# Appendix B

# Laboratory Analytical Data Package

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.comL

NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

March 25, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0052L

Enclosed are the results of analyses for samples received by our laboratory on 3/12/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

E O For Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/25/2024 12:07o |

# Data Validatable Report

## Analysis Case Narrative

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL 's SOP. Abbreviated flags for technical t justification are provided as data qualifiers. t

## Samples in this Reportn

| Lab IDn | Sample | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0052-01o | MW-24-3o | Watero | 03/11/2024 08:30o | 03/12/2024o |
| 24C0052-02o | MW-24-2o | Watero | 03/11/2024 08:55o | 03/12/2024o |
| 24C0052-03o | DUP-1-031124o | Watero | 03/11/2024 09:15o | 03/12/2024o |
| 24C0052-04o | MW-24-1o | Watero | 03/11/2024 09:35o | 03/12/2024o |
| 24C0052-05o | MW-23-3o | Watero | 03/11/2024 10:40o | 03/12/2024o |
| 24C0052-06o | MW-23-2o | Watero | 03/11/2024 11:05o | 03/12/2024o |
| 24C0052-07o | MW-23-1o | Watero | 03/11/2024 11:30o | 03/12/2024o |
| 24C0052-08o | EB-1-031124o | Watero | 03/11/2024 11:40o | 03/12/2024o |
| 24C0052-09o | FB-1-031124o | Watero | 03/11/2024 11:50o | 03/12/2024o |
| 24C0052-10o | SB-1-031124o | Watero | 03/11/2024 12:00o | 03/12/2024o |

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| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0052-01t | | | |
| | 500mL Pt | 1t | |
| 24C0052-02t | | | |
| | 500mL Pt | 1t | |
| 24C0052-03t | | | |
| | 500mL Pt | 1t | |
| 24C0052-04t | | | |
| | 500mL Pt | 1t | |
| 24C0052-05t | | | |
| | 500mL Pt | 1t | |
| 24C0052-06t | | | |
| | 500mL Pt | 1t | |
| 24C0052-07t | | | |
| | 500mL Pt | 1t | |
| 24C0052-08t | | | |
| | 500mL Pt | 1t | |
| 24C0052-09t | | | |
| | 500mL Pt | 1t | |
| 24C0052-10t | | | |
| | 500mL Pt | 1t | |

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoring o | |
| 5835 Avenida Encinas, Suite 118o | Project Number: o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/25/2024 12:07 o |

## Sample Results

**Sample: MW-24-3**
**24C0052-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | 3.1o | MI4o | 1.6o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 6.4o | | 0.78o | 0.063o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 5.8o | | 0.39o | 0.054o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 2.9o | | 0.39o | 0.040o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 7.9o | MI5o | 0.39o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | 1.1o | | 0.39o | 0.080o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | 3.0o | | 0.39o | 0.099o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | 0.28o | Jo | 0.39o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | 0.28o | Jo | 0.39o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | | 0.39o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | 7.8o | IR1o | 0.39o | 0.036o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | 0.21o | Jo | 0.39o | 0.061o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 1.5o | MI1o | 0.39o | 0.031o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | 0.15o | Jo | 0.39o | 0.050o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 5.8o | MI1o | 0.39o | 0.062o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | | 0.39o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | | 0.39o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | | 0.39o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | | 1.6o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | 0.60o | Jo | 1.6o | 0.31o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | | 1.6o | 0.080o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | | 1.6o | 0.39o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | 0.59o | MI5o | 0.39o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | | 1.6o | 0.46o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | | 1.6o | 0.40o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | 0.54o | MI2o | 0.39o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | 0.43o | MI2o | 0.39o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | | 1.6o | 0.99o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | | 1.6o | 1.0o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | | 0.78o | 0.17o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | | 0.78o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | | 0.78o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | | 0.78o | 0.053o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | | 0.78o | 0.089o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | | 0.78o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | | 0.78o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | | 0.78o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | | 1.6o | 0.56o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | 4.3o | | 1.6o | 0.43o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | 2.2o | MI2o | 1.6o | 0.54o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *74.2%o* | *MI2o* | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *108%o* | | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: MW-24-3 (Continued)
**24C0052-01 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *111%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *111%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *114%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *118%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *89.8%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *65.4%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *100%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *106%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *167%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *194%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *115%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *73.1%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *91.8%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *52.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *46.6%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *77.4%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *118%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *57.8%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *52.6%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *114%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: MW-24-2**

**24C0052-02 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | 1.6o | 1.5o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 2.2o | 0.73o | 0.059o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 1.5o | 0.36o | 0.050o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 0.88o | 0.36o | 0.037o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 0.95o MI5o | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo IR2, o | 0.36o | 0.074o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | 0.27o MI2, Jo | 0.36o | 0.092o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | 0.36o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | 0.36o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | 0.80o | 0.36o | 0.033o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | 0.51o | 0.36o | 0.057o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 2.4o | 0.36o | 0.029o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | 0.36o | 0.047o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 0.61o | 0.36o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | 1.5o | 0.26o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | 1.5o | 0.075o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | 1.5o | 0.36o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo MI5, o | 0.36o | 0.095o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | 1.5o | 0.43o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | 0.36o | 0.096o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo MI2, o | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | 1.5o | 0.92o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | 1.5o | 0.95o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | 0.73o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | 0.73o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | 0.73o | 0.099o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | 0.73o | 0.049o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | 0.73o | 0.083o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | 0.73o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | 0.73o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | 0.73o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | 1.5o | 0.52o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | 1.5o | 0.40o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo IR1, o | 1.5o | 0.50o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *97.2%o* | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *115%o* | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: | JPL-GW Monitoring |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: | David Connero |
| | | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: MW-24-2 (Continued)
**24C0052-02 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *108%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *107%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *110%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *108%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *114%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *109%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *100%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *85.6%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *101%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *113%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *105%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *131%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *135%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *118%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *96.7%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *68.9%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *36.3%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *34.4%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *113%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *118%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *43.0%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *36.4%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *106%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: DUP-1-031124**

**24C0052-03 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | 1.7o | 1.5o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 2.5o | 0.74o | 0.060o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 1.5o | 0.37o | 0.051o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 0.86o | 0.37o | 0.038o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 0.94o MI5o | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | 0.37o | 0.076o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | 0.22o Jo | 0.37o | 0.094o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | 0.80o | 0.37o | 0.034o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | 0.55o | 0.37o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 2.5o | 0.37o | 0.029o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | 0.37o | 0.047o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 0.47o MI2o | 0.37o | 0.059o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo MI5, o | 0.37o | 0.096o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | 1.5o | 0.93o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *97.1%o* | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *118%o* | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: | JPL-GW Monitoring |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: | David Connero |
| | | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: DUP-1-031124 (Continued)
**24C0052-03 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *118%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *126%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *115%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *116%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *116%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *109%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *111%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *100%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *88.9%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *102%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *107%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *111%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *126%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *129%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *118%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *92.2%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *63.4%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *34.3%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *33.4%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *113%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *116%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *45.3%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *41.5%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *122%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: MW-24-1**

**24C0052-04 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | NDo | MI5, o | 1.5o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 2.5o | | 0.75o | 0.061o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 0.078o | IR2, Jo | 0.37o | 0.051o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 0.046o | Jo | 0.37o | 0.038o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 0.20o | Jo | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | | 0.37o | 0.077o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | NDo | | 0.37o | 0.059o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 0.066o | Jo | 0.37o | 0.030o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 0.44o | IR1o | 0.37o | 0.060o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | | 0.37o | 0.099o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | | 1.5o | 0.98o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | | 0.75o | 0.051o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | | 1.5o | 0.42o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *96.2%o* | | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *113%o* | | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: MW-24-1 (Continued)
**24C0052-04 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *113%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *123%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *116%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *118%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *114%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *109%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *123%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *95.2%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *82.7%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *99.1%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *111%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *110%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *124%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *116%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *105%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *44.2%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *123%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *67.5%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *56.8%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *57.6%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *116%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *82.0%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *77.5%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *115%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.*
*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: MW-23-3**

**24C0052-05 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | NDo MI5, o | 1.5o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 0.19o Jo | 0.75o | 0.061o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 0.25o Jo | 0.38o | 0.051o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 0.11o Jo | 0.38o | 0.038o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 0.33o Jo | 0.38o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | 0.38o | 0.077o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | 0.11o Jo | 0.38o | 0.095o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | 0.38o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | 0.38o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | 0.38o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | 0.25o Jo | 0.38o | 0.034o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | 0.14o Jo | 0.38o | 0.059o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 0.47o IR1o | 0.38o | 0.030o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | 0.38o | 0.048o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 0.29o MI1, Jo | 0.38o | 0.060o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | 0.38o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | 0.38o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | 0.38o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | 1.5o | 0.077o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | 1.5o | 0.38o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | 0.38o | 0.098o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | 0.38o | 0.099o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | 0.38o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | 1.5o | 0.95o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | 1.5o | 0.98o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | 0.75o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | 0.75o | 0.12o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | 0.75o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | 0.75o | 0.051o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | 0.75o | 0.085o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | 0.75o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | 0.75o | 0.20o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | 0.75o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | 1.5o | 0.54o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | 1.5o | 0.42o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | 1.5o | 0.52o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *94.7%o* | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *111%o* | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: MW-23-3 (Continued)
**24C0052-05 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *117%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *121%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *113%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *114%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *112%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *106%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *95.2%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *74.4%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *104%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *101%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *140%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *136%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *120%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *90.0%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *82.4%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *45.3%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *39.7%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *84.4%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *118%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *54.7%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *48.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *122%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: MW-23-2**

**24C0052-06 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | 7.0o | | 1.5o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 6.7o | | 0.73o | 0.059o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 6.3o | | 0.36o | 0.050o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 3.9o | | 0.36o | 0.037o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 4.9o | MI5o | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | | 0.36o | 0.075o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | 0.094o | Jo | 0.36o | 0.092o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | | 0.36o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | | 0.36o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | 21o | | 0.36o | 0.033o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | 1.7o | | 0.36o | 0.057o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 17o | | 0.36o | 0.029o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | 0.16o | Jo | 0.36o | 0.047o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 0.43o | IR1o | 0.36o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | | 1.5o | 0.26o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | | 1.5o | 0.36o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | | 0.73o | 0.099o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | | 1.5o | 0.50o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *94.5%o* | | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *115%o* | | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: MW-23-2 (Continued)
**24C0052-06 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *115%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *120%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *119%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *115%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *110%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *106%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *94.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *78.3%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *108%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *115%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *107%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *150%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *139%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *120%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *92.6%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *80.2%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *42.0%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *36.6%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *99.1%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *117%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *50.4%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *48.3%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *119%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.*
*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: MW-23-1**

**24C0052-07 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | 6.3o | MI5o | 1.4o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | 13o | | 0.71o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | 15o | | 0.36o | 0.049o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | 16o | | 0.36o | 0.037o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | 27o | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | 0.38o | | 0.36o | 0.073o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | NDo | IR1, o | 0.36o | 0.090o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | 9.6o | | 0.36o | 0.033o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | 0.71o | | 0.36o | 0.056o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | 12o | | 0.36o | 0.028o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | 0.60o | | 0.36o | 0.046o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | 3.7o | IR1o | 0.36o | 0.057o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | | 1.4o | 0.073o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | | 0.36o | 0.093o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | | 1.4o | 0.42o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | | 1.4o | 0.90o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | | 1.4o | 0.93o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | | 0.71o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | | 0.71o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | | 0.71o | 0.097o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | | 0.71o | 0.048o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | | 0.71o | 0.081o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | | 0.71o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | | 0.71o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | | 0.71o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | | 1.4o | 0.51o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | | 1.4o | 0.49o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *94.6%o* | | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *105%o* | | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: MW-23-1 (Continued)
**24C0052-07 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *113%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *115%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *111%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *117%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *109%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *97.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *84.9%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *97.1%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *108%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *107%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *136%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *131%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *110%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *97.2%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *81.2%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *48.4%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *47.3%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *106%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *121%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *59.9%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *53.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *111%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: EB-1-031124**

**24C0052-08 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | NDo | 1.5o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | NDo | 0.74o | 0.060o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | NDo | 0.37o | 0.051o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | NDo | 0.37o | 0.038o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | NDo MI1, o | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | 0.37o | 0.076o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | NDo | 0.37o | 0.094o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | NDo | 0.37o | 0.034o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | NDo | 0.37o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | NDo | 0.37o | 0.029o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | NDo MI2, o | 0.37o | 0.059o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | 0.37o | 0.096o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | 1.5o | 0.94o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *110%o* | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *110%o* | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: EB-1-031124 (Continued)
**24C0052-08 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *114%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *121%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *117%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *116%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *111%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *108%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *107%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *95.4%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *108%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *114%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *123%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *127%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *123%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *109%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *61.9%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *39.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *37.8%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *110%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *110%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *42.7%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *37.1%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: FB-1-031124**

**24C0052-09 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | NDo | | 0.73o | 0.060o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | NDo | | 0.37o | 0.050o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | NDo | | 0.37o | 0.038o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | NDo | | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | NDo | | 0.37o | 0.093o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | NDo | | 0.37o | 0.057o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | NDo | | 0.37o | 0.029o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | NDo | MI2, o | 0.37o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *111%o* | | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *117%o* | | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: FB-1-031124 (Continued)
**24C0052-09 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *117%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *123%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *112%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *111%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *104%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *100%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *91.6%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *103%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *109%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *110%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *116%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *122%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *126%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *102%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *58.7%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *33.5%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *31.2%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *106%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *109%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *37.2%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *30.0%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *122%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Sample Results

**(Continued)a**

**Sample: SB-1-031124**

**24C0052-10 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | NDo | | 1.4o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeAo | NDo | | 0.72o | 0.058o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxAo | NDo | | 0.36o | 0.049o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpAo | NDo | | 0.36o | 0.037o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDAo | NDo | | 0.36o | 0.091o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFODAo | NDo | IR1, o | 0.36o | 0.18o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFBSo | NDo | | 0.36o | 0.033o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFPeSo | NDo | | 0.36o | 0.056o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHxSo | NDo | | 0.36o | 0.028o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSo | NDo | MI2, o | 0.36o | 0.057o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFOSAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSAAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NEtFOSEo | NDo | | 1.4o | 0.94o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFEESAo | NDo | | 0.72o | 0.098o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMPAo | NDo | | 0.72o | 0.048o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/14/24o | 1o | EPA 1633o | BDC0186o |
| *Surrogate: 13C4-PFBAo* | *110%o* | *MI4o* | *5-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *116%o* | | *40-130o* | | | *03/14/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/25/2024 12:07 |

## Sample Results
**(Continued)**

### Sample: SB-1-031124 (Continued)
**24C0052-10 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *110%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *119%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *104%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *98.6%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *110%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *106%* | | *30-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *105%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *104%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *97.5%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *102%* | | *40-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *99.4%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *106%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *116%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *119%* | | *40-200* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *131%* | | *40-300* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *107%* | | *20-150* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *61.6%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *37.0%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *36.0%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *104%* | | *40-170* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *103%* | | *25-135* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *41.8%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *34.8%* | | *10-130* | | | *03/14/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *118%* | | *40-130* | | | *03/14/24* | 1 | *EPA 1633* | |

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/25/2024 12:07 |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0186 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0186-BLK1)u** | | | | | Prepared: 03/13/24 13:29 Analyzed: 03/14/24 15:56o | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/L | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/L | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/L | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/L | | | | | | |
| PFOAo | NDo | 0.40o | 0.15o | ng/L | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/L | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/L | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/L | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/L | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/L | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/L | | | | | | |
| PFOSo | NDo | 0.40o | 0.064o | ng/L | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/L | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/L | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/L | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/L | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/L | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/L | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/L | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/L | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/L | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/L | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/L | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/L | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/L | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/L | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/L | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/L | | | | | | |
| *Surrogate: 13C4-PFBAo* | *35.2o* | | | *ng/Lo* | *32.0o* | | *110o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.3o* | | | *ng/Lo* | *16.0o* | | *108o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.91o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *9.17o* | | | *ng/Lo* | *8.00o* | | *115o* | *40-130o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/25/2024 12:07o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0186-BLK1)u** | | | | | Prepared: 03/13/24 13:29 Analyzed: 03/14/24 15:56o | | | | | |
| *Surrogate: 13C8-PFOAo* | *8.98o* | | | *ng/Lo* | *8.00o* | | *112* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.23o* | | | *ng/Lo* | *4.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.24o* | | | *ng/Lo* | *4.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.32o* | | | *ng/Lo* | *4.00o* | | *108* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.34o* | | | *ng/Lo* | *4.00o* | | *109* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.21o* | | | *ng/Lo* | *4.00o* | | *105* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *7.72o* | | | *ng/Lo* | *8.00o* | | *96.5* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *8.46o* | | | *ng/Lo* | *8.00o* | | *106* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.94o* | | | *ng/Lo* | *8.00o* | | *112* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.51o* | | | *ng/Lo* | *8.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.8o* | | | *ng/Lo* | *16.0o* | | *118* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.5o* | | | *ng/Lo* | *16.0o* | | *128* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *20.0o* | | | *ng/Lo* | *16.0o* | | *125* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *38.4o* | | | *ng/Lo* | *32.0o* | | *120* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *4.10o* | | | *ng/Lo* | *8.00o* | | *51.2* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.54o* | | | *ng/Lo* | *8.00o* | | *31.7* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *2.45o* | | | *ng/Lo* | *8.00o* | | *30.7* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.0o* | | | *ng/Lo* | *16.0o* | | *106* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *17.9o* | | | *ng/Lo* | *16.0o* | | *112* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *25.1o* | | | *ng/Lo* | *80.0o* | | *31.4* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *21.0o* | | | *ng/Lo* | *80.0o* | | *26.2* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *37.1o* | | | *ng/Lo* | *32.0o* | | *116* | *40-130* | | |
| **LCS (BDC0186-BS1)u** | | | | | Prepared: 03/13/24 13:29 Analyzed: 03/14/24 16:17o | | | | | |
| PFBAo | 16.3oMI5o | | 0.21o | ng/L | 16.0o | | 102 | 70-140 | | |
| PFPeAo | 7.94o | | 0.065o | ng/L | 8.00o | | 99.2 | 65-135 | | |
| PFHxAo | 3.86o | | 0.055o | ng/L | 4.00o | | 96.5 | 70-145 | | |
| PFHpAo | 3.94o | | 0.041o | ng/L | 4.00o | | 98.5 | 70-150 | | |
| PFOAo | 4.00o | | 0.15o | ng/L | 4.00o | | 100 | 70-150 | | |
| PFNAo | 3.75o | | 0.082o | ng/L | 4.00o | | 93.7 | 70-150 | | |
| PFDAo | 4.11o | | 0.10o | ng/L | 4.00o | | 103 | 70-140 | | |
| PFUnAo | 3.88o | | 0.16o | ng/L | 4.00o | | 97.1 | 70-145 | | |
| PFDoAo | 3.90o | | 0.11o | ng/L | 4.00o | | 97.6 | 70-140 | | |
| PFTrDAo | 3.89o | | 0.20o | ng/L | 4.00o | | 97.2 | 65-140 | | |
| PFTeDAo | 4.04o | | 0.20o | ng/L | 4.00o | | 101 | 60-140 | | |
| PFHxDAo | 4.07o | | 0.20o | ng/L | 4.00o | | 102 | 40-150 | | |
| PFODAo | 3.72o | | 0.20o | ng/L | 4.00o | | 93.0 | 40-150 | | |
| PFBSo | 3.44o | | 0.037o | ng/L | 3.54o | | 97.3 | 60-145 | | |
| PFPeSo | 3.71o | | 0.063o | ng/L | 3.76o | | 98.7 | 65-140 | | |
| PFHxSo | 3.58o | | 0.032o | ng/L | 3.66o | | 97.8 | 65-145 | | |
| PFHpSo | 3.94o | | 0.051o | ng/L | 3.82o | | 103 | 70-150 | | |
| PFOSo | 3.69o | | 0.064o | ng/L | 3.72o | | 99.1 | 55-150 | | |
| PFNSo | 3.82o | | 0.12o | ng/L | 3.84o | | 99.5 | 65-145 | | |
| PFDSo | 4.03o | | 0.15o | ng/L | 3.86o | | 104 | 60-145 | | |
| PFDoSo | 3.65o | | 0.12o | ng/L | 3.88o | | 94.0 | 50-145 | | |
| 4:2FTSo | 14.7o | | 0.29o | ng/L | 15.0o | | 98.0 | 70-145 | | |
| 6:2FTSo | 15.6o | | 0.31o | ng/L | 15.2o | | 103 | 65-155 | | |
| 8:2FTSo | 15.7o | | 0.082o | ng/L | 15.4o | | 102 | 60-150 | | |
| 10:2FTSo | 14.5o | | 0.40o | ng/L | 15.4o | | 94.0 | 0-200 | | |
| PFOSAo | 4.28o | | 0.10o | ng/L | 4.00o | | 107 | 70-145 | | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0186-BS1)u** | | | | | Prepared: 03/13/24 13:29 | | Analyzed: 03/14/24 16:17o | | | |
| NMeFOSAo | 17.0o | | 0.47o | ng/L | 16.0o | | 106 | 60-150 | | |
| NEtFOSAo | 16.6o | | 0.41o | ng/L | 16.0o | | 104 | 65-145 | | |
| NMeFOSAAo | 4.08o | | 0.11o | ng/L | 4.00o | | 102 | 50-140 | | |
| NEtFOSAAo | 4.11o | | 0.11o | ng/L | 4.00o | | 103 | 70-145 | | |
| NMeFOSEo | 16.2o | | 1.0o | ng/L | 16.0o | | 101 | 70-145 | | |
| NEtFOSEo | 16.3o | | 1.0o | ng/L | 16.0o | | 102 | 70-135 | | |
| HFPO-DAo | 4.01o | | 0.17o | ng/L | 4.00o | | 100 | 70-140 | | |
| ADONAo | 3.92o | | 0.12o | ng/L | 3.78o | | 104 | 65-145 | | |
| PFEESAo | 7.28o | | 0.11o | ng/L | 7.12o | | 102 | 70-140 | | |
| PFMPAo | 8.24o | | 0.054o | ng/L | 8.00o | | 103 | 55-140 | | |
| PFMBAo | 8.16o | | 0.091o | ng/L | 8.00o | | 102 | 60-150 | | |
| NFDHAo | 7.38o | | 0.30o | ng/L | 8.00o | | 92.3 | 50-150 | | |
| 9Cl-PF3ONSo | 3.80o | | 0.21o | ng/L | 3.74o | | 102 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.90o | | 0.21o | ng/L | 3.78o | | 103 | 55-160 | | |
| 3:3FTCAo | 15.3o | | 0.57o | ng/L | 16.0o | | 95.3 | 65-130 | | |
| 5:3FTCAo | 15.4o | | 0.44o | ng/L | 16.0o | | 96.0 | 70-135 | | |
| 7:3FTCAo | 13.4o | | 0.55o | ng/L | 16.0o | | 83.9 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *34.0o* | | | *ng/Lo* | *32.0o* | | *106* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *9.24o* | | | *ng/Lo* | *8.00o* | | *115* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *9.33o* | | | *ng/Lo* | *8.00o* | | *117* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.43o* | | | *ng/Lo* | *8.00o* | | *105* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.52o* | | | *ng/Lo* | *4.00o* | | *113* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.13o* | | | *ng/Lo* | *4.00o* | | *103* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.33o* | | | *ng/Lo* | *4.00o* | | *108* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.28o* | | | *ng/Lo* | *4.00o* | | *107* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.91o* | | | *ng/Lo* | *4.00o* | | *97.7* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *7.14o* | | | *ng/Lo* | *8.00o* | | *89.2* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *7.97o* | | | *ng/Lo* | *8.00o* | | *99.6* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.38o* | | | *ng/Lo* | *8.00o* | | *105* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.42o* | | | *ng/Lo* | *8.00o* | | *105* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *17.0o* | | | *ng/Lo* | *16.0o* | | *106* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *17.6o* | | | *ng/Lo* | *16.0o* | | *110* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *37.0o* | | | *ng/Lo* | *32.0o* | | *116* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.94o* | | | *ng/Lo* | *8.00o* | | *49.3* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.33o* | | | *ng/Lo* | *8.00o* | | *29.1* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *2.28o* | | | *ng/Lo* | *8.00o* | | *28.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.1o* | | | *ng/Lo* | *16.0o* | | *107* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *16.7o* | | | *ng/Lo* | *16.0o* | | *104* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *25.2o* | | | *ng/Lo* | *80.0o* | | *31.5* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *21.0o* | | | *ng/Lo* | *80.0o* | | *26.3* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *35.2o* | | | *ng/Lo* | *32.0o* | | *110* | *40-130* | | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/25/2024 12:07o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0186-MRL1)u** | | | | | Prepared: 03/13/24 13:29 | | Analyzed: 03/14/24 16:37o | | | |
| PFBAo | 2.97o | | 0.21o | ng/Lo | 3.20o | | 92.8o | 70-140 | | |
| PFPeAo | 1.46o | | 0.065o | ng/Lo | 1.60o | | 91.4o | 65-135 | | |
| PFHxAo | 0.735o | | 0.055o | ng/Lo | 0.800o | | 91.8o | 70-145 | | |
| PFHpAo | 0.748o | | 0.041o | ng/Lo | 0.800o | | 93.6o | 70-150 | | |
| PFOAo | 0.734o | | 0.15o | ng/Lo | 0.800o | | 91.7o | 70-150 | | |
| PFNAo | 0.769o | | 0.082o | ng/Lo | 0.800o | | 96.2o | 70-150 | | |
| PFDAo | 0.754o | | 0.10o | ng/Lo | 0.800o | | 94.3o | 70-140 | | |
| PFUnAo | 0.750o | | 0.16o | ng/Lo | 0.800o | | 93.8o | 70-145 | | |
| PFDoAo | 0.800o | | 0.11o | ng/Lo | 0.800o | | 100o | 70-140 | | |
| PFTrDAo | 0.764o | | 0.20o | ng/Lo | 0.800o | | 95.5o | 65-140 | | |
| PFTeDAo | 0.717o | | 0.20o | ng/Lo | 0.800o | | 89.6o | 60-140 | | |
| PFHxDAo | 0.680o | | 0.20o | ng/Lo | 0.800o | | 85.0o | 40-150 | | |
| PFODAo | 0.772o | | 0.20o | ng/Lo | 0.800o | | 96.5o | 40-150 | | |
| PFBSo | 0.637o | | 0.037o | ng/Lo | 0.708o | | 89.9o | 60-145 | | |
| PFPeSo | 0.697o | | 0.063o | ng/Lo | 0.752o | | 92.7o | 65-140 | | |
| PFHxSo | 0.670o | | 0.032o | ng/Lo | 0.732o | | 91.6o | 65-145 | | |
| PFHpSo | 0.656o | | 0.051o | ng/Lo | 0.764o | | 85.8o | 70-150 | | |
| PFOSo | 0.710o | | 0.064o | ng/Lo | 0.744o | | 95.4o | 55-150 | | |
| PFNSo | 0.710o | | 0.12o | ng/Lo | 0.768o | | 92.5o | 65-145 | | |
| PFDSo | 0.730o | | 0.15o | ng/Lo | 0.772o | | 94.6o | 60-145 | | |
| PFDoSo | 0.687o | | 0.12o | ng/Lo | 0.776o | | 88.6o | 50-145 | | |
| 4:2FTSo | 2.88o | | 0.29o | ng/Lo | 3.00o | | 95.9o | 70-145 | | |
| 6:2FTSo | 2.72o | | 0.31o | ng/Lo | 3.04o | | 89.4o | 65-155 | | |
| 8:2FTSo | 2.98o | | 0.082o | ng/Lo | 3.07o | | 97.0o | 60-150 | | |
| 10:2FTSo | 3.08o | | 0.40o | ng/Lo | 3.09o | | 99.9o | 0-200 | | |
| PFOSAo | 0.765o | | 0.10o | ng/Lo | 0.800o | | 95.6o | 70-145 | | |
| NMeFOSAo | 3.26o | | 0.47o | ng/Lo | 3.20o | | 102o | 60-150 | | |
| NEtFOSAo | 2.80o | | 0.41o | ng/Lo | 3.20o | | 87.5o | 65-145 | | |
| NMeFOSAAo | 0.746o | | 0.11o | ng/Lo | 0.800o | | 93.2o | 50-140 | | |
| NEtFOSAAo | 0.798o | | 0.11o | ng/Lo | 0.800o | | 99.8o | 70-145 | | |
| NMeFOSEo | 3.23o | | 1.0o | ng/Lo | 3.20o | | 101o | 70-145 | | |
| NEtFOSEo | 3.33o | | 1.0o | ng/Lo | 3.20o | | 104o | 70-135 | | |
| HFPO-DAo | 0.676oJo | | 0.17o | ng/Lo | 0.800o | | 84.5o | 70-140 | | |
| ADONAo | 0.668oJo | | 0.12o | ng/Lo | 0.756o | | 88.4o | 65-145 | | |
| PFEESAo | 1.27o | | 0.11o | ng/Lo | 1.42o | | 89.0o | 70-140 | | |
| PFMPAo | 1.49o | | 0.054o | ng/Lo | 1.60o | | 93.3o | 55-140 | | |
| PFMBAo | 1.38o | | 0.091o | ng/Lo | 1.60o | | 86.2o | 60-150 | | |
| NFDHAo | 1.34o | | 0.30o | ng/Lo | 1.60o | | 83.6o | 50-150 | | |
| 9Cl-PF3ONSo | 0.655oJo | | 0.21o | ng/Lo | 0.748o | | 87.6o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.655oJo | | 0.21o | ng/Lo | 0.756o | | 86.7o | 55-160 | | |
| 3:3FTCAo | 2.68o | | 0.57o | ng/Lo | 3.20o | | 83.9o | 65-130 | | |
| 5:3FTCAo | 2.87o | | 0.44o | ng/Lo | 3.20o | | 89.7o | 70-135 | | |
| 7:3FTCAo | 2.53o | | 0.55o | ng/Lo | 3.20o | | 79.2o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *35.4o* | | | *ng/Lo* | *32.0o* | | *111o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *18.7o* | | | *ng/Lo* | *16.0o* | | *117o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *9.43o* | | | *ng/Lo* | *8.00o* | | *118o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *9.60o* | | | *ng/Lo* | *8.00o* | | *120o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *8.82o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.32o* | | | *ng/Lo* | *4.00o* | | *108o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.38o* | | | *ng/Lo* | *4.00o* | | *110o* | *40-130 o* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/25/2024 12:07o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0186-MRL1)u** | | | | Prepared: 03/13/24 13:29 Analyzed: 03/14/24 16:37o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *4.41o* | | | *ng/Lo* | *4.00o* | | *110* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.23o* | | | *ng/Lo* | *4.00o* | | *106* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.29o* | | | *ng/Lo* | *4.00o* | | *107* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *7.59o* | | | *ng/Lo* | *8.00o* | | *94.9* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *8.18o* | | | *ng/Lo* | *8.00o* | | *102* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.86o* | | | *ng/Lo* | *8.00o* | | *111* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *9.02o* | | | *ng/Lo* | *8.00o* | | *113* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *17.8o* | | | *ng/Lo* | *16.0o* | | *112* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.2o* | | | *ng/Lo* | *16.0o* | | *126* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.7o* | | | *ng/Lo* | *16.0o* | | *123* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *36.6o* | | | *ng/Lo* | *32.0o* | | *114* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *4.17o* | | | *ng/Lo* | *8.00o* | | *52.1* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.40o* | | | *ng/Lo* | *8.00o* | | *30.0* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *2.44o* | | | *ng/Lo* | *8.00o* | | *30.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.2o* | | | *ng/Lo* | *16.0o* | | *108* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *17.9o* | | | *ng/Lo* | *16.0o* | | *112* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *25.3o* | | | *ng/Lo* | *80.0o* | | *31.7* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *21.4o* | | | *ng/Lo* | *80.0o* | | *26.8* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *39.1o* | | | *ng/Lo* | *32.0o* | | *122* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:o | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/25/2024 12:07o |

## Notes and Definitions

| Itemo | Definitiono |
|---|---|
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI4o | Manual integration, peak unsplit o |
| MI5o | Manual integration, whole peak was not integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0052** R

Printed: 03/25/2024 12:08 pmi

**Project: R** **JPL-GW Monitoring**
**Project Number: R**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/12/2024 10:00 AMi
Date Due:i 03/26/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Jake Henigei

| Analysisa | Commentsa |
|---|---|

**24C0052-01 MW-24-3 [Water] Sampled 3/11/2024 8:30:00AMR**
1633i NASA Listi

**24C0052-02 MW-24-2 [Water] Sampled 3/11/2024 8:55:00AMR**
1633i NASA Listi

**24C0052-03 DUP-1-031124 [Water] Sampled 3/11/2024 9:15:00AMR**
1633i NASA Listi

**24C0052-04 MW-24-1 [Water] Sampled 3/11/2024 9:35:00AMR**
1633i NASA Listi

**24C0052-05 MW-23-3 [Water] Sampled 3/11/2024 10:40:00AMR**
1633i NASA Listi

**24C0052-06 MW-23-2 [Water] Sampled 3/11/2024 11:05:00AMR**
1633i NASA Listi

**24C0052-07 MW-23-1 [Water] Sampled 3/11/2024 11:30:00AMR**
1633i NASA Listi

**24C0052-08 EB-1-031124 [Water] Sampled 3/11/2024 11:40:00AMR**
1633i NASA Listi

**24C0052-09 FB-1-031124 [Water] Sampled 3/11/2024 11:50:00AMR**
1633i NASA Listi

**24C0052-10 SB-1-031124 [Water] Sampled 3/11/2024 12:00:00PMR**
1633i NASA Listi

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0052** R

Printed: 03/25/2024 12:08 pmi

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0052C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **1.3°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yes i |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yes i |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yes i |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yes i |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yes i |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yes i |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | No i |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | No i |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | No i |

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

24C0052

C.O.C. 62612

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: (626)-298-5715 | Company Name: Tidewater | Phone: (626)-298-5715 |
| Address: 3761 A Hucks Dr Powell, OH 43065 | Fax: (614)-792-2897 | Address: 3761 A Hucks Dr @ ~~OH~~ Powell, OH 43065 | Fax: (614)-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh20.net | | Email: david.conner@tideh20.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Thinh Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Matrix: Sed. | Matrix: Soil | Analysis Requested/Method Number: PFAS 1633 | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-24-3 | | 03/11/24 | 0830 | | 1 | X | | | X | Laboratory, please |
| MW-24-2 | | | 0855 | | 1 | X | | | X | select 25DGs |
| DUP-1-031124 | | | 0915 | | 1 | X | | | X | for level IV validation |
| W-24-1 | | | 0935 | | 1 | X | | | X | |
| W-23-3 | | | 1040 | | 1 | X | | | X | |
| W-23-2 | | | 1105 | | 1 | X | | | X | |
| W-23-1 | | | 1130 | | 1 | X | | | X | |
| B-1-031124 | | | 1140 | | 1 | X | | | X | |
| B-1-031124 | | | 1150 | | 1 | X | | | X | |
| B-1-031124 | | | 1200 | | 1 | X | | | X | |

Shuttle Temperature: IRB: 13°C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/11/24 | 1405 | Nicole Parks | Nicole Parks | 3/11/24 | 1600 | FEDEX |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date 3/12/24 | Time 1000 | Received at lab by: APPL |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information



Table of Contents

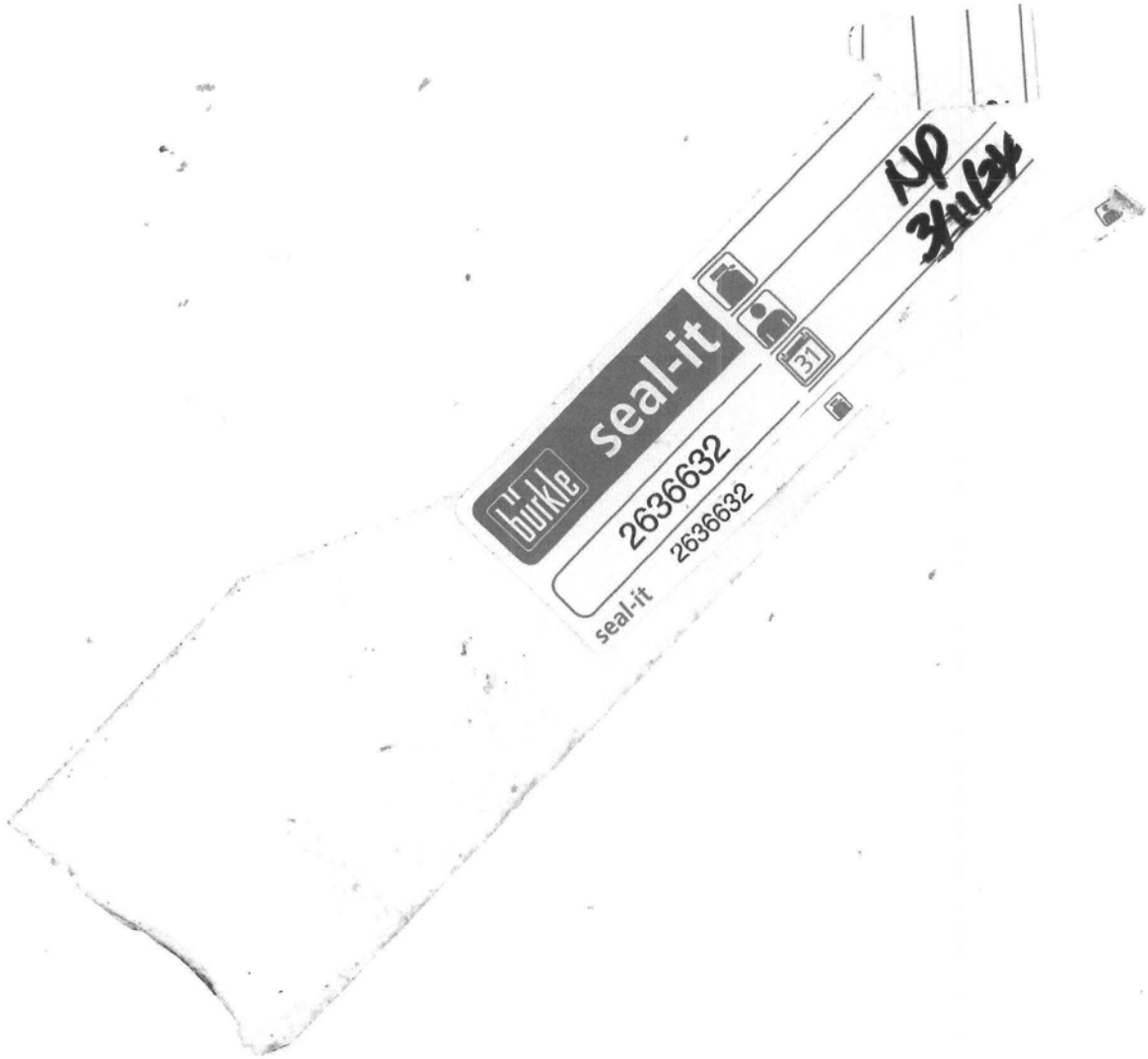
burkle
seal-it
2636632
seal-it 2636632
37

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

## MW-24-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-01- | File ID: | S2024-03-14A (20)- |
| Sampled:- | 03/11/24 08:30- | Prepared:- | 03/13/24 13:29 | Analyzed:- | 03/14/24 19:01 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 512.113 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | 3.1- | 0.20- | 1.6 | MI4 |
| PFPeA- | 6.4- | 0.063- | 0.78 | |
| PFHxA- | 5.8- | 0.054- | 0.39 | |
| PFHpA- | 2.9- | 0.040- | 0.39 | |
| PFOA- | 7.9- | 0.15- | 0.39 | MI5 |
| PFNA- | 1.1- | 0.080- | 0.39 | |
| PFDA- | 3.0- | 0.099- | 0.39 | |
| PFUnA- | 0.28- | 0.16- | 0.39 | J |
| PFDoA- | 0.28- | 0.11- | 0.39 | J |
| PFTrDA- | ND- | 0.20- | 0.39 | U |
| PFTeDA- | ND- | 0.19- | 0.39 | U |
| PFHxDA- | ND- | 0.20- | 0.39 | U |
| PFODA- | ND- | 0.20- | 0.39 | U |
| PFBS- | 7.8- | 0.036- | 0.39 | IR1 |
| PFPeS- | 0.21- | 0.061- | 0.39 | J |
| PFHxS- | 1.5- | 0.031- | 0.39 | MI1 |
| PFHpS- | 0.15- | 0.050- | 0.39 | J |
| PFOS- | 5.8- | 0.062- | 0.39 | MI1 |
| PFNS- | ND- | 0.12- | 0.39 | U |
| PFDS- | ND- | 0.15- | 0.39 | U |
| PFDoS- | ND- | 0.12- | 0.39 | U |
| 4:2FTS- | ND- | 0.28- | 1.6 | U |
| 6:2FTS- | 0.60- | 0.31- | 1.6 | J |
| 8:2FTS- | ND- | 0.080- | 1.6 | U |
| 10:2FTS- | ND- | 0.39- | 1.6 | U |
| PFOSA- | 0.59- | 0.10- | 0.39 | MI5 |
| NMeFOSA- | ND- | 0.46- | 1.6 | U |
| NEtFOSA- | ND- | 0.40- | 1.6 | U |
| NMeFOSAA- | 0.54- | 0.10- | 0.39 | MI2 |
| NEtFOSAA- | 0.43- | 0.11- | 0.39 | MI2 |

# ANALYSIS DATA SHEETL

MW-24-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project:- | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-01- | File ID:- | S2024-03-14A (20)- |
| Sampled:- | 03/11/24 08:30- | Prepared:- | 03/13/24 13:29- | Analyzed:- | 03/14/24 19:01- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 512.113 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.99- | 1.6- | U- |
| NEtFOSE- | ND- | 1.0- | 1.6- | U- |
| HFPO-DA- | ND- | 0.17- | 0.78- | U- |
| ADONA- | ND- | 0.12- | 0.78- | U- |
| PFEESA- | ND- | 0.11- | 0.78- | U- |
| PFMPA- | ND- | 0.053- | 0.78- | U- |
| PFMBA- | ND- | 0.089- | 0.78- | U- |
| NFDHA- | ND- | 0.29- | 0.78- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.78- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.78- | U- |
| 3:3FTCA- | ND- | 0.56- | 1.6- | U- |
| 5:3FTCA- | 4.3- | 0.43- | 1.6- | |
| 7:3FTCA- | 2.2- | 0.54- | 1.6- | MI2- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (20)
Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 77895<br>( 163.0 / 69.0 ) 2114 | ( 2.78 , 0.80 )<br>( N/A , -0.04 , -0.1) | 151.2<br>138.9 | 0.0271<br>108.3<br>107.1 | 0.4320 | N/A | 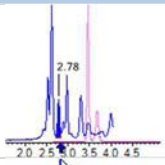 | 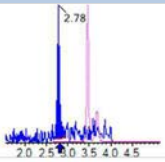 | |
| PFBA | ( 213.0 / 169.0 ) 152368 | ( 3.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 131.9 | N/A<br>0.0<br>0.0 | 0.7910 | N/A | 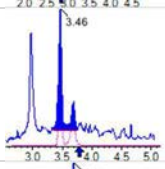 | | MI4 DAG 2024-03-15 |
| PFPeA | ( 263.0 / 219.0 ) 418567<br>( 263.0 / 69.0 ) 4257 | ( 4.84 , 1.00 )<br>( 0.00 , N/A , 0.2) | 742.8<br>31.5 | 0.0102<br>92.6<br>84.4 | 1.6380 | N/A | 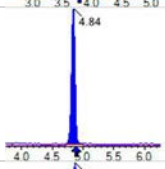 | 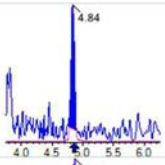 | |
| PFHxA | ( 313.0 / 269.0 ) 434489<br>( 313.0 / 119.0 ) 44950 | ( 6.06 , 1.00 )<br>( 0.00 , N/A , 0.0) | 525.2<br>283.7 | 0.1035<br>93.1<br>89.7 | 1.4790 | N/A | 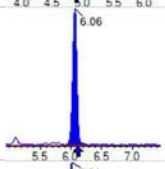 | 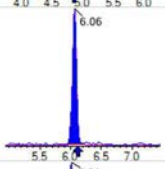 | |
| PFHpA | ( 363.0 / 319.0 ) 237876<br>( 363.0 / 169.0 ) 73240 | ( 7.21 , 1.00 )<br>( 0.00 , N/A , 0.0) | 452.4<br>428.1 | 0.3079<br>98.8<br>105.0 | 0.7490 | N/A | 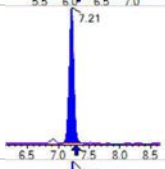 | 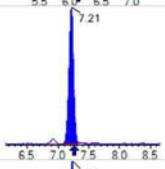 | |
| PFOA | ( 413.0 / 369.0 ) 974521<br>( 413.0 / 169.0 ) 377963 | ( 8.23 , 1.00 )<br>( 0.00 , N/A , 0.0) | 507.0<br>526.2 | 0.3878<br>107.2<br>112.5 | 2.0190 | N/A | 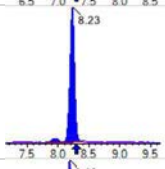 | 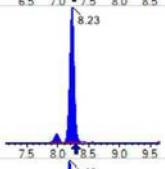 | MI5 DG 2024-03-15 |
| PFNA | ( 463.0 / 419.0 ) 94910<br>( 463.0 / 169.0 ) 21575 | ( 9.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 129.8<br>65.2 | 0.2273<br>86.6<br>90.1 | 0.2850 | N/A | 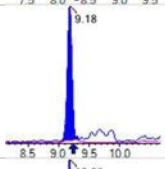 | 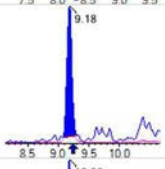 | |
| PFDA | ( 513.0 / 469.0 ) 246580<br>( 513.0 / 169.0 ) 30845 | ( 10.08 , 1.00 )<br>( 0.00 , N/A , -0.3) | 794.3<br>303.0 | 0.1251<br>106.6<br>108.0 | 0.7760 | N/A | 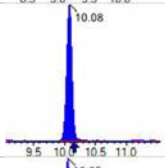 | 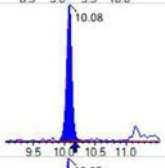 | |
| PFUnA | ( 563.0 / 519.0 ) 26851<br>( 563.0 / 169.0 ) 3620 | ( 10.95 , 1.00 )<br>( 0.00 , N/A , 0.3) | 183.7<br>31.3 | 0.1348<br>91.0<br>91.0 | 0.0720 | N/A | 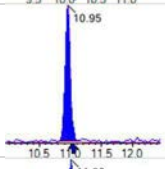 | 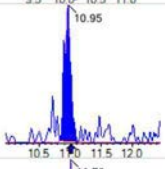 | |
| PFDoA | ( 613.0 / 569.0 ) 29835<br>( 613.0 / 169.0 ) 3544 | ( 11.80 , 1.00 )<br>( 0.00 , N/A , 0.3) | 146.3<br>53.7 | 0.1188<br>75.1<br>79.0 | 0.0710 | N/A | 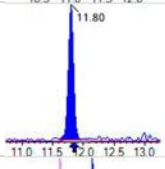 | 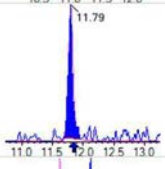 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 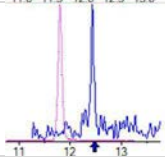 | 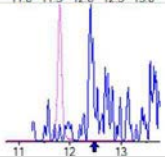 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (20)
Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 7691<br>( 713.0 / 169.0 ) 2320 | ( 12.91 , 1.00 )<br>( -0.01 , N/A , 0.1) | 43.8<br>23.5 | 0.3017<br>116.1<br>119.6 | 0.0300 | N/A | 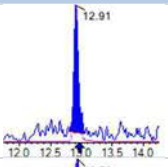 | 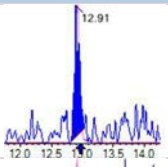 | |
| PFHxDA | ( 813.0 / 769.0 ) 3105<br>( 813.0 / 169.0 ) 496 | ( 13.73 , 1.00 )<br>( 0.01 , N/A , -0.4) | 18.6<br>8.0 | 0.1599<br>73.7<br>71.8 | 0.0190 | N/A | 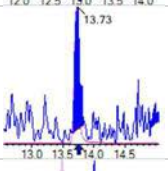 | 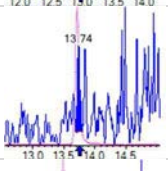 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 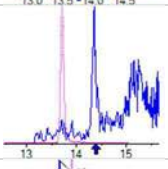 | 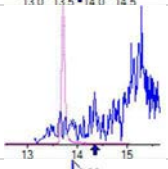 | |
| PFBS | ( 299.0 / 80.0 ) 975256<br>( 299.0 / 99.0 ) 50860 | ( 6.18 , 0.97 )<br>( -0.21 , N/A , -12.2) | 352.7<br>70.6 | 0.0522<br>7.3<br>7.1 | 1.9970 | N/A | 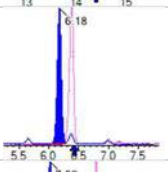 | 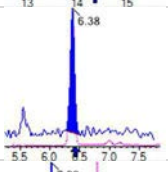 | IR1, |
| PFPeS | ( 349.0 / 80.0 ) 66847<br>( 349.0 / 99.0 ) 29310 | ( 7.62 , 0.88 )<br>( N/A , -0.05 , -0.1) | 27.2<br>82.0 | 0.4385<br>128.9<br>126.8 | 0.0550 | N/A | 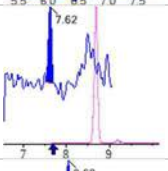 | 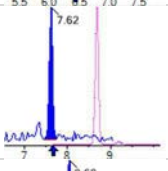 | |
| PFHxS | ( 399.0 / 80.0 ) 528726<br>( 399.0 / 99.0 ) 116480 | ( 8.68 , 1.00 )<br>( 0.00 , N/A , 0.0) | 215.7<br>311.9 | 0.2203<br>70.5<br>65.6 | 0.3890 | N/A | 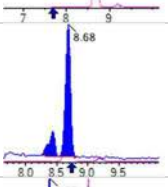 | 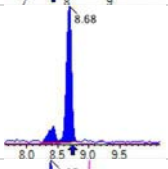 | MI1 DG 2024-03-15 |
| PFHpS | ( 449.0 / 80.0 ) 34145<br>( 449.0 / 99.0 ) 12525 | ( 9.65 , 0.92 )<br>( N/A , -0.06 , -0.1) | 36.2<br>36.0 | 0.3668<br>137.3<br>135.5 | 0.0400 | N/A | 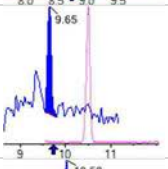 | 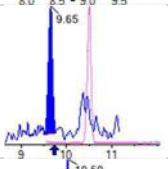 | |
| PFOS | ( 499.0 / 80.0 ) 1280296<br>( 499.0 / 99.0 ) 299456 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 367.9<br>834.2 | 0.2339<br>98.9<br>100.8 | 1.4760 | N/A | 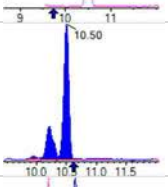 | 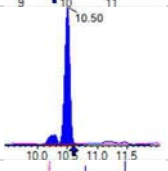 | MI1 DG 2024-03-15 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 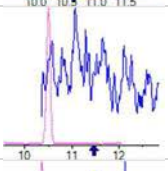 | 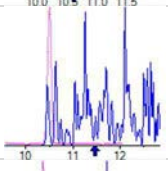 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 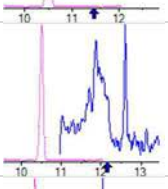 | 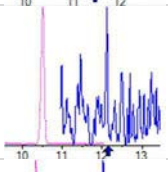 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 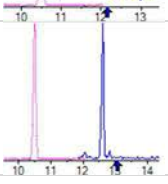 | 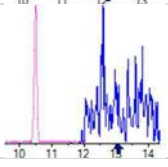 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 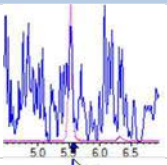 | 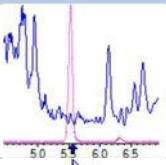 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>69091<br>( 427.0 / 81.0 )<br>81913 | ( 7.65 , 1.00 )<br>( 0.00 , N/A , -0.1) | 600.8<br>82.8 | 1.1856<br>93.3<br>95.7 | 0.1550 | N/A | 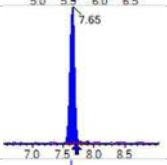 | 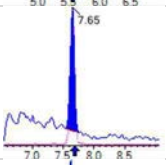 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 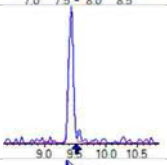 | 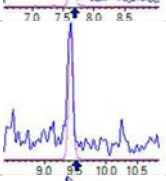 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>9938<br>( 627.0 / 81.0 )<br>13012 | ( 11.07 , 1.00 )<br>( 0.01 , N/A , 0.2) | 119.6<br>31.9 | 1.3093<br>96.9<br>101.2 | 0.0560 | N/A | 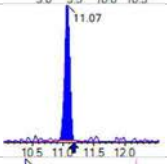 | 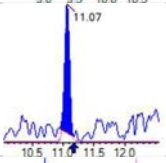 | |
| PFBSA | ( 297.9 / 78.0 )<br>46596<br>( 297.9 / 278.0 )<br>75 | ( 8.05 , 0.57 )<br>( N/A , -0.03 , 0.7) | 295.3<br>1.0 | 0.0016<br>115.2<br>112.5 | 0.1370 | N/A | 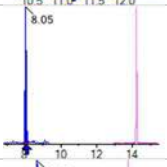 | 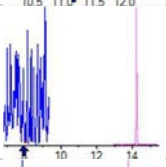 | |
| PFHxSA | ( 397.9 / 78.0 )<br>28692<br>( 397.9 / 378.0 )<br>127 | ( 10.95 , 0.75 )<br>( N/A , 0.00 , 0.6) | 125.4<br>2.3 | 0.0044<br>116.6<br>107.8 | 0.0740 | N/A | 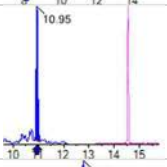 | 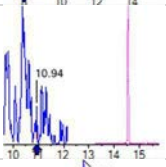 | |
| PFOSA | ( 498.0 / 78.0 )<br>104216<br>( 498.0 / 478.0 )<br>1548 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , -0.4) | 279.6<br>16.0 | 0.0149<br>102.9<br>105.8 | 0.1510 | N/A | 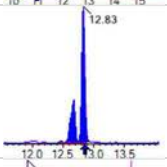 | 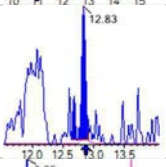 | MI5 DG 2024-03-15 |
| TFSI | ( 279.7 / 147.0 )<br>133768<br>( 279.7 / 211.0 )<br>11832 | ( 8.26 , 0.64 )<br>( N/A , -0.06 , 0.5) | 40.2<br>19.5 | 0.0885<br>107.3<br>107.4 | 0.0910 | N/A | 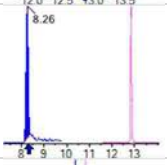 | 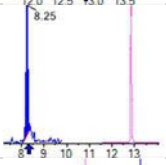 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 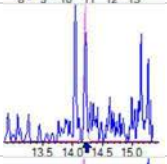 | 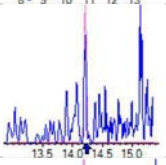 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 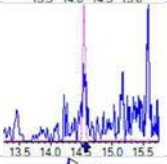 | 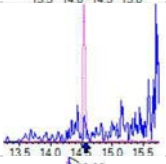 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>18373<br>( 570.0 / 483.0 )<br>7348 | ( 10.29 , 1.00 )<br>( 0.01 , N/A , -0.8) | 336.0<br>4152.5 | 0.3999<br>92.4<br>90.3 | 0.1380 | N/A | 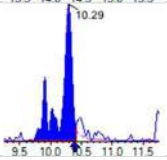 | 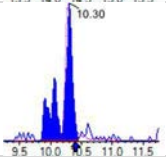 | MI2 DG 2024-03-15 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (20)
Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21780<br>( 584.0 / 526.0 ) 12715 | ( 10.85 , 1.00 )<br>( 0.01 , N/A , -0.5) | 487.2<br>133.6 | 0.5838<br>94.3<br>98.7 | 0.1110 | N/A | 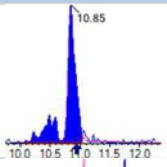 | 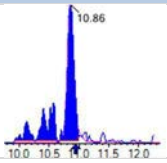 | MI2 DG 2024-03-15 |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 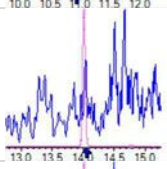 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 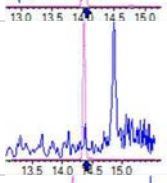 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 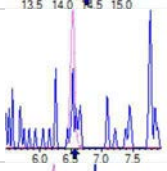 | 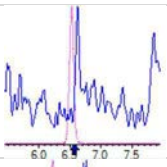 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 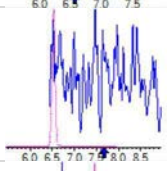 | 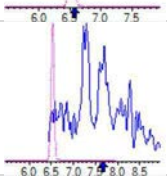 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 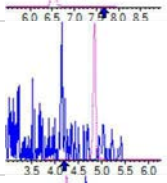 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 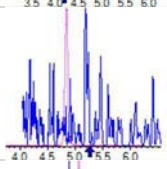 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 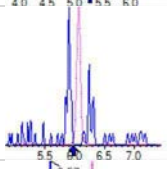 | 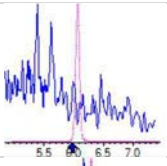 | |
| PFECHS | ( 461.0 / 98.9 ) 9632<br>( 461.0 / 381.2 ) 5491 | ( 9.57 , 0.91 )<br>( N/A , -0.06 , -5.8) | 32.2<br>15.4 | 0.5701<br>146.0<br>147.6 | 0.0200 | N/A | 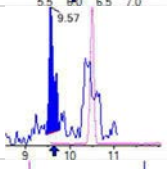 | 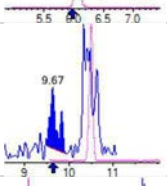 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 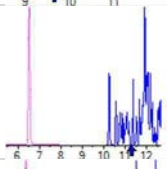 | 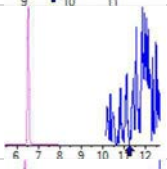 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 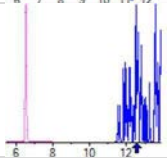 | 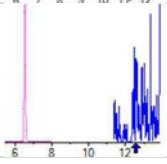 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 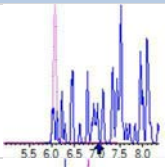 | 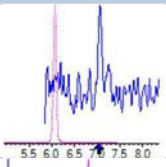 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 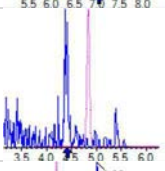 | 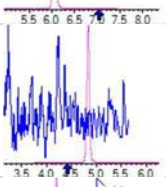 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 78206<br>( 341.0 / 217.0 ) 117891 | ( 6.93 , 1.14 ) ( N/A , -0.05 , 0.2) | 324.6<br>363.5 | 1.5074<br>100.7<br>103.7 | 1.0980 | N/A | 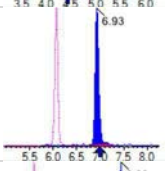 | 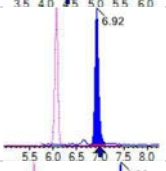 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 57688<br>( 441.0 / 337.0 ) 48182 | ( 9.33 , 1.54 ) ( N/A , -0.06 , 0.4) | 382.8<br>542.7 | 0.8352<br>93.8<br>93.7 | 0.5510 | N/A | 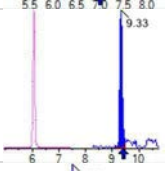 | 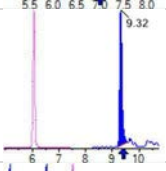 | MI2 DG 2024-03-15 |
| 6:2FTUCA | ( 357.2 / 293.0 ) 10135<br>( 357.2 / 243.0 ) 1253 | ( 6.79 , 1.00 ) ( -0.01 , N/A , -0.3) | 51.3<br>6.7 | 0.1236<br>117.1<br>119.7 | 0.0320 | N/A | 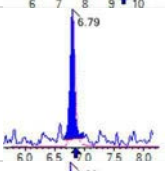 | 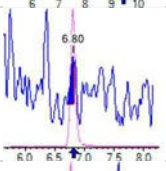 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 16126<br>( 457.2 / 343.0 ) 325 | ( 8.86 , 1.00 ) ( -0.01 , N/A , 0.1) | 62.1<br>3.2 | 0.0201<br>51.5<br>48.8 | 0.0690 | N/A | 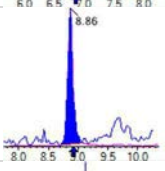 | 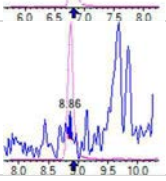 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 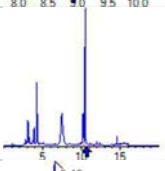 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 249012 | ( 3.46 , N/A ) ( N/A , -0.33 , N/A ) | 1013.7 | N/A | 0.8270<br>[ 1.0000 ] | 82.7%<br>{ 84.5% } | 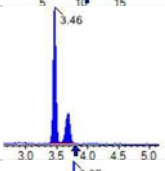 | | MI4 DAG 2024-03-15 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 129535 | ( 6.07 , N/A ) ( N/A , -0.04 , N/A ) | 3341.0 | N/A | 0.8420<br>[ 1.0000 ] | 84.2%<br>{ 83.5% } | 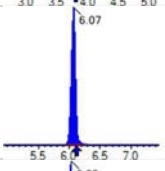 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 412486 | ( 8.23 , N/A ) ( N/A , -0.04 , N/A ) | 2440.2 | N/A | 0.9250<br>[ 1.0000 ] | 92.5%<br>{ 89.3% } | 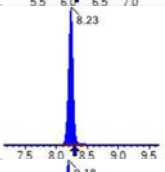 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 309302 | ( 9.18 , N/A ) ( N/A , -0.05 , N/A ) | 521.7 | N/A | 0.9250<br>[ 1.0000 ] | 92.5%<br>{ 91.1% } | 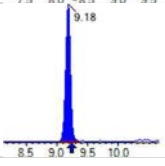 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246929 | ( 10.08 , N/A ) ( N/A , -0.06 , N/A ) | 1989.4 | N/A | 0.7450 [ 1.0000 ] | 74.5% { 73.8% } | 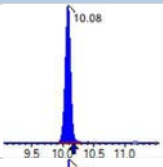 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 959411 | ( 8.69 , N/A ) ( N/A , -0.05 , N/A ) | 2528.0 | N/A | 0.8590 [ 1.0000 ] | 85.9% { 83.9% } | 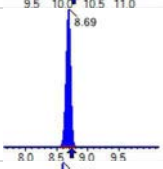 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 667664 | ( 10.50 , N/A ) ( N/A , -0.10 , N/A ) | 480.7 | N/A | 0.6840 [ 1.0000 ] | 68.4% { 70.3% } | 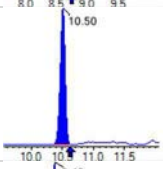 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1629879 | ( 3.46 , N/A ) ( N/A , -0.33 , N/A ) | 18969.0 | N/A | 5.9350 [ 8.0000 ] | 74.2% { 61.6% } | 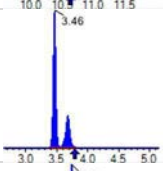 | | MI2 DAG 2024-03-15 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1003774 | ( 4.84 , N/A ) ( N/A , -0.03 , N/A ) | 5054.3 | N/A | 4.3190 [ 4.0000 ] | 108.0% { 85.3% } | 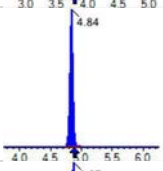 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 606402 | ( 6.07 , N/A ) ( N/A , -0.04 , N/A ) | 5521.0 | N/A | 2.1800 [ 2.0000 ] | 109.0% { 87.9% } | 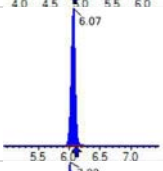 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 644960 | ( 7.22 , N/A ) ( N/A , -0.04 , N/A ) | 3841.2 | N/A | 2.2200 [ 2.0000 ] | 111.0% { 89.9% } | 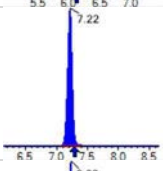 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 949526 | ( 8.23 , N/A ) ( N/A , -0.05 , N/A ) | 2383.3 | N/A | 2.1830 [ 2.0000 ] | 109.2% { 92.8% } | 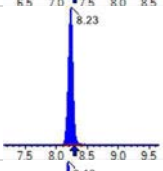 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 332061 | ( 9.18 , N/A ) ( N/A , -0.05 , N/A ) | 1349.7 | N/A | 1.1120 [ 1.0000 ] | 111.2% { 99.2% } | 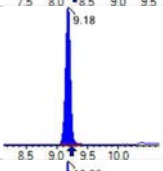 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 319054 | ( 10.08 , N/A ) ( N/A , -0.07 , N/A ) | 956.0 | N/A | 1.1200 [ 1.0000 ] | 112.0% { 82.2% } | 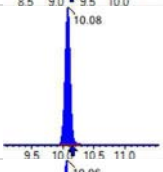 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 396658 | ( 10.96 , N/A ) ( N/A , -0.06 , N/A ) | 990.0 | N/A | 1.1450 [ 1.0000 ] | 114.5% { 82.3% } | 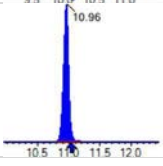 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409978 | ( 11.80 , N/A ) ( N/A , -0.04 , N/A ) | 1359.1 | N/A | 1.1780 [ 1.0000 ] | 117.8% { 86.0% } | 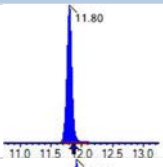  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 272136 | ( 12.92 , N/A ) ( N/A , -0.03 , N/A ) | 1323.8 | N/A | 0.8980 [ 1.0000 ] | 89.8% { 62.8% } | 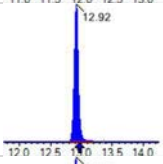  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 336763 | ( 13.72 , N/A ) ( N/A , -0.03 , N/A ) | 1699.7 | N/A | 1.3080 [ 2.0000 ] | 65.4% { 48.6% } | 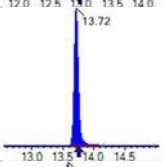  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1878732 | ( 6.38 , N/A ) ( N/A , -0.04 , N/A ) | 315.1 | N/A | 2.0100 [ 2.0000 ] | 100.5% { 84.7% } | 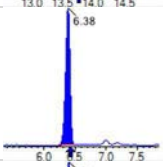  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1535927 | ( 8.69 , N/A ) ( N/A , -0.05 , N/A ) | 1227.1 | N/A | 2.1880 [ 2.0000 ] | 109.4% { 93.1% } | 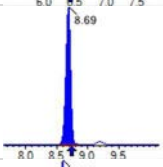  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1500941 | ( 10.50 , N/A ) ( N/A , -0.10 , N/A ) | 514.7 | N/A | 2.1120 [ 2.0000 ] | 105.6% { 71.3% } | 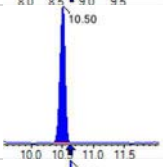  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 559657 | ( 5.53 , N/A ) ( N/A , -0.04 , N/A ) | 81.8 | N/A | 6.6990 [ 4.0000 ] | 167.5% { 153.6% } | 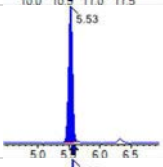  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2008458 | ( 7.65 , N/A ) ( N/A , -0.04 , N/A ) | 1208.7 | N/A | 7.7410 [ 4.0000 ] | 193.5% { 190.5% } | 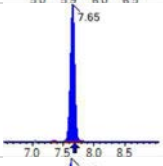  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1192538 | ( 9.43 , N/A ) ( N/A , -0.07 , N/A ) | 1064.3 | N/A | 4.6140 [ 4.0000 ] | 115.3% { 107.4% } | 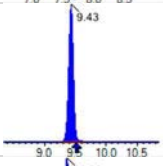  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 1736305 | ( 11.06 , N/A ) ( N/A , -0.09 , N/A ) | 1317.9 | N/A | 5.8520 [ 8.0000 ] | 73.1% { 68.8% } | 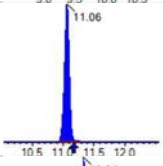  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1413599 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 2580.6 | N/A | 1.8350 [ 2.0000 ] | 91.8% { 62.4% } | 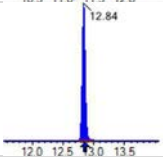  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 148163 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1167.7 | N/A | 1.0420 [ 2.0000 ] | 52.1% { 35.6% } | 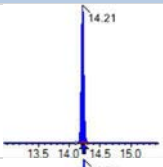 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 152159 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 1146.6 | N/A | 0.9310 [ 2.0000 ] | 46.6% { 31.6% } | 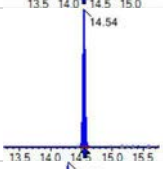 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 563847 | ( 10.28 , N/A ) ( N/A , -0.10 , N/A ) | 1908.4 | N/A | 3.0980 [ 4.0000 ] | 77.4% { 52.9% } | 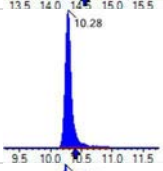 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 815767 | ( 10.84 , N/A ) ( N/A , -0.07 , N/A ) | 1680.9 | N/A | 4.7210 [ 4.0000 ] | 118.0% { 79.7% } | 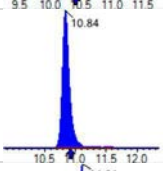 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 767936 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1556.6 | N/A | 11.5550 [ 20.0000 ] | 57.8% { 38.5% } | 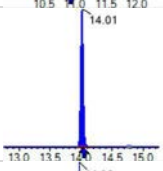 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 847083 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2500.8 | N/A | 10.5220 [ 20.0000 ] | 52.6% { 34.8% } | 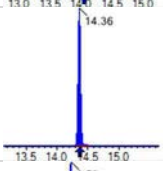 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1094073 | ( 6.53 , N/A ) ( N/A , -0.04 , N/A ) | 2194.8 | N/A | 9.1510 [ 8.0000 ] | 114.4% { 91.7% } | 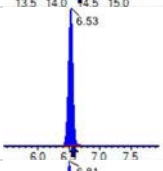 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 590595 | ( 6.81 , N/A ) ( N/A , -0.04 , N/A ) | 1525.7 | N/A | 2.6970 [ 2.0000 ] | 134.8% { 98.4% } | 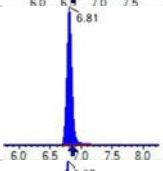 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 554033 | ( 8.87 , N/A ) ( N/A , -0.05 , N/A ) | 576.5 | N/A | 2.7100 [ 2.0000 ] | 135.5% { 103.7% } | 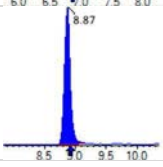 | | |

# ANALYSIS DATA SHEETL

## MW-24-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-02- | File ID: | S2024-03-14A (21)- |
| Sampled:- | 03/11/24 08:55- | Prepared:- | 03/13/24 13:29 | Analyzed:- | 03/14/24 19:21 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.554 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | 1.6- | 0.19- | 1.5 | |
| PFPeA- | 2.2- | 0.059- | 0.73 | |
| PFHxA- | 1.5- | 0.050- | 0.36 | |
| PFHpA- | 0.88- | 0.037- | 0.36 | |
| PFOA- | 0.95- | 0.14- | 0.36 | MI5 |
| PFNA- | ND- | 0.074- | 0.36 | IR2, U |
| PFDA- | 0.27- | 0.092- | 0.36 | MI2, J |
| PFUnA- | ND- | 0.15- | 0.36 | U |
| PFDoA- | ND- | 0.10- | 0.36 | U |
| PFTrDA- | ND- | 0.19- | 0.36 | U |
| PFTeDA- | ND- | 0.18- | 0.36 | U |
| PFHxDA- | ND- | 0.18- | 0.36 | U |
| PFODA- | ND- | 0.18- | 0.36 | U |
| PFBS- | 0.80- | 0.033- | 0.36 | |
| PFPeS- | 0.51- | 0.057- | 0.36 | |
| PFHxS- | 2.4- | 0.029- | 0.36 | |
| PFHpS- | ND- | 0.047- | 0.36 | U |
| PFOS- | 0.61- | 0.058- | 0.36 | |
| PFNS- | ND- | 0.11- | 0.36 | U |
| PFDS- | ND- | 0.14- | 0.36 | U |
| PFDoS- | ND- | 0.11- | 0.36 | U |
| 4:2FTS- | ND- | 0.26- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.075- | 1.5 | U |
| 10:2FTS- | ND- | 0.36- | 1.5 | U |
| PFOSA- | ND- | 0.095- | 0.36 | MI5, U |
| NMeFOSA- | ND- | 0.43- | 1.5 | U |
| NEtFOSA- | ND- | 0.38- | 1.5 | U |
| NMeFOSAA- | ND- | 0.096- | 0.36 | U |
| NEtFOSAA- | ND- | 0.10- | 0.36 | MI2, U |

# ANALYSIS DATA SHEETL

MW-24-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project:- | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-02- | File ID:- | S2024-03-14A (21)- |
| Sampled:- | 03/11/24 08:55- | Prepared:- | 03/13/24 13:29- | Analyzed:- | 03/14/24 19:21- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.554 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.95- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.099- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.5- | IR1, U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (21)
Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 71299<br>( 163.0 / 69.0 ) 1778 | ( 2.80 , 0.75 )<br>( N/A , -0.02 , -0.4) | 331.5<br>105.3 | 0.0249<br>99.5<br>98.5 | 0.2450 | N/A | 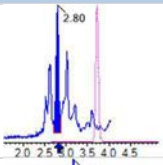 | 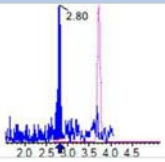 | |
| PFBA | ( 213.0 / 169.0 ) 137729 | ( 3.72 , 1.00 )<br>( 0.00 , N/A , 0.0) | 226.0 | N/A<br>0.0<br>0.0 | 0.4430 | N/A | 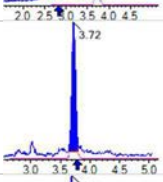 | | |
| PFPeA | ( 263.0 / 219.0 ) 185573<br>( 263.0 / 69.0 ) 1647 | ( 4.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 645.5<br>27.7 | 0.0089<br>80.8<br>73.7 | 0.6090 | N/A | 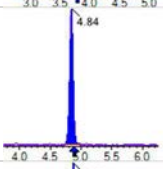 | 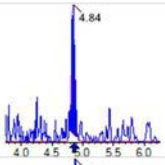 | |
| PFHxA | ( 313.0 / 269.0 ) 133489<br>( 313.0 / 119.0 ) 12495 | ( 6.07 , 1.00 )<br>( 0.00 , N/A , 0.1) | 546.4<br>164.5 | 0.0936<br>84.2<br>81.2 | 0.4060 | N/A | 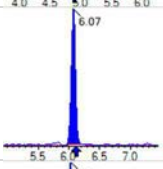 | 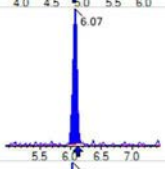 | |
| PFHpA | ( 363.0 / 319.0 ) 87186<br>( 363.0 / 169.0 ) 26485 | ( 7.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 367.9<br>268.3 | 0.3038<br>97.5<br>103.6 | 0.2410 | N/A | 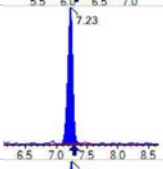 | 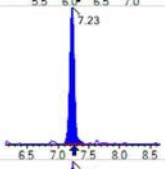 | |
| PFOA | ( 413.0 / 369.0 ) 132527<br>( 413.0 / 169.0 ) 52981 | ( 8.24 , 1.00 )<br>( 0.00 , N/A , 0.1) | 202.7<br>256.5 | 0.3998<br>110.5<br>116.0 | 0.2620 | N/A | 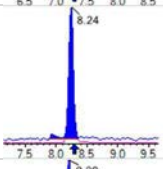 | 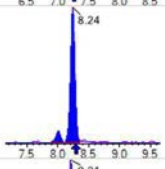 | MI5 DG 2024-03-15 |
| PFNA | ( 463.0 / 419.0 ) 6272<br>( 463.0 / 169.0 ) 2711 | ( 9.20 , 1.00 )<br>( 0.00 , N/A , -1.0) | 25.3<br>27.6 | 0.4322<br>164.7<br>171.3 | 0.0180 | N/A | 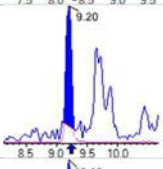 | 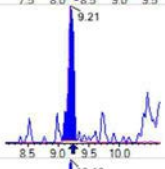 | IR2, |
| PFDA | ( 513.0 / 469.0 ) 28786<br>( 513.0 / 169.0 ) 3503 | ( 10.10 , 1.00 )<br>( 0.00 , N/A , 0.0) | 194.3<br>71.8 | 0.1217<br>103.7<br>105.1 | 0.0740 | N/A | 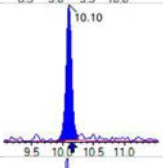 | 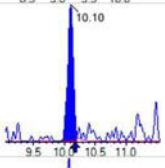 | MI2 DG 2024-03-15 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 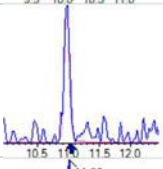 | 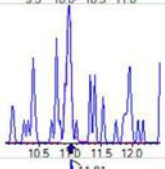 | |
| PFDoA | ( 613.0 / 569.0 ) 12074<br>( 613.0 / 169.0 ) 1591 | ( 11.80 , 1.00 )<br>( 0.00 , N/A , -0.3) | 64.3<br>29.8 | 0.1318<br>83.3<br>87.6 | 0.0240 | N/A | 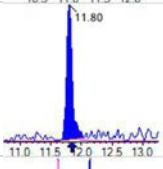 | 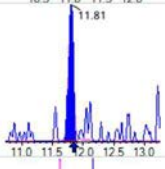 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 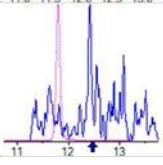 | 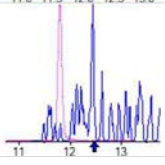 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (21)
Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 5254<br>( 713.0 / 169.0 ) 1362 | ( 12.91 , 1.00 )<br>( -0.01 , N/A , -0.7) | 37.0<br>19.0 | 0.2592<br>99.7<br>102.8 | 0.0140 | N/A | 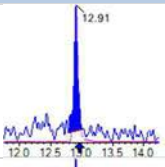 | 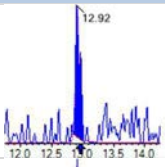 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 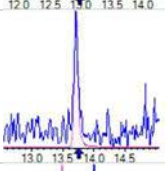 | 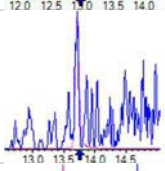 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 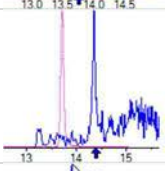 | 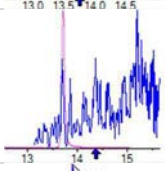 | |
| PFBS | ( 299.0 / 80.0 ) 119804<br>( 299.0 / 99.0 ) 87475 | ( 6.38 , 1.00 )<br>( 0.00 , N/A , 0.3) | 235.5<br>341.5 | 0.7302<br>102.7<br>99.0 | 0.2210 | N/A | 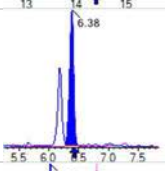 | 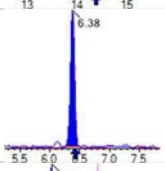 | |
| PFPeS | ( 349.0 / 80.0 ) 195142<br>( 349.0 / 99.0 ) 72258 | ( 7.63 , 0.88 )<br>( N/A , -0.03 , -0.1) | 187.7<br>279.8 | 0.3703<br>108.9<br>107.1 | 0.1390 | N/A | 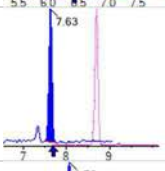 | 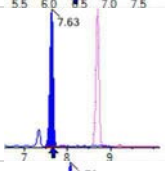 | |
| PFHxS | ( 399.0 / 80.0 ) 1034508<br>( 399.0 / 99.0 ) 283800 | ( 8.70 , 1.00 )<br>( 0.00 , N/A , 0.0) | 816.3<br>1381.6 | 0.2743<br>87.7<br>81.7 | 0.6620 | N/A | 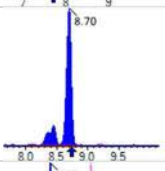 | 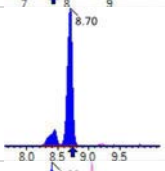 | |
| PFHpS | ( 449.0 / 80.0 ) 12882<br>( 449.0 / 99.0 ) 3248 | ( 9.67 , 0.92 )<br>( N/A , -0.04 , -0.7) | 29.9<br>16.9 | 0.2521<br>94.4<br>93.1 | 0.0110 | N/A | 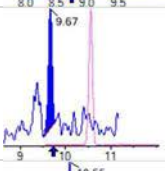 | 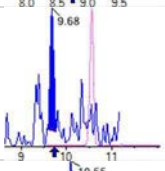 | |
| PFOS | ( 499.0 / 80.0 ) 193969<br>( 499.0 / 99.0 ) 30995 | ( 10.55 , 1.00 )<br>( 0.00 , N/A , 0.0) | 153.6<br>314.9 | 0.1598<br>67.6<br>68.8 | 0.1660 | N/A | 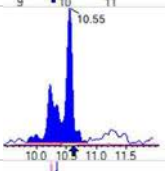 | 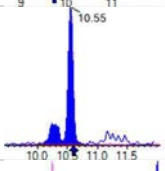 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 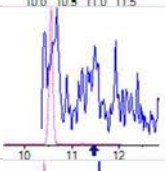 | 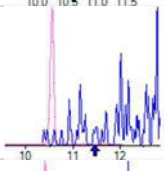 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 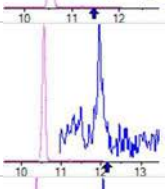 | 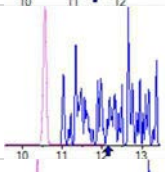 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 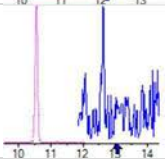 | 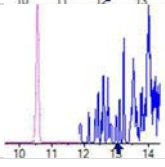 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 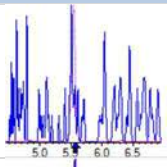 | 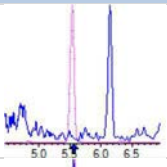 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 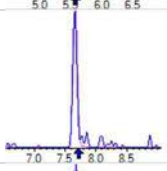 | 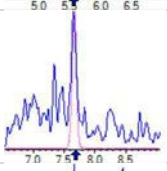 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 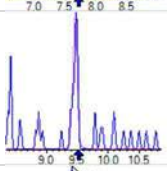 | 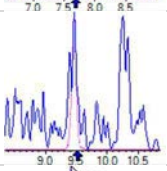 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15878<br>( 627.0 / 81.0 )<br>20160 | ( 11.11 , 1.00 )<br>( 0.01 , N/A , 0.0) | 148.3<br>56.9 | 1.2697<br>93.9<br>98.2 | 0.0610 | N/A | 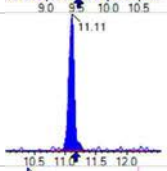 | 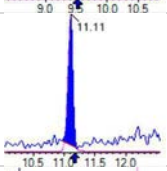 | |
| PFBSA | ( 297.9 / 78.0 )<br>35799<br>( 297.9 / 278.0 )<br>N/A | ( 8.06 , 0.57 )<br>( N/A , -0.02 , #Value!) | 322.1<br>N/A | N/A<br>0.0<br>0.0 | 0.1110 | N/A | 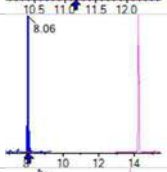 | 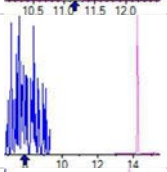 | |
| PFHxSA | ( 397.9 / 78.0 )<br>9454<br>( 397.9 / 378.0 )<br>N/A | ( 10.94 , 0.75 )<br>( N/A , -0.01 , #Value!) | 83.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0240 | N/A | 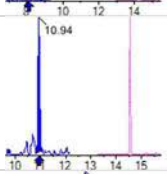 | 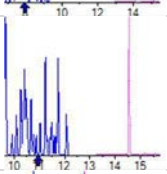 | |
| PFOSA | ( 498.0 / 78.0 )<br>11714<br>( 498.0 / 478.0 )<br>162 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , -0.7) | 103.7<br>9.5 | 0.0138<br>95.8<br>98.5 | 0.0170 | N/A | 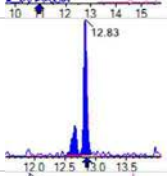 | 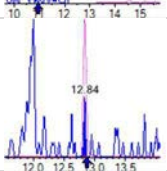 | MI5 DG 2024-03-15 |
| TFSI | ( 279.7 / 147.0 )<br>81392<br>( 279.7 / 211.0 )<br>6449 | ( 8.27 , 0.64 )<br>( N/A , -0.04 , 0.1) | 36.2<br>14.2 | 0.0792<br>96.1<br>96.2 | 0.0550 | N/A | 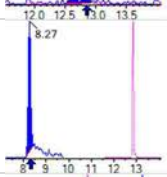 | 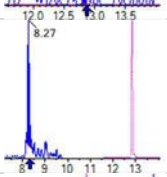 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 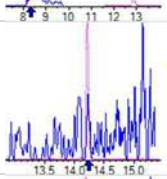 | 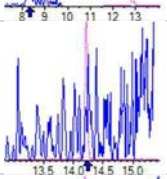 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 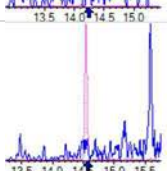 | 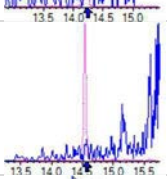 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4050<br>( 570.0 / 483.0 )<br>1942 | ( 10.36 , 1.00 )<br>( 0.02 , N/A , 1.0) | 485750.3<br>1459.1 | 0.4795<br>110.7<br>108.3 | 0.0150 | N/A | 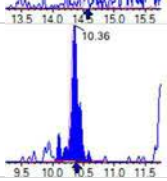 | 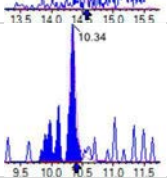 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (21)
Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>3118<br>( 584.0 / 526.0 )<br>2070 | ( 10.85 , 1.00 )<br>( -0.02 , N/A , -4.1) | 1178.9<br>193.9 | 0.6641<br>107.3<br>112.2 | 0.0120 | N/A | 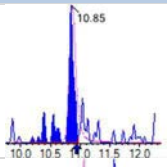 | 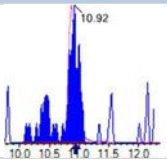 | MI2 DG 2024-03-15 |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 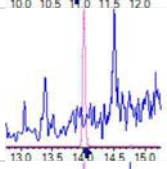 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 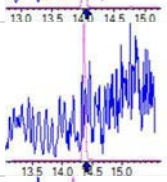 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 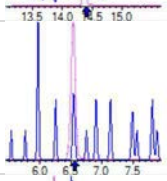 | 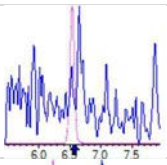 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 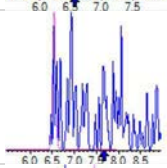 | 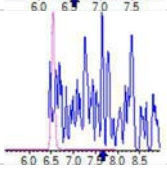 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 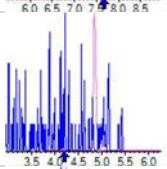 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 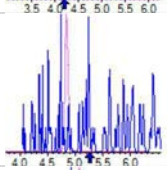 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 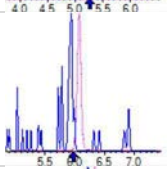 | 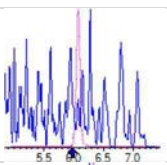 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 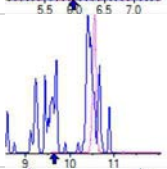 | 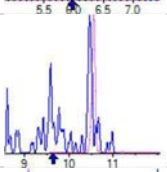 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 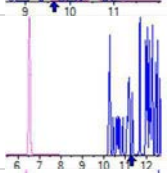 | 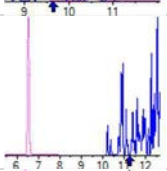 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 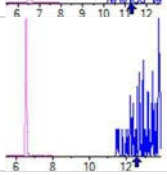 | 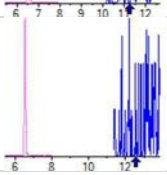 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (21)
Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 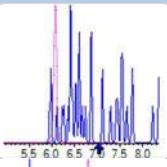 | 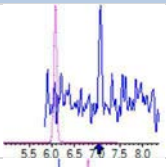 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 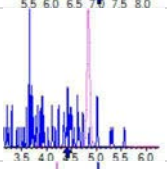 | 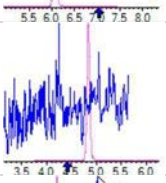 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) 5829 | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>28.9 | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 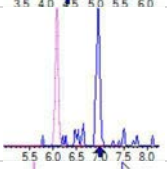 | 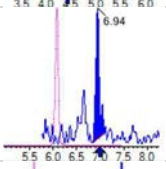 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5498<br>( 441.0 / 337.0 ) N/A | ( 9.37 , 1.54 ) ( N/A , -0.02 , #Value!) | 205.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0470 | N/A | 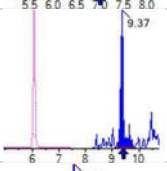 | 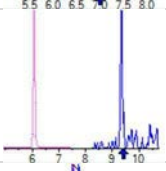 | IR1, |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3514<br>( 357.2 / 243.0 ) 581 | ( 6.82 , 1.00 ) ( 0.00 , N/A , 1.1) | 31.8<br>8.8 | 0.1653<br>156.6<br>160.0 | 0.0150 | N/A | 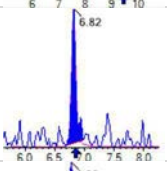 | 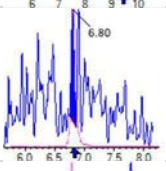 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5036<br>( 457.2 / 343.0 ) 209 | ( 8.88 , 1.00 ) ( -0.01 , N/A , -6.2) | 52.5<br>5.0 | 0.0414<br>105.9<br>100.3 | 0.0280 | N/A | 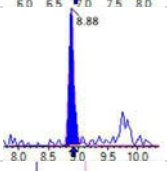 | 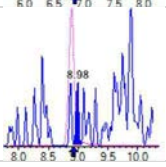 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 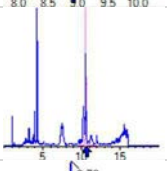 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 306683 | ( 3.72 , N/A ) ( N/A , -0.07 , N/A ) | 1877.3 | N/A | 1.0180 [ 1.0000 ] | 101.8% { 104.0% } | 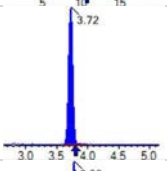 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145680 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 15373.7 | N/A | 0.9470 [ 1.0000 ] | 94.7% { 93.9% } | 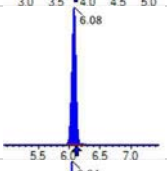 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 440932 | ( 8.24 , N/A ) ( N/A , -0.03 , N/A ) | 5337.7 | N/A | 0.9880 [ 1.0000 ] | 98.8% { 95.5% } | 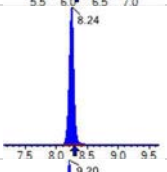 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 327519 | ( 9.20 , N/A ) ( N/A , -0.03 , N/A ) | 882.2 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 96.5% } | 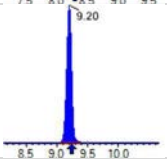 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 314276 | ( 10.11 , N/A ) ( N/A , -0.04 , N/A ) | 3520.4 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 93.9% } | 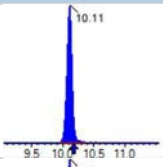 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1064631 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 5356.7 | N/A | 0.9530 [ 1.0000 ] | 95.3% { 93.1% } | 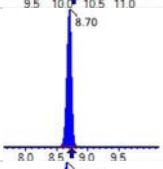 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 904600 | ( 10.56 , N/A ) ( N/A , -0.05 , N/A ) | 941.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 95.2% } | 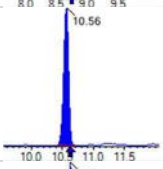 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2630315 | ( 3.72 , N/A ) ( N/A , -0.07 , N/A ) | 39463.6 | N/A | 7.7770 [ 8.0000 ] | 97.2% { 99.4% } | 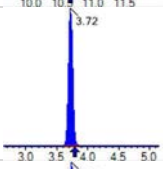 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1197486 | ( 4.84 , N/A ) ( N/A , -0.03 , N/A ) | 6187.7 | N/A | 4.5820 [ 4.0000 ] | 114.5% { 101.8% } | 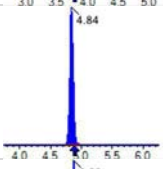 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 678424 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 9195.3 | N/A | 2.1690 [ 2.0000 ] | 108.4% { 98.4% } | 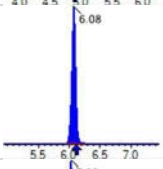 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 734551 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 4662.2 | N/A | 2.2480 [ 2.0000 ] | 112.4% { 102.3% } | 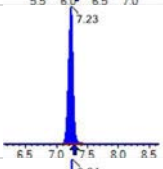 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 993586 | ( 8.24 , N/A ) ( N/A , -0.03 , N/A ) | 2271.0 | N/A | 2.1370 [ 2.0000 ] | 106.9% { 97.1% } | 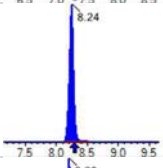 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 349365 | ( 9.20 , N/A ) ( N/A , -0.04 , N/A ) | 2284.7 | N/A | 1.1050 [ 1.0000 ] | 110.5% { 104.4% } | 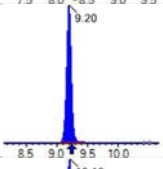 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 392285 | ( 10.10 , N/A ) ( N/A , -0.04 , N/A ) | 1163.3 | N/A | 1.0820 [ 1.0000 ] | 108.2% { 101.0% } | 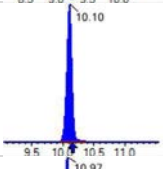 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 502378 | ( 10.97 , N/A ) ( N/A , -0.04 , N/A ) | 1018.0 | N/A | 1.1390 [ 1.0000 ] | 113.9% { 104.3% } | 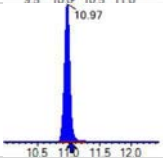 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (21)
Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 483305 | ( 11.80 , N/A ) ( N/A , -0.04 , N/A ) | 1509.1 | N/A | 1.0910 [ 1.0000 ] | 109.2% { 101.4% } | 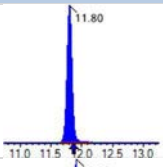 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 386653 | ( 12.92 , N/A ) ( N/A , -0.03 , N/A ) | 1443.6 | N/A | 1.0020 [ 1.0000 ] | 100.2% { 89.3% } | 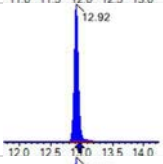 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 561046 | ( 13.72 , N/A ) ( N/A , -0.03 , N/A ) | 3027.6 | N/A | 1.7120 [ 2.0000 ] | 85.6% { 81.0% } | 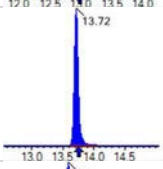 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2086050 | ( 6.39 , N/A ) ( N/A , -0.03 , N/A ) | 462.4 | N/A | 2.0110 [ 2.0000 ] | 100.6% { 94.0% } | 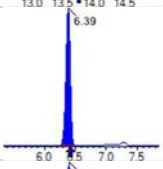 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1764360 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 2446.3 | N/A | 2.2650 [ 2.0000 ] | 113.2% { 107.0% } | 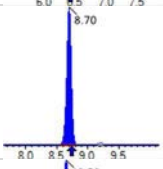 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2018287 | ( 10.56 , N/A ) ( N/A , -0.05 , N/A ) | 882.9 | N/A | 2.0960 [ 2.0000 ] | 104.8% { 95.9% } | 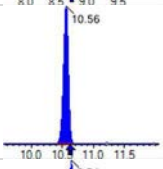 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 486869 | ( 5.54 , N/A ) ( N/A , -0.03 , N/A ) | 78.7 | N/A | 5.2520 [ 4.0000 ] | 131.3% { 133.6% } | 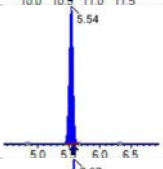 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1549726 | ( 7.67 , N/A ) ( N/A , -0.03 , N/A ) | 2180.4 | N/A | 5.3830 [ 4.0000 ] | 134.6% { 147.0% } | 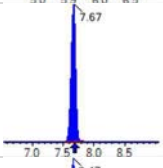 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1356729 | ( 9.47 , N/A ) ( N/A , -0.03 , N/A ) | 1047.5 | N/A | 4.7300 [ 4.0000 ] | 118.3% { 122.2% } | 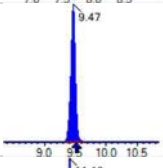 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2546875 | ( 11.10 , N/A ) ( N/A , -0.05 , N/A ) | 1434.6 | N/A | 7.7350 [ 8.0000 ] | 96.7% { 100.9% } | 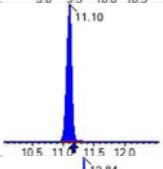 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1438291 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1840.4 | N/A | 1.3780 [ 2.0000 ] | 68.9% { 63.5% } | 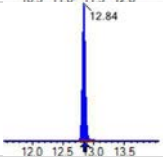 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 139935 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1312.5 | N/A | 0.7260 [ 2.0000 ] | 36.3% { 33.6% } | 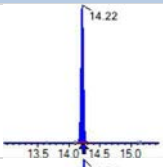  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 152472 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 1200.4 | N/A | 0.6890 [ 2.0000 ] | 34.4% { 31.7% } | 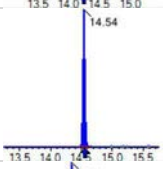  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1113735 | ( 10.34 , N/A ) ( N/A , -0.04 , N/A ) | 2205.0 | N/A | 4.5160 [ 4.0000 ] | 112.9% { 104.4% } | 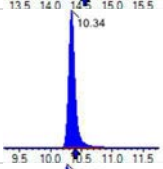  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1108063 | ( 10.87 , N/A ) ( N/A , -0.04 , N/A ) | 1702.2 | N/A | 4.7330 [ 4.0000 ] | 118.3% { 108.3% } | 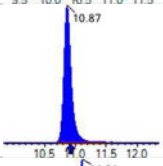  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 774285 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1979.0 | N/A | 8.5990 [ 20.0000 ] | 43.0% { 38.8% } | 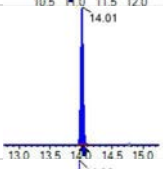  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 793544 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 1954.8 | N/A | 7.2750 [ 20.0000 ] | 36.4% { 32.6% } | 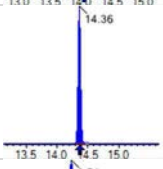  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1136991 | ( 6.54 , N/A ) ( N/A , -0.04 , N/A ) | 2585.7 | N/A | 8.4560 [ 8.0000 ] | 105.7% { 95.2% } | 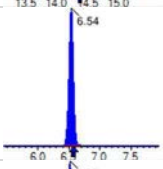  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 424111 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 891.7 | N/A | 1.5220 [ 2.0000 ] | 76.1% { 70.7% } | 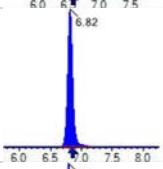  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 431037 | ( 8.89 , N/A ) ( N/A , -0.03 , N/A ) | 680.5 | N/A | 1.6560 [ 2.0000 ] | 82.8% { 80.7% } | 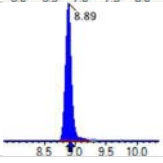  | | |

# ANALYSIS DATA SHEETL

## DUP-1-031124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0052P |
| Client:P | Tidewater, Inc.P | | | roject: | [none]P |
| Matrix:P | WaterP | Laboratory ID:P | 24C0052-03P | File ID: | S2024-03-14A (22)P |
| Sampled:P | 03/11/24 09:15P | repared:P | 03/13/24 13:29 | Analyzed: | 03/14/24 19:42 |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 541.627 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0186P | Sequence:P | SD00936 | Calibration:P | 2411010P |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| FBAP | 1.7P | 0.19P | 1.5 | |
| FPeAP | 2.5P | 0.060P | 0.74 | |
| FHxAP | 1.5P | 0.051P | 0.37 | |
| FHpAP | 0.86P | 0.038P | 0.37 | |
| FOAP | 0.94P | 0.14P | 0.37 | MI5 |
| FNAP | NDP | 0.076P | 0.37 | U |
| FDAP | 0.22P | 0.094P | 0.37 | J |
| FUnAP | NDP | 0.15P | 0.37 | U |
| FDoAP | NDP | 0.10P | 0.37 | U |
| PFTrDAP | NDP | 0.19P | 0.37 | U |
| PFTeDAP | NDP | 0.18P | 0.37 | U |
| FHxDAP | NDP | 0.18P | 0.37 | U |
| FODAP | NDP | 0.18P | 0.37 | U |
| FBSP | 0.80P | 0.034P | 0.37 | |
| FPeSP | 0.55P | 0.058P | 0.37 | |
| FHxSP | 2.5P | 0.029P | 0.37 | |
| FHpSP | NDP | 0.047P | 0.37 | U |
| FOSP | 0.47P | 0.059P | 0.37 | MI2 |
| FNSP | NDP | 0.11P | 0.37 | U |
| FDSP | NDP | 0.14P | 0.37 | U |
| FDoSP | NDP | 0.11P | 0.37 | U |
| 4:2FTSP | NDP | 0.27P | 1.5 | U |
| 6:2FTSP | NDP | 0.29P | 1.5 | U |
| 8:2FTSP | NDP | 0.076P | 1.5 | U |
| 10:2FTSP | NDP | 0.37P | 1.5 | U |
| FOSAP | NDP | 0.096P | 0.37 | MI5, U |
| NMeFOSAP | NDP | 0.44P | 1.5 | U |
| NEtFOSAP | NDP | 0.38P | 1.5 | U |
| NMeFOSAAP | NDP | 0.098P | 0.37 | U |
| NEtFOSAAP | NDP | 0.11P | 0.37 | U |

# ANALYSIS DATA SHEETL

## DUP-1-031124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0052P |
| Client:P | Tidewater, Inc.P | | | roject:P | [none]P |
| Matrix:P | WaterP | Laboratory ID:P | 24C0052-03P | File ID: | S2024-03-14A (22)P |
| Sampled:P | 03/11/24 09:15P | repared:P | 03/13/24 13:29P | Analyzed: | 03/14/24 19:42P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 541.627 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0186P | Sequence:P | SD00936 | Calibration:P | 2411010P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.93P | 1.5P | UP |
| NEtFOSEP | NDP | 0.97P | 1.5P | UP |
| HFPO-DAP | NDP | 0.16P | 0.74P | UP |
| ADONAP | NDP | 0.11P | 0.74P | UP |
| FEESAP | NDP | 0.10P | 0.74 | UP |
| PFMPAP | NDP | 0.050P | 0.74 | UP |
| FMBAP | NDP | 0.084P | 0.74 | UP |
| NFDHAP | NDP | 0.28P | 0.74P | UP |
| 9Cl-PF3ONSP | NDP | 0.19P | 0.74P | UP |
| 11Cl-PF3OUDSP | NDP | 0.19P | 0.74P | UP |
| 3:3FTCAP | NDP | 0.53P | 1.5P | UP |
| 5:3FTCAP | NDP | 0.41P | 1.5P | UP |
| 7:3FTCAP | NDP | 0.51P | 1.5P | UP |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (22)
Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 74968<br>( 163.0 / 69.0 ) 1835 | ( 2.80 , 0.75 )<br>( N/A , -0.01 , 0.1) | 361.2<br>102.0 | 0.0245<br>97.7<br>96.7 | 0.2690 | N/A | 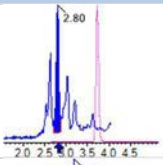 | 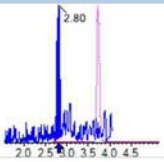 | |
| PFBA | ( 213.0 / 169.0 ) 135041 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 270.3 | N/A<br>0.0<br>0.0 | 0.4530 | N/A | 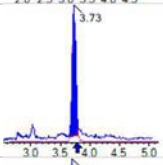 | | |
| PFPeA | ( 263.0 / 219.0 ) 194461<br>( 263.0 / 69.0 ) 2007 | ( 4.85 , 1.00 )<br>( 0.00 , N/A , -0.2) | 778.5<br>36.8 | 0.0103<br>94.0<br>85.7 | 0.6700 | N/A | 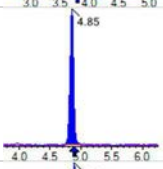 | 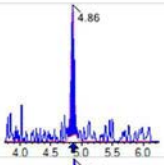 | |
| PFHxA | ( 313.0 / 269.0 ) 133712<br>( 313.0 / 119.0 ) 16395 | ( 6.08 , 1.00 )<br>( 0.00 , N/A , 0.3) | 509.4<br>240.5 | 0.1226<br>110.4<br>106.3 | 0.4050 | N/A | 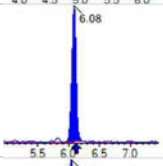 | 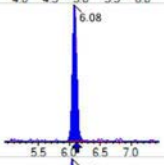 | |
| PFHpA | ( 363.0 / 319.0 ) 87317<br>( 363.0 / 169.0 ) 27513 | ( 7.24 , 1.00 )<br>( 0.00 , N/A , 0.2) | 382.1<br>292.1 | 0.3151<br>101.1<br>107.5 | 0.2330 | N/A | 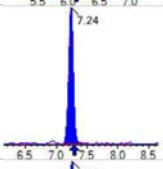 | 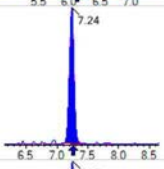 | |
| PFOA | ( 413.0 / 369.0 ) 134479<br>( 413.0 / 169.0 ) 43454 | ( 8.25 , 1.00 )<br>( 0.00 , N/A , 0.4) | 219.2<br>212.1 | 0.3231<br>89.3<br>93.7 | 0.2560 | N/A | 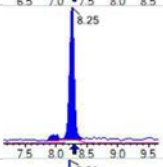 | 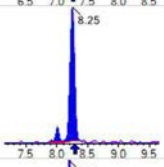 | MI5 DG 2024-03-15 |
| PFNA | ( 463.0 / 419.0 ) 6493<br>( 463.0 / 169.0 ) 1480 | ( 9.21 , 1.00 )<br>( 0.00 , N/A , 0.8) | 29.8<br>19.6 | 0.2280<br>86.9<br>90.4 | 0.0180 | N/A | 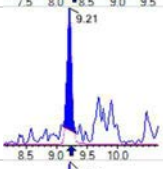 | 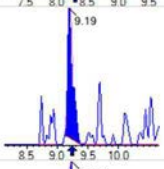 | |
| PFDA | ( 513.0 / 469.0 ) 25461<br>( 513.0 / 169.0 ) 2929 | ( 10.11 , 1.00 )<br>( 0.00 , N/A , -0.5) | 165.8<br>109.5 | 0.1151<br>98.0<br>99.3 | 0.0600 | N/A | 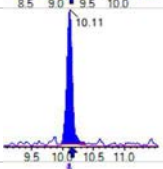 | 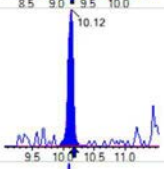 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 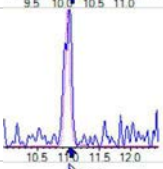 | 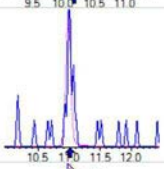 | |
| PFDoA | ( 613.0 / 569.0 ) 8584<br>( 613.0 / 169.0 ) 761 | ( 11.80 , 1.00 )<br>( -0.01 , N/A , 2.1) | 43.4<br>9.5 | 0.0887<br>56.1<br>59.0 | 0.0170 | N/A | 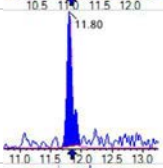 | 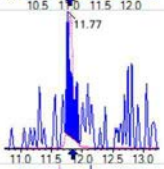 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 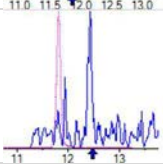 | 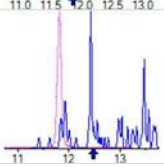 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>5079<br>( 713.0 / 169.0 )<br>1074 | ( 12.92 , 1.00 )<br>( 0.00 , N/A , 0.9) | 40.3<br>14.9 | 0.2114<br>81.3<br>83.8 | 0.0140 | N/A | 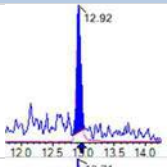 | 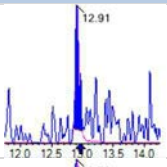 | |
| PFHxDA | ( 813.0 / 769.0 )<br>2981<br>( 813.0 / 169.0 )<br>865 | ( 13.71 , 1.00 )<br>( -0.01 , N/A , 0.6) | 28.2<br>9.3 | 0.2903<br>133.8<br>130.3 | 0.0100 | N/A | 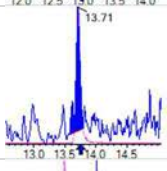 | 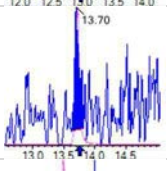 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 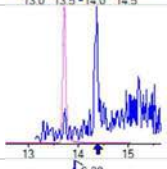 | 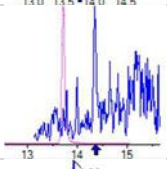 | |
| PFBS | ( 299.0 / 80.0 )<br>122461<br>( 299.0 / 99.0 )<br>91091 | ( 6.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 281.3<br>328.5 | 0.7438<br>104.6<br>100.8 | 0.2170 | N/A | 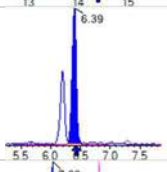 | 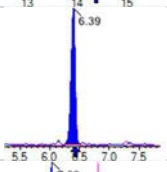 | |
| PFPeS | ( 349.0 / 80.0 )<br>203496<br>( 349.0 / 99.0 )<br>72850 | ( 7.63 , 0.88 )<br>( N/A , -0.03 , 0.1) | 175.8<br>349.0 | 0.3580<br>105.3<br>103.6 | 0.1490 | N/A | 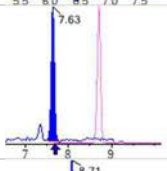 | 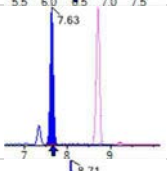 | |
| PFHxS | ( 399.0 / 80.0 )<br>1027245<br>( 399.0 / 99.0 )<br>287701 | ( 8.71 , 1.00 )<br>( 0.00 , N/A , -0.1) | 802.0<br>1824.5 | 0.2801<br>89.6<br>83.4 | 0.6770 | N/A | 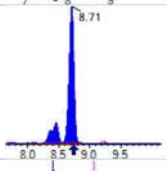 | 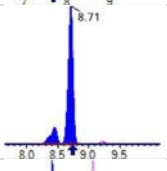 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 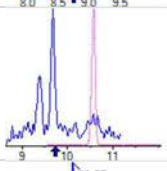 | 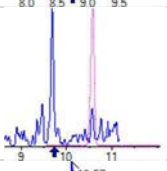 | |
| PFOS | ( 499.0 / 80.0 )<br>164986<br>( 499.0 / 99.0 )<br>28198 | ( 10.57 , 1.00 )<br>( 0.00 , N/A , -0.1) | 179.6<br>392.7 | 0.1709<br>72.3<br>73.6 | 0.1280 | N/A | 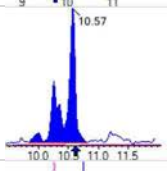 | 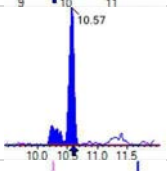 | MI2 DAG 2024-03-15 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 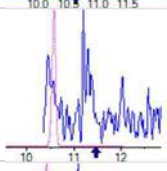 | 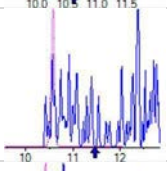 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 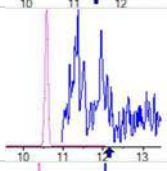 | 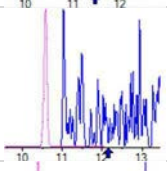 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 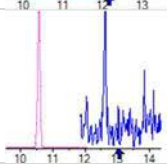 | 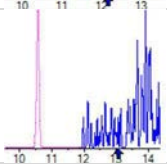 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (22)
Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 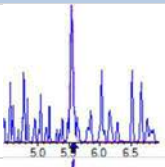 | 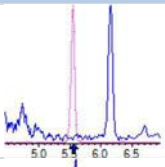 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 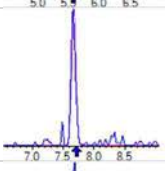 | 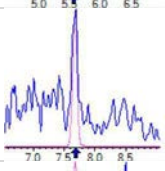 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 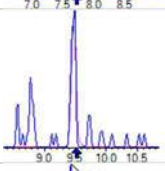 | 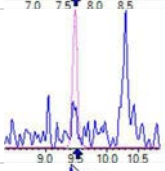 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14749<br>( 627.0 / 81.0 ) 21925 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.5) | 190.6<br>47.2 | 1.4865<br>110.0<br>114.9 | 0.0580 | N/A | 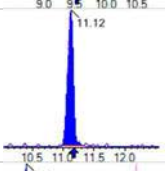 | 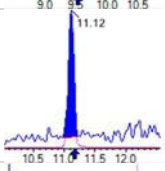 | |
| PFBSA | ( 297.9 / 78.0 ) 34521<br>( 297.9 / 278.0 ) 492 | ( 8.07 , 0.57 ) ( N/A , 0.00 , 0.6) | 284.0<br>6.6 | 0.0142<br>1014.9<br>990.5 | 0.1090 | N/A | 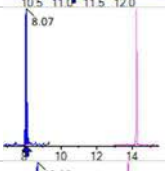 | 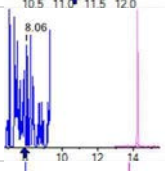 | |
| PFHxSA | ( 397.9 / 78.0 ) 8198<br>( 397.9 / 378.0 ) N/A | ( 10.96 , 0.75 ) ( N/A , 0.01 , #Value!) | 64.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0210 | N/A | 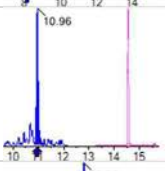 | 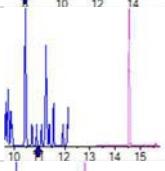 | |
| PFOSA | ( 498.0 / 78.0 ) 11164<br>( 498.0 / 478.0 ) 121 | ( 12.84 , 1.00 ) ( 0.00 , N/A , 0.4) | 107.4<br>6.7 | 0.0109<br>75.3<br>77.4 | 0.0170 | N/A | 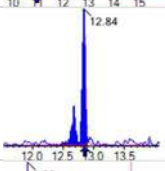 | 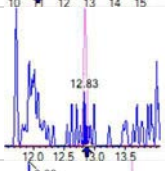 | MI5 DG 2024-03-15 |
| TFSI | ( 279.7 / 147.0 ) 88111<br>( 279.7 / 211.0 ) 6989 | ( 8.28 , 0.64 ) ( N/A , -0.04 , -0.2) | 38.7<br>16.4 | 0.0793<br>96.2<br>96.3 | 0.0610 | N/A | 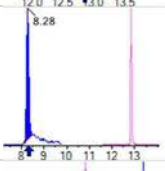 | 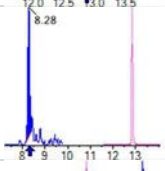 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 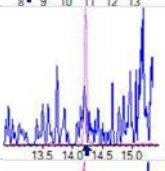 | 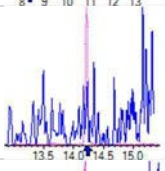 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 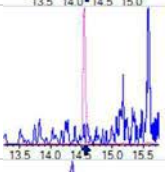 | 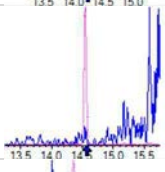 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 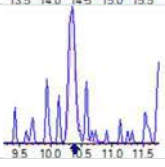 | 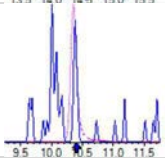 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (22)
Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 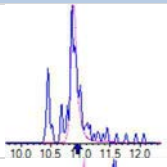 | 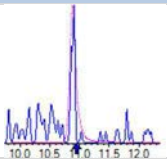 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 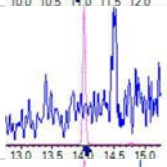 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 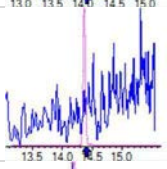 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 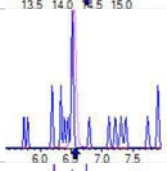 | 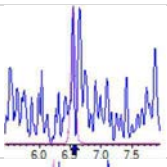 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 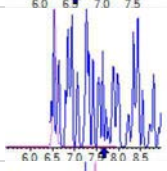 | 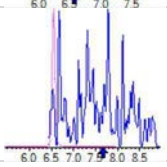 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 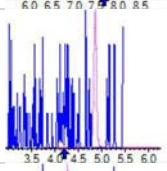 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 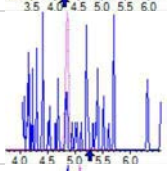 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 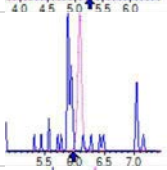 | 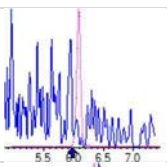 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 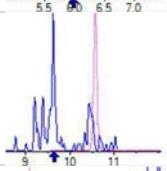 | 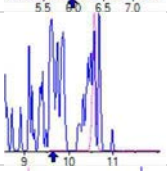 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 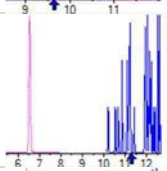 | 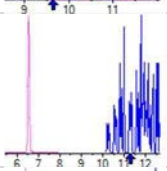 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 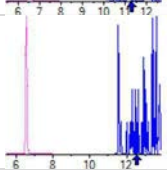 | 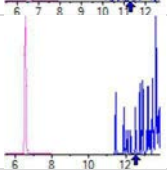 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 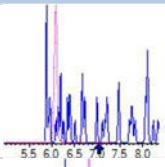 | 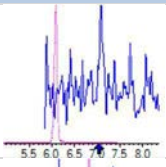 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 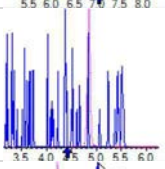 | 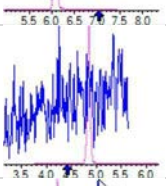 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>3294<br>( 341.0 / 217.0 )<br>4848 | ( 6.95 , 1.14 )<br>( N/A , -0.02 , -0.5) | 42.3<br>35.1 | 1.4717<br>98.3<br>101.3 | 0.0410 | N/A | 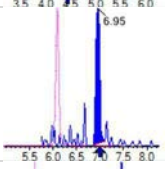 | 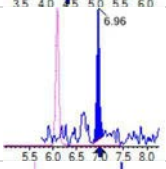 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 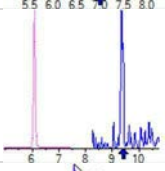 | 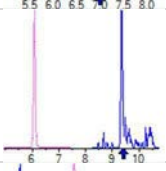 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>3554<br>( 357.2 / 243.0 )<br>454 | ( 6.83 , 1.00 )<br>( 0.00 , N/A , -1.6) | 31.7<br>3.8 | 0.1276<br>120.9<br>123.5 | 0.0160 | N/A | 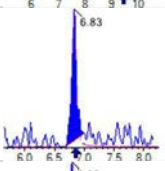 | 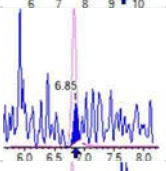 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>3445<br>( 457.2 / 343.0 )<br>495 | ( 8.89 , 1.00 )<br>( 0.00 , N/A , -0.8) | 46.9<br>8.4 | 0.1437<br>367.3<br>348.0 | 0.0190 | N/A | 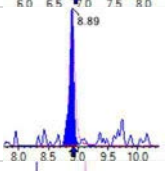 | 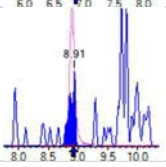 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 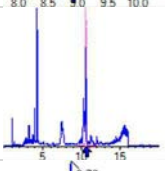 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>294261 | ( 3.73 , N/A )<br>( N/A , -0.06 , N/A ) | 2038.6 | N/A | 0.9770<br>[ 1.0000 ] | 97.7%<br>{ 99.8% } | 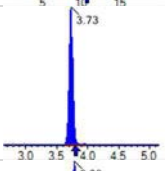 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>134952 | ( 6.08 , N/A )<br>( N/A , -0.03 , N/A ) | 22517.9 | N/A | 0.8780<br>[ 1.0000 ] | 87.8%<br>{ 87.0% } | 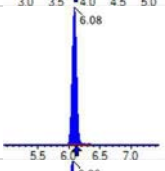 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>427328 | ( 8.26 , N/A )<br>( N/A , -0.02 , N/A ) | 3598.1 | N/A | 0.9580<br>[ 1.0000 ] | 95.8%<br>{ 92.6% } | 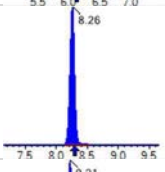 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>329241 | ( 9.21 , N/A )<br>( N/A , -0.02 , N/A ) | 750.1 | N/A | 0.9850<br>[ 1.0000 ] | 98.5%<br>{ 97.0% } | 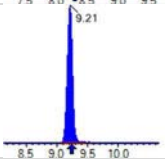 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (22)
Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 320464 | ( 10.12 , N/A ) ( N/A , -0.02 , N/A ) | 5627.2 | N/A | 0.9660 [ 1.0000 ] | 96.6% { 95.7% } | 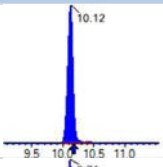 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1089922 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 5176.6 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 95.3% } | 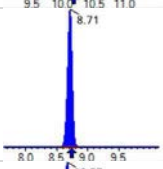 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 944237 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 1182.8 | N/A | 0.9670 [ 1.0000 ] | 96.7% { 99.4% } | 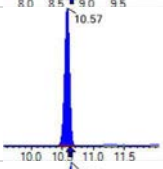 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2519460 | ( 3.73 , N/A ) ( N/A , -0.06 , N/A ) | 39284.8 | N/A | 7.7640 [ 8.0000 ] | 97.1% { 95.3% } | 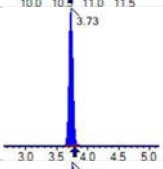 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1140953 | ( 4.85 , N/A ) ( N/A , -0.02 , N/A ) | 5942.3 | N/A | 4.7130 [ 4.0000 ] | 117.8% { 97.0% } | 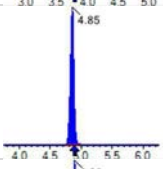 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 682042 | ( 6.09 , N/A ) ( N/A , -0.02 , N/A ) | 7942.9 | N/A | 2.3540 [ 2.0000 ] | 117.7% { 98.9% } | 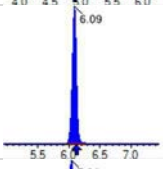 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 761552 | ( 7.24 , N/A ) ( N/A , -0.02 , N/A ) | 4953.3 | N/A | 2.5160 [ 2.0000 ] | 125.8% { 106.1% } | 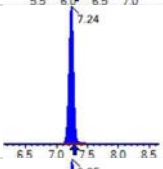 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1034917 | ( 8.25 , N/A ) ( N/A , -0.02 , N/A ) | 2802.3 | N/A | 2.2970 [ 2.0000 ] | 114.8% { 101.2% } | 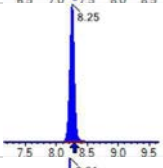 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 367639 | ( 9.21 , N/A ) ( N/A , -0.03 , N/A ) | 2571.9 | N/A | 1.1560 [ 1.0000 ] | 115.6% { 109.8% } | 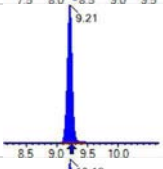 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 429062 | ( 10.12 , N/A ) ( N/A , -0.03 , N/A ) | 885.8 | N/A | 1.1600 [ 1.0000 ] | 116.0% { 110.5% } | 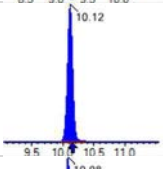 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 491535 | ( 10.98 , N/A ) ( N/A , -0.03 , N/A ) | 848.0 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 102.0% } | 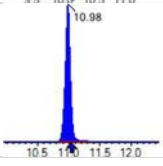 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 500391 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1211.0 | N/A | 1.1080 [ 1.0000 ] | 110.8% { 104.9% } | 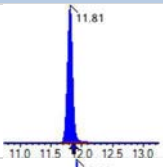 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 394997 | ( 12.92 , N/A ) ( N/A , -0.02 , N/A ) | 1284.6 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 91.2% } | 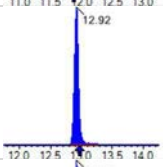 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 594351 | ( 13.72 , N/A ) ( N/A , -0.02 , N/A ) | 2649.1 | N/A | 1.7780 [ 2.0000 ] | 88.9% { 85.8% } | 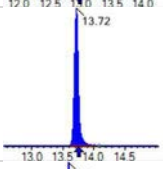 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2171986 | ( 6.39 , N/A ) ( N/A , -0.03 , N/A ) | 425.6 | N/A | 2.0450 [ 2.0000 ] | 102.3% { 97.9% } | 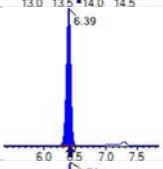 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1714327 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 2950.3 | N/A | 2.1490 [ 2.0000 ] | 107.5% { 103.9% } | 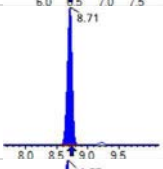 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2227959 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 1182.8 | N/A | 2.2160 [ 2.0000 ] | 110.8% { 105.8% } | 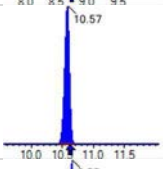 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 480096 | ( 5.55 , N/A ) ( N/A , -0.02 , N/A ) | 72.8 | N/A | 5.0580 [ 4.0000 ] | 126.5% { 131.8% } | 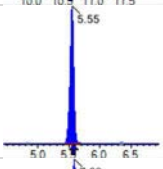 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1523672 | ( 7.68 , N/A ) ( N/A , -0.02 , N/A ) | 1920.4 | N/A | 5.1690 [ 4.0000 ] | 129.2% { 144.5% } | 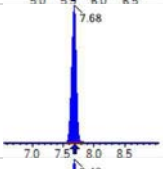 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1383959 | ( 9.48 , N/A ) ( N/A , -0.02 , N/A ) | 1246.7 | N/A | 4.7130 [ 4.0000 ] | 117.8% { 124.7% } | 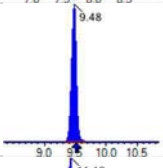 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2485450 | ( 11.12 , N/A ) ( N/A , -0.03 , N/A ) | 1421.6 | N/A | 7.3740 [ 8.0000 ] | 92.2% { 98.4% } | 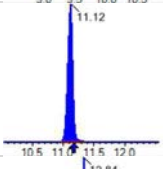 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1381547 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2100.7 | N/A | 1.2680 [ 2.0000 ] | 63.4% { 61.0% } | 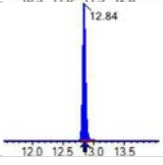 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (22)
Acquired: 2024/03/14 - 19:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 137819 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1050.3 | N/A | 0.6850 [ 2.0000 ] | 34.3% { 33.1% } | 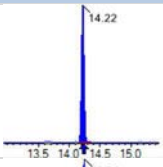  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 154112 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 1249.8 | N/A | 0.6670 [ 2.0000 ] | 33.4% { 32.0% } | 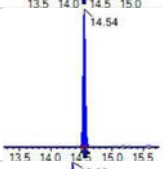  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1168090 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3018.8 | N/A | 4.5380 [ 4.0000 ] | 113.4% { 109.5% } | 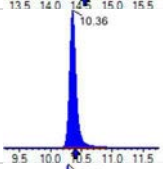  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1133963 | ( 10.88 , N/A ) ( N/A , -0.03 , N/A ) | 1891.5 | N/A | 4.6410 [ 4.0000 ] | 116.0% { 110.9% } | 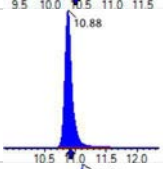  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 851058 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1554.2 | N/A | 9.0550 [ 20.0000 ] | 45.3% { 42.6% } | 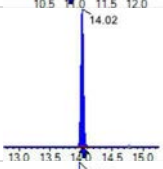  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 945070 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 2291.8 | N/A | 8.3000 [ 20.0000 ] | 41.5% { 38.8% } | 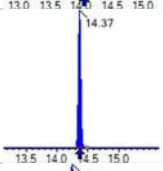  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1212344 | ( 6.55 , N/A ) ( N/A , -0.03 , N/A ) | 2804.6 | N/A | 9.7340 [ 8.0000 ] | 121.7% { 101.6% } | 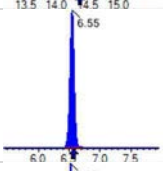  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 416124 | ( 6.83 , N/A ) ( N/A , -0.02 , N/A ) | 1435.8 | N/A | 1.4640 [ 2.0000 ] | 73.2% { 69.3% } | 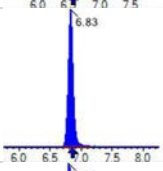  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 425293 | ( 8.90 , N/A ) ( N/A , -0.02 , N/A ) | 833.7 | N/A | 1.6030 [ 2.0000 ] | 80.1% { 79.6% } | 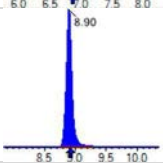  | | |

# ANALYSIS DATA SHEETL

MW-24-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-04- | File ID: | S2024-03-14A (23)- |
| Sampled:- | 03/11/24 09:35- | Prepared:- | 03/13/24 13:29 | Analyzed:- | 03/14/24 20:02 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 533.734 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5 | MI5, U |
| PFPeA- | 2.5- | 0.061- | 0.75 | |
| PFHxA- | 0.078- | 0.051- | 0.37 | IR2, J |
| PFHpA- | 0.046- | 0.038- | 0.37 | J |
| PFOA- | 0.20- | 0.14- | 0.37 | J |
| PFNA- | ND- | 0.077- | 0.37 | U |
| PFDA- | ND- | 0.095- | 0.37 | U |
| PFUnA- | ND- | 0.15- | 0.37 | U |
| PFDoA- | ND- | 0.10- | 0.37 | U |
| PFTrDA- | ND- | 0.19- | 0.37 | U |
| PFTeDA- | ND- | 0.19- | 0.37 | U |
| PFHxDA- | ND- | 0.19- | 0.37 | U |
| PFODA- | ND- | 0.19- | 0.37 | U |
| PFBS- | ND- | 0.034- | 0.37 | U |
| PFPeS- | ND- | 0.059- | 0.37 | U |
| PFHxS- | 0.066- | 0.030- | 0.37 | J |
| PFHpS- | ND- | 0.048- | 0.37 | U |
| PFOS- | 0.44- | 0.060- | 0.37 | IR1 |
| PFNS- | ND- | 0.12- | 0.37 | U |
| PFDS- | ND- | 0.14- | 0.37 | U |
| PFDoS- | ND- | 0.12- | 0.37 | U |
| 4:2FTS- | ND- | 0.27- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.077- | 1.5 | U |
| 10:2FTS- | ND- | 0.37- | 1.5 | U |
| PFOSA- | ND- | 0.098- | 0.37 | U |
| NMeFOSA- | ND- | 0.44- | 1.5 | U |
| NEtFOSA- | ND- | 0.39- | 1.5 | U |
| NMeFOSAA- | ND- | 0.099- | 0.37 | U |
| NEtFOSAA- | ND- | 0.11- | 0.37 | U |

# ANALYSIS DATA SHEETL

MW-24-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project:- | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-04- | File ID:- | S2024-03-14A (23)- |
| Sampled:- | 03/11/24 09:35- | Prepared:- | 03/13/24 13:29- | Analyzed:- | 03/14/24 20:02- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 533.734 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.051- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (23)
Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 136096<br>( 163.0 / 69.0 ) 3296 | ( 2.76 , 0.75 )<br>( N/A , -0.05 , 0.2) | 789.7<br>240.6 | 0.0242<br>96.6<br>95.6 | 0.4830 | N/A | 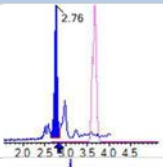 | 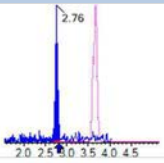 | |
| PFBA | ( 213.0 / 169.0 ) -2660 | ( 4.79 , 1.31 )<br>( 1.13 , N/A , 0.0) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 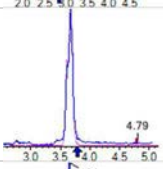 | | MI5 DAG 2024-03-15 |
| PFPeA | ( 263.0 / 219.0 ) 208085<br>( 263.0 / 69.0 ) 1925 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , -0.2) | 810.8<br>44.9 | 0.0093<br>84.3<br>76.8 | 0.6760 | N/A | 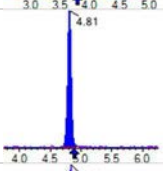 | 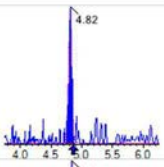 | |
| PFHxA | ( 313.0 / 269.0 ) 7299<br>( 313.0 / 119.0 ) 1354 | ( 6.03 , 1.00 )<br>( -0.01 , N/A , -0.1) | 59.2<br>43.2 | 0.1856<br>167.0<br>160.9 | 0.0210 | N/A | 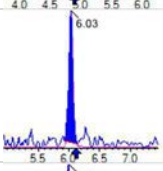 | 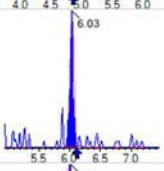 | IR2, |
| PFHpA | ( 363.0 / 319.0 ) 4963<br>( 363.0 / 169.0 ) 1960 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , -1.0) | 27.6<br>72.7 | 0.3950<br>126.8<br>134.8 | 0.0120 | N/A | 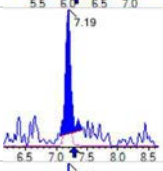 | 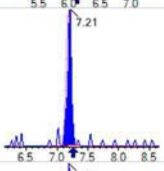 | |
| PFOA | ( 413.0 / 369.0 ) 29670<br>( 413.0 / 169.0 ) 12303 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.2) | 64.8<br>83.9 | 0.4146<br>114.6<br>120.3 | 0.0530 | N/A | 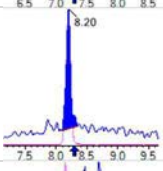 | 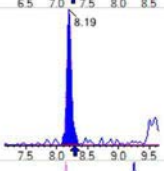 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 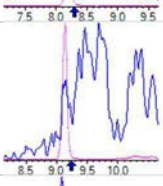 | 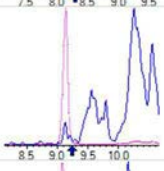 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 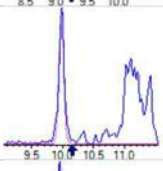 | 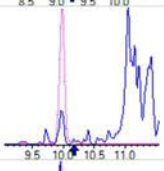 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 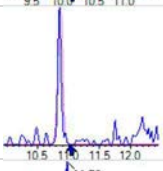 | 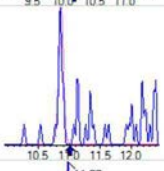 | |
| PFDoA | ( 613.0 / 569.0 ) 7758<br>( 613.0 / 169.0 ) 846 | ( 11.76 , 1.00 )<br>( 0.00 , N/A , -0.5) | 53.8<br>21.1 | 0.1090<br>68.9<br>72.5 | 0.0170 | N/A | 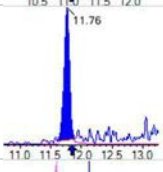 | 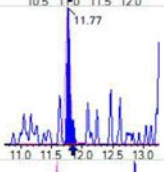 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 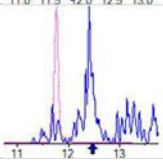 | 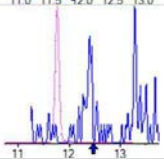 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (23)
Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 5785<br>( 713.0 / 169.0 ) 1405 | ( 12.88 , 1.00 )<br>( 0.00 , N/A , -0.5) | 34.6<br>13.5 | 0.2429<br>93.4<br>96.3 | 0.0210 | N/A | 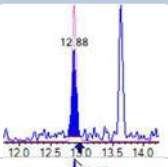 | 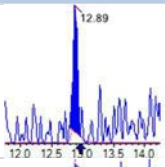 | |
| PFHxDA | ( 813.0 / 769.0 ) 2778<br>( 813.0 / 169.0 ) 603 | ( 13.68 , 1.00 )<br>( 0.00 , N/A , -0.3) | 21.5<br>9.7 | 0.2171<br>100.1<br>97.5 | 0.0130 | N/A | 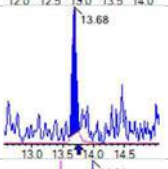 | 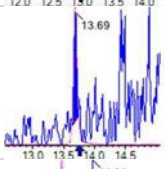 | |
| PFODA | ( 913.0 / 869.0 ) 4663<br>( 913.0 / 169.0 ) 1425 | ( 14.31 , 1.05 )<br>( N/A , -0.06 , 0.3) | 28.2<br>17.1 | 0.3056<br>80.0<br>87.7 | 0.0330 | N/A | 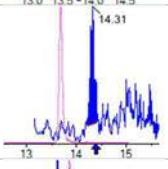 | 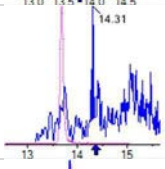 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 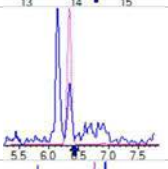 | 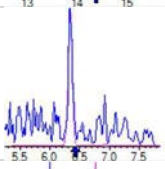 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 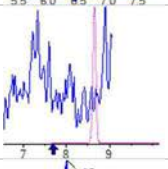 | 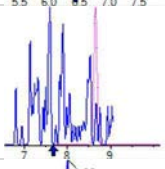 | |
| PFHxS | ( 399.0 / 80.0 ) 29786<br>( 399.0 / 99.0 ) 6743 | ( 8.65 , 1.00 )<br>( 0.00 , N/A , -0.3) | 63.4<br>63.9 | 0.2264<br>72.4<br>67.4 | 0.0180 | N/A | 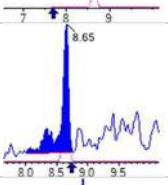 | 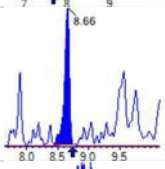 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 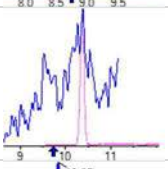 | 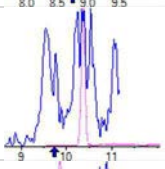 | |
| PFOS | ( 499.0 / 80.0 ) 95735<br>( 499.0 / 99.0 ) 8041 | ( 10.25 , 0.99 )<br>( -0.12 , N/A , -7.3) | 47.2<br>45.8 | 0.0840<br>35.5<br>36.2 | 0.1170 | N/A | 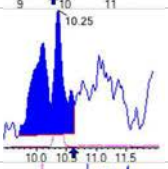 | 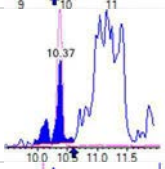 | IR1,MI2 DG 2024-03-15 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 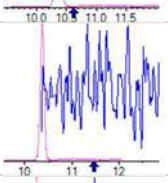 | 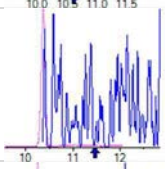 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 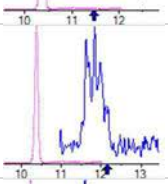 | 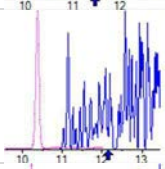 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 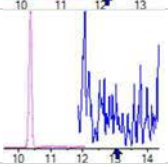 | 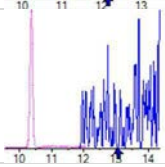 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (23)
Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 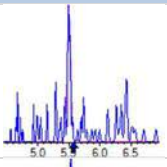 | 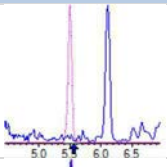 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 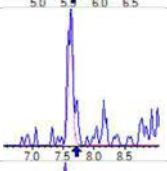 | 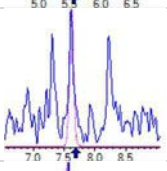 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 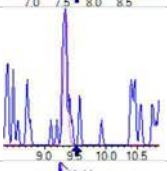 | 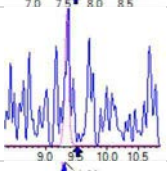 | |
| 10:2FTS | ( 627.0 / 607.0 ) 6077<br>( 627.0 / 81.0 ) 8135 | ( 10.98 , 1.00 ) ( 0.00 , N/A , -1.3) | 51.1<br>20.8 | 1.3387<br>99.0<br>103.5 | 0.0460 | N/A | 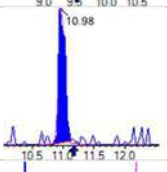 | 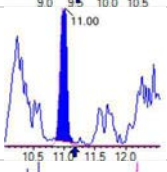 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 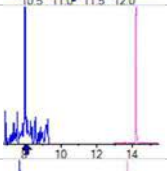 | 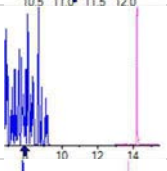 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 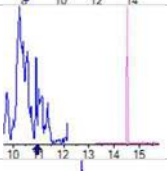 | 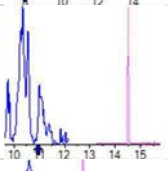 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 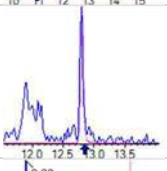 | 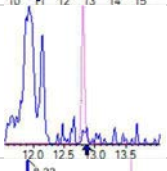 | |
| TFSI | ( 279.7 / 147.0 ) 65386<br>( 279.7 / 211.0 ) 5596 | ( 8.22 , 0.64 ) ( N/A , -0.10 , -0.5) | 30.7<br>11.4 | 0.0856<br>103.8<br>103.9 | 0.0370 | N/A | 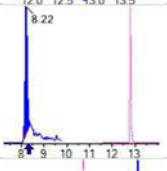 | 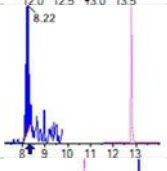 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 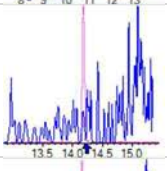 | 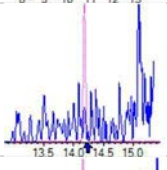 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 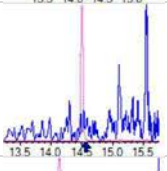 | 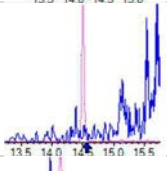 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 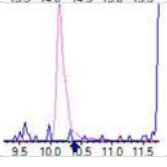 | 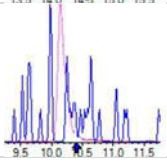 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (23)
Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 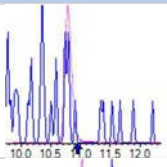 | 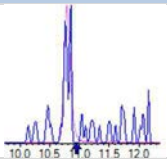 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 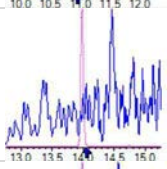 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 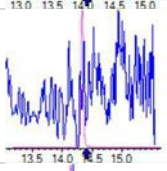 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 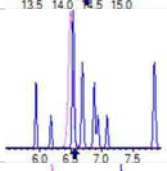 | 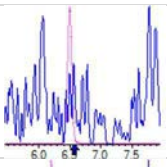 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 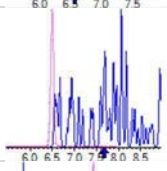 | 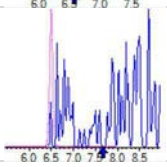 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 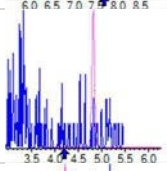 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 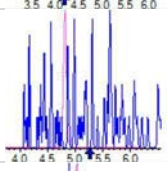 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 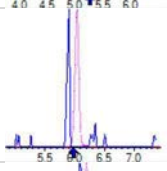 | 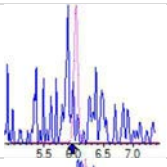 | |
| PFECHS | ( 461.0 / 98.9 ) 14961<br>( 461.0 / 381.2 ) 15533 | ( 9.55 , 0.92 ) ( N/A , -0.08 , -5.6) | 15.4<br>16.2 | 1.0382<br>265.9<br>268.7 | 0.0330 | N/A | 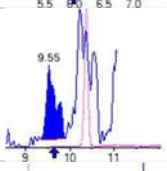 | 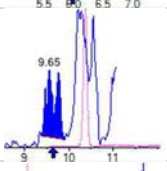 | IR2, |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 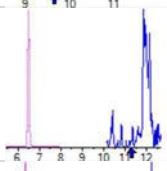 | 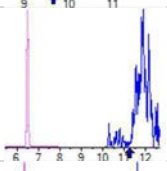 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 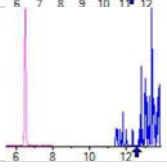 | 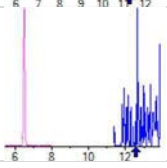 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 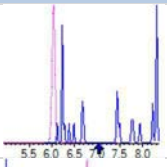 | 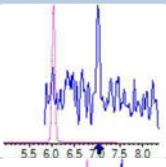 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 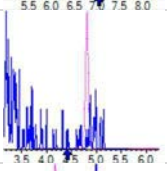 | 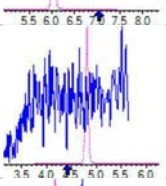 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 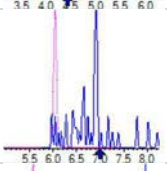 | 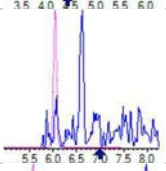 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 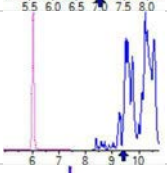 | 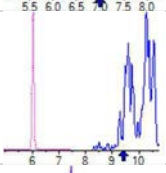 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 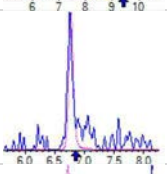 | 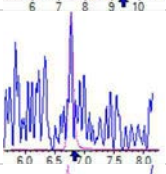 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 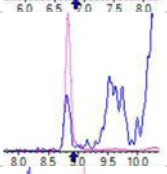 | 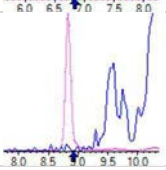 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 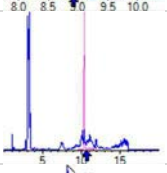 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 300450 | ( 3.67 , N/A ) ( N/A , -0.12 , N/A ) | 1772.4 | N/A | 0.9970 [ 1.0000 ] | 99.7% { 101.9% } | 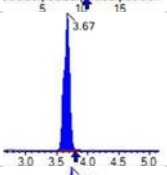 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 148764 | ( 6.04 , N/A ) ( N/A , -0.07 , N/A ) | 21912.8 | N/A | 0.9670 [ 1.0000 ] | 96.7% { 95.9% } | 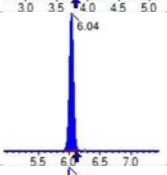 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 453920 | ( 8.20 , N/A ) ( N/A , -0.08 , N/A ) | 2290.0 | N/A | 1.0170 [ 1.0000 ] | 101.7% { 98.3% } | 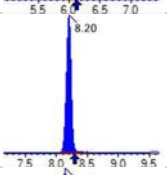 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 327947 | ( 9.13 , N/A ) ( N/A , -0.10 , N/A ) | 332.5 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 96.6% } | 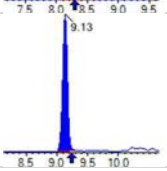 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 250748 | ( 9.98 , N/A ) ( N/A , -0.16 , N/A ) | 1916.7 | N/A | 0.7560 [ 1.0000 ] | 75.6% { 74.9% } | 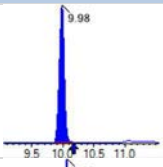 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1165607 | ( 8.66 , N/A ) ( N/A , -0.09 , N/A ) | 2405.9 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 101.9% } | 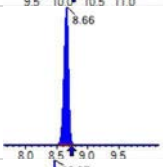 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 599328 | ( 10.37 , N/A ) ( N/A , -0.24 , N/A ) | 421.7 | N/A | 0.6140 [ 1.0000 ] | 61.4% { 63.1% } | 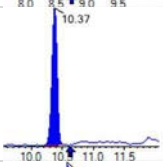 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2550324 | ( 3.66 , N/A ) ( N/A , -0.12 , N/A ) | 23497.0 | N/A | 7.6970 [ 8.0000 ] | 96.2% { 96.4% } | 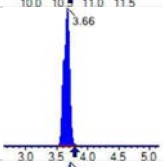 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1209370 | ( 4.81 , N/A ) ( N/A , -0.06 , N/A ) | 5537.8 | N/A | 4.5310 [ 4.0000 ] | 113.3% { 102.8% } | 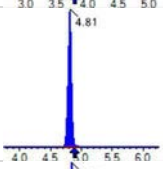 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 720971 | ( 6.04 , N/A ) ( N/A , -0.07 , N/A ) | 7580.8 | N/A | 2.2570 [ 2.0000 ] | 112.9% { 104.6% } | 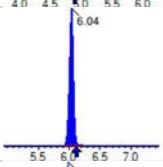 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 819184 | ( 7.19 , N/A ) ( N/A , -0.07 , N/A ) | 5155.9 | N/A | 2.4560 [ 2.0000 ] | 122.8% { 114.1% } | 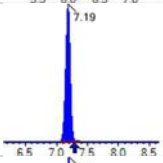 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1108065 | ( 8.20 , N/A ) ( N/A , -0.08 , N/A ) | 2568.1 | N/A | 2.3150 [ 2.0000 ] | 115.8% { 108.3% } | 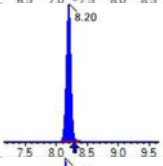 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 374321 | ( 9.13 , N/A ) ( N/A , -0.10 , N/A ) | 1034.1 | N/A | 1.1820 [ 1.0000 ] | 118.2% { 111.8% } | 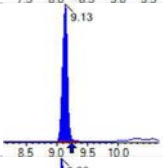 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 328915 | ( 9.98 , N/A ) ( N/A , -0.16 , N/A ) | 984.2 | N/A | 1.1370 [ 1.0000 ] | 113.7% { 84.7% } | 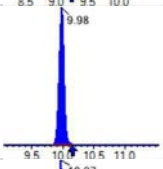 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 382363 | ( 10.87 , N/A ) ( N/A , -0.15 , N/A ) | 1156.2 | N/A | 1.0870 [ 1.0000 ] | 108.7% { 79.4% } | 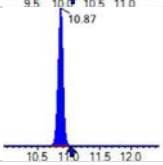 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433159 | ( 11.77 , N/A ) ( N/A , -0.07 , N/A ) | 1526.5 | N/A | 1.2260 [ 1.0000 ] | 122.6% { 90.8% } | 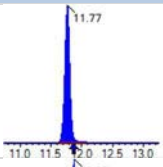 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 292969 | ( 12.88 , N/A ) ( N/A , -0.06 , N/A ) | 1452.2 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 67.7% } | 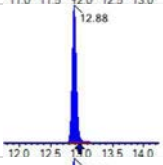 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 432400 | ( 13.68 , N/A ) ( N/A , -0.06 , N/A ) | 1994.9 | N/A | 1.6540 [ 2.0000 ] | 82.7% { 62.4% } | 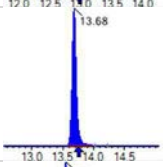 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2250203 | ( 6.34 , N/A ) ( N/A , -0.08 , N/A ) | 1295.6 | N/A | 1.9810 [ 2.0000 ] | 99.1% { 101.4% } | 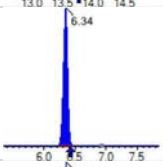 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1897253 | ( 8.65 , N/A ) ( N/A , -0.09 , N/A ) | 2266.3 | N/A | 2.2240 [ 2.0000 ] | 111.2% { 115.0% } | 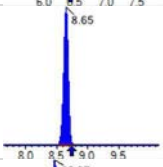 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1409915 | ( 10.37 , N/A ) ( N/A , -0.23 , N/A ) | 573.4 | N/A | 2.2100 [ 2.0000 ] | 110.5% { 67.0% } | 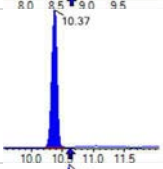 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 501451 | ( 5.50 , N/A ) ( N/A , -0.07 , N/A ) | 89.5 | N/A | 4.9400 [ 4.0000 ] | 123.5% { 137.6% } | 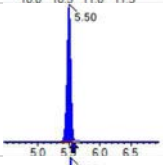 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1456338 | ( 7.62 , N/A ) ( N/A , -0.08 , N/A ) | 2679.1 | N/A | 4.6200 [ 4.0000 ] | 115.5% { 138.2% } | 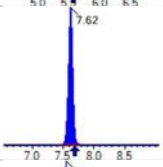 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1320376 | ( 9.35 , N/A ) ( N/A , -0.15 , N/A ) | 1618.5 | N/A | 4.2040 [ 4.0000 ] | 105.1% { 119.0% } | 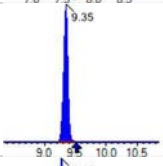 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 1273219 | ( 10.97 , N/A ) ( N/A , -0.17 , N/A ) | 1139.2 | N/A | 3.5320 [ 8.0000 ] | 44.2% { 50.4% } | 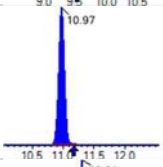 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1707575 | ( 12.81 , N/A ) ( N/A , -0.03 , N/A ) | 1685.8 | N/A | 2.4700 [ 2.0000 ] | 123.5% { 75.4% } | 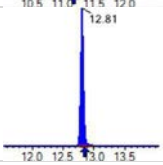 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 172370 | ( 14.18 , N/A ) ( N/A , -0.04 , N/A ) | 1207.6 | N/A | 1.3500 [ 2.0000 ] | 67.5% { 41.4% } | 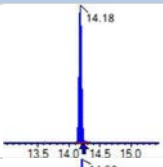 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 166702 | ( 14.50 , N/A ) ( N/A , -0.04 , N/A ) | 1256.8 | N/A | 1.1370 [ 2.0000 ] | 56.8% { 34.6% } | 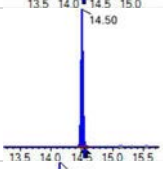 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 376777 | ( 10.15 , N/A ) ( N/A , -0.23 , N/A ) | 1550.3 | N/A | 2.3060 [ 4.0000 ] | 57.6% { 35.3% } | 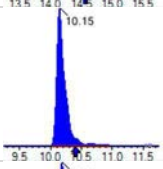 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 718526 | ( 10.79 , N/A ) ( N/A , -0.13 , N/A ) | 1581.7 | N/A | 4.6330 [ 4.0000 ] | 115.8% { 70.2% } | 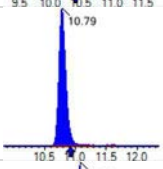 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 978835 | ( 13.98 , N/A ) ( N/A , -0.04 , N/A ) | 1422.1 | N/A | 16.4080 [ 20.0000 ] | 82.0% { 49.0% } | 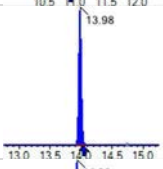 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1120002 | ( 14.33 , N/A ) ( N/A , -0.04 , N/A ) | 3501.3 | N/A | 15.4980 [ 20.0000 ] | 77.5% { 46.0% } | 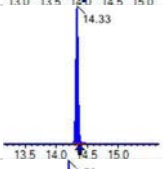 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1264088 | ( 6.50 , N/A ) ( N/A , -0.07 , N/A ) | 2295.6 | N/A | 9.2070 [ 8.0000 ] | 115.1% { 105.9% } | 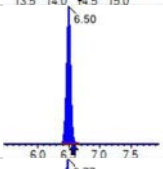 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 504314 | ( 6.77 , N/A ) ( N/A , -0.07 , N/A ) | 1077.5 | N/A | 2.2680 [ 2.0000 ] | 113.4% { 84.0% } | 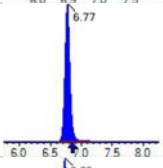 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 610411 | ( 8.83 , N/A ) ( N/A , -0.09 , N/A ) | 456.8 | N/A | 2.9400 [ 2.0000 ] | 147.0% { 114.2% } | 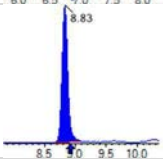 | | |

# ANALYSIS DATA SHEETL

## MW-23-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-05- | File ID: | S2024-03-14A (24)- |
| Sampled:- | 03/11/24 10:40- | Prepared:- | 03/13/24 13:29 | Analyzed:- | 03/14/24 20:23 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 533.287 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.5 | MI5, U |
| PFPeA- | 0.19- | 0.061- | 0.75 | J |
| PFHxA- | 0.25- | 0.051- | 0.38 | J |
| PFHpA- | 0.11- | 0.038- | 0.38 | J |
| PFOA- | 0.33- | 0.14- | 0.38 | J |
| PFNA- | ND- | 0.077- | 0.38 | U |
| PFDA- | 0.11- | 0.095- | 0.38 | J |
| PFUnA- | ND- | 0.15- | 0.38 | U |
| PFDoA- | ND- | 0.10- | 0.38 | U |
| PFTrDA- | ND- | 0.19- | 0.38 | U |
| PFTeDA- | ND- | 0.19- | 0.38 | U |
| PFHxDA- | ND- | 0.19- | 0.38 | U |
| PFODA- | ND- | 0.19- | 0.38 | U |
| PFBS- | 0.25- | 0.034- | 0.38 | J |
| PFPeS- | 0.14- | 0.059- | 0.38 | J |
| PFHxS- | 0.47- | 0.030- | 0.38 | IR1 |
| PFHpS- | ND- | 0.048- | 0.38 | U |
| PFOS- | 0.29- | 0.060- | 0.38 | MI1, J |
| PFNS- | ND- | 0.12- | 0.38 | U |
| PFDS- | ND- | 0.14- | 0.38 | U |
| PFDoS- | ND- | 0.12- | 0.38 | U |
| 4:2FTS- | ND- | 0.27- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.077- | 1.5 | U |
| 10:2FTS- | ND- | 0.38- | 1.5 | U |
| PFOSA- | ND- | 0.098- | 0.38 | U |
| NMeFOSA- | ND- | 0.44- | 1.5 | U |
| NEtFOSA- | ND- | 0.39- | 1.5 | U |
| NMeFOSAA- | ND- | 0.099- | 0.38 | U |
| NEtFOSAA- | ND- | 0.11- | 0.38 | U |

# ANALYSIS DATA SHEETL

MW-23-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project:- | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-05- | File ID:- | S2024-03-14A (24)- |
| Sampled:- | 03/11/24 10:40- | Prepared:- | 03/13/24 13:29- | Analyzed:- | 03/14/24 20:23- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 533.287 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.051- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (24)
Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>38771<br>( 163.0 / 69.0 )<br>772 | ( 2.80 , 0.75 )<br>( N/A , -0.01 , 0.1) | 209.4<br>52.5 | 0.0199<br>79.5<br>78.6 | 0.1450 | N/A | 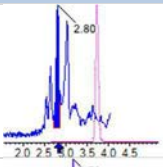 | 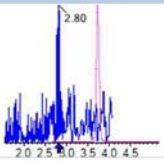 | |
| PFBA | ( 213.0 / 169.0 )<br>12203 | ( 3.72 , 1.00 )<br>( 0.00 , N/A , 0.0) | 31.6 | N/A<br>0.0<br>0.0 | 0.0430 | N/A | 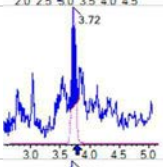 | | MI5 DG<br>2024-03-15 |
| PFPeA | ( 263.0 / 219.0 )<br>14211<br>( 263.0 / 69.0 )<br>N/A | ( 4.85 , 1.00 )<br>( 0.00 , N/A , #Value!) | 68.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0520 | N/A | 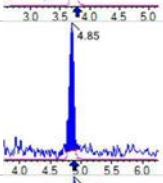 | 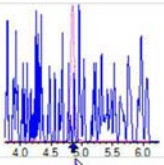 | |
| PFHxA | ( 313.0 / 269.0 )<br>21827<br>( 313.0 / 119.0 )<br>2632 | ( 6.08 , 1.00 )<br>( 0.00 , N/A , 0.0) | 142.7<br>45.3 | 0.1206<br>108.5<br>104.5 | 0.0660 | N/A | 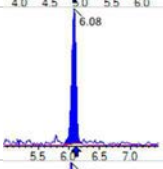 | 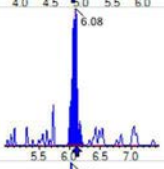 | |
| PFHpA | ( 363.0 / 319.0 )<br>10603<br>( 363.0 / 169.0 )<br>2440 | ( 7.24 , 1.00 )<br>( 0.01 , N/A , 0.1) | 63.7<br>48.7 | 0.2302<br>73.9<br>78.5 | 0.0290 | N/A | 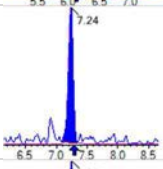 | 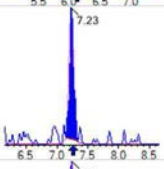 | |
| PFOA | ( 413.0 / 369.0 )<br>44062<br>( 413.0 / 169.0 )<br>17380 | ( 8.24 , 1.00 )<br>( 0.00 , N/A , 0.5) | 89.2<br>95.5 | 0.3944<br>109.0<br>114.4 | 0.0870 | N/A | 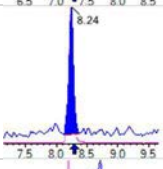 | 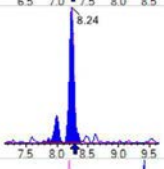 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 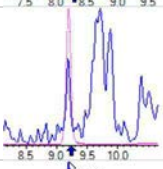 | 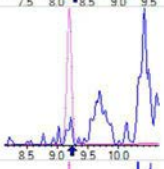 | |
| PFDA | ( 513.0 / 469.0 )<br>12930<br>( 513.0 / 169.0 )<br>1086 | ( 10.09 , 1.00 )<br>( 0.00 , N/A , -1.8) | 70.4<br>15.2 | 0.0840<br>71.6<br>72.5 | 0.0300 | N/A | 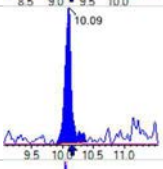 | 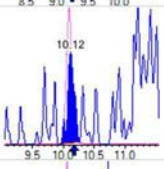 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 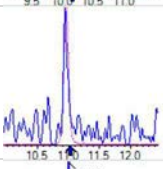 | 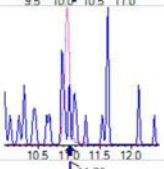 | |
| PFDoA | ( 613.0 / 569.0 )<br>8125<br>( 613.0 / 169.0 )<br>858 | ( 11.80 , 1.00 )<br>( -0.01 , N/A , 2.0) | 53.8<br>13.0 | 0.1056<br>66.8<br>70.2 | 0.0160 | N/A | 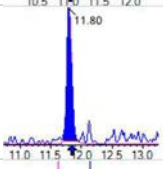 | 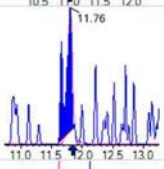 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 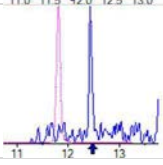 | 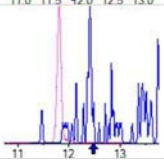 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (24)
Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 5527<br>( 713.0 / 169.0 ) 1504 | ( 12.91 , 1.00 )<br>( -0.01 , N/A , -1.2) | 32.5<br>24.2 | 0.2722<br>104.7<br>107.9 | 0.0150 | N/A | 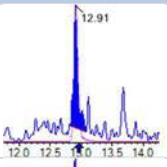 | 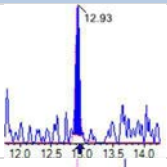 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 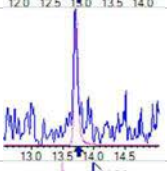 | 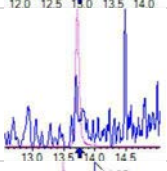 | |
| PFODA | ( 913.0 / 869.0 ) 3322<br>( 913.0 / 169.0 ) 658 | ( 14.34 , 1.05 )<br>( N/A , -0.03 , -0.6) | 19.7<br>8.8 | 0.1980<br>51.8<br>56.8 | 0.0200 | N/A | 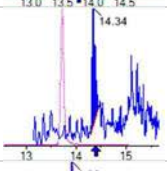 | 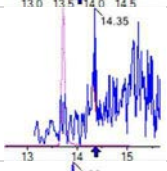 | |
| PFBS | ( 299.0 / 80.0 ) 37084<br>( 299.0 / 99.0 ) 28131 | ( 6.39 , 1.00 )<br>( 0.00 , N/A , 0.1) | 93.5<br>136.7 | 0.7586<br>106.7<br>102.8 | 0.0670 | N/A | 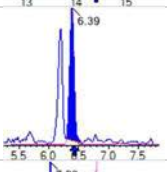 | 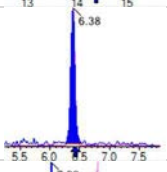 | |
| PFPeS | ( 349.0 / 80.0 ) 52276<br>( 349.0 / 99.0 ) 20242 | ( 7.62 , 0.88 )<br>( N/A , -0.04 , 0.0) | 70.0<br>120.0 | 0.3872<br>113.9<br>112.0 | 0.0380 | N/A | 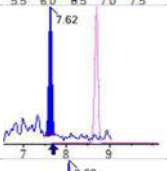 | 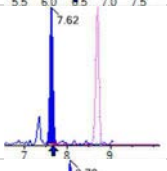 | |
| PFHxS | ( 399.0 / 80.0 ) 193155<br>( 399.0 / 99.0 ) 21337 | ( 8.69 , 1.00 )<br>( 0.00 , N/A , -0.2) | 292.7<br>255.4 | 0.1105<br>35.3<br>32.9 | 0.1260 | N/A | 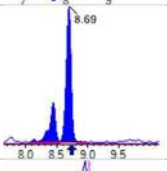 | 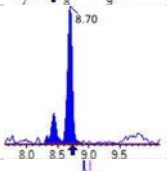 | IR1, |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 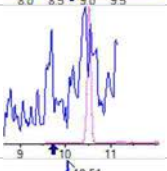 | 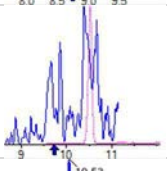 | |
| PFOS | ( 499.0 / 80.0 ) 86364<br>( 499.0 / 99.0 ) 11717 | ( 10.51 , 1.00 )<br>( -0.01 , N/A , -0.9) | 82.1<br>122.1 | 0.1357<br>57.4<br>58.4 | 0.0780 | N/A | 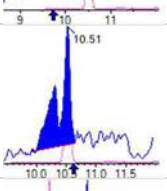 | 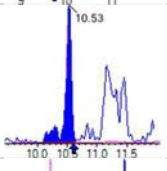 | MI1 DG 2024-03-15 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 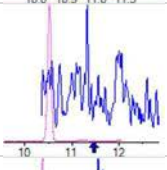 | 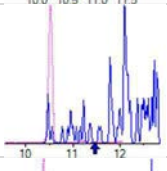 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 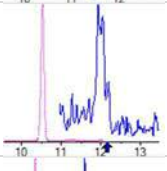 | 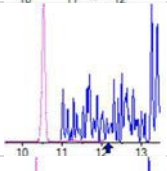 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 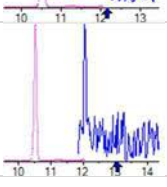 | 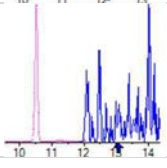 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (24)
Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 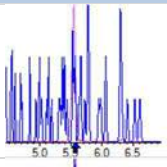 | 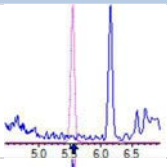 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 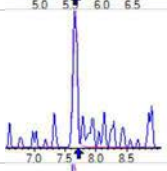 | 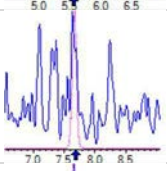 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 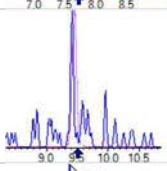 | 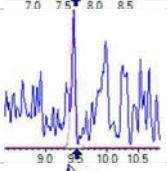 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>12765<br>( 627.0 / 81.0 )<br>16887 | ( 11.08 , 1.00 )<br>( 0.00 , N/A , 0.4) | 216.5<br>56.0 | 1.3229<br>97.9<br>102.3 | 0.0530 | N/A | 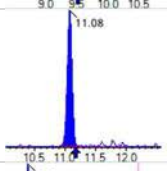 | 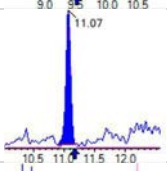 | |
| PFBSA | ( 297.9 / 78.0 )<br>17257<br>( 297.9 / 278.0 )<br>N/A | ( 8.06 , 0.57 )<br>( N/A , -0.01 , #Value!) | 155.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0440 | N/A | 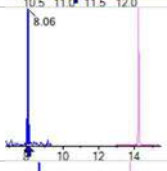 | 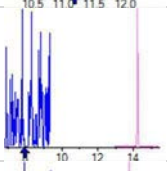 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 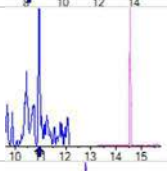 | 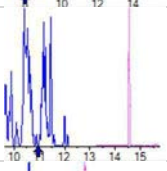 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 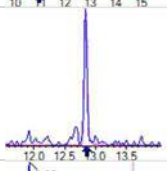 | 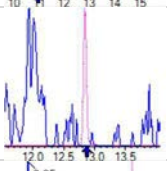 | |
| TFSI | ( 279.7 / 147.0 )<br>57083<br>( 279.7 / 211.0 )<br>6650 | ( 8.26 , 0.64 )<br>( N/A , -0.05 , 0.8) | 31.4<br>15.7 | 0.1165<br>141.3<br>141.4 | 0.0320 | N/A | 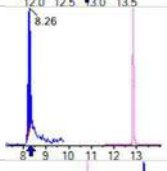 | 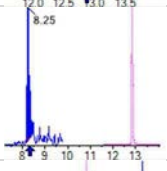 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 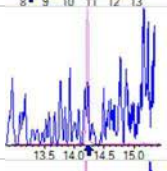 | 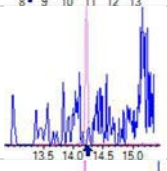 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 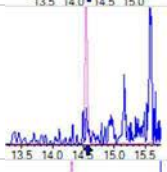 | 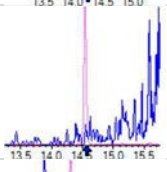 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 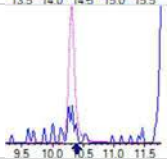 | 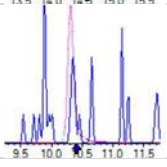 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (24)
Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 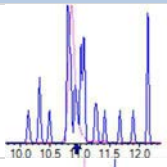 | 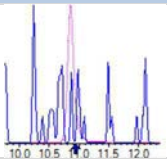 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 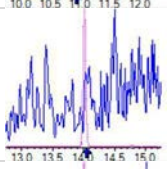 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 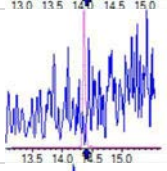 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 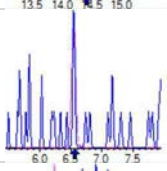 | 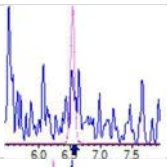 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 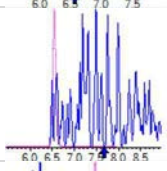 | 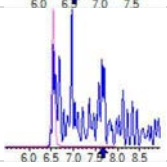 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 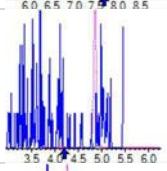 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 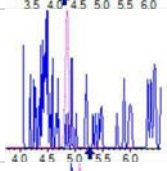 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 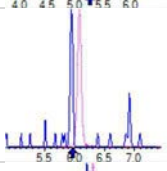 | 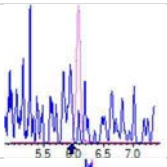 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 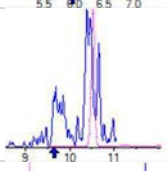 | 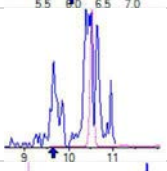 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 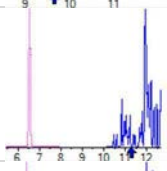 | 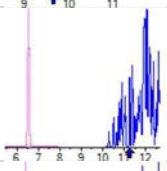 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 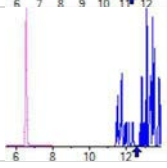 | 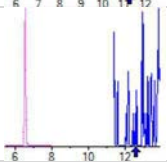 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 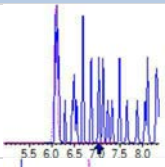 | 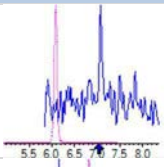 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 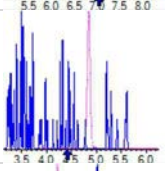 | 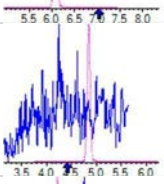 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 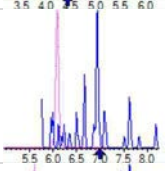 | 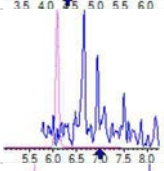 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 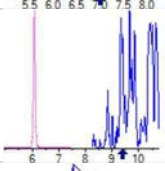 | 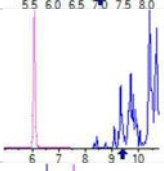 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>3709<br>( 357.2 / 243.0 )<br>329 | ( 6.81 , 1.00 )<br>( -0.01 , N/A , 0.4) | 28.2<br>3.6 | 0.0888<br>84.1<br>85.9 | 0.0150 | N/A | 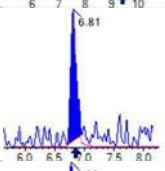 | 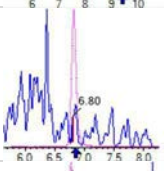 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>2853<br>( 457.2 / 343.0 )<br>N/A | ( 8.88 , 1.00 )<br>( 0.00 , N/A , #Value!) | 22.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0140 | N/A | 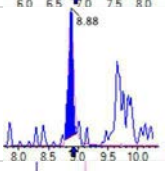 | 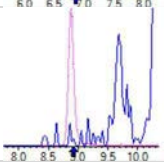 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 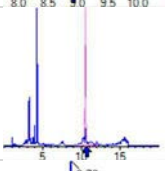 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>289145 | ( 3.73 , N/A )<br>( N/A , -0.06 , N/A ) | 2151.9 | N/A | 0.9600<br>[ 1.0000 ] | 96.0%<br>{ 98.1% } | 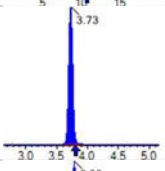 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>135649 | ( 6.08 , N/A )<br>( N/A , -0.03 , N/A ) | 25812.9 | N/A | 0.8820<br>[ 1.0000 ] | 88.2%<br>{ 87.4% } | 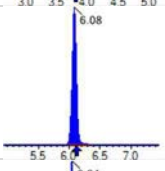 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>417449 | ( 8.24 , N/A )<br>( N/A , -0.03 , N/A ) | 5531.1 | N/A | 0.9360<br>[ 1.0000 ] | 93.6%<br>{ 90.4% } | 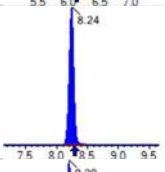 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>307734 | ( 9.20 , N/A )<br>( N/A , -0.04 , N/A ) | 745.3 | N/A | 0.9210<br>[ 1.0000 ] | 92.1%<br>{ 90.6% } | 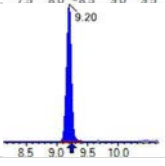 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (24)
Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 325230 | ( 10.10 , N/A ) ( N/A , -0.05 , N/A ) | 2786.4 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 97.2% } | 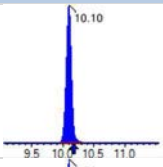 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1057075 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 4161.1 | N/A | 0.9460 [ 1.0000 ] | 94.6% { 92.4% } | 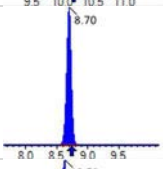 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 892432 | ( 10.53 , N/A ) ( N/A , -0.08 , N/A ) | 910.4 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 94.0% } | 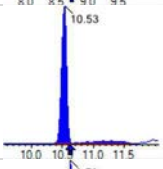 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2416794 | ( 3.73 , N/A ) ( N/A , -0.06 , N/A ) | 44694.1 | N/A | 7.5800 [ 8.0000 ] | 94.7% { 91.4% } | 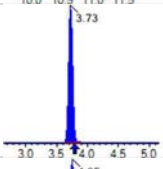 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1080248 | ( 4.85 , N/A ) ( N/A , -0.02 , N/A ) | 5842.7 | N/A | 4.4390 [ 4.0000 ] | 111.0% { 91.8% } | 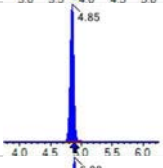 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 680184 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 7303.3 | N/A | 2.3350 [ 2.0000 ] | 116.8% { 98.6% } | 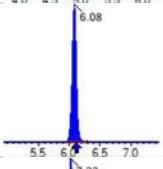 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 734581 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 4354.9 | N/A | 2.4150 [ 2.0000 ] | 120.7% { 102.3% } | 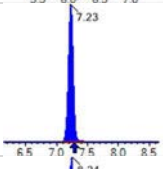 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 997847 | ( 8.24 , N/A ) ( N/A , -0.04 , N/A ) | 2904.5 | N/A | 2.2670 [ 2.0000 ] | 113.4% { 97.6% } | 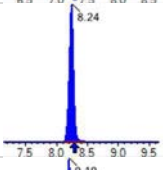 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 333059 | ( 9.19 , N/A ) ( N/A , -0.04 , N/A ) | 1410.0 | N/A | 1.1210 [ 1.0000 ] | 112.1% { 99.5% } | 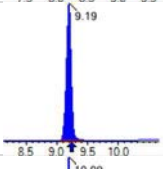 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 426252 | ( 10.09 , N/A ) ( N/A , -0.05 , N/A ) | 1262.8 | N/A | 1.1360 [ 1.0000 ] | 113.6% { 109.8% } | 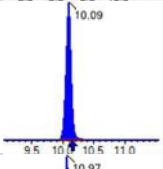 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 510720 | ( 10.97 , N/A ) ( N/A , -0.05 , N/A ) | 1068.3 | N/A | 1.1190 [ 1.0000 ] | 111.9% { 106.0% } | 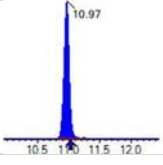 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 487701 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1403.1 | N/A | 1.0640 [ 1.0000 ] | 106.4% { 102.3% } | 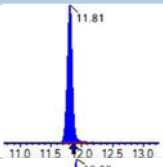 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 380301 | ( 12.92 , N/A ) ( N/A , -0.02 , N/A ) | 1465.5 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 87.8% } | 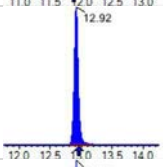 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 504904 | ( 13.72 , N/A ) ( N/A , -0.02 , N/A ) | 2582.2 | N/A | 1.4890 [ 2.0000 ] | 74.4% { 72.9% } | 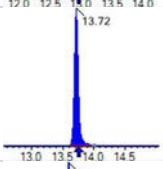 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2132801 | ( 6.39 , N/A ) ( N/A , -0.03 , N/A ) | 850.6 | N/A | 2.0710 [ 2.0000 ] | 103.5% { 96.1% } | 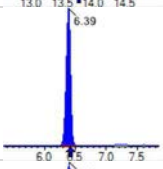 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1731427 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 3108.4 | N/A | 2.2380 [ 2.0000 ] | 111.9% { 105.0% } | 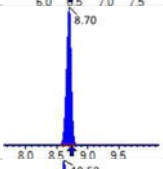 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1927518 | ( 10.52 , N/A ) ( N/A , -0.08 , N/A ) | 756.6 | N/A | 2.0290 [ 2.0000 ] | 101.4% { 91.6% } | 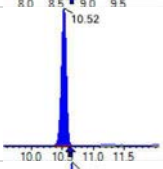 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 513968 | ( 5.54 , N/A ) ( N/A , -0.02 , N/A ) | 80.0 | N/A | 5.5830 [ 4.0000 ] | 139.6% { 141.1% } | 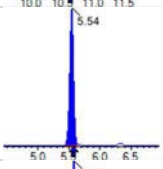 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1559824 | ( 7.67 , N/A ) ( N/A , -0.03 , N/A ) | 2547.8 | N/A | 5.4570 [ 4.0000 ] | 136.4% { 148.0% } | 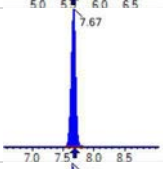 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1372520 | ( 9.45 , N/A ) ( N/A , -0.05 , N/A ) | 1599.3 | N/A | 4.8190 [ 4.0000 ] | 120.5% { 123.7% } | 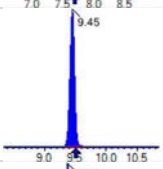 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2354524 | ( 11.07 , N/A ) ( N/A , -0.08 , N/A ) | 1596.1 | N/A | 7.2020 [ 8.0000 ] | 90.0% { 93.3% } | 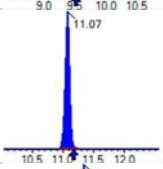 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1695707 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2002.5 | N/A | 1.6470 [ 2.0000 ] | 82.4% { 74.9% } | 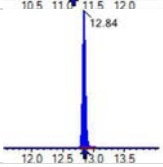 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (24)
Acquired: 2024/03/14 - 20:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 172294 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1113.3 | N/A | 0.9060 [ 2.0000 ] | 45.3% { 41.4% } | 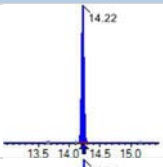 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 173491 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 1146.7 | N/A | 0.7940 [ 2.0000 ] | 39.7% { 36.0% } | 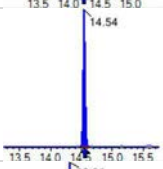 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 821862 | ( 10.31 , N/A ) ( N/A , -0.08 , N/A ) | 2101.3 | N/A | 3.3780 [ 4.0000 ] | 84.4% { 77.1% } | 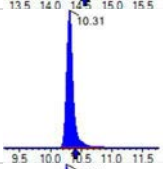 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1090761 | ( 10.86 , N/A ) ( N/A , -0.06 , N/A ) | 1887.1 | N/A | 4.7230 [ 4.0000 ] | 118.1% { 106.6% } | 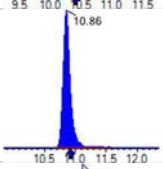 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 972492 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1439.5 | N/A | 10.9480 [ 20.0000 ] | 54.7% { 48.7% } | 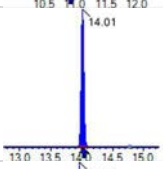 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1035760 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3302.2 | N/A | 9.6250 [ 20.0000 ] | 48.1% { 42.5% } | 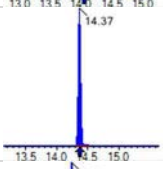 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1223849 | ( 6.54 , N/A ) ( N/A , -0.03 , N/A ) | 1740.2 | N/A | 9.7760 [ 8.0000 ] | 122.2% { 102.5% } | 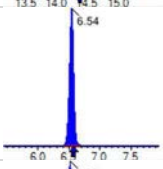 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 471865 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 1337.8 | N/A | 1.6360 [ 2.0000 ] | 81.8% { 78.6% } | 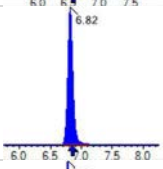 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 483174 | ( 8.88 , N/A ) ( N/A , -0.04 , N/A ) | 774.7 | N/A | 1.7940 [ 2.0000 ] | 89.7% { 90.4% } | 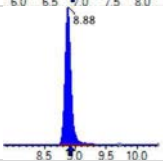 | | |

# ANALYSIS DATA SHEETL

## MW-23-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-06- | File ID: | S2024-03-14A (25)- |
| Sampled:- | 03/11/24 11:05- | Prepared:- | 03/13/24 13:29 | Analyzed:- | 03/14/24 20:43 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.376 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | 7.0- | 0.19- | 1.5 | |
| PFPeA- | 6.7- | 0.059- | 0.73 | |
| PFHxA- | 6.3- | 0.050- | 0.36 | |
| PFHpA- | 3.9- | 0.037- | 0.36 | |
| PFOA- | 4.9- | 0.14- | 0.36 | MI5 |
| PFNA- | ND- | 0.075- | 0.36 | U |
| PFDA- | 0.094- | 0.092- | 0.36 | J |
| PFUnA- | ND- | 0.15- | 0.36 | U |
| PFDoA- | ND- | 0.10- | 0.36 | U |
| PFTrDA- | ND- | 0.19- | 0.36 | U |
| PFTeDA- | ND- | 0.18- | 0.36 | U |
| PFHxDA- | ND- | 0.18- | 0.36 | U |
| PFODA- | ND- | 0.18- | 0.36 | U |
| PFBS- | 21- | 0.033- | 0.36 | |
| PFPeS- | 1.7- | 0.057- | 0.36 | |
| PFHxS- | 17- | 0.029- | 0.36 | |
| PFHpS- | 0.16- | 0.047- | 0.36 | J |
| PFOS- | 0.43- | 0.058- | 0.36 | IR1 |
| PFNS- | ND- | 0.11- | 0.36 | U |
| PFDS- | ND- | 0.14- | 0.36 | U |
| PFDoS- | ND- | 0.11- | 0.36 | U |
| 4:2FTS- | ND- | 0.26- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.075- | 1.5 | U |
| 10:2FTS- | ND- | 0.36- | 1.5 | U |
| PFOSA- | ND- | 0.095- | 0.36 | U |
| NMeFOSA- | ND- | 0.43- | 1.5 | U |
| NEtFOSA- | ND- | 0.38- | 1.5 | U |
| NMeFOSAA- | ND- | 0.096- | 0.36 | U |
| NEtFOSAA- | ND- | 0.10- | 0.36 | U |

# ANALYSIS DATA SHEETL

MW-23-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project:- | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-06- | File ID:- | S2024-03-14A (25)- |
| Sampled:- | 03/11/24 11:05- | Prepared:- | 03/13/24 13:29- | Analyzed:- | 03/14/24 20:43- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.376 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.95- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.099- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (25)
Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 107182<br>( 163.0 / 69.0 ) 2545 | ( 2.79 , 0.75 )<br>( N/A , -0.03 , -0.1) | 686.4<br>224.2 | 0.0237<br>94.7<br>93.8 | 0.4020 | N/A | 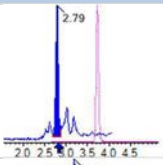 | 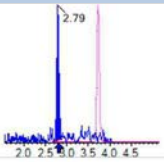 | |
| PFBA | ( 213.0 / 169.0 ) 547578 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1182.8 | N/A<br>0.0<br>0.0 | 1.9210 | N/A | 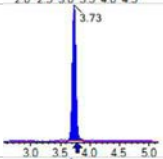 | | |
| PFPeA | ( 263.0 / 219.0 ) 562523<br>( 263.0 / 69.0 ) 8357 | ( 4.84 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1804.1<br>95.6 | 0.0149<br>135.3<br>123.3 | 1.8430 | N/A | 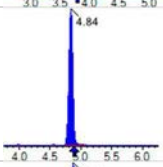 | 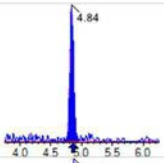 | |
| PFHxA | ( 313.0 / 269.0 ) 598474<br>( 313.0 / 119.0 ) 68566 | ( 6.06 , 1.00 )<br>( 0.00 , N/A , 0.1) | 998.2<br>726.5 | 0.1146<br>103.1<br>99.3 | 1.7190 | N/A | 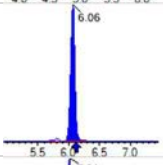 | 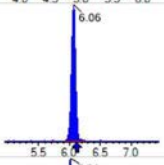 | |
| PFHpA | ( 363.0 / 319.0 ) 416547<br>( 363.0 / 169.0 ) 123890 | ( 7.21 , 1.00 )<br>( 0.00 , N/A , -0.1) | 764.1<br>703.7 | 0.2974<br>95.4<br>101.5 | 1.0750 | N/A | 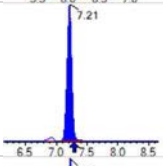 | 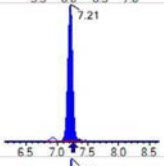 | |
| PFOA | ( 413.0 / 369.0 ) 713883<br>( 413.0 / 169.0 ) 251817 | ( 8.23 , 1.00 )<br>( 0.00 , N/A , -0.1) | 422.4<br>424.1 | 0.3527<br>97.5<br>102.3 | 1.3330 | N/A | 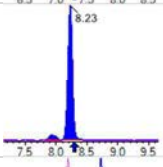 | 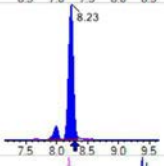 | MI5 DG 2024-03-15 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 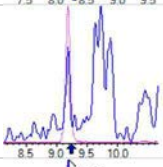 | 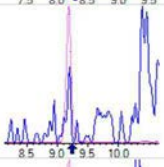 | |
| PFDA | ( 513.0 / 469.0 ) 11437<br>( 513.0 / 169.0 ) 1223 | ( 10.10 , 1.00 )<br>( 0.01 , N/A , -1.4) | 82.9<br>24.6 | 0.1069<br>91.1<br>92.3 | 0.0260 | N/A | 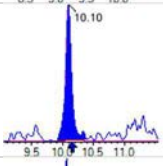 | 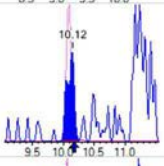 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 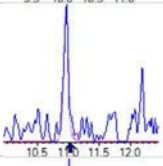 | 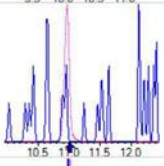 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 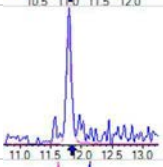 | 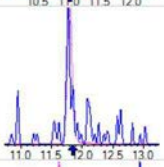 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 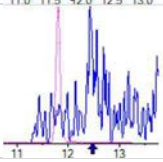 | 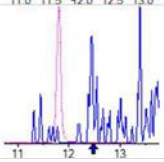 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (25)
Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 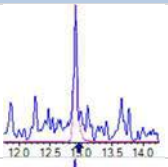 | 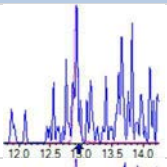 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 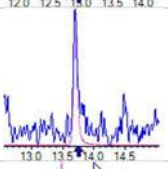 | 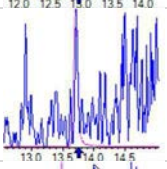 | |
| PFODA | ( 913.0 / 869.0 )<br>3336<br>( 913.0 / 169.0 )<br>917 | ( 14.35 , 1.05 )<br>( N/A , -0.02 , -0.1) | 22.0<br>8.5 | 0.2749<br>72.0<br>78.9 | 0.0190 | N/A | 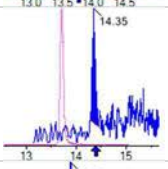 | 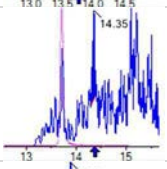 | |
| PFBS | ( 299.0 / 80.0 )<br>3464156<br>( 299.0 / 99.0 )<br>2525278 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2080.9<br>2154.4 | 0.7290<br>102.5<br>98.8 | 5.8440 | N/A | 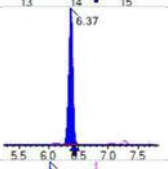 | 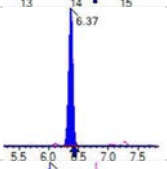 | |
| PFPeS | ( 349.0 / 80.0 )<br>677652<br>( 349.0 / 99.0 )<br>235292 | ( 7.61 , 0.88 )<br>( N/A , -0.05 , 0.1) | 546.3<br>617.0 | 0.3472<br>102.1<br>100.4 | 0.4660 | N/A | 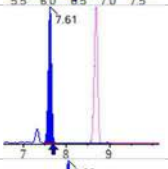 | 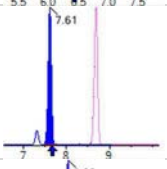 | |
| PFHxS | ( 399.0 / 80.0 )<br>7735861<br>( 399.0 / 99.0 )<br>2333575 | ( 8.68 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2652.5<br>4033.6 | 0.3017<br>96.5<br>89.8 | 4.7860 | N/A | 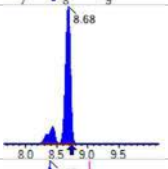 | 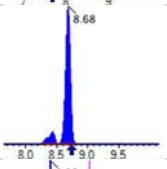 | |
| PFHpS | ( 449.0 / 80.0 )<br>53225<br>( 449.0 / 99.0 )<br>15365 | ( 9.65 , 0.92 )<br>( N/A , -0.05 , -0.3) | 93.5<br>55.7 | 0.2887<br>108.0<br>106.6 | 0.0440 | N/A | 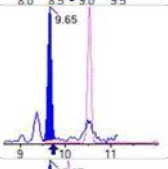 | 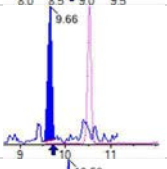 | |
| PFOS | ( 499.0 / 80.0 )<br>142587<br>( 499.0 / 99.0 )<br>16486 | ( 10.17 , 0.97 )<br>( -0.36 , N/A , -20.5) | 75.0<br>79.6 | 0.1156<br>48.9<br>49.8 | 0.1170 | N/A | 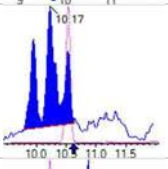 | 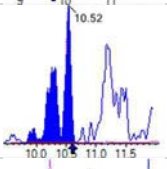 | IR1,MI1 DG<br>2024-03-15 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 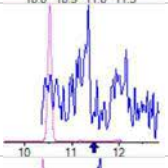 | 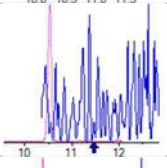 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 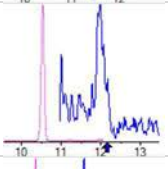 | 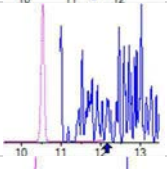 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 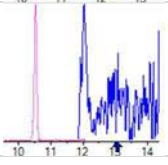 | 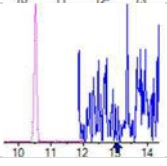 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (25)
Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 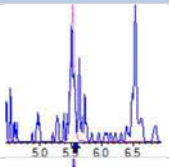 | 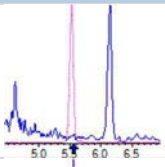 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 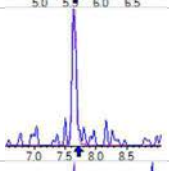 | 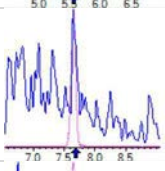 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 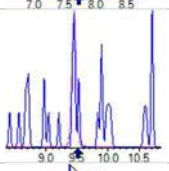 | 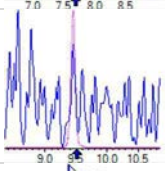 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>12976<br>( 627.0 / 81.0 )<br>18835 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.4) | 222.7<br>53.5 | 1.4515<br>107.4<br>112.2 | 0.0510 | N/A | 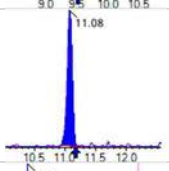 | 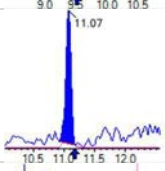 | |
| PFBSA | ( 297.9 / 78.0 )<br>173617<br>( 297.9 / 278.0 )<br>256 | ( 8.05 , 0.57 )<br>( N/A , -0.03 , -0.3) | 810.3<br>6.0 | 0.0015<br>104.9<br>102.4 | 0.4560 | N/A | 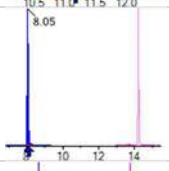 | 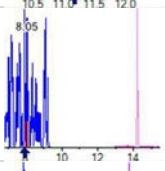 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 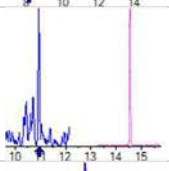 | 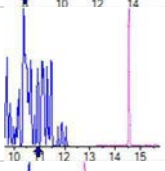 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 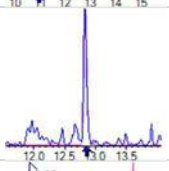 | 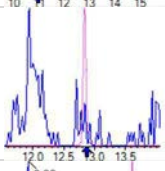 | |
| TFSI | ( 279.7 / 147.0 )<br>410706<br>( 279.7 / 211.0 )<br>39271 | ( 8.26 , 0.64 )<br>( N/A , -0.05 , 0.1) | 57.6<br>31.6 | 0.0956<br>115.9<br>116.1 | 0.2320 | N/A | 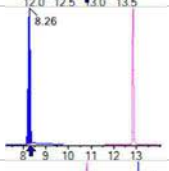 | 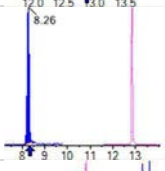 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 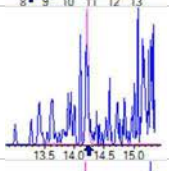 | 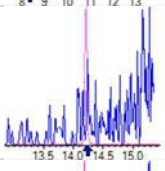 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 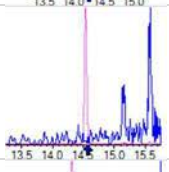 | 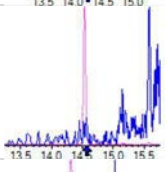 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 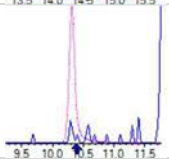 | 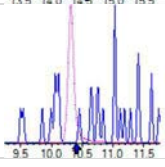 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (25)
Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 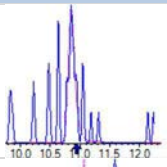 | 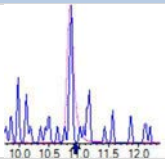 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 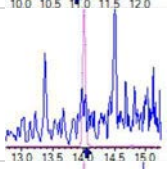 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 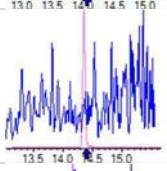 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 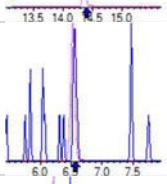 | 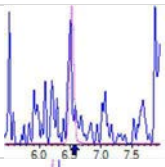 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 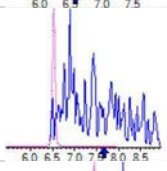 | 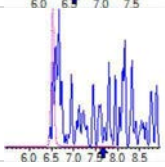 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 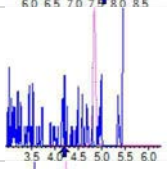 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 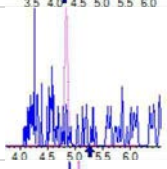 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 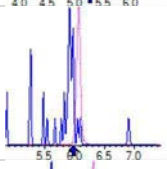 | 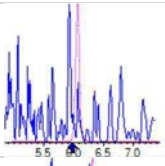 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 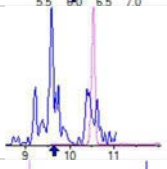 | 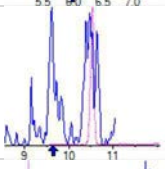 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 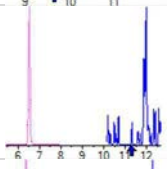 | 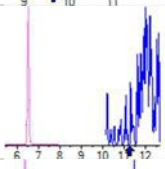 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 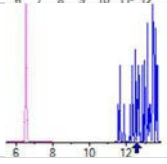 | 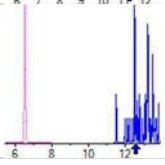 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 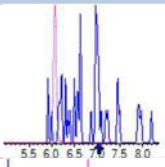 | 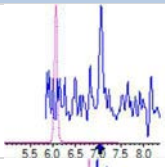 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 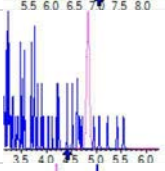 | 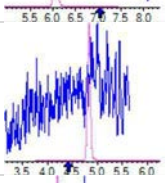 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 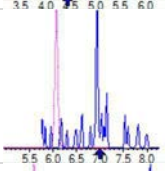 | 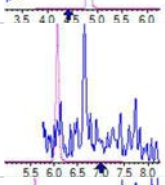 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 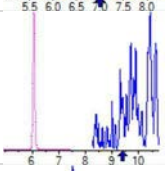 | 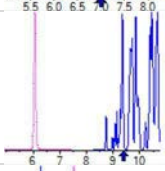 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 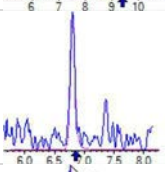 | 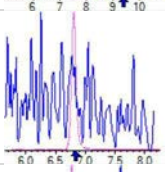 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2815<br>( 457.2 / 343.0 ) 298 | ( 8.86 , 1.00 )<br>( -0.01 , N/A , 2.3) | 20.7<br>5.5 | 0.1060<br>270.8<br>256.5 | 0.0130 | N/A | 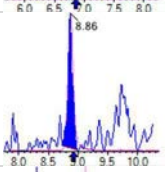 | 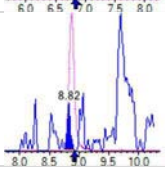 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 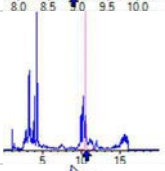 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 289096 | ( 3.73 , N/A )<br>( N/A , -0.06 , N/A ) | 2274.6 | N/A | 0.9600<br>[ 1.0000 ] | 96.0%<br>{ 98.1% } | 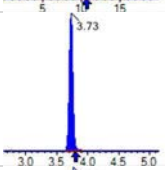 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145838 | ( 6.07 , N/A )<br>( N/A , -0.04 , N/A ) | 17873.4 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 94.0% } | 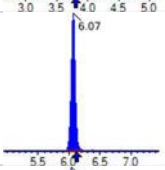 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 421338 | ( 8.23 , N/A )<br>( N/A , -0.05 , N/A ) | 2786.0 | N/A | 0.9440<br>[ 1.0000 ] | 94.4%<br>{ 91.3% } | 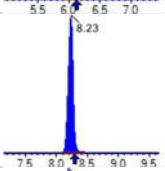 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 325668 | ( 9.19 , N/A )<br>( N/A , -0.05 , N/A ) | 743.0 | N/A | 0.9740<br>[ 1.0000 ] | 97.4%<br>{ 95.9% } | 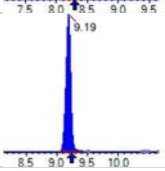 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 335311 | ( 10.09 , N/A ) ( N/A , -0.05 , N/A ) | 2896.8 | N/A | 1.0110 [ 1.0000 ] | 101.1% { 100.2% } | 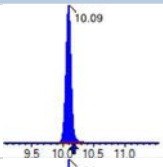 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1085280 | ( 8.69 , N/A ) ( N/A , -0.05 , N/A ) | 3562.7 | N/A | 0.9710 [ 1.0000 ] | 97.1% { 94.9% } | 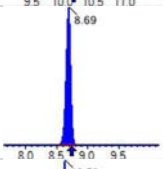 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 923581 | ( 10.53 , N/A ) ( N/A , -0.07 , N/A ) | 836.4 | N/A | 0.9460 [ 1.0000 ] | 94.6% { 97.2% } | 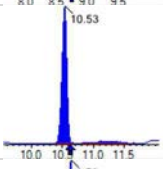 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2410354 | ( 3.73 , N/A ) ( N/A , -0.06 , N/A ) | 37784.9 | N/A | 7.5610 [ 8.0000 ] | 94.5% { 91.1% } | 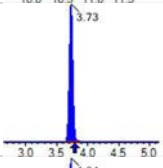 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1199124 | ( 4.84 , N/A ) ( N/A , -0.04 , N/A ) | 5220.9 | N/A | 4.5830 [ 4.0000 ] | 114.6% { 101.9% } | 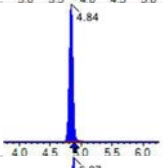 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 718442 | ( 6.07 , N/A ) ( N/A , -0.04 , N/A ) | 7388.4 | N/A | 2.2940 [ 2.0000 ] | 114.7% { 104.2% } | 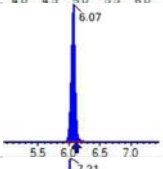 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 787144 | ( 7.21 , N/A ) ( N/A , -0.05 , N/A ) | 5617.3 | N/A | 2.4070 [ 2.0000 ] | 120.3% { 109.7% } | 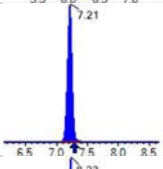 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1052944 | ( 8.23 , N/A ) ( N/A , -0.05 , N/A ) | 3177.4 | N/A | 2.3700 [ 2.0000 ] | 118.5% { 102.9% } | 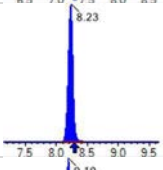 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 342151 | ( 9.19 , N/A ) ( N/A , -0.05 , N/A ) | 1657.5 | N/A | 1.0880 [ 1.0000 ] | 108.8% { 102.2% } | 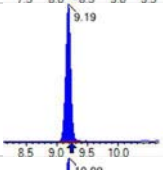 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 445035 | ( 10.09 , N/A ) ( N/A , -0.05 , N/A ) | 1311.2 | N/A | 1.1500 [ 1.0000 ] | 115.0% { 114.6% } | 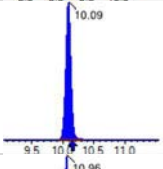 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 516769 | ( 10.96 , N/A ) ( N/A , -0.05 , N/A ) | 1206.8 | N/A | 1.0980 [ 1.0000 ] | 109.8% { 107.2% } | 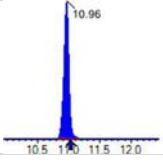 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 503004 | ( 11.80 , N/A ) ( N/A , -0.04 , N/A ) | 1016.4 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 105.5% } | 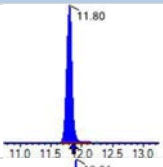 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 387431 | ( 12.91 , N/A ) ( N/A , -0.03 , N/A ) | 1525.5 | N/A | 0.9410 [ 1.0000 ] | 94.1% { 89.5% } | 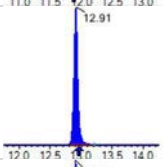 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 547390 | ( 13.71 , N/A ) ( N/A , -0.03 , N/A ) | 2839.7 | N/A | 1.5650 [ 2.0000 ] | 78.3% { 79.0% } | 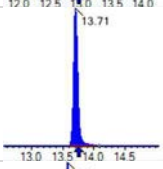 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2280106 | ( 6.37 , N/A ) ( N/A , -0.05 , N/A ) | 418.5 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 102.8% } | 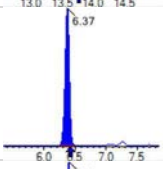 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1825550 | ( 8.69 , N/A ) ( N/A , -0.05 , N/A ) | 3358.4 | N/A | 2.2990 [ 2.0000 ] | 114.9% { 110.7% } | 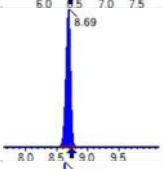 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2100405 | ( 10.53 , N/A ) ( N/A , -0.07 , N/A ) | 945.4 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 99.8% } | 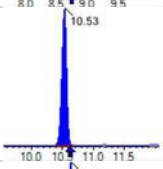 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 565673 | ( 5.53 , N/A ) ( N/A , -0.04 , N/A ) | 89.5 | N/A | 5.9850 [ 4.0000 ] | 149.6% { 155.3% } | 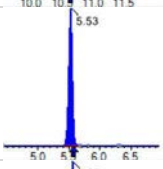 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1631890 | ( 7.65 , N/A ) ( N/A , -0.05 , N/A ) | 2165.9 | N/A | 5.5600 [ 4.0000 ] | 139.0% { 154.8% } | 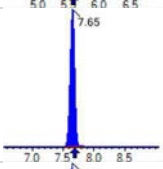 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1401390 | ( 9.45 , N/A ) ( N/A , -0.05 , N/A ) | 1151.0 | N/A | 4.7930 [ 4.0000 ] | 119.8% { 126.3% } | 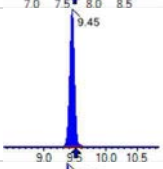 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2486861 | ( 11.07 , N/A ) ( N/A , -0.08 , N/A ) | 1334.6 | N/A | 7.4090 [ 8.0000 ] | 92.6% { 98.5% } | 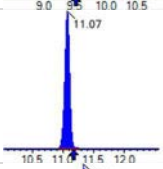 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1709935 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 2263.7 | N/A | 1.6050 [ 2.0000 ] | 80.2% { 75.5% } | 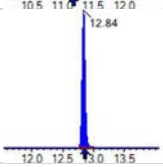 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (25)
Acquired: 2024/03/14 - 20:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 165459 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1243.9 | N/A | 0.8410 [ 2.0000 ] | 42.0% { 39.8% } | 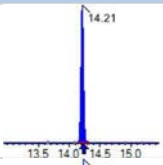  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 165629 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1126.8 | N/A | 0.7330 [ 2.0000 ] | 36.6% { 34.4% } | 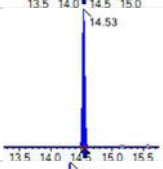  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 998103 | ( 10.31 , N/A ) ( N/A , -0.07 , N/A ) | 2015.3 | N/A | 3.9640 [ 4.0000 ] | 99.1% { 93.6% } | 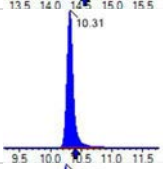  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1117095 | ( 10.85 , N/A ) ( N/A , -0.06 , N/A ) | 1858.5 | N/A | 4.6740 [ 4.0000 ] | 116.8% { 109.2% } | 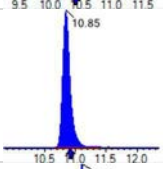  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 927372 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1935.8 | N/A | 10.0870 [ 20.0000 ] | 50.4% { 46.5% } | 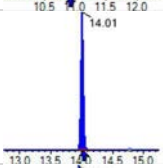  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1076561 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3540.0 | N/A | 9.6670 [ 20.0000 ] | 48.3% { 44.2% } | 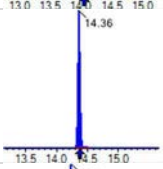  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1284447 | ( 6.53 , N/A ) ( N/A , -0.05 , N/A ) | 2297.2 | N/A | 9.5430 [ 8.0000 ] | 119.3% { 107.6% } | 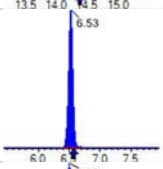  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 530457 | ( 6.80 , N/A ) ( N/A , -0.05 , N/A ) | 1171.7 | N/A | 1.7840 [ 2.0000 ] | 89.2% { 88.4% } | 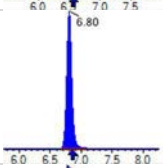  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 524703 | ( 8.87 , N/A ) ( N/A , -0.05 , N/A ) | 786.8 | N/A | 1.8900 [ 2.0000 ] | 94.5% { 98.2% } | 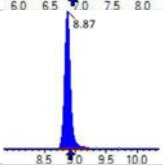  | | |

# ANALYSIS DATA SHEETL

MW-23-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-07- | File ID: | S2024-03-14A (26)- |
| Sampled:- | 03/11/24 11:30- | Prepared:- | 03/13/24 13:29 | Analyzed:- | 03/14/24 21:04 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 560.396 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | 6.3- | 0.19- | 1.4 | MI5 |
| PFPeA- | 13- | 0.058- | 0.71 | |
| PFHxA- | 15- | 0.049- | 0.36 | |
| PFHpA- | 16- | 0.037- | 0.36 | |
| PFOA- | 27- | 0.14- | 0.36 | |
| PFNA- | 0.38- | 0.073- | 0.36 | |
| PFDA- | ND- | 0.090- | 0.36 | IR1, U |
| PFUnA- | ND- | 0.14- | 0.36 | U |
| PFDoA- | ND- | 0.10- | 0.36 | U |
| PFTrDA- | ND- | 0.18- | 0.36 | U |
| PFTeDA- | ND- | 0.18- | 0.36 | U |
| PFHxDA- | ND- | 0.18- | 0.36 | U |
| PFODA- | ND- | 0.18- | 0.36 | U |
| PFBS- | 9.6- | 0.033- | 0.36 | |
| PFPeS- | 0.71- | 0.056- | 0.36 | |
| PFHxS- | 12- | 0.028- | 0.36 | |
| PFHpS- | 0.60- | 0.046- | 0.36 | |
| PFOS- | 3.7- | 0.057- | 0.36 | IR1 |
| PFNS- | ND- | 0.11- | 0.36 | U |
| PFDS- | ND- | 0.14- | 0.36 | U |
| PFDoS- | ND- | 0.11- | 0.36 | U |
| 4:2FTS- | ND- | 0.26- | 1.4 | U |
| 6:2FTS- | ND- | 0.28- | 1.4 | U |
| 8:2FTS- | ND- | 0.073- | 1.4 | U |
| 10:2FTS- | ND- | 0.36- | 1.4 | U |
| PFOSA- | ND- | 0.093- | 0.36 | U |
| NMeFOSA- | ND- | 0.42- | 1.4 | U |
| NEtFOSA- | ND- | 0.37- | 1.4 | U |
| NMeFOSAA- | ND- | 0.094- | 0.36 | U |
| NEtFOSAA- | ND- | 0.10- | 0.36 | U |

# ANALYSIS DATA SHEETL

MW-23-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0052- |
| Client:- | Tidewater, Inc.- | | | Project:- | [none]- |
| Matrix:- | Water- | Laboratory ID:- | 24C0052-07- | File ID:- | S2024-03-14A (26)- |
| Sampled:- | 03/11/24 11:30- | Prepared:- | 03/13/24 13:29- | Analyzed:- | 03/14/24 21:04- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 560.396 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0186- | Sequence:- | SD00936 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.90- | 1.4- | U- |
| NEtFOSE- | ND- | 0.93- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.71- | U- |
| ADONA- | ND- | 0.11- | 0.71- | U- |
| PFEESA- | ND- | 0.097- | 0.71- | U- |
| PFMPA- | ND- | 0.048- | 0.71- | U- |
| PFMBA- | ND- | 0.081- | 0.71- | U- |
| NFDHA- | ND- | 0.27- | 0.71- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.71- | U- |
| 11Cl-PF3OUDS- | ND- | 0.18- | 0.71- | U- |
| 3:3FTCA- | ND- | 0.51- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.49- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 120295<br>( 163.0 / 69.0 ) 2856 | ( 2.78 , 0.75 )<br>( N/A , -0.03 , 0.2) | 793.4<br>176.7 | 0.0237<br>94.7<br>93.7 | 0.4790 | N/A | 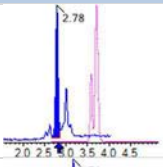 | 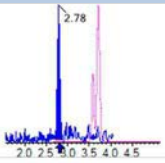 | |
| PFBA | ( 213.0 / 169.0 ) 477058 | ( 3.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 717.2 | N/A<br>0.0<br>0.0 | 1.7780 | N/A | 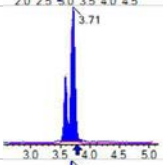 | | MI5 DAG 2024-03-15 |
| PFPeA | ( 263.0 / 219.0 ) 1013310<br>( 263.0 / 69.0 ) 13372 | ( 4.84 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2881.9<br>218.8 | 0.0132<br>120.2<br>109.6 | 3.7570 | N/A | 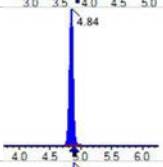 | 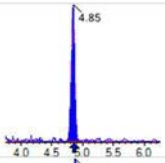 | |
| PFHxA | ( 313.0 / 269.0 ) 1341094<br>( 313.0 / 119.0 ) 140874 | ( 6.08 , 1.00 )<br>( 0.00 , N/A , 0.4) | 1517.5<br>1493.1 | 0.1050<br>94.5<br>91.1 | 4.0810 | N/A | 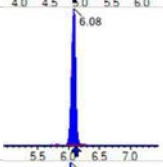 | 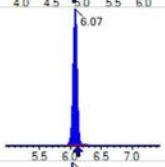 | |
| PFHpA | ( 363.0 / 319.0 ) 1616474<br>( 363.0 / 169.0 ) 466863 | ( 7.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1063.1<br>1235.6 | 0.2888<br>92.7<br>98.5 | 4.5450 | N/A | 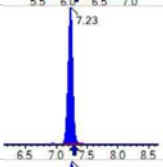 | 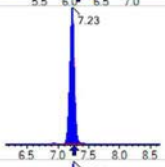 | |
| PFOA | ( 413.0 / 369.0 ) 3761633<br>( 413.0 / 169.0 ) 1366946 | ( 8.25 , 1.00 )<br>( 0.00 , N/A , 0.1) | 795.5<br>793.9 | 0.3634<br>100.5<br>105.4 | 7.6620 | N/A | 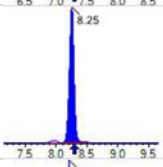 | 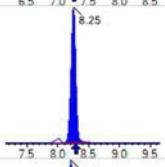 | |
| PFNA | ( 463.0 / 419.0 ) 35986<br>( 463.0 / 169.0 ) 9388 | ( 9.20 , 1.00 )<br>( 0.00 , N/A , 0.1) | 79.0<br>55.5 | 0.2609<br>99.4<br>103.4 | 0.1070 | N/A | 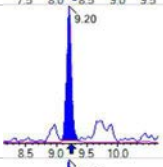 | 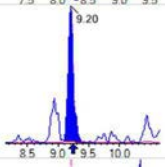 | |
| PFDA | ( 513.0 / 469.0 ) 5999<br>( 513.0 / 169.0 ) N/A | ( 10.10 , 1.00 )<br>( -0.01 , N/A , #Value!) | 49.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0150 | N/A | 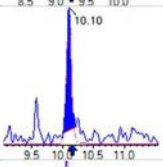 | 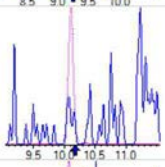 | IR1, |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 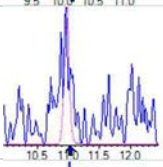 | 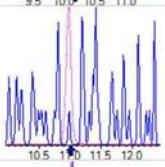 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 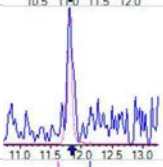 | 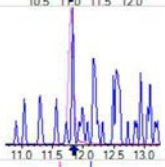 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 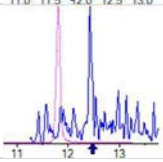 | 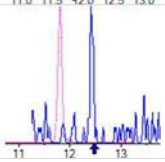 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 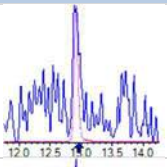 | 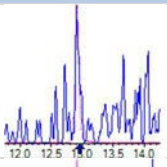 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 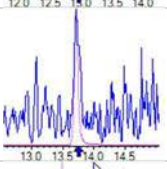 | 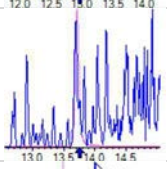 | |
| PFODA | ( 913.0 / 869.0 )<br>3211<br>( 913.0 / 169.0 )<br>1054 | ( 14.35 , 1.05 )<br>( N/A , -0.02 , -0.3) | 22.7<br>11.9 | 0.3282<br>85.9<br>94.2 | 0.0180 | N/A | 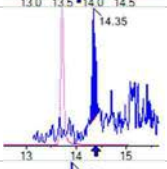 | 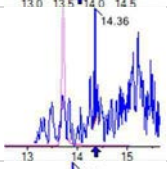 | |
| PFBS | ( 299.0 / 80.0 )<br>1405023<br>( 299.0 / 99.0 )<br>1009238 | ( 6.38 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1851.0<br>1872.1 | 0.7183<br>101.0<br>97.4 | 2.6920 | N/A | 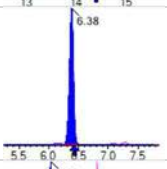 | 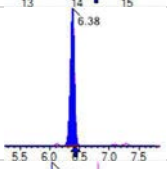 | |
| PFPeS | ( 349.0 / 80.0 )<br>265670<br>( 349.0 / 99.0 )<br>97526 | ( 7.63 , 0.88 )<br>( N/A , -0.03 , -0.1) | 373.7<br>309.3 | 0.3671<br>107.9<br>106.2 | 0.1990 | N/A | 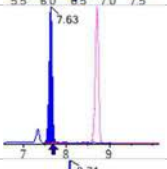 | 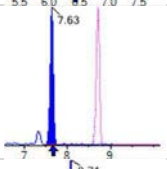 | |
| PFHxS | ( 399.0 / 80.0 )<br>4931588<br>( 399.0 / 99.0 )<br>1509921 | ( 8.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2493.6<br>2755.6 | 0.3062<br>97.9<br>91.2 | 3.3140 | N/A | 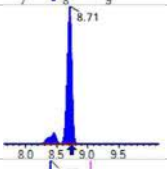 | 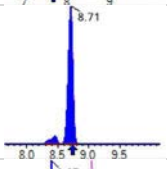 | |
| PFHpS | ( 449.0 / 80.0 )<br>194578<br>( 449.0 / 99.0 )<br>52108 | ( 9.67 , 0.92 )<br>( N/A , -0.04 , 0.1) | 230.2<br>167.8 | 0.2678<br>100.2<br>98.9 | 0.1670 | N/A | 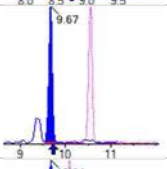 | 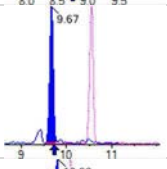 | |
| PFOS | ( 499.0 / 80.0 )<br>1226317<br>( 499.0 / 99.0 )<br>104597 | ( 10.24 , 0.97 )<br>( -0.32 , N/A , -3.0) | 566.3<br>422.3 | 0.0853<br>36.1<br>36.7 | 1.0470 | N/A | 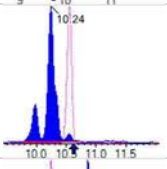 | 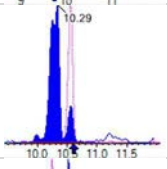 | IR1,MI2 DG 2024-03-15 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 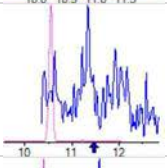 | 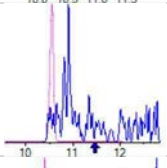 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 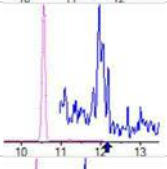 | 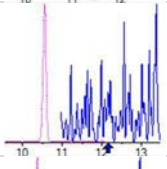 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 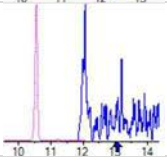 | 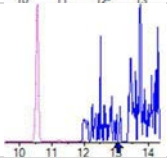 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 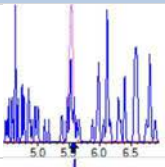 | 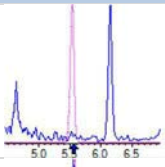 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 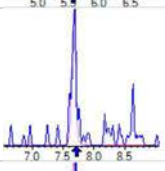 | 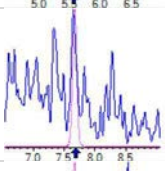 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 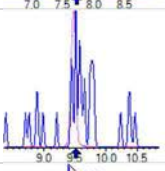 | 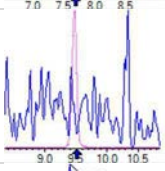 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>11935<br>( 627.0 / 81.0 )<br>19142 | ( 11.09 , 1.00 )<br>( 0.00 , N/A , -0.1) | 154.4<br>40.1 | 1.6038<br>118.7<br>124.0 | 0.0460 | N/A | 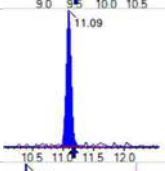 | 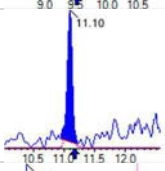 | |
| PFBSA | ( 297.9 / 78.0 )<br>546415<br>( 297.9 / 278.0 )<br>1139 | ( 8.07 , 0.57 )<br>( N/A , -0.01 , 1.2) | 1198.1<br>14.8 | 0.0021<br>148.5<br>144.9 | 1.2990 | N/A | 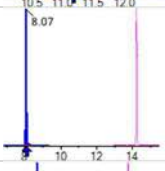 | 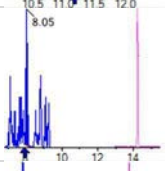 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 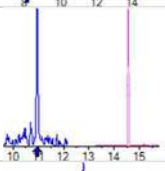 | 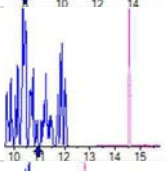 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 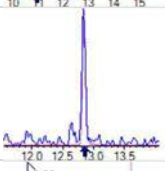 | 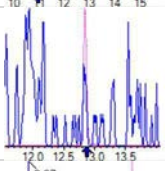 | |
| TFSI | ( 279.7 / 147.0 )<br>101961<br>( 279.7 / 211.0 )<br>9134 | ( 8.28 , 0.64 )<br>( N/A , -0.04 , 0.3) | 41.7<br>18.0 | 0.0896<br>108.6<br>108.8 | 0.0590 | N/A | 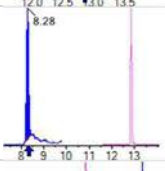 | 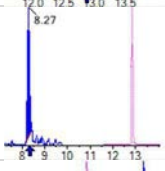 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 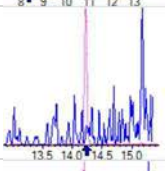 | 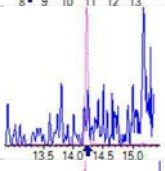 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 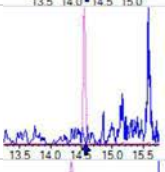 | 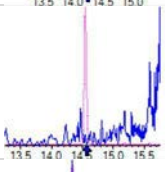 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 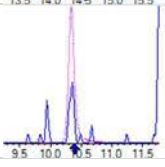 | 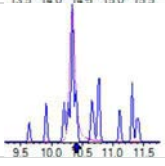 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 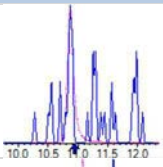 | 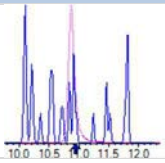 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 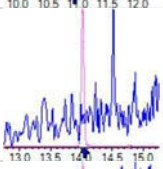 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 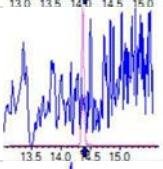 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 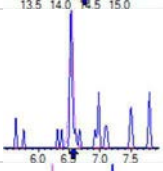 | 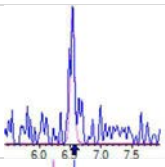 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 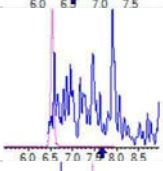 | 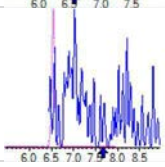 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 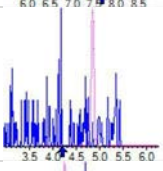 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 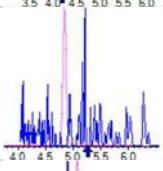 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 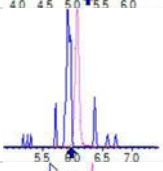 | 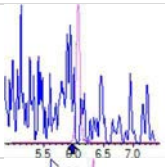 | |
| PFECHS | ( 461.0 / 98.9 )<br>17183<br>( 461.0 / 381.2 )<br>5898 | ( 9.59 , 0.91 )<br>( N/A , -0.04 , 0.2) | 63.5<br>43.7 | 0.3433<br>87.9<br>88.9 | 0.0260 | N/A | 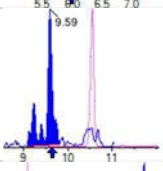 | 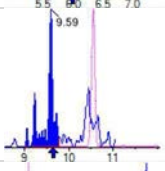 | MI5 DG<br>2024-03-15 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 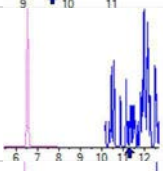 | 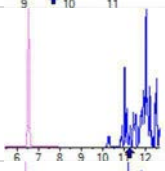 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 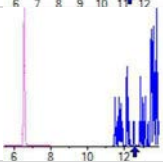 | 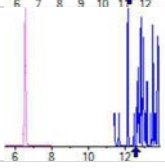 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 )<br>Area Counts*min | R.T.<br>( R.T [min] , R.R.T. )<br>( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio<br>IR Vs MP%<br>IR Vs CV% | Concentration<br>[ True ] ng/mL | Q.C. Rec.<br>{Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 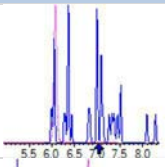 | 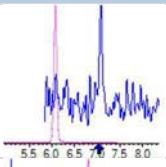 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 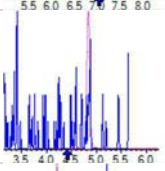 | 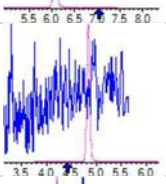 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 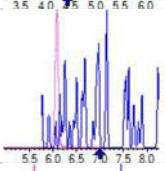 | 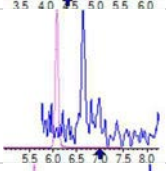 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 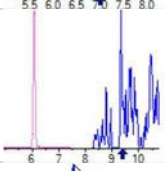 | 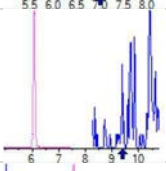 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>3988<br>( 357.2 / 243.0 )<br>437 | ( 6.81 , 1.00 )<br>( -0.01 , N/A , -2.5) | 27.9<br>6.2 | 0.1097<br>103.9<br>106.2 | 0.0140 | N/A | 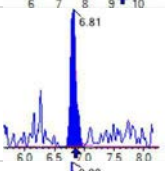 | 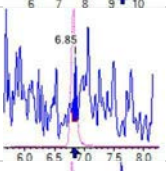 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>2754<br>( 457.2 / 343.0 )<br>160 | ( 8.90 , 1.00 )<br>( 0.00 , N/A , 1.7) | 15.6<br>6.8 | 0.0582<br>148.6<br>140.8 | 0.0130 | N/A | 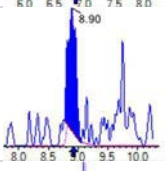 | 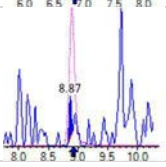 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 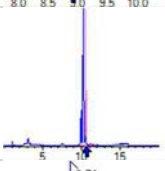 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>271746 | ( 3.71 , N/A )<br>( N/A , -0.08 , N/A ) | 1583.0 | N/A | 0.9020<br>[ 1.0000 ] | 90.2%<br>{ 92.2% } | 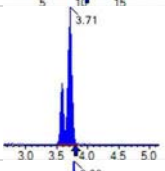 | | MI4 DAG<br>2024-03-15 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>140025 | ( 6.08 , N/A )<br>( N/A , -0.03 , N/A ) | 11116.4 | N/A | 0.9110<br>[ 1.0000 ] | 91.1%<br>{ 90.2% } | 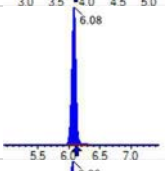 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>420970 | ( 8.26 , N/A )<br>( N/A , -0.02 , N/A ) | 7832.7 | N/A | 0.9440<br>[ 1.0000 ] | 94.4%<br>{ 91.2% } | 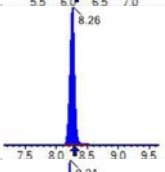 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>314781 | ( 9.21 , N/A )<br>( N/A , -0.02 , N/A ) | 866.4 | N/A | 0.9420<br>[ 1.0000 ] | 94.2%<br>{ 92.7% } | 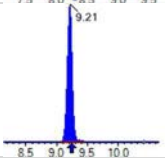 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 315709 | ( 10.11 , N/A ) ( N/A , -0.04 , N/A ) | 2373.2 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 94.3% } | 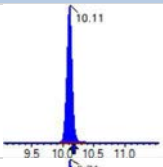 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1060757 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 4486.2 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 92.8% } | 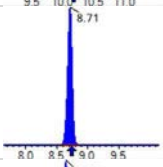 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 887606 | ( 10.55 , N/A ) ( N/A , -0.05 , N/A ) | 926.0 | N/A | 0.9090 [ 1.0000 ] | 90.9% { 93.4% } | 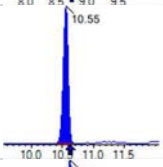 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2268963 | ( 3.71 , N/A ) ( N/A , -0.08 , N/A ) | 14178.0 | N/A | 7.5720 [ 8.0000 ] | 94.6% { 85.8% } | 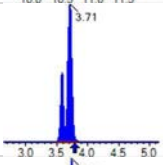 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1059890 | ( 4.84 , N/A ) ( N/A , -0.03 , N/A ) | 5315.7 | N/A | 4.2190 [ 4.0000 ] | 105.5% { 90.1% } | 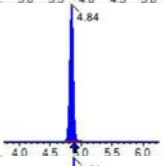 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 678374 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 4995.6 | N/A | 2.2560 [ 2.0000 ] | 112.8% { 98.4% } | 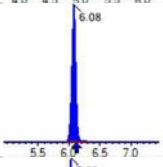 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 722252 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 5694.9 | N/A | 2.3000 [ 2.0000 ] | 115.0% { 100.6% } | 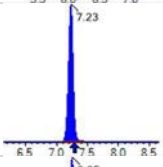 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 965544 | ( 8.25 , N/A ) ( N/A , -0.03 , N/A ) | 2740.8 | N/A | 2.1750 [ 2.0000 ] | 108.8% { 94.4% } | 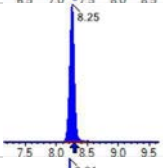 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 336551 | ( 9.21 , N/A ) ( N/A , -0.03 , N/A ) | 1838.9 | N/A | 1.1070 [ 1.0000 ] | 110.7% { 100.5% } | 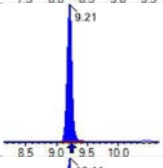 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 409770 | ( 10.11 , N/A ) ( N/A , -0.04 , N/A ) | 1394.5 | N/A | 1.1250 [ 1.0000 ] | 112.5% { 105.5% } | 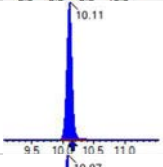 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 516146 | ( 10.97 , N/A ) ( N/A , -0.04 , N/A ) | 1142.3 | N/A | 1.1650 [ 1.0000 ] | 116.5% { 107.1% } | 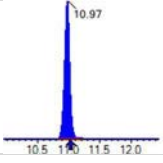 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (26)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 485635 | ( 11.80 , N/A ) ( N/A , -0.03 , N/A ) | 1222.1 | N/A | 1.0920 [ 1.0000 ] | 109.2% { 101.8% } | 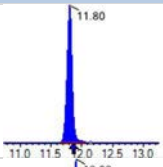 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 376375 | ( 12.92 , N/A ) ( N/A , -0.03 , N/A ) | 1385.5 | N/A | 0.9710 [ 1.0000 ] | 97.1% { 86.9% } | 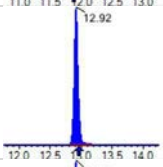 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 559051 | ( 13.72 , N/A ) ( N/A , -0.02 , N/A ) | 2665.8 | N/A | 1.6980 [ 2.0000 ] | 84.9% { 80.7% } | 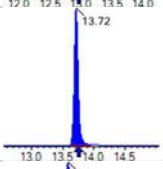 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2007253 | ( 6.38 , N/A ) ( N/A , -0.04 , N/A ) | 617.6 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 90.5% } | 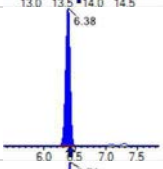 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1680389 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 3910.4 | N/A | 2.1650 [ 2.0000 ] | 108.2% { 101.9% } | 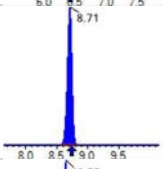 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2026136 | ( 10.55 , N/A ) ( N/A , -0.05 , N/A ) | 847.7 | N/A | 2.1440 [ 2.0000 ] | 107.2% { 96.2% } | 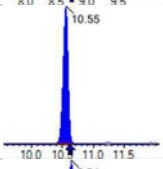 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 501670 | ( 5.54 , N/A ) ( N/A , -0.03 , N/A ) | 86.0 | N/A | 5.4310 [ 4.0000 ] | 135.8% { 137.7% } | 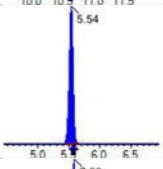 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1501800 | ( 7.68 , N/A ) ( N/A , -0.02 , N/A ) | 2041.2 | N/A | 5.2350 [ 4.0000 ] | 130.9% { 142.5% } | 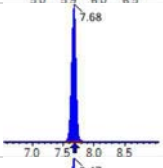 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1256955 | ( 9.47 , N/A ) ( N/A , -0.03 , N/A ) | 1401.3 | N/A | 4.3980 [ 4.0000 ] | 110.0% { 113.2% } | 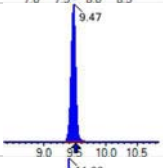 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2549950 | ( 11.09 , N/A ) ( N/A , -0.06 , N/A ) | 1364.3 | N/A | 7.7730 [ 8.0000 ] | 97.2% { 101.0% } | 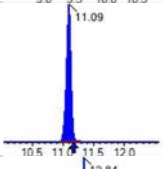 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1662775 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1816.1 | N/A | 1.6240 [ 2.0000 ] | 81.2% { 73.4% } | 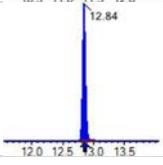 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (26)
Acquired: 2024/03/14 - 21:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 182991 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1282.7 | N/A | 0.9680 [ 2.0000 ] | 48.4% { 44.0% } | 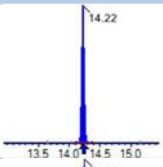  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 205568 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 1545.0 | N/A | 0.9460 [ 2.0000 ] | 47.3% { 42.7% } | 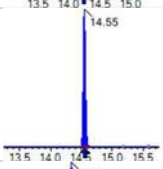  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1029225 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 2223.8 | N/A | 4.2530 [ 4.0000 ] | 106.3% { 96.5% } | 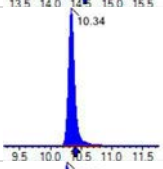  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1110980 | ( 10.87 , N/A ) ( N/A , -0.05 , N/A ) | 2102.9 | N/A | 4.8370 [ 4.0000 ] | 120.9% { 108.6% } | 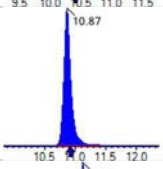  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1058189 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2117.4 | N/A | 11.9770 [ 20.0000 ] | 59.9% { 53.0% } | 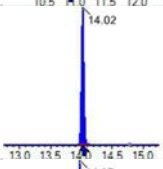  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1135789 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 2382.0 | N/A | 10.6120 [ 20.0000 ] | 53.1% { 46.6% } | 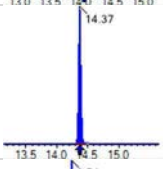  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1145380 | ( 6.54 , N/A ) ( N/A , -0.04 , N/A ) | 3259.1 | N/A | 8.8630 [ 8.0000 ] | 110.8% { 96.0% } | 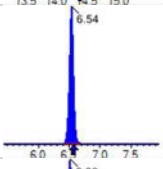  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 514161 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 1248.8 | N/A | 1.8360 [ 2.0000 ] | 91.8% { 85.7% } | 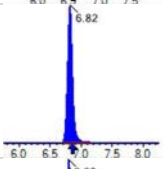  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 506848 | ( 8.90 , N/A ) ( N/A , -0.02 , N/A ) | 669.7 | N/A | 1.9390 [ 2.0000 ] | 96.9% { 94.8% } | 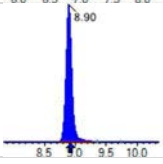  | | |

# ANALYSIS DATA SHEETL

EB-1-031124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0052- |
| Client: | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix: | Water- | Laboratory ID: | 24C0052-08- | File ID: | S2024-03-14A (15)- |
| Sampled: | 03/11/24 11:40- | Prepared: | 03/13/24 13:29 | Analyzed: | 03/14/24 17:18 |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 540.059 mL / 2 mL- | | | Instrument: | Saphira |
| Batch: | BDC0186- | Sequence: | SD00936 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5 | U |
| PFPeA- | ND- | 0.060- | 0.74 | U |
| PFHxA- | ND- | 0.051- | 0.37 | U |
| PFHpA- | ND- | 0.038- | 0.37 | U |
| PFOA- | ND- | 0.14- | 0.37 | MI1, U |
| PFNA- | ND- | 0.076- | 0.37 | U |
| PFDA- | ND- | 0.094- | 0.37 | U |
| PFUnA- | ND- | 0.15- | 0.37 | U |
| PFDoA- | ND- | 0.10- | 0.37 | U |
| PFTrDA- | ND- | 0.19- | 0.37 | U |
| PFTeDA- | ND- | 0.18- | 0.37 | U |
| PFHxDA- | ND- | 0.19- | 0.37 | U |
| PFODA- | ND- | 0.19- | 0.37 | U |
| PFBS- | ND- | 0.034- | 0.37 | U |
| PFPeS- | ND- | 0.058- | 0.37 | U |
| PFHxS- | ND- | 0.029- | 0.37 | U |
| PFHpS- | ND- | 0.048- | 0.37 | U |
| PFOS- | ND- | 0.059- | 0.37 | MI2, U |
| PFNS- | ND- | 0.11- | 0.37 | U |
| PFDS- | ND- | 0.14- | 0.37 | U |
| PFDoS- | ND- | 0.11- | 0.37 | U |
| 4:2FTS- | ND- | 0.27- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.076- | 1.5 | U |
| 10:2FTS- | ND- | 0.37- | 1.5 | U |
| PFOSA- | ND- | 0.096- | 0.37 | U |
| NMeFOSA- | ND- | 0.44- | 1.5 | U |
| NEtFOSA- | ND- | 0.38- | 1.5 | U |
| NMeFOSAA- | ND- | 0.098- | 0.37 | U |
| NEtFOSAA- | ND- | 0.11- | 0.37 | U |

# ANALYSIS DATA SHEETL

EB-1-031124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0052- |
| Client: | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix: | Water- | Laboratory ID: | 24C0052-08- | File ID: | S2024-03-14A (15)- |
| Sampled: | 03/11/24 11:40- | Prepared: | 03/13/24 13:29- | Analyzed: | 03/14/24 17:18- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 540.059 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0186- | Sequence: | SD00936 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>36778<br>( 163.0 / 69.0 )<br>1151 | ( 2.81 , 0.75 )<br>( N/A , -0.01 , 0.2) | 258.6<br>92.4 | 0.0313<br>124.8<br>123.5 | 0.1170 | N/A | 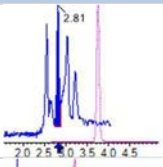 | 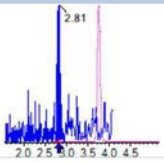 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 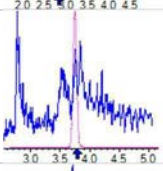 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 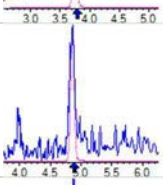 | 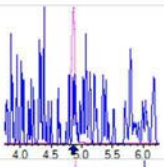 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 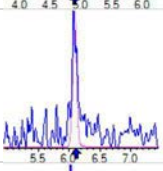 | 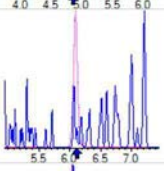 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 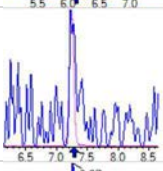 | 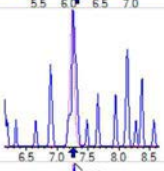 | |
| PFOA | ( 413.0 / 369.0 )<br>12027<br>( 413.0 / 169.0 )<br>3131 | ( 8.27 , 1.00 )<br>( 0.00 , N/A , -0.5) | 30.2<br>26.1 | 0.2603<br>72.0<br>75.5 | 0.0230 | N/A | 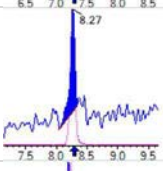 | 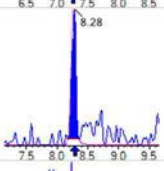 | MI1 DG<br>2024-03-15 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 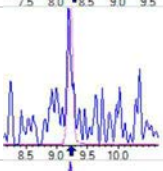 | 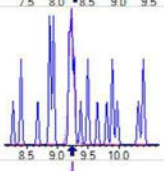 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 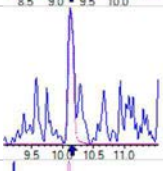 | 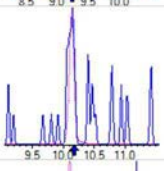 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 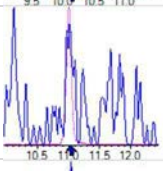 | 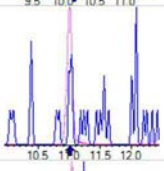 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 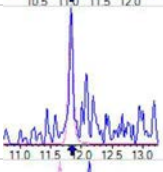 | 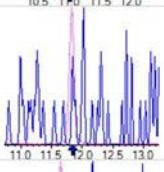 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 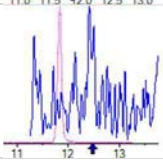 | 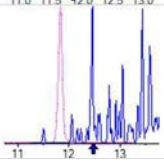 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 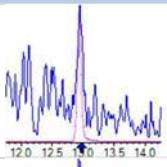 | 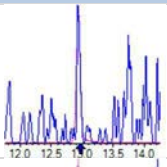 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 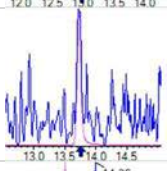 | 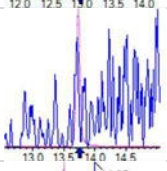 | |
| PFODA | ( 913.0 / 869.0 )<br>4567<br>( 913.0 / 169.0 )<br>1430 | ( 14.36 , 1.05 )<br>( N/A , -0.01 , 0.5) | 22.2<br>13.5 | 0.3130<br>81.9<br>89.8 | 0.0220 | N/A | 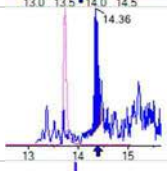 | 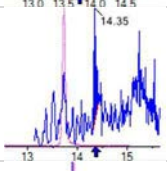 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 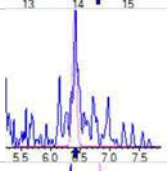 | 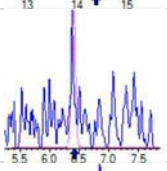 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 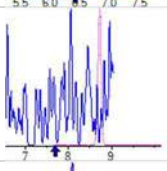 | 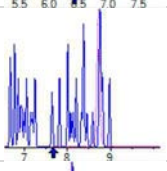 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 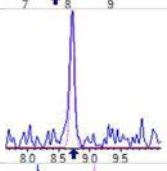 | 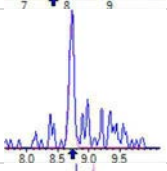 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 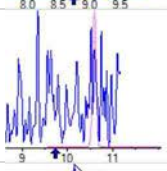 | 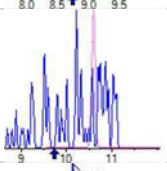 | |
| PFOS | ( 499.0 / 80.0 )<br>15771<br>( 499.0 / 99.0 )<br>5046 | ( 10.51 , 0.99 )<br>( -0.08 , N/A , -4.5) | 71.1<br>332.2 | 0.3200<br>135.3<br>137.8 | 0.0130 | N/A | 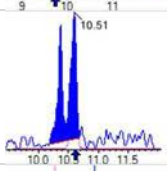 | 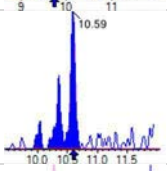 | MI2 DG<br>2024-03-15 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 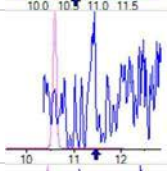 | 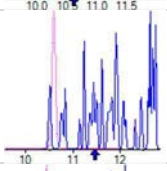 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 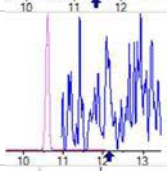 | 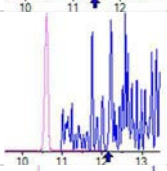 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 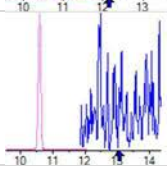 | 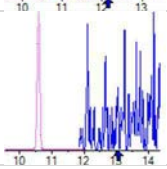 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 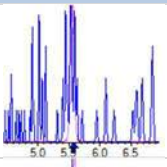 | 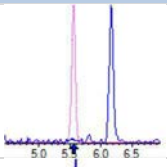 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 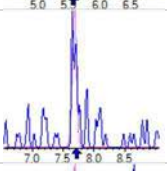 | 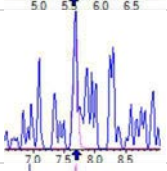 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 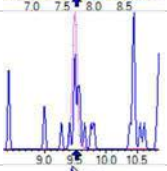 | 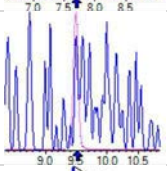 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14326<br>( 627.0 / 81.0 )<br>18804 | ( 11.14 , 1.00 )<br>( 0.00 , N/A , -0.4) | 231.1<br>54.3 | 1.3126<br>97.1<br>101.5 | 0.0510 | N/A | 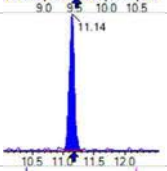 | 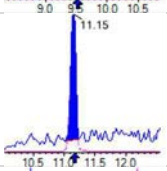 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 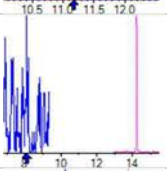 | 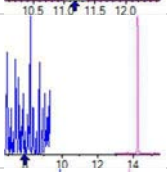 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 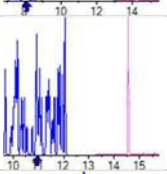 | 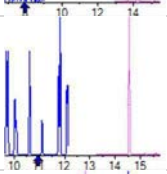 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 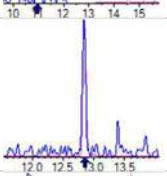 | 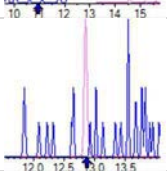 | |
| TFSI | ( 279.7 / 147.0 )<br>73847<br>( 279.7 / 211.0 )<br>5384 | ( 8.29 , 0.64 )<br>( N/A , -0.03 , 0.1) | 29.7<br>13.3 | 0.0729<br>88.4<br>88.5 | 0.0560 | N/A | 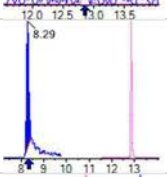 | 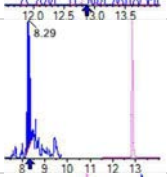 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 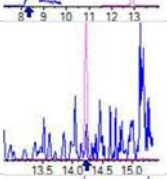 | 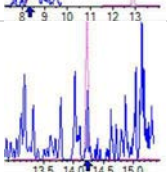 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 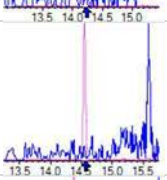 | 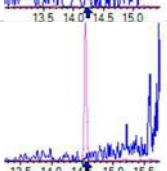 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 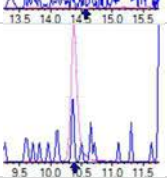 | 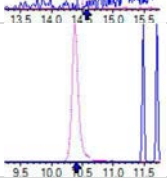 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (15)
Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 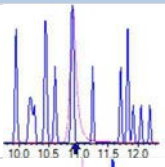 | 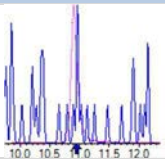 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 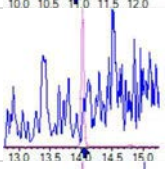 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 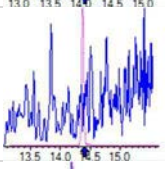 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 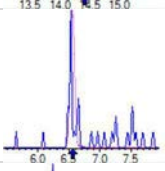 | 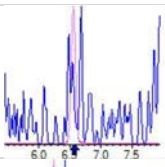 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 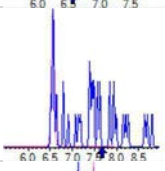 | 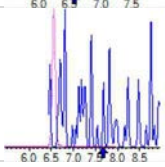 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 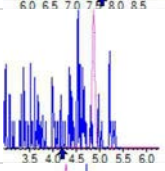 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 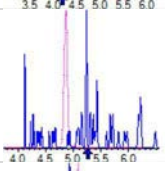 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 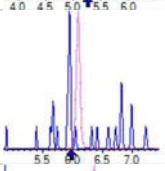 | 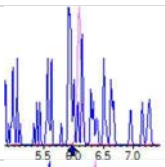 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 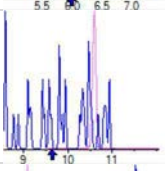 | 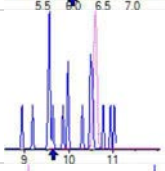 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 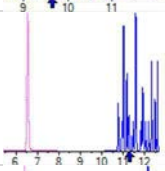 | 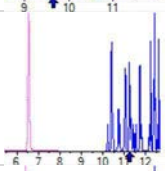 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 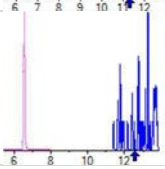 | 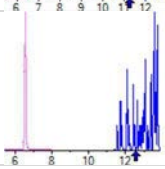 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 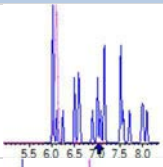 | 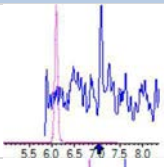 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 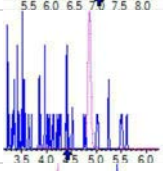 | 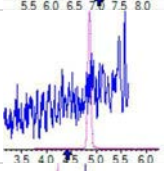 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 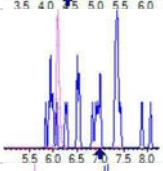 | 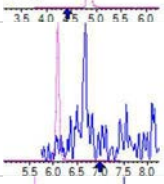 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 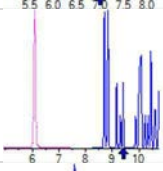 | 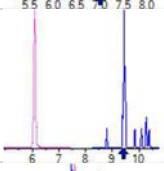 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 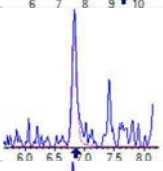 | 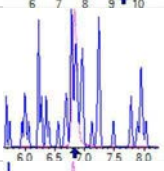 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 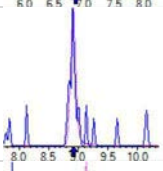 | 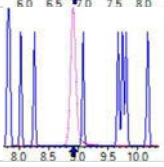 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 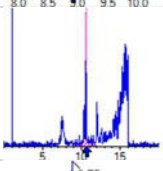 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 292748 | ( 3.75 , N/A )<br>( N/A , -0.04 , N/A ) | 1875.9 | N/A | 0.9720<br>[ 1.0000 ] | 97.2%<br>{ 99.3% } | 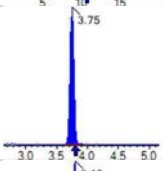 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 148686 | ( 6.10 , N/A )<br>( N/A , -0.02 , N/A ) | 7766.4 | N/A | 0.9670<br>[ 1.0000 ] | 96.7%<br>{ 95.8% } | 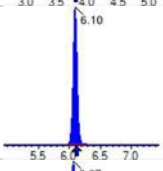 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 402851 | ( 8.27 , N/A )<br>( N/A , -0.01 , N/A ) | 3909.5 | N/A | 0.9030<br>[ 1.0000 ] | 90.3%<br>{ 87.3% } | 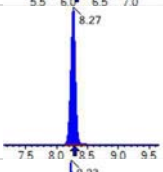 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 322139 | ( 9.23 , N/A )<br>( N/A , -0.01 , N/A ) | 1235.2 | N/A | 0.9640<br>[ 1.0000 ] | 96.4%<br>{ 94.9% } | 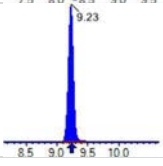 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 319322 | ( 10.14 , N/A ) ( N/A , -0.01 , N/A ) | 6707.0 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 95.4% } | 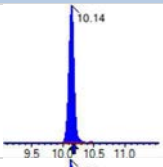 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1021270 | ( 8.73 , N/A ) ( N/A , -0.01 , N/A ) | 5537.1 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 89.3% } | 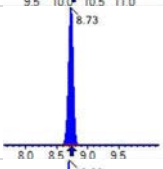 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 892022 | ( 10.60 , N/A ) ( N/A , -0.01 , N/A ) | 2687.5 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 93.9% } | 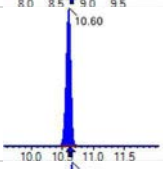 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2845747 | ( 3.75 , N/A ) ( N/A , -0.04 , N/A ) | 41899.4 | N/A | 8.8150 [ 8.0000 ] | 110.2% { 107.6% } | 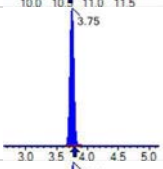 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1168505 | ( 4.86 , N/A ) ( N/A , -0.01 , N/A ) | 5547.9 | N/A | 4.3810 [ 4.0000 ] | 109.5% { 99.3% } | 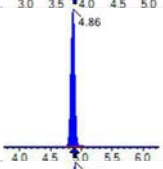 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 698704 | ( 6.09 , N/A ) ( N/A , -0.02 , N/A ) | 15519.7 | N/A | 2.1890 [ 2.0000 ] | 109.4% { 101.3% } | 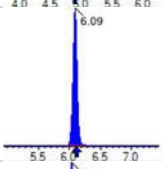 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 763377 | ( 7.25 , N/A ) ( N/A , -0.01 , N/A ) | 4399.2 | N/A | 2.2890 [ 2.0000 ] | 114.5% { 106.4% } | 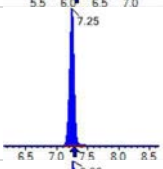 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1029592 | ( 8.26 , N/A ) ( N/A , -0.01 , N/A ) | 2980.4 | N/A | 2.4240 [ 2.0000 ] | 121.2% { 100.7% } | 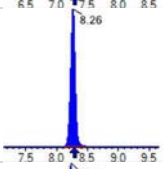 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 364900 | ( 9.23 , N/A ) ( N/A , -0.01 , N/A ) | 3132.3 | N/A | 1.1730 [ 1.0000 ] | 117.3% { 109.0% } | 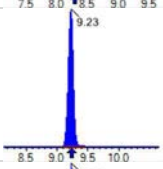 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 425792 | ( 10.14 , N/A ) ( N/A , -0.01 , N/A ) | 1133.6 | N/A | 1.1560 [ 1.0000 ] | 115.6% { 109.7% } | 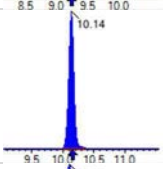 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 496831 | ( 11.00 , N/A ) ( N/A , -0.01 , N/A ) | 1031.0 | N/A | 1.1090 [ 1.0000 ] | 110.9% { 103.1% } | 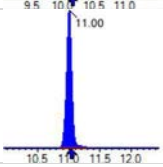 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 486659 | ( 11.83 , N/A ) ( N/A , -0.01 , N/A ) | 1366.5 | N/A | 1.0820 [ 1.0000 ] | 108.2% { 102.1% } | 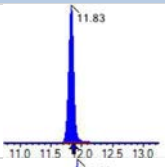 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 419313 | ( 12.93 , N/A ) ( N/A , -0.01 , N/A ) | 1646.9 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 96.8% } | 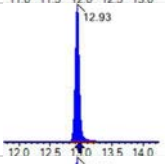 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 635277 | ( 13.73 , N/A ) ( N/A , -0.01 , N/A ) | 2678.5 | N/A | 1.9080 [ 2.0000 ] | 95.4% { 91.7% } | 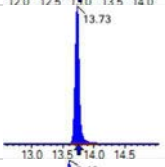 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2157193 | ( 6.40 , N/A ) ( N/A , -0.02 , N/A ) | 1063.8 | N/A | 2.1680 [ 2.0000 ] | 108.4% { 97.2% } | 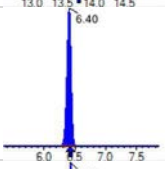 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1705749 | ( 8.73 , N/A ) ( N/A , -0.02 , N/A ) | 5591.8 | N/A | 2.2820 [ 2.0000 ] | 114.1% { 103.4% } | 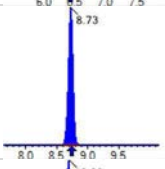 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2121486 | ( 10.60 , N/A ) ( N/A , -0.01 , N/A ) | 1903.2 | N/A | 2.2340 [ 2.0000 ] | 111.7% { 100.8% } | 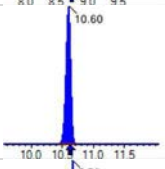 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 438620 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 85.1 | N/A | 4.9320 [ 4.0000 ] | 123.3% { 120.4% } | 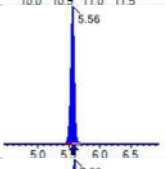 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1401941 | ( 7.68 , N/A ) ( N/A , -0.02 , N/A ) | 4976.6 | N/A | 5.0760 [ 4.0000 ] | 126.9% { 133.0% } | 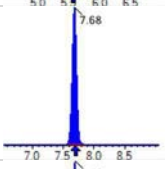 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1355452 | ( 9.49 , N/A ) ( N/A , -0.01 , N/A ) | 2029.6 | N/A | 4.9260 [ 4.0000 ] | 123.2% { 122.1% } | 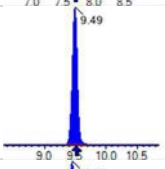 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2748934 | ( 11.15 , N/A ) ( N/A , 0.00 , N/A ) | 1495.1 | N/A | 8.7040 [ 8.0000 ] | 108.8% { 108.9% } | 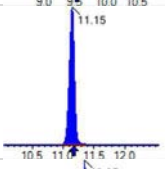 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1274060 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1753.4 | N/A | 1.2380 [ 2.0000 ] | 61.9% { 56.3% } | 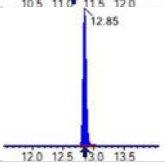 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 148424 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1081.9 | N/A | 0.7810 [ 2.0000 ] | 39.1% { 35.7% } | 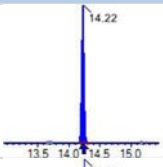 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 164948 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 1315.2 | N/A | 0.7560 [ 2.0000 ] | 37.8% { 34.3% } | 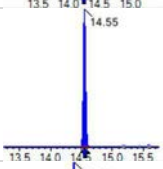 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1073214 | ( 10.38 , N/A ) ( N/A , -0.01 , N/A ) | 2496.0 | N/A | 4.4130 [ 4.0000 ] | 110.3% { 100.6% } | 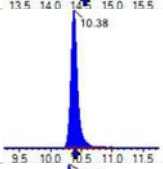 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1017227 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1984.4 | N/A | 4.4070 [ 4.0000 ] | 110.2% { 99.4% } | 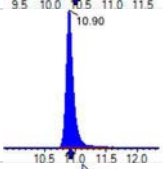 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 757611 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 1468.2 | N/A | 8.5320 [ 20.0000 ] | 42.7% { 38.0% } | 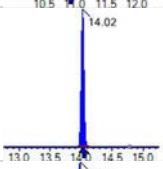 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 797936 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 2039.3 | N/A | 7.4180 [ 20.0000 ] | 37.1% { 32.8% } | 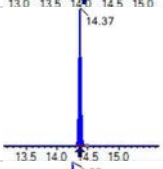 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1230224 | ( 6.55 , N/A ) ( N/A , -0.02 , N/A ) | 2357.4 | N/A | 8.9650 [ 8.0000 ] | 112.1% { 103.1% } | 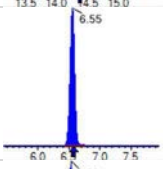 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 503869 | ( 6.83 , N/A ) ( N/A , -0.02 , N/A ) | 1192.4 | N/A | 1.7790 [ 2.0000 ] | 89.0% { 83.9% } | 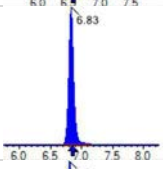 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 486933 | ( 8.91 , N/A ) ( N/A , -0.01 , N/A ) | 677.9 | N/A | 1.8420 [ 2.0000 ] | 92.1% { 91.1% } | 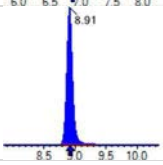 | | |

# ANALYSIS DATA SHEETL

FB-1-031124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0052- |
| Client: | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix: | Water- | Laboratory ID: | 24C0052-09- | File ID: | S2024-03-14A (16)- |
| Sampled: | 03/11/24 11:50- | Prepared: | 03/13/24 13:29 | Analyzed: | 03/14/24 17:39 |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 545.789 mL / 2 mL- | | | Instrument: | Saphira |
| Batch: | BDC0186- | Sequence: | SD00936 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5 | U |
| PFPeA- | ND- | 0.060- | 0.73 | U |
| PFHxA- | ND- | 0.050- | 0.37 | U |
| PFHpA- | ND- | 0.038- | 0.37 | U |
| PFOA- | ND- | 0.14- | 0.37 | U |
| PFNA- | ND- | 0.075- | 0.37 | U |
| PFDA- | ND- | 0.093- | 0.37 | U |
| PFUnA- | ND- | 0.15- | 0.37 | U |
| PFDoA- | ND- | 0.10- | 0.37 | U |
| PFTrDA- | ND- | 0.19- | 0.37 | U |
| PFTeDA- | ND- | 0.18- | 0.37 | U |
| PFHxDA- | ND- | 0.18- | 0.37 | U |
| PFODA- | ND- | 0.18- | 0.37 | U |
| PFBS- | ND- | 0.034- | 0.37 | U |
| PFPeS- | ND- | 0.057- | 0.37 | U |
| PFHxS- | ND- | 0.029- | 0.37 | U |
| PFHpS- | ND- | 0.047- | 0.37 | U |
| PFOS- | ND- | 0.058- | 0.37 | MI2, U |
| PFNS- | ND- | 0.11- | 0.37 | U |
| PFDS- | ND- | 0.14- | 0.37 | U |
| PFDoS- | ND- | 0.11- | 0.37 | U |
| 4:2FTS- | ND- | 0.27- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.075- | 1.5 | U |
| 10:2FTS- | ND- | 0.37- | 1.5 | U |
| PFOSA- | ND- | 0.095- | 0.37 | U |
| NMeFOSA- | ND- | 0.43- | 1.5 | U |
| NEtFOSA- | ND- | 0.38- | 1.5 | U |
| NMeFOSAA- | ND- | 0.097- | 0.37 | U |
| NEtFOSAA- | ND- | 0.11- | 0.37 | U |

# ANALYSIS DATA SHEETL

FB-1-031124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0052- |
| Client: | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix: | Water- | Laboratory ID: | 24C0052-09- | File ID: | S2024-03-14A (16)- |
| Sampled: | 03/11/24 11:50- | Prepared: | 03/13/24 13:29- | Analyzed: | 03/14/24 17:39- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 545.789 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0186- | Sequence: | SD00936 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>42191<br>( 163.0 / 69.0 )<br>972 | ( 2.80 , 0.75 )<br>( N/A , -0.01 , 0.3) | 258.2<br>46.9 | 0.0230<br>91.9<br>91.0 | 0.1200 | N/A | 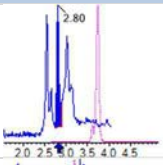 | 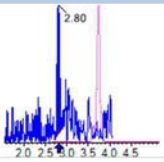 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 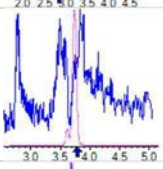 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 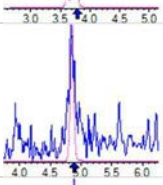 | 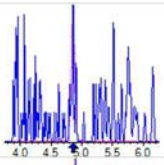 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 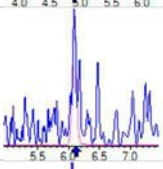 | 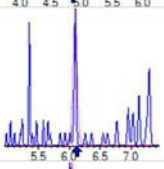 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 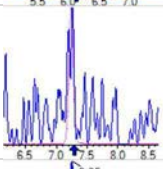 | 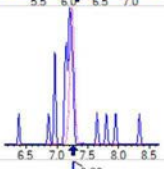 | |
| PFOA | ( 413.0 / 369.0 )<br>14188<br>( 413.0 / 169.0 )<br>3928 | ( 8.25 , 1.00 )<br>( -0.01 , N/A , -0.7) | 26.0<br>45.4 | 0.2768<br>76.5<br>80.3 | 0.0260 | N/A | 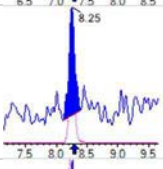 | 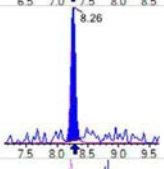 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 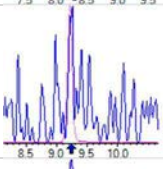 | 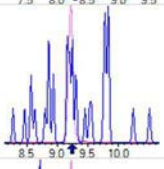 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 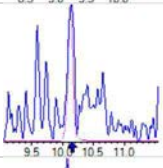 | 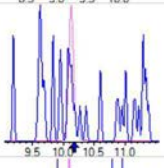 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 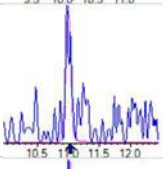 | 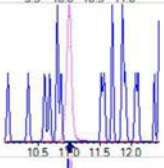 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 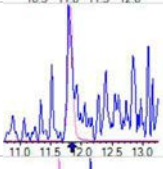 | 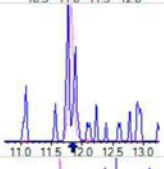 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 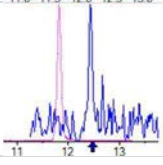 | 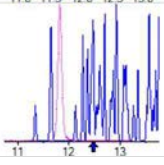 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 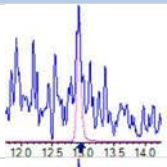 | 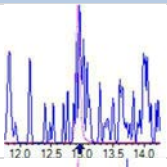 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 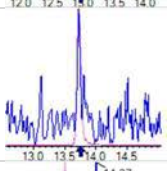 | 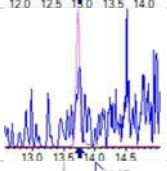 | |
| PFODA | ( 913.0 / 869.0 )<br>3962<br>( 913.0 / 169.0 )<br>1142 | ( 14.37 , 1.05 )<br>( N/A , 0.00 , -0.1) | 23.7<br>10.9 | 0.2883<br>75.5<br>82.7 | 0.0190 | N/A | 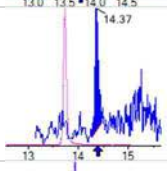 | 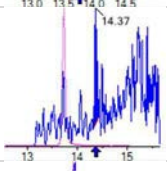 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 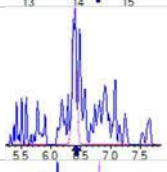 | 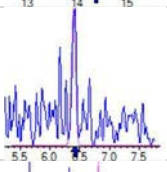 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 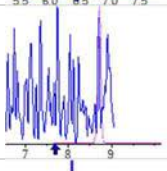 | 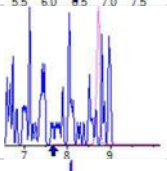 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 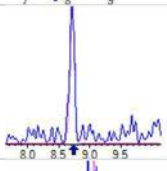 | 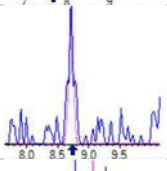 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 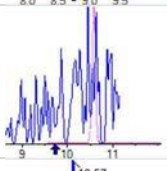 | 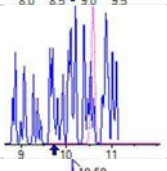 | |
| PFOS | ( 499.0 / 80.0 )<br>18928<br>( 499.0 / 99.0 )<br>3539 | ( 10.57 , 1.00 )<br>( -0.02 , N/A , 4.6) | 84.2<br>1341.7 | 0.1870<br>79.0<br>80.6 | 0.0150 | N/A | 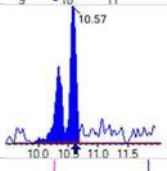 | 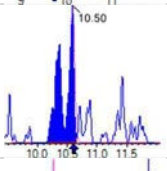 | MI2 DG<br>2024-03-15 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 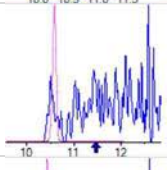 | 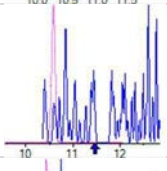 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 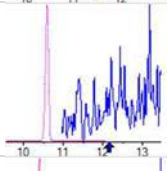 | 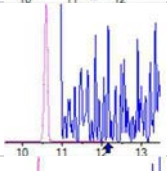 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 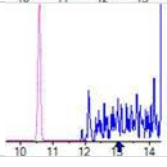 | 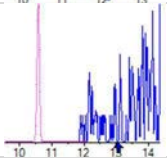 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 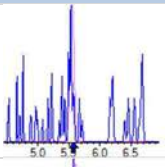 | 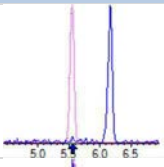 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 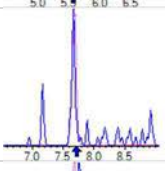 | 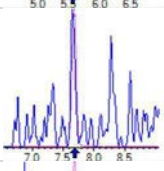 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 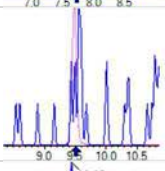 | 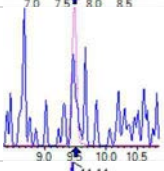 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17992<br>( 627.0 / 81.0 )<br>23687 | ( 11.13 , 1.00 )<br>( 0.00 , N/A , -0.3) | 230.6<br>50.6 | 1.3166<br>97.4<br>101.8 | 0.0630 | N/A | 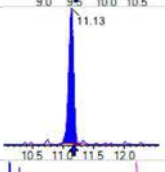 | 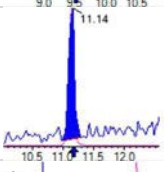 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 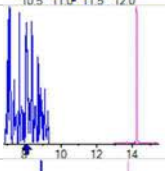 | 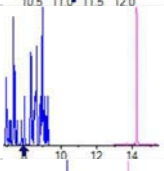 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 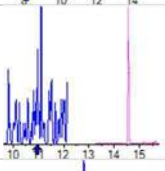 | 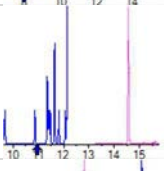 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 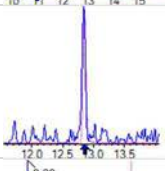 | 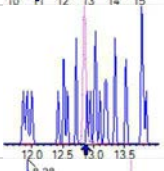 | |
| TFSI | ( 279.7 / 147.0 )<br>68586<br>( 279.7 / 211.0 )<br>7815 | ( 8.28 , 0.64 )<br>( N/A , -0.03 , 0.2) | 31.2<br>12.6 | 0.1139<br>138.2<br>138.3 | 0.0510 | N/A | 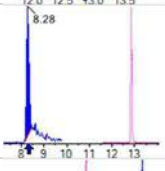 | 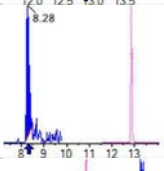 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 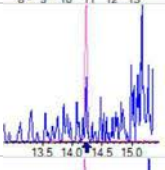 | 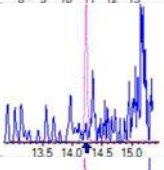 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 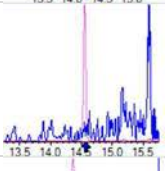 | 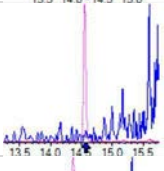 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 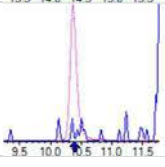 | 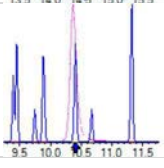 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (16)
Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 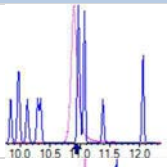 | 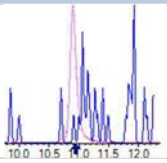 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 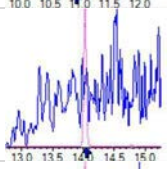 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 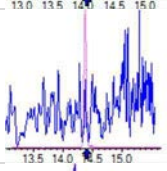 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 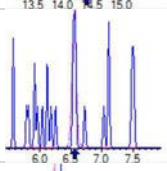 | 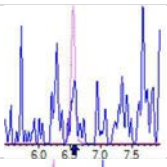 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 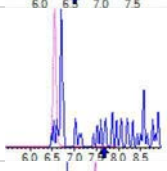 | 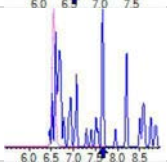 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 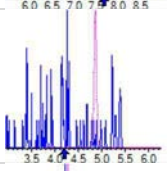 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 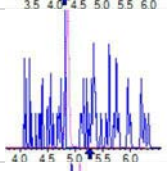 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 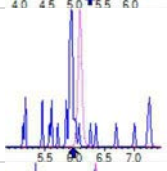 | 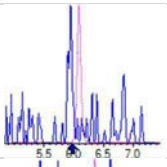 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 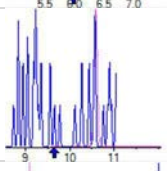 | 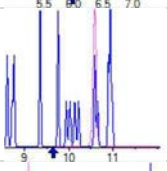 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 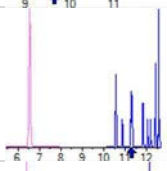 | 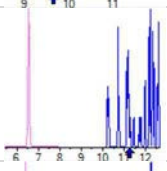 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 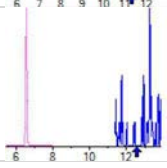 | 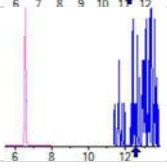 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (16)
Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 )<br>Area Counts*min | R.T.<br>( R.T [min] , R.R.T. )<br>( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio<br>IR Vs MP%<br>IR Vs CV% | Concentration<br>[ True ] ng/mL | Q.C. Rec.<br>{Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 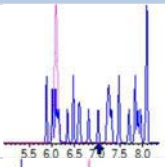 | 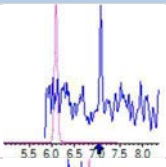 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 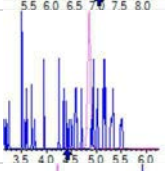 | 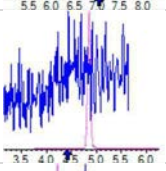 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 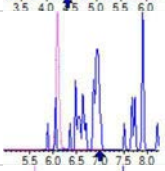 | 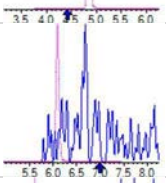 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 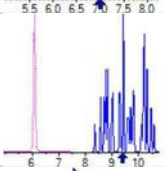 | 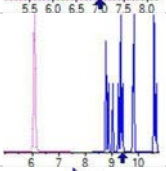 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>3207<br>( 357.2 / 243.0 )<br>583 | ( 6.82 , 1.00 )<br>( -0.01 , N/A , 1.2) | 32.0<br>13.5 | 0.1819<br>172.3<br>176.1 | 0.0110 | N/A | 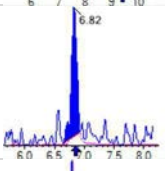 | 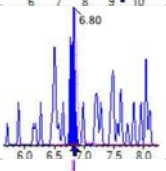 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 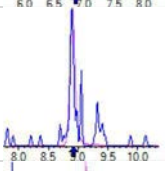 | 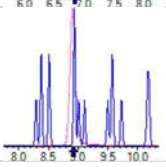 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 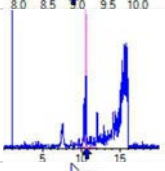 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>324760 | ( 3.74 , N/A )<br>( N/A , -0.05 , N/A ) | 1986.3 | N/A | 1.0780<br>[ 1.0000 ] | 107.8%<br>{ 110.2% } | 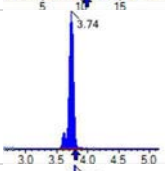 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>143523 | ( 6.09 , N/A )<br>( N/A , -0.02 , N/A ) | 22970.8 | N/A | 0.9330<br>[ 1.0000 ] | 93.3%<br>{ 92.5% } | 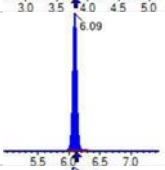 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>450612 | ( 8.26 , N/A )<br>( N/A , -0.02 , N/A ) | 4147.8 | N/A | 1.0100<br>[ 1.0000 ] | 101.0%<br>{ 97.6% } | 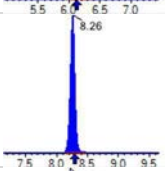 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>350120 | ( 9.22 , N/A )<br>( N/A , -0.02 , N/A ) | 899.6 | N/A | 1.0470<br>[ 1.0000 ] | 104.7%<br>{ 103.1% } | 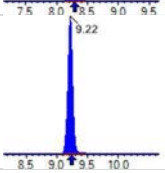 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 333216 | ( 10.13 , N/A ) ( N/A , -0.02 , N/A ) | 4789.9 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 99.5% } | 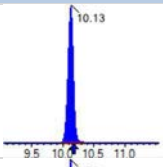 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1099961 | ( 8.72 , N/A ) ( N/A , -0.02 , N/A ) | 4485.9 | N/A | 0.9840 [ 1.0000 ] | 98.4% { 96.2% } | 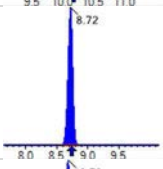 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 953295 | ( 10.59 , N/A ) ( N/A , -0.02 , N/A ) | 2346.1 | N/A | 0.9770 [ 1.0000 ] | 97.7% { 100.4% } | 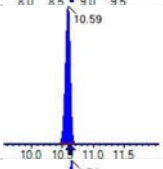 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3171558 | ( 3.74 , N/A ) ( N/A , -0.05 , N/A ) | 32010.5 | N/A | 8.8560 [ 8.0000 ] | 110.7% { 119.9% } | 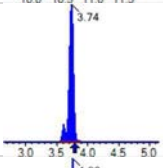 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1209228 | ( 4.86 , N/A ) ( N/A , -0.02 , N/A ) | 5191.4 | N/A | 4.6960 [ 4.0000 ] | 117.4% { 102.8% } | 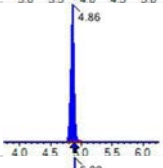 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 721210 | ( 6.09 , N/A ) ( N/A , -0.02 , N/A ) | 8331.9 | N/A | 2.3400 [ 2.0000 ] | 117.0% { 104.6% } | 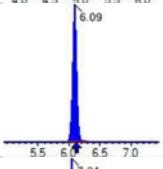 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 789348 | ( 7.24 , N/A ) ( N/A , -0.02 , N/A ) | 4519.8 | N/A | 2.4530 [ 2.0000 ] | 122.6% { 110.0% } | 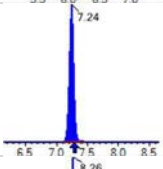 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1064572 | ( 8.26 , N/A ) ( N/A , -0.02 , N/A ) | 2846.4 | N/A | 2.2410 [ 2.0000 ] | 112.0% { 104.1% } | 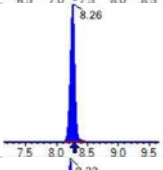 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 378740 | ( 9.22 , N/A ) ( N/A , -0.02 , N/A ) | 2577.2 | N/A | 1.1200 [ 1.0000 ] | 112.0% { 113.1% } | 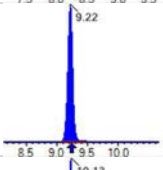 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 429266 | ( 10.13 , N/A ) ( N/A , -0.02 , N/A ) | 1320.8 | N/A | 1.1160 [ 1.0000 ] | 111.6% { 110.5% } | 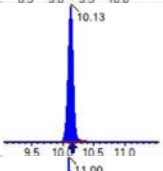 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 519287 | ( 11.00 , N/A ) ( N/A , -0.02 , N/A ) | 805.1 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 107.8% } | 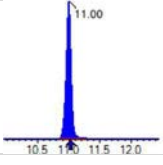 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 486209 | ( 11.82 , N/A ) ( N/A , -0.02 , N/A ) | 1375.5 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 102.0% } | 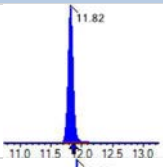 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 409947 | ( 12.93 , N/A ) ( N/A , -0.01 , N/A ) | 1505.9 | N/A | 1.0020 [ 1.0000 ] | 100.2% { 94.7% } | 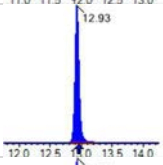 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 636897 | ( 13.73 , N/A ) ( N/A , -0.01 , N/A ) | 3020.8 | N/A | 1.8330 [ 2.0000 ] | 91.6% { 91.9% } | 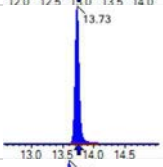 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2212694 | ( 6.40 , N/A ) ( N/A , -0.02 , N/A ) | 1495.3 | N/A | 2.0650 [ 2.0000 ] | 103.2% { 99.7% } | 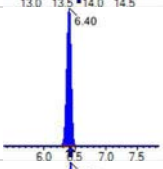 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1753290 | ( 8.72 , N/A ) ( N/A , -0.02 , N/A ) | 4824.2 | N/A | 2.1780 [ 2.0000 ] | 108.9% { 106.3% } | 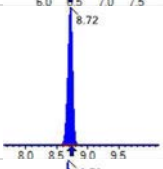 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2232865 | ( 10.59 , N/A ) ( N/A , -0.02 , N/A ) | 1830.9 | N/A | 2.2000 [ 2.0000 ] | 110.0% { 106.1% } | 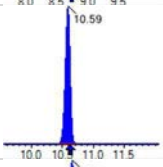 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 442820 | ( 5.55 , N/A ) ( N/A , -0.01 , N/A ) | 91.8 | N/A | 4.6230 [ 4.0000 ] | 115.6% { 121.6% } | 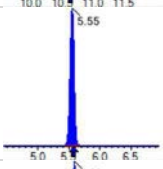 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1453427 | ( 7.68 , N/A ) ( N/A , -0.02 , N/A ) | 3783.1 | N/A | 4.8860 [ 4.0000 ] | 122.2% { 137.9% } | 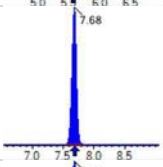 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490630 | ( 9.49 , N/A ) ( N/A , -0.01 , N/A ) | 1636.8 | N/A | 5.0300 [ 4.0000 ] | 125.7% { 134.3% } | 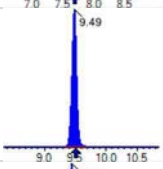 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2783022 | ( 11.13 , N/A ) ( N/A , -0.01 , N/A ) | 1507.7 | N/A | 8.1810 [ 8.0000 ] | 102.3% { 110.2% } | 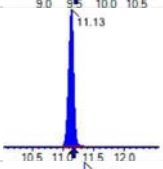 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1290398 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1533.4 | N/A | 1.1730 [ 2.0000 ] | 58.7% { 57.0% } | 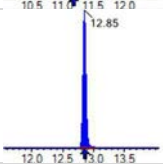 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 135874 | ( 14.23 , N/A ) ( N/A , 0.01 , N/A ) | 990.1 | N/A | 0.6690 [ 2.0000 ] | 33.5% { 32.7% } | 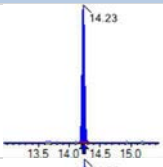 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 145669 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 1190.4 | N/A | 0.6240 [ 2.0000 ] | 31.2% { 30.2% } | 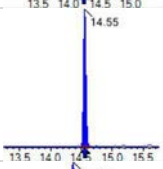 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1103373 | ( 10.37 , N/A ) ( N/A , -0.02 , N/A ) | 2391.3 | N/A | 4.2450 [ 4.0000 ] | 106.1% { 103.5% } | 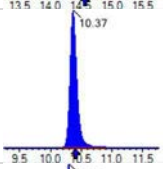 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1073276 | ( 10.90 , N/A ) ( N/A , -0.02 , N/A ) | 1907.3 | N/A | 4.3500 [ 4.0000 ] | 108.8% { 104.9% } | 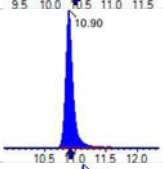 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 705528 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 1484.0 | N/A | 7.4350 [ 20.0000 ] | 37.2% { 35.4% } | 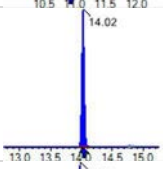 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 690616 | ( 14.38 , N/A ) ( N/A , 0.01 , N/A ) | 1897.9 | N/A | 6.0080 [ 20.0000 ] | 30.0% { 28.3% } | 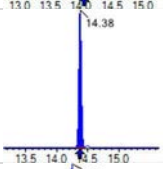 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1294465 | ( 6.55 , N/A ) ( N/A , -0.02 , N/A ) | 2369.5 | N/A | 9.7720 [ 8.0000 ] | 122.2% { 108.4% } | 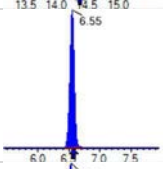 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 526212 | ( 6.83 , N/A ) ( N/A , -0.02 , N/A ) | 1350.4 | N/A | 1.7810 [ 2.0000 ] | 89.0% { 87.7% } | 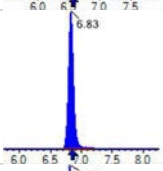 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 500528 | ( 8.90 , N/A ) ( N/A , -0.02 , N/A ) | 629.8 | N/A | 1.8140 [ 2.0000 ] | 90.7% { 93.7% } | 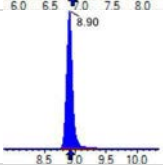 | | |

# ANALYSIS DATA SHEETL

SB-1-031124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0052- |
| Client: | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix: | Water- | Laboratory ID: | 24C0052-10- | File ID: | S2024-03-14A (17)- |
| Sampled: | 03/11/24 12:00- | Prepared: | 03/13/24 13:29 | Analyzed: | 03/14/24 17:59 |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 556.209 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0186- | Sequence: | SD00936 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.4 | U |
| PFPeA- | ND- | 0.058- | 0.72 | U |
| PFHxA- | ND- | 0.049- | 0.36 | U |
| PFHpA- | ND- | 0.037- | 0.36 | U |
| PFOA- | ND- | 0.14- | 0.36 | U |
| PFNA- | ND- | 0.074- | 0.36 | U |
| PFDA- | ND- | 0.091- | 0.36 | U |
| PFUnA- | ND- | 0.14- | 0.36 | U |
| PFDoA- | ND- | 0.10- | 0.36 | U |
| PFTrDA- | ND- | 0.18- | 0.36 | U |
| PFTeDA- | ND- | 0.18- | 0.36 | U |
| PFHxDA- | ND- | 0.18- | 0.36 | U |
| PFODA- | ND- | 0.18- | 0.36 | IR1, U |
| PFBS- | ND- | 0.033- | 0.36 | U |
| PFPeS- | ND- | 0.056- | 0.36 | U |
| PFHxS- | ND- | 0.028- | 0.36 | U |
| PFHpS- | ND- | 0.046- | 0.36 | U |
| PFOS- | ND- | 0.057- | 0.36 | MI2, U |
| PFNS- | ND- | 0.11- | 0.36 | U |
| PFDS- | ND- | 0.14- | 0.36 | U |
| PFDoS- | ND- | 0.11- | 0.36 | U |
| 4:2FTS- | ND- | 0.26- | 1.4 | U |
| 6:2FTS- | ND- | 0.28- | 1.4 | U |
| 8:2FTS- | ND- | 0.074- | 1.4 | U |
| 10:2FTS- | ND- | 0.36- | 1.4 | U |
| PFOSA- | ND- | 0.094- | 0.36 | U |
| NMeFOSA- | ND- | 0.43- | 1.4 | U |
| NEtFOSA- | ND- | 0.37- | 1.4 | U |
| NMeFOSAA- | ND- | 0.095- | 0.36 | U |
| NEtFOSAA- | ND- | 0.10- | 0.36 | U |

# ANALYSIS DATA SHEETL

SB-1-031124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0052- |
| Client: | Tidewater, Inc.- | | | Project: | [none]- |
| Matrix: | Water- | Laboratory ID: | 24C0052-10- | File ID: | S2024-03-14A (17)- |
| Sampled: | 03/11/24 12:00- | Prepared: | 03/13/24 13:29- | Analyzed: | 03/14/24 17:59- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 556.209 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0186- | Sequence: | SD00936 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.94- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.098- | 0.72- | U- |
| PFMPA- | ND- | 0.048- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (17)
Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>32186<br>( 163.0 / 69.0 )<br>1072 | ( 2.80 , 0.75 )<br>( N/A , -0.01 , -0.1) | 222.5<br>64.1 | 0.0333<br>132.8<br>131.4 | 0.0970 | N/A | 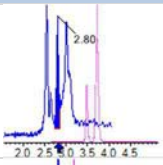 | 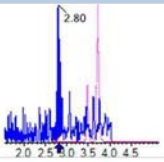 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 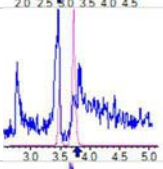 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 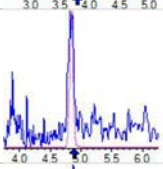 | 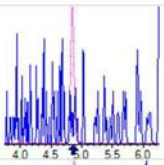 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 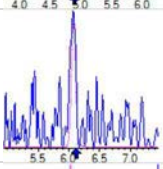 | 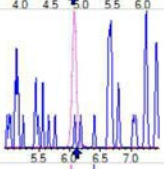 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 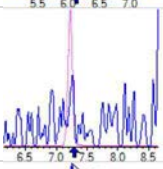 | 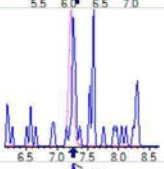 | |
| PFOA | ( 413.0 / 369.0 )<br>13355<br>( 413.0 / 169.0 )<br>5177 | ( 8.25 , 1.00 )<br>( 0.01 , N/A , -0.7) | 32.4<br>39.2 | 0.3876<br>107.2<br>112.4 | 0.0260 | N/A | 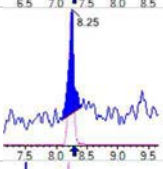 | 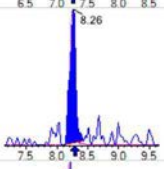 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 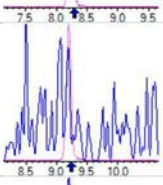 | 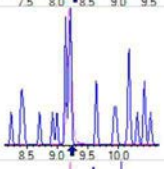 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 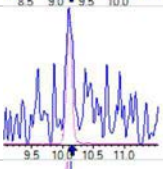 | 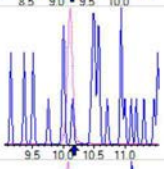 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 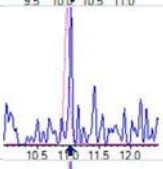 | 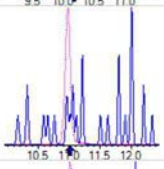 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 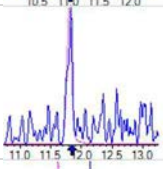 | 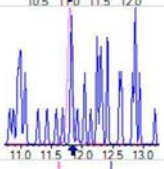 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 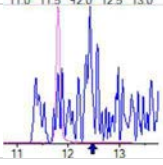 | 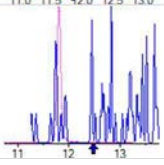 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (17)
Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 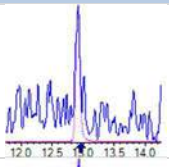 | 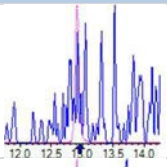 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 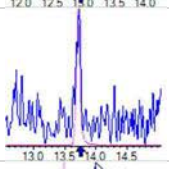 | 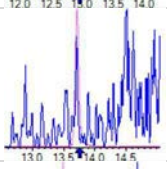 | |
| PFODA | ( 913.0 / 869.0 )<br>4636<br>( 913.0 / 169.0 )<br>847 | ( 14.35 , 1.05 )<br>( N/A , -0.02 , 0.8) | 24.4<br>9.0 | 0.1827<br>47.8<br>52.4 | 0.0200 | N/A | 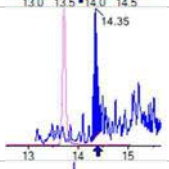 | 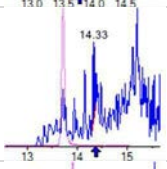 | IR1, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 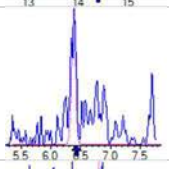 | 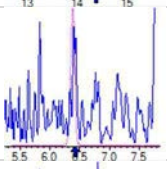 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 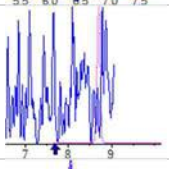 | 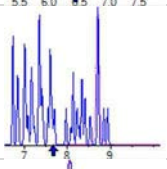 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 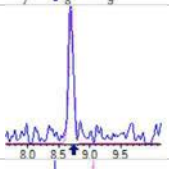 | 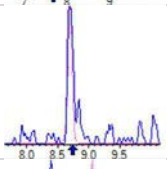 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 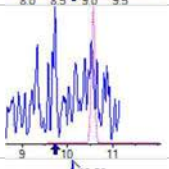 | 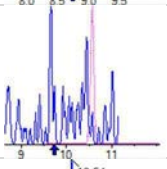 | |
| PFOS | ( 499.0 / 80.0 )<br>15815<br>( 499.0 / 99.0 )<br>4971 | ( 10.53 , 1.00 )<br>( -0.04 , N/A , -1.0) | 80.7<br>2271.2 | 0.3143<br>132.9<br>135.4 | 0.0120 | N/A | 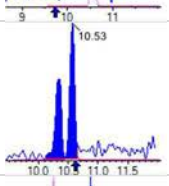 | 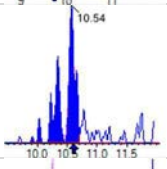 | MI2 DG<br>2024-03-15 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 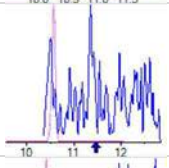 | 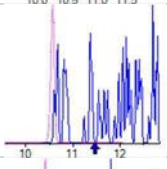 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 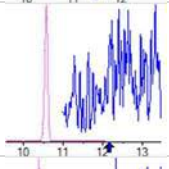 | 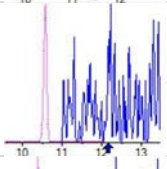 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 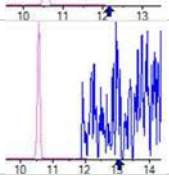 | 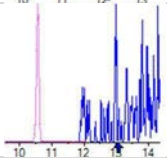 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-10 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 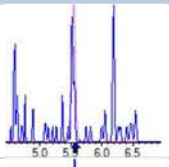 | 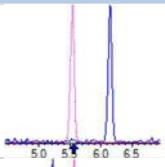 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 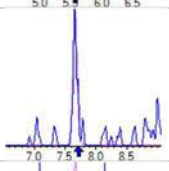 | 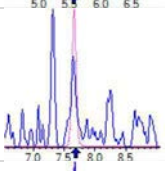 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 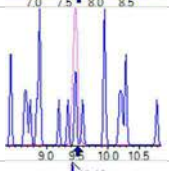 | 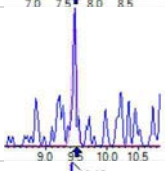 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16277<br>( 627.0 / 81.0 )<br>24113 | ( 11.12 , 1.00 )<br>( 0.01 , N/A , -0.2) | 190.5<br>70.2 | 1.4814<br>109.6<br>114.5 | 0.0540 | N/A | 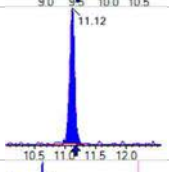 | 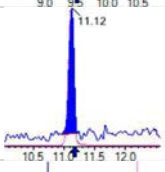 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 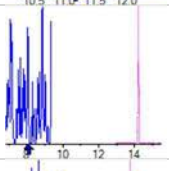 | 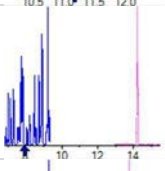 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 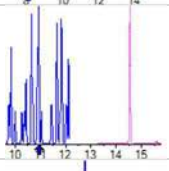 | 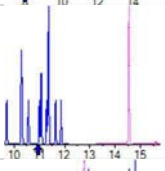 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 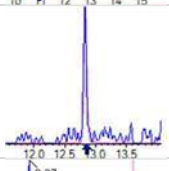 | 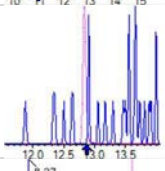 | |
| TFSI | ( 279.7 / 147.0 )<br>67665<br>( 279.7 / 211.0 )<br>6564 | ( 8.27 , 0.64 )<br>( N/A , -0.05 , -0.3) | 32.7<br>13.6 | 0.0970<br>117.6<br>117.8 | 0.0450 | N/A | 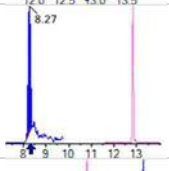 | 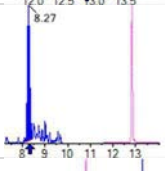 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 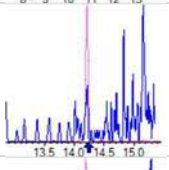 | 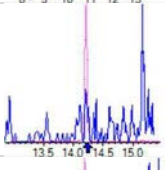 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 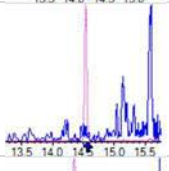 | 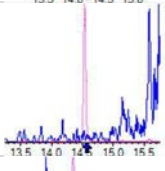 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 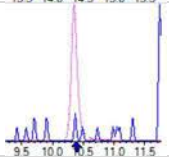 | 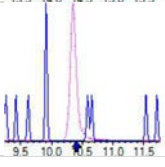 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-10 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 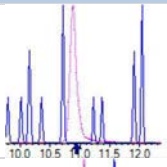 | 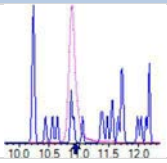 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 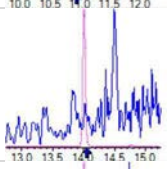 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 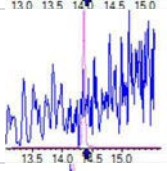 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 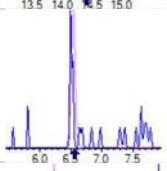 | 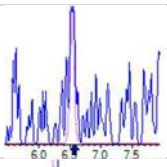 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 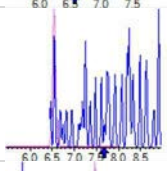 | 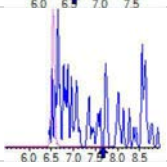 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 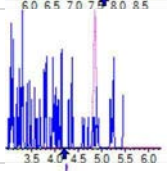 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 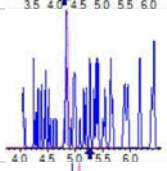 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 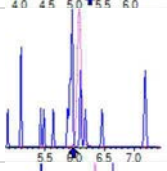 | 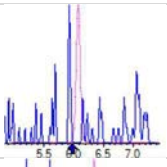 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 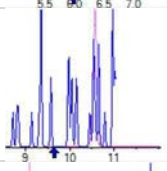 | 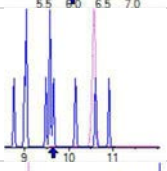 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 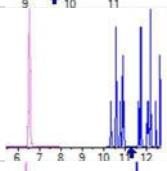 | 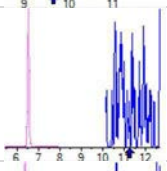 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 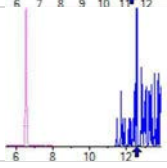 | 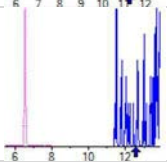 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-10 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 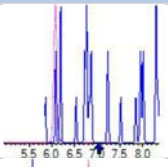 | 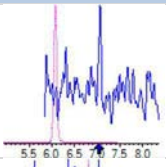 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 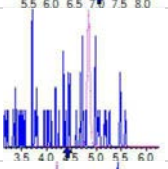 | 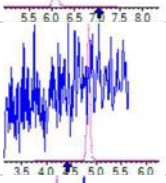 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 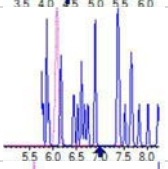 | 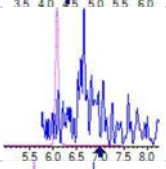 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 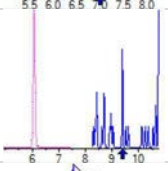 | 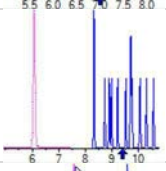 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3321<br>( 357.2 / 243.0 ) 758 | ( 6.80 , 1.00 )<br>( -0.02 , N/A , -3.0) | 36.6<br>15.7 | 0.2283<br>216.3<br>221.0 | 0.0110 | N/A | 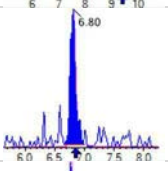 | 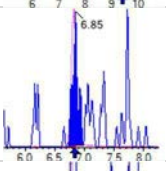 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 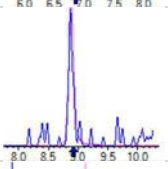 | 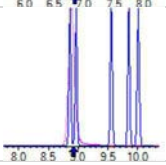 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 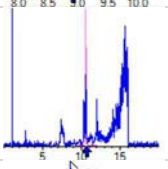 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 310064 | ( 3.71 , N/A )<br>( N/A , -0.08 , N/A ) | 1460.1 | N/A | 1.0290<br>[ 1.0000 ] | 102.9%<br>{ 105.2% } | 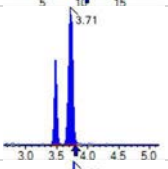 | | MI4 DAG 2024-03-15 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 146746 | ( 6.08 , N/A )<br>( N/A , -0.04 , N/A ) | 141417.1 | N/A | 0.9540<br>[ 1.0000 ] | 95.4%<br>{ 94.6% } | 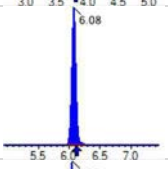 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 463982 | ( 8.25 , N/A )<br>( N/A , -0.03 , N/A ) | 3536.5 | N/A | 1.0400<br>[ 1.0000 ] | 104.0%<br>{ 100.5% } | 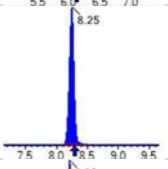 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 360755 | ( 9.20 , N/A )<br>( N/A , -0.03 , N/A ) | 969.3 | N/A | 1.0790<br>[ 1.0000 ] | 107.9%<br>{ 106.3% } | 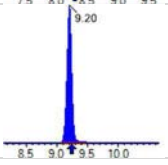 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (17)
Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 344668 | ( 10.11 , N/A ) ( N/A , -0.03 , N/A ) | 7013.7 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 103.0% } | 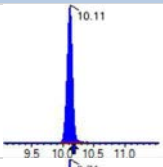 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1114677 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 4596.7 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 97.5% } | 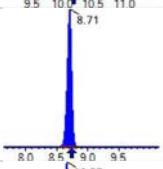 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1012561 | ( 10.57 , N/A ) ( N/A , -0.04 , N/A ) | 2337.5 | N/A | 1.0370 [ 1.0000 ] | 103.7% { 106.6% } | 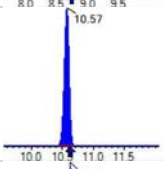 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3006974 | ( 3.72 , N/A ) ( N/A , -0.07 , N/A ) | 22188.6 | N/A | 8.7940 [ 8.0000 ] | 109.9% { 113.7% } | 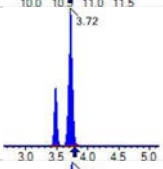 | | MI4 DAG 2024-03-15 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1220697 | ( 4.85 , N/A ) ( N/A , -0.03 , N/A ) | 5490.3 | N/A | 4.6370 [ 4.0000 ] | 115.9% { 103.8% } | 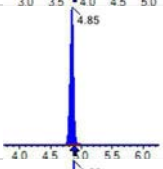 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 695878 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 8519.0 | N/A | 2.2090 [ 2.0000 ] | 110.4% { 100.9% } | 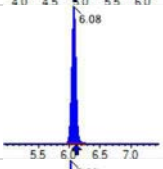 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 784181 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 6455.8 | N/A | 2.3830 [ 2.0000 ] | 119.1% { 109.3% } | 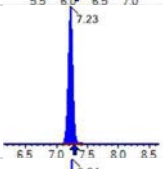 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1020328 | ( 8.24 , N/A ) ( N/A , -0.03 , N/A ) | 2387.1 | N/A | 2.0860 [ 2.0000 ] | 104.3% { 99.8% } | 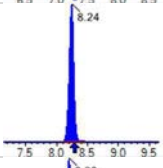 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 343353 | ( 9.20 , N/A ) ( N/A , -0.04 , N/A ) | 3315.2 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 102.6% } | 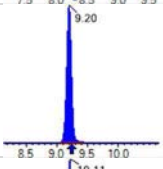 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 435879 | ( 10.11 , N/A ) ( N/A , -0.03 , N/A ) | 1027.2 | N/A | 1.0960 [ 1.0000 ] | 109.6% { 112.3% } | 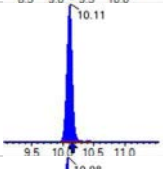 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 512329 | ( 10.98 , N/A ) ( N/A , -0.04 , N/A ) | 799.9 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 106.3% } | 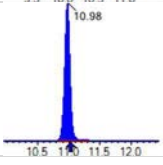 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0052-10 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 511392 | ( 11.80 , N/A ) ( N/A , -0.03 , N/A ) | 1364.9 | N/A | 1.0530 [ 1.0000 ] | 105.3% { 107.2% } | 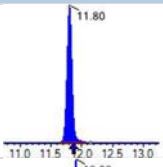 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 438574 | ( 12.92 , N/A ) ( N/A , -0.03 , N/A ) | 1483.0 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 101.3% } | 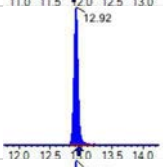 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 700915 | ( 13.72 , N/A ) ( N/A , -0.03 , N/A ) | 2852.1 | N/A | 1.9500 [ 2.0000 ] | 97.5% { 101.2% } | 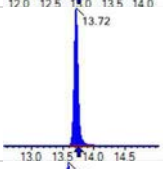 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2213868 | ( 6.38 , N/A ) ( N/A , -0.04 , N/A ) | 1133.5 | N/A | 2.0380 [ 2.0000 ] | 101.9% { 99.8% } | 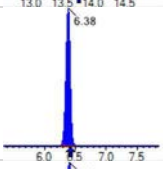 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1622180 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 4705.7 | N/A | 1.9890 [ 2.0000 ] | 99.4% { 98.3% } | 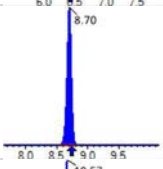 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2278746 | ( 10.57 , N/A ) ( N/A , -0.04 , N/A ) | 2089.0 | N/A | 2.1140 [ 2.0000 ] | 105.7% { 108.2% } | 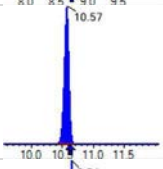 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 450279 | ( 5.54 , N/A ) ( N/A , -0.03 , N/A ) | 101.0 | N/A | 4.6390 [ 4.0000 ] | 116.0% { 123.6% } | 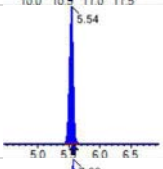 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1432519 | ( 7.66 , N/A ) ( N/A , -0.04 , N/A ) | 3636.4 | N/A | 4.7520 [ 4.0000 ] | 118.8% { 135.9% } | 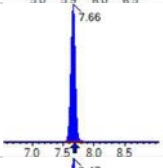 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1573374 | ( 9.47 , N/A ) ( N/A , -0.03 , N/A ) | 1629.0 | N/A | 5.2390 [ 4.0000 ] | 131.0% { 141.8% } | 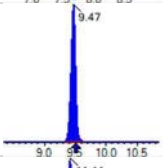 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2944866 | ( 11.11 , N/A ) ( N/A , -0.04 , N/A ) | 1435.0 | N/A | 8.5430 [ 8.0000 ] | 106.8% { 116.6% } | 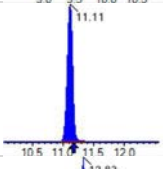 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1438780 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2307.7 | N/A | 1.2320 [ 2.0000 ] | 61.6% { 63.5% } | 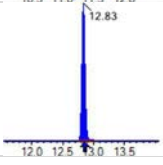 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0052-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (17)
Acquired: 2024/03/14 - 17:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 159805 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1235.1 | N/A | 0.7410 [ 2.0000 ] | 37.0% { 38.4% } | 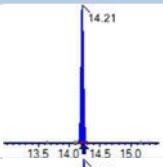 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 178440 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1260.1 | N/A | 0.7200 [ 2.0000 ] | 36.0% { 37.1% } | 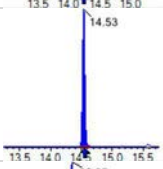 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1143230 | ( 10.35 , N/A ) ( N/A , -0.03 , N/A ) | 2835.5 | N/A | 4.1410 [ 4.0000 ] | 103.5% { 107.2% } | 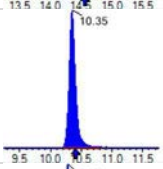 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1081660 | ( 10.88 , N/A ) ( N/A , -0.03 , N/A ) | 1618.3 | N/A | 4.1280 [ 4.0000 ] | 103.2% { 105.7% } | 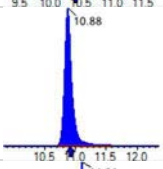 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 842348 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1962.0 | N/A | 8.3570 [ 20.0000 ] | 41.8% { 42.2% } | 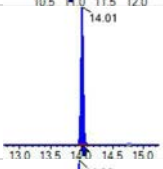 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 850363 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2835.3 | N/A | 6.9650 [ 20.0000 ] | 34.8% { 34.9% } | 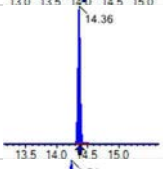 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1275271 | ( 6.54 , N/A ) ( N/A , -0.04 , N/A ) | 2140.0 | N/A | 9.4160 [ 8.0000 ] | 117.7% { 106.8% } | 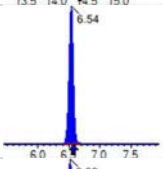 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 537798 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 1226.7 | N/A | 1.7590 [ 2.0000 ] | 88.0% { 89.6% } | 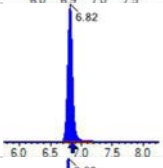 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 523205 | ( 8.89 , N/A ) ( N/A , -0.03 , N/A ) | 679.6 | N/A | 1.8330 [ 2.0000 ] | 91.7% { 97.9% } | 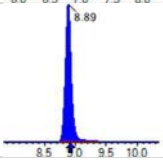 | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-24-3 (24C0052-01 ) ng/L** | Lab File ID: S2024-03-14A (20) | | | Analyzed: 03/14/24 19:01 |
| 13C4-PFBA | 31.2 | 74.2 | 5 - 130 | |
| 13C5-PFPEA | 15.6 | 108 | 40 - 130 | |
| 13C5-PFHXA | 7.81 | 109 | 40 - 130 | |
| 13C4-PFHPA | 7.81 | 111 | 40 - 130 | |
| 13C8-PFOA | 7.81 | 109 | 40 - 130 | |
| 13C9-PFNA | 3.91 | 111 | 40 - 130 | |
| 13C6-PFDA | 3.91 | 112 | 40 - 130 | |
| 13C7-PFUnA | 3.91 | 114 | 30 - 130 | |
| 13C2-PFDOA | 3.91 | 118 | 10 - 130 | |
| 13C2-PFTEDA | 3.91 | 89.8 | 10 - 130 | |
| 13C2-PFHxDA | 7.81 | 65.4 | 20 - 150 | |
| 13C3-PFBS | 7.81 | 100 | 40 - 135 | |
| 13C3-PFHXS | 7.81 | 109 | 40 - 130 | |
| 13C8-PFOS | 7.81 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 15.6 | 167 | 40 - 200 | |
| 13C2-6:2FTS | 15.6 | 194 | 40 - 200 | |
| 13C2-8:2FTS | 15.6 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 31.2 | 73.1 | 20 - 150 | |
| 13C8-PFOSA | 7.81 | 91.8 | 40 - 130 | |
| D3-NMEFOSA | 7.81 | 52.1 | 10 - 130 | |
| D5-NETFOSA | 7.81 | 46.6 | 10 - 130 | |
| D3-NMEFOSAA | 15.6 | 77.4 | 40 - 170 | |
| D5-NETFOSAA | 15.6 | 118 | 25 - 135 | |
| D7-NMEFOSE | 78.1 | 57.8 | 10 - 130 | |
| D9-NETFOSE | 78.1 | 52.6 | 10 - 130 | |
| 13C3-HFPO-DA | 31.2 | 114 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-24-2 (24C0052-02 ) ng/L** | Lab File ID: S2024-03-14A (21) | | | Analyzed: 03/14/24 19:21 |
| 13C4-PFBA | 29.1 | 97.2 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 115 | 40 - 130 | |
| 13C5-PFHXA | 7.28 | 108 | 40 - 130 | |
| 13C4-PFHPA | 7.28 | 112 | 40 - 130 | |
| 13C8-PFOA | 7.28 | 107 | 40 - 130 | |
| 13C9-PFNA | 3.64 | 110 | 40 - 130 | |
| 13C6-PFDA | 3.64 | 108 | 40 - 130 | |
| 13C7-PFUnA | 3.64 | 114 | 30 - 130 | |
| 13C2-PFDOA | 3.64 | 109 | 10 - 130 | |
| 13C2-PFTEDA | 3.64 | 100 | 10 - 130 | |
| 13C2-PFHxDA | 7.28 | 85.6 | 20 - 150 | |
| 13C3-PFBS | 7.28 | 101 | 40 - 135 | |
| 13C3-PFHXS | 7.28 | 113 | 40 - 130 | |
| 13C8-PFOS | 7.28 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 131 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 135 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 118 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.1 | 96.7 | 20 - 150 | |
| 13C8-PFOSA | 7.28 | 68.9 | 40 - 130 | |
| D3-NMEFOSA | 7.28 | 36.3 | 10 - 130 | |
| D5-NETFOSA | 7.28 | 34.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 113 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 118 | 25 - 135 | |
| D7-NMEFOSE | 72.8 | 43.0 | 10 - 130 | |
| D9-NETFOSE | 72.8 | 36.4 | 10 - 130 | |
| 13C3-HFPO-DA | 29.1 | 106 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-1-031124 (24C0052-03 ) ng/L** | Lab File ID: S2024-03-14A (22) | | | Analyzed: 03/14/24 19:42 |
| 13C4-PFBA | 29.5 | 97.1 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 118 | 40 - 130 | |
| 13C5-PFHXA | 7.39 | 118 | 40 - 130 | |
| 13C4-PFHPA | 7.39 | 126 | 40 - 130 | |
| 13C8-PFOA | 7.39 | 115 | 40 - 130 | |
| 13C9-PFNA | 3.69 | 116 | 40 - 130 | |
| 13C6-PFDA | 3.69 | 116 | 40 - 130 | |
| 13C7-PFUnA | 3.69 | 109 | 30 - 130 | |
| 13C2-PFDOA | 3.69 | 111 | 10 - 130 | |
| 13C2-PFTEDA | 3.69 | 100 | 10 - 130 | |
| 13C2-PFHxDA | 7.39 | 88.9 | 20 - 150 | |
| 13C3-PFBS | 7.39 | 102 | 40 - 135 | |
| 13C3-PFHXS | 7.39 | 107 | 40 - 130 | |
| 13C8-PFOS | 7.39 | 111 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 126 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 129 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 118 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.5 | 92.2 | 20 - 150 | |
| 13C8-PFOSA | 7.39 | 63.4 | 40 - 130 | |
| D3-NMEFOSA | 7.39 | 34.3 | 10 - 130 | |
| D5-NETFOSA | 7.39 | 33.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 113 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 116 | 25 - 135 | |
| D7-NMEFOSE | 73.9 | 45.3 | 10 - 130 | |
| D9-NETFOSE | 73.9 | 41.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.5 | 122 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-24-1 (24C0052-04 ) ng/L** | Lab File ID: S2024-03-14A (23) | | | Analyzed: 03/14/24 20:02 |
| 13C4-PFBA | 30.0 | 96.2 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 113 | 40 - 130 | |
| 13C5-PFHXA | 7.49 | 113 | 40 - 130 | |
| 13C4-PFHPA | 7.49 | 123 | 40 - 130 | |
| 13C8-PFOA | 7.49 | 116 | 40 - 130 | |
| 13C9-PFNA | 3.75 | 118 | 40 - 130 | |
| 13C6-PFDA | 3.75 | 114 | 40 - 130 | |
| 13C7-PFUnA | 3.75 | 109 | 30 - 130 | |
| 13C2-PFDOA | 3.75 | 123 | 10 - 130 | |
| 13C2-PFTEDA | 3.75 | 95.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.49 | 82.7 | 20 - 150 | |
| 13C3-PFBS | 7.49 | 99.1 | 40 - 135 | |
| 13C3-PFHXS | 7.49 | 111 | 40 - 130 | |
| 13C8-PFOS | 7.49 | 110 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 124 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 116 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 105 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.0 | 44.2 | 20 - 150 | |
| 13C8-PFOSA | 7.49 | 123 | 40 - 130 | |
| D3-NMEFOSA | 7.49 | 67.5 | 10 - 130 | |
| D5-NETFOSA | 7.49 | 56.8 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 57.6 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 116 | 25 - 135 | |
| D7-NMEFOSE | 74.9 | 82.0 | 10 - 130 | |
| D9-NETFOSE | 74.9 | 77.5 | 10 - 130 | |
| 13C3-HFPO-DA | 30.0 | 115 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-23-3 (24C0052-05 ) ng/L** | Lab File ID: S2024-03-14A (24) | | | Analyzed: 03/14/24 20:23 |
| 13C4-PFBA | 30.0 | 94.7 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 111 | 40 - 130 | |
| 13C5-PFHXA | 7.50 | 117 | 40 - 130 | |
| 13C4-PFHPA | 7.50 | 121 | 40 - 130 | |
| 13C8-PFOA | 7.50 | 113 | 40 - 130 | |
| 13C9-PFNA | 3.75 | 112 | 40 - 130 | |
| 13C6-PFDA | 3.75 | 114 | 40 - 130 | |
| 13C7-PFUnA | 3.75 | 112 | 30 - 130 | |
| 13C2-PFDOA | 3.75 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 3.75 | 95.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.50 | 74.4 | 20 - 150 | |
| 13C3-PFBS | 7.50 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.50 | 112 | 40 - 130 | |
| 13C8-PFOS | 7.50 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 140 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 136 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.0 | 90.0 | 20 - 150 | |
| 13C8-PFOSA | 7.50 | 82.4 | 40 - 130 | |
| D3-NMEFOSA | 7.50 | 45.3 | 10 - 130 | |
| D5-NETFOSA | 7.50 | 39.7 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 84.4 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 118 | 25 - 135 | |
| D7-NMEFOSE | 75.0 | 54.7 | 10 - 130 | |
| D9-NETFOSE | 75.0 | 48.1 | 10 - 130 | |
| 13C3-HFPO-DA | 30.0 | 122 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-23-2 (24C0052-06 ) ng/L** | Lab File ID: S2024-03-14A (25) | | | Analyzed: 03/14/24 20:43 |
| 13C4-PFBA | 29.1 | 94.5 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 115 | 40 - 130 | |
| 13C5-PFHXA | 7.28 | 115 | 40 - 130 | |
| 13C4-PFHPA | 7.28 | 120 | 40 - 130 | |
| 13C8-PFOA | 7.28 | 119 | 40 - 130 | |
| 13C9-PFNA | 3.64 | 109 | 40 - 130 | |
| 13C6-PFDA | 3.64 | 115 | 40 - 130 | |
| 13C7-PFUnA | 3.64 | 110 | 30 - 130 | |
| 13C2-PFDOA | 3.64 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 3.64 | 94.1 | 10 - 130 | |
| 13C2-PFHxDA | 7.28 | 78.3 | 20 - 150 | |
| 13C3-PFBS | 7.28 | 108 | 40 - 135 | |
| 13C3-PFHXS | 7.28 | 115 | 40 - 130 | |
| 13C8-PFOS | 7.28 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 150 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 139 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.1 | 92.6 | 20 - 150 | |
| 13C8-PFOSA | 7.28 | 80.2 | 40 - 130 | |
| D3-NMEFOSA | 7.28 | 42.0 | 10 - 130 | |
| D5-NETFOSA | 7.28 | 36.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 99.1 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 117 | 25 - 135 | |
| D7-NMEFOSE | 72.8 | 50.4 | 10 - 130 | |
| D9-NETFOSE | 72.8 | 48.3 | 10 - 130 | |
| 13C3-HFPO-DA | 29.1 | 119 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-23-1 (24C0052-07 ) ng/L** | Lab File ID: S2024-03-14A (26) | | | Analyzed: 03/14/24 21:04 |
| 13C4-PFBA | 28.6 | 94.6 | 5 - 130 | |
| 13C5-PFPEA | 14.3 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.14 | 113 | 40 - 130 | |
| 13C4-PFHPA | 7.14 | 115 | 40 - 130 | |
| 13C8-PFOA | 7.14 | 109 | 40 - 130 | |
| 13C9-PFNA | 3.57 | 111 | 40 - 130 | |
| 13C6-PFDA | 3.57 | 112 | 40 - 130 | |
| 13C7-PFUnA | 3.57 | 117 | 30 - 130 | |
| 13C2-PFDOA | 3.57 | 109 | 10 - 130 | |
| 13C2-PFTEDA | 3.57 | 97.1 | 10 - 130 | |
| 13C2-PFHxDA | 7.14 | 84.9 | 20 - 150 | |
| 13C3-PFBS | 7.14 | 97.1 | 40 - 135 | |
| 13C3-PFHXS | 7.14 | 108 | 40 - 130 | |
| 13C8-PFOS | 7.14 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 14.3 | 136 | 40 - 200 | |
| 13C2-6:2FTS | 14.3 | 131 | 40 - 200 | |
| 13C2-8:2FTS | 14.3 | 110 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.6 | 97.2 | 20 - 150 | |
| 13C8-PFOSA | 7.14 | 81.2 | 40 - 130 | |
| D3-NMEFOSA | 7.14 | 48.4 | 10 - 130 | |
| D5-NETFOSA | 7.14 | 47.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.3 | 106 | 40 - 170 | |
| D5-NETFOSAA | 14.3 | 121 | 25 - 135 | |
| D7-NMEFOSE | 71.4 | 59.9 | 10 - 130 | |
| D9-NETFOSE | 71.4 | 53.1 | 10 - 130 | |
| 13C3-HFPO-DA | 28.6 | 111 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-1-031124 (24C0052-08 ) ng/L** | Lab File ID: S2024-03-14A (15) | | | Analyzed: 03/14/24 17:18 |
| 13C4-PFBA | 29.6 | 110 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 110 | 40 - 130 | |
| 13C5-PFHXA | 7.41 | 109 | 40 - 130 | |
| 13C4-PFHPA | 7.41 | 114 | 40 - 130 | |
| 13C8-PFOA | 7.41 | 121 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 117 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 116 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 111 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 108 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 107 | 10 - 130 | |
| 13C2-PFHxDA | 7.41 | 95.4 | 20 - 150 | |
| 13C3-PFBS | 7.41 | 108 | 40 - 135 | |
| 13C3-PFHXS | 7.41 | 114 | 40 - 130 | |
| 13C8-PFOS | 7.41 | 112 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 123 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 127 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 109 | 20 - 150 | |
| 13C8-PFOSA | 7.41 | 61.9 | 40 - 130 | |
| D3-NMEFOSA | 7.41 | 39.1 | 10 - 130 | |
| D5-NETFOSA | 7.41 | 37.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 110 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 110 | 25 - 135 | |
| D7-NMEFOSE | 74.1 | 42.7 | 10 - 130 | |
| D9-NETFOSE | 74.1 | 37.1 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 112 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-1-031124 (24C0052-09 ) ng/L** | Lab File ID: S2024-03-14A (16) | | | Analyzed: 03/14/24 17:39 |
| 13C4-PFBA | 29.3 | 111 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 117 | 40 - 130 | |
| 13C5-PFHXA | 7.33 | 117 | 40 - 130 | |
| 13C4-PFHPA | 7.33 | 123 | 40 - 130 | |
| 13C8-PFOA | 7.33 | 112 | 40 - 130 | |
| 13C9-PFNA | 3.66 | 112 | 40 - 130 | |
| 13C6-PFDA | 3.66 | 112 | 40 - 130 | |
| 13C7-PFUnA | 3.66 | 111 | 30 - 130 | |
| 13C2-PFDOA | 3.66 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 3.66 | 100 | 10 - 130 | |
| 13C2-PFHxDA | 7.33 | 91.6 | 20 - 150 | |
| 13C3-PFBS | 7.33 | 103 | 40 - 135 | |
| 13C3-PFHXS | 7.33 | 109 | 40 - 130 | |
| 13C8-PFOS | 7.33 | 110 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 116 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 126 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 102 | 20 - 150 | |
| 13C8-PFOSA | 7.33 | 58.7 | 40 - 130 | |
| D3-NMEFOSA | 7.33 | 33.5 | 10 - 130 | |
| D5-NETFOSA | 7.33 | 31.2 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 106 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 109 | 25 - 135 | |
| D7-NMEFOSE | 73.3 | 37.2 | 10 - 130 | |
| D9-NETFOSE | 73.3 | 30.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 122 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **SB-1-031124 (24C0052-10 ) ng/L** | Lab File ID: S2024-03-14A (17) | | | Analyzed: 03/14/24 17:59 |
| 13C4-PFBA | 28.8 | 110 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 116 | 40 - 130 | |
| 13C5-PFHXA | 7.19 | 110 | 40 - 130 | |
| 13C4-PFHPA | 7.19 | 119 | 40 - 130 | |
| 13C8-PFOA | 7.19 | 104 | 40 - 130 | |
| 13C9-PFNA | 3.60 | 98.6 | 40 - 130 | |
| 13C6-PFDA | 3.60 | 110 | 40 - 130 | |
| 13C7-PFUnA | 3.60 | 106 | 30 - 130 | |
| 13C2-PFDOA | 3.60 | 105 | 10 - 130 | |
| 13C2-PFTEDA | 3.60 | 104 | 10 - 130 | |
| 13C2-PFHxDA | 7.19 | 97.5 | 20 - 150 | |
| 13C3-PFBS | 7.19 | 102 | 40 - 135 | |
| 13C3-PFHXS | 7.19 | 99.4 | 40 - 130 | |
| 13C8-PFOS | 7.19 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 116 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 119 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 131 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 107 | 20 - 150 | |
| 13C8-PFOSA | 7.19 | 61.6 | 40 - 130 | |
| D3-NMEFOSA | 7.19 | 37.0 | 10 - 130 | |
| D5-NETFOSA | 7.19 | 36.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 104 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 103 | 25 - 135 | |
| D7-NMEFOSE | 71.9 | 41.8 | 10 - 130 | |
| D9-NETFOSE | 71.9 | 34.8 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 118 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0186-BLK1 ) ng/L** | Lab File ID: S2024-03-14A (11) | | | Analyzed: 03/14/24 15:56 |
| 13C4-PFBA | 32.0 | 110 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 108 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 111 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 115 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 112 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 106 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 106 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 108 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 109 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 105 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 96.5 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 106 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 112 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 118 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 128 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 125 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 120 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 51.2 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 31.7 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 30.7 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 106 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 112 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 31.4 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 26.2 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 116 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0186-BS1 ) ng/L | Lab File ID: S2024-03-14A (12) | | | Analyzed: 03/14/24 16:17 |
| 13C4-PFBA | 32.0 | 106 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 113 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 115 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 117 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 105 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 113 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 103 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 108 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 107 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 97.7 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 89.2 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 99.6 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 106 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 110 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 116 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 49.3 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 29.1 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 28.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 107 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 104 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 31.5 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 26.3 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0052
Project: [none]

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0186-MRL1 ) ng/L** | Lab File ID: S2024-03-14A (13) | | | Analyzed: 03/14/24 16:37 |
| 13C4-PFBA | 32.0 | 111 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 117 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 118 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 120 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 110 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 108 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 110 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 110 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 107 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 94.9 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 102 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 111 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 113 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 112 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 126 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 114 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 52.1 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 30.0 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 30.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 108 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 112 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 31.7 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 26.8 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 122 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0052T

Client:T idewater, Inc.T Project:T [none]T

Blank ID:T BDC0186-BLK1T Batch:T BDC0186T Prepared:T 03/13/2024 13:29/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0186-BS1T | S2024-03-14A (12)T | 16:17T |
| MRL CheckT | BDC0186-MRL1T | S2024-03-14A (13)T | 16:37T |
| EB-1-031124T | 24C0052-08T | S2024-03-14A (15)T | 17:18T |
| FB-1-031124T | 24C0052-09T | S2024-03-14A (16)T | 17:39T |
| SB-1-031124T | 24C0052-10T | S2024-03-14A (17)T | 17:59T |
| MW-24-3T | 24C0052-01T | S2024-03-14A (20)T | 19:01T |
| MW-24-2T | 24C0052-02T | S2024-03-14A (21)T | 19:21T |
| DUP-1-031124T | 24C0052-03T | S2024-03-14A (22)T | 19:42T |
| MW-24-1T | 24C0052-04T | S2024-03-14A (23)T | 20:02T |
| MW-23-3T | 24C0052-05T | S2024-03-14A (24)T | 20:23T |
| MW-23-2T | 24C0052-06T | S2024-03-14A (25)T | 20:43T |
| MW-23-1T | 24C0052-07T | S2024-03-14A (26)T | 21:04T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none] | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-BLK1a | File ID: | S2024-03-14A (11)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed: | 03/14/24 15:56a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | R | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | NDa | 0.15a | 0.40a | Ua |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | NDa | 0.064a | 0.40a | Ua |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none]a | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-BLK1a | File ID:a | S2024-03-14A (11)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed:a | 03/14/24 15:56a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project:A | [none]A |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0186A | Laboratory ID:A | BDC0186-BS1A |
| Column:A | | | |

| ANALYTE | PIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 16.3A | 102A | 70 - 140A |
| PFPeA | 8.00A | 7.94A | 99.2A | 65 - 135A |
| PFHxA | 4.00A | 3.86A | 96.5A | 70 - 145A |
| PFHpA | 4.00A | 3.94A | 98.5A | 70 - 150A |
| PFOA | 4.00A | 4.00A | 100A | 70 - 150A |
| PFNA | 4.00A | 3.75A | 93.7A | 70 - 150A |
| PFDA | 4.00A | 4.11A | 103A | 70 - 140A |
| PFUnA | 4.00A | 3.88A | 97.1A | 70 - 145A |
| PFDoA | 4.00A | 3.90A | 97.6A | 70 - 140A |
| PFTrDA | 4.00A | 3.89A | 97.2A | 65 - 140A |
| PFTeDA | 4.00A | 4.04A | 101A | 60 - 140A |
| PFHxDA | 4.00A | 4.07A | 102A | 40 - 150A |
| PFODA | 4.00A | 3.72A | 93.0A | 40 - 150A |
| PFBSA | 3.54A | 3.44A | 97.3A | 60 - 145A |
| PFPeSA | 3.76A | 3.71A | 98.7A | 65 - 140A |
| PFHxSA | 3.66A | 3.58A | 97.8A | 65 - 145A |
| PFHpSA | 3.82A | 3.94A | 103A | 70 - 150A |
| PFOSA | 3.72A | 3.69A | 99.1A | 55 - 150A |
| PFNSA | 3.84A | 3.82A | 99.5A | 65 - 145A |
| PFDSA | 3.86A | 4.03A | 104A | 60 - 145A |
| PFDoSA | 3.88A | 3.65A | 94.0A | 50 - 145A |
| 4:2FTSA | 15.0A | 14.7A | 98.0A | 70 - 145A |
| 6:2FTSA | 15.2A | 15.6A | 103A | 65 - 155A |
| 8:2FTSA | 15.4A | 15.7A | 102A | 60 - 150A |
| 10:2FTSA | 15.4A | 14.5A | 94.0A | 0 - 200A |
| PFOSA | 4.00A | 4.28A | 107A | 70 - 145A |
| NMeFOSA | 16.0A | 17.0A | 106A | 60 - 150A |
| NEtFOSA | 16.0A | 16.6A | 104A | 65 - 145A |
| NMeFOSA | 4.00A | 4.08A | 102A | 50 - 140A |
| NEtFOSA | 4.00A | 4.11A | 103A | 70 - 145A |
| NMeFOSEA | 16.0A | 16.2A | 101A | 70 - 145A |
| NEtFOSEA | 16.0A | 16.3A | 102A | 70 - 135A |
| HFPO-DA | 4.00A | 4.01A | 100 | 70 - 140A |
| DONA | 3.78A | 3.92A | 104A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project:A | [none]A |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0186A | Laboratory ID:A | BDC0186-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.28A | 102A | 70 - 140A |
| PFMPA | 8.00A | 8.24A | 103A | 55 - 140A |
| PFMBA | 8.00A | 8.16A | 102A | 60 - 150A |
| NFDHA | 8.00A | 7.38A | 92.3A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.80A | 102A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 3.90A | 103A | 55 - 160A |
| 3:3FTCA | 16.0A | 15.3A | 95.3A | 65 - 130A |
| 5:3FTCA | 16.0A | 15.4A | 96.0A | 70 - 135A |
| 7:3FTCA | 16.0A | 13.4A | 83.9A | 50 - 145A |

# CALIBRATION SUMMARYL

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.22118 x (std. dev. = 0.01350) (weighting: None) | %RSE=6.1 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.47303 x (std. dev. = 0.01619) (weighting: None) | %RSE=3.4 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50900 x (std. dev. = 0.02066) (weighting: None) | %RSE=4.1 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48447 x (std. dev. = 0.02648) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49245 x (std. dev. = 0.03763) (weighting: None) | %RSE=7.6 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 0.50845 x (std. dev. = 0.04036) (weighting: None) | %RSE=7.9 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00209 x (std. dev. = 0.07967) (weighting: None) | %RSE=8.0 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 0.99591 x (std. dev. = 0.06364) (weighting: None) | %RSE=6.4 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.93380 x (std. dev. = 0.06074) (weighting: None) | %RSE=6.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.02349 x (std. dev. = 0.05498) (weighting: None) | %RSE=5.4 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98404 x (std. dev. = 0.05368) (weighting: None) | %RSE=5.5 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.94970 x (std. dev. = 0.06711) (weighting: None) | %RSE=7.1 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.48258 x (std. dev. = 0.02989) (weighting: None) | %RSE=6.2 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.32424 x (std. dev. = 0.02849) (weighting: None) | %RSE=8.8 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.23003 x (std. dev. = 0.01414) (weighting: None) | %RSE=6.1 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.74718 x (std. dev. = 0.05921) (weighting: None) | %RSE=7.9 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80665 x (std. dev. = 0.03395) (weighting: None) | %RSE=4.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.54657 x (std. dev. = 0.03511) (weighting: None) | %RSE=6.4 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53610 x (std. dev. = 0.02015) (weighting: None) | %RSE=3.8 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.54105 x (std. dev. = 0.03589) (weighting: None) | %RSE=6.6 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.64705 x (std. dev. = 0.05398) (weighting: None) | %RSE=8.3 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.55660 x (std. dev. = 0.05132) (weighting: None) | %RSE=9.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.51639 x (std. dev. = 0.10936) (weighting: None) | %RSE=4.3 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.84310 x (std. dev. = 0.04432) (weighting: None) | %RSE=5.3 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.94945 x (std. dev. = 0.08425) (weighting: None) | %RSE=8.9 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.39749 x (std. dev. = 0.01629) (weighting: None) | %RSE=4.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.29905 x (std. dev. = 0.16050) (weighting: None) | %RSE=7.0 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 2.56445 x (std. dev. = 0.08113) (weighting: None) | %RSE=3.2 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.48797 x (std. dev. = 0.02370) (weighting: None) | %RSE=4.9 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.01595 x (std. dev. = 0.07189) (weighting: None) | %RSE=7.1 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 2.01442 x (std. dev. = 0.13774) (weighting: None) | %RSE=6.8 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.19461 x (std. dev. = 0.08339) (weighting: None) | %RSE=3.8 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23544 x (std. dev. = 0.00918) (weighting: None) | %RSE=3.9 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24116 x (std. dev. = 0.01198) (weighting: None) | %RSE=5.0 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.22641 x (std. dev. = 0.00767) (weighting: None) | %RSE=3.4 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17672 x (std. dev. = 0.00729) (weighting: None) | %RSE=4.1 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07096 x (std. dev. = 0.00352) (weighting: None) | %RSE=5.0 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.85192 x (std. dev. = 0.05267) (weighting: None) | %RSE=6.2 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16115 x (std. dev. = 0.01007) (weighting: None) | %RSE=6.3 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.42654 x (std. dev. = 0.03547) (weighting: None) | %RSE=8.3 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.33683 x (std. dev. = 0.01165) (weighting: None) | %RSE=3.5 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30114 x (std. dev. = 0.01851) (weighting: None) | %RSE=6.1 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 1.04078 x (std. dev. = 0.03352) (weighting: None) | %RSE=3.2 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.82392 x (std. dev. = 0.05207) (weighting: None) | %RSE=6.3 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.65040 x (std. dev. = 0.05210) (weighting: None) | %RSE=8.0 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.04946 x (std. dev. = 0.00816) (weighting: None) | %RSE=16.5 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.46968 x (std. dev. = 0.03522) (weighting: None) | %RSE=7.5 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.69092 x (std. dev. = 0.07127) (weighting: None) | %RSE=10.3 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53744 x (std. dev. = 0.04320) (weighting: None) | %RSE=8.0 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.42170 x (std. dev. = 0.02178) (weighting: None) | %RSE=5.2 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39280 x (std. dev. = 0.01731) (weighting: None) | %RSE=4.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 301250.6434 x | %RSD=13.4 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 153767.4862 x | %RSD=7.1 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 446132.0413 x | %RSD=5.8 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 334296.6606 x | %RSD=7.2 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 331624.9386 x | %RSD=6.5 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 1117433.9888 x | %RSD=5.5 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 976196.7271 x | %RSD=7.6 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 8.8221 x | %RSD=2.4 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.1759 x | %RSD=11.1 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.2943 x | %RSD=6.4 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.4850 x | %RSD=4.6 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1087 x | %RSD=3.8 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9657 x | %RSD=6.7 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1540 x | %RSD=7.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4030 x | %RSD=7.1 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4089 x | %RSD=7.1 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.2277 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.0857 x | %RSD=6.8 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.9487 x | %RSD=6.8 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4635 x | %RSD=4.5 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1292 x | %RSD=4.0 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.3483 x | %RSD=17.5 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.0817 x | %RSD=12.3 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.0777 x | %RSD=18.1 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 2.4741 x | %RSD=9.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.3073 x | %RSD=5.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4261 x | %RSD=7.0 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4894 x | %RSD=5.3 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0905 x | %RSD=4.6 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0352 x | %RSD=5.5 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.9908 x | %RSD=6.5 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 2.4116 x | %RSD=5.2 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 7.3835 x | %RSD=5.7 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.7738 x | %RSD=6.9 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.6560 x | %RSD=5.5 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result}\left(\frac{\text{ng}}{\text{mL}}\right) = x\text{*Multiplier*Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

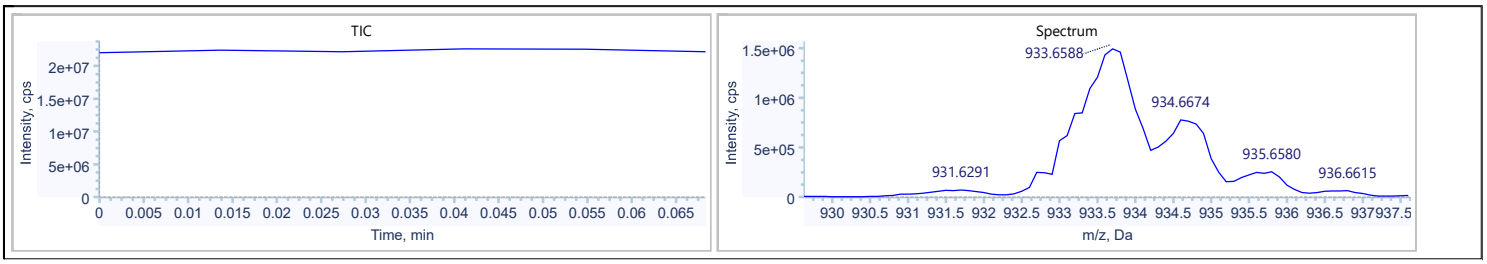


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

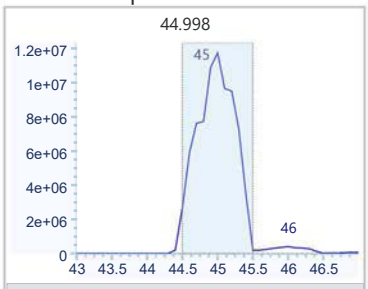


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

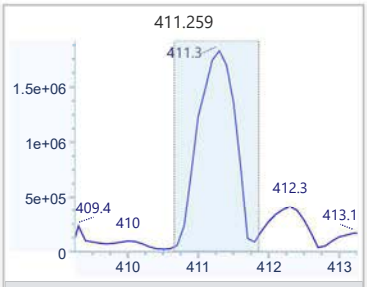


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

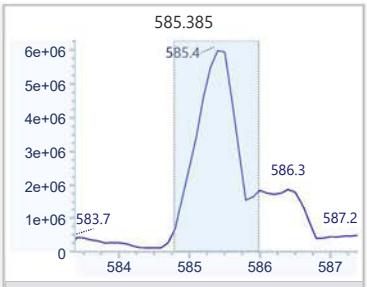


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

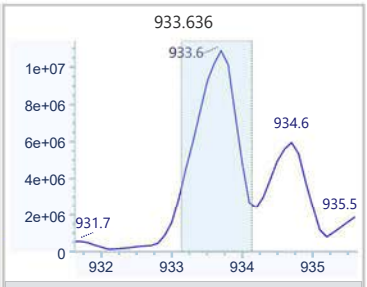


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

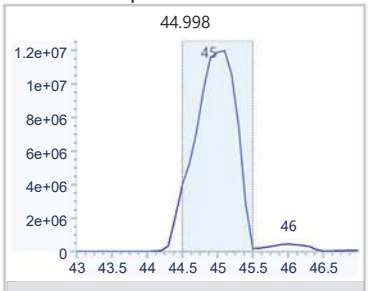


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

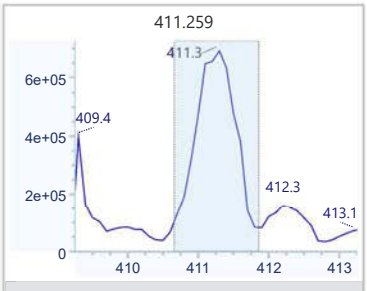


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

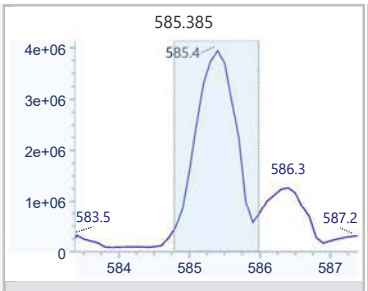


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

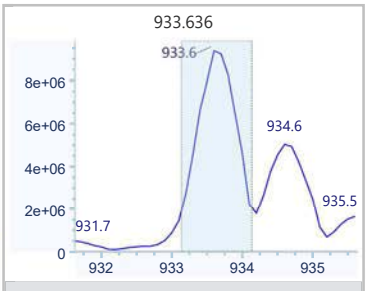


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report



| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

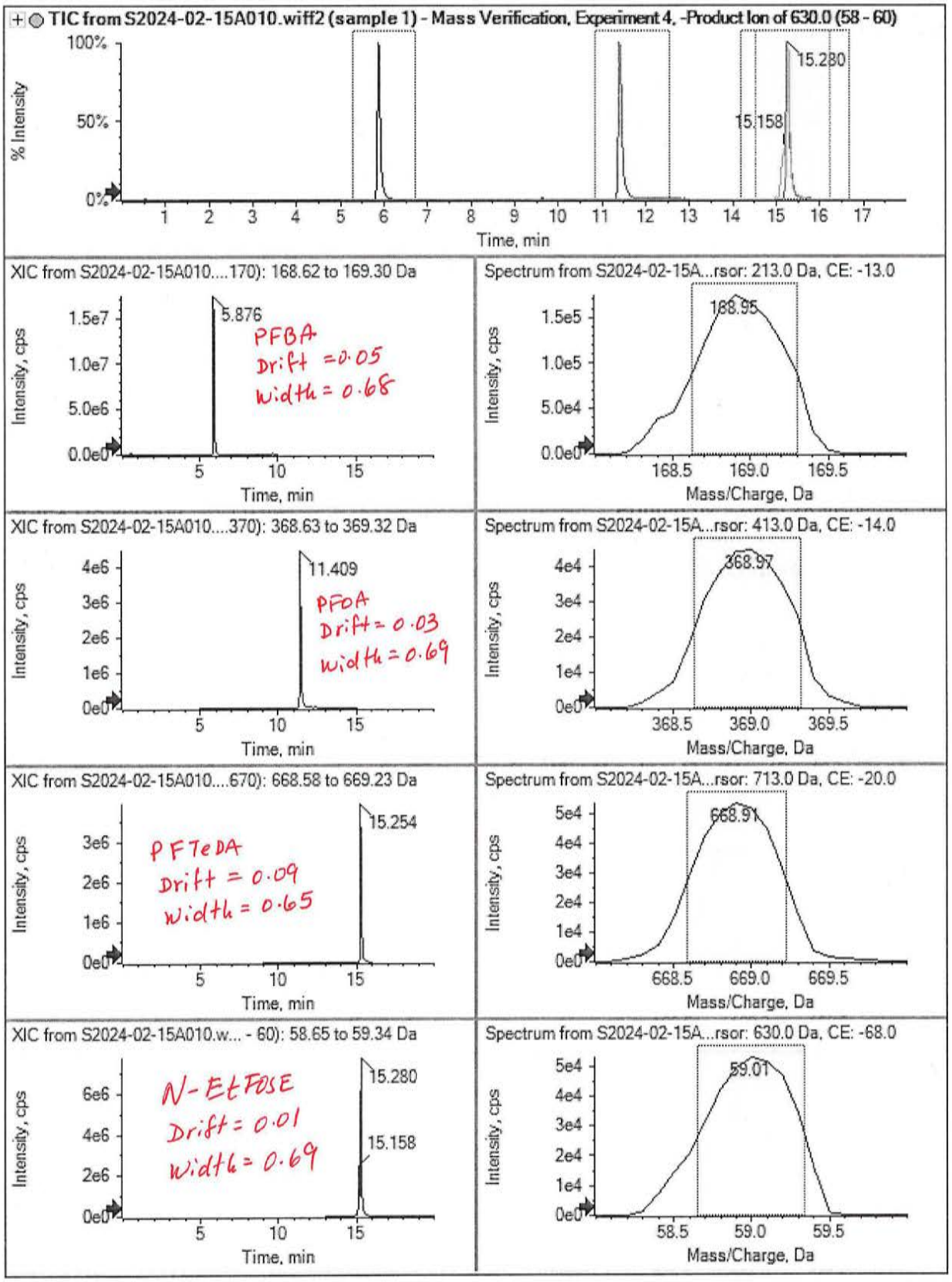

# EPA 1633A

Initial Calibration: SD00912 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 62723<br>( 163.0 / 69.0 ) 1685 | ( 2.83 , 0.74 ) ( N/A , 0.02 , -0.3) | 386.0<br>81.4 | 0.0269<br>107.2<br>107.2 | 0.1856 | N/A | 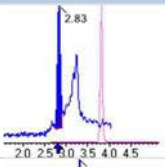 | 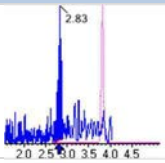 | |
| PFBA | ( 213.0 / 169.0 ) 136703 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 341.6 | N/A<br>0.0<br>0.0 | 0.3783 | N/A | 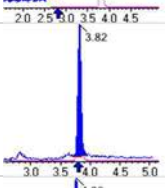 | | |
| PFPeA | ( 263.0 / 219.0 ) 67216<br>( 263.0 / 69.0 ) 860 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.2) | 289.8<br>23.6 | 0.0128<br>116.5<br>116.5 | 0.2014 | N/A | 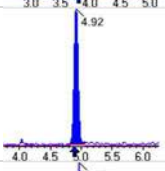 | 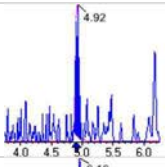 | |
| PFHxA | ( 313.0 / 269.0 ) 33325<br>( 313.0 / 119.0 ) 3267 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.2) | 235.2<br>83.4 | 0.0980<br>88.2<br>88.2 | 0.0933 | N/A | 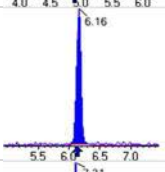 | 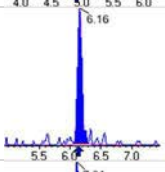 | |
| PFHpA | ( 363.0 / 319.0 ) 32624<br>( 363.0 / 169.0 ) 12319 | ( 7.31 , 1.00 ) ( 0.00 , N/A , -0.1) | 279.5<br>167.5 | 0.3776<br>121.2<br>121.2 | 0.0891 | N/A | 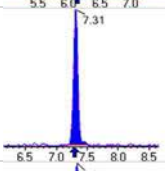 | 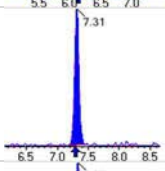 | |
| PFOA | ( 413.0 / 369.0 ) 58295<br>( 413.0 / 169.0 ) 17550 | ( 8.34 , 1.00 ) ( 0.00 , N/A , 0.4) | 109.6<br>129.3 | 0.3010<br>83.2<br>83.2 | 0.1174 | N/A | 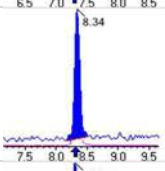 | 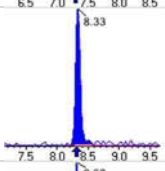 | |
| PFNA | ( 463.0 / 419.0 ) 28976<br>( 463.0 / 169.0 ) 8598 | ( 9.30 , 1.00 ) ( 0.00 , N/A , -0.4) | 213.3<br>159.9 | 0.2967<br>113.1<br>113.1 | 0.0857 | N/A | 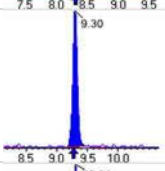 | 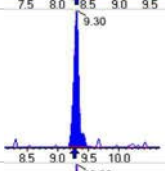 | |
| PFDA | ( 513.0 / 469.0 ) 40117<br>( 513.0 / 169.0 ) 4652 | ( 10.21 , 1.00 ) ( -0.01 , N/A , 0.2) | 316.7<br>146.9 | 0.1160<br>98.8<br>98.8 | 0.0979 | N/A | 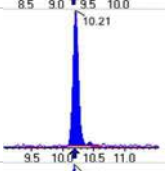 | 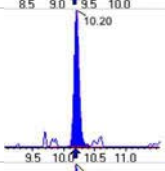 | |
| PFUnA | ( 563.0 / 519.0 ) 43625<br>( 563.0 / 169.0 ) 5480 | ( 11.09 , 1.00 ) ( 0.00 , N/A , -0.8) | 297.1<br>129.9 | 0.1256<br>84.8<br>84.8 | 0.0960 | N/A | 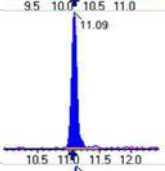 | 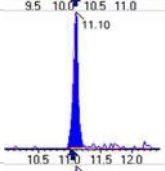 | |
| PFDoA | ( 613.0 / 569.0 ) 46521<br>( 613.0 / 169.0 ) 6369 | ( 11.90 , 1.00 ) ( 0.00 , N/A , 0.3) | 285.5<br>143.9 | 0.1369<br>86.6<br>86.6 | 0.0962 | N/A | 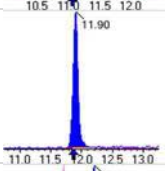 | 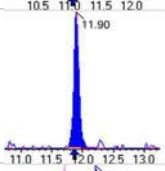 | |
| PFTrDA | ( 663.0 / 619.0 ) 41893<br>( 663.0 / 169.0 ) 13170 | ( 12.50 , 1.05 ) ( N/A , 0.02 , -0.5) | 306.5<br>186.1 | 0.3144<br>116.7<br>116.7 | 0.0901 | N/A | 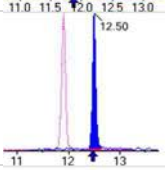 | 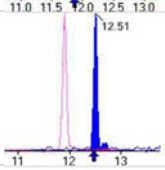 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 37262<br>( 713.0 / 169.0 ) 8926 | ( 12.99 , 1.00 )<br>( 0.00 , N/A , -0.1) | 212.5<br>105.1 | 0.2395<br>92.1<br>92.1 | 0.0963 | N/A | 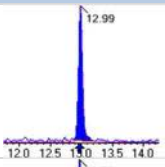 | 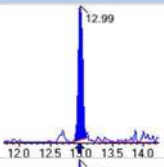 | |
| PFHxDA | ( 813.0 / 769.0 ) 33878<br>( 813.0 / 169.0 ) 9263 | ( 13.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 212.8<br>100.6 | 0.2734<br>126.0<br>126.0 | 0.0983 | N/A | 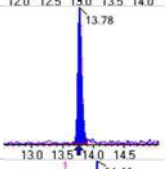 | 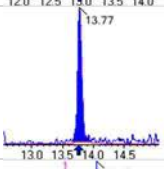 | |
| PFODA | ( 913.0 / 869.0 ) 23238<br>( 913.0 / 169.0 ) 8574 | ( 14.41 , 1.05 )<br>( N/A , 0.02 , 0.3) | 111.1<br>50.7 | 0.3690<br>96.6<br>96.6 | 0.1004 | N/A | 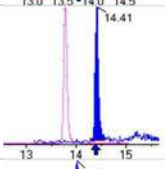 | 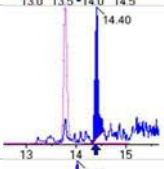 | |
| PFBS | ( 299.0 / 80.0 ) 50426<br>( 299.0 / 99.0 ) 41032 | ( 6.48 , 1.00 )<br>( 0.00 , N/A , -0.1) | 556.9<br>235.3 | 0.8137<br>114.5<br>114.5 | 0.0815 | N/A | 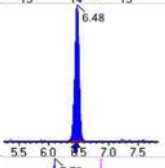 | 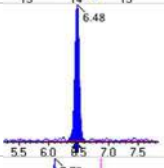 | |
| PFPeS | ( 349.0 / 80.0 ) 123999<br>( 349.0 / 99.0 ) 42294 | ( 7.73 , 0.88 )<br>( N/A , 0.03 , 0.0) | 595.5<br>374.4 | 0.3411<br>100.3<br>100.3 | 0.0913 | N/A | 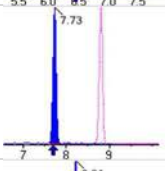 | 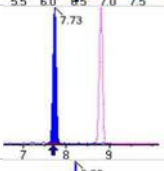 | |
| PFHxS | ( 399.0 / 80.0 ) 132475<br>( 399.0 / 99.0 ) 45070 | ( 8.81 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1203.5<br>2202.5 | 0.3402<br>108.8<br>108.8 | 0.0877 | N/A | 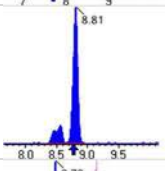 | 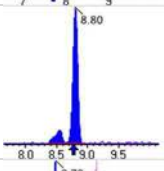 | |
| PFHpS | ( 449.0 / 80.0 ) 108095<br>( 449.0 / 99.0 ) 29112 | ( 9.78 , 0.92 )<br>( N/A , 0.04 , 0.0) | 536.0<br>464.4 | 0.2693<br>100.8<br>100.8 | 0.0870 | N/A | 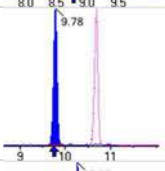 | 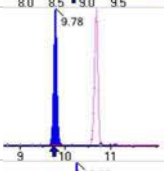 | |
| PFOS | ( 499.0 / 80.0 ) 112318<br>( 499.0 / 99.0 ) 28129 | ( 10.68 , 1.00 )<br>( 0.00 , N/A , 0.4) | 603.9<br>14525.9 | 0.2504<br>105.9<br>105.9 | 0.0899 | N/A | 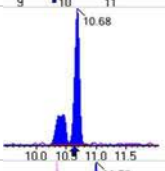 | 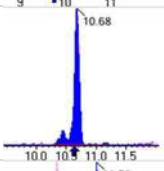 | |
| PFNS | ( 549.0 / 80.0 ) 111684<br>( 549.0 / 99.0 ) 29098 | ( 11.52 , 1.08 )<br>( N/A , 0.04 , -0.2) | 646.5<br>351.3 | 0.2605<br>98.1<br>98.1 | 0.0916 | N/A | 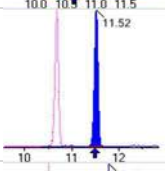 | 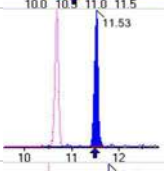 | |
| PFDS | ( 599.0 / 80.0 ) 134832<br>( 599.0 / 99.0 ) 37343 | ( 12.19 , 1.14 )<br>( N/A , 0.03 , -0.1) | 653.9<br>334.4 | 0.2770<br>110.4<br>110.4 | 0.0928 | N/A | 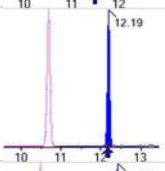 | 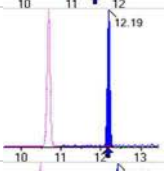 | |
| PFDoS | ( 699.0 / 80.0 ) 104822<br>( 699.0 / 99.0 ) 23043 | ( 13.08 , 1.22 )<br>( N/A , 0.02 , 0.1) | 847.9<br>268.9 | 0.2198<br>95.3<br>95.3 | 0.0844 | N/A | 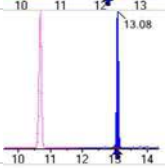 | 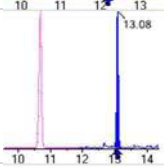 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 121312<br>( 327.0 / 81.0 ) 111526 | ( 5.61 , 1.00 ) ( 0.00 , N/A , -0.1) | 1649.4<br>615.1 | 0.9193<br>104.9<br>104.9 | 0.3547 | N/A | 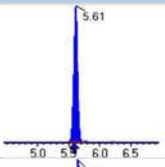 | 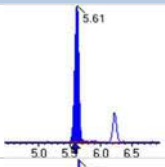 | |
| 6:2FTS | ( 427.0 / 407.0 ) 107117<br>( 427.0 / 81.0 ) 132681 | ( 7.74 , 1.00 ) ( 0.00 , N/A , 0.2) | 1262.1<br>1015.6 | 1.2387<br>97.5<br>97.5 | 0.3533 | N/A | 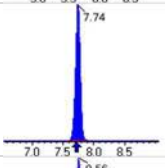 | 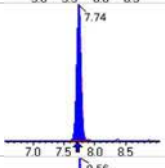 | |
| 8:2FTS | ( 527.0 / 507.0 ) 141528<br>( 527.0 / 81.0 ) 133044 | ( 9.56 , 1.00 ) ( -0.01 , N/A , -0.1) | 879.7<br>748.6 | 0.9401<br>99.1<br>99.1 | 0.3741 | N/A | 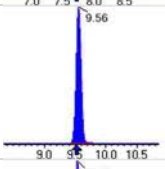 | 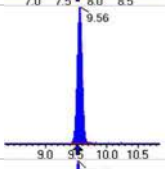 | |
| 10:2FTS | ( 627.0 / 607.0 ) 115526<br>( 627.0 / 81.0 ) 155798 | ( 11.23 , 1.00 ) ( 0.01 , N/A , 0.2) | 918.4<br>436.3 | 1.3486<br>99.8<br>99.8 | 0.3753 | N/A | 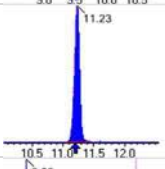 | 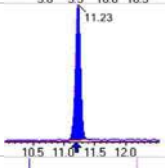 | |
| PFBSA | ( 297.9 / 78.0 ) 96966<br>( 297.9 / 278.0 ) 206 | ( 8.08 , 0.57 ) ( N/A , 0.02 , 1.3) | 396.3<br>4.2 | 0.0021<br>151.4<br>151.4 | 0.0968 | N/A | 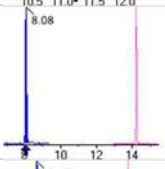 | 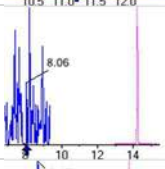 | |
| PFHxSA | ( 397.9 / 78.0 ) 122222<br>( 397.9 / 378.0 ) 429 | ( 10.95 , 0.75 ) ( N/A , 0.02 , -0.2) | 797.1<br>20.4 | 0.0035<br>92.2<br>92.2 | 0.0974 | N/A | 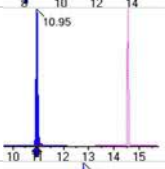 | 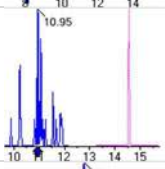 | |
| PFOSA | ( 498.0 / 78.0 ) 103305<br>( 498.0 / 478.0 ) 1207 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.2) | 872.8<br>35.7 | 0.0117<br>81.0<br>81.0 | 0.0949 | N/A | 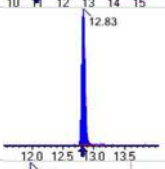 | 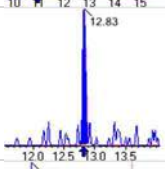 | |
| TFSI | ( 279.7 / 147.0 ) 204349<br>( 279.7 / 211.0 ) 17973 | ( 8.40 , 0.65 ) ( N/A , 0.04 , 0.0) | 53.4<br>36.1 | 0.0879<br>106.6<br>106.6 | 0.0883 | N/A | 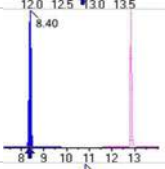 | 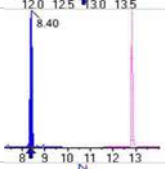 | |
| NMeFOSA | ( 512.0 / 219.0 ) 78690<br>( 512.0 / 169.0 ) 60518 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 3.4) | 743.3<br>323.4 | 0.7691<br>104.6<br>104.6 | 0.3586 | N/A | 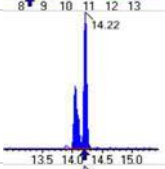 | 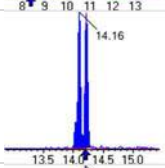 | |
| NEtFOSA | ( 526.0 / 219.0 ) 100051<br>( 526.0 / 169.0 ) 125891 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 1.8) | 820.4<br>865.9 | 1.2583<br>99.3<br>99.3 | 0.3726 | N/A | 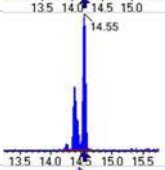 | 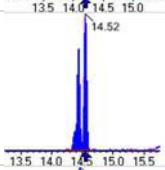 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 26083<br>( 570.0 / 483.0 ) 11125 | ( 10.47 , 1.00 ) ( 0.01 , N/A , 0.2) | 15618.7<br>155.0 | 0.4265<br>98.5<br>98.5 | 0.0999 | N/A | 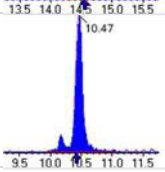 | 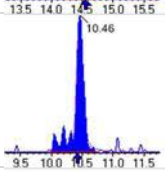 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 23924<br>( 584.0 / 526.0 ) 15004 | ( 11.00 , 1.00 )<br>( 0.02 , N/A , 0.9) | 2524.5<br>162.6 | 0.6272<br>101.3<br>101.3 | 0.0901 | N/A | 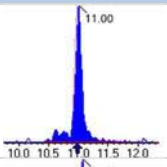 | 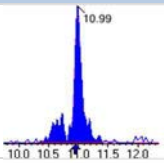 | |
| NMeFOSE | ( 616.0 / 59.0 ) 43798 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 255.9 | N/A<br>0.0<br>0.0 | 0.3846 | N/A | 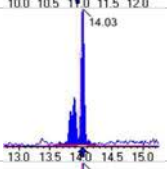 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 38625 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 397.7 | N/A<br>0.0<br>0.0 | 0.3704 | N/A | 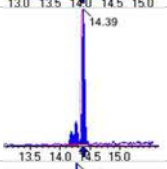 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 9456<br>( 285.0 / 185.0 ) 24600 | ( 6.63 , 1.00 )<br>( 0.00 , N/A , 0.3) | 361.2<br>257.0 | 2.6015<br>83.5<br>83.5 | 0.1083 | N/A | 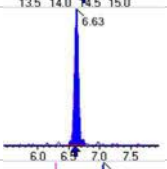 | 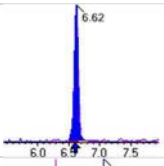 | |
| ADONA | ( 377.0 / 85.0 ) 98316<br>( 377.0 / 251.0 ) 11269 | ( 7.70 , 1.16 )<br>( N/A , 0.03 , -0.1) | 701.4<br>143.0 | 0.1146<br>107.5<br>107.5 | 0.0884 | N/A | 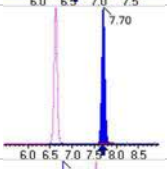 | 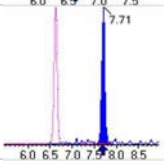 | |
| PFMPA | ( 229.0 / 85.0 ) 18639 | ( 4.21 , 0.86 )<br>( N/A , 0.02 , 0.0) | 629.9 | N/A<br>0.0<br>0.0 | 0.1764 | N/A | 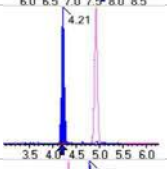 | | |
| PFMBA | ( 279.0 / 85.0 ) 50706 | ( 5.30 , 1.08 )<br>( N/A , 0.02 , 0.0) | 757.5 | N/A<br>0.0<br>0.0 | 0.1813 | N/A | 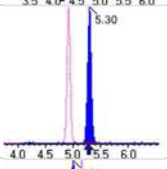 | | |
| NFDHA | ( 295.0 / 201.0 ) 24333<br>( 295.0 / 85.0 ) 24357 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , -0.1) | 935.5<br>379.9 | 1.0010<br>92.5<br>92.5 | 0.1960 | N/A | 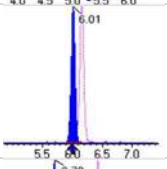 | 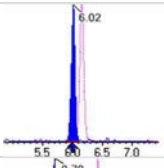 | |
| PFECHS | ( 461.0 / 98.9 ) 61546<br>( 461.0 / 381.2 ) 24546 | ( 9.70 , 0.91 )<br>( N/A , 0.03 , 0.0) | 1082.3<br>2413.0 | 0.3988<br>102.1<br>102.1 | 0.0873 | N/A | 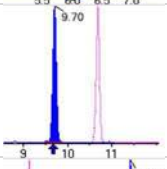 | 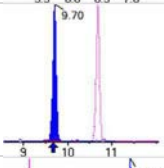 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 119480<br>( 533.0 / 353.0 ) 38220 | ( 11.34 , 1.71 )<br>( N/A , 0.04 , 0.2) | 1071.2<br>364.0 | 0.3199<br>99.5<br>99.5 | 0.0871 | N/A | 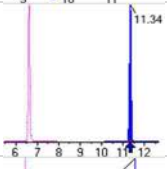 | 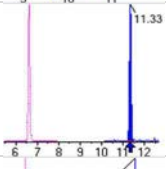 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 90010<br>( 633.0 / 453.0 ) 30548 | ( 12.59 , 1.90 )<br>( N/A , 0.02 , 0.2) | 1140.6<br>427.2 | 0.3394<br>103.9<br>103.9 | 0.0837 | N/A | 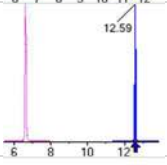 | 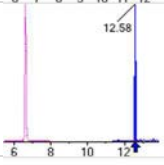 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 39824<br>( 315.0 / 83.0 ) 30264 | ( 7.08 , 1.15 )<br>( N/A , 0.02 , -0.7) | 738.9<br>150.8 | 0.7599<br>132.6<br>132.6 | 0.1483 | N/A | 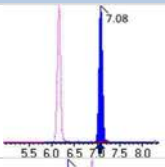 | 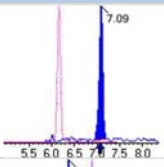 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5064<br>( 241.0 / 117.0 ) 10499 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , -0.5) | 188.3<br>51.6 | 2.0731<br>93.4<br>93.4 | 0.3124 | N/A | 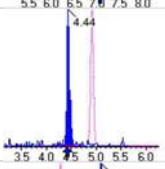 | 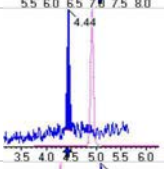 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30684<br>( 341.0 / 217.0 ) 46927 | ( 7.02 , 1.14 )<br>( N/A , 0.02 , 0.4) | 289.8<br>170.2 | 1.5294<br>102.2<br>102.2 | 0.3545 | N/A | 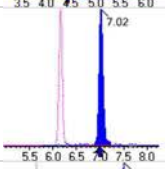 | 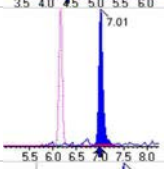 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 42697<br>( 441.0 / 337.0 ) 41711 | ( 9.44 , 1.53 )<br>( N/A , 0.03 , 0.4) | 3495.7<br>1294.5 | 0.9769<br>109.8<br>109.8 | 0.3354 | N/A | 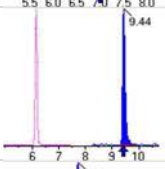 | 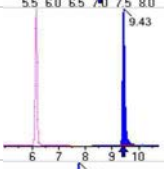 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 27612<br>( 357.2 / 243.0 ) 3484 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , -0.1) | 249.0<br>31.9 | 0.1262<br>119.5<br>119.5 | 0.0822 | N/A | 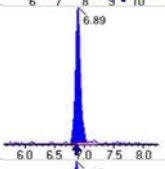 | 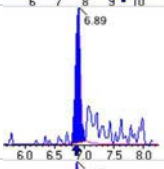 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 21799<br>( 457.2 / 343.0 ) 787 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , 0.0) | 260.4<br>35.3 | 0.0361<br>92.2<br>92.2 | 0.0927 | N/A | 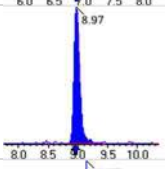 | 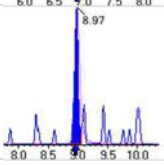 | |
| TDCA | ( 499.0 / 80.0 ) 81929 | ( 10.67 , 1.00 )<br>( N/A , 0.04 , 0.0) | 1064.2 | N/A<br>0.0<br>0.0 | 0.0964 | N/A | 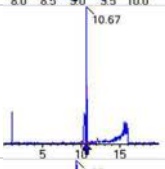 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 340327 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1372.3 | N/A | 1.1297<br>[ 1.0000 ] | 113.0%<br>{ 112.2% } | 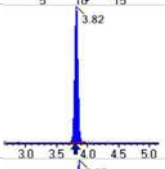 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 158640 | ( 6.16 , N/A )<br>( N/A , 0.03 , N/A ) | 7626318.1 | N/A | 1.0317<br>[ 1.0000 ] | 103.2%<br>{ 96.1% } | 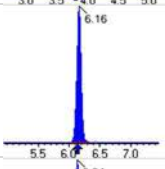 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 450854 | ( 8.34 , N/A )<br>( N/A , 0.03 , N/A ) | 3550.0 | N/A | 1.0106<br>[ 1.0000 ] | 101.1%<br>{ 99.2% } | 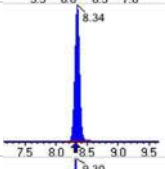 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 333991 | ( 9.30 , N/A )<br>( N/A , 0.03 , N/A ) | 945.7 | N/A | 0.9991<br>[ 1.0000 ] | 99.9%<br>{ 102.5% } | 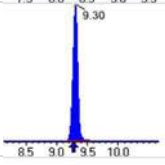 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 314067 | ( 10.22 , N/A ) ( N/A , 0.03 , N/A ) | 7620.3 | N/A | 0.9471 [ 1.0000 ] | 94.7% { 92.4% } | 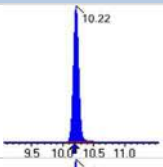 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1157344 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 4794.8 | N/A | 1.0357 [ 1.0000 ] | 103.6% { 101.6% } | 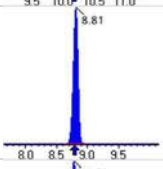 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 991669 | ( 10.69 , N/A ) ( N/A , 0.04 , N/A ) | 3275.0 | N/A | 1.0158 [ 1.0000 ] | 101.6% { 99.6% } | 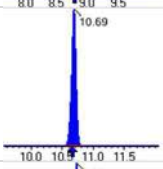 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3055452 | ( 3.82 , N/A ) ( N/A , 0.02 , N/A ) | 49731.0 | N/A | 8.1414 [ 8.0000 ] | 101.8% { 115.0% } | 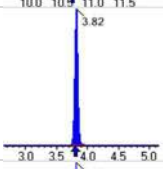 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1311252 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 6150.7 | N/A | 4.6074 [ 4.0000 ] | 115.2% { 113.2% } | 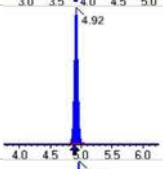 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 737112 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 18992.8 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 107.7% } | 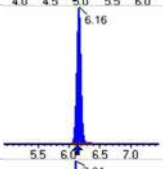 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 743928 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 5060.0 | N/A | 2.0912 [ 2.0000 ] | 104.6% { 105.6% } | 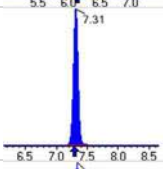 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 976702 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 2744.6 | N/A | 2.0546 [ 2.0000 ] | 102.7% { 102.4% } | 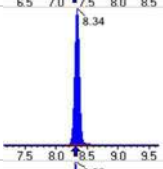 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 337221 | ( 9.30 , N/A ) ( N/A , 0.03 , N/A ) | 3446.6 | N/A | 1.0456 [ 1.0000 ] | 104.6% { 108.5% } | 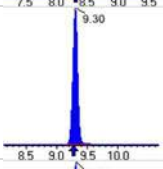 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 411273 | ( 10.21 , N/A ) ( N/A , 0.04 , N/A ) | 1512.9 | N/A | 1.1348 [ 1.0000 ] | 113.5% { 106.9% } | 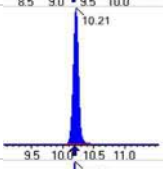 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 486595 | ( 11.09 , N/A ) ( N/A , 0.04 , N/A ) | 778.9 | N/A | 1.1043 [ 1.0000 ] | 110.4% { 97.8% } | 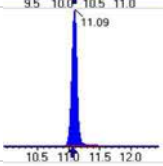 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 472249 | ( 11.90 , N/A ) ( N/A , 0.04 , N/A ) | 1056.3 | N/A | 1.0672 [ 1.0000 ] | 106.7% { 94.7% } | 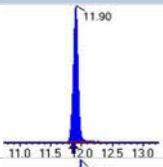 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 407605 | ( 12.99 , N/A ) ( N/A , 0.03 , N/A ) | 1351.1 | N/A | 1.0571 [ 1.0000 ] | 105.7% { 96.1% } | 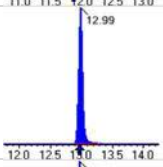 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 713892 | ( 13.78 , N/A ) ( N/A , 0.02 , N/A ) | 2875.4 | N/A | 2.1797 [ 2.0000 ] | 109.0% { 100.8% } | 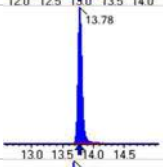 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2379010 | ( 6.48 , N/A ) ( N/A , 0.02 , N/A ) | 1504.2 | N/A | 2.1097 [ 2.0000 ] | 105.5% { 103.0% } | 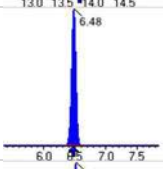 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1705833 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 5434.1 | N/A | 2.0142 [ 2.0000 ] | 100.7% { 103.7% } | 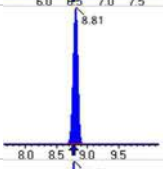 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2162723 | ( 10.68 , N/A ) ( N/A , 0.04 , N/A ) | 1971.1 | N/A | 2.0486 [ 2.0000 ] | 102.4% { 103.0% } | 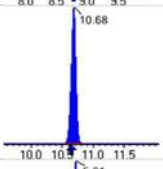 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 508045 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 85.0 | N/A | 5.0410 [ 4.0000 ] | 126.0% { 141.2% } | 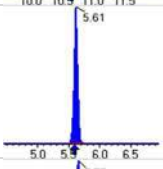 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1365290 | ( 7.75 , N/A ) ( N/A , 0.02 , N/A ) | 5720.7 | N/A | 4.3623 [ 4.0000 ] | 109.1% { 127.1% } | 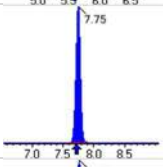 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527227 | ( 9.57 , N/A ) ( N/A , 0.03 , N/A ) | 1210.9 | N/A | 4.8979 [ 4.0000 ] | 122.4% { 131.1% } | 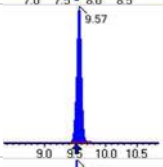 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2993081 | ( 11.22 , N/A ) ( N/A , 0.04 , N/A ) | 1518.0 | N/A | 8.3623 [ 8.0000 ] | 104.5% { 119.5% } | 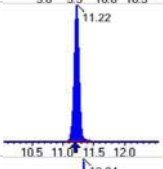 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2230755 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1617.1 | N/A | 1.9499 [ 2.0000 ] | 97.5% { 95.8% } | 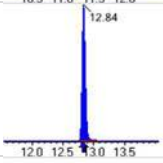 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 435676 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2829.0 | N/A | 2.0623 [ 2.0000 ] | 103.1% { 102.9% } | 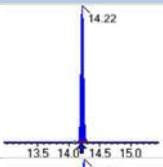 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 489431 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2668.7 | N/A | 2.0170 [ 2.0000 ] | 100.8% { 98.5% } | 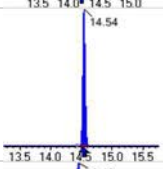 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1108890 | ( 10.46 , N/A ) ( N/A , 0.04 , N/A ) | 2729.9 | N/A | 4.1016 [ 4.0000 ] | 102.5% { 102.6% } | 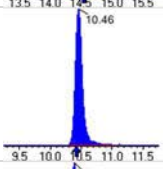 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1101168 | ( 10.99 , N/A ) ( N/A , 0.04 , N/A ) | 1686.3 | N/A | 4.2908 [ 4.0000 ] | 107.3% { 105.1% } | 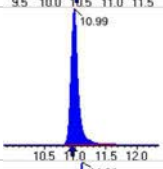 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2011783 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2565.0 | N/A | 20.3807 [ 20.0000 ] | 101.9% { 106.9% } | 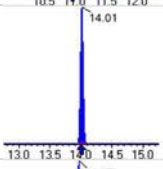 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2360344 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5759.2 | N/A | 19.7391 [ 20.0000 ] | 98.7% { 100.0% } | 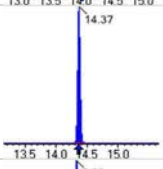 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1230457 | ( 6.63 , N/A ) ( N/A , 0.02 , N/A ) | 2090.3 | N/A | 8.4040 [ 8.0000 ] | 105.0% { 108.5% } | 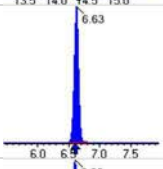 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 624710 | ( 6.90 , N/A ) ( N/A , 0.02 , N/A ) | 1187.0 | N/A | 2.2427 [ 2.0000 ] | 112.1% { 106.6% } | 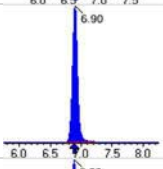 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 557510 | ( 8.99 , N/A ) ( N/A , 0.03 , N/A ) | 815.6 | N/A | 2.1438 [ 2.0000 ] | 107.2% { 98.8% } | 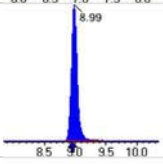 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 310943<br>( 163.0 / 69.0 ) 7678 | ( 2.83 , 0.74 ) ( N/A , 0.02 , 0.0) | 1967.3<br>326.9 | 0.0247<br>98.5<br>98.5 | 0.9837 | N/A | 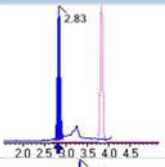 | 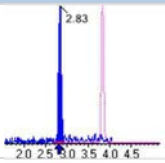 | |
| PFBA | ( 213.0 / 169.0 ) 661236 | ( 3.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1272.3 | N/A<br>0.0<br>0.0 | 1.9563 | N/A | 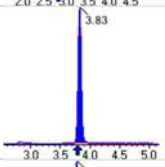 | | |
| PFPeA | ( 263.0 / 219.0 ) 289941<br>( 263.0 / 69.0 ) 3532 | ( 4.93 , 1.00 ) ( 0.00 , N/A , -0.2) | 1405.2<br>63.0 | 0.0122<br>110.9<br>110.9 | 0.9598 | N/A | 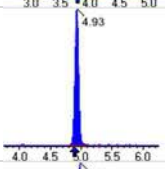 | 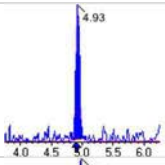 | |
| PFHxA | ( 313.0 / 269.0 ) 156981<br>( 313.0 / 119.0 ) 20723 | ( 6.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 878.4<br>407.6 | 0.1320<br>118.8<br>118.8 | 0.4806 | N/A | 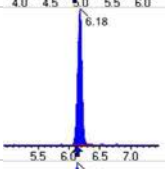 | 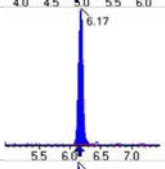 | |
| PFHpA | ( 363.0 / 319.0 ) 172554<br>( 363.0 / 169.0 ) 53621 | ( 7.33 , 1.00 ) ( 0.00 , N/A , -0.2) | 1075.9<br>812.3 | 0.3107<br>99.7<br>99.7 | 0.4836 | N/A | 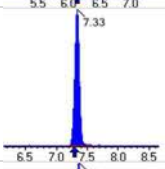 | 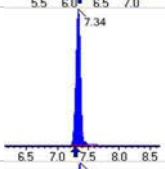 | |
| PFOA | ( 413.0 / 369.0 ) 238705<br>( 413.0 / 169.0 ) 84264 | ( 8.36 , 1.00 ) ( 0.00 , N/A , -0.2) | 351.7<br>608.9 | 0.3530<br>97.6<br>97.6 | 0.4876 | N/A | 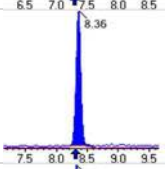 | 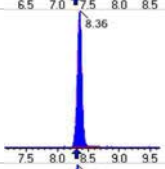 | |
| PFNA | ( 463.0 / 419.0 ) 158575<br>( 463.0 / 169.0 ) 40887 | ( 9.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 636.8<br>465.1 | 0.2578<br>98.2<br>98.2 | 0.4784 | N/A | 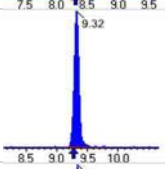 | 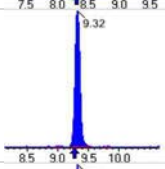 | |
| PFDA | ( 513.0 / 469.0 ) 200638<br>( 513.0 / 169.0 ) 24392 | ( 10.24 , 1.00 ) ( 0.00 , N/A , 0.6) | 1137.9<br>1734.9 | 0.1216<br>103.6<br>103.6 | 0.5048 | N/A | 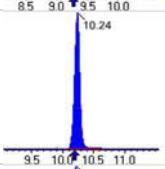 | 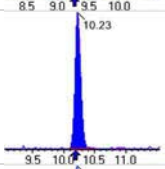 | |
| PFUnA | ( 563.0 / 519.0 ) 228676<br>( 563.0 / 169.0 ) 30079 | ( 11.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 715.4<br>476.1 | 0.1315<br>88.8<br>88.8 | 0.4938 | N/A | 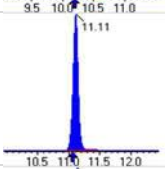 | 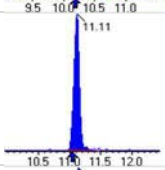 | |
| PFDoA | ( 613.0 / 569.0 ) 234860<br>( 613.0 / 169.0 ) 34508 | ( 11.93 , 1.00 ) ( 0.00 , N/A , -0.2) | 810.5<br>413.2 | 0.1469<br>92.9<br>92.9 | 0.4915 | N/A | 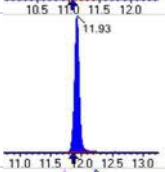 | 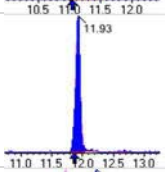 | |
| PFTrDA | ( 663.0 / 619.0 ) 227333<br>( 663.0 / 169.0 ) 60335 | ( 12.52 , 1.05 ) ( N/A , 0.04 , -0.1) | 1013.5<br>578.2 | 0.2654<br>98.5<br>98.5 | 0.4948 | N/A | 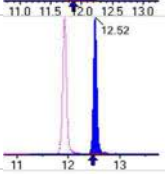 | 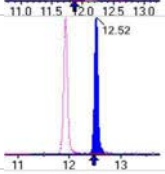 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 179647<br>( 713.0 / 169.0 ) 46122 | ( 13.01 , 1.00 )<br>( 0.00 , N/A , -0.1) | 704.5<br>458.2 | 0.2567<br>98.8<br>98.8 | 0.4555 | N/A | 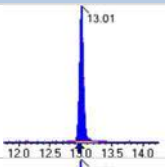 | 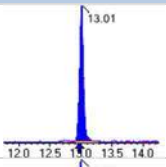 | |
| PFHxDA | ( 813.0 / 769.0 ) 165149<br>( 813.0 / 169.0 ) 38097 | ( 13.79 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1062.4<br>327.6 | 0.2307<br>106.3<br>106.3 | 0.4418 | N/A | 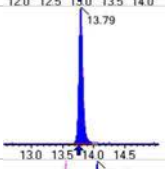 | 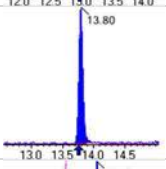 | |
| PFODA | ( 913.0 / 869.0 ) 111560<br>( 913.0 / 169.0 ) 38584 | ( 14.43 , 1.05 )<br>( N/A , 0.04 , 0.4) | 496.5<br>208.1 | 0.3459<br>90.5<br>90.5 | 0.4442 | N/A | 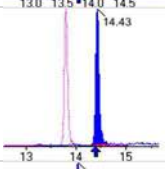 | 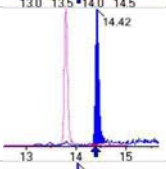 | |
| PFBS | ( 299.0 / 80.0 ) 253629<br>( 299.0 / 99.0 ) 181646 | ( 6.49 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1914.5<br>671.6 | 0.7162<br>100.7<br>100.7 | 0.4251 | N/A | 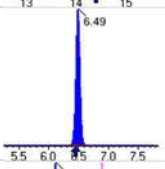 | 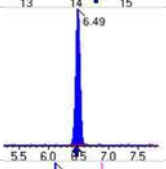 | |
| PFPeS | ( 349.0 / 80.0 ) 633829<br>( 349.0 / 99.0 ) 225776 | ( 7.75 , 0.88 )<br>( N/A , 0.05 , 0.1) | 1816.0<br>1482.7 | 0.3562<br>104.7<br>104.7 | 0.4887 | N/A | 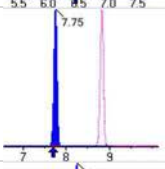 | 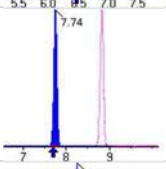 | |
| PFHxS | ( 399.0 / 80.0 ) 642355<br>( 399.0 / 99.0 ) 215749 | ( 8.83 , 1.00 )<br>( 0.00 , N/A , -0.3) | 2085.8<br>13437.8 | 0.3359<br>107.4<br>107.4 | 0.4454 | N/A | 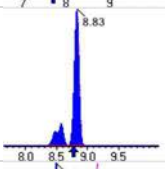 | 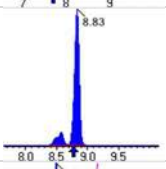 | |
| PFHpS | ( 449.0 / 80.0 ) 543830<br>( 449.0 / 99.0 ) 149492 | ( 9.80 , 0.92 )<br>( N/A , 0.06 , 0.1) | 1273.7<br>1315.7 | 0.2749<br>102.9<br>102.9 | 0.4428 | N/A | 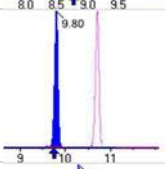 | 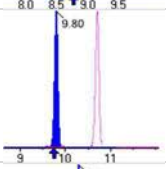 | |
| PFOS | ( 499.0 / 80.0 ) 572706<br>( 499.0 / 99.0 ) 136320 | ( 10.70 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1216.4<br>3334.6 | 0.2380<br>100.6<br>100.6 | 0.4635 | N/A | 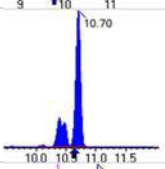 | 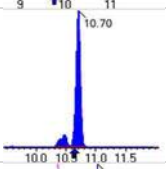 | |
| PFNS | ( 549.0 / 80.0 ) 565862<br>( 549.0 / 99.0 ) 155751 | ( 11.55 , 1.08 )<br>( N/A , 0.06 , 0.1) | 1110.5<br>1287.3 | 0.2752<br>103.6<br>103.6 | 0.4696 | N/A | 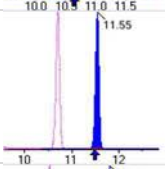 | 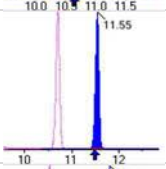 | |
| PFDS | ( 599.0 / 80.0 ) 693240<br>( 599.0 / 99.0 ) 185589 | ( 12.21 , 1.14 )<br>( N/A , 0.05 , 0.0) | 2270.0<br>1626.4 | 0.2677<br>106.8<br>106.8 | 0.4827 | N/A | 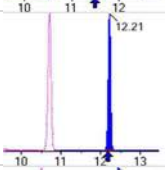 | 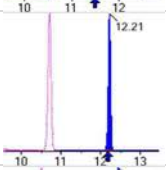 | |
| PFDoS | ( 699.0 / 80.0 ) 582541<br>( 699.0 / 99.0 ) 126432 | ( 13.10 , 1.22 )<br>( N/A , 0.04 , 0.2) | 1802.3<br>1069.7 | 0.2170<br>94.1<br>94.1 | 0.4747 | N/A | 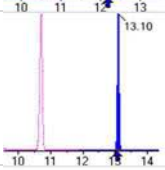 | 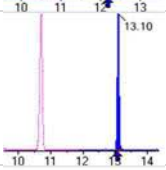 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 568863<br>( 327.0 / 81.0 ) 517089 | ( 5.63 , 1.00 ) ( 0.00 , N/A , 0.0) | 4690.0<br>2125.1 | 0.9090<br>103.7<br>103.7 | 1.9116 | N/A | 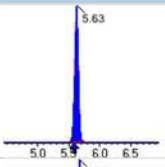 | 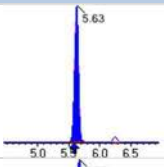 | |
| 6:2FTS | ( 427.0 / 407.0 ) 557782<br>( 427.0 / 81.0 ) 680418 | ( 7.77 , 1.00 ) ( 0.00 , N/A , 0.1) | 3238.1<br>2975.8 | 1.2199<br>96.0<br>96.0 | 1.8228 | N/A | 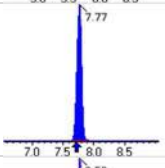 | 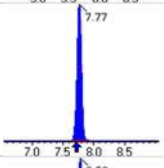 | |
| 8:2FTS | ( 527.0 / 507.0 ) 693443<br>( 527.0 / 81.0 ) 633282 | ( 9.58 , 1.00 ) ( -0.01 , N/A , -0.3) | 1358.7<br>1361.1 | 0.9132<br>96.3<br>96.3 | 1.9368 | N/A | 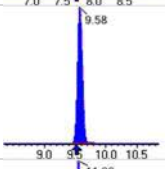 | 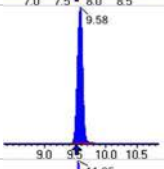 | |
| 10:2FTS | ( 627.0 / 607.0 ) 629399<br>( 627.0 / 81.0 ) 834823 | ( 11.26 , 1.00 ) ( 0.01 , N/A , 0.1) | 1152.2<br>861.4 | 1.3264<br>98.1<br>98.1 | 2.0829 | N/A | 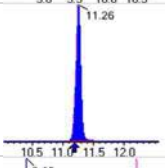 | 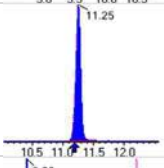 | |
| PFBSA | ( 297.9 / 78.0 ) 487321<br>( 297.9 / 278.0 ) 780 | ( 8.10 , 0.57 ) ( N/A , 0.04 , 0.4) | 1208.4<br>6.8 | 0.0016<br>114.0<br>114.0 | 0.5177 | N/A | 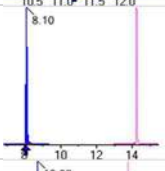 | 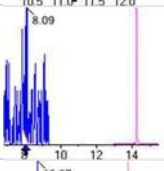 | |
| PFHxSA | ( 397.9 / 78.0 ) 606921<br>( 397.9 / 378.0 ) 2805 | ( 10.98 , 0.75 ) ( N/A , 0.05 , 0.4) | 1097.4<br>119.5 | 0.0046<br>121.4<br>121.4 | 0.4943 | N/A | 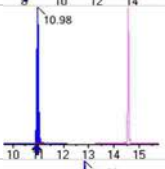 | 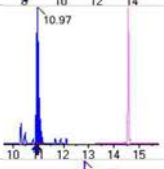 | |
| PFOSA | ( 498.0 / 78.0 ) 590052<br>( 498.0 / 478.0 ) 7112 | ( 12.86 , 1.00 ) ( -0.01 , N/A , 0.3) | 1639.6<br>208.1 | 0.0121<br>83.5<br>83.5 | 0.5259 | N/A | 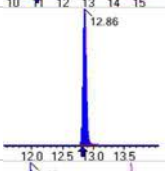 | 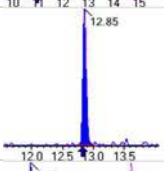 | |
| TFSI | ( 279.7 / 147.0 ) 1243476<br>( 279.7 / 211.0 ) 106931 | ( 8.42 , 0.65 ) ( N/A , 0.05 , -0.4) | 54.8<br>47.5 | 0.0860<br>104.3<br>104.3 | 0.5214 | N/A | 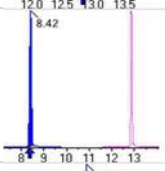 | 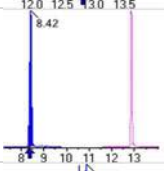 | |
| NMeFOSA | ( 512.0 / 219.0 ) 426127<br>( 512.0 / 169.0 ) 319988 | ( 14.24 , 1.00 ) ( 0.00 , N/A , 3.2) | 2163.1<br>859.2 | 0.7509<br>102.2<br>102.2 | 2.0666 | N/A | 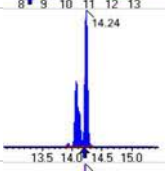 | 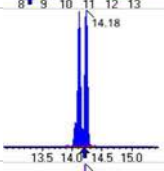 | |
| NEtFOSA | ( 526.0 / 219.0 ) 524100<br>( 526.0 / 169.0 ) 656319 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.2) | 2777.6<br>2450.8 | 1.2523<br>98.9<br>98.9 | 1.9952 | N/A | 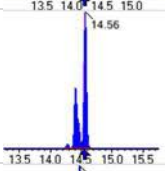 | 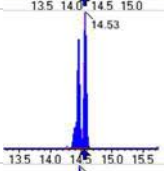 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 133021<br>( 570.0 / 483.0 ) 55215 | ( 10.48 , 1.00 ) ( 0.00 , N/A , 0.0) | 23737.5<br>349.5 | 0.4151<br>95.9<br>95.9 | 0.5229 | N/A | 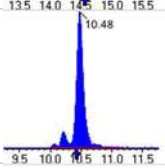 | 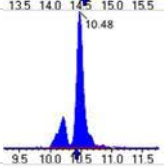 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 128438<br>( 584.0 / 526.0 ) 78717 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.1) | 2142.9<br>363.8 | 0.6129<br>99.0<br>99.0 | 0.5037 | N/A | 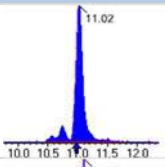 | 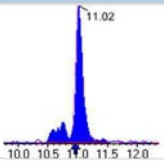 | |
| NMeFOSE | ( 616.0 / 59.0 ) 220612 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 854.8 | N/A<br>0.0<br>0.0 | 1.9957 | N/A | 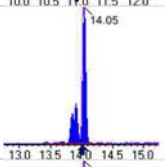 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 215942 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 1420.0 | N/A<br>0.0<br>0.0 | 1.9529 | N/A | 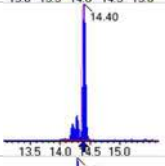 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 40032<br>( 285.0 / 185.0 ) 124909 | ( 6.64 , 1.00 ) ( 0.00 , N/A , 0.1) | 843.5<br>688.0 | 3.1203<br>100.1<br>100.1 | 0.4944 | N/A | 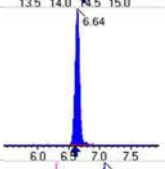 | 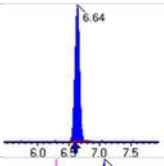 | |
| ADONA | ( 377.0 / 85.0 ) 510988<br>( 377.0 / 251.0 ) 52833 | ( 7.73 , 1.16 ) ( N/A , 0.05 , 0.0) | 1500.2<br>449.5 | 0.1034<br>97.0<br>97.0 | 0.4955 | N/A | 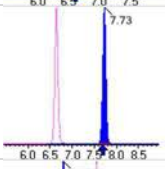 | 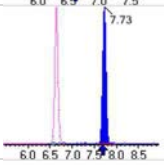 | |
| PFMPA | ( 229.0 / 85.0 ) 93591 | ( 4.22 , 0.86 ) ( N/A , 0.03 , 0.0) | 1985.4 | N/A<br>0.0<br>0.0 | 0.9785 | N/A | 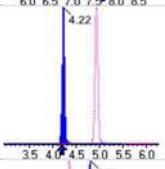 | | |
| PFMBA | ( 279.0 / 85.0 ) 234107 | ( 5.31 , 1.08 ) ( N/A , 0.04 , 0.0) | 2513.1 | N/A<br>0.0<br>0.0 | 0.9248 | N/A | 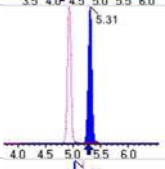 | | |
| NFDHA | ( 295.0 / 201.0 ) 110288<br>( 295.0 / 85.0 ) 112077 | ( 6.03 , 0.98 ) ( N/A , 0.04 , 0.0) | 2224.6<br>1148.6 | 1.0162<br>94.0<br>94.0 | 0.9713 | N/A | 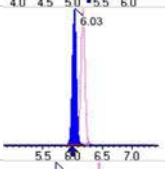 | 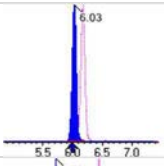 | |
| PFECHS | ( 461.0 / 98.9 ) 297735<br>( 461.0 / 381.2 ) 116128 | ( 9.73 , 0.91 ) ( N/A , 0.06 , 0.0) | 2432.6<br>2342.2 | 0.3900<br>99.9<br>99.9 | 0.4273 | N/A | 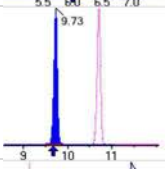 | 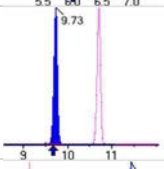 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 598633<br>( 533.0 / 353.0 ) 194205 | ( 11.36 , 1.71 ) ( N/A , 0.06 , 0.1) | 2809.7<br>1446.8 | 0.3244<br>100.9<br>100.9 | 0.4704 | N/A | 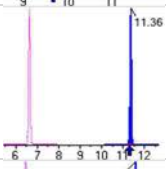 | 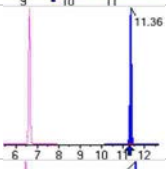 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 470152<br>( 633.0 / 453.0 ) 155946 | ( 12.61 , 1.90 ) ( N/A , 0.04 , 0.0) | 2652.7<br>1448.7 | 0.3317<br>101.6<br>101.6 | 0.4717 | N/A | 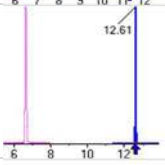 | 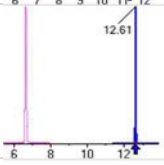 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 217343<br>( 315.0 / 83.0 ) 134472 | ( 7.10 , 1.15 )<br>( N/A , 0.05 , 0.0) | 2291.9<br>540.0 | 0.6187<br>108.0<br>108.0 | 0.8847 | N/A | 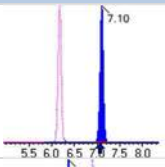 | 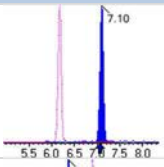 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25883<br>( 241.0 / 117.0 ) 60022 | ( 4.45 , 0.90 )<br>( N/A , 0.03 , 0.0) | 671.2<br>250.8 | 2.3189<br>104.5<br>104.5 | 1.7636 | N/A | 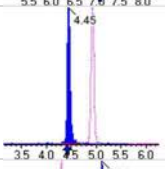 | 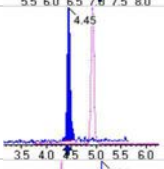 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 168888<br>( 341.0 / 217.0 ) 227443 | ( 7.04 , 1.14 )<br>( N/A , 0.04 , 0.1) | 742.2<br>609.0 | 1.3467<br>89.9<br>89.9 | 2.1334 | N/A | 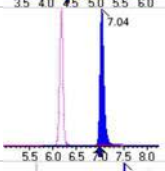 | 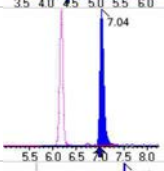 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 220429<br>( 441.0 / 337.0 ) 201280 | ( 9.46 , 1.53 )<br>( N/A , 0.05 , 0.0) | 104912.9<br>64729.3 | 0.9131<br>102.6<br>102.6 | 1.8929 | N/A | 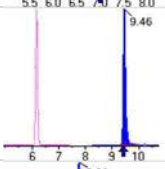 | 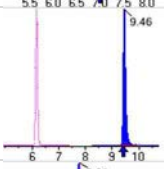 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 167714<br>( 357.2 / 243.0 ) 16619 | ( 6.91 , 1.00 )<br>( -0.01 , N/A , 0.2) | 833.4<br>153.3 | 0.0991<br>93.9<br>93.9 | 0.5154 | N/A | 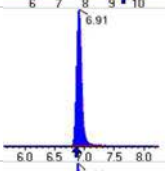 | 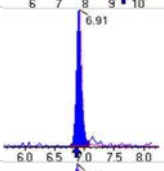 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 113188<br>( 457.2 / 343.0 ) 5020 | ( 9.00 , 1.00 )<br>( -0.01 , N/A , 0.7) | 441.4<br>125.4 | 0.0444<br>113.3<br>113.3 | 0.4888 | N/A | 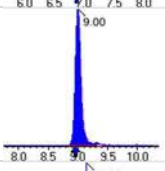 | 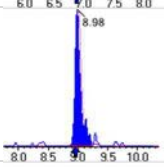 | |
| TDCA | ( 499.0 / 80.0 ) 406104 | ( 10.69 , 1.00 )<br>( N/A , 0.06 , 0.0) | 5419.9 | N/A<br>0.0<br>0.0 | 0.4836 | N/A | 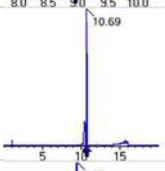 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 336642 | ( 3.83 , N/A )<br>( N/A , 0.03 , N/A ) | 1413.5 | N/A | 1.1175<br>[ 1.0000 ] | 111.7%<br>{ 111.0% } | 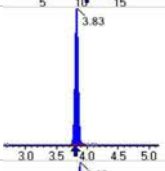 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 162950 | ( 6.18 , N/A )<br>( N/A , 0.04 , N/A ) | 25775.9 | N/A | 1.0597<br>[ 1.0000 ] | 106.0%<br>{ 98.8% } | 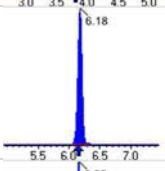 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 471625 | ( 8.36 , N/A )<br>( N/A , 0.05 , N/A ) | 3856.5 | N/A | 1.0571<br>[ 1.0000 ] | 105.7%<br>{ 103.7% } | 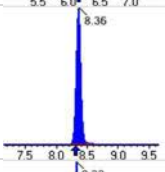 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 366298 | ( 9.32 , N/A )<br>( N/A , 0.05 , N/A ) | 1150.8 | N/A | 1.0957<br>[ 1.0000 ] | 109.6%<br>{ 112.4% } | 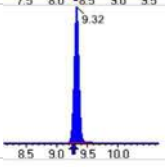 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 352892 | ( 10.24 , N/A ) ( N/A , 0.06 , N/A ) | 4145.1 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 103.8% } | 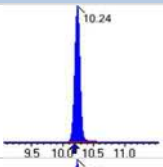 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1150496 | ( 8.83 , N/A ) ( N/A , 0.05 , N/A ) | 5167.9 | N/A | 1.0296 [ 1.0000 ] | 103.0% { 101.0% } | 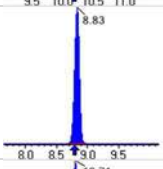 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1023027 | ( 10.71 , N/A ) ( N/A , 0.06 , N/A ) | 3434.6 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 102.8% } | 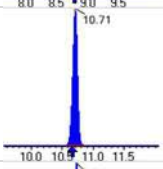 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2858238 | ( 3.83 , N/A ) ( N/A , 0.03 , N/A ) | 46367.4 | N/A | 7.6993 [ 8.0000 ] | 96.2% { 107.6% } | 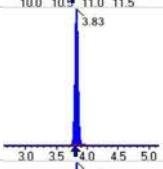 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1187020 | ( 4.93 , N/A ) ( N/A , 0.04 , N/A ) | 4924.0 | N/A | 4.0606 [ 4.0000 ] | 101.5% { 102.5% } | 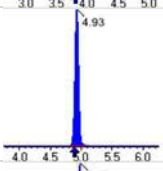 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 674193 | ( 6.17 , N/A ) ( N/A , 0.04 , N/A ) | 6432.9 | N/A | 1.9269 [ 2.0000 ] | 96.3% { 98.5% } | 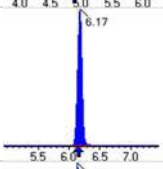 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 724563 | ( 7.34 , N/A ) ( N/A , 0.04 , N/A ) | 6899.7 | N/A | 1.9828 [ 2.0000 ] | 99.1% { 102.8% } | 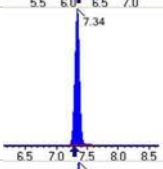 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 962855 | ( 8.36 , N/A ) ( N/A , 0.05 , N/A ) | 2546.6 | N/A | 1.9363 [ 2.0000 ] | 96.8% { 101.0% } | 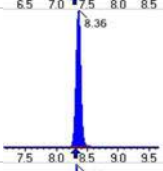 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330799 | ( 9.32 , N/A ) ( N/A , 0.05 , N/A ) | 3687.4 | N/A | 0.9352 [ 1.0000 ] | 93.5% { 106.4% } | 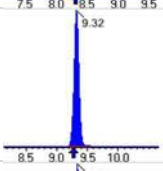 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 399081 | ( 10.24 , N/A ) ( N/A , 0.06 , N/A ) | 1103.5 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 103.7% } | 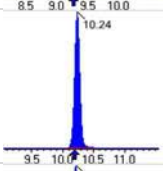 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 495888 | ( 11.11 , N/A ) ( N/A , 0.06 , N/A ) | 897.7 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 99.7% } | 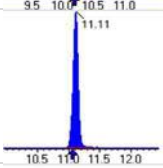 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 466902 | ( 11.93 , N/A ) ( N/A , 0.06 , N/A ) | 1334.4 | N/A | 0.9391 [ 1.0000 ] | 93.9% { 93.6% } | 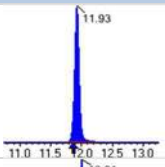  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 415288 | ( 13.01 , N/A ) ( N/A , 0.04 , N/A ) | 1605.9 | N/A | 0.9585 [ 1.0000 ] | 95.9% { 97.9% } | 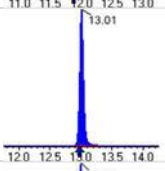  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 774592 | ( 13.80 , N/A ) ( N/A , 0.03 , N/A ) | 3175.6 | N/A | 2.1048 [ 2.0000 ] | 105.2% { 109.3% } | 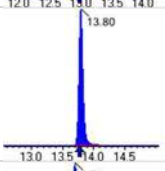  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2294919 | ( 6.50 , N/A ) ( N/A , 0.04 , N/A ) | 1384.9 | N/A | 2.0473 [ 2.0000 ] | 102.4% { 99.3% } | 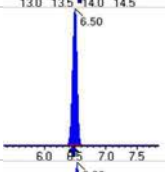  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1628854 | ( 8.83 , N/A ) ( N/A , 0.06 , N/A ) | 5208.7 | N/A | 1.9348 [ 2.0000 ] | 96.7% { 99.0% } | 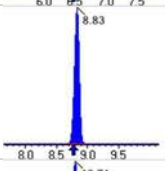  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2137804 | ( 10.71 , N/A ) ( N/A , 0.06 , N/A ) | 1781.1 | N/A | 1.9629 [ 2.0000 ] | 98.1% { 101.8% } | 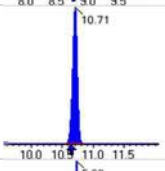  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 442074 | ( 5.62 , N/A ) ( N/A , 0.03 , N/A ) | 83.9 | N/A | 4.4125 [ 4.0000 ] | 110.3% { 122.9% } | 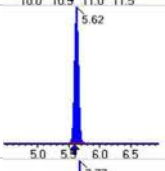  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1377793 | ( 7.77 , N/A ) ( N/A , 0.05 , N/A ) | 4009.0 | N/A | 4.4284 [ 4.0000 ] | 110.7% { 128.3% } | 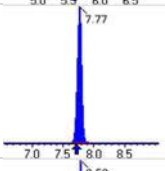  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1445457 | ( 9.59 , N/A ) ( N/A , 0.06 , N/A ) | 1277.8 | N/A | 4.6632 [ 4.0000 ] | 116.6% { 124.1% } | 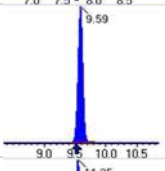  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2937999 | ( 11.25 , N/A ) ( N/A , 0.06 , N/A ) | 1355.8 | N/A | 8.2573 [ 8.0000 ] | 103.2% { 117.3% } | 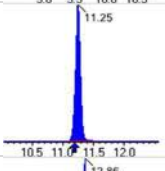  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2299133 | ( 12.86 , N/A ) ( N/A , 0.04 , N/A ) | 1788.2 | N/A | 1.9481 [ 2.0000 ] | 97.4% { 98.7% } | 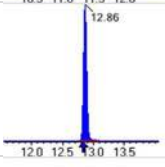  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 409452 | ( 14.23 , N/A ) ( N/A , 0.03 , N/A ) | 2926.6 | N/A | 1.8788 [ 2.0000 ] | 93.9% { 96.7% } | 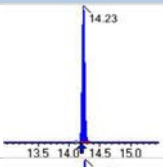 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 478765 | ( 14.56 , N/A ) ( N/A , 0.03 , N/A ) | 3083.5 | N/A | 1.9125 [ 2.0000 ] | 95.6% { 96.3% } | 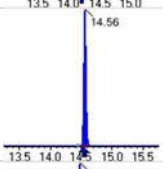 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1080521 | ( 10.48 , N/A ) ( N/A , 0.06 , N/A ) | 2696.1 | N/A | 3.8741 [ 4.0000 ] | 96.9% { 99.9% } | 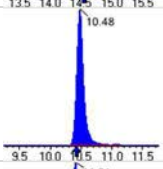 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1057392 | ( 11.01 , N/A ) ( N/A , 0.06 , N/A ) | 1787.5 | N/A | 3.9939 [ 4.0000 ] | 99.8% { 100.9% } | 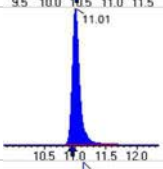 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1953011 | ( 14.03 , N/A ) ( N/A , 0.03 , N/A ) | 3118.9 | N/A | 19.1788 [ 20.0000 ] | 95.9% { 103.8% } | 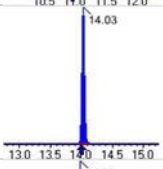 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2502947 | ( 14.38 , N/A ) ( N/A , 0.03 , N/A ) | 7328.7 | N/A | 20.2900 [ 20.0000 ] | 101.5% { 106.1% } | 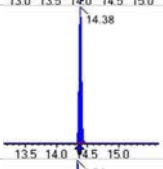 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1141036 | ( 6.64 , N/A ) ( N/A , 0.04 , N/A ) | 2430.9 | N/A | 7.5871 [ 8.0000 ] | 94.8% { 100.6% } | 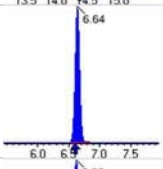 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 605471 | ( 6.92 , N/A ) ( N/A , 0.04 , N/A ) | 1140.2 | N/A | 1.9345 [ 2.0000 ] | 96.7% { 103.3% } | 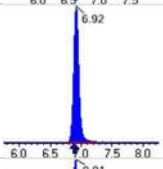 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 549106 | ( 9.01 , N/A ) ( N/A , 0.05 , N/A ) | 570.8 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 97.3% } | 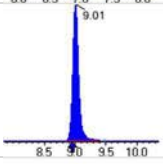 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 612990<br>( 163.0 / 69.0 ) 16536 | ( 2.83 , 0.74 ) ( N/A , 0.02 , 0.0) | 3780.7<br>781.6 | 0.0270<br>107.6<br>107.6 | 1.9057 | N/A | 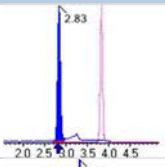 | 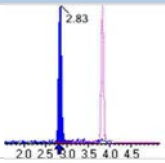 | |
| PFBA | ( 213.0 / 169.0 ) 1388429 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 2403.5 | N/A<br>0.0<br>0.0 | 4.0365 | N/A | 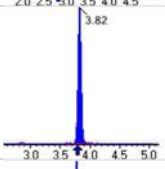 | | |
| PFPeA | ( 263.0 / 219.0 ) 565688<br>( 263.0 / 69.0 ) 6040 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.2) | 2080.7<br>99.9 | 0.0107<br>97.2<br>97.2 | 1.9476 | N/A | 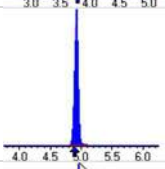 | 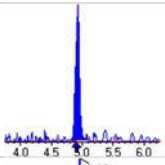 | |
| PFHxA | ( 313.0 / 269.0 ) 334351<br>( 313.0 / 119.0 ) 40474 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.2) | 1584.7<br>664.3 | 0.1211<br>108.9<br>108.9 | 1.0133 | N/A | 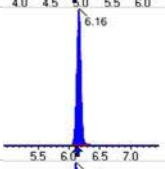 | 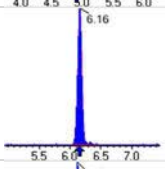 | |
| PFHpA | ( 363.0 / 319.0 ) 342568<br>( 363.0 / 169.0 ) 107781 | ( 7.32 , 1.00 ) ( 0.00 , N/A , -0.3) | 1367.4<br>931.2 | 0.3146<br>101.0<br>101.0 | 0.9382 | N/A | 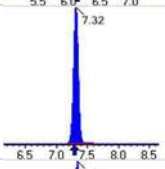 | 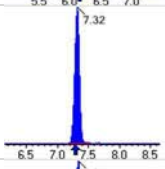 | |
| PFOA | ( 413.0 / 369.0 ) 508802<br>( 413.0 / 169.0 ) 176356 | ( 8.34 , 1.00 ) ( 0.00 , N/A , -0.1) | 567.5<br>765.7 | 0.3466<br>95.8<br>95.8 | 1.0316 | N/A | 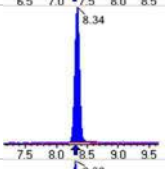 | 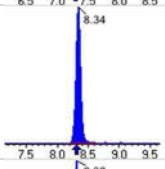 | |
| PFNA | ( 463.0 / 419.0 ) 355117<br>( 463.0 / 169.0 ) 80506 | ( 9.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 794.1<br>671.7 | 0.2267<br>86.4<br>86.4 | 1.1255 | N/A | 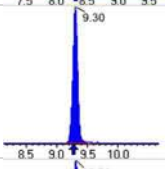 | 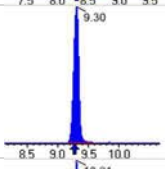 | |
| PFDA | ( 513.0 / 469.0 ) 404718<br>( 513.0 / 169.0 ) 45562 | ( 10.21 , 1.00 ) ( 0.00 , N/A , 0.3) | 1884.7<br>5987.3 | 0.1126<br>95.9<br>95.9 | 1.0112 | N/A | 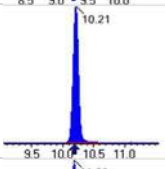 | 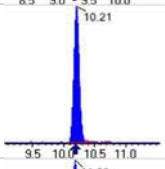 | |
| PFUnA | ( 563.0 / 519.0 ) 443955<br>( 563.0 / 169.0 ) 70225 | ( 11.09 , 1.00 ) ( 0.00 , N/A , 0.0) | 849.2<br>438.0 | 0.1582<br>106.8<br>106.8 | 0.9830 | N/A | 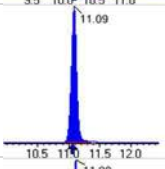 | 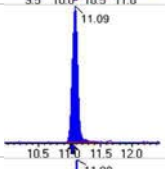 | |
| PFDoA | ( 613.0 / 569.0 ) 506969<br>( 613.0 / 169.0 ) 77211 | ( 11.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1109.9<br>593.1 | 0.1523<br>96.3<br>96.3 | 1.0702 | N/A | 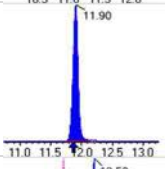 | 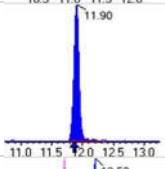 | |
| PFTrDA | ( 663.0 / 619.0 ) 480883<br>( 663.0 / 169.0 ) 128223 | ( 12.50 , 1.05 ) ( N/A , 0.03 , 0.0) | 1260.4<br>800.9 | 0.2666<br>98.9<br>98.9 | 1.0558 | N/A | 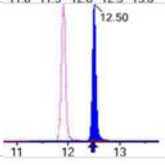 | 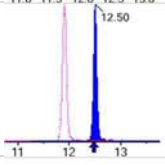 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 422129<br>( 713.0 / 169.0 ) 103015 | ( 12.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 1302.8<br>567.0 | 0.2440<br>93.9<br>93.9 | 1.0617 | N/A | 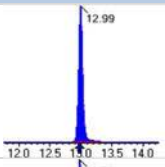 | 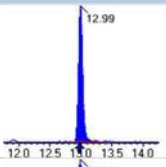 | |
| PFHxDA | ( 813.0 / 769.0 ) 371447<br>( 813.0 / 169.0 ) 79944 | ( 13.78 , 1.00 ) ( 0.00 , N/A , -0.2) | 1477.9<br>499.7 | 0.2152<br>99.2<br>99.2 | 0.9870 | N/A | 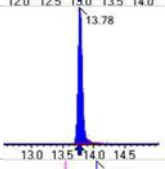 | 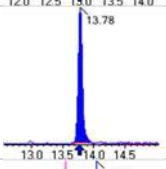 | |
| PFODA | ( 913.0 / 869.0 ) 229944<br>( 913.0 / 169.0 ) 82961 | ( 14.41 , 1.05 ) ( N/A , 0.02 , 0.0) | 931.8<br>422.0 | 0.3608<br>94.4<br>94.4 | 0.9094 | N/A | 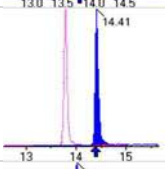 | 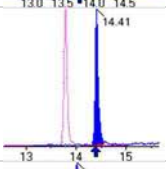 | |
| PFBS | ( 299.0 / 80.0 ) 512751<br>( 299.0 / 99.0 ) 380503 | ( 6.48 , 1.00 ) ( 0.00 , N/A , -0.1) | 2573.7<br>1359.8 | 0.7421<br>104.4<br>104.4 | 0.9019 | N/A | 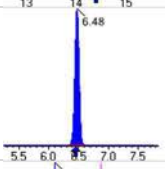 | 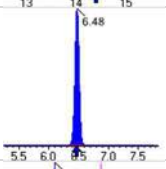 | |
| PFPeS | ( 349.0 / 80.0 ) 1340450<br>( 349.0 / 99.0 ) 474624 | ( 7.73 , 0.88 ) ( N/A , 0.03 , 0.1) | 2054.9<br>1903.1 | 0.3541<br>104.1<br>104.1 | 0.9700 | N/A | 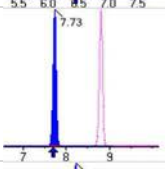 | 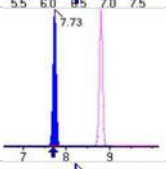 | |
| PFHxS | ( 399.0 / 80.0 ) 1377311<br>( 399.0 / 99.0 ) 455656 | ( 8.81 , 1.00 ) ( 0.00 , N/A , 0.2) | 2505.3<br>5989.5 | 0.3308<br>105.8<br>105.8 | 0.8962 | N/A | 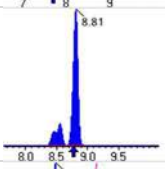 | 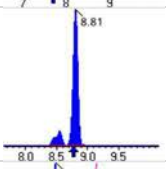 | |
| PFHpS | ( 449.0 / 80.0 ) 1223414<br>( 449.0 / 99.0 ) 317627 | ( 9.78 , 0.92 ) ( N/A , 0.04 , 0.1) | 1978.1<br>1574.7 | 0.2596<br>97.2<br>97.2 | 0.9698 | N/A | 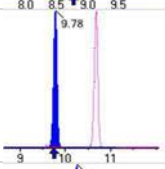 | 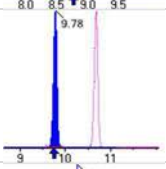 | |
| PFOS | ( 499.0 / 80.0 ) 1168809<br>( 499.0 / 99.0 ) 278995 | ( 10.68 , 1.00 ) ( 0.00 , N/A , -0.1) | 1895.0<br>4434.8 | 0.2387<br>100.9<br>100.9 | 0.9208 | N/A | 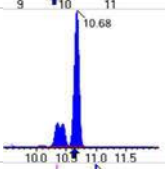 | 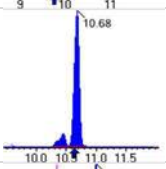 | |
| PFNS | ( 549.0 / 80.0 ) 1266067<br>( 549.0 / 99.0 ) 325636 | ( 11.52 , 1.08 ) ( N/A , 0.03 , -0.1) | 2491.0<br>2087.0 | 0.2572<br>96.8<br>96.8 | 1.0229 | N/A | 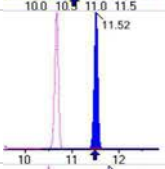 | 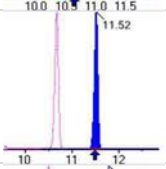 | |
| PFDS | ( 599.0 / 80.0 ) 1471573<br>( 599.0 / 99.0 ) 388343 | ( 12.19 , 1.14 ) ( N/A , 0.03 , 0.1) | 2343.1<br>1626.9 | 0.2639<br>105.2<br>105.2 | 0.9974 | N/A | 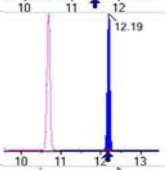 | 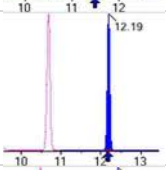 | |
| PFDoS | ( 699.0 / 80.0 ) 1270035<br>( 699.0 / 99.0 ) 292971 | ( 13.09 , 1.23 ) ( N/A , 0.03 , 0.0) | 3083.8<br>1775.3 | 0.2307<br>100.0<br>100.0 | 1.0074 | N/A | 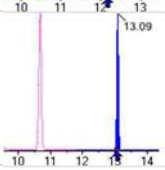 | 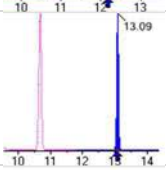 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1189216<br>( 327.0 / 81.0 ) 1045131 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4319.4<br>3072.5 | 0.8788<br>100.3<br>100.3 | 3.9766 | N/A | 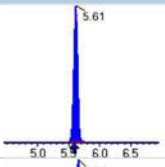 | 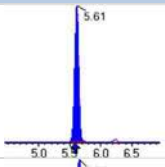 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1202168<br>( 427.0 / 81.0 ) 1500552 | ( 7.75 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3476.9<br>3155.6 | 1.2482<br>98.2<br>98.2 | 3.9585 | N/A | 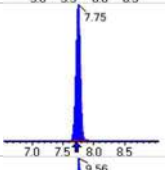 | 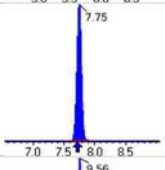 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1431110<br>( 527.0 / 81.0 ) 1398272 | ( 9.56 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1337.7<br>1454.3 | 0.9771<br>103.0<br>103.0 | 4.1726 | N/A | 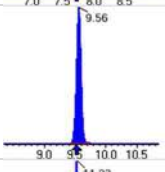 | 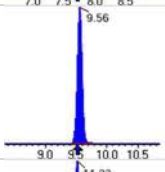 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1198194<br>( 627.0 / 81.0 ) 1672583 | ( 11.23 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1205.6<br>916.8 | 1.3959<br>103.3<br>103.3 | 3.7187 | N/A | 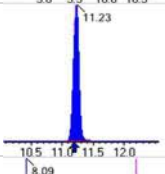 | 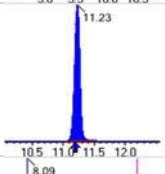 | |
| PFBSA | ( 297.9 / 78.0 ) 1015134<br>( 297.9 / 278.0 ) 1168 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , -0.1) | 1173.2<br>26.0 | 0.0012<br>81.9<br>81.9 | 1.0586 | N/A | 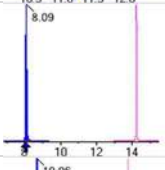 | 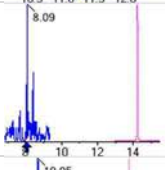 | |
| PFHxSA | ( 397.9 / 78.0 ) 1322546<br>( 397.9 / 378.0 ) 5197 | ( 10.96 , 0.75 )<br>( N/A , 0.03 , 0.4) | 1583.9<br>115.0 | 0.0039<br>103.2<br>103.2 | 1.0213 | N/A | 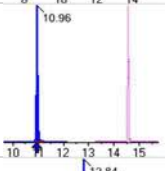 | 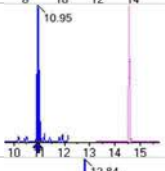 | |
| PFOSA | ( 498.0 / 78.0 ) 1198508<br>( 498.0 / 478.0 ) 17170 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2052.8<br>451.2 | 0.0143<br>99.3<br>99.3 | 1.0190 | N/A | 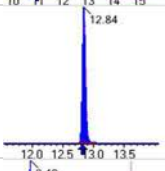 | 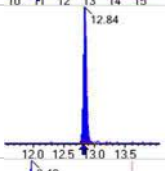 | |
| TFSI | ( 279.7 / 147.0 ) 2545387<br>( 279.7 / 211.0 ) 214730 | ( 8.40 , 0.65 )<br>( N/A , 0.04 , 0.1) | 55.2<br>50.8 | 0.0844<br>102.3<br>102.3 | 1.0180 | N/A | 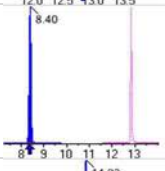 | 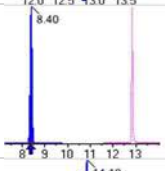 | |
| NMeFOSA | ( 512.0 / 219.0 ) 886837<br>( 512.0 / 169.0 ) 642807 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.0) | 2828.3<br>1325.1 | 0.7248<br>98.6<br>98.6 | 4.2219 | N/A | 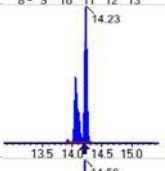 | 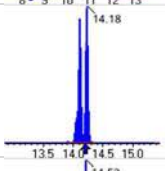 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1114931<br>( 526.0 / 169.0 ) 1406540 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 1.9) | 3659.4<br>3014.4 | 1.2615<br>99.6<br>99.6 | 4.0243 | N/A | 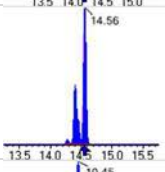 | 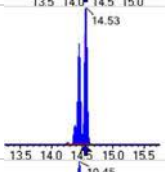 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 259677<br>( 570.0 / 483.0 ) 124103 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , -0.2) | 509.2<br>568.4 | 0.4779<br>110.4<br>110.4 | 0.9417 | N/A | 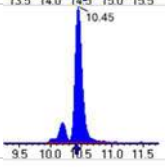 | 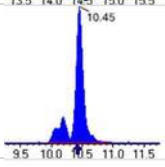 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 263370<br>( 584.0 / 526.0 ) 158943 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1352.2<br>485.9 | 0.6035<br>97.5<br>97.5 | 1.0020 | N/A | 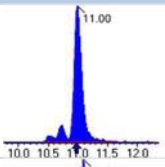 | 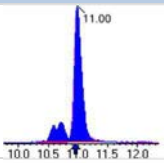 | |
| NMeFOSE | ( 616.0 / 59.0 ) 479403 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1618.1 | N/A<br>0.0<br>0.0 | 4.1809 | N/A | 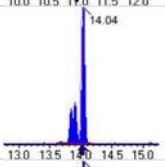 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 443936 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 2129.4 | N/A<br>0.0<br>0.0 | 4.1469 | N/A | 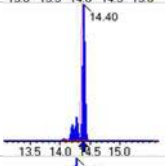 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 81256<br>( 285.0 / 185.0 ) 261962 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1184.7<br>1438.3 | 3.2239<br>103.5<br>103.5 | 0.9826 | N/A | 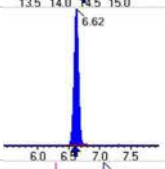 | 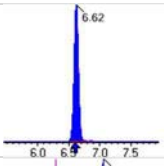 | |
| ADONA | ( 377.0 / 85.0 ) 1054309<br>( 377.0 / 251.0 ) 113162 | ( 7.71 , 1.16 )<br>( N/A , 0.03 , 0.2) | 1731.0<br>813.0 | 0.1073<br>100.7<br>100.7 | 1.0011 | N/A | 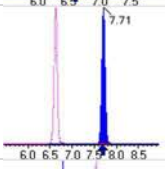 | 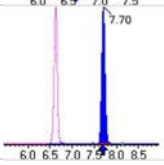 | |
| PFMPA | ( 229.0 / 85.0 ) 190593 | ( 4.22 , 0.86 )<br>( N/A , 0.03 , 0.0) | 3471.4 | N/A<br>0.0<br>0.0 | 2.0726 | N/A | 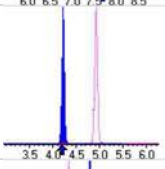 | | |
| PFMBA | ( 279.0 / 85.0 ) 509395 | ( 5.30 , 1.08 )<br>( N/A , 0.03 , 0.0) | 3490.1 | N/A<br>0.0<br>0.0 | 2.0929 | N/A | 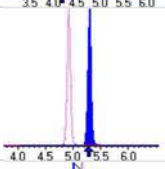 | | |
| NFDHA | ( 295.0 / 201.0 ) 242543<br>( 295.0 / 85.0 ) 246492 | ( 6.02 , 0.98 )<br>( N/A , 0.02 , 0.1) | 2487.6<br>1958.5 | 1.0163<br>94.0<br>94.0 | 2.1146 | N/A | 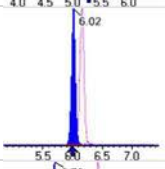 | 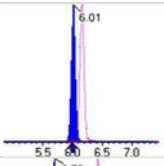 | |
| PFECHS | ( 461.0 / 98.9 ) 673717<br>( 461.0 / 381.2 ) 256956 | ( 9.70 , 0.91 )<br>( N/A , 0.03 , 0.0) | 3406.4<br>3344.4 | 0.3814<br>97.7<br>97.7 | 0.9412 | N/A | 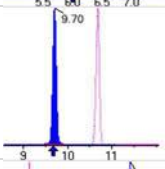 | 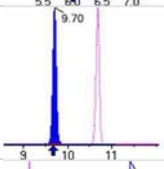 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1267391<br>( 533.0 / 353.0 ) 404449 | ( 11.33 , 1.71 )<br>( N/A , 0.03 , 0.0) | 2736.4<br>1979.9 | 0.3191<br>99.3<br>99.3 | 0.9752 | N/A | 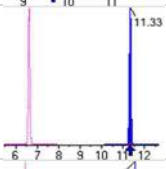 | 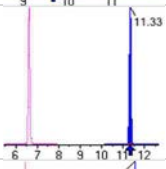 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1035128<br>( 633.0 / 453.0 ) 356304 | ( 12.59 , 1.90 )<br>( N/A , 0.03 , -0.1) | 2900.8<br>2755.5 | 0.3442<br>105.4<br>105.4 | 1.0168 | N/A | 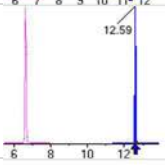 | 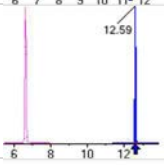 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 444787<br>( 315.0 / 83.0 ) 281789 | ( 7.08 , 1.15 ) ( N/A , 0.03 , 0.0) | 2108.1<br>1019.0 | 0.6335<br>110.6<br>110.6 | 1.7923 | N/A | 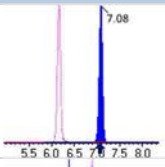 | 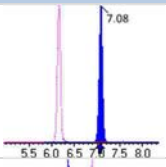 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 56590<br>( 241.0 / 117.0 ) 130386 | ( 4.45 , 0.90 ) ( N/A , 0.03 , 0.2) | 984.1<br>493.6 | 2.3041<br>103.8<br>103.8 | 4.0105 | N/A | 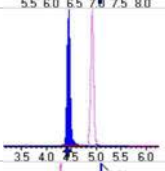 | 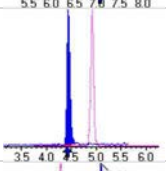 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 329958<br>( 341.0 / 217.0 ) 491130 | ( 7.02 , 1.14 ) ( N/A , 0.03 , 0.1) | 1035.3<br>923.0 | 1.4885<br>99.4<br>99.4 | 4.1261 | N/A | 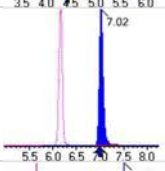 | 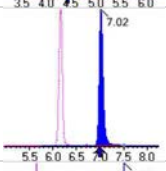 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 476429<br>( 441.0 / 337.0 ) 398092 | ( 9.44 , 1.53 ) ( N/A , 0.03 , 0.0) | 3726.9<br>7336.1 | 0.8356<br>93.9<br>93.9 | 4.0499 | N/A | 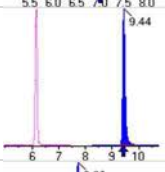 | 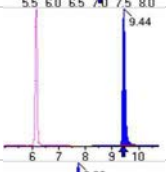 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 331465<br>( 357.2 / 243.0 ) 34187 | ( 6.89 , 1.00 ) ( -0.01 , N/A , -0.1) | 974.1<br>303.3 | 0.1031<br>97.7<br>97.7 | 0.9901 | N/A | 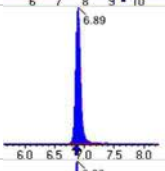 | 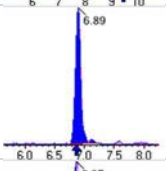 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 244506<br>( 457.2 / 343.0 ) 10166 | ( 8.98 , 1.00 ) ( -0.01 , N/A , 0.6) | 683.8<br>240.6 | 0.0416<br>106.3<br>106.3 | 0.9893 | N/A | 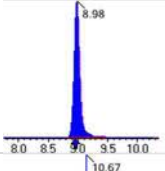 | 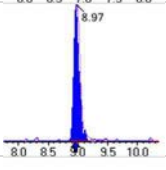 | |
| TDCA | ( 499.0 / 80.0 ) 871639 | ( 10.67 , 1.00 ) ( N/A , 0.03 , 0.0) | 7745.0 | N/A<br>0.0<br>0.0 | 1.0105 | N/A | 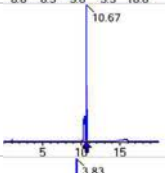 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 334919 | ( 3.83 , N/A ) ( N/A , 0.03 , N/A ) | 1399.0 | N/A | 1.1118 [ 1.0000 ] | 111.2% { 110.5% } | 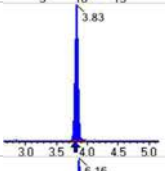 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 159043 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 24519.8 | N/A | 1.0343 [ 1.0000 ] | 103.4% { 96.4% } | 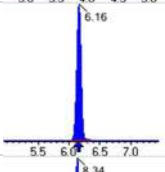 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 482772 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 3154.8 | N/A | 1.0821 [ 1.0000 ] | 108.2% { 106.2% } | 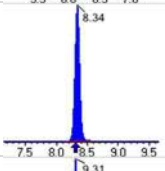 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 369101 | ( 9.31 , N/A ) ( N/A , 0.03 , N/A ) | 1133.1 | N/A | 1.1041 [ 1.0000 ] | 110.4% { 113.3% } | 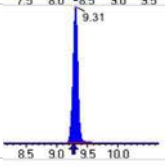 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 364723 | ( 10.22 , N/A ) ( N/A , 0.03 , N/A ) | 7515.0 | N/A | 1.0998 [ 1.0000 ] | 110.0% { 107.3% } | 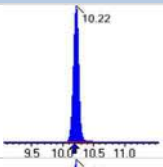 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1202697 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 4335.0 | N/A | 1.0763 [ 1.0000 ] | 107.6% { 105.5% } | 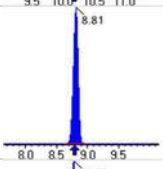 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1101241 | ( 10.68 , N/A ) ( N/A , 0.03 , N/A ) | 3170.9 | N/A | 1.1281 [ 1.0000 ] | 112.8% { 110.6% } | 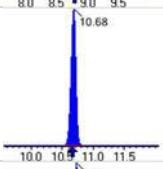 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2908654 | ( 3.82 , N/A ) ( N/A , 0.03 , N/A ) | 61466.5 | N/A | 7.8754 [ 8.0000 ] | 98.4% { 109.5% } | 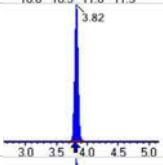 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1141238 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 5291.6 | N/A | 3.9999 [ 4.0000 ] | 100.0% { 98.5% } | 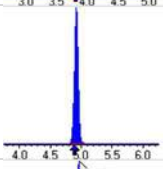 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 681059 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 7693.9 | N/A | 1.9944 [ 2.0000 ] | 99.7% { 99.5% } | 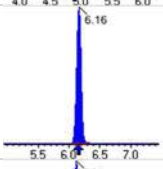 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 741498 | ( 7.32 , N/A ) ( N/A , 0.03 , N/A ) | 6936.5 | N/A | 2.0790 [ 2.0000 ] | 104.0% { 105.2% } | 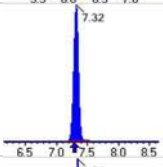 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 969992 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 3350.5 | N/A | 1.9056 [ 2.0000 ] | 95.3% { 101.7% } | 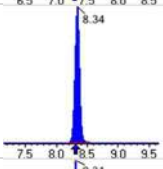 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 314850 | ( 9.31 , N/A ) ( N/A , 0.03 , N/A ) | 3265.2 | N/A | 0.8834 [ 1.0000 ] | 88.3% { 101.3% } | 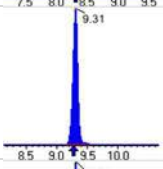 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 401889 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 1190.9 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 104.4% } | 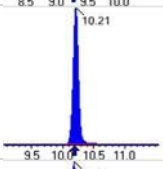 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 483647 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 940.7 | N/A | 0.9452 [ 1.0000 ] | 94.5% { 97.2% } | 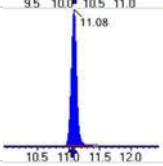 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 462842 | ( 11.90 , N/A ) ( N/A , 0.04 , N/A ) | 1233.1 | N/A | 0.9007 [ 1.0000 ] | 90.1% { 92.8% } | 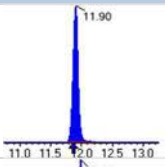  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 418674 | ( 12.99 , N/A ) ( N/A , 0.03 , N/A ) | 1347.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 98.7% } | 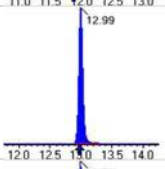  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 779866 | ( 13.79 , N/A ) ( N/A , 0.02 , N/A ) | 3224.9 | N/A | 2.0504 [ 2.0000 ] | 102.5% { 110.1% } | 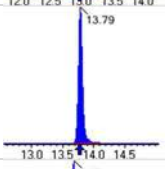  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2186633 | ( 6.48 , N/A ) ( N/A , 0.03 , N/A ) | 1297.4 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 94.7% } | 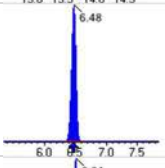  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1735528 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 5114.4 | N/A | 1.9720 [ 2.0000 ] | 98.6% { 105.5% } | 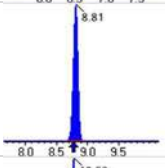  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2195983 | ( 10.68 , N/A ) ( N/A , 0.04 , N/A ) | 1375.4 | N/A | 1.8731 [ 2.0000 ] | 93.7% { 104.5% } | 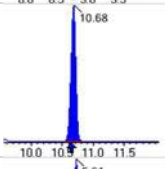  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 444248 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 88.3 | N/A | 4.2417 [ 4.0000 ] | 106.0% { 123.5% } | 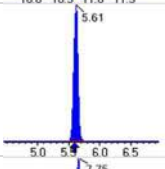  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1367408 | ( 7.75 , N/A ) ( N/A , 0.03 , N/A ) | 3658.9 | N/A | 4.2043 [ 4.0000 ] | 105.1% { 127.3% } | 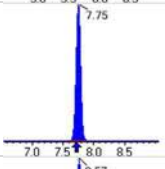  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1384682 | ( 9.57 , N/A ) ( N/A , 0.03 , N/A ) | 1244.0 | N/A | 4.2733 [ 4.0000 ] | 106.8% { 118.9% } | 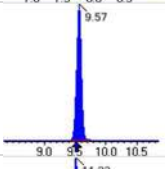  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3132754 | ( 11.22 , N/A ) ( N/A , 0.04 , N/A ) | 1243.0 | N/A | 8.4225 [ 8.0000 ] | 105.3% { 125.1% } | 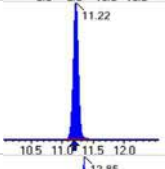  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2410276 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2087.1 | N/A | 1.8972 [ 2.0000 ] | 94.9% { 103.5% } | 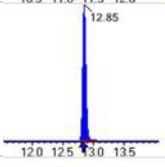  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 417102 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 3490.5 | N/A | 1.7780 [ 2.0000 ] | 88.9% { 98.5% } | 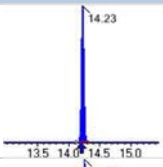  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 504968 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2723.4 | N/A | 1.8739 [ 2.0000 ] | 93.7% { 101.6% } | 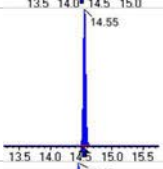  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1171210 | ( 10.45 , N/A ) ( N/A , 0.04 , N/A ) | 3279.5 | N/A | 3.9011 [ 4.0000 ] | 97.5% { 108.3% } | 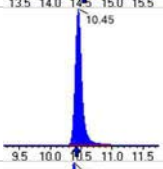  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1089970 | ( 10.99 , N/A ) ( N/A , 0.04 , N/A ) | 1553.4 | N/A | 3.8246 [ 4.0000 ] | 95.6% { 104.0% } | 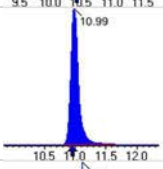  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2025755 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2600.8 | N/A | 18.4803 [ 20.0000 ] | 92.4% { 107.6% } | 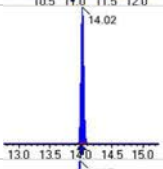  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2423173 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5098.6 | N/A | 18.2482 [ 20.0000 ] | 91.2% { 102.7% } | 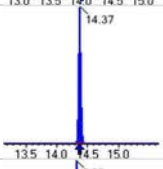  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1165366 | ( 6.63 , N/A ) ( N/A , 0.02 , N/A ) | 1867.0 | N/A | 7.9393 [ 8.0000 ] | 99.2% { 102.7% } | 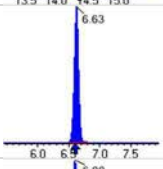  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 622901 | ( 6.90 , N/A ) ( N/A , 0.02 , N/A ) | 949.0 | N/A | 1.9256 [ 2.0000 ] | 96.3% { 106.3% } | 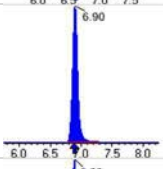  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 586096 | ( 8.99 , N/A ) ( N/A , 0.04 , N/A ) | 731.2 | N/A | 1.9407 [ 2.0000 ] | 97.0% { 103.9% } | 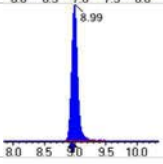  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1192766<br>( 163.0 / 69.0 ) 30696 | ( 2.82 , 0.74 )<br>( N/A , 0.01 , 0.0) | 7360.2<br>1436.6 | 0.0257<br>102.7<br>102.7 | 3.9928 | N/A | 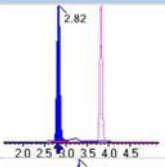 | 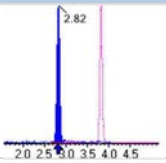 | |
| PFBA | ( 213.0 / 169.0 ) 2619162 | ( 3.81 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4598.2 | N/A<br>0.0<br>0.0 | 8.1991 | N/A | 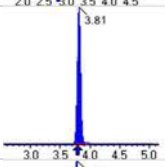 | | |
| PFPeA | ( 263.0 / 219.0 ) 1144181<br>( 263.0 / 69.0 ) 14596 | ( 4.92 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3363.5<br>252.6 | 0.0128<br>116.2<br>116.2 | 3.9714 | N/A | 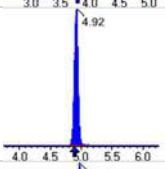 | 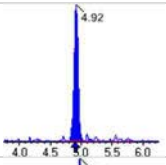 | |
| PFHxA | ( 313.0 / 269.0 ) 651995<br>( 313.0 / 119.0 ) 74725 | ( 6.17 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2066.1<br>806.7 | 0.1146<br>103.1<br>103.1 | 2.0746 | N/A | 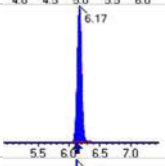 | 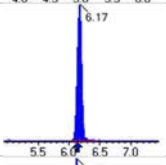 | |
| PFHpA | ( 363.0 / 319.0 ) 684849<br>( 363.0 / 169.0 ) 212071 | ( 7.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1361.8<br>1077.8 | 0.3097<br>99.4<br>99.4 | 2.1093 | N/A | 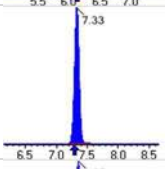 | 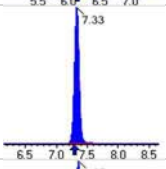 | |
| PFOA | ( 413.0 / 369.0 ) 915234<br>( 413.0 / 169.0 ) 343403 | ( 8.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 820.8<br>1166.4 | 0.3752<br>103.7<br>103.7 | 1.9107 | N/A | 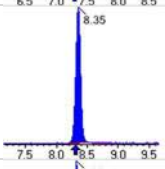 | 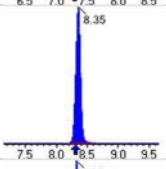 | |
| PFNA | ( 463.0 / 419.0 ) 650157<br>( 463.0 / 169.0 ) 169103 | ( 9.32 , 1.00 )<br>( 0.00 , N/A , 0.0) | 953.7<br>754.7 | 0.2601<br>99.1<br>99.1 | 1.9288 | N/A | 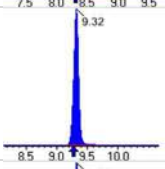 | 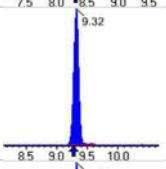 | |
| PFDA | ( 513.0 / 469.0 ) 764087<br>( 513.0 / 169.0 ) 89045 | ( 10.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2369.9<br>6644.6 | 0.1165<br>99.3<br>99.3 | 1.9479 | N/A | 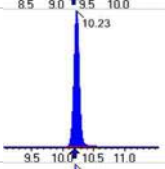 | 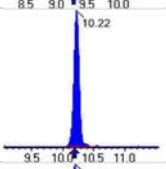 | |
| PFUnA | ( 563.0 / 519.0 ) 881450<br>( 563.0 / 169.0 ) 129776 | ( 11.10 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1124.1<br>790.8 | 0.1472<br>99.4<br>99.4 | 1.9871 | N/A | 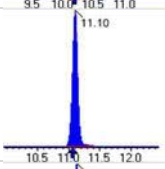 | 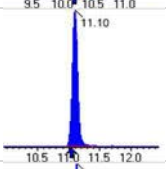 | |
| PFDoA | ( 613.0 / 569.0 ) 961447<br>( 613.0 / 169.0 ) 149773 | ( 11.92 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1394.5<br>984.7 | 0.1558<br>98.5<br>98.5 | 2.0919 | N/A | 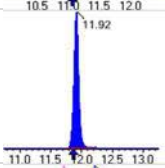 | 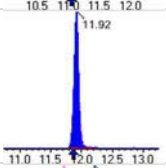 | |
| PFTrDA | ( 663.0 / 619.0 ) 925673<br>( 663.0 / 169.0 ) 238189 | ( 12.51 , 1.05 )<br>( N/A , 0.04 , 0.0) | 1175.4<br>1106.1 | 0.2573<br>95.5<br>95.5 | 2.0949 | N/A | 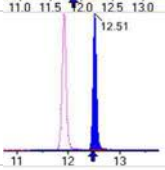 | 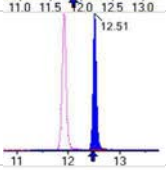 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 789614<br>( 713.0 / 169.0 ) 196961 | ( 13.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1525.6<br>728.6 | 0.2494<br>95.9<br>95.9 | 2.0854 | N/A | 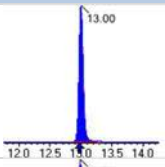 | 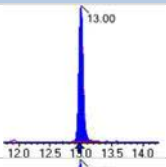 | |
| PFHxDA | ( 813.0 / 769.0 ) 686456<br>( 813.0 / 169.0 ) 163993 | ( 13.79 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1551.4<br>876.9 | 0.2389<br>110.1<br>110.1 | 1.9988 | N/A | 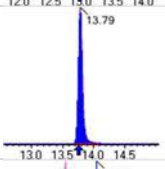 | 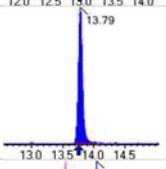 | |
| PFODA | ( 913.0 / 869.0 ) 473575<br>( 913.0 / 169.0 ) 163980 | ( 14.41 , 1.05 )<br>( N/A , 0.03 , -0.1) | 1363.7<br>708.9 | 0.3463<br>90.6<br>90.6 | 2.0523 | N/A | 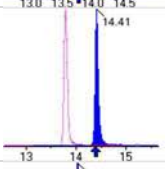 | 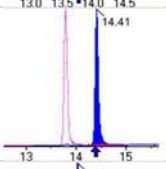 | |
| PFBS | ( 299.0 / 80.0 ) 1016211<br>( 299.0 / 99.0 ) 716732 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2704.7<br>1896.9 | 0.7053<br>99.2<br>99.2 | 1.7932 | N/A | 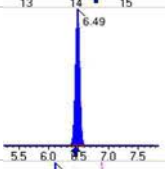 | 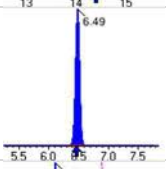 | |
| PFPeS | ( 349.0 / 80.0 ) 2622602<br>( 349.0 / 99.0 ) 894077 | ( 7.74 , 0.88 )<br>( N/A , 0.04 , -0.1) | 2816.5<br>2245.2 | 0.3409<br>100.2<br>100.2 | 2.0635 | N/A | 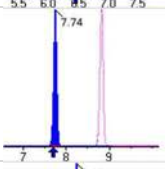 | 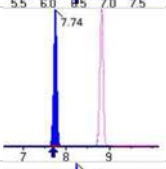 | |
| PFHxS | ( 399.0 / 80.0 ) 2694227<br>( 399.0 / 99.0 ) 874878 | ( 8.82 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3518.0<br>5529.2 | 0.3247<br>103.8<br>103.8 | 1.9063 | N/A | 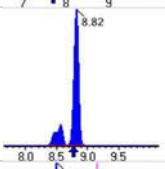 | 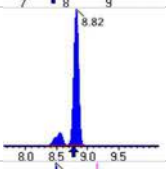 | |
| PFHpS | ( 449.0 / 80.0 ) 2314127<br>( 449.0 / 99.0 ) 623358 | ( 9.80 , 0.92 )<br>( N/A , 0.05 , 0.2) | 1890.4<br>1605.5 | 0.2694<br>100.8<br>100.8 | 2.0446 | N/A | 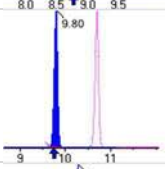 | 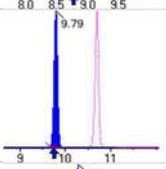 | |
| PFOS | ( 499.0 / 80.0 ) 2231365<br>( 499.0 / 99.0 ) 527855 | ( 10.69 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2239.5<br>11894.3 | 0.2366<br>100.0<br>100.0 | 1.9595 | N/A | 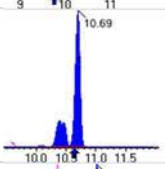 | 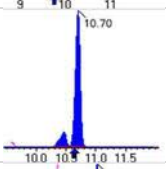 | |
| PFNS | ( 549.0 / 80.0 ) 2370352<br>( 549.0 / 99.0 ) 610267 | ( 11.54 , 1.08 )<br>( N/A , 0.05 , -0.2) | 2618.3<br>2854.3 | 0.2575<br>96.9<br>96.9 | 2.1346 | N/A | 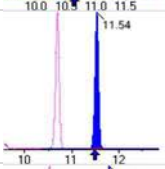 | 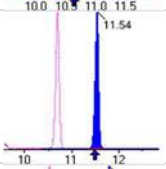 | |
| PFDS | ( 599.0 / 80.0 ) 2814247<br>( 599.0 / 99.0 ) 746124 | ( 12.21 , 1.14 )<br>( N/A , 0.04 , 0.0) | 2777.1<br>2163.0 | 0.2651<br>105.7<br>105.7 | 2.1262 | N/A | 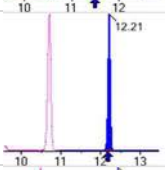 | 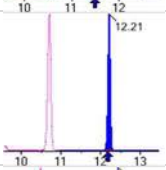 | |
| PFDoS | ( 699.0 / 80.0 ) 2408642<br>( 699.0 / 99.0 ) 553330 | ( 13.09 , 1.22 )<br>( N/A , 0.03 , 0.0) | 4354.8<br>2728.1 | 0.2297<br>99.6<br>99.6 | 2.1297 | N/A | 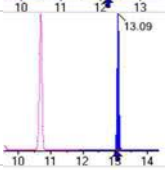 | 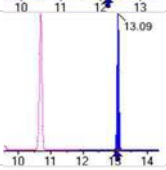 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2088900<br>( 327.0 / 81.0 ) 1849173 | ( 5.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5156.9<br>3365.6 | 0.8852<br>101.0<br>101.0 | 7.4640 | N/A | 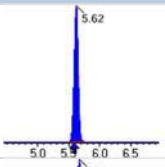 | 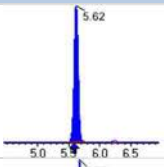 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2120725<br>( 427.0 / 81.0 ) 2578247 | ( 7.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4279.1<br>3420.2 | 1.2157<br>95.7<br>95.7 | 7.7701 | N/A | 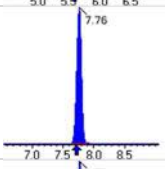 | 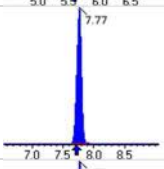 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2622268<br>( 527.0 / 81.0 ) 2640248 | ( 9.58 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1702.1<br>1794.5 | 1.0069<br>106.2<br>106.2 | 8.0740 | N/A | 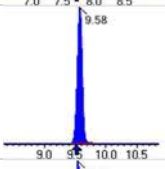 | 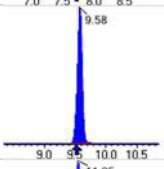 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2297999<br>( 627.0 / 81.0 ) 3060459 | ( 11.24 , 1.00 )<br>( 0.01 , N/A , -0.3) | 1321.6<br>1107.1 | 1.3318<br>98.5<br>98.5 | 7.7053 | N/A | 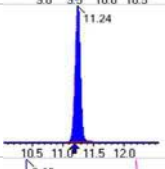 | 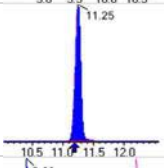 | |
| PFBSA | ( 297.9 / 78.0 ) 2012058<br>( 297.9 / 278.0 ) 2356 | ( 8.10 , 0.57 )<br>( N/A , 0.04 , -0.6) | 1618.0<br>38.8 | 0.0012<br>83.4<br>83.4 | 2.2464 | N/A | 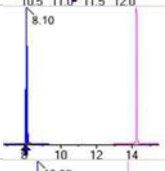 | 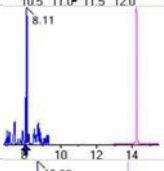 | |
| PFHxSA | ( 397.9 / 78.0 ) 2477197<br>( 397.9 / 378.0 ) 12448 | ( 10.98 , 0.75 )<br>( N/A , 0.05 , -0.1) | 1137.5<br>293.6 | 0.0050<br>132.0<br>132.0 | 2.0703 | N/A | 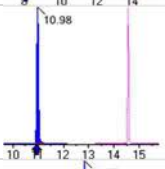 | 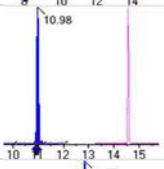 | |
| PFOSA | ( 498.0 / 78.0 ) 2382790<br>( 498.0 / 478.0 ) 33562 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2468.5<br>717.2 | 0.0141<br>97.6<br>97.6 | 2.1050 | N/A | 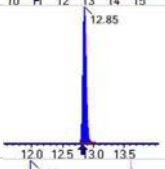 | 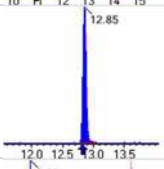 | |
| TFSI | ( 279.7 / 147.0 ) 5007205<br>( 279.7 / 211.0 ) 424277 | ( 8.41 , 0.65 )<br>( N/A , 0.05 , 0.1) | 62.8<br>60.0 | 0.0847<br>102.7<br>102.7 | 2.0807 | N/A | 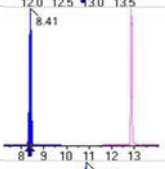 | 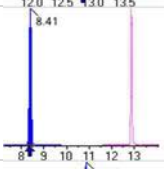 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1749980<br>( 512.0 / 169.0 ) 1299362 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.0) | 3106.0<br>1058.1 | 0.7425<br>101.0<br>101.0 | 8.9196 | N/A | 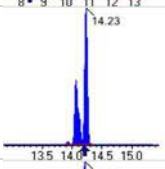 | 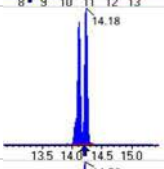 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2160938<br>( 526.0 / 169.0 ) 2761580 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3906.8<br>3197.4 | 1.2780<br>100.9<br>100.9 | 8.4413 | N/A | 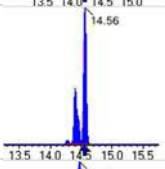 | 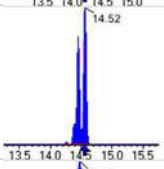 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 504995<br>( 570.0 / 483.0 ) 229734 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2294.9<br>1724.6 | 0.4549<br>105.1<br>105.1 | 2.0006 | N/A | 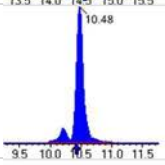 | 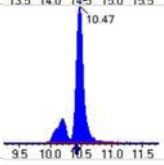 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 493083<br>( 584.0 / 526.0 ) 302551 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.1) | 2634.7<br>666.2 | 0.6136<br>99.1<br>99.1 | 2.0274 | N/A | 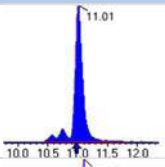 | 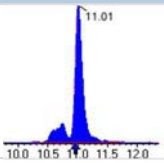 | |
| NMeFOSE | ( 616.0 / 59.0 ) 918411 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 2116.6 | N/A<br>0.0<br>0.0 | 8.1742 | N/A | 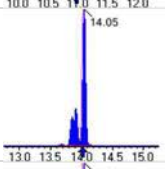 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 854995 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 2966.2 | N/A<br>0.0<br>0.0 | 7.8835 | N/A | 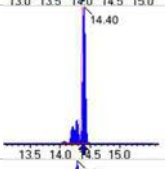 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 151391<br>( 285.0 / 185.0 ) 504958 | ( 6.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 1472.1<br>1614.7 | 3.3355<br>107.0<br>107.0 | 1.8568 | N/A | 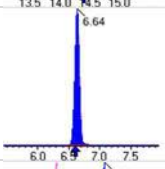 | 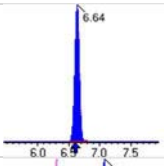 | |
| ADONA | ( 377.0 / 85.0 ) 2020002<br>( 377.0 / 251.0 ) 210829 | ( 7.72 , 1.16 ) ( N/A , 0.05 , 0.2) | 1688.7<br>1047.7 | 0.1044<br>97.9<br>97.9 | 1.9454 | N/A | 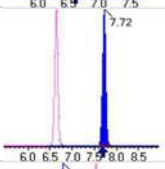 | 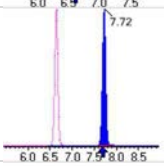 | |
| PFMPA | ( 229.0 / 85.0 ) 367437 | ( 4.21 , 0.86 ) ( N/A , 0.02 , 0.0) | 4251.4 | N/A<br>0.0<br>0.0 | 4.0283 | N/A | 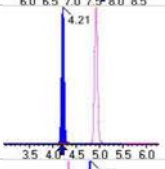 | | |
| PFMBA | ( 279.0 / 85.0 ) 949637 | ( 5.30 , 1.08 ) ( N/A , 0.03 , 0.0) | 5581.6 | N/A<br>0.0<br>0.0 | 3.9334 | N/A | 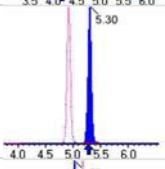 | | |
| NFDHA | ( 295.0 / 201.0 ) 454277<br>( 295.0 / 85.0 ) 518489 | ( 6.03 , 0.98 ) ( N/A , 0.03 , 0.0) | 2806.5<br>2289.3 | 1.1414<br>105.5<br>105.5 | 4.1581 | N/A | 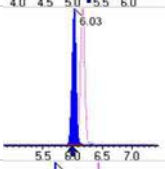 | 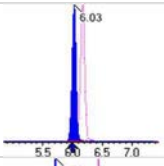 | |
| PFECHS | ( 461.0 / 98.9 ) 1208151<br>( 461.0 / 381.2 ) 513039 | ( 9.72 , 0.91 ) ( N/A , 0.05 , 0.0) | 4199.3<br>4547.3 | 0.4246<br>108.8<br>108.8 | 1.8814 | N/A | 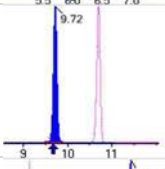 | 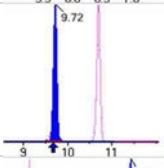 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 2411929<br>( 533.0 / 353.0 ) 810272 | ( 11.35 , 1.71 ) ( N/A , 0.05 , 0.0) | 2782.3<br>2421.8 | 0.3359<br>104.5<br>104.5 | 1.8823 | N/A | 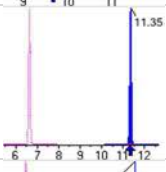 | 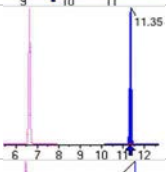 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1906502<br>( 633.0 / 453.0 ) 634584 | ( 12.60 , 1.90 ) ( N/A , 0.04 , 0.0) | 3389.8<br>2328.6 | 0.3329<br>101.9<br>101.9 | 1.8995 | N/A | 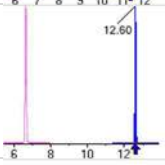 | 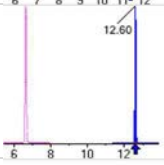 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 924297<br>( 315.0 / 83.0 ) 495246 | ( 7.09 , 1.15 )<br>( N/A , 0.04 , 0.1) | 2671.6<br>1353.1 | 0.5358<br>93.5<br>93.5 | 3.9103 | N/A | 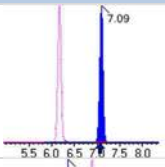 | 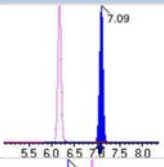 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 104621<br>( 241.0 / 117.0 ) 247496 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , -0.1) | 1617.9<br>840.6 | 2.3656<br>106.6<br>106.6 | 7.4748 | N/A | 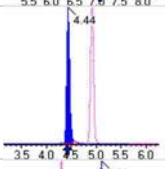 | 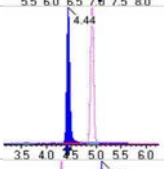 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 659083<br>( 341.0 / 217.0 ) 973555 | ( 7.03 , 1.14 )<br>( N/A , 0.04 , 0.0) | 1145.6<br>1150.2 | 1.4771<br>98.7<br>98.7 | 8.6528 | N/A | 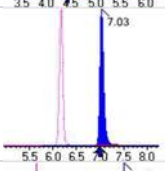 | 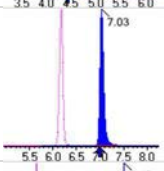 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 900697<br>( 441.0 / 337.0 ) 812428 | ( 9.46 , 1.53 )<br>( N/A , 0.05 , 0.0) | 4896.4<br>36251.7 | 0.9020<br>101.3<br>101.3 | 8.0383 | N/A | 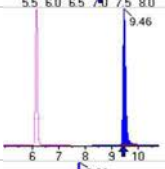 | 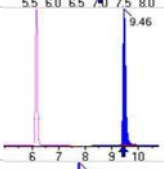 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 643408<br>( 357.2 / 243.0 ) 70965 | ( 6.91 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1339.3<br>459.1 | 0.1103<br>104.5<br>104.5 | 2.0795 | N/A | 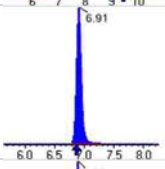 | 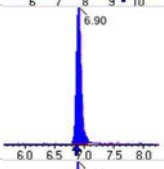 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 491480<br>( 457.2 / 343.0 ) 19210 | ( 8.99 , 1.00 )<br>( -0.01 , N/A , 0.2) | 760.7<br>219.5 | 0.0391<br>99.9<br>99.9 | 2.1727 | N/A | 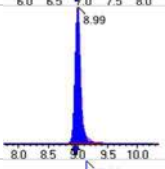 | 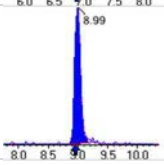 | |
| TDCA | ( 499.0 / 80.0 ) 1687279 | ( 10.69 , 1.00 )<br>( N/A , 0.05 , 0.0) | 15998.8 | N/A<br>0.0<br>0.0 | 2.1803 | N/A | 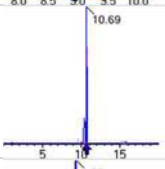 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 295986 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1248.7 | N/A | 0.9825<br>[ 1.0000 ] | 98.3%<br>{ 97.6% } | 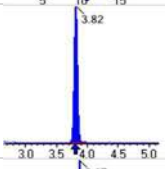 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 149378 | ( 6.17 , N/A )<br>( N/A , 0.04 , N/A ) | 119082.3 | N/A | 0.9715<br>[ 1.0000 ] | 97.1%<br>{ 90.5% } | 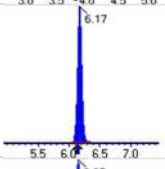 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 425892 | ( 8.35 , N/A )<br>( N/A , 0.04 , N/A ) | 3638.8 | N/A | 0.9546<br>[ 1.0000 ] | 95.5%<br>{ 93.7% } | 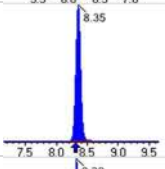 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317861 | ( 9.32 , N/A )<br>( N/A , 0.05 , N/A ) | 1164.1 | N/A | 0.9508<br>[ 1.0000 ] | 95.1%<br>{ 97.5% } | 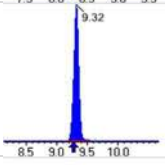 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 327849 | ( 10.23 , N/A ) ( N/A , 0.05 , N/A ) | 8291.8 | N/A | 0.9886 [ 1.0000 ] | 98.9% { 96.4% } | 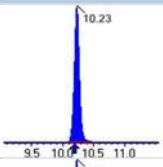 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1069801 | ( 8.82 , N/A ) ( N/A , 0.05 , N/A ) | 4716.7 | N/A | 0.9574 [ 1.0000 ] | 95.7% { 93.9% } | 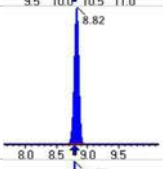 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 941416 | ( 10.70 , N/A ) ( N/A , 0.05 , N/A ) | 3293.9 | N/A | 0.9644 [ 1.0000 ] | 96.4% { 94.6% } | 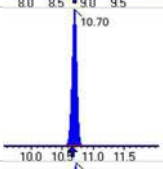 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2701285 | ( 3.81 , N/A ) ( N/A , 0.02 , N/A ) | 56552.0 | N/A | 8.2759 [ 8.0000 ] | 103.4% { 101.7% } | 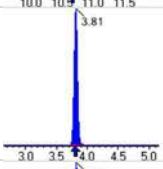 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1132032 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 5141.1 | N/A | 4.2243 [ 4.0000 ] | 105.6% { 97.7% } | 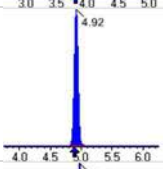 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 648702 | ( 6.17 , N/A ) ( N/A , 0.04 , N/A ) | 6211.3 | N/A | 2.0225 [ 2.0000 ] | 101.1% { 94.7% } | 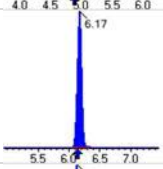 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659326 | ( 7.33 , N/A ) ( N/A , 0.04 , N/A ) | 4612.8 | N/A | 1.9682 [ 2.0000 ] | 98.4% { 93.6% } | 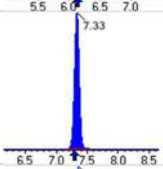 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 942089 | ( 8.35 , N/A ) ( N/A , 0.05 , N/A ) | 3344.2 | N/A | 2.0980 [ 2.0000 ] | 104.9% { 98.8% } | 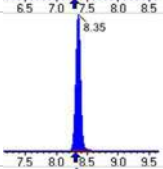 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 336383 | ( 9.32 , N/A ) ( N/A , 0.05 , N/A ) | 2517.4 | N/A | 1.0959 [ 1.0000 ] | 109.6% { 108.2% } | 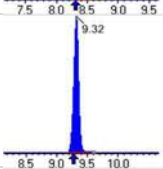 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 393878 | ( 10.23 , N/A ) ( N/A , 0.05 , N/A ) | 1236.8 | N/A | 1.0411 [ 1.0000 ] | 104.1% { 102.3% } | 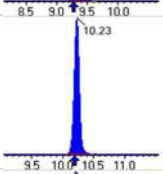 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 475029 | ( 11.11 , N/A ) ( N/A , 0.05 , N/A ) | 1009.6 | N/A | 1.0327 [ 1.0000 ] | 103.3% { 95.5% } | 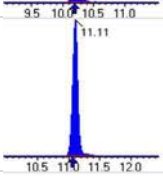 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 449047 | ( 11.92 , N/A ) ( N/A , 0.05 , N/A ) | 1328.0 | N/A | 0.9721 [ 1.0000 ] | 97.2% { 90.0% } | 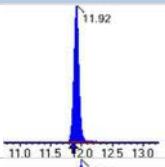 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 398686 | ( 13.00 , N/A ) ( N/A , 0.04 , N/A ) | 1829.1 | N/A | 0.9905 [ 1.0000 ] | 99.1% { 94.0% } | 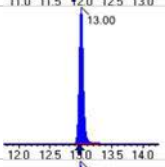 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 711674 | ( 13.79 , N/A ) ( N/A , 0.02 , N/A ) | 3142.8 | N/A | 2.0816 [ 2.0000 ] | 104.1% { 100.5% } | 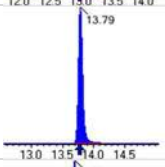 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2179603 | ( 6.49 , N/A ) ( N/A , 0.03 , N/A ) | 1290.4 | N/A | 2.0911 [ 2.0000 ] | 104.6% { 94.4% } | 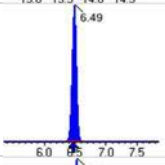 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1596157 | ( 8.82 , N/A ) ( N/A , 0.05 , N/A ) | 6148.5 | N/A | 2.0389 [ 2.0000 ] | 101.9% { 97.0% } | 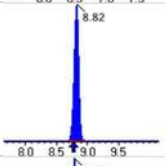 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1970109 | ( 10.70 , N/A ) ( N/A , 0.05 , N/A ) | 1259.7 | N/A | 1.9658 [ 2.0000 ] | 98.3% { 93.8% } | 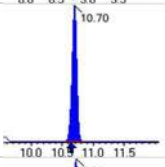 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 415740 | ( 5.62 , N/A ) ( N/A , 0.03 , N/A ) | 87.2 | N/A | 4.4626 [ 4.0000 ] | 111.6% { 115.5% } | 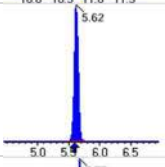 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1228923 | ( 7.77 , N/A ) ( N/A , 0.04 , N/A ) | 3779.8 | N/A | 4.2479 [ 4.0000 ] | 106.2% { 114.4% } | 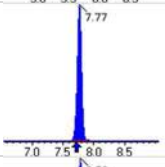 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1311211 | ( 9.58 , N/A ) ( N/A , 0.05 , N/A ) | 1343.1 | N/A | 4.5492 [ 4.0000 ] | 113.7% { 112.6% } | 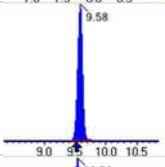 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2899664 | ( 11.24 , N/A ) ( N/A , 0.06 , N/A ) | 1891.9 | N/A | 8.7643 [ 8.0000 ] | 109.6% { 115.8% } | 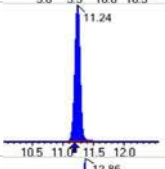 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2319798 | ( 12.86 , N/A ) ( N/A , 0.03 , N/A ) | 1830.7 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 99.6% } | 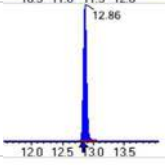 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 389582 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 2084.1 | N/A | 1.9426 [ 2.0000 ] | 97.1% { 92.0% } | 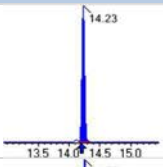  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 466589 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2902.8 | N/A | 2.0255 [ 2.0000 ] | 101.3% { 93.9% } | 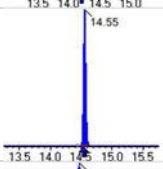  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1072122 | ( 10.47 , N/A ) ( N/A , 0.06 , N/A ) | 2757.6 | N/A | 4.1773 [ 4.0000 ] | 104.4% { 99.2% } | 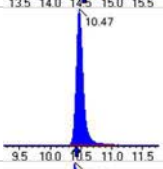  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1008512 | ( 11.00 , N/A ) ( N/A , 0.06 , N/A ) | 1763.4 | N/A | 4.1395 [ 4.0000 ] | 103.5% { 96.2% } | 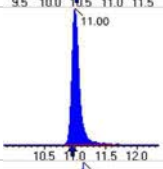  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1984960 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 2836.8 | N/A | 21.1824 [ 20.0000 ] | 105.9% { 105.5% } | 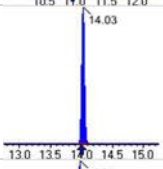  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2454876 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 5979.2 | N/A | 21.6255 [ 20.0000 ] | 108.1% { 104.0% } | 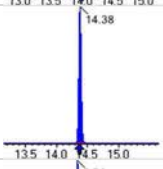  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148987 | ( 6.64 , N/A ) ( N/A , 0.04 , N/A ) | 2506.6 | N/A | 8.3341 [ 8.0000 ] | 104.2% { 101.3% } | 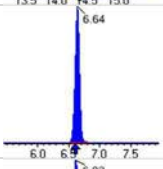  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575717 | ( 6.92 , N/A ) ( N/A , 0.04 , N/A ) | 1216.0 | N/A | 1.9800 [ 2.0000 ] | 99.0% { 98.2% } | 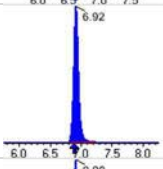  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 536414 | ( 9.00 , N/A ) ( N/A , 0.05 , N/A ) | 794.9 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 95.1% } | 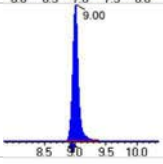  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2896659<br>( 163.0 / 69.0 ) 72613 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.2) | 15036.3<br>3067.3 | 0.0251<br>100.0<br>100.0 | 9.8578 | N/A | 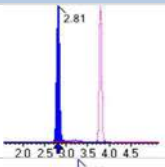 | 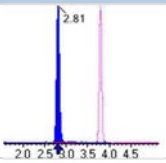 | |
| PFBA | ( 213.0 / 169.0 ) 6141279 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 7081.0 | N/A<br>0.0<br>0.0 | 19.5443 | N/A | 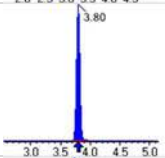 | | |
| PFPeA | ( 263.0 / 219.0 ) 2815339<br>( 263.0 / 69.0 ) 30920 | ( 4.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 5200.9<br>437.8 | 0.0110<br>100.0<br>100.0 | 9.5499 | N/A | 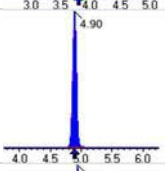 | 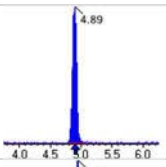 | |
| PFHxA | ( 313.0 / 269.0 ) 1537054<br>( 313.0 / 119.0 ) 170783 | ( 6.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 2942.0<br>1354.1 | 0.1111<br>100.0<br>100.0 | 4.6336 | N/A | 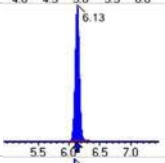 | 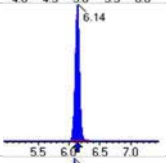 | |
| PFHpA | ( 363.0 / 319.0 ) 1626195<br>( 363.0 / 169.0 ) 506800 | ( 7.29 , 1.00 ) ( 0.00 , N/A , 0.0) | 1520.9<br>1256.4 | 0.3116<br>100.0<br>100.0 | 4.6857 | N/A | 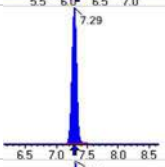 | 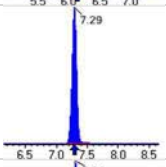 | |
| PFOA | ( 413.0 / 369.0 ) 2241902<br>( 413.0 / 169.0 ) 810969 | ( 8.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1228.2<br>1124.5 | 0.3617<br>100.0<br>100.0 | 4.6236 | N/A | 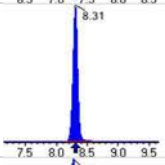 | 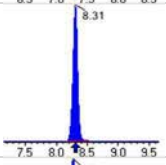 | |
| PFNA | ( 463.0 / 419.0 ) 1548787<br>( 463.0 / 169.0 ) 406513 | ( 9.27 , 1.00 ) ( -0.01 , N/A , 0.0) | 1191.6<br>1069.1 | 0.2625<br>100.0<br>100.0 | 4.9712 | N/A | 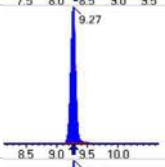 | 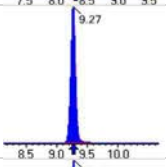 | |
| PFDA | ( 513.0 / 469.0 ) 1768941<br>( 513.0 / 169.0 ) 207647 | ( 10.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 3473.7<br>2696.0 | 0.1174<br>100.0<br>100.0 | 4.6148 | N/A | 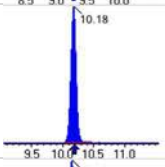 | 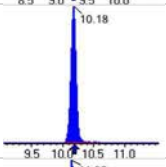 | |
| PFUnA | ( 563.0 / 519.0 ) 2132736<br>( 563.0 / 169.0 ) 315834 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 983.9<br>664.8 | 0.1481<br>100.0<br>100.0 | 4.5923 | N/A | 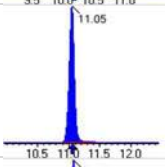 | 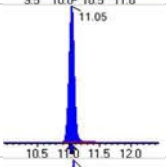 | |
| PFDoA | ( 613.0 / 569.0 ) 2329744<br>( 613.0 / 169.0 ) 368367 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1469.3<br>1190.7 | 0.1581<br>100.0<br>100.0 | 4.5629 | N/A | 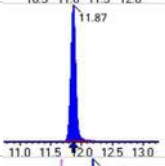 | 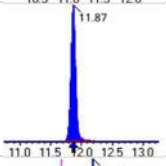 | |
| PFTrDA | ( 663.0 / 619.0 ) 2335306<br>( 663.0 / 169.0 ) 629323 | ( 12.47 , 1.05 ) ( N/A , 0.00 , 0.0) | 1617.7<br>1255.7 | 0.2695<br>100.0<br>100.0 | 4.7571 | N/A | 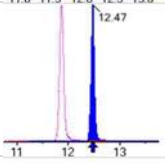 | 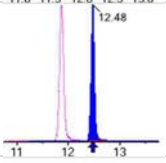 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1893340<br>( 713.0 / 169.0 ) 492228 | ( 12.96 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1540.7<br>1153.6 | 0.2600<br>100.0<br>100.0 | 4.7015 | N/A | 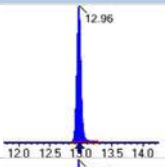 | 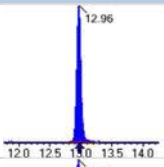 | |
| PFHxDA | ( 813.0 / 769.0 ) 1682359<br>( 813.0 / 169.0 ) 365028 | ( 13.76 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2286.0<br>1135.8 | 0.2170<br>100.0<br>100.0 | 4.9209 | N/A | 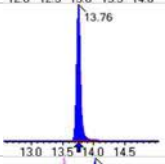 | 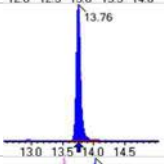 | |
| PFODA | ( 913.0 / 869.0 ) 1040102<br>( 913.0 / 169.0 ) 397315 | ( 14.38 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1613.4<br>1062.5 | 0.3820<br>100.0<br>100.0 | 4.5281 | N/A | 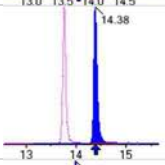 | 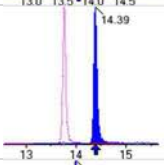 | |
| PFBS | ( 299.0 / 80.0 ) 2470833<br>( 299.0 / 99.0 ) 1756548 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4520.0<br>2789.0 | 0.7109<br>100.0<br>100.0 | 4.1141 | N/A | 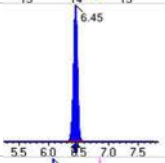 | 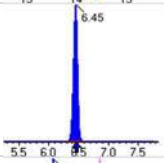 | |
| PFPeS | ( 349.0 / 80.0 ) 6245142<br>( 349.0 / 99.0 ) 2123897 | ( 7.70 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2664.4<br>3558.8 | 0.3401<br>100.0<br>100.0 | 4.7658 | N/A | 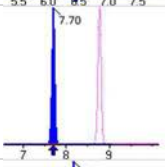 | 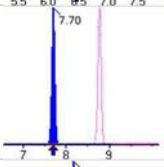 | |
| PFHxS | ( 399.0 / 80.0 ) 6662479<br>( 399.0 / 99.0 ) 2083343 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4634.6<br>7041.2 | 0.3127<br>100.0<br>100.0 | 4.5720 | N/A | 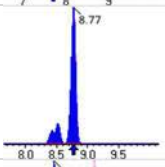 | 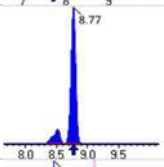 | |
| PFHpS | ( 449.0 / 80.0 ) 5583795<br>( 449.0 / 99.0 ) 1491858 | ( 9.75 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2809.4<br>2620.8 | 0.2672<br>100.0<br>100.0 | 4.6269 | N/A | 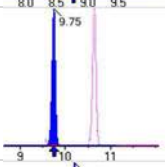 | 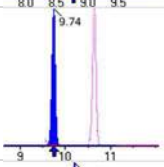 | |
| PFOS | ( 499.0 / 80.0 ) 5338415<br>( 499.0 / 99.0 ) 1262797 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3004.8<br>4975.0 | 0.2365<br>100.0<br>100.0 | 4.3966 | N/A | 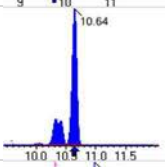 | 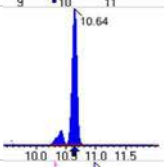 | |
| PFNS | ( 549.0 / 80.0 ) 5531273<br>( 549.0 / 99.0 ) 1469562 | ( 11.49 , 1.08 )<br>( N/A , 0.00 , 0.2) | 2749.5<br>2095.6 | 0.2657<br>100.0<br>100.0 | 4.6714 | N/A | 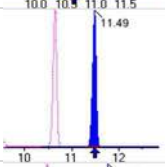 | 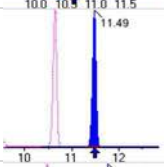 | |
| PFDS | ( 599.0 / 80.0 ) 6932369<br>( 599.0 / 99.0 ) 1738495 | ( 12.17 , 1.14 )<br>( N/A , 0.00 , 0.0) | 3750.8<br>2858.0 | 0.2508<br>100.0<br>100.0 | 4.9120 | N/A | 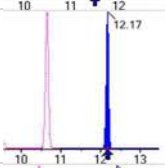 | 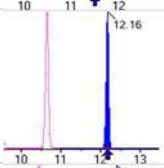 | |
| PFDoS | ( 699.0 / 80.0 ) 5850833<br>( 699.0 / 99.0 ) 1349552 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.0) | 4828.8<br>4621.0 | 0.2307<br>100.0<br>100.0 | 4.8516 | N/A | 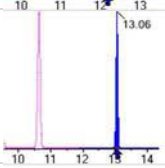 | 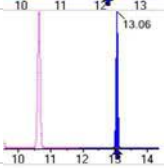 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 4567618<br>( 327.0 / 81.0 ) 4001943 | ( 5.59 , 1.00 ) ( -0.01 , N/A , 0.0) | 4763.7<br>3804.3 | 0.8762<br>100.0<br>100.0 | 18.8567 | N/A | 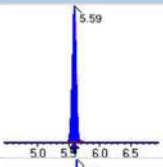 | 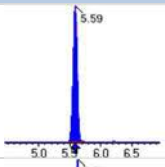 | |
| 6:2FTS | ( 427.0 / 407.0 ) 4418720<br>( 427.0 / 81.0 ) 5613773 | ( 7.72 , 1.00 ) ( -0.01 , N/A , -0.3) | 3929.7<br>3706.1 | 1.2705<br>100.0<br>100.0 | 18.5251 | N/A | 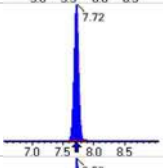 | 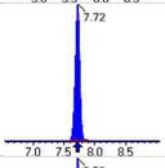 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5786740<br>( 527.0 / 81.0 ) 5487076 | ( 9.53 , 1.00 ) ( 0.00 , N/A , 0.1) | 1549.2<br>1273.7 | 0.9482<br>100.0<br>100.0 | 20.0600 | N/A | 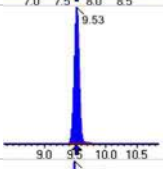 | 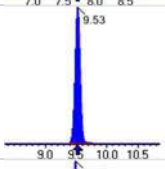 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4971050<br>( 627.0 / 81.0 ) 6719275 | ( 11.19 , 1.00 ) ( 0.01 , N/A , -0.1) | 1138.2<br>1309.4 | 1.3517<br>100.0<br>100.0 | 19.3038 | N/A | 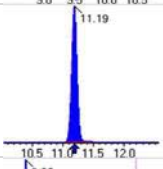 | 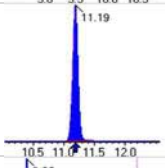 | |
| PFBSA | ( 297.9 / 78.0 ) 4660437<br>( 297.9 / 278.0 ) 6543 | ( 8.06 , 0.57 ) ( N/A , 0.00 , 0.2) | 1090.0<br>92.6 | 0.0014<br>100.0<br>100.0 | 4.7886 | N/A | 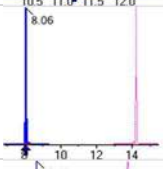 | 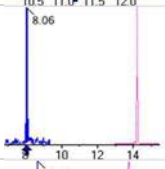 | |
| PFHxSA | ( 397.9 / 78.0 ) 6088955<br>( 397.9 / 378.0 ) 23184 | ( 10.93 , 0.75 ) ( N/A , 0.00 , 0.1) | 1453.6<br>288.7 | 0.0038<br>100.0<br>100.0 | 4.7782 | N/A | 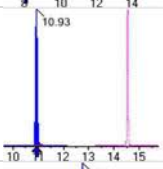 | 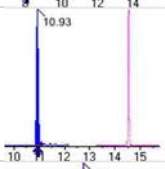 | |
| PFOSA | ( 498.0 / 78.0 ) 5581904<br>( 498.0 / 478.0 ) 80548 | ( 12.82 , 1.00 ) ( -0.01 , N/A , 0.0) | 2176.7<br>828.8 | 0.0144<br>100.0<br>100.0 | 4.9127 | N/A | 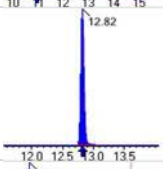 | 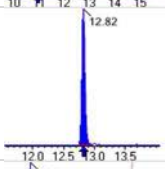 | |
| TFSI | ( 279.7 / 147.0 ) 12018072<br>( 279.7 / 211.0 ) 991097 | ( 8.36 , 0.65 ) ( N/A , 0.00 , 0.0) | 70.0<br>61.2 | 0.0825<br>100.0<br>100.0 | 4.9754 | N/A | 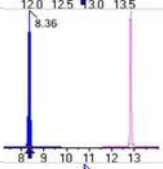 | 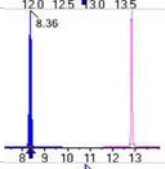 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4136100<br>( 512.0 / 169.0 ) 3040082 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.1) | 3601.6<br>1346.0 | 0.7350<br>100.0<br>100.0 | 19.4015 | N/A | 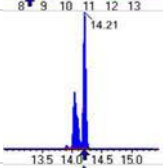 | 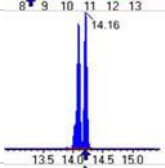 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5272521<br>( 526.0 / 169.0 ) 6678528 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.1) | 4965.7<br>4309.5 | 1.2667<br>100.0<br>100.0 | 19.3393 | N/A | 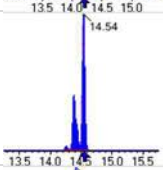 | 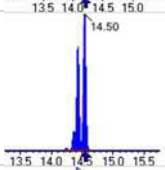 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1266534<br>( 570.0 / 483.0 ) 548402 | ( 10.42 , 1.00 ) ( 0.00 , N/A , -0.2) | 4168.6<br>1584.8 | 0.4330<br>100.0<br>100.0 | 4.9755 | N/A | 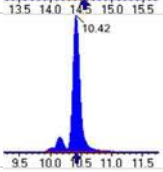 | 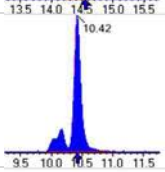 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1215456<br>( 584.0 / 526.0 ) 752561 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.1) | 2140.4<br>802.7 | 0.6192<br>100.0<br>100.0 | 4.8084 | N/A | 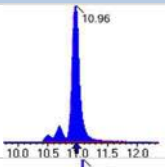 | 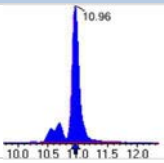 | |
| NMeFOSE | ( 616.0 / 59.0 ) 2107237 | ( 14.02 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3196.3 | N/A<br>0.0<br>0.0 | 19.7811 | N/A | 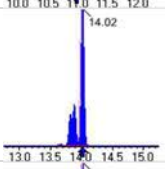 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2097072 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4259.2 | N/A<br>0.0<br>0.0 | 20.1165 | N/A | 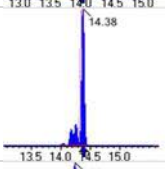 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 383740<br>( 285.0 / 185.0 ) 1195799 | ( 6.60 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1667.6<br>1885.9 | 3.1162<br>100.0<br>100.0 | 4.7678 | N/A | 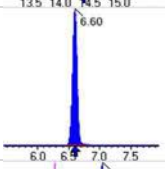 | 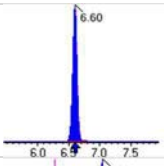 | |
| ADONA | ( 377.0 / 85.0 ) 4983578<br>( 377.0 / 251.0 ) 531307 | ( 7.68 , 1.16 )<br>( N/A , 0.00 , -0.1) | 1596.0<br>1569.5 | 0.1066<br>100.0<br>100.0 | 4.8620 | N/A | 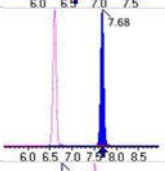 | 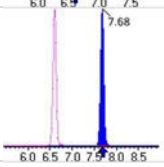 | |
| PFMPA | ( 229.0 / 85.0 ) 884560 | ( 4.19 , 0.86 )<br>( N/A , 0.00 , 0.0) | 8668.8 | N/A<br>0.0<br>0.0 | 9.4772 | N/A | 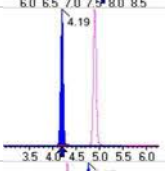 | | |
| PFMBA | ( 279.0 / 85.0 ) 2280385 | ( 5.27 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5544.9 | N/A<br>0.0<br>0.0 | 9.2307 | N/A | 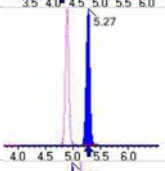 | | |
| NFDHA | ( 295.0 / 201.0 ) 1119266<br>( 295.0 / 85.0 ) 1210627 | ( 5.99 , 0.98 )<br>( N/A , 0.00 , -0.1) | 2611.1<br>2676.9 | 1.0816<br>100.0<br>100.0 | 9.7062 | N/A | 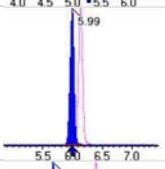 | 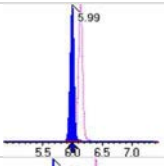 | |
| PFECHS | ( 461.0 / 98.9 ) 2922607<br>( 461.0 / 381.2 ) 1141147 | ( 9.67 , 0.91 )<br>( N/A , 0.00 , 0.0) | 3902.9<br>4329.5 | 0.3905<br>100.0<br>100.0 | 4.2682 | N/A | 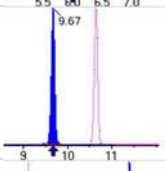 | 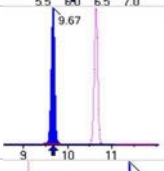 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5871891<br>( 533.0 / 353.0 ) 1887630 | ( 11.30 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2755.4<br>2594.1 | 0.3215<br>100.0<br>100.0 | 4.6421 | N/A | 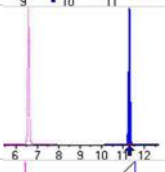 | 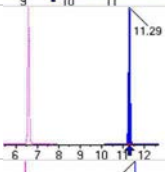 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4724946<br>( 633.0 / 453.0 ) 1543120 | ( 12.56 , 1.90 )<br>( N/A , 0.00 , 0.0) | 4004.8<br>2990.5 | 0.3266<br>100.0<br>100.0 | 4.7689 | N/A | 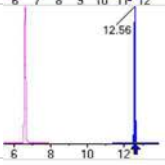 | 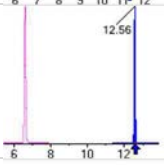 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2146025<br>( 315.0 / 83.0 ) 1229605 | ( 7.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2953.2<br>2319.6 | 0.5730<br>100.0<br>100.0 | 8.6015 | N/A | 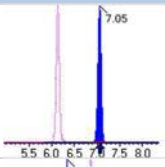 | 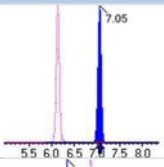 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 272272<br>( 241.0 / 117.0 ) 604079 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.0) | 2617.6<br>1994.7 | 2.2187<br>100.0<br>100.0 | 19.0109 | N/A | 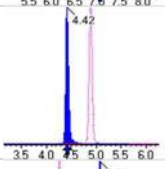 | 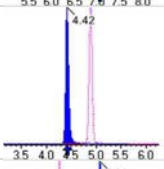 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1547604<br>( 341.0 / 217.0 ) 2317035 | ( 7.00 , 1.14 )<br>( N/A , 0.00 , 0.1) | 1143.1<br>1153.5 | 1.4972<br>100.0<br>100.0 | 19.2496 | N/A | 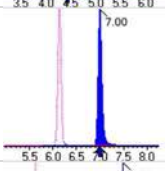 | 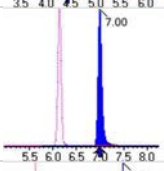 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2228212<br>( 441.0 / 337.0 ) 1983202 | ( 9.41 , 1.53 )<br>( N/A , 0.00 , -0.1) | 7555.6<br>6797.3 | 0.8900<br>100.0<br>100.0 | 18.8403 | N/A | 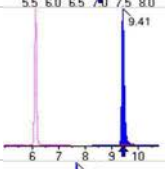 | 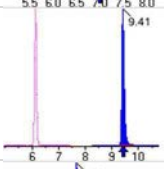 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1540114<br>( 357.2 / 243.0 ) 162569 | ( 6.87 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1398.7<br>675.5 | 0.1056<br>100.0<br>100.0 | 4.8900 | N/A | 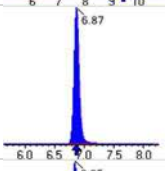 | 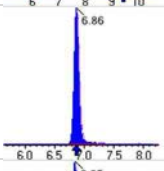 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1159358<br>( 457.2 / 343.0 ) 45367 | ( 8.95 , 1.00 )<br>( -0.01 , N/A , 0.0) | 709.0<br>447.7 | 0.0391<br>100.0<br>100.0 | 4.8723 | N/A | 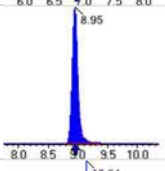 | 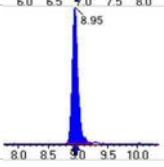 | |
| TDCA | ( 499.0 / 80.0 ) 3910401 | ( 10.64 , 1.00 )<br>( N/A , 0.00 , 0.0) | 23040.8 | N/A<br>0.0<br>0.0 | 4.7390 | N/A | 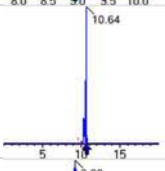 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 303221 | ( 3.80 , N/A )<br>( N/A , 0.00 , N/A ) | 1260.9 | N/A | 1.0065<br>[ 1.0000 ] | 100.7%<br>{ 100.0% } | 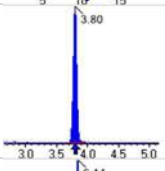 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 165003 | ( 6.14 , N/A )<br>( N/A , 0.00 , N/A ) | 136099.4 | N/A | 1.0731<br>[ 1.0000 ] | 107.3%<br>{ 100.0% } | 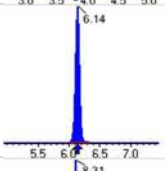 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 454682 | ( 8.31 , N/A )<br>( N/A , 0.00 , N/A ) | 3812.0 | N/A | 1.0192<br>[ 1.0000 ] | 101.9%<br>{ 100.0% } | 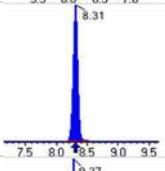 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 325896 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1082.0 | N/A | 0.9749<br>[ 1.0000 ] | 97.5%<br>{ 100.0% } | 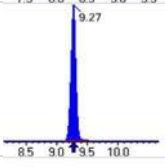 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 340046 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 17935.0 | N/A | 1.0254 [ 1.0000 ] | 102.5% { 100.0% } | 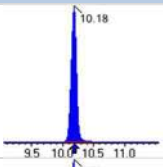  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1139651 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4282.1 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 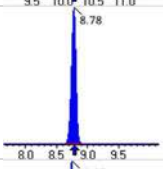  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 995584 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 4670.3 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 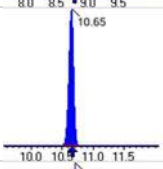  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2657124 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 43637.8 | N/A | 7.9464 [ 8.0000 ] | 99.3% { 100.0% } | 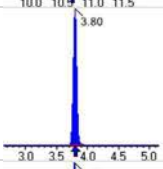  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1158355 | ( 4.89 , N/A ) ( N/A , 0.00 , N/A ) | 6074.2 | N/A | 3.9132 [ 4.0000 ] | 97.8% { 100.0% } | 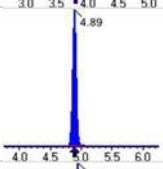  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 684701 | ( 6.13 , N/A ) ( N/A , 0.00 , N/A ) | 8902.8 | N/A | 1.9326 [ 2.0000 ] | 96.6% { 100.0% } | 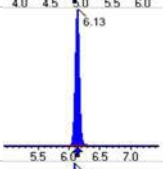  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 704754 | ( 7.29 , N/A ) ( N/A , 0.00 , N/A ) | 5580.3 | N/A | 1.9046 [ 2.0000 ] | 95.2% { 100.0% } | 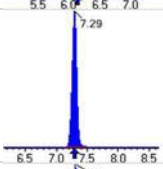  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 953656 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 3562.5 | N/A | 1.9893 [ 2.0000 ] | 99.5% { 100.0% } | 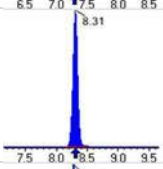  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 310906 | ( 9.27 , N/A ) ( N/A , 0.00 , N/A ) | 2463.6 | N/A | 0.9879 [ 1.0000 ] | 98.8% { 100.0% } | 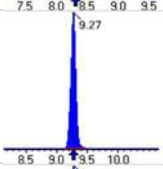  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 384895 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 1132.1 | N/A | 0.9809 [ 1.0000 ] | 98.1% { 100.0% } | 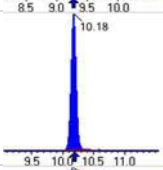  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 497340 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 832.8 | N/A | 1.0425 [ 1.0000 ] | 104.2% { 100.0% } | 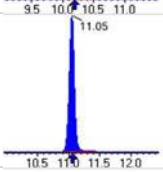  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 498870 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1510.0 | N/A | 1.0413 [ 1.0000 ] | 104.1% { 100.0% } | 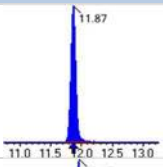 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 424042 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1339.5 | N/A | 1.0157 [ 1.0000 ] | 101.6% { 100.0% } | 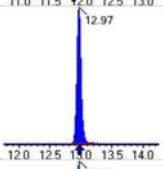 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 708437 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3403.3 | N/A | 1.9978 [ 2.0000 ] | 99.9% { 100.0% } | 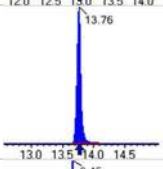 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2309943 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1219.6 | N/A | 2.0803 [ 2.0000 ] | 104.0% { 100.0% } | 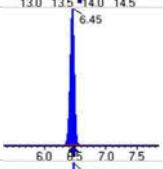 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1645728 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 5644.6 | N/A | 1.9734 [ 2.0000 ] | 98.7% { 100.0% } | 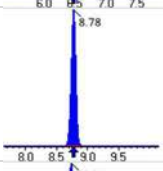 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2100694 | ( 10.64 , N/A ) ( N/A , 0.00 , N/A ) | 1507.8 | N/A | 1.9820 [ 2.0000 ] | 99.1% { 100.0% } | 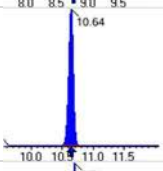 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 359830 | ( 5.59 , N/A ) ( N/A , 0.00 , N/A ) | 84.4 | N/A | 3.6258 [ 4.0000 ] | 90.6% { 100.0% } | 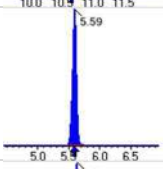 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1074003 | ( 7.73 , N/A ) ( N/A , 0.00 , N/A ) | 5008.6 | N/A | 3.4848 [ 4.0000 ] | 87.1% { 100.0% } | 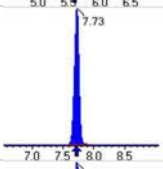 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1164627 | ( 9.53 , N/A ) ( N/A , 0.00 , N/A ) | 1043.7 | N/A | 3.7930 [ 4.0000 ] | 94.8% { 100.0% } | 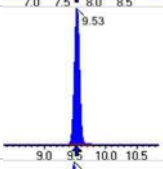 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2503774 | ( 11.18 , N/A ) ( N/A , 0.00 , N/A ) | 1638.9 | N/A | 7.1039 [ 8.0000 ] | 88.8% { 100.0% } | 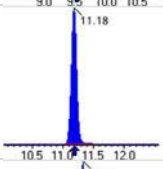 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2328466 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2616.5 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 100.0% } | 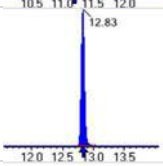 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 423319 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2725.6 | N/A | 1.9960 [ 2.0000 ] | 99.8% { 100.0% } | 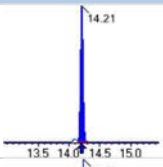  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 496914 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 3542.0 | N/A | 2.0398 [ 2.0000 ] | 102.0% { 100.0% } | 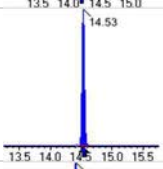  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1081175 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2605.9 | N/A | 3.9834 [ 4.0000 ] | 99.6% { 100.0% } | 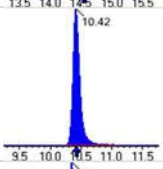  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1048167 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 1847.6 | N/A | 4.0682 [ 4.0000 ] | 101.7% { 100.0% } | 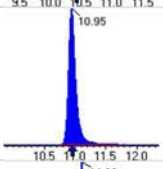  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1882014 | ( 14.00 , N/A ) ( N/A , 0.00 , N/A ) | 2694.7 | N/A | 18.9910 [ 20.0000 ] | 95.0% { 100.0% } | 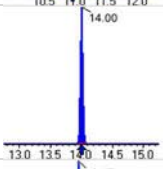  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2359639 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 4853.3 | N/A | 19.6556 [ 20.0000 ] | 98.3% { 100.0% } | 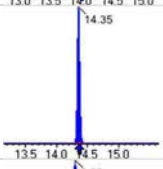  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1134242 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2358.9 | N/A | 7.4481 [ 8.0000 ] | 93.1% { 100.0% } | 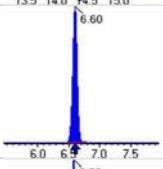  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 586030 | ( 6.88 , N/A ) ( N/A , 0.00 , N/A ) | 1615.1 | N/A | 1.9431 [ 2.0000 ] | 97.2% { 100.0% } | 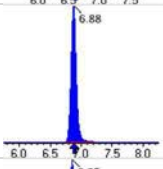  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 564269 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 604.6 | N/A | 2.0041 [ 2.0000 ] | 100.2% { 100.0% } | 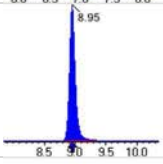  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 5378030<br>( 163.0 / 69.0 ) 135866 | ( 2.83 , 0.74 ) ( N/A , 0.02 , 0.0) | 28525.5<br>5580.8 | 0.0253<br>100.8<br>100.8 | 20.7339 | N/A | 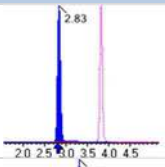 | 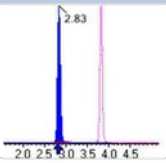 | |
| PFBA | ( 213.0 / 169.0 ) 11319821 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 10292.4 | N/A<br>0.0<br>0.0 | 40.8109 | N/A | 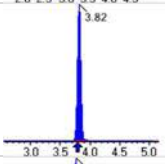 | | |
| PFPeA | ( 263.0 / 219.0 ) 5426856<br>( 263.0 / 69.0 ) 64070 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.1) | 6484.6<br>796.2 | 0.0118<br>107.5<br>107.5 | 19.8576 | N/A | 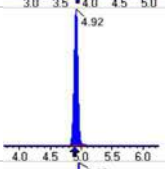 | 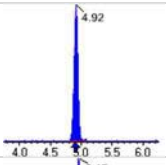 | |
| PFHxA | ( 313.0 / 269.0 ) 3132131<br>( 313.0 / 119.0 ) 352582 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 2919.8<br>2514.3 | 0.1126<br>101.3<br>101.3 | 10.0740 | N/A | 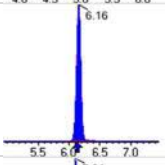 | 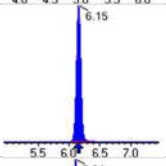 | |
| PFHpA | ( 363.0 / 319.0 ) 3316003<br>( 363.0 / 169.0 ) 973035 | ( 7.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1611.7<br>1562.3 | 0.2934<br>94.2<br>94.2 | 10.3656 | N/A | 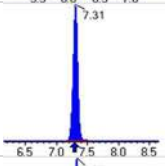 | 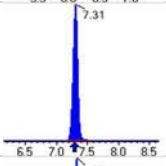 | |
| PFOA | ( 413.0 / 369.0 ) 4435417<br>( 413.0 / 169.0 ) 1605144 | ( 8.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 1451.3<br>1758.0 | 0.3619<br>100.0<br>100.0 | 9.3611 | N/A | 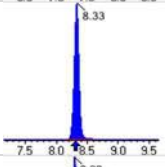 | 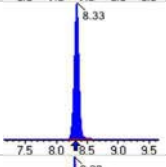 | |
| PFNA | ( 463.0 / 419.0 ) 3071368<br>( 463.0 / 169.0 ) 754950 | ( 9.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 1373.7<br>1257.6 | 0.2458<br>93.6<br>93.6 | 10.0666 | N/A | 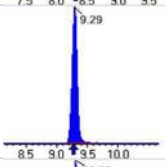 | 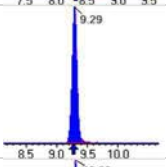 | |
| PFDA | ( 513.0 / 469.0 ) 3483470<br>( 513.0 / 169.0 ) 425656 | ( 10.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 3900.1<br>4832.9 | 0.1222<br>104.1<br>104.1 | 9.3078 | N/A | 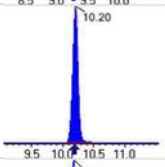 | 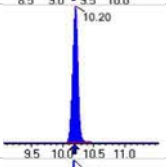 | |
| PFUnA | ( 563.0 / 519.0 ) 4012760<br>( 563.0 / 169.0 ) 611536 | ( 11.08 , 1.00 ) ( 0.00 , N/A , 0.0) | 1096.4<br>925.9 | 0.1524<br>102.9<br>102.9 | 9.6647 | N/A | 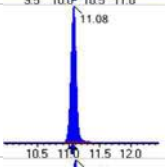 | 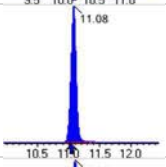 | |
| PFDoA | ( 613.0 / 569.0 ) 4687393<br>( 613.0 / 169.0 ) 681381 | ( 11.89 , 1.00 ) ( 0.00 , N/A , 0.1) | 1397.6<br>1270.3 | 0.1454<br>91.9<br>91.9 | 9.6086 | N/A | 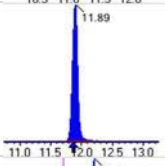 | 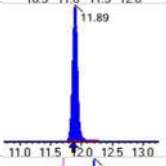 | |
| PFTrDA | ( 663.0 / 619.0 ) 4597133<br>( 663.0 / 169.0 ) 1185711 | ( 12.50 , 1.05 ) ( N/A , 0.02 , 0.1) | 1653.1<br>1316.2 | 0.2579<br>95.7<br>95.7 | 9.8014 | N/A | 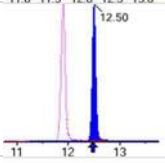 | 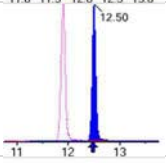 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3744996<br>( 713.0 / 169.0 ) 978784 | ( 12.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1989.0<br>1160.5 | 0.2614<br>100.5<br>100.5 | 9.6620 | N/A | 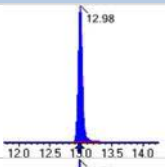 | 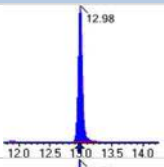 | |
| PFHxDA | ( 813.0 / 769.0 ) 3079749<br>( 813.0 / 169.0 ) 761911 | ( 13.78 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2580.8<br>1678.0 | 0.2474<br>114.0<br>114.0 | 10.2254 | N/A | 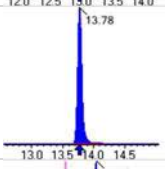 | 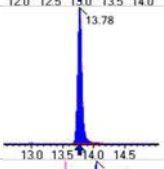 | |
| PFODA | ( 913.0 / 869.0 ) 2190436<br>( 913.0 / 169.0 ) 793319 | ( 14.40 , 1.05 )<br>( N/A , 0.02 , 0.1) | 2664.5<br>1927.3 | 0.3622<br>94.8<br>94.8 | 10.8244 | N/A | 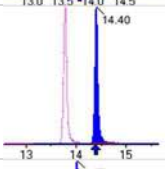 | 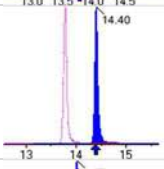 | |
| PFBS | ( 299.0 / 80.0 ) 4798533<br>( 299.0 / 99.0 ) 3500195 | ( 6.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4308.3<br>3466.7 | 0.7294<br>102.6<br>102.6 | 8.8005 | N/A | 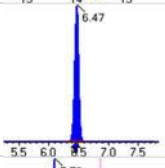 | 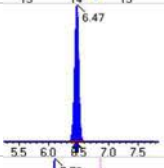 | |
| PFPeS | ( 349.0 / 80.0 ) 12278795<br>( 349.0 / 99.0 ) 4316220 | ( 7.72 , 0.88 )<br>( N/A , 0.02 , 0.1) | 3181.8<br>3225.6 | 0.3515<br>103.4<br>103.4 | 9.5481 | N/A | 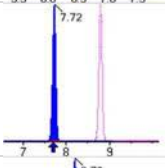 | 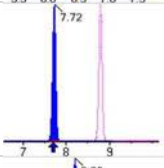 | |
| PFHxS | ( 399.0 / 80.0 ) 12534184<br>( 399.0 / 99.0 ) 4132575 | ( 8.79 , 1.00 )<br>( 0.00 , N/A , -0.2) | 4084.9<br>4986.6 | 0.3297<br>105.4<br>105.4 | 8.7645 | N/A | 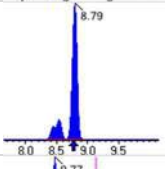 | 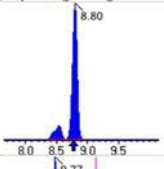 | |
| PFHpS | ( 449.0 / 80.0 ) 11262481<br>( 449.0 / 99.0 ) 2908577 | ( 9.77 , 0.92 )<br>( N/A , 0.02 , -0.1) | 2270.6<br>2305.9 | 0.2583<br>96.7<br>96.7 | 10.0195 | N/A | 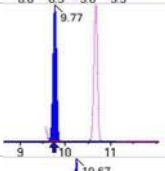 | 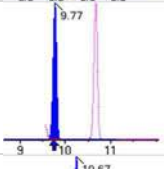 | |
| PFOS | ( 499.0 / 80.0 ) 10174885<br>( 499.0 / 99.0 ) 2343775 | ( 10.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3555.4<br>6439.0 | 0.2303<br>97.4<br>97.4 | 8.9968 | N/A | 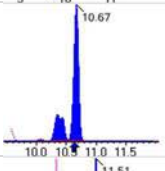 | 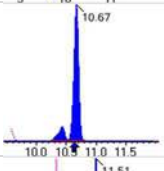 | |
| PFNS | ( 549.0 / 80.0 ) 10908192<br>( 549.0 / 99.0 ) 2799302 | ( 11.51 , 1.08 )<br>( N/A , 0.02 , 0.0) | 2448.8<br>2619.5 | 0.2566<br>96.6<br>96.6 | 9.8908 | N/A | 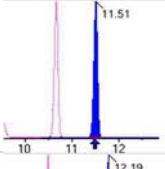 | 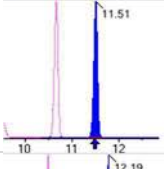 | |
| PFDS | ( 599.0 / 80.0 ) 13371200<br>( 599.0 / 99.0 ) 3616978 | ( 12.19 , 1.14 )<br>( N/A , 0.02 , -0.1) | 3474.9<br>3189.0 | 0.2705<br>107.9<br>107.9 | 10.1718 | N/A | 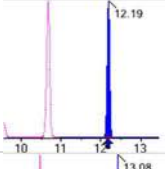 | 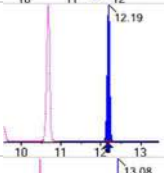 | |
| PFDoS | ( 699.0 / 80.0 ) 11771848<br>( 699.0 / 99.0 ) 2814513 | ( 13.08 , 1.23 )<br>( N/A , 0.02 , 0.0) | 5374.9<br>4638.4 | 0.2391<br>103.7<br>103.7 | 10.4802 | N/A | 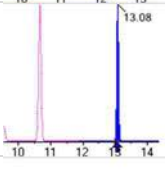 | 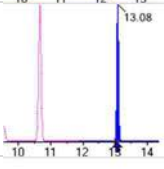 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 8592242<br>( 327.0 / 81.0 ) 7650817 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5605.3<br>4278.6 | 0.8904<br>101.6<br>101.6 | 35.7047 | N/A | 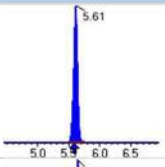 | 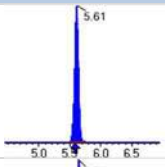 | |
| 6:2FTS | ( 427.0 / 407.0 ) 7990655<br>( 427.0 / 81.0 ) 9527692 | ( 7.74 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3864.3<br>3689.9 | 1.1924<br>93.9<br>93.9 | 40.5006 | N/A | 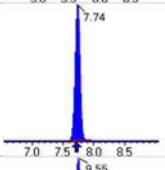 | 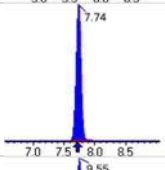 | |
| 8:2FTS | ( 527.0 / 507.0 ) 9595304<br>( 527.0 / 81.0 ) 9786215 | ( 9.55 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1355.0<br>1104.9 | 1.0199<br>107.6<br>107.6 | 37.6973 | N/A | 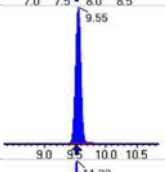 | 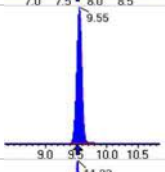 | |
| 10:2FTS | ( 627.0 / 607.0 ) 8687929<br>( 627.0 / 81.0 ) 12244324 | ( 11.22 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1659.8<br>1314.4 | 1.4093<br>104.3<br>104.3 | 38.3765 | N/A | 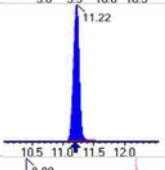 | 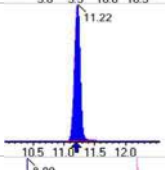 | |
| PFBSA | ( 297.9 / 78.0 ) 9133692<br>( 297.9 / 278.0 ) 13739 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , -0.1) | 1488.2<br>182.2 | 0.0015<br>107.1<br>107.1 | 9.7878 | N/A | 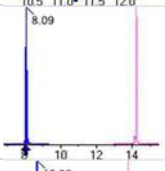 | 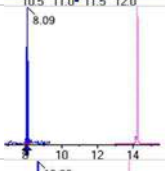 | |
| PFHxSA | ( 397.9 / 78.0 ) 12137835<br>( 397.9 / 378.0 ) 53364 | ( 10.96 , 0.75 )<br>( N/A , 0.03 , 0.1) | 1171.0<br>774.1 | 0.0044<br>115.5<br>115.5 | 10.0852 | N/A | 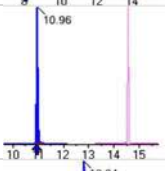 | 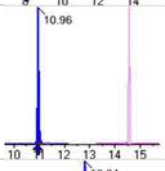 | |
| PFOSA | ( 498.0 / 78.0 ) 10671873<br>( 498.0 / 478.0 ) 160855 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2515.3<br>1421.2 | 0.0151<br>104.5<br>104.5 | 10.0617 | N/A | 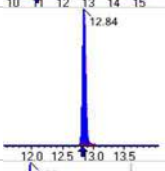 | 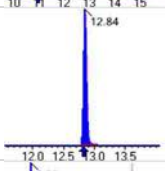 | |
| TFSI | ( 279.7 / 147.0 ) 22530344<br>( 279.7 / 211.0 ) 1911938 | ( 8.39 , 0.65 )<br>( N/A , 0.02 , 0.1) | 53.3<br>48.5 | 0.0849<br>102.9<br>102.9 | 9.9920 | N/A | 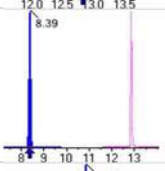 | 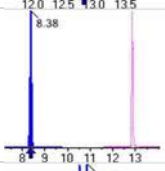 | |
| NMeFOSA | ( 512.0 / 219.0 ) 8130231<br>( 512.0 / 169.0 ) 6149169 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3599.8<br>1357.7 | 0.7563<br>102.9<br>102.9 | 39.7742 | N/A | 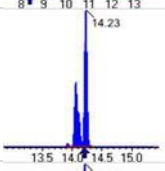 | 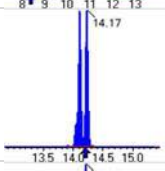 | |
| NEtFOSA | ( 526.0 / 219.0 ) 10354406<br>( 526.0 / 169.0 ) 13053493 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.2) | 5503.3<br>4335.3 | 1.2607<br>99.5<br>99.5 | 40.2129 | N/A | 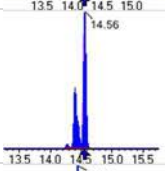 | 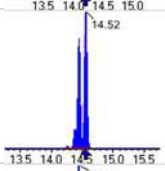 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 2308133<br>( 570.0 / 483.0 ) 1062326 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4404.5<br>2054.0 | 0.4603<br>106.3<br>106.3 | 9.6417 | N/A | 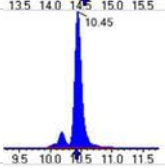 | 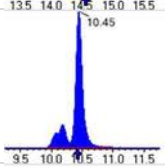 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 2363088<br>( 584.0 / 526.0 ) 1416941 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 2328.3<br>780.6 | 0.5996<br>96.8<br>96.8 | 10.3771 | N/A | 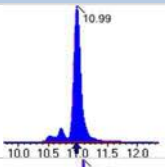 | 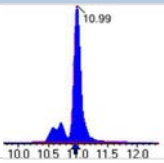 | |
| NMeFOSE | ( 616.0 / 59.0 ) 4146482 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3949.5 | N/A<br>0.0<br>0.0 | 39.2888 | N/A | 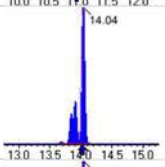 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 4024952 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 5910.1 | N/A<br>0.0<br>0.0 | 41.7380 | N/A | 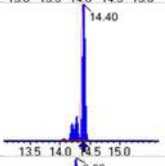 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 779811<br>( 285.0 / 185.0 ) 2434064 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1760.1<br>2684.8 | 3.1214<br>100.2<br>100.2 | 10.1190 | N/A | 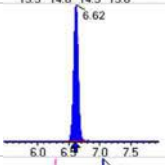 | 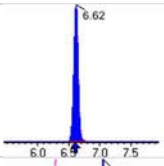 | |
| ADONA | ( 377.0 / 85.0 ) 9549476<br>( 377.0 / 251.0 ) 1011087 | ( 7.69 , 1.16 )<br>( N/A , 0.02 , -0.1) | 1502.1<br>1731.9 | 0.1059<br>99.3<br>99.3 | 9.7301 | N/A | 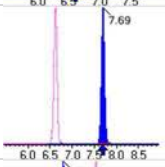 | 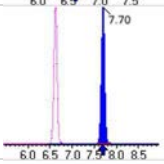 | |
| PFMPA | ( 229.0 / 85.0 ) 1760592 | ( 4.21 , 0.86 )<br>( N/A , 0.02 , 0.0) | 10301.2 | N/A<br>0.0<br>0.0 | 20.3480 | N/A | 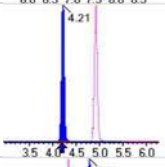 | | |
| PFMBA | ( 279.0 / 85.0 ) 4537528 | ( 5.29 , 1.08 )<br>( N/A , 0.02 , 0.0) | 6337.8 | N/A<br>0.0<br>0.0 | 19.8133 | N/A | 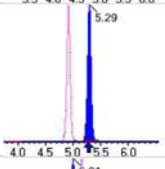 | | |
| NFDHA | ( 295.0 / 201.0 ) 2147243<br>( 295.0 / 85.0 ) 2304599 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , 0.0) | 4016.5<br>3445.4 | 1.0733<br>99.2<br>99.2 | 19.8669 | N/A | 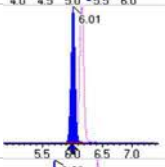 | 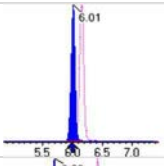 | |
| PFECHS | ( 461.0 / 98.9 ) 6036450<br>( 461.0 / 381.2 ) 2400206 | ( 9.69 , 0.91 )<br>( N/A , 0.02 , 0.0) | 4046.6<br>3700.0 | 0.3976<br>101.8<br>101.8 | 9.4649 | N/A | 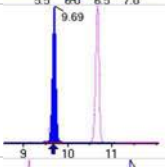 | 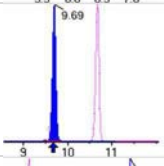 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 11351431<br>( 533.0 / 353.0 ) 3607678 | ( 11.32 , 1.71 )<br>( N/A , 0.03 , 0.1) | 2980.4<br>2942.3 | 0.3178<br>98.9<br>98.9 | 9.3725 | N/A | 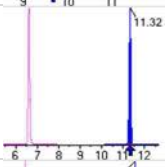 | 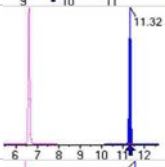 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 9357015<br>( 633.0 / 453.0 ) 3111352 | ( 12.59 , 1.90 )<br>( N/A , 0.02 , 0.0) | 4205.4<br>3482.4 | 0.3325<br>101.8<br>101.8 | 9.8634 | N/A | 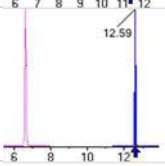 | 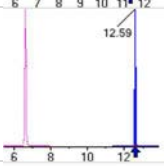 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 4279396<br>( 315.0 / 83.0 ) 2385965 | ( 7.07 , 1.15 )<br>( N/A , 0.02 , 0.0) | 3819.0<br>2750.6 | 0.5575<br>97.3<br>97.3 | 18.3000 | N/A | 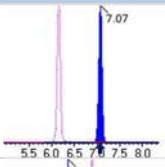 | 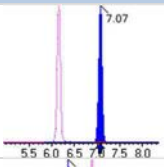 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 532284<br>( 241.0 / 117.0 ) 1172088 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , 0.0) | 2830.4<br>3075.7 | 2.2020<br>99.2<br>99.2 | 40.0916 | N/A | 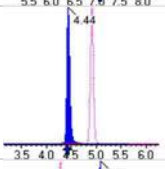 | 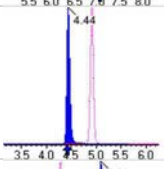 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 2711685<br>( 341.0 / 217.0 ) 4385230 | ( 7.01 , 1.14 )<br>( N/A , 0.01 , -0.1) | 1251.4<br>1238.0 | 1.6172<br>108.0<br>108.0 | 35.9858 | N/A | 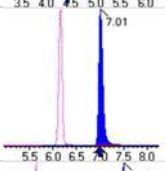 | 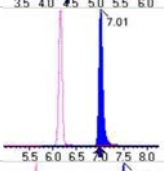 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 4368920<br>( 441.0 / 337.0 ) 3755395 | ( 9.43 , 1.53 )<br>( N/A , 0.03 , 0.0) | 9552.5<br>15824.3 | 0.8596<br>96.6<br>96.6 | 39.4127 | N/A | 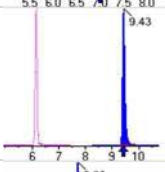 | 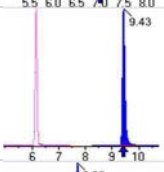 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3143361<br>( 357.2 / 243.0 ) 310708 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1159.6<br>1200.9 | 0.0988<br>93.6<br>93.6 | 10.1713 | N/A | 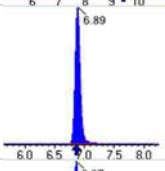 | 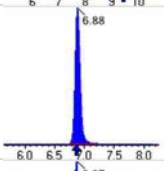 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2225595<br>( 457.2 / 343.0 ) 90091 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , -0.2) | 789.8<br>414.7 | 0.0405<br>103.4<br>103.4 | 9.7142 | N/A | 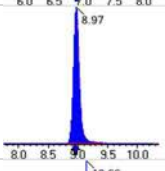 | 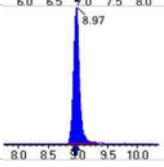 | |
| TDCA | ( 499.0 / 80.0 ) 7683017 | ( 10.66 , 1.00 )<br>( N/A , 0.03 , 0.0) | 56902.2 | N/A<br>0.0<br>0.0 | 9.9965 | N/A | 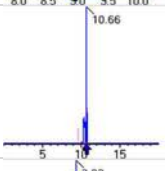 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262567 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1160.3 | N/A | 0.8716<br>[ 1.0000 ] | 87.2%<br>{ 86.6% } | 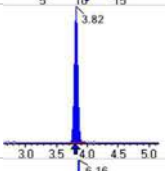 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135233 | ( 6.16 , N/A )<br>( N/A , 0.02 , N/A ) | 78054.9 | N/A | 0.8795<br>[ 1.0000 ] | 87.9%<br>{ 82.0% } | 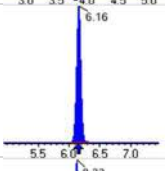 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 422380 | ( 8.33 , N/A )<br>( N/A , 0.02 , N/A ) | 5583.3 | N/A | 0.9468<br>[ 1.0000 ] | 94.7%<br>{ 92.9% } | 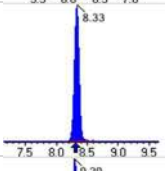 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 310194 | ( 9.29 , N/A )<br>( N/A , 0.02 , N/A ) | 1025.1 | N/A | 0.9279<br>[ 1.0000 ] | 92.8%<br>{ 95.2% } | 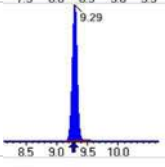 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 302748 | ( 10.21 , N/A ) ( N/A , 0.02 , N/A ) | 16568.3 | N/A | 0.9129 [ 1.0000 ] | 91.3% { 89.0% } | 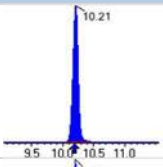 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1003889 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 5154.4 | N/A | 0.8984 [ 1.0000 ] | 89.8% { 88.1% } | 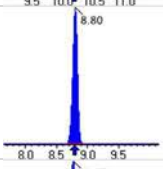 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 863468 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 3120.4 | N/A | 0.8845 [ 1.0000 ] | 88.5% { 86.7% } | 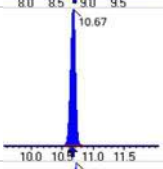 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2345500 | ( 3.82 , N/A ) ( N/A , 0.02 , N/A ) | 50599.2 | N/A | 8.1006 [ 8.0000 ] | 101.3% { 88.3% } | 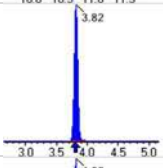 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1073819 | ( 4.92 , N/A ) ( N/A , 0.02 , N/A ) | 5717.5 | N/A | 4.4262 [ 4.0000 ] | 110.7% { 92.7% } | 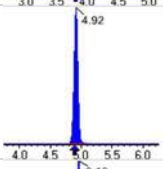 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 641756 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 6787.6 | N/A | 2.2102 [ 2.0000 ] | 110.5% { 93.7% } | 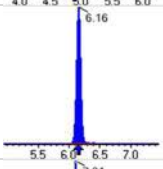 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 649624 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 4697.3 | N/A | 2.1421 [ 2.0000 ] | 107.1% { 92.2% } | 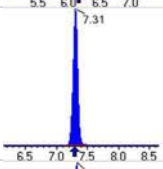 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 931882 | ( 8.33 , N/A ) ( N/A , 0.02 , N/A ) | 3437.8 | N/A | 2.0925 [ 2.0000 ] | 104.6% { 97.7% } | 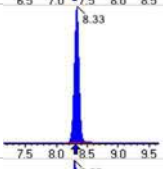 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 304469 | ( 9.29 , N/A ) ( N/A , 0.02 , N/A ) | 3269.4 | N/A | 1.0164 [ 1.0000 ] | 101.6% { 97.9% } | 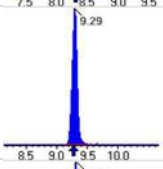 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 375790 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 933.5 | N/A | 1.0757 [ 1.0000 ] | 107.6% { 97.6% } | 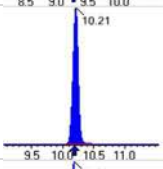 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 444632 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 940.9 | N/A | 1.0468 [ 1.0000 ] | 104.7% { 89.4% } | 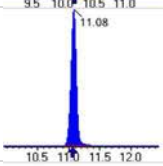 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 476638 | ( 11.90 , N/A ) ( N/A , 0.03 , N/A ) | 1326.4 | N/A | 1.1174 [ 1.0000 ] | 111.7% { 95.5% } | 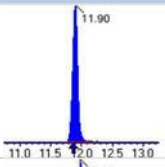  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 408133 | ( 12.99 , N/A ) ( N/A , 0.02 , N/A ) | 1337.5 | N/A | 1.0980 [ 1.0000 ] | 109.8% { 96.2% } | 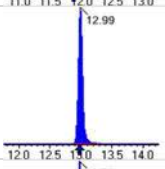  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624120 | ( 13.78 , N/A ) ( N/A , 0.01 , N/A ) | 2406.2 | N/A | 1.9768 [ 2.0000 ] | 98.8% { 88.1% } | 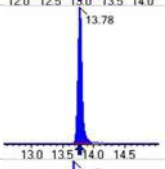  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2097152 | ( 6.47 , N/A ) ( N/A , 0.02 , N/A ) | 1371.9 | N/A | 2.1441 [ 2.0000 ] | 107.2% { 90.8% } | 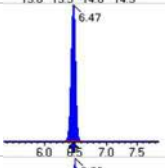  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1615084 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 4539.2 | N/A | 2.1986 [ 2.0000 ] | 109.9% { 98.1% } | 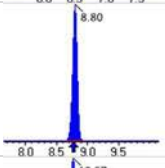  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1956628 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 1284.8 | N/A | 2.1286 [ 2.0000 ] | 106.4% { 93.1% } | 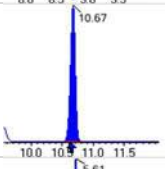  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 357483 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 85.6 | N/A | 4.0892 [ 4.0000 ] | 102.2% { 99.3% } | 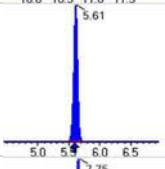  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 888360 | ( 7.75 , N/A ) ( N/A , 0.02 , N/A ) | 3787.7 | N/A | 3.2723 [ 4.0000 ] | 81.8% { 82.7% } | 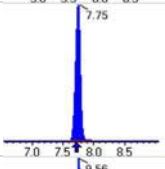  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1027619 | ( 9.56 , N/A ) ( N/A , 0.03 , N/A ) | 1368.7 | N/A | 3.7994 [ 4.0000 ] | 95.0% { 88.2% } | 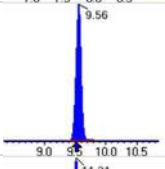  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2201104 | ( 11.21 , N/A ) ( N/A , 0.03 , N/A ) | 1146.7 | N/A | 7.0897 [ 8.0000 ] | 88.6% { 87.9% } | 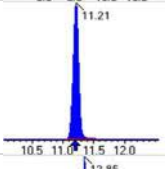  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2173596 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2055.0 | N/A | 2.1820 [ 2.0000 ] | 109.1% { 93.3% } | 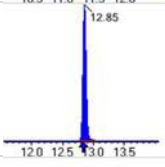  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 405894 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 1926.1 | N/A | 2.2066 [ 2.0000 ] | 110.3% { 95.9% } | 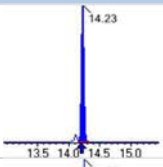  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 469313 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 3199.5 | N/A | 2.2212 [ 2.0000 ] | 111.1% { 94.4% } | 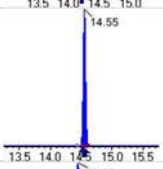  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1016769 | ( 10.45 , N/A ) ( N/A , 0.03 , N/A ) | 2312.1 | N/A | 4.3192 [ 4.0000 ] | 108.0% { 94.0% } | 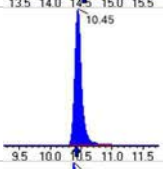  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 944281 | ( 10.98 , N/A ) ( N/A , 0.03 , N/A ) | 1708.9 | N/A | 4.2258 [ 4.0000 ] | 105.6% { 90.1% } | 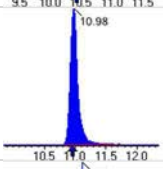  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1864536 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2580.2 | N/A | 21.6934 [ 20.0000 ] | 108.5% { 99.1% } | 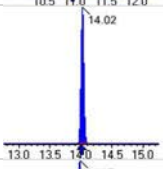  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2182801 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5363.0 | N/A | 20.9646 [ 20.0000 ] | 104.8% { 92.5% } | 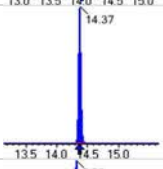  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1086016 | ( 6.62 , N/A ) ( N/A , 0.02 , N/A ) | 2282.1 | N/A | 8.7013 [ 8.0000 ] | 108.8% { 95.7% } | 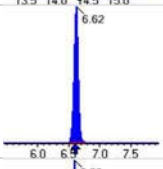  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575029 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 1035.8 | N/A | 2.1416 [ 2.0000 ] | 107.1% { 98.1% } | 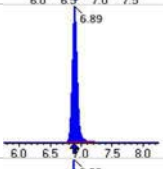  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 543301 | ( 8.98 , N/A ) ( N/A , 0.02 , N/A ) | 735.2 | N/A | 2.1673 [ 2.0000 ] | 108.4% { 96.3% } | 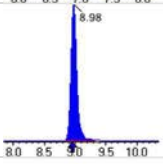  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 10176145<br>( 163.0 / 69.0 ) 255215 | ( 2.81 , 0.74 )<br>( N/A , 0.00 , 0.1) | 46589.2<br>10044.5 | 0.0251<br>100.0<br>100.0 | 44.5845 | N/A | 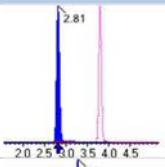 | 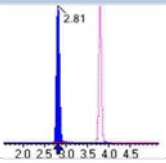 | |
| PFBA | ( 213.0 / 169.0 ) 20395510 | ( 3.79 , 1.00 )<br>( 0.00 , N/A , 0.0) | 13501.8 | N/A<br>0.0<br>0.0 | 83.5631 | N/A | 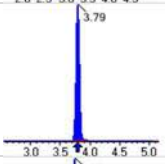 | | |
| PFPeA | ( 263.0 / 219.0 ) 10570659<br>( 263.0 / 69.0 ) 121834 | ( 4.89 , 1.00 )<br>( 0.00 , N/A , -0.1) | 7156.8<br>1484.6 | 0.0115<br>104.9<br>104.9 | 42.2517 | N/A | 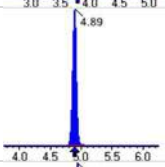 | 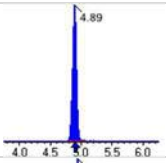 | |
| PFHxA | ( 313.0 / 269.0 ) 6402934<br>( 313.0 / 119.0 ) 705276 | ( 6.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2751.9<br>2726.8 | 0.1101<br>99.1<br>99.1 | 20.8495 | N/A | 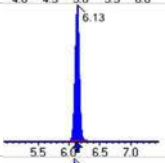 | 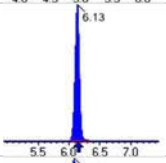 | |
| PFHpA | ( 363.0 / 319.0 ) 7156998<br>( 363.0 / 169.0 ) 2136784 | ( 7.29 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2119.9<br>1751.1 | 0.2986<br>95.8<br>95.8 | 21.5222 | N/A | 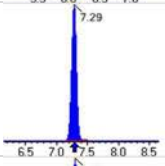 | 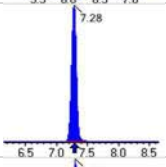 | |
| PFOA | ( 413.0 / 369.0 ) 9517339<br>( 413.0 / 169.0 ) 3410061 | ( 8.30 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1524.7<br>1286.1 | 0.3583<br>99.1<br>99.1 | 20.3493 | N/A | 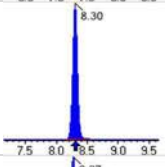 | 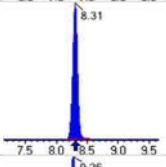 | |
| PFNA | ( 463.0 / 419.0 ) 7034413<br>( 463.0 / 169.0 ) 1640515 | ( 9.27 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1501.1<br>1553.0 | 0.2332<br>88.9<br>88.9 | 21.2492 | N/A | 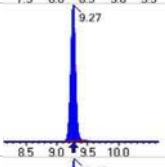 | 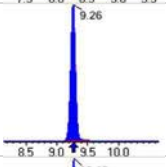 | |
| PFDA | ( 513.0 / 469.0 ) 7750833<br>( 513.0 / 169.0 ) 905812 | ( 10.18 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4849.1<br>4129.0 | 0.1169<br>99.6<br>99.6 | 22.3085 | N/A | 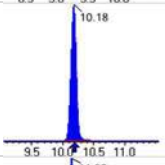 | 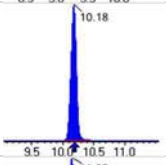 | |
| PFUnA | ( 563.0 / 519.0 ) 8863100<br>( 563.0 / 169.0 ) 1264545 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1109.3<br>939.8 | 0.1427<br>96.3<br>96.3 | 22.4705 | N/A | 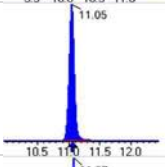 | 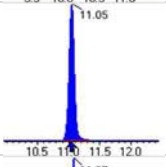 | |
| PFDoA | ( 613.0 / 569.0 ) 9923328<br>( 613.0 / 169.0 ) 1491951 | ( 11.87 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1665.9<br>1336.8 | 0.1503<br>95.1<br>95.1 | 20.8357 | N/A | 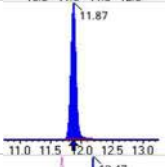 | 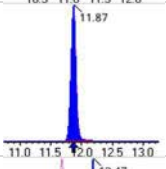 | |
| PFTrDA | ( 663.0 / 619.0 ) 9577578<br>( 663.0 / 169.0 ) 2584915 | ( 12.47 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1454.1<br>1603.0 | 0.2699<br>100.2<br>100.2 | 20.9161 | N/A | 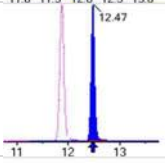 | 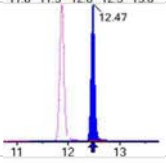 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 8442959<br>( 713.0 / 169.0 ) 2100131 | ( 12.96 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2115.6<br>1469.2 | 0.2487<br>95.7<br>95.7 | 22.4689 | N/A | 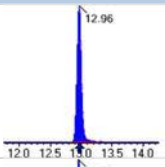 | 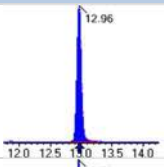 | |
| PFHxDA | ( 813.0 / 769.0 ) 6878569<br>( 813.0 / 169.0 ) 1592222 | ( 13.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2614.7<br>1755.8 | 0.2315<br>106.7<br>106.7 | 22.0788 | N/A | 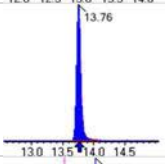 | 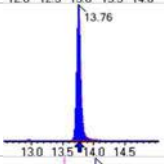 | |
| PFODA | ( 913.0 / 869.0 ) 4588493<br>( 913.0 / 169.0 ) 1518219 | ( 14.39 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2651.3<br>1740.1 | 0.3309<br>86.6<br>86.6 | 21.9208 | N/A | 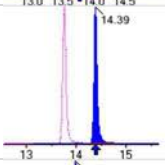 | 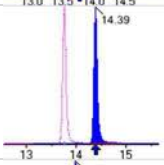 | |
| PFBS | ( 299.0 / 80.0 ) 10383809<br>( 299.0 / 99.0 ) 7131765 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5358.7<br>4536.0 | 0.6868<br>96.6<br>96.6 | 19.3808 | N/A | 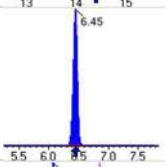 | 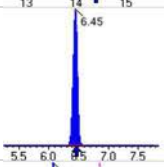 | |
| PFPeS | ( 349.0 / 80.0 ) 23552483<br>( 349.0 / 99.0 ) 8452143 | ( 7.69 , 0.88 )<br>( N/A , 0.00 , 0.1) | 3072.6<br>2543.3 | 0.3589<br>105.5<br>105.5 | 18.6129 | N/A | 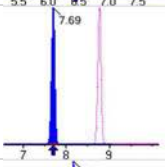 | 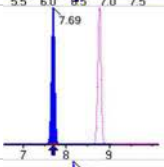 | |
| PFHxS | ( 399.0 / 80.0 ) 27689170<br>( 399.0 / 99.0 ) 9109943 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5583.7<br>6389.4 | 0.3290<br>105.2<br>105.2 | 19.6770 | N/A | 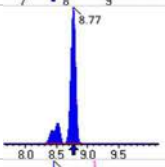 | 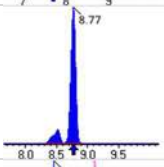 | |
| PFHpS | ( 449.0 / 80.0 ) 24478977<br>( 449.0 / 99.0 ) 6562983 | ( 9.74 , 0.92 )<br>( N/A , 0.00 , -0.1) | 2047.2<br>2514.2 | 0.2681<br>100.3<br>100.3 | 20.4607 | N/A | 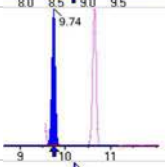 | 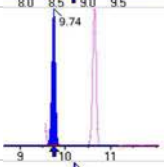 | |
| PFOS | ( 499.0 / 80.0 ) 23005511<br>( 499.0 / 99.0 ) 5286051 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3783.4<br>7622.8 | 0.2298<br>97.1<br>97.1 | 19.1119 | N/A | 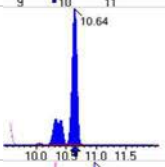 | 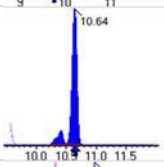 | |
| PFNS | ( 549.0 / 80.0 ) 22163737<br>( 549.0 / 99.0 ) 5972003 | ( 11.48 , 1.08 )<br>( N/A , 0.00 , -0.1) | 2978.6<br>2825.6 | 0.2694<br>101.4<br>101.4 | 18.8813 | N/A | 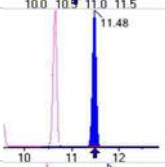 | 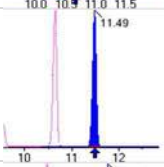 | |
| PFDS | ( 599.0 / 80.0 ) 26863005<br>( 599.0 / 99.0 ) 7218997 | ( 12.16 , 1.14 )<br>( N/A , 0.00 , 0.0) | 4167.7<br>2957.6 | 0.2687<br>107.2<br>107.2 | 19.1997 | N/A | 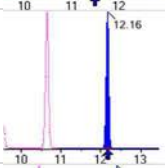 | 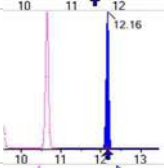 | |
| PFDoS | ( 699.0 / 80.0 ) 24829854<br>( 699.0 / 99.0 ) 5800476 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.1) | 4855.0<br>5320.2 | 0.2336<br>101.3<br>101.3 | 20.7687 | N/A | 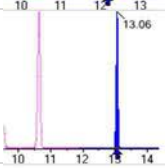 | 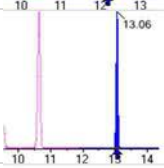 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 16197449<br>( 327.0 / 81.0 ) 13997678 | ( 5.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5148.0<br>4822.5 | 0.8642<br>98.6<br>98.6 | 78.1567 | N/A | 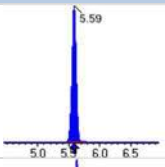 | 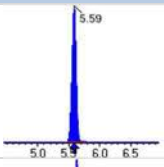 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 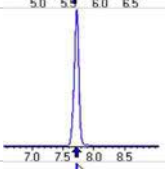 | 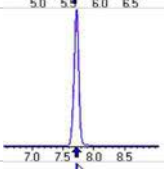 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 17863064<br>( 527.0 / 81.0 ) 17515353 | ( 9.53 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1042.8<br>1331.0 | 0.9805<br>103.4<br>103.4 | 79.7829 | N/A | 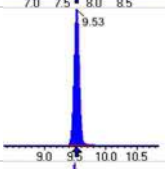 | 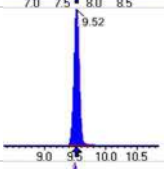 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 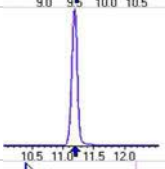 | 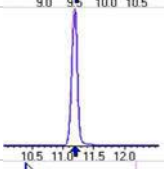 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 18953981<br>( 297.9 / 278.0 ) 25925 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , -0.1) | 1270.3<br>379.7 | 0.0014<br>97.4<br>97.4 | 19.6284 | N/A | 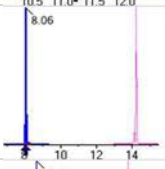 | 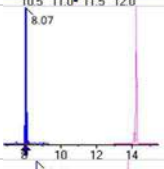 | |
| PFHxSA | ( 397.9 / 78.0 ) 25302275<br>( 397.9 / 378.0 ) 118514 | ( 10.94 , 0.75 )<br>( N/A , 0.00 , 0.0) | 950.6<br>805.4 | 0.0047<br>123.0<br>123.0 | 20.8502 | N/A | 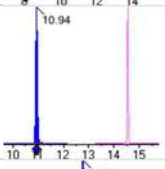 | 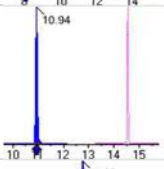 | |
| PFOSA | ( 498.0 / 78.0 ) 21767174<br>( 498.0 / 478.0 ) 326808 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2568.1<br>1223.6 | 0.0150<br>104.0<br>104.0 | 20.4745 | N/A | 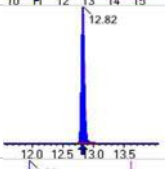 | 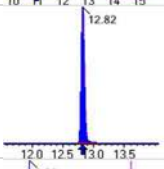 | |
| TFSI | ( 279.7 / 147.0 ) 45027999<br>( 279.7 / 211.0 ) 4193887 | ( 8.36 , 0.65 )<br>( N/A , 0.00 , 0.0) | 59.9<br>64.0 | 0.0931<br>112.9<br>112.9 | 19.9226 | N/A | 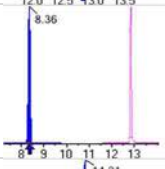 | 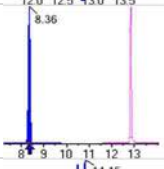 | |
| NMeFOSA | ( 512.0 / 219.0 ) 16854818<br>( 512.0 / 169.0 ) 12793598 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.2) | 3743.0<br>1315.9 | 0.7590<br>103.3<br>103.3 | 79.6837 | N/A | 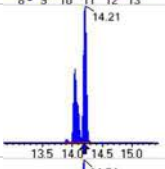 | 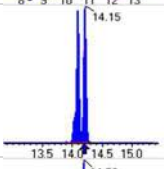 | |
| NEtFOSA | ( 526.0 / 219.0 ) 21489682<br>( 526.0 / 169.0 ) 26814196 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4844.9<br>3997.4 | 1.2478<br>98.5<br>98.5 | 82.7706 | N/A | 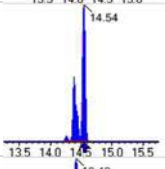 | 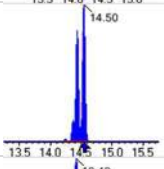 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5096367<br>( 570.0 / 483.0 ) 2366062 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , -0.1) | 5277.0<br>1602.9 | 0.4643<br>107.2<br>107.2 | 21.2312 | N/A | 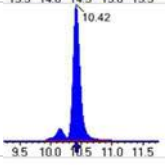 | 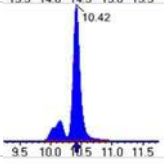 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 4739449<br>( 584.0 / 526.0 ) 2989120 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , -0.1) | 2282.2<br>847.2 | 0.6307<br>101.9<br>101.9 | 20.2414 | N/A | 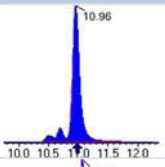 | 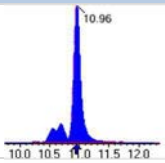 | |
| NMeFOSE | ( 616.0 / 59.0 ) 8768305 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4477.2 | N/A<br>0.0<br>0.0 | 83.4843 | N/A | 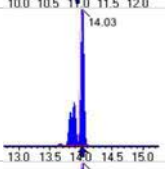 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 8513376 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 6626.1 | N/A<br>0.0<br>0.0 | 83.6180 | N/A | 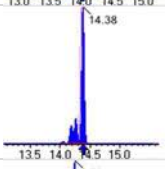 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1580033<br>( 285.0 / 185.0 ) 5012729 | ( 6.60 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2229.3<br>2535.1 | 3.1725<br>101.8<br>101.8 | 20.0355 | N/A | 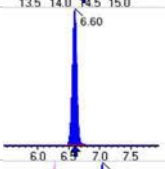 | 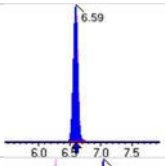 | |
| ADONA | ( 377.0 / 85.0 ) 18233087<br>( 377.0 / 251.0 ) 2030458 | ( 7.67 , 1.16 )<br>( N/A , 0.00 , 0.0) | 2018.1<br>1590.1 | 0.1114<br>104.5<br>104.5 | 18.1546 | N/A | 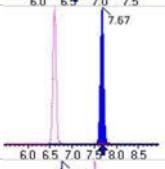 | 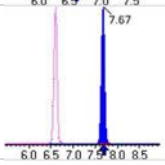 | |
| PFMPA | ( 229.0 / 85.0 ) 3381731 | ( 4.19 , 0.86 )<br>( N/A , 0.00 , 0.0) | 11762.1 | N/A<br>0.0<br>0.0 | 42.6938 | N/A | 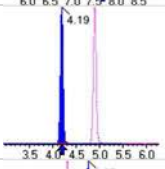 | | |
| PFMBA | ( 279.0 / 85.0 ) 9237814 | ( 5.27 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5748.9 | N/A<br>0.0<br>0.0 | 44.0627 | N/A | 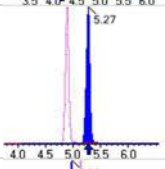 | | |
| NFDHA | ( 295.0 / 201.0 ) 4354470<br>( 295.0 / 85.0 ) 4370009 | ( 5.99 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3176.7<br>3052.2 | 1.0036<br>92.8<br>92.8 | 40.7884 | N/A | 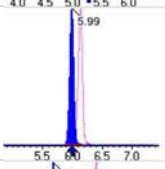 | 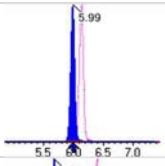 | |
| PFECHS | ( 461.0 / 98.9 ) 13296955<br>( 461.0 / 381.2 ) 5237179 | ( 9.67 , 0.91 )<br>( N/A , 0.00 , -0.1) | 4939.7<br>3903.0 | 0.3939<br>100.9<br>100.9 | 19.5883 | N/A | 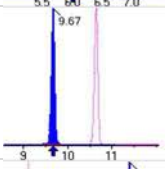 | 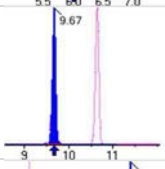 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 23589267<br>( 533.0 / 353.0 ) 7781403 | ( 11.29 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3258.8<br>2639.8 | 0.3299<br>102.6<br>102.6 | 19.0330 | N/A | 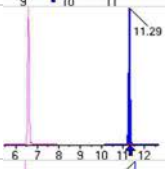 | 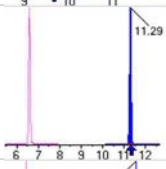 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 19087969<br>( 633.0 / 453.0 ) 6373552 | ( 12.56 , 1.90 )<br>( N/A , 0.00 , 0.0) | 3508.3<br>3457.4 | 0.3339<br>102.2<br>102.2 | 19.6624 | N/A | 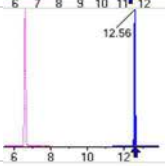 | 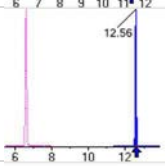 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 8808687<br>( 315.0 / 83.0 ) 4783189 | ( 7.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 3188.4<br>2987.6 | 0.5430<br>94.8<br>94.8 | 38.1359 | N/A | 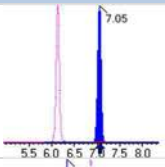 | 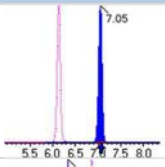 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1088429<br>( 241.0 / 117.0 ) 2486287 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.0) | 3414.7<br>4447.8 | 2.2843<br>103.0<br>103.0 | 89.5517 | N/A | 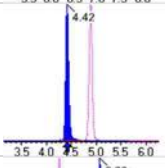 | 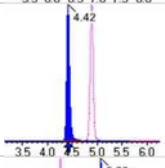 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6098749<br>( 341.0 / 217.0 ) 9093487 | ( 6.99 , 1.14 )<br>( N/A , 0.00 , -0.1) | 1229.7<br>1195.5 | 1.4910<br>99.6<br>99.6 | 81.9381 | N/A | 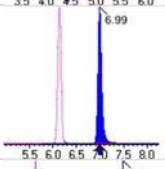 | 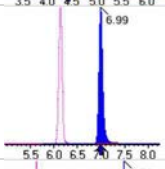 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 9501359<br>( 441.0 / 337.0 ) 8344402 | ( 9.41 , 1.53 )<br>( N/A , 0.00 , 0.2) | 7203.2<br>8254.3 | 0.8782<br>98.7<br>98.7 | 86.7763 | N/A | 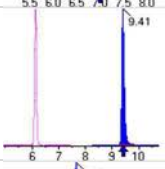 | 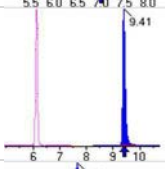 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6396862<br>( 357.2 / 243.0 ) 655276 | ( 6.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1515.1<br>1338.9 | 0.1024<br>97.0<br>97.0 | 21.9761 | N/A | 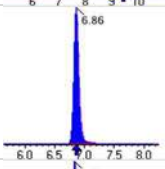 | 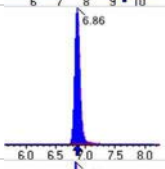 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 4680526<br>( 457.2 / 343.0 ) 185609 | ( 8.94 , 1.00 )<br>( -0.01 , N/A , 0.0) | 830.0<br>537.4 | 0.0397<br>101.3<br>101.3 | 21.2094 | N/A | 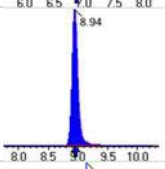 | 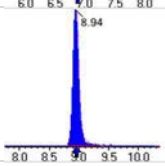 | |
| TDCA | ( 499.0 / 80.0 ) 16629936 | ( 10.63 , 1.00 )<br>( N/A , 0.00 , 0.0) | 28206.5 | N/A<br>0.0<br>0.0 | 20.3292 | N/A | 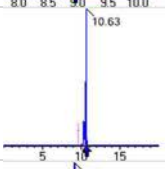 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235092 | ( 3.79 , N/A )<br>( N/A , 0.00 , N/A ) | 1016.1 | N/A | 0.7804<br>[ 1.0000 ] | 78.0%<br>{ 77.5% } | 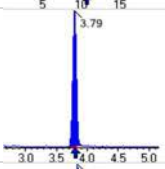 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 159182 | ( 6.13 , N/A )<br>( N/A , 0.00 , N/A ) | 67563.9 | N/A | 1.0352<br>[ 1.0000 ] | 103.5%<br>{ 96.5% } | 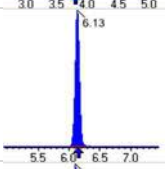 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 453426 | ( 8.31 , N/A )<br>( N/A , 0.00 , N/A ) | 4956.7 | N/A | 1.0163<br>[ 1.0000 ] | 101.6%<br>{ 99.7% } | 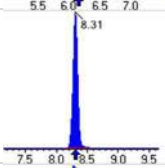 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 345349 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1196.8 | N/A | 1.0331<br>[ 1.0000 ] | 103.3%<br>{ 106.0% } | 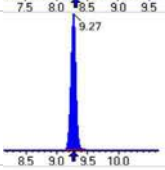 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 338705 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 4585.7 | N/A | 1.0213 [ 1.0000 ] | 102.1% { 99.6% } | 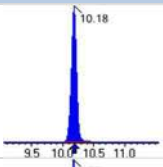 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1128464 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 3883.8 | N/A | 1.0099 [ 1.0000 ] | 101.0% { 99.0% } | 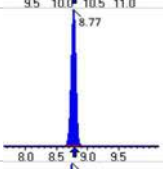 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 995635 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 3109.8 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 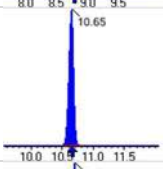 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2063917 | ( 3.79 , N/A ) ( N/A , 0.00 , N/A ) | 42093.7 | N/A | 7.9611 [ 8.0000 ] | 99.5% { 77.7% } | 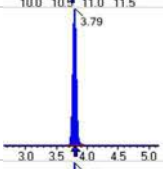 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 983031 | ( 4.89 , N/A ) ( N/A , 0.00 , N/A ) | 5658.2 | N/A | 3.4424 [ 4.0000 ] | 86.1% { 84.9% } | 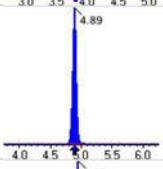 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 633894 | ( 6.13 , N/A ) ( N/A , 0.00 , N/A ) | 6704.1 | N/A | 1.8547 [ 2.0000 ] | 92.7% { 92.6% } | 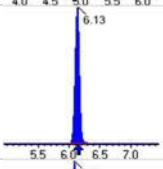 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 675286 | ( 7.29 , N/A ) ( N/A , -0.01 , N/A ) | 4480.6 | N/A | 1.8917 [ 2.0000 ] | 94.6% { 95.8% } | 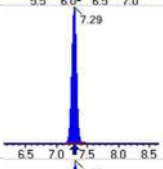 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 919850 | ( 8.30 , N/A ) ( N/A , 0.00 , N/A ) | 3529.1 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 96.5% } | 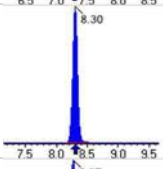 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330354 | ( 9.27 , N/A ) ( N/A , -0.01 , N/A ) | 3992.9 | N/A | 0.9906 [ 1.0000 ] | 99.1% { 106.3% } | 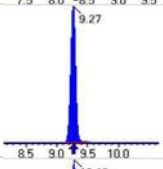 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348865 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 979.0 | N/A | 0.8926 [ 1.0000 ] | 89.3% { 90.6% } | 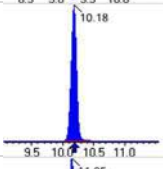 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 422397 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1068.9 | N/A | 0.8889 [ 1.0000 ] | 88.9% { 84.9% } | 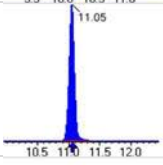 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 465333 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1351.3 | N/A | 0.9751 [ 1.0000 ] | 97.5% { 93.3% } | 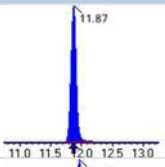  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 395666 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1572.4 | N/A | 0.9515 [ 1.0000 ] | 95.1% { 93.3% } | 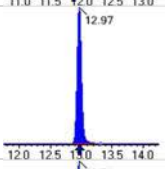  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 645585 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3103.6 | N/A | 1.8277 [ 2.0000 ] | 91.4% { 91.1% } | 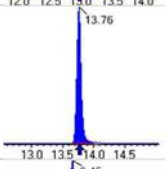  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2060709 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1117.4 | N/A | 1.8742 [ 2.0000 ] | 93.7% { 89.2% } | 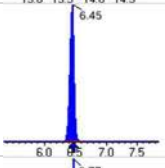  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1589199 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 6298.2 | N/A | 1.9245 [ 2.0000 ] | 96.2% { 96.6% } | 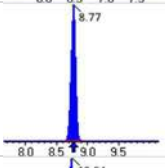  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2082551 | ( 10.64 , N/A ) ( N/A , 0.00 , N/A ) | 1186.2 | N/A | 1.9648 [ 2.0000 ] | 98.2% { 99.1% } | 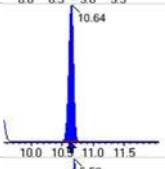  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 307861 | ( 5.59 , N/A ) ( N/A , -0.01 , N/A ) | 79.4 | N/A | 3.1329 [ 4.0000 ] | 78.3% { 85.6% } | 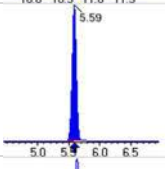  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 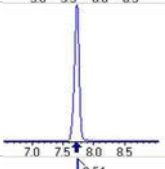 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 903919 | ( 9.54 , N/A ) ( N/A , 0.00 , N/A ) | 1042.3 | N/A | 2.9731 [ 4.0000 ] | 74.3% { 77.6% } | 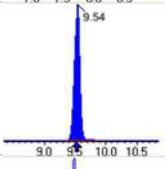  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 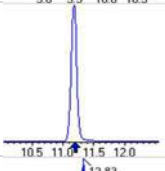 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2178712 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1847.3 | N/A | 1.8968 [ 2.0000 ] | 94.8% { 93.6% } | 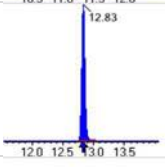  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 420016 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1539.5 | N/A | 1.9803 [ 2.0000 ] | 99.0% { 99.2% } | 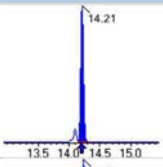  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 473213 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2428.6 | N/A | 1.9424 [ 2.0000 ] | 97.1% { 95.2% } | 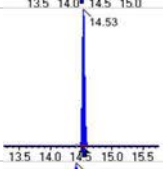  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1019536 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2558.0 | N/A | 3.7561 [ 4.0000 ] | 93.9% { 94.3% } | 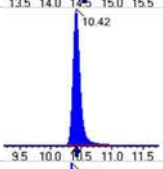  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 970920 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 2066.6 | N/A | 3.7682 [ 4.0000 ] | 94.2% { 92.6% } | 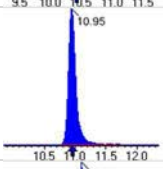  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1855542 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 3273.2 | N/A | 18.7229 [ 20.0000 ] | 93.6% { 98.6% } | 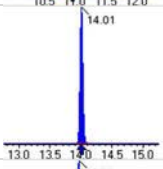  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2304558 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5380.4 | N/A | 19.1958 [ 20.0000 ] | 96.0% { 97.7% } | 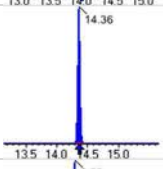  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1111343 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2562.9 | N/A | 7.5646 [ 8.0000 ] | 94.6% { 98.0% } | 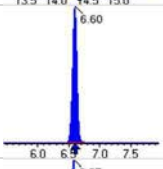  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 541611 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 1147.3 | N/A | 1.8030 [ 2.0000 ] | 90.1% { 92.4% } | 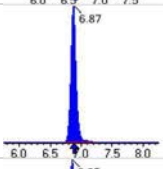  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 523319 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 621.1 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 92.7% } | 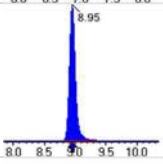  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 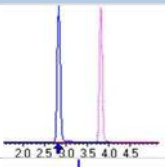 | 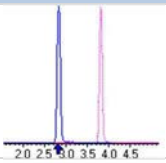 | NR, |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 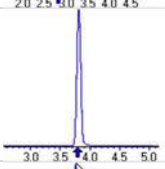 | | NR, |
| PFPeA | ( 263.0 / 219.0 )<br>22700897<br>( 263.0 / 69.0 )<br>261520 | ( 4.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 7496.5<br>2671.3 | 0.0115<br>104.9<br>104.9 | 106.2319 | N/A | 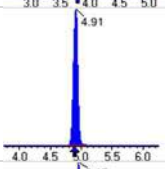 | 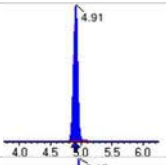 | |
| PFHxA | ( 313.0 / 269.0 )<br>14952955<br>( 313.0 / 119.0 )<br>1634831 | ( 6.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3037.2<br>3640.2 | 0.1093<br>98.4<br>98.4 | 53.9185 | N/A | 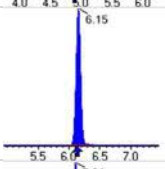 | 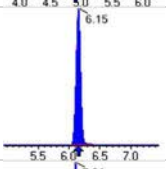 | |
| PFHpA | ( 363.0 / 319.0 )<br>16576643<br>( 363.0 / 169.0 )<br>4950298 | ( 7.31 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1818.1<br>1504.2 | 0.2986<br>95.8<br>95.8 | 54.9822 | N/A | 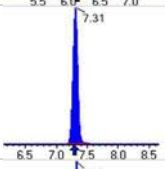 | 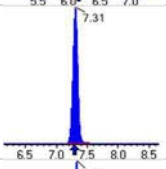 | |
| PFOA | ( 413.0 / 369.0 )<br>21523866<br>( 413.0 / 169.0 )<br>7868863 | ( 8.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1380.8<br>1423.8 | 0.3656<br>101.1<br>101.1 | 49.2835 | N/A | 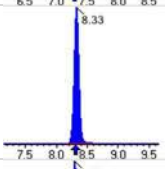 | 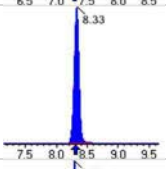 | |
| PFNA | ( 463.0 / 419.0 )<br>15957600<br>( 463.0 / 169.0 )<br>3864370 | ( 9.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1284.7<br>1228.8 | 0.2422<br>92.3<br>92.3 | 51.6247 | N/A | 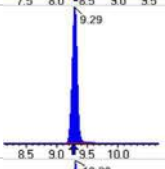 | 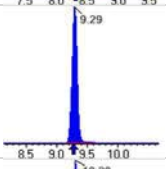 | |
| PFDA | ( 513.0 / 469.0 )<br>17806822<br>( 513.0 / 169.0 )<br>2160213 | ( 10.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4639.2<br>4232.5 | 0.1213<br>103.3<br>103.3 | 52.8327 | N/A | 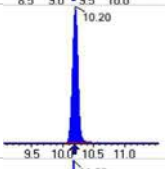 | 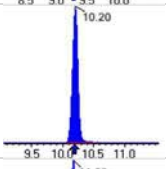 | |
| PFUnA | ( 563.0 / 519.0 )<br>20457199<br>( 563.0 / 169.0 )<br>3062448 | ( 11.08 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1110.4<br>1116.5 | 0.1497<br>101.1<br>101.1 | 53.3596 | N/A | 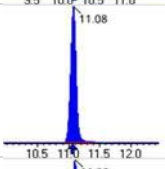 | 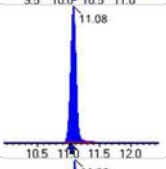 | |
| PFDoA | ( 613.0 / 569.0 )<br>22716961<br>( 613.0 / 169.0 )<br>3338606 | ( 11.89 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1723.5<br>1651.0 | 0.1470<br>92.9<br>92.9 | 51.1595 | N/A | 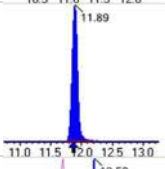 | 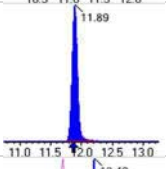 | |
| PFTrDA | ( 663.0 / 619.0 )<br>21950044<br>( 663.0 / 169.0 )<br>5851407 | ( 12.50 , 1.05 )<br>( N/A , 0.02 , 0.0) | 1439.0<br>1349.9 | 0.2666<br>98.9<br>98.9 | 51.4143 | N/A | 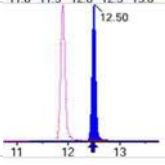 | 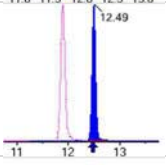 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 17928976<br>( 713.0 / 169.0 ) 4641610 | ( 12.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1836.1<br>1585.2 | 0.2589<br>99.6<br>99.6 | 49.6050 | N/A | 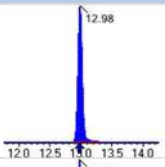 | 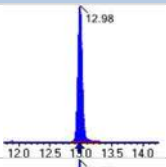 | |
| PFHxDA | ( 813.0 / 769.0 ) 14485066<br>( 813.0 / 169.0 ) 3562659 | ( 13.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2697.5<br>1867.8 | 0.2460<br>113.4<br>113.4 | 51.7987 | N/A | 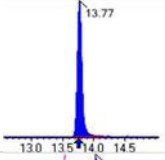 | 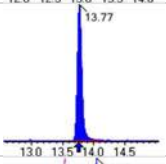 | |
| PFODA | ( 913.0 / 869.0 ) 10221420<br>( 913.0 / 169.0 ) 3533512 | ( 14.40 , 1.05 )<br>( N/A , 0.01 , -0.1) | 2291.6<br>2038.1 | 0.3457<br>90.5<br>90.5 | 54.4024 | N/A | 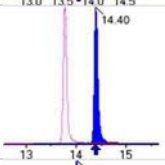 | 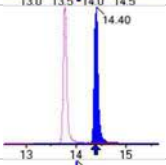 | |
| PFBS | ( 299.0 / 80.0 ) 23185289<br>( 299.0 / 99.0 ) 16750665 | ( 6.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4415.8<br>3731.3 | 0.7225<br>101.6<br>101.6 | 47.1020 | N/A | 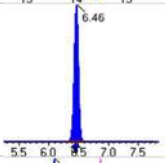 | 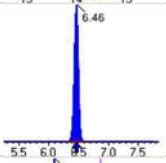 | |
| PFPeS | ( 349.0 / 80.0 ) 47785585<br>( 349.0 / 99.0 ) 17953209 | ( 7.72 , 0.88 )<br>( N/A , 0.02 , 0.1) | 2343.6<br>2424.1 | 0.3757<br>110.5<br>110.5 | 38.8162 | N/A | 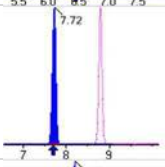 | 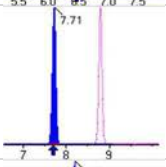 | |
| PFHxS | ( 399.0 / 80.0 ) 61332254<br>( 399.0 / 99.0 ) 21513265 | ( 8.80 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5068.9<br>8254.3 | 0.3508<br>112.2<br>112.2 | 44.7998 | N/A | 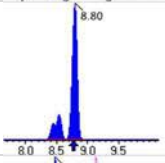 | 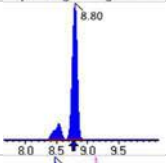 | |
| PFHpS | ( 449.0 / 80.0 ) 51985297<br>( 449.0 / 99.0 ) 15377952 | ( 9.77 , 0.92 )<br>( N/A , 0.03 , 0.0) | 1960.2<br>2069.6 | 0.2958<br>110.7<br>110.7 | 45.6583 | N/A | 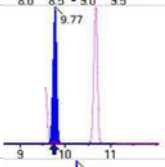 | 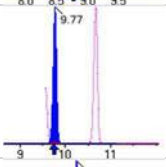 | |
| PFOS | ( 499.0 / 80.0 ) 54945052<br>( 499.0 / 99.0 ) 13114814 | ( 10.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3980.2<br>10975.4 | 0.2387<br>100.9<br>100.9 | 47.9639 | N/A | 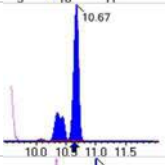 | 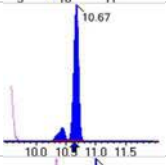 | |
| PFNS | ( 549.0 / 80.0 ) 48380518<br>( 549.0 / 99.0 ) 13891796 | ( 11.51 , 1.08 )<br>( N/A , 0.02 , 0.1) | 2683.5<br>3132.6 | 0.2871<br>108.1<br>108.1 | 43.3085 | N/A | 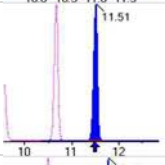 | 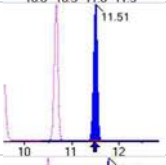 | |
| PFDS | ( 599.0 / 80.0 ) 52690985<br>( 599.0 / 99.0 ) 15132609 | ( 12.19 , 1.14 )<br>( N/A , 0.02 , 0.0) | 2895.8<br>3543.8 | 0.2872<br>114.5<br>114.5 | 39.5721 | N/A | 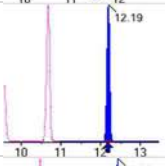 | 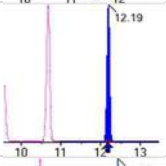 | |
| PFDoS | ( 699.0 / 80.0 ) 47435382<br>( 699.0 / 99.0 ) 12739149 | ( 13.08 , 1.23 )<br>( N/A , 0.02 , 0.0) | 5050.5<br>5543.0 | 0.2686<br>116.4<br>116.4 | 41.6919 | N/A | 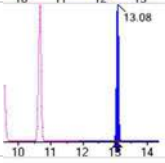 | 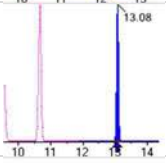 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 34123443<br>( 327.0 / 81.0 ) 29616232 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5634.8<br>5125.2 | 0.8679<br>99.1<br>99.1 | 178.8228 | N/A | 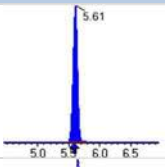 | 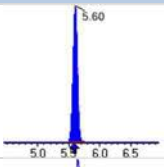 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 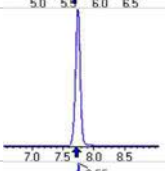 | 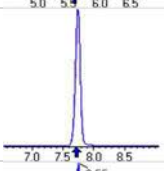 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 33973276<br>( 527.0 / 81.0 ) 35801989 | ( 9.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1084.5<br>1080.4 | 1.0538<br>111.1<br>111.1 | 153.4928 | N/A | 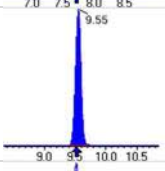 | 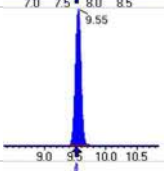 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 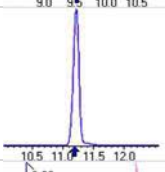 | 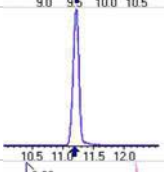 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 42485406<br>( 297.9 / 278.0 ) 69244 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , 0.2) | 1345.4<br>545.1 | 0.0016<br>116.1<br>116.1 | 44.8414 | N/A | 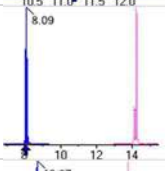 | 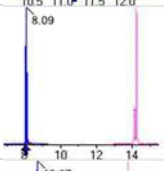 | |
| PFHxSA | ( 397.9 / 78.0 ) 53995591<br>( 397.9 / 378.0 ) 273817 | ( 10.97 , 0.75 )<br>( N/A , 0.03 , 0.0) | 1080.5<br>859.3 | 0.0051<br>133.2<br>133.2 | 48.7212 | N/A | 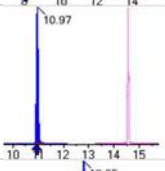 | 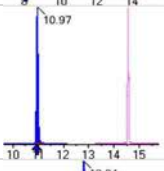 | |
| PFOSA | ( 498.0 / 78.0 ) 45375539<br>( 498.0 / 478.0 ) 788888 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1782.2<br>2134.8 | 0.0174<br>120.5<br>120.5 | 45.7564 | N/A | 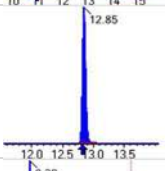 | 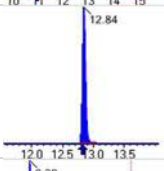 | |
| TFSI | ( 279.7 / 147.0 ) 90676570<br>( 279.7 / 211.0 ) 10184991 | ( 8.38 , 0.65 )<br>( N/A , 0.02 , 0.0) | 40.7<br>60.2 | 0.1123<br>136.2<br>136.2 | 43.0109 | N/A | 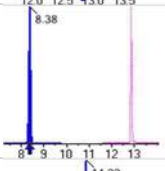 | 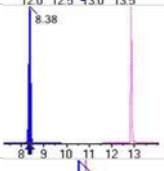 | |
| NMeFOSA | ( 512.0 / 219.0 ) 38984304<br>( 512.0 / 169.0 ) 29736833 | ( 14.22 , 1.00 )<br>( -0.01 , N/A , 3.3) | 3560.7<br>1538.2 | 0.7628<br>103.8<br>103.8 | 187.8405 | N/A | 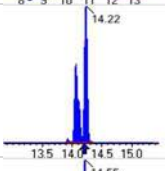 | 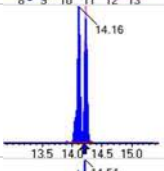 | |
| NEtFOSA | ( 526.0 / 219.0 ) 47551636<br>( 526.0 / 169.0 ) 59451862 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4466.9<br>3567.8 | 1.2503<br>98.7<br>98.7 | 200.5495 | N/A | 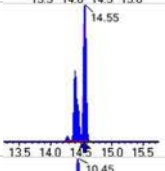 | 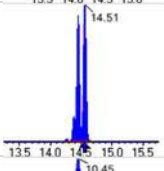 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 11111770<br>( 570.0 / 483.0 ) 5096487 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , -0.2) | 6823.7<br>1415.8 | 0.4587<br>105.9<br>105.9 | 49.6174 | N/A | 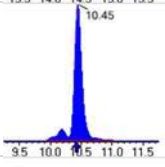 | 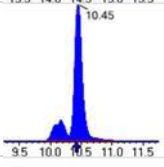 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 10999372<br>( 584.0 / 526.0 ) 6518005 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3040.2<br>779.2 | 0.5926<br>95.7<br>95.7 | 53.2321 | N/A | 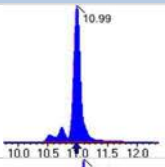 | 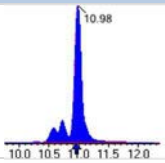 | |
| NMeFOSE | ( 616.0 / 59.0 ) 20722850 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7835.0 | N/A<br>0.0<br>0.0 | 191.7557 | N/A | 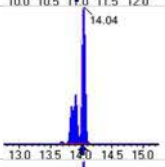 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 19023553 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 7423.3 | N/A<br>0.0<br>0.0 | 196.1770 | N/A | 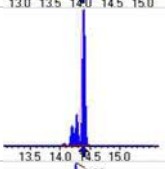 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 3880780<br>( 285.0 / 185.0 ) 12031984 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1950.8<br>2585.5 | 3.1004<br>99.5<br>99.5 | 52.4977 | N/A | 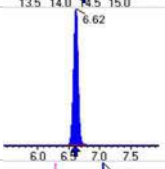 | 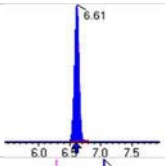 | |
| ADONA | ( 377.0 / 85.0 ) 39511304<br>( 377.0 / 251.0 ) 4415561 | ( 7.70 , 1.16 )<br>( N/A , 0.02 , 0.1) | 2027.7<br>1824.5 | 0.1118<br>104.8<br>104.8 | 41.9697 | N/A | 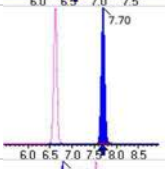 | 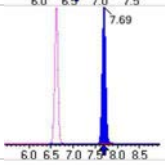 | |
| PFMPA | ( 229.0 / 85.0 ) 7195628 | ( 4.20 , 0.86 )<br>( N/A , 0.01 , 0.0) | 12023.2 | N/A<br>0.0<br>0.0 | 106.3568 | N/A | 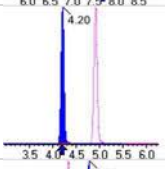 | | |
| PFMBA | ( 279.0 / 85.0 ) 20119580 | ( 5.29 , 1.08 )<br>( N/A , 0.02 , 0.0) | 6179.8 | N/A<br>0.0<br>0.0 | 112.3546 | N/A | 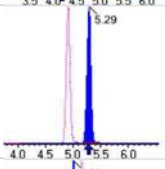 | | |
| NFDHA | ( 295.0 / 201.0 ) 9333499<br>( 295.0 / 85.0 ) 10336335 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , 0.1) | 3365.3<br>3282.3 | 1.1074<br>102.4<br>102.4 | 96.8147 | N/A | 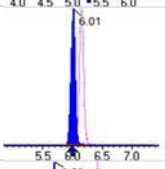 | 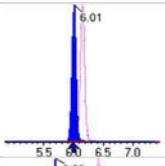 | |
| PFECHS | ( 461.0 / 98.9 ) 32358475<br>( 461.0 / 381.2 ) 13289552 | ( 9.69 , 0.91 )<br>( N/A , 0.03 , 0.1) | 4390.6<br>5012.6 | 0.4107<br>105.2<br>105.2 | 50.0894 | N/A | 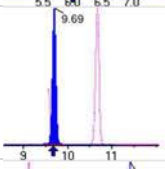 | 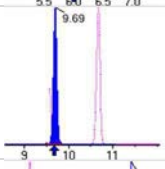 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 53486666<br>( 533.0 / 353.0 ) 18536995 | ( 11.32 , 1.71 )<br>( N/A , 0.02 , -0.1) | 2863.1<br>2611.8 | 0.3466<br>107.8<br>107.8 | 46.0390 | N/A | 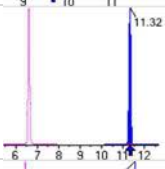 | 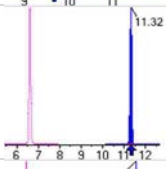 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 39812300<br>( 633.0 / 453.0 ) 13709837 | ( 12.58 , 1.90 )<br>( N/A , 0.02 , 0.0) | 3750.7<br>3839.2 | 0.3444<br>105.4<br>105.4 | 43.7502 | N/A | 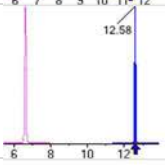 | 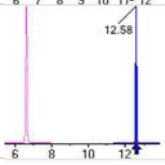 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 19009470<br>( 315.0 / 83.0 ) 10888523 | ( 7.07 , 1.15 )<br>( N/A , 0.02 , 0.0) | 3279.5<br>3491.5 | 0.5728<br>100.0<br>100.0 | 91.1356 | N/A | 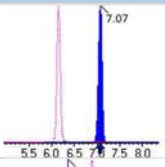 | 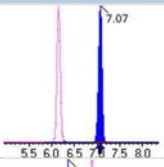 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2757370<br>( 241.0 / 117.0 ) 6072336 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , 0.0) | 5358.8<br>6970.8 | 2.2022<br>99.3<br>99.3 | 265.6068 | N/A | 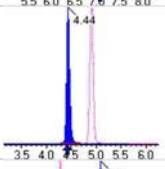 | 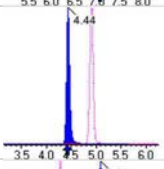 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14081726<br>( 341.0 / 217.0 ) 20939293 | ( 7.01 , 1.14 )<br>( N/A , 0.01 , 0.0) | 1178.8<br>1145.3 | 1.4870<br>99.3<br>99.3 | 209.5060 | N/A | 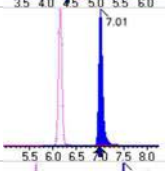 | 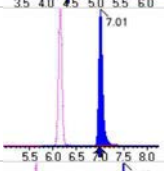 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 23451208<br>( 441.0 / 337.0 ) 20299435 | ( 9.43 , 1.53 )<br>( N/A , 0.02 , 0.0) | 6456.1<br>9898.3 | 0.8656<br>97.3<br>97.3 | 237.1788 | N/A | 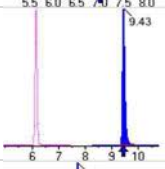 | 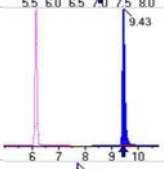 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 15436633<br>( 357.2 / 243.0 ) 1584531 | ( 6.88 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1657.1<br>1390.7 | 0.1026<br>97.2<br>97.2 | 51.1494 | N/A | 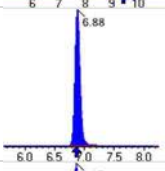 | 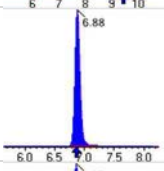 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 11162809<br>( 457.2 / 343.0 ) 463570 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , 0.0) | 876.5<br>788.8 | 0.0415<br>106.1<br>106.1 | 50.6578 | N/A | 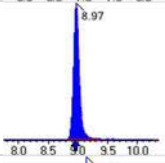 | 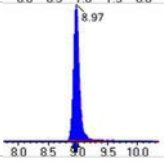 | |
| TDCA | ( 499.0 / 80.0 ) 39073100 | ( 10.66 , 1.00 )<br>( N/A , 0.03 , 0.0) | 118176.8 | N/A<br>0.0<br>0.0 | 50.1904 | N/A | 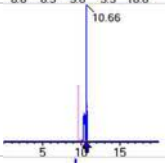 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A ) | N/A | N/A | 0.0000<br>[ 1.0000 ] | 0.0%<br>{ 0.0% } | 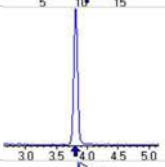 | | NR,IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 140712 | ( 6.15 , N/A )<br>( N/A , 0.02 , N/A ) | 25724.0 | N/A | 0.9151<br>[ 1.0000 ] | 91.5%<br>{ 85.3% } | 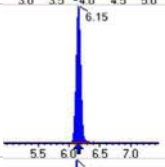 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 407424 | ( 8.33 , N/A )<br>( N/A , 0.02 , N/A ) | 3784.7 | N/A | 0.9132<br>[ 1.0000 ] | 91.3%<br>{ 89.6% } | 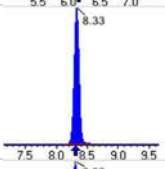 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 305683 | ( 9.30 , N/A )<br>( N/A , 0.03 , N/A ) | 999.0 | N/A | 0.9144<br>[ 1.0000 ] | 91.4%<br>{ 93.8% } | 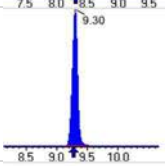 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 311971 | ( 10.21 , N/A ) ( N/A , 0.02 , N/A ) | 6527.7 | N/A | 0.9407 [ 1.0000 ] | 94.1% { 91.7% } | 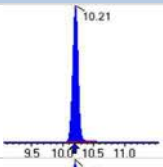 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1087130 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 3242.6 | N/A | 0.9729 [ 1.0000 ] | 97.3% { 95.4% } | 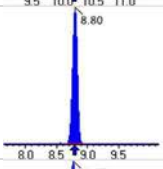 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 897533 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 3839.6 | N/A | 0.9194 [ 1.0000 ] | 91.9% { 90.2% } | 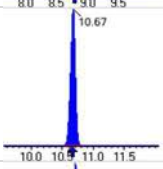 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 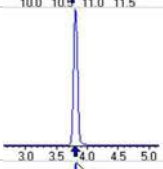 | | NR,S1, |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 839648 | ( 4.91 , N/A ) ( N/A , 0.02 , N/A ) | 4764.2 | N/A | 3.3262 [ 4.0000 ] | 83.2% { 72.5% } | 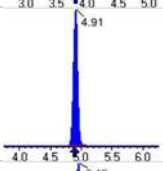 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 572429 | ( 6.15 , N/A ) ( N/A , 0.02 , N/A ) | 6808.0 | N/A | 1.8946 [ 2.0000 ] | 94.7% { 83.6% } | 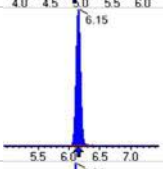 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 612233 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 5440.4 | N/A | 1.9402 [ 2.0000 ] | 97.0% { 86.9% } | 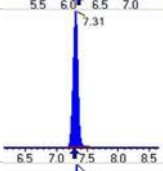 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858954 | ( 8.33 , N/A ) ( N/A , 0.02 , N/A ) | 3396.8 | N/A | 1.9996 [ 2.0000 ] | 100.0% { 90.1% } | 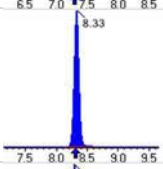 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 308464 | ( 9.29 , N/A ) ( N/A , 0.02 , N/A ) | 3598.0 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 99.2% } | 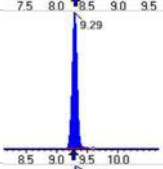 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 338425 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 1131.0 | N/A | 0.9401 [ 1.0000 ] | 94.0% { 87.9% } | 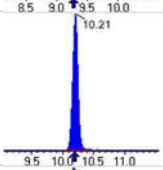 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 410565 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 820.9 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 82.6% } | 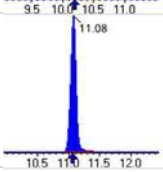 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433850 | ( 11.89 , N/A ) ( N/A , 0.02 , N/A ) | 1561.5 | N/A | 0.9870 [ 1.0000 ] | 98.7% { 87.0% } | 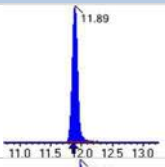 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 380580 | ( 12.99 , N/A ) ( N/A , 0.02 , N/A ) | 1366.1 | N/A | 0.9936 [ 1.0000 ] | 99.4% { 89.8% } | 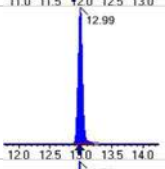 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579472 | ( 13.78 , N/A ) ( N/A , 0.01 , N/A ) | 2801.8 | N/A | 1.7812 [ 2.0000 ] | 89.1% { 81.8% } | 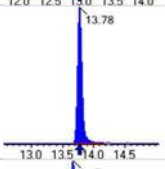 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1893233 | ( 6.47 , N/A ) ( N/A , 0.01 , N/A ) | 1395.4 | N/A | 1.7874 [ 2.0000 ] | 89.4% { 82.0% } | 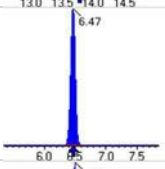 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1546106 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 4379.2 | N/A | 1.9435 [ 2.0000 ] | 97.2% { 93.9% } | 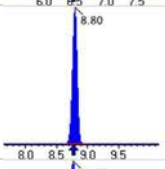 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1981905 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 616.6 | N/A | 2.0742 [ 2.0000 ] | 103.7% { 94.3% } | 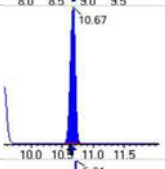 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 283468 | ( 5.61 , N/A ) ( N/A , 0.01 , N/A ) | 75.0 | N/A | 2.9943 [ 4.0000 ] | 74.9% { 78.8% } | 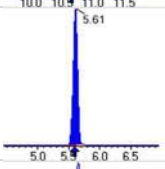 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 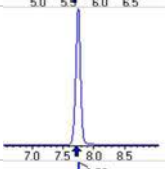 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 893578 | ( 9.56 , N/A ) ( N/A , 0.03 , N/A ) | 1072.7 | N/A | 3.0508 [ 4.0000 ] | 76.3% { 76.7% } | 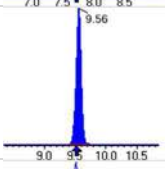 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 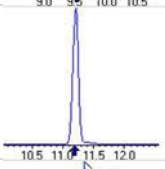 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2032266 | ( 12.85 , N/A ) ( N/A , 0.03 , N/A ) | 1776.7 | N/A | 1.9627 [ 2.0000 ] | 98.1% { 87.3% } | 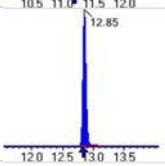 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 412108 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 1946.8 | N/A | 2.1554 [ 2.0000 ] | 107.8% { 97.4% } | 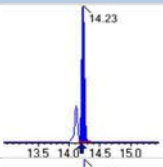  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 432162 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2675.4 | N/A | 1.9678 [ 2.0000 ] | 98.4% { 87.0% } | 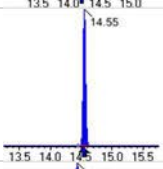  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 951188 | ( 10.44 , N/A ) ( N/A , 0.03 , N/A ) | 1462.8 | N/A | 3.8873 [ 4.0000 ] | 97.2% { 88.0% } | 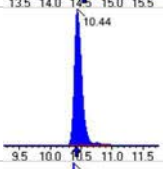  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 856821 | ( 10.98 , N/A ) ( N/A , 0.03 , N/A ) | 1852.7 | N/A | 3.6889 [ 4.0000 ] | 92.2% { 81.7% } | 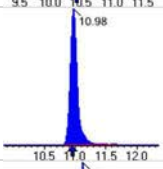  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1909243 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 3516.7 | N/A | 21.3705 [ 20.0000 ] | 106.9% { 101.4% } | 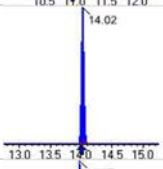  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2194972 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5592.6 | N/A | 20.2813 [ 20.0000 ] | 101.4% { 93.0% } | 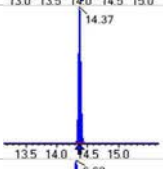  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1041744 | ( 6.62 , N/A ) ( N/A , 0.02 , N/A ) | 2598.2 | N/A | 8.0216 [ 8.0000 ] | 100.3% { 91.8% } | 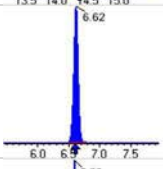  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561544 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 1277.3 | N/A | 2.0295 [ 2.0000 ] | 101.5% { 95.8% } | 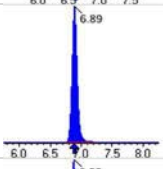  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 522549 | ( 8.98 , N/A ) ( N/A , 0.02 , N/A ) | 533.5 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 92.6% } | 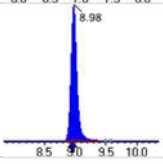  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0052L

**Client:C**Tidewater, Inc.L

**Project:C**[none]L

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.85L | -3.7L | 30.00L |
| PFPeAL | 4.00L | 3.72L | -6.9L | 30.00L |
| PFHxAL | 4.00L | 3.79L | -5.4L | 30.00L |
| PFHpAL | 4.00L | 3.66L | -8.6L | 30.00L |
| PFOAL | 4.00L | 3.17L | -20.8L | 30.00L |
| PFNAL | 4.00L | 3.83L | -4.3L | 30.00L |
| PFDAL | 4.00L | 3.82L | -4.6L | 30.00L |
| PFUnAL | 4.00L | 3.51L | -12.3L | 30.00L |
| PFDoAL | 4.00L | 3.25L | -18.9L | 30.00L |
| PFTrDAL | 4.00L | 3.37L | -15.8L | 30.00L |
| PFTeDAL | 4.00L | 4.07L | 1.9L | 30.00L |
| PFHxDAL | 4.00L | 3.19L | -20.4L | 30.00L |
| PFODAL | 4.00L | 3.15L | -21.2L | 30.00L |
| PFBSL | 4.00L | 3.87L | -3.1L | 30.00L |
| PFPeSL | 4.00L | 3.84L | -3.9L | 30.00L |
| PFHxSL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFHpSL | 4.00L | 3.80L | -5.0L | 30.00L |
| PFOSL | 4.00L | 3.54L | -11.5L | 30.00L |
| PFNSL | 4.00L | 3.70L | -7.5L | 30.00L |
| PFDSL | 4.00L | 4.06L | 1.5L | 30.00L |
| PFDoSL | 4.00L | 3.98L | -0.5L | 30.00L |
| 4:2FTSL | 4.00L | 3.85L | -3.9L | 30.00L |
| 6:2FTSL | 4.00L | 3.90L | -2.6L | 30.00L |
| 8:2FTSL | 4.00L | 3.75L | -6.2L | 30.00L |
| 10:2FTSL | 3.86L | 4.06L | 5.2L | 30.00L |
| PFOSAL | 4.00L | 3.98L | -0.5L | 30.00L |
| NMeFOSAL | 4.00L | 3.32L | -16.9L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0052L

**Client:C**Tidewater, Inc.L

**Project:C**[none]L

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.65L | -8.7L | 30.00L |
| NMeFOSAAL | 4.00L | 3.85L | -3.7L | 30.00L |
| NEtFOSAAL | 4.00L | 3.81L | -4.9L | 30.00L |
| NMeFOSEL | 4.00L | 3.94L | -1.5L | 30.00L |
| NEtFOSEL | 4.00L | 4.65L | 16.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.35L | -16.4L | 30.00L |
| ADONAL | 4.00L | 3.60L | -10.1L | 30.00L |
| PFEESAL | 4.00L | 3.38L | -15.4L | 30.00L |
| PFMPAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFMBAL | 4.00L | 3.39L | -15.2L | 30.00L |
| NFDHAL | 4.00L | 3.94L | -1.4L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.47L | -13.2L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 3.72L | -7.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.46L | -13.5L | 30.00L |
| 5:3FTCAL | 4.00L | 3.89L | -2.8L | 30.00L |
| 7:3FTCAL | 4.00L | 3.92L | -2.1L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.75L | 9.4L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.43L | 10.7L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.12L | 6.2L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.25L | 12.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.10L | 10.3L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.13L | 12.7L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.14L | 14.1L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.21L | 20.6L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.21L | 20.7L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.52L | 26.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.01L | 0.6L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.14L | 6.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0052L

**Client:C**Tidewater, Inc.L

**Project:C**[none]L

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.17L | 8.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.57L | 14.3L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.13L | 3.4L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.62L | 15.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 8.69L | 8.6L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.14L | 6.9L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.23L | 11.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.32L | 15.9L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.52L | 13.0L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.62L | 15.4L | 30.00L |
| D7-NMEFOSEL | 20.0L | 23.4L | 16.8L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.6L | 13.2L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 9.31L | 16.4L | 30.00L |

* Values outside of QC limitsL

APPL
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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (10)
Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 960012<br>( 163.0 / 69.0 ) 24140 | ( 2.82 , 0.74 ) ( N/A , 0.01 , 0.0) | 6179.9<br>1318.1 | 0.0251<br>100.3<br>100.3 | 3.3855 | N/A | 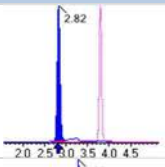 | 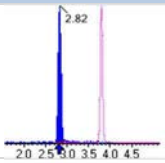 | |
| PFBA | ( 213.0 / 169.0 ) 1168041 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 2371.2 | N/A<br>0.0<br>0.0 | 3.8520 | N/A | 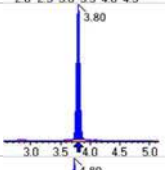 | | |
| PFPeA | ( 263.0 / 219.0 ) 980882<br>( 263.0 / 69.0 ) 12973 | ( 4.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 3446.6<br>234.0 | 0.0132<br>120.4<br>120.4 | 3.7234 | N/A | 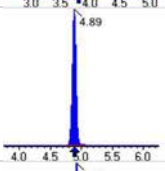 | 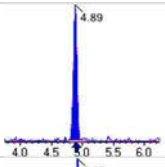 | |
| PFHxA | ( 313.0 / 269.0 ) 1090317<br>( 313.0 / 119.0 ) 126098 | ( 6.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 2560.9<br>1671.2 | 0.1157<br>104.1<br>104.1 | 3.7855 | N/A | 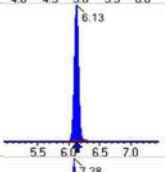 | 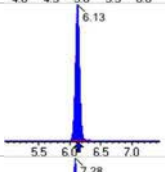 | |
| PFHpA | ( 363.0 / 319.0 ) 1184297<br>( 363.0 / 169.0 ) 360697 | ( 7.28 , 1.00 ) ( 0.00 , N/A , -0.1) | 1966.5<br>1170.9 | 0.3046<br>97.7<br>97.7 | 3.6554 | N/A | 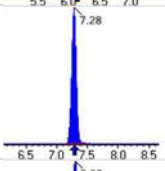 | 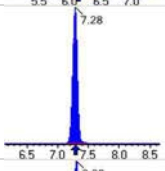 | |
| PFOA | ( 413.0 / 369.0 ) 1504917<br>( 413.0 / 169.0 ) 534568 | ( 8.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 848.3<br>779.3 | 0.3552<br>98.2<br>98.2 | 3.1674 | N/A | 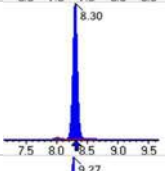 | 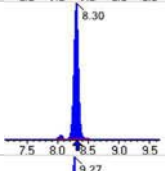 | MI5 DG 2024-03-13 |
| PFNA | ( 463.0 / 419.0 ) 1155444<br>( 463.0 / 169.0 ) 302002 | ( 9.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 1235.3<br>970.2 | 0.2614<br>99.6<br>99.6 | 3.8271 | N/A | 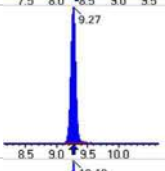 | 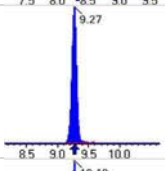 | |
| PFDA | ( 513.0 / 469.0 ) 1333493<br>( 513.0 / 169.0 ) 150349 | ( 10.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 2839.1<br>4132.0 | 0.1127<br>96.1<br>96.1 | 3.8164 | N/A | 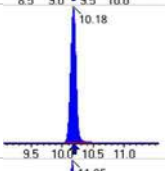 | 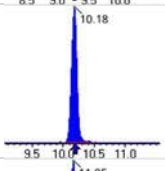 | |
| PFUnA | ( 563.0 / 519.0 ) 1415133<br>( 563.0 / 169.0 ) 203765 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.0) | 954.4<br>542.2 | 0.1440<br>97.2<br>97.2 | 3.5077 | N/A | 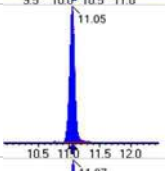 | 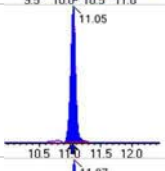 | |
| PFDoA | ( 613.0 / 569.0 ) 1522339<br>( 613.0 / 169.0 ) 223220 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 1216.3<br>726.0 | 0.1466<br>92.7<br>92.7 | 3.2452 | N/A | 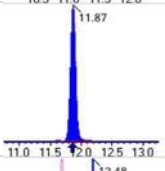 | 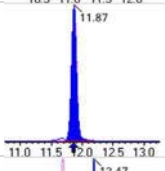 | |
| PFTrDA | ( 663.0 / 619.0 ) 1519440<br>( 663.0 / 169.0 ) 399428 | ( 12.48 , 1.05 ) ( N/A , 0.00 , 0.1) | 1082.7<br>705.9 | 0.2629<br>97.5<br>97.5 | 3.3689 | N/A | 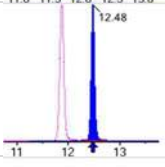 | 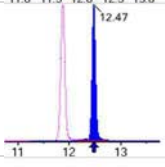 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1547325<br>( 713.0 / 169.0 ) 369471 | ( 12.96 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1598.8<br>774.0 | 0.2388<br>91.8<br>91.8 | 4.0743 | N/A | 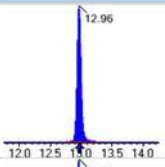 | 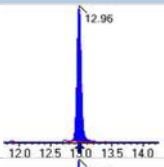 | |
| PFHxDA | ( 813.0 / 769.0 ) 1091864<br>( 813.0 / 169.0 ) 257584 | ( 13.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1694.2<br>868.3 | 0.2359<br>108.7<br>108.7 | 3.1855 | N/A | 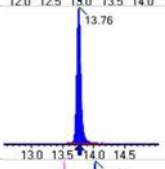 | 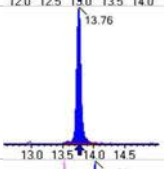 | |
| PFODA | ( 913.0 / 869.0 ) 725581<br>( 913.0 / 169.0 ) 246290 | ( 14.38 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1453.6<br>924.2 | 0.3394<br>88.9<br>88.9 | 3.1507 | N/A | 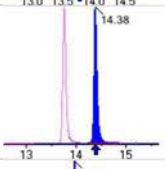 | 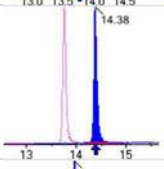 | |
| PFBS | ( 299.0 / 80.0 ) 1958171<br>( 299.0 / 99.0 ) 1431313 | ( 6.44 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4821.8<br>3013.6 | 0.7309<br>102.8<br>102.8 | 3.8746 | N/A | 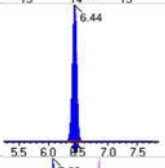 | 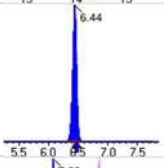 | |
| PFPeS | ( 349.0 / 80.0 ) 4744093<br>( 349.0 / 99.0 ) 1609699 | ( 7.69 , 0.88 )<br>( N/A , -0.01 , 0.0) | 3035.0<br>3228.8 | 0.3393<br>99.8<br>99.8 | 3.8426 | N/A | 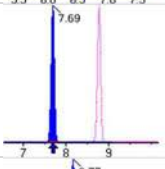 | 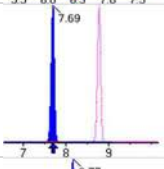 | |
| PFHxS | ( 399.0 / 80.0 ) 5120898<br>( 399.0 / 99.0 ) 1702580 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3958.3<br>5730.4 | 0.3325<br>106.3<br>106.3 | 3.7298 | N/A | 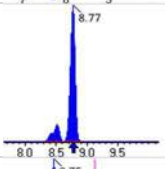 | 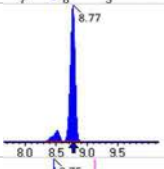 | |
| PFHpS | ( 449.0 / 80.0 ) 4144968<br>( 449.0 / 99.0 ) 1137014 | ( 9.75 , 0.92 )<br>( N/A , 0.00 , 0.0) | 1404.8<br>2127.7 | 0.2743<br>102.7<br>102.7 | 3.7999 | N/A | 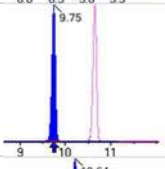 | 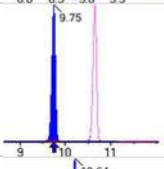 | |
| PFOS | ( 499.0 / 80.0 ) 3884446<br>( 499.0 / 99.0 ) 846912 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2363.0<br>19909.8 | 0.2180<br>92.2<br>92.2 | 3.5394 | N/A | 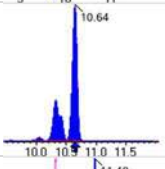 | 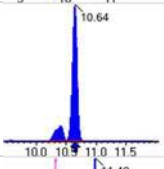 | |
| PFNS | ( 549.0 / 80.0 ) 3958884<br>( 549.0 / 99.0 ) 1101392 | ( 11.48 , 1.08 )<br>( N/A , 0.00 , -0.1) | 2811.4<br>2589.0 | 0.2782<br>104.7<br>104.7 | 3.6990 | N/A | 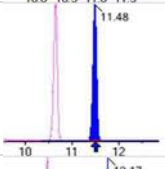 | 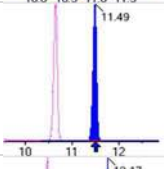 | |
| PFDS | ( 599.0 / 80.0 ) 5177392<br>( 599.0 / 99.0 ) 1344953 | ( 12.17 , 1.14 )<br>( N/A , 0.00 , 0.0) | 3992.8<br>3560.7 | 0.2598<br>103.6<br>103.6 | 4.0586 | N/A | 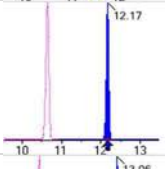 | 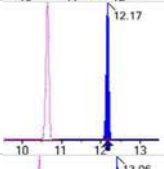 | |
| PFDoS | ( 699.0 / 80.0 ) 4338419<br>( 699.0 / 99.0 ) 1038626 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.0) | 4248.8<br>2853.2 | 0.2394<br>103.8<br>103.8 | 3.9801 | N/A | 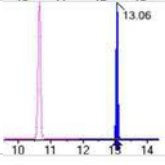 | 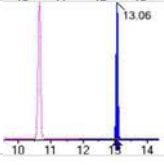 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1022473<br>( 327.0 / 81.0 ) 867299 | ( 5.58 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4383.6<br>2501.8 | 0.8482<br>96.8<br>96.8 | 3.8457 | N/A | 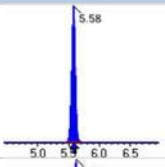 | 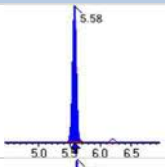 | |
| 6:2FTS | ( 427.0 / 407.0 ) 959749<br>( 427.0 / 81.0 ) 1050251 | ( 7.71 , 1.00 )<br>( 0.00 , N/A , 0.2) | 3454.5<br>3314.6 | 1.0943<br>86.1<br>86.1 | 3.8974 | N/A | 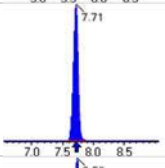 | 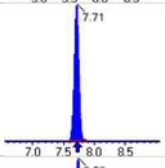 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1148897<br>( 527.0 / 81.0 ) 1137689 | ( 9.53 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1249.3<br>1342.3 | 0.9902<br>104.4<br>104.4 | 3.7537 | N/A | 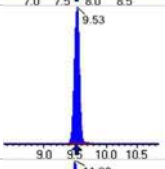 | 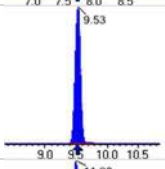 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1112399<br>( 627.0 / 81.0 ) 1536261 | ( 11.20 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1195.1<br>998.5 | 1.3810<br>102.2<br>102.2 | 4.0591 | N/A | 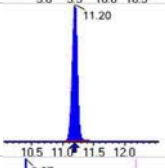 | 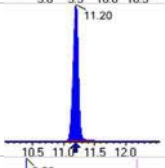 | |
| PFBSA | ( 297.9 / 78.0 ) 3794956<br>( 297.9 / 278.0 ) 6394 | ( 8.07 , 0.57 )<br>( N/A , 0.01 , 0.2) | 1263.9<br>83.5 | 0.0017<br>120.0<br>120.0 | 4.2276 | N/A | 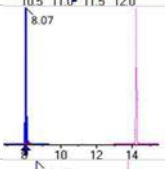 | 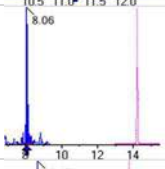 | |
| PFHxSA | ( 397.9 / 78.0 ) 4290810<br>( 397.9 / 378.0 ) 22446 | ( 10.95 , 0.75 )<br>( N/A , 0.01 , -0.2) | 682.1<br>275.2 | 0.0052<br>137.4<br>137.4 | 3.5831 | N/A | 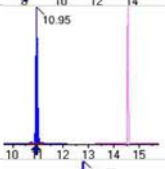 | 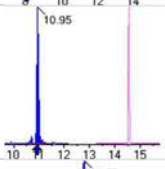 | MI4 ABK 3/13/24 |
| PFOSA | ( 498.0 / 78.0 ) 3945625<br>( 498.0 / 478.0 ) 54682 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.1) | 921.3<br>455.9 | 0.0139<br>96.0<br>96.0 | 3.9818 | N/A | 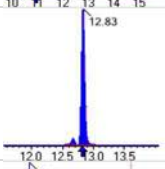 | 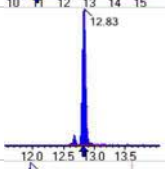 | MI4 ABK 3/13/24 |
| TFSI | ( 279.7 / 147.0 ) 7895986<br>( 279.7 / 211.0 ) 704864 | ( 8.36 , 0.65 )<br>( N/A , -0.01 , 0.2) | 57.4<br>54.9 | 0.0893<br>108.2<br>108.2 | 3.7482 | N/A | 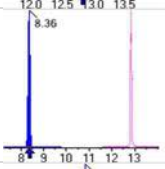 | 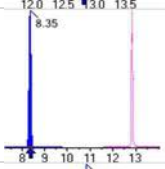 | |
| NMeFOSA | ( 512.0 / 219.0 ) 653625<br>( 512.0 / 169.0 ) 418140 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5759.3<br>2386.7 | 0.6397<br>87.0<br>87.0 | 3.3241 | N/A | 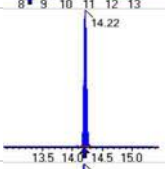 | 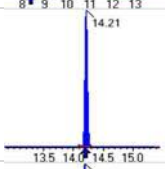 | |
| NEtFOSA | ( 526.0 / 219.0 ) 935275<br>( 526.0 / 169.0 ) 1006483 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 0.0) | 6956.6<br>5886.3 | 1.0761<br>85.0<br>85.0 | 3.6505 | N/A | 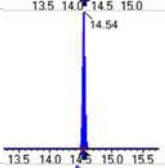 | 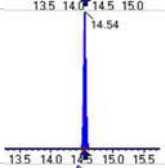 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 920311<br>( 570.0 / 483.0 ) 421673 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , -0.1) | 6919.9<br>1886.4 | 0.4582<br>105.8<br>105.8 | 3.8528 | N/A | 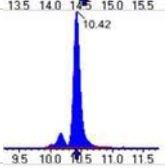 | 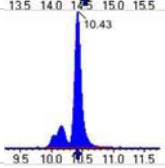 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (10)
Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 902817<br>( 584.0 / 526.0 ) 543021 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1977.4<br>685.9 | 0.6015<br>97.1<br>97.1 | 3.8059 | N/A | 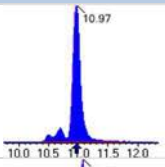 | 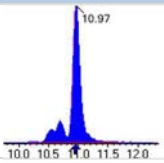 | |
| NMeFOSE | ( 616.0 / 59.0 ) 426612 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3035.5 | N/A<br>0.0<br>0.0 | 3.9383 | N/A | 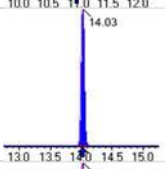 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 462041 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 5371.3 | N/A<br>0.0<br>0.0 | 4.6537 | N/A | 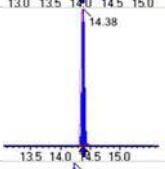 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 265795<br>( 285.0 / 185.0 ) 867547 | ( 6.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1555.4<br>1546.6 | 3.2640<br>104.7<br>104.7 | 3.3451 | N/A | 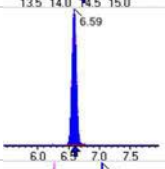 | 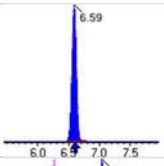 | |
| ADONA | ( 377.0 / 85.0 ) 3640673<br>( 377.0 / 251.0 ) 374734 | ( 7.67 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1627.1<br>1227.3 | 0.1029<br>96.5<br>96.5 | 3.5978 | N/A | 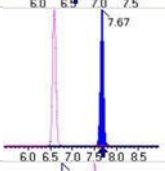 | 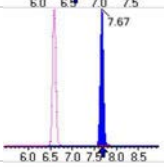 | |
| PFMPA | ( 229.0 / 85.0 ) 283218 | ( 4.19 , 0.86 )<br>( N/A , -0.01 , 0.0) | 4172.7 | N/A<br>0.0<br>0.0 | 3.3957 | N/A | 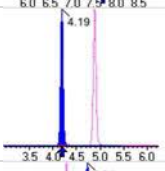 | | |
| PFMBA | ( 279.0 / 85.0 ) 748985 | ( 5.26 , 1.08 )<br>( N/A , -0.01 , 0.0) | 4515.5 | N/A<br>0.0<br>0.0 | 3.3928 | N/A | 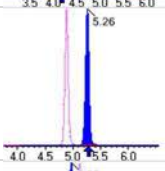 | | |
| NFDHA | ( 295.0 / 201.0 ) 394803<br>( 295.0 / 85.0 ) 413378 | ( 5.98 , 0.98 )<br>( N/A , -0.01 , -0.2) | 2334.3<br>2269.5 | 1.0470<br>96.8<br>96.8 | 3.9431 | N/A | 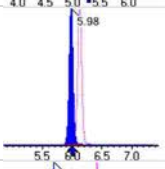 | 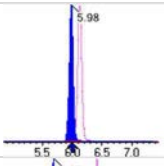 | |
| PFECHS | ( 461.0 / 98.9 ) 2241130<br>( 461.0 / 381.2 ) 851667 | ( 9.67 , 0.91 )<br>( N/A , 0.00 , 0.1) | 2238.1<br>2255.1 | 0.3800<br>97.3<br>97.3 | 3.6211 | N/A | 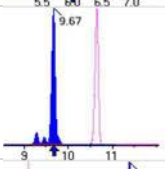 | 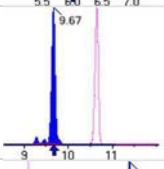 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4338051<br>( 533.0 / 353.0 ) 1382815 | ( 11.30 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3566.4<br>2412.4 | 0.3188<br>99.2<br>99.2 | 3.4739 | N/A | 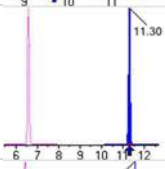 | 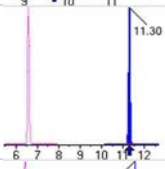 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3635672<br>( 633.0 / 453.0 ) 1218785 | ( 12.57 , 1.91 )<br>( N/A , 0.00 , 0.0) | 3125.5<br>2891.4 | 0.3352<br>102.6<br>102.6 | 3.7170 | N/A | 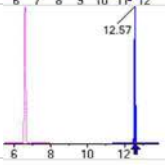 | 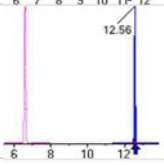 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (10)
Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 732928<br>( 315.0 / 83.0 ) 430320 | ( 7.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 2694.6<br>1447.1 | 0.5871<br>102.5<br>102.5 | 3.3833 | N/A | 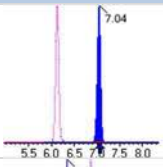 | 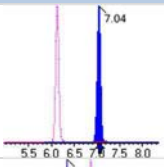 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 44296<br>( 241.0 / 117.0 ) 106197 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.1) | 675.9<br>443.8 | 2.3974<br>108.1<br>108.1 | 3.4612 | N/A | 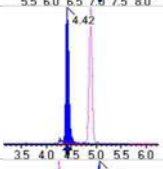 | 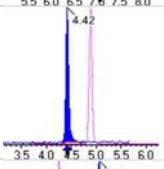 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 271454<br>( 341.0 / 217.0 ) 392115 | ( 6.99 , 1.14 )<br>( N/A , 0.00 , 0.1) | 838.6<br>769.5 | 1.4445<br>96.5<br>96.5 | 3.8886 | N/A | 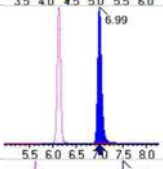 | 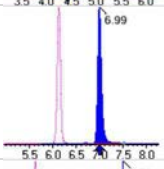 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 402129<br>( 441.0 / 337.0 ) 338035 | ( 9.42 , 1.54 )<br>( N/A , 0.01 , 0.1) | 2390.3<br>3196.5 | 0.8406<br>94.4<br>94.4 | 3.9159 | N/A | 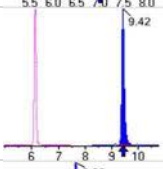 | 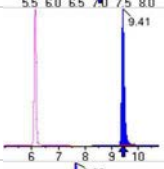 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1154034<br>( 357.2 / 243.0 ) 118377 | ( 6.86 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1241.4<br>729.6 | 0.1026<br>97.2<br>97.2 | 3.7351 | N/A | 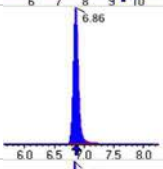 | 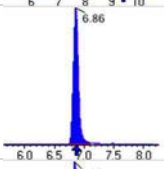 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 884567<br>( 457.2 / 343.0 ) 34980 | ( 8.94 , 1.00 )<br>( -0.01 , N/A , -0.2) | 659.7<br>430.9 | 0.0395<br>101.1<br>101.1 | 3.9899 | N/A | 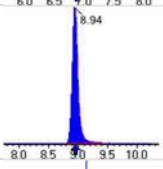 | 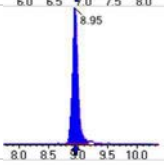 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 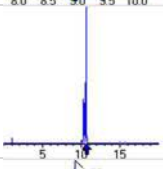 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 265638 | ( 3.80 , N/A )<br>( N/A , 0.00 , N/A ) | 1102.0 | N/A | 0.8818<br>[ 1.0000 ] | 88.2%<br>{ 87.6% } | 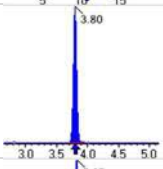 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130299 | ( 6.13 , N/A )<br>( N/A , -0.01 , N/A ) | 5646.2 | N/A | 0.8474<br>[ 1.0000 ] | 84.7%<br>{ 79.0% } | 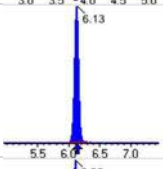 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 405261 | ( 8.30 , N/A )<br>( N/A , -0.01 , N/A ) | 8311.7 | N/A | 0.9084<br>[ 1.0000 ] | 90.8%<br>{ 89.1% } | 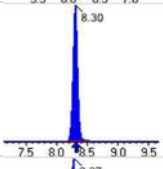 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282851 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1074.0 | N/A | 0.8461<br>[ 1.0000 ] | 84.6%<br>{ 86.8% } | 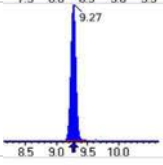 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 269853 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 7039.7 | N/A | 0.8137 [ 1.0000 ] | 81.4% { 79.4% } | 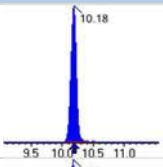 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 991747 | ( 8.77 , N/A ) ( N/A , -0.01 , N/A ) | 4735.8 | N/A | 0.8875 [ 1.0000 ] | 88.8% { 87.0% } | 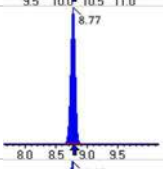 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 823232 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 2848.3 | N/A | 0.8433 [ 1.0000 ] | 84.3% { 82.7% } | 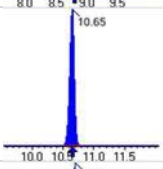 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2564182 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 52437.7 | N/A | 8.7534 [ 8.0000 ] | 109.4% { 96.5% } | 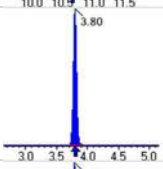 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1035099 | ( 4.89 , N/A ) ( N/A , -0.01 , N/A ) | 5490.9 | N/A | 4.4281 [ 4.0000 ] | 110.7% { 89.4% } | 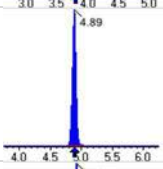 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 594514 | ( 6.13 , N/A ) ( N/A , -0.01 , N/A ) | 7927.5 | N/A | 2.1250 [ 2.0000 ] | 106.3% { 86.8% } | 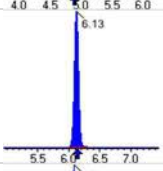 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 657917 | ( 7.28 , N/A ) ( N/A , -0.01 , N/A ) | 4103.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 93.4% } | 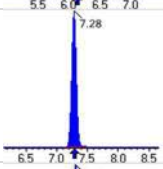 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 934465 | ( 8.30 , N/A ) ( N/A , 0.00 , N/A ) | 3809.8 | N/A | 2.1870 [ 2.0000 ] | 109.3% { 98.0% } | 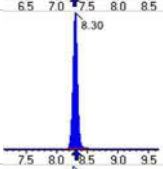 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 301279 | ( 9.27 , N/A ) ( N/A , -0.01 , N/A ) | 2676.2 | N/A | 1.1030 [ 1.0000 ] | 110.3% { 96.9% } | 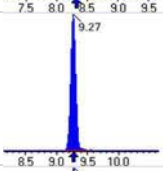 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 350842 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 1337.7 | N/A | 1.1267 [ 1.0000 ] | 112.7% { 91.2% } | 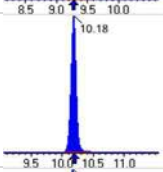 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432041 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1147.3 | N/A | 1.1412 [ 1.0000 ] | 114.1% { 86.9% } | 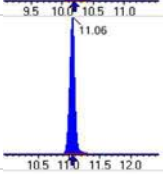 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 458339 | ( 11.87 , N/A ) ( N/A , 0.01 , N/A ) | 1453.0 | N/A | 1.2055 [ 1.0000 ] | 120.6% { 91.9% } | 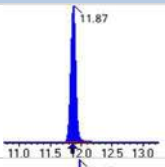  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 399892 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1437.5 | N/A | 1.2070 [ 1.0000 ] | 120.7% { 94.3% } | 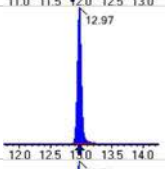  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 710258 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3142.5 | N/A | 2.5239 [ 2.0000 ] | 126.2% { 100.3% } | 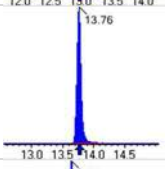  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1943804 | ( 6.44 , N/A ) ( N/A , -0.01 , N/A ) | 1332.8 | N/A | 2.0116 [ 2.0000 ] | 100.6% { 84.1% } | 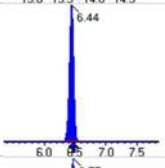  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1550553 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 4650.3 | N/A | 2.1366 [ 2.0000 ] | 106.8% { 94.2% } | 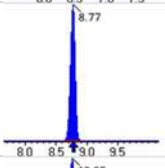  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1898767 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 1632.8 | N/A | 2.1666 [ 2.0000 ] | 108.3% { 90.4% } | 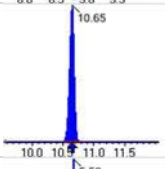  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 394958 | ( 5.58 , N/A ) ( N/A , -0.01 , N/A ) | 81.1 | N/A | 4.5732 [ 4.0000 ] | 114.3% { 109.8% } | 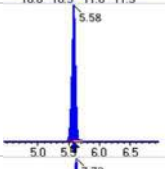  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1108790 | ( 7.72 , N/A ) ( N/A , -0.01 , N/A ) | 4344.9 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 103.2% } | 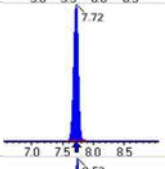  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1235693 | ( 9.53 , N/A ) ( N/A , 0.00 , N/A ) | 1481.0 | N/A | 4.6246 [ 4.0000 ] | 115.6% { 106.1% } | 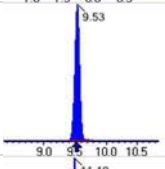  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2664551 | ( 11.19 , N/A ) ( N/A , 0.01 , N/A ) | 1653.1 | N/A | 8.6875 [ 8.0000 ] | 108.6% { 106.4% } | 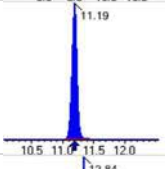  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2030706 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2445.6 | N/A | 2.1382 [ 2.0000 ] | 106.9% { 87.2% } | 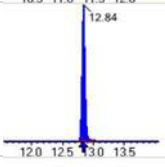  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 390446 | ( 14.21 , N/A ) ( N/A , 0.01 , N/A ) | 2867.0 | N/A | 2.2264 [ 2.0000 ] | 111.3% { 92.2% } | 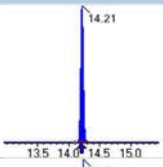  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 466969 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2783.5 | N/A | 2.3181 [ 2.0000 ] | 115.9% { 94.0% } | 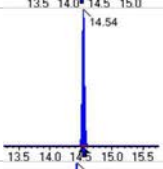  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1014564 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2082.7 | N/A | 4.5205 [ 4.0000 ] | 113.0% { 93.8% } | 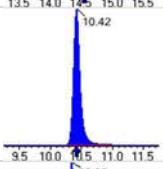  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 983632 | ( 10.95 , N/A ) ( N/A , 0.01 , N/A ) | 1957.9 | N/A | 4.6170 [ 4.0000 ] | 115.4% { 93.8% } | 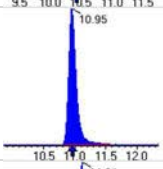  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1913754 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2608.4 | N/A | 23.3544 [ 20.0000 ] | 116.8% { 101.7% } | 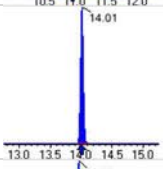  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2247315 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4304.5 | N/A | 22.6391 [ 20.0000 ] | 113.2% { 95.2% } | 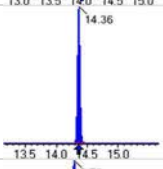  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1119738 | ( 6.59 , N/A ) ( N/A , -0.01 , N/A ) | 2851.6 | N/A | 9.3112 [ 8.0000 ] | 116.4% { 98.7% } | 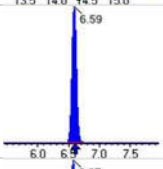  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 574894 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 1420.6 | N/A | 2.4020 [ 2.0000 ] | 120.1% { 98.1% } | 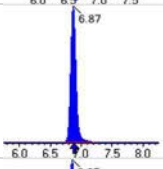  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 525740 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 697.0 | N/A | 2.3529 [ 2.0000 ] | 117.6% { 93.2% } | 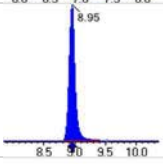  | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0052L

**Client:W**Tidewater, Inc.L

**Project:W**[none]L

**Calibration:W**2411010L

**Laboratory ID:W**SD00936-LCV1L

**Sequence:W**SD00936L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.392L | -2.0L | 30.00L |
| PFPeAL | 0.200L | 0.184L | -7.8L | 30.00L |
| PFHxAL | 0.100L | 0.0871L | -12.9L | 30.00L |
| PFHpAL | 0.100L | 0.0848L | -15.2L | 30.00L |
| PFOAL | 0.100L | 0.112L | 11.8L | 30.00L |
| PFNAL | 0.100L | 0.0942L | -5.8L | 30.00L |
| PFDAL | 0.100L | 0.0906L | -9.4L | 30.00L |
| PFUnAL | 0.100L | 0.0924L | -7.6L | 30.00L |
| PFDoAL | 0.100L | 0.0992L | -0.8L | 30.00L |
| PFTrDAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFTeDAL | 0.100L | 0.100L | 0.3L | 30.00L |
| PFHxDAL | 0.100L | 0.0986L | -1.4L | 30.00L |
| PFODAL | 0.100L | 0.101L | 0.8L | 30.00L |
| PFBSL | 0.0885L | 0.0833L | -5.8L | 30.00L |
| PFPeSL | 0.0940L | 0.0861L | -8.4L | 30.00L |
| PFHxSL | 0.0915L | 0.0869L | -5.0L | 30.00L |
| PFHpSL | 0.0955L | 0.0956L | 0.1L | 30.00L |
| PFOSL | 0.0930L | 0.0935L | 0.5L | 30.00L |
| PFNSL | 0.0960L | 0.0897L | -6.6L | 30.00L |
| PFDSL | 0.0965L | 0.0928L | -3.9L | 30.00L |
| PFDoSL | 0.0970L | 0.0931L | -4.0L | 30.00L |
| 4:2FTSL | 0.375L | 0.336L | -10.4L | 30.00L |
| 6:2FTSL | 0.380L | 0.387L | 1.8L | 30.00L |
| 8:2FTSL | 0.384L | 0.368L | -4.3L | 30.00L |
| 10:2FTSL | 0.386L | 0.361L | -6.5L | 30.00L |
| PFOSAL | 0.100L | 0.0936L | -6.4L | 30.00L |
| NMeFOSAL | 0.400L | 0.396L | -1.0L | 30.00L |
| NEtFOSAL | 0.400L | 0.363L | -9.3L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0052L

**Client:W**Tidewater, Inc.L

**Project:W**[none]L

**Calibration:W**2411010L

**Laboratory ID:W**SD00936-LCV1L

**Sequence:W**SD00936L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.107L | 6.9L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0867L | -13.3L | 30.00L |
| NMeFOSEL | 0.400L | 0.397L | -0.7L | 30.00L |
| NEtFOSEL | 0.400L | 0.401L | 0.1L | 30.00L |
| HFPO-DAL | 0.100L | 0.0920L | -8.0L | 30.00L |
| ADONAL | 0.0945L | 0.0886L | -6.2L | 30.00L |
| PFEESAL | 0.178L | 0.159L | -10.8L | 30.00L |
| PFMPAL | 0.200L | 0.185L | -7.5L | 30.00L |
| PFMBAL | 0.200L | 0.182L | -9.0L | 30.00L |
| NFDHAL | 0.200L | 0.211L | 5.6L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0817L | -12.6L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0849L | -10.2L | 30.00L |
| 3:3FTCAL | 0.400L | 0.331L | -17.2L | 30.00L |
| 5:3FTCAL | 0.400L | 0.359L | -10.3L | 30.00L |
| 7:3FTCAL | 0.400L | 0.367L | -8.3L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 52039<br>( 163.0 / 69.0 ) 1306 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.2) | 376.6<br>73.1 | 0.0251<br>100.1<br>99.1 | 0.1670<br>[ 0.2000 ] | 83.6% | 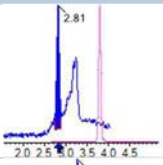 | 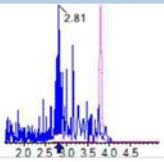 | |
| PFBA | ( 213.0 / 169.0 ) 130554 | ( 3.79 , 1.00 ) ( 0.00 , N/A , 0.0) | 310.8 | N/A<br>0.0<br>0.0 | 0.3920<br>[ 0.4000 ] | 98.0% | 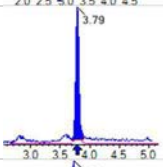 | | |
| PFPeA | ( 263.0 / 219.0 ) 54245<br>( 263.0 / 69.0 ) 597 | ( 4.88 , 1.00 ) ( 0.01 , N/A , 1.2) | 278.7<br>16.1 | 0.0110<br>100.2<br>91.4 | 0.1840<br>[ 0.2000 ] | 92.2% | 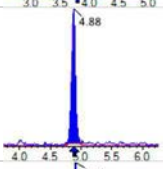 | 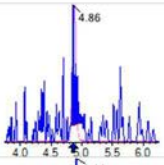 | |
| PFHxA | ( 313.0 / 269.0 ) 27649<br>( 313.0 / 119.0 ) 3749 | ( 6.11 , 1.00 ) ( 0.00 , N/A , 0.2) | 225.6<br>84.7 | 0.1356<br>122.0<br>117.6 | 0.0870<br>[ 0.1000 ] | 87.1% | 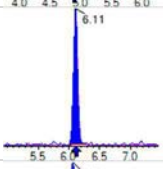 | 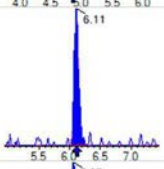 | |
| PFHpA | ( 363.0 / 319.0 ) 29077<br>( 363.0 / 169.0 ) 11753 | ( 7.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 279.0<br>234.2 | 0.4042<br>129.7<br>137.9 | 0.0850<br>[ 0.1000 ] | 84.8% | 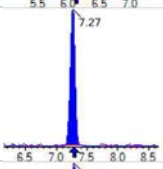 | 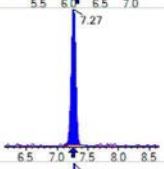 | |
| PFOA | ( 413.0 / 369.0 ) 52071<br>( 413.0 / 169.0 ) 16650 | ( 8.29 , 1.00 ) ( 0.00 , N/A , 0.5) | 93.0<br>140.5 | 0.3197<br>88.4<br>92.7 | 0.1120<br>[ 0.1000 ] | 111.8% | 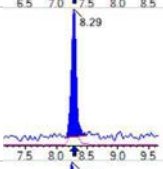 | 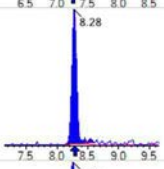 | |
| PFNA | ( 463.0 / 419.0 ) 31061<br>( 463.0 / 169.0 ) 8716 | ( 9.24 , 1.00 ) ( 0.00 , N/A , -0.3) | 188.4<br>217.7 | 0.2806<br>106.9<br>111.2 | 0.0940<br>[ 0.1000 ] | 94.2% | 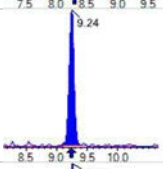 | 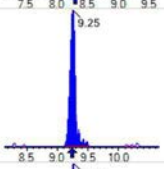 | |
| PFDA | ( 513.0 / 469.0 ) 35041<br>( 513.0 / 169.0 ) 3949 | ( 10.15 , 1.00 ) ( 0.00 , N/A , 0.0) | 335.2<br>311.7 | 0.1127<br>96.0<br>97.3 | 0.0910<br>[ 0.1000 ] | 90.6% | 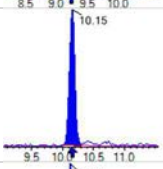 | 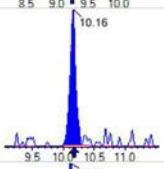 | MI1 DG 2024-03-14 |
| PFUnA | ( 563.0 / 519.0 ) 39819<br>( 563.0 / 169.0 ) 6588 | ( 11.03 , 1.00 ) ( 0.00 , N/A , 0.5) | 304.5<br>101.9 | 0.1655<br>111.7<br>111.7 | 0.0920<br>[ 0.1000 ] | 92.4% | 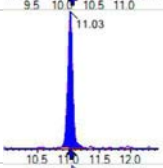 | 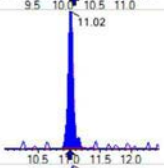 | |
| PFDoA | ( 613.0 / 569.0 ) 45120<br>( 613.0 / 169.0 ) 7702 | ( 11.85 , 1.00 ) ( 0.00 , N/A , -0.1) | 238.7<br>67.8 | 0.1707<br>108.0<br>113.5 | 0.0990<br>[ 0.1000 ] | 99.2% | 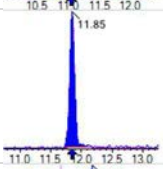 | 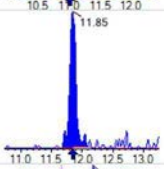 | |
| PFTrDA | ( 663.0 / 619.0 ) 41932<br>( 663.0 / 169.0 ) 10610 | ( 12.46 , 1.05 ) ( N/A , 0.01 , -0.4) | 244.9<br>185.1 | 0.2530<br>93.9<br>96.4 | 0.0960<br>[ 0.1000 ] | 95.9% | 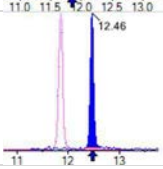 | 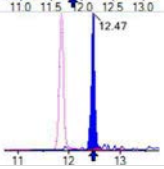 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 38471<br>( 713.0 / 169.0 ) 10993 | ( 12.95 , 1.00 ) ( -0.01 , N/A , 0.0) | 256.0<br>126.9 | 0.2858<br>109.9<br>113.3 | 0.1000<br>[ 0.1000 ] | 100.3% | 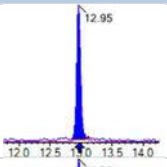 | 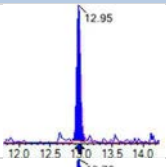 | |
| PFHxDA | ( 813.0 / 769.0 ) 33688<br>( 813.0 / 169.0 ) 7880 | ( 13.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 228.8<br>82.3 | 0.2339<br>107.8<br>105.0 | 0.0990<br>[ 0.1000 ] | 98.6% | 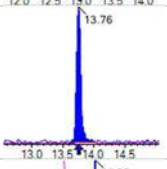 | 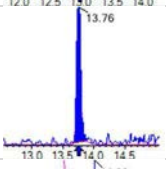 | |
| PFODA | ( 913.0 / 869.0 ) 23127<br>( 913.0 / 169.0 ) 7255 | ( 14.38 , 1.05 ) ( N/A , 0.01 , 0.2) | 141.4<br>52.1 | 0.3137<br>82.1<br>90.0 | 0.1010<br>[ 0.1000 ] | 100.8% | 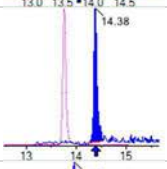 | 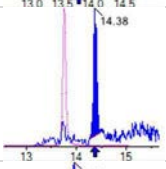 | |
| PFBS | ( 299.0 / 80.0 ) 48008<br>( 299.0 / 99.0 ) 35003 | ( 6.42 , 1.00 ) ( 0.00 , N/A , 0.2) | 480.9<br>222.4 | 0.7291<br>102.6<br>98.8 | 0.0830<br>[ 0.0880 ] | 94.2% | 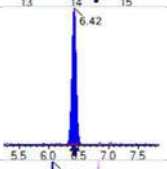 | 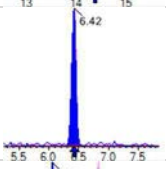 | |
| PFPeS | ( 349.0 / 80.0 ) 114070<br>( 349.0 / 99.0 ) 37278 | ( 7.67 , 0.88 ) ( N/A , 0.01 , -0.1) | 660.6<br>352.1 | 0.3268<br>96.1<br>94.5 | 0.0860<br>[ 0.0940 ] | 91.8% | 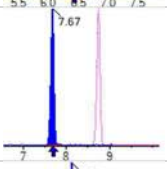 | 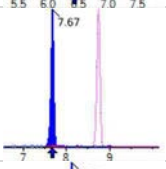 | |
| PFHxS | ( 399.0 / 80.0 ) 128070<br>( 399.0 / 99.0 ) 41928 | ( 8.74 , 1.00 ) ( 0.00 , N/A , -0.2) | 821.8<br>2973.9 | 0.3274<br>104.7<br>97.5 | 0.0870<br>[ 0.0910 ] | 95.4% | 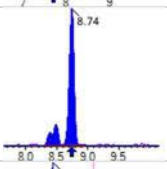 | 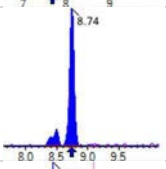 | |
| PFHpS | ( 449.0 / 80.0 ) 109401<br>( 449.0 / 99.0 ) 26209 | ( 9.72 , 0.92 ) ( N/A , 0.01 , -0.1) | 620.7<br>259.5 | 0.2396<br>89.7<br>88.5 | 0.0960<br>[ 0.0950 ] | 100.5% | 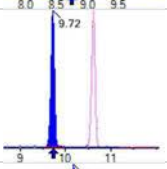 | 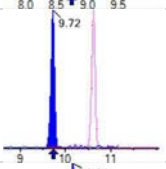 | |
| PFOS | ( 499.0 / 80.0 ) 107640<br>( 499.0 / 99.0 ) 24915 | ( 10.61 , 1.00 ) ( 0.00 , N/A , 0.2) | 523.2<br>2684.6 | 0.2315<br>97.9<br>99.7 | 0.0940<br>[ 0.0930 ] | 100.8% | 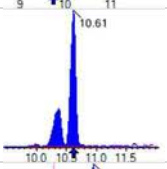 | 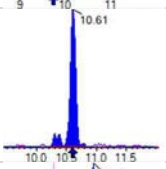 | |
| PFNS | ( 549.0 / 80.0 ) 100683<br>( 549.0 / 99.0 ) 29541 | ( 11.46 , 1.08 ) ( N/A , 0.01 , 0.1) | 385.9<br>347.0 | 0.2934<br>110.4<br>109.4 | 0.0900<br>[ 0.0960 ] | 93.4% | 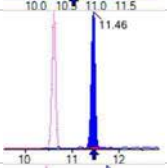 | 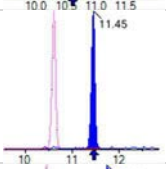 | |
| PFDS | ( 599.0 / 80.0 ) 124099<br>( 599.0 / 99.0 ) 35631 | ( 12.15 , 1.14 ) ( N/A , 0.01 , -0.1) | 563.9<br>408.1 | 0.2871<br>114.5<br>109.2 | 0.0930<br>[ 0.0960 ] | 96.3% | 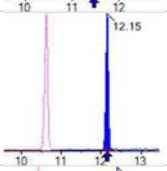 | 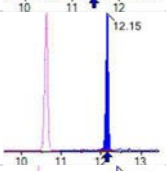 | |
| PFDoS | ( 699.0 / 80.0 ) 106415<br>( 699.0 / 99.0 ) 25340 | ( 13.06 , 1.23 ) ( N/A , 0.02 , -0.1) | 747.3<br>292.9 | 0.2381<br>103.2<br>98.5 | 0.0930<br>[ 0.0970 ] | 96.0% | 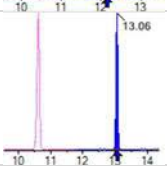 | 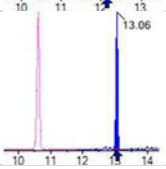 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 96957<br>( 327.0 / 81.0 ) 97244 | ( 5.57 , 1.00 ) ( 0.00 , N/A , 0.0) | 1380.1<br>616.6 | 1.0030<br>114.5<br>121.4 | 0.3360<br>[ 0.3740 ] | 89.9% | 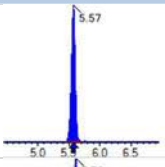 | 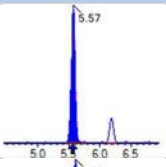 | |
| 6:2FTS | ( 427.0 / 407.0 ) 108798<br>( 427.0 / 81.0 ) 127678 | ( 7.70 , 1.00 ) ( 0.00 , N/A , 0.1) | 2419.0<br>983.7 | 1.1735<br>92.4<br>94.8 | 0.3870<br>[ 0.3800 ] | 101.9% | 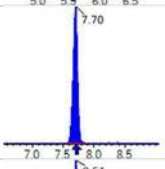 | 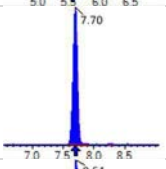 | |
| 8:2FTS | ( 527.0 / 507.0 ) 120058<br>( 527.0 / 81.0 ) 118373 | ( 9.51 , 1.00 ) ( -0.01 , N/A , -0.1) | 696.5<br>714.3 | 0.9860<br>104.0<br>103.3 | 0.3680<br>[ 0.3830 ] | 95.9% | 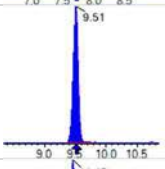 | 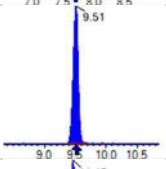 | |
| 10:2FTS | ( 627.0 / 607.0 ) 105813<br>( 627.0 / 81.0 ) 150096 | ( 11.17 , 1.00 ) ( 0.01 , N/A , 0.1) | 989.8<br>367.9 | 1.4185<br>104.9<br>109.7 | 0.3610<br>[ 0.3860 ] | 93.3% | 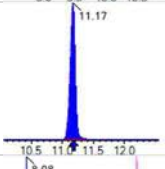 | 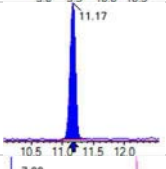 | |
| PFBSA | ( 297.9 / 78.0 ) 92092<br>( 297.9 / 278.0 ) 253 | ( 8.08 , 0.57 ) ( N/A , 0.00 , 10.4) | 529.0<br>6.7 | 0.0028<br>196.0<br>191.2 | 0.0990<br>[ 0.1000 ] | 98.7% | 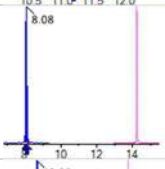 | 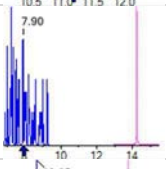 | |
| PFHxSA | ( 397.9 / 78.0 ) 112531<br>( 397.9 / 378.0 ) 876 | ( 10.96 , 0.75 ) ( N/A , 0.01 , 0.6) | 632.6<br>43.7 | 0.0078<br>204.4<br>189.0 | 0.0920<br>[ 0.1000 ] | 91.7% | 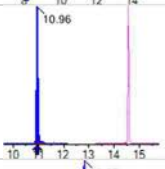 | 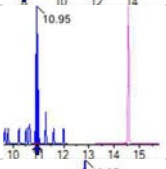 | |
| PFOSA | ( 498.0 / 78.0 ) 104494<br>( 498.0 / 478.0 ) 1369 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.1) | 839.8<br>62.8 | 0.0131<br>90.8<br>93.4 | 0.0940<br>[ 0.1000 ] | 93.6% | 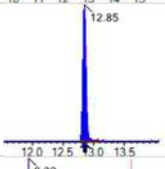 | 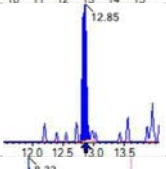 | |
| TFSI | ( 279.7 / 147.0 ) 237518<br>( 279.7 / 211.0 ) 20173 | ( 8.32 , 0.65 ) ( N/A , 0.01 , -0.3) | 53.0<br>23.5 | 0.0849<br>103.0<br>103.1 | 0.1000<br>[ 0.0980 ] | 102.2% | 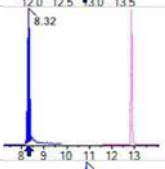 | 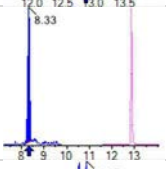 | |
| NMeFOSA | ( 512.0 / 219.0 ) 80941<br>( 512.0 / 169.0 ) 60393 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.4) | 870.0<br>686.2 | 0.7461<br>101.5<br>96.8 | 0.3960<br>[ 0.4000 ] | 99.0% | 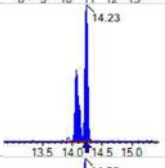 | 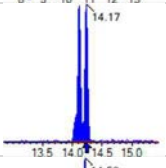 | |
| NEtFOSA | ( 526.0 / 219.0 ) 95186<br>( 526.0 / 169.0 ) 127620 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.3) | 893.4<br>793.5 | 1.3407<br>105.8<br>105.1 | 0.3630<br>[ 0.4000 ] | 90.7% | 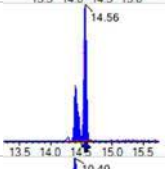 | 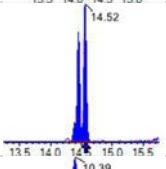 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 25801<br>( 570.0 / 483.0 ) 9296 | ( 10.40 , 1.00 ) ( 0.00 , N/A , 0.6) | 9854.1<br>254.7 | 0.3603<br>83.2<br>81.4 | 0.1070<br>[ 0.1000 ] | 106.9% | 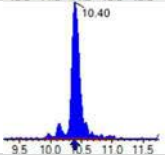 | 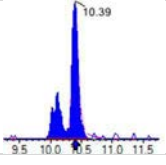 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21765<br>( 584.0 / 526.0 ) 13016 | ( 10.93 , 1.00 ) ( 0.01 , N/A , 0.2) | 1133219.1<br>115.0 | 0.5980<br>96.6<br>101.1 | 0.0870<br>[ 0.1000 ] | 86.7% | 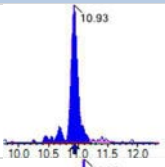 | 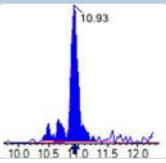 | MI5 DG 2024-03-14 |
| NMeFOSE | ( 616.0 / 59.0 ) 47036 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 313.1 | N/A<br>0.0<br>0.0 | 0.3970<br>[ 0.4000 ] | 99.3% | 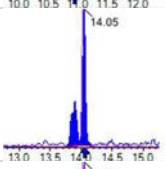 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 43536 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 383.9 | N/A<br>0.0<br>0.0 | 0.4010<br>[ 0.4000 ] | 100.1% | 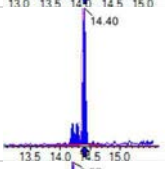 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7344<br>( 285.0 / 185.0 ) 23728 | ( 6.57 , 1.00 ) ( -0.01 , N/A , -0.4) | 210.0<br>219.8 | 3.2311<br>103.7<br>111.5 | 0.0920<br>[ 0.1000 ] | 92.0% | 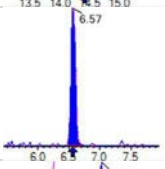 | 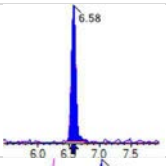 | |
| ADONA | ( 377.0 / 85.0 ) 90133<br>( 377.0 / 251.0 ) 11185 | ( 7.65 , 1.16 ) ( N/A , 0.01 , -0.2) | 716.4<br>126.4 | 0.1241<br>116.4<br>116.9 | 0.0890<br>[ 0.0940 ] | 94.0% | 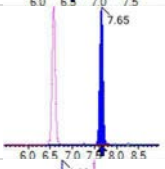 | 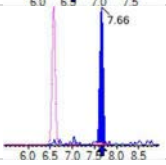 | |
| PFMPA | ( 229.0 / 85.0 ) 17241 | ( 4.18 , 0.86 ) ( N/A , 0.00 , 0.0) | 623.3 | N/A<br>0.0<br>0.0 | 0.1850<br>[ 0.2000 ] | 92.5% | 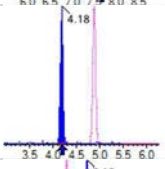 | | |
| PFMBA | ( 279.0 / 85.0 ) 44897 | ( 5.25 , 1.08 ) ( N/A , 0.00 , 0.0) | 676.6 | N/A<br>0.0<br>0.0 | 0.1820<br>[ 0.2000 ] | 91.0% | 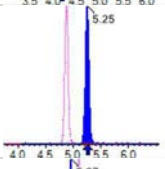 | | |
| NFDHA | ( 295.0 / 201.0 ) 23305<br>( 295.0 / 85.0 ) 20737 | ( 5.97 , 0.98 ) ( N/A , 0.01 , 0.0) | 569.5<br>292.2 | 0.8898<br>82.3<br>85.4 | 0.2110<br>[ 0.2000 ] | 105.6% | 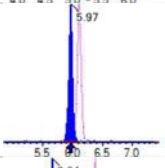 | 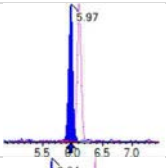 | |
| PFECHS | ( 461.0 / 98.9 ) 51594<br>( 461.0 / 381.2 ) 22772 | ( 9.64 , 0.91 ) ( N/A , 0.01 , 0.3) | 1681.3<br>1181.3 | 0.4414<br>113.0<br>114.2 | 0.0790<br>[ 0.0920 ] | 86.0% | 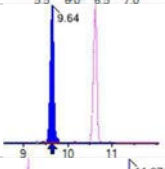 | 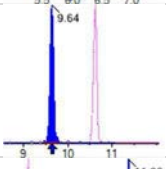 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 102559<br>( 533.0 / 353.0 ) 34286 | ( 11.27 , 1.71 ) ( N/A , 0.01 , 0.4) | 1090.7<br>372.2 | 0.3343<br>104.0<br>107.8 | 0.0820<br>[ 0.0930 ] | 87.6% | 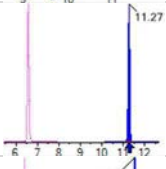 | 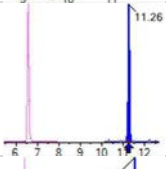 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 83434<br>( 633.0 / 453.0 ) 28129 | ( 12.55 , 1.91 ) ( N/A , 0.01 , -0.1) | 1232.7<br>399.7 | 0.3371<br>103.2<br>106.1 | 0.0850<br>[ 0.0940 ] | 90.0% | 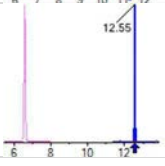 | 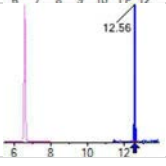 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 37903<br>( 315.0 / 83.0 ) 28577 | ( 7.02 , 1.15 )<br>( N/A , 0.00 , -0.2) | 602.3<br>63.1 | 0.7540<br>131.6<br>130.2 | 0.1590<br>[ 0.1780 ] | 89.0% | 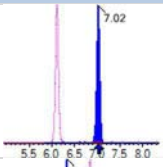 | 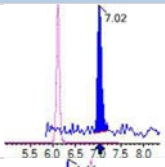 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 4735<br>( 241.0 / 117.0 ) 11190 | ( 4.41 , 0.90 )<br>( N/A , 0.00 , -0.2) | 293.8<br>48.3 | 2.3631<br>106.5<br>103.8 | 0.3310<br>[ 0.4000 ] | 82.8% | 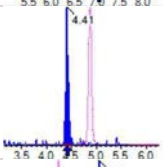 | 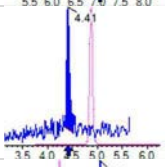 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 27593<br>( 341.0 / 217.0 ) 47029 | ( 6.98 , 1.14 )<br>( N/A , 0.01 , 0.1) | 290.8<br>228.7 | 1.7044<br>113.8<br>117.3 | 0.3590<br>[ 0.4000 ] | 89.7% | 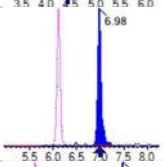 | 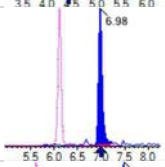 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 41487<br>( 441.0 / 337.0 ) 37444 | ( 9.39 , 1.54 )<br>( N/A , 0.01 , -0.4) | 2832165.8<br>714.1 | 0.9026<br>101.4<br>101.2 | 0.3670<br>[ 0.4000 ] | 91.7% | 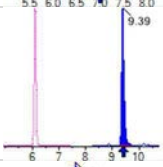 | 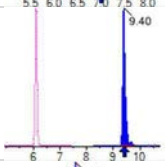 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 26249<br>( 357.2 / 243.0 ) 2448 | ( 6.84 , 1.00 )<br>( -0.01 , N/A , 0.9) | 205.4<br>43.7 | 0.0933<br>88.4<br>90.3 | 0.0870<br>[ 0.1000 ] | 87.5% | 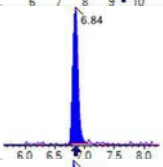 | 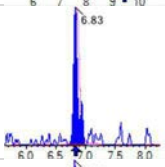 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 18634<br>( 457.2 / 343.0 ) 942 | ( 8.92 , 1.00 )<br>( -0.01 , N/A , 0.1) | 271.0<br>55.7 | 0.0506<br>129.2<br>122.4 | 0.0850<br>[ 0.1000 ] | 84.8% | 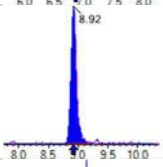 | 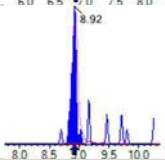 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 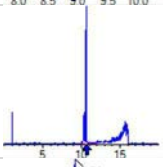 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 319396 | ( 3.79 , N/A )<br>( N/A , 0.00 , N/A ) | 2307.0 | N/A | 1.0600<br>[ 1.0000 ] | 106.0%<br>{ 108.3% } | 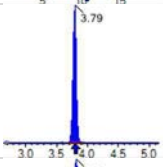 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 140489 | ( 6.11 , N/A )<br>( N/A , 0.00 , N/A ) | 71286.2 | N/A | 0.9140<br>[ 1.0000 ] | 91.4%<br>{ 90.5% } | 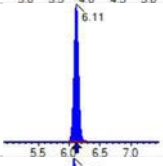 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 424800 | ( 8.28 , N/A )<br>( N/A , 0.01 , N/A ) | 4452.3 | N/A | 0.9520<br>[ 1.0000 ] | 95.2%<br>{ 92.0% } | 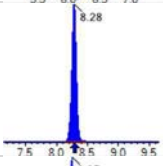 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 328192 | ( 9.25 , N/A )<br>( N/A , 0.01 , N/A ) | 1156.5 | N/A | 0.9820<br>[ 1.0000 ] | 98.2%<br>{ 96.7% } | 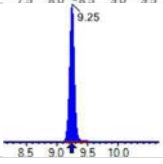 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 305639 | ( 10.16 , N/A ) ( N/A , 0.01 , N/A ) | 6049.8 | N/A | 0.9220 [ 1.0000 ] | 92.2% { 91.3% } | 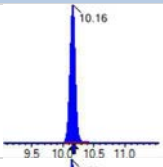 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1051192 | ( 8.75 , N/A ) ( N/A , 0.01 , N/A ) | 4762.2 | N/A | 0.9410 [ 1.0000 ] | 94.1% { 91.9% } | 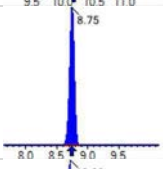 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 881509 | ( 10.62 , N/A ) ( N/A , 0.01 , N/A ) | 2356.1 | N/A | 0.9030 [ 1.0000 ] | 90.3% { 92.8% } | 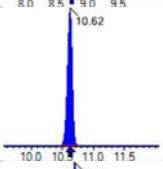 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2815096 | ( 3.79 , N/A ) ( N/A , 0.00 , N/A ) | 52295.2 | N/A | 7.9920 [ 8.0000 ] | 99.9% { 106.4% } | 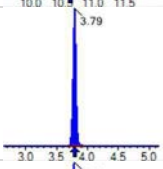 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1156101 | ( 4.88 , N/A ) ( N/A , 0.00 , N/A ) | 6102.3 | N/A | 4.5870 [ 4.0000 ] | 114.7% { 98.3% } | 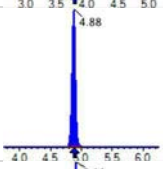 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 654993 | ( 6.11 , N/A ) ( N/A , 0.00 , N/A ) | 9835.2 | N/A | 2.1710 [ 2.0000 ] | 108.6% { 95.0% } | 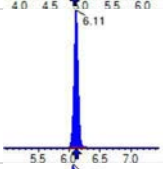 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 696687 | ( 7.27 , N/A ) ( N/A , 0.01 , N/A ) | 5928.5 | N/A | 2.2110 [ 2.0000 ] | 110.6% { 97.1% } | 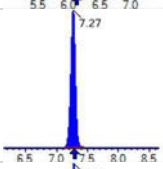 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 916234 | ( 8.28 , N/A ) ( N/A , 0.01 , N/A ) | 3286.4 | N/A | 2.0460 [ 2.0000 ] | 102.3% { 89.6% } | 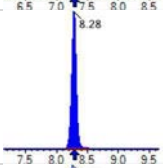 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 329222 | ( 9.25 , N/A ) ( N/A , 0.01 , N/A ) | 2860.5 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 98.3% } | 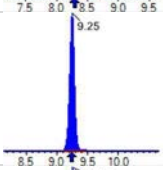 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 388282 | ( 10.15 , N/A ) ( N/A , 0.01 , N/A ) | 1037.8 | N/A | 1.1010 [ 1.0000 ] | 110.1% { 100.0% } | 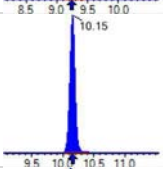 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 461279 | ( 11.03 , N/A ) ( N/A , 0.01 , N/A ) | 1031.2 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 95.7% } | 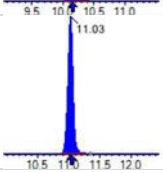 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 444509 | ( 11.85 , N/A ) ( N/A , 0.02 , N/A ) | 1486.0 | N/A | 1.0320 [ 1.0000 ] | 103.2% { 93.2% } | 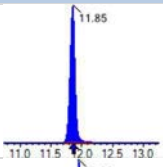 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 403866 | ( 12.96 , N/A ) ( N/A , 0.02 , N/A ) | 1457.4 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 93.3% } | 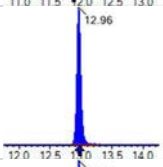 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 707898 | ( 13.76 , N/A ) ( N/A , 0.02 , N/A ) | 3228.3 | N/A | 2.2210 [ 2.0000 ] | 111.0% { 102.2% } | 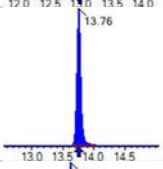 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2216057 | ( 6.42 , N/A ) ( N/A , 0.01 , N/A ) | 1520.7 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 99.9% } | 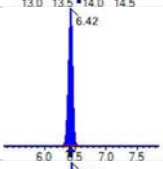 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1663831 | ( 8.75 , N/A ) ( N/A , 0.01 , N/A ) | 6270.7 | N/A | 2.1630 [ 2.0000 ] | 108.2% { 100.9% } | 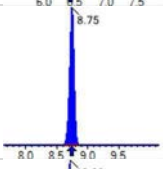 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1991491 | ( 10.62 , N/A ) ( N/A , 0.01 , N/A ) | 1716.5 | N/A | 2.1220 [ 2.0000 ] | 106.1% { 94.6% } | 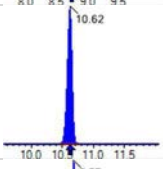 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 428541 | ( 5.57 , N/A ) ( N/A , 0.01 , N/A ) | 77.4 | N/A | 4.6810 [ 4.0000 ] | 117.0% { 117.6% } | 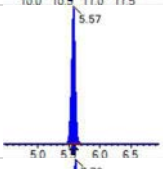 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1266880 | ( 7.70 , N/A ) ( N/A , 0.00 , N/A ) | 5155.0 | N/A | 4.4570 [ 4.0000 ] | 111.4% { 120.2% } | 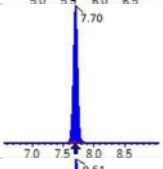 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1318627 | ( 9.51 , N/A ) ( N/A , 0.02 , N/A ) | 1354.9 | N/A | 4.6560 [ 4.0000 ] | 116.4% { 118.8% } | 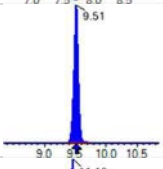 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2851792 | ( 11.16 , N/A ) ( N/A , 0.01 , N/A ) | 1338.6 | N/A | 8.7720 [ 8.0000 ] | 109.7% { 113.0% } | 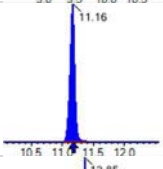 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2288014 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 2621.4 | N/A | 2.2500 [ 2.0000 ] | 112.5% { 101.0% } | 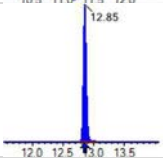 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (2)
Acquired: 2024/03/14 - 12:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 405987 | ( 14.23 , N/A ) ( N/A , 0.01 , N/A ) | 2524.6 | N/A | 2.1620 [ 2.0000 ] | 108.1% { 97.6% } | 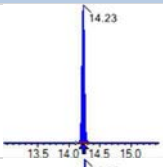  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 478437 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 2897.8 | N/A | 2.2180 [ 2.0000 ] | 110.9% { 99.3% } | 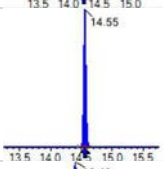  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1025521 | ( 10.40 , N/A ) ( N/A , 0.01 , N/A ) | 2265.9 | N/A | 4.2670 [ 4.0000 ] | 106.7% { 96.2% } | 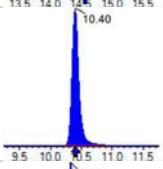  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1041379 | ( 10.93 , N/A ) ( N/A , 0.01 , N/A ) | 1952.0 | N/A | 4.5650 [ 4.0000 ] | 114.1% { 101.8% } | 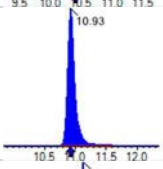  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2092141 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 3507.9 | N/A | 23.8430 [ 20.0000 ] | 119.2% { 104.8% } | 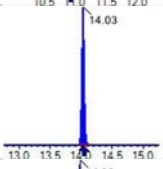  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2460196 | ( 14.38 , N/A ) ( N/A , 0.01 , N/A ) | 5717.0 | N/A | 23.1450 [ 20.0000 ] | 115.7% { 101.0% } | 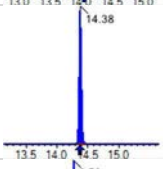  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1125236 | ( 6.58 , N/A ) ( N/A , 0.00 , N/A ) | 2141.6 | N/A | 8.6780 [ 8.0000 ] | 108.5% { 94.3% } | 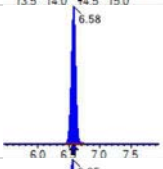  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 558351 | ( 6.85 , N/A ) ( N/A , 0.01 , N/A ) | 955.1 | N/A | 2.0600 [ 2.0000 ] | 103.0% { 93.0% } | 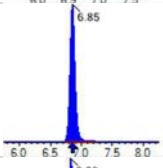  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 520847 | ( 8.93 , N/A ) ( N/A , 0.01 , N/A ) | 648.3 | N/A | 2.0580 [ 2.0000 ] | 102.9% { 97.5% } | 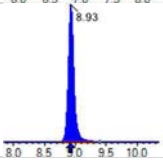  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project: | [none]A |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00936A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00936-CCV1A | PFBA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 8.96A | 89.6A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.59A | 91.9A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.93A | 98.5A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.51A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.85A | 97.1A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.74A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.92A | 98.5A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.81A | 96.3A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.62A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 5.06A | 101A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.89A | 97.8A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.14A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.75A | 101A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.29A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.45A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.33A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.63A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.72A | 97.9A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.80A | 98.9A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 19.1A | 101A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.6A | 97.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.8A | 103A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.5A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 5.19A | 104A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.3A | 96.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.83A | 96.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.90A | 98.0A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project: | [none]A |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00936A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00936-CCV1A | NMeFOSEA | 20.0A | 18.6A | 93.2A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.01A | 100A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.51A | 95.5A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.43A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.57A | 95.7A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.03A | 90.3A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.40A | 94.0A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.31A | 92.2A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.46A | 94.5A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.4A | 92.1A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.2A | 96.2A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 18.4A | 91.8A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2848586<br>( 163.0 / 69.0 ) 72154 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.0) | 15513.8<br>2786.4 | 0.0253<br>101.0<br>100.0 | 9.7380<br>[ 10.0000 ] | 97.4% | 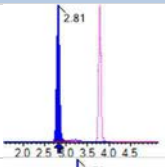 | 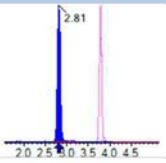 | |
| PFBA | ( 213.0 / 169.0 ) 6178455 | ( 3.79 , 1.00 ) ( 0.00 , N/A , 0.0) | 7526.0 | N/A<br>0.0<br>0.0 | 19.7520<br>[ 20.0000 ] | 98.8% | 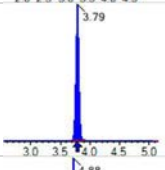 | | |
| PFPeA | ( 263.0 / 219.0 ) 2683538<br>( 263.0 / 69.0 ) 32321 | ( 4.88 , 1.00 ) ( 0.00 , N/A , 0.1) | 5307.8<br>576.5 | 0.0120<br>109.7<br>100.0 | 8.9640<br>[ 10.0000 ] | 89.6% | 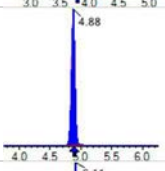 | 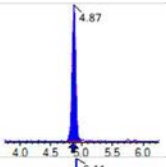 | |
| PFHxA | ( 313.0 / 269.0 ) 1534738<br>( 313.0 / 119.0 ) 176996 | ( 6.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 2745.7<br>1896.5 | 0.1153<br>103.8<br>100.0 | 4.5940<br>[ 5.0000 ] | 91.9% | 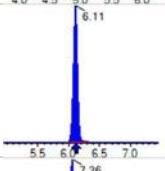 | 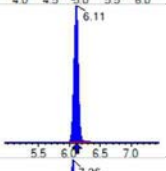 | |
| PFHpA | ( 363.0 / 319.0 ) 1741028<br>( 363.0 / 169.0 ) 510341 | ( 7.26 , 1.00 ) ( 0.00 , N/A , 0.0) | 2147.6<br>1769.4 | 0.2931<br>94.1<br>100.0 | 4.9260<br>[ 5.0000 ] | 98.5% | 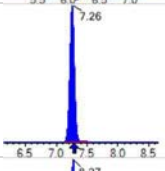 | 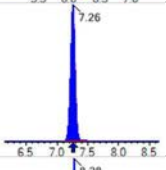 | |
| PFOA | ( 413.0 / 369.0 ) 2342997<br>( 413.0 / 169.0 ) 807812 | ( 8.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 1157.9<br>1022.0 | 0.3448<br>95.3<br>100.0 | 4.5050<br>[ 5.0000 ] | 90.1% | 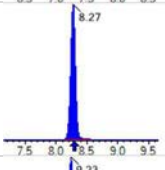 | 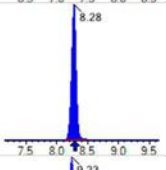 | |
| PFNA | ( 463.0 / 419.0 ) 1583121<br>( 463.0 / 169.0 ) 399359 | ( 9.23 , 1.00 ) ( 0.00 , N/A , 0.1) | 1155.6<br>904.7 | 0.2523<br>96.1<br>100.0 | 4.7190<br>[ 5.0000 ] | 94.4% | 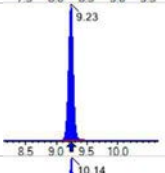 | 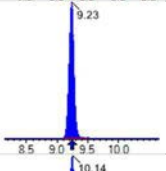 | |
| PFDA | ( 513.0 / 469.0 ) 1876937<br>( 513.0 / 169.0 ) 217397 | ( 10.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 3909.4<br>5064.5 | 0.1158<br>98.7<br>100.0 | 4.8530<br>[ 5.0000 ] | 97.1% | 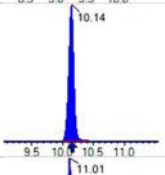 | 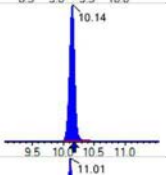 | |
| PFUnA | ( 563.0 / 519.0 ) 2131587<br>( 563.0 / 169.0 ) 315610 | ( 11.01 , 1.00 ) ( 0.00 , N/A , 0.1) | 1009.7<br>856.9 | 0.1481<br>100.0<br>100.0 | 4.7370<br>[ 5.0000 ] | 94.7% | 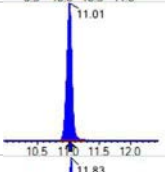 | 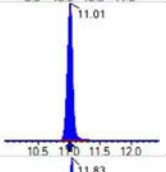 | |
| PFDoA | ( 613.0 / 569.0 ) 2403312<br>( 613.0 / 169.0 ) 361310 | ( 11.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1586.4<br>1213.1 | 0.1503<br>95.1<br>100.0 | 4.9240<br>[ 5.0000 ] | 98.5% | 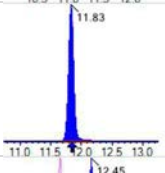 | 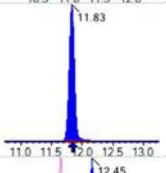 | |
| PFTrDA | ( 663.0 / 619.0 ) 2258377<br>( 663.0 / 169.0 ) 592835 | ( 12.45 , 1.05 ) ( N/A , 0.00 , 0.0) | 1418.4<br>1152.7 | 0.2625<br>97.4<br>100.0 | 4.8130<br>[ 5.0000 ] | 96.3% | 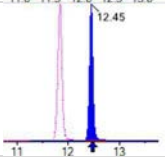 | 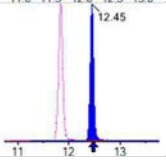 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1901228<br>( 713.0 / 169.0 ) 479448 | ( 12.94 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1885.8<br>1025.1 | 0.2522<br>97.0<br>100.0 | 4.6230<br>[ 5.0000 ] | 92.5% | 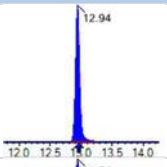 | 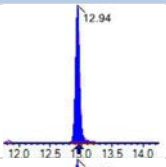 | |
| PFHxDA | ( 813.0 / 769.0 ) 1692391<br>( 813.0 / 169.0 ) 376958 | ( 13.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1968.4<br>1348.8 | 0.2227<br>102.7<br>100.0 | 5.0620<br>[ 5.0000 ] | 101.2% | 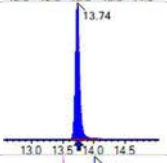 | 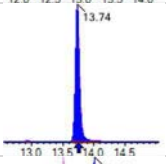 | |
| PFODA | ( 913.0 / 869.0 ) 1097962<br>( 913.0 / 169.0 ) 382721 | ( 14.37 , 1.05 )<br>( N/A , 0.00 , 0.2) | 2161.8<br>1264.2 | 0.3486<br>91.3<br>100.0 | 4.8880<br>[ 5.0000 ] | 97.8% | 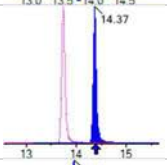 | 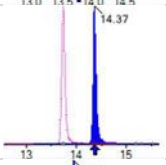 | |
| PFBS | ( 299.0 / 80.0 ) 2386253<br>( 299.0 / 99.0 ) 1760215 | ( 6.42 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3461.3<br>2956.3 | 0.7376<br>103.8<br>100.0 | 4.1370<br>[ 4.4240 ] | 93.5% | 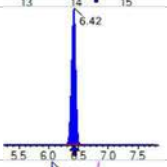 | 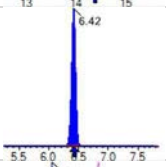 | |
| PFPeS | ( 349.0 / 80.0 ) 6242787<br>( 349.0 / 99.0 ) 2158060 | ( 7.66 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2367.3<br>2350.9 | 0.3457<br>101.6<br>100.0 | 4.7530<br>[ 4.6920 ] | 101.3% | 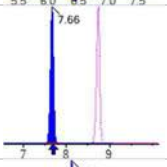 | 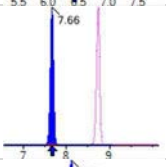 | |
| PFHxS | ( 399.0 / 80.0 ) 6267075<br>( 399.0 / 99.0 ) 2104430 | ( 8.74 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3682.1<br>6166.7 | 0.3358<br>107.4<br>100.0 | 4.2910<br>[ 4.5550 ] | 94.2% | 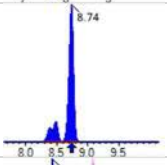 | 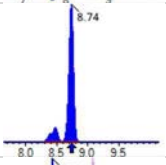 | |
| PFHpS | ( 449.0 / 80.0 ) 5386363<br>( 449.0 / 99.0 ) 1458342 | ( 9.71 , 0.92 )<br>( N/A , 0.00 , 0.0) | 1651.8<br>2028.9 | 0.2707<br>101.3<br>100.0 | 4.4530<br>[ 4.7570 ] | 93.6% | 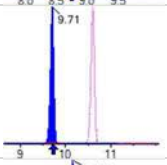 | 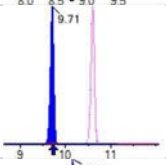 | |
| PFOS | ( 499.0 / 80.0 ) 5273374<br>( 499.0 / 99.0 ) 1224028 | ( 10.60 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3104.1<br>4634.9 | 0.2321<br>98.1<br>100.0 | 4.3330<br>[ 4.6370 ] | 93.4% | 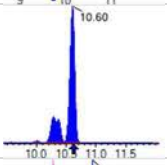 | 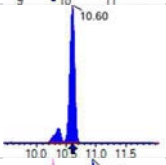 | |
| PFNS | ( 549.0 / 80.0 ) 5500226<br>( 549.0 / 99.0 ) 1475616 | ( 11.44 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2614.7<br>2514.1 | 0.2683<br>101.0<br>100.0 | 4.6350<br>[ 4.7990 ] | 96.6% | 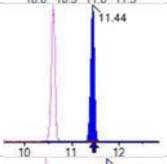 | 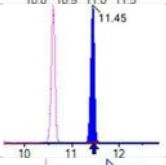 | |
| PFDS | ( 599.0 / 80.0 ) 6674851<br>( 599.0 / 99.0 ) 1755629 | ( 12.14 , 1.14 )<br>( N/A , 0.00 , 0.0) | 4028.2<br>3356.9 | 0.2630<br>104.9<br>100.0 | 4.7190<br>[ 4.8160 ] | 98.0% | 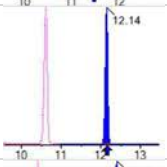 | 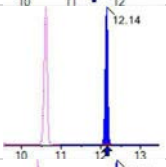 | |
| PFDoS | ( 699.0 / 80.0 ) 5795751<br>( 699.0 / 99.0 ) 1400926 | ( 13.04 , 1.23 )<br>( N/A , 0.00 , 0.1) | 5096.0<br>4107.5 | 0.2417<br>104.8<br>100.0 | 4.7950<br>[ 4.8480 ] | 98.9% | 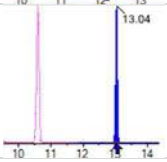 | 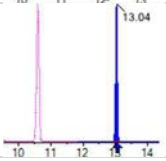 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 4675878<br>( 327.0 / 81.0 ) 3862139 | ( 5.56 , 1.00 ) ( 0.00 , N/A , 0.1) | 6512.0<br>4028.5 | 0.8260<br>94.3<br>100.0 | 19.0660<br>[ 18.6910 ] | 102.0% | 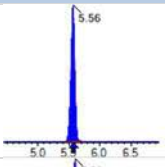 | 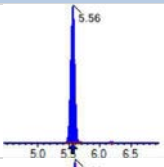 | |
| 6:2FTS | ( 427.0 / 407.0 ) 4349823<br>( 427.0 / 81.0 ) 5386935 | ( 7.69 , 1.00 ) ( 0.00 , N/A , 0.1) | 2815.8<br>3703.1 | 1.2384<br>97.5<br>100.0 | 18.5800<br>[ 18.9810 ] | 97.9% | 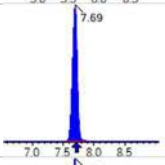 | 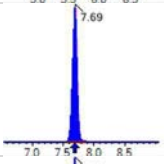 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5445458<br>( 527.0 / 81.0 ) 5195219 | ( 9.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1388.5<br>1321.7 | 0.9540<br>100.6<br>100.0 | 19.8070<br>[ 19.1660 ] | 103.3% | 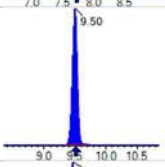 | 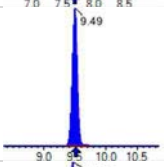 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5075477<br>( 627.0 / 81.0 ) 6565092 | ( 11.16 , 1.00 ) ( 0.01 , N/A , 0.1) | 1743.7<br>1438.9 | 1.2935<br>95.7<br>100.0 | 19.5460<br>[ 19.3240 ] | 101.2% | 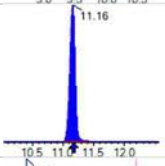 | 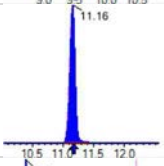 | |
| PFBSA | ( 297.9 / 78.0 ) 4737647<br>( 297.9 / 278.0 ) 6815 | ( 8.07 , 0.57 ) ( N/A , 0.00 , -0.2) | 1156.5<br>92.7 | 0.0014<br>102.5<br>100.0 | 4.9540<br>[ 5.0000 ] | 99.1% | 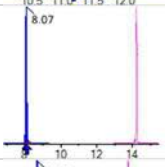 | 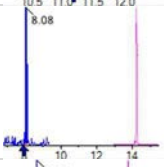 | |
| PFHxSA | ( 397.9 / 78.0 ) 6203404<br>( 397.9 / 378.0 ) 25536 | ( 10.95 , 0.75 ) ( N/A , 0.00 , 0.1) | 1700.4<br>541.6 | 0.0041<br>108.1<br>100.0 | 5.0230<br>[ 5.0000 ] | 100.5% | 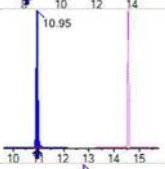 | 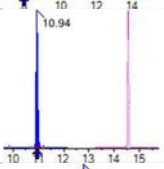 | |
| PFOSA | ( 498.0 / 78.0 ) 5734920<br>( 498.0 / 478.0 ) 80482 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.0) | 2794.7<br>955.4 | 0.0140<br>97.3<br>100.0 | 5.1890<br>[ 5.0000 ] | 103.8% | 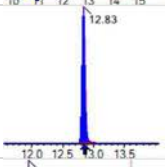 | 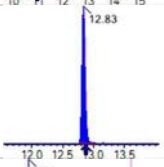 | |
| TFSI | ( 279.7 / 147.0 ) 12164513<br>( 279.7 / 211.0 ) 1002022 | ( 8.32 , 0.65 ) ( N/A , 0.00 , 0.0) | 50.8<br>59.9 | 0.0824<br>99.9<br>100.0 | 5.1770<br>[ 4.8970 ] | 105.7% | 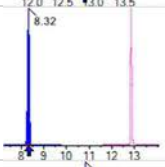 | 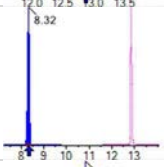 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4043777<br>( 512.0 / 169.0 ) 3115591 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 3.2) | 3209.4<br>4482.3 | 0.7705<br>104.8<br>100.0 | 19.3030<br>[ 20.0000 ] | 96.5% | 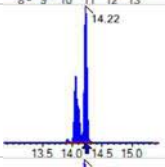 | 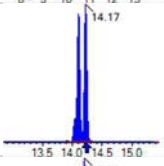 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5220136<br>( 526.0 / 169.0 ) 6662269 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 1.9) | 5223.5<br>4635.6 | 1.2763<br>100.8<br>100.0 | 19.7570<br>[ 20.0000 ] | 98.8% | 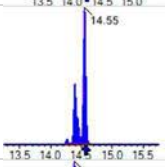 | 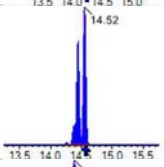 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1213836<br>( 570.0 / 483.0 ) 537558 | ( 10.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 3198.7<br>1645.3 | 0.4429<br>102.3<br>100.0 | 4.8350<br>[ 5.0000 ] | 96.7% | 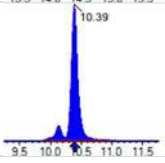 | 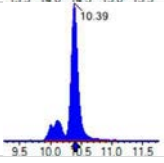 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1208800<br>( 584.0 / 526.0 ) 715279 | ( 10.93 , 1.00 ) ( 0.01 , N/A , -0.1) | 2565.0<br>887.3 | 0.5917<br>95.6<br>100.0 | 4.9000<br>[ 5.0000 ] | 98.0% | 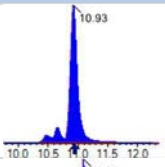 | 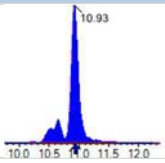 | |
| NMeFOSE | ( 616.0 / 59.0 ) 2106318 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 2732.4 | N/A<br>0.0<br>0.0 | 18.6460<br>[ 20.0000 ] | 93.2% | 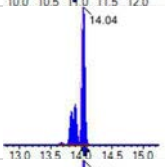 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2092686 | ( 14.39 , 1.00 ) ( 0.03 , N/A , 0.0) | 4451.7 | N/A<br>0.0<br>0.0 | 19.4420<br>[ 20.0000 ] | 97.2% | 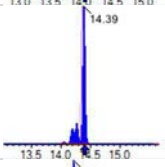 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 424135<br>( 285.0 / 185.0 ) 1228642 | ( 6.57 , 1.00 ) ( 0.00 , N/A , -0.1) | 1778.6<br>2132.7 | 2.8968<br>93.0<br>100.0 | 5.0070<br>[ 5.0000 ] | 100.1% | 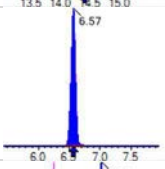 | 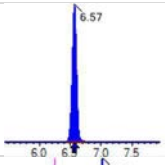 | |
| ADONA | ( 377.0 / 85.0 ) 4861654<br>( 377.0 / 251.0 ) 516227 | ( 7.65 , 1.16 ) ( N/A , 0.00 , 0.2) | 1756.6<br>1728.0 | 0.1062<br>99.6<br>100.0 | 4.5070<br>[ 4.7140 ] | 95.6% | 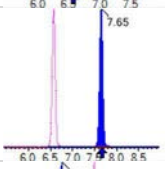 | 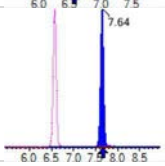 | |
| PFMPA | ( 229.0 / 85.0 ) 907067 | ( 4.18 , 0.86 ) ( N/A , 0.00 , 0.0) | 8608.3 | N/A<br>0.0<br>0.0 | 9.5700<br>[ 10.0000 ] | 95.7% | 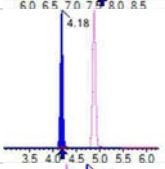 | | |
| PFMBA | ( 279.0 / 85.0 ) 2264770 | ( 5.25 , 1.08 ) ( N/A , 0.00 , 0.0) | 6462.0 | N/A<br>0.0<br>0.0 | 9.0270<br>[ 10.0000 ] | 90.3% | 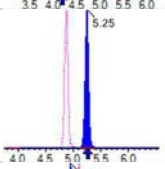 | | |
| NFDHA | ( 295.0 / 201.0 ) 1091372<br>( 295.0 / 85.0 ) 1137633 | ( 5.97 , 0.98 ) ( N/A , 0.00 , 0.0) | 3233.2<br>3339.1 | 1.0424<br>96.4<br>100.0 | 9.3970<br>[ 10.0000 ] | 94.0% | 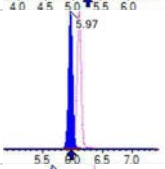 | 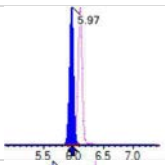 | |
| PFECHS | ( 461.0 / 98.9 ) 2903248<br>( 461.0 / 381.2 ) 1121659 | ( 9.63 , 0.91 ) ( N/A , 0.00 , -0.1) | 3793.4<br>3477.9 | 0.3863<br>98.9<br>100.0 | 4.2310<br>[ 4.6190 ] | 91.6% | 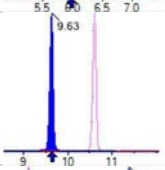 | 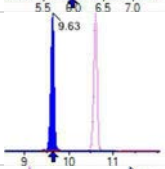 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5741546<br>( 533.0 / 353.0 ) 1781377 | ( 11.25 , 1.71 ) ( N/A , 0.00 , 0.0) | 2566.4<br>2756.5 | 0.3103<br>96.5<br>100.0 | 4.3130<br>[ 4.6660 ] | 92.4% | 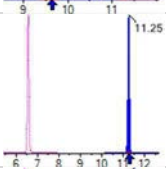 | 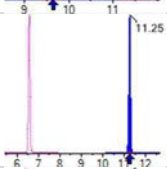 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4652020<br>( 633.0 / 453.0 ) 1478318 | ( 12.54 , 1.91 ) ( N/A , 0.00 , 0.0) | 3466.9<br>3316.0 | 0.3178<br>97.3<br>100.0 | 4.4610<br>[ 4.7160 ] | 94.6% | 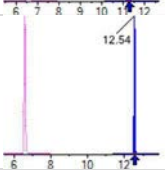 | 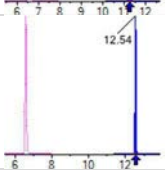 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2117789<br>( 315.0 / 83.0 ) 1226782 | ( 7.02 , 1.15 )<br>( N/A , 0.00 , 0.1) | 2941.6<br>1339.4 | 0.5793<br>101.1<br>100.0 | 8.4280<br>[ 8.9250 ] | 94.4% | 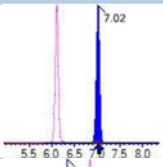 | 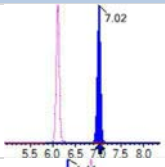 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 267872<br>( 241.0 / 117.0 ) 609704 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.1) | 2535.6<br>1945.9 | 2.2761<br>102.6<br>100.0 | 18.4170<br>[ 20.0000 ] | 92.1% | 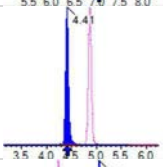 | 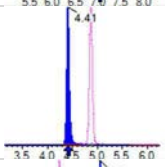 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1558303<br>( 341.0 / 217.0 ) 2264389 | ( 6.98 , 1.14 )<br>( N/A , 0.00 , 0.0) | 1512.6<br>1232.6 | 1.4531<br>97.1<br>100.0 | 19.2450<br>[ 20.0000 ] | 96.2% | 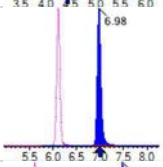 | 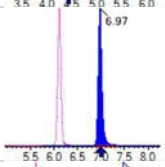 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2186990<br>( 441.0 / 337.0 ) 1949723 | ( 9.39 , 1.54 )<br>( N/A , 0.00 , 0.1) | 6819.9<br>6815.4 | 0.8915<br>100.2<br>100.0 | 18.3610<br>[ 20.0000 ] | 91.8% | 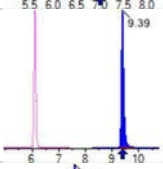 | 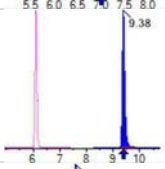 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1536846<br>( 357.2 / 243.0 ) 158756 | ( 6.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1235.7<br>780.1 | 0.1033<br>97.9<br>100.0 | 4.7640<br>[ 5.0000 ] | 95.3% | 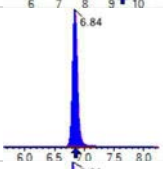 | 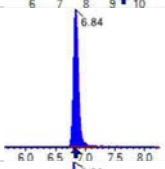 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1107297<br>( 457.2 / 343.0 ) 45736 | ( 8.91 , 1.00 )<br>( -0.01 , N/A , 0.0) | 739.0<br>464.1 | 0.0413<br>105.6<br>100.0 | 4.9140<br>[ 5.0000 ] | 98.3% | 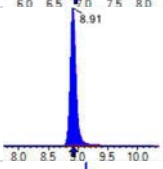 | 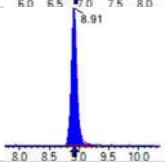 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 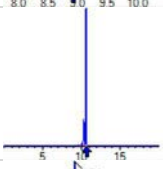 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 294803 | ( 3.79 , N/A )<br>( N/A , 0.00 , N/A ) | 2226.7 | N/A | 0.9790<br>[ 1.0000 ] | 97.9%<br>{ 100.0% } | 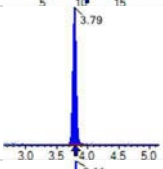 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 155164 | ( 6.11 , N/A )<br>( N/A , 0.00 , N/A ) | 1927.7 | N/A | 1.0090<br>[ 1.0000 ] | 100.9%<br>{ 100.0% } | 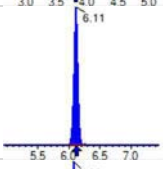 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 461664 | ( 8.28 , N/A )<br>( N/A , 0.00 , N/A ) | 3719.6 | N/A | 1.0350<br>[ 1.0000 ] | 103.5%<br>{ 100.0% } | 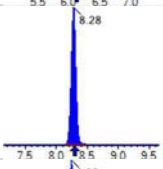 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 339532 | ( 9.23 , N/A )<br>( N/A , 0.00 , N/A ) | 1048.7 | N/A | 1.0160<br>[ 1.0000 ] | 101.6%<br>{ 100.0% } | 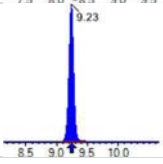 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 334751 | ( 10.14 , N/A ) ( N/A , 0.00 , N/A ) | 7462.2 | N/A | 1.0090 [ 1.0000 ] | 100.9% { 100.0% } | 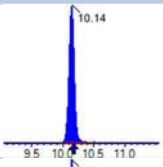 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1143460 | ( 8.74 , N/A ) ( N/A , 0.00 , N/A ) | 4749.7 | N/A | 1.0230 [ 1.0000 ] | 102.3% { 100.0% } | 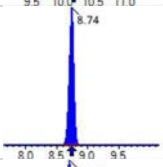 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 949827 | ( 10.61 , N/A ) ( N/A , 0.00 , N/A ) | 3419.5 | N/A | 0.9730 [ 1.0000 ] | 97.3% { 100.0% } | 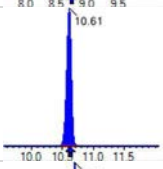 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2645083 | ( 3.79 , N/A ) ( N/A , 0.00 , N/A ) | 53024.7 | N/A | 8.1360 [ 8.0000 ] | 101.7% { 100.0% } | 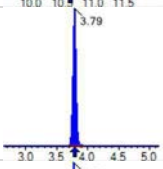 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1176357 | ( 4.87 , N/A ) ( N/A , 0.00 , N/A ) | 6489.7 | N/A | 4.2260 [ 4.0000 ] | 105.7% { 100.0% } | 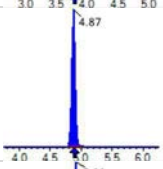 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 689586 | ( 6.11 , N/A ) ( N/A , 0.00 , N/A ) | 7510.7 | N/A | 2.0700 [ 2.0000 ] | 103.5% { 100.0% } | 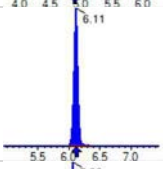 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 717741 | ( 7.26 , N/A ) ( N/A , 0.00 , N/A ) | 4244.8 | N/A | 2.0630 [ 2.0000 ] | 103.1% { 100.0% } | 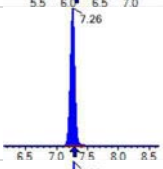 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1022807 | ( 8.28 , N/A ) ( N/A , 0.00 , N/A ) | 3134.7 | N/A | 2.1010 [ 2.0000 ] | 105.1% { 100.0% } | 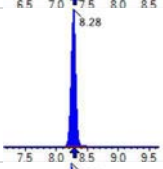 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 334793 | ( 9.23 , N/A ) ( N/A , 0.00 , N/A ) | 19523.2 | N/A | 1.0210 [ 1.0000 ] | 102.1% { 100.0% } | 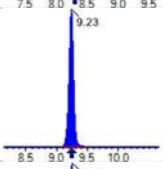 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 388310 | ( 10.14 , N/A ) ( N/A , 0.00 , N/A ) | 1038.2 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 100.0% } | 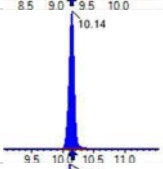 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 481869 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 987.7 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 100.0% } | 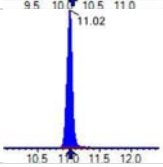 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 476836 | ( 11.84 , N/A ) ( N/A , 0.00 , N/A ) | 1410.4 | N/A | 1.0110 [ 1.0000 ] | 101.1% { 100.0% } | 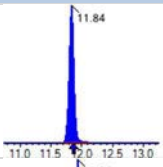 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 433008 | ( 12.94 , N/A ) ( N/A , 0.00 , N/A ) | 1424.1 | N/A | 1.0540 [ 1.0000 ] | 105.4% { 100.0% } | 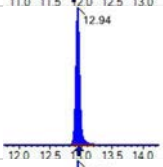 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 692769 | ( 13.74 , N/A ) ( N/A , 0.00 , N/A ) | 3011.1 | N/A | 1.9840 [ 2.0000 ] | 99.2% { 100.0% } | 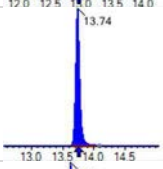 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2218679 | ( 6.42 , N/A ) ( N/A , 0.00 , N/A ) | 1106.7 | N/A | 1.9910 [ 2.0000 ] | 99.6% { 100.0% } | 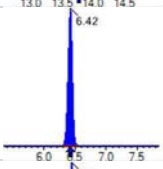 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1649444 | ( 8.74 , N/A ) ( N/A , 0.00 , N/A ) | 4159.3 | N/A | 1.9710 [ 2.0000 ] | 98.6% { 100.0% } | 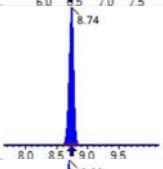 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2105363 | ( 10.60 , N/A ) ( N/A , 0.00 , N/A ) | 1395.3 | N/A | 2.0820 [ 2.0000 ] | 104.1% { 100.0% } | 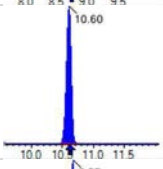 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 364308 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 88.2 | N/A | 3.6590 [ 4.0000 ] | 91.5% { 100.0% } | 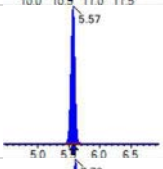 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1054139 | ( 7.70 , N/A ) ( N/A , 0.00 , N/A ) | 3173.3 | N/A | 3.4090 [ 4.0000 ] | 85.2% { 100.0% } | 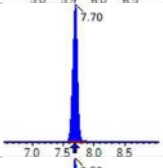 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1109954 | ( 9.50 , N/A ) ( N/A , 0.00 , N/A ) | 1453.8 | N/A | 3.6030 [ 4.0000 ] | 90.1% { 100.0% } | 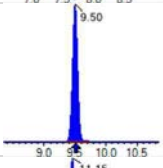 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2524713 | ( 11.15 , N/A ) ( N/A , 0.00 , N/A ) | 1191.0 | N/A | 7.1390 [ 8.0000 ] | 89.2% { 100.0% } | 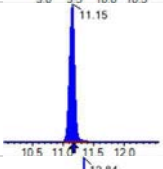 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2264917 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2131.4 | N/A | 2.0670 [ 2.0000 ] | 103.3% { 100.0% } | 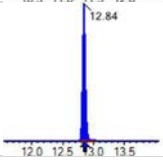 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (3)
Acquired: 2024/03/14 - 13:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 415984 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 2077.4 | N/A | 2.0560 [ 2.0000 ] | 102.8% { 100.0% } | 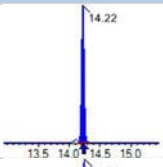 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 481586 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 3389.1 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 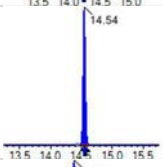 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1066407 | ( 10.38 , N/A ) ( N/A , 0.00 , N/A ) | 2738.0 | N/A | 4.1180 [ 4.0000 ] | 103.0% { 100.0% } | 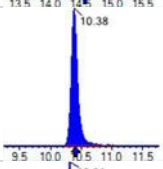 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1022935 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1870.2 | N/A | 4.1620 [ 4.0000 ] | 104.0% { 100.0% } | 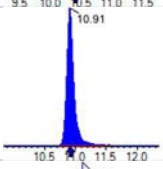 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1995740 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2536.8 | N/A | 21.1090 [ 20.0000 ] | 105.5% { 100.0% } | 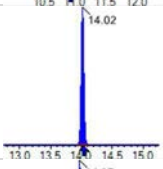 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2436357 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 5278.1 | N/A | 21.2720 [ 20.0000 ] | 106.4% { 100.0% } | 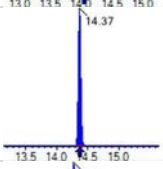 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1193727 | ( 6.57 , N/A ) ( N/A , 0.00 , N/A ) | 2409.8 | N/A | 8.3360 [ 8.0000 ] | 104.2% { 100.0% } | 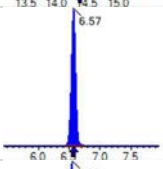 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 600207 | ( 6.85 , N/A ) ( N/A , 0.00 , N/A ) | 1365.2 | N/A | 2.0220 [ 2.0000 ] | 101.1% { 100.0% } | 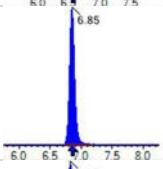 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 534389 | ( 8.92 , N/A ) ( N/A , 0.00 , N/A ) | 745.0 | N/A | 1.9280 [ 2.0000 ] | 96.4% { 100.0% } | 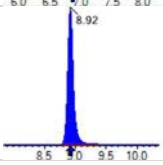 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project: | [none]A |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00936A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00936-CCV2A | PFBA | 20.0A | 19.7A | 98.4A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.55A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.89A | 97.8A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.93A | 98.5A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.75A | 95.0A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.95A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.69A | 93.9A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.61A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.73A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.85A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.51A | 90.3A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.33A | 86.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.14A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.46A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.34A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.88A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.57A | 98.2A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.80A | 100A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.10A | 106A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.10A | 105A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.2A | 96.8A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.4A | 102A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.7A | 103A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 18.2A | 94.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 5.05A | 101A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.7A | 98.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.7A | 98.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.74A | 94.8A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project: | [none]A |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00936A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00936-CCV2A | NMeFOSEA | 20.0A | 18.6A | 93.2A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.4A | 97.0A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.96A | 99.1A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.40A | 93.2A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 9.07A | 102A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.97A | 99.7A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.58A | 95.8A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.54A | 95.4A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.14A | 88.4A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.40A | 93.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.8A | 93.8A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 18.9A | 94.4A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (18)
Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2630030<br>( 163.0 / 69.0 ) 65736 | ( 2.80 , 0.74 ) ( N/A , -0.02 , 0.0) | 13350.5<br>2390.9 | 0.0250<br>99.7<br>98.7 | 9.1850<br>[ 10.0000 ] | 91.8% | 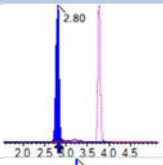 | 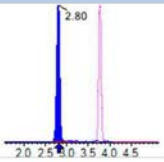 | |
| PFBA | ( 213.0 / 169.0 ) 6023808 | ( 3.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 7092.3 | N/A<br>0.0<br>0.0 | 19.6730<br>[ 20.0000 ] | 98.4% | 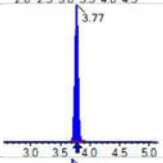 | | |
| PFPeA | ( 263.0 / 219.0 ) 2700521<br>( 263.0 / 69.0 ) 30723 | ( 4.85 , 1.00 ) ( 0.00 , N/A , 0.1) | 5058.6<br>573.5 | 0.0114<br>103.6<br>94.5 | 9.5540<br>[ 10.0000 ] | 95.5% | 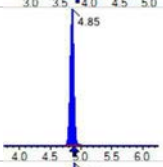 | 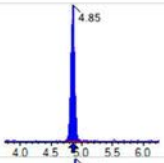 | |
| PFHxA | ( 313.0 / 269.0 ) 1506593<br>( 313.0 / 119.0 ) 161102 | ( 6.09 , 1.00 ) ( 0.00 , N/A , 0.0) | 2804.6<br>1261.9 | 0.1069<br>96.2<br>92.7 | 4.7120<br>[ 5.0000 ] | 94.2% | 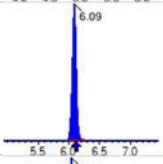 | 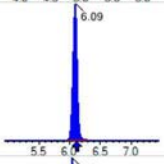 | |
| PFHpA | ( 363.0 / 319.0 ) 1702866<br>( 363.0 / 169.0 ) 527490 | ( 7.25 , 1.00 ) ( 0.00 , N/A , 0.1) | 1688.2<br>1697.3 | 0.3098<br>99.4<br>105.7 | 4.8900<br>[ 5.0000 ] | 97.8% | 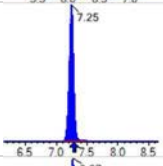 | 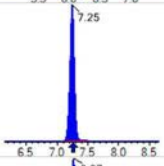 | |
| PFOA | ( 413.0 / 369.0 ) 2393916<br>( 413.0 / 169.0 ) 812643 | ( 8.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 1010.7<br>1215.9 | 0.3395<br>93.8<br>98.5 | 4.9270<br>[ 5.0000 ] | 98.5% | 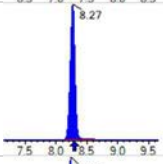 | 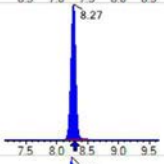 | |
| PFNA | ( 463.0 / 419.0 ) 1570985<br>( 463.0 / 169.0 ) 394517 | ( 9.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 1124.5<br>1176.0 | 0.2511<br>95.7<br>99.6 | 4.7520<br>[ 5.0000 ] | 95.0% | 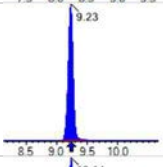 | 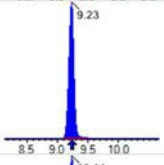 | |
| PFDA | ( 513.0 / 469.0 ) 1924432<br>( 513.0 / 169.0 ) 222052 | ( 10.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 3249.6<br>3086.0 | 0.1154<br>98.3<br>99.6 | 4.9490<br>[ 5.0000 ] | 99.0% | 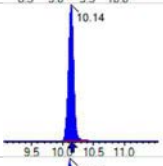 | 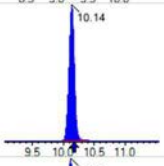 | |
| PFUnA | ( 563.0 / 519.0 ) 2120002<br>( 563.0 / 169.0 ) 302015 | ( 11.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 967.5<br>862.5 | 0.1425<br>96.2<br>96.2 | 4.6930<br>[ 5.0000 ] | 93.9% | 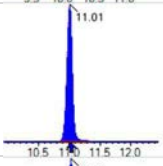 | 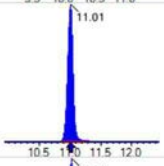 | |
| PFDoA | ( 613.0 / 569.0 ) 2383037<br>( 613.0 / 169.0 ) 358561 | ( 11.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1455.5<br>1318.0 | 0.1505<br>95.2<br>100.1 | 4.6150<br>[ 5.0000 ] | 92.3% | 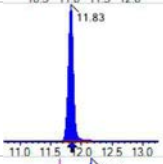 | 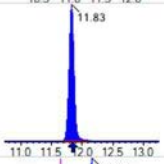 | |
| PFTrDA | ( 663.0 / 619.0 ) 2349724<br>( 663.0 / 169.0 ) 597287 | ( 12.44 , 1.05 ) ( N/A , -0.01 , 0.0) | 1416.6<br>1263.2 | 0.2542<br>94.3<br>96.8 | 4.7330<br>[ 5.0000 ] | 94.7% | 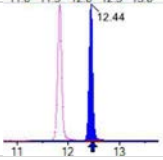 | 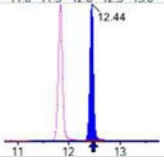 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (18)
Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1938082<br>( 713.0 / 169.0 ) 518031 | ( 12.93 , 1.00 ) ( 0.00 , N/A , 0.1) | 1629.6<br>1140.1 | 0.2673<br>102.8<br>106.0 | 4.8470<br>[ 5.0000 ] | 96.9% | 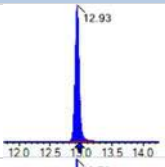 | 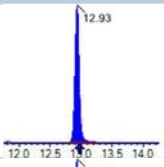 | |
| PFHxDA | ( 813.0 / 769.0 ) 1739657<br>( 813.0 / 169.0 ) 401303 | ( 13.72 , 1.00 ) ( -0.01 , N/A , -0.1) | 2202.4<br>1349.5 | 0.2307<br>106.3<br>103.6 | 4.5150<br>[ 5.0000 ] | 90.3% | 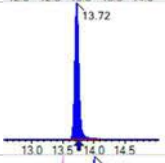 | 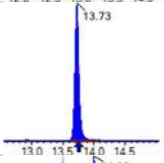 | |
| PFODA | ( 913.0 / 869.0 ) 1120798<br>( 913.0 / 169.0 ) 362270 | ( 14.36 , 1.05 ) ( N/A , -0.01 , 0.1) | 2254.8<br>1085.3 | 0.3232<br>84.6<br>92.7 | 4.3290<br>[ 5.0000 ] | 86.6% | 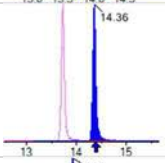 | 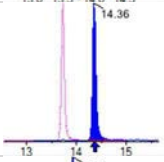 | |
| PFBS | ( 299.0 / 80.0 ) 2245113<br>( 299.0 / 99.0 ) 1676188 | ( 6.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 3206.9<br>2740.4 | 0.7466<br>105.0<br>101.2 | 4.1360<br>[ 4.4240 ] | 93.5% | 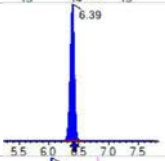 | 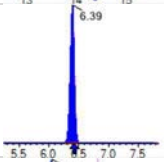 | |
| PFPeS | ( 349.0 / 80.0 ) 5826958<br>( 349.0 / 99.0 ) 2090656 | ( 7.65 , 0.88 ) ( N/A , -0.02 , 0.0) | 2417.6<br>2347.8 | 0.3588<br>105.5<br>103.8 | 4.4560<br>[ 4.6920 ] | 95.0% | 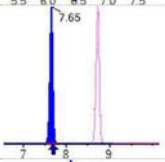 | 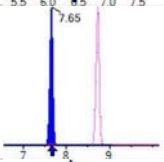 | |
| PFHxS | ( 399.0 / 80.0 ) 6313299<br>( 399.0 / 99.0 ) 2007831 | ( 8.72 , 1.00 ) ( 0.00 , N/A , -0.1) | 4090.5<br>4385.3 | 0.3180<br>101.7<br>94.7 | 4.3420<br>[ 4.5550 ] | 95.3% | 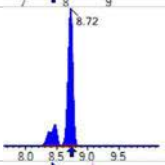 | 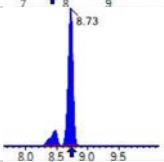 | |
| PFHpS | ( 449.0 / 80.0 ) 5679745<br>( 449.0 / 99.0 ) 1498749 | ( 9.70 , 0.92 ) ( N/A , 0.00 , 0.2) | 3361.4<br>3493.1 | 0.2639<br>98.8<br>97.5 | 4.8830<br>[ 4.7570 ] | 102.7% | 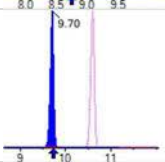 | 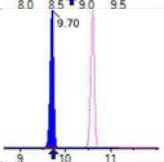 | |
| PFOS | ( 499.0 / 80.0 ) 5345052<br>( 499.0 / 99.0 ) 1221576 | ( 10.60 , 1.00 ) ( 0.00 , N/A , 0.1) | 2669.8<br>7993.2 | 0.2285<br>96.6<br>98.5 | 4.5680<br>[ 4.6370 ] | 98.5% | 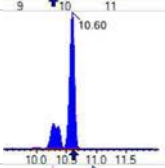 | 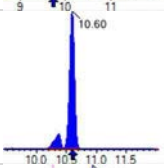 | |
| PFNS | ( 549.0 / 80.0 ) 5476764<br>( 549.0 / 99.0 ) 1452908 | ( 11.44 , 1.08 ) ( N/A , -0.01 , 0.1) | 2134.2<br>2388.1 | 0.2653<br>99.9<br>98.9 | 4.7990<br>[ 4.7990 ] | 100.0% | 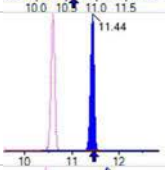 | 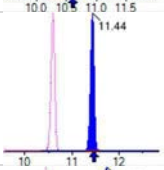 | |
| PFDS | ( 599.0 / 80.0 ) 6941986<br>( 599.0 / 99.0 ) 1799072 | ( 12.13 , 1.14 ) ( N/A , -0.01 , 0.0) | 4337.2<br>3288.3 | 0.2592<br>103.3<br>98.5 | 5.1040<br>[ 4.8160 ] | 106.0% | 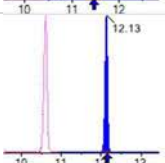 | 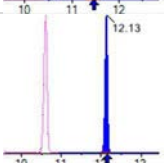 | |
| PFDoS | ( 699.0 / 80.0 ) 5925700<br>( 699.0 / 99.0 ) 1379824 | ( 13.03 , 1.23 ) ( N/A , -0.01 , 0.0) | 3708.6<br>3168.5 | 0.2329<br>101.0<br>96.3 | 5.0980<br>[ 4.8480 ] | 105.2% | 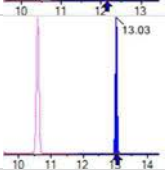 | 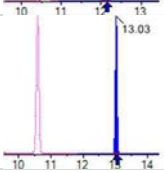 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 4599063<br>( 327.0 / 81.0 ) 4133515 | ( 5.55 , 1.00 ) ( 0.00 , N/A , 0.1) | 5150.7<br>3970.7 | 0.8988<br>102.6<br>108.8 | 18.1980<br>[ 18.6910 ] | 97.4% | 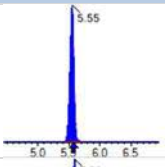 | 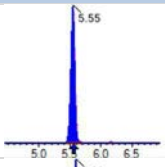 | |
| 6:2FTS | ( 427.0 / 407.0 ) 4585762<br>( 427.0 / 81.0 ) 5536040 | ( 7.68 , 1.00 ) ( -0.01 , N/A , 0.0) | 4544.3<br>4101.5 | 1.2072<br>95.0<br>97.5 | 19.4160<br>[ 18.9810 ] | 102.3% | 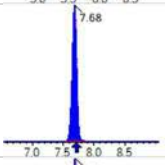 | 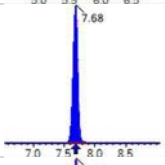 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5403709<br>( 527.0 / 81.0 ) 5492021 | ( 9.49 , 1.00 ) ( -0.01 , N/A , -0.1) | 1402.2<br>1224.0 | 1.0163<br>107.2<br>106.5 | 19.6810<br>[ 19.1660 ] | 102.7% | 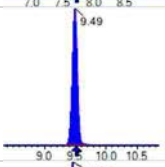 | 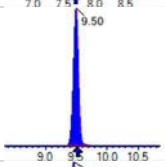 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4886156<br>( 627.0 / 81.0 ) 6981268 | ( 11.15 , 1.00 ) ( 0.01 , N/A , -0.1) | 1547.2<br>1296.6 | 1.4288<br>105.7<br>110.5 | 18.1530<br>[ 19.3240 ] | 93.9% | 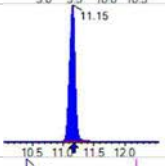 | 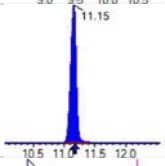 | |
| PFBSA | ( 297.9 / 78.0 ) 4686973<br>( 297.9 / 278.0 ) 6186 | ( 8.08 , 0.57 ) ( N/A , 0.01 , -0.5) | 1626.5<br>100.1 | 0.0013<br>94.0<br>91.7 | 4.6790<br>[ 5.0000 ] | 93.6% | 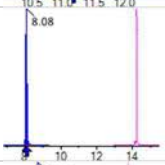 | 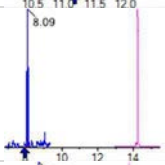 | |
| PFHxSA | ( 397.9 / 78.0 ) 6280192<br>( 397.9 / 378.0 ) 25174 | ( 10.97 , 0.75 ) ( N/A , 0.02 , 0.0) | 1175.8<br>347.9 | 0.0040<br>105.3<br>97.4 | 4.8030<br>[ 5.0000 ] | 96.1% | 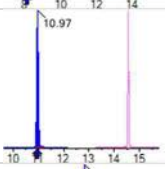 | 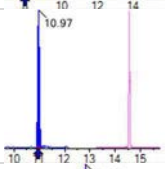 | |
| PFOSA | ( 498.0 / 78.0 ) 5671181<br>( 498.0 / 478.0 ) 84158 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.0) | 2947.5<br>1169.2 | 0.0148<br>102.8<br>105.7 | 5.0540<br>[ 5.0000 ] | 101.1% | 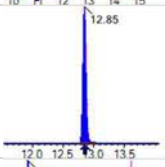 | 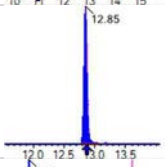 | |
| TFSI | ( 279.7 / 147.0 ) 11406077<br>( 279.7 / 211.0 ) 981875 | ( 8.30 , 0.65 ) ( N/A , -0.02 , -0.1) | 58.5<br>51.0 | 0.0861<br>104.4<br>104.5 | 4.7820<br>[ 4.8970 ] | 97.6% | 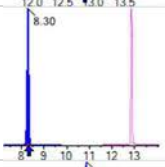 | 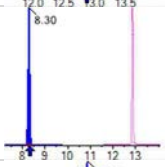 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4313932<br>( 512.0 / 169.0 ) 3271190 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.2) | 3375.6<br>4396.0 | 0.7583<br>103.2<br>98.4 | 19.6590<br>[ 20.0000 ] | 98.3% | 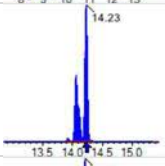 | 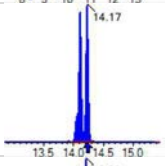 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5506247<br>( 526.0 / 169.0 ) 6965950 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.2) | 5392.6<br>4267.5 | 1.2651<br>99.9<br>99.1 | 19.6810<br>[ 20.0000 ] | 98.4% | 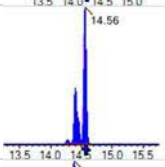 | 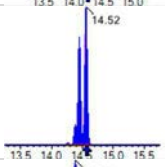 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1273423<br>( 570.0 / 483.0 ) 585337 | ( 10.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 3605.0<br>2017.9 | 0.4597<br>106.2<br>103.8 | 4.7090<br>[ 5.0000 ] | 94.2% | 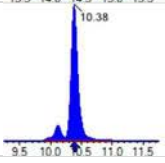 | 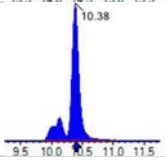 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (18)
Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1273855<br>( 584.0 / 526.0 ) 752068 | ( 10.92 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1943.2<br>767.3 | 0.5904<br>95.4<br>99.8 | 4.7380<br>[ 5.0000 ] | 94.8% | 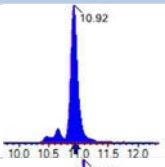 | 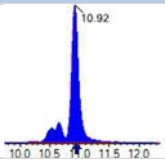 | |
| NMeFOSE | ( 616.0 / 59.0 ) 2317255 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2729.2 | N/A<br>0.0<br>0.0 | 18.6440<br>[ 20.0000 ] | 93.2% | 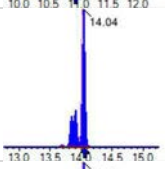 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2234807 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 5086.9 | N/A<br>0.0<br>0.0 | 19.3980<br>[ 20.0000 ] | 97.0% | 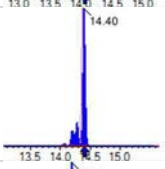 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 428874<br>( 285.0 / 185.0 ) 1205178 | ( 6.55 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2101.0<br>2692.8 | 2.8101<br>90.2<br>97.0 | 4.9570<br>[ 5.0000 ] | 99.1% | 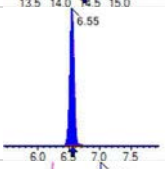 | 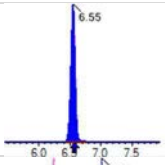 | |
| ADONA | ( 377.0 / 85.0 ) 4847476<br>( 377.0 / 251.0 ) 479802 | ( 7.64 , 1.17 )<br>( N/A , -0.01 , 0.0) | 1685.8<br>1339.8 | 0.0990<br>92.8<br>93.2 | 4.3990<br>[ 4.7140 ] | 93.3% | 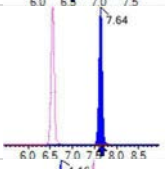 | 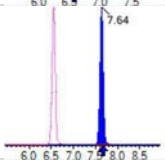 | |
| PFMPA | ( 229.0 / 85.0 ) 892236 | ( 4.16 , 0.86 )<br>( N/A , -0.02 , 0.0) | 7491.0 | N/A<br>0.0<br>0.0 | 9.9700<br>[ 10.0000 ] | 99.7% | 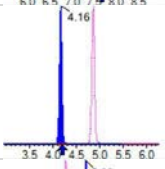 | | |
| PFMBA | ( 279.0 / 85.0 ) 2270179 | ( 5.23 , 1.08 )<br>( N/A , -0.02 , 0.0) | 6854.9 | N/A<br>0.0<br>0.0 | 9.5840<br>[ 10.0000 ] | 95.8% | 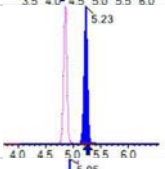 | | |
| NFDHA | ( 295.0 / 201.0 ) 1060210<br>( 295.0 / 85.0 ) 1106433 | ( 5.95 , 0.98 )<br>( N/A , -0.02 , 0.0) | 3302.5<br>2925.6 | 1.0436<br>96.5<br>100.1 | 9.5380<br>[ 10.0000 ] | 95.4% | 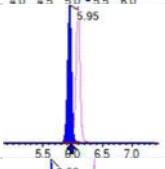 | 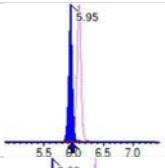 | |
| PFECHS | ( 461.0 / 98.9 ) 2894453<br>( 461.0 / 381.2 ) 1109594 | ( 9.62 , 0.91 )<br>( N/A , -0.01 , 0.0) | 4697.3<br>2937.8 | 0.3834<br>98.2<br>99.2 | 4.3860<br>[ 4.6190 ] | 95.0% | 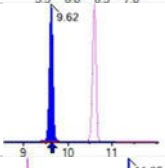 | 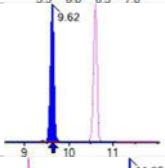 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5623777<br>( 533.0 / 353.0 ) 1818280 | ( 11.25 , 1.72 )<br>( N/A , -0.01 , -0.1) | 3041.2<br>2815.6 | 0.3233<br>100.6<br>104.2 | 4.1360<br>[ 4.6660 ] | 88.6% | 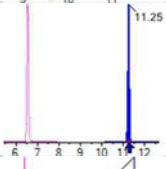 | 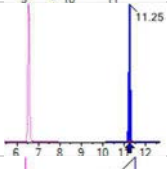 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4681624<br>( 633.0 / 453.0 ) 1556007 | ( 12.53 , 1.91 )<br>( N/A , -0.01 , 0.0) | 3238.2<br>3673.3 | 0.3324<br>101.8<br>104.6 | 4.3960<br>[ 4.7160 ] | 93.2% | 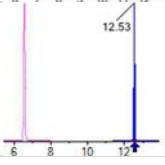 | 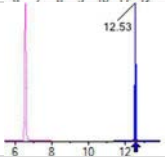 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2180560<br>( 315.0 / 83.0 ) 1186426 | ( 7.00 , 1.15 )<br>( N/A , -0.02 , 0.0) | 3910.9<br>1338.7 | 0.5441<br>95.0<br>93.9 | 9.0670<br>[ 8.9250 ] | 101.6% | 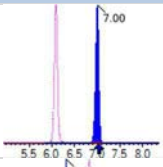 | 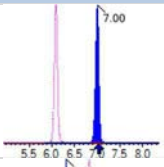 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 257703<br>( 241.0 / 117.0 ) 583429 | ( 4.40 , 0.91 )<br>( N/A , -0.02 , 0.1) | 2201.9<br>1985.7 | 2.2640<br>102.0<br>99.5 | 18.7670<br>[ 20.0000 ] | 93.8% | 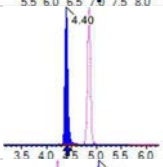 | 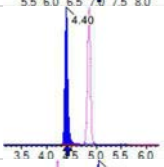 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1464701<br>( 341.0 / 217.0 ) 2116493 | ( 6.96 , 1.14 )<br>( N/A , -0.01 , 0.1) | 1089.7<br>1256.4 | 1.4450<br>96.5<br>99.4 | 18.9000<br>[ 20.0000 ] | 94.5% | 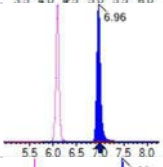 | 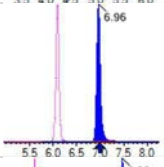 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2152301<br>( 441.0 / 337.0 ) 1913354 | ( 9.38 , 1.54 )<br>( N/A , 0.00 , 0.1) | 7205.0<br>8667.9 | 0.8890<br>99.9<br>99.7 | 18.8800<br>[ 20.0000 ] | 94.4% | 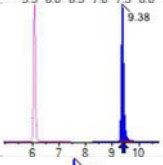 | 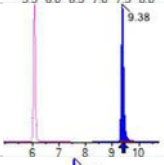 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1551404<br>( 357.2 / 243.0 ) 164480 | ( 6.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1438.4<br>924.5 | 0.1060<br>100.4<br>102.6 | 5.0640<br>[ 5.0000 ] | 101.3% | 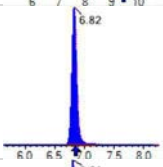 | 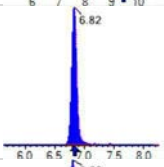 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1123495<br>( 457.2 / 343.0 ) 48230 | ( 8.91 , 1.00 )<br>( -0.01 , N/A , 0.1) | 773.2<br>496.2 | 0.0429<br>109.7<br>103.9 | 4.8950<br>[ 5.0000 ] | 97.9% | 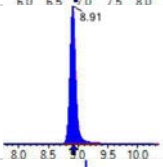 | 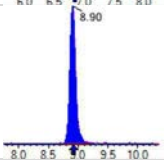 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 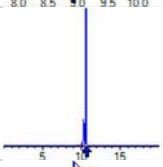 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 294342 | ( 3.77 , N/A )<br>( N/A , -0.02 , N/A ) | 2437.1 | N/A | 0.9770<br>[ 1.0000 ] | 97.7%<br>{ 99.8% } | 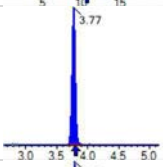 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 146763 | ( 6.09 , N/A )<br>( N/A , -0.02 , N/A ) | 25166.1 | N/A | 0.9540<br>[ 1.0000 ] | 95.4%<br>{ 94.6% } | 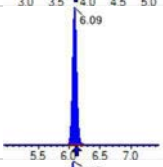 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 458375 | ( 8.27 , N/A )<br>( N/A , -0.01 , N/A ) | 4053.3 | N/A | 1.0270<br>[ 1.0000 ] | 102.7%<br>{ 99.3% } | 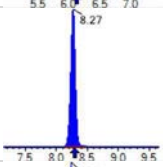 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 349263 | ( 9.23 , N/A )<br>( N/A , 0.00 , N/A ) | 865.5 | N/A | 1.0450<br>[ 1.0000 ] | 104.5%<br>{ 102.9% } | 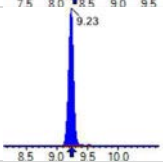 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (18)
Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 345446 | ( 10.14 , N/A ) ( N/A , 0.00 , N/A ) | 4877.8 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 103.2% } | 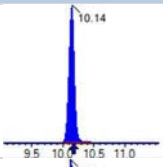 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1093658 | ( 8.73 , N/A ) ( N/A , -0.01 , N/A ) | 5517.8 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 95.6% } | 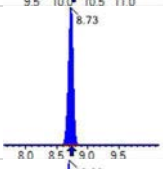 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 957311 | ( 10.60 , N/A ) ( N/A , -0.01 , N/A ) | 2815.0 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 100.8% } | 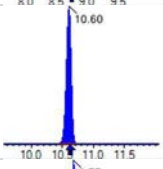 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2589280 | ( 3.77 , N/A ) ( N/A , -0.02 , N/A ) | 42208.7 | N/A | 7.9770 [ 8.0000 ] | 99.7% { 97.9% } | 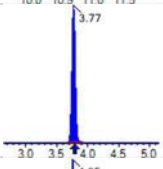 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1110609 | ( 4.85 , N/A ) ( N/A , -0.02 , N/A ) | 5972.1 | N/A | 4.2180 [ 4.0000 ] | 105.5% { 94.4% } | 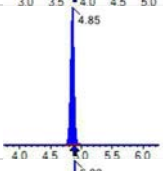 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 659999 | ( 6.09 , N/A ) ( N/A , -0.02 , N/A ) | 7400.1 | N/A | 2.0940 [ 2.0000 ] | 104.7% { 95.7% } | 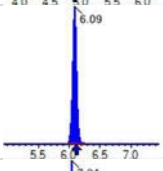 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 707197 | ( 7.24 , N/A ) ( N/A , -0.02 , N/A ) | 4992.9 | N/A | 2.1490 [ 2.0000 ] | 107.4% { 98.5% } | 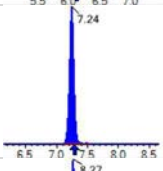 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 955615 | ( 8.27 , N/A ) ( N/A , -0.01 , N/A ) | 4177.5 | N/A | 1.9770 [ 2.0000 ] | 98.9% { 93.4% } | 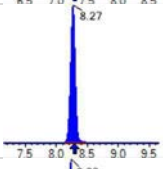 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 329879 | ( 9.23 , N/A ) ( N/A , -0.01 , N/A ) | 3121.9 | N/A | 0.9780 [ 1.0000 ] | 97.8% { 98.5% } | 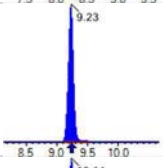 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 390441 | ( 10.14 , N/A ) ( N/A , -0.01 , N/A ) | 1087.0 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 100.5% } | 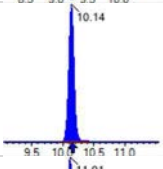 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 483735 | ( 11.01 , N/A ) ( N/A , -0.01 , N/A ) | 917.1 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 100.4% } | 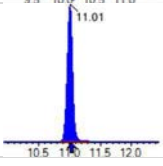 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 504518 | ( 11.83 , N/A ) ( N/A , -0.01 , N/A ) | 1480.3 | N/A | 1.0370 [ 1.0000 ] | 103.7% { 105.8% } | 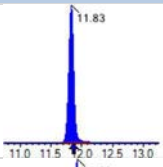  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 421072 | ( 12.93 , N/A ) ( N/A , -0.01 , N/A ) | 1373.9 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 97.2% } | 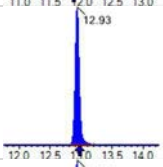  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 798480 | ( 13.73 , N/A ) ( N/A , -0.01 , N/A ) | 3050.5 | N/A | 2.2160 [ 2.0000 ] | 110.8% { 115.3% } | 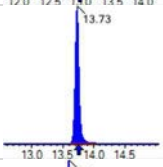  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2087928 | ( 6.40 , N/A ) ( N/A , -0.02 , N/A ) | 1192.4 | N/A | 1.9590 [ 2.0000 ] | 98.0% { 94.1% } | 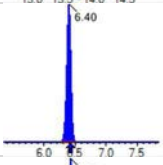  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1642132 | ( 8.73 , N/A ) ( N/A , -0.01 , N/A ) | 5825.7 | N/A | 2.0520 [ 2.0000 ] | 102.6% { 99.6% } | 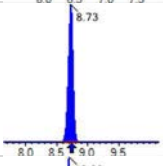  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2024552 | ( 10.60 , N/A ) ( N/A , -0.01 , N/A ) | 1317.3 | N/A | 1.9870 [ 2.0000 ] | 99.3% { 96.2% } | 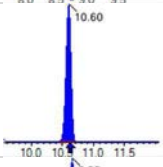  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 375418 | ( 5.55 , N/A ) ( N/A , -0.02 , N/A ) | 78.6 | N/A | 3.9420 [ 4.0000 ] | 98.5% { 103.1% } | 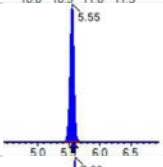  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1063452 | ( 7.69 , N/A ) ( N/A , -0.01 , N/A ) | 3298.0 | N/A | 3.5960 [ 4.0000 ] | 89.9% { 100.9% } | 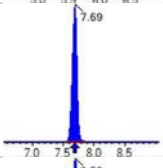  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1108454 | ( 9.50 , N/A ) ( N/A , 0.00 , N/A ) | 1278.5 | N/A | 3.7620 [ 4.0000 ] | 94.0% { 99.9% } | 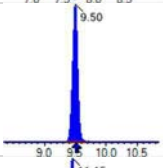  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2617039 | ( 11.15 , N/A ) ( N/A , 0.00 , N/A ) | 1136.4 | N/A | 7.7370 [ 8.0000 ] | 96.7% { 103.7% } | 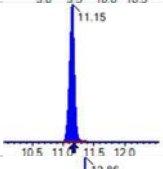  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2299465 | ( 12.86 , N/A ) ( N/A , 0.01 , N/A ) | 2227.8 | N/A | 2.0820 [ 2.0000 ] | 104.1% { 101.5% } | 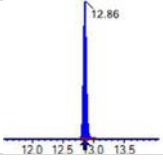  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (18)
Acquired: 2024/03/14 - 18:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 435746 | ( 14.23 , N/A ) ( N/A , 0.01 , N/A ) | 1752.9 | N/A | 2.1370 [ 2.0000 ] | 106.8% { 104.8% } | 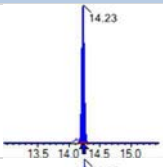  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 509925 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 3306.8 | N/A | 2.1770 [ 2.0000 ] | 108.8% { 105.9% } | 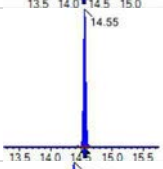  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1148524 | ( 10.38 , N/A ) ( N/A , 0.00 , N/A ) | 2267.9 | N/A | 4.4010 [ 4.0000 ] | 110.0% { 107.7% } | 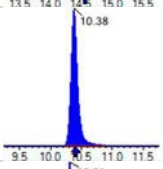  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1114959 | ( 10.91 , N/A ) ( N/A , -0.01 , N/A ) | 2081.9 | N/A | 4.5000 [ 4.0000 ] | 112.5% { 109.0% } | 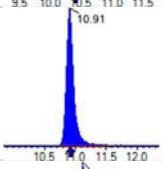  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2195791 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 2908.4 | N/A | 23.0430 [ 20.0000 ] | 115.2% { 110.0% } | 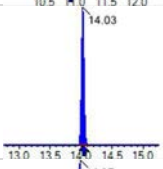  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2607744 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 6478.4 | N/A | 22.5910 [ 20.0000 ] | 113.0% { 107.0% } | 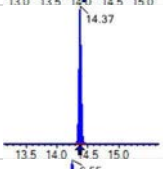  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1219280 | ( 6.55 , N/A ) ( N/A , -0.02 , N/A ) | 2234.2 | N/A | 9.0020 [ 8.0000 ] | 112.5% { 102.1% } | 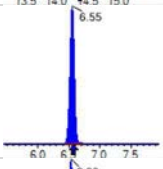  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 570079 | ( 6.83 , N/A ) ( N/A , -0.02 , N/A ) | 1432.5 | N/A | 1.8610 [ 2.0000 ] | 93.0% { 95.0% } | 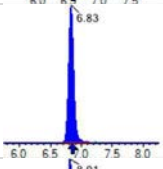  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 544305 | ( 8.91 , N/A ) ( N/A , -0.01 , N/A ) | 718.2 | N/A | 1.9030 [ 2.0000 ] | 95.1% { 101.9% } | 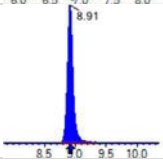  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project: | [none]A |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00936A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00936-CCV3A | PFBA | 20.0A | 19.0A | 95.0A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.21A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 5.03A | 101A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.81A | 96.3A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.58A | 91.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.90A | 98.0A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.81A | 96.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 5.03A | 101A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.60A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.98A | 99.6A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.46A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.34A | 98.2A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.79A | 102A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.56A | 99.5A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.51A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.20A | 90.4A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.50A | 93.8A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.83A | 100A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.78A | 98.5A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.7A | 93.9A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.2A | 95.9A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.9A | 98.4A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 5.07A | 101A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.9A | 99.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.6A | 97.9A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.88A | 97.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.80A | 96.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 19.4A | 96.9A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project: | [none]A |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00936A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00936-CCV3A | NEtFOSEA | 20.0A | 19.4A | 97.0A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.99A | 99.8A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.47A | 94.7A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 9.02A | 101A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.0A | 100A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.97A | 99.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.76A | 97.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.16A | 88.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.45A | 94.3A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 19.3A | 96.6A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.9A | 104A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 20.5A | 103A | ng/mLA | +/- 30.00%A |

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Chemist: DAG | Sample I.D.: SD00936-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2514843<br>( 163.0 / 69.0 ) 66794 | ( 2.78 , 0.74 )<br>( N/A , -0.03 , 0.0) | 12976.2<br>2850.5 | 0.0266<br>106.0<br>104.9 | 8.8510<br>[ 10.0000 ] | 88.5% | 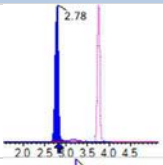 | 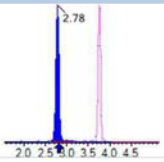 | |
| PFBA | ( 213.0 / 169.0 ) 5772113 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 7578.2 | N/A<br>0.0<br>0.0 | 18.9980<br>[ 20.0000 ] | 95.0% | 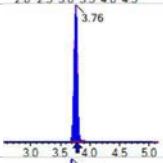 | | |
| PFPeA | ( 263.0 / 219.0 ) 2501464<br>( 263.0 / 69.0 ) 30068 | ( 4.85 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5175.7<br>458.1 | 0.0120<br>109.4<br>99.8 | 9.2120<br>[ 10.0000 ] | 92.1% | 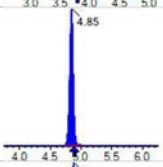 | 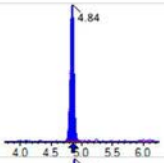 | |
| PFHxA | ( 313.0 / 269.0 ) 1498455<br>( 313.0 / 119.0 ) 167209 | ( 6.08 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2440.0<br>1572.7 | 0.1116<br>100.4<br>96.8 | 5.0250<br>[ 5.0000 ] | 100.5% | 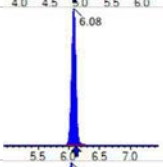 | 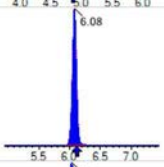 | |
| PFHpA | ( 363.0 / 319.0 ) 1637804<br>( 363.0 / 169.0 ) 497601 | ( 7.24 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1742.9<br>1668.0 | 0.3038<br>97.5<br>103.6 | 4.8150<br>[ 5.0000 ] | 96.3% | 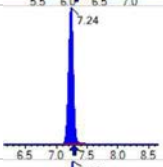 | 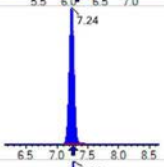 | |
| PFOA | ( 413.0 / 369.0 ) 2235632<br>( 413.0 / 169.0 ) 789157 | ( 8.26 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1081.1<br>1336.2 | 0.3530<br>97.6<br>102.4 | 4.6830<br>[ 5.0000 ] | 93.7% | 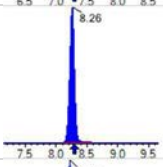 | 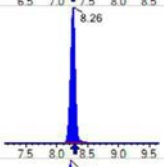 | |
| PFNA | ( 463.0 / 419.0 ) 1544994<br>( 463.0 / 169.0 ) 380131 | ( 9.22 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1074.5<br>1013.6 | 0.2460<br>93.7<br>97.5 | 4.5790<br>[ 5.0000 ] | 91.6% | 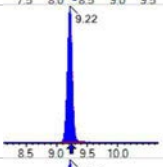 | 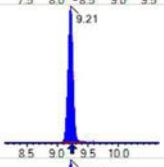 | |
| PFDA | ( 513.0 / 469.0 ) 1806431<br>( 513.0 / 169.0 ) 223556 | ( 10.12 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3215.3<br>3980.1 | 0.1238<br>105.4<br>106.8 | 4.8320<br>[ 5.0000 ] | 96.6% | 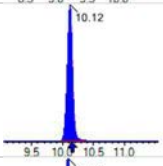 | 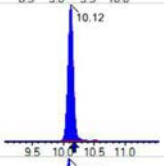 | |
| PFUnA | ( 563.0 / 519.0 ) 2074644<br>( 563.0 / 169.0 ) 292770 | ( 10.99 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1113.9<br>936.6 | 0.1411<br>95.3<br>95.3 | 4.8980<br>[ 5.0000 ] | 98.0% | 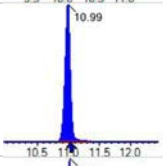 | 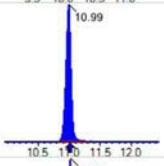 | |
| PFDoA | ( 613.0 / 569.0 ) 2353682<br>( 613.0 / 169.0 ) 366580 | ( 11.81 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1614.3<br>1043.3 | 0.1557<br>98.5<br>103.6 | 4.8090<br>[ 5.0000 ] | 96.2% | 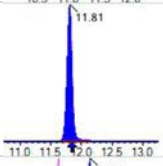 | 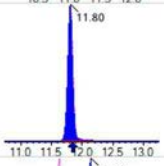 | |
| PFTrDA | ( 663.0 / 619.0 ) 2366970<br>( 663.0 / 169.0 ) 588865 | ( 12.42 , 1.05 )<br>( N/A , -0.03 , 0.0) | 1575.3<br>1277.3 | 0.2488<br>92.3<br>94.8 | 5.0300<br>[ 5.0000 ] | 100.6% | 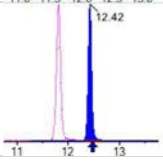 | 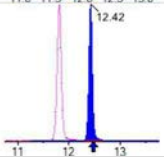 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (27)
Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1869947<br>( 713.0 / 169.0 ) 492603 | ( 12.91 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1873.5<br>1051.7 | 0.2634<br>101.3<br>104.5 | 4.5990<br>[ 5.0000 ] | 92.0% | 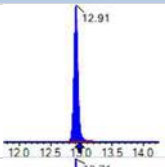 | 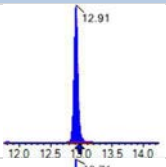 | |
| PFHxDA | ( 813.0 / 769.0 ) 1765861<br>( 813.0 / 169.0 ) 406859 | ( 13.71 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2155.6<br>1335.8 | 0.2304<br>106.2<br>103.4 | 4.9790<br>[ 5.0000 ] | 99.6% | 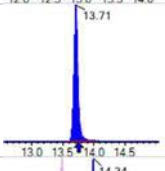 | 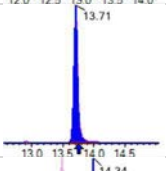 | |
| PFODA | ( 913.0 / 869.0 ) 1063500<br>( 913.0 / 169.0 ) 382890 | ( 14.34 , 1.05 )<br>( N/A , -0.03 , 0.1) | 1879.2<br>1347.0 | 0.3600<br>94.2<br>103.3 | 4.4630<br>[ 5.0000 ] | 89.3% | 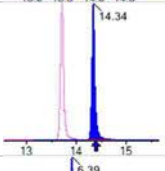 | 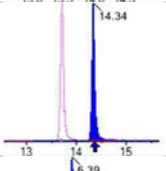 | |
| PFBS | ( 299.0 / 80.0 ) 2284967<br>( 299.0 / 99.0 ) 1627392 | ( 6.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3844.5<br>3307.0 | 0.7122<br>100.2<br>96.6 | 4.3390<br>[ 4.4240 ] | 98.1% | 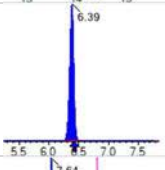 | 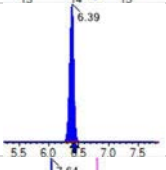 | |
| PFPeS | ( 349.0 / 80.0 ) 5972223<br>( 349.0 / 99.0 ) 2051711 | ( 7.64 , 0.88 )<br>( N/A , -0.02 , 0.0) | 3504.0<br>2542.1 | 0.3435<br>101.0<br>99.4 | 4.7880<br>[ 4.6920 ] | 102.0% | 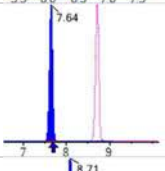 | 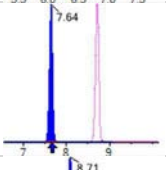 | |
| PFHxS | ( 399.0 / 80.0 ) 6321245<br>( 399.0 / 99.0 ) 2008406 | ( 8.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4072.9<br>6202.4 | 0.3177<br>101.6<br>94.6 | 4.5570<br>[ 4.5550 ] | 100.0% | 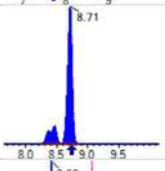 | 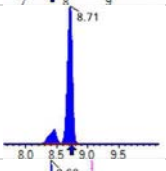 | |
| PFHpS | ( 449.0 / 80.0 ) 5474161<br>( 449.0 / 99.0 ) 1459607 | ( 9.68 , 0.92 )<br>( N/A , -0.02 , 0.0) | 2756.6<br>2109.6 | 0.2666<br>99.8<br>98.5 | 4.5100<br>[ 4.7570 ] | 94.8% | 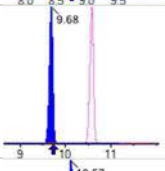 | 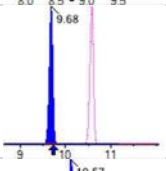 | |
| PFOS | ( 499.0 / 80.0 ) 5134546<br>( 499.0 / 99.0 ) 1188338 | ( 10.57 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2564.9<br>4895.6 | 0.2314<br>97.8<br>99.7 | 4.2040<br>[ 4.6370 ] | 90.7% | 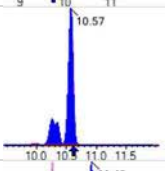 | 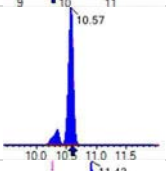 | |
| PFNS | ( 549.0 / 80.0 ) 5363838<br>( 549.0 / 99.0 ) 1433420 | ( 11.42 , 1.08 )<br>( N/A , -0.03 , 0.0) | 3028.4<br>3026.6 | 0.2672<br>100.6<br>99.6 | 4.5040<br>[ 4.7990 ] | 93.8% | 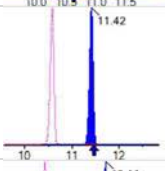 | 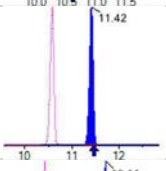 | |
| PFDS | ( 599.0 / 80.0 ) 6850736<br>( 599.0 / 99.0 ) 1740752 | ( 12.11 , 1.14 )<br>( N/A , -0.03 , 0.0) | 3601.1<br>3113.2 | 0.2541<br>101.3<br>96.6 | 4.8260<br>[ 4.8160 ] | 100.2% | 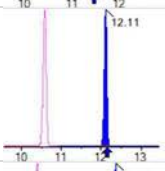 | 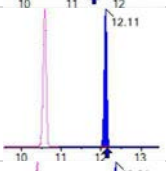 | |
| PFDoS | ( 699.0 / 80.0 ) 5795075<br>( 699.0 / 99.0 ) 1351134 | ( 13.01 , 1.23 )<br>( N/A , -0.03 , 0.0) | 4732.3<br>3926.0 | 0.2332<br>101.1<br>96.5 | 4.7770<br>[ 4.8480 ] | 98.5% | 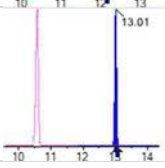 | 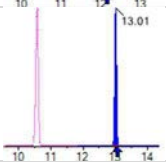 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (27)
Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 4518935<br>( 327.0 / 81.0 ) 4003113 | ( 5.54 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4908.8<br>3306.9 | 0.8859<br>101.1<br>107.3 | 17.6560<br>[ 18.6910 ] | 94.5% | 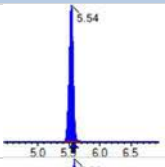 | 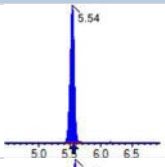 | |
| 6:2FTS | ( 427.0 / 407.0 ) 4504397<br>( 427.0 / 81.0 ) 5622284 | ( 7.68 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3254.4<br>3261.0 | 1.2482<br>98.2<br>100.8 | 18.2230<br>[ 18.9810 ] | 96.0% | 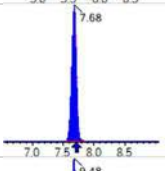 | 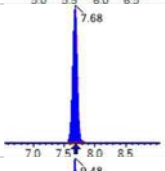 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5039554<br>( 527.0 / 81.0 ) 5800384 | ( 9.48 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1232.7<br>1604.9 | 1.1510<br>121.4<br>120.6 | 18.8920<br>[ 19.1660 ] | 98.6% | 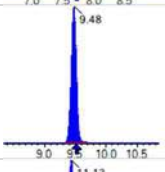 | 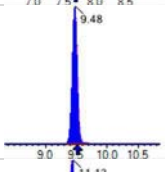 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4577624<br>( 627.0 / 81.0 ) 6761781 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1128.7<br>1449.3 | 1.4771<br>109.3<br>114.2 | 17.8700<br>[ 19.3240 ] | 92.5% | 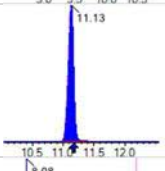 | 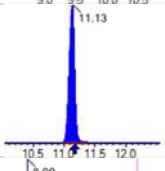 | |
| PFBSA | ( 297.9 / 78.0 ) 4538522<br>( 297.9 / 278.0 ) 4570 | ( 8.08 , 0.57 )<br>( N/A , 0.01 , -0.2) | 1682.4<br>69.9 | 0.0010<br>71.7<br>70.0 | 4.7020<br>[ 5.0000 ] | 94.0% | 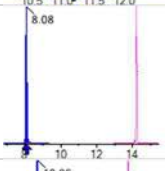 | 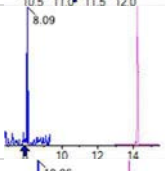 | |
| PFHxSA | ( 397.9 / 78.0 ) 5838988<br>( 397.9 / 378.0 ) 26714 | ( 10.96 , 0.75 )<br>( N/A , 0.01 , 0.1) | 1374.5<br>444.9 | 0.0046<br>120.2<br>111.1 | 4.6630<br>[ 5.0000 ] | 93.3% | 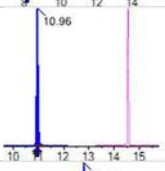 | 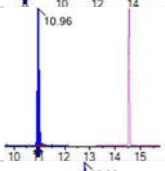 | |
| PFOSA | ( 498.0 / 78.0 ) 5587692<br>( 498.0 / 478.0 ) 82388 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2686.4<br>968.4 | 0.0147<br>102.2<br>105.1 | 5.0730<br>[ 5.0000 ] | 101.5% | 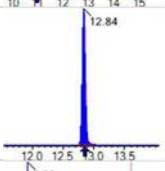 | 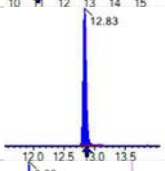 | |
| TFSI | ( 279.7 / 147.0 ) 10788284<br>( 279.7 / 211.0 ) 947622 | ( 8.28 , 0.65 )<br>( N/A , -0.03 , 0.0) | 59.3<br>58.4 | 0.0878<br>106.5<br>106.6 | 4.6070<br>[ 4.8970 ] | 94.1% | 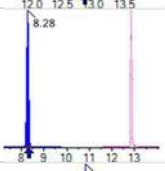 | 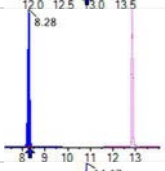 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4209961<br>( 512.0 / 169.0 ) 3186089 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 3.0) | 3750.6<br>4433.2 | 0.7568<br>103.0<br>98.2 | 19.9130<br>[ 20.0000 ] | 99.6% | 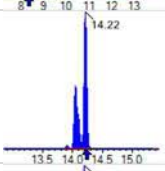 | 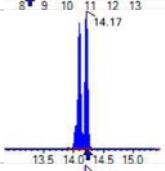 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5244048<br>( 526.0 / 169.0 ) 6764677 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.2) | 4270.8<br>3499.3 | 1.2900<br>101.8<br>101.1 | 19.5760<br>[ 20.0000 ] | 97.9% | 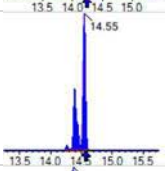 | 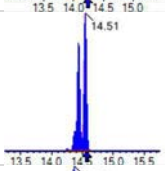 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1274387<br>( 570.0 / 483.0 ) 587075 | ( 10.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4717.2<br>2869.9 | 0.4607<br>106.4<br>104.0 | 4.8840<br>[ 5.0000 ] | 97.7% | 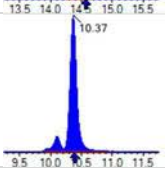 | 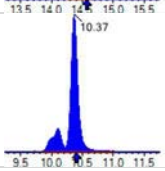 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1250592<br>( 584.0 / 526.0 ) 740456 | ( 10.90 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1719.4<br>736.2 | 0.5921<br>95.6<br>100.1 | 4.8020<br>[ 5.0000 ] | 96.0% | 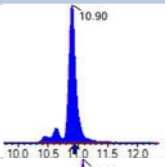 | 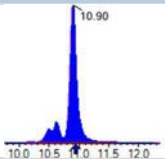 | |
| NMeFOSE | ( 616.0 / 59.0 ) 2302132 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3158.4 | N/A<br>0.0<br>0.0 | 19.3800<br>[ 20.0000 ] | 96.9% | 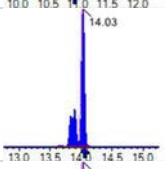 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2179307 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4076.0 | N/A<br>0.0<br>0.0 | 19.3930<br>[ 20.0000 ] | 97.0% | 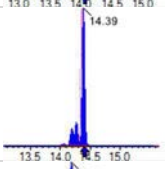 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 410900<br>( 285.0 / 185.0 ) 1128614 | ( 6.54 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1566.0<br>1935.1 | 2.7467<br>88.1<br>94.8 | 4.9900<br>[ 5.0000 ] | 99.8% | 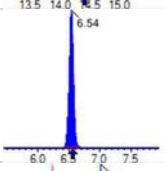 | 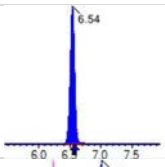 | |
| ADONA | ( 377.0 / 85.0 ) 4686483<br>( 377.0 / 251.0 ) 478687 | ( 7.63 , 1.17 )<br>( N/A , -0.01 , 0.1) | 1652.9<br>1297.3 | 0.1021<br>95.8<br>96.2 | 4.4690<br>[ 4.7140 ] | 94.8% | 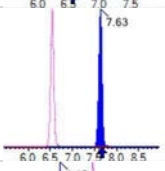 | 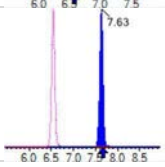 | |
| PFMPA | ( 229.0 / 85.0 ) 861671 | ( 4.15 , 0.86 )<br>( N/A , -0.03 , 0.0) | 7989.8 | N/A<br>0.0<br>0.0 | 10.0230<br>[ 10.0000 ] | 100.2% | 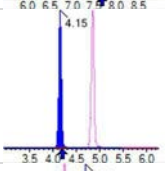 | | |
| PFMBA | ( 279.0 / 85.0 ) 2267895 | ( 5.22 , 1.08 )<br>( N/A , -0.03 , 0.0) | 5561.0 | N/A<br>0.0<br>0.0 | 9.9670<br>[ 10.0000 ] | 99.7% | 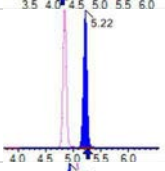 | | |
| NFDHA | ( 295.0 / 201.0 ) 1011200<br>( 295.0 / 85.0 ) 1040709 | ( 5.94 , 0.98 )<br>( N/A , -0.03 , 0.1) | 2907.5<br>3636.9 | 1.0292<br>95.2<br>98.7 | 9.7560<br>[ 10.0000 ] | 97.6% | 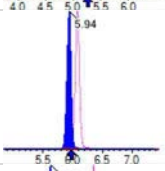 | 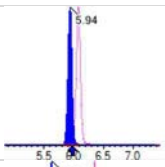 | |
| PFECHS | ( 461.0 / 98.9 ) 2871724<br>( 461.0 / 381.2 ) 1051010 | ( 9.60 , 0.91 )<br>( N/A , -0.03 , 0.0) | 3476.4<br>4012.6 | 0.3660<br>93.7<br>94.7 | 4.1700<br>[ 4.6190 ] | 90.3% | 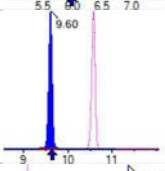 | 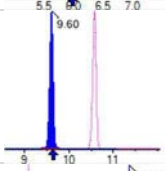 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5386491<br>( 533.0 / 353.0 ) 1711898 | ( 11.22 , 1.72 )<br>( N/A , -0.03 , 0.1) | 2613.6<br>3259.9 | 0.3178<br>98.9<br>102.4 | 4.1620<br>[ 4.6660 ] | 89.2% | 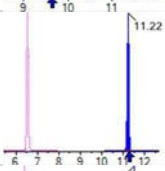 | 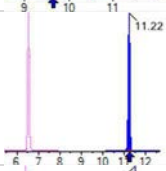 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4509677<br>( 633.0 / 453.0 ) 1472032 | ( 12.51 , 1.91 )<br>( N/A , -0.03 , 0.1) | 4103.0<br>3486.9 | 0.3264<br>99.9<br>102.7 | 4.4490<br>[ 4.7160 ] | 94.3% | 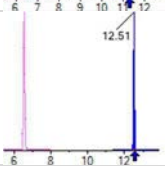 | 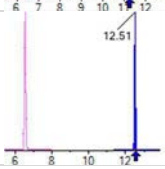 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (27)
Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2022951<br>( 315.0 / 83.0 ) 1220560 | ( 6.99 , 1.15 )<br>( N/A , -0.03 , 0.0) | 3982.4<br>1074.1 | 0.6034<br>105.3<br>104.2 | 9.0200<br>[ 8.9250 ] | 101.1% | 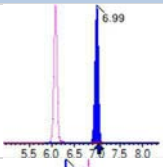 | 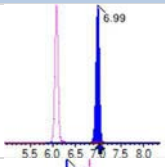 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 254823<br>( 241.0 / 117.0 ) 559983 | ( 4.39 , 0.91 )<br>( N/A , -0.03 , 0.0) | 2405.5<br>1663.0 | 2.1975<br>99.0<br>96.5 | 19.3170<br>[ 20.0000 ] | 96.6% | 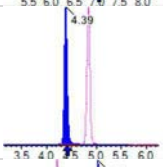 | 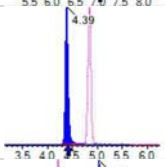 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1510070<br>( 341.0 / 217.0 ) 2133749 | ( 6.95 , 1.14 )<br>( N/A , -0.02 , 0.0) | 1236.4<br>1076.7 | 1.4130<br>94.4<br>97.2 | 20.8960<br>[ 20.0000 ] | 104.5% | 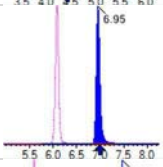 | 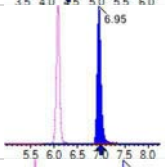 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2184571<br>( 441.0 / 337.0 ) 1902319 | ( 9.37 , 1.54 )<br>( N/A , -0.01 , 0.0) | 6151.3<br>15030.2 | 0.8708<br>97.8<br>97.7 | 20.5500<br>[ 20.0000 ] | 102.7% | 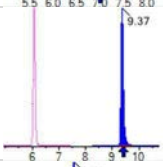 | 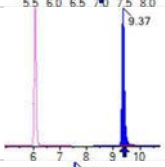 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1500787<br>( 357.2 / 243.0 ) 160071 | ( 6.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1165.1<br>833.0 | 0.1067<br>101.0<br>103.3 | 4.9020<br>[ 5.0000 ] | 98.0% | 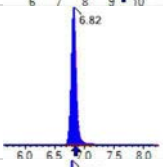 | 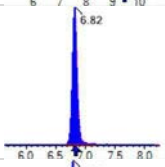 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1137995<br>( 457.2 / 343.0 ) 44844 | ( 8.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 845.1<br>451.1 | 0.0394<br>100.7<br>95.4 | 5.0600<br>[ 5.0000 ] | 101.2% | 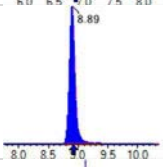 | 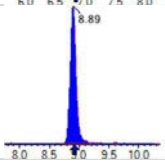 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 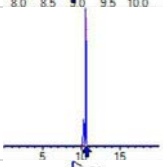 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 289672 | ( 3.76 , N/A )<br>( N/A , -0.03 , N/A ) | 2679.0 | N/A | 0.9620<br>[ 1.0000 ] | 96.2%<br>{ 98.3% } | 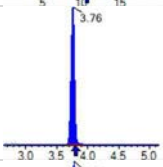 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 157757 | ( 6.08 , N/A )<br>( N/A , -0.03 , N/A ) | 23474.7 | N/A | 1.0260<br>[ 1.0000 ] | 102.6%<br>{ 101.7% } | 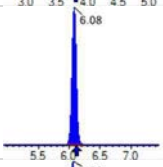 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 432650 | ( 8.26 , N/A )<br>( N/A , -0.01 , N/A ) | 8520.1 | N/A | 0.9700<br>[ 1.0000 ] | 97.0%<br>{ 93.7% } | 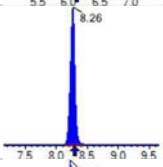 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 333923 | ( 9.22 , N/A )<br>( N/A , -0.02 , N/A ) | 904.8 | N/A | 0.9990<br>[ 1.0000 ] | 99.9%<br>{ 98.3% } | 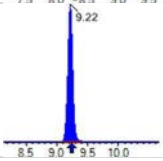 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (27)
Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 329253 | ( 10.12 , N/A ) ( N/A , -0.02 , N/A ) | 3928.0 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 98.4% } | 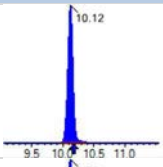 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1139643 | ( 8.72 , N/A ) ( N/A , -0.02 , N/A ) | 4573.5 | N/A | 1.0200 [ 1.0000 ] | 102.0% { 99.7% } | 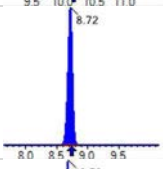 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 969608 | ( 10.58 , N/A ) ( N/A , -0.03 , N/A ) | 3063.5 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 102.1% } | 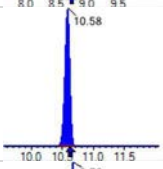 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2569152 | ( 3.76 , N/A ) ( N/A , -0.03 , N/A ) | 36390.0 | N/A | 8.0430 [ 8.0000 ] | 100.5% { 97.1% } | 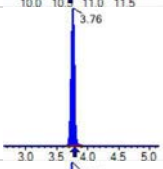 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1066915 | ( 4.84 , N/A ) ( N/A , -0.03 , N/A ) | 5393.3 | N/A | 3.7700 [ 4.0000 ] | 94.2% { 90.7% } | 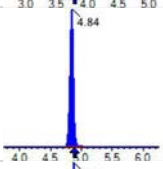 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 615456 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 8175.0 | N/A | 1.8170 [ 2.0000 ] | 90.8% { 89.3% } | 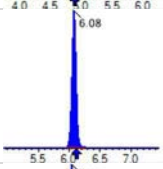 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 690761 | ( 7.24 , N/A ) ( N/A , -0.02 , N/A ) | 5142.6 | N/A | 1.9530 [ 2.0000 ] | 97.6% { 96.2% } | 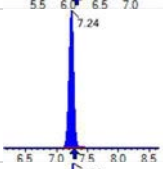 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 938913 | ( 8.26 , N/A ) ( N/A , -0.02 , N/A ) | 2905.7 | N/A | 2.0580 [ 2.0000 ] | 102.9% { 91.8% } | 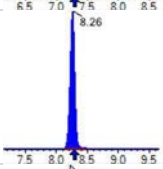 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 336727 | ( 9.22 , N/A ) ( N/A , -0.02 , N/A ) | 2968.2 | N/A | 1.0440 [ 1.0000 ] | 104.4% { 100.6% } | 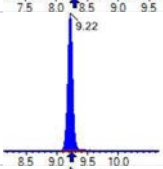 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 375357 | ( 10.12 , N/A ) ( N/A , -0.02 , N/A ) | 874.4 | N/A | 0.9880 [ 1.0000 ] | 98.8% { 96.7% } | 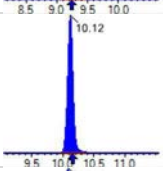 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 453627 | ( 10.99 , N/A ) ( N/A , -0.03 , N/A ) | 994.2 | N/A | 0.9820 [ 1.0000 ] | 98.2% { 94.1% } | 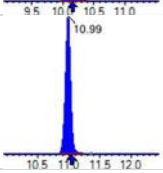 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 478189 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1296.2 | N/A | 1.0310 [ 1.0000 ] | 103.1% { 100.3% } | 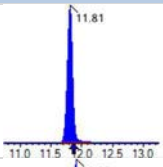 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 428165 | ( 12.91 , N/A ) ( N/A , -0.03 , N/A ) | 1556.4 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 98.9% } | 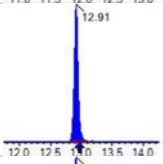 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 734945 | ( 13.71 , N/A ) ( N/A , -0.03 , N/A ) | 3064.4 | N/A | 2.1400 [ 2.0000 ] | 107.0% { 106.1% } | 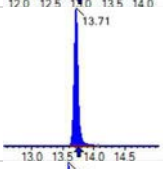 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2025541 | ( 6.39 , N/A ) ( N/A , -0.03 , N/A ) | 1165.9 | N/A | 1.8240 [ 2.0000 ] | 91.2% { 91.3% } | 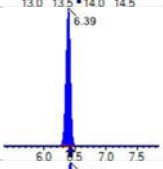 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1566596 | ( 8.72 , N/A ) ( N/A , -0.02 , N/A ) | 5143.2 | N/A | 1.8790 [ 2.0000 ] | 93.9% { 95.0% } | 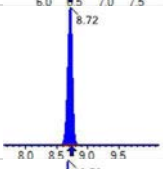 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2112958 | ( 10.58 , N/A ) ( N/A , -0.03 , N/A ) | 1854.8 | N/A | 2.0470 [ 2.0000 ] | 102.4% { 100.4% } | 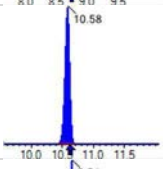 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 380215 | ( 5.54 , N/A ) ( N/A , -0.02 , N/A ) | 73.1 | N/A | 3.8310 [ 4.0000 ] | 95.8% { 104.4% } | 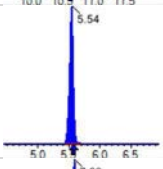 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1112964 | ( 7.68 , N/A ) ( N/A , -0.02 , N/A ) | 3380.2 | N/A | 3.6110 [ 4.0000 ] | 90.3% { 105.6% } | 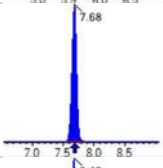 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1076968 | ( 9.48 , N/A ) ( N/A , -0.02 , N/A ) | 1258.6 | N/A | 3.5080 [ 4.0000 ] | 87.7% { 97.0% } | 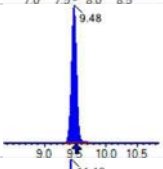 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2490551 | ( 11.12 , N/A ) ( N/A , -0.03 , N/A ) | 1304.1 | N/A | 7.0660 [ 8.0000 ] | 88.3% { 98.6% } | 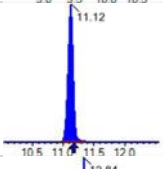 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2257173 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2066.5 | N/A | 2.0180 [ 2.0000 ] | 100.9% { 99.7% } | 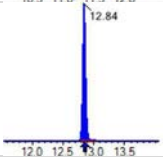 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 21:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 419805 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2599.4 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 100.9% } | 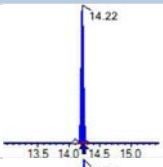  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 488249 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2852.3 | N/A | 2.0580 [ 2.0000 ] | 102.9% { 101.4% } | 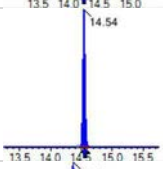  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1108341 | ( 10.36 , N/A ) ( N/A , -0.02 , N/A ) | 2686.9 | N/A | 4.1930 [ 4.0000 ] | 104.8% { 103.9% } | 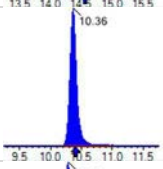  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1079816 | ( 10.89 , N/A ) ( N/A , -0.03 , N/A ) | 1746.8 | N/A | 4.3030 [ 4.0000 ] | 107.6% { 105.6% } | 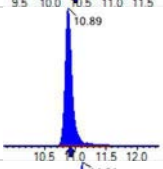  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2098652 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2393.6 | N/A | 21.7440 [ 20.0000 ] | 108.7% { 105.2% } | 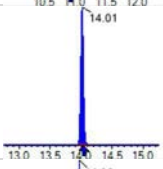  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2543692 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5081.8 | N/A | 21.7560 [ 20.0000 ] | 108.8% { 104.4% } | 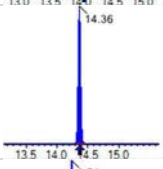  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1160388 | ( 6.54 , N/A ) ( N/A , -0.03 , N/A ) | 2194.6 | N/A | 7.9700 [ 8.0000 ] | 99.6% { 97.2% } | 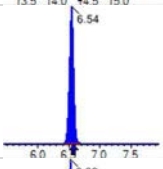  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 569702 | ( 6.82 , N/A ) ( N/A , -0.02 , N/A ) | 1364.3 | N/A | 1.9510 [ 2.0000 ] | 97.5% { 94.9% } | 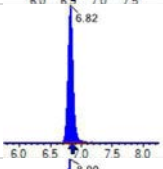  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 533354 | ( 8.90 , N/A ) ( N/A , -0.02 , N/A ) | 596.0 | N/A | 1.9560 [ 2.0000 ] | 97.8% { 99.8% } | 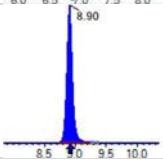  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0052L |
| Client:N | Tidewater, Inc.L | Project:N | [none]L |
| Sequence:N | SD00912L | Instrument:N | Saphira |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01830 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .01770 | ng/mL0 | .10 | U |
| | PFHxDA0 | .040 | ng/mL0 | .10 | U |
| | PFODA0 | .08910 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06860 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02530 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .02610 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00912L
Calibration:N 2411010L

SDG:N 24C0052L
Project:N [none]L
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .07760 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.440 | ng/mL0 | | |
| | 13C5-PFPEA0 | 3.960 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.020 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.090 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.080 | ng/mL0 | | |
| | 13C6-PFDA | 0.980 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9890 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.910 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.960 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.080 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.430 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.530 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.210 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.50 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.060 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.040 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.220 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.390 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0052L |
| Client: | Tidewater, Inc.L | Project: | [none]L |
| Sequence: | SD00912L | Instrument: | Saphira |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | C |
|---|---|---|---|---|---|
| SD0 912-ICB10 | D7-NMEFOSE0 | 23.60 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.40 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.540 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 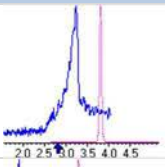 | 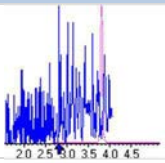 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 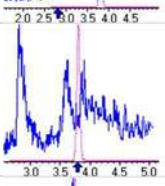 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 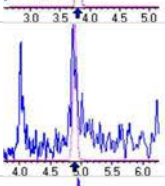 | 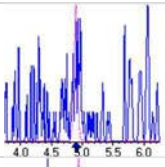 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 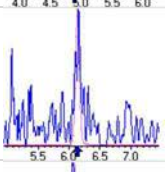 | 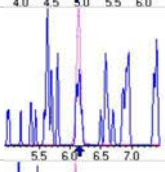 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 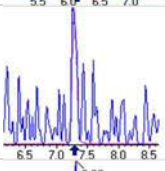 | 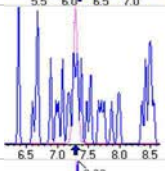 | |
| PFOA | ( 413.0 / 369.0 ) 8051<br>( 413.0 / 169.0 ) 3686 | ( 8.32 , 1.00 ) ( 0.01 , N/A , 0.2) | 17.5<br>27.6 | 0.4578<br>126.6<br>126.6 | 0.0183 | N/A | 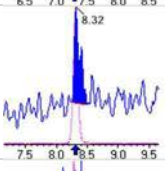 | 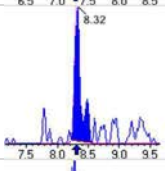 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 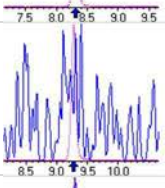 | 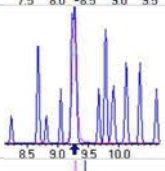 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 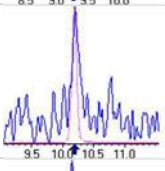 | 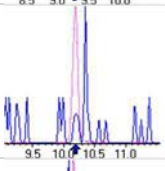 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 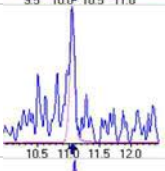 | 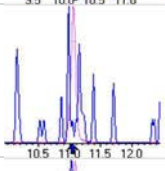 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 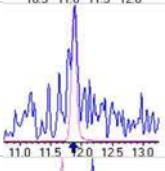 | 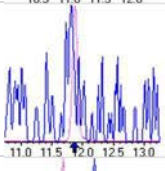 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 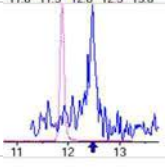 | 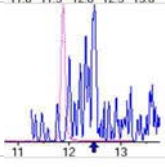 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6095<br>( 713.0 / 169.0 ) 1955 | ( 12.95 , 1.00 )<br>( -0.03 , N/A , -1.9) | 24.0<br>18.1 | 0.3208<br>123.4<br>123.4 | 0.0177 | N/A | 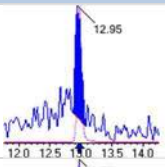 | 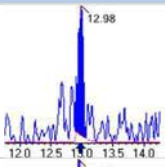 | |
| PFHxDA | ( 813.0 / 769.0 ) 11232<br>( 813.0 / 169.0 ) 2907 | ( 13.77 , 1.00 )<br>( 0.00 , N/A , 0.7) | 48.7<br>23.1 | 0.2588<br>119.3<br>119.3 | 0.0400 | N/A | 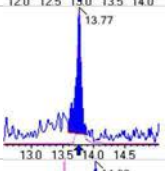 | 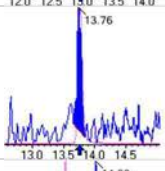 | |
| PFODA | ( 913.0 / 869.0 ) 16821<br>( 913.0 / 169.0 ) 4625 | ( 14.39 , 1.05 )<br>( N/A , 0.00 , 0.4) | 56.9<br>29.4 | 0.2750<br>72.0<br>72.0 | 0.0891 | N/A | 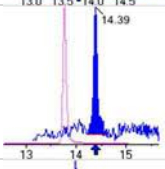 | 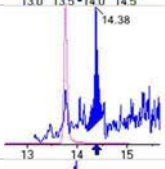 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 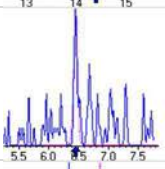 | 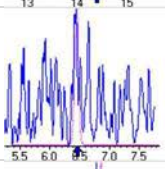 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 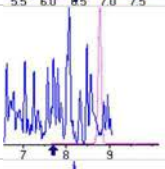 | 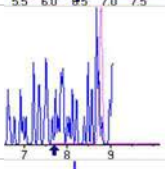 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 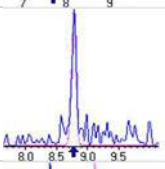 | 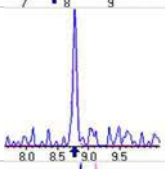 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 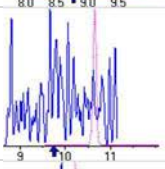 | 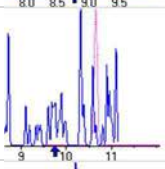 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 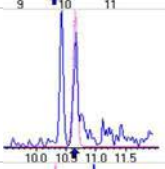 | 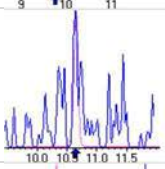 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 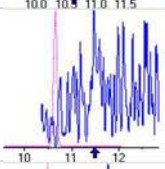 | 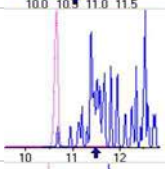 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 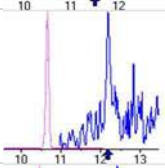 | 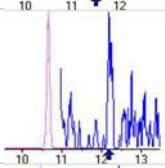 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 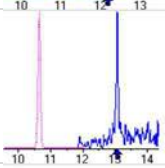 | 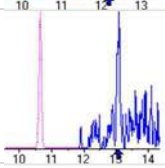 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 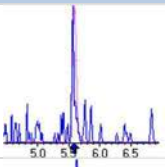 | 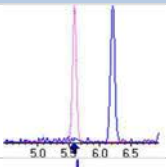 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 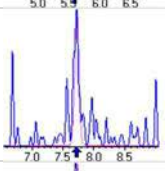 | 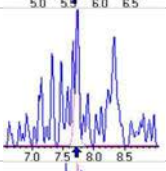 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 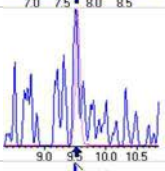 | 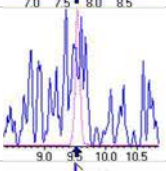 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17567<br>( 627.0 / 81.0 ) 23554 | ( 11.20 , 1.00 ) ( 0.01 , N/A , -0.2) | 96.5<br>58.1 | 1.3408<br>99.2<br>99.2 | 0.0686 | N/A | 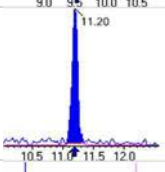 | 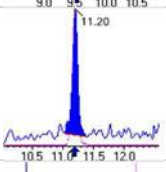 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 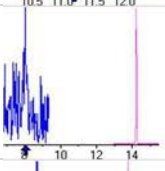 | 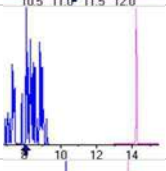 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 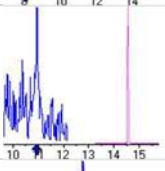 | 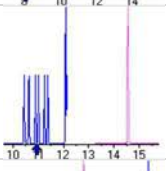 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 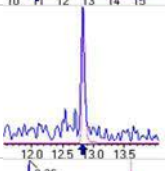 | 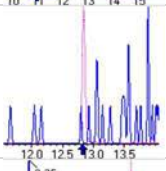 | |
| TFSI | ( 279.7 / 147.0 ) 58193<br>( 279.7 / 211.0 ) 5712 | ( 8.36 , 0.65 ) ( N/A , -0.01 , 0.6) | 33.3<br>13.4 | 0.0982<br>119.0<br>119.0 | 0.0288 | N/A | 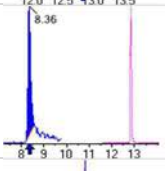 | 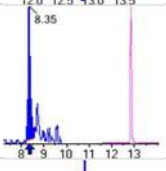 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 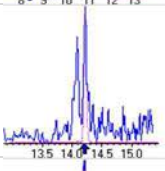 | 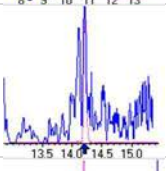 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 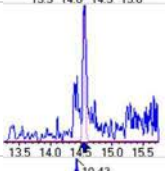 | 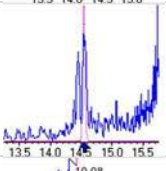 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5625<br>( 570.0 / 483.0 ) 2369 | ( 10.43 , 1.00 ) ( 0.00 , N/A , 20.5) | 109.0<br>614.2 | 0.4211<br>97.3<br>97.3 | 0.0253 | N/A | 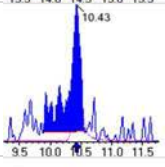 | 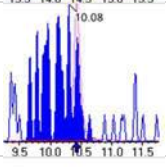 | MI2 DG 2024-03-13 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 5863<br>( 584.0 / 526.0 ) 3543 | ( 10.87 , 0.99 )<br>( -0.09 , N/A , 1.9) | 35.3<br>17.3 | 0.6042<br>97.6<br>97.6 | 0.0261 | N/A | 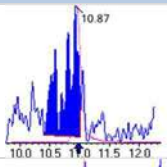 | 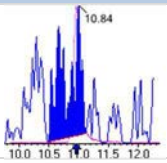 | MI2 DG 2024-03-13 |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 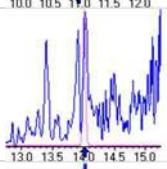 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 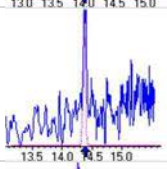 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 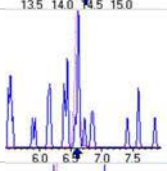 | 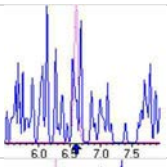 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 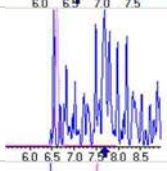 | 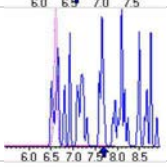 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 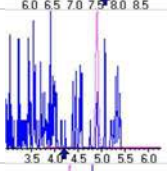 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 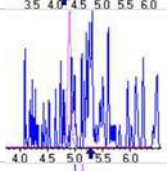 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 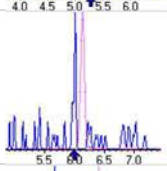 | 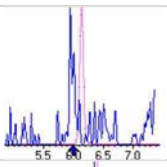 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 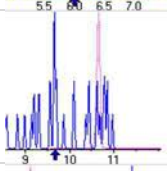 | 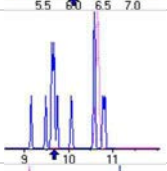 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 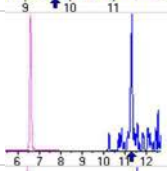 | 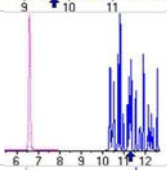 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 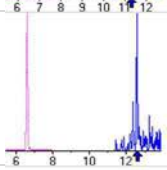 | 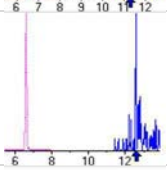 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 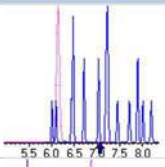 | 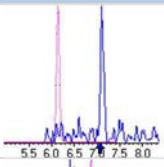 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 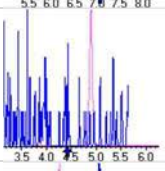 | 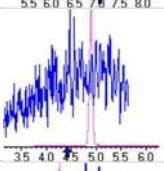 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 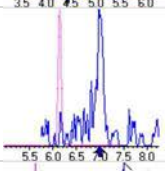 | 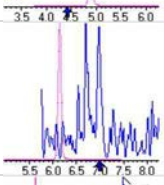 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 7778<br>( 441.0 / 337.0 ) 5397 | ( 9.43 , 1.54 ) ( N/A , 0.02 , 0.4) | 97.1<br>58.9 | 0.6939<br>78.0<br>78.0 | 0.0776 | N/A | 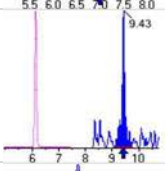 | 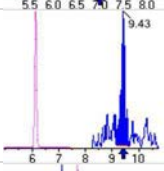 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 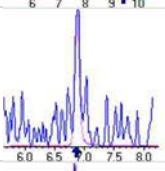 | 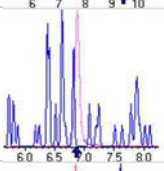 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 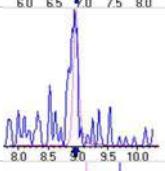 | 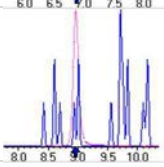 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 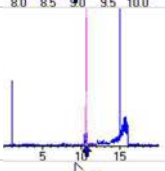 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 260995 | ( 3.80 , N/A ) ( N/A , 0.01 , N/A ) | 1112.0 | N/A | 0.8664 [ 1.0000 ] | 86.6% { 86.1% } | 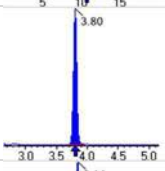 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 133399 | ( 6.14 , N/A ) ( N/A , 0.00 , N/A ) | 1191075.8 | N/A | 0.8675 [ 1.0000 ] | 86.8% { 80.8% } | 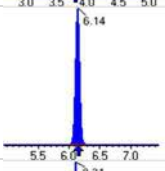 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 391680 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 4086.5 | N/A | 0.8779 [ 1.0000 ] | 87.8% { 86.1% } | 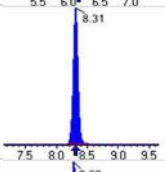 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 285591 | ( 9.28 , N/A ) ( N/A , 0.00 , N/A ) | 1057.3 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 87.6% } | 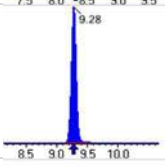 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 293203 | ( 10.19 , N/A ) ( N/A , 0.01 , N/A ) | 5654.1 | N/A | 0.8841 [ 1.0000 ] | 88.4% { 86.2% } | 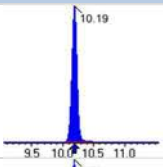 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 947581 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4753.1 | N/A | 0.8480 [ 1.0000 ] | 84.8% { 83.1% } | 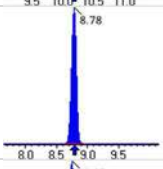 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 819814 | ( 10.66 , N/A ) ( N/A , 0.01 , N/A ) | 2978.4 | N/A | 0.8398 [ 1.0000 ] | 84.0% { 82.3% } | 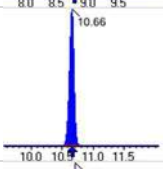 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2427954 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 46047.2 | N/A | 8.4358 [ 8.0000 ] | 105.4% { 91.4% } | 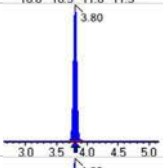 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 946891 | ( 4.90 , N/A ) ( N/A , 0.00 , N/A ) | 5582.9 | N/A | 3.9566 [ 4.0000 ] | 98.9% { 81.7% } | 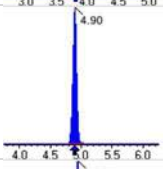 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 579960 | ( 6.14 , N/A ) ( N/A , 0.00 , N/A ) | 8466.9 | N/A | 2.0248 [ 2.0000 ] | 101.2% { 84.7% } | 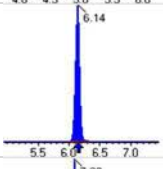 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 615403 | ( 7.29 , N/A ) ( N/A , 0.00 , N/A ) | 3732.9 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 87.3% } | 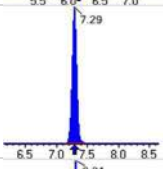 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 864634 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 4278.2 | N/A | 2.0937 [ 2.0000 ] | 104.7% { 90.7% } | 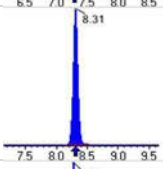 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 297361 | ( 9.28 , N/A ) ( N/A , 0.00 , N/A ) | 3188.0 | N/A | 1.0782 [ 1.0000 ] | 107.8% { 95.6% } | 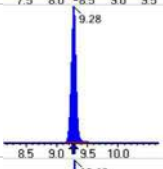 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331668 | ( 10.19 , N/A ) ( N/A , 0.01 , N/A ) | 1106.6 | N/A | 0.9803 [ 1.0000 ] | 98.0% { 86.2% } | 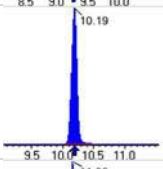 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 406678 | ( 11.06 , N/A ) ( N/A , 0.01 , N/A ) | 998.5 | N/A | 0.9886 [ 1.0000 ] | 98.9% { 81.8% } | 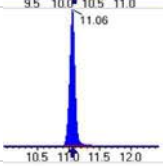 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 419013 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1322.8 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 84.0% } | 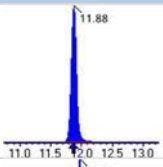 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362156 | ( 12.97 , N/A ) ( N/A , 0.01 , N/A ) | 1626.7 | N/A | 1.0061 [ 1.0000 ] | 100.6% { 85.4% } | 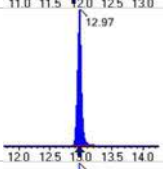 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 582518 | ( 13.77 , N/A ) ( N/A , 0.00 , N/A ) | 2735.5 | N/A | 1.9051 [ 2.0000 ] | 95.3% { 82.2% } | 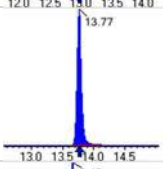 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1811355 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1138.1 | N/A | 1.9619 [ 2.0000 ] | 98.1% { 78.4% } | 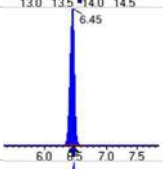 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440683 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4930.4 | N/A | 2.0777 [ 2.0000 ] | 103.9% { 87.5% } | 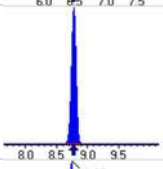 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1717212 | ( 10.65 , N/A ) ( N/A , 0.01 , N/A ) | 2191.5 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 81.7% } | 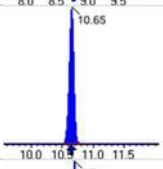 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 365723 | ( 5.59 , N/A ) ( N/A , 0.00 , N/A ) | 81.5 | N/A | 4.4321 [ 4.0000 ] | 110.8% { 101.6% } | 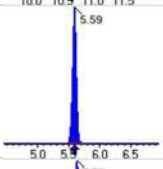 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1161421 | ( 7.73 , N/A ) ( N/A , 0.00 , N/A ) | 3440.9 | N/A | 4.5323 [ 4.0000 ] | 113.3% { 108.1% } | 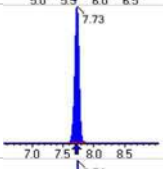 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1075546 | ( 9.54 , N/A ) ( N/A , 0.01 , N/A ) | 1550.9 | N/A | 4.2129 [ 4.0000 ] | 105.3% { 92.4% } | 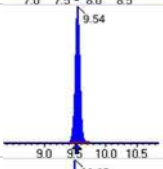 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2491297 | ( 11.19 , N/A ) ( N/A , 0.01 , N/A ) | 1870.1 | N/A | 8.5012 [ 8.0000 ] | 106.3% { 99.5% } | 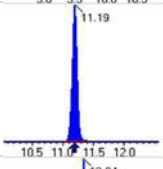 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1945955 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1547.5 | N/A | 2.0575 [ 2.0000 ] | 102.9% { 83.6% } | 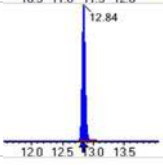 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 355520 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2647.3 | N/A | 2.0357 [ 2.0000 ] | 101.8% { 84.0% } | 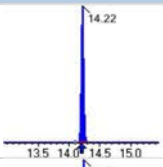  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 419000 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2792.3 | N/A | 2.0887 [ 2.0000 ] | 104.4% { 84.3% } | 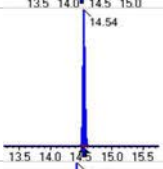  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 943187 | ( 10.43 , N/A ) ( N/A , 0.01 , N/A ) | 2295.4 | N/A | 4.2200 [ 4.0000 ] | 105.5% { 87.2% } | 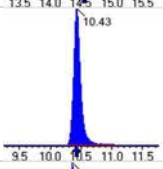  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 930349 | ( 10.96 , N/A ) ( N/A , 0.01 , N/A ) | 1550.3 | N/A | 4.3851 [ 4.0000 ] | 109.6% { 88.8% } | 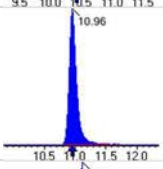  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1925084 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 3121.2 | N/A | 23.5906 [ 20.0000 ] | 118.0% { 102.3% } | 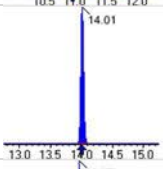  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2016954 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4547.0 | N/A | 20.4032 [ 20.0000 ] | 102.0% { 85.5% } | 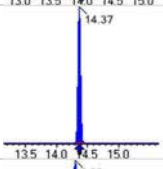  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 928272 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2592.2 | N/A | 7.5397 [ 8.0000 ] | 94.2% { 81.8% } | 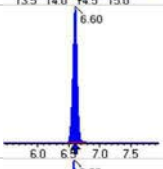  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 455043 | ( 6.88 , N/A ) ( N/A , 0.00 , N/A ) | 1157.8 | N/A | 1.7499 [ 2.0000 ] | 87.5% { 77.6% } | 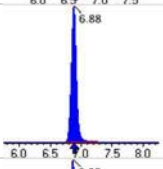  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 435679 | ( 8.96 , N/A ) ( N/A , 0.01 , N/A ) | 649.4 | N/A | 1.7946 [ 2.0000 ] | 89.7% { 77.2% } | 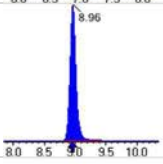  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0052L |
| Client:N | Tidewater, Inc.L | Project:N | [none]L |
| Sequence:N | SD00936L | Instrument:N | Saphira |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01590 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05730 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0052L |
| Client:N | Tidewater, Inc.L | Project:N | [none]L |
| Sequence:N | SD00936L | Instrument:N | Saphira |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.080 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.330 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.120 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.030 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.060 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.090 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 2.050 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.030 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.020 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.120 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.10 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.350 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.740 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.160 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.10 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.060 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.250 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.390 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0052L |
| Client: | Tidewater, Inc.L | Project: | [none]L |
| Sequence: | SD00936L | Instrument: | Saphira |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 936-CCB10 | D7-NMEFOSE0 | 25.30 | ng/mL0 | | |
| | D9-NETFOSE0 | 22.50 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.370 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (1)
Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 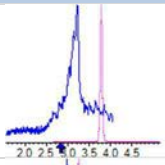 | 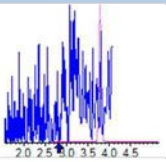 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 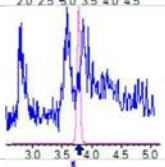 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 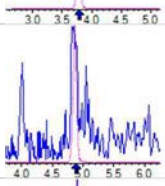 | 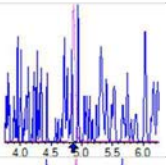 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 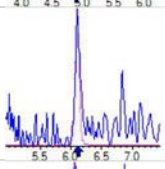 | 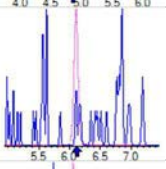 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 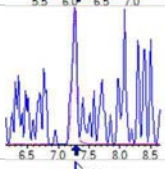 | 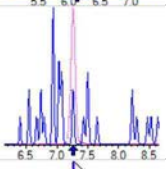 | |
| PFOA | ( 413.0 / 369.0 )<br>7505<br>( 413.0 / 169.0 )<br>2326 | ( 8.28 , 1.00 )<br>( 0.00 , N/A , -0.3) | 16.1<br>17.6 | 0.3100<br>85.7<br>89.9 | 0.0160 | N/A | 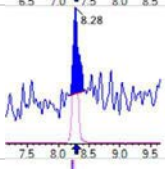 | 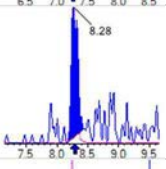 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 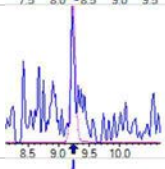 | 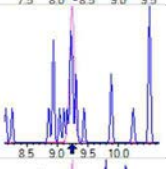 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 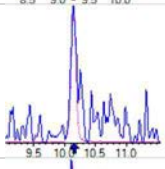 | 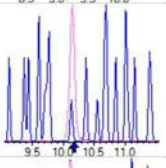 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 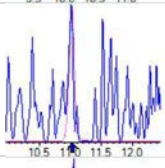 | 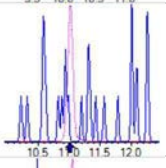 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 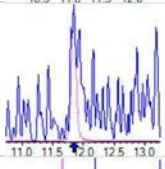 | 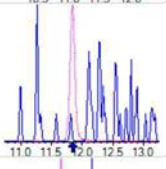 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 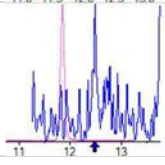 | 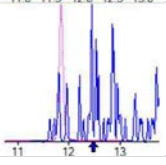 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (1)
Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 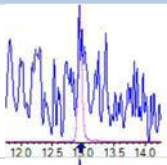 | 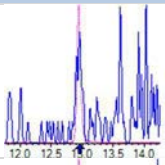 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 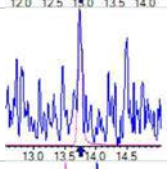 | 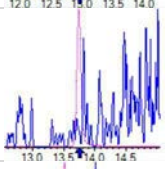 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 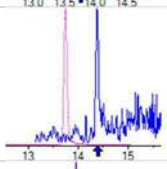 | 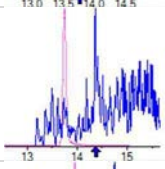 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 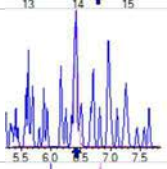 | 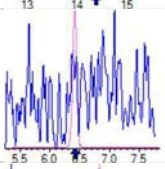 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 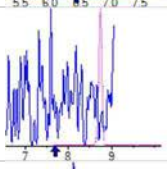 | 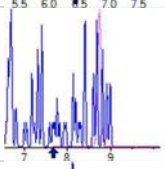 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 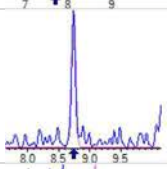 | 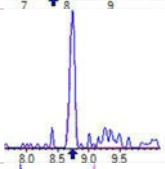 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 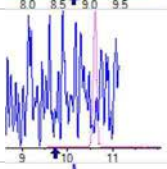 | 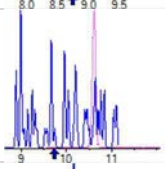 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 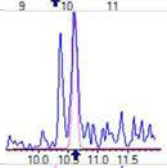 | 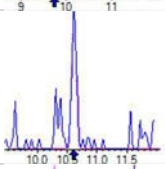 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 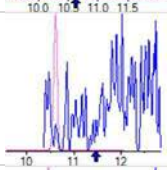 | 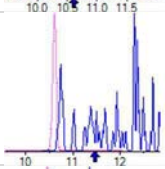 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 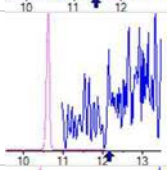 | 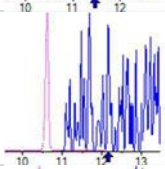 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 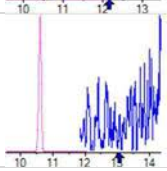 | 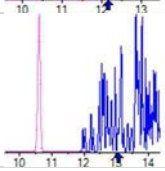 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (1)
Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 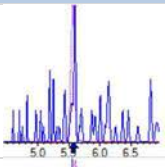 | 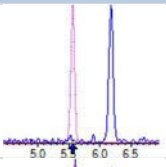 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 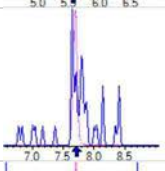 | 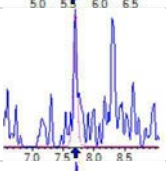 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 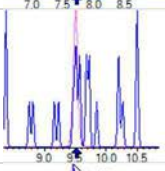 | 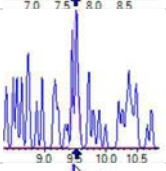 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15048<br>( 627.0 / 81.0 )<br>21934 | ( 11.17 , 1.00 )<br>( 0.01 , N/A , 0.0) | 263.8<br>76.6 | 1.4576<br>107.8<br>112.7 | 0.0570 | N/A | 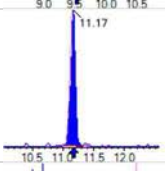 | 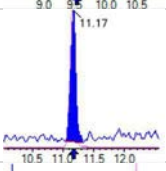 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 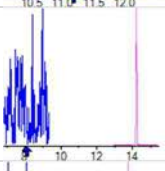 | 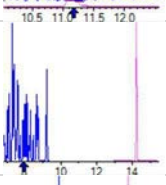 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 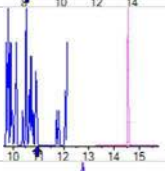 | 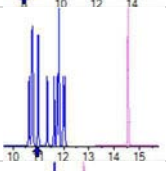 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 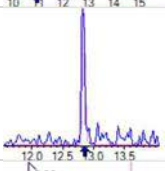 | 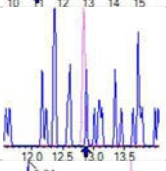 | |
| TFSI | ( 279.7 / 147.0 )<br>74744<br>( 279.7 / 211.0 )<br>5816 | ( 8.32 , 0.65 )<br>( N/A , 0.00 , 0.4) | 35.4<br>13.2 | 0.0778<br>94.4<br>94.5 | 0.0330 | N/A | 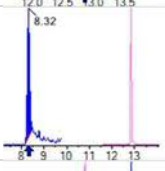 | 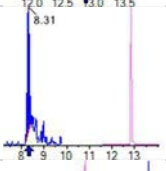 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 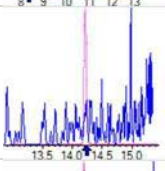 | 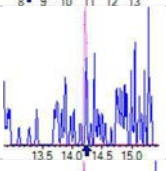 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 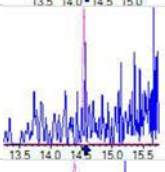 | 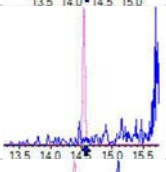 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 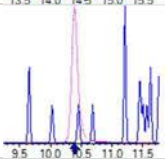 | 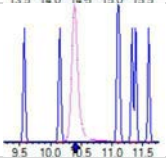 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (1)
Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 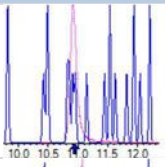 | 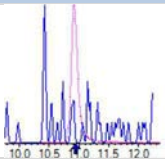 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 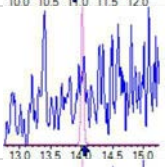 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 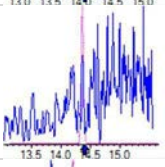 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 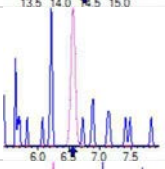 | 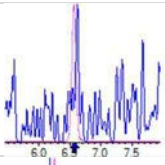 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 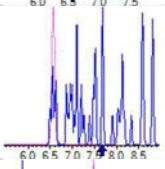 | 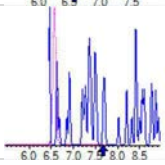 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 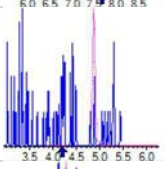 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 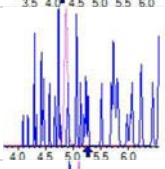 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 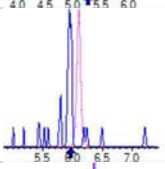 | 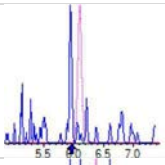 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 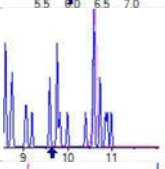 | 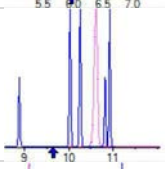 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 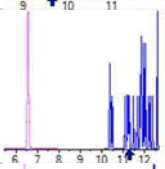 | 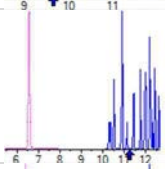 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 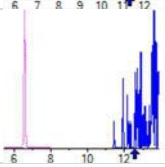 | 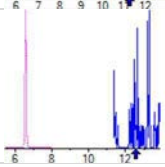 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 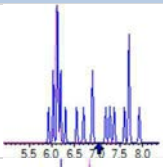 | 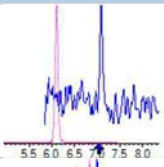 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 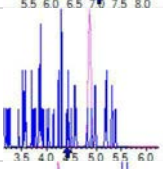 | 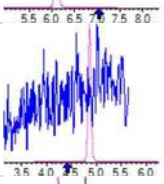 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 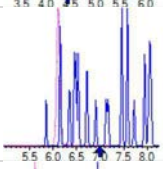 | 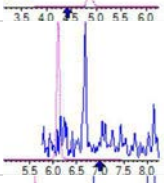 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 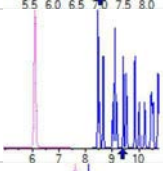 | 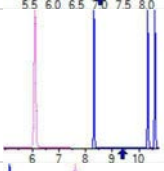 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 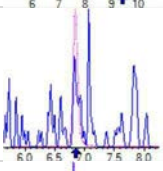 | 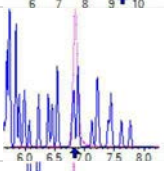 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 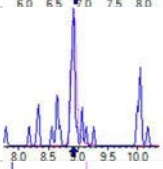 | 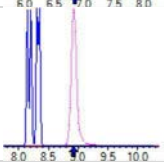 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 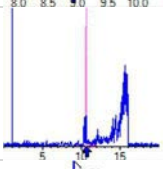 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 302880 | ( 3.78 , N/A )<br>( N/A , -0.01 , N/A ) | 2231.7 | N/A | 1.0050<br>[ 1.0000 ] | 100.5%<br>{ 102.7% } | 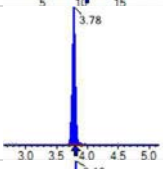 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 143925 | ( 6.10 , N/A )<br>( N/A , -0.01 , N/A ) | 6392.2 | N/A | 0.9360<br>[ 1.0000 ] | 93.6%<br>{ 92.8% } | 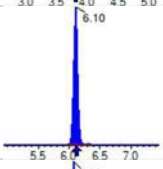 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 433703 | ( 8.28 , N/A )<br>( N/A , 0.00 , N/A ) | 3643.2 | N/A | 0.9720<br>[ 1.0000 ] | 97.2%<br>{ 93.9% } | 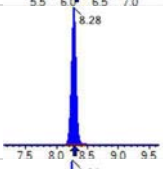 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 320106 | ( 9.24 , N/A )<br>( N/A , 0.01 , N/A ) | 1520.8 | N/A | 0.9580<br>[ 1.0000 ] | 95.8%<br>{ 94.3% } | 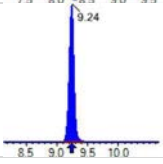 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (1)
Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 301154 | ( 10.15 , N/A ) ( N/A , 0.01 , N/A ) | 938201.6 | N/A | 0.9080 [ 1.0000 ] | 90.8% { 90.0% } | 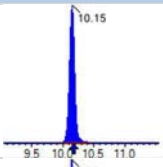 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1066887 | ( 8.74 , N/A ) ( N/A , 0.00 , N/A ) | 4977.6 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 93.3% } | 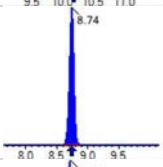 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 878750 | ( 10.61 , N/A ) ( N/A , 0.01 , N/A ) | 4019.6 | N/A | 0.9000 [ 1.0000 ] | 90.0% { 92.5% } | 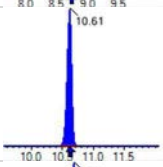 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2699046 | ( 3.78 , N/A ) ( N/A , -0.01 , N/A ) | 45105.7 | N/A | 8.0810 [ 8.0000 ] | 101.0% { 102.0% } | 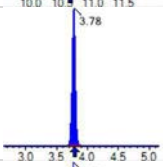 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1117176 | ( 4.87 , N/A ) ( N/A , -0.01 , N/A ) | 5261.0 | N/A | 4.3270 [ 4.0000 ] | 108.2% { 95.0% } | 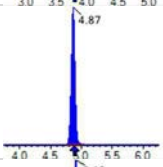 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 654408 | ( 6.10 , N/A ) ( N/A , -0.01 , N/A ) | 7973.3 | N/A | 2.1180 [ 2.0000 ] | 105.9% { 94.9% } | 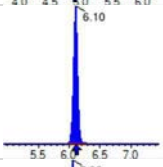 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 667168 | ( 7.26 , N/A ) ( N/A , 0.00 , N/A ) | 5621.4 | N/A | 2.0670 [ 2.0000 ] | 103.4% { 93.0% } | 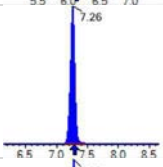 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 926601 | ( 8.28 , N/A ) ( N/A , 0.00 , N/A ) | 3115.6 | N/A | 2.0260 [ 2.0000 ] | 101.3% { 90.6% } | 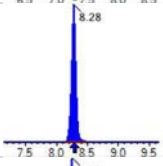 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 327463 | ( 9.24 , N/A ) ( N/A , 0.00 , N/A ) | 4604.4 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 97.8% } | 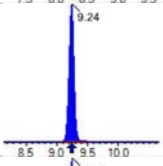 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 379125 | ( 10.15 , N/A ) ( N/A , 0.00 , N/A ) | 1032.8 | N/A | 1.0910 [ 1.0000 ] | 109.1% { 97.6% } | 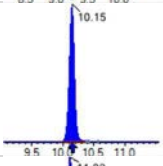 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 445827 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 953.2 | N/A | 1.0550 [ 1.0000 ] | 105.5% { 92.5% } | 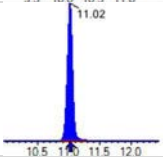 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 449782 | ( 11.84 , N/A ) ( N/A , 0.01 , N/A ) | 1328.1 | N/A | 1.0600 [ 1.0000 ] | 106.0% { 94.3% } | 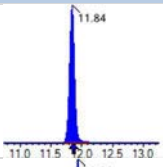 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 391344 | ( 12.94 , N/A ) ( N/A , 0.00 , N/A ) | 1532.8 | N/A | 1.0580 [ 1.0000 ] | 105.8% { 90.4% } | 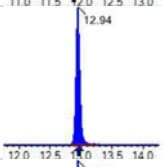 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 642334 | ( 13.74 , N/A ) ( N/A , 0.00 , N/A ) | 3352.9 | N/A | 2.0450 [ 2.0000 ] | 102.3% { 92.7% } | 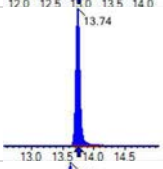 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2105726 | ( 6.42 , N/A ) ( N/A , 0.00 , N/A ) | 1107.9 | N/A | 2.0260 [ 2.0000 ] | 101.3% { 94.9% } | 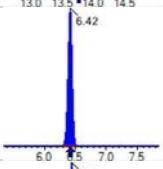 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1574308 | ( 8.74 , N/A ) ( N/A , 0.00 , N/A ) | 4852.4 | N/A | 2.0170 [ 2.0000 ] | 100.8% { 95.4% } | 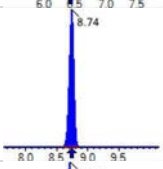 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1981287 | ( 10.61 , N/A ) ( N/A , 0.01 , N/A ) | 2053.0 | N/A | 2.1180 [ 2.0000 ] | 105.9% { 94.1% } | 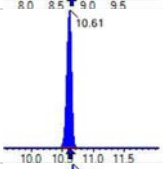 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 418884 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 83.5 | N/A | 4.5090 [ 4.0000 ] | 112.7% { 115.0% } | 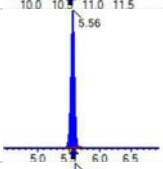 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1183750 | ( 7.70 , N/A ) ( N/A , 0.00 , N/A ) | 3627.5 | N/A | 4.1030 [ 4.0000 ] | 102.6% { 112.3% } | 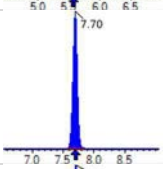 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1251390 | ( 9.51 , N/A ) ( N/A , 0.01 , N/A ) | 1614.7 | N/A | 4.3540 [ 4.0000 ] | 108.8% { 112.7% } | 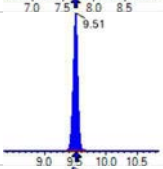 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2552677 | ( 11.15 , N/A ) ( N/A , 0.01 , N/A ) | 1699.8 | N/A | 7.7370 [ 8.0000 ] | 96.7% { 101.1% } | 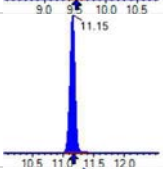 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2192911 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2340.5 | N/A | 2.1630 [ 2.0000 ] | 108.2% { 96.8% } | 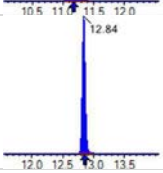 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (1)
Acquired: 2024/03/14 - 12:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 393366 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2821.5 | N/A | 2.1010 [ 2.0000 ] | 105.1% { 94.6% } | 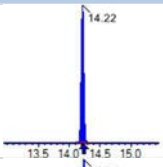 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 442948 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 3057.9 | N/A | 2.0600 [ 2.0000 ] | 103.0% { 92.0% } | 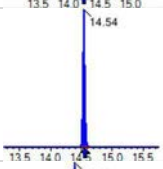 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1017074 | ( 10.39 , N/A ) ( N/A , 0.01 , N/A ) | 2222.6 | N/A | 4.2450 [ 4.0000 ] | 106.1% { 95.4% } | 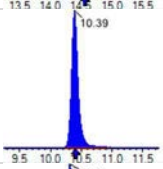 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 997939 | ( 10.92 , N/A ) ( N/A , 0.01 , N/A ) | 1869.2 | N/A | 4.3880 [ 4.0000 ] | 109.7% { 97.6% } | 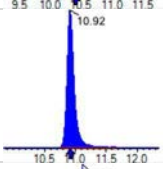 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2215747 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 3163.2 | N/A | 25.3310 [ 20.0000 ] | 126.7% { 111.0% } | 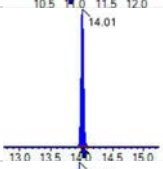 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2381901 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 5317.7 | N/A | 22.4790 [ 20.0000 ] | 112.4% { 97.8% } | 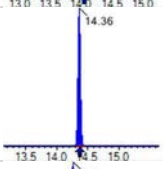 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1112065 | ( 6.57 , N/A ) ( N/A , 0.00 , N/A ) | 2077.3 | N/A | 8.3720 [ 8.0000 ] | 104.6% { 93.2% } | 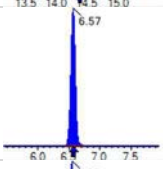 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 520910 | ( 6.85 , N/A ) ( N/A , 0.00 , N/A ) | 1521.5 | N/A | 1.9500 [ 2.0000 ] | 97.5% { 86.8% } | 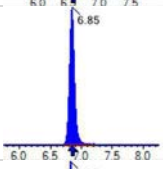 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 467221 | ( 8.93 , N/A ) ( N/A , 0.01 , N/A ) | 710.1 | N/A | 1.8740 [ 2.0000 ] | 93.7% { 87.4% } | 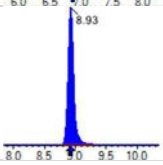 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00936L
Calibration:N 2411010L

SDG:N 24C0052L
Project:N [none]L
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB20 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01460 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05480 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0052L |
| Client:N | Tidewater, Inc.L | Project:N | [none]L |
| Sequence:N | SD00936L | Instrument:N | Saphira |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB20 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.670 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.30 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.170 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.0 | ng/mL0 | | |
| | 13C9-PFNA | 0.9640 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.020 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.10 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9670 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.950 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.0 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.060 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.480 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.610 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.770 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.190 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.090 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.160 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.430 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.490 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0052L |
| Client: | Tidewater, Inc.L | Project: | [none]L |
| Sequence: | SD00936L | Instrument: | Saphira |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 936-CCB20 | D7-NMEFOSE0 | 25.50 | ng/mL0 | | |
| | D9-NETFOSE0 | 23.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.640 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (6)
Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 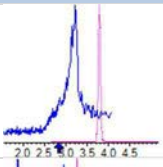 | 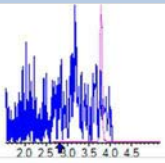 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 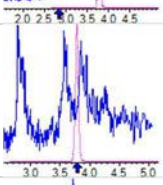 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 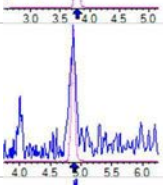 | 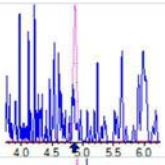 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 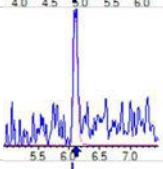 | 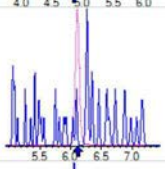 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 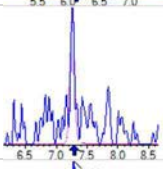 | 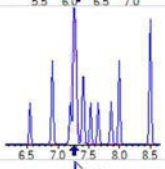 | |
| PFOA | ( 413.0 / 369.0 )<br>6490<br>( 413.0 / 169.0 )<br>2147 | ( 8.28 , 1.00 )<br>( 0.01 , N/A , 0.3) | 19.1<br>28.5 | 0.3308<br>91.5<br>96.0 | 0.0150 | N/A | 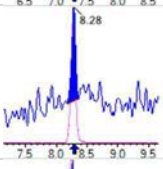 | 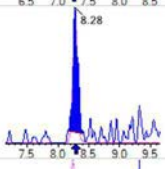 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 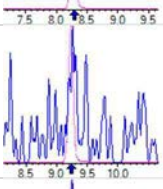 | 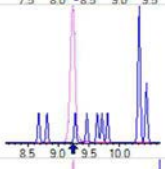 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 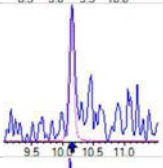 | 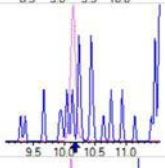 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 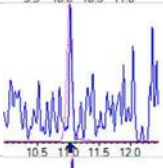 | 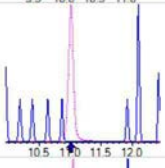 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 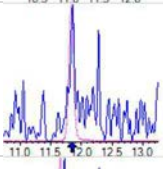 | 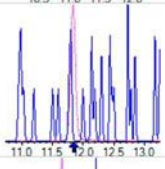 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 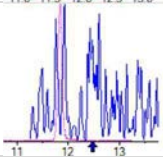 | 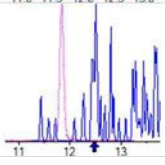 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (6)
Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 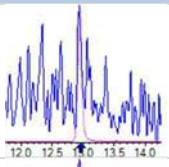 | 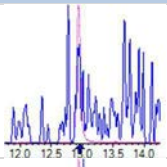 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 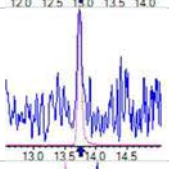 | 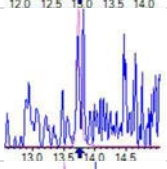 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 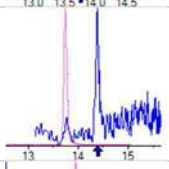 | 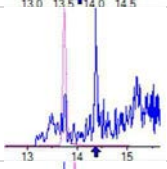 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 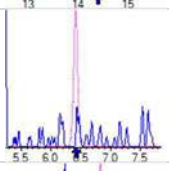 | 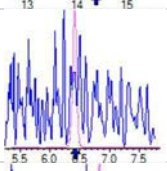 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 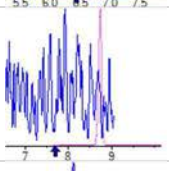 | 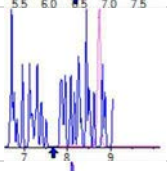 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 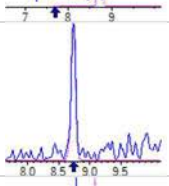 | 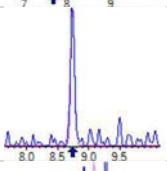 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 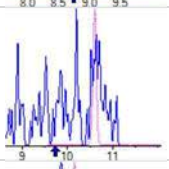 | 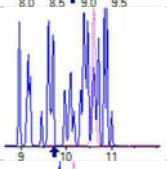 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 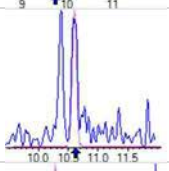 | 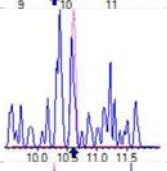 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 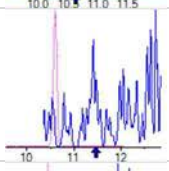 | 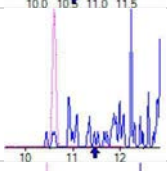 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 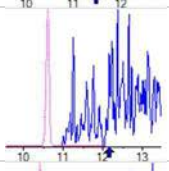 | 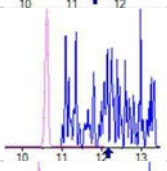 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 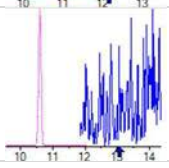 | 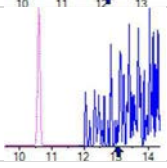 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 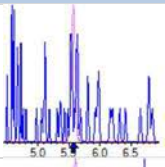 | 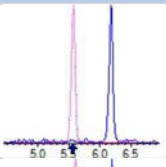 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 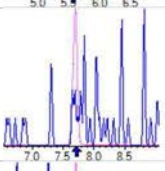 | 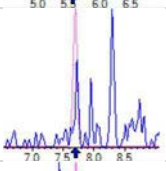 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 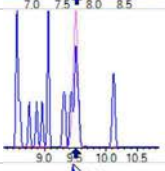 | 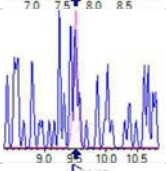 | |
| 10:2FTS | ( 627.0 / 607.0 ) 13441<br>( 627.0 / 81.0 ) 19364 | ( 11.16 , 1.00 ) ( 0.01 , N/A , -0.1) | 157.0<br>51.8 | 1.4407<br>106.6<br>111.4 | 0.0550 | N/A | 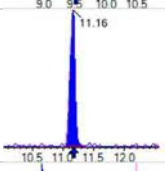 | 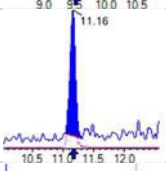 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 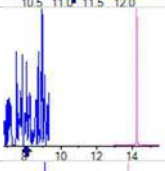 | 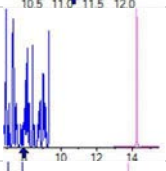 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 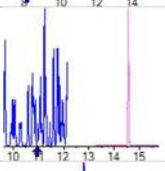 | 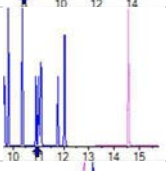 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 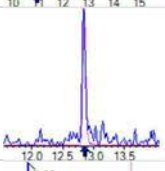 | 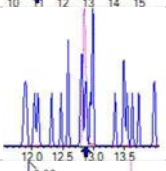 | |
| TFSI | ( 279.7 / 147.0 ) 59192<br>( 279.7 / 211.0 ) 4381 | ( 8.30 , 0.65 ) ( N/A , -0.02 , -0.1) | 29.5<br>12.1 | 0.0740<br>89.7<br>89.8 | 0.0270 | N/A | 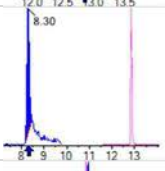 | 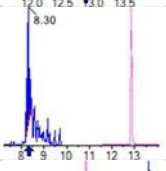 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 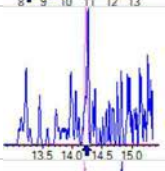 | 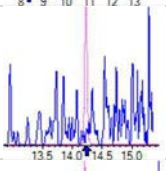 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 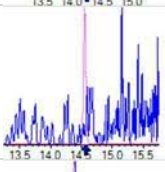 | 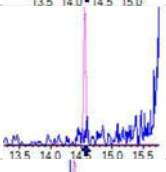 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 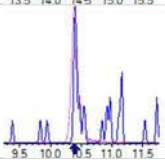 | 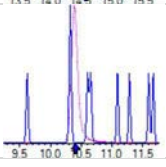 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (6)
Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 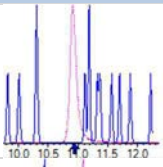 | 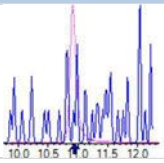 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 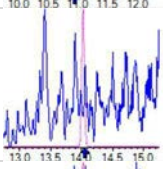 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 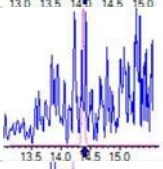 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 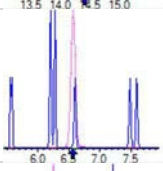 | 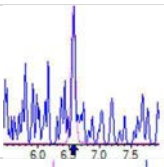 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 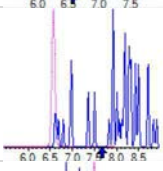 | 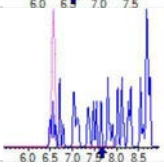 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 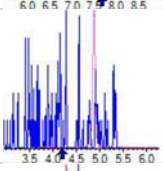 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 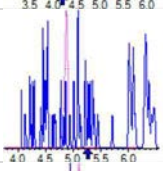 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 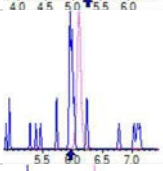 | 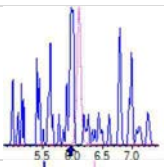 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 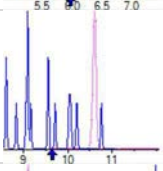 | 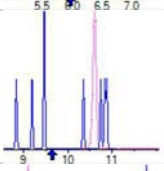 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 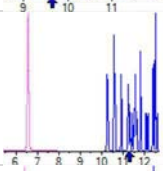 | 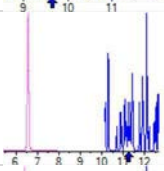 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 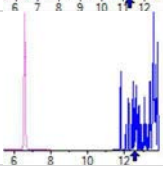 | 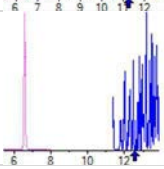 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (6)
Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 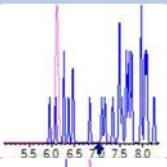 | 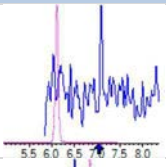 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 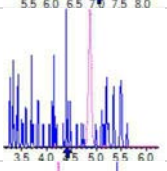 | 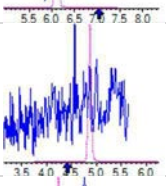 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 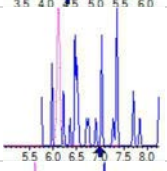 | 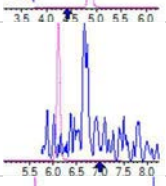 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 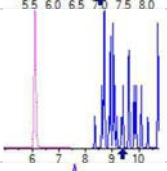 | 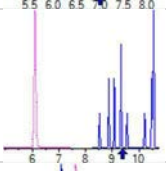 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 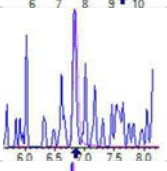 | 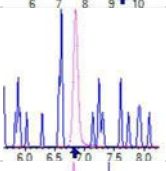 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 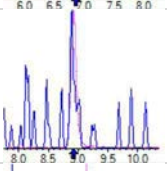 | 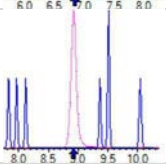 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 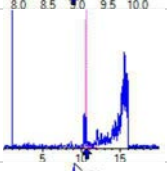 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 276044 | ( 3.78 , N/A ) ( N/A , -0.01 , N/A ) | 2317.2 | N/A | 0.9160 [ 1.0000 ] | 91.6% { 93.6% } | 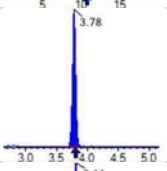 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130670 | ( 6.11 , N/A ) ( N/A , 0.00 , N/A ) | 19769.6 | N/A | 0.8500 [ 1.0000 ] | 85.0% { 84.2% } | 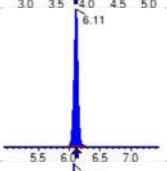 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 415485 | ( 8.28 , N/A ) ( N/A , 0.00 , N/A ) | 4503.8 | N/A | 0.9310 [ 1.0000 ] | 93.1% { 90.0% } | 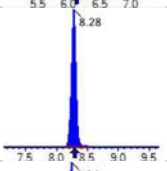 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 309590 | ( 9.24 , N/A ) ( N/A , 0.00 , N/A ) | 1180.1 | N/A | 0.9260 [ 1.0000 ] | 92.6% { 91.2% } | 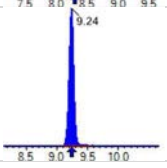 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 298072 | ( 10.15 , N/A ) ( N/A , 0.00 , N/A ) | 70378.1 | N/A | 0.8990 [ 1.0000 ] | 89.9% { 89.0% } | 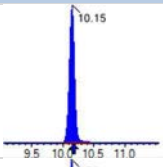 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 993431 | ( 8.74 , N/A ) ( N/A , 0.00 , N/A ) | 5138.3 | N/A | 0.8890 [ 1.0000 ] | 88.9% { 86.9% } | 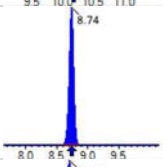 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 824810 | ( 10.61 , N/A ) ( N/A , 0.00 , N/A ) | 2730.8 | N/A | 0.8450 [ 1.0000 ] | 84.5% { 86.8% } | 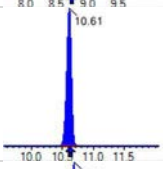 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2639398 | ( 3.78 , N/A ) ( N/A , -0.01 , N/A ) | 49406.9 | N/A | 8.6710 [ 8.0000 ] | 108.4% { 99.8% } | 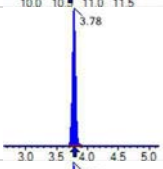 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1008014 | ( 4.87 , N/A ) ( N/A , 0.00 , N/A ) | 4753.0 | N/A | 4.3000 [ 4.0000 ] | 107.5% { 85.7% } | 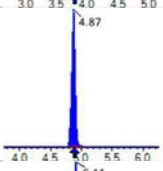 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 607968 | ( 6.11 , N/A ) ( N/A , 0.00 , N/A ) | 15384.3 | N/A | 2.1670 [ 2.0000 ] | 108.3% { 88.2% } | 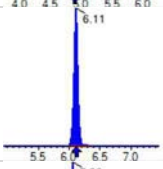 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 606120 | ( 7.26 , N/A ) ( N/A , 0.00 , N/A ) | 5127.5 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 84.4% } | 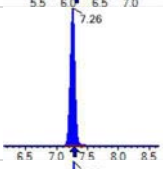 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 876599 | ( 8.28 , N/A ) ( N/A , 0.00 , N/A ) | 3535.2 | N/A | 2.0010 [ 2.0000 ] | 100.1% { 85.7% } | 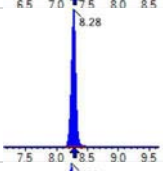 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 288276 | ( 9.23 , N/A ) ( N/A , 0.00 , N/A ) | 3263.0 | N/A | 0.9640 [ 1.0000 ] | 96.4% { 86.1% } | 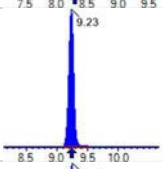 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 351821 | ( 10.14 , N/A ) ( N/A , 0.00 , N/A ) | 902.4 | N/A | 1.0230 [ 1.0000 ] | 102.3% { 90.6% } | 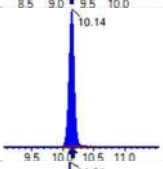 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 423746 | ( 11.01 , N/A ) ( N/A , 0.00 , N/A ) | 823.0 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 87.9% } | 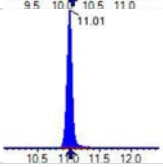 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 459880 | ( 11.84 , N/A ) ( N/A , 0.00 , N/A ) | 1233.0 | N/A | 1.0950 [ 1.0000 ] | 109.5% { 96.4% } | 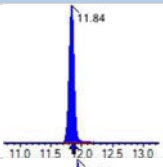 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 354045 | ( 12.94 , N/A ) ( N/A , 0.00 , N/A ) | 1207.0 | N/A | 0.9670 [ 1.0000 ] | 96.7% { 81.8% } | 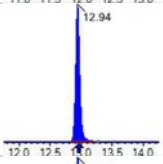 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 606742 | ( 13.74 , N/A ) ( N/A , 0.00 , N/A ) | 3850.9 | N/A | 1.9520 [ 2.0000 ] | 97.6% { 87.6% } | 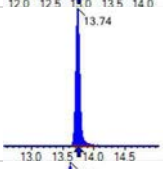 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1936625 | ( 6.42 , N/A ) ( N/A , 0.00 , N/A ) | 1130.1 | N/A | 2.0010 [ 2.0000 ] | 100.0% { 87.3% } | 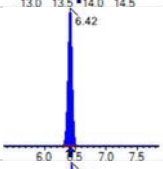 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1500386 | ( 8.74 , N/A ) ( N/A , 0.00 , N/A ) | 4441.3 | N/A | 2.0640 [ 2.0000 ] | 103.2% { 91.0% } | 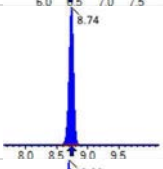 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1808236 | ( 10.60 , N/A ) ( N/A , 0.00 , N/A ) | 1752.8 | N/A | 2.0590 [ 2.0000 ] | 103.0% { 85.9% } | 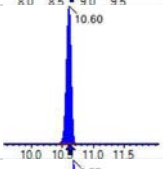 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 387540 | ( 5.57 , N/A ) ( N/A , 0.01 , N/A ) | 86.2 | N/A | 4.4800 [ 4.0000 ] | 112.0% { 106.4% } | 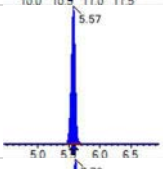 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1211376 | ( 7.70 , N/A ) ( N/A , 0.00 , N/A ) | 3481.8 | N/A | 4.5090 [ 4.0000 ] | 112.7% { 114.9% } | 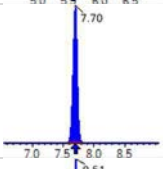 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1234261 | ( 9.51 , N/A ) ( N/A , 0.01 , N/A ) | 1185.3 | N/A | 4.6110 [ 4.0000 ] | 115.3% { 111.2% } | 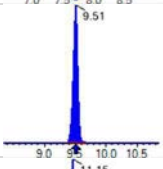 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2386219 | ( 11.15 , N/A ) ( N/A , 0.00 , N/A ) | 1185.0 | N/A | 7.7670 [ 8.0000 ] | 97.1% { 94.5% } | 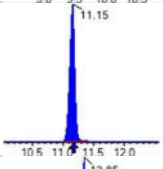 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2085487 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 2063.9 | N/A | 2.1920 [ 2.0000 ] | 109.6% { 92.1% } | 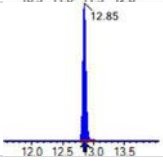 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 14:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 367077 | ( 14.23 , N/A ) ( N/A , 0.01 , N/A ) | 2120.9 | N/A | 2.0890 [ 2.0000 ] | 104.5% { 88.2% } | 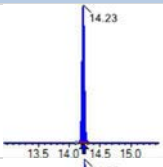 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 436414 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 3035.4 | N/A | 2.1620 [ 2.0000 ] | 108.1% { 90.6% } | 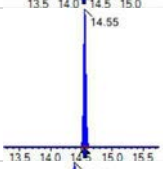 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 995214 | ( 10.39 , N/A ) ( N/A , 0.01 , N/A ) | 2234.2 | N/A | 4.4260 [ 4.0000 ] | 110.6% { 93.3% } | 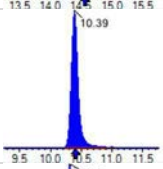 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 957866 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1717.2 | N/A | 4.4870 [ 4.0000 ] | 112.2% { 93.6% } | 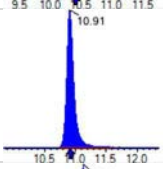 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2091790 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2947.6 | N/A | 25.4780 [ 20.0000 ] | 127.4% { 104.8% } | 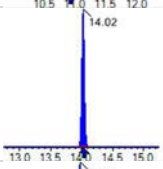 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2301956 | ( 14.38 , N/A ) ( N/A , 0.01 , N/A ) | 5480.4 | N/A | 23.1450 [ 20.0000 ] | 115.7% { 94.5% } | 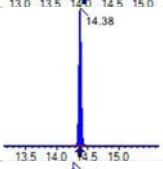 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1042359 | ( 6.57 , N/A ) ( N/A , 0.00 , N/A ) | 2436.9 | N/A | 8.6430 [ 8.0000 ] | 108.0% { 87.3% } | 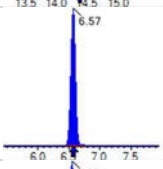 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 495833 | ( 6.85 , N/A ) ( N/A , 0.00 , N/A ) | 1284.9 | N/A | 1.8760 [ 2.0000 ] | 93.8% { 82.6% } | 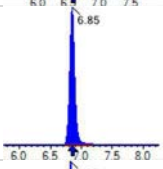 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 440530 | ( 8.92 , N/A ) ( N/A , 0.00 , N/A ) | 688.3 | N/A | 1.7850 [ 2.0000 ] | 89.2% { 82.4% } | 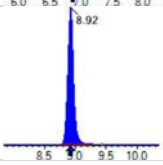 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00936L
Calibration:N 2411010L

SDG:N 24C0052L
Project:N [none]L
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB30 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05840 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0052L |
| Client:N | Tidewater, Inc.L | Project:N | [none]L |
| Sequence:N | SD00936L | Instrument:N | Saphira |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB30 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.160 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.230 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.090 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.080 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.030 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.070 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.080 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.130 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 2.210 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.960 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.0 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.410 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.740 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.940 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.730 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.240 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.120 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.140 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.290 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.350 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0052L |
| Client: | Tidewater, Inc.L | Project: | [none]L |
| Sequence: | SD00936L | Instrument: | Saphira |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 936-CCB30 | D7-NMEFOSE0 | 25.30 | ng/mL0 | | |
| | D9-NETFOSE0 | 23.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.70 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (19)
Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 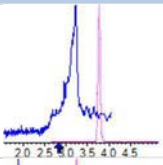 | 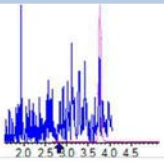 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 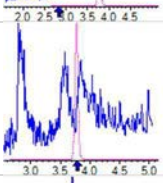 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 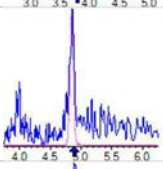 | 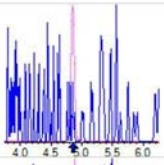 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 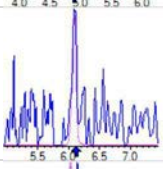 | 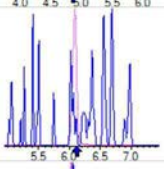 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 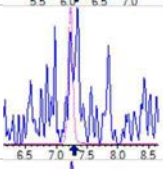 | 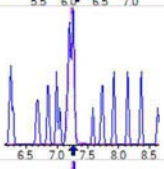 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 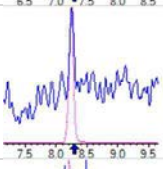 | 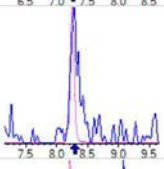 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 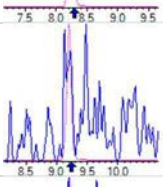 | 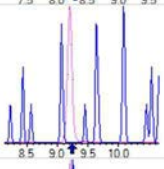 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 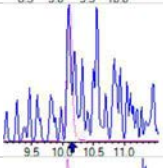 | 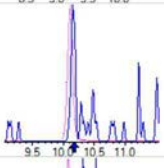 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 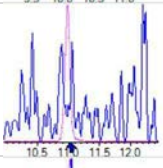 | 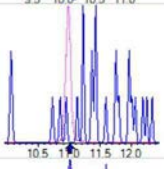 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 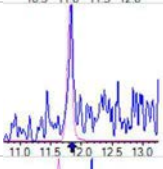 | 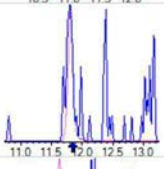 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 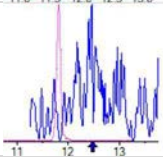 | 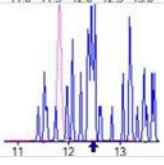 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (19)
Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 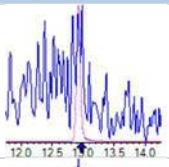 | 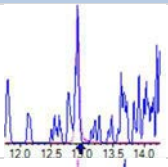 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 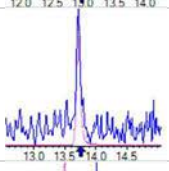 | 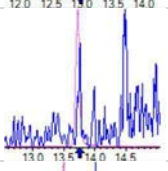 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 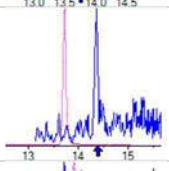 | 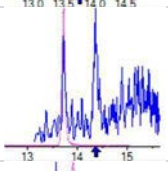 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 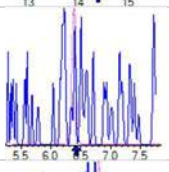 | 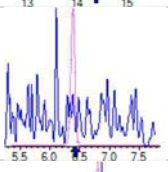 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 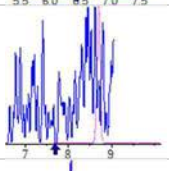 | 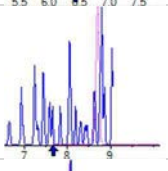 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 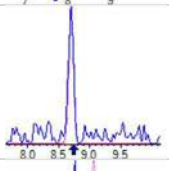 | 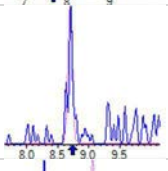 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 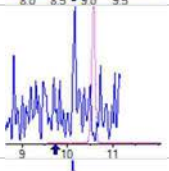 | 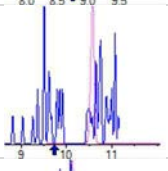 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 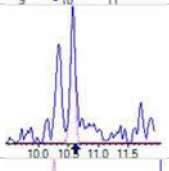 | 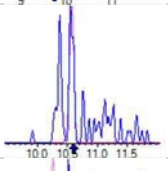 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 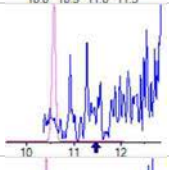 | 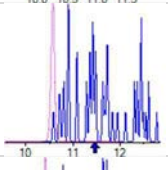 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 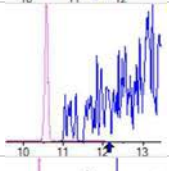 | 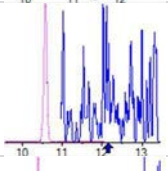 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 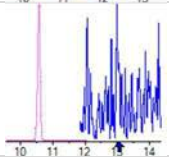 | 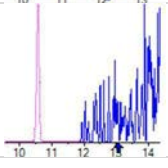 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 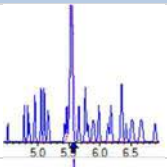 | 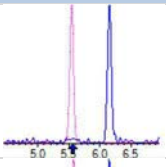 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 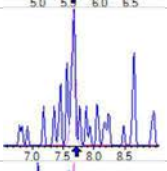 | 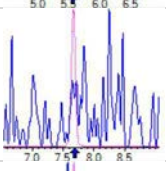 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 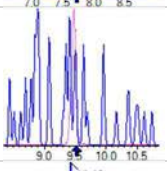 | 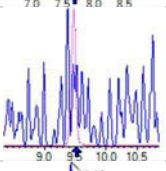 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16467<br>( 627.0 / 81.0 )<br>21239 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.2) | 178.6<br>58.0 | 1.2898<br>95.4<br>99.7 | 0.0580 | N/A | 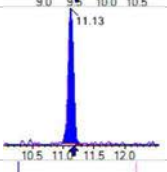 | 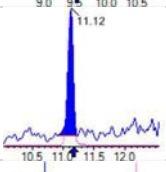 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 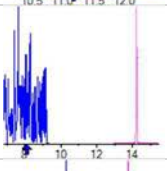 | 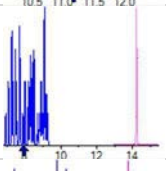 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 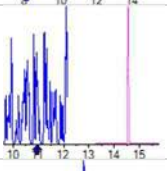 | 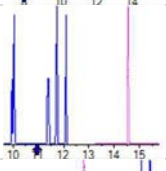 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 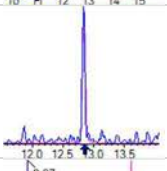 | 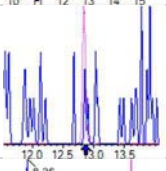 | |
| TFSI | ( 279.7 / 147.0 )<br>74748<br>( 279.7 / 211.0 )<br>6157 | ( 8.27 , 0.64 )<br>( N/A , -0.04 , 0.7) | 32.2<br>13.9 | 0.0824<br>99.9<br>100.0 | 0.0310 | N/A | 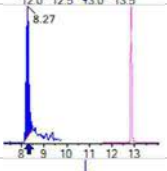 | 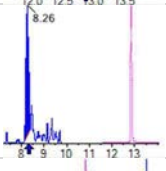 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 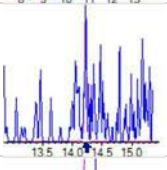 | 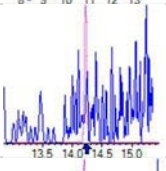 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 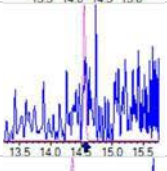 | 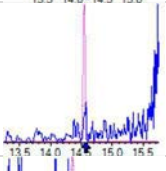 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 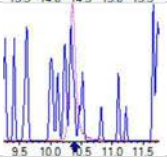 | 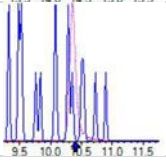 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (19)
Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 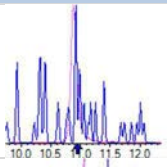 | 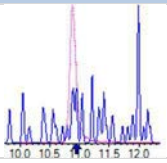 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 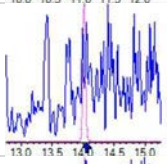 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 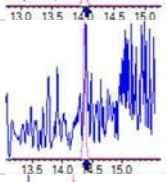 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 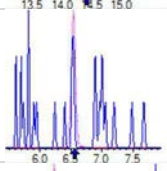 | 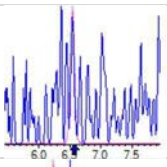 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 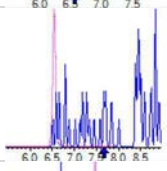 | 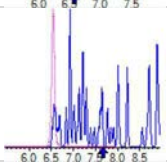 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 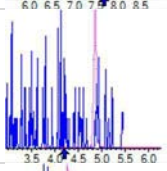 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 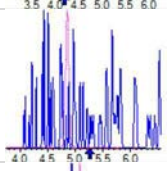 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 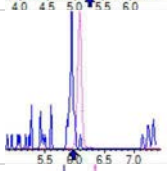 | 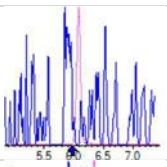 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 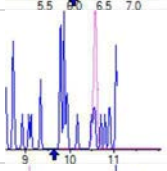 | 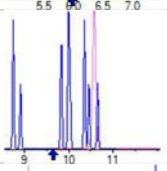 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 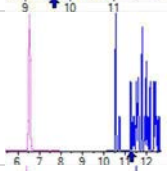 | 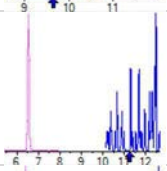 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 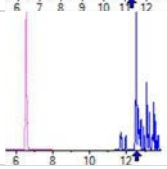 | 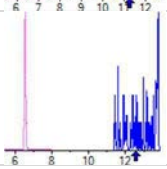 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 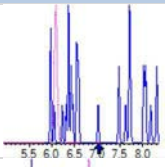 | 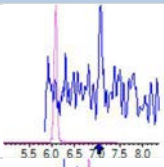 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 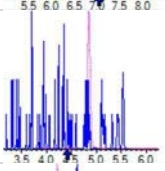 | 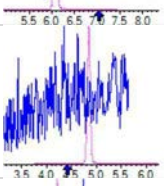 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 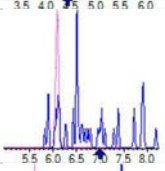 | 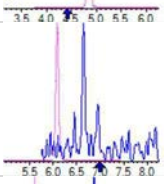 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 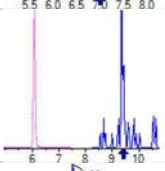 | 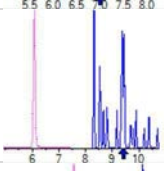 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3686<br>( 357.2 / 243.0 ) N/A | ( 6.82 , 1.00 )<br>( 0.00 , N/A , #Value!) | 26.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0140 | N/A | 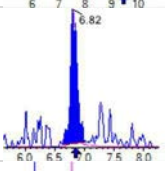 | 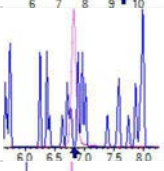 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 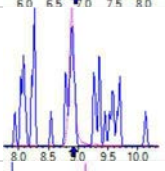 | 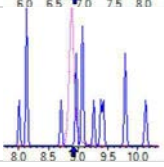 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 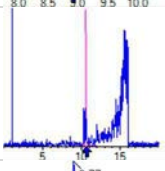 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 287122 | ( 3.77 , N/A )<br>( N/A , -0.02 , N/A ) | 2441.0 | N/A | 0.9530<br>[ 1.0000 ] | 95.3%<br>{ 97.4% } | 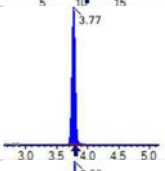 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 139013 | ( 6.08 , N/A )<br>( N/A , -0.03 , N/A ) | 29060.3 | N/A | 0.9040<br>[ 1.0000 ] | 90.4%<br>{ 89.6% } | 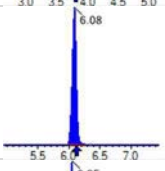 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 414535 | ( 8.25 , N/A )<br>( N/A , -0.03 , N/A ) | 3709.6 | N/A | 0.9290<br>[ 1.0000 ] | 92.9%<br>{ 89.8% } | 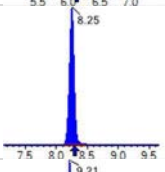 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 320914 | ( 9.21 , N/A )<br>( N/A , -0.03 , N/A ) | 969.6 | N/A | 0.9600<br>[ 1.0000 ] | 96.0%<br>{ 94.5% } | 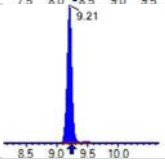 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303984 | ( 10.12 , N/A ) ( N/A , -0.03 , N/A ) | 7582.0 | N/A | 0.9170 [ 1.0000 ] | 91.7% { 90.8% } | 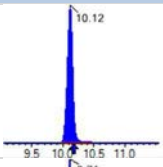 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1014367 | ( 8.71 , N/A ) ( N/A , -0.04 , N/A ) | 4033.1 | N/A | 0.9080 [ 1.0000 ] | 90.8% { 88.7% } | 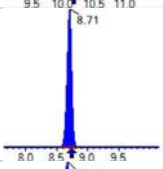 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 908866 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 2603.1 | N/A | 0.9310 [ 1.0000 ] | 93.1% { 95.7% } | 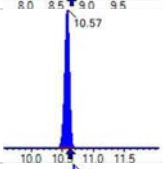 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2583824 | ( 3.77 , N/A ) ( N/A , -0.02 , N/A ) | 42807.1 | N/A | 8.1600 [ 8.0000 ] | 102.0% { 97.7% } | 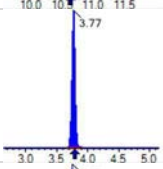 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1054527 | ( 4.85 , N/A ) ( N/A , -0.02 , N/A ) | 4444.9 | N/A | 4.2280 [ 4.0000 ] | 105.7% { 89.6% } | 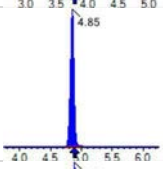 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 623062 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 9703.8 | N/A | 2.0870 [ 2.0000 ] | 104.4% { 90.4% } | 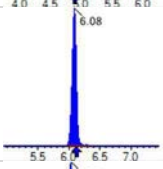 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 643410 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 4345.1 | N/A | 2.0640 [ 2.0000 ] | 103.2% { 89.6% } | 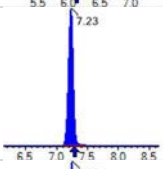 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 907120 | ( 8.25 , N/A ) ( N/A , -0.03 , N/A ) | 3221.4 | N/A | 2.0750 [ 2.0000 ] | 103.8% { 88.7% } | 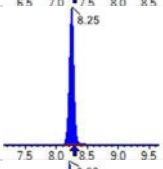 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 318883 | ( 9.20 , N/A ) ( N/A , -0.03 , N/A ) | 3334.9 | N/A | 1.0290 [ 1.0000 ] | 102.9% { 95.2% } | 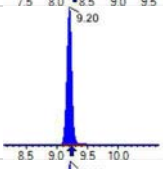 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 374014 | ( 10.11 , N/A ) ( N/A , -0.03 , N/A ) | 951.0 | N/A | 1.0660 [ 1.0000 ] | 106.6% { 96.3% } | 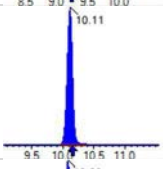 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 472287 | ( 10.98 , N/A ) ( N/A , -0.03 , N/A ) | 994.7 | N/A | 1.1070 [ 1.0000 ] | 110.7% { 98.0% } | 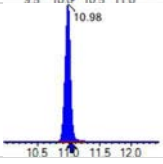 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 462016 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1534.7 | N/A | 1.0790 [ 1.0000 ] | 107.9% { 96.9% } | 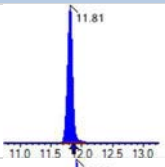 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 420969 | ( 12.92 , N/A ) ( N/A , -0.02 , N/A ) | 1420.1 | N/A | 1.1280 [ 1.0000 ] | 112.8% { 97.2% } | 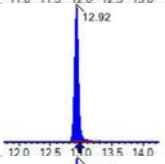 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 699259 | ( 13.72 , N/A ) ( N/A , -0.02 , N/A ) | 2709.9 | N/A | 2.2060 [ 2.0000 ] | 110.3% { 100.9% } | 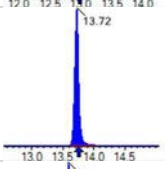 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1939975 | ( 6.39 , N/A ) ( N/A , -0.03 , N/A ) | 1414.6 | N/A | 1.9630 [ 2.0000 ] | 98.1% { 87.4% } | 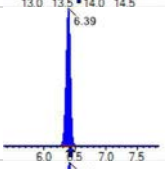 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1486093 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 4154.4 | N/A | 2.0020 [ 2.0000 ] | 100.1% { 90.1% } | 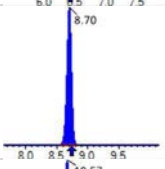 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1961856 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 1957.3 | N/A | 2.0280 [ 2.0000 ] | 101.4% { 93.2% } | 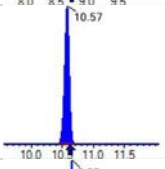 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 389899 | ( 5.55 , N/A ) ( N/A , -0.02 , N/A ) | 81.8 | N/A | 4.4140 [ 4.0000 ] | 110.4% { 107.0% } | 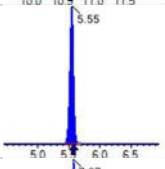 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1299552 | ( 7.67 , N/A ) ( N/A , -0.03 , N/A ) | 3923.4 | N/A | 4.7370 [ 4.0000 ] | 118.4% { 123.3% } | 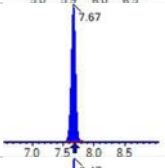 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1349146 | ( 9.47 , N/A ) ( N/A , -0.02 , N/A ) | 1868.5 | N/A | 4.9370 [ 4.0000 ] | 123.4% { 121.6% } | 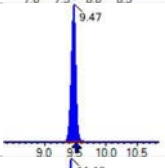 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2739607 | ( 11.12 , N/A ) ( N/A , -0.03 , N/A ) | 1120.3 | N/A | 8.7330 [ 8.0000 ] | 109.2% { 108.5% } | 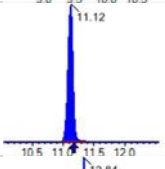 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2353458 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2262.1 | N/A | 2.2450 [ 2.0000 ] | 112.2% { 103.9% } | 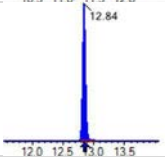 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (19)
Acquired: 2024/03/14 - 18:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 409921 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 2255.2 | N/A | 2.1170 [ 2.0000 ] | 105.9% { 98.5% } | 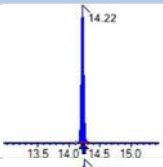  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 475698 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2418.0 | N/A | 2.1390 [ 2.0000 ] | 106.9% { 98.8% } | 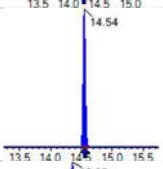  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1063501 | ( 10.35 , N/A ) ( N/A , -0.03 , N/A ) | 2825.7 | N/A | 4.2920 [ 4.0000 ] | 107.3% { 99.7% } | 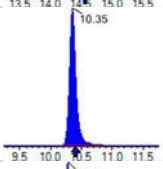  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1023240 | ( 10.88 , N/A ) ( N/A , -0.03 , N/A ) | 1698.0 | N/A | 4.3500 [ 4.0000 ] | 108.8% { 100.0% } | 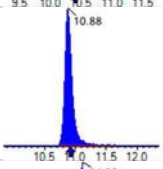  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2289306 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 3264.6 | N/A | 25.3050 [ 20.0000 ] | 126.5% { 114.7% } | 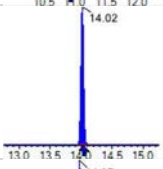  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2536271 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 5955.2 | N/A | 23.1430 [ 20.0000 ] | 115.7% { 104.1% } | 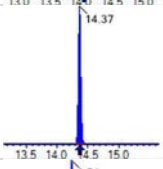  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1115961 | ( 6.54 , N/A ) ( N/A , -0.03 , N/A ) | 1667.3 | N/A | 8.6980 [ 8.0000 ] | 108.7% { 93.5% } | 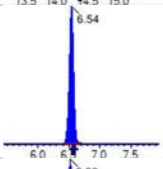  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 500679 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 1066.7 | N/A | 1.8570 [ 2.0000 ] | 92.9% { 83.4% } | 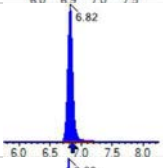  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 484246 | ( 8.89 , N/A ) ( N/A , -0.03 , N/A ) | 789.4 | N/A | 1.9240 [ 2.0000 ] | 96.2% { 90.6% } | 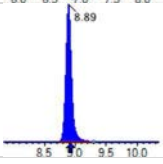  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00936L
Calibration:N 2411010L

SDG:N 24C0052L
Project:N [none]L
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB40 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .02710 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06360 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00936L
Calibration:N 2411010L

SDG:N 24C0052L
Project:N [none]L
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 936-CCB40 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.160 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.10 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.150 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.120 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.10 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.020 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.070 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.040 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 2.170 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.790 | ng/mL0 | | |
| | 13C3-PFHXS0 | 1.990 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.060 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.40 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.520 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.580 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.030 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.180 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.10 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.150 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.280 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.470 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0052L |
| Client: | Tidewater, Inc.L | Project: | [none]L |
| Sequence: | SD00936L | Instrument: | Saphira |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 936-CCB40 | D7-NMEFOSE0 | 25.90 | ng/mL0 | | |
| | D9-NETFOSE0 | 23.70 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.560 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 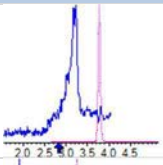 | 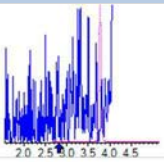 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 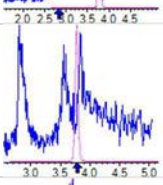 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 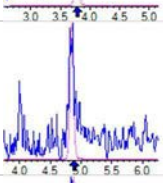 | 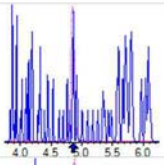 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 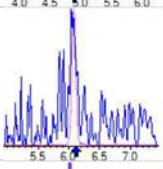 | 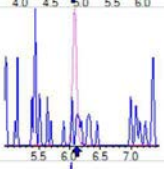 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 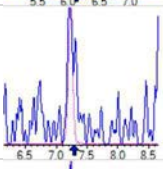 | 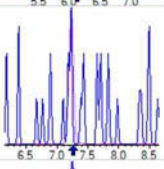 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 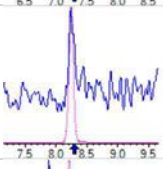 | 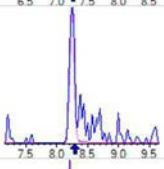 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 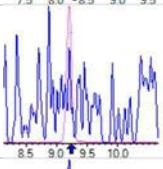 | 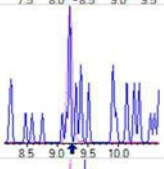 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 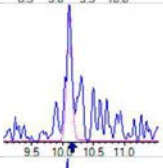 | 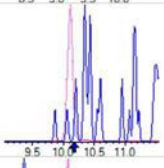 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 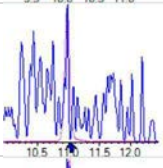 | 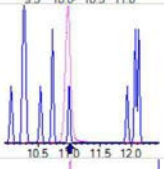 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 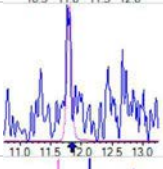 | 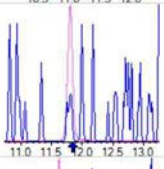 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 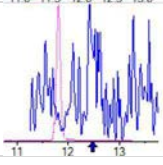 | 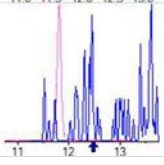 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 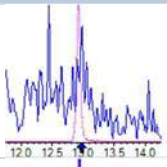 | 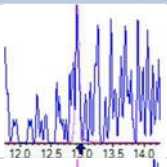 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 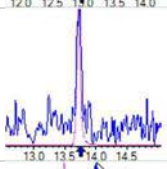 | 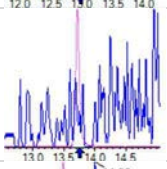 | |
| PFODA | ( 913.0 / 869.0 )<br>6015<br>( 913.0 / 169.0 )<br>1805 | ( 14.36 , 1.05 )<br>( N/A , -0.01 , -0.2) | 28.5<br>13.3 | 0.3000<br>78.5<br>86.1 | 0.0270 | N/A | 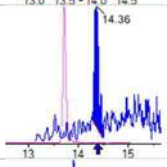 | 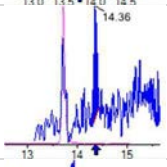 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 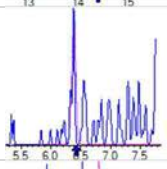 | 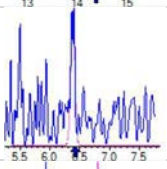 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 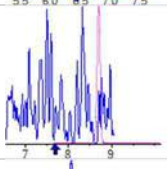 | 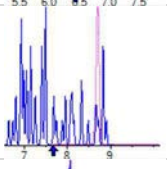 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 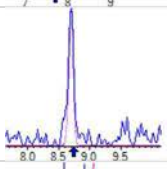 | 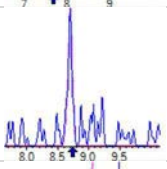 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 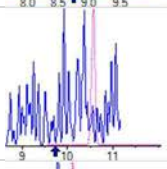 | 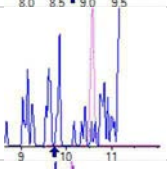 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 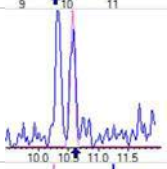 | 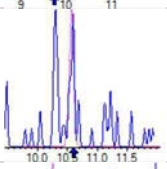 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 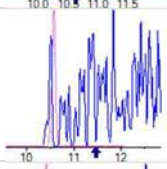 | 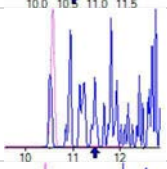 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 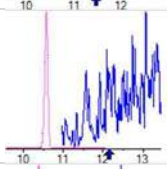 | 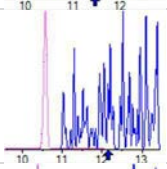 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 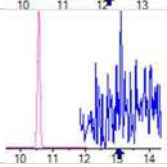 | 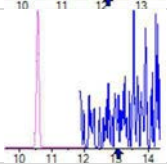 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 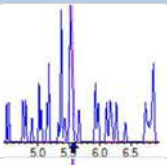 | 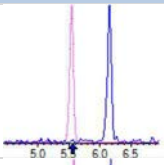 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 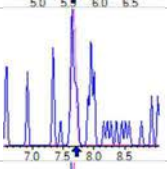 | 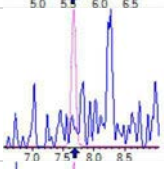 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 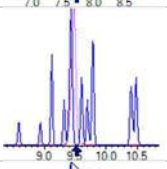 | 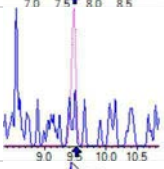 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16795<br>( 627.0 / 81.0 )<br>20813 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.2) | 156.0<br>56.4 | 1.2392<br>91.7<br>95.8 | 0.0640 | N/A | 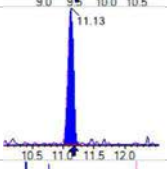 | 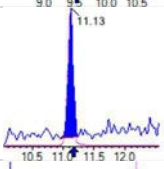 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 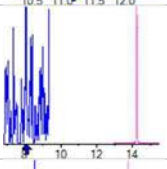 | 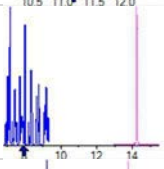 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 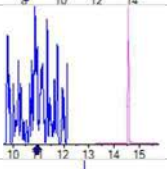 | 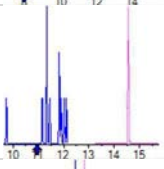 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 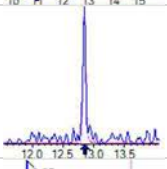 | 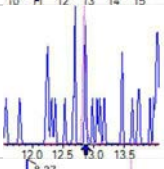 | |
| TFSI | ( 279.7 / 147.0 )<br>65309<br>( 279.7 / 211.0 )<br>5639 | ( 8.25 , 0.64 )<br>( N/A , -0.06 , -1.0) | 32.8<br>12.2 | 0.0863<br>104.7<br>104.8 | 0.0290 | N/A | 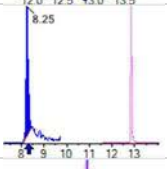 | 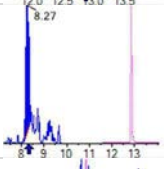 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 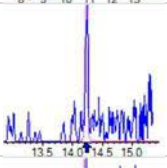 | 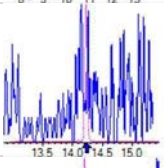 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 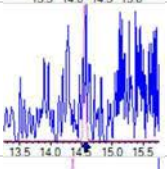 | 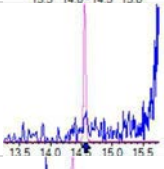 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 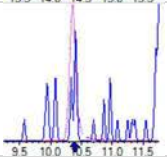 | 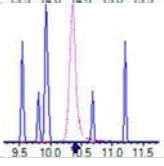 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 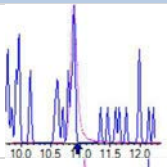 | 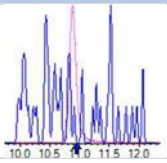 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 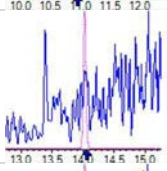 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 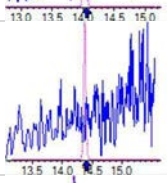 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 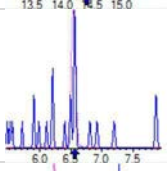 | 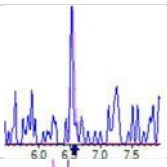 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 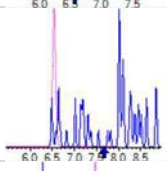 | 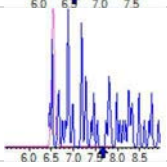 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 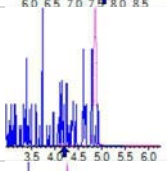 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 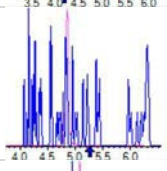 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 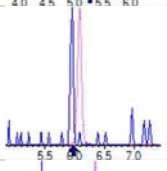 | 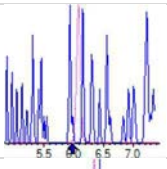 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 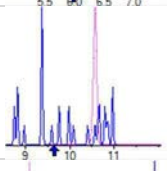 | 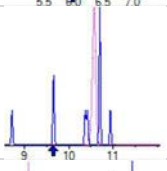 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 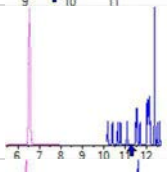 | 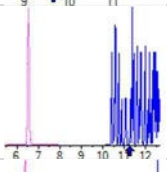 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 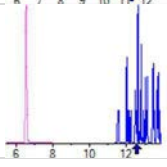 | 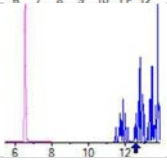 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 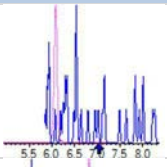 | 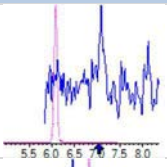 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 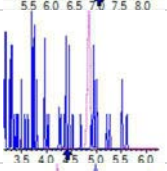 | 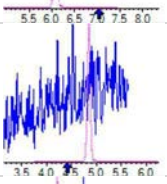 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 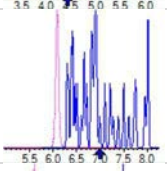 | 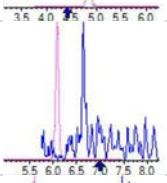 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 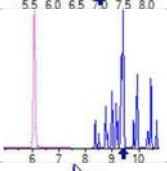 | 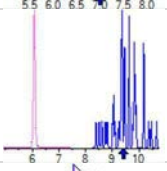 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3162<br>( 357.2 / 243.0 ) 456 | ( 6.83 , 1.00 ) ( 0.01 , N/A , 0.9) | 37.3<br>11.1 | 0.1442<br>136.7<br>139.6 | 0.0120 | N/A | 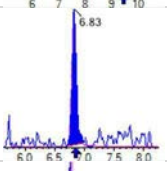 | 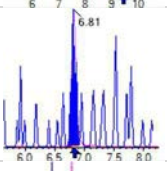 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 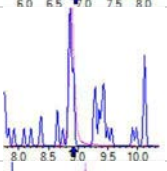 | 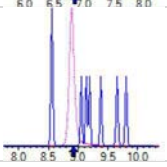 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 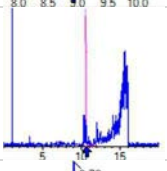 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277363 | ( 3.78 , N/A ) ( N/A , -0.01 , N/A ) | 2677.9 | N/A | 0.9210 [ 1.0000 ] | 92.1% { 94.1% } | 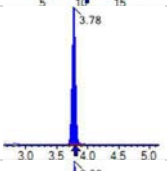 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135593 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 15902.9 | N/A | 0.8820 [ 1.0000 ] | 88.2% { 87.4% } | 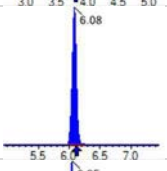 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 409138 | ( 8.25 , N/A ) ( N/A , -0.03 , N/A ) | 3083.5 | N/A | 0.9170 [ 1.0000 ] | 91.7% { 88.6% } | 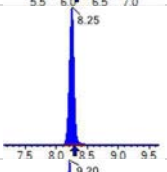 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 301581 | ( 9.20 , N/A ) ( N/A , -0.03 , N/A ) | 963.8 | N/A | 0.9020 [ 1.0000 ] | 90.2% { 88.8% } | 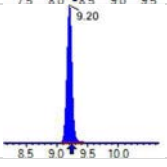 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303023 | ( 10.11 , N/A ) ( N/A , -0.03 , N/A ) | 19552.5 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 90.5% } | 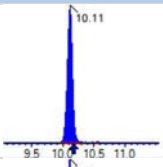 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1033913 | ( 8.71 , N/A ) ( N/A , -0.04 , N/A ) | 3880.7 | N/A | 0.9250 [ 1.0000 ] | 92.5% { 90.4% } | 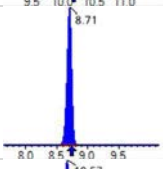 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 876760 | ( 10.57 , N/A ) ( N/A , -0.04 , N/A ) | 2804.2 | N/A | 0.8980 [ 1.0000 ] | 89.8% { 92.3% } | 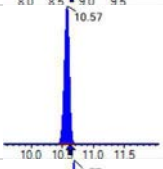 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2495680 | ( 3.77 , N/A ) ( N/A , -0.01 , N/A ) | 55185.0 | N/A | 8.1590 [ 8.0000 ] | 102.0% { 94.4% } | 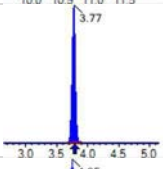 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 998137 | ( 4.85 , N/A ) ( N/A , -0.02 , N/A ) | 5934.9 | N/A | 4.1030 [ 4.0000 ] | 102.6% { 84.9% } | 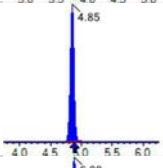 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 626101 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 10474.0 | N/A | 2.1510 [ 2.0000 ] | 107.5% { 90.8% } | 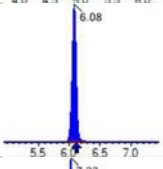 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 644383 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 5078.7 | N/A | 2.1190 [ 2.0000 ] | 106.0% { 89.8% } | 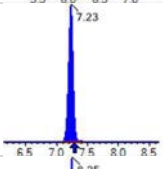 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 903938 | ( 8.25 , N/A ) ( N/A , -0.03 , N/A ) | 2482.8 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 88.4% } | 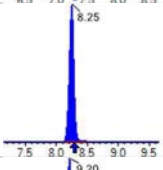 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 297280 | ( 9.20 , N/A ) ( N/A , -0.03 , N/A ) | 5127.7 | N/A | 1.0210 [ 1.0000 ] | 102.1% { 88.8% } | 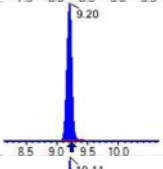 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 361894 | ( 10.11 , N/A ) ( N/A , -0.03 , N/A ) | 938.7 | N/A | 1.0350 [ 1.0000 ] | 103.5% { 93.2% } | 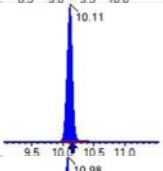 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 453131 | ( 10.98 , N/A ) ( N/A , -0.04 , N/A ) | 984.1 | N/A | 1.0660 [ 1.0000 ] | 106.6% { 94.0% } | 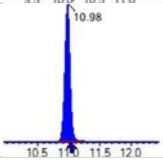 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-CCB4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 445803 | ( 11.80 , N/A ) ( N/A , -0.03 , N/A ) | 1350.1 | N/A | 1.0440 [ 1.0000 ] | 104.4% { 93.5% } | 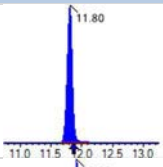 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 394624 | ( 12.92 , N/A ) ( N/A , -0.02 , N/A ) | 1403.0 | N/A | 1.0610 [ 1.0000 ] | 106.1% { 91.1% } | 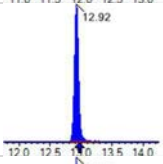 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 684388 | ( 13.72 , N/A ) ( N/A , -0.02 , N/A ) | 3508.6 | N/A | 2.1660 [ 2.0000 ] | 108.3% { 98.8% } | 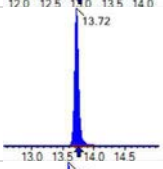 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1801058 | ( 6.39 , N/A ) ( N/A , -0.03 , N/A ) | 1354.7 | N/A | 1.7880 [ 2.0000 ] | 89.4% { 81.2% } | 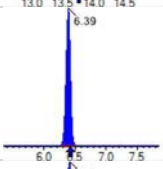 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1504672 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 6413.4 | N/A | 1.9890 [ 2.0000 ] | 99.4% { 91.2% } | 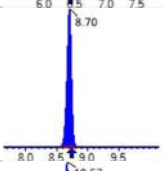 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1920509 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 1875.7 | N/A | 2.0580 [ 2.0000 ] | 102.9% { 91.2% } | 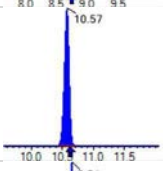 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 396543 | ( 5.54 , N/A ) ( N/A , -0.02 , N/A ) | 91.3 | N/A | 4.4040 [ 4.0000 ] | 110.1% { 108.8% } | 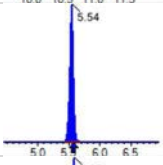 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1264742 | ( 7.67 , N/A ) ( N/A , -0.03 , N/A ) | 4499.8 | N/A | 4.5230 [ 4.0000 ] | 113.1% { 120.0% } | 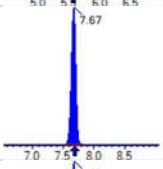 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1277004 | ( 9.48 , N/A ) ( N/A , -0.02 , N/A ) | 1730.8 | N/A | 4.5840 [ 4.0000 ] | 114.6% { 115.1% } | 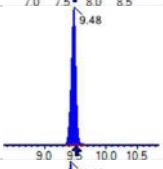 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2568934 | ( 11.12 , N/A ) ( N/A , -0.03 , N/A ) | 1185.9 | N/A | 8.0340 [ 8.0000 ] | 100.4% { 101.8% } | 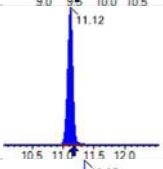 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2201214 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 2479.3 | N/A | 2.1760 [ 2.0000 ] | 108.8% { 97.2% } | 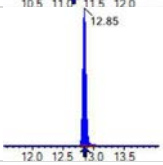 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (28)
Acquired: 2024/03/14 - 21:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 393137 | ( 14.23 , N/A ) ( N/A , 0.01 , N/A ) | 2643.5 | N/A | 2.1050 [ 2.0000 ] | 105.2% { 94.5% } | 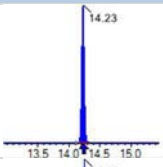  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 461970 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 3175.9 | N/A | 2.1530 [ 2.0000 ] | 107.7% { 95.9% } | 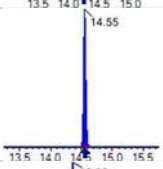  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1022590 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 2622.1 | N/A | 4.2780 [ 4.0000 ] | 107.0% { 95.9% } | 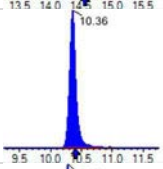  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1015220 | ( 10.88 , N/A ) ( N/A , -0.03 , N/A ) | 1815.0 | N/A | 4.4740 [ 4.0000 ] | 111.9% { 99.2% } | 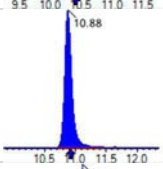  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2260224 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 3422.4 | N/A | 25.8980 [ 20.0000 ] | 129.5% { 113.3% } | 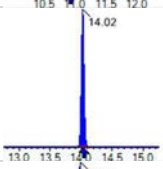  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2509046 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 6760.1 | N/A | 23.7330 [ 20.0000 ] | 118.7% { 103.0% } | 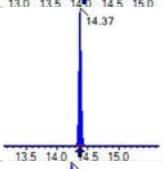  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1071058 | ( 6.54 , N/A ) ( N/A , -0.03 , N/A ) | 2628.7 | N/A | 8.5590 [ 8.0000 ] | 107.0% { 89.7% } | 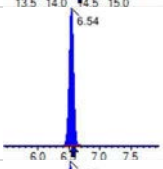  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 506138 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 1320.9 | N/A | 1.8830 [ 2.0000 ] | 94.2% { 84.3% } | 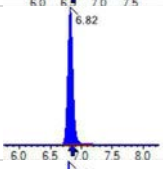  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 467022 | ( 8.89 , N/A ) ( N/A , -0.03 , N/A ) | 490.3 | N/A | 1.8610 [ 2.0000 ] | 93.1% { 87.4% } | 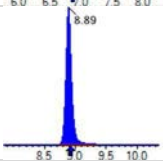  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (4)
Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 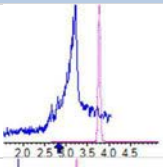 | 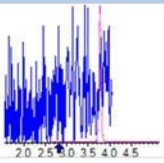 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 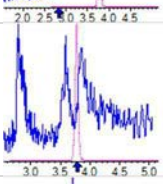 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 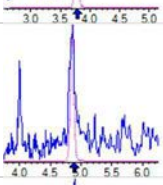 | 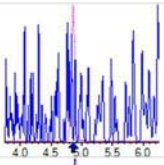 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 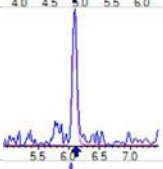 | 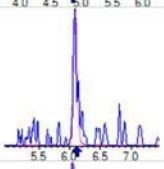 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 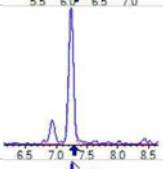 | 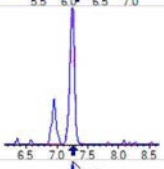 | |
| PFOA | ( 413.0 / 369.0 )<br>3257085<br>( 413.0 / 169.0 )<br>1313895 | ( 8.25 , 1.00 )<br>( 0.00 , N/A , 0.0) | 474.4<br>354.2 | 0.4034<br>111.5<br>117.0 | 7.2660 | N/A | 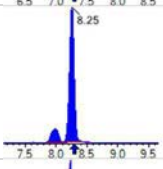 | 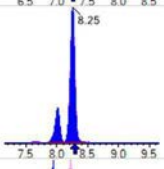 | MI5 DG 2024-03-14 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 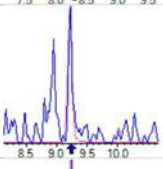 | 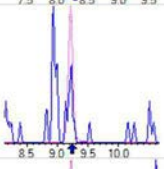 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 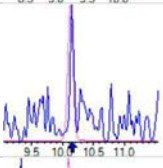 | 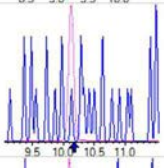 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 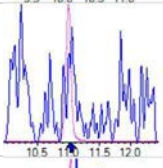 | 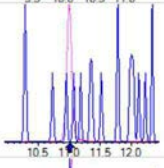 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 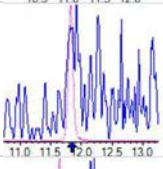 | 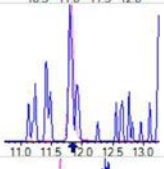 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 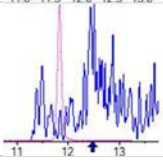 | 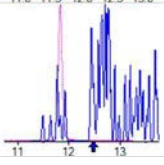 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (4)
Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 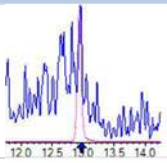 | 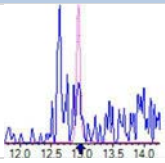 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 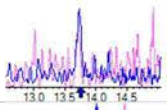 | 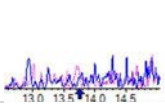 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 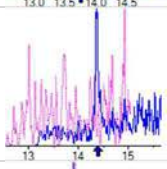 | 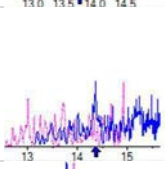 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 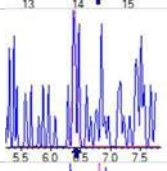 | 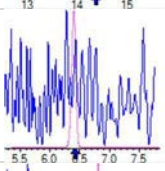 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 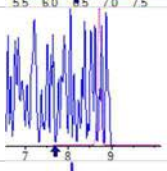 | 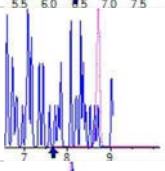 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 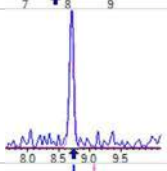 | 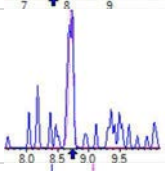 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 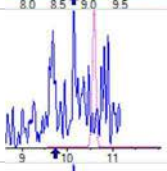 | 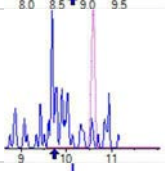 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 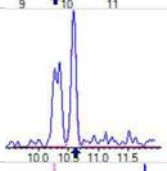 | 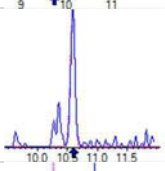 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 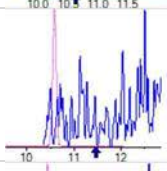 | 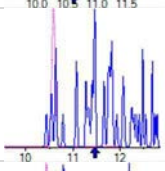 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 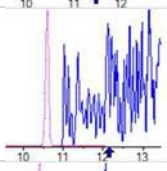 | 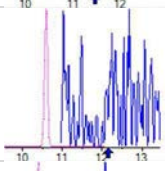 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 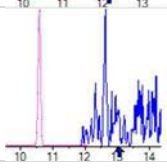 | 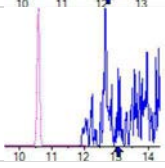 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (4)
Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 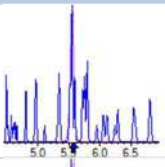 | 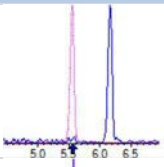 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 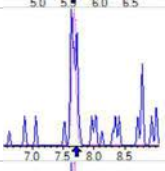 | 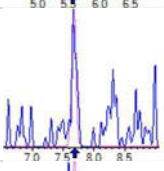 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 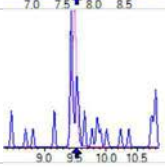 | 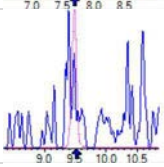 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 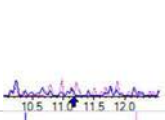 | 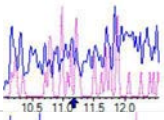 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 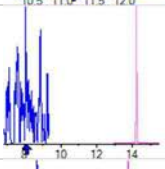 | 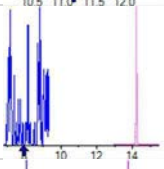 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 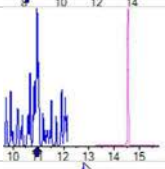 | 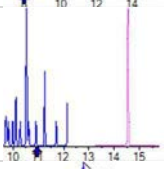 | |
| PFOSA | ( 498.0 / 78.0 )<br>9591831<br>( 498.0 / 478.0 )<br>142657 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 377.5<br>489.2 | 0.0149<br>103.1<br>106.0 | 9.1880 | N/A | 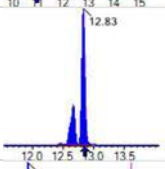 | 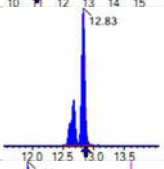 | MI5 DG<br>2024-03-14 |
| TFSI | ( 279.7 / 147.0 )<br>59154<br>( 279.7 / 211.0 )<br>4849 | ( 8.29 , 0.65 )<br>( N/A , -0.03 , 0.5) | 30.6<br>12.4 | 0.0820<br>99.4<br>99.5 | 0.0270 | N/A | 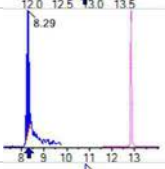 | 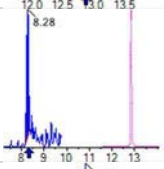 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1624839<br>( 512.0 / 169.0 )<br>1252522 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.2) | 3748.4<br>3144.5 | 0.7709<br>104.9<br>100.1 | 8.5400 | N/A | 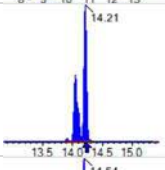 | 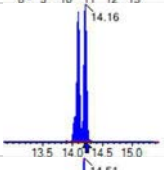 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>2091579<br>( 526.0 / 169.0 )<br>2609359 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.2) | 4432.2<br>3217.5 | 1.2476<br>98.5<br>97.8 | 8.1280 | N/A | 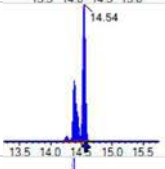 | 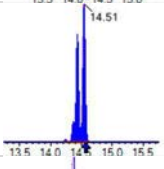 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 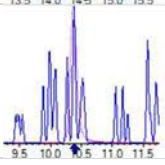 | 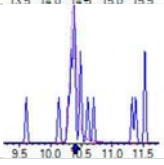 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (4)
Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 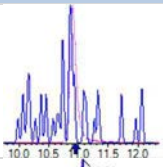 | 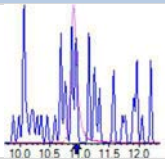 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>940301 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1955.0 | N/A<br>0.0<br>0.0 | 8.7730 | N/A | 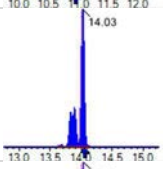 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>910205 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2955.0 | N/A<br>0.0<br>0.0 | 9.1090 | N/A | 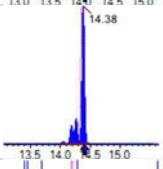 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 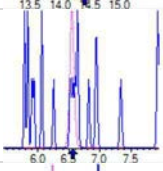 | 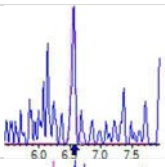 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 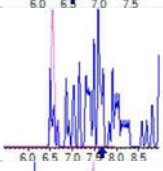 | 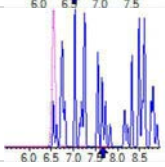 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 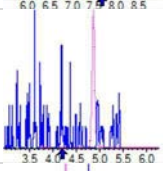 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 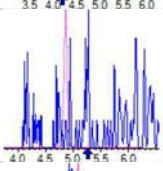 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 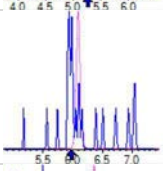 | 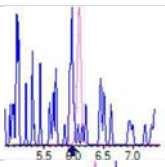 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 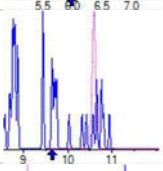 | 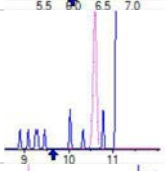 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 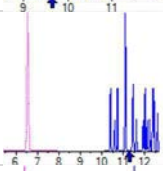 | 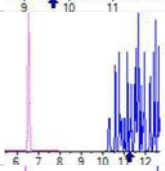 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 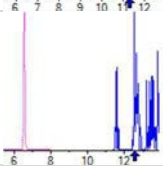 | 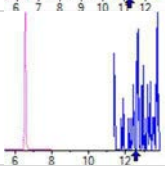 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (4)
Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 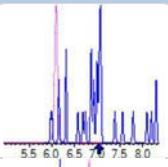 | 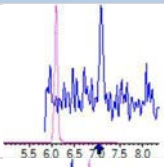 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 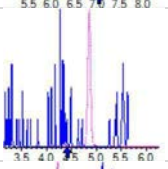 | 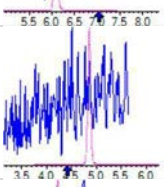 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 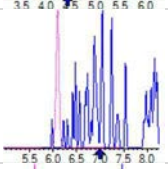 | 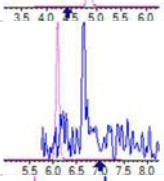 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 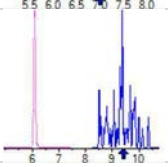 | 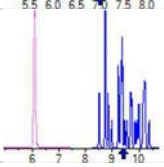 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 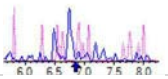 | | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 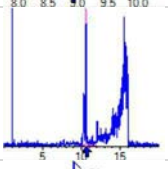 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282135 | ( 3.78 , N/A ) ( N/A , -0.01 , N/A ) | 2200.3 | N/A | 0.9370 [ 1.0000 ] | 93.7% { 95.7% } | 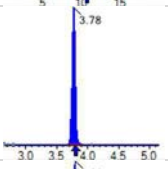 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127283 | ( 6.09 , N/A ) ( N/A , -0.02 , N/A ) | 6158.6 | N/A | 0.8280 [ 1.0000 ] | 82.8% { 82.0% } | 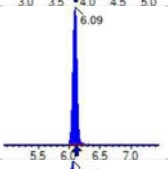 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 388223 | ( 8.26 , N/A ) ( N/A , -0.02 , N/A ) | 3221.6 | N/A | 0.8700 [ 1.0000 ] | 87.0% { 84.1% } | 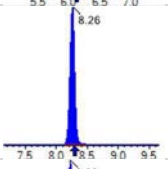 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 299849 | ( 9.22 , N/A ) ( N/A , -0.02 , N/A ) | 961.3 | N/A | 0.8970 [ 1.0000 ] | 89.7% { 88.3% } | 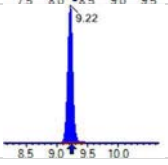 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (4)
Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266746 | ( 10.13 , N/A ) ( N/A , -0.01 , N/A ) | 11620.6 | N/A | 0.8040 [ 1.0000 ] | 80.4% { 79.7% } | 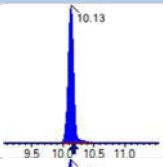 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 952114 | ( 8.72 , N/A ) ( N/A , -0.03 , N/A ) | 5762.4 | N/A | 0.8520 [ 1.0000 ] | 85.2% { 83.3% } | 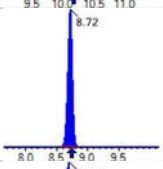 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 806777 | ( 10.59 , N/A ) ( N/A , -0.02 , N/A ) | 3075.2 | N/A | 0.8260 [ 1.0000 ] | 82.6% { 84.9% } | 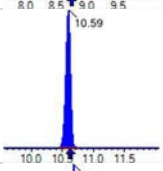 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2636526 | ( 3.77 , N/A ) ( N/A , -0.02 , N/A ) | 41781.8 | N/A | 8.4740 [ 8.0000 ] | 105.9% { 99.7% } | 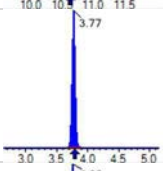 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1067336 | ( 4.86 , N/A ) ( N/A , -0.01 , N/A ) | 5323.7 | N/A | 4.6740 [ 4.0000 ] | 116.9% { 90.7% } | 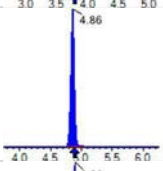 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 622097 | ( 6.09 , N/A ) ( N/A , -0.02 , N/A ) | 8206.9 | N/A | 2.2760 [ 2.0000 ] | 113.8% { 90.2% } | 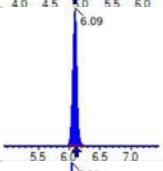 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659708 | ( 7.24 , N/A ) ( N/A , -0.02 , N/A ) | 4514.3 | N/A | 2.3110 [ 2.0000 ] | 115.6% { 91.9% } | 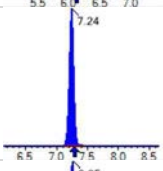 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 881678 | ( 8.25 , N/A ) ( N/A , -0.02 , N/A ) | 2872.3 | N/A | 2.1540 [ 2.0000 ] | 107.7% { 86.2% } | 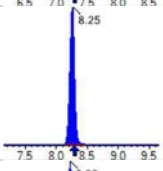 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 297250 | ( 9.22 , N/A ) ( N/A , -0.02 , N/A ) | 4920.0 | N/A | 1.0270 [ 1.0000 ] | 102.7% { 88.8% } | 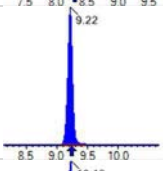 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 358680 | ( 10.13 , N/A ) ( N/A , -0.02 , N/A ) | 945.0 | N/A | 1.1650 [ 1.0000 ] | 116.5% { 92.4% } | 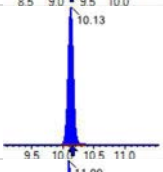 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 455574 | ( 11.00 , N/A ) ( N/A , -0.02 , N/A ) | 1134.5 | N/A | 1.2170 [ 1.0000 ] | 121.7% { 94.5% } | 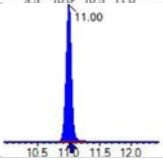 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 443239 | ( 11.82 , N/A ) ( N/A , -0.01 , N/A ) | 1239.3 | N/A | 1.1790 [ 1.0000 ] | 117.9% { 93.0% } | 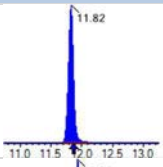 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362450 | ( 12.94 , N/A ) ( N/A , -0.01 , N/A ) | 1691.1 | N/A | 1.1070 [ 1.0000 ] | 110.7% { 83.7% } | 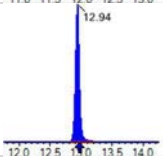 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1878867 | ( 6.40 , N/A ) ( N/A , -0.02 , N/A ) | 1393.0 | N/A | 2.0250 [ 2.0000 ] | 101.3% { 84.7% } | 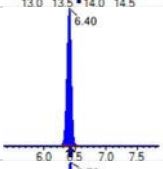 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1520114 | ( 8.72 , N/A ) ( N/A , -0.02 , N/A ) | 6045.6 | N/A | 2.1820 [ 2.0000 ] | 109.1% { 92.2% } | 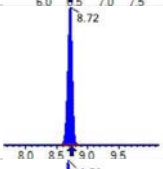 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1877299 | ( 10.59 , N/A ) ( N/A , -0.02 , N/A ) | 1884.2 | N/A | 2.1860 [ 2.0000 ] | 109.3% { 89.2% } | 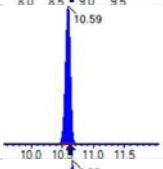 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 393618 | ( 5.55 , N/A ) ( N/A , -0.01 , N/A ) | 87.2 | N/A | 4.7470 [ 4.0000 ] | 118.7% { 108.0% } | 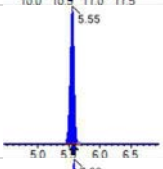 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1184235 | ( 7.68 , N/A ) ( N/A , -0.02 , N/A ) | 3401.2 | N/A | 4.5990 [ 4.0000 ] | 115.0% { 112.3% } | 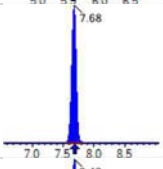 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1206678 | ( 9.48 , N/A ) ( N/A , -0.02 , N/A ) | 1452.3 | N/A | 4.7040 [ 4.0000 ] | 117.6% { 108.7% } | 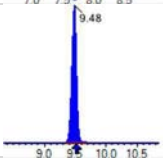 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2139401 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 2537.1 | N/A | 2.2990 [ 2.0000 ] | 114.9% { 94.5% } | 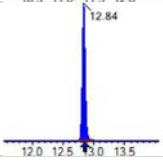 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD00936-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 13:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 377781 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2586.6 | N/A | 2.1980 [ 2.0000 ] | 109.9% { 90.8% } | 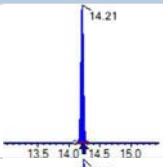 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 469013 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 3405.4 | N/A | 2.3760 [ 2.0000 ] | 118.8% { 97.4% } | 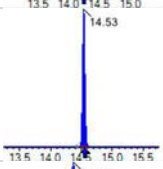 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1008785 | ( 10.37 , N/A ) ( N/A , -0.01 , N/A ) | 2532.4 | N/A | 4.5860 [ 4.0000 ] | 114.7% { 94.6% } | 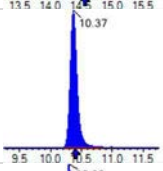 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1002037 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1681.5 | N/A | 4.7990 [ 4.0000 ] | 120.0% { 98.0% } | 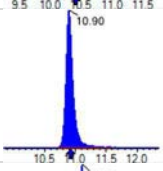 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1893624 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 2946.0 | N/A | 23.5800 [ 20.0000 ] | 117.9% { 94.9% } | 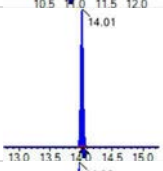 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2261705 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 5689.2 | N/A | 23.2490 [ 20.0000 ] | 116.2% { 92.8% } | 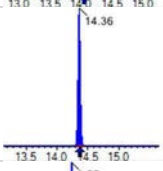 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1130923 | ( 6.55 , N/A ) ( N/A , -0.02 , N/A ) | 2243.2 | N/A | 9.6270 [ 8.0000 ] | 120.3% { 94.7% } | 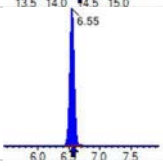 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 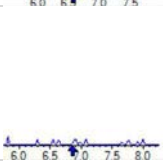 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 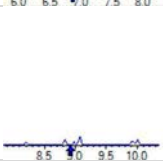 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00936-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (5)
Acquired: 2024/03/14 - 13:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 34817<br>( 499.0 / 99.0 ) N/A | ( 10.01 , 0.94 ) ( -0.59 , N/A , #Value!) | 11.2 | N/A<br>0.0<br>0.0 | 0.0310 | N/A | 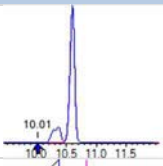 | 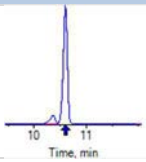 | |
| TDCA | ( 499.0 / 80.0 ) 7302224 | ( 7.06 , 0.67 ) ( N/A , #Value! , 0.0) | 38745.6 | N/A<br>0.0<br>0.0 | 9.5970 | N/A | 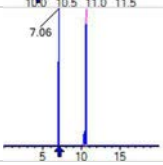 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

10.01 - 7.06 = 2.95 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none] | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-BLK1a | File ID: | S2024-03-14A (11)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed: | 03/14/24 15:56a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | NDa | 0.15a | 0.40a | Ua |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | NDa | 0.064a | 0.40a | Ua |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none]a | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-BLK1a | File ID:a | S2024-03-14A (11)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed:a | 03/14/24 15:56a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (11)
Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>40034<br>( 163.0 / 69.0 )<br>945 | ( 2.79 , 0.75 )<br>( N/A , -0.02 , 0.2) | 231.7<br>73.0 | 0.0236<br>94.2<br>93.2 | 0.1260 | N/A | 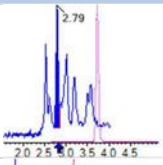 | 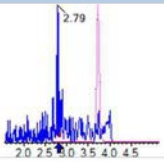 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 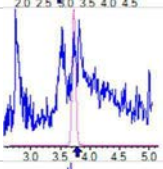 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 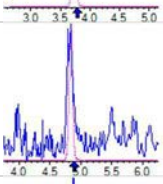 | 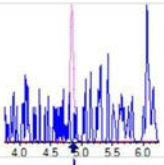 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 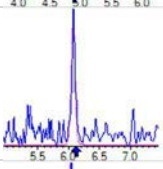 | 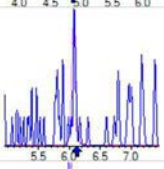 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 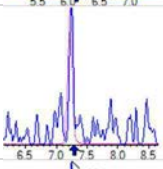 | 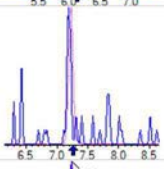 | |
| PFOA | ( 413.0 / 369.0 )<br>12133<br>( 413.0 / 169.0 )<br>3402 | ( 8.25 , 1.00 )<br>( 0.00 , N/A , 0.8) | 33.2<br>25.4 | 0.2804<br>77.5<br>81.3 | 0.0230 | N/A | 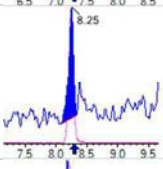 | 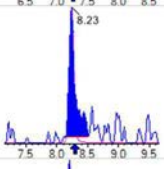 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 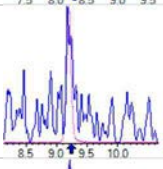 | 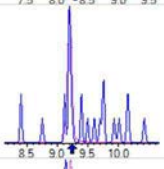 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 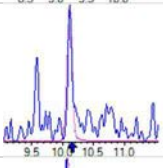 | 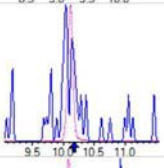 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 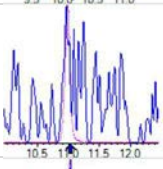 | 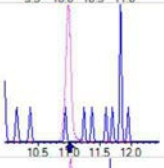 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 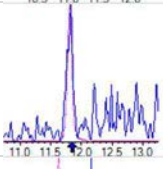 | 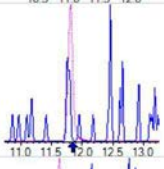 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 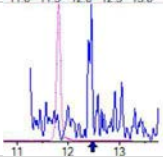 | 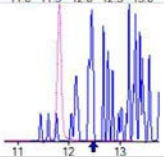 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (11)
Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 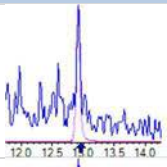 | 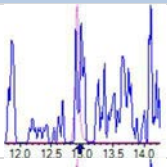 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 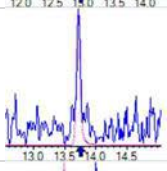 | 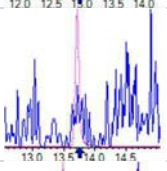 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 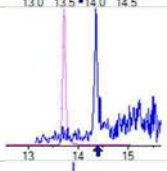 | 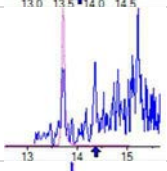 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 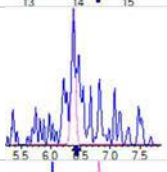 | 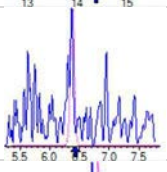 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 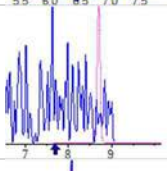 | 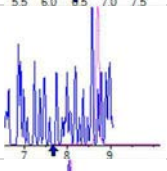 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 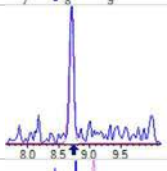 | 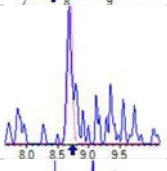 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 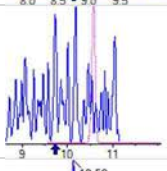 | 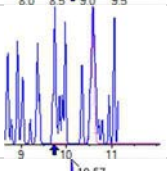 | |
| PFOS | ( 499.0 / 80.0 ) 17202<br>( 499.0 / 99.0 ) 4434 | ( 10.50 , 0.99 ) ( -0.07 , N/A , -4.2) | 90.4<br>2563.0 | 0.2577<br>109.0<br>111.0 | 0.0140 | N/A | 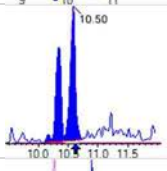 | 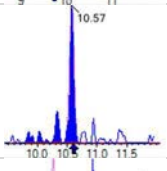 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 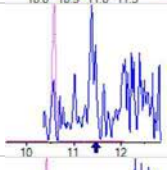 | 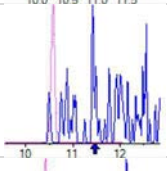 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 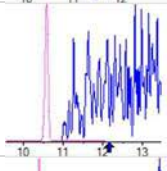 | 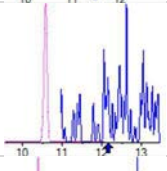 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 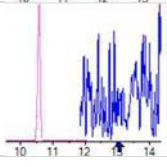 | 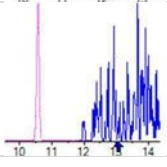 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (11)
Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 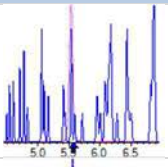 | 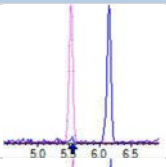 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 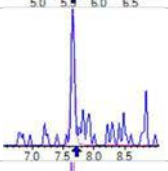 | 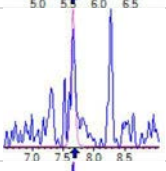 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 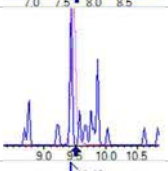 | 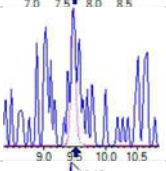 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15682<br>( 627.0 / 81.0 )<br>23398 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.0) | 161.8<br>81.0 | 1.4920<br>110.4<br>115.3 | 0.0470 | N/A | 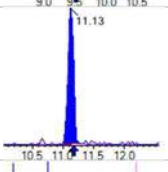 | 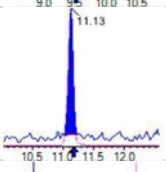 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 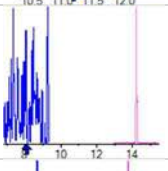 | 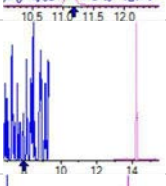 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 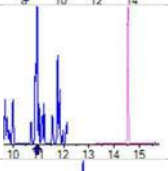 | 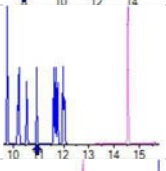 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 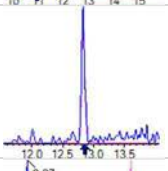 | 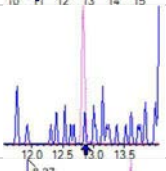 | |
| TFSI | ( 279.7 / 147.0 )<br>73000<br>( 279.7 / 211.0 )<br>4895 | ( 8.27 , 0.64 )<br>( N/A , -0.04 , 0.4) | 37.8<br>18.5 | 0.0671<br>81.3<br>81.4 | 0.0630 | N/A | 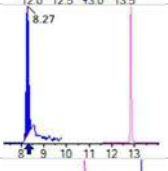 | 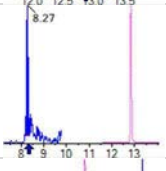 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 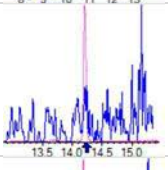 | 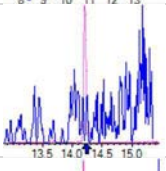 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 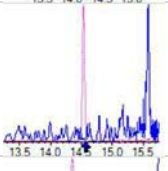 | 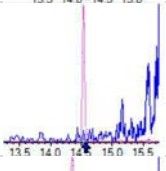 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 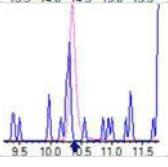 | 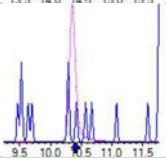 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-BLK1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 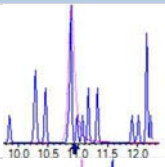 | 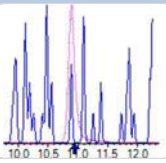 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 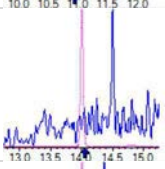 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 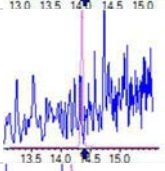 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 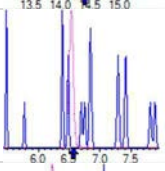 | 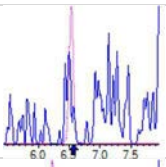 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 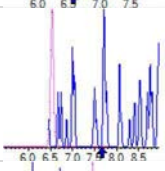 | 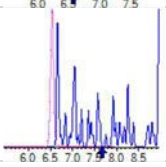 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 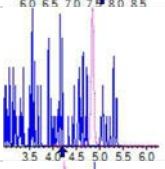 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 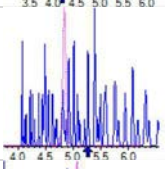 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 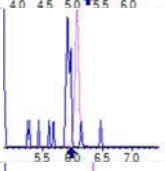 | 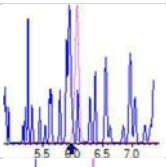 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 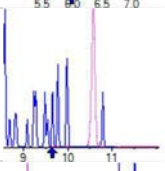 | 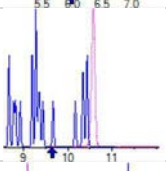 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 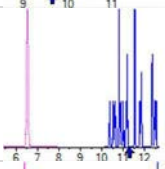 | 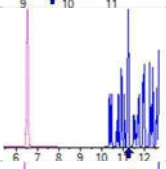 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 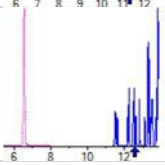 | 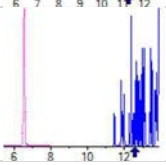 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-BLK1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 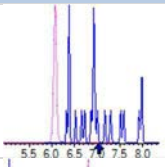 | 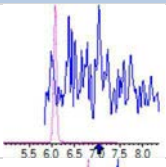 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 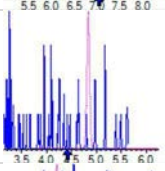 | 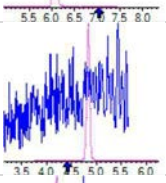 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 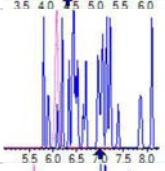 | 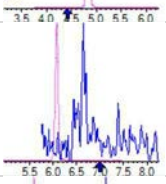 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 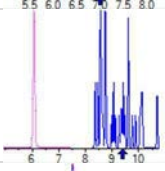 | 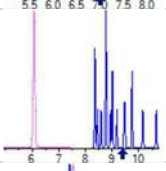 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 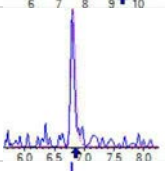 | 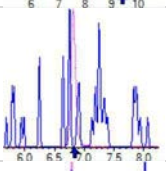 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 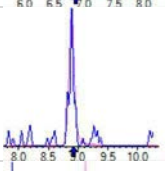 | 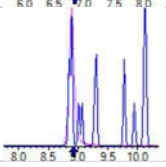 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 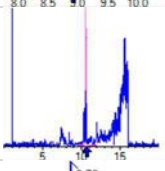 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 294665 | ( 3.73 , N/A )<br>( N/A , -0.06 , N/A ) | 2233.6 | N/A | 0.9780<br>[ 1.0000 ] | 97.8%<br>{ 100.0% } | 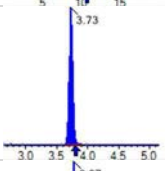 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145398 | ( 6.07 , N/A )<br>( N/A , -0.04 , N/A ) | 86538.5 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 93.7% } | 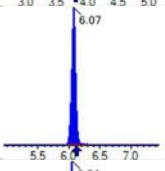 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 447329 | ( 8.24 , N/A )<br>( N/A , -0.03 , N/A ) | 3931.2 | N/A | 1.0030<br>[ 1.0000 ] | 100.3%<br>{ 96.9% } | 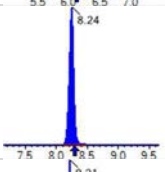 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 339423 | ( 9.21 , N/A )<br>( N/A , -0.03 , N/A ) | 1218.5 | N/A | 1.0150<br>[ 1.0000 ] | 101.5%<br>{ 100.0% } | 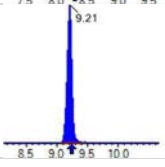 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (11)
Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 332381 | ( 10.12 , N/A ) ( N/A , -0.03 , N/A ) | 5976.5 | N/A | 1.0020 [ 1.0000 ] | 100.2% { 99.3% } | 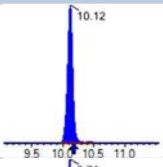 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1089262 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 4064.7 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 95.3% } | 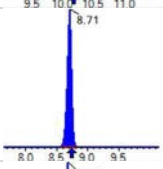 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 950720 | ( 10.58 , N/A ) ( N/A , -0.03 , N/A ) | 2587.5 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 100.1% } | 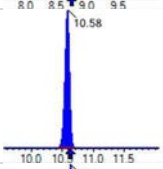 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2862958 | ( 3.73 , N/A ) ( N/A , -0.06 , N/A ) | 48205.4 | N/A | 8.8110 [ 8.0000 ] | 110.1% { 108.2% } | 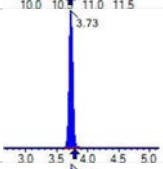 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1129075 | ( 4.84 , N/A ) ( N/A , -0.04 , N/A ) | 6064.0 | N/A | 4.3290 [ 4.0000 ] | 108.2% { 96.0% } | 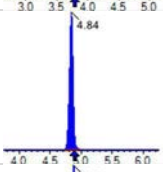 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 695688 | ( 6.07 , N/A ) ( N/A , -0.04 , N/A ) | 9300.4 | N/A | 2.2280 [ 2.0000 ] | 111.4% { 100.9% } | 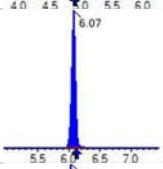 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 747172 | ( 7.22 , N/A ) ( N/A , -0.03 , N/A ) | 18631.8 | N/A | 2.2920 [ 2.0000 ] | 114.6% { 104.1% } | 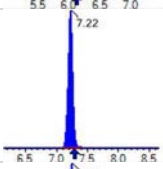 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1058389 | ( 8.24 , N/A ) ( N/A , -0.03 , N/A ) | 3874.2 | N/A | 2.2440 [ 2.0000 ] | 112.2% { 103.5% } | 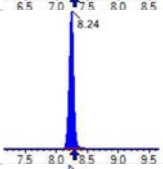 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 346352 | ( 9.20 , N/A ) ( N/A , -0.03 , N/A ) | 4183.3 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 103.5% } | 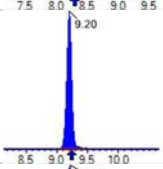 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 406600 | ( 10.12 , N/A ) ( N/A , -0.03 , N/A ) | 827.8 | N/A | 1.0600 [ 1.0000 ] | 106.0% { 104.7% } | 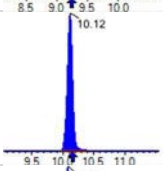 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 503638 | ( 10.99 , N/A ) ( N/A , -0.03 , N/A ) | 1289.1 | N/A | 1.0800 [ 1.0000 ] | 108.0% { 104.5% } | 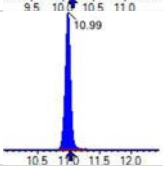 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-BLK1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 508377 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1562.2 | N/A | 1.0860 [ 1.0000 ] | 108.6% { 106.6% } | 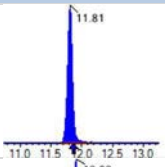 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 429441 | ( 12.92 , N/A ) ( N/A , -0.03 , N/A ) | 1566.8 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 99.2% } | 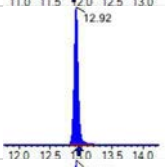 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 669248 | ( 13.72 , N/A ) ( N/A , -0.02 , N/A ) | 2857.5 | N/A | 1.9310 [ 2.0000 ] | 96.5% { 96.6% } | 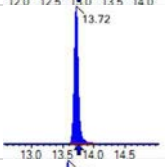 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2245210 | ( 6.38 , N/A ) ( N/A , -0.04 , N/A ) | 1184.0 | N/A | 2.1160 [ 2.0000 ] | 105.8% { 101.2% } | 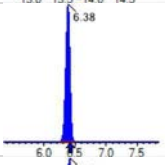 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1780534 | ( 8.70 , N/A ) ( N/A , -0.04 , N/A ) | 4282.4 | N/A | 2.2340 [ 2.0000 ] | 111.7% { 107.9% } | 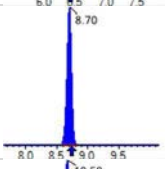 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2152999 | ( 10.58 , N/A ) ( N/A , -0.03 , N/A ) | 2117.7 | N/A | 2.1270 [ 2.0000 ] | 106.4% { 102.3% } | 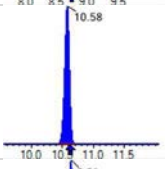 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 446867 | ( 5.53 , N/A ) ( N/A , -0.03 , N/A ) | 79.5 | N/A | 4.7110 [ 4.0000 ] | 117.8% { 122.7% } | 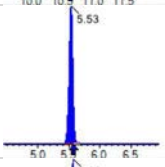 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1506407 | ( 7.66 , N/A ) ( N/A , -0.04 , N/A ) | 4393.1 | N/A | 5.1140 [ 4.0000 ] | 127.9% { 142.9% } | 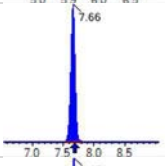 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1464037 | ( 9.47 , N/A ) ( N/A , -0.03 , N/A ) | 1633.8 | N/A | 4.9890 [ 4.0000 ] | 124.7% { 131.9% } | 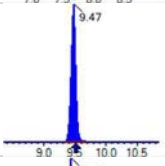 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3236413 | ( 11.12 , N/A ) ( N/A , -0.03 , N/A ) | 1264.6 | N/A | 9.6070 [ 8.0000 ] | 120.1% { 128.2% } | 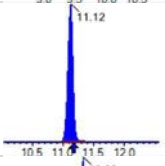 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1123013 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1834.7 | N/A | 1.0240 [ 2.0000 ] | 51.2% { 49.6% } | 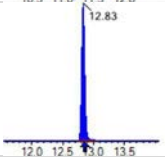 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (11)
Acquired: 2024/03/14 - 15:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 128519 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 924.4 | N/A | 0.6350 [ 2.0000 ] | 31.7% { 30.9% } | 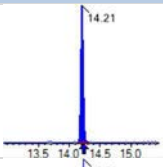 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 142753 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1064.9 | N/A | 0.6140 [ 2.0000 ] | 30.7% { 29.6% } | 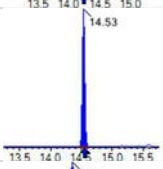 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1102553 | ( 10.35 , N/A ) ( N/A , -0.03 , N/A ) | 2478.4 | N/A | 4.2540 [ 4.0000 ] | 106.3% { 103.4% } | 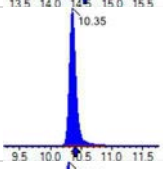 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1099872 | ( 10.89 , N/A ) ( N/A , -0.03 , N/A ) | 1543.1 | N/A | 4.4700 [ 4.0000 ] | 111.8% { 107.5% } | 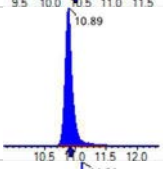 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 594827 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1059.0 | N/A | 6.2860 [ 20.0000 ] | 31.4% { 29.8% } | 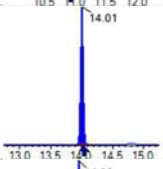 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 601043 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2210.5 | N/A | 5.2430 [ 20.0000 ] | 26.2% { 24.7% } | 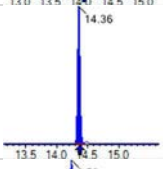 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1244145 | ( 6.53 , N/A ) ( N/A , -0.04 , N/A ) | 2422.5 | N/A | 9.2710 [ 8.0000 ] | 115.9% { 104.2% } | 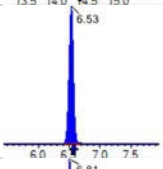 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 587584 | ( 6.81 , N/A ) ( N/A , -0.04 , N/A ) | 976.5 | N/A | 1.9930 [ 2.0000 ] | 99.7% { 97.9% } | 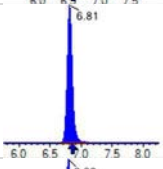 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 560616 | ( 8.89 , N/A ) ( N/A , -0.03 , N/A ) | 725.9 | N/A | 2.0370 [ 2.0000 ] | 101.9% { 104.9% } | 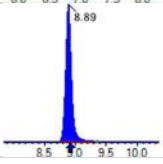 | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none]a | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-BS1a | File ID:a | S2024-03-14A (12)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed:a | 03/14/24 16:17a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.3a | 0.21a | 1.6a | MI5a |
| PFPeAa | 7.94a | 0.065a | 0.80a | |
| PFHxAa | 3.86a | 0.055a | 0.40a | |
| PFHpAa | 3.94a | 0.041a | 0.40a | |
| PFOAa | 4.00a | 0.15a | 0.40a | |
| PFNAa | 3.75a | 0.082a | 0.40a | |
| PFDAa | 4.11a | 0.10a | 0.40a | |
| PFUnAa | 3.88a | 0.16a | 0.40a | |
| PFDoAa | 3.90a | 0.11a | 0.40a | |
| PFTrDAa | 3.89a | 0.20a | 0.40a | |
| PFTeDAa | 4.04a | 0.20a | 0.40a | |
| PFHxDAa | 4.07a | 0.20a | 0.40a | |
| PFODAa | 3.72a | 0.20a | 0.40a | |
| PFBSa | 3.44a | 0.037a | 0.40a | |
| PFPeSa | 3.71a | 0.063a | 0.40a | |
| PFHxSa | 3.58a | 0.032a | 0.40a | |
| PFHpSa | 3.94a | 0.051a | 0.40a | |
| PFOSa | 3.69a | 0.064a | 0.40a | |
| PFNSa | 3.82a | 0.12a | 0.40a | |
| PFDSa | 4.03a | 0.15a | 0.40a | |
| PFDoSa | 3.65a | 0.12a | 0.40a | |
| 4:2FTSa | 14.7a | 0.29a | 1.6a | |
| 6:2FTSa | 15.6a | 0.31a | 1.6a | |
| 8:2FTSa | 15.7a | 0.082a | 1.6a | |
| 10:2FTSa | 14.5a | 0.40a | 1.6a | |
| PFOSAa | 4.28a | 0.10a | 0.40a | |
| NMeFOSAa | 17.0a | 0.47a | 1.6a | |
| NEtFOSAa | 16.6a | 0.41a | 1.6a | |
| NMeFOSAAa | 4.08a | 0.11a | 0.40a | |
| NEtFOSAAa | 4.11a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none]a | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-BS1a | File ID:a | S2024-03-14A (12)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed:a | 03/14/24 16:17a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.2a | 1.0a | 1.6a | |
| NEtFOSEa | 16.3a | 1.0a | 1.6a | |
| HFPO-DAa | 4.01a | 0.17a | 0.80a | |
| ADONAa | 3.92a | 0.12a | 0.80a | |
| PFEESAa | 7.28a | 0.11a | 0.80a | |
| PFMPAa | 8.24a | 0.054a | 0.80a | |
| PFMBAa | 8.16a | 0.091a | 0.80a | |
| NFDHAa | 7.38a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.80a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 3.90a | 0.21a | 0.80a | |
| 3:3FTCAa | 15.3a | 0.57a | 1.6a | |
| 5:3FTCAa | 15.4a | 0.44a | 1.6a | |
| 7:3FTCAa | 13.4a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (12)
Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 692222<br>( 163.0 / 69.0 ) 17581 | ( 2.83 , 0.75 ) ( N/A , 0.01 , 0.1) | 3647.4<br>1205.9 | 0.0254<br>101.3<br>100.3 | 2.0020<br>[ 2.0000 ] | 100.1% | 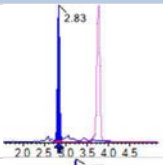 | 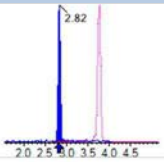 | |
| PFBA | ( 213.0 / 169.0 ) 1510349 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 2171.3 | N/A<br>0.0<br>0.0 | 4.0840<br>[ 4.0000 ] | 102.1% | 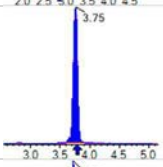 | | MI5 DG 2024-03-15 |
| PFPeA | ( 263.0 / 219.0 ) 639154<br>( 263.0 / 69.0 ) 6975 | ( 4.87 , 1.00 ) ( 0.00 , N/A , -0.2) | 2677.3<br>135.6 | 0.0109<br>99.4<br>90.6 | 1.9840<br>[ 2.0000 ] | 99.2% | 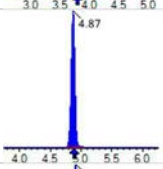 | 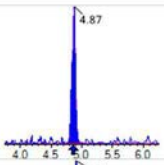 | |
| PFHxA | ( 313.0 / 269.0 ) 360871<br>( 313.0 / 119.0 ) 41597 | ( 6.10 , 1.00 ) ( 0.00 , N/A , -0.1) | 1515.9<br>593.3 | 0.1153<br>103.7<br>99.9 | 0.9650<br>[ 1.0000 ] | 96.5% | 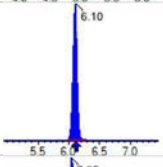 | 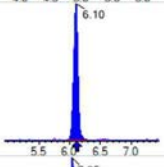 | |
| PFHpA | ( 363.0 / 319.0 ) 394711<br>( 363.0 / 169.0 ) 122150 | ( 7.25 , 1.00 ) ( 0.00 , N/A , 0.1) | 1129.4<br>896.0 | 0.3095<br>99.3<br>105.6 | 0.9850<br>[ 1.0000 ] | 98.5% | 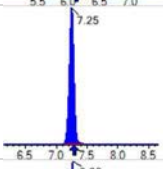 | 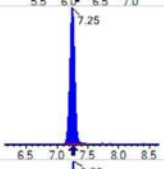 | |
| PFOA | ( 413.0 / 369.0 ) 553586<br>( 413.0 / 169.0 ) 201434 | ( 8.26 , 1.00 ) ( 0.00 , N/A , 0.1) | 621.5<br>723.7 | 0.3639<br>100.6<br>105.5 | 1.0000<br>[ 1.0000 ] | 100.0% | 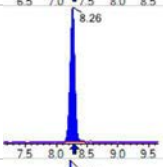 | 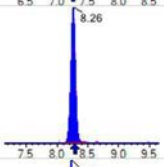 | |
| PFNA | ( 463.0 / 419.0 ) 373389<br>( 463.0 / 169.0 ) 91957 | ( 9.22 , 1.00 ) ( 0.00 , N/A , -0.1) | 888.1<br>866.7 | 0.2463<br>93.8<br>97.6 | 0.9370<br>[ 1.0000 ] | 93.7% | 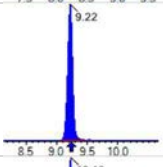 | 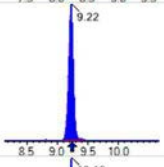 | |
| PFDA | ( 513.0 / 469.0 ) 439921<br>( 513.0 / 169.0 ) 54594 | ( 10.13 , 1.00 ) ( 0.00 , N/A , 0.2) | 1510.8<br>39545.6 | 0.1241<br>105.7<br>107.1 | 1.0280<br>[ 1.0000 ] | 102.8% | 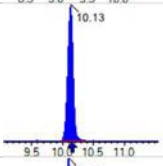 | 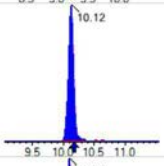 | |
| PFUnA | ( 563.0 / 519.0 ) 496037<br>( 563.0 / 169.0 ) 71531 | ( 11.00 , 1.00 ) ( 0.00 , N/A , 0.1) | 802.6<br>581.1 | 0.1442<br>97.4<br>97.4 | 0.9710<br>[ 1.0000 ] | 97.1% | 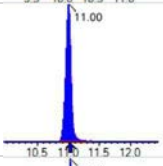 | 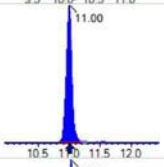 | |
| PFDoA | ( 613.0 / 569.0 ) 543334<br>( 613.0 / 169.0 ) 81437 | ( 11.82 , 1.00 ) ( -0.01 , N/A , 0.0) | 1177.4<br>633.8 | 0.1499<br>94.8<br>99.7 | 0.9760<br>[ 1.0000 ] | 97.6% | 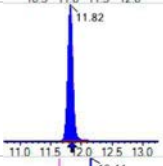 | 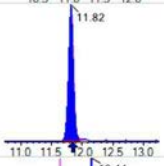 | |
| PFTrDA | ( 663.0 / 619.0 ) 520355<br>( 663.0 / 169.0 ) 138433 | ( 12.44 , 1.05 ) ( N/A , -0.01 , 0.0) | 1260.0<br>712.1 | 0.2660<br>98.7<br>101.3 | 0.9720<br>[ 1.0000 ] | 97.2% | 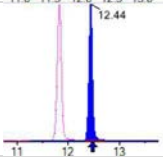 | 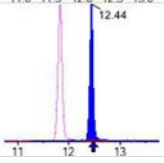 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (12)
Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 414771<br>( 713.0 / 169.0 ) 114108 | ( 12.93 , 1.00 ) ( 0.00 , N/A , 0.1) | 1207.9<br>636.8 | 0.2751<br>105.8<br>109.1 | 1.0100<br>[ 1.0000 ] | 101.0% | 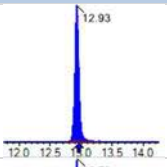 | 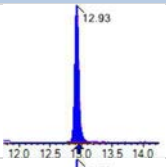 | |
| PFHxDA | ( 813.0 / 769.0 ) 329335<br>( 813.0 / 169.0 ) 73907 | ( 13.73 , 1.00 ) ( -0.01 , N/A , 0.0) | 1347.5<br>498.1 | 0.2244<br>103.4<br>100.8 | 1.0170<br>[ 1.0000 ] | 101.7% | 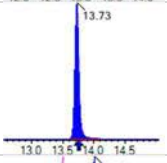 | 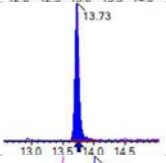 | |
| PFODA | ( 913.0 / 869.0 ) 202409<br>( 913.0 / 169.0 ) 70858 | ( 14.36 , 1.05 ) ( N/A , -0.01 , 0.1) | 837.6<br>342.7 | 0.3501<br>91.6<br>100.4 | 0.9300<br>[ 1.0000 ] | 93.0% | 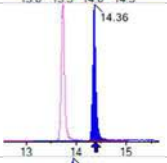 | 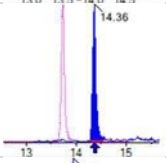 | |
| PFBS | ( 299.0 / 80.0 ) 537706<br>( 299.0 / 99.0 ) 381179 | ( 6.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 2018.0<br>1311.0 | 0.7089<br>99.7<br>96.1 | 0.8610<br>[ 0.8850 ] | 97.3% | 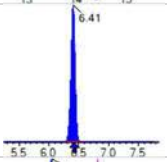 | 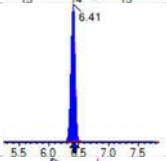 | |
| PFPeS | ( 349.0 / 80.0 ) 1401756<br>( 349.0 / 99.0 ) 498716 | ( 7.65 , 0.88 ) ( N/A , -0.01 , 0.1) | 1865.6<br>1528.1 | 0.3558<br>104.6<br>102.9 | 0.9280<br>[ 0.9380 ] | 98.9% | 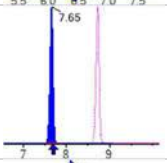 | 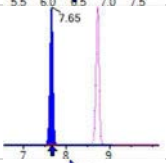 | |
| PFHxS | ( 399.0 / 80.0 ) 1502327<br>( 399.0 / 99.0 ) 474360 | ( 8.72 , 1.00 ) ( 0.00 , N/A , -0.1) | 2106.2<br>4319.2 | 0.3157<br>101.0<br>94.0 | 0.8950<br>[ 0.9110 ] | 98.2% | 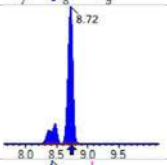 | 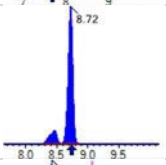 | |
| PFHpS | ( 449.0 / 80.0 ) 1348950<br>( 449.0 / 99.0 ) 351814 | ( 9.69 , 0.92 ) ( N/A , -0.01 , 0.1) | 1474.7<br>1070.7 | 0.2608<br>97.6<br>96.3 | 0.9850<br>[ 0.9510 ] | 103.5% | 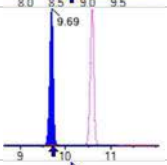 | 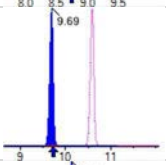 | |
| PFOS | ( 499.0 / 80.0 ) 1269626<br>( 499.0 / 99.0 ) 287805 | ( 10.59 , 1.00 ) ( 0.00 , N/A , 0.1) | 1742.6<br>4651.7 | 0.2267<br>95.8<br>97.7 | 0.9220<br>[ 0.9270 ] | 99.4% | 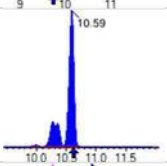 | 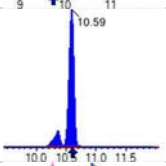 | |
| PFNS | ( 549.0 / 80.0 ) 1283012<br>( 549.0 / 99.0 ) 329683 | ( 11.43 , 1.08 ) ( N/A , -0.02 , 0.1) | 1825.8<br>1754.8 | 0.2570<br>96.7<br>95.8 | 0.9550<br>[ 0.9600 ] | 99.5% | 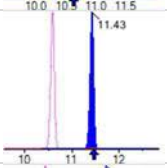 | 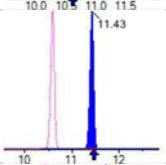 | |
| PFDS | ( 599.0 / 80.0 ) 1614472<br>( 599.0 / 99.0 ) 415596 | ( 12.13 , 1.15 ) ( N/A , -0.01 , 0.0) | 2224.8<br>1504.0 | 0.2574<br>102.6<br>97.9 | 1.0080<br>[ 0.9630 ] | 104.7% | 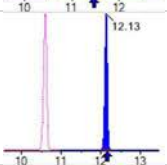 | 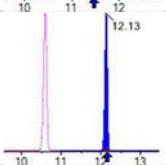 | |
| PFDoS | ( 699.0 / 80.0 ) 1247144<br>( 699.0 / 99.0 ) 292273 | ( 13.03 , 1.23 ) ( N/A , -0.01 , 0.0) | 3068.7<br>2000.6 | 0.2344<br>101.6<br>97.0 | 0.9110<br>[ 0.9700 ] | 94.0% | 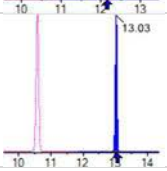 | 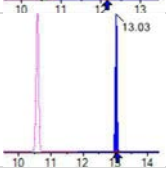 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1132618<br>( 327.0 / 81.0 ) 1023789 | ( 5.56 , 1.00 ) ( 0.00 , N/A , -0.1) | 4324.8<br>2518.9 | 0.9039<br>103.2<br>109.4 | 3.6760<br>[ 3.7380 ] | 98.3% | 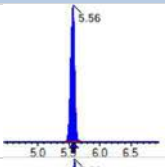 | 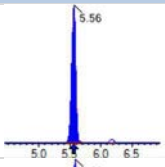 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1280183<br>( 427.0 / 81.0 ) 1631407 | ( 7.68 , 1.00 ) ( 0.00 , N/A , 0.2) | 4625.4<br>2934.8 | 1.2744<br>100.3<br>102.9 | 3.9090<br>[ 3.7960 ] | 103.0% | 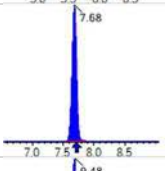 | 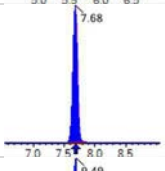 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1464488<br>( 527.0 / 81.0 ) 1499365 | ( 9.48 , 1.00 ) ( -0.01 , N/A , -0.1) | 1929.9<br>1441.2 | 1.0238<br>108.0<br>107.3 | 3.9170<br>[ 3.8330 ] | 102.2% | 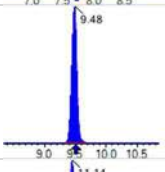 | 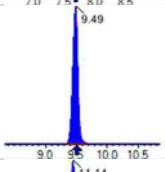 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1319210<br>( 627.0 / 81.0 ) 1882485 | ( 11.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 1386.8<br>1350.1 | 1.4270<br>105.6<br>110.3 | 3.6280<br>[ 3.8650 ] | 93.9% | 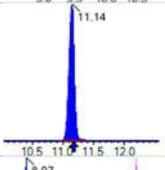 | 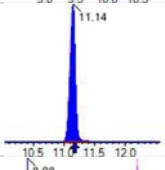 | |
| PFBSA | ( 297.9 / 78.0 ) 824821<br>( 297.9 / 278.0 ) 746 | ( 8.07 , 0.57 ) ( N/A , 0.00 , -0.3) | 1189.0<br>10.8 | 0.0009<br>64.5<br>62.9 | 2.7200<br>[ 1.0000 ] | 272.0% | 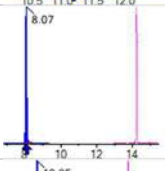 | 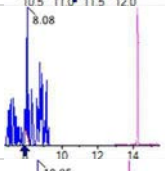 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 956189<br>( 397.9 / 378.0 ) 4643 | ( 10.95 , 0.75 ) ( N/A , 0.01 , 0.3) | 789.4<br>133.7 | 0.0049<br>127.5<br>118.0 | 2.5090<br>[ 1.0000 ] | 250.9% | 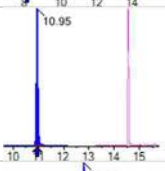 | 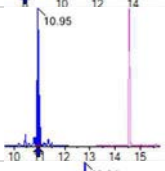 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 631152<br>( 498.0 / 478.0 ) 8909 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.1) | 1845.4<br>284.7 | 0.0141<br>97.8<br>100.6 | 1.0700<br>[ 1.0000 ] | 107.0% | 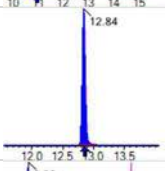 | 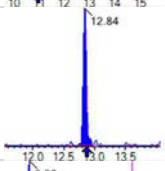 | |
| TFSI | ( 279.7 / 147.0 ) 2610313<br>( 279.7 / 211.0 ) 223005 | ( 8.30 , 0.65 ) ( N/A , -0.01 , 0.1) | 62.6<br>50.1 | 0.0854<br>103.6<br>103.7 | 2.0810<br>[ 0.9790 ] | 212.5% | 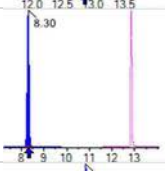 | 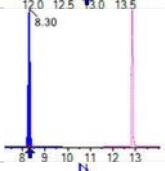 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 282764<br>( 512.0 / 169.0 ) 220028 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 3.5) | 1715.5<br>1756.6 | 0.7781<br>105.9<br>101.0 | 4.2570<br>[ 4.0000 ] | 106.4% | 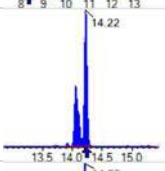 | 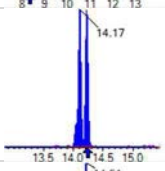 | |
| NEtFOSA | ( 526.0 / 219.0 ) 338766<br>( 526.0 / 169.0 ) 415686 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.7) | 1804.8<br>1399.1 | 1.2271<br>96.9<br>96.1 | 4.1550<br>[ 4.0000 ] | 103.9% | 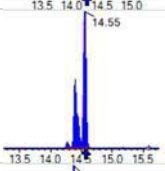 | 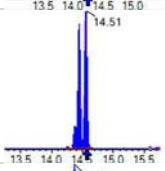 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 296688<br>( 570.0 / 483.0 ) 136230 | ( 10.38 , 1.00 ) ( 0.00 , N/A , 0.2) | 3043.8<br>378726.0 | 0.4592<br>106.0<br>103.7 | 1.0190<br>[ 1.0000 ] | 101.9% | 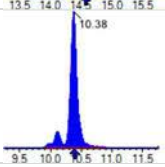 | 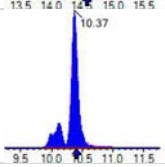 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (12)
Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 284207<br>( 584.0 / 526.0 ) 172867 | ( 10.91 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1394.5<br>756.6 | 0.6082<br>98.2<br>102.8 | 1.0270<br>[ 1.0000 ] | 102.7% | 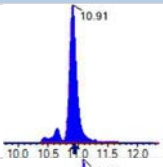 | 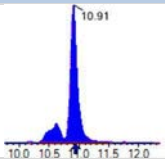 | |
| NMeFOSE | ( 616.0 / 59.0 ) 153011 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 551.7 | N/A<br>0.0<br>0.0 | 4.0530<br>[ 4.0000 ] | 101.3% | 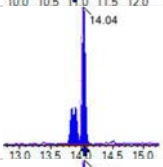 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 121189 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1005.8 | N/A<br>0.0<br>0.0 | 4.0670<br>[ 4.0000 ] | 101.7% | 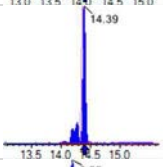 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 89929<br>( 285.0 / 185.0 ) 269316 | ( 6.55 , 1.00 )<br>( -0.01 , N/A , -0.2) | 971.0<br>1215.7 | 2.9948<br>96.1<br>103.4 | 1.0020<br>[ 1.0000 ] | 100.2% | 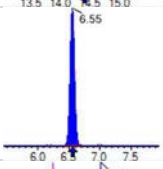 | 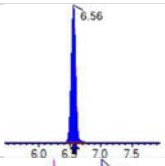 | |
| ADONA | ( 377.0 / 85.0 ) 1119205<br>( 377.0 / 251.0 ) 110116 | ( 7.64 , 1.16 )<br>( N/A , -0.01 , -0.1) | 1688.6<br>796.3 | 0.0984<br>92.3<br>92.7 | 0.9800<br>[ 0.9430 ] | 103.9% | 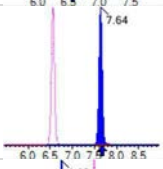 | 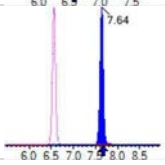 | |
| PFMPA | ( 229.0 / 85.0 ) 210058 | ( 4.18 , 0.86 )<br>( N/A , 0.00 , 0.0) | 3295.2 | N/A<br>0.0<br>0.0 | 2.0600<br>[ 2.0000 ] | 103.0% | 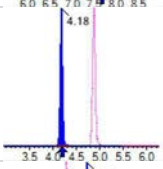 | | |
| PFMBA | ( 279.0 / 85.0 ) 550711 | ( 5.24 , 1.08 )<br>( N/A , 0.00 , 0.0) | 4561.0 | N/A<br>0.0<br>0.0 | 2.0400<br>[ 2.0000 ] | 102.0% | 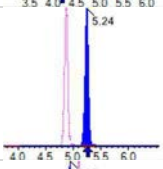 | | |
| NFDHA | ( 295.0 / 201.0 ) 239849<br>( 295.0 / 85.0 ) 236952 | ( 5.96 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2352.7<br>1581.9 | 0.9879<br>91.3<br>94.8 | 1.8460<br>[ 2.0000 ] | 92.3% | 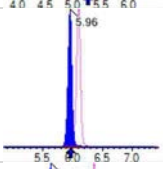 | 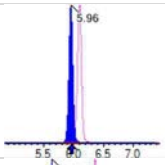 | |
| PFECHS | ( 461.0 / 98.9 ) 684262<br>( 461.0 / 381.2 ) 259575 | ( 9.61 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2896.2<br>3078.0 | 0.3794<br>97.2<br>98.2 | 0.8810<br>[ 0.9240 ] | 95.3% | 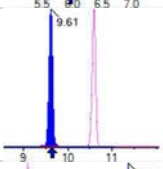 | 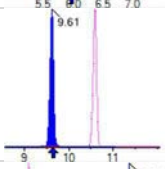 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1338812<br>( 533.0 / 353.0 ) 450151 | ( 11.24 , 1.71 )<br>( N/A , -0.02 , 0.0) | 2884.2<br>1936.0 | 0.3362<br>104.6<br>108.4 | 0.9490<br>[ 0.9330 ] | 101.7% | 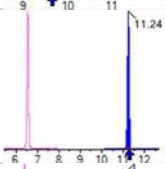 | 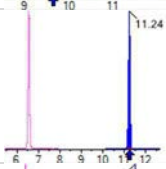 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1076183<br>( 633.0 / 453.0 ) 365064 | ( 12.53 , 1.91 )<br>( N/A , -0.01 , 0.2) | 2608.1<br>2808.9 | 0.3392<br>103.9<br>106.7 | 0.9740<br>[ 0.9430 ] | 103.3% | 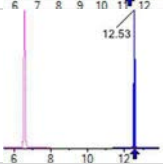 | 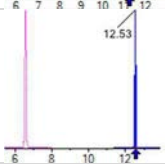 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (12)
Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 511893<br>( 315.0 / 83.0 ) 292612 | ( 7.01 , 1.15 )<br>( N/A , -0.01 , 0.1) | 3076.6<br>527.5 | 0.5716<br>99.8<br>98.7 | 1.8210<br>[ 1.7850 ] | 102.0% | 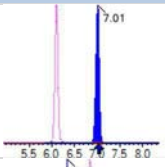 | 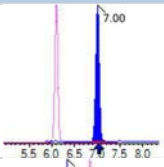 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 59678<br>( 241.0 / 117.0 ) 134687 | ( 4.42 , 0.91 )<br>( N/A , 0.00 , 0.1) | 1078.4<br>552.4 | 2.2569<br>101.7<br>99.2 | 3.8140<br>[ 4.0000 ] | 95.3% | 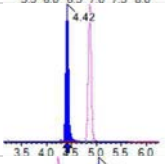 | 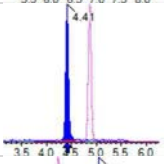 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 347967<br>( 341.0 / 217.0 ) 485855 | ( 6.96 , 1.14 )<br>( N/A , -0.01 , -0.1) | 838.7<br>812.0 | 1.3963<br>93.3<br>96.1 | 3.8410<br>[ 4.0000 ] | 96.0% | 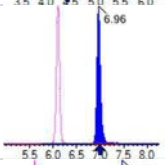 | 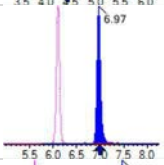 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 447500<br>( 441.0 / 337.0 ) 393154 | ( 9.37 , 1.54 )<br>( N/A , -0.01 , -0.1) | 3336.3<br>7427.6 | 0.8786<br>98.7<br>98.5 | 3.3580<br>[ 4.0000 ] | 83.9% | 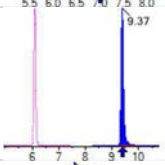 | 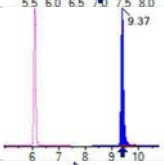 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 352772<br>( 357.2 / 243.0 ) 32460 | ( 6.83 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1265.1<br>351.6 | 0.0920<br>87.2<br>89.1 | 1.0400<br>[ 1.0000 ] | 104.0% | 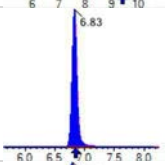 | 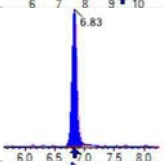 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 266086<br>( 457.2 / 343.0 ) 10690 | ( 8.90 , 1.00 )<br>( -0.01 , N/A , 0.1) | 656.6<br>144.2 | 0.0402<br>102.7<br>97.3 | 1.0320<br>[ 1.0000 ] | 103.2% | 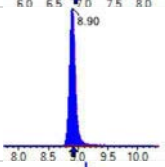 | 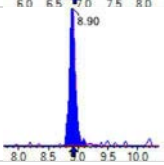 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 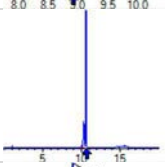 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 333312 | ( 3.76 , N/A )<br>( N/A , -0.03 , N/A ) | 1840.9 | N/A | 1.1060<br>[ 1.0000 ] | 110.6%<br>{ 113.1% } | 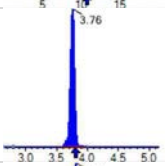 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 155627 | ( 6.10 , N/A )<br>( N/A , -0.01 , N/A ) | 6754.6 | N/A | 1.0120<br>[ 1.0000 ] | 101.2%<br>{ 100.3% } | 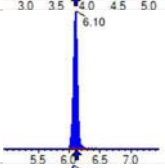 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 490209 | ( 8.27 , N/A )<br>( N/A , -0.01 , N/A ) | 4630.6 | N/A | 1.0990<br>[ 1.0000 ] | 109.9%<br>{ 106.2% } | 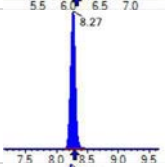 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 364306 | ( 9.22 , N/A )<br>( N/A , -0.01 , N/A ) | 928.1 | N/A | 1.0900<br>[ 1.0000 ] | 109.0%<br>{ 107.3% } | 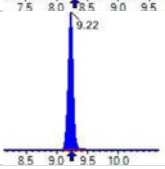 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (12)
Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 360563 | ( 10.13 , N/A ) ( N/A , -0.01 , N/A ) | 5097.1 | N/A | 1.0870 [ 1.0000 ] | 108.7% { 107.7% } | 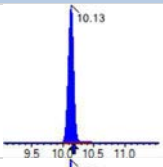 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1237004 | ( 8.73 , N/A ) ( N/A , -0.02 , N/A ) | 4615.4 | N/A | 1.1070 [ 1.0000 ] | 110.7% { 108.2% } | 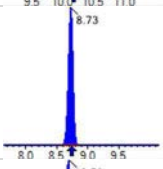 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1063506 | ( 10.59 , N/A ) ( N/A , -0.01 , N/A ) | 2577.9 | N/A | 1.0890 [ 1.0000 ] | 108.9% { 112.0% } | 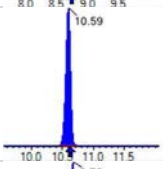 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3127030 | ( 3.76 , N/A ) ( N/A , -0.03 , N/A ) | 37772.3 | N/A | 8.5070 [ 8.0000 ] | 106.3% { 118.2% } | 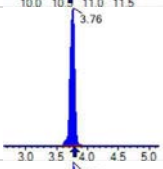 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1265660 | ( 4.87 , N/A ) ( N/A , 0.00 , N/A ) | 5826.5 | N/A | 4.5330 [ 4.0000 ] | 113.3% { 107.6% } | 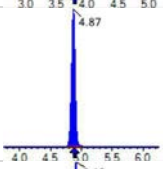 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 771597 | ( 6.10 , N/A ) ( N/A , -0.01 , N/A ) | 8117.4 | N/A | 2.3090 [ 2.0000 ] | 115.5% { 111.9% } | 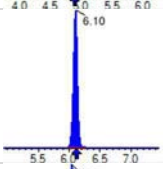 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 814125 | ( 7.25 , N/A ) ( N/A , -0.01 , N/A ) | 4811.3 | N/A | 2.3330 [ 2.0000 ] | 116.6% { 113.4% } | 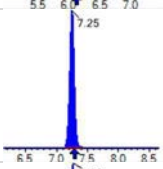 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1089127 | ( 8.26 , N/A ) ( N/A , -0.01 , N/A ) | 3520.4 | N/A | 2.1070 [ 2.0000 ] | 105.4% { 106.5% } | 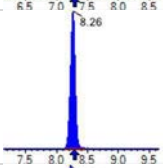 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 397506 | ( 9.22 , N/A ) ( N/A , -0.01 , N/A ) | 3225.8 | N/A | 1.1300 [ 1.0000 ] | 113.0% { 118.7% } | 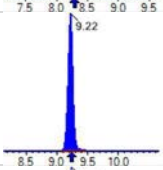 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 429856 | ( 10.13 , N/A ) ( N/A , -0.01 , N/A ) | 1197.2 | N/A | 1.0330 [ 1.0000 ] | 103.3% { 110.7% } | 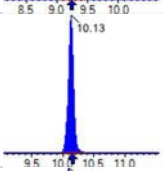 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 547058 | ( 11.00 , N/A ) ( N/A , -0.02 , N/A ) | 1013.5 | N/A | 1.0810 [ 1.0000 ] | 108.1% { 113.5% } | 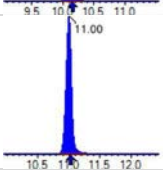 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 543895 | ( 11.82 , N/A ) ( N/A , -0.01 , N/A ) | 1583.4 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 114.1% } | 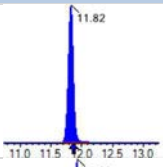 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 432586 | ( 12.93 , N/A ) ( N/A , -0.01 , N/A ) | 1482.1 | N/A | 0.9770 [ 1.0000 ] | 97.7% { 99.9% } | 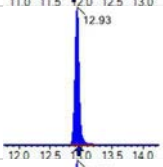 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 671153 | ( 13.73 , N/A ) ( N/A , -0.01 , N/A ) | 2939.1 | N/A | 1.7850 [ 2.0000 ] | 89.2% { 96.9% } | 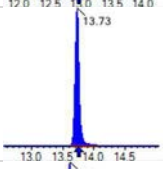 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2401841 | ( 6.41 , N/A ) ( N/A , -0.01 , N/A ) | 1227.8 | N/A | 1.9930 [ 2.0000 ] | 99.6% { 108.3% } | 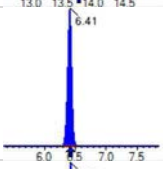 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1896693 | ( 8.73 , N/A ) ( N/A , -0.01 , N/A ) | 4584.9 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 115.0% } | 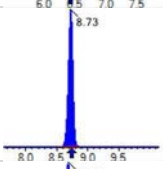 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2383578 | ( 10.59 , N/A ) ( N/A , -0.01 , N/A ) | 1788.5 | N/A | 2.1050 [ 2.0000 ] | 105.3% { 113.2% } | 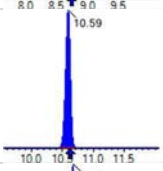 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 457669 | ( 5.56 , N/A ) ( N/A , 0.00 , N/A ) | 78.6 | N/A | 4.2490 [ 4.0000 ] | 106.2% { 125.6% } | 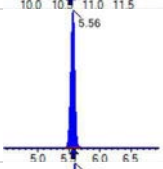 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1474706 | ( 7.69 , N/A ) ( N/A , -0.01 , N/A ) | 4634.5 | N/A | 4.4080 [ 4.0000 ] | 110.2% { 139.9% } | 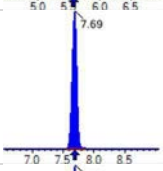 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1509537 | ( 9.49 , N/A ) ( N/A , -0.01 , N/A ) | 1370.9 | N/A | 4.5290 [ 4.0000 ] | 113.2% { 136.0% } | 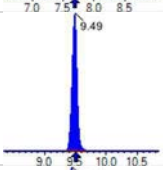 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3535539 | ( 11.14 , N/A ) ( N/A , -0.01 , N/A ) | 1281.7 | N/A | 9.2420 [ 8.0000 ] | 115.5% { 140.0% } | 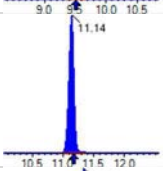 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1208946 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 2262.7 | N/A | 0.9850 [ 2.0000 ] | 49.3% { 53.4% } | 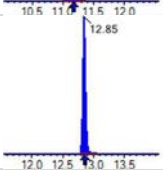 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 16:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 131899 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 765.3 | N/A | 0.5820 [ 2.0000 ] | 29.1% { 31.7% } | 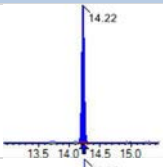 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 148614 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 1217.4 | N/A | 0.5710 [ 2.0000 ] | 28.6% { 30.9% } | 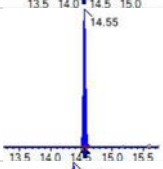 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1236669 | ( 10.37 , N/A ) ( N/A , -0.01 , N/A ) | 2821.6 | N/A | 4.2650 [ 4.0000 ] | 106.6% { 116.0% } | 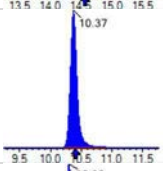 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1147646 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1727.2 | N/A | 4.1700 [ 4.0000 ] | 104.2% { 112.2% } | 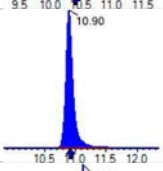 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 666960 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1625.3 | N/A | 6.3000 [ 20.0000 ] | 31.5% { 33.4% } | 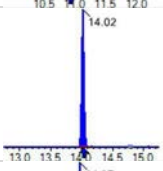 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 674410 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 1792.5 | N/A | 5.2590 [ 20.0000 ] | 26.3% { 27.7% } | 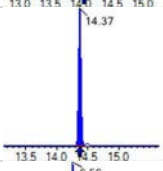 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1264350 | ( 6.56 , N/A ) ( N/A , -0.01 , N/A ) | 2189.5 | N/A | 8.8030 [ 8.0000 ] | 110.0% { 105.9% } | 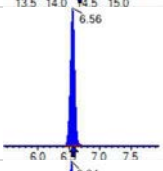 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 630867 | ( 6.84 , N/A ) ( N/A , -0.01 , N/A ) | 1220.2 | N/A | 1.9730 [ 2.0000 ] | 98.6% { 105.1% } | 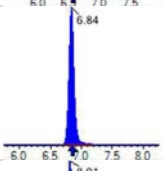 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 611529 | ( 8.91 , N/A ) ( N/A , -0.01 , N/A ) | 571.6 | N/A | 2.0480 [ 2.0000 ] | 102.4% { 114.4% } | 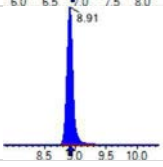 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none]a | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-MRL1a | File ID:a | S2024-03-14A (13)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed:a | 03/14/24 16:37a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 2.97a | 0.21a | 1.6a | |
| PFPeAa | 1.46a | 0.065a | 0.80a | |
| PFHxAa | 0.735a | 0.055a | 0.40a | |
| PFHpAa | 0.748a | 0.041a | 0.40a | |
| PFOAa | 0.734a | 0.15a | 0.40a | |
| PFNAa | 0.769a | 0.082a | 0.40a | |
| PFDAa | 0.754a | 0.10a | 0.40a | |
| PFUnAa | 0.750a | 0.16a | 0.40a | |
| PFDoAa | 0.800a | 0.11a | 0.40a | |
| PFTrDAa | 0.764a | 0.20a | 0.40a | |
| PFTeDAa | 0.717a | 0.20a | 0.40a | |
| PFHxDAa | 0.680a | 0.20a | 0.40a | |
| PFODAa | 0.772a | 0.20a | 0.40a | |
| PFBSa | 0.637a | 0.037a | 0.40a | |
| PFPeSa | 0.697a | 0.063a | 0.40a | |
| PFHxSa | 0.670a | 0.032a | 0.40a | |
| PFHpSa | 0.656a | 0.051a | 0.40a | |
| PFOSa | 0.710a | 0.064a | 0.40a | |
| PFNSa | 0.710a | 0.12a | 0.40a | |
| PFDSa | 0.730a | 0.15a | 0.40a | |
| PFDoSa | 0.687a | 0.12a | 0.40a | |
| 4:2FTSa | 2.88a | 0.29a | 1.6a | |
| 6:2FTSa | 2.72a | 0.31a | 1.6a | |
| 8:2FTSa | 2.98a | 0.082a | 1.6a | |
| 10:2FTSa | 3.08a | 0.40a | 1.6a | |
| PFOSAa | 0.765a | 0.10a | 0.40a | |
| NMeFOSAa | 3.26a | 0.47a | 1.6a | |
| NEtFOSAa | 2.80a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.746a | 0.11a | 0.40a | |
| NEtFOSAAa | 0.708a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0052a |
| Client:a | Tidewater, Inc.a | | Project:a | [none]a | |
| Matrix:a | Watera | Laboratory ID:a | BDC0186-MRL1a | File ID:a | S2024-03-14A (13)a |
| Sampled:a | | Prepared:a | 03/13/24 13:29a | Analyzed:a | 03/14/24 16:37a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0186a | Sequence:a | SD00936a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 3.23a | 1.0a | 1.6a | |
| NEtFOSEa | 3.33a | 1.0a | 1.6a | |
| HFPO-DAa | 0.676a | 0.17a | 0.80a | Ja |
| ADONAa | 0.668a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.27a | 0.11a | 0.80a | |
| PFMPAa | 1.49a | 0.054a | 0.80a | |
| PFMBAa | 1.38a | 0.091a | 0.80a | |
| NFDHAa | 1.34a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.655a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.655a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.68a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.87a | 0.44a | 1.6a | |
| 7:3FTCAa | 2.53a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (13)
Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 143410<br>( 163.0 / 69.0 ) 3853 | ( 2.80 , 0.75 ) ( N/A , -0.01 , 0.2) | 744.5<br>257.8 | 0.0269<br>107.2<br>106.1 | 0.4670<br>[ 0.4000 ] | 116.8% | 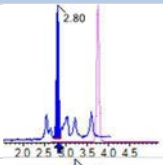 | 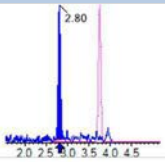 | |
| PFBA | ( 213.0 / 169.0 ) 243542 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 525.9 | N/A<br>0.0<br>0.0 | 0.7420<br>[ 0.8000 ] | 92.8% | 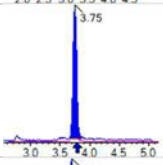 | | |
| PFPeA | ( 263.0 / 219.0 ) 107985<br>( 263.0 / 69.0 ) 1282 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -0.5) | 593.7<br>43.4 | 0.0119<br>108.1<br>98.6 | 0.3660<br>[ 0.4000 ] | 91.4% | 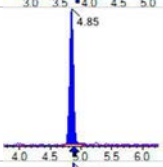 | 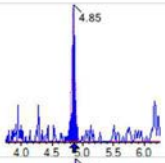 | |
| PFHxA | ( 313.0 / 269.0 ) 62366<br>( 313.0 / 119.0 ) 7624 | ( 6.08 , 1.00 ) ( 0.00 , N/A , -0.1) | 400.3<br>198.5 | 0.1222<br>110.0<br>106.0 | 0.1840<br>[ 0.2000 ] | 91.8% | 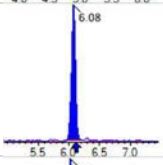 | 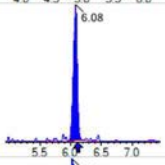 | |
| PFHpA | ( 363.0 / 319.0 ) 68647<br>( 363.0 / 169.0 ) 20334 | ( 7.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 380.4<br>292.8 | 0.2962<br>95.0<br>101.1 | 0.1870<br>[ 0.2000 ] | 93.6% | 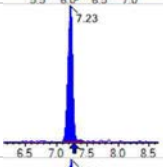 | 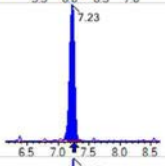 | |
| PFOA | ( 413.0 / 369.0 ) 95426<br>( 413.0 / 169.0 ) 34778 | ( 8.24 , 1.00 ) ( 0.00 , N/A , -0.3) | 175.7<br>287.6 | 0.3644<br>100.8<br>105.7 | 0.1830<br>[ 0.2000 ] | 91.7% | 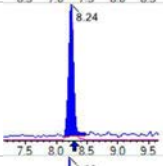 | 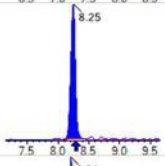 | |
| PFNA | ( 463.0 / 419.0 ) 67266<br>( 463.0 / 169.0 ) 16391 | ( 9.20 , 1.00 ) ( 0.00 , N/A , -0.1) | 365.5<br>220.8 | 0.2437<br>92.8<br>96.6 | 0.1920<br>[ 0.2000 ] | 96.2% | 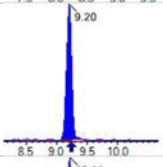 | 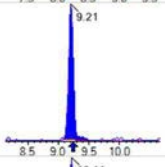 | |
| PFDA | ( 513.0 / 469.0 ) 77653<br>( 513.0 / 169.0 ) 10327 | ( 10.11 , 1.00 ) ( -0.01 , N/A , 0.0) | 660.0<br>484.5 | 0.1330<br>113.3<br>114.8 | 0.1890<br>[ 0.2000 ] | 94.3% | 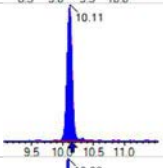 | 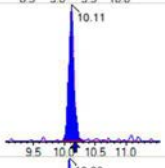 | |
| PFUnA | ( 563.0 / 519.0 ) 88602<br>( 563.0 / 169.0 ) 9755 | ( 10.98 , 1.00 ) ( 0.00 , N/A , 0.2) | 453.1<br>115.4 | 0.1101<br>74.3<br>74.4 | 0.1880<br>[ 0.2000 ] | 93.8% | 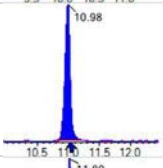 | 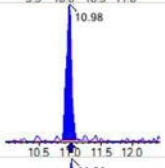 | |
| PFDoA | ( 613.0 / 569.0 ) 99705<br>( 613.0 / 169.0 ) 13138 | ( 11.80 , 1.00 ) ( -0.01 , N/A , -0.3) | 402.4<br>157.3 | 0.1318<br>83.3<br>87.6 | 0.2000<br>[ 0.2000 ] | 100.0% | 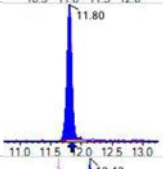 | 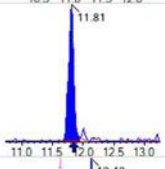 | |
| PFTrDA | ( 663.0 / 619.0 ) 91521<br>( 663.0 / 169.0 ) 24248 | ( 12.42 , 1.05 ) ( N/A , -0.03 , 0.3) | 456.9<br>205.9 | 0.2649<br>98.3<br>100.9 | 0.1910<br>[ 0.2000 ] | 95.5% | 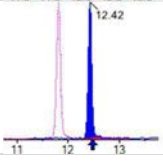 | 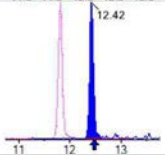 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (13)
Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 73327<br>( 713.0 / 169.0 ) 19223 | ( 12.91 , 1.00 )<br>( 0.00 , N/A , 0.0) | 431.4<br>203.9 | 0.2622<br>100.8<br>104.0 | 0.1790<br>[ 0.2000 ] | 89.6% | 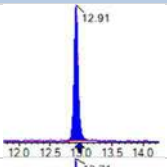 | 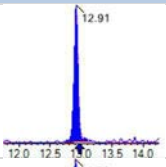 | |
| PFHxDA | ( 813.0 / 769.0 ) 53121<br>( 813.0 / 169.0 ) 14110 | ( 13.71 , 1.00 )<br>( -0.01 , N/A , 0.2) | 337.7<br>134.8 | 0.2656<br>122.4<br>119.3 | 0.1700<br>[ 0.2000 ] | 85.0% | 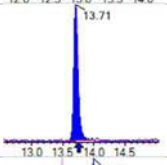 | 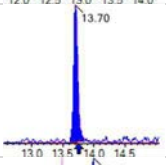 | |
| PFODA | ( 913.0 / 869.0 ) 40540<br>( 913.0 / 169.0 ) 13829 | ( 14.34 , 1.05 )<br>( N/A , -0.03 , 0.1) | 192.6<br>69.0 | 0.3411<br>89.3<br>97.9 | 0.1930<br>[ 0.2000 ] | 96.5% | 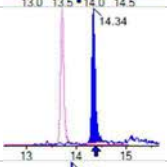 | 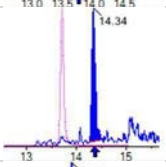 | |
| PFBS | ( 299.0 / 80.0 ) 89042<br>( 299.0 / 99.0 ) 67353 | ( 6.38 , 1.00 )<br>( 0.00 , N/A , 0.2) | 636.3<br>378.6 | 0.7564<br>106.4<br>102.5 | 0.1590<br>[ 0.1770 ] | 89.9% | 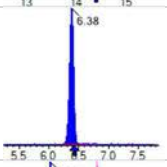 | 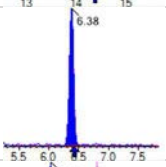 | |
| PFPeS | ( 349.0 / 80.0 ) 242861<br>( 349.0 / 99.0 ) 83602 | ( 7.63 , 0.88 )<br>( N/A , -0.04 , -0.1) | 1053.7<br>775.5 | 0.3442<br>101.2<br>99.6 | 0.1740<br>[ 0.1880 ] | 92.8% | 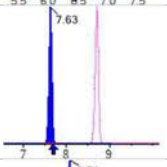 | 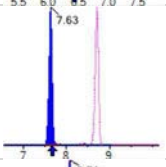 | |
| PFHxS | ( 399.0 / 80.0 ) 259857<br>( 399.0 / 99.0 ) 89903 | ( 8.71 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1123.1<br>1601.4 | 0.3460<br>110.6<br>103.0 | 0.1680<br>[ 0.1820 ] | 92.0% | 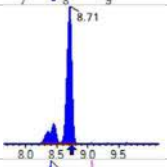 | 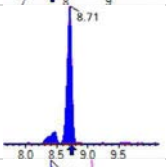 | |
| PFHpS | ( 449.0 / 80.0 ) 211794<br>( 449.0 / 99.0 ) 62674 | ( 9.68 , 0.92 )<br>( N/A , -0.03 , 0.0) | 693.6<br>418.9 | 0.2959<br>110.8<br>109.3 | 0.1640<br>[ 0.1900 ] | 86.2% | 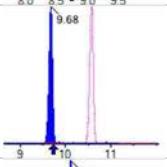 | 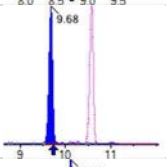 | |
| PFOS | ( 499.0 / 80.0 ) 230624<br>( 499.0 / 99.0 ) 52545 | ( 10.57 , 1.00 )<br>( -0.01 , N/A , -0.1) | 762.8<br>3952.0 | 0.2278<br>96.3<br>98.2 | 0.1770<br>[ 0.1850 ] | 95.6% | 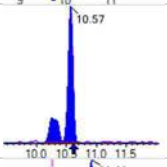 | 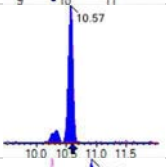 | |
| PFNS | ( 549.0 / 80.0 ) 225092<br>( 549.0 / 99.0 ) 60181 | ( 11.41 , 1.08 )<br>( N/A , -0.03 , 0.1) | 921.8<br>472.9 | 0.2674<br>100.6<br>99.7 | 0.1780<br>[ 0.1920 ] | 92.5% | 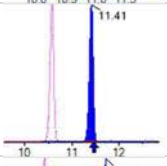 | 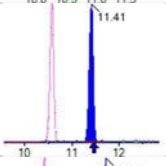 | |
| PFDS | ( 599.0 / 80.0 ) 275729<br>( 599.0 / 99.0 ) 70093 | ( 12.11 , 1.15 )<br>( N/A , -0.03 , 0.0) | 920.8<br>555.9 | 0.2542<br>101.4<br>96.6 | 0.1820<br>[ 0.1930 ] | 94.7% | 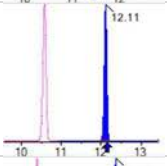 | 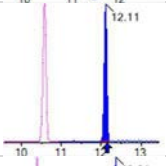 | |
| PFDoS | ( 699.0 / 80.0 ) 221866<br>( 699.0 / 99.0 ) 51434 | ( 13.01 , 1.23 )<br>( N/A , -0.03 , 0.0) | 1314.7<br>578.3 | 0.2318<br>100.5<br>95.9 | 0.1720<br>[ 0.1940 ] | 88.6% | 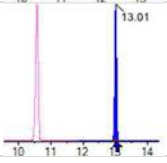 | 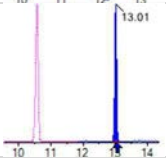 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (13)
Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 203135<br>( 327.0 / 81.0 ) 172320 | ( 5.54 , 1.00 ) ( 0.00 , N/A , 0.0) | 2172.3<br>881.3 | 0.8483<br>96.8<br>102.7 | 0.7190<br>[ 0.7480 ] | 96.2% | 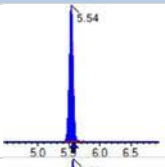 | 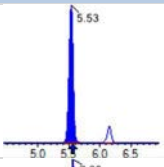 | |
| 6:2FTS | ( 427.0 / 407.0 ) 222785<br>( 427.0 / 81.0 ) 258152 | ( 7.66 , 1.00 ) ( -0.01 , N/A , 0.1) | 2121.1<br>1132.3 | 1.1587<br>91.2<br>93.6 | 0.6800<br>[ 0.7590 ] | 89.5% | 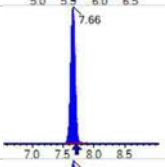 | 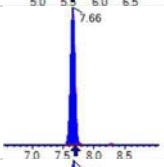 | |
| 8:2FTS | ( 527.0 / 507.0 ) 264727<br>( 527.0 / 81.0 ) 269196 | ( 9.47 , 1.00 ) ( -0.01 , N/A , -0.1) | 1235.1<br>1217.6 | 1.0169<br>107.2<br>106.6 | 0.7450<br>[ 0.7670 ] | 97.1% | 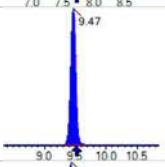 | 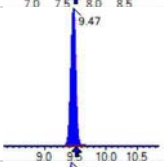 | |
| 10:2FTS | ( 627.0 / 607.0 ) 242152<br>( 627.0 / 81.0 ) 339891 | ( 11.12 , 1.00 ) ( 0.00 , N/A , -0.3) | 1117.8<br>580.5 | 1.4036<br>103.8<br>108.5 | 0.7710<br>[ 0.7730 ] | 99.8% | 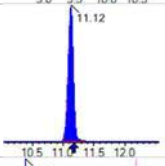 | 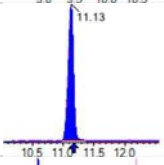 | |
| PFBSA | ( 297.9 / 78.0 ) 141629<br>( 297.9 / 278.0 ) 237 | ( 8.05 , 0.57 ) ( N/A , -0.02 , 1.4) | 703.9<br>5.7 | 0.0017<br>119.4<br>116.5 | 0.5150<br>[ 0.2000 ] | 257.3% | 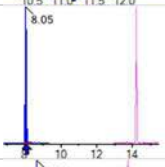 | 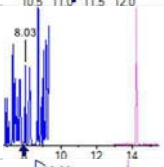 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 174756<br>( 397.9 / 378.0 ) 837 | ( 10.94 , 0.75 ) ( N/A , -0.01 , 0.8) | 813.1<br>29.5 | 0.0048<br>125.8<br>116.3 | 0.4870<br>[ 0.2000 ] | 243.3% | 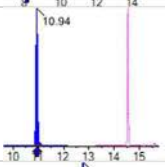 | 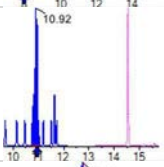 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 105034<br>( 498.0 / 478.0 ) 1977 | ( 12.82 , 1.00 ) ( -0.01 , N/A , 0.3) | 831.2<br>56.1 | 0.0188<br>130.4<br>134.1 | 0.1910<br>[ 0.2000 ] | 95.6% | 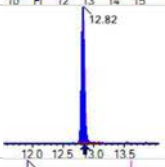 | 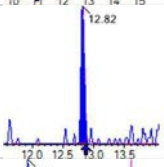 | |
| TFSI | ( 279.7 / 147.0 ) 492941<br>( 279.7 / 211.0 ) 42005 | ( 8.28 , 0.65 ) ( N/A , -0.04 , -0.2) | 56.7<br>34.4 | 0.0852<br>103.3<br>103.4 | 0.4220<br>[ 0.1960 ] | 215.4% | 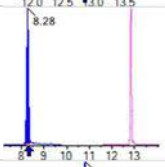 | 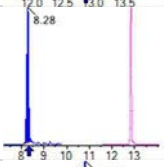 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 49171<br>( 512.0 / 169.0 ) 36210 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.3) | 518.5<br>885.2 | 0.7364<br>100.2<br>95.6 | 0.8160<br>[ 0.8000 ] | 102.0% | 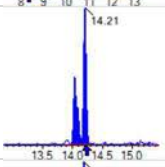 | 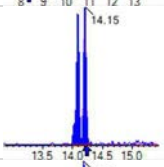 | |
| NEtFOSA | ( 526.0 / 219.0 ) 53792<br>( 526.0 / 169.0 ) 68084 | ( 14.54 , 1.00 ) ( 0.00 , N/A , 1.9) | 441.1<br>457.7 | 1.2657<br>99.9<br>99.2 | 0.7000<br>[ 0.8000 ] | 87.5% | 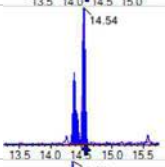 | 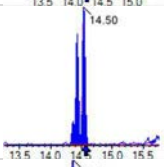 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 48273<br>( 570.0 / 483.0 ) 21522 | ( 10.36 , 1.00 ) ( 0.00 , N/A , -0.2) | 2706.5<br>11617.7 | 0.4458<br>103.0<br>100.7 | 0.1860<br>[ 0.2000 ] | 93.2% | 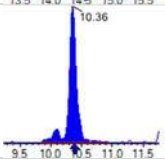 | 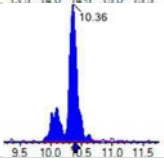 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (13)
Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 52239<br>( 584.0 / 526.0 ) 32098 | ( 10.90 , 1.00 ) ( 0.01 , N/A , 0.4) | 3018742.6<br>278.9 | 0.6144<br>99.2<br>103.8 | 0.2000<br>[ 0.2000 ] | 99.8% | 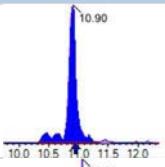 | 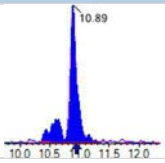 | |
| NMeFOSE | ( 616.0 / 59.0 ) 26967 | ( 14.02 , 1.00 ) ( 0.02 , N/A , 0.0) | 149.3 | N/A<br>0.0<br>0.0 | 0.8070<br>[ 0.8000 ] | 100.9% | 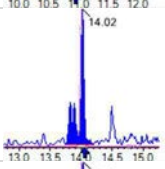 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 22227 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 177.7 | N/A<br>0.0<br>0.0 | 0.8320<br>[ 0.8000 ] | 104.0% | 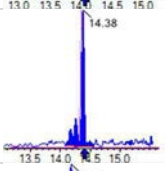 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 14959<br>( 285.0 / 185.0 ) 43828 | ( 6.53 , 1.00 ) ( 0.00 , N/A , -0.1) | 370.8<br>466.1 | 2.9300<br>94.0<br>101.1 | 0.1690<br>[ 0.2000 ] | 84.5% | 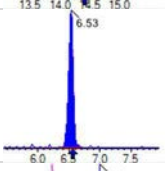 | 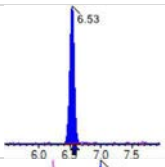 | |
| ADONA | ( 377.0 / 85.0 ) 188292<br>( 377.0 / 251.0 ) 19910 | ( 7.62 , 1.17 ) ( N/A , -0.03 , 0.0) | 1112.5<br>190.9 | 0.1057<br>99.2<br>99.6 | 0.1670<br>[ 0.1890 ] | 88.6% | 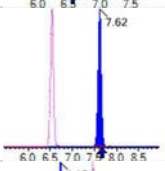 | 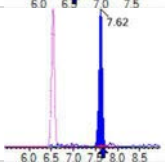 | |
| PFMPA | ( 229.0 / 85.0 ) 34908 | ( 4.15 , 0.86 ) ( N/A , -0.03 , 0.0) | 857.2 | N/A<br>0.0<br>0.0 | 0.3730<br>[ 0.4000 ] | 93.3% | 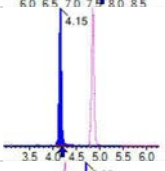 | | |
| PFMBA | ( 279.0 / 85.0 ) 85366 | ( 5.22 , 1.08 ) ( N/A , -0.02 , 0.0) | 1244.0 | N/A<br>0.0<br>0.0 | 0.3450<br>[ 0.4000 ] | 86.2% | 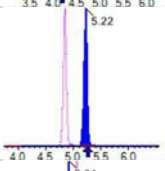 | | |
| NFDHA | ( 295.0 / 201.0 ) 39473<br>( 295.0 / 85.0 ) 41672 | ( 5.94 , 0.98 ) ( N/A , -0.03 , 0.1) | 1106.9<br>461.3 | 1.0557<br>97.6<br>101.3 | 0.3340<br>[ 0.4000 ] | 83.6% | 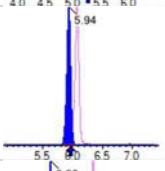 | 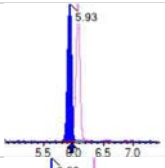 | |
| PFECHS | ( 461.0 / 98.9 ) 121887<br>( 461.0 / 381.2 ) 40347 | ( 9.60 , 0.91 ) ( N/A , -0.03 , -0.1) | 1045.4<br>809.2 | 0.3310<br>84.8<br>85.7 | 0.1660<br>[ 0.1850 ] | 90.0% | 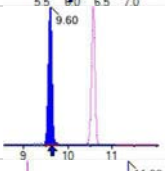 | 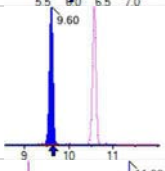 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 227900<br>( 533.0 / 353.0 ) 75084 | ( 11.22 , 1.72 ) ( N/A , -0.03 , 0.1) | 1823.9<br>510.4 | 0.3295<br>102.5<br>106.2 | 0.1640<br>[ 0.1870 ] | 87.7% | 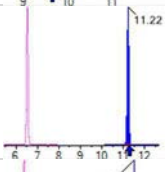 | 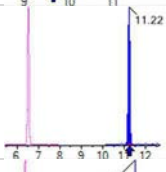 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 178611<br>( 633.0 / 453.0 ) 62707 | ( 12.51 , 1.91 ) ( N/A , -0.03 , 0.0) | 1685.9<br>872.4 | 0.3511<br>107.5<br>110.5 | 0.1640<br>[ 0.1890 ] | 86.9% | 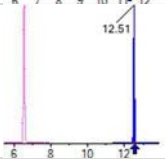 | 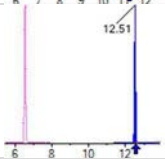 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-MRL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 80960<br>( 315.0 / 83.0 ) 57009 | ( 6.99 , 1.15 )<br>( N/A , -0.03 , 0.2) | 1279.1<br>141.6 | 0.7042<br>122.9<br>121.6 | 0.3170<br>[ 0.3570 ] | 88.8% | 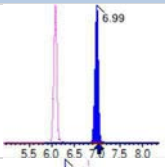 | 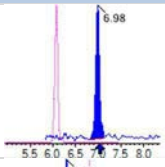 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 9624<br>( 241.0 / 117.0 ) 20420 | ( 4.38 , 0.90 )<br>( N/A , -0.03 , -0.2) | 435.6<br>94.2 | 2.1218<br>95.6<br>93.2 | 0.6710<br>[ 0.8000 ] | 83.9% | 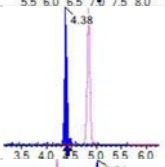 | 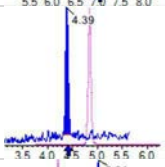 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 59092<br>( 341.0 / 217.0 ) 84703 | ( 6.94 , 1.14 )<br>( N/A , -0.03 , 0.0) | 467.6<br>336.4 | 1.4334<br>95.7<br>98.6 | 0.7180<br>[ 0.8000 ] | 89.7% | 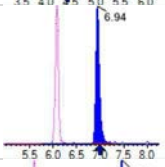 | 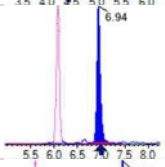 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 76685<br>( 441.0 / 337.0 ) 68934 | ( 9.36 , 1.54 )<br>( N/A , -0.03 , 0.3) | 4667.6<br>33744.7 | 0.8989<br>101.0<br>100.8 | 0.6330<br>[ 0.8000 ] | 79.2% | 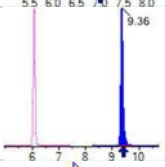 | 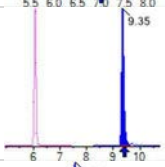 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 59582<br>( 357.2 / 243.0 ) 6337 | ( 6.81 , 1.00 )<br>( -0.01 , N/A , -0.1) | 394.5<br>94.4 | 0.1064<br>100.8<br>103.0 | 0.1870<br>[ 0.2000 ] | 93.6% | 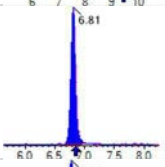 | 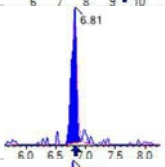 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 47785<br>( 457.2 / 343.0 ) 1971 | ( 8.88 , 1.00 )<br>( -0.01 , N/A , -0.4) | 427.5<br>44.6 | 0.0412<br>105.4<br>99.9 | 0.1990<br>[ 0.2000 ] | 99.5% | 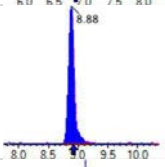 | 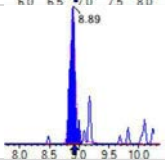 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 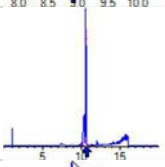 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284079 | ( 3.74 , N/A )<br>( N/A , -0.05 , N/A ) | 1968.2 | N/A | 0.9430<br>[ 1.0000 ] | 94.3%<br>{ 96.4% } | 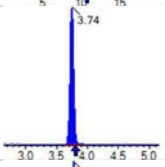 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 138420 | ( 6.08 , N/A )<br>( N/A , -0.03 , N/A ) | 75376.6 | N/A | 0.9000<br>[ 1.0000 ] | 90.0%<br>{ 89.2% } | 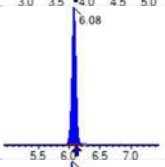 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 439868 | ( 8.25 , N/A )<br>( N/A , -0.03 , N/A ) | 2780.4 | N/A | 0.9860<br>[ 1.0000 ] | 98.6%<br>{ 95.3% } | 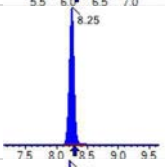 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 334587 | ( 9.21 , N/A )<br>( N/A , -0.03 , N/A ) | 1056.4 | N/A | 1.0010<br>[ 1.0000 ] | 100.1%<br>{ 98.5% } | 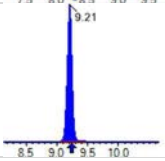 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (13)
Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 327117 | ( 10.12 , N/A ) ( N/A , -0.03 , N/A ) | 6855.8 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 97.7% } | 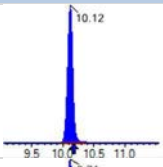 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1079738 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 6155.8 | N/A | 0.9660 [ 1.0000 ] | 96.6% { 94.4% } | 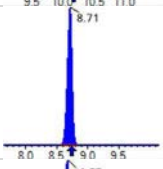 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 936604 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 2205.3 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 98.6% } | 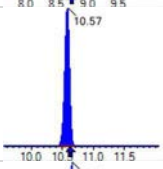 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2775347 | ( 3.74 , N/A ) ( N/A , -0.04 , N/A ) | 47013.9 | N/A | 8.8590 [ 8.0000 ] | 110.7% { 104.9% } | 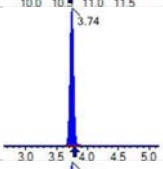 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1160312 | ( 4.85 , N/A ) ( N/A , -0.03 , N/A ) | 6541.4 | N/A | 4.6730 [ 4.0000 ] | 116.8% { 98.6% } | 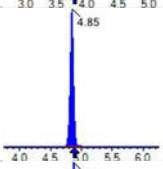 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 701033 | ( 6.08 , N/A ) ( N/A , -0.03 , N/A ) | 7832.5 | N/A | 2.3590 [ 2.0000 ] | 117.9% { 101.7% } | 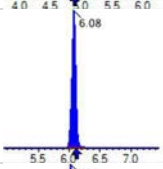 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 745023 | ( 7.23 , N/A ) ( N/A , -0.03 , N/A ) | 4099.1 | N/A | 2.4000 [ 2.0000 ] | 120.0% { 103.8% } | 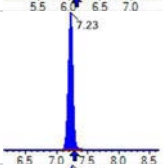 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1023111 | ( 8.24 , N/A ) ( N/A , -0.03 , N/A ) | 3007.5 | N/A | 2.2060 [ 2.0000 ] | 110.3% { 100.0% } | 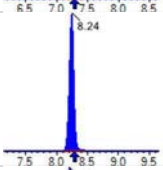 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 349005 | ( 9.21 , N/A ) ( N/A , -0.03 , N/A ) | 3617.1 | N/A | 1.0800 [ 1.0000 ] | 108.0% { 104.2% } | 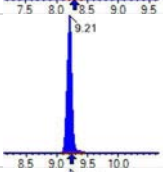 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 413470 | ( 10.12 , N/A ) ( N/A , -0.03 , N/A ) | 997.0 | N/A | 1.0950 [ 1.0000 ] | 109.5% { 106.5% } | 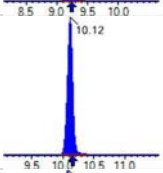 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 505821 | ( 10.98 , N/A ) ( N/A , -0.03 , N/A ) | 1069.3 | N/A | 1.1020 [ 1.0000 ] | 110.2% { 105.0% } | 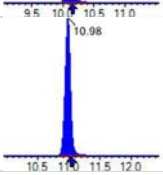 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0186-MRL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-14A (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 487073 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1231.2 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 102.1% } | 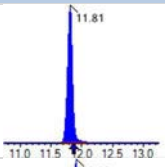 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 430630 | ( 12.92 , N/A ) ( N/A , -0.03 , N/A ) | 1220.8 | N/A | 1.0720 [ 1.0000 ] | 107.2% { 99.5% } | 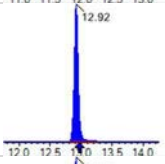 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 647557 | ( 13.72 , N/A ) ( N/A , -0.03 , N/A ) | 2920.1 | N/A | 1.8980 [ 2.0000 ] | 94.9% { 93.5% } | 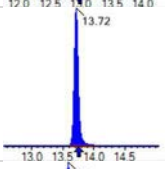 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2152119 | ( 6.39 , N/A ) ( N/A , -0.04 , N/A ) | 1169.7 | N/A | 2.0460 [ 2.0000 ] | 102.3% { 97.0% } | 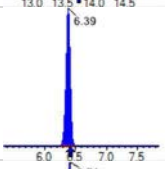 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1750947 | ( 8.71 , N/A ) ( N/A , -0.03 , N/A ) | 3291.7 | N/A | 2.2160 [ 2.0000 ] | 110.8% { 106.2% } | 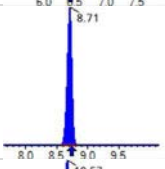 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2248835 | ( 10.57 , N/A ) ( N/A , -0.03 , N/A ) | 1996.8 | N/A | 2.2550 [ 2.0000 ] | 112.8% { 106.8% } | 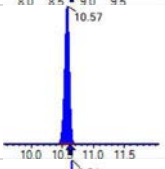 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 419533 | ( 5.54 , N/A ) ( N/A , -0.03 , N/A ) | 84.3 | N/A | 4.4620 [ 4.0000 ] | 111.5% { 115.2% } | 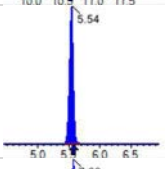 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1475578 | ( 7.66 , N/A ) ( N/A , -0.03 , N/A ) | 3714.4 | N/A | 5.0540 [ 4.0000 ] | 126.3% { 140.0% } | 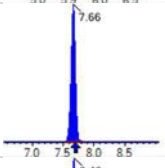 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1435015 | ( 9.48 , N/A ) ( N/A , -0.02 , N/A ) | 1397.5 | N/A | 4.9330 [ 4.0000 ] | 123.3% { 129.3% } | 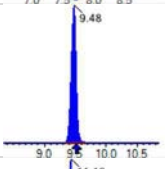 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3052885 | ( 11.12 , N/A ) ( N/A , -0.03 , N/A ) | 1409.6 | N/A | 9.1420 [ 8.0000 ] | 114.3% { 120.9% } | 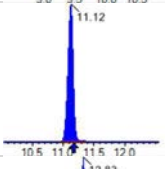 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1126160 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2132.9 | N/A | 1.0420 [ 2.0000 ] | 52.1% { 49.7% } | 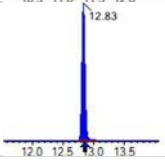 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0186-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-14A (13)
Acquired: 2024/03/14 - 16:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 119690 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 828.4 | N/A | 0.6000 [ 2.0000 ] | 30.0% { 28.8% } | 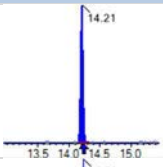  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 140036 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 970.5 | N/A | 0.6110 [ 2.0000 ] | 30.6% { 29.1% } | 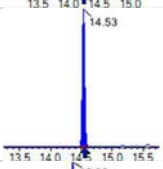  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1100088 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 2215.9 | N/A | 4.3080 [ 4.0000 ] | 107.7% { 103.2% } | 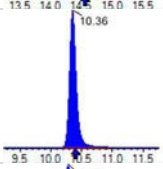  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1085211 | ( 10.89 , N/A ) ( N/A , -0.03 , N/A ) | 1665.8 | N/A | 4.4770 [ 4.0000 ] | 111.9% { 106.1% } | 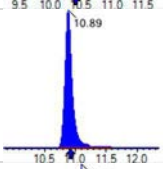  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 590219 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1209.9 | N/A | 6.3310 [ 20.0000 ] | 31.7% { 29.6% } | 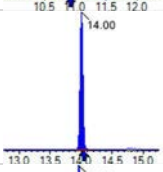  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 604938 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 1931.4 | N/A | 5.3560 [ 20.0000 ] | 26.8% { 24.8% } | 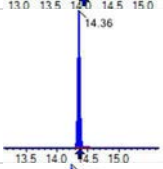  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1247759 | ( 6.54 , N/A ) ( N/A , -0.04 , N/A ) | 2188.8 | N/A | 9.7670 [ 8.0000 ] | 122.1% { 104.5% } | 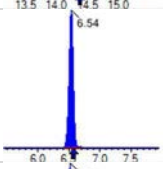  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 592508 | ( 6.82 , N/A ) ( N/A , -0.03 , N/A ) | 987.0 | N/A | 2.0420 [ 2.0000 ] | 102.1% { 98.7% } | 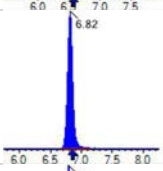  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 569385 | ( 8.89 , N/A ) ( N/A , -0.03 , N/A ) | 678.2 | N/A | 2.1020 [ 2.0000 ] | 105.1% { 106.5% } | 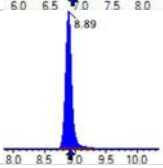  | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

Laboratory: PPL, LLC
Work Order: 24C0052A
Client: Tidewater, Inc.
Project: [none]
Batch: BDC0186 Batch Matrix: Water Preparation: EPA 1633A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-24-3- | 24C0052-01- | 03/13/24 13:29- | 512.11- | 2.00- |
| MW-24-2- | 24C0052-02- | 03/13/24 13:29- | 549.55- | 2.00- |
| DUP-1-031124- | 24C0052-03- | 03/13/24 13:29- | 541.63- | 2.00- |
| MW-24-1- | 24C0052-04- | 03/13/24 13:29- | 533.73- | 2.00- |
| MW-23-3- | 24C0052-05- | 03/13/24 13:29- | 533.29- | 2.00- |
| MW-23-2- | 24C0052-06- | 03/13/24 13:29- | 549.38- | 2.00- |
| MW-23-1- | 24C0052-07- | 03/13/24 13:29- | 560.40- | 2.00- |
| EB-1-031124- | 24C0052-08- | 03/13/24 13:29- | 540.06- | 2.00- |
| FB-1-031124- | 24C0052-09- | 03/13/24 13:29- | 545.79- | 2.00- |
| SB-1-031124- | 24C0052-10- | 03/13/24 13:29- | 556.21- | 2.00- |
| Blank- | BDC0186-BLK1- | 03/13/24 13:29- | 500.00- | 2.00- |
| LCS- | BDC0186-BS1- | 03/13/24 13:29- | 500.00- | 2.00- |
| MRL Check- | BDC0186-MRL1- | 03/13/24 13:29- | 500.00- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/14/2024 2:53 pm

BDC0186

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0015-03 A | BW-20240304 H | 596.695 | 44.801 | 7 | 3/13/2024 1:29:00PM | 551.894 | 2 | | 200 , 200 | |
| 24C0052-01 A | MW-24-3 A | 557.311 | 45.198 | 7 | 3/13/2024 1:29:00PM | 512.113 | 2 | | 200 , 200 | |
| 24C0052-02 A | MW-24-2 A | 595.211 | 45.657 | 7 | 3/13/2024 1:29:00PM | 549.554 | 2 | | 200 , 200 | |
| 24C0052-03 A | DUP-1-031124 A | 586.673 | 45.046 | 7 | 3/13/2024 1:29:00PM | 541.627 | 2 | | 200 , 200 | |
| 24C0052-04 A | MW-24-1 A | 579.667 | 45.933 | 7 | 3/13/2024 1:29:00PM | 533.734 | 2 | | 200 , 200 | |
| 24C0052-05 A | MW-23-3 A | 578.504 | 45.217 | 7 | 3/13/2024 1:29:00PM | 533.287 | 2 | | 200 , 200 | |
| 24C0052-06 A | MW-23-2 A | 594.499 | 45.123 | 7 | 3/13/2024 1:29:00PM | 549.376 | 2 | | 200 , 200 | |
| 24C0052-07 A | MW-23-1 A | 606.16 | 45.764 | 7 | 3/13/2024 1:29:00PM | 560.396 | 2 | | 200 , 200 | |
| 24C0052-08 A | EB-1-031124 A | 586.315 | 46.256 | 7 | 3/13/2024 1:29:00PM | 540.059 | 2 | | 200 , 200 | |
| 24C0052-09 A | FB-1-031124 A | 591.648 | 45.859 | 7 | 3/13/2024 1:29:00PM | 545.789 | 2 | | 200 , 200 | |
| 24C0052-10 A | SB-1-031124 A | 601.931 | 45.722 | 7 | 3/13/2024 1:29:00PM | 556.209 | 2 | | 200 , 200 | |
| BDC0186-BLK1 | Blank | | | | 3/13/2024 1:29:00PM | 500 | 2 | | 200 , 200 | |
| BDC0186-BS1 | LCS | | | | 3/13/2024 1:29:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0186-MRL1 | MRL Check | | | | 3/13/2024 1:29:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0551 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0280 | 1633 EIS MIXB 20-80ng/mL |

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 23H0402 | Envi-carb | 148517 |
| 24A0483 | Am. Ac. preservative | R021040 |
| 24B0660 | Reagent -0.3M Formic Acid | 50009265 |
| 24B0661 | Reagent - 0.05MFA wash | 50009265 |
| 24C0248 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |

_____ _____
Spiking Witnessed By Date

_____
Preparation Reviewed By Date

ABL 3/14/24
Extracts Received By Date





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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/14/2024 2:53 pm

BDC0186

(Continued)

**Prepared using: PFAS - EPA 1633**

**Matrix: Water**

Batch Comments:

Spiked By: KMY 3/13/24 13:29
Witness By: CFM
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23172102PB
Concentration: 3/13/24 12:25-12:45
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By MSK Date 3/14/25





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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/13/2024 1:26 pm

BDC0186

Add on

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ID's Confirmed By: X KMY | | | | | | | | | | |
| 24C0015-03 | A | X BW-20240304 | H | 596.695 | 44.801 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-01 | A | MW-24-3 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-02 | A | MW-24-2 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-03 | A | DUP-1-031124 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-04 | A | MW-24-1 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-05 | A | MW-23-3 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-06 | A | MW-23-2 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-07 | A | MW-23-1 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-08 | A | EB-1-031124 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-09 | A | FB-1-031124 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-10 | A | SB-1-031124 | A | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| BDC0186-BLK1 | | Blank | | | | | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| BDC0186-BS1 | | LCS | | | | | 3/13/2024 11:17:00AM | 500 | 2 | 200 ~~40~~, ~~40~~ 200 | 200 , 200 | |
| BDC0186-MRL1 | | MRL Check | | | | | 3/13/2024 11:17:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

24B0011 ✔ PFAS - MIX 1633 10ng/mL rev1

24B0397 ✔ 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)** 24B0551

~~24B0289~~ MPFAC-HIF-ES 20.0ng/mL

~~24C0067~~ 1633 EIS MIXB 20-80ng/mL 24C0280

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** SCALE

**Hotblock/Plate:**

**Sonic Horns:**

**Pipettes:** HK-47

**Water Baths:**

**Ovens:**

**Desiccator:**

**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0483 | AM AC | |
| 24C0248 | 1% | |
| 24B0660 | 0.3m FA | |
| 24B0661 | 0.05 FA | |

Loading (concentrate & vial)

KMY / CFM 13:29 3/13/24

Spiking Witnessed By Date

CFM / ADS

Preparation Reviewed By Date

~~KBK~~ 3/14/24

Extracts Received By Date

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/13/2024 11:19 am

BDC0186

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID<br>ID's Confirmed By: VK | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24C0052-01 | A | X MW-24-3 | A | 577.311 | 45.198 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-02 | A | X MW-24-2 | A | 595.211 | 45.657 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-03 | A | X DUP-1-031124 | A | 586.673 | 45.046 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-04 | A | X MW-24-1 | A | 579.667 | 45.933 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-05 | A | X MW-23-3 | A | 578.504 | 45.217 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-06 | A | X MW-23-2 | A | 594.499 | 45.123 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-07 | A | X MW-23-1 | A | 606.160 | 45.764 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-08 | A | X EB-1-031124 | A | 586.315 | 46.256 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-09 | A | X FB-1-031124 | A | 591.648 | 45.859 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| 24C0052-10 | A | X SB-1-031124 | A | 601.931 | 45.722 | 7 | 3/13/2024 11:17:00AM | 500 | 2 | | 200 , 200 | |
| BDC0186-BLK1 | | Blank | | | | 7 | 3/13/2024 11:17:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0186-BS1 | | LCS | | | | 7 | 3/13/2024 11:17:00AM | 500 | 2 | ~~40 , 40~~ | 200 , 200 | |
| BDC0186-MRL1 | | MRL Check | | | | 7 | 3/13/2024 11:17:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

24B0011 ✓ PFAS - MIX 1633 10ng/mL rev1

24B0397 ✓ 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)** 24B0551

~~24B0289~~ MPFAC-HIF-ES 20.0ng/mL

~~24C0067~~ 1633 EIS MIXB 20-80ng/mL 24C0280

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** SCALE

**Hotblock/Plate:**

**Sonic Horns:**

**Pipettes:** HR-47

**Water Baths:**

**Ovens:**

**Desiccator:**

**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| | | |

24A0483 AMAC

Kmy/CFM 12:57 3/13/24

Spiking Witnessed By Date

Preparation Reviewed By Date

ABK 3/14/24

Extracts Received By Date



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/12/2024 3:32 pm

BDC0169

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| BDC0169-MRL1 | MRL Check | | | | 3/12/2024 3:04:00PM | 500 | 2 | 10 , 10 | 200 , 200 | |
| BDC0169-MRL2 | MRL Check | | | | 3/12/2024 3:04:00PM | 500 | 2 | 10 , 10 | 200 , 200 | |
| BDC0169-MRL3 | MRL Check | | | | 3/12/2024 3:04:00PM | 500 | 2 | 10 , 10 | 200 , 200 | |

**Analyses**

**Spiking Solution(s)**

24B0011 ✓ PFAS - MIX 1633 10ng/mL rev1
24B0397 ✓ 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)** 24B0551

~~24B0289~~ MPFAC-HIF-ES 20.0ng/mL
24C0067 ✓ 1633 EIS MIXB 20-80ng/mL

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** SCALE
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|

Batch Comments:

Spiked By:
Witness By:
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23172102PB
Concentration: 12:25 3/13/24 12:45
IIS: 24B0645
Carbon Lot: 148517

Kenny | CFM 12:57 3/13/24
Spiking Witnessed By Date

Preparation Reviewed By Date

ABK 3/14/24
Extracts Received By Date

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project:A | [none]A |
| Sequence:A | SD00912A | Instrument:A | SaphiraA |
| Calibration: | 2411010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00912-CAL1A | S2024-03-12A (1)A | 03/12/24 18:28A |
| Cal Standardl | SD00912-CAL2A | S2024-03-12A (2)A | 03/12/24 18:49A |
| Cal Standardl | SD00912-CAL3A | S2024-03-12A (3)A | 03/12/24 19:09A |
| Cal Standardl | SD00912-CAL4A | S2024-03-12A (4)A | 03/12/24 19:30A |
| Cal Standardl | SD00912-CAL5A | S2024-03-12A (5)A | 03/12/24 19:50A |
| Cal Standardl | SD00912-CAL6A | S2024-03-12A (6)A | 03/12/24 20:11A |
| Cal Standardl | SD00912-CAL7A | S2024-03-12A (7)A | 03/12/24 20:31A |
| Cal Standardl | SD00912-CAL8A | S2024-03-12A (8)A | 03/12/24 20:52A |
| Initial Cal Blankl | SD00912-ICB1A | S2024-03-12A (9)A | 03/12/24 21:12A |
| Secondary Cal Checkl | SD00912-SCV1A | S2024-03-12A (10)A | 03/12/24 21:33A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0052A |
| Client:A | Tidewater, Inc.A | Project:A | [none]A |
| Sequence:A | SD00936A | Instrument:A | SaphiraA |
| Calibration: | 2411010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration BlankI | SD00936-CCB1A | S2024-03-14A (1)A | 03/14/24 12:31A |
| Low Cal CheckI | SD00936-LCV1A | S2024-03-14A (2)A | 03/14/24 12:51A |
| Calibration CheckI | SD00936-CCV1A | S2024-03-14A (3)A | 03/14/24 13:12A |
| Performance MixI | SD00936-PEM1A | S2024-03-14A (4)A | 03/14/24 13:32A |
| Performance MixI | SD00936-PEM2A | S2024-03-14A (5)A | 03/14/24 13:53A |
| Calibration BlankI | SD00936-CCB2A | S2024-03-14A (6)A | 03/14/24 14:13A |
| BlankI | BDC0186-BLK1A | S2024-03-14A (11)A | 03/14/24 15:56A |
| LCSI | BDC0186-BS1A | S2024-03-14A (12)A | 03/14/24 16:17A |
| MRL CheckI | BDC0186-MRL1A | S2024-03-14A (13)A | 03/14/24 16:37A |
| EB-1-031124I | 24C0052-08A | S2024-03-14A (15)A | 03/14/24 17:18A |
| FB-1-031124I | 24C0052-09A | S2024-03-14A (16)A | 03/14/24 17:39A |
| SB-1-031124I | 24C0052-10A | S2024-03-14A (17)A | 03/14/24 17:59A |
| Calibration CheckI | SD00936-CCV2A | S2024-03-14A (18)A | 03/14/24 18:20A |
| Calibration BlankI | SD00936-CCB3A | S2024-03-14A (19)A | 03/14/24 18:40A |
| MW-24-3I | 24C0052-01A | S2024-03-14A (20)A | 03/14/24 19:01A |
| MW-24-2I | 24C0052-02A | S2024-03-14A (21)A | 03/14/24 19:21A |
| DUP-1-031124I | 24C0052-03A | S2024-03-14A (22)A | 03/14/24 19:42A |
| MW-24-1I | 24C0052-04A | S2024-03-14A (23)A | 03/14/24 20:02A |
| MW-23-3I | 24C0052-05A | S2024-03-14A (24)A | 03/14/24 20:23A |
| MW-23-2I | 24C0052-06A | S2024-03-14A (25)A | 03/14/24 20:43A |
| MW-23-1I | 24C0052-07A | S2024-03-14A (26)A | 03/14/24 21:04A |
| Calibration CheckI | SD00936-CCV3A | S2024-03-14A (27)A | 03/14/24 21:25A |
| Calibration BlankI | SD00936-CCB4A | S2024-03-14A (28)A | 03/14/24 21:45A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**

**CAS #:** 356-02-5

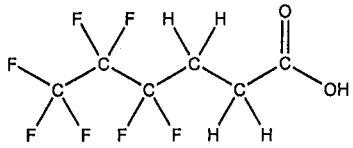


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

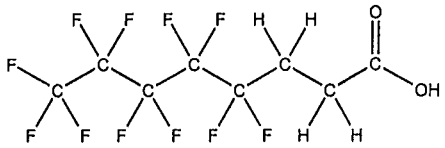

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

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**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

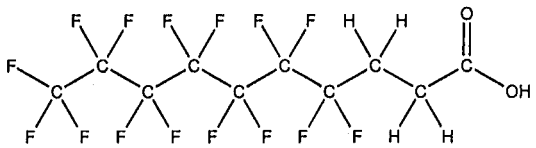

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_5F_{15}O_2$ | **MOLECULAR WEIGHT:** | 442.12 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

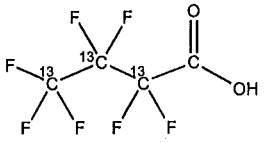

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

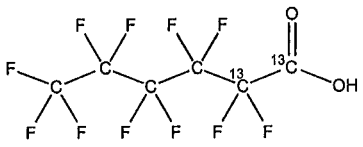

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_{11}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 10/04/2021
**EXPIRY DATE:** (mm/dd/yyyy) 10/04/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

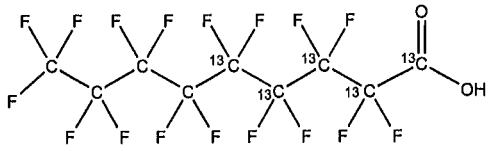

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

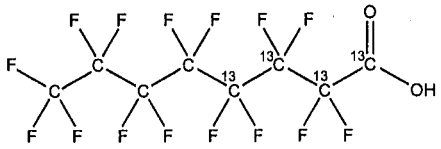

**MOLECULAR FORMULA:** $^{13}C_4{}^{12}C_4HF_{15}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 418.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 12/07/2021
**EXPIRY DATE:** (mm/dd/yyyy) 12/07/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A0120**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

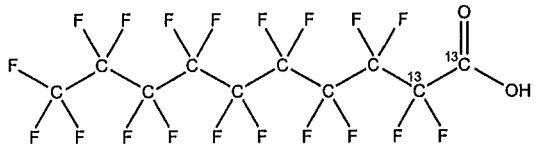

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOS **LOT NUMBER:** MPFOS0821

**COMPOUND:** Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate

**STRUCTURE:** **CAS #:** 960315-53-1

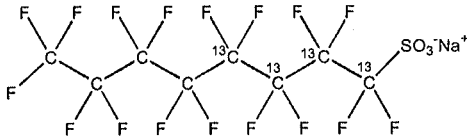

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

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**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 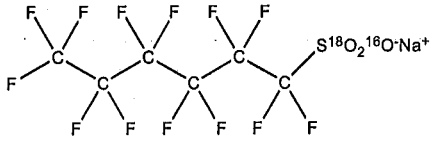 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

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B.G. Chittim, General Manager

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Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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**EMD Millipore Corporation | 28820 Single Oak Dr., Temecula, CA 92590**

**Technical Support NA +1-800-221-1975 | email: www.millipore.com/techservices | www.calbiochem.com**

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

## 23A0 220

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

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# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

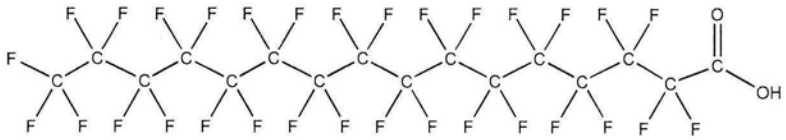

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

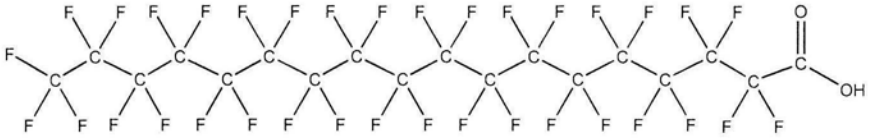

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

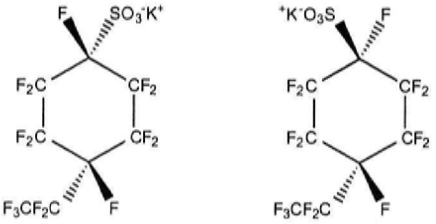


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}SO_3K$ |
| **MOLECULAR WEIGHT:** | 500.22 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (K salt)<br>46.2 ± 2.3 µg/mL (PFECHS acid)<br>46.1 ± 2.3 µg/mL (PFECHS anion) |
| **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% |
| **LAST TESTED:** (mm/dd/yyyy) | 03/28/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/28/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard RecordC

## 23C0155C

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FBSA-I | **LOT NUMBER:** | FBSA0123I |
| **COMPOUND:** | Perfluoro-1-butanesulfonamide | | |
| **STRUCTURE:** | | **CAS #:** | 30334-69-1 |

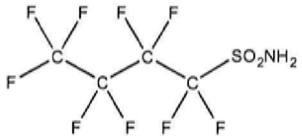

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**
**CAS #:** 41997-13-1

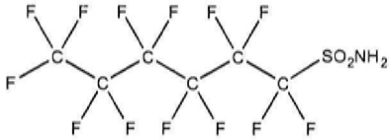

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
800-368-1131
www.absolutestandards.com

**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| Formulated By: | Prashant Chauhan | 051723 DATE |
|---|---|---|
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4488& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Hodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994). B

**Method:** 1633M1
**Column:** $CB_{18}$ (150mm X 2.1mm ID X 5µm df)
**Column Temperature:** 40°C B
**Flowrate:** 0.30ml/min.
**Injection Volume:** 1µL B
**Mobile Phase:**
A: 10mM Ammonium Acetate in Water
: Methanol:Acetonitrile (80%:20%)
**Mobile Phase Profile:**
Time=00 45%A:55%B
Time=07 30%A:70%B
Time=12 10%A:90%B
Time=21 10%A:90%B
Time=31 45%A:55%B
Time=41 45%A:55%B
**Detector:** MSD (API-ES, Negative Polarity, SIM)
**Analyst:** Pedro Rentas B

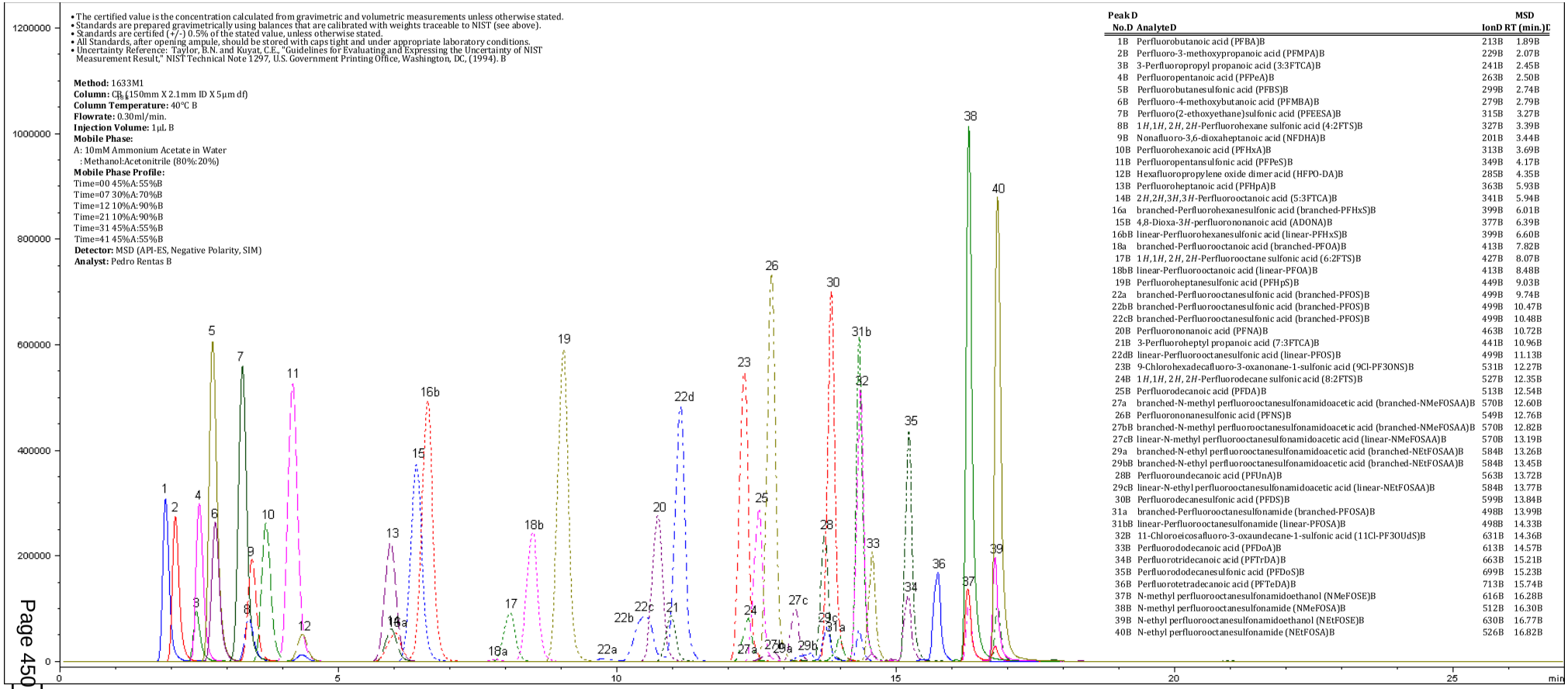


| Peak No. | D Analyte | D Ion | MSD RT (min.) | D |
|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA)B | 213B | 1.89B | |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA)B | 229B | 2.07B | |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA)B | 241B | 2.45B | |
| 4B | Perfluoropentanoic acid (PFPeA)B | 263B | 2.50B | |
| 5B | Perfluorobutanesulfonic acid (PFBS)B | 299B | 2.74B | |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA)B | 279B | 2.79B | |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)B | 315B | 3.27B | |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS)B | 327B | 3.39B | |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)B | 201B | 3.44B | |
| 10B | Perfluorohexanoic acid (PFHxA)B | 313B | 3.69B | |
| 11B | Perfluoropentansulfonic acid (PFPeS)B | 349B | 4.17B | |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA)B | 285B | 4.35B | |
| 13B | Perfluoroheptanoic acid (PFHpA)B | 363B | 5.93B | |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA)B | 341B | 5.94B | |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS)B | 399B | 6.01B | |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA)B | 377B | 6.39B | |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS)B | 399B | 6.60B | |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA)B | 413B | 7.82B | |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS)B | 427B | 8.07B | |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA)B | 413B | 8.48B | |
| 19B | Perfluoroheptanesulfonic acid (PFHpS)B | 449B | 9.03B | |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS)B | 499B | 9.74B | |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS)B | 499B | 10.47B | |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS)B | 499B | 10.48B | |
| 20B | Perfluorononanoic acid (PFNA)B | 463B | 10.72B | |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA)B | 441B | 10.96B | |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS)B | 499B | 11.13B | |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)B | 531B | 12.27B | |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS)B | 527B | 12.35B | |
| 25B | Perfluorodecanoic acid (PFDA)B | 513B | 12.54B | |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA)B | 570B | 12.60B | |
| 26B | Perfluorononanesulfonic acid (PFNS)B | 549B | 12.76B | |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA)B | 570B | 12.82B | |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA)B | 570B | 13.19B | |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA)B | 584B | 13.26B | |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA)B | 584B | 13.45B | |
| 28B | Perfluoroundecanoic acid (PFUnA)B | 563B | 13.72B | |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA)B | 584B | 13.77B | |
| 30B | Perfluorodecanesulfonic acid (PFDS)B | 599B | 13.84B | |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA)B | 498B | 13.99B | |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA)B | 498B | 14.33B | |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)B | 631B | 14.36B | |
| 33B | Perfluorododecanoic acid (PFDoA)B | 613B | 14.57B | |
| 34B | Perfluorotridecanoic acid (PFTrDA)B | 663B | 15.21B | |
| 35B | Perfluorododecanesulfonic acid (PFDoS)B | 699B | 15.23B | |
| 36B | Perfluorotetradecanoic acid (PFTeDA)B | 713B | 15.74B | |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)B | 616B | 16.28B | |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA)B | 512B | 16.30B | |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)B | 630B | 16.77B | |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA)B | 526B | 16.82B | |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

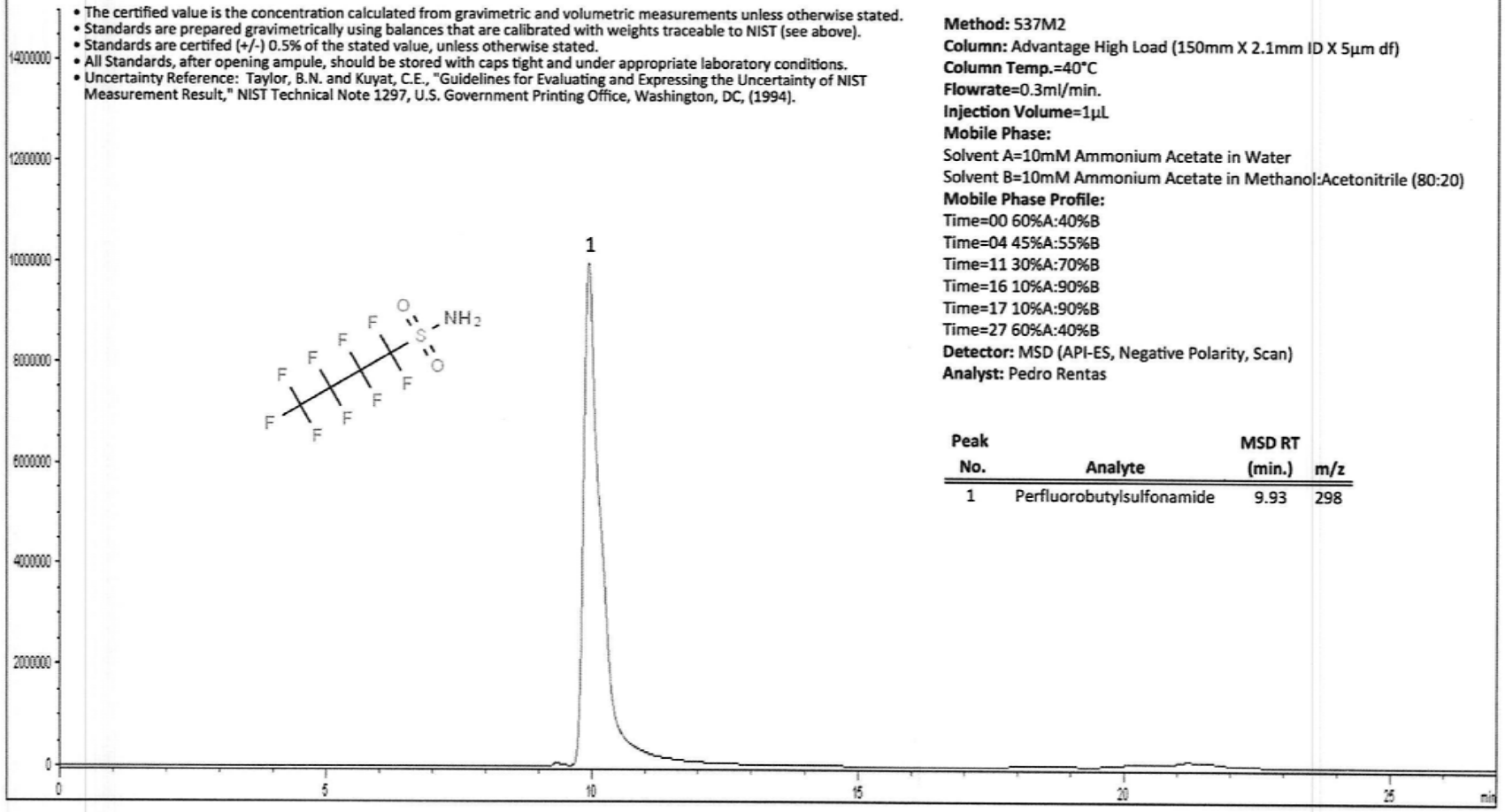


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | | Solvent: | Lot# |
|---|---|---|---|---|
| Expiration Date: | 091125 | | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | | |
| Nominal Concentration (µg/mL): | 1000 | | | |
| NIST Test ID#: | 23060 | 5E-05 | Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 | Flask Uncertainty | |

| | | |
|---|---|---|
| | | 091120 |
| Formulated By: | Benson Chan | DATE |
| | | 091120 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| 101520 | | |
| Formulated By: | Benson Chan | DATE |
| 101520 | | |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordD

## 23L0522D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:32 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

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DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

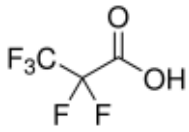


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0371

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 2s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# nalytical Standard RecordA

## 24B0010

| | | | |
|---|---|---|---|
| Description: s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number: | 63321s | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# nalytical Standard RecordA

**24B0010**

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# nalytical Standard RecordA

## 24B0011

| | | | |
|---|---|---|---|
| Description: s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number: | 63321s | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# nalytical Standard RecordA

**24B0011**

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

AR-1463

| Component | CAS # | Purity³ % | Prepared Concentration² (µg/mL) | Certified Analyte Concentration¹ (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

² All weights are traceable through NIST, Test No. 684/289871-17

³ Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

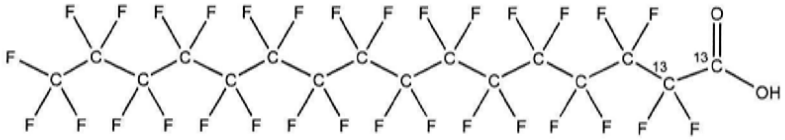

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

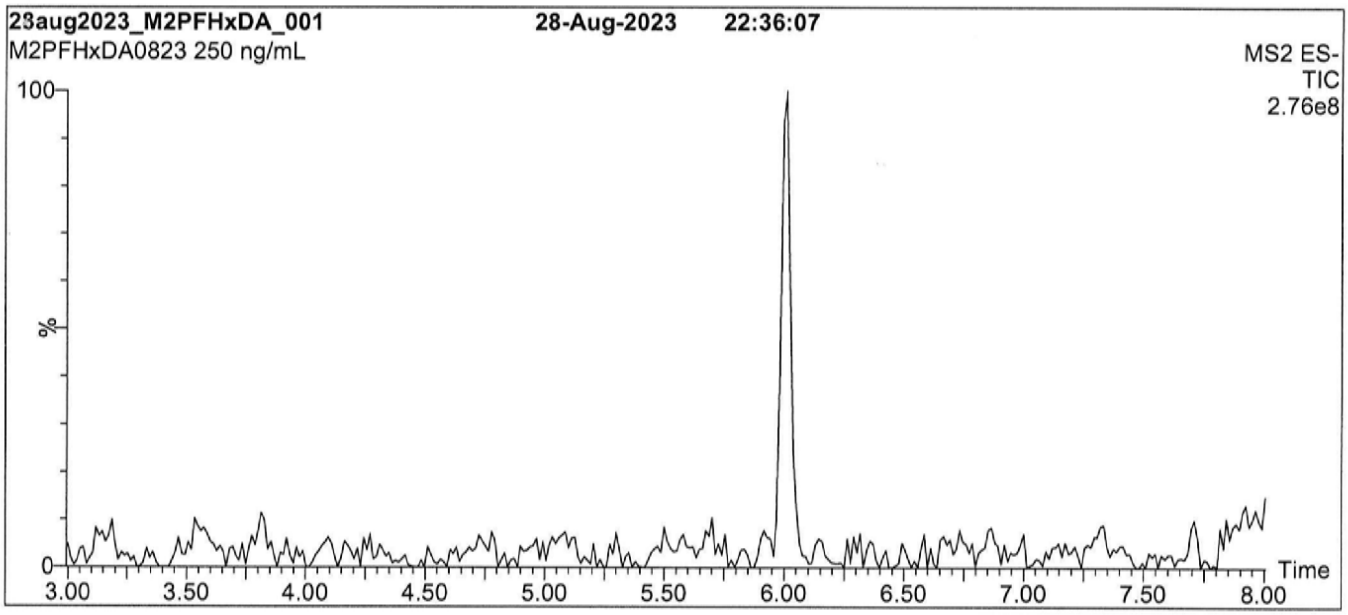


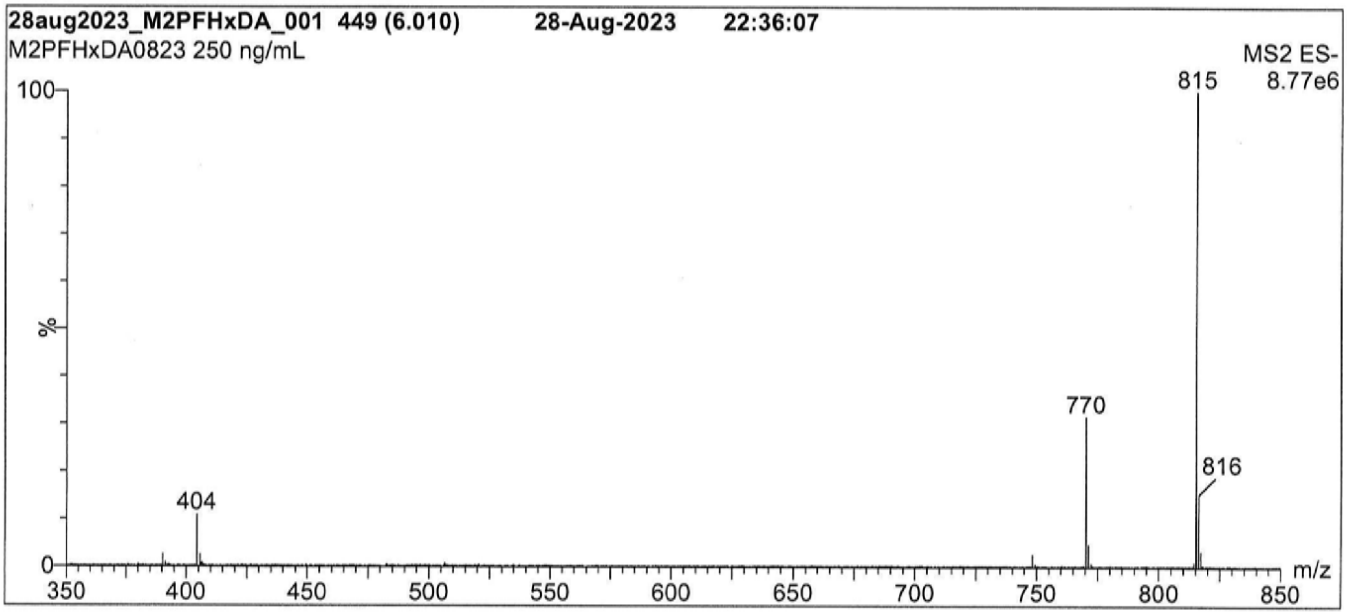


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

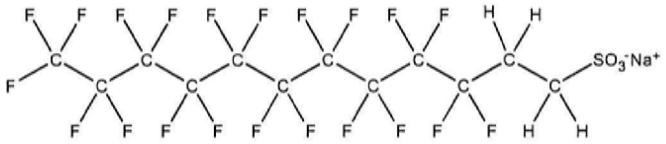


**MOLECULAR FORMULA:** $C_{12}H_4F_{21}SO_3Na$ **MOLECULAR WEIGHT:** 650.18
**CONCENTRATION:** 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
48.3 ± 2.4 µg/mL (10:2FTS acid)
48.2 ± 2.4 µg/mL (10:2FTS anion)
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 09/13/2023
**EXPIRY DATE:** (mm/dd/yyyy) 09/13/2028
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

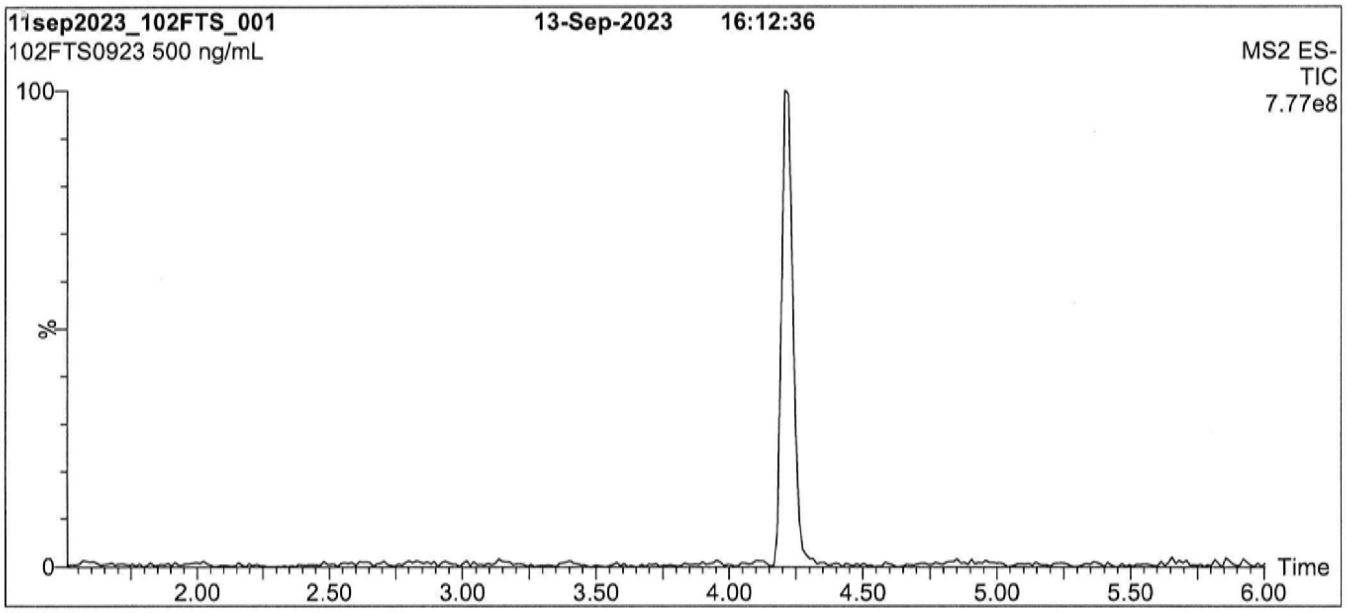


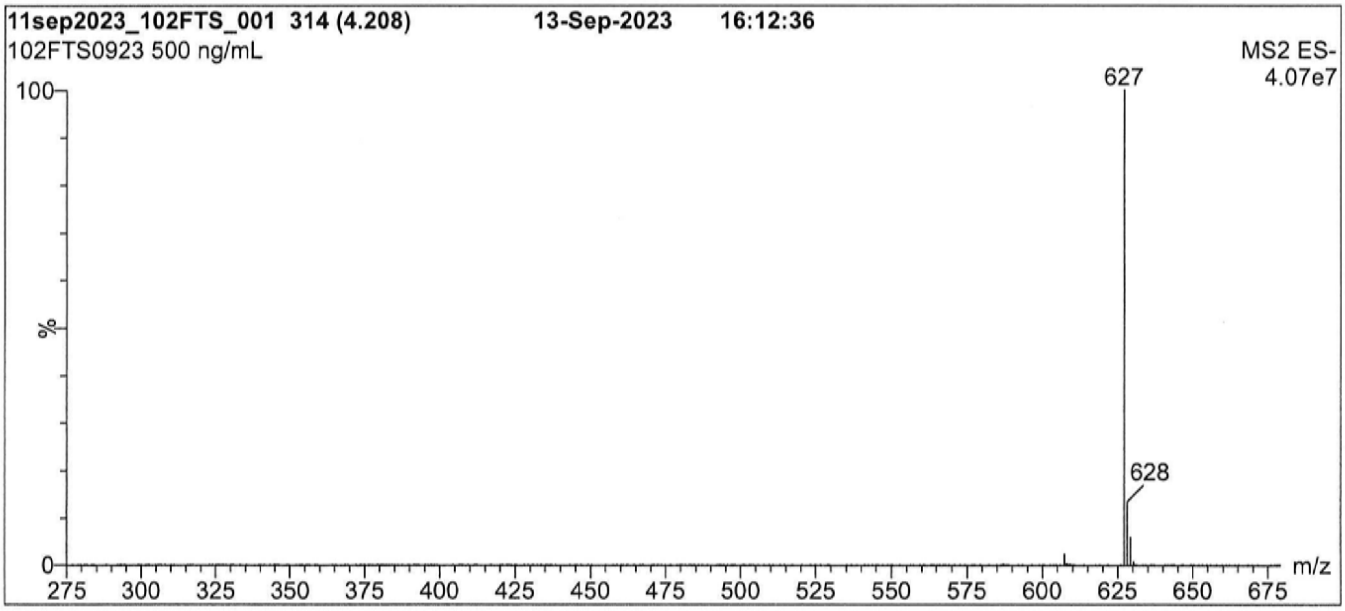


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

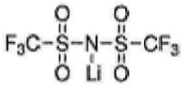

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

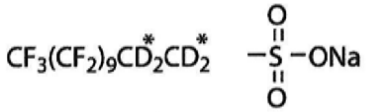

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

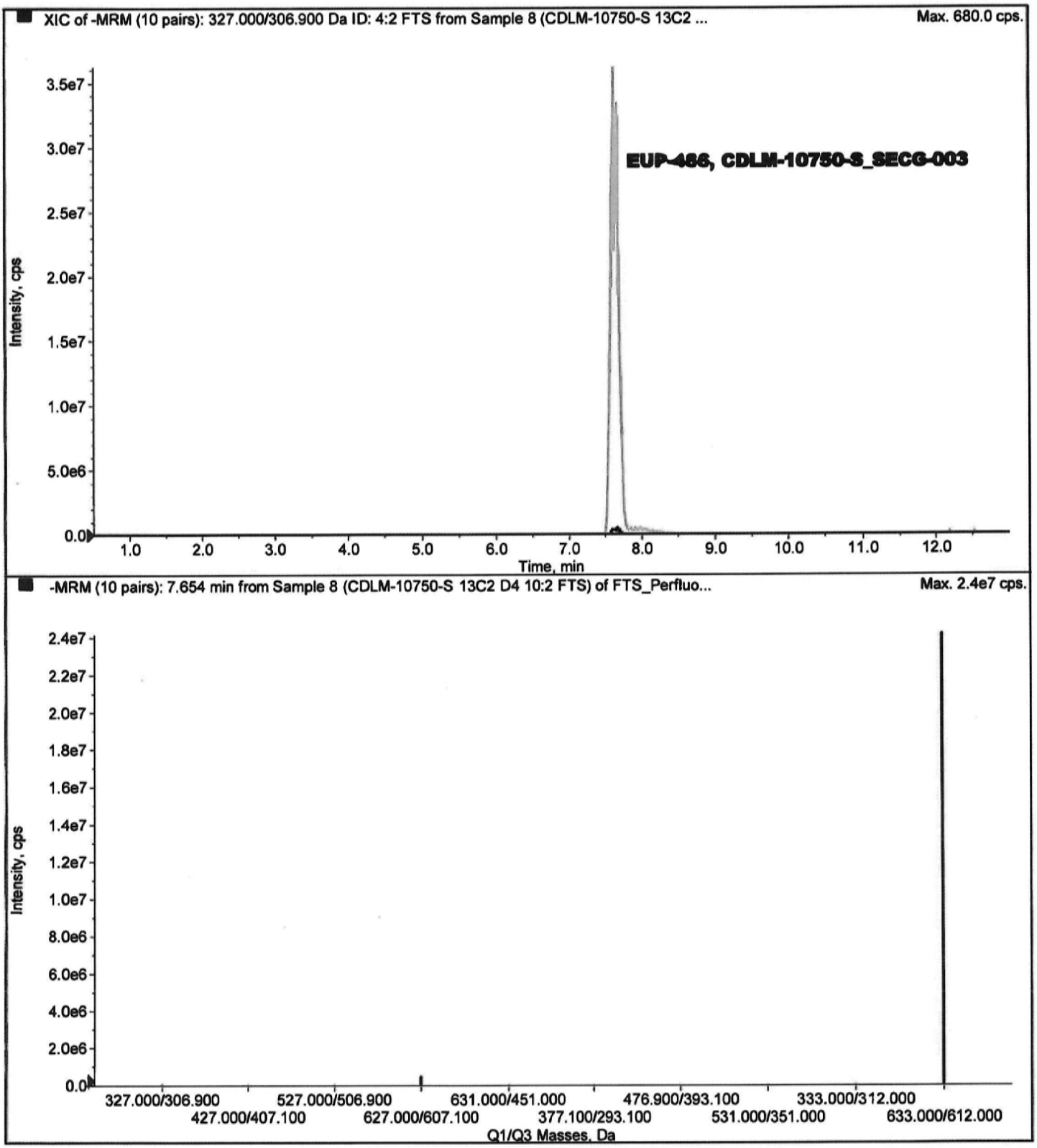

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

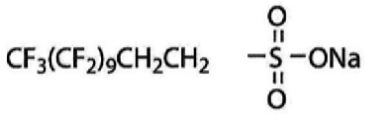

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# Analytical Standard RecordB

**24B0290** B

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number:s | FOUEA1123s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FOUEA
**COMPOUND:** 2H-Perfluoro-2-decenoic acid

**LOT NUMBER:** FOUEA1123

**STRUCTURE:**

**CAS #:** 70887-84-2

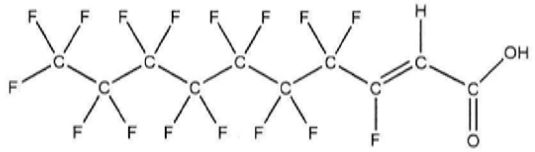

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

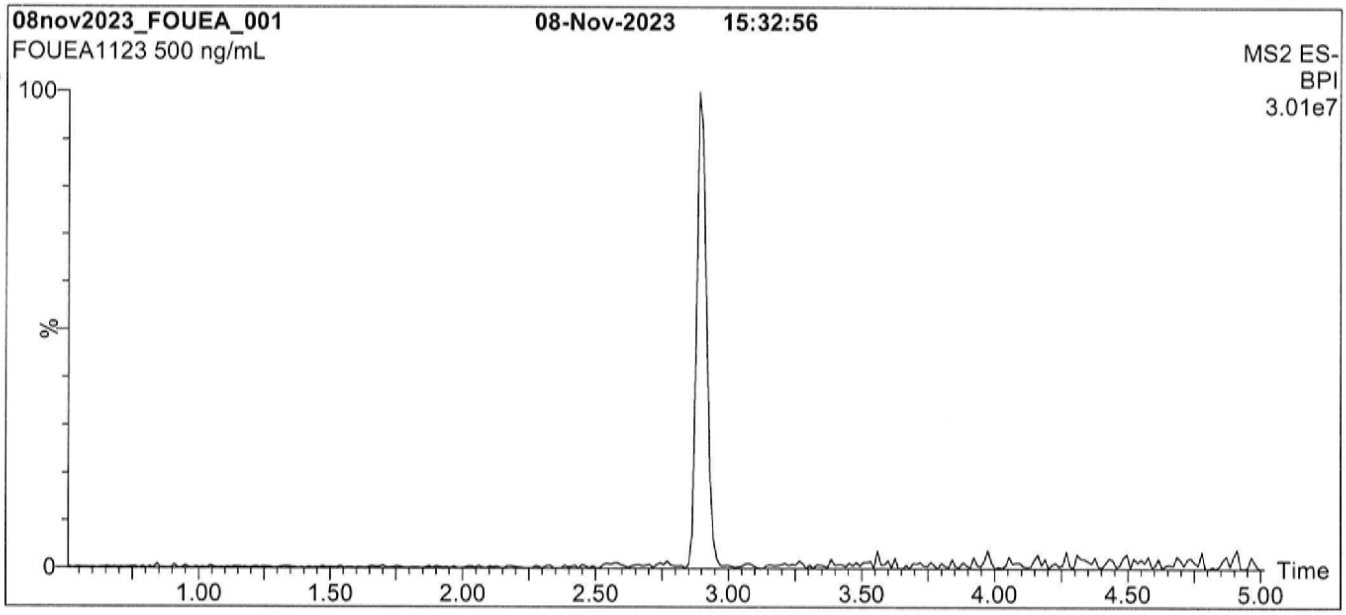


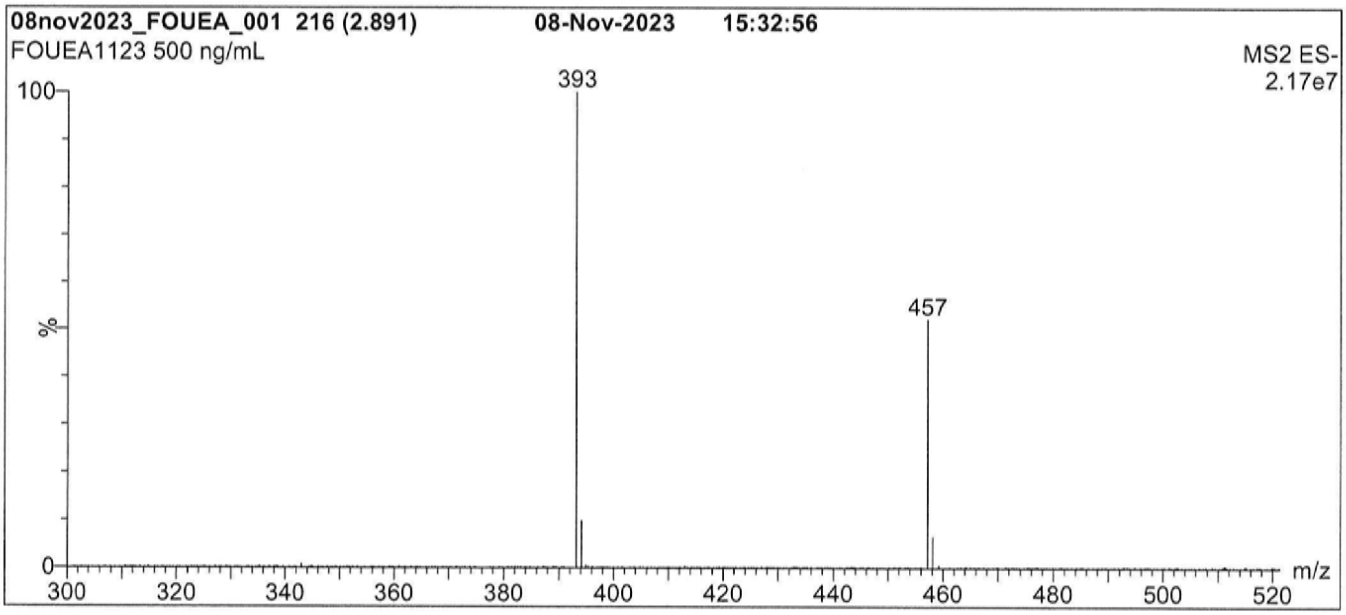


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0292** B

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | FHUEA0124s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

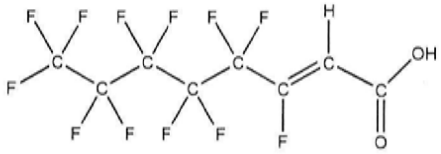

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

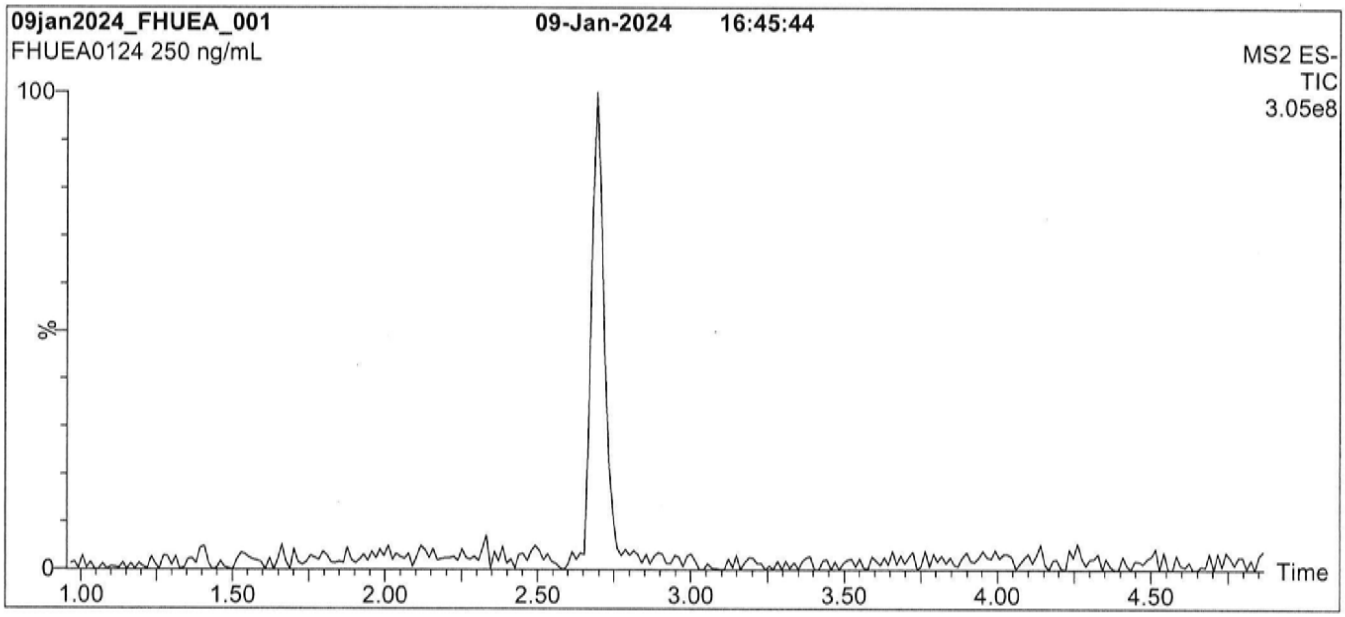


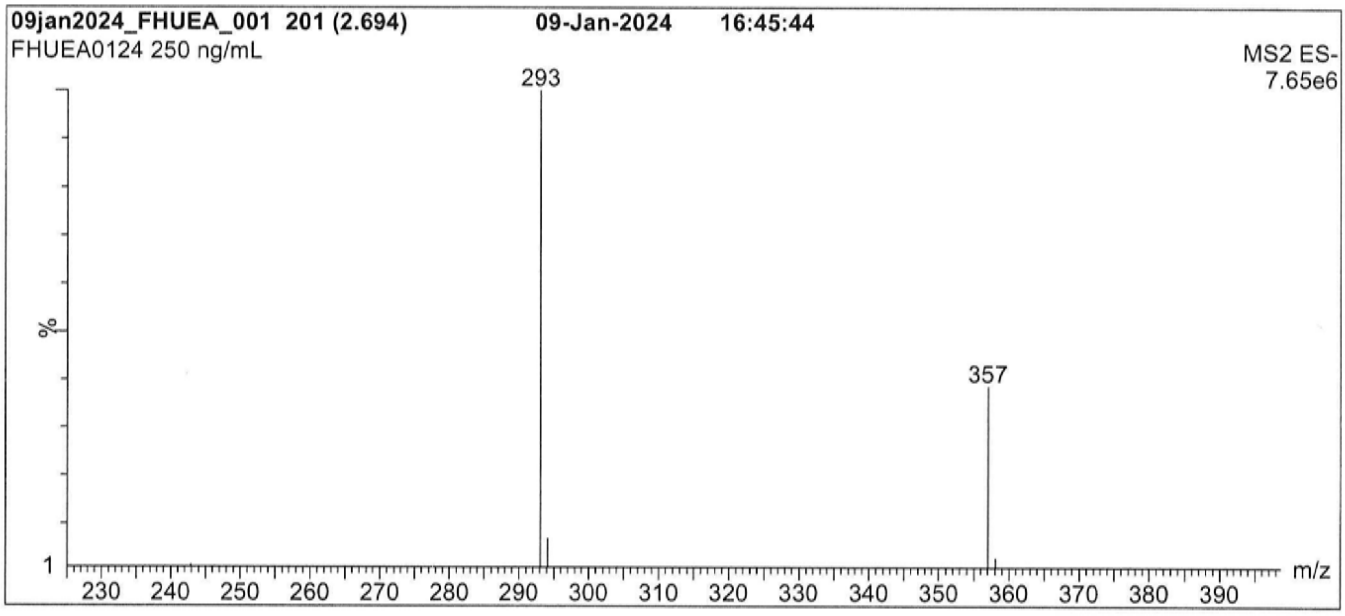


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0293** B

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

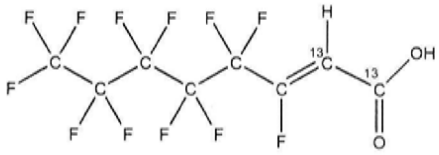

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-($1,2\text{-}^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-($1,2\text{-}^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

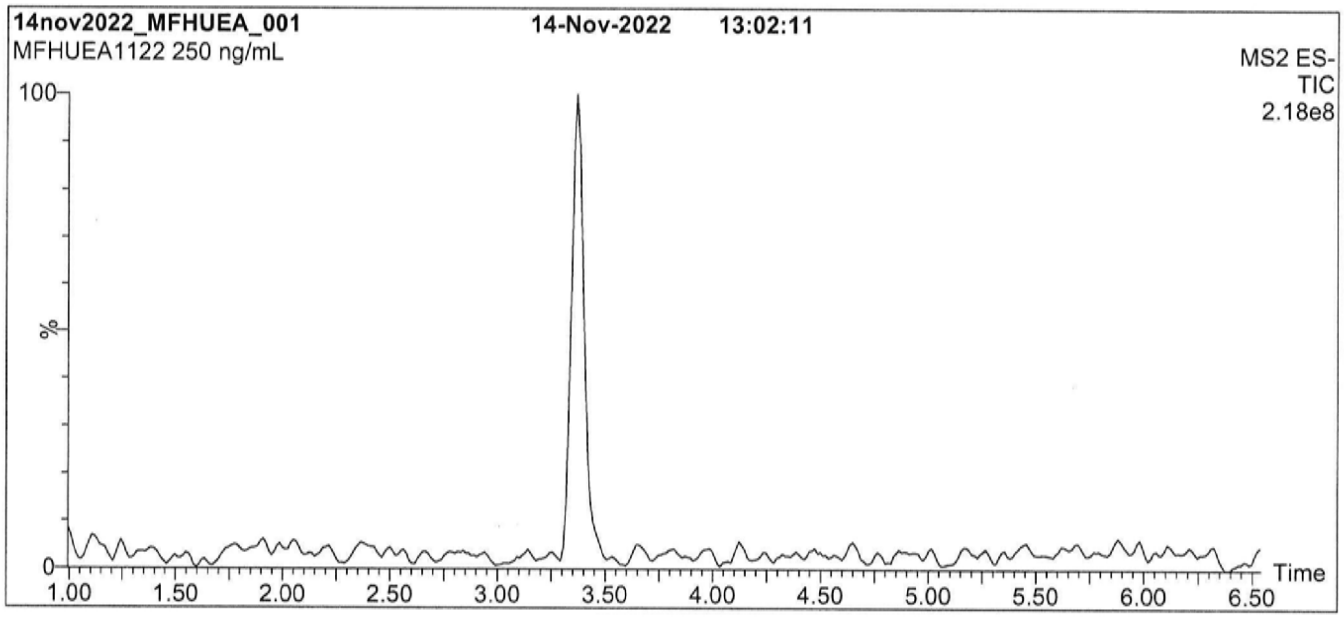


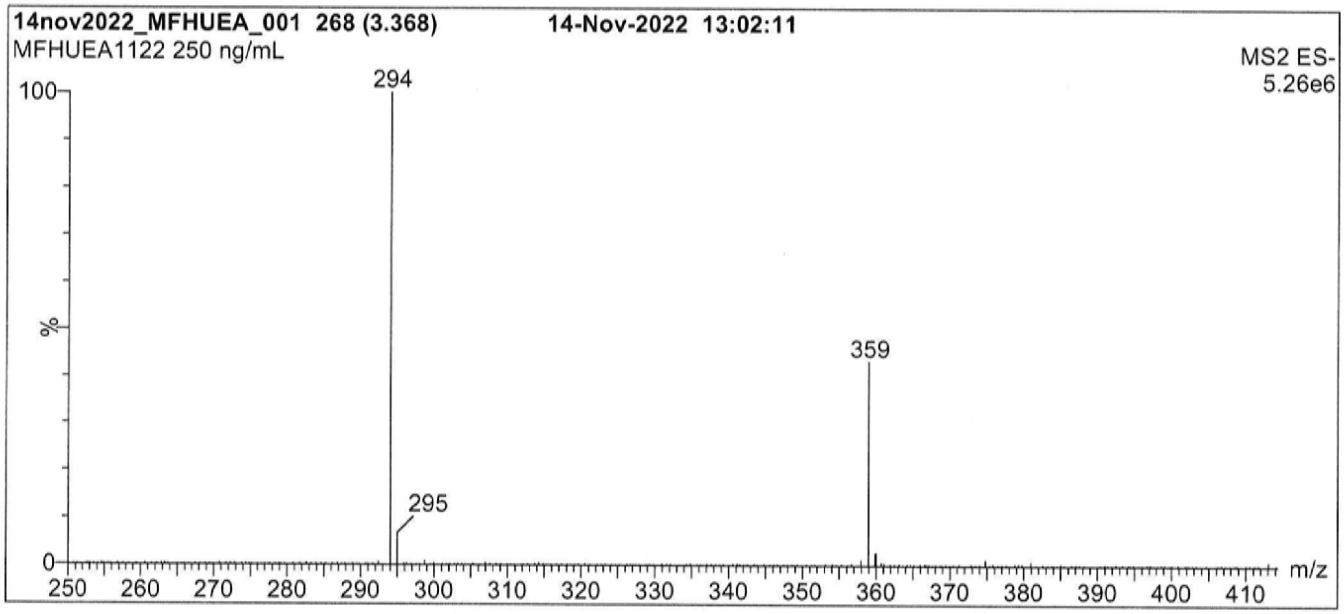


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

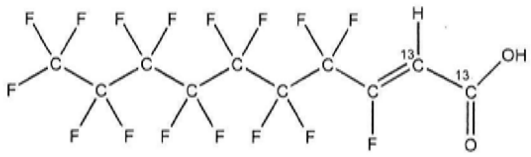

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

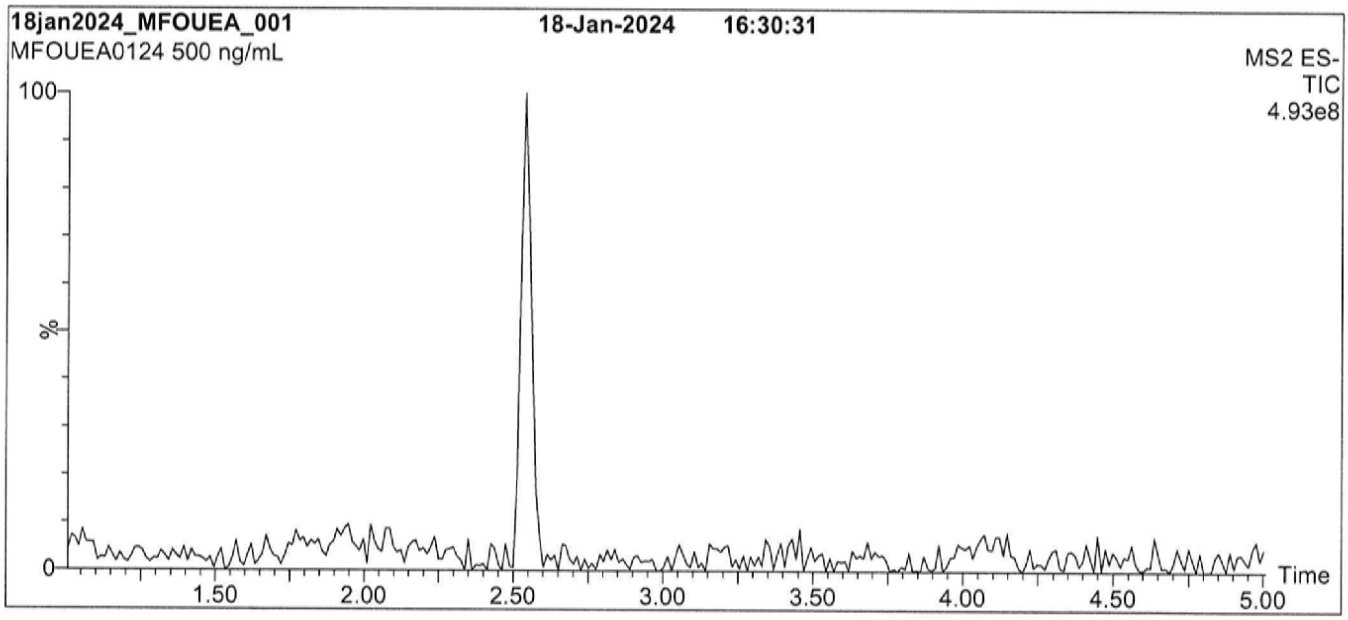


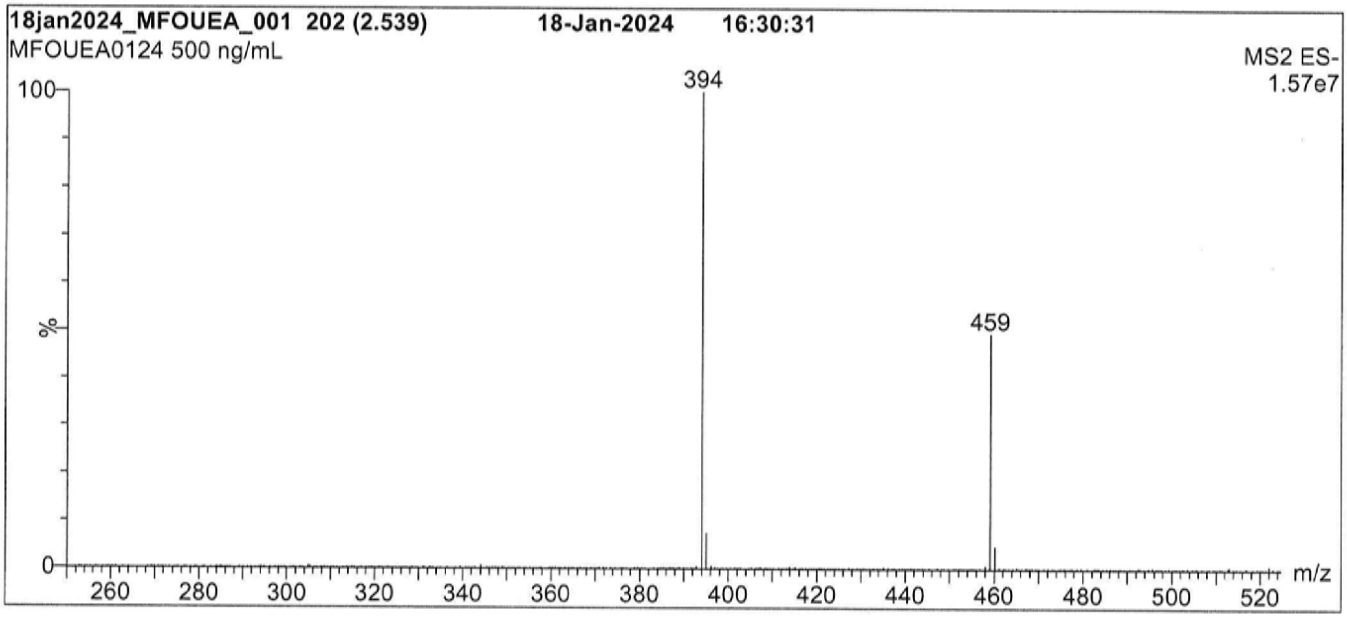


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0299B

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# Analytical Standard RecordB

## 24B0394B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0466B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0466B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0470B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0470B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |

# Analytical Standard RecordB

**24B0470** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.025s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.025s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used:** B

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls) B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0551B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:49 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0522s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0522s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0522s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0522s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0522s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0522s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0522s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0522s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0522s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0522s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0522s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0522s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0522s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0522s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0522s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0522s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0522s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0522s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0522s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0522s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0522s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0522s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0522s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0522s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0522s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:32s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0553B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# Analytical Standard RecordB

## 24B0646B

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordB

## 24C0038B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24C0039K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

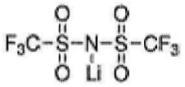

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23G0454s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023 | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523s | PFAS SS- 5C 200ng/mLs | 08/21/2023 | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041s | PFAS SS- 5C B 200ng/mLs | 03/04/2024 | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** B

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls) B |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** B

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls) B |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# Analytical Standard RecordB

## 24C0281B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/12/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 16:39 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

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NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

March 28, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0076L

Enclosed are the results of analyses for samples received by our laboratory on 3/13/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

# Data Validatable Report

## Analysis Case Narrativen

n

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical t justification are provided as data qualifiers. t

## Samples in this Reportn

| Lab IDn | Sample n | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0076-01o | MW-4-4o | Watero | 03/12/2024 08:15o | 03/13/2024o |
| 24C0076-02o | MW-4-3o | Watero | 03/12/2024 08:40o | 03/13/2024o |
| 24C0076-03o | MW-4-2o | Watero | 03/12/2024 09:10o | 03/13/2024o |
| 24C0076-04o | DUP-2-031224o | Watero | 03/12/2024 09:20o | 03/13/2024o |
| 24C0076-05o | MW-4-1o | Watero | 03/12/2024 09:40o | 03/13/2024o |
| 24C0076-06o | MW-14-4o | Watero | 03/12/2024 10:40o | 03/13/2024o |
| 24C0076-07o | MW-14-3o | Watero | 03/12/2024 11:00o | 03/13/2024o |
| 24C0076-08o | MW-14-2o | Watero | 03/12/2024 11:20o | 03/13/2024o |
| 24C0076-09o | MW-14-1o | Watero | 03/12/2024 11:40o | 03/13/2024o |
| 24C0076-10o | EB-2-031224o | Watero | 03/12/2024 11:50o | 03/13/2024o |
| 24C0076-11o | FB-2-031224o | Watero | 03/12/2024 12:00o | 03/13/2024o |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0076-01t | | | |
| | 500mL Pt | 1t | |
| 24C0076-02t | | | |
| | 500mL Pt | 1t | |
| 24C0076-03t | | | |
| | 500mL Pt | 1t | |
| 24C0076-04t | | | |
| | 500mL Pt | 1t | |
| 24C0076-05t | | | |
| | 500mL Pt | 1t | |
| 24C0076-06t | | | |
| | 500mL Pt | 1t | |
| 24C0076-07t | | | |
| | 500mL Pt | 1t | |
| 24C0076-08t | | | |
| | 500mL Pt | 1t | |
| 24C0076-09t | | | |
| | 500mL Pt | 1t | |
| 24C0076-10t | | | |
| | 500mL Pt | 1t | |
| 24C0076-11t | | | |
| | 500mL Pt | 1t | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

a

**Sample: aMW-4-4 a**

**24C0076-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 3.3o | | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 5.2o | | 0.75o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 4.9o | | 0.38o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 4.3o | | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 2.9o | MI4o | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | 0.091o | MI6, Jo | 0.38o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | 0.18o | Jo | 0.38o | 0.095o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | IR2, o | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 7.5o | | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.26o | Jo | 0.38o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 2.5o | | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.38o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.76o | IR1, MI3o | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.38o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.99o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.75o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *93.8%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-4-4 (Continued)a

**24C0076-01 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *111%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *125%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *110%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *108%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *106%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *97.2%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *97.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *77.4%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *74.9%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *98.7%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *106%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *113%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *185%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *173%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *125%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *69.0%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *112%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *36.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *34.9%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *82.0%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *122%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *59.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *57.4%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *116%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-4-3 a**

**24C0076-02 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 4.8o | | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 8.7o | | 0.75o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 8.6o | | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 7.9o | | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 4.7o | MI4o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.37o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | 0.095o | Jo | 0.37o | 0.095o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 12o | | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.35o | Jo | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 4.0o | | 0.37o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.1o | IR1, MI3o | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.099o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.98o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.75o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *89.2%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *91.6%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-4-3 (Continued)a

**24C0076-02 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *105%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *113%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *103%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.9%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *94.5%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *88.0%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *77.3%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *76.3%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *98.9%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *107%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *107%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *189%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *151%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *121%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *89.0%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *91.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *36.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *36.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *88.1%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *110%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *62.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *60.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *105%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-4-2 a**

**24C0076-03 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 5.1o | | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 9.0o | | 0.74o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 8.9o | | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 7.9o | | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 5.7o | MI4o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | | 0.37o | 0.094o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 12o | | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.35o | Jo | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 4.5o | | 0.37o | 0.029o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.059o | Jo | 0.37o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.4o | IR1o | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *92.7%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *100%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-4-2 (Continued)a

**24C0076-03 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *97.1%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *109%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *98.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *97.9%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *97.2%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *98.7%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *88.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *70.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *75.2%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *90.7%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *96.6%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *97.4%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *154%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *147%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *120%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *89.1%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *79.9%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *27.3%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *22.9%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *99.1%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *101%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *41.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *33.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-2-031224 a**

**24C0076-04 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 4.9o | | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 8.7o | | 0.77o | 0.062o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 8.6o | | 0.38o | 0.053o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 7.8o | | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 5.7o | MI4o | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | 0.088o | MI6, Jo | 0.38o | 0.079o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | 0.097o | Jo | 0.38o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | MI2, o | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.38o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 13o | | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.33o | Jo | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 4.2o | | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.053o | MI6, Jo | 0.38o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.2o | IR1, MI3o | 0.38o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.079o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 1.0o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.77o | 0.17o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.77o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.77o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.77o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.77o | 0.087o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.77o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.77o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.77o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.55o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *100%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *111%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 10:44 |

## Sample Results
**(Continued)**

### Sample: DUP-2-031224 (Continued)
**24C0076-04 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *109%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *121%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *106%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *109%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *109%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *109%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *104%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *92.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *83.6%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *103%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *110%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *105%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *171%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *161%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *124%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *95.1%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *95.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *37.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *30.4%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *94.8%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *114%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *54.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *51.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *111%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-4-1 a**

**24C0076-05 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.45o | Jo | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 0.29o | Jo | 0.73o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 0.18o | Jo | 0.37o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 0.18o | Jo | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.44o | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | | 0.37o | 0.093o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 2.1o | | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 0.27o | Jo | 0.37o | 0.029o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.7o | IR1o | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *97.8%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *94.6%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-4-1 (Continued)a

**24C0076-05 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *100%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *104%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *103%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *102%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.7%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *93.6%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *91.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *75.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *79.6%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *89.9%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *96.6%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *98.4%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *157%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *149%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *115%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *100%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *80.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *27.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *21.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *100%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *104%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *46.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *36.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-14-4 a**

**24C0076-06 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 0.18o | Jo | 0.75o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 0.11o | Jo | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 0.044o | Jo | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.39o | MI2o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.37o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | IR1, o | 0.37o | 0.095o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | IR2, o | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 0.20o | Jo | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.11o | Jo | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 0.37o | IR1o | 0.37o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.34o | IR1, Jo | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.099o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.98o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.75o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *96.3%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *99.0%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 10:44 |

## Sample Results
**(Continued)**

### Sample: MW-14-4 (Continued)
**24C0076-06 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *99.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *110%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *92.8%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *92.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *90.2%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *85.8%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *77.7%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *58.5%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *65.3%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *88.3%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *92.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *92.1%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *151%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *145%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *120%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *91.1%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *83.1%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *32.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *26.0%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *90.8%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *99.5%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *55.4%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *41.9%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *105%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-14-3 a**

**24C0076-07 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 1.0o | Jo | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 1.4o | | 0.73o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 1.1o | | 0.37o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 0.28o | Jo | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 2.4o | MI4o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | IR2, o MI2, o | 0.37o | 0.093o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 1.0o | | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.74o | | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 1.5o | | 0.37o | 0.029o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.52o | MI3o | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *80.9%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-14-3 (Continued)a

**24C0076-07 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFPEAo* | *96.4%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFHXAo* | *96.2%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *104%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *96.2%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *98.6%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *90.2%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *87.0%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *80.9%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *72.6%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *60.7%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *90.9%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *94.0%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *97.2%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *146%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *148%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *111%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *93.9%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *82.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *32.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *23.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *97.7%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *105%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *42.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *34.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-14-2 a**

**24C0076-08 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 1.5o | | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 2.8o | | 0.74o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 2.2o | | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 0.35o | Jo | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.66o | MI4o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | MI2, o | 0.37o | 0.094o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 1.7o | | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 1.0o | | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 1.7o | | 0.37o | 0.029o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.25o | MI3, Jo | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *81.9%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *110%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-14-2 (Continued)a

**24C0076-08 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *110%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *119%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *102%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *107%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *101%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *95.5%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *91.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *78.6%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *71.2%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *94.6%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *101%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *104%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *166%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *156%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *115%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *97.0%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *91.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *42.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *31.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *104%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *114%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *64.4%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *52.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *118%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-14-1 a**

**24C0076-09 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 2.7o | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 5.2o | 0.75o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 3.6o | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 0.80o | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.72o MI4o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | 0.37o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | 0.37o | 0.095o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 2.5o | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 1.2o | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 1.5o | 0.37o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.20o IR1, Jo | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | 0.37o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | 1.5o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | 0.37o | 0.099o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | 1.5o | 0.95o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | 1.5o | 0.98o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | 0.75o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | 0.75o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | 0.75o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | 0.75o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | 0.75o | 0.085o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | 0.75o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | 0.75o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | 0.75o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *90.6%o* | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *100%o* | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-14-1 (Continued)a

**24C0076-09 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *101%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *102%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *93.1%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *93.5%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *92.0%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *87.0%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *83.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *72.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *71.4%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *88.0%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *98.2%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *94.0%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *143%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *140%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *113%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *98.8%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *82.4%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *31.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *20.8%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *95.1%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *98.3%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *49.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *36.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-2-031224 a**

**24C0076-10 (Water)a**

| Analyteo | Result | Qual | o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | | |
| PFBAo | NDo | | | 1.6o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 0.15o | Jo | | 0.78o | 0.063o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | NDo | | | 0.39o | 0.053o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | NDo | | | 0.39o | 0.040o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.31o | Jo | | 0.39o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | | 0.39o | 0.079o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | | | 0.39o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | | 0.39o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | | 0.39o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | | 0.39o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | | 0.39o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | | 0.39o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | | 0.39o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | NDo | | | 0.39o | 0.036o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | NDo | | | 0.39o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | NDo | | | 0.39o | 0.031o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | | 0.39o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.076o | Jo | | 0.39o | 0.062o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | | 0.39o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | | 0.39o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | | 0.39o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | | 1.6o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | | 1.6o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | | 1.6o | 0.080o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | | 1.6o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | | 0.39o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | | 1.6o | 0.46o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | | 1.6o | 0.40o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | | 0.39o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | | 0.39o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | | 1.6o | 0.98o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | | 1.6o | 1.0o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | | 0.78o | 0.17o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | | 0.78o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | | 0.78o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | | 0.78o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | | 0.78o | 0.088o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | | 0.78o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | | 0.78o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | | 0.78o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | | 1.6o | 0.56o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | | 1.6o | 0.43o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | | 1.6o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *101%o* | | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *97.6%o* | | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aEB-2-031224 (Continued)a

**24C0076-10 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *99.4%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *104%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *100%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *99.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *100%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *90.5%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *83.0%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *71.3%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *78.1%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *94.6%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *99.6%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *95.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *158%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *161%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *139%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *120%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *54.3%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *20.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *16.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *102%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *101%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *41.5%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *31.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *100%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-2-031224 a**

**24C0076-11 (Water)a**

| Analyteo | Result | Qual | o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | | |
| PFBAo | NDo | | | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 0.11o | Jo | | 0.76o | 0.062o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | NDo | | | 0.38o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | NDo | | | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.29o | Jo | | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | | 0.38o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | | | 0.38o | 0.096o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | NDo | | | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | NDo | | | 0.38o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | NDo | | | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | | 0.38o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.065o | Jo | | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | | 1.5o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | | 1.5o | 0.078o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | | 0.38o | 0.099o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | | 1.5o | 0.96o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | | 1.5o | 0.99o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | | 0.76o | 0.17o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | | 0.76o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | | 0.76o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | | 0.76o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | | 0.76o | 0.086o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | | 0.76o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | | 1.5o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *104%o* | | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *110%o* | | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 10:44o |

## Sample Resultsa

**(Continued) a**

### Sample: aFB-2-031224 (Continued)a

**24C0076-11 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *105%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *114%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *100%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *105%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *104%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *93.6%o* | | *30-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *81.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *70.6%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *78.8%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *92.4%o* | | *40-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *98.8%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *99.7%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *155%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *152%o* | | *40-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *140%o* | | *40-300o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *111%o* | | *0-200o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *70.0%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *27.6%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *20.1%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *112%o* | | *40-170o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *108%o* | | *25-135o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *48.7%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *40.2%o* | | *10-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *109%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0208 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0208-BLK1)u** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/19/24 18:32o | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/Lo | | | | | | |
| PFPeAo | 0.125 Jo | 0.80o | 0.065o | ng/Lo | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/Lo | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/Lo | | | | | | |
| PFOAo | 0.197 MI3, Jo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/Lo | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/Lo | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/Lo | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/Lo | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/Lo | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/Lo | | | | | | |
| PFOSo | 0.0970 Jo | 0.40o | 0.064o | ng/Lo | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/Lo | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/Lo | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/Lo | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/Lo | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/Lo | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/Lo | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/Lo | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/Lo | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/Lo | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/Lo | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/Lo | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/Lo | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/Lo | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/Lo | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/Lo | | | | | | |
| *Surrogate: 13C4-PFBAo* | *31.4o* | | | *ng/Lo* | *32.0o* | | *98.3o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *15.2o* | | | *ng/Lo* | *16.0o* | | *95.2o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.52o* | | | *ng/Lo* | *8.00o* | | *94.1o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.22o* | | | *ng/Lo* | *8.00o* | | *90.2o* | *40-130o* | | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 10:44o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0208-BLK1)u** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/19/24 18:32o | | | | | |
| *Surrogate: 13C8-PFOAo* | *7.48o* | | | *ng/Lo* | *8.00o* | | *93.5o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *3.33o* | | | *ng/Lo* | *4.00o* | | *83.2o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *3.53o* | | | *ng/Lo* | *4.00o* | | *88.1o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *3.43o* | | | *ng/Lo* | *4.00o* | | *85.8o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.32o* | | | *ng/Lo* | *4.00o* | | *82.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.00o* | | | *ng/Lo* | *4.00o* | | *75.1o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.46o* | | | *ng/Lo* | *8.00o* | | *68.2o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *7.42o* | | | *ng/Lo* | *8.00o* | | *92.8o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.61o* | | | *ng/Lo* | *8.00o* | | *95.2o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *6.91o* | | | *ng/Lo* | *8.00o* | | *86.4o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.2o* | | | *ng/Lo* | *16.0o* | | *114o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *15.7o* | | | *ng/Lo* | *16.0o* | | *97.9o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *15.7o* | | | *ng/Lo* | *16.0o* | | *98.0o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *31.5o* | | | *ng/Lo* | *32.0o* | | *98.3o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *5.32o* | | | *ng/Lo* | *8.00o* | | *66.5o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *1.74o* | | | *ng/Lo* | *8.00o* | | *21.8o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *1.43o* | | | *ng/Lo* | *8.00o* | | *17.8o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.9o* | | | *ng/Lo* | *16.0o* | | *86.6o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *13.6o* | | | *ng/Lo* | *16.0o* | | *85.1o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *44.0o* | | | *ng/Lo* | *80.0o* | | *54.9o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *41.3o* | | | *ng/Lo* | *80.0o* | | *51.6o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *29.4o* | | | *ng/Lo* | *32.0o* | | *92.0o* | *40-130o* | | |
| **LCS (BDC0208-BS1)u** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/18/24 15:54o | | | | | |
| PFBAo | 16.8o | | 0.21o | ng/Lo | 16.0o | | 105o | 70-140o | | |
| PFPeAo | 8.37o | | 0.065o | ng/Lo | 8.00o | | 105o | 65-135o | | |
| PFHxAo | 4.17o | | 0.055o | ng/Lo | 4.00o | | 104o | 70-145o | | |
| PFHpAo | 3.87o | | 0.041o | ng/Lo | 4.00o | | 96.8o | 70-150o | | |
| PFOAo | 4.07o | | 0.15o | ng/Lo | 4.00o | | 102o | 70-150o | | |
| PFNAo | 4.06o | | 0.082o | ng/Lo | 4.00o | | 102o | 70-150o | | |
| PFDAo | 3.94o | | 0.10o | ng/Lo | 4.00o | | 98.6o | 70-140o | | |
| PFUnAo | 4.01o | | 0.16o | ng/Lo | 4.00o | | 100o | 70-145o | | |
| PFDoAo | 3.97o | | 0.11o | ng/Lo | 4.00o | | 99.3o | 70-140o | | |
| PFTrDAo | 4.04o | | 0.20o | ng/Lo | 4.00o | | 101o | 65-140o | | |
| PFTeDAo | 3.93o | | 0.20o | ng/Lo | 4.00o | | 98.3o | 60-140o | | |
| PFHxDAo | 3.95o | | 0.20o | ng/Lo | 4.00o | | 98.8o | 40-150o | | |
| PFODAo | 3.42o | | 0.20o | ng/Lo | 4.00o | | 85.4o | 40-150o | | |
| PFBSo | 3.51o | | 0.037o | ng/Lo | 3.54o | | 99.3o | 60-145o | | |
| PFPeSo | 3.94o | | 0.063o | ng/Lo | 3.76o | | 105o | 65-140o | | |
| PFHxSo | 3.88o | | 0.032o | ng/Lo | 3.66o | | 106o | 65-145o | | |
| PFHpSo | 4.19o | | 0.051o | ng/Lo | 3.82o | | 110o | 70-150o | | |
| PFOSo | 3.89o | | 0.064o | ng/Lo | 3.72o | | 104o | 55-150o | | |
| PFNSo | 3.87o | | 0.12o | ng/Lo | 3.84o | | 101o | 65-145o | | |
| PFDSo | 3.70o | | 0.15o | ng/Lo | 3.86o | | 95.9o | 60-145o | | |
| PFDoSo | 3.62o | | 0.12o | ng/Lo | 3.88o | | 93.4o | 50-145o | | |
| 4:2FTSo | 16.1o | | 0.29o | ng/Lo | 15.0o | | 107o | 70-145o | | |
| 6:2FTSo | 15.5o | | 0.31o | ng/Lo | 15.2o | | 102o | 65-155o | | |
| 8:2FTSo | 16.4o | | 0.082o | ng/Lo | 15.4o | | 107o | 60-150o | | |
| 10:2FTSo | 18.5o | | 0.40o | ng/Lo | 15.4o | | 120o | 0-200o | | |
| PFOSAo | 4.27o | | 0.10o | ng/Lo | 4.00o | | 107o | 70-145o | | |

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*No duplication of this report is allowed, except in its entirety.o*

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 10:44o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0208-BS1)u** | | | | | Prepared: 03/14/24 12:39 | | Analyzed: 03/18/24 15:54o | | | |
| NMeFOSAo | 19.4o | | 0.47o | ng/L | 16.0o | | 121 | 60-150 | | |
| NEtFOSAo | 15.9o | | 0.41o | ng/L | 16.0o | | 99.2 | 65-145 | | |
| NMeFOSAAo | 3.98o | | 0.11o | ng/L | 4.00o | | 99.4 | 50-140 | | |
| NEtFOSAAo | 4.12o | | 0.11o | ng/L | 4.00o | | 103 | 70-145 | | |
| NMeFOSEo | 14.7o | | 1.0o | ng/L | 16.0o | | 91.8 | 70-145 | | |
| NEtFOSEo | 15.9o | | 1.0o | ng/L | 16.0o | | 99.3 | 70-135 | | |
| HFPO-DAo | 3.98o | | 0.17o | ng/L | 4.00o | | 99.6 | 70-140 | | |
| ADONAo | 3.76o | | 0.12o | ng/L | 3.78o | | 99.6 | 65-145 | | |
| PFEESAo | 7.06o | | 0.11o | ng/L | 7.12o | | 99.2 | 70-140 | | |
| PFMPAo | 8.43o | | 0.054o | ng/L | 8.00o | | 105 | 55-140 | | |
| PFMBAo | 8.17o | | 0.091o | ng/L | 8.00o | | 102 | 60-150 | | |
| NFDHAo | 8.20o | | 0.30o | ng/L | 8.00o | | 103 | 50-150 | | |
| 9Cl-PF3ONSo | 3.12o | | 0.21o | ng/L | 3.74o | | 83.3 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.03o | | 0.21o | ng/L | 3.78o | | 80.2 | 55-160 | | |
| 3:3FTCAo | 16.6o | | 0.57o | ng/L | 16.0o | | 104 | 65-130 | | |
| 5:3FTCAo | 16.7o | | 0.44o | ng/L | 16.0o | | 104 | 70-135 | | |
| 7:3FTCAo | 17.7o | | 0.55o | ng/L | 16.0o | | 111 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *30.1o* | | | *ng/Lo* | *32.0o* | | *94.1* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *15.5o* | | | *ng/Lo* | *16.0o* | | *96.7* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *7.79o* | | | *ng/Lo* | *8.00o* | | *97.3* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.45o* | | | *ng/Lo* | *8.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.61o* | | | *ng/Lo* | *8.00o* | | *95.2* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.86o* | | | *ng/Lo* | *4.00o* | | *96.6* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.62o* | | | *ng/Lo* | *4.00o* | | *90.6* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *3.51o* | | | *ng/Lo* | *4.00o* | | *87.6* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.12o* | | | *ng/Lo* | *4.00o* | | *77.9* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *2.91o* | | | *ng/Lo* | *4.00o* | | *72.8* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *4.91o* | | | *ng/Lo* | *8.00o* | | *61.4* | *0-200* | | |
| *Surrogate: 13C3-PFBSo* | *7.20o* | | | *ng/Lo* | *8.00o* | | *90.0* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *7.08o* | | | *ng/Lo* | *8.00o* | | *88.5* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *7.18o* | | | *ng/Lo* | *8.00o* | | *89.8* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *21.1o* | | | *ng/Lo* | *16.0o* | | *132* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *21.3o* | | | *ng/Lo* | *16.0o* | | *133* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.7o* | | | *ng/Lo* | *16.0o* | | *123* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *33.8o* | | | *ng/Lo* | *32.0o* | | *106* | *0-200* | | |
| *Surrogate: 13C8-PFOSAo* | *5.68o* | | | *ng/Lo* | *8.00o* | | *71.0* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.76o* | | | *ng/Lo* | *8.00o* | | *22.0* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.50o* | | | *ng/Lo* | *8.00o* | | *18.8* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *15.4o* | | | *ng/Lo* | *16.0o* | | *96.4* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *14.8o* | | | *ng/Lo* | *16.0o* | | *92.4* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *41.1o* | | | *ng/Lo* | *80.0o* | | *51.4* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *36.6o* | | | *ng/Lo* | *80.0o* | | *45.7* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.7o* | | | *ng/Lo* | *32.0o* | | *102* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0208-MRL1)u** | | | | | Prepared: 03/14/24 12:39 | Analyzed: 03/18/24 16:14o | | | | |
| PFBAo | 3.29o | | 0.21o | ng/Lo | 3.20o | | 103o | 70-140 | | |
| PFPeAo | 1.54o | | 0.065o | ng/Lo | 1.60o | | 96.2o | 65-135 | | |
| PFHxAo | 0.724o | | 0.055o | ng/Lo | 0.800o | | 90.5o | 70-145 | | |
| PFHpAo | 0.780o | | 0.041o | ng/Lo | 0.800o | | 97.5o | 70-150 | | |
| PFOAo | 0.959oMI4o | | 0.15o | ng/Lo | 0.800o | | 120o | 70-150 | | |
| PFNAo | 0.780o | | 0.082o | ng/Lo | 0.800o | | 97.5o | 70-150 | | |
| PFDAo | 0.827o | | 0.10o | ng/Lo | 0.800o | | 103o | 70-140 | | |
| PFUnAo | 0.774o | | 0.16o | ng/Lo | 0.800o | | 96.7o | 70-145 | | |
| PFDoAo | 0.755o | | 0.11o | ng/Lo | 0.800o | | 94.4o | 70-140 | | |
| PFTrDAo | 0.754o | | 0.20o | ng/Lo | 0.800o | | 94.3o | 65-140 | | |
| PFTeDAo | 0.791o | | 0.20o | ng/Lo | 0.800o | | 98.9o | 60-140 | | |
| PFHxDAo | 0.973o | | 0.20o | ng/Lo | 0.800o | | 122o | 40-150 | | |
| PFODAo | 0.829o | | 0.20o | ng/Lo | 0.800o | | 104o | 40-150 | | |
| PFBSo | 0.691o | | 0.037o | ng/Lo | 0.708o | | 97.6o | 60-145 | | |
| PFPeSo | 0.779o | | 0.063o | ng/Lo | 0.752o | | 104o | 65-140 | | |
| PFHxSo | 0.752o | | 0.032o | ng/Lo | 0.732o | | 103o | 65-145 | | |
| PFHpSo | 0.774o | | 0.051o | ng/Lo | 0.764o | | 101o | 70-150 | | |
| PFOSo | 0.776o | | 0.064o | ng/Lo | 0.744o | | 104o | 55-150 | | |
| PFNSo | 0.707o | | 0.12o | ng/Lo | 0.768o | | 92.1o | 65-145 | | |
| PFDSo | 0.716o | | 0.15o | ng/Lo | 0.772o | | 92.8o | 60-145 | | |
| PFDoSo | 0.662o | | 0.12o | ng/Lo | 0.776o | | 85.3o | 50-145 | | |
| 4:2FTSo | 3.05o | | 0.29o | ng/Lo | 3.00o | | 102o | 70-145 | | |
| 6:2FTSo | 3.03o | | 0.31o | ng/Lo | 3.04o | | 99.6o | 65-155 | | |
| 8:2FTSo | 2.97o | | 0.082o | ng/Lo | 3.07o | | 96.6o | 60-150 | | |
| 10:2FTSo | 4.19o | | 0.40o | ng/Lo | 3.09o | | 136o | 0-200 | | |
| PFOSAo | 0.781o | | 0.10o | ng/Lo | 0.800o | | 97.7o | 70-145 | | |
| NMeFOSAo | 3.56o | | 0.47o | ng/Lo | 3.20o | | 111o | 60-150 | | |
| NEtFOSAo | 3.01o | | 0.41o | ng/Lo | 3.20o | | 94.0o | 65-145 | | |
| NMeFOSAAo | 0.774o | | 0.11o | ng/Lo | 0.800o | | 96.8o | 50-140 | | |
| NEtFOSAAo | 0.786o | | 0.11o | ng/Lo | 0.800o | | 98.3o | 70-145 | | |
| NMeFOSEo | 3.09o | | 1.0o | ng/Lo | 3.20o | | 96.5o | 70-145 | | |
| NEtFOSEo | 3.18o | | 1.0o | ng/Lo | 3.20o | | 99.3o | 70-135 | | |
| HFPO-DAo | 0.816o | | 0.17o | ng/Lo | 0.800o | | 102o | 70-140 | | |
| ADONAo | 0.749odo | | 0.12o | ng/Lo | 0.756o | | 99.0o | 65-145 | | |
| PFEESAo | 1.36o | | 0.11o | ng/Lo | 1.42o | | 95.2o | 70-140 | | |
| PFMPAo | 1.52o | | 0.054o | ng/Lo | 1.60o | | 94.9o | 55-140 | | |
| PFMBAo | 1.48o | | 0.091o | ng/Lo | 1.60o | | 92.5o | 60-150 | | |
| NFDHAo | 1.51o | | 0.30o | ng/Lo | 1.60o | | 94.4o | 50-150 | | |
| 9Cl-PF3ONSo | 0.648odo | | 0.21o | ng/Lo | 0.748o | | 86.7o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.636odo | | 0.21o | ng/Lo | 0.756o | | 84.1o | 55-160 | | |
| 3:3FTCAo | 3.07o | | 0.57o | ng/Lo | 3.20o | | 95.8o | 65-130 | | |
| 5:3FTCAo | 3.11o | | 0.44o | ng/Lo | 3.20o | | 97.1o | 70-135 | | |
| 7:3FTCAo | 3.27o | | 0.55o | ng/Lo | 3.20o | | 102o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.1o* | | | *ng/Lo* | *32.0o* | | *103o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.4o* | | | *ng/Lo* | *16.0o* | | *109o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.67o* | | | *ng/Lo* | *8.00o* | | *108o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.87o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *7.97o* | | | *ng/Lo* | *8.00o* | | *99.6o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.26o* | | | *ng/Lo* | *4.00o* | | *107o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *3.98o* | | | *ng/Lo* | *4.00o* | | *99.5o* | *40-130 o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 10:44 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0208-MRL1)** | | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/18/24 16:14 | | | | | |
| *Surrogate: 13C7-PFUnA* | *3.70* | | | | *ng/L* | *4.00* | | *92.5* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.59* | | | | *ng/L* | *4.00* | | *89.7* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.12* | | | | *ng/L* | *4.00* | | *77.9* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *4.92* | | | | *ng/L* | *8.00* | | *61.4* | *0-200* | | |
| *Surrogate: 13C3-PFBS* | *7.44* | | | | *ng/L* | *8.00* | | *93.0* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *7.66* | | | | *ng/L* | *8.00* | | *95.7* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *8.17* | | | | *ng/L* | *8.00* | | *102* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *23.9* | | | | *ng/L* | *16.0* | | *149* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *25.3* | | | | *ng/L* | *16.0* | | *158* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *24.3* | | | | *ng/L* | *16.0* | | *152* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *34.5* | | | | *ng/L* | *32.0* | | *108* | *0-200* | | |
| *Surrogate: 13C8-PFOSA* | *6.21* | | | | *ng/L* | *8.00* | | *77.7* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *2.11* | | | | *ng/L* | *8.00* | | *26.4* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *1.77* | | | | *ng/L* | *8.00* | | *22.1* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *16.6* | | | | *ng/L* | *16.0* | | *104* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *17.2* | | | | *ng/L* | *16.0* | | *108* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *44.8* | | | | *ng/L* | *80.0* | | *56.0* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *40.4* | | | | *ng/L* | *80.0* | | *50.5* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *33.9* | | | | *ng/L* | *32.0* | | *106* | *40-130* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 10:44o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI3o | Manual integration, peaks split o |
| MI4o | Manual integration, peak unsplit o |
| MI5o | Manual integration, whole peak was not integrated o |
| MI6o | Manual integration, wrong peak integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0076** R

Printed: 03/28/2024 10:45 ami

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/13/2024 10:00 AMi
Date Due:i 03/27/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Steven Crupi

| Analysisa | Commentsa |
|---|---|

**24C0076-01 MW-4-4 [Water] Sampled 3/12/2024 8:15:00AMR**
1633i NASA Listi

**24C0076-02 MW-4-3 [Water] Sampled 3/12/2024 8:40:00AMR**
1633i NASA Listi

**24C0076-03 MW-4-2 [Water] Sampled 3/12/2024 9:10:00AMR**
1633i NASA Listi

**24C0076-04 DUP-2-031224 [Water] Sampled 3/12/2024 9:20:00AMR**
1633i NASA Listi

**24C0076-05 MW-4-1 [Water] Sampled 3/12/2024 9:40:00AMR**
1633i NASA Listi

**24C0076-06 MW-14-4 [Water] Sampled 3/12/2024 10:40:00AMR**
1633i NASA Listi

**24C0076-07 MW-14-3 [Water] Sampled 3/12/2024 11:00:00AMR**
1633i NASA Listi

**24C0076-08 MW-14-2 [Water] Sampled 3/12/2024 11:20:00AMR**
1633i NASA Listi

**24C0076-09 MW-14-1 [Water] Sampled 3/12/2024 11:40:00AMR**
1633i NASA Listi

**24C0076-10 EB-2-031224 [Water] Sampled 3/12/2024 11:50:00AMR**
1633i NASA Listi

**24C0076-11 FB-2-031224 [Water] Sampled 3/12/2024 12:00:00PMR**
1633i NASA Listi

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# WORK ORDER

**24C0076** R

Printed: 03/28/2024 10:45 ami

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0076C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **-0.6°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yes i |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yes i |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yes i |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yes i |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yes i |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | No i |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | No i |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | No i |

APPL, Inc.
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Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

24C0076

C.O.C. 62613

| Report to: PLEASE PRINT | Invoice to: PLEASE PRINT |
|---|---|
| Company Name: Tidewater Inc | Company Name: Tidewater |
| Phone: (626)-298-5715 | Phone: (626)-298-5715 |
| Address: 3761 A Hucks Dr Powell OH 43065 | Address: 3761 A Hucks Dr Powell OH 43065 |
| Fax: (614)-792-2897 | Fax: (614)-792-2897 |
| Attn: David Conner | Attn: David Conner |
| Email: david.conner@tideh20.net | Email: david.conner@tideh20.net |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Think Haas |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Matrix: Sed. | Matrix: Soil | Analysis Requested/Method Number: PFAS 1633 | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-4-4 | | 03/12/24 | 0815 | | 1 | X | | | X | Laboratory, please |
| MW-4-3 | | | 0840 | | 1 | X | | | X | select 2 SDGs for |
| MW-4-2 | | | 0910 | | 1 | X | | | X | level IV validation |
| DUP-2-031224 | | | 0920 | | 1 | X | | | X | |
| MW-4-1 | | | 0940 | | 1 | X | | | X | |
| MW-14-4 | | | 1040 | | 1 | X | | | X | |
| MW-14-3 | | | 1100 | | 1 | X | | | X | |
| MW-14-2 | | | 1120 | | 1 | X | | | X | |
| MW-14-1 | | | 1140 | | 1 | X | | | X | |
| EB-2-031224 | | | 1150 | | 1 | X | | | X | |
| FB-2-031224 | | | 1200 | | 1 | X | | | X | |

Shuttle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/12/24 | 1410 | Nicole Parks | Nicole Parks | 3/12/24 | 1600 | FEDEX 775511291292 |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/13/24 | 1000 | Steve R. Cupp |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information

IRB -0.6°C



Table of Contents

24C0076

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

MW-4-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-01- | File ID:- | S2024-03-18A (12)- |
| Sampled:- | 03/12/24 08:15- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 17:16- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 531.097 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 3.3- | 0.20- | 1.5- | |
| PFPeA- | 5.2- | 0.061- | 0.75- | |
| PFHxA- | 4.9- | 0.052- | 0.38- | |
| PFHpA- | 4.3- | 0.039- | 0.38- | |
| PFOA- | 2.9- | 0.14- | 0.38- | MI4- |
| PFNA- | 0.091- | 0.077- | 0.38- | MI6, J- |
| PFDA- | 0.18- | 0.095- | 0.38- | J- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | IR2, U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | U- |
| PFBS- | 7.5- | 0.035- | 0.38- | |
| PFPeS- | 0.26- | 0.059- | 0.38- | J- |
| PFHxS- | 2.5- | 0.030- | 0.38- | |
| PFHpS- | ND- | 0.048- | 0.38- | U- |
| PFOS- | 0.76- | 0.060- | 0.38- | IR1, MI3- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.098- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

MW-4-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-01- | File ID:- | S2024-03-18A (12)- |
| Sampled:- | 03/12/24 08:15- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 17:16- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 531.097 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.99- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.051- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (12)
Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 164862<br>( 163.0 / 69.0 ) 4270 | ( 2.81 , 0.75 )<br>( N/A , 0.04 , 0.4) | 767.6<br>183.6 | 0.0259<br>103.3<br>99.0 | 0.6504 | N/A | 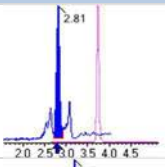 | 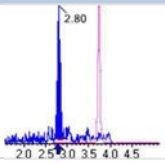 | |
| PFBA | ( 213.0 / 169.0 ) 237036 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 474.1 | N/A<br>0.0<br>0.0 | 0.8744 | N/A | 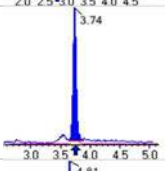 | | |
| PFPeA | ( 263.0 / 219.0 ) 356602<br>( 263.0 / 69.0 ) 4345 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1329.4<br>53.1 | 0.0122<br>110.9<br>104.2 | 1.3861 | N/A | 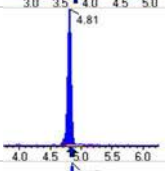 | 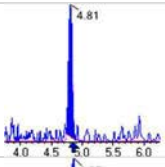 | |
| PFHxA | ( 313.0 / 269.0 ) 419836<br>( 313.0 / 119.0 ) 49036 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1048.7<br>606.3 | 0.1168<br>105.1<br>102.8 | 1.3102 | N/A | 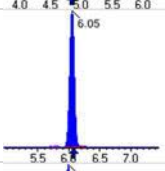 | 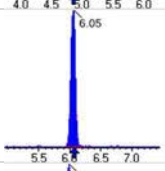 | |
| PFHpA | ( 363.0 / 319.0 ) 435043<br>( 363.0 / 169.0 ) 135044 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1072.9<br>729.4 | 0.3104<br>99.6<br>105.6 | 1.1311 | N/A | 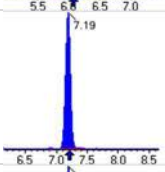 | 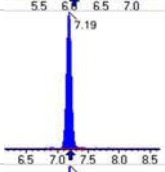 | |
| PFOA | ( 413.0 / 369.0 ) 400589<br>( 413.0 / 169.0 ) 151601 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , -0.1) | 416.0<br>471.5 | 0.3784<br>104.6<br>106.6 | 0.7662 | N/A | 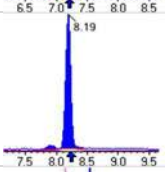 | 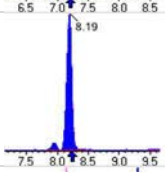 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 ) 8576<br>( 463.0 / 169.0 ) 2516 | ( 9.13 , 1.00 )<br>( -0.01 , N/A , -1.0) | 14.9<br>12.0 | 0.2933<br>111.8<br>119.2 | 0.0242 | N/A | 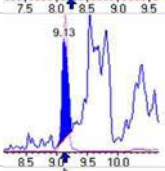 | 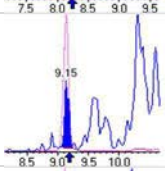 | MI6 ABK 3/1/8/24 |
| PFDA | ( 513.0 / 469.0 ) 18589<br>( 513.0 / 169.0 ) 2446 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , 0.7) | 133.0<br>42.5 | 0.1316<br>112.1<br>109.0 | 0.0489 | N/A | 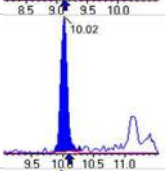 | 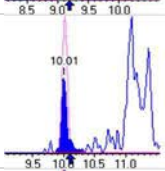 | |
| PFUnA | ( 563.0 / 519.0 ) 4270<br>( 563.0 / 169.0 ) 807 | ( 10.88 , 1.00 )<br>( -0.01 , N/A , -1.6) | 38.0<br>11.4 | 0.1890<br>127.6<br>130.6 | 0.0108 | N/A | 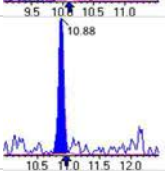 | 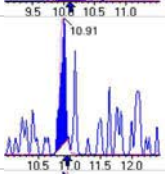 | |
| PFDoA | ( 613.0 / 569.0 ) 7884<br>( 613.0 / 169.0 ) 2170 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 1.6) | 55.3<br>24.7 | 0.2752<br>174.1<br>179.9 | 0.0179 | N/A | 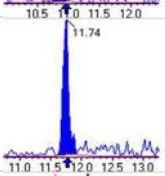 | 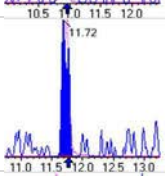 | IR2, |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 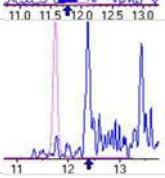 | 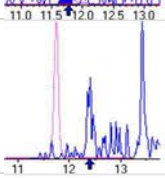 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 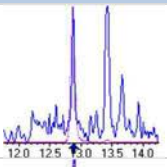 | 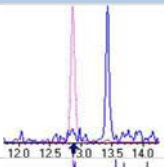 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 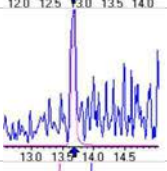 | 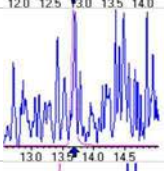 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 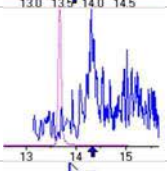 | 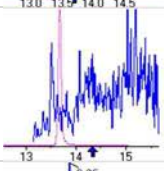 | |
| PFBS | ( 299.0 / 80.0 )<br>1088595<br>( 299.0 / 99.0 )<br>808544 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1198.6<br>1836.6 | 0.7427<br>104.5<br>103.0 | 1.9919 | N/A | 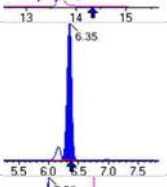 | 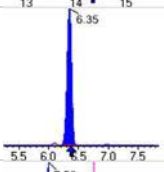 | |
| PFPeS | ( 349.0 / 80.0 )<br>92074<br>( 349.0 / 99.0 )<br>33248 | ( 7.58 , 0.88 )<br>( N/A , -0.03 , 0.2) | 150.7<br>196.9 | 0.3611<br>106.2<br>105.2 | 0.0679 | N/A | 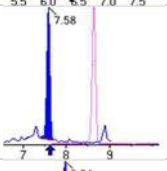 | 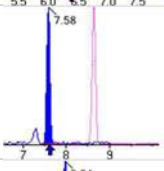 | |
| PFHxS | ( 399.0 / 80.0 )<br>1000758<br>( 399.0 / 99.0 )<br>302273 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , -0.1) | 836.3<br>1698.5 | 0.3020<br>96.6<br>94.1 | 0.6637 | N/A | 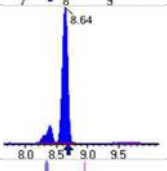 | 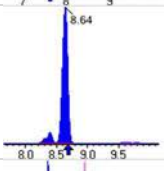 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 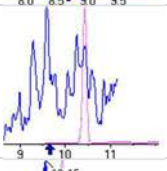 | 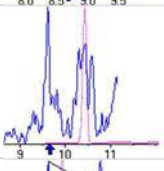 | |
| PFOS | ( 499.0 / 80.0 )<br>196653<br>( 499.0 / 99.0 )<br>18775 | ( 10.15 , 0.97 )<br>( -0.28 , N/A , -6.8) | 129.2<br>64.7 | 0.0955<br>40.4<br>43.6 | 0.2027 | N/A | 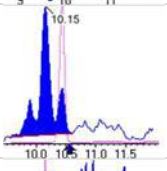 | 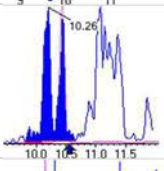 | IR1,MI3 ABK 3/18/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 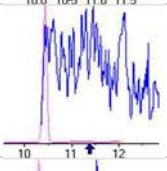 | 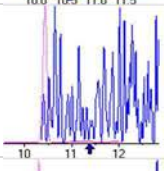 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 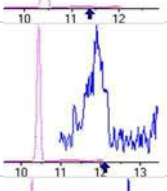 | 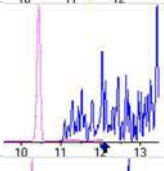 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 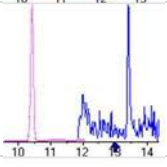 | 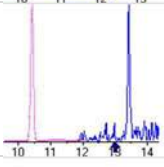 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (12)
Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 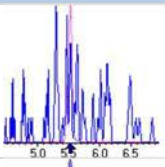 | 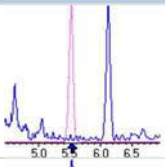 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 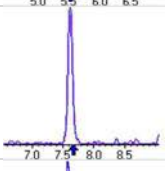 | 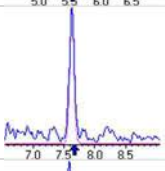 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 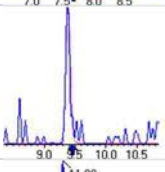 | 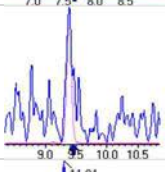 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>10588<br>( 627.0 / 81.0 )<br>13764 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , -0.5) | 140.3<br>42.4 | 1.2999<br>96.2<br>94.9 | 0.0552 | N/A | 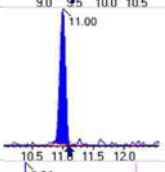 | 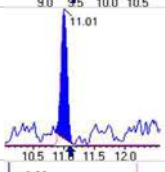 | |
| PFBSA | ( 297.9 / 78.0 )<br>162111<br>( 297.9 / 278.0 )<br>149 | ( 8.04 , 0.57 )<br>( N/A , -0.02 , -0.7) | 750.3<br>8.1 | 0.0009<br>65.6<br>58.2 | 0.6488 | N/A | 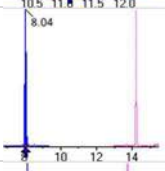 | 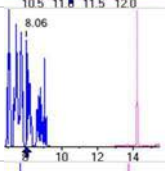 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 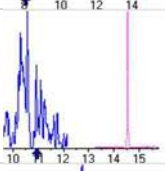 | 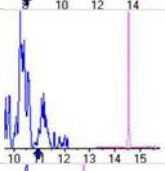 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 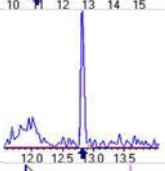 | 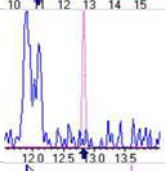 | |
| TFSI | ( 279.7 / 147.0 )<br>109866<br>( 279.7 / 211.0 )<br>9873 | ( 8.21 , 0.64 )<br>( N/A , -0.04 , 0.2) | 37.6<br>16.6 | 0.0899<br>109.0<br>105.7 | 0.0592 | N/A | 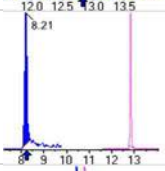 | 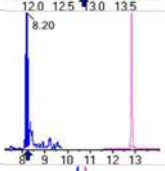 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 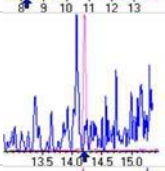 | 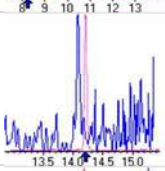 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 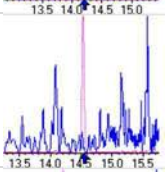 | 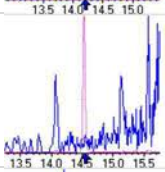 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 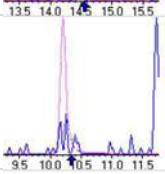 | 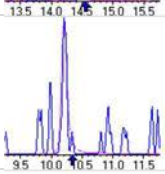 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (12)
Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 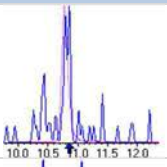 | 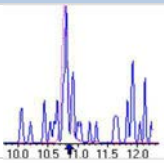 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 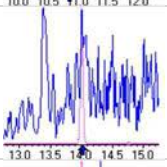 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 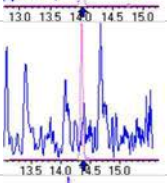 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 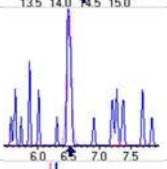 | 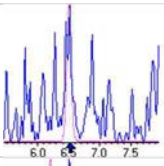 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 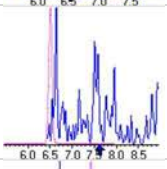 | 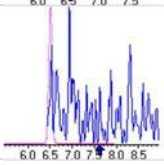 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 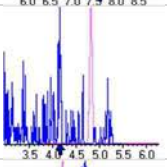 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 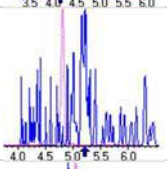 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 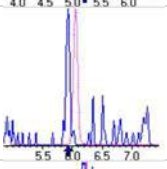 | 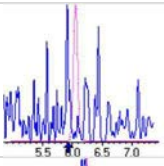 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 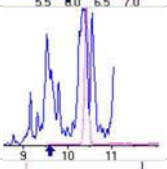 | 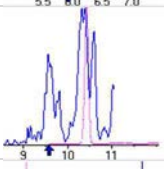 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 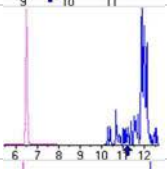 | 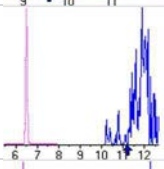 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 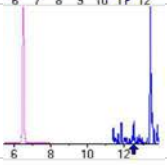 | 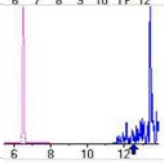 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 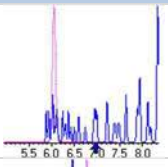 | 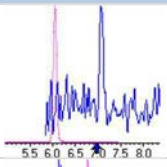 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 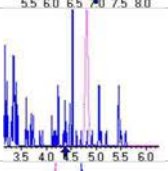 | 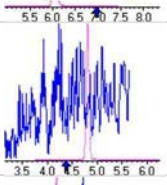 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 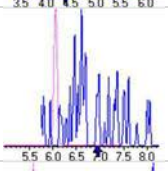 | 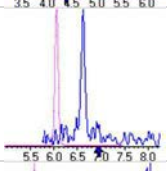 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 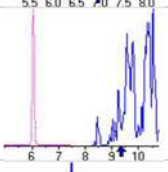 | 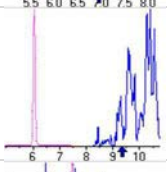 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 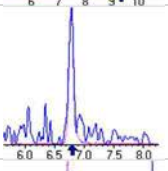 | 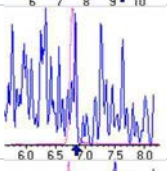 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 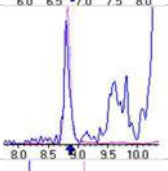 | 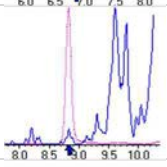 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 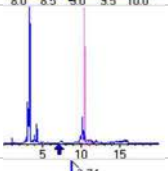 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 276925 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1149.8 | N/A | 0.9193<br>[ 1.0000 ] | 91.9%<br>{ 81.8% } | 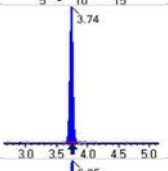 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 139336 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 111444.5 | N/A | 0.9061<br>[ 1.0000 ] | 90.6%<br>{ 81.8% } | 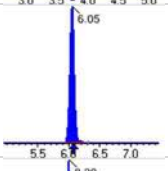 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 442892 | ( 8.20 , N/A )<br>( N/A , -0.04 , N/A ) | 2020.9 | N/A | 0.9927<br>[ 1.0000 ] | 99.3%<br>{ 90.7% } | 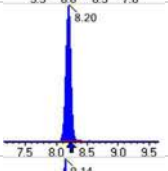 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 338307 | ( 9.14 , N/A )<br>( N/A , -0.05 , N/A ) | 514.3 | N/A | 1.0120<br>[ 1.0000 ] | 101.2%<br>{ 88.0% } | 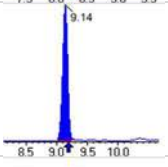 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 311604 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 1990.1 | N/A | 0.9396 [ 1.0000 ] | 94.0% { 82.5% } | 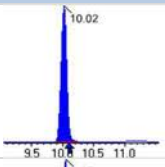 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1092547 | ( 8.65 , N/A ) ( N/A , -0.04 , N/A ) | 2635.5 | N/A | 0.9777 [ 1.0000 ] | 97.8% { 87.2% } | 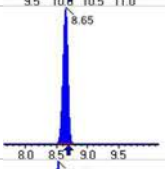 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 694857 | ( 10.43 , N/A ) ( N/A , -0.12 , N/A ) | 546.0 | N/A | 0.7118 [ 1.0000 ] | 71.2% { 65.7% } | 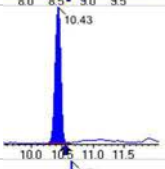 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2292243 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 36173.9 | N/A | 7.5061 [ 8.0000 ] | 93.8% { 80.7% } | 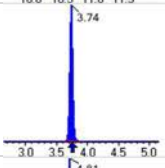 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1010904 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 6269.0 | N/A | 4.0441 [ 4.0000 ] | 101.1% { 78.9% } | 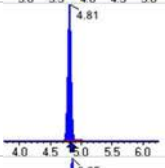 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 661404 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 7980.2 | N/A | 2.2108 [ 2.0000 ] | 110.5% { 87.2% } | 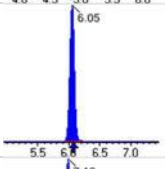 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 781048 | ( 7.19 , N/A ) ( N/A , -0.03 , N/A ) | 6084.6 | N/A | 2.4997 [ 2.0000 ] | 125.0% { 95.1% } | 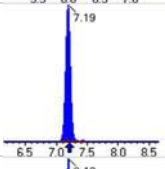 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1028263 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 2805.1 | N/A | 2.2020 [ 2.0000 ] | 110.1% { 94.6% } | 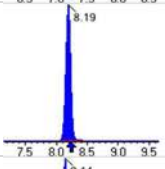 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 353866 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 1240.5 | N/A | 1.0832 [ 1.0000 ] | 108.3% { 93.6% } | 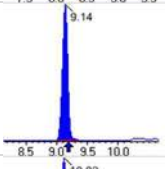 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 381459 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 1104.7 | N/A | 1.0609 [ 1.0000 ] | 106.1% { 80.9% } | 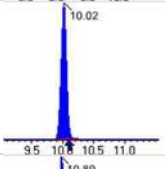 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 425104 | ( 10.89 , N/A ) ( N/A , -0.07 , N/A ) | 1169.4 | N/A | 0.9724 [ 1.0000 ] | 97.2% { 83.8% } | 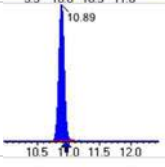 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 429555 | ( 11.74 , N/A ) ( N/A , -0.03 , N/A ) | 1083.7 | N/A | 0.9784 [ 1.0000 ] | 97.8% { 82.7% } | 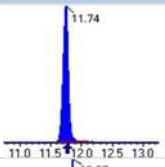 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 296220 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1132.1 | N/A | 0.7743 [ 1.0000 ] | 77.4% { 66.9% } | 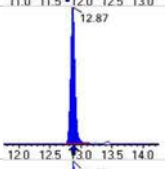 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 486684 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 3030.3 | N/A | 1.4977 [ 2.0000 ] | 74.9% { 60.5% } | 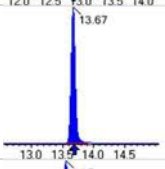 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2101950 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 1015.8 | N/A | 1.9746 [ 2.0000 ] | 98.7% { 88.2% } | 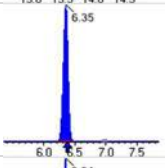 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1702860 | ( 8.64 , N/A ) ( N/A , -0.04 , N/A ) | 2686.2 | N/A | 2.1300 [ 2.0000 ] | 106.5% { 96.6% } | 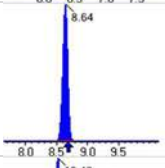 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1678183 | ( 10.43 , N/A ) ( N/A , -0.12 , N/A ) | 578.7 | N/A | 2.2686 [ 2.0000 ] | 113.4% { 75.2% } | 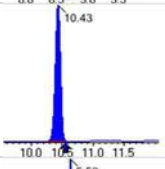 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 705106 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 90.7 | N/A | 7.4112 [ 4.0000 ] | 185.3% { 127.5% } | 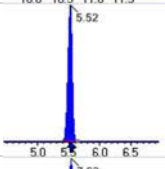 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2048258 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 2619.6 | N/A | 6.9326 [ 4.0000 ] | 173.3% { 125.8% } | 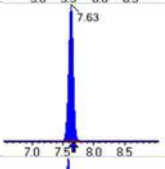 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1476123 | ( 9.39 , N/A ) ( N/A , -0.07 , N/A ) | 1201.0 | N/A | 5.0148 [ 4.0000 ] | 125.4% { 86.5% } | 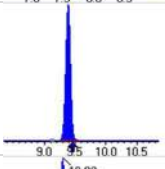 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 1863858 | ( 10.99 , N/A ) ( N/A , -0.10 , N/A ) | 1306.0 | N/A | 5.5163 [ 8.0000 ] | 69.0% { 50.2% } | 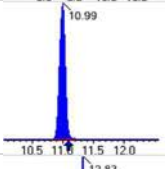 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1788203 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2160.8 | N/A | 2.2307 [ 2.0000 ] | 111.5% { 73.8% } | 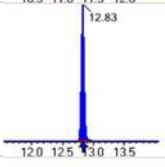 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 108686 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 766.1 | N/A | 0.7342 [ 2.0000 ] | 36.7% { 25.4% } | 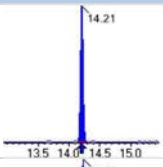 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 118751 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 968.1 | N/A | 0.6984 [ 2.0000 ] | 34.9% { 24.5% } | 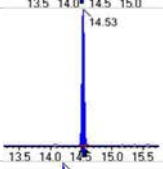 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 621563 | ( 10.21 , N/A ) ( N/A , -0.12 , N/A ) | 2309.2 | N/A | 3.2811 [ 4.0000 ] | 82.0% { 47.1% } | 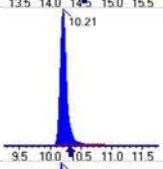 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 878372 | ( 10.78 , N/A ) ( N/A , -0.07 , N/A ) | 1893.7 | N/A | 4.8847 [ 4.0000 ] | 122.1% { 71.3% } | 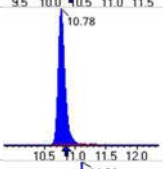 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 826071 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1568.3 | N/A | 11.9433 [ 20.0000 ] | 59.7% { 44.4% } | 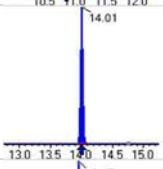 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 961077 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 3225.4 | N/A | 11.4705 [ 20.0000 ] | 57.4% { 45.9% } | 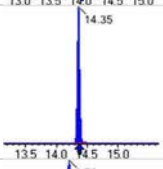 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1194815 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 3122.5 | N/A | 9.2911 [ 8.0000 ] | 116.1% { 85.1% } | 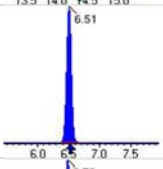 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 579531 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1058.4 | N/A | 2.0970 [ 2.0000 ] | 104.8% { 81.5% } | 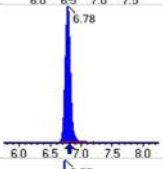 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 590255 | ( 8.82 , N/A ) ( N/A , -0.04 , N/A ) | 590.9 | N/A | 2.2877 [ 2.0000 ] | 114.4% { 88.1% } | 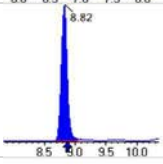 | | |

# ANALYSIS DATA SHEETL

MW-4-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-02- | File ID:- | S2024-03-18A (13)- |
| Sampled:- | 03/12/24 08:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 17:36- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.647 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 4.8- | 0.19- | 1.5- | |
| PFPeA- | 8.7- | 0.061- | 0.75- | |
| PFHxA- | 8.6- | 0.051- | 0.37- | |
| PFHpA- | 7.9- | 0.038- | 0.37- | |
| PFOA- | 4.7- | 0.14- | 0.37- | MI4- |
| PFNA- | ND- | 0.077- | 0.37- | U- |
| PFDA- | 0.095- | 0.095- | 0.37- | J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.19- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 12- | 0.034- | 0.37- | |
| PFPeS- | 0.35- | 0.059- | 0.37- | J- |
| PFHxS- | 4.0- | 0.030- | 0.37- | |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 1.1- | 0.059- | 0.37- | IR1, MI3- |
| PFNS- | ND- | 0.12- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.099- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-4-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-02- | File ID:- | S2024-03-18A (13)- |
| Sampled:- | 03/12/24 08:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 17:36- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.647 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.050- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (13)
Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 116303<br>( 163.0 / 69.0 ) 2912 | ( 2.82 , 0.75 )<br>( N/A , 0.04 , 0.0) | 490.0<br>114.9 | 0.0250<br>99.9<br>95.7 | 0.4759 | N/A | 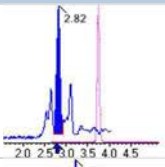 | 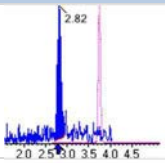 | |
| PFBA | ( 213.0 / 169.0 ) 337159 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 695.4 | N/A<br>0.0<br>0.0 | 1.2901 | N/A | 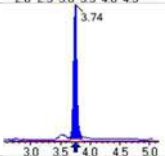 | | |
| PFPeA | ( 263.0 / 219.0 ) 567362<br>( 263.0 / 69.0 ) 7107 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1669.5<br>92.5 | 0.0125<br>114.1<br>107.2 | 2.3362 | N/A | 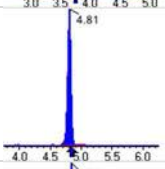 | 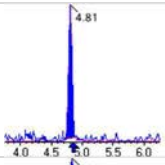 | |
| PFHxA | ( 313.0 / 269.0 ) 724277<br>( 313.0 / 119.0 ) 76350 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1383.2<br>684.4 | 0.1054<br>94.9<br>92.8 | 2.2910 | N/A | 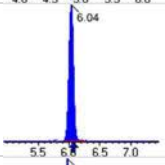 | 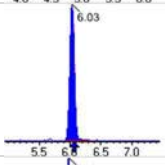 | |
| PFHpA | ( 363.0 / 319.0 ) 765395<br>( 363.0 / 169.0 ) 230566 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1038.1<br>907.7 | 0.3012<br>96.7<br>102.4 | 2.1083 | N/A | 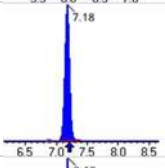 | 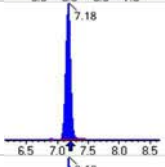 | |
| PFOA | ( 413.0 / 369.0 ) 638921<br>( 413.0 / 169.0 ) 227499 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.1) | 455.7<br>455.0 | 0.3561<br>98.4<br>100.3 | 1.2673 | N/A | 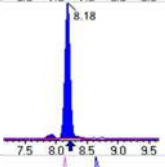 | 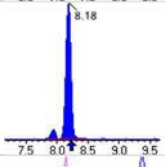 | MI4 ABK 3/18/24 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 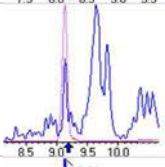 | 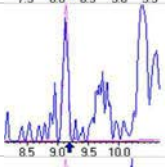 | |
| PFDA | ( 513.0 / 469.0 ) 9599<br>( 513.0 / 169.0 ) 590 | ( 10.04 , 1.00 )<br>( 0.01 , N/A , 0.2) | 56.9<br>17.2 | 0.0615<br>52.4<br>50.9 | 0.0253 | N/A | 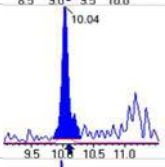 | 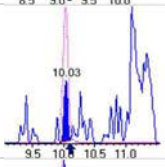 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 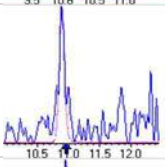 | 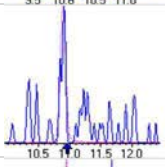 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 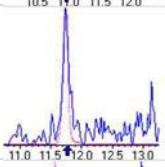 | 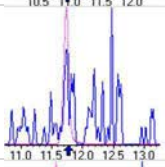 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 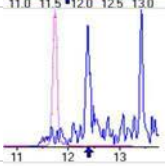 | 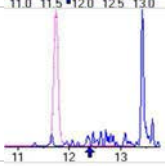 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (13)
Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 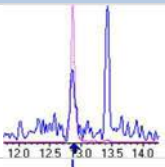 | 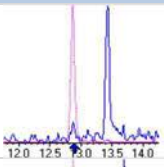 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 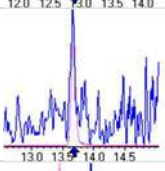 | 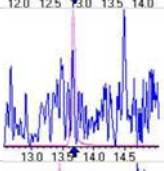 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 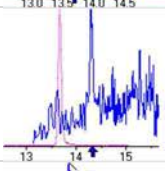 | 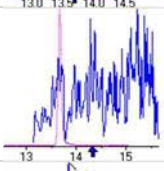 | |
| PFBS | ( 299.0 / 80.0 )<br>1753141<br>( 299.0 / 99.0 )<br>1259524 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1556.1<br>1677.6 | 0.7184<br>101.1<br>99.7 | 3.2919 | N/A | 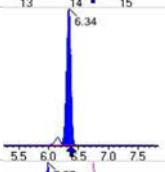 | 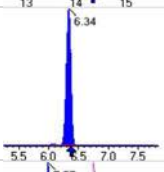 | |
| PFPeS | ( 349.0 / 80.0 )<br>125468<br>( 349.0 / 99.0 )<br>46467 | ( 7.57 , 0.88 )<br>( N/A , -0.04 , -0.1) | 266.4<br>214.9 | 0.3704<br>108.9<br>107.9 | 0.0943 | N/A | 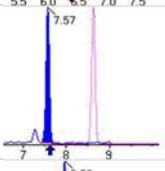 | 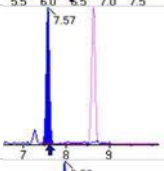 | |
| PFHxS | ( 399.0 / 80.0 )<br>1589646<br>( 399.0 / 99.0 )<br>490020 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1501.2<br>1827.8 | 0.3083<br>98.6<br>96.1 | 1.0746 | N/A | 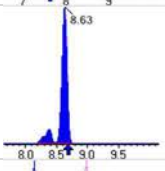 | 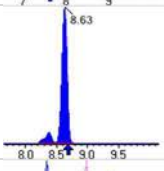 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 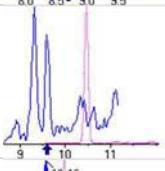 | 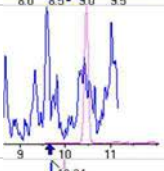 | |
| PFOS | ( 499.0 / 80.0 )<br>318992<br>( 499.0 / 99.0 )<br>29763 | ( 10.16 , 0.97 )<br>( -0.30 , N/A , -4.9) | 193.9<br>141.0 | 0.0933<br>39.4<br>42.6 | 0.2884 | N/A | 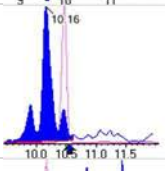 | 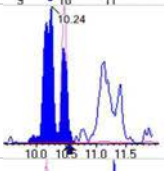 | IR1,MI3 ABK 3/18/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 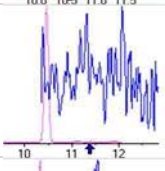 | 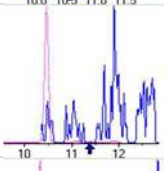 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 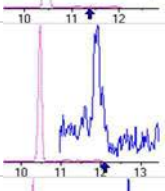 | 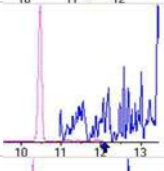 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 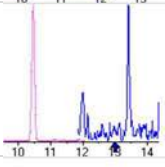 | 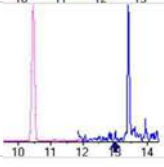 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (13)
Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 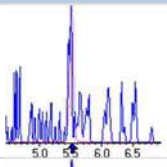 | 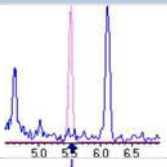 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 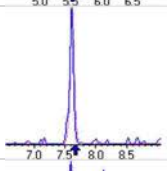 | 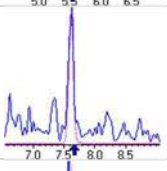 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 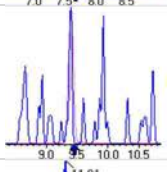 | 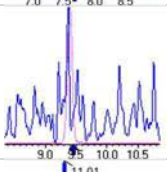 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>12282<br>( 627.0 / 81.0 )<br>16395 | ( 11.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 155.4<br>38.0 | 1.3348<br>98.8<br>97.5 | 0.0510 | N/A | 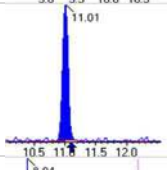 | 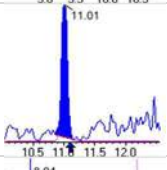 | |
| PFBSA | ( 297.9 / 78.0 )<br>264596<br>( 297.9 / 278.0 )<br>337 | ( 8.04 , 0.57 )<br>( N/A , -0.02 , -0.4) | 785.7<br>5.8 | 0.0013<br>90.7<br>80.5 | 0.8882 | N/A | 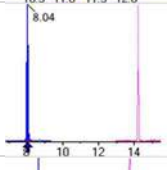 | 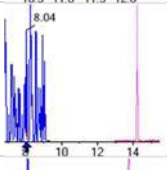 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 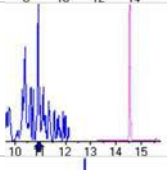 | 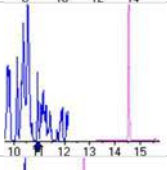 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 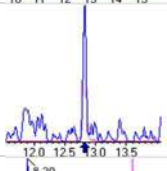 | 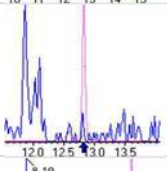 | |
| TFSI | ( 279.7 / 147.0 )<br>142063<br>( 279.7 / 211.0 )<br>10058 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , 0.4) | 44.0<br>15.8 | 0.0708<br>85.9<br>83.3 | 0.0766 | N/A | 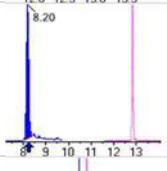 | 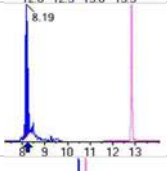 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 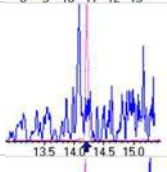 | 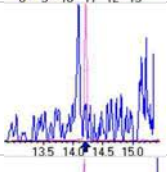 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 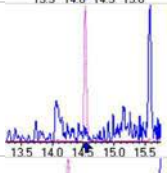 | 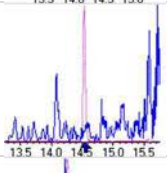 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 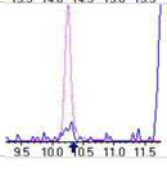 | 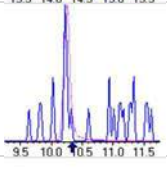 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (13)
Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 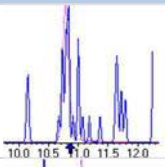 | 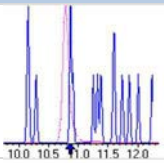 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 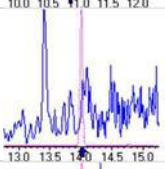 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 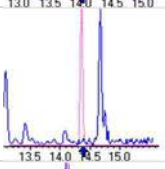 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 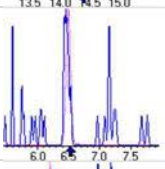 | 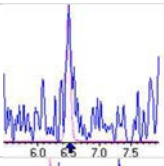 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 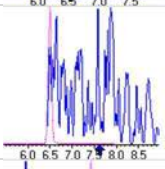 | 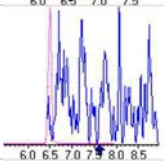 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 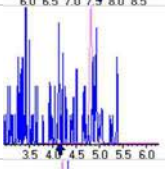 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 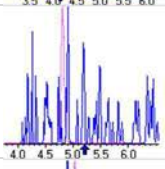 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 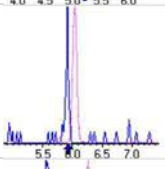 | 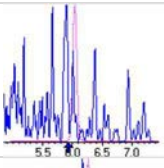 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 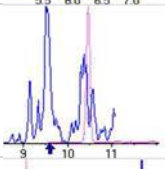 | 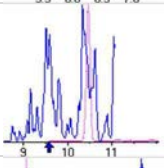 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 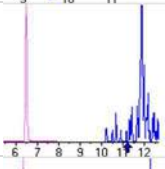 | 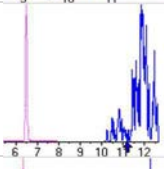 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 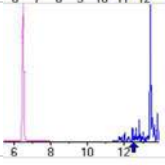 | 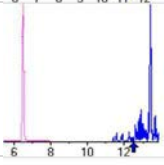 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 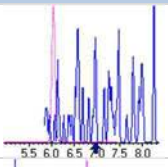 | 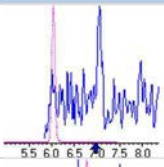 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 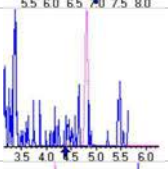 | 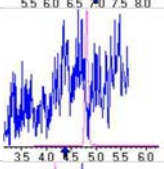 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 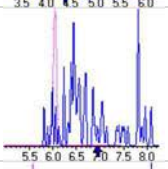 | 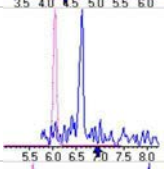 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 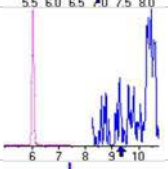 | 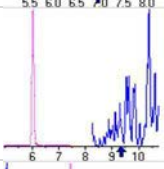 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 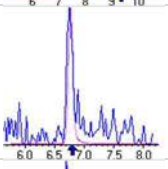 | 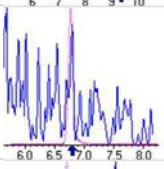 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 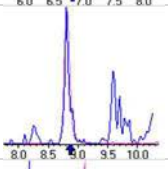 | 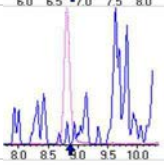 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 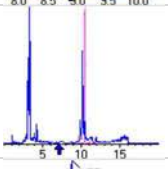 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>280952 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1221.9 | N/A | 0.9326<br>[ 1.0000 ] | 93.3%<br>{ 83.0% } | 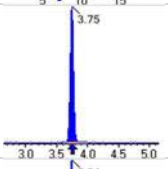 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>145123 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 22963.6 | N/A | 0.9438<br>[ 1.0000 ] | 94.4%<br>{ 85.2% } | 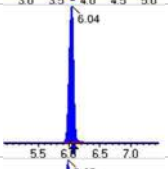 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>458575 | ( 8.19 , N/A )<br>( N/A , -0.05 , N/A ) | 2475.1 | N/A | 1.0279<br>[ 1.0000 ] | 102.8%<br>{ 94.0% } | 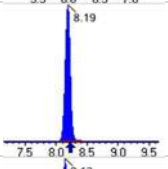 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>329549 | ( 9.13 , N/A )<br>( N/A , -0.05 , N/A ) | 713.3 | N/A | 0.9858<br>[ 1.0000 ] | 98.6%<br>{ 85.7% } | 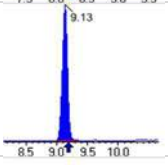 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 333330 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 2877.2 | N/A | 1.0051 [ 1.0000 ] | 100.5% { 88.3% } | 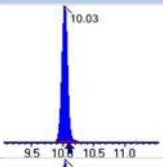 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1062410 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 3869.2 | N/A | 0.9508 [ 1.0000 ] | 95.1% { 84.8% } | 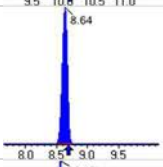 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 843260 | ( 10.47 , N/A ) ( N/A , -0.09 , N/A ) | 819.3 | N/A | 0.8638 [ 1.0000 ] | 86.4% { 79.7% } | 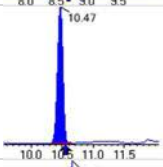 | | MI4 ABK 3/18/24 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2209877 | ( 3.74 , N/A ) ( N/A , 0.00 , N/A ) | 36228.0 | N/A | 7.1327 [ 8.0000 ] | 89.2% { 77.8% } | 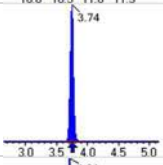 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 954239 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4888.3 | N/A | 3.6652 [ 4.0000 ] | 91.6% { 74.5% } | 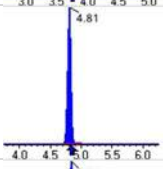 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 652552 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 6933.0 | N/A | 2.0942 [ 2.0000 ] | 104.7% { 86.0% } | 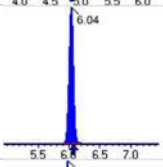 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 737235 | ( 7.18 , N/A ) ( N/A , -0.04 , N/A ) | 4435.4 | N/A | 2.2653 [ 2.0000 ] | 113.3% { 89.8% } | 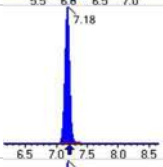 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 991521 | ( 8.18 , N/A ) ( N/A , -0.05 , N/A ) | 3120.6 | N/A | 2.0507 [ 2.0000 ] | 102.5% { 91.3% } | 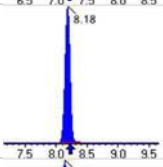 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 332175 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 1889.9 | N/A | 1.0438 [ 1.0000 ] | 104.4% { 87.8% } | 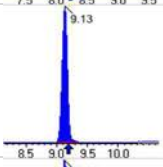 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 380563 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 1381.2 | N/A | 0.9894 [ 1.0000 ] | 98.9% { 80.7% } | 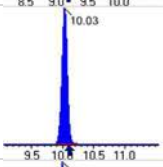 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 441714 | ( 10.89 , N/A ) ( N/A , -0.06 , N/A ) | 1048.7 | N/A | 0.9445 [ 1.0000 ] | 94.5% { 87.1% } | 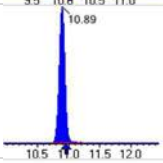 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413233 | ( 11.74 , N/A ) ( N/A , -0.04 , N/A ) | 1269.7 | N/A | 0.8799 [ 1.0000 ] | 88.0% { 79.6% } | 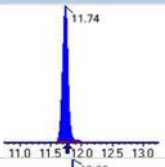  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 316430 | ( 12.86 , N/A ) ( N/A , -0.02 , N/A ) | 970.1 | N/A | 0.7732 [ 1.0000 ] | 77.3% { 71.5% } | 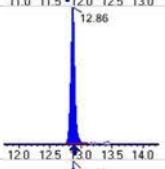  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 530196 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 2613.0 | N/A | 1.5253 [ 2.0000 ] | 76.3% { 65.9% } | 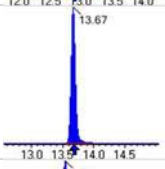  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2048312 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 1082.2 | N/A | 1.9788 [ 2.0000 ] | 98.9% { 85.9% } | 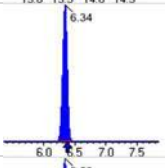  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1670619 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 3437.1 | N/A | 2.1489 [ 2.0000 ] | 107.4% { 94.7% } | 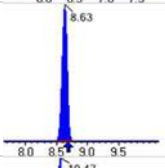  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1913905 | ( 10.47 , N/A ) ( N/A , -0.08 , N/A ) | 706.1 | N/A | 2.1320 [ 2.0000 ] | 106.6% { 85.8% } | 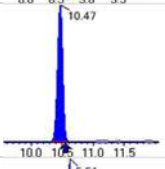  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 699656 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 84.1 | N/A | 7.5625 [ 4.0000 ] | 189.1% { 126.5% } | 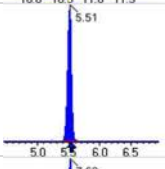  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1736959 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 2601.7 | N/A | 6.0457 [ 4.0000 ] | 151.1% { 106.7% } | 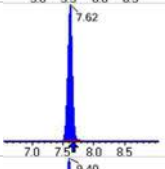  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1385960 | ( 9.40 , N/A ) ( N/A , -0.06 , N/A ) | 1108.4 | N/A | 4.8420 [ 4.0000 ] | 121.1% { 81.2% } | 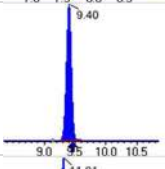  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2339927 | ( 11.01 , N/A ) ( N/A , -0.09 , N/A ) | 1623.8 | N/A | 7.1217 [ 8.0000 ] | 89.0% { 63.1% } | 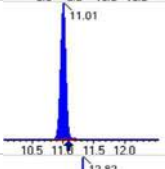  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1786907 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 2769.8 | N/A | 1.8368 [ 2.0000 ] | 91.8% { 73.8% } | 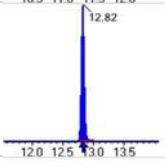  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (13)
Acquired: 2024/03/18 - 17:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 129573 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1053.6 | N/A | 0.7213 [ 2.0000 ] | 36.1% { 30.3% } | 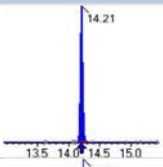 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 152027 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 1392.9 | N/A | 0.7368 [ 2.0000 ] | 36.8% { 31.4% } | 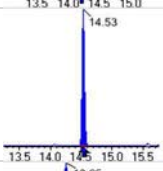 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 809755 | ( 10.25 , N/A ) ( N/A , -0.08 , N/A ) | 2274.4 | N/A | 3.5223 [ 4.0000 ] | 88.1% { 61.3% } | 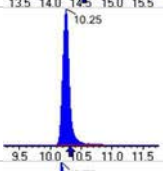 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 963847 | ( 10.78 , N/A ) ( N/A , -0.07 , N/A ) | 1864.8 | N/A | 4.4167 [ 4.0000 ] | 110.4% { 78.2% } | 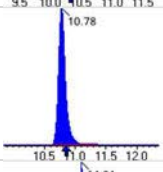 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1043528 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2083.7 | N/A | 12.4322 [ 20.0000 ] | 62.2% { 56.1% } | 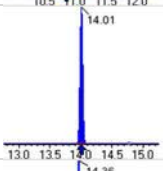 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1236517 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3565.2 | N/A | 12.1606 [ 20.0000 ] | 60.8% { 59.1% } | 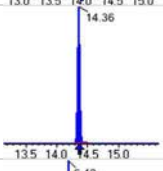 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1129638 | ( 6.49 , N/A ) ( N/A , -0.03 , N/A ) | 2433.2 | N/A | 8.4340 [ 8.0000 ] | 105.4% { 80.5% } | 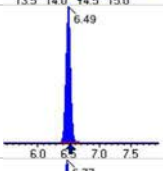 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 550454 | ( 6.77 , N/A ) ( N/A , -0.04 , N/A ) | 1509.3 | N/A | 1.8619 [ 2.0000 ] | 93.1% { 77.4% } | 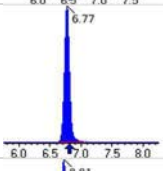 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 545615 | ( 8.81 , N/A ) ( N/A , -0.05 , N/A ) | 602.8 | N/A | 1.9768 [ 2.0000 ] | 98.8% { 81.5% } | 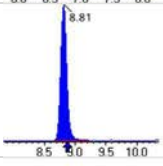 | | |

# ANALYSIS DATA SHEETL

MW-4-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-03- | File ID:- | S2024-03-18A (14)- |
| Sampled:- | 03/12/24 09:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 17:57- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 537.937 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 5.1- | 0.19- | 1.5- | |
| PFPeA- | 9.0- | 0.060- | 0.74- | |
| PFHxA- | 8.9- | 0.051- | 0.37- | |
| PFHpA- | 7.9- | 0.038- | 0.37- | |
| PFOA- | 5.7- | 0.14- | 0.37- | MI4- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 12- | 0.034- | 0.37- | |
| PFPeS- | 0.35- | 0.058- | 0.37- | J- |
| PFHxS- | 4.5- | 0.029- | 0.37- | |
| PFHpS- | 0.059- | 0.048- | 0.37- | J- |
| PFOS- | 1.4- | 0.059- | 0.37- | IR1- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-4-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-03- | File ID:- | S2024-03-18A (14)- |
| Sampled:- | 03/12/24 09:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 17:57- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 537.937 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (14)
Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>116275<br>( 163.0 / 69.0 )<br>3387 | ( 2.81 , 0.75 )<br>( N/A , 0.04 , -0.4) | 510.3<br>139.4 | 0.0291<br>116.2<br>111.3 | 0.4390 | N/A | 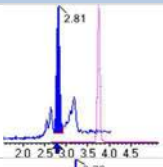 | 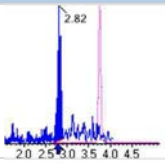 | |
| PFBA | ( 213.0 / 169.0 )<br>388202 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 694.7 | N/A<br>0.0<br>0.0 | 1.3707 | N/A | 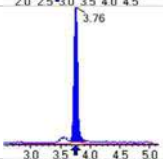 | | |
| PFPeA | ( 263.0 / 219.0 )<br>642049<br>( 263.0 / 69.0 )<br>7771 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2223.4<br>78.2 | 0.0121<br>110.2<br>103.6 | 2.4130 | N/A | 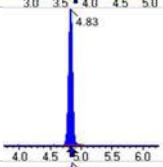 | 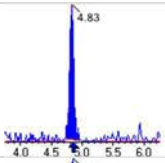 | |
| PFHxA | ( 313.0 / 269.0 )<br>702664<br>( 313.0 / 119.0 )<br>79548 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1695.5<br>876.1 | 0.1132<br>101.9<br>99.6 | 2.3908 | N/A | 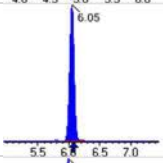 | 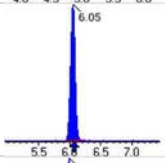 | |
| PFHpA | ( 363.0 / 319.0 )<br>741304<br>( 363.0 / 169.0 )<br>229647 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1114.9<br>913.3 | 0.3098<br>99.4<br>105.3 | 2.1240 | N/A | 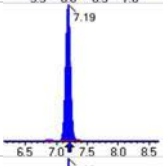 | 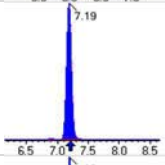 | |
| PFOA | ( 413.0 / 369.0 )<br>713764<br>( 413.0 / 169.0 )<br>258849 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 433.6<br>460.4 | 0.3627<br>100.3<br>102.2 | 1.5267 | N/A | 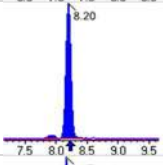 | 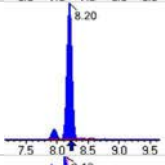 | MI4 ABK 3/18/24 |
| PFNA | ( 463.0 / 419.0 )<br>4871<br>( 463.0 / 169.0 )<br>1285 | ( 9.15 , 1.00 )<br>( -0.01 , N/A , 0.9) | 22.6<br>13.0 | 0.2639<br>100.5<br>107.2 | 0.0161 | N/A | 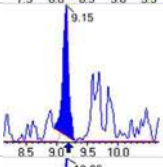 | 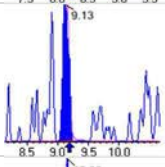 | |
| PFDA | ( 513.0 / 469.0 )<br>7352<br>( 513.0 / 169.0 )<br>1093 | ( 10.06 , 1.00 )<br>( 0.01 , N/A , 0.4) | 47.5<br>1664.3 | 0.1486<br>126.6<br>123.1 | 0.0209 | N/A | 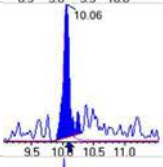 | 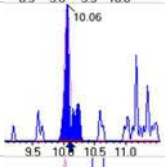 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 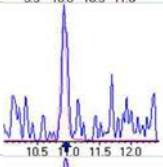 | 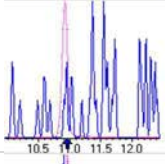 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 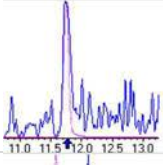 | 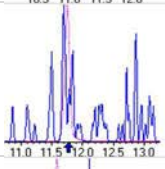 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 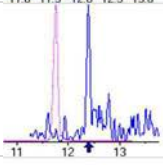 | 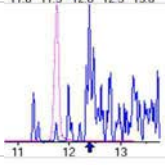 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 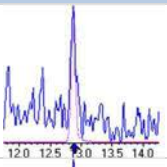 | 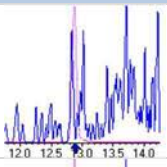 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 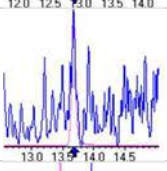 | 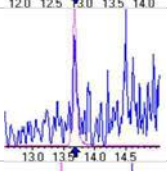 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 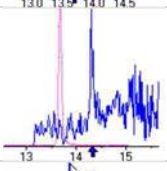 | 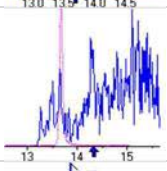 | |
| PFBS | ( 299.0 / 80.0 )<br>1610664<br>( 299.0 / 99.0 )<br>1198628 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1580.5<br>1916.9 | 0.7442<br>104.7<br>103.2 | 3.2216 | N/A | 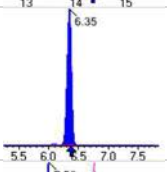 | 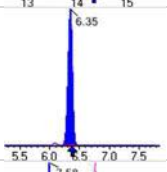 | |
| PFPeS | ( 349.0 / 80.0 )<br>116072<br>( 349.0 / 99.0 )<br>40395 | ( 7.58 , 0.88 )<br>( N/A , -0.03 , 0.2) | 298.6<br>195.5 | 0.3480<br>102.3<br>101.4 | 0.0948 | N/A | 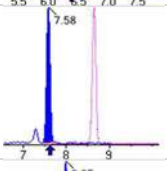 | 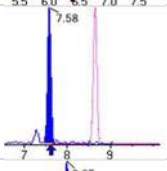 | |
| PFHxS | ( 399.0 / 80.0 )<br>1658927<br>( 399.0 / 99.0 )<br>497266 | ( 8.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2261.4<br>2548.6 | 0.2998<br>95.9<br>93.4 | 1.2186 | N/A | 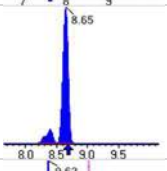 | 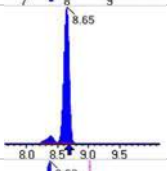 | |
| PFHpS | ( 449.0 / 80.0 )<br>17125<br>( 449.0 / 99.0 )<br>4392 | ( 9.62 , 0.92 )<br>( N/A , -0.03 , 0.1) | 51.1<br>20.2 | 0.2565<br>96.0<br>95.5 | 0.0158 | N/A | 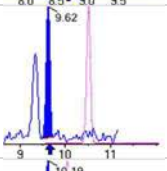 | 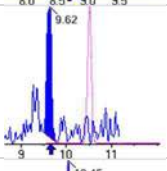 | |
| PFOS | ( 499.0 / 80.0 )<br>395670<br>( 499.0 / 99.0 )<br>43177 | ( 10.19 , 0.97 )<br>( -0.32 , N/A , -15.4) | 325.1<br>272.8 | 0.1091<br>46.1<br>49.8 | 0.3635 | N/A | 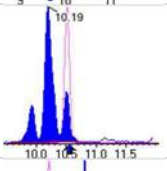 | 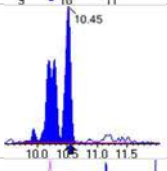 | IR1, |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 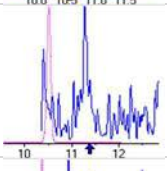 | 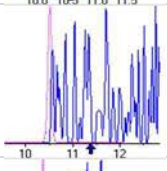 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 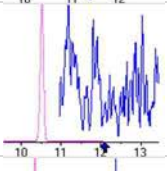 | 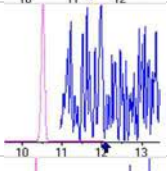 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 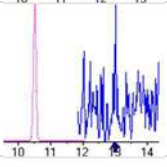 | 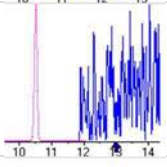 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (14)
Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 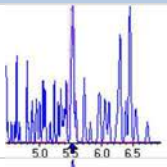 | 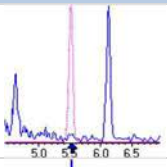 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 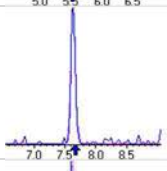 | 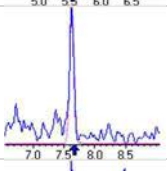 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 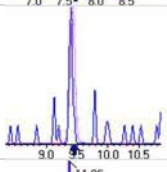 | 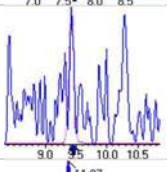 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14627<br>( 627.0 / 81.0 )<br>23151 | ( 11.06 , 1.00 )<br>( 0.00 , N/A , -0.5) | 176.4<br>52.8 | 1.5828<br>117.1<br>115.6 | 0.0593 | N/A | 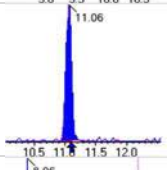 | 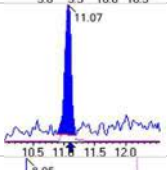 | |
| PFBSA | ( 297.9 / 78.0 )<br>231341<br>( 297.9 / 278.0 )<br>203 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , 0.4) | 976.9<br>7.6 | 0.0009<br>62.6<br>55.6 | 0.9521 | N/A | 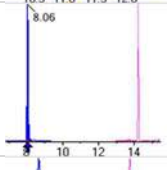 | 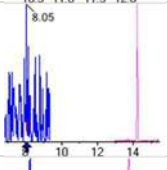 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 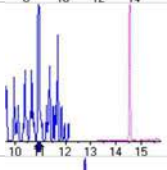 | 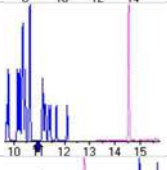 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 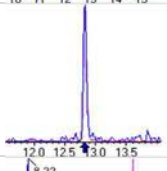 | 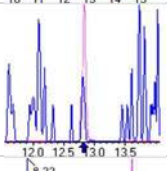 | |
| TFSI | ( 279.7 / 147.0 )<br>132382<br>( 279.7 / 211.0 )<br>11235 | ( 8.22 , 0.64 )<br>( N/A , -0.03 , -0.2) | 42.8<br>17.8 | 0.0849<br>102.9<br>99.8 | 0.0762 | N/A | 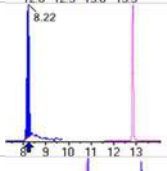 | 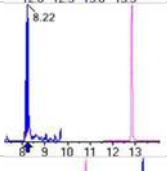 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 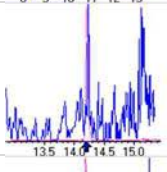 | 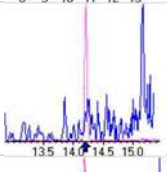 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 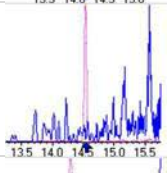 | 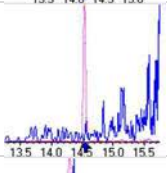 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 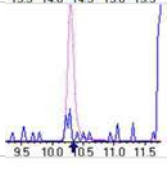 | 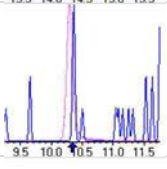 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (14)
Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 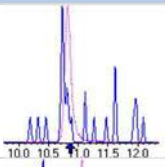 | 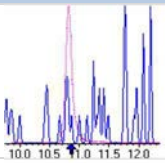 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 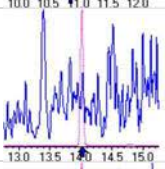 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 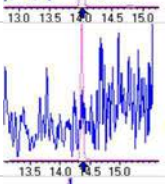 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 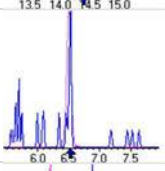 | 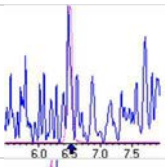 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 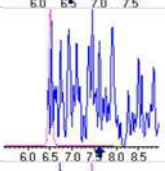 | 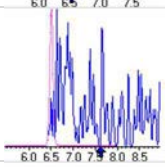 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 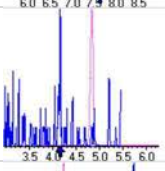 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 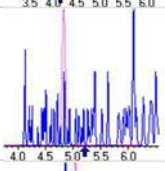 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 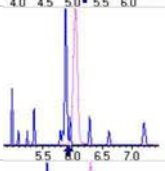 | 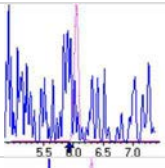 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 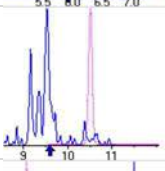 | 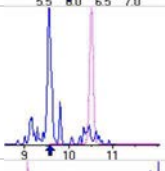 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 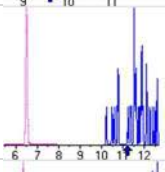 | 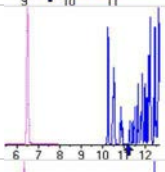 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 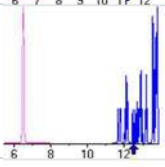 | 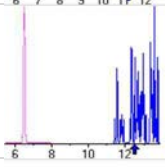 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 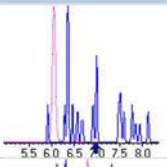 | 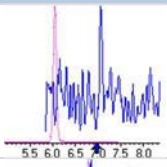 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 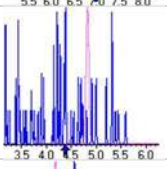 | 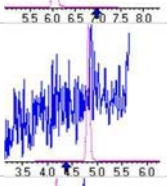 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 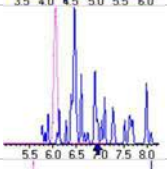 | 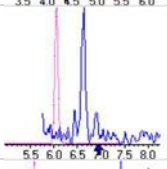 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 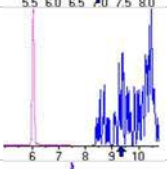 | 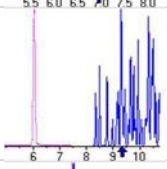 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 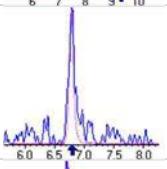 | 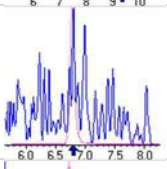 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 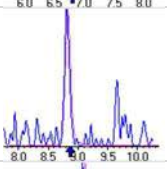 | 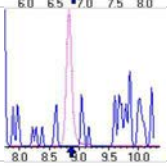 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 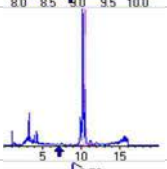 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 292778 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 1482.0 | N/A | 0.9719<br>[ 1.0000 ] | 97.2%<br>{ 86.5% } | 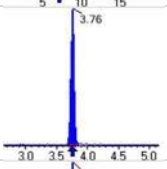 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145459 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 20292.7 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 85.4% } | 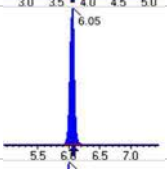 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441486 | ( 8.20 , N/A )<br>( N/A , -0.03 , N/A ) | 2937.9 | N/A | 0.9896<br>[ 1.0000 ] | 99.0%<br>{ 90.5% } | 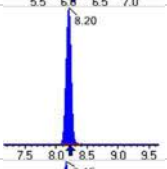 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 319091 | ( 9.15 , N/A )<br>( N/A , -0.04 , N/A ) | 865.8 | N/A | 0.9545<br>[ 1.0000 ] | 95.5%<br>{ 83.0% } | 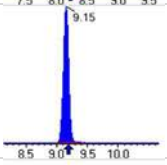 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 315228 | ( 10.06 , N/A ) ( N/A , -0.04 , N/A ) | 2605.4 | N/A | 0.9506 [ 1.0000 ] | 95.1% { 83.5% } | 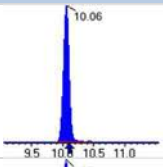 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1087437 | ( 8.65 , N/A ) ( N/A , -0.04 , N/A ) | 5131.6 | N/A | 0.9732 [ 1.0000 ] | 97.3% { 86.8% } | 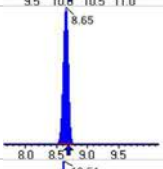 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 908129 | ( 10.51 , N/A ) ( N/A , -0.04 , N/A ) | 1399.7 | N/A | 0.9303 [ 1.0000 ] | 93.0% { 85.8% } | 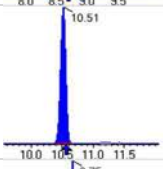 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2394874 | ( 3.75 , N/A ) ( N/A , 0.01 , N/A ) | 33575.4 | N/A | 7.4176 [ 8.0000 ] | 92.7% { 84.3% } | 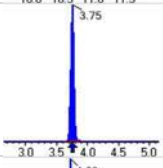 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1045476 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5225.4 | N/A | 4.0064 [ 4.0000 ] | 100.2% { 81.6% } | 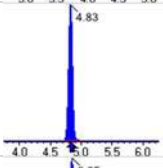 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 606642 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 8475.7 | N/A | 1.9424 [ 2.0000 ] | 97.1% { 80.0% } | 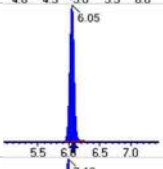 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 708725 | ( 7.19 , N/A ) ( N/A , -0.03 , N/A ) | 4432.4 | N/A | 2.1727 [ 2.0000 ] | 108.6% { 86.3% } | 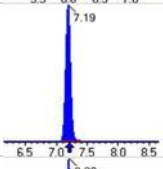 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 919515 | ( 8.20 , N/A ) ( N/A , -0.03 , N/A ) | 3258.0 | N/A | 1.9754 [ 2.0000 ] | 98.8% { 84.6% } | 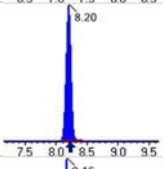 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 301719 | ( 9.16 , N/A ) ( N/A , -0.03 , N/A ) | 2075.7 | N/A | 0.9792 [ 1.0000 ] | 97.9% { 79.8% } | 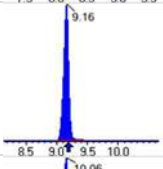 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 353613 | ( 10.06 , N/A ) ( N/A , -0.04 , N/A ) | 940.3 | N/A | 0.9721 [ 1.0000 ] | 97.2% { 75.0% } | 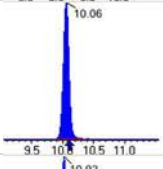 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 436638 | ( 10.92 , N/A ) ( N/A , -0.03 , N/A ) | 968.6 | N/A | 0.9873 [ 1.0000 ] | 98.7% { 86.1% } | 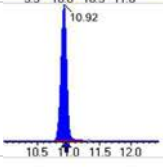 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 391558 | ( 11.75 , N/A ) ( N/A , -0.03 , N/A ) | 1374.1 | N/A | 0.8816 [ 1.0000 ] | 88.2% { 75.4% } | 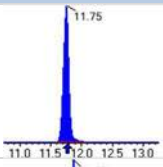 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 271205 | ( 12.87 , N/A ) ( N/A , -0.01 , N/A ) | 1315.7 | N/A | 0.7008 [ 1.0000 ] | 70.1% { 61.3% } | 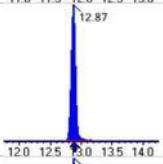 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 494549 | ( 13.68 , N/A ) ( N/A , -0.01 , N/A ) | 2660.3 | N/A | 1.5044 [ 2.0000 ] | 75.2% { 61.4% } | 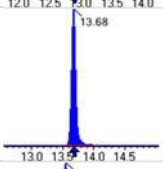 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1922913 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 1102.9 | N/A | 1.8149 [ 2.0000 ] | 90.7% { 80.7% } | 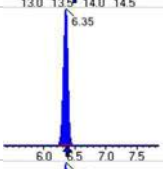 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1537465 | ( 8.65 , N/A ) ( N/A , -0.04 , N/A ) | 4470.3 | N/A | 1.9321 [ 2.0000 ] | 96.6% { 87.2% } | 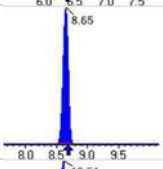 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1883178 | ( 10.51 , N/A ) ( N/A , -0.04 , N/A ) | 1168.0 | N/A | 1.9479 [ 2.0000 ] | 97.4% { 84.4% } | 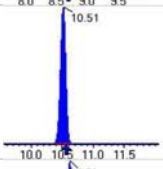 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 581868 | ( 5.52 , N/A ) ( N/A , -0.02 , N/A ) | 87.6 | N/A | 6.1446 [ 4.0000 ] | 153.6% { 105.2% } | 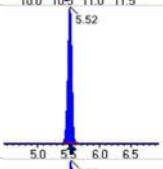 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1727037 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 2472.9 | N/A | 5.8728 [ 4.0000 ] | 146.8% { 106.1% } | 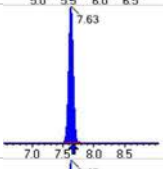 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1404155 | ( 9.43 , N/A ) ( N/A , -0.03 , N/A ) | 1121.0 | N/A | 4.7927 [ 4.0000 ] | 119.8% { 82.3% } | 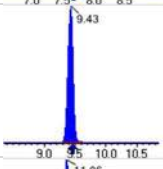 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2397272 | ( 11.06 , N/A ) ( N/A , -0.03 , N/A ) | 1412.6 | N/A | 7.1283 [ 8.0000 ] | 89.1% { 64.6% } | 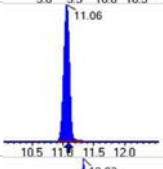 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1673934 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2439.0 | N/A | 1.5978 [ 2.0000 ] | 79.9% { 69.1% } | 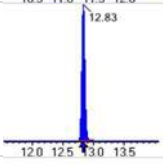 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (14)
Acquired: 2024/03/18 - 17:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 105689 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 781.7 | N/A | 0.5463 [ 2.0000 ] | 27.3% { 24.7% } | 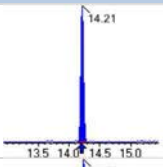 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 101808 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 803.8 | N/A | 0.4582 [ 2.0000 ] | 22.9% { 21.0% } | 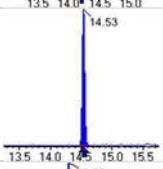 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 981690 | ( 10.30 , N/A ) ( N/A , -0.03 , N/A ) | 2080.5 | N/A | 3.9651 [ 4.0000 ] | 99.1% { 74.4% } | 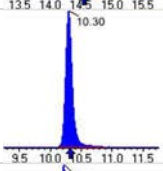 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 950967 | ( 10.82 , N/A ) ( N/A , -0.03 , N/A ) | 1935.3 | N/A | 4.0464 [ 4.0000 ] | 101.2% { 77.2% } | 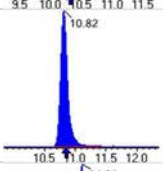 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 745404 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1545.6 | N/A | 8.2461 [ 20.0000 ] | 41.2% { 40.1% } | 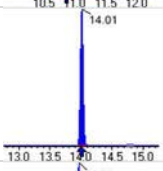 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 733861 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2042.4 | N/A | 6.7017 [ 20.0000 ] | 33.5% { 35.1% } | 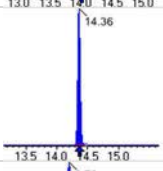 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1097924 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 2353.2 | N/A | 8.1783 [ 8.0000 ] | 102.2% { 78.2% } | 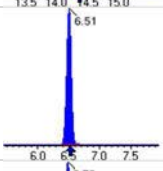 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 518206 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1344.8 | N/A | 1.8535 [ 2.0000 ] | 92.7% { 72.8% } | 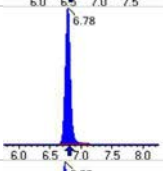 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 522708 | ( 8.83 , N/A ) ( N/A , -0.04 , N/A ) | 717.5 | N/A | 2.0026 [ 2.0000 ] | 100.1% { 78.1% } | 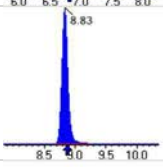 | | |

# ANALYSIS DATA SHEETL

## DUP-2-031224P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0076P |
| Client:P | Tidewater, Inc.P | | | roject: | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0076-04P | File ID: | S2024-03-18A (15)P |
| Sampled:P | 03/12/24 09:20P | repared:P | 03/14/24 12:39 | Analyzed: | 03/18/24 18:17 |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 520.781 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0208P | Sequence:P | SD00977 | Calibration:P | 2411010P |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| FBAP | 4.9P | 0.20P | 1.5 | |
| FPeAP | 8.7P | 0.062P | 0.77 | |
| FHxAP | 8.6P | 0.053P | 0.38 | |
| FHpAP | 7.8P | 0.039P | 0.38 | |
| FOAP | 5.7P | 0.15P | 0.38 | MI4 |
| FNAP | 0.088P | 0.079P | 0.38 | MI6, J |
| FDAP | 0.097P | 0.097P | 0.38 | J |
| FUnAP | NDP | 0.15P | 0.38 | U |
| FDoAP | NDP | 0.11P | 0.38 | MI2, U |
| PFTrDAP | NDP | 0.20P | 0.38 | U |
| PFTeDAP | NDP | 0.19P | 0.38 | U |
| FHxDAP | NDP | 0.19P | 0.38 | U |
| FODAP | NDP | 0.19P | 0.38 | U |
| FBSP | 13P | 0.035P | 0.38 | |
| FPeSP | 0.33P | 0.060P | 0.38 | J |
| FHxSP | 4.2P | 0.030P | 0.38 | |
| FHpSP | 0.053P | 0.049P | 0.38 | MI6, J |
| FOSP | 1.2P | 0.061P | 0.38 | IR1, MI3 |
| FNSP | NDP | 0.12P | 0.38 | U |
| FDSP | NDP | 0.15P | 0.38 | U |
| FDoSP | NDP | 0.12P | 0.38 | U |
| 4:2FTSP | NDP | 0.28P | 1.5 | U |
| 6:2FTSP | NDP | 0.30P | 1.5 | U |
| 8:2FTSP | NDP | 0.079P | 1.5 | U |
| 10:2FTSP | NDP | 0.38P | 1.5 | U |
| FOSAP | NDP | 0.10P | 0.38 | U |
| NMeFOSAP | NDP | 0.45P | 1.5 | U |
| NEtFOSAP | NDP | 0.40P | 1.5 | U |
| NMeFOSAAP | NDP | 0.10P | 0.38 | U |
| NEtFOSAAP | NDP | 0.11P | 0.38 | U |

# ANALYSIS DATA SHEETL

## DUP-2-031224P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0076P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0076-04P | File ID: | S2024-03-18A (15)P |
| Sampled:P | 03/12/24 09:20P | repared:P | 03/14/24 12:39P | Analyzed: | 03/18/24 18:17P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 520.781 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0208P | Sequence:P | SD00977 | Calibration:P | 2411010P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.97P | 1.5P | UP |
| NEtFOSEP | NDP | 1.0P | 1.5P | UP |
| HFPO-DAP | NDP | 0.17P | 0.77P | UP |
| ADONAP | NDP | 0.12P | 0.77P | UP |
| FEESAP | NDP | 0.10P | 0.77 | UP |
| PFMPAP | NDP | 0.052P | 0.77 | UP |
| FMBAP | NDP | 0.087P | 0.77 | UP |
| NFDHAP | NDP | 0.29P | 0.77P | UP |
| 9Cl-PF3ONSP | NDP | 0.20P | 0.77P | UP |
| 11Cl-PF3OUDSP | NDP | 0.20P | 0.77P | UP |
| 3:3FTCAP | NDP | 0.55P | 1.5P | UP |
| 5:3FTCAP | NDP | 0.43P | 1.5P | UP |
| 7:3FTCAP | NDP | 0.53P | 1.5P | UP |

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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (15)
Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 135486<br>( 163.0 / 69.0 ) 3430 | ( 2.82 , 0.75 )<br>( N/A , 0.04 , -0.5) | 610.7<br>195.1 | 0.0253<br>101.0<br>96.8 | 0.4667 | N/A | 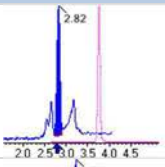 | 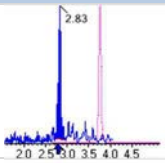 | |
| PFBA | ( 213.0 / 169.0 ) 397560 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 713.8 | N/A<br>0.0<br>0.0 | 1.2806 | N/A | 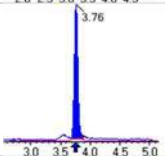 | | |
| PFPeA | ( 263.0 / 219.0 ) 658760<br>( 263.0 / 69.0 ) 8672 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1917.7<br>108.5 | 0.0132<br>119.9<br>112.6 | 2.2688 | N/A | 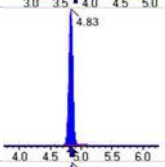 | 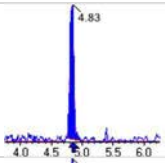 | |
| PFHxA | ( 313.0 / 269.0 ) 722647<br>( 313.0 / 119.0 ) 83217 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1303.6<br>821.1 | 0.1152<br>103.6<br>101.3 | 2.2316 | N/A | 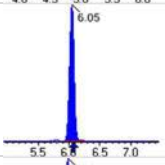 | 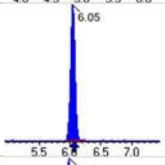 | |
| PFHpA | ( 363.0 / 319.0 ) 779408<br>( 363.0 / 169.0 ) 229531 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1020.0<br>1107.6 | 0.2945<br>94.5<br>100.1 | 2.0404 | N/A | 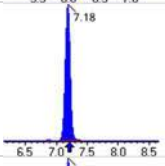 | 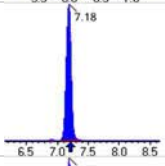 | |
| PFOA | ( 413.0 / 369.0 ) 742862<br>( 413.0 / 169.0 ) 260947 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 481.0<br>497.9 | 0.3513<br>97.1<br>99.0 | 1.4807 | N/A | 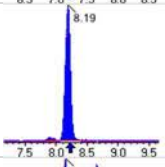 | 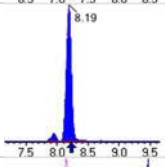 | MI4 ABK 3/18/24 |
| PFNA | ( 463.0 / 419.0 ) 8201<br>( 463.0 / 169.0 ) 1288 | ( 9.14 , 1.00 )<br>( 0.01 , N/A , -0.4) | 20.6<br>6.9 | 0.1571<br>59.8<br>63.8 | 0.0229 | N/A | 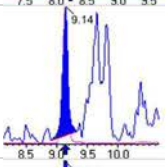 | 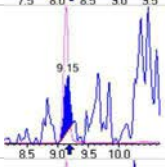 | MI6 ABK 3/18/24 |
| PFDA | ( 513.0 / 469.0 ) 9497<br>( 513.0 / 169.0 ) 1428 | ( 10.04 , 1.00 )<br>( 0.00 , N/A , 2.0) | 63.8<br>25.5 | 0.1504<br>128.1<br>124.6 | 0.0253 | N/A | 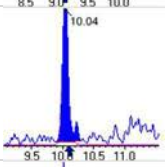 | 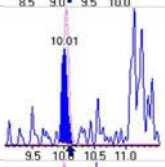 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 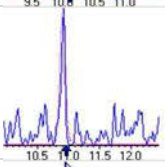 | 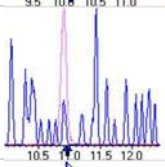 | |
| PFDoA | ( 613.0 / 569.0 ) 5272<br>( 613.0 / 169.0 ) 1103 | ( 11.74 , 1.00 )<br>( -0.01 , N/A , -0.1) | 41.3<br>18.2 | 0.2092<br>132.3<br>136.8 | 0.0118 | N/A | 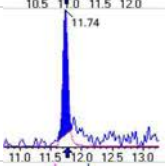 | 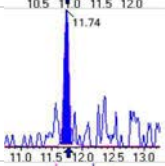 | MI2 PIT 3/19/24 |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 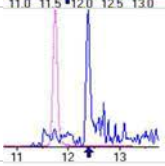 | 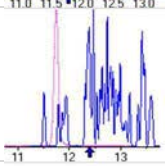 | |

APPL
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Chemist: ABK | Sample I.D.: 24C0076-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 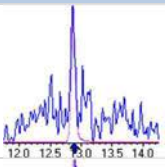 | 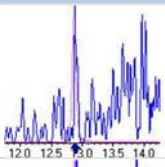 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 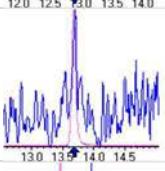 | 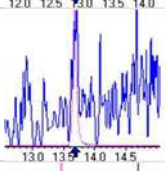 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 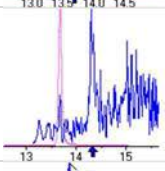 | 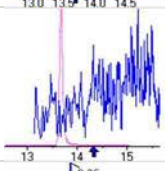 | |
| PFBS | ( 299.0 / 80.0 )<br>1780800<br>( 299.0 / 99.0 )<br>1282306 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1933.6<br>1627.8 | 0.7201<br>101.3<br>99.9 | 3.2756 | N/A | 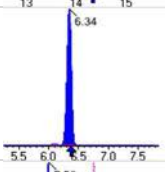 | 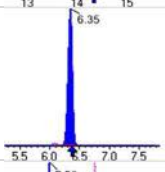 | |
| PFPeS | ( 349.0 / 80.0 )<br>116770<br>( 349.0 / 99.0 )<br>47514 | ( 7.58 , 0.88 )<br>( N/A , -0.04 , 0.0) | 237.3<br>226.7 | 0.4069<br>119.6<br>118.6 | 0.0871 | N/A | 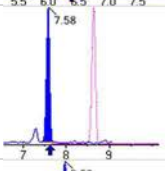 | 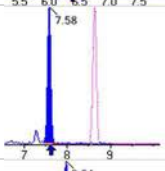 | |
| PFHxS | ( 399.0 / 80.0 )<br>1642039<br>( 399.0 / 99.0 )<br>514919 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1457.8<br>2920.8 | 0.3136<br>100.3<br>97.7 | 1.1016 | N/A | 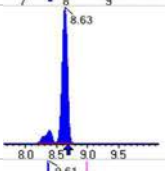 | 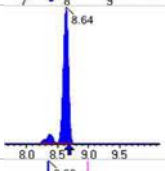 | |
| PFHpS | ( 449.0 / 80.0 )<br>14968<br>( 449.0 / 99.0 )<br>5135 | ( 9.61 , 0.92 )<br>( N/A , -0.05 , 0.5) | 28.9<br>15.7 | 0.3430<br>128.4<br>127.7 | 0.0138 | N/A | 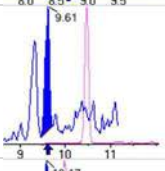 | 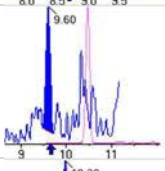 | MI6 ABK 3/18/24 |
| PFOS | ( 499.0 / 80.0 )<br>336060<br>( 499.0 / 99.0 )<br>34808 | ( 10.17 , 0.97 )<br>( -0.30 , N/A , -12.2) | 172.4<br>118.2 | 0.1036<br>43.8<br>47.3 | 0.3076 | N/A | 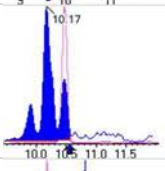 | 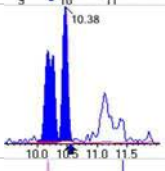 | IR1,MI3 ABK 3/18/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 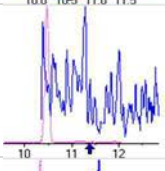 | 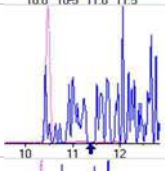 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 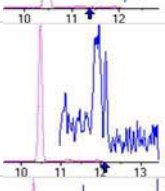 | 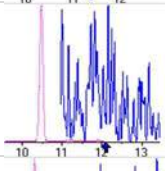 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 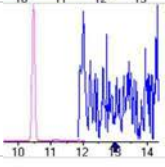 | 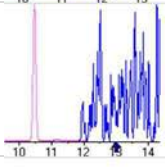 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (15)
Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 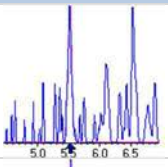 | 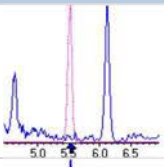 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 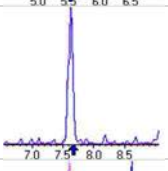 | 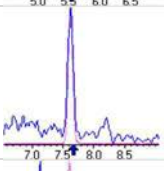 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 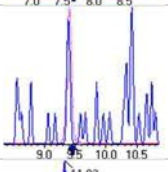 | 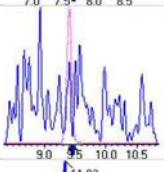 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>13540<br>( 627.0 / 81.0 )<br>16405 | ( 11.03 , 1.00 )<br>( 0.01 , N/A , -0.2) | 182.4<br>51.7 | 1.2116<br>89.6<br>88.5 | 0.0536 | N/A | 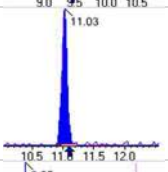 | 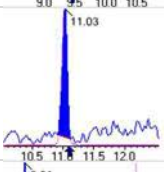 | |
| PFBSA | ( 297.9 / 78.0 )<br>274328<br>( 297.9 / 278.0 )<br>353 | ( 8.05 , 0.57 )<br>( N/A , -0.01 , 2.1) | 852.7<br>9.3 | 0.0013<br>91.6<br>81.3 | 0.8728 | N/A | 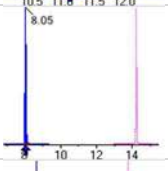 | 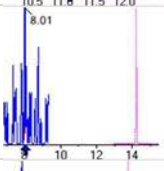 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 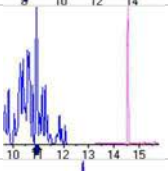 | 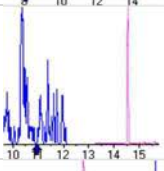 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 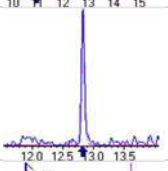 | 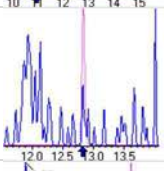 | |
| TFSI | ( 279.7 / 147.0 )<br>140363<br>( 279.7 / 211.0 )<br>11682 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , 0.1) | 39.3<br>21.2 | 0.0832<br>100.9<br>97.9 | 0.0722 | N/A | 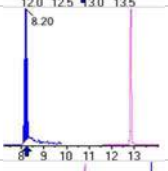 | 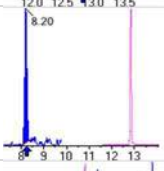 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 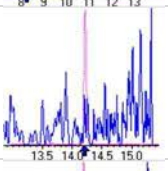 | 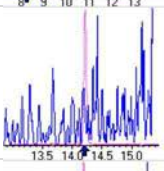 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 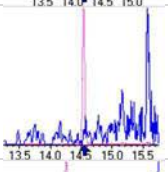 | 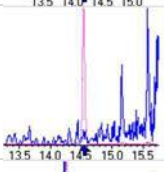 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 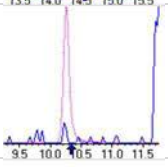 | 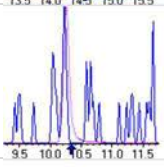 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (15)
Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 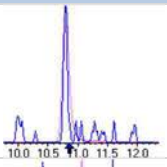 | 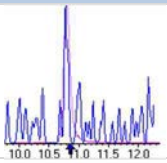 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 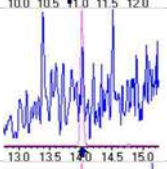 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 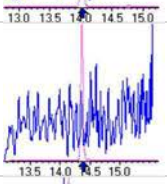 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 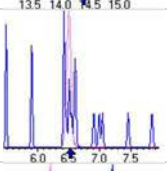 | 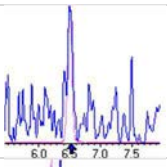 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 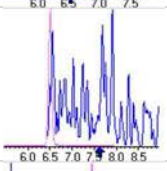 | 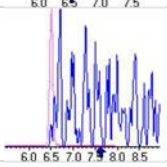 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 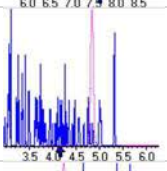 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 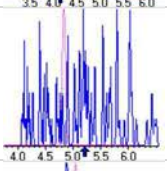 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 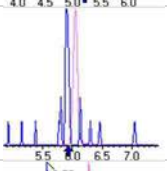 | 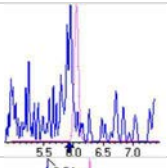 | |
| PFECHS | ( 461.0 / 98.9 )<br>13129<br>( 461.0 / 381.2 )<br>7065 | ( 9.53 , 0.91 )<br>( N/A , -0.04 , -0.2) | 38.5<br>28.8 | 0.5381<br>137.8<br>137.5 | 0.0213 | N/A | 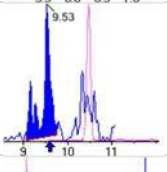 | 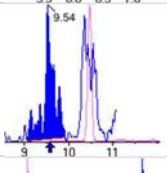 | MI4 ABK 3/18/24 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 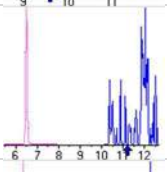 | 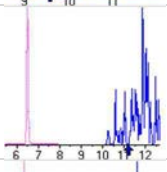 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 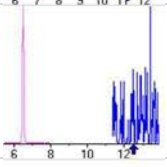 | 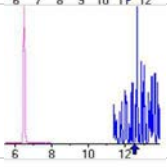 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (15)
Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 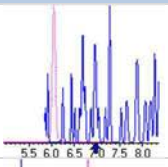 | 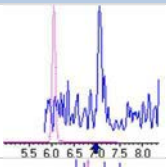 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 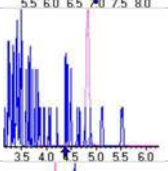 | 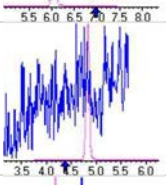 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 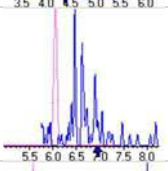 | 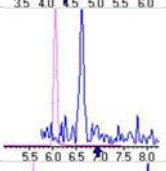 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 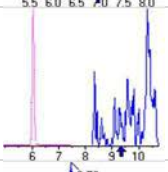 | 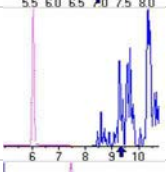 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4318<br>( 357.2 / 243.0 ) 450 | ( 6.78 , 1.00 ) ( 0.00 , N/A , 2.4) | 31.2<br>4.1 | 0.1042<br>98.8<br>97.6 | 0.0143 | N/A | 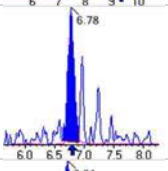 | 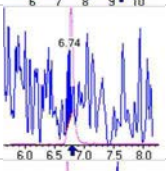 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5392<br>( 457.2 / 343.0 ) 269 | ( 8.81 , 1.00 ) ( -0.01 , N/A , 1.2) | 34.0<br>3.6 | 0.0499<br>127.6<br>131.4 | 0.0224 | N/A | 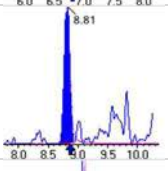 | 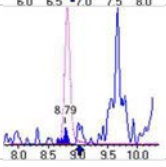 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 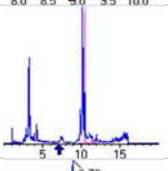 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 296951 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 1274.5 | N/A | 0.9857<br>[ 1.0000 ] | 98.6%<br>{ 87.7% } | 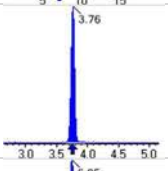 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 143440 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 17978.9 | N/A | 0.9328<br>[ 1.0000 ] | 93.3%<br>{ 84.2% } | 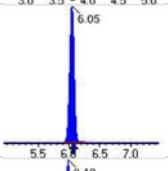 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441820 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 3092.3 | N/A | 0.9903<br>[ 1.0000 ] | 99.0%<br>{ 90.5% } | 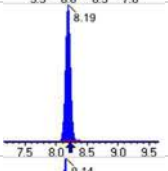 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 338936 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 654.7 | N/A | 1.0139<br>[ 1.0000 ] | 101.4%<br>{ 88.1% } | 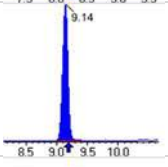 | | |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299192 | ( 10.04 , N/A ) ( N/A , -0.06 , N/A ) | 2089.5 | N/A | 0.9022 [ 1.0000 ] | 90.2% { 79.2% } | 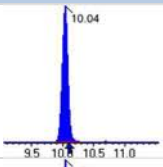 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1043012 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 3206.7 | N/A | 0.9334 [ 1.0000 ] | 93.3% { 83.2% } | 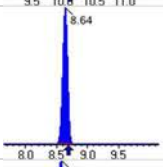 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 849153 | ( 10.48 , N/A ) ( N/A , -0.08 , N/A ) | 822.9 | N/A | 0.8699 [ 1.0000 ] | 87.0% { 80.3% } | 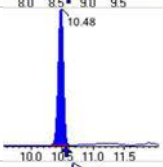 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2625109 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 42167.6 | N/A | 8.0164 [ 8.0000 ] | 100.2% { 92.4% } | 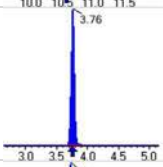 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1140868 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5506.0 | N/A | 4.4335 [ 4.0000 ] | 110.8% { 89.1% } | 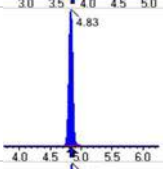 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 668395 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 8112.6 | N/A | 2.1702 [ 2.0000 ] | 108.5% { 88.1% } | 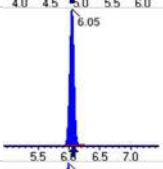 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 775709 | ( 7.19 , N/A ) ( N/A , -0.03 , N/A ) | 4135.7 | N/A | 2.4115 [ 2.0000 ] | 120.6% { 94.5% } | 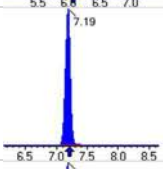 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 986719 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 2782.2 | N/A | 2.1182 [ 2.0000 ] | 105.9% { 90.8% } | 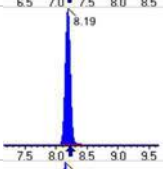 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 358038 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 2200.7 | N/A | 1.0939 [ 1.0000 ] | 109.4% { 94.7% } | 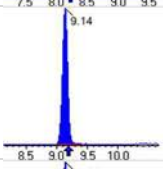 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 376379 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 1149.5 | N/A | 1.0901 [ 1.0000 ] | 109.0% { 79.9% } | 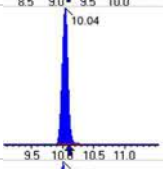 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 455823 | ( 10.90 , N/A ) ( N/A , -0.05 , N/A ) | 1004.2 | N/A | 1.0859 [ 1.0000 ] | 108.6% { 89.9% } | 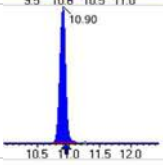 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 437413 | ( 11.74 , N/A ) ( N/A , -0.03 , N/A ) | 1089.4 | N/A | 1.0377 [ 1.0000 ] | 103.8% { 84.3% } | 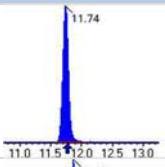  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 338628 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1368.3 | N/A | 0.9219 [ 1.0000 ] | 92.2% { 76.5% } | 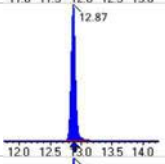  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521860 | ( 13.68 , N/A ) ( N/A , -0.01 , N/A ) | 2487.1 | N/A | 1.6726 [ 2.0000 ] | 83.6% { 64.8% } | 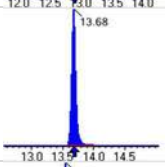  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2090977 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 967.5 | N/A | 2.0576 [ 2.0000 ] | 102.9% { 87.7% } | 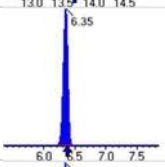  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1683406 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 3071.7 | N/A | 2.2056 [ 2.0000 ] | 110.3% { 95.5% } | 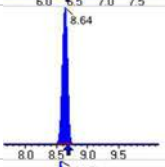  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1890215 | ( 10.47 , N/A ) ( N/A , -0.08 , N/A ) | 954.2 | N/A | 2.0910 [ 2.0000 ] | 104.5% { 84.7% } | 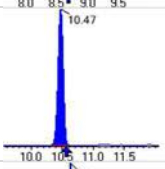  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 620201 | ( 5.52 , N/A ) ( N/A , -0.02 , N/A ) | 82.5 | N/A | 6.8284 [ 4.0000 ] | 170.7% { 112.1% } | 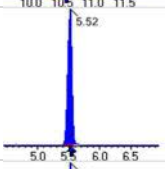  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1811303 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 2534.0 | N/A | 6.4217 [ 4.0000 ] | 160.5% { 111.3% } | 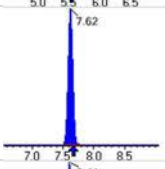  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1388610 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1210.0 | N/A | 4.9415 [ 4.0000 ] | 123.5% { 81.4% } | 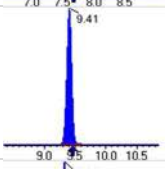  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2454089 | ( 11.02 , N/A ) ( N/A , -0.07 , N/A ) | 1465.1 | N/A | 7.6080 [ 8.0000 ] | 95.1% { 66.1% } | 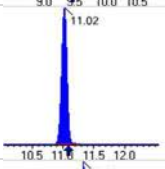  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1873856 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2472.1 | N/A | 1.9128 [ 2.0000 ] | 95.6% { 77.4% } | 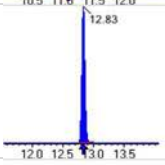  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (15)
Acquired: 2024/03/18 - 18:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 136713 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 1080.1 | N/A | 0.7558 [ 2.0000 ] | 37.8% { 32.0% } | 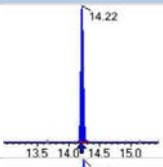  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 126235 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 1121.9 | N/A | 0.6075 [ 2.0000 ] | 30.4% { 26.1% } | 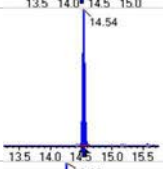  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877884 | ( 10.26 , N/A ) ( N/A , -0.07 , N/A ) | 1823.7 | N/A | 3.7921 [ 4.0000 ] | 94.8% { 66.5% } | 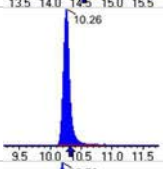  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 997794 | ( 10.79 , N/A ) ( N/A , -0.06 , N/A ) | 1995.5 | N/A | 4.5405 [ 4.0000 ] | 113.5% { 81.0% } | 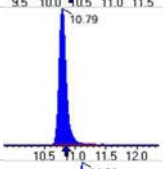  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 927220 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2020.2 | N/A | 10.9699 [ 20.0000 ] | 54.8% { 49.9% } | 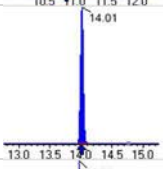  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1061534 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 2172.6 | N/A | 10.3673 [ 20.0000 ] | 51.8% { 50.7% } | 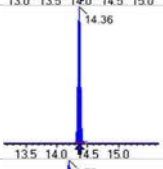  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1179878 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2388.1 | N/A | 8.9125 [ 8.0000 ] | 111.4% { 84.1% } | 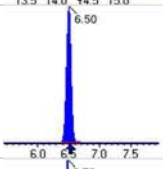  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 560143 | ( 6.78 , N/A ) ( N/A , -0.03 , N/A ) | 1086.8 | N/A | 2.1109 [ 2.0000 ] | 105.5% { 78.7% } | 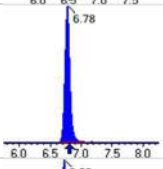  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 571730 | ( 8.82 , N/A ) ( N/A , -0.05 , N/A ) | 749.3 | N/A | 2.3078 [ 2.0000 ] | 115.4% { 85.4% } | 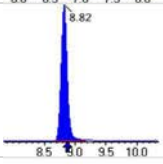  | | |

# ANALYSIS DATA SHEETL

MW-4-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-05- | File ID:- | S2024-03-18A (16)- |
| Sampled:- | 03/12/24 09:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 18:38- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 544.738 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.45- | 0.19- | 1.5- | J- |
| PFPeA- | 0.29- | 0.060- | 0.73- | J- |
| PFHxA- | 0.18- | 0.050- | 0.37- | J- |
| PFHpA- | 0.18- | 0.038- | 0.37- | J- |
| PFOA- | 0.44- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | ND- | 0.093- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 2.1- | 0.034- | 0.37- | |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | 0.27- | 0.029- | 0.37- | J- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 1.7- | 0.058- | 0.37- | IR1- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-4-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-05- | File ID:- | S2024-03-18A (16)- |
| Sampled:- | 03/12/24 09:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 18:38- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 544.738 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (16)
Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 283914<br>( 163.0 / 69.0 ) 5090 | ( 2.80 , 0.75 )<br>( N/A , 0.02 , -0.5) | 1127.5<br>217.6 | 0.0179<br>71.5<br>68.5 | 0.9284 | N/A | 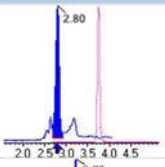 | 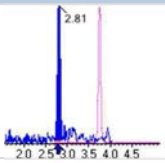 | |
| PFBA | ( 213.0 / 169.0 ) 40110 | ( 3.75 , 1.00 )<br>( 0.00 , N/A , 0.0) | 81.9 | N/A<br>0.0<br>0.0 | 0.1226 | N/A | 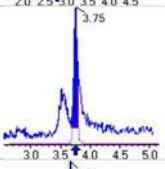 | | |
| PFPeA | ( 263.0 / 219.0 ) 21908<br>( 263.0 / 69.0 ) 478 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.7) | 113.4<br>8.0 | 0.0218<br>198.6<br>186.6 | 0.0789 | N/A | 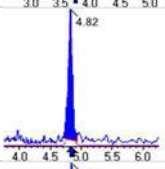 | 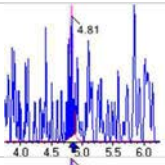 | |
| PFHxA | ( 313.0 / 269.0 ) 16647<br>( 313.0 / 119.0 ) 1298 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 1.4) | 120.1<br>32.3 | 0.0780<br>70.2<br>68.6 | 0.0497 | N/A | 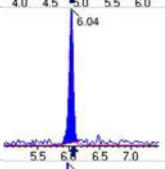 | 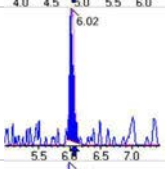 | |
| PFHpA | ( 363.0 / 319.0 ) 17645<br>( 363.0 / 169.0 ) 4705 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , -0.2) | 98.1<br>94.9 | 0.2666<br>85.6<br>90.7 | 0.0477 | N/A | 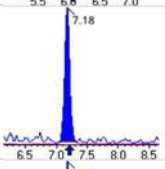 | 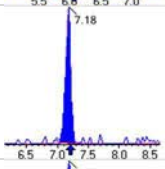 | |
| PFOA | ( 413.0 / 369.0 ) 61434<br>( 413.0 / 169.0 ) 21963 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , -0.2) | 94.0<br>130.9 | 0.3575<br>98.8<br>100.7 | 0.1212 | N/A | 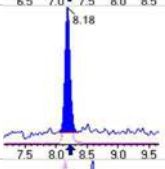 | 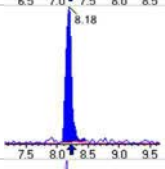 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 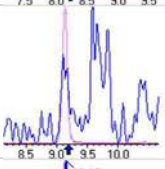 | 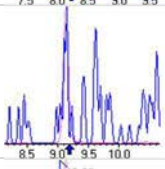 | |
| PFDA | ( 513.0 / 469.0 ) 8251<br>( 513.0 / 169.0 ) 1324 | ( 10.05 , 1.00 )<br>( 0.01 , N/A , 1.2) | 48.3<br>20.2 | 0.1605<br>136.7<br>132.9 | 0.0212 | N/A | 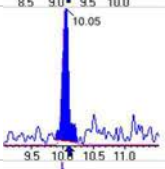 | 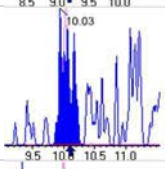 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 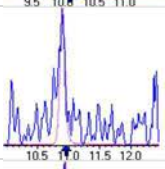 | 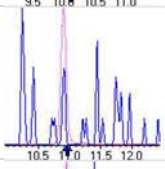 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 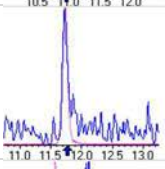 | 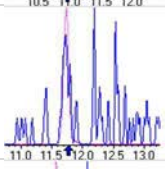 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 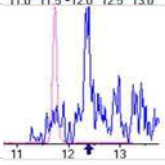 | 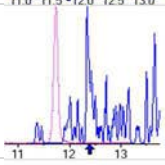 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 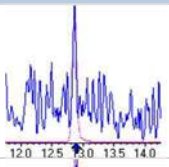 | 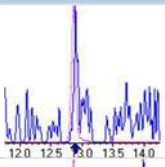 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 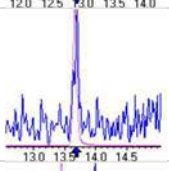 | 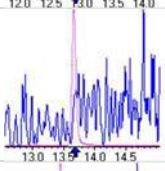 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 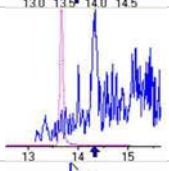 | 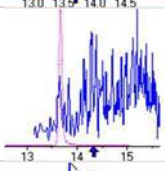 | |
| PFBS | ( 299.0 / 80.0 )<br>292178<br>( 299.0 / 99.0 )<br>218428 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1193.8<br>803.7 | 0.7476<br>105.2<br>103.7 | 0.5607 | N/A | 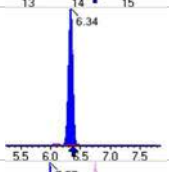 | 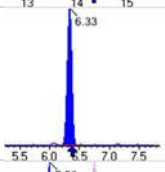 | |
| PFPeS | ( 349.0 / 80.0 )<br>16562<br>( 349.0 / 99.0 )<br>5707 | ( 7.57 , 0.88 )<br>( N/A , -0.04 , -0.4) | 62.3<br>42.2 | 0.3446<br>101.3<br>100.4 | 0.0129 | N/A | 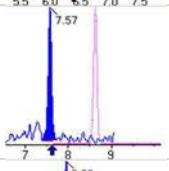 | 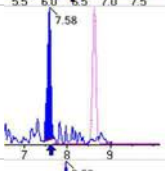 | |
| PFHxS | ( 399.0 / 80.0 )<br>107026<br>( 399.0 / 99.0 )<br>31690 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , -0.3) | 434.5<br>317.4 | 0.2961<br>94.7<br>92.3 | 0.0747 | N/A | 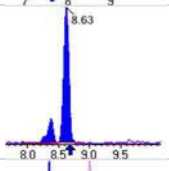 | 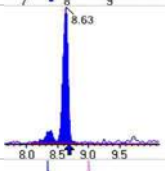 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 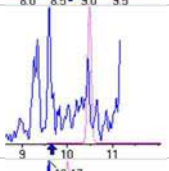 | 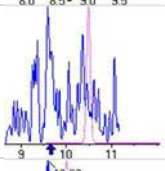 | |
| PFOS | ( 499.0 / 80.0 )<br>533312<br>( 499.0 / 99.0 )<br>43789 | ( 10.17 , 0.97 )<br>( -0.32 , N/A , -1.8) | 556.0<br>248.0 | 0.0821<br>34.7<br>37.5 | 0.4630 | N/A | 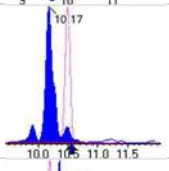 | 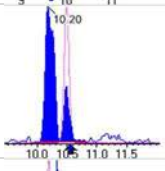 | IR1, |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 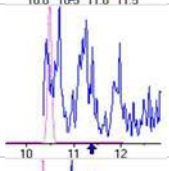 | 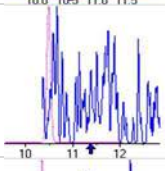 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 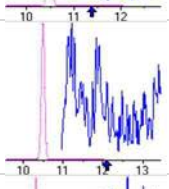 | 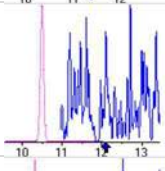 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 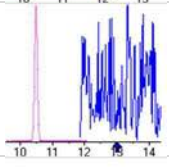 | 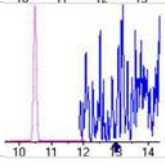 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (16)
Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 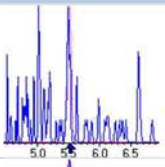 | 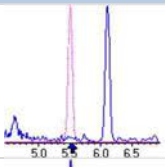 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 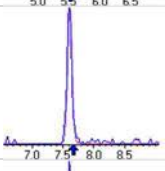 | 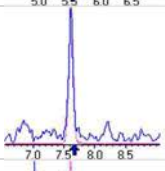 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 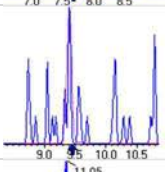 | 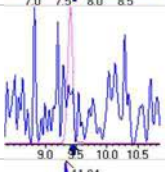 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16149<br>( 627.0 / 81.0 )<br>21312 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.3) | 204.5<br>46.1 | 1.3197<br>97.6<br>96.4 | 0.0553 | N/A | 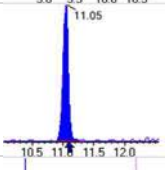 | 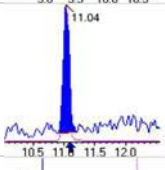 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 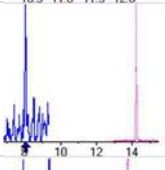 | 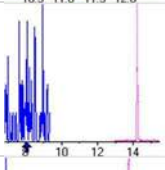 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 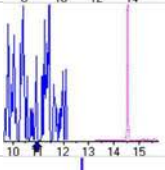 | 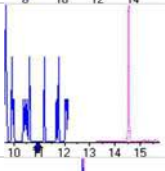 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 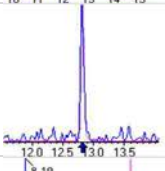 | 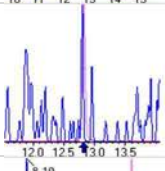 | |
| TFSI | ( 279.7 / 147.0 )<br>83695<br>( 279.7 / 211.0 )<br>4924 | ( 8.19 , 0.64 )<br>( N/A , -0.06 , 0.1) | 34.8<br>17.5 | 0.0588<br>71.3<br>69.2 | 0.0455 | N/A | 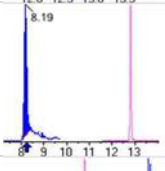 | 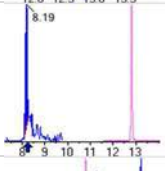 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 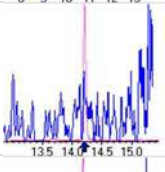 | 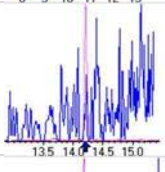 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 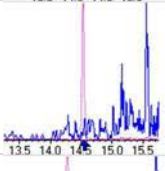 | 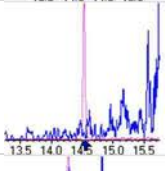 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 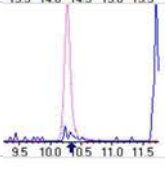 | 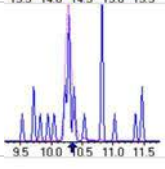 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (16)
Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 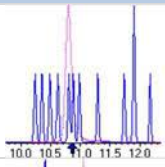 | 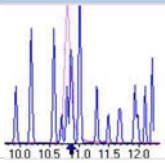 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 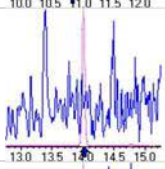 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 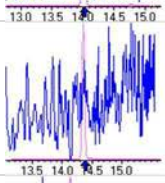 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 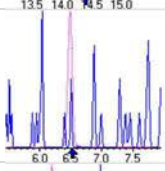 | 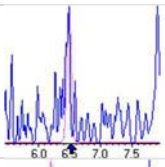 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 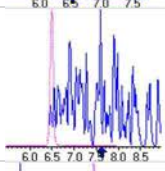 | 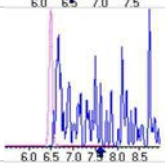 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 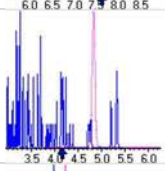 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 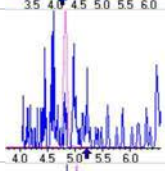 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 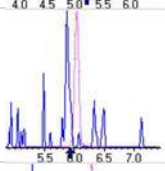 | 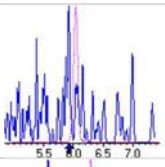 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 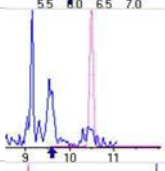 | 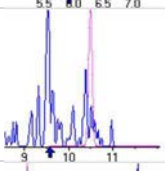 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 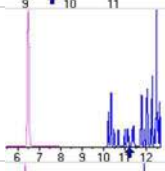 | 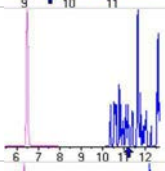 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 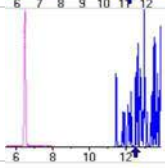 | 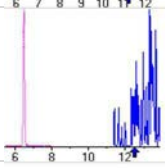 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (16)
Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 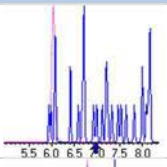 | 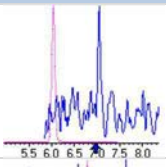 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 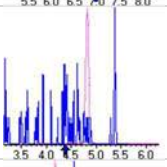 | 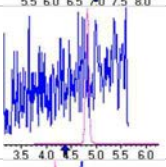 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 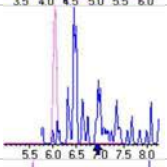 | 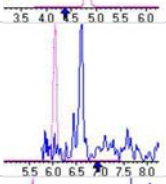 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 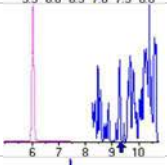 | 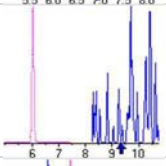 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 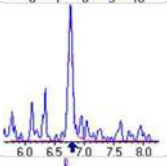 | 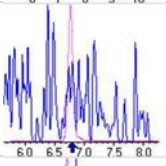 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 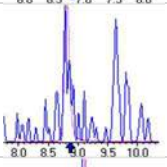 | 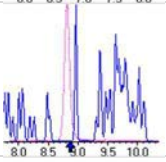 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 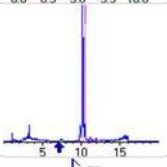 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 320480 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1388.9 | N/A | 1.0638<br>[ 1.0000 ] | 106.4%<br>{ 94.7% } | 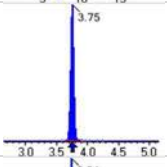 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 160600 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 18774848.2 | N/A | 1.0444<br>[ 1.0000 ] | 104.4%<br>{ 94.2% } | 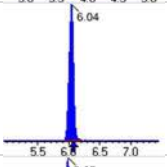 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 459186 | ( 8.18 , N/A )<br>( N/A , -0.05 , N/A ) | 3074.7 | N/A | 1.0293<br>[ 1.0000 ] | 102.9%<br>{ 94.1% } | 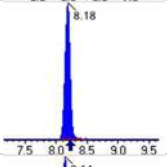 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 339940 | ( 9.14 , N/A )<br>( N/A , -0.05 , N/A ) | 1149.5 | N/A | 1.0169<br>[ 1.0000 ] | 101.7%<br>{ 88.4% } | 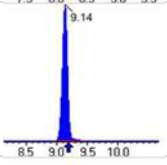 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (16)
Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 343047 | ( 10.04 , N/A ) ( N/A , -0.06 , N/A ) | 2699.5 | N/A | 1.0344 [ 1.0000 ] | 103.4% { 90.8% } | 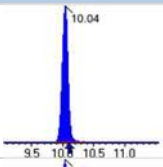  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1143882 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 5323.8 | N/A | 1.0237 [ 1.0000 ] | 102.4% { 91.3% } | 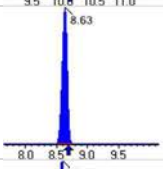  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 951357 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1138.7 | N/A | 0.9746 [ 1.0000 ] | 97.5% { 89.9% } | 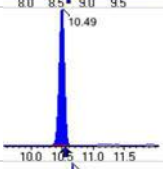  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2765401 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 43410.3 | N/A | 7.8249 [ 8.0000 ] | 97.8% { 97.4% } | 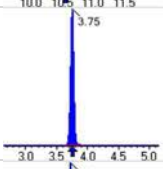  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1090641 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5723.2 | N/A | 3.7854 [ 4.0000 ] | 94.6% { 85.2% } | 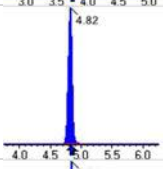  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 691395 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 9121.6 | N/A | 2.0050 [ 2.0000 ] | 100.3% { 91.1% } | 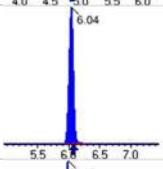  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 751641 | ( 7.18 , N/A ) ( N/A , -0.04 , N/A ) | 7143.6 | N/A | 2.0870 [ 2.0000 ] | 104.4% { 91.5% } | 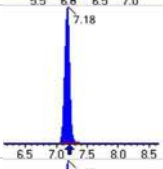  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 997294 | ( 8.18 , N/A ) ( N/A , -0.05 , N/A ) | 3864.8 | N/A | 2.0599 [ 2.0000 ] | 103.0% { 91.8% } | 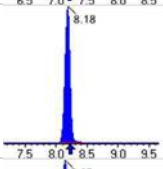  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 335543 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 2190.2 | N/A | 1.0222 [ 1.0000 ] | 102.2% { 88.7% } | 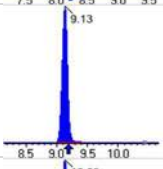  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 390593 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 748.9 | N/A | 0.9867 [ 1.0000 ] | 98.7% { 82.9% } | 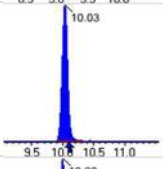  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 450301 | ( 10.90 , N/A ) ( N/A , -0.05 , N/A ) | 786.2 | N/A | 0.9356 [ 1.0000 ] | 93.6% { 88.8% } | 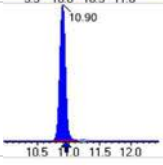  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 440839 | ( 11.73 , N/A ) ( N/A , -0.04 , N/A ) | 1170.1 | N/A | 0.9121 [ 1.0000 ] | 91.2% { 84.9% } | 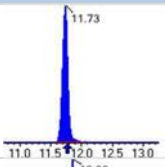 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 317940 | ( 12.86 , N/A ) ( N/A , -0.03 , N/A ) | 1344.6 | N/A | 0.7549 [ 1.0000 ] | 75.5% { 71.8% } | 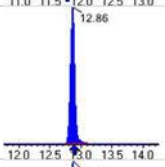 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 569761 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 2360.1 | N/A | 1.5927 [ 2.0000 ] | 79.6% { 70.8% } | 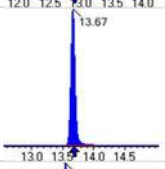 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2004146 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 1109.1 | N/A | 1.7982 [ 2.0000 ] | 89.9% { 84.1% } | 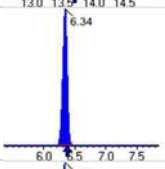 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1617434 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 3330.5 | N/A | 1.9323 [ 2.0000 ] | 96.6% { 91.7% } | 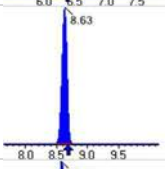 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1992911 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1530.0 | N/A | 1.9677 [ 2.0000 ] | 98.4% { 89.3% } | 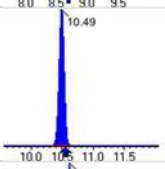 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 625015 | ( 5.51 , N/A ) ( N/A , -0.03 , N/A ) | 80.5 | N/A | 6.2746 [ 4.0000 ] | 156.9% { 113.0% } | 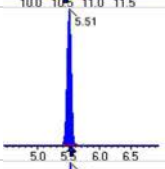 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1846499 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 2482.7 | N/A | 5.9692 [ 4.0000 ] | 149.2% { 113.4% } | 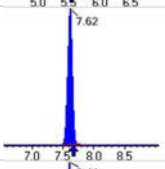 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1413540 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1584.5 | N/A | 4.5866 [ 4.0000 ] | 114.7% { 82.8% } | 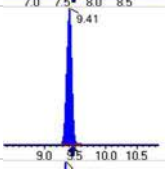 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2840830 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1460.7 | N/A | 8.0304 [ 8.0000 ] | 100.4% { 76.6% } | 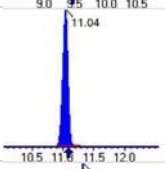 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1774098 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 3006.1 | N/A | 1.6164 [ 2.0000 ] | 80.8% { 73.3% } | 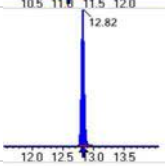 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 109904 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 853.2 | N/A | 0.5423 [ 2.0000 ] | 27.1% { 25.7% } | 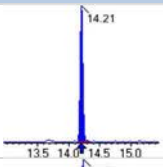 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 101656 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 773.9 | N/A | 0.4367 [ 2.0000 ] | 21.8% { 21.0% } | 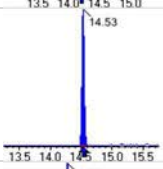 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1037186 | ( 10.28 , N/A ) ( N/A , -0.05 , N/A ) | 2808.4 | N/A | 3.9989 [ 4.0000 ] | 100.0% { 78.6% } | 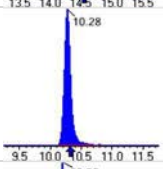 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1023075 | ( 10.80 , N/A ) ( N/A , -0.05 , N/A ) | 2038.5 | N/A | 4.1554 [ 4.0000 ] | 103.9% { 83.1% } | 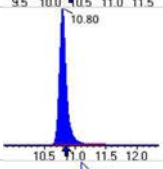 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 885833 | ( 14.00 , N/A ) ( N/A , 0.00 , N/A ) | 1591.3 | N/A | 9.3543 [ 20.0000 ] | 46.8% { 47.6% } | 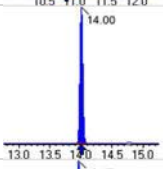 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 841710 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 2461.6 | N/A | 7.3373 [ 20.0000 ] | 36.7% { 40.2% } | 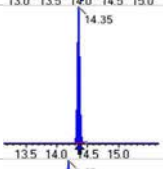 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1191775 | ( 6.49 , N/A ) ( N/A , -0.03 , N/A ) | 2563.3 | N/A | 8.0404 [ 8.0000 ] | 100.5% { 84.9% } | 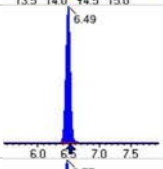 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 544349 | ( 6.77 , N/A ) ( N/A , -0.04 , N/A ) | 1311.0 | N/A | 1.7891 [ 2.0000 ] | 89.5% { 76.5% } | 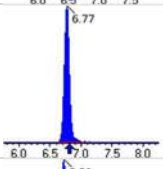 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 550181 | ( 8.81 , N/A ) ( N/A , -0.05 , N/A ) | 712.0 | N/A | 1.9369 [ 2.0000 ] | 96.8% { 82.2% } | 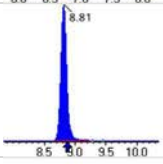 | | |

# ANALYSIS DATA SHEETL

## MW-14-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-06- | File ID:- | S2024-03-18A (17)- |
| Sampled:- | 03/12/24 10:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 18:59- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.629 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.18- | 0.061- | 0.75- | J- |
| PFHxA- | 0.11- | 0.051- | 0.37- | J- |
| PFHpA- | 0.044- | 0.038- | 0.37- | J- |
| PFOA- | 0.39- | 0.14- | 0.37- | MI2- |
| PFNA- | ND- | 0.077- | 0.37- | U- |
| PFDA- | ND- | 0.095- | 0.37- | IR1, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.19- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | IR2, U- |
| PFBS- | 0.20- | 0.034- | 0.37- | J- |
| PFPeS- | 0.11- | 0.059- | 0.37- | J- |
| PFHxS- | 0.37- | 0.030- | 0.37- | IR1- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.34- | 0.059- | 0.37- | IR1, J- |
| PFNS- | ND- | 0.12- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.099- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-14-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-06- | File ID:- | S2024-03-18A (17)- |
| Sampled:- | 03/12/24 10:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 18:59- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.629 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.050- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (17)
Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>33813<br>( 163.0 / 69.0 )<br>1215 | ( 2.85 , 0.75 )<br>( N/A , 0.07 , -0.1) | 141.9<br>43.6 | 0.0359<br>143.3<br>137.4 | 0.1130 | N/A | 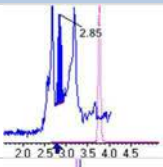 | 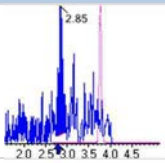 | MI5 ABK 3/18/24 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 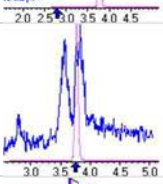 | | |
| PFPeA | ( 263.0 / 219.0 )<br>13029<br>( 263.0 / 69.0 )<br>63 | ( 4.83 , 1.00 )<br>( -0.01 , N/A , 0.2) | 55.8<br>3.6 | 0.0048<br>43.9<br>41.2 | 0.0474 | N/A | 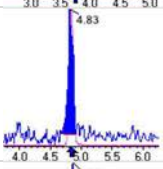 | 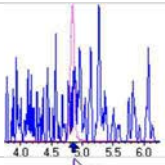 | |
| PFHxA | ( 313.0 / 269.0 )<br>9579<br>( 313.0 / 119.0 )<br>1482 | ( 6.06 , 1.00 )<br>( 0.00 , N/A , -0.2) | 63.5<br>25.8 | 0.1548<br>139.3<br>136.2 | 0.0304 | N/A | 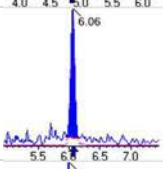 | 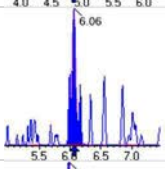 | |
| PFHpA | ( 363.0 / 319.0 )<br>4353<br>( 363.0 / 169.0 )<br>1445 | ( 7.20 , 1.00 )<br>( 0.00 , N/A , 0.9) | 26.4<br>21.3 | 0.3321<br>106.6<br>112.9 | 0.0118 | N/A | 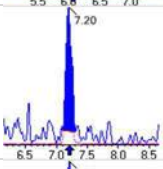 | 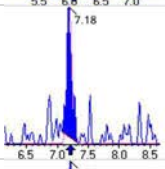 | |
| PFOA | ( 413.0 / 369.0 )<br>50777<br>( 413.0 / 169.0 )<br>19346 | ( 8.21 , 1.00 )<br>( 0.00 , N/A , -0.1) | 77.7<br>108.5 | 0.3810<br>105.3<br>107.3 | 0.1029 | N/A | 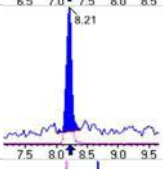 | 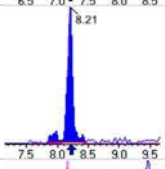 | MI2 PIT 3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 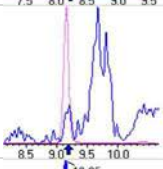 | 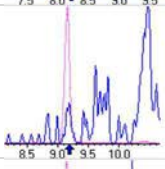 | |
| PFDA | ( 513.0 / 469.0 )<br>9474<br>( 513.0 / 169.0 )<br>522 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -3.0) | 48.1<br>11.3 | 0.0551<br>47.0<br>45.7 | 0.0243 | N/A | 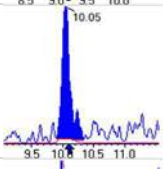 | 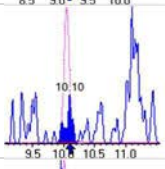 | IR1, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 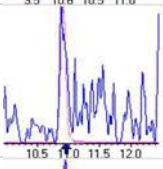 | 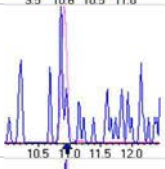 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 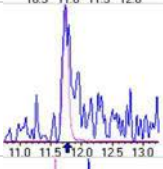 | 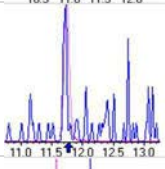 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 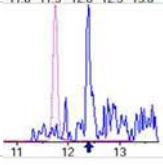 | 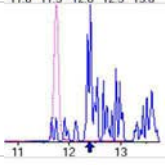 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (17)
Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 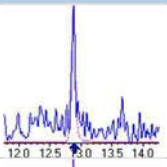 | 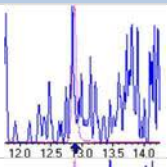 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 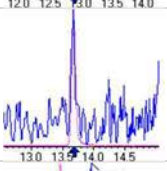 | 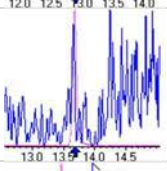 | |
| PFODA | ( 913.0 / 869.0 ) 3407<br>( 913.0 / 169.0 ) 2262 | ( 14.31 , 1.05 ) ( N/A , 0.00 , 0.7) | 18.4<br>14.1 | 0.6640<br>173.8<br>200.2 | 0.0205 | N/A | 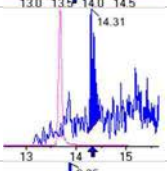 | 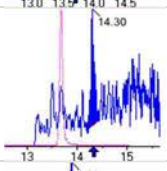 | IR2, |
| PFBS | ( 299.0 / 80.0 ) 28229<br>( 299.0 / 99.0 ) 21850 | ( 6.35 , 1.00 ) ( 0.00 , N/A , -0.2) | 109.4<br>105.9 | 0.7740<br>108.9<br>107.4 | 0.0539 | N/A | 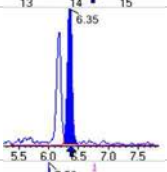 | 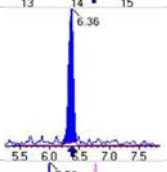 | |
| PFPeS | ( 349.0 / 80.0 ) 37100<br>( 349.0 / 99.0 ) 12733 | ( 7.59 , 0.88 ) ( N/A , -0.02 , 0.3) | 78.5<br>76.0 | 0.3432<br>100.9<br>100.0 | 0.0295 | N/A | 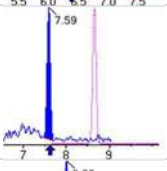 | 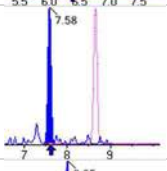 | |
| PFHxS | ( 399.0 / 80.0 ) 137489<br>( 399.0 / 99.0 ) 14718 | ( 8.66 , 1.00 ) ( 0.00 , N/A , 0.3) | 296.7<br>181.9 | 0.1071<br>34.2<br>33.4 | 0.0983 | N/A | 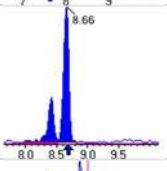 | 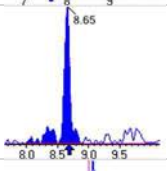 | IR1, |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 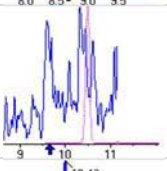 | 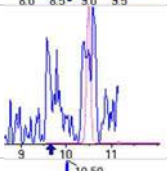 | |
| PFOS | ( 499.0 / 80.0 ) 98491<br>( 499.0 / 99.0 ) 9795 | ( 10.43 , 0.99 ) ( -0.06 , N/A , -3.9) | 84.8<br>86.6 | 0.0994<br>42.0<br>45.4 | 0.0903 | N/A | 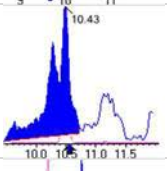 | 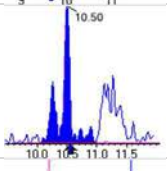 | IR1, |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 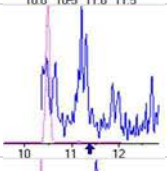 | 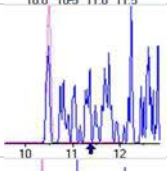 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 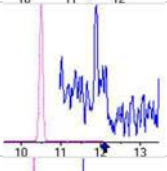 | 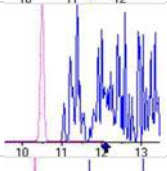 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 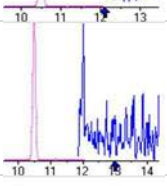 | 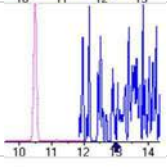 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 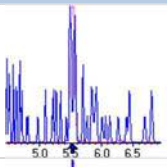 | 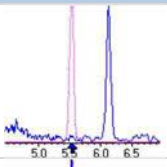 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 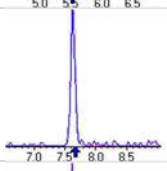 | 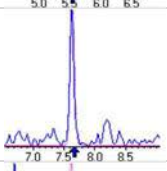 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 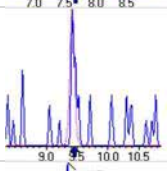 | 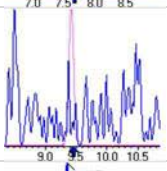 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14569<br>( 627.0 / 81.0 )<br>21723 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.1) | 175.0<br>66.9 | 1.4910<br>110.3<br>108.9 | 0.0538 | N/A | 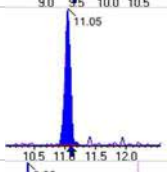 | 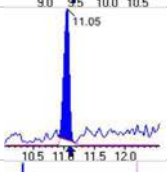 | |
| PFBSA | ( 297.9 / 78.0 )<br>10901<br>( 297.9 / 278.0 )<br>N/A | ( 8.06 , 0.57 )<br>( N/A , 0.00 , #Value!) | 93.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0354 | N/A | 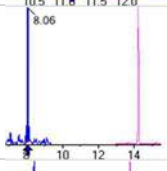 | 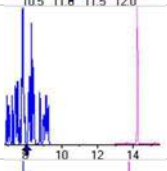 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 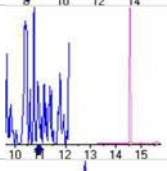 | 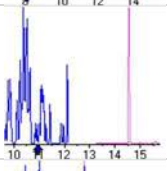 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 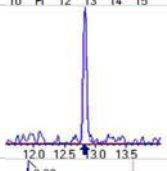 | 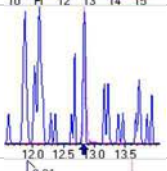 | |
| TFSI | ( 279.7 / 147.0 )<br>70376<br>( 279.7 / 211.0 )<br>5392 | ( 8.22 , 0.64 )<br>( N/A , -0.03 , 0.5) | 33.7<br>13.2 | 0.0766<br>92.9<br>90.1 | 0.0367 | N/A | 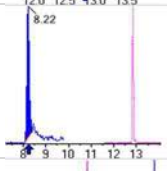 | 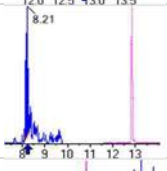 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 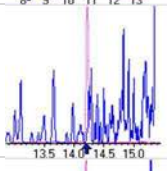 | 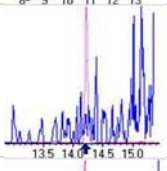 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 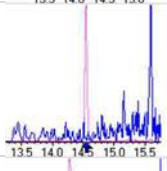 | 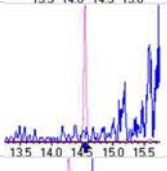 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 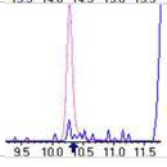 | 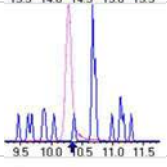 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (17)
Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 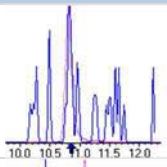 | 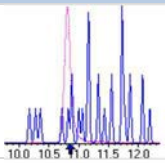 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 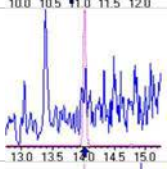 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 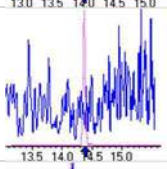 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 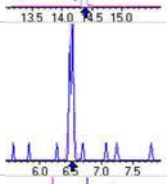 | 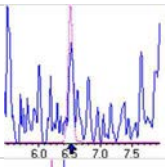 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 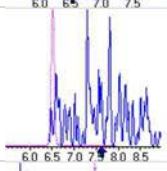 | 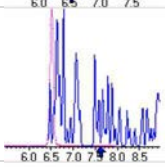 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 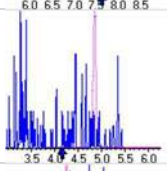 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 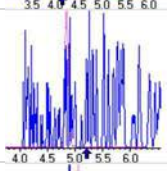 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 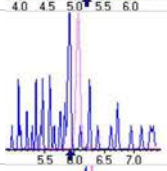 | 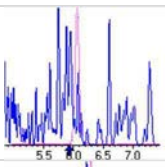 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 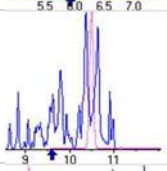 | 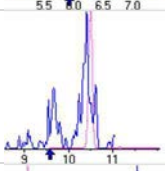 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 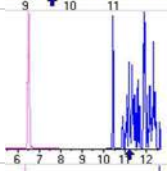 | 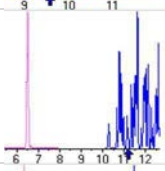 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 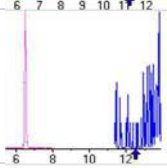 | 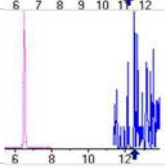 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 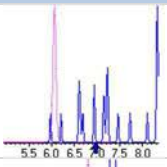 | 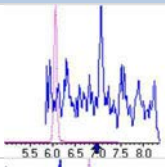 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 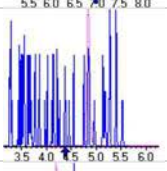 | 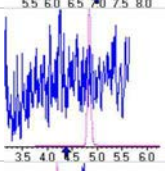 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 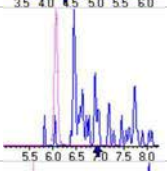 | 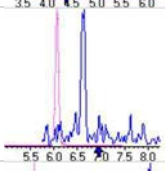 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 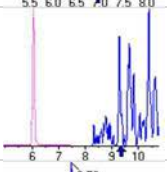 | 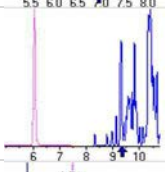 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3812<br>( 357.2 / 243.0 ) 988 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 2.1) | 38.3<br>7.9 | 0.2593<br>245.6<br>242.6 | 0.0131 | N/A | 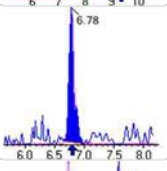 | 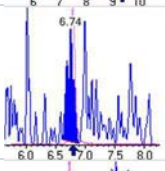 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 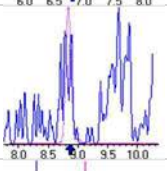 | 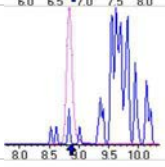 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 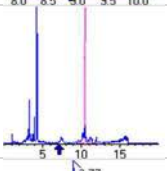 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 318646 | ( 3.77 , N/A )<br>( N/A , 0.02 , N/A ) | 1303.3 | N/A | 1.0577<br>[ 1.0000 ] | 105.8%<br>{ 94.1% } | 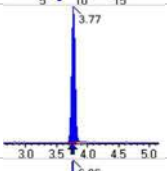 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 152124 | ( 6.06 , N/A )<br>( N/A , -0.01 , N/A ) | 16127.8 | N/A | 0.9893<br>[ 1.0000 ] | 98.9%<br>{ 89.3% } | 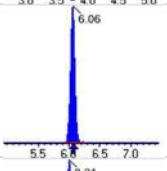 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 495758 | ( 8.21 , N/A )<br>( N/A , -0.02 , N/A ) | 4500.7 | N/A | 1.1112<br>[ 1.0000 ] | 111.1%<br>{ 101.6% } | 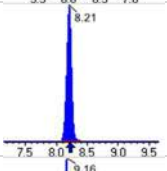 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 370248 | ( 9.16 , N/A )<br>( N/A , -0.03 , N/A ) | 785.7 | N/A | 1.1075<br>[ 1.0000 ] | 110.8%<br>{ 96.3% } | 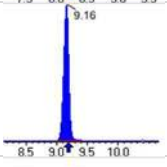 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 376233 | ( 10.05 , N/A ) ( N/A , -0.04 , N/A ) | 3358.6 | N/A | 1.1345 [ 1.0000 ] | 113.5% { 99.6% } | 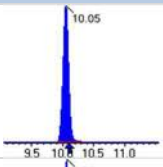 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1169225 | ( 8.66 , N/A ) ( N/A , -0.03 , N/A ) | 3713.0 | N/A | 1.0463 [ 1.0000 ] | 104.6% { 93.3% } | 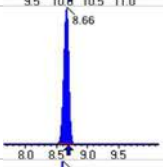 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 963208 | ( 10.50 , N/A ) ( N/A , -0.06 , N/A ) | 1087.8 | N/A | 0.9867 [ 1.0000 ] | 98.7% { 91.1% } | 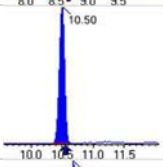 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2705773 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 43810.2 | N/A | 7.7002 [ 8.0000 ] | 96.3% { 95.3% } | 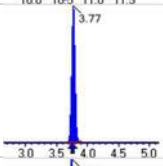 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1081195 | ( 4.84 , N/A ) ( N/A , 0.01 , N/A ) | 5500.9 | N/A | 3.9618 [ 4.0000 ] | 99.0% { 84.4% } | 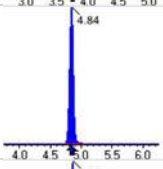 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 650800 | ( 6.06 , N/A ) ( N/A , -0.01 , N/A ) | 10466.5 | N/A | 1.9925 [ 2.0000 ] | 99.6% { 85.8% } | 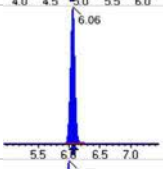 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 747970 | ( 7.20 , N/A ) ( N/A , -0.02 , N/A ) | 4722.0 | N/A | 2.1926 [ 2.0000 ] | 109.6% { 91.1% } | 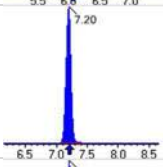 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 970259 | ( 8.20 , N/A ) ( N/A , -0.02 , N/A ) | 2737.8 | N/A | 1.8562 [ 2.0000 ] | 92.8% { 89.3% } | 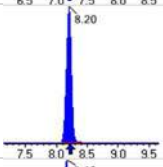 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330077 | ( 9.16 , N/A ) ( N/A , -0.03 , N/A ) | 1579.1 | N/A | 0.9232 [ 1.0000 ] | 92.3% { 87.3% } | 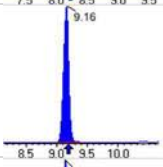 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 391652 | ( 10.05 , N/A ) ( N/A , -0.04 , N/A ) | 1101.3 | N/A | 0.9021 [ 1.0000 ] | 90.2% { 83.1% } | 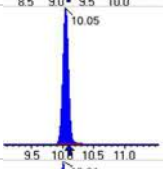 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 452784 | ( 10.91 , N/A ) ( N/A , -0.04 , N/A ) | 1040.3 | N/A | 0.8578 [ 1.0000 ] | 85.8% { 89.3% } | 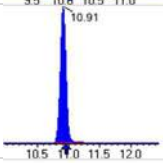 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 411786 | ( 11.74 , N/A ) ( N/A , -0.03 , N/A ) | 1056.4 | N/A | 0.7768 [ 1.0000 ] | 77.7% { 79.3% } | 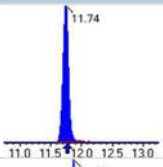 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 270078 | ( 12.87 , N/A ) ( N/A , -0.01 , N/A ) | 1210.5 | N/A | 0.5847 [ 1.0000 ] | 58.5% { 61.0% } | 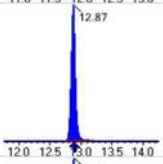 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 512403 | ( 13.68 , N/A ) ( N/A , -0.01 , N/A ) | 2739.3 | N/A | 1.3060 [ 2.0000 ] | 65.3% { 63.7% } | 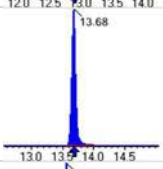 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2012846 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 977.6 | N/A | 1.7669 [ 2.0000 ] | 88.3% { 84.4% } | 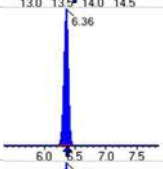 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1579616 | ( 8.66 , N/A ) ( N/A , -0.03 , N/A ) | 3044.9 | N/A | 1.8462 [ 2.0000 ] | 92.3% { 89.6% } | 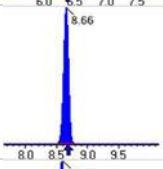 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1888007 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 945.0 | N/A | 1.8412 [ 2.0000 ] | 92.1% { 84.6% } | 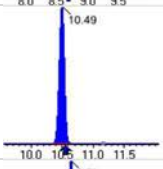 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 613018 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 86.3 | N/A | 6.0207 [ 4.0000 ] | 150.5% { 110.8% } | 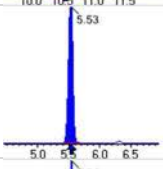 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1837373 | ( 7.64 , N/A ) ( N/A , -0.02 , N/A ) | 3001.3 | N/A | 5.8110 [ 4.0000 ] | 145.3% { 112.9% } | 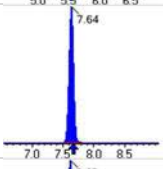 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1509345 | ( 9.42 , N/A ) ( N/A , -0.03 , N/A ) | 1374.8 | N/A | 4.7914 [ 4.0000 ] | 119.8% { 88.4% } | 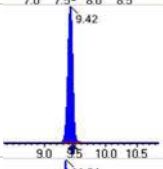 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2634692 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1446.7 | N/A | 7.2862 [ 8.0000 ] | 91.1% { 71.0% } | 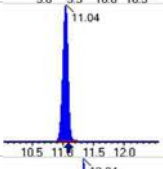 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1847207 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2768.9 | N/A | 1.6624 [ 2.0000 ] | 83.1% { 76.3% } | 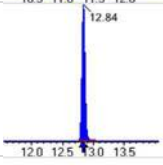 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (17)
Acquired: 2024/03/18 - 18:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 133982 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 937.1 | N/A | 0.6530 [ 2.0000 ] | 32.6% { 31.4% } | 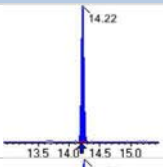 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 122682 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 1278.0 | N/A | 0.5205 [ 2.0000 ] | 26.0% { 25.3% } | 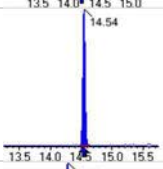 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 953643 | ( 10.28 , N/A ) ( N/A , -0.05 , N/A ) | 2703.7 | N/A | 3.6316 [ 4.0000 ] | 90.8% { 72.2% } | 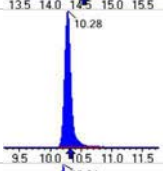 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 992298 | ( 10.81 , N/A ) ( N/A , -0.04 , N/A ) | 1912.7 | N/A | 3.9808 [ 4.0000 ] | 99.5% { 80.6% } | 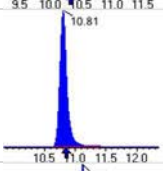 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1063239 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2245.9 | N/A | 11.0896 [ 20.0000 ] | 55.4% { 57.2% } | 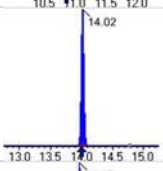 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 972989 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3734.0 | N/A | 8.3773 [ 20.0000 ] | 41.9% { 46.5% } | 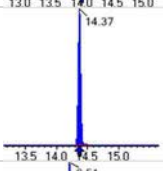 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1175462 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2541.2 | N/A | 8.3722 [ 8.0000 ] | 104.7% { 83.7% } | 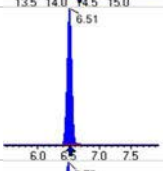 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 543421 | ( 6.79 , N/A ) ( N/A , -0.02 , N/A ) | 1368.6 | N/A | 1.6285 [ 2.0000 ] | 81.4% { 76.4% } | 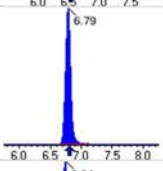 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 574487 | ( 8.84 , N/A ) ( N/A , -0.03 , N/A ) | 962.2 | N/A | 1.8441 [ 2.0000 ] | 92.2% { 85.8% } | 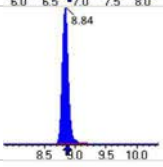 | | |

# ANALYSIS DATA SHEETL

## MW-14-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-07- | File ID:- | S2024-03-18A (18)- |
| Sampled:- | 03/12/24 11:00- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 19:19- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.129 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 1.0- | 0.19- | 1.5- | J- |
| PFPeA- | 1.4- | 0.060- | 0.73- | |
| PFHxA- | 1.1- | 0.050- | 0.37- | |
| PFHpA- | 0.28- | 0.038- | 0.37- | J- |
| PFOA- | 2.4- | 0.14- | 0.37- | MI4- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | ND- | 0.093- | 0.37- | IR2, MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 1.0- | 0.034- | 0.37- | |
| PFPeS- | 0.74- | 0.058- | 0.37- | |
| PFHxS- | 1.5- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.52- | 0.058- | 0.37- | MI3- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-14-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-07- | File ID:- | S2024-03-18A (18)- |
| Sampled:- | 03/12/24 11:00- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 19:19- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.129 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (18)
Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>36854<br>( 163.0 / 69.0 )<br>1269 | ( 2.80 , 0.75 )<br>( N/A , 0.03 , -0.1) | 172.0<br>83.0 | 0.0344<br>137.4<br>131.7 | 0.1499 | N/A | 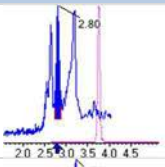 | 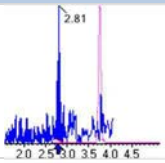 | |
| PFBA | ( 213.0 / 169.0 )<br>72229 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 142.2 | N/A<br>0.0<br>0.0 | 0.2748 | N/A | 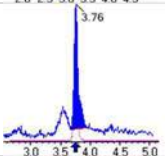 | | |
| PFPeA | ( 263.0 / 219.0 )<br>99765<br>( 263.0 / 69.0 )<br>1226 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , 0.0) | 371.5<br>16.7 | 0.0123<br>111.9<br>105.1 | 0.3683 | N/A | 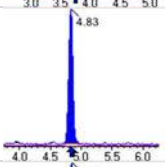 | 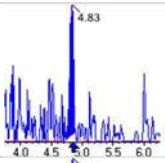 | |
| PFHxA | ( 313.0 / 269.0 )<br>96380<br>( 313.0 / 119.0 )<br>10600 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 356.7<br>168.6 | 0.1100<br>99.0<br>96.8 | 0.3129 | N/A | 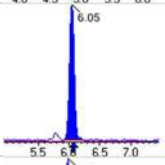 | 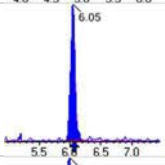 | |
| PFHpA | ( 363.0 / 319.0 )<br>26915<br>( 363.0 / 169.0 )<br>7817 | ( 7.18 , 1.00 )<br>( -0.01 , N/A , 0.1) | 129.1<br>123.2 | 0.2904<br>93.2<br>98.8 | 0.0760 | N/A | 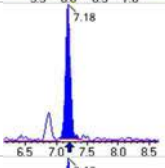 | 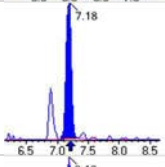 | |
| PFOA | ( 413.0 / 369.0 )<br>313575<br>( 413.0 / 169.0 )<br>114623 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 317.9<br>298.8 | 0.3655<br>101.1<br>103.0 | 0.6522 | N/A | 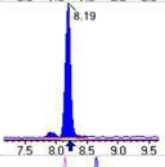 | 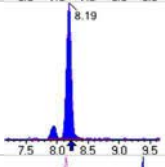 | MI4 ABK 3/18/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 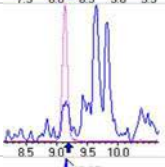 | 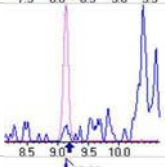 | |
| PFDA | ( 513.0 / 469.0 )<br>4390<br>( 513.0 / 169.0 )<br>821 | ( 10.05 , 1.00 )<br>( 0.01 , N/A , 1.5) | 35.2<br>192.0 | 0.1871<br>159.4<br>155.0 | 0.0118 | N/A | 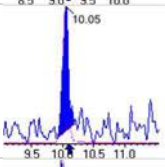 | 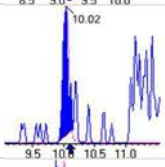 | IR2,MI2 PIT 3/19/24 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 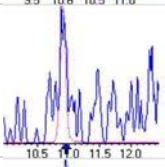 | 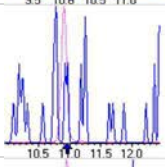 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 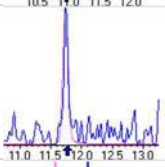 | 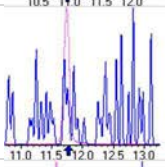 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 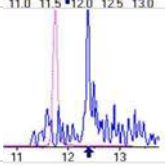 | 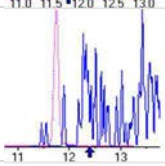 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 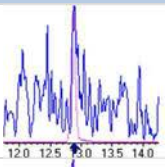 | 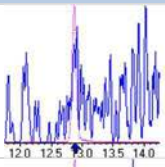 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 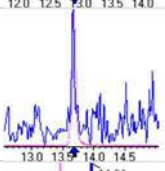 | 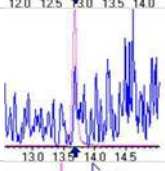 | |
| PFODA | ( 913.0 / 869.0 )<br>3191<br>( 913.0 / 169.0 )<br>896 | ( 14.31 , 1.05 )<br>( N/A , -0.01 , 0.3) | 15.3<br>9.6 | 0.2808<br>73.5<br>84.7 | 0.0216 | N/A | 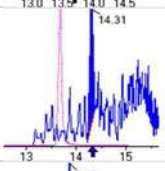 | 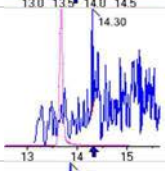 | |
| PFBS | ( 299.0 / 80.0 )<br>149316<br>( 299.0 / 99.0 )<br>108209 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.2) | 347.0<br>353.6 | 0.7247<br>101.9<br>100.5 | 0.2859 | N/A | 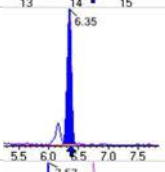 | 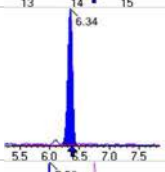 | |
| PFPeS | ( 349.0 / 80.0 )<br>249126<br>( 349.0 / 99.0 )<br>88421 | ( 7.57 , 0.88 )<br>( N/A , -0.04 , -0.1) | 150.1<br>331.0 | 0.3549<br>104.4<br>103.4 | 0.2005 | N/A | 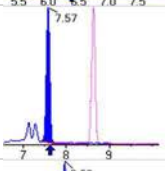 | 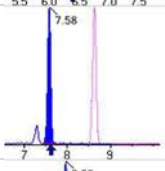 | |
| PFHxS | ( 399.0 / 80.0 )<br>551804<br>( 399.0 / 99.0 )<br>99515 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 597.4<br>670.2 | 0.1803<br>57.7<br>56.2 | 0.3994 | N/A | 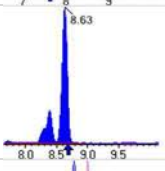 | 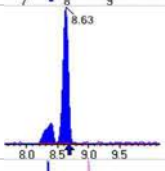 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 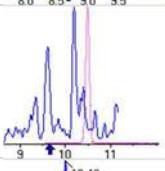 | 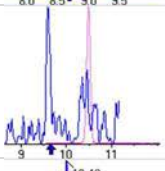 | |
| PFOS | ( 499.0 / 80.0 )<br>155604<br>( 499.0 / 99.0 )<br>23072 | ( 10.48 , 1.00 )<br>( -0.01 , N/A , 0.0) | 153.2<br>227.6 | 0.1483<br>62.7<br>67.7 | 0.1420 | N/A | 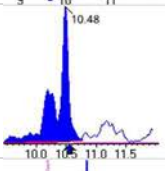 | 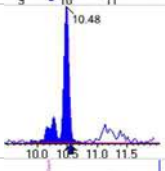 | MI3 ABK<br>3/18/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 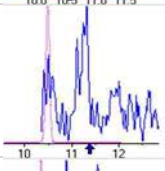 | 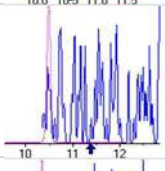 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 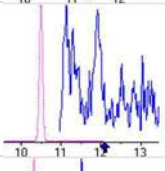 | 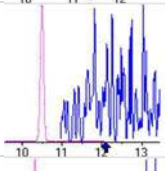 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 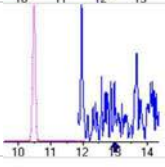 | 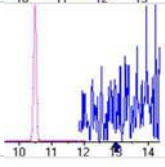 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (18)
Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 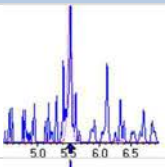 | 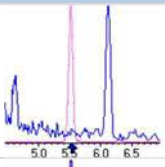 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 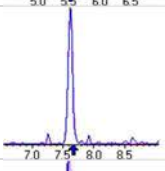 | 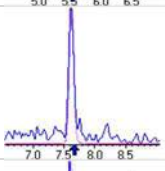 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 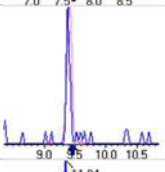 | 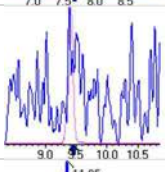 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14225<br>( 627.0 / 81.0 )<br>22133 | ( 11.04 , 1.00 )<br>( 0.00 , N/A , -0.5) | 172.6<br>58.2 | 1.5560<br>115.1<br>113.6 | 0.0525 | N/A | 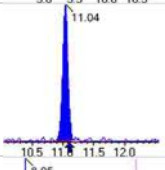 | 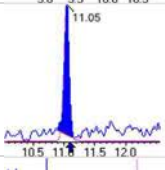 | |
| PFBSA | ( 297.9 / 78.0 )<br>50029<br>( 297.9 / 278.0 )<br>520 | ( 8.05 , 0.57 )<br>( N/A , -0.01 , 1.6) | 326.5<br>5.8 | 0.0104<br>739.9<br>656.7 | 0.1740 | N/A | 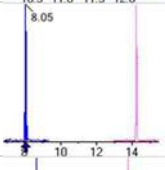 | 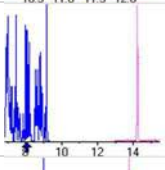 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 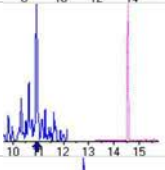 | 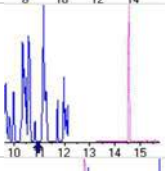 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 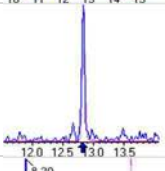 | 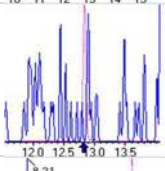 | |
| TFSI | ( 279.7 / 147.0 )<br>78249<br>( 279.7 / 211.0 )<br>4892 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , -0.5) | 31.1<br>13.8 | 0.0625<br>75.8<br>73.5 | 0.0431 | N/A | 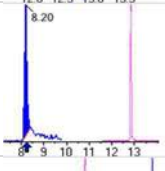 | 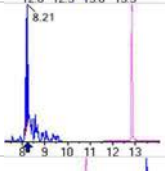 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 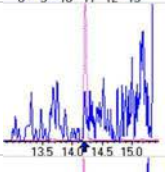 | 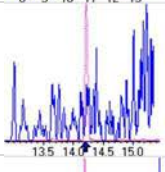 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 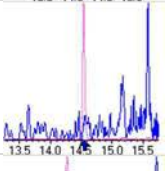 | 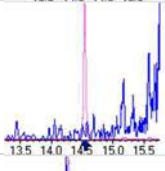 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 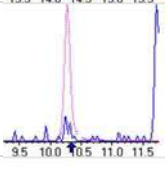 | 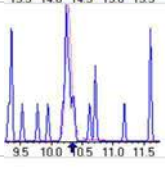 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (18)
Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 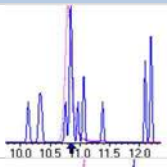 | 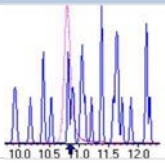 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 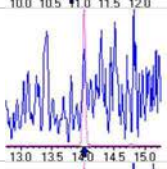 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 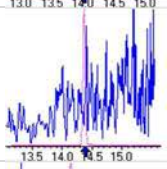 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 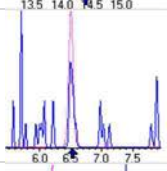 | 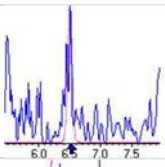 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 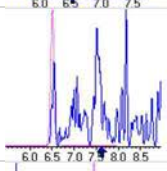 | 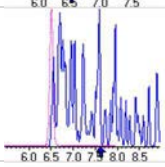 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 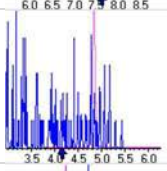 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 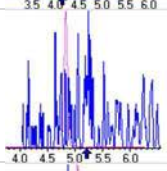 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 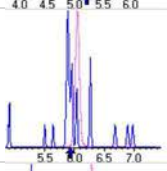 | 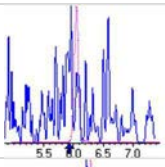 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 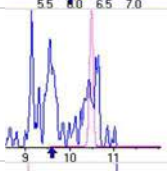 | 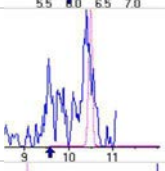 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 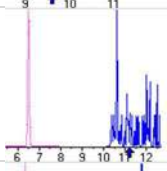 | 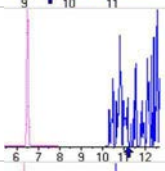 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 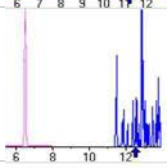 | 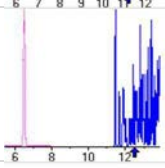 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 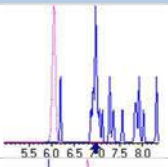 | 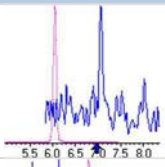 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 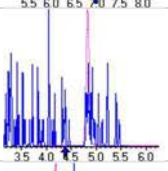 | 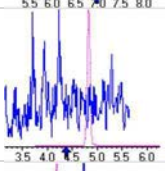 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 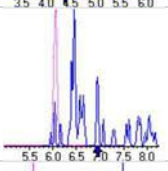 | 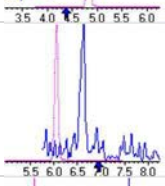 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 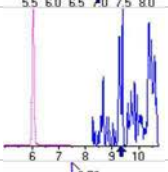 | 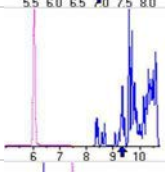 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3293<br>( 357.2 / 243.0 ) 552 | ( 6.79 , 1.00 )<br>( 0.01 , N/A , 1.1) | 27.2<br>5.5 | 0.1677<br>158.9<br>157.0 | 0.0119 | N/A | 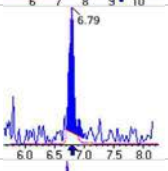 | 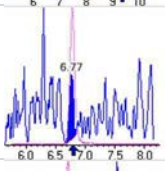 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 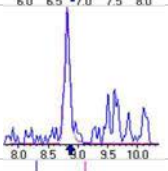 | 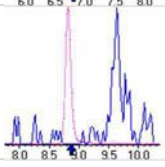 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 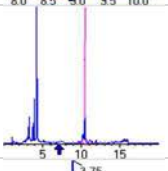 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 311529 | ( 3.75 , N/A )<br>( N/A , 0.01 , N/A ) | 1127.8 | N/A | 1.0341<br>[ 1.0000 ] | 103.4%<br>{ 92.0% } | 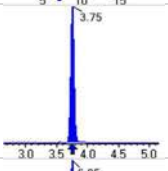 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 153849 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 6879.9 | N/A | 1.0005<br>[ 1.0000 ] | 100.1%<br>{ 90.3% } | 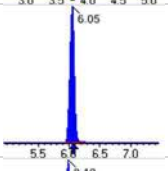 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 465975 | ( 8.19 , N/A )<br>( N/A , -0.04 , N/A ) | 3300.2 | N/A | 1.0445<br>[ 1.0000 ] | 104.4%<br>{ 95.5% } | 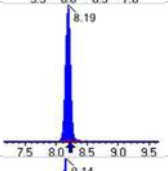 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 347837 | ( 9.14 , N/A )<br>( N/A , -0.05 , N/A ) | 710.0 | N/A | 1.0405<br>[ 1.0000 ] | 104.1%<br>{ 90.4% } | 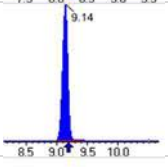 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 359174 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 2747.8 | N/A | 1.0831 [ 1.0000 ] | 108.3% { 95.1% } | 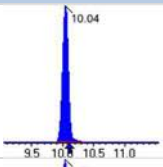 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1134514 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 5355.4 | N/A | 1.0153 [ 1.0000 ] | 101.5% { 90.5% } | 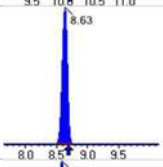 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 915919 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 954.0 | N/A | 0.9383 [ 1.0000 ] | 93.8% { 86.6% } | 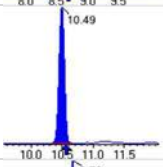 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2222602 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 36196.3 | N/A | 6.4697 [ 8.0000 ] | 80.9% { 78.3% } | 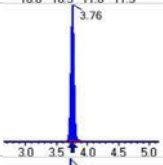 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1064220 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5993.2 | N/A | 3.8558 [ 4.0000 ] | 96.4% { 83.1% } | 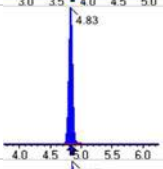 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 635744 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 5940.1 | N/A | 1.9245 [ 2.0000 ] | 96.2% { 83.8% } | 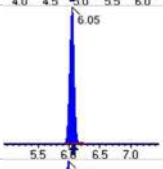 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 719184 | ( 7.19 , N/A ) ( N/A , -0.03 , N/A ) | 3612.5 | N/A | 2.0845 [ 2.0000 ] | 104.2% { 87.6% } | 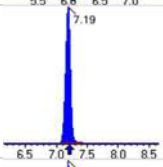 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 945672 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 2973.0 | N/A | 1.9248 [ 2.0000 ] | 96.2% { 87.0% } | 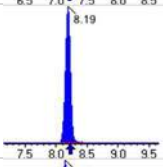 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 331169 | ( 9.13 , N/A ) ( N/A , -0.05 , N/A ) | 1575.0 | N/A | 0.9859 [ 1.0000 ] | 98.6% { 87.6% } | 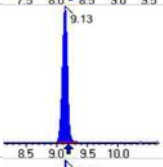 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 373834 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 933.3 | N/A | 0.9020 [ 1.0000 ] | 90.2% { 79.3% } | 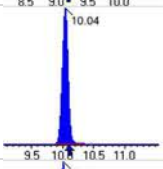 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 438450 | ( 10.91 , N/A ) ( N/A , -0.05 , N/A ) | 1026.5 | N/A | 0.8701 [ 1.0000 ] | 87.0% { 86.5% } | 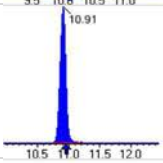 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409585 | ( 11.74 , N/A ) ( N/A , -0.03 , N/A ) | 1218.9 | N/A | 0.8094 [ 1.0000 ] | 80.9% { 78.9% } | 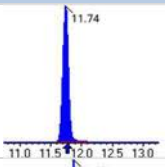 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 320319 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1370.1 | N/A | 0.7264 [ 1.0000 ] | 72.6% { 72.4% } | 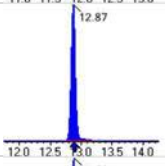 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 454785 | ( 13.68 , N/A ) ( N/A , -0.01 , N/A ) | 2431.1 | N/A | 1.2142 [ 2.0000 ] | 60.7% { 56.5% } | 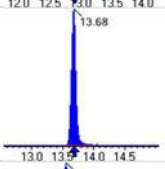 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2008736 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 808.2 | N/A | 1.8172 [ 2.0000 ] | 90.9% { 84.3% } | 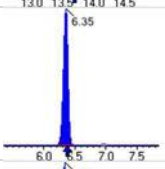 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1560184 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 2821.0 | N/A | 1.8793 [ 2.0000 ] | 94.0% { 88.5% } | 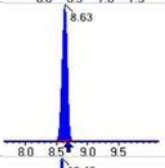 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1895927 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1071.1 | N/A | 1.9444 [ 2.0000 ] | 97.2% { 85.0% } | 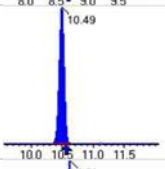 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 575771 | ( 5.52 , N/A ) ( N/A , -0.02 , N/A ) | 92.2 | N/A | 5.8279 [ 4.0000 ] | 145.7% { 104.1% } | 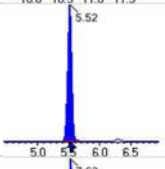 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1816322 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 2390.6 | N/A | 5.9202 [ 4.0000 ] | 148.0% { 111.6% } | 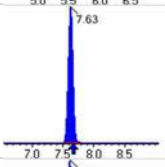 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1355938 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1155.8 | N/A | 4.4361 [ 4.0000 ] | 110.9% { 79.5% } | 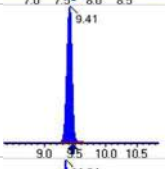 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2635463 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1354.9 | N/A | 7.5114 [ 8.0000 ] | 93.9% { 71.0% } | 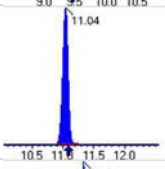 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1750477 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2984.1 | N/A | 1.6566 [ 2.0000 ] | 82.8% { 72.3% } | 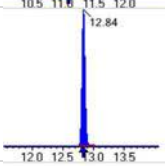 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (18)
Acquired: 2024/03/18 - 19:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 125090 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 846.1 | N/A | 0.6411 [ 2.0000 ] | 32.1% { 29.3% } | 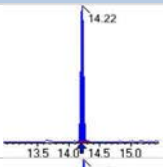 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 105231 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 946.6 | N/A | 0.4695 [ 2.0000 ] | 23.5% { 21.7% } | 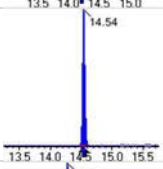 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 976072 | ( 10.27 , N/A ) ( N/A , -0.05 , N/A ) | 2665.3 | N/A | 3.9089 [ 4.0000 ] | 97.7% { 73.9% } | 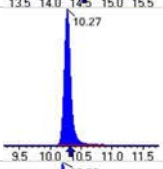 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 994970 | ( 10.80 , N/A ) ( N/A , -0.05 , N/A ) | 2156.0 | N/A | 4.1977 [ 4.0000 ] | 104.9% { 80.8% } | 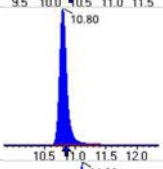 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 779243 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 1918.4 | N/A | 8.5471 [ 20.0000 ] | 42.7% { 41.9% } | 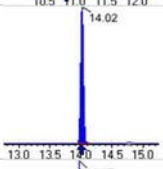 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 761780 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 2231.9 | N/A | 6.8975 [ 20.0000 ] | 34.5% { 36.4% } | 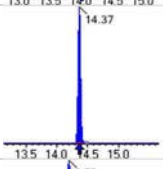 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1159086 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2497.7 | N/A | 8.1630 [ 8.0000 ] | 102.0% { 82.6% } | 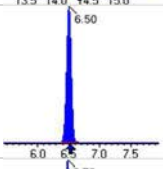 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 515534 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1177.9 | N/A | 1.6184 [ 2.0000 ] | 80.9% { 72.5% } | 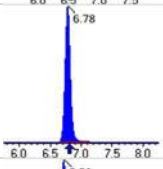 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 539193 | ( 8.81 , N/A ) ( N/A , -0.05 , N/A ) | 621.0 | N/A | 1.8130 [ 2.0000 ] | 90.7% { 80.5% } | 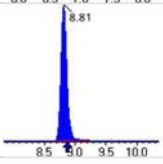 | | |

# ANALYSIS DATA SHEETL

## MW-14-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-08- | File ID:- | S2024-03-18A (19)- |
| Sampled:- | 03/12/24 11:20- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 19:40- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 538.842 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 1.5- | 0.19- | 1.5- | |
| PFPeA- | 2.8- | 0.060- | 0.74- | |
| PFHxA- | 2.2- | 0.051- | 0.37- | |
| PFHpA- | 0.35- | 0.038- | 0.37- | J- |
| PFOA- | 0.66- | 0.14- | 0.37- | MI4- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 1.7- | 0.034- | 0.37- | |
| PFPeS- | 1.0- | 0.058- | 0.37- | |
| PFHxS- | 1.7- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.25- | 0.059- | 0.37- | MI3, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-14-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-08- | File ID:- | S2024-03-18A (19)- |
| Sampled:- | 03/12/24 11:20- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 19:40- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 538.842 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (19)
Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>57716<br>( 163.0 / 69.0 )<br>1032 | ( 2.80 , 0.74 )<br>( N/A , 0.02 , -0.7) | 280.1<br>54.0 | 0.0179<br>71.3<br>68.3 | 0.2555 | N/A | 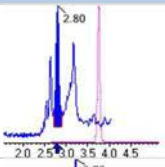 | 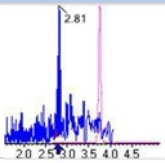 | |
| PFBA | ( 213.0 / 169.0 )<br>100355 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 207.5 | N/A<br>0.0<br>0.0 | 0.4155 | N/A | 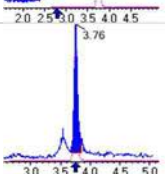 | | |
| PFPeA | ( 263.0 / 219.0 )<br>195396<br>( 263.0 / 69.0 )<br>2372 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , 0.0) | 715.7<br>28.2 | 0.0121<br>110.5<br>103.9 | 0.7505 | N/A | 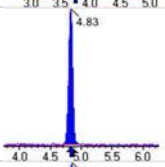 | 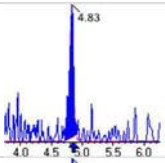 | |
| PFHxA | ( 313.0 / 269.0 )<br>179050<br>( 313.0 / 119.0 )<br>19648 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 616.0<br>288.6 | 0.1097<br>98.8<br>96.6 | 0.6041 | N/A | 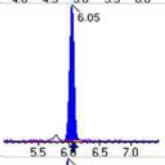 | 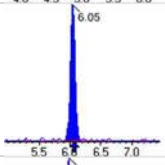 | |
| PFHpA | ( 363.0 / 319.0 )<br>31801<br>( 363.0 / 169.0 )<br>11836 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , -0.2) | 122.0<br>115.7 | 0.3722<br>119.4<br>126.6 | 0.0933 | N/A | 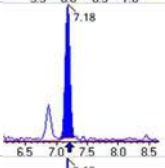 | 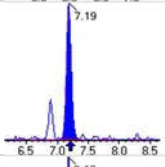 | |
| PFOA | ( 413.0 / 369.0 )<br>85052<br>( 413.0 / 169.0 )<br>36066 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.2) | 89.3<br>104.7 | 0.4240<br>117.2<br>119.5 | 0.1784 | N/A | 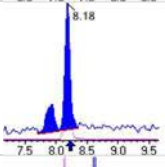 | 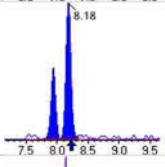 | MI4 ABK<br>3/18/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 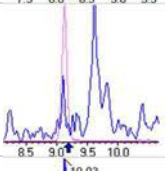 | 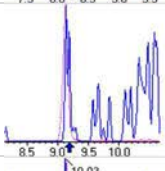 | |
| PFDA | ( 513.0 / 469.0 )<br>6452<br>( 513.0 / 169.0 )<br>705 | ( 10.03 , 1.00 )<br>( 0.00 , N/A , 0.2) | 42.0<br>24.4 | 0.1092<br>93.0<br>90.4 | 0.0175 | N/A | 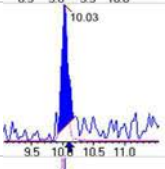 | 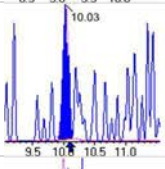 | MI2 PIT<br>3/19/24 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 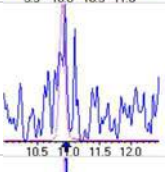 | 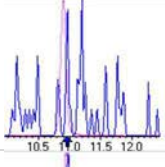 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 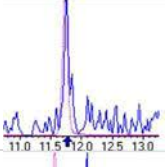 | 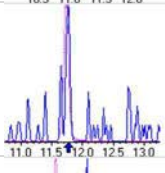 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 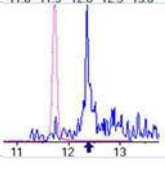 | 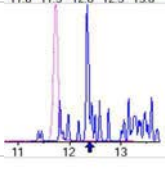 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 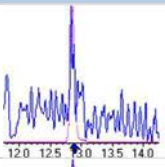 | 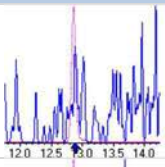 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 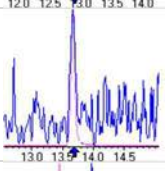 | 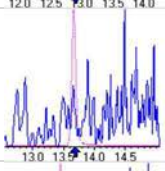 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 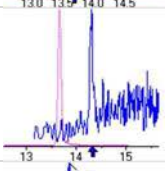 | 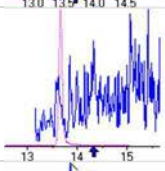 | |
| PFBS | ( 299.0 / 80.0 )<br>231462<br>( 299.0 / 99.0 )<br>169851 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 521.3<br>504.7 | 0.7338<br>103.2<br>101.8 | 0.4596 | N/A | 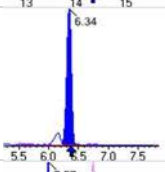 | 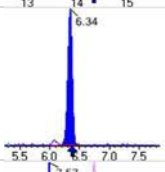 | |
| PFPeS | ( 349.0 / 80.0 )<br>339627<br>( 349.0 / 99.0 )<br>119395 | ( 7.57 , 0.88 )<br>( N/A , -0.04 , 0.0) | 269.5<br>321.3 | 0.3515<br>103.4<br>102.4 | 0.2757 | N/A | 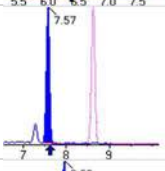 | 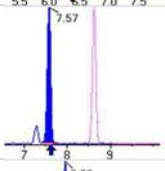 | |
| PFHxS | ( 399.0 / 80.0 )<br>609280<br>( 399.0 / 99.0 )<br>151183 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 744.1<br>851.0 | 0.2481<br>79.4<br>77.3 | 0.4448 | N/A | 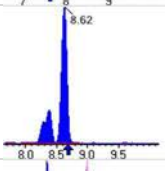 | 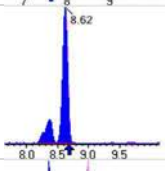 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 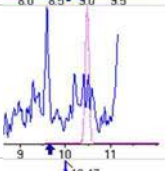 | 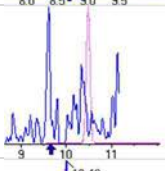 | |
| PFOS | ( 499.0 / 80.0 )<br>73237<br>( 499.0 / 99.0 )<br>9015 | ( 10.47 , 1.00 )<br>( -0.01 , N/A , -0.7) | 70.9<br>80.9 | 0.1231<br>52.0<br>56.2 | 0.0679 | N/A | 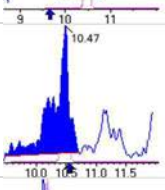 | 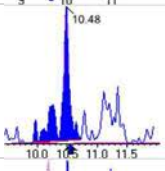 | MI3 ABK 3/18/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 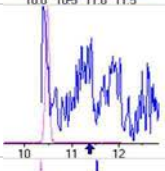 | 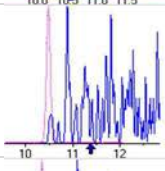 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 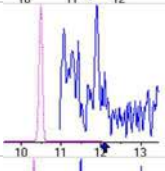 | 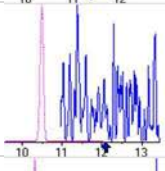 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 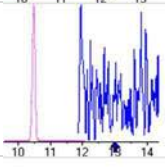 | 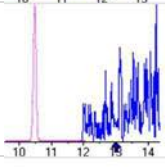 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (19)
Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 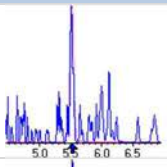 | 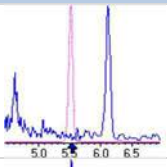 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 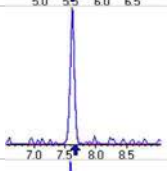 | 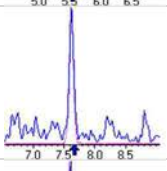 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 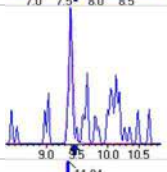 | 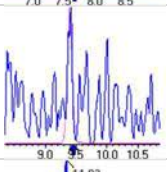 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14528<br>( 627.0 / 81.0 )<br>22439 | ( 11.04 , 1.00 )<br>( 0.01 , N/A , 0.4) | 189.5<br>58.2 | 1.5445<br>114.3<br>112.8 | 0.0560 | N/A | 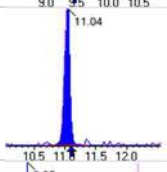 | 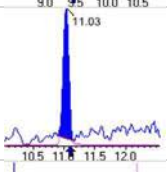 | |
| PFBSA | ( 297.9 / 78.0 )<br>64153<br>( 297.9 / 278.0 )<br>107 | ( 8.05 , 0.57 )<br>( N/A , -0.01 , -0.5) | 345.7<br>4.3 | 0.0017<br>118.3<br>105.0 | 0.1813 | N/A | 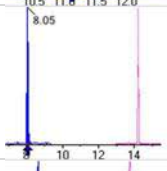 | 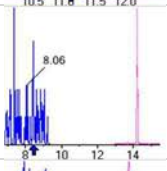 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 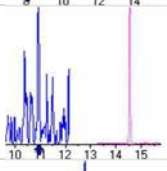 | 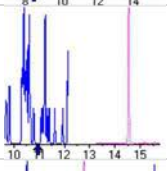 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 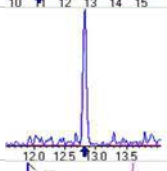 | 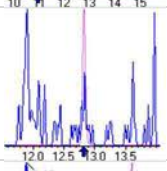 | |
| TFSI | ( 279.7 / 147.0 )<br>73280<br>( 279.7 / 211.0 )<br>4894 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , 0.9) | 31.4<br>11.9 | 0.0668<br>81.0<br>78.5 | 0.0394 | N/A | 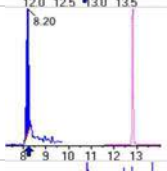 | 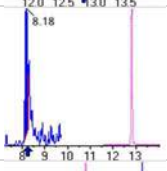 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 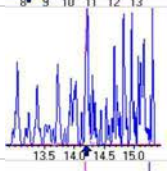 | 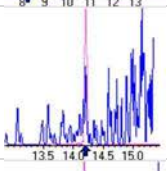 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 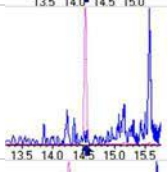 | 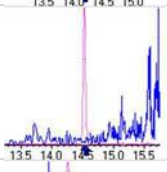 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 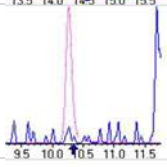 | 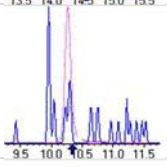 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (19)
Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 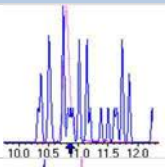 | 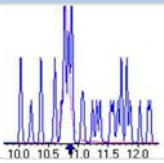 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 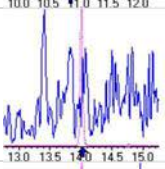 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 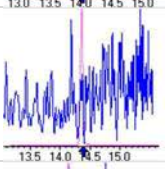 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 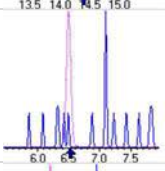 | 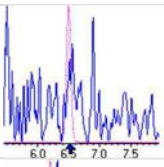 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 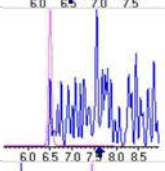 | 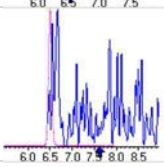 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 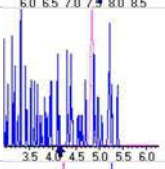 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 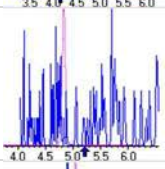 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 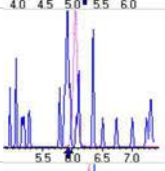 | 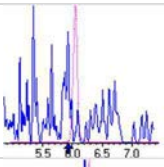 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 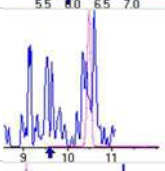 | 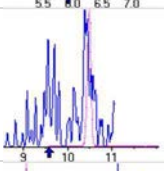 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 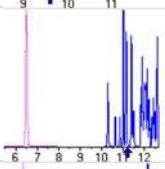 | 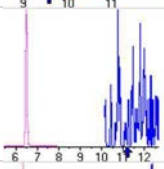 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 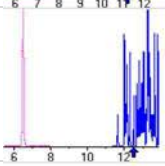 | 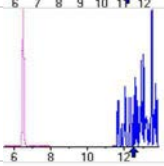 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (19)
Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 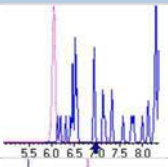 | 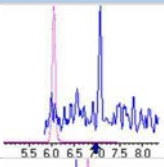 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 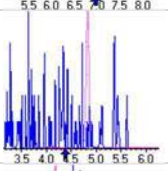 | 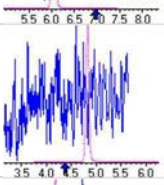 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 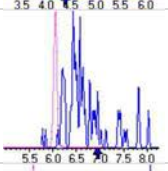 | 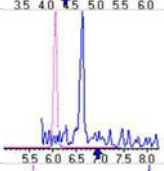 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 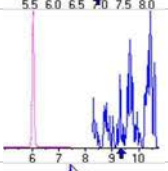 | 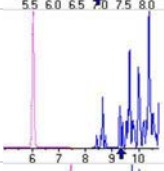 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3321<br>( 357.2 / 243.0 ) 838 | ( 6.76 , 1.00 ) ( -0.02 , N/A , 1.2) | 26.6<br>5.5 | 0.2523<br>239.0<br>236.1 | 0.0118 | N/A | 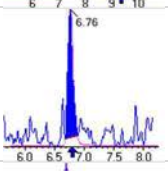 | 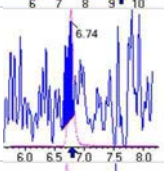 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 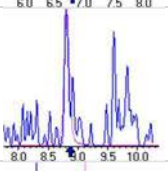 | 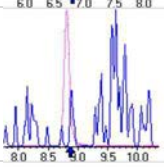 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 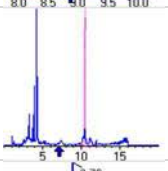 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282693 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 1164.8 | N/A | 0.9384 [ 1.0000 ] | 93.8% { 83.5% } | 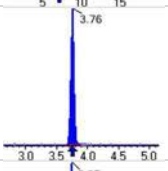 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 129880 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 14821.7 | N/A | 0.8447 [ 1.0000 ] | 84.5% { 76.2% } | 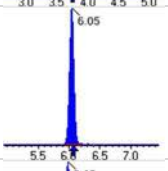 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 435526 | ( 8.19 , N/A ) ( N/A , -0.05 , N/A ) | 3085.1 | N/A | 0.9762 [ 1.0000 ] | 97.6% { 89.2% } | 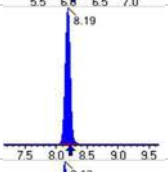 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 313960 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 845.5 | N/A | 0.9392 [ 1.0000 ] | 93.9% { 81.6% } | 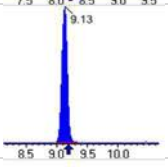 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 317283 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 2377.6 | N/A | 0.9568 [ 1.0000 ] | 95.7% { 84.0% } | 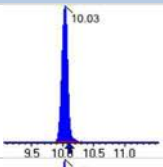 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1051213 | ( 8.63 , N/A ) ( N/A , -0.06 , N/A ) | 4437.7 | N/A | 0.9407 [ 1.0000 ] | 94.1% { 83.9% } | 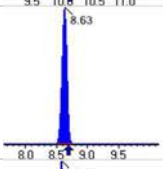 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 846089 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 1078.2 | N/A | 0.8667 [ 1.0000 ] | 86.7% { 80.0% } | 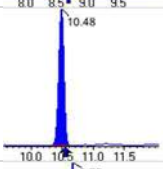 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2042537 | ( 3.75 , N/A ) ( N/A , 0.01 , N/A ) | 35905.6 | N/A | 6.5520 [ 8.0000 ] | 81.9% { 71.9% } | 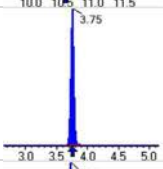 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1023033 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 4846.5 | N/A | 4.3907 [ 4.0000 ] | 109.8% { 79.9% } | 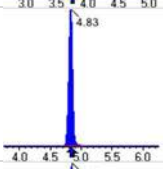 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 611764 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 7621.1 | N/A | 2.1937 [ 2.0000 ] | 109.7% { 80.6% } | 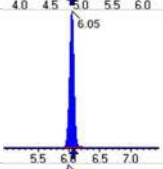 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 691899 | ( 7.18 , N/A ) ( N/A , -0.03 , N/A ) | 4532.5 | N/A | 2.3756 [ 2.0000 ] | 118.8% { 84.3% } | 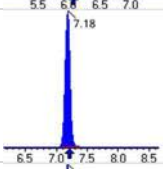 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 937452 | ( 8.18 , N/A ) ( N/A , -0.05 , N/A ) | 3259.5 | N/A | 2.0415 [ 2.0000 ] | 102.1% { 86.3% } | 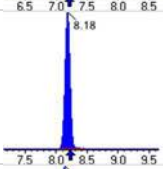 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 324363 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 1716.6 | N/A | 1.0699 [ 1.0000 ] | 107.0% { 85.8% } | 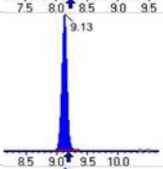 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 370444 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 1365.6 | N/A | 1.0118 [ 1.0000 ] | 101.2% { 78.6% } | 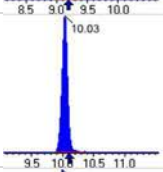 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 424907 | ( 10.90 , N/A ) ( N/A , -0.06 , N/A ) | 1054.4 | N/A | 0.9545 [ 1.0000 ] | 95.5% { 83.8% } | 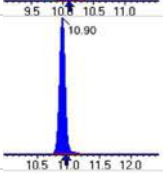 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 407168 | ( 11.73 , N/A ) ( N/A , -0.04 , N/A ) | 1163.6 | N/A | 0.9108 [ 1.0000 ] | 91.1% { 78.4% } | 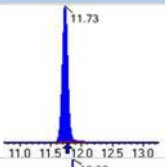  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 306321 | ( 12.86 , N/A ) ( N/A , -0.03 , N/A ) | 1506.1 | N/A | 0.7864 [ 1.0000 ] | 78.6% { 69.2% } | 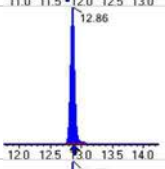  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 471307 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 2444.6 | N/A | 1.4244 [ 2.0000 ] | 71.2% { 58.5% } | 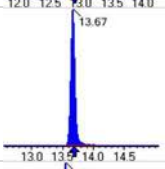  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1937018 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 1358.3 | N/A | 1.8912 [ 2.0000 ] | 94.6% { 81.3% } | 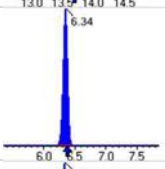  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1546839 | ( 8.63 , N/A ) ( N/A , -0.06 , N/A ) | 2686.7 | N/A | 2.0109 [ 2.0000 ] | 100.5% { 87.7% } | 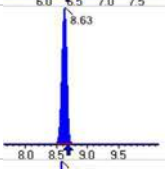  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1865442 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 1042.7 | N/A | 2.0710 [ 2.0000 ] | 103.6% { 83.6% } | 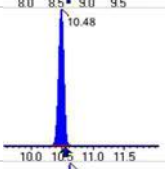  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 606442 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 91.9 | N/A | 6.6248 [ 4.0000 ] | 165.6% { 109.6% } | 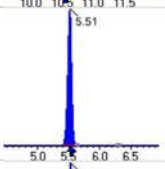  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1778612 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 2610.6 | N/A | 6.2566 [ 4.0000 ] | 156.4% { 109.3% } | 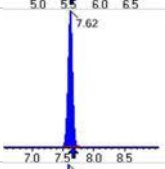  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1297541 | ( 9.40 , N/A ) ( N/A , -0.06 , N/A ) | 1330.7 | N/A | 4.5814 [ 4.0000 ] | 114.5% { 76.0% } | 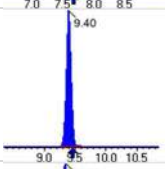  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2522116 | ( 11.03 , N/A ) ( N/A , -0.06 , N/A ) | 1254.8 | N/A | 7.7579 [ 8.0000 ] | 97.0% { 68.0% } | 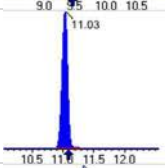  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1791429 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2084.0 | N/A | 1.8353 [ 2.0000 ] | 91.8% { 74.0% } | 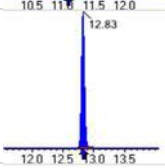  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (19)
Acquired: 2024/03/18 - 19:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 153903 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 958.0 | N/A | 0.8539 [ 2.0000 ] | 42.7% { 36.0% } | 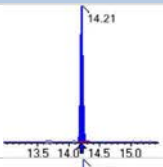 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 131486 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 1017.8 | N/A | 0.6351 [ 2.0000 ] | 31.8% { 27.1% } | 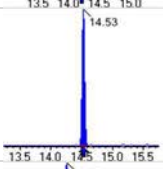 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 956083 | ( 10.27 , N/A ) ( N/A , -0.06 , N/A ) | 1942.0 | N/A | 4.1449 [ 4.0000 ] | 103.6% { 72.4% } | 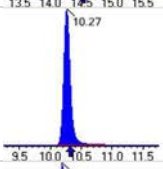 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 995239 | ( 10.79 , N/A ) ( N/A , -0.06 , N/A ) | 2152.7 | N/A | 4.5453 [ 4.0000 ] | 113.6% { 80.8% } | 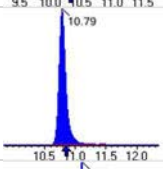 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1084661 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2417.1 | N/A | 12.8790 [ 20.0000 ] | 64.4% { 58.3% } | 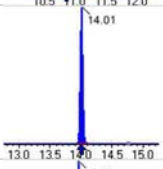 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1071147 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4438.5 | N/A | 10.4991 [ 20.0000 ] | 52.5% { 51.2% } | 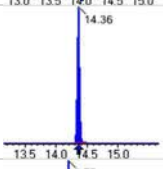 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1131177 | ( 6.50 , N/A ) ( N/A , -0.03 , N/A ) | 2195.1 | N/A | 9.4367 [ 8.0000 ] | 118.0% { 80.6% } | 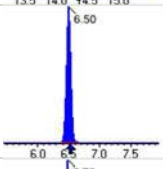 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 521755 | ( 6.78 , N/A ) ( N/A , -0.03 , N/A ) | 1068.0 | N/A | 1.8541 [ 2.0000 ] | 92.7% { 73.3% } | 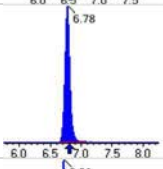 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 540096 | ( 8.81 , N/A ) ( N/A , -0.06 , N/A ) | 752.0 | N/A | 2.0558 [ 2.0000 ] | 102.8% { 80.6% } | 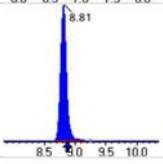 | | |

# ANALYSIS DATA SHEETL

MW-14-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-09- | File ID: | S2024-03-18A (20)- |
| Sampled:- | 03/12/24 11:40- | Prepared:- | 03/14/24 12:39 | Analyzed:- | 03/18/24 20:00 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.845 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | 2.7- | 0.19- | 1.5 | |
| PFPeA- | 5.2- | 0.061- | 0.75 | |
| PFHxA- | 3.6- | 0.051- | 0.37 | |
| PFHpA- | 0.80- | 0.038- | 0.37 | |
| PFOA- | 0.72- | 0.14- | 0.37 | MI4 |
| PFNA- | ND- | 0.077- | 0.37 | U |
| PFDA- | ND- | 0.095- | 0.37 | U |
| PFUnA- | ND- | 0.15- | 0.37 | U |
| PFDoA- | ND- | 0.10- | 0.37 | U |
| PFTrDA- | ND- | 0.19- | 0.37 | U |
| PFTeDA- | ND- | 0.19- | 0.37 | U |
| PFHxDA- | ND- | 0.19- | 0.37 | U |
| PFODA- | ND- | 0.19- | 0.37 | U |
| PFBS- | 2.5- | 0.034- | 0.37 | |
| PFPeS- | 1.2- | 0.059- | 0.37 | |
| PFHxS- | 1.5- | 0.030- | 0.37 | |
| PFHpS- | ND- | 0.048- | 0.37 | U |
| PFOS- | 0.20- | 0.059- | 0.37 | IR1, J |
| PFNS- | ND- | 0.12- | 0.37 | U |
| PFDS- | ND- | 0.14- | 0.37 | U |
| PFDoS- | ND- | 0.11- | 0.37 | U |
| 4:2FTS- | ND- | 0.27- | 1.5 | U |
| 6:2FTS- | ND- | 0.29- | 1.5 | U |
| 8:2FTS- | ND- | 0.077- | 1.5 | U |
| 10:2FTS- | ND- | 0.37- | 1.5 | U |
| PFOSA- | ND- | 0.097- | 0.37 | U |
| NMeFOSA- | ND- | 0.44- | 1.5 | U |
| NEtFOSA- | ND- | 0.39- | 1.5 | U |
| NMeFOSAA- | ND- | 0.099- | 0.37 | U |
| NEtFOSAA- | ND- | 0.11- | 0.37 | U |

# ANALYSIS DATA SHEETL

MW-14-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0076- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0076-09- | File ID:- | S2024-03-18A (20)- |
| Sampled:- | 03/12/24 11:40- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 20:00- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.845 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.050- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (20)
Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 61860<br>( 163.0 / 69.0 ) 1950 | ( 2.88 , 0.77 ) ( N/A , 0.11 , -0.3) | 379.1<br>115.1 | 0.0315<br>125.7<br>120.5 | 0.2116 | N/A | 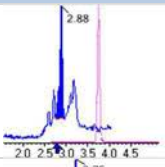 | 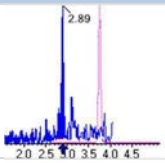 | MI6 ABK 3/18/24 |
| PFBA | ( 213.0 / 169.0 ) 221704 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 416.3 | N/A<br>0.0<br>0.0 | 0.7092 | N/A | 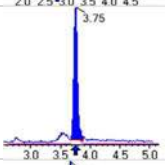 | | |
| PFPeA | ( 263.0 / 219.0 ) 394062<br>( 263.0 / 69.0 ) 4148 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.5) | 1358.9<br>54.6 | 0.0105<br>95.8<br>90.1 | 1.3781 | N/A | 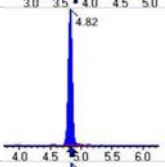 | 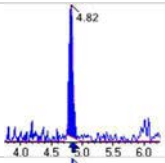 | |
| PFHxA | ( 313.0 / 269.0 ) 314725<br>( 313.0 / 119.0 ) 36408 | ( 6.04 , 1.00 ) ( 0.00 , N/A , -0.1) | 789.5<br>438.8 | 0.1157<br>104.1<br>101.8 | 0.9558 | N/A | 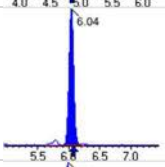 | 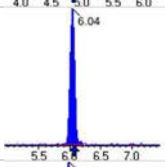 | |
| PFHpA | ( 363.0 / 319.0 ) 74980<br>( 363.0 / 169.0 ) 20463 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 254.9<br>194.0 | 0.2729<br>87.6<br>92.8 | 0.2135 | N/A | 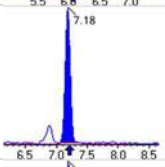 | 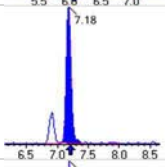 | |
| PFOA | ( 413.0 / 369.0 ) 94182<br>( 413.0 / 169.0 ) 35021 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.3) | 101.0<br>101.5 | 0.3718<br>102.8<br>104.8 | 0.1925 | N/A | 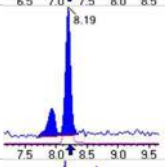 | 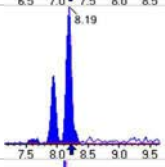 | MI4 ABK 3/18/24 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 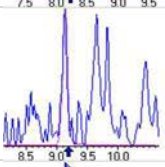 | 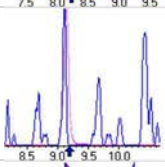 | |
| PFDA | ( 513.0 / 469.0 ) 6272<br>( 513.0 / 169.0 ) 771 | ( 10.05 , 1.00 ) ( 0.00 , N/A , 0.3) | 41.3<br>39.9 | 0.1229<br>104.7<br>101.8 | 0.0160 | N/A | 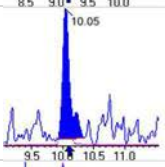 | 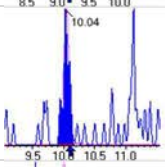 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 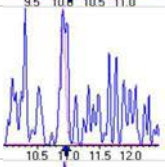 | 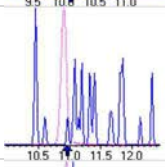 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 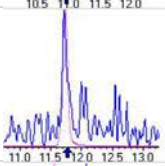 | 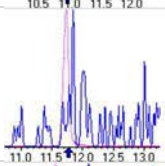 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 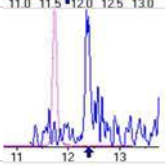 | 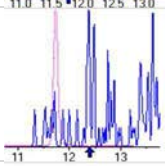 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 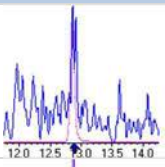 | 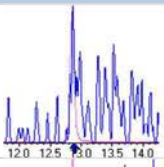 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 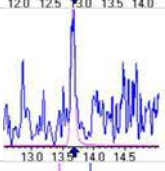 | 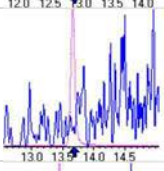 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 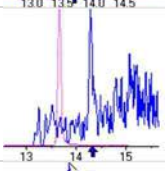 | 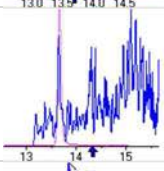 | |
| PFBS | ( 299.0 / 80.0 )<br>352084<br>( 299.0 / 99.0 )<br>256183 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 745.0<br>738.0 | 0.7276<br>102.4<br>100.9 | 0.6601 | N/A | 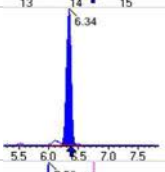 | 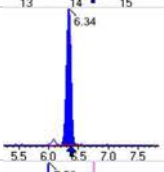 | |
| PFPeS | ( 349.0 / 80.0 )<br>435663<br>( 349.0 / 99.0 )<br>157762 | ( 7.58 , 0.88 )<br>( N/A , -0.04 , 0.0) | 365.2<br>447.3 | 0.3621<br>106.5<br>105.5 | 0.3184 | N/A | 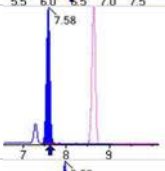 | 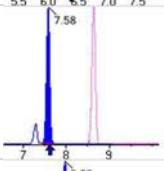 | |
| PFHxS | ( 399.0 / 80.0 )<br>613713<br>( 399.0 / 99.0 )<br>162089 | ( 8.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 795.7<br>829.2 | 0.2641<br>84.5<br>82.3 | 0.4033 | N/A | 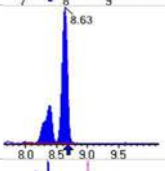 | 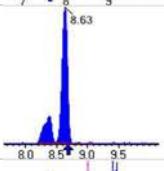 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 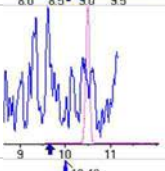 | 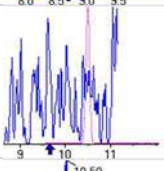 | |
| PFOS | ( 499.0 / 80.0 )<br>61115<br>( 499.0 / 99.0 )<br>6727 | ( 10.48 , 1.00 )<br>( -0.01 , N/A , -0.8) | 75.8<br>71.4 | 0.1101<br>46.5<br>50.2 | 0.0536 | N/A | 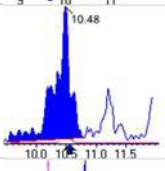 | 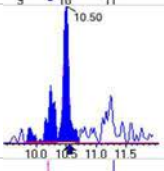 | IR1, |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 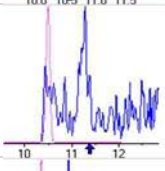 | 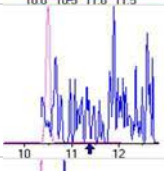 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 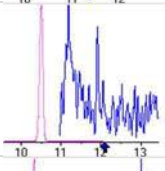 | 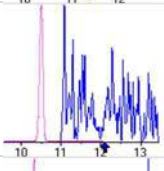 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 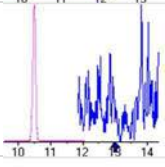 | 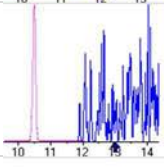 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (20)
Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 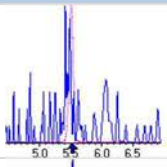 | 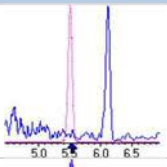 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 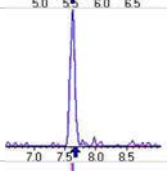 | 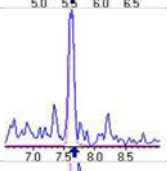 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 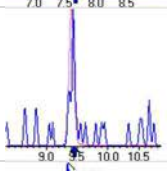 | 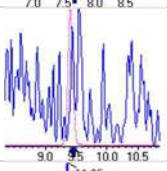 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14242<br>( 627.0 / 81.0 )<br>23575 | ( 11.04 , 1.00 )<br>( 0.00 , N/A , -0.5) | 149.0<br>59.3 | 1.6553<br>122.5<br>120.9 | 0.0474 | N/A | 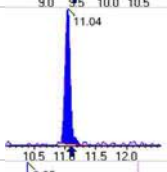 | 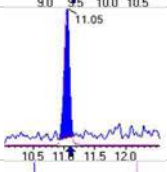 | |
| PFBSA | ( 297.9 / 78.0 )<br>51716<br>( 297.9 / 278.0 )<br>37 | ( 8.05 , 0.57 )<br>( N/A , -0.01 , 1.1) | 425.8<br>1.7 | 0.0007<br>51.6<br>45.8 | 0.1724 | N/A | 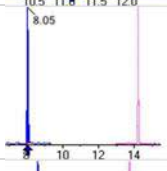 | 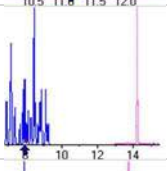 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 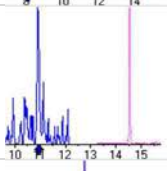 | 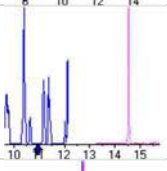 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 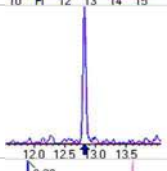 | 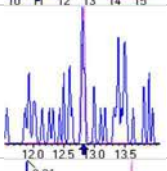 | |
| TFSI | ( 279.7 / 147.0 )<br>104705<br>( 279.7 / 211.0 )<br>9001 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , -0.4) | 40.7<br>16.8 | 0.0860<br>104.2<br>101.1 | 0.0539 | N/A | 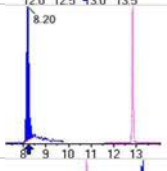 | 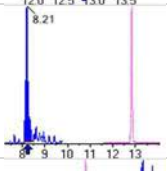 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 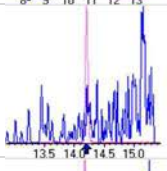 | 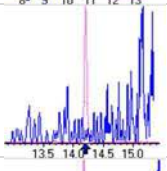 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 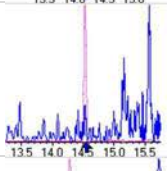 | 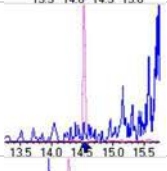 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 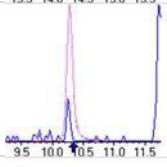 | 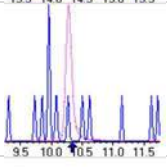 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (20)
Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 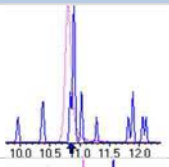 | 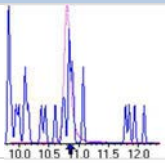 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 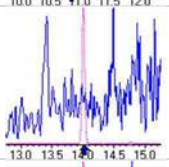 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 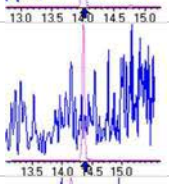 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 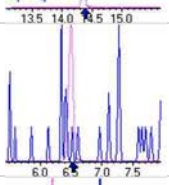 | 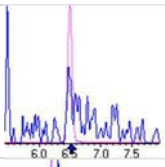 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 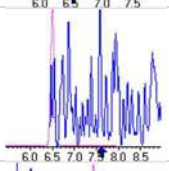 | 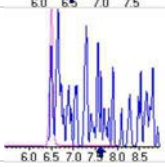 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 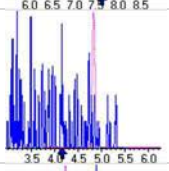 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 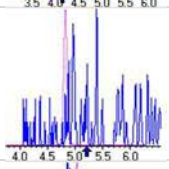 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 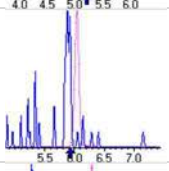 | 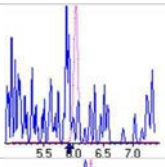 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 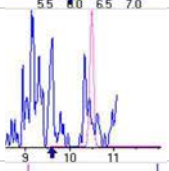 | 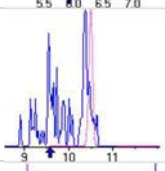 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 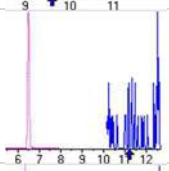 | 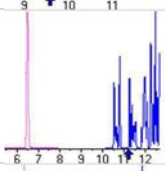 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 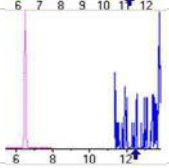 | 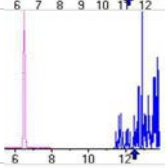 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (20)
Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 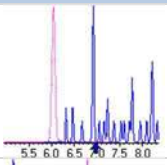 | 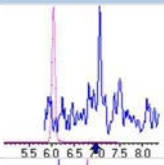 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 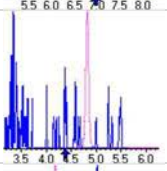 | 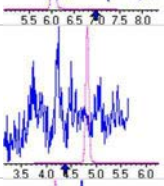 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 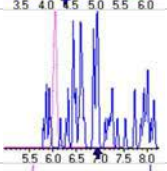 | 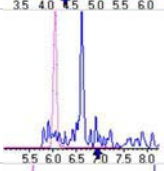 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 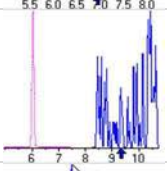 | 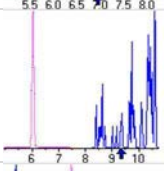 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4334<br>( 357.2 / 243.0 ) 590 | ( 6.77 , 1.00 ) ( -0.01 , N/A , -0.6) | 28.6<br>7.5 | 0.1362<br>129.0<br>127.4 | 0.0142 | N/A | 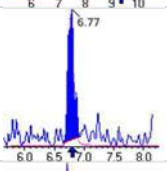 | 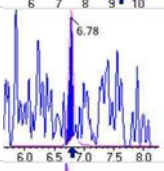 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 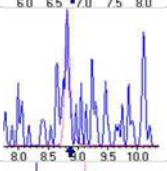 | 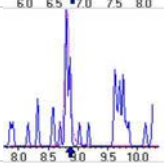 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 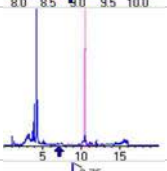 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 330923 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 1394.6 | N/A | 1.0985<br>[ 1.0000 ] | 109.8%<br>{ 97.8% } | 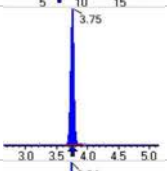 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 156213 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 5811.0 | N/A | 1.0159<br>[ 1.0000 ] | 101.6%<br>{ 91.7% } | 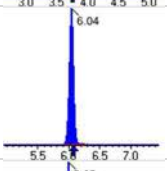 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 490168 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 3817.7 | N/A | 1.0987<br>[ 1.0000 ] | 109.9%<br>{ 100.4% } | 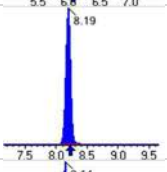 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 360199 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 1261.1 | N/A | 1.0775<br>[ 1.0000 ] | 107.7%<br>{ 93.6% } | 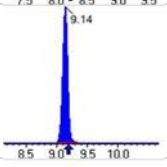 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 371264 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 7169.9 | N/A | 1.1195 [ 1.0000 ] | 112.0% { 98.3% } | 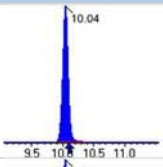 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1195811 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 5464.2 | N/A | 1.0701 [ 1.0000 ] | 107.0% { 95.4% } | 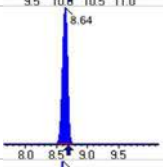 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 985727 | ( 10.50 , N/A ) ( N/A , -0.06 , N/A ) | 1247.5 | N/A | 1.0098 [ 1.0000 ] | 101.0% { 93.2% } | 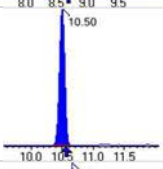 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2643552 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 46269.7 | N/A | 7.2440 [ 8.0000 ] | 90.6% { 93.1% } | 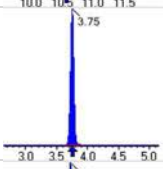 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1123584 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6200.2 | N/A | 4.0093 [ 4.0000 ] | 100.2% { 87.7% } | 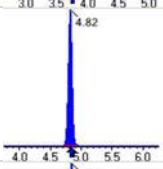 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 679645 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 7217.0 | N/A | 2.0263 [ 2.0000 ] | 101.3% { 89.6% } | 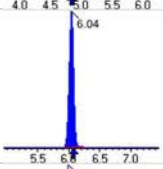 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 713047 | ( 7.19 , N/A ) ( N/A , -0.03 , N/A ) | 4040.0 | N/A | 2.0355 [ 2.0000 ] | 101.8% { 86.8% } | 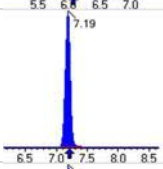 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 962145 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 4321.1 | N/A | 1.8617 [ 2.0000 ] | 93.1% { 88.6% } | 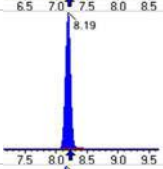 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 325202 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 2311.8 | N/A | 0.9349 [ 1.0000 ] | 93.5% { 86.0% } | 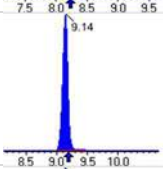 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 394320 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 1061.3 | N/A | 0.9204 [ 1.0000 ] | 92.0% { 83.7% } | 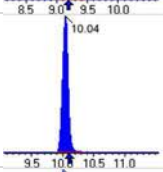 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 453130 | ( 10.91 , N/A ) ( N/A , -0.05 , N/A ) | 1070.5 | N/A | 0.8699 [ 1.0000 ] | 87.0% { 89.4% } | 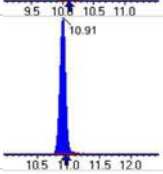 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 435221 | ( 11.73 , N/A ) ( N/A , -0.04 , N/A ) | 1265.4 | N/A | 0.8320 [ 1.0000 ] | 83.2% { 83.8% } | 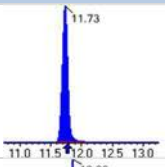 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 331306 | ( 12.86 , N/A ) ( N/A , -0.03 , N/A ) | 1389.0 | N/A | 0.7268 [ 1.0000 ] | 72.7% { 74.8% } | 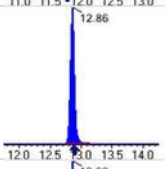 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 553224 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2531.2 | N/A | 1.4289 [ 2.0000 ] | 71.4% { 68.7% } | 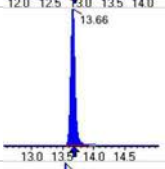 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2051592 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 1037.9 | N/A | 1.7608 [ 2.0000 ] | 88.0% { 86.1% } | 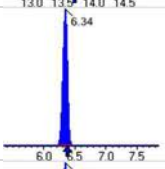 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1718554 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 3919.0 | N/A | 1.9640 [ 2.0000 ] | 98.2% { 97.5% } | 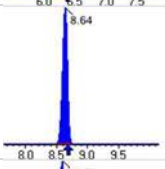 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1972746 | ( 10.50 , N/A ) ( N/A , -0.05 , N/A ) | 1101.9 | N/A | 1.8799 [ 2.0000 ] | 94.0% { 88.4% } | 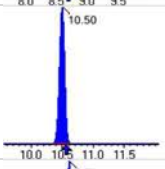 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 593665 | ( 5.51 , N/A ) ( N/A , -0.03 , N/A ) | 89.8 | N/A | 5.7010 [ 4.0000 ] | 142.5% { 107.3% } | 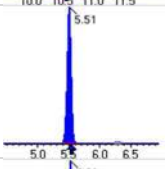 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1806650 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 2499.3 | N/A | 5.5868 [ 4.0000 ] | 139.7% { 111.0% } | 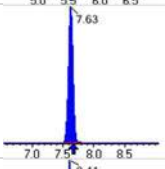 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1456410 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1057.2 | N/A | 4.5205 [ 4.0000 ] | 113.0% { 85.3% } | 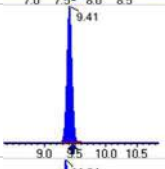 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2922074 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1375.5 | N/A | 7.9013 [ 8.0000 ] | 98.8% { 78.7% } | 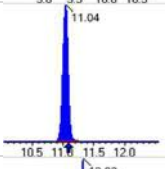 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1874215 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 2481.2 | N/A | 1.6481 [ 2.0000 ] | 82.4% { 77.4% } | 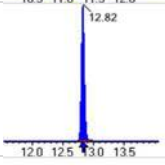 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-09 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 130496 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1135.4 | N/A | 0.6214 [ 2.0000 ] | 31.1% { 30.5% } | 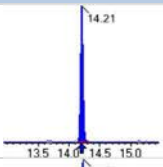 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 100393 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 839.7 | N/A | 0.4162 [ 2.0000 ] | 20.8% { 20.7% } | 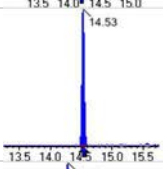 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1022062 | ( 10.28 , N/A ) ( N/A , -0.05 , N/A ) | 1904.5 | N/A | 3.8032 [ 4.0000 ] | 95.1% { 77.4% } | 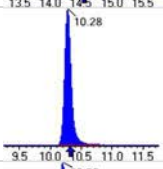 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1002823 | ( 10.80 , N/A ) ( N/A , -0.05 , N/A ) | 1748.3 | N/A | 3.9312 [ 4.0000 ] | 98.3% { 81.4% } | 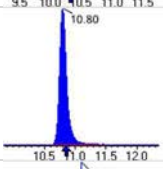 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 963191 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1967.2 | N/A | 9.8166 [ 20.0000 ] | 49.1% { 51.8% } | 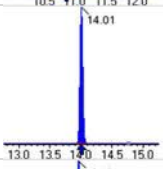 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 872014 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3070.1 | N/A | 7.3364 [ 20.0000 ] | 36.7% { 41.6% } | 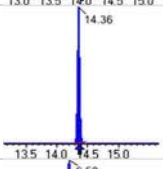 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1171368 | ( 6.50 , N/A ) ( N/A , -0.03 , N/A ) | 2666.0 | N/A | 8.1247 [ 8.0000 ] | 101.6% { 83.4% } | 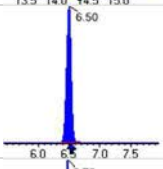 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 569900 | ( 6.78 , N/A ) ( N/A , -0.03 , N/A ) | 1310.5 | N/A | 1.7308 [ 2.0000 ] | 86.5% { 80.1% } | 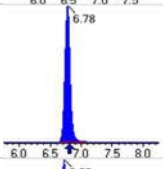 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 580617 | ( 8.82 , N/A ) ( N/A , -0.05 , N/A ) | 709.0 | N/A | 1.8887 [ 2.0000 ] | 94.4% { 86.7% } | 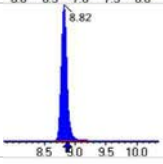 | | |

# ANALYSIS DATA SHEETL

## EB-2-031224-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0076- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0076-10- | File ID: | S2024-03-18A (21)- |
| Sampled: | 03/12/24 11:50- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 20:21- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 516.062 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977- | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.6- | U- |
| PFPeA- | 0.15- | 0.063- | 0.78- | J- |
| PFHxA- | ND- | 0.053- | 0.39- | U- |
| PFHpA- | ND- | 0.040- | 0.39- | U- |
| PFOA- | 0.31- | 0.15- | 0.39- | J- |
| PFNA- | ND- | 0.079- | 0.39- | U- |
| PFDA- | ND- | 0.098- | 0.39- | U- |
| PFUnA- | ND- | 0.16- | 0.39- | U- |
| PFDoA- | ND- | 0.11- | 0.39- | U- |
| PFTrDA- | ND- | 0.20- | 0.39- | U- |
| PFTeDA- | ND- | 0.19- | 0.39- | U- |
| PFHxDA- | ND- | 0.19- | 0.39- | U- |
| PFODA- | ND- | 0.19- | 0.39- | U- |
| PFBS- | ND- | 0.036- | 0.39- | U- |
| PFPeS- | ND- | 0.061- | 0.39- | U- |
| PFHxS- | ND- | 0.031- | 0.39- | U- |
| PFHpS- | ND- | 0.050- | 0.39- | U- |
| PFOS- | 0.076- | 0.062- | 0.39- | J- |
| PFNS- | ND- | 0.12- | 0.39- | U- |
| PFDS- | ND- | 0.15- | 0.39- | U- |
| PFDoS- | ND- | 0.12- | 0.39- | U- |
| 4:2FTS- | ND- | 0.28- | 1.6- | U- |
| 6:2FTS- | ND- | 0.30- | 1.6- | U- |
| 8:2FTS- | ND- | 0.080- | 1.6- | U- |
| 10:2FTS- | ND- | 0.39- | 1.6- | U- |
| PFOSA- | ND- | 0.10- | 0.39- | U- |
| NMeFOSA- | ND- | 0.46- | 1.6- | U- |
| NEtFOSA- | ND- | 0.40- | 1.6- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.39- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.39- | U- |

# ANALYSIS DATA SHEETL

EB-2-031224-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0076- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0076-10- | File ID: | S2024-03-18A (21)- |
| Sampled: | 03/12/24 11:50- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 20:21- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 516.062 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.98- | 1.6- | U- |
| NEtFOSE- | ND- | 1.0- | 1.6- | U- |
| HFPO-DA- | ND- | 0.17- | 0.78- | U- |
| ADONA- | ND- | 0.12- | 0.78- | U- |
| PFEESA- | ND- | 0.11- | 0.78- | U- |
| PFMPA- | ND- | 0.052- | 0.78- | U- |
| PFMBA- | ND- | 0.088- | 0.78- | U- |
| NFDHA- | ND- | 0.29- | 0.78- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.78- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.78- | U- |
| 3:3FTCA- | ND- | 0.56- | 1.6- | U- |
| 5:3FTCA- | ND- | 0.43- | 1.6- | U- |
| 7:3FTCA- | ND- | 0.54- | 1.6- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (21)
Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>41512<br>( 163.0 / 69.0 )<br>1196 | ( 2.81 , 0.75 )<br>( N/A , 0.03 , 0.3) | 217.9<br>62.4 | 0.0288<br>114.9<br>110.1 | 0.1303 | N/A | 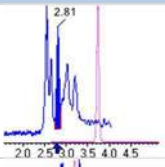 | 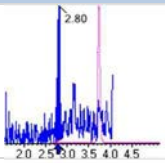 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 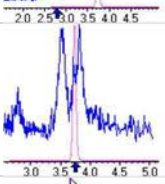 | | |
| PFPeA | ( 263.0 / 219.0 )<br>10650<br>( 263.0 / 69.0 )<br>122 | ( 4.80 , 1.00 )<br>( -0.02 , N/A , 0.1) | 39.2<br>10.4 | 0.0115<br>104.7<br>98.4 | 0.0380 | N/A | 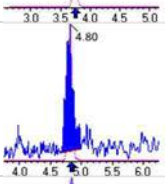 | 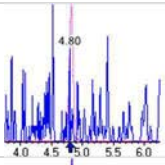 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 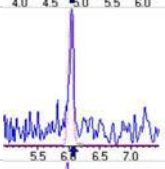 | 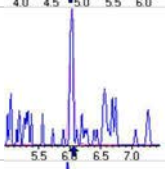 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 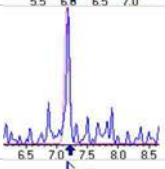 | 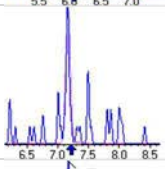 | |
| PFOA | ( 413.0 / 369.0 )<br>40018<br>( 413.0 / 169.0 )<br>14890 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.2) | 62.3<br>112.6 | 0.3721<br>102.9<br>104.8 | 0.0790 | N/A | 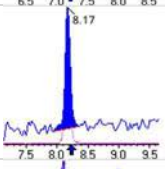 | 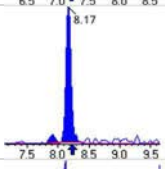 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 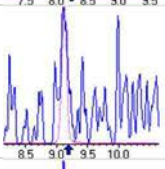 | 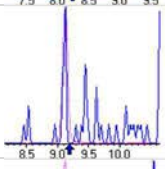 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 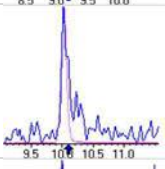 | 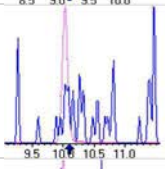 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 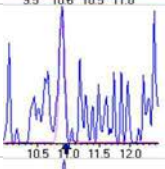 | 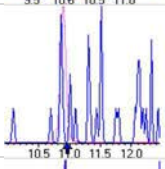 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 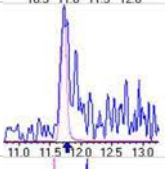 | 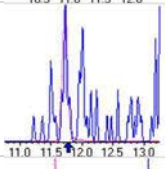 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 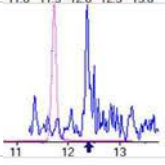 | 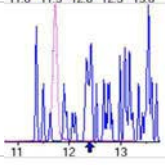 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (21)
Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 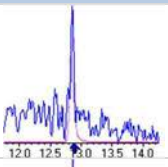 | 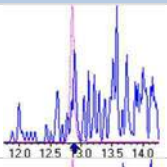 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 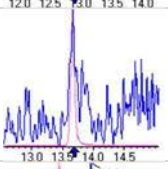 | 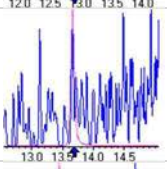 | |
| PFODA | ( 913.0 / 869.0 )<br>3104<br>( 913.0 / 169.0 )<br>831 | ( 14.30 , 1.05 )<br>( N/A , -0.02 , -2.3) | 16.2<br>7.1 | 0.2676<br>70.1<br>80.7 | 0.0175 | N/A | 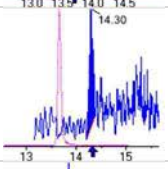 | 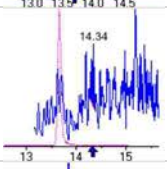 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 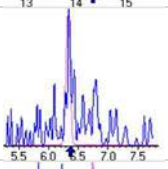 | 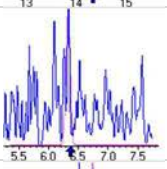 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 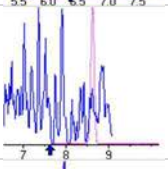 | 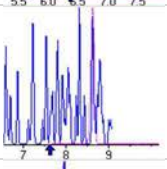 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 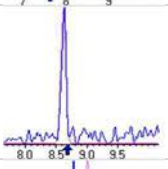 | 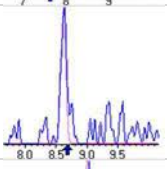 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 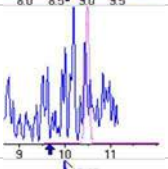 | 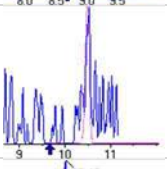 | |
| PFOS | ( 499.0 / 80.0 )<br>22056<br>( 499.0 / 99.0 )<br>6226 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , -0.5) | 103.0<br>495.9 | 0.2823<br>119.3<br>128.8 | 0.0197 | N/A | 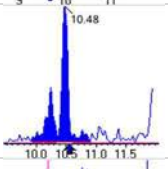 | 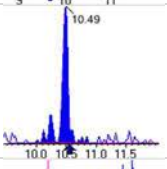 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 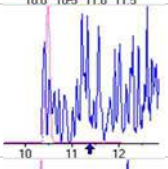 | 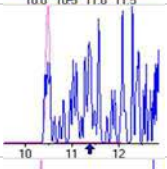 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 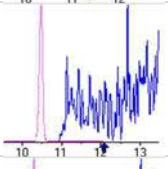 | 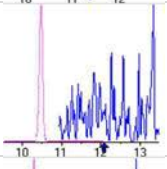 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 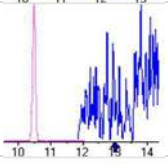 | 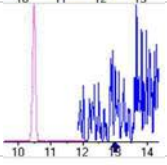 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (21)
Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 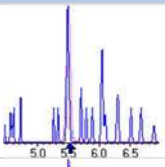 | 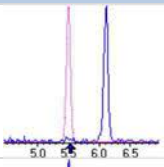 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 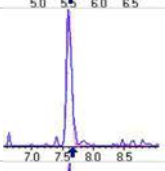 | 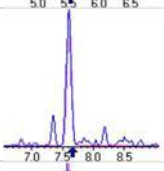 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 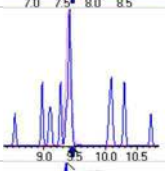 | 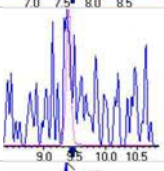 | |
| 10:2FTS | ( 627.0 / 607.0 ) 16494<br>( 627.0 / 81.0 ) 25802 | ( 11.05 , 1.00 ) ( 0.01 , N/A , -0.2) | 224.7<br>53.5 | 1.5643<br>115.7<br>114.2 | 0.0487 | N/A | 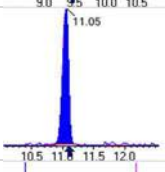 | 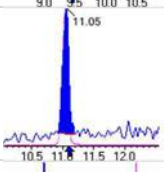 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 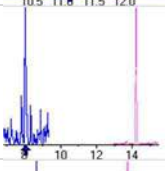 | 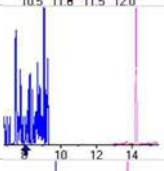 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 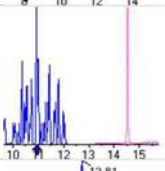 | 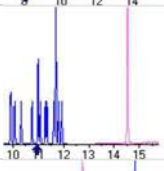 | |
| PFOSA | ( 498.0 / 78.0 ) 7155<br>( 498.0 / 478.0 ) 124 | ( 12.81 , 1.00 ) ( -0.01 , N/A , -1.6) | 89.4<br>5.8 | 0.0173<br>120.0<br>126.5 | 0.0123 | N/A | 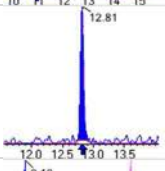 | 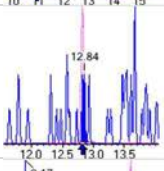 | |
| TFSI | ( 279.7 / 147.0 ) 54014<br>( 279.7 / 211.0 ) 4838 | ( 8.18 , 0.64 ) ( N/A , -0.07 , 0.5) | 36.5<br>13.6 | 0.0896<br>108.6<br>105.3 | 0.0437 | N/A | 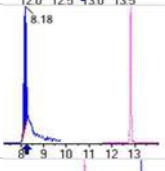 | 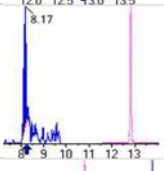 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 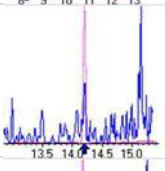 | 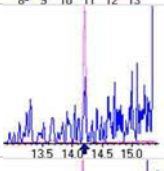 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 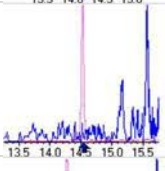 | 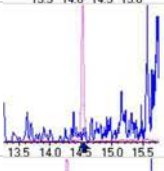 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 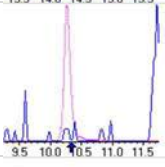 | 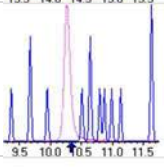 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (21)
Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 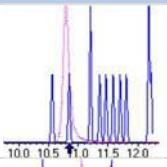 | 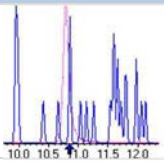 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 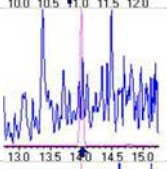 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 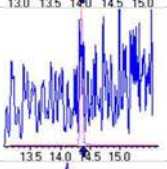 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 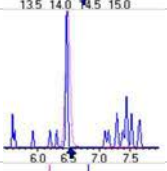 | 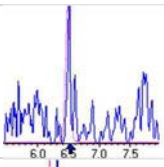 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 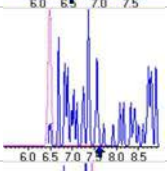 | 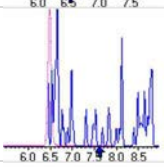 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 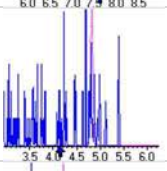 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 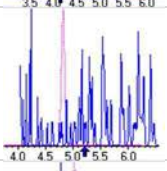 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 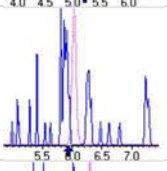 | 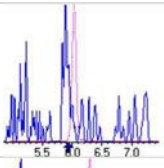 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 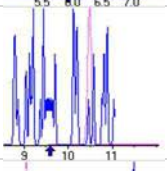 | 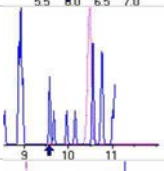 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 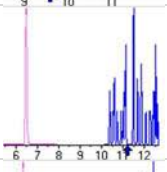 | 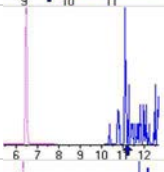 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 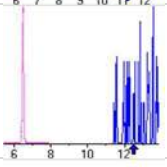 | 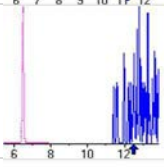 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (21)
Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 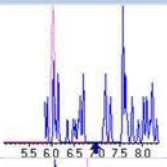 | 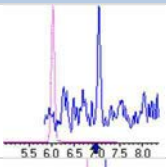 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 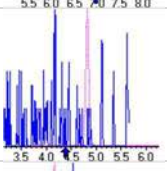 | 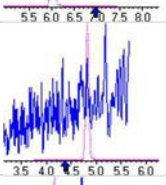 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 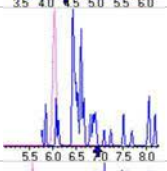 | 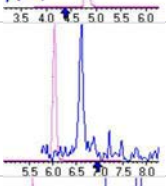 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 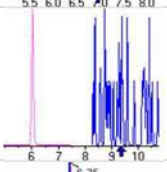 | 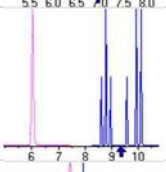 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 5237<br>( 357.2 / 243.0 ) 534 | ( 6.75 , 1.00 ) ( -0.01 , N/A , -0.5) | 41.4<br>7.7 | 0.1020<br>96.7<br>95.5 | 0.0174 | N/A | 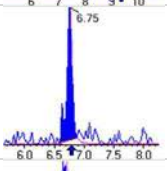 | 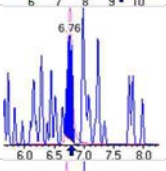 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 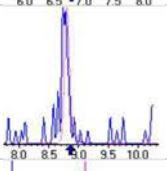 | 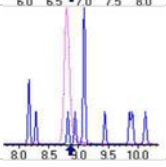 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 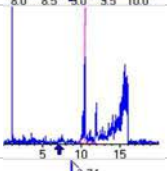 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 324624 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 1298.6 | N/A | 1.0776<br>[ 1.0000 ] | 107.8%<br>{ 95.9% } | 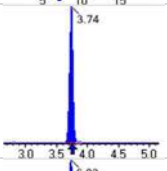 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 157174 | ( 6.03 , N/A ) ( N/A , -0.04 , N/A ) | 23490.7 | N/A | 1.0222<br>[ 1.0000 ] | 102.2%<br>{ 92.2% } | 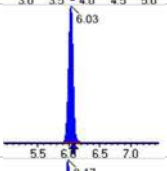 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 470678 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 3287.0 | N/A | 1.0550<br>[ 1.0000 ] | 105.5%<br>{ 96.4% } | 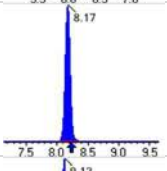 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 344704 | ( 9.12 , N/A ) ( N/A , -0.07 , N/A ) | 1287.8 | N/A | 1.0311<br>[ 1.0000 ] | 103.1%<br>{ 89.6% } | 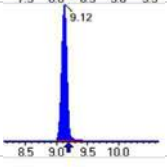 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-10 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 336954 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 6012.2 | N/A | 1.0161 [ 1.0000 ] | 101.6% { 89.2% } | 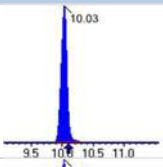 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1112861 | ( 8.62 , N/A ) ( N/A , -0.06 , N/A ) | 6904.3 | N/A | 0.9959 [ 1.0000 ] | 99.6% { 88.8% } | 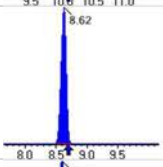 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 950413 | ( 10.49 , N/A ) ( N/A , -0.07 , N/A ) | 2505.5 | N/A | 0.9736 [ 1.0000 ] | 97.4% { 89.8% } | 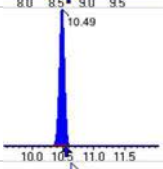 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2879895 | ( 3.73 , N/A ) ( N/A , -0.01 , N/A ) | 49755.2 | N/A | 8.0448 [ 8.0000 ] | 100.6% { 101.4% } | 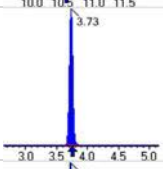 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1101018 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 6070.6 | N/A | 3.9048 [ 4.0000 ] | 97.6% { 86.0% } | 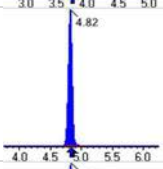 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 671153 | ( 6.03 , N/A ) ( N/A , -0.04 , N/A ) | 9894.5 | N/A | 1.9888 [ 2.0000 ] | 99.4% { 88.5% } | 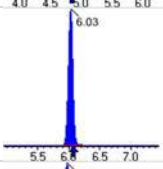 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 735381 | ( 7.17 , N/A ) ( N/A , -0.05 , N/A ) | 5282.3 | N/A | 2.0864 [ 2.0000 ] | 104.3% { 89.6% } | 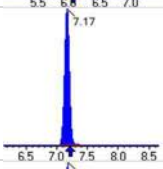 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 996587 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 3728.1 | N/A | 2.0082 [ 2.0000 ] | 100.4% { 91.7% } | 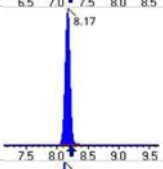 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 332316 | ( 9.12 , N/A ) ( N/A , -0.07 , N/A ) | 5300.5 | N/A | 0.9983 [ 1.0000 ] | 99.8% { 87.9% } | 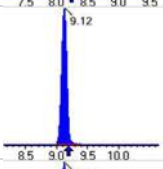 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 389375 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 1051.7 | N/A | 1.0014 [ 1.0000 ] | 100.1% { 82.6% } | 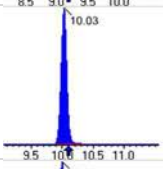 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 427605 | ( 10.89 , N/A ) ( N/A , -0.06 , N/A ) | 1022.3 | N/A | 0.9045 [ 1.0000 ] | 90.5% { 84.3% } | 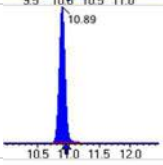 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-10 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 393880 | ( 11.72 , N/A ) ( N/A , -0.05 , N/A ) | 1245.9 | N/A | 0.8297 [ 1.0000 ] | 83.0% { 75.9% } | 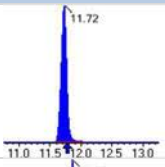  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295016 | ( 12.85 , N/A ) ( N/A , -0.03 , N/A ) | 1504.6 | N/A | 0.7131 [ 1.0000 ] | 71.3% { 66.6% } | 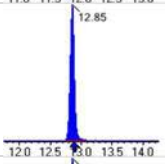  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 548525 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2642.3 | N/A | 1.5610 [ 2.0000 ] | 78.1% { 68.1% } | 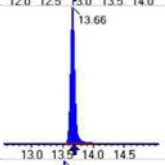  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2050954 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 1103.3 | N/A | 1.8915 [ 2.0000 ] | 94.6% { 86.0% } | 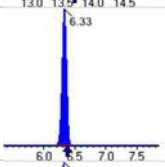  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1622328 | ( 8.62 , N/A ) ( N/A , -0.07 , N/A ) | 4911.4 | N/A | 1.9922 [ 2.0000 ] | 99.6% { 92.0% } | 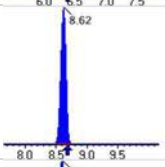  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1937777 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 1912.3 | N/A | 1.9152 [ 2.0000 ] | 95.8% { 86.8% } | 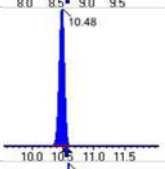  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 611468 | ( 5.50 , N/A ) ( N/A , -0.04 , N/A ) | 101.2 | N/A | 6.3097 [ 4.0000 ] | 157.7% { 110.5% } | 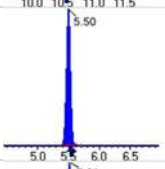  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1934474 | ( 7.61 , N/A ) ( N/A , -0.05 , N/A ) | 4764.3 | N/A | 6.4279 [ 4.0000 ] | 160.7% { 118.8% } | 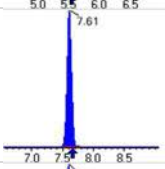  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1669458 | ( 9.40 , N/A ) ( N/A , -0.06 , N/A ) | 1649.6 | N/A | 5.5680 [ 4.0000 ] | 139.2% { 97.8% } | 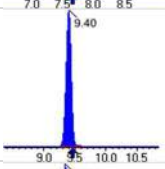  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3292723 | ( 11.04 , N/A ) ( N/A , -0.06 , N/A ) | 1358.3 | N/A | 9.5672 [ 8.0000 ] | 119.6% { 88.7% } | 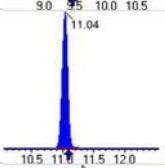  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1191119 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 2225.4 | N/A | 1.0864 [ 2.0000 ] | 54.3% { 49.2% } | 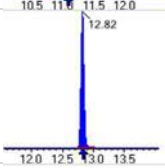  | | |

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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (21)
Acquired: 2024/03/18 - 20:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 82974 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 725.9 | N/A | 0.4098 [ 2.0000 ] | 20.5% { 19.4% } | 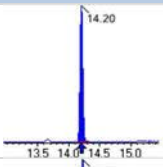  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 75101 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 632.7 | N/A | 0.3229 [ 2.0000 ] | 16.1% { 15.5% } | 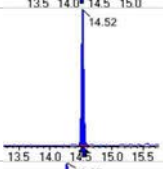  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1062258 | ( 10.27 , N/A ) ( N/A , -0.06 , N/A ) | 2546.9 | N/A | 4.0997 [ 4.0000 ] | 102.5% { 80.5% } | 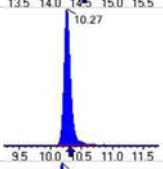  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 989717 | ( 10.79 , N/A ) ( N/A , -0.06 , N/A ) | 1844.8 | N/A | 4.0239 [ 4.0000 ] | 100.6% { 80.3% } | 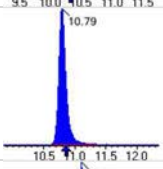  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 785011 | ( 14.00 , N/A ) ( N/A , 0.00 , N/A ) | 1821.3 | N/A | 8.2979 [ 20.0000 ] | 41.5% { 42.2% } | 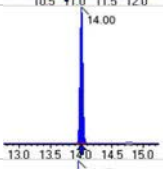  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 725771 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 2936.2 | N/A | 6.3329 [ 20.0000 ] | 31.7% { 34.7% } | 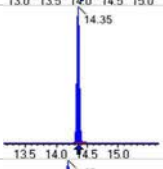  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1160117 | ( 6.49 , N/A ) ( N/A , -0.04 , N/A ) | 2481.5 | N/A | 7.9975 [ 8.0000 ] | 100.0% { 82.6% } | 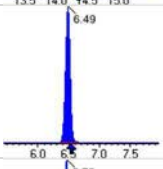  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 558793 | ( 6.76 , N/A ) ( N/A , -0.04 , N/A ) | 1255.5 | N/A | 1.8698 [ 2.0000 ] | 93.5% { 78.5% } | 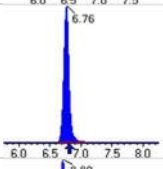  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 589201 | ( 8.80 , N/A ) ( N/A , -0.07 , N/A ) | 867.3 | N/A | 2.1118 [ 2.0000 ] | 105.6% { 88.0% } | 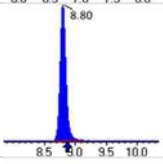  | | |

# ANALYSIS DATA SHEETL

## FB-2-031224-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0076- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0076-11- | File ID: | S2024-03-18A (24)- |
| Sampled: | 03/12/24 12:00- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 21:22- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 528.36 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977- | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.5- | U- |
| PFPeA- | 0.11- | 0.062- | 0.76- | J- |
| PFHxA- | ND- | 0.052- | 0.38- | U- |
| PFHpA- | ND- | 0.039- | 0.38- | U- |
| PFOA- | 0.29- | 0.14- | 0.38- | J- |
| PFNA- | ND- | 0.077- | 0.38- | U- |
| PFDA- | ND- | 0.096- | 0.38- | U- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | U- |
| PFBS- | ND- | 0.035- | 0.38- | U- |
| PFPeS- | ND- | 0.059- | 0.38- | U- |
| PFHxS- | ND- | 0.030- | 0.38- | U- |
| PFHpS- | ND- | 0.049- | 0.38- | U- |
| PFOS- | 0.065- | 0.060- | 0.38- | J- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.28- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.099- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

FB-2-031224-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0076- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0076-11- | File ID: | S2024-03-18A (24)- |
| Sampled: | 03/12/24 12:00- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 21:22- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 528.36 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.96- | 1.5- | U- |
| NEtFOSE- | ND- | 0.99- | 1.5- | U- |
| HFPO-DA- | ND- | 0.17- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.051- | 0.76- | U- |
| PFMBA- | ND- | 0.086- | 0.76- | U- |
| NFDHA- | ND- | 0.28- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-11 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>47753<br>( 163.0 / 69.0 )<br>1219 | ( 2.80 , 0.75 )<br>( N/A , 0.03 , -0.2) | 229.0<br>76.9 | 0.0255<br>101.8<br>97.6 | 0.1616 | N/A | 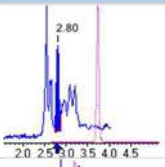 | 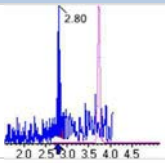 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 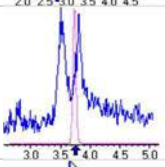 | | |
| PFPeA | ( 263.0 / 219.0 )<br>7668<br>( 263.0 / 69.0 )<br>N/A | ( 4.80 , 1.00 )<br>( -0.01 , N/A , #Value!) | 42.8<br>N/A | N/A<br>0.0<br>0.0 | 0.0278 | N/A | 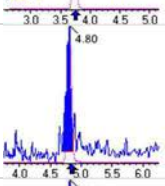 | 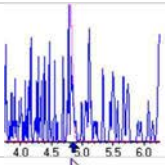 | |
| PFHxA | ( 313.0 / 269.0 )<br>3219<br>( 313.0 / 119.0 )<br>473 | ( 6.01 , 1.00 )<br>( -0.01 , N/A , -0.4) | 24.9<br>20.5 | 0.1470<br>132.3<br>129.3 | 0.0107 | N/A | 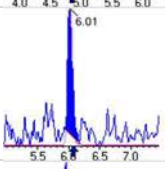 | 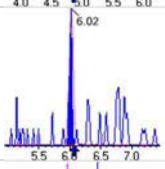 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 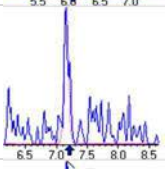 | 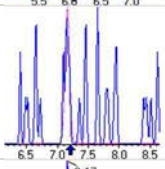 | |
| PFOA | ( 413.0 / 369.0 )<br>37020<br>( 413.0 / 169.0 )<br>12098 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.0) | 54.8<br>89.5 | 0.3268<br>90.3<br>92.1 | 0.0758 | N/A | 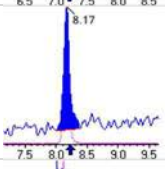 | 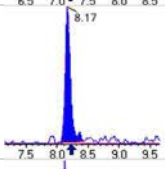 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 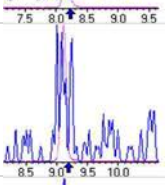 | 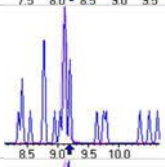 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 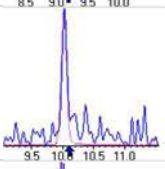 | 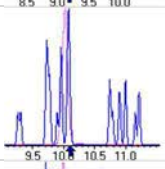 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 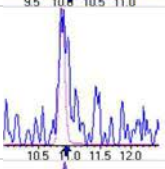 | 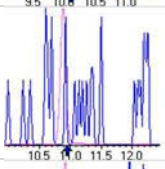 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 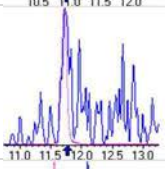 | 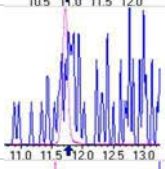 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 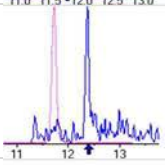 | 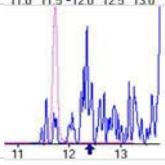 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-11 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 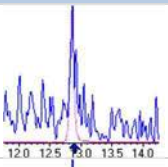 | 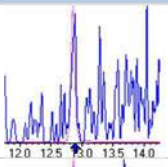 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 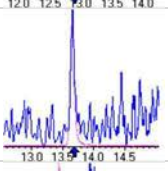 | 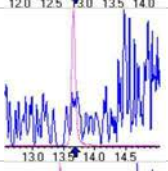 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 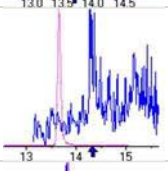 | 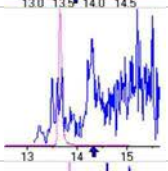 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 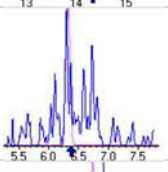 | 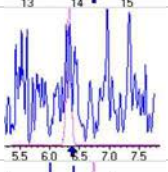 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 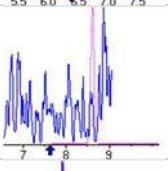 | 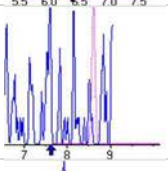 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 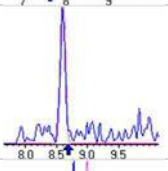 | 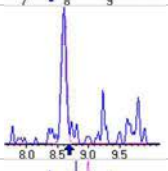 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 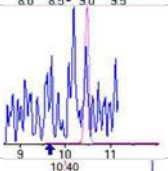 | 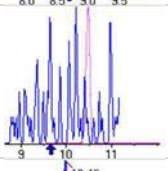 | |
| PFOS | ( 499.0 / 80.0 )<br>19029<br>( 499.0 / 99.0 )<br>4674 | ( 10.40 , 0.99 )<br>( -0.08 , N/A , -3.7) | 52.0<br>152.0 | 0.2456<br>103.8<br>112.1 | 0.0173 | N/A | 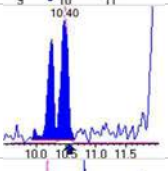 | 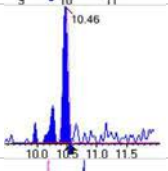 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 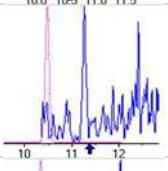 | 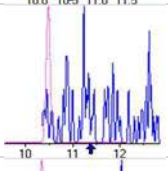 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 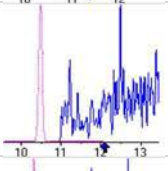 | 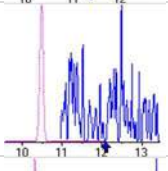 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 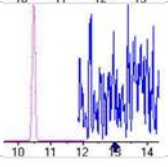 | 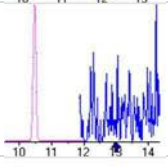 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (24)
Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 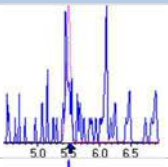 | 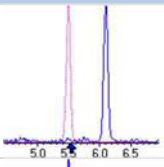 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 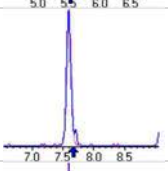 | 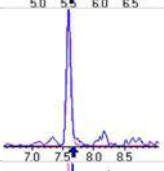 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 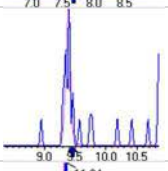 | 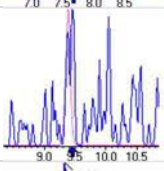 | |
| 10:2FTS | ( 627.0 / 607.0 ) 16193<br>( 627.0 / 81.0 ) 24314 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.6) | 169.5<br>65.1 | 1.5016<br>111.1<br>109.6 | 0.0524 | N/A | 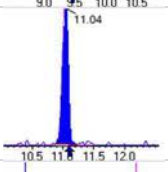 | 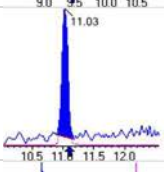 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 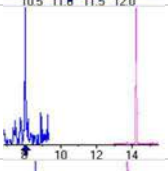 | 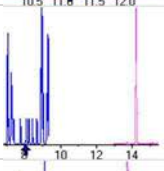 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 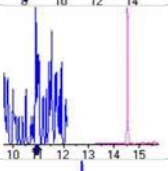 | 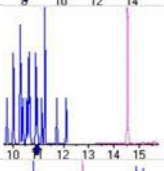 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 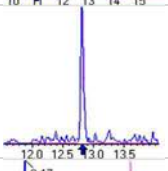 | 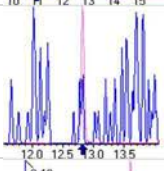 | |
| TFSI | ( 279.7 / 147.0 ) 73617<br>( 279.7 / 211.0 ) 4981 | ( 8.17 , 0.64 ) ( N/A , -0.08 , -0.5) | 31.4<br>13.1 | 0.0677<br>82.0<br>79.6 | 0.0489 | N/A | 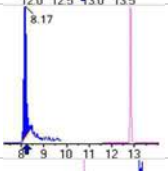 | 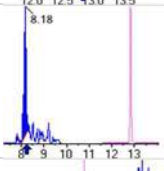 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 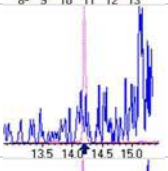 | 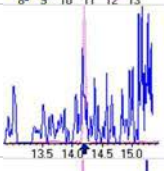 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 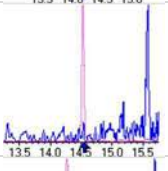 | 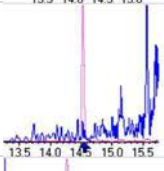 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 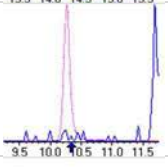 | 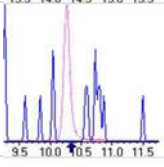 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0076-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (24)
Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 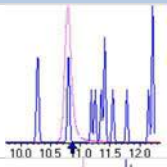 | 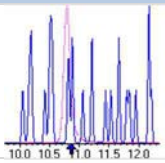 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 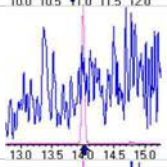 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 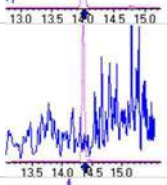 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 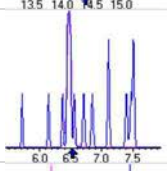 | 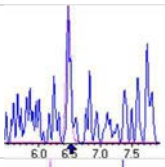 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 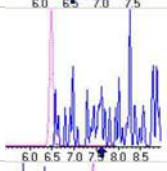 | 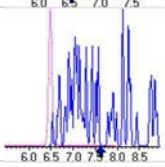 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 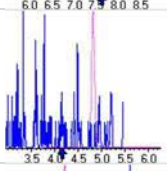 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 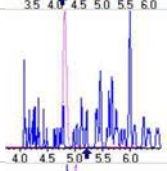 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 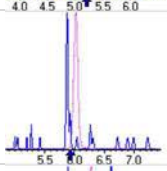 | 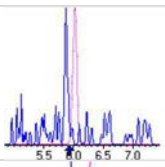 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 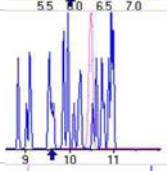 | 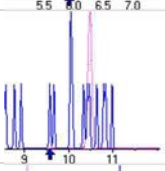 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 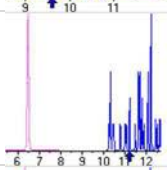 | 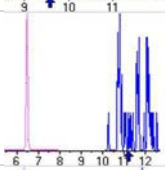 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 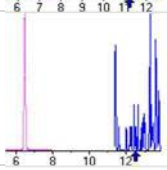 | 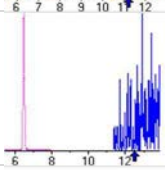 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-11 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 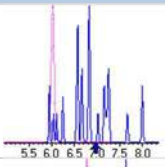 | 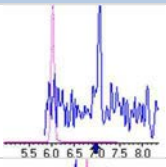 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 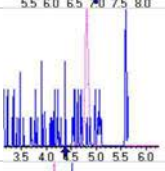 | 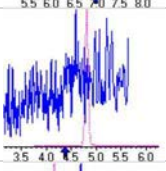 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 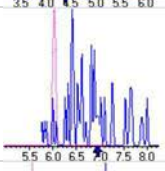 | 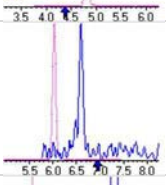 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 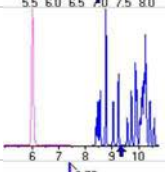 | 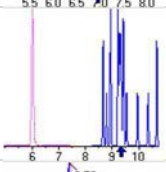 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>3688<br>( 357.2 / 243.0 )<br>575 | ( 6.75 , 1.00 )<br>( -0.01 , N/A , -0.6) | 34.0<br>10.9 | 0.1560<br>147.8<br>146.0 | 0.0131 | N/A | 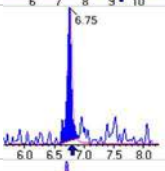 | 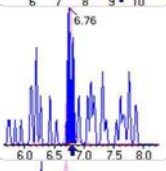 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 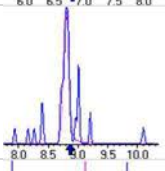 | 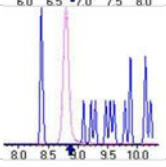 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 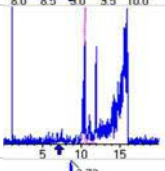 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>289933 | ( 3.73 , N/A )<br>( N/A , -0.02 , N/A ) | 1187.7 | N/A | 0.9624<br>[ 1.0000 ] | 96.2%<br>{ 85.7% } | 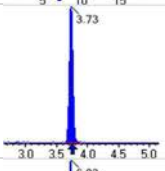 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>137617 | ( 6.03 , N/A )<br>( N/A , -0.04 , N/A ) | 21947.3 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 80.8% } | 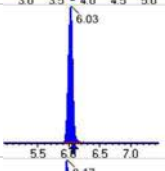 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>453551 | ( 8.17 , N/A )<br>( N/A , -0.06 , N/A ) | 3356.4 | N/A | 1.0166<br>[ 1.0000 ] | 101.7%<br>{ 92.9% } | 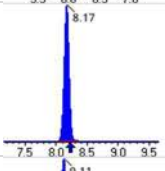 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>322331 | ( 9.11 , N/A )<br>( N/A , -0.07 , N/A ) | 996.2 | N/A | 0.9642<br>[ 1.0000 ] | 96.4%<br>{ 83.8% } | 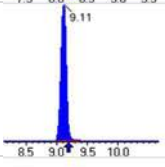 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-11 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 330944 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 71432.4 | N/A | 0.9979 [ 1.0000 ] | 99.8% { 87.6% } | 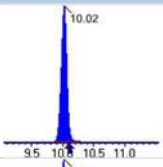 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1093399 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 5195.8 | N/A | 0.9785 [ 1.0000 ] | 97.8% { 87.2% } | 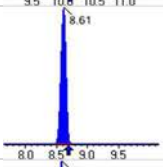 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 897632 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 2239.6 | N/A | 0.9195 [ 1.0000 ] | 92.0% { 84.9% } | 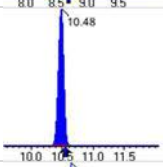 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2672179 | ( 3.73 , N/A ) ( N/A , -0.01 , N/A ) | 48337.6 | N/A | 8.3577 [ 8.0000 ] | 104.5% { 94.1% } | 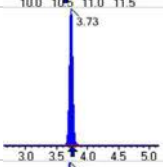 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1085092 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 5723.4 | N/A | 4.3952 [ 4.0000 ] | 109.9% { 84.7% } | 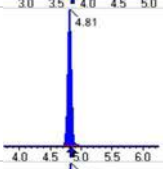 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 622463 | ( 6.02 , N/A ) ( N/A , -0.04 , N/A ) | 6920.3 | N/A | 2.1066 [ 2.0000 ] | 105.3% { 82.1% } | 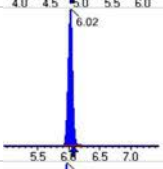 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 702667 | ( 7.16 , N/A ) ( N/A , -0.05 , N/A ) | 7175.7 | N/A | 2.2769 [ 2.0000 ] | 113.8% { 85.6% } | 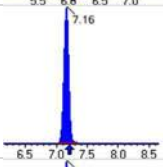 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 959993 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 2901.8 | N/A | 2.0075 [ 2.0000 ] | 100.4% { 88.4% } | 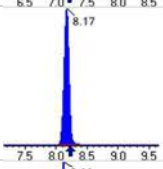 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 327647 | ( 9.11 , N/A ) ( N/A , -0.08 , N/A ) | 5464.0 | N/A | 1.0526 [ 1.0000 ] | 105.3% { 86.7% } | 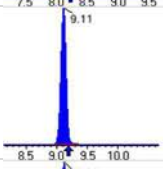 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 397809 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 1187.0 | N/A | 1.0417 [ 1.0000 ] | 104.2% { 84.4% } | 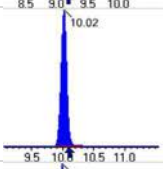 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 434500 | ( 10.89 , N/A ) ( N/A , -0.07 , N/A ) | 844.1 | N/A | 0.9358 [ 1.0000 ] | 93.6% { 85.7% } | 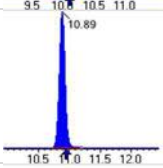 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-11 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 378627 | ( 11.72 , N/A ) ( N/A , -0.06 , N/A ) | 1148.4 | N/A | 0.8120 [ 1.0000 ] | 81.2% { 72.9% } | 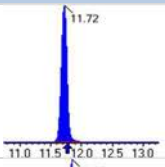 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 286869 | ( 12.85 , N/A ) ( N/A , -0.04 , N/A ) | 1248.1 | N/A | 0.7060 [ 1.0000 ] | 70.6% { 64.8% } | 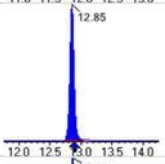 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 543666 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2232.3 | N/A | 1.5753 [ 2.0000 ] | 78.8% { 67.5% } | 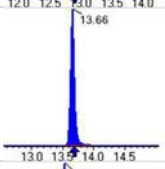 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1969742 | ( 6.32 , N/A ) ( N/A , -0.05 , N/A ) | 927.5 | N/A | 1.8489 [ 2.0000 ] | 92.4% { 82.6% } | 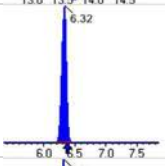 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1580224 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 4060.9 | N/A | 1.9750 [ 2.0000 ] | 98.8% { 89.6% } | 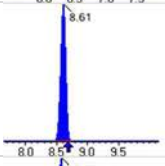 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1905241 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 1886.9 | N/A | 1.9938 [ 2.0000 ] | 99.7% { 85.4% } | 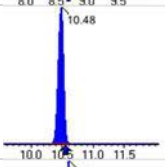 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 592235 | ( 5.50 , N/A ) ( N/A , -0.04 , N/A ) | 95.0 | N/A | 6.2200 [ 4.0000 ] | 155.5% { 107.0% } | 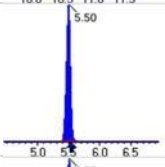 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1793414 | ( 7.60 , N/A ) ( N/A , -0.06 , N/A ) | 4004.0 | N/A | 6.0653 [ 4.0000 ] | 151.6% { 110.2% } | 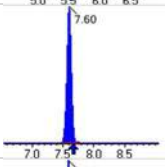 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1650295 | ( 9.39 , N/A ) ( N/A , -0.07 , N/A ) | 1422.1 | N/A | 5.6021 [ 4.0000 ] | 140.1% { 96.7% } | 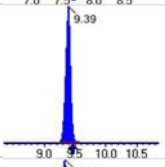 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3005344 | ( 11.03 , N/A ) ( N/A , -0.07 , N/A ) | 1435.0 | N/A | 8.8877 [ 8.0000 ] | 111.1% { 81.0% } | 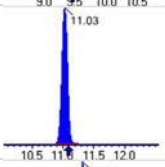 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1450492 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 2270.8 | N/A | 1.4007 [ 2.0000 ] | 70.0% { 59.9% } | 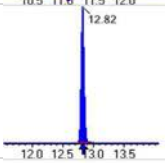 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0076-11 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 105602 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 964.7 | N/A | 0.5523 [ 2.0000 ] | 27.6% { 24.7% } | 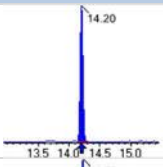 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 88502 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 813.1 | N/A | 0.4029 [ 2.0000 ] | 20.1% { 18.3% } | 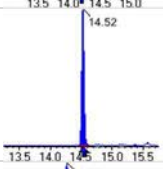 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1099503 | ( 10.26 , N/A ) ( N/A , -0.06 , N/A ) | 2002.5 | N/A | 4.4929 [ 4.0000 ] | 112.3% { 83.3% } | 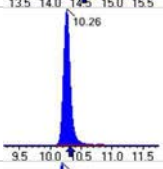 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1004886 | ( 10.79 , N/A ) ( N/A , -0.06 , N/A ) | 1779.4 | N/A | 4.3258 [ 4.0000 ] | 108.1% { 81.6% } | 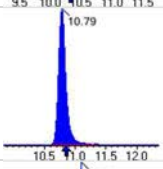 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 870815 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1865.9 | N/A | 9.7461 [ 20.0000 ] | 48.7% { 46.8% } | 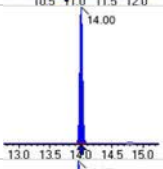 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 869976 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 2414.5 | N/A | 8.0376 [ 20.0000 ] | 40.2% { 41.6% } | 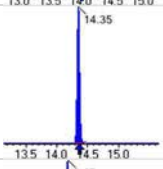 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1112522 | ( 6.48 , N/A ) ( N/A , -0.05 , N/A ) | 2223.3 | N/A | 8.7592 [ 8.0000 ] | 109.5% { 79.3% } | 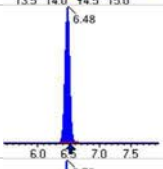 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 522900 | ( 6.76 , N/A ) ( N/A , -0.05 , N/A ) | 1219.0 | N/A | 1.7815 [ 2.0000 ] | 89.1% { 73.5% } | 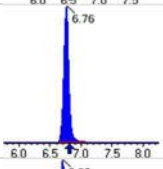 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 540028 | ( 8.80 , N/A ) ( N/A , -0.07 , N/A ) | 753.5 | N/A | 1.9707 [ 2.0000 ] | 98.5% { 80.6% } | 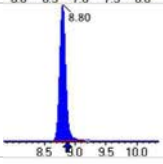 | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-4-4 (24C0076-01) ng/L** | Lab File ID: S2024-03-18A (12) | | | Analyzed: 03/18/24 17:16 |
| 13C4-PFBA | 30.1 | 93.8 | 5 - 130 | |
| 13C5-PFPEA | 15.1 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.53 | 111 | 40 - 130 | |
| 13C4-PFHPA | 7.53 | 125 | 40 - 130 | |
| 13C8-PFOA | 7.53 | 110 | 40 - 130 | |
| 13C9-PFNA | 3.77 | 108 | 40 - 130 | |
| 13C6-PFDA | 3.77 | 106 | 40 - 130 | |
| 13C7-PFUnA | 3.77 | 97.2 | 30 - 130 | |
| 13C2-PFDOA | 3.77 | 97.8 | 10 - 130 | |
| 13C2-PFTEDA | 3.77 | 77.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.53 | 74.9 | 0 - 200 | |
| 13C3-PFBS | 7.53 | 98.7 | 40 - 135 | |
| 13C3-PFHXS | 7.53 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.53 | 113 | 40 - 130 | |
| 13C2-4:2FTS | 15.1 | 185 | 40 - 200 | |
| 13C2-6:2FTS | 15.1 | 173 | 40 - 200 | |
| 13C2-8:2FTS | 15.1 | 125 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.1 | 69.0 | 0 - 200 | |
| 13C8-PFOSA | 7.53 | 112 | 40 - 130 | |
| D3-NMEFOSA | 7.53 | 36.7 | 10 - 130 | |
| D5-NETFOSA | 7.53 | 34.9 | 10 - 130 | |
| D3-NMEFOSAA | 15.1 | 82.0 | 40 - 170 | |
| D5-NETFOSAA | 15.1 | 122 | 25 - 135 | |
| D7-NMEFOSE | 75.3 | 59.7 | 10 - 130 | |
| D9-NETFOSE | 75.3 | 57.4 | 10 - 130 | |
| 13C3-HFPO-DA | 30.1 | 116 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-4-3 (24C0076-02 ) ng/L** | Lab File ID: S2024-03-18A (13) | | | Analyzed: 03/18/24 17:36 |
| 13C4-PFBA | 29.9 | 89.2 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 91.6 | 40 - 130 | |
| 13C5-PFHXA | 7.48 | 105 | 40 - 130 | |
| 13C4-PFHPA | 7.48 | 113 | 40 - 130 | |
| 13C8-PFOA | 7.48 | 103 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 98.9 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 94.5 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 88.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 77.3 | 10 - 130 | |
| 13C2-PFHxDA | 7.48 | 76.3 | 0 - 200 | |
| 13C3-PFBS | 7.48 | 98.9 | 40 - 135 | |
| 13C3-PFHXS | 7.48 | 107 | 40 - 130 | |
| 13C8-PFOS | 7.48 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 189 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 151 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 121 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.9 | 89.0 | 0 - 200 | |
| 13C8-PFOSA | 7.48 | 91.8 | 40 - 130 | |
| D3-NMEFOSA | 7.48 | 36.1 | 10 - 130 | |
| D5-NETFOSA | 7.48 | 36.8 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 88.1 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 110 | 25 - 135 | |
| D7-NMEFOSE | 74.8 | 62.2 | 10 - 130 | |
| D9-NETFOSE | 74.8 | 60.8 | 10 - 130 | |
| 13C3-HFPO-DA | 29.9 | 105 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-4-2 (24C0076-03 ) ng/L** | Lab File ID: S2024-03-18A (14) | | | Analyzed: 03/18/24 17:57 |
| 13C4-PFBA | 29.7 | 92.7 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 100 | 40 - 130 | |
| 13C5-PFHXA | 7.44 | 97.1 | 40 - 130 | |
| 13C4-PFHPA | 7.44 | 109 | 40 - 130 | |
| 13C8-PFOA | 7.44 | 98.8 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 97.9 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 97.2 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 98.7 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 88.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 70.1 | 10 - 130 | |
| 13C2-PFHxDA | 7.44 | 75.2 | 0 - 200 | |
| 13C3-PFBS | 7.44 | 90.7 | 40 - 135 | |
| 13C3-PFHXS | 7.44 | 96.6 | 40 - 130 | |
| 13C8-PFOS | 7.44 | 97.4 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 154 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 147 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 89.1 | 0 - 200 | |
| 13C8-PFOSA | 7.44 | 79.9 | 40 - 130 | |
| D3-NMEFOSA | 7.44 | 27.3 | 10 - 130 | |
| D5-NETFOSA | 7.44 | 22.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 99.1 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 101 | 25 - 135 | |
| D7-NMEFOSE | 74.4 | 41.2 | 10 - 130 | |
| D9-NETFOSE | 74.4 | 33.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-2-031224 (24C0076-04 ) ng/L** | Lab File ID: S2024-03-18A (15) | | | Analyzed: 03/18/24 18:17 |
| 13C4-PFBA | 30.7 | 100 | 5 - 130 | |
| 13C5-PFPEA | 15.4 | 111 | 40 - 130 | |
| 13C5-PFHXA | 7.68 | 109 | 40 - 130 | |
| 13C4-PFHPA | 7.68 | 121 | 40 - 130 | |
| 13C8-PFOA | 7.68 | 106 | 40 - 130 | |
| 13C9-PFNA | 3.84 | 109 | 40 - 130 | |
| 13C6-PFDA | 3.84 | 109 | 40 - 130 | |
| 13C7-PFUnA | 3.84 | 109 | 30 - 130 | |
| 13C2-PFDOA | 3.84 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 3.84 | 92.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.68 | 83.6 | 0 - 200 | |
| 13C3-PFBS | 7.68 | 103 | 40 - 135 | |
| 13C3-PFHXS | 7.68 | 110 | 40 - 130 | |
| 13C8-PFOS | 7.68 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 15.4 | 171 | 40 - 200 | |
| 13C2-6:2FTS | 15.4 | 161 | 40 - 200 | |
| 13C2-8:2FTS | 15.4 | 124 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.7 | 95.1 | 0 - 200 | |
| 13C8-PFOSA | 7.68 | 95.6 | 40 - 130 | |
| D3-NMEFOSA | 7.68 | 37.8 | 10 - 130 | |
| D5-NETFOSA | 7.68 | 30.4 | 10 - 130 | |
| D3-NMEFOSAA | 15.4 | 94.8 | 40 - 170 | |
| D5-NETFOSAA | 15.4 | 114 | 25 - 135 | |
| D7-NMEFOSE | 76.8 | 54.8 | 10 - 130 | |
| D9-NETFOSE | 76.8 | 51.8 | 10 - 130 | |
| 13C3-HFPO-DA | 30.7 | 111 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-4-1 (24C0076-05 ) ng/L** | Lab File ID: S2024-03-18A (16) | | | Analyzed: 03/18/24 18:38 |
| 13C4-PFBA | 29.4 | 97.8 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 94.6 | 40 - 130 | |
| 13C5-PFHXA | 7.34 | 100 | 40 - 130 | |
| 13C4-PFHPA | 7.34 | 104 | 40 - 130 | |
| 13C8-PFOA | 7.34 | 103 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 98.7 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 93.6 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 91.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 75.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.34 | 79.6 | 0 - 200 | |
| 13C3-PFBS | 7.34 | 89.9 | 40 - 135 | |
| 13C3-PFHXS | 7.34 | 96.6 | 40 - 130 | |
| 13C8-PFOS | 7.34 | 98.4 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 157 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 149 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.4 | 100 | 0 - 200 | |
| 13C8-PFOSA | 7.34 | 80.8 | 40 - 130 | |
| D3-NMEFOSA | 7.34 | 27.1 | 10 - 130 | |
| D5-NETFOSA | 7.34 | 21.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 100 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 104 | 25 - 135 | |
| D7-NMEFOSE | 73.4 | 46.8 | 10 - 130 | |
| D9-NETFOSE | 73.4 | 36.7 | 10 - 130 | |
| 13C3-HFPO-DA | 29.4 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-14-4 (24C0076-06 ) ng/L** | Lab File ID: S2024-03-18A (17) | | | Analyzed: 03/18/24 18:59 |
| 13C4-PFBA | 29.9 | 96.3 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 99.0 | 40 - 130 | |
| 13C5-PFHXA | 7.48 | 99.6 | 40 - 130 | |
| 13C4-PFHPA | 7.48 | 110 | 40 - 130 | |
| 13C8-PFOA | 7.48 | 92.8 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 92.3 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 90.2 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 85.8 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 77.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 58.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.48 | 65.3 | 0 - 200 | |
| 13C3-PFBS | 7.48 | 88.3 | 40 - 135 | |
| 13C3-PFHXS | 7.48 | 92.3 | 40 - 130 | |
| 13C8-PFOS | 7.48 | 92.1 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 151 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 145 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.9 | 91.1 | 0 - 200 | |
| 13C8-PFOSA | 7.48 | 83.1 | 40 - 130 | |
| D3-NMEFOSA | 7.48 | 32.6 | 10 - 130 | |
| D5-NETFOSA | 7.48 | 26.0 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 90.8 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 99.5 | 25 - 135 | |
| D7-NMEFOSE | 74.8 | 55.4 | 10 - 130 | |
| D9-NETFOSE | 74.8 | 41.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.9 | 105 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-14-3 (24C0076-07 ) ng/L** | Lab File ID: S2024-03-18A (18) | | | Analyzed: 03/18/24 19:19 |
| 13C4-PFBA | 29.4 | 80.9 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 96.4 | 40 - 130 | |
| 13C5-PFHXA | 7.34 | 96.2 | 40 - 130 | |
| 13C4-PFHPA | 7.34 | 104 | 40 - 130 | |
| 13C8-PFOA | 7.34 | 96.2 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 98.6 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 90.2 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 87.0 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 80.9 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 72.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.34 | 60.7 | 0 - 200 | |
| 13C3-PFBS | 7.34 | 90.9 | 40 - 135 | |
| 13C3-PFHXS | 7.34 | 94.0 | 40 - 130 | |
| 13C8-PFOS | 7.34 | 97.2 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 146 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 148 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 111 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.4 | 93.9 | 0 - 200 | |
| 13C8-PFOSA | 7.34 | 82.8 | 40 - 130 | |
| D3-NMEFOSA | 7.34 | 32.1 | 10 - 130 | |
| D5-NETFOSA | 7.34 | 23.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 97.7 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 105 | 25 - 135 | |
| D7-NMEFOSE | 73.4 | 42.7 | 10 - 130 | |
| D9-NETFOSE | 73.4 | 34.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.4 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-14-2 (24C0076-08 ) ng/L** | Lab File ID: S2024-03-18A (19) | | | Analyzed: 03/18/24 19:40 |
| 13C4-PFBA | 29.7 | 81.9 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 110 | 40 - 130 | |
| 13C5-PFHXA | 7.42 | 110 | 40 - 130 | |
| 13C4-PFHPA | 7.42 | 119 | 40 - 130 | |
| 13C8-PFOA | 7.42 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.71 | 107 | 40 - 130 | |
| 13C6-PFDA | 3.71 | 101 | 40 - 130 | |
| 13C7-PFUnA | 3.71 | 95.5 | 30 - 130 | |
| 13C2-PFDOA | 3.71 | 91.1 | 10 - 130 | |
| 13C2-PFTEDA | 3.71 | 78.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.42 | 71.2 | 0 - 200 | |
| 13C3-PFBS | 7.42 | 94.6 | 40 - 135 | |
| 13C3-PFHXS | 7.42 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.42 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 166 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 156 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 97.0 | 0 - 200 | |
| 13C8-PFOSA | 7.42 | 91.8 | 40 - 130 | |
| D3-NMEFOSA | 7.42 | 42.7 | 10 - 130 | |
| D5-NETFOSA | 7.42 | 31.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 104 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 114 | 25 - 135 | |
| D7-NMEFOSE | 74.2 | 64.4 | 10 - 130 | |
| D9-NETFOSE | 74.2 | 52.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 118 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-14-1 (24C0076-09 ) ng/L** | Lab File ID: S2024-03-18A (20) | | | Analyzed: 03/18/24 20:00 |
| 13C4-PFBA | 29.9 | 90.6 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 100 | 40 - 130 | |
| 13C5-PFHXA | 7.48 | 101 | 40 - 130 | |
| 13C4-PFHPA | 7.48 | 102 | 40 - 130 | |
| 13C8-PFOA | 7.48 | 93.1 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 93.5 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 92.0 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 87.0 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 83.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 72.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.48 | 71.4 | 0 - 200 | |
| 13C3-PFBS | 7.48 | 88.0 | 40 - 135 | |
| 13C3-PFHXS | 7.48 | 98.2 | 40 - 130 | |
| 13C8-PFOS | 7.48 | 94.0 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 143 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 140 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.9 | 98.8 | 0 - 200 | |
| 13C8-PFOSA | 7.48 | 82.4 | 40 - 130 | |
| D3-NMEFOSA | 7.48 | 31.1 | 10 - 130 | |
| D5-NETFOSA | 7.48 | 20.8 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 95.1 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 98.3 | 25 - 135 | |
| D7-NMEFOSE | 74.8 | 49.1 | 10 - 130 | |
| D9-NETFOSE | 74.8 | 36.7 | 10 - 130 | |
| 13C3-HFPO-DA | 29.9 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-2-031224 (24C0076-10 ) ng/L** | Lab File ID: S2024-03-18A (21) | | | Analyzed: 03/18/24 20:21 |
| 13C4-PFBA | 31.0 | 101 | 5 - 130 | |
| 13C5-PFPEA | 15.5 | 97.6 | 40 - 130 | |
| 13C5-PFHXA | 7.75 | 99.4 | 40 - 130 | |
| 13C4-PFHPA | 7.75 | 104 | 40 - 130 | |
| 13C8-PFOA | 7.75 | 100 | 40 - 130 | |
| 13C9-PFNA | 3.88 | 99.8 | 40 - 130 | |
| 13C6-PFDA | 3.88 | 100 | 40 - 130 | |
| 13C7-PFUnA | 3.88 | 90.5 | 30 - 130 | |
| 13C2-PFDOA | 3.88 | 83.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.88 | 71.3 | 10 - 130 | |
| 13C2-PFHxDA | 7.75 | 78.1 | 0 - 200 | |
| 13C3-PFBS | 7.75 | 94.6 | 40 - 135 | |
| 13C3-PFHXS | 7.75 | 99.6 | 40 - 130 | |
| 13C8-PFOS | 7.75 | 95.8 | 40 - 130 | |
| 13C2-4:2FTS | 15.5 | 158 | 40 - 200 | |
| 13C2-6:2FTS | 15.5 | 161 | 40 - 200 | |
| 13C2-8:2FTS | 15.5 | 139 | 40 - 300 | |
| 13C2D4-10:2FTS | 31.0 | 120 | 0 - 200 | |
| 13C8-PFOSA | 7.75 | 54.3 | 40 - 130 | |
| D3-NMEFOSA | 7.75 | 20.5 | 10 - 130 | |
| D5-NETFOSA | 7.75 | 16.1 | 10 - 130 | |
| D3-NMEFOSAA | 15.5 | 102 | 40 - 170 | |
| D5-NETFOSAA | 15.5 | 101 | 25 - 135 | |
| D7-NMEFOSE | 77.5 | 41.5 | 10 - 130 | |
| D9-NETFOSE | 77.5 | 31.7 | 10 - 130 | |
| 13C3-HFPO-DA | 31.0 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-2-031224 (24C0076-11) ng/L** | Lab File ID: S2024-03-18A (24) | | | Analyzed: 03/18/24 21:22 |
| 13C4-PFBA | 30.3 | 104 | 5 - 130 | |
| 13C5-PFPEA | 15.1 | 110 | 40 - 130 | |
| 13C5-PFHXA | 7.57 | 105 | 40 - 130 | |
| 13C4-PFHPA | 7.57 | 114 | 40 - 130 | |
| 13C8-PFOA | 7.57 | 100 | 40 - 130 | |
| 13C9-PFNA | 3.79 | 105 | 40 - 130 | |
| 13C6-PFDA | 3.79 | 104 | 40 - 130 | |
| 13C7-PFUnA | 3.79 | 93.6 | 30 - 130 | |
| 13C2-PFDOA | 3.79 | 81.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.79 | 70.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.57 | 78.8 | 0 - 200 | |
| 13C3-PFBS | 7.57 | 92.4 | 40 - 135 | |
| 13C3-PFHXS | 7.57 | 98.8 | 40 - 130 | |
| 13C8-PFOS | 7.57 | 99.7 | 40 - 130 | |
| 13C2-4:2FTS | 15.1 | 155 | 40 - 200 | |
| 13C2-6:2FTS | 15.1 | 152 | 40 - 200 | |
| 13C2-8:2FTS | 15.1 | 140 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.3 | 111 | 0 - 200 | |
| 13C8-PFOSA | 7.57 | 70.0 | 40 - 130 | |
| D3-NMEFOSA | 7.57 | 27.6 | 10 - 130 | |
| D5-NETFOSA | 7.57 | 20.1 | 10 - 130 | |
| D3-NMEFOSAA | 15.1 | 112 | 40 - 170 | |
| D5-NETFOSAA | 15.1 | 108 | 25 - 135 | |
| D7-NMEFOSE | 75.7 | 48.7 | 10 - 130 | |
| D9-NETFOSE | 75.7 | 40.2 | 10 - 130 | |
| 13C3-HFPO-DA | 30.3 | 109 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0208-BLK1 ) ng/L** | Lab File ID: S2024-03-19B (7) | | | Analyzed: 03/19/24 18:32 |
| 13C4-PFBA | 32.0 | 98.3 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 95.2 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 94.1 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 90.2 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 93.5 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 83.2 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 88.1 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 85.8 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 82.9 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 75.1 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 68.2 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 92.8 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 95.2 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 86.4 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 114 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 97.9 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 98.0 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 98.3 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 66.5 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 21.8 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 17.8 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 86.6 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 85.1 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 54.9 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 51.6 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 92.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0208-BS1 ) ng/L | Lab File ID: S2024-03-18A (8) | | | Analyzed: 03/18/24 15:54 |
| 13C4-PFBA | 32.0 | 94.1 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 96.7 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 97.3 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 106 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 95.2 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 96.6 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 90.6 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 87.6 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 77.9 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 72.8 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 61.4 | 0 - 200 | |
| 13C3-PFBS | 8.00 | 90.0 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 88.5 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 89.8 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 132 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 133 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 106 | 0 - 200 | |
| 13C8-PFOSA | 8.00 | 71.0 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 22.0 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 18.8 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 96.4 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 92.4 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 51.4 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 45.7 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0076
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0208-MRL1 ) ng/L** | Lab File ID: S2024-03-18A (9) | | | Analyzed: 03/18/24 16:14 |
| 13C4-PFBA | 32.0 | 103 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 109 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 108 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 111 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 99.6 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 107 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 99.5 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 92.5 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 89.7 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 77.9 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 61.4 | 0 - 200 | |
| 13C3-PFBS | 8.00 | 93.0 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 95.7 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 102 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 149 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 158 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 152 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 108 | 0 - 200 | |
| 13C8-PFOSA | 8.00 | 77.7 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 26.4 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 22.1 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 104 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 108 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 56.0 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 50.5 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 106 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0076T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0208-BLK1T Batch:T BDC0208T Prepared:T 03/14/2024 12:39/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0208-BS1T | S2024-03-18A (8)T | 15:54T |
| MRL CheckT | BDC0208-MRL1T | S2024-03-18A (9)T | 16:14T |
| MW-4-4T | 24C0076-01T | S2024-03-18A (12)T | 17:16T |
| MW-4-3T | 24C0076-02T | S2024-03-18A (13)T | 17:36T |
| MW-4-2T | 24C0076-03T | S2024-03-18A (14)T | 17:57T |
| DUP-2-031224T | 24C0076-04T | S2024-03-18A (15)T | 18:17T |
| MW-4-1T | 24C0076-05T | S2024-03-18A (16)T | 18:38T |
| MW-14-4T | 24C0076-06T | S2024-03-18A (17)T | 18:59T |
| MW-14-3T | 24C0076-07T | S2024-03-18A (18)T | 19:19T |
| MW-14-2T | 24C0076-08T | S2024-03-18A (19)T | 19:40T |
| MW-14-1T | 24C0076-09T | S2024-03-18A (20)T | 20:00T |
| EB-2-031224T | 24C0076-10T | S2024-03-18A (21)T | 20:21T |
| FB-2-031224T | 24C0076-11T | S2024-03-18A (24)T | 21:22T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | 0.125a | 0.065a | 0.80a | Ja |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.197a | 0.15a | 0.40a | MI3, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0970a | 0.064a | 0.40a | Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0208A | Laboratory ID:A | BDC0208-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 16.8A | 105A | 70 - 140A |
| PFPeA | 8.00A | 8.37A | 105A | 65 - 135A |
| PFHxA | 4.00A | 4.17A | 104A | 70 - 145A |
| PFHpA | 4.00A | 3.87A | 96.8A | 70 - 150A |
| PFOA | 4.00A | 4.07A | 102A | 70 - 150A |
| PFNA | 4.00A | 4.06A | 102A | 70 - 150A |
| PFDA | 4.00A | 3.94A | 98.6A | 70 - 140A |
| PFUnA | 4.00A | 4.01A | 100A | 70 - 145A |
| PFDoA | 4.00A | 3.97A | 99.3A | 70 - 140A |
| PFTrDA | 4.00A | 4.04A | 101A | 65 - 140A |
| PFTeDA | 4.00A | 3.93A | 98.3A | 60 - 140A |
| PFHxDA | 4.00A | 3.95A | 98.8A | 40 - 150A |
| PFODA | 4.00A | 3.42A | 85.4A | 40 - 150A |
| PFBSA | 3.54A | 3.51A | 99.3A | 60 - 145A |
| PFPeSA | 3.76A | 3.94A | 105A | 65 - 140A |
| PFHxSA | 3.66A | 3.88A | 106A | 65 - 145A |
| PFHpSA | 3.82A | 4.19A | 110A | 70 - 150A |
| PFOSA | 3.72A | 3.89A | 104A | 55 - 150A |
| PFNSA | 3.84A | 3.87A | 101A | 65 - 145A |
| PFDSA | 3.86A | 3.70A | 95.9A | 60 - 145A |
| PFDoSA | 3.88A | 3.62A | 93.4A | 50 - 145A |
| 4:2FTSA | 15.0A | 16.1A | 107A | 70 - 145A |
| 6:2FTSA | 15.2A | 15.5A | 102A | 65 - 155A |
| 8:2FTSA | 15.4A | 16.4A | 107A | 60 - 150A |
| 10:2FTSA | 15.4A | 18.5A | 120A | 0 - 200A |
| PFOSA | 4.00A | 4.27A | 107A | 70 - 145A |
| NMeFOSA | 16.0A | 19.4A | 121A | 60 - 150A |
| NEtFOSA | 16.0A | 15.9A | 99.2A | 65 - 145A |
| NMeFOSA | 4.00A | 3.98A | 99.4A | 50 - 140A |
| NEtFOSA | 4.00A | 4.12A | 103A | 70 - 145A |
| NMeFOSEA | 16.0A | 14.7A | 91.8A | 70 - 145A |
| NEtFOSEA | 16.0A | 15.9A | 99.3A | 70 - 135A |
| HFPO-DA | 4.00A | 3.98A | 99.6 | 70 - 140A |
| DONA | 3.78A | 3.76A | 99.6A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0208A | Laboratory ID:A | BDC0208-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.06A | 99.2A | 70 - 140A |
| PFMPA | 8.00A | 8.43A | 105A | 55 - 140A |
| PFMBA | 8.00A | 8.17A | 102A | 60 - 150A |
| NFDHA | 8.00A | 8.20A | 103A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.12A | 83.3A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 3.03A | 80.2A | 55 - 160A |
| 3:3FTCA | 16.0A | 16.6A | 104A | 65 - 130A |
| 5:3FTCA | 16.0A | 16.7A | 104A | 70 - 135A |
| 7:3FTCA | 16.0A | 17.7A | 111A | 50 - 145A |

# CALIBRATION SUMMARYL

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.22118 x (std. dev. = 0.01350) (weighting: None) | %RSE=6.1 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.47303 x (std. dev. = 0.01619) (weighting: None) | %RSE=3.4 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50900 x (std. dev. = 0.02066) (weighting: None) | %RSE=4.1 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48447 x (std. dev. = 0.02648) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49245 x (std. dev. = 0.03763) (weighting: None) | %RSE=7.6 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 0.50845 x (std. dev. = 0.04036) (weighting: None) | %RSE=7.9 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00209 x (std. dev. = 0.07967) (weighting: None) | %RSE=8.0 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 0.99591 x (std. dev. = 0.06364) (weighting: None) | %RSE=6.4 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.93380 x (std. dev. = 0.06074) (weighting: None) | %RSE=6.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.02349 x (std. dev. = 0.05498) (weighting: None) | %RSE=5.4 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98404 x (std. dev. = 0.05368) (weighting: None) | %RSE=5.5 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.94970 x (std. dev. = 0.06711) (weighting: None) | %RSE=7.1 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.48258 x (std. dev. = 0.02989) (weighting: None) | %RSE=6.2 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.32424 x (std. dev. = 0.02849) (weighting: None) | %RSE=8.8 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.23003 x (std. dev. = 0.01414) (weighting: None) | %RSE=6.1 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.74718 x (std. dev. = 0.05921) (weighting: None) | %RSE=7.9 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80665 x (std. dev. = 0.03395) (weighting: None) | %RSE=4.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.54657 x (std. dev. = 0.03511) (weighting: None) | %RSE=6.4 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53610 x (std. dev. = 0.02015) (weighting: None) | %RSE=3.8 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.54105 x (std. dev. = 0.03589) (weighting: None) | %RSE=6.6 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.64705 x (std. dev. = 0.05398) (weighting: None) | %RSE=8.3 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.55660 x (std. dev. = 0.05132) (weighting: None) | %RSE=9.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.51639 x (std. dev. = 0.10936) (weighting: None) | %RSE=4.3 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.84310 x (std. dev. = 0.04432) (weighting: None) | %RSE=5.3 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.94945 x (std. dev. = 0.08425) (weighting: None) | %RSE=8.9 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.39749 x (std. dev. = 0.01629) (weighting: None) | %RSE=4.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.29905 x (std. dev. = 0.16050) (weighting: None) | %RSE=7.0 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 2.56445 x (std. dev. = 0.08113) (weighting: None) | %RSE=3.2 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.48797 x (std. dev. = 0.02370) (weighting: None) | %RSE=4.9 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.01595 x (std. dev. = 0.07189) (weighting: None) | %RSE=7.1 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 2.01442 x (std. dev. = 0.13774) (weighting: None) | %RSE=6.8 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.19461 x (std. dev. = 0.08339) (weighting: None) | %RSE=3.8 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23544 x (std. dev. = 0.00918) (weighting: None) | %RSE=3.9 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24116 x (std. dev. = 0.01198) (weighting: None) | %RSE=5.0 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.22641 x (std. dev. = 0.00767) (weighting: None) | %RSE=3.4 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17672 x (std. dev. = 0.00729) (weighting: None) | %RSE=4.1 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07096 x (std. dev. = 0.00352) (weighting: None) | %RSE=5.0 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.85192 x (std. dev. = 0.05267) (weighting: None) | %RSE=6.2 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16115 x (std. dev. = 0.01007) (weighting: None) | %RSE=6.3 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.42654 x (std. dev. = 0.03547) (weighting: None) | %RSE=8.3 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.33683 x (std. dev. = 0.01165) (weighting: None) | %RSE=3.5 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30114 x (std. dev. = 0.01851) (weighting: None) | %RSE=6.1 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 1.04078 x (std. dev. = 0.03352) (weighting: None) | %RSE=3.2 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.82392 x (std. dev. = 0.05207) (weighting: None) | %RSE=6.3 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.65040 x (std. dev. = 0.05210) (weighting: None) | %RSE=8.0 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.04946 x (std. dev. = 0.00816) (weighting: None) | %RSE=16.5 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.46968 x (std. dev. = 0.03522) (weighting: None) | %RSE=7.5 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.69092 x (std. dev. = 0.07127) (weighting: None) | %RSE=10.3 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53744 x (std. dev. = 0.04320) (weighting: None) | %RSE=8.0 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.42170 x (std. dev. = 0.02178) (weighting: None) | %RSE=5.2 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39280 x (std. dev. = 0.01731) (weighting: None) | %RSE=4.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 301250.6434 x | %RSD=13.4 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 153767.4862 x | %RSD=7.1 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 446132.0413 x | %RSD=5.8 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 334296.6606 x | %RSD=7.2 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 331624.9386 x | %RSD=6.5 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 1117433.9888 x | %RSD=5.5 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 976196.7271 x | %RSD=7.6 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 8.8221 x | %RSD=2.4 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.1759 x | %RSD=11.1 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.2943 x | %RSD=6.4 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.4850 x | %RSD=4.6 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1087 x | %RSD=3.8 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9657 x | %RSD=6.7 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1540 x | %RSD=7.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4030 x | %RSD=7.1 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4089 x | %RSD=7.1 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.2277 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.0857 x | %RSD=6.8 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.9487 x | %RSD=6.8 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4635 x | %RSD=4.5 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1292 x | %RSD=4.0 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.3483 x | %RSD=17.5 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.0817 x | %RSD=12.3 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.0777 x | %RSD=18.1 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 2.4741 x | %RSD=9.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.3073 x | %RSD=5.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4261 x | %RSD=7.0 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4894 x | %RSD=5.3 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0905 x | %RSD=4.6 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0352 x | %RSD=5.5 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.9908 x | %RSD=6.5 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 2.4116 x | %RSD=5.2 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 7.3835 x | %RSD=5.7 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.7738 x | %RSD=6.9 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.6560 x | %RSD=5.5 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result}\left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

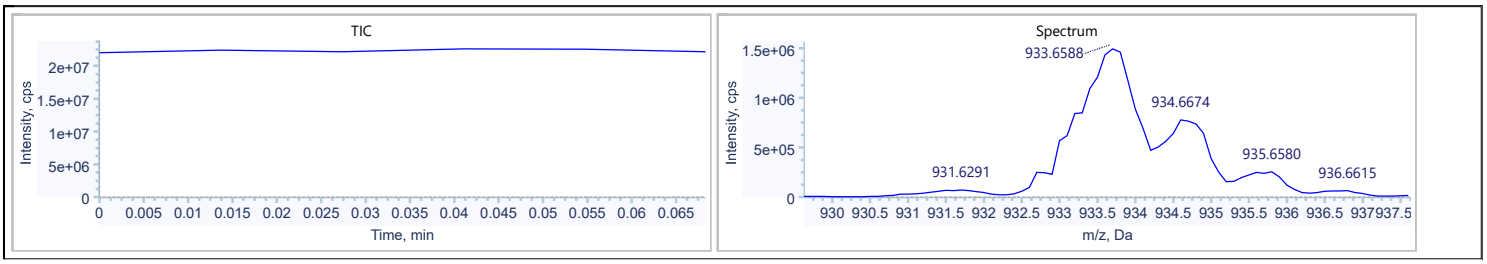


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

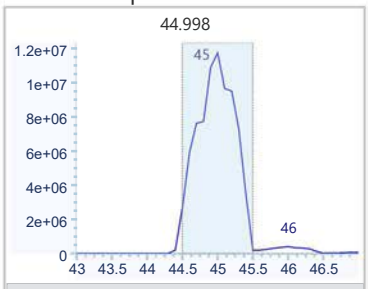


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

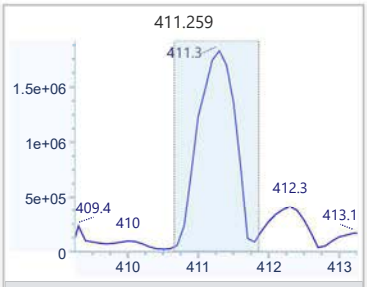


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

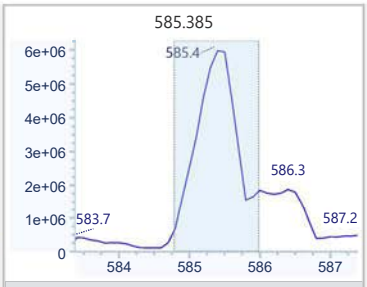


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

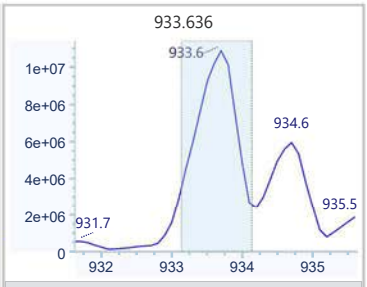


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

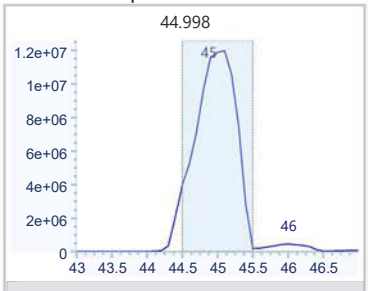


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

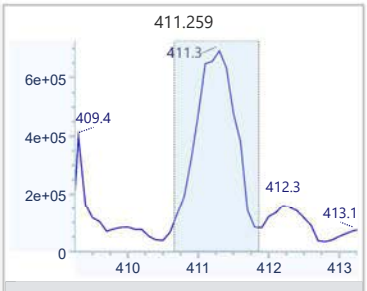


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

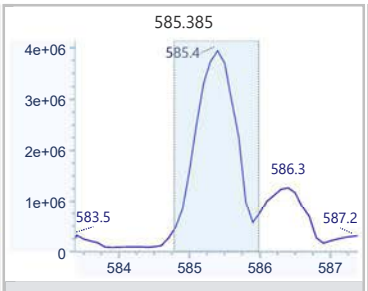


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

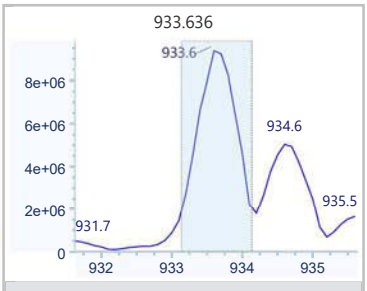


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

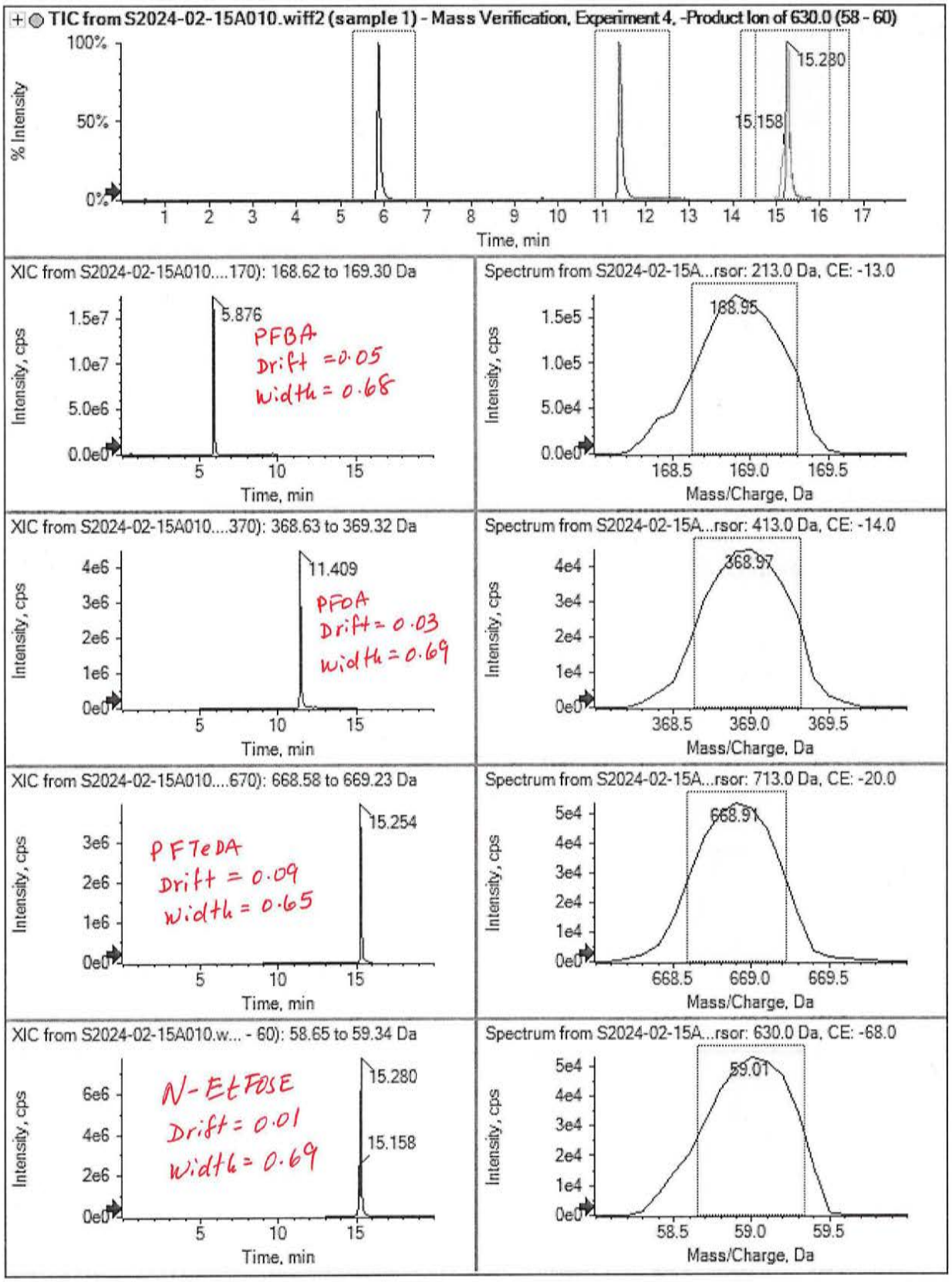

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.23574 x (std. dev. = 0.01485) (weighting: None) | %RSE=6.3 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49841 x (std. dev. = 0.03017) (weighting: None) | %RSE=6.1 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50512 x (std. dev. = 0.02794) (weighting: None) | %RSE=5.5 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48038 x (std. dev. = 0.02636) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49065 x (std. dev. = 0.03123) (weighting: None) | %RSE=6.4 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 9.99867e-4 x^2 + 0.48413 x + 0.01226 (r = 0.99905) (weighting: 1 / x) | %RSE=7.3 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00506 x (std. dev. = 0.07345) (weighting: None) | %RSE=7.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 1.02176 x (std. dev. = 0.07981) (weighting: None) | %RSE=7.8 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.92494 x (std. dev. = 0.04119) (weighting: None) | %RSE=4.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00604 x (std. dev. = 0.03628) (weighting: None) | %RSE=3.6 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98412 x (std. dev. = 0.02772) (weighting: None) | %RSE=2.8 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93655 x (std. dev. = 0.03297) (weighting: None) | %RSE=3.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.47691 x (std. dev. = 0.01946) (weighting: None) | %RSE=4.1 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29836 x (std. dev. = 0.01281) (weighting: None) | %RSE=4.3 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.22968 x (std. dev. = 0.01218) (weighting: None) | %RSE=5.3 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.71812 x (std. dev. = 0.05325) (weighting: None) | %RSE=7.4 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80977 x (std. dev. = 0.02624) (weighting: None) | %RSE=3.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.56999 x (std. dev. = 0.03426) (weighting: None) | %RSE=6.0 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53562 x (std. dev. = 0.02668) (weighting: None) | %RSE=5.0 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.51901 x (std. dev. = 0.02103) (weighting: None) | %RSE=4.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.63587 x (std. dev. = 0.04565) (weighting: None) | %RSE=7.2 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.56432 x (std. dev. = 0.04069) (weighting: None) | %RSE=7.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.45261 x (std. dev. = 0.08690) (weighting: None) | %RSE=3.5 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.78588 x (std. dev. = 0.04847) (weighting: None) | %RSE=6.2 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.91008 x (std. dev. = 0.10404) (weighting: None) | %RSE=11.4 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.37234 x (std. dev. = 0.02276) (weighting: None) | %RSE=6.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.57679 x (std. dev. = 0.13834) (weighting: None) | %RSE=5.4 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.07289 x (std. dev. = 0.21947) (weighting: None) | %RSE=7.1 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.50001 x (std. dev. = 0.02156) (weighting: None) | %RSE=4.3 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.28942 x (std. dev. = 0.09531) (weighting: None) | %RSE=7.4 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.98582 x (std. dev. = 0.09760) (weighting: None) | %RSE=4.9 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.23988 x (std. dev. = 0.08781) (weighting: None) | %RSE=3.9 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23844 x (std. dev. = 0.01045) (weighting: None) | %RSE=4.4 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24455 x (std. dev. = 0.01542) (weighting: None) | %RSE=6.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21938 x (std. dev. = 0.01283) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17769 x (std. dev. = 0.01004) (weighting: None) | %RSE=5.6 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07371 x (std. dev. = 0.00395) (weighting: None) | %RSE=5.4 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.81069 x (std. dev. = 0.04465) (weighting: None) | %RSE=5.5 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.61575 x (std. dev. = 0.03779) (weighting: None) | %RSE=6.1 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16029 x (std. dev. = 0.01308) (weighting: None) | %RSE=8.2 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.43566 x (std. dev. = 0.03766) (weighting: None) | %RSE=8.6 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.35868 x (std. dev. = 0.02163) (weighting: None) | %RSE=6.0 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 0.86685 x (std. dev. = 0.02525) (weighting: None) | %RSE=2.9 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.67374 x (std. dev. = 0.02028) (weighting: None) | %RSE=3.0 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30098 x (std. dev. = 0.02588) (weighting: None) | %RSE=8.6 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.05747 x (std. dev. = 0.00909) (weighting: None) | %RSE=15.8 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.53288 x (std. dev. = 0.02986) (weighting: None) | %RSE=5.6 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.87447 x (std. dev. = 0.07090) (weighting: None) | %RSE=8.1 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53158 x (std. dev. = 0.01736) (weighting: None) | %RSE=3.3 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.40781 x (std. dev. = 0.04430) (weighting: None) | %RSE=10.9 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39365 x (std. dev. = 0.02523) (weighting: None) | %RSE=6.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 238433.9480 x | %RSD=15.9 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 126855.7219 x | %RSD=7.8 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 395316.5081 x | %RSD=6.4 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 284407.9695 x | %RSD=7.7 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 292026.6901 x | %RSD=5.1 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 949032.5442 x | %RSD=6.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 761641.2582 x | %RSD=6.3 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 9.1391 x | %RSD=3.3 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.4634 x | %RSD=11.5 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.5633 x | %RSD=6.5 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 5.0762 x | %RSD=7.1 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1429 x | %RSD=4.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9805 x | %RSD=6.0 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1207 x | %RSD=4.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3184 x | %RSD=5.0 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3427 x | %RSD=4.5 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1434 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9523 x | %RSD=6.6 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.8070 x | %RSD=5.2 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4423 x | %RSD=5.2 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1564 x | %RSD=6.3 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.6235 x | %RSD=9.6 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.8661 x | %RSD=7.0 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.4635 x | %RSD=12.9 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.0591 x | %RSD=7.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 1.9110 x | %RSD=6.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4053 x | %RSD=5.6 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4347 x | %RSD=6.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.1097 x | %RSD=6.8 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0114 x | %RSD=8.2 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8214 x | %RSD=7.4 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8487 x | %RSD=6.5 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 8.3148 x | %RSD=5.9 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1684 x | %RSD=4.0 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9740 x | %RSD=5.2 |

x= Concentration Analyte

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result}\left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

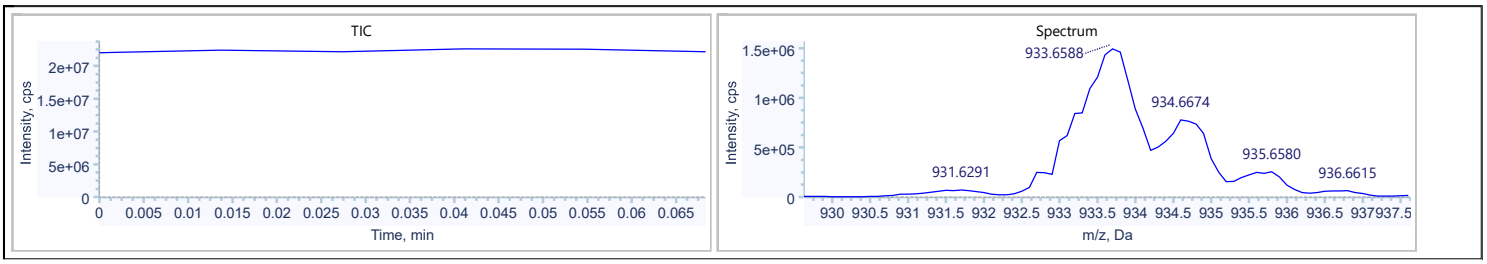


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

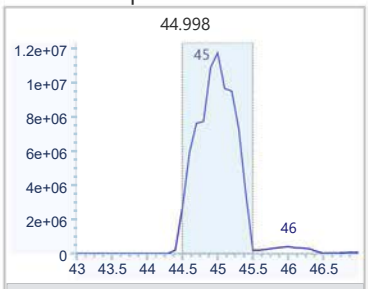


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

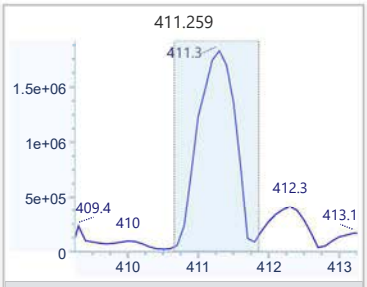


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

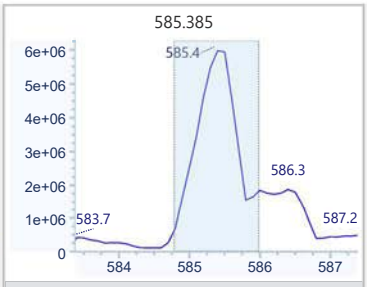


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

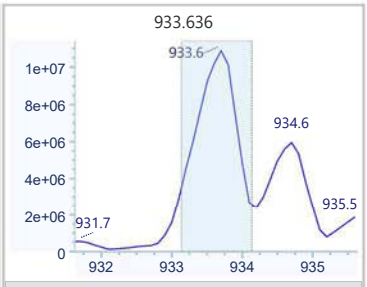


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

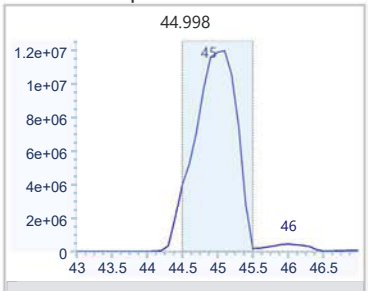


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

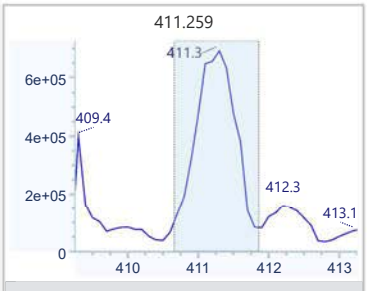


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

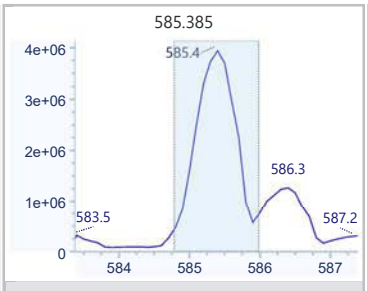


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

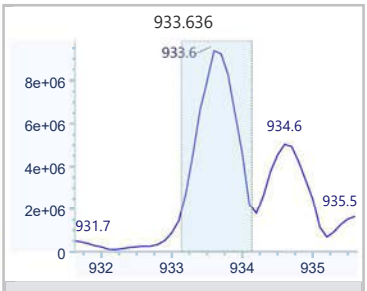


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

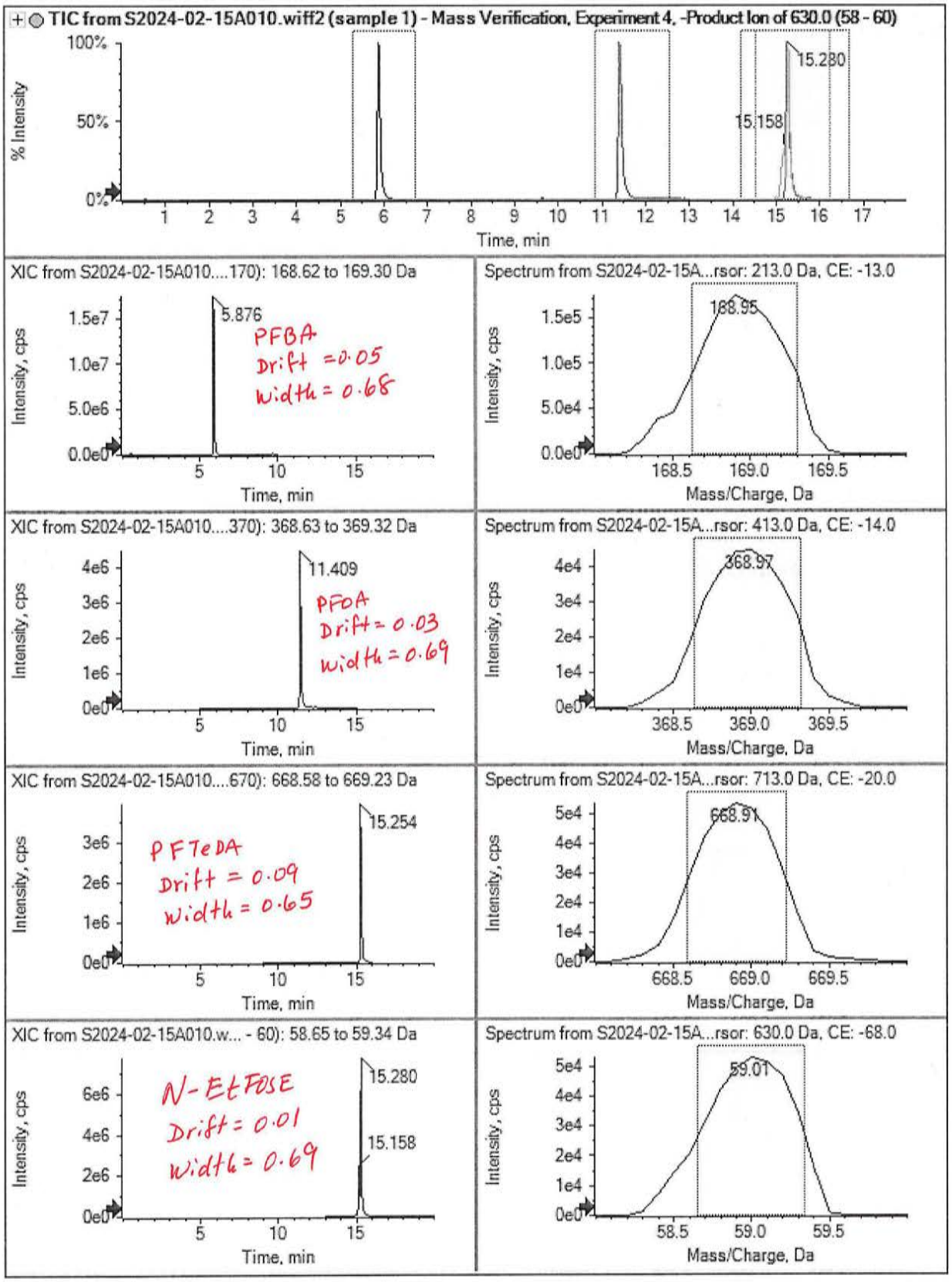

# EPA 1633A

Initial Calibration: SD00912 i

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A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 62723<br>( 163.0 / 69.0 ) 1685 | ( 2.83 , 0.74 ) ( N/A , 0.02 , -0.3) | 386.0<br>81.4 | 0.0269<br>107.2<br>107.2 | 0.1856 | N/A | 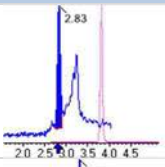 | 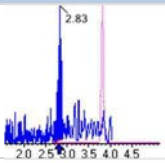 | |
| PFBA | ( 213.0 / 169.0 ) 136703 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 341.6 | N/A<br>0.0<br>0.0 | 0.3783 | N/A | 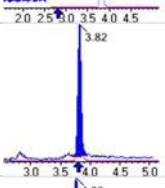 | | |
| PFPeA | ( 263.0 / 219.0 ) 67216<br>( 263.0 / 69.0 ) 860 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.2) | 289.8<br>23.6 | 0.0128<br>116.5<br>116.5 | 0.2014 | N/A | 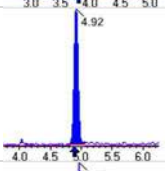 | 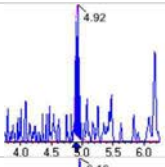 | |
| PFHxA | ( 313.0 / 269.0 ) 33325<br>( 313.0 / 119.0 ) 3267 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.2) | 235.2<br>83.4 | 0.0980<br>88.2<br>88.2 | 0.0933 | N/A | 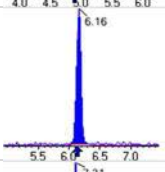 | 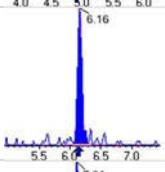 | |
| PFHpA | ( 363.0 / 319.0 ) 32624<br>( 363.0 / 169.0 ) 12319 | ( 7.31 , 1.00 ) ( 0.00 , N/A , -0.1) | 279.5<br>167.5 | 0.3776<br>121.2<br>121.2 | 0.0891 | N/A | 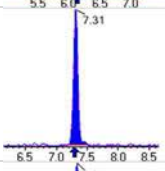 | 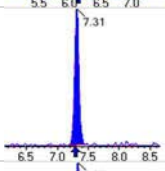 | |
| PFOA | ( 413.0 / 369.0 ) 58295<br>( 413.0 / 169.0 ) 17550 | ( 8.34 , 1.00 ) ( 0.00 , N/A , 0.4) | 109.6<br>129.3 | 0.3010<br>83.2<br>83.2 | 0.1174 | N/A | 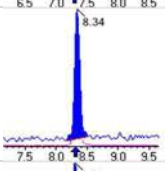 | 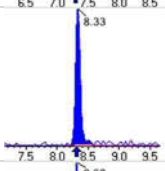 | |
| PFNA | ( 463.0 / 419.0 ) 28976<br>( 463.0 / 169.0 ) 8598 | ( 9.30 , 1.00 ) ( 0.00 , N/A , -0.4) | 213.3<br>159.9 | 0.2967<br>113.1<br>113.1 | 0.0857 | N/A | 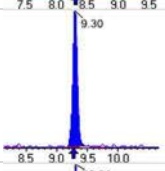 | 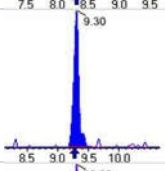 | |
| PFDA | ( 513.0 / 469.0 ) 40117<br>( 513.0 / 169.0 ) 4652 | ( 10.21 , 1.00 ) ( -0.01 , N/A , 0.2) | 316.7<br>146.9 | 0.1160<br>98.8<br>98.8 | 0.0979 | N/A | 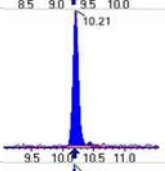 | 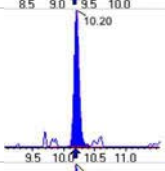 | |
| PFUnA | ( 563.0 / 519.0 ) 43625<br>( 563.0 / 169.0 ) 5480 | ( 11.09 , 1.00 ) ( 0.00 , N/A , -0.8) | 297.1<br>129.9 | 0.1256<br>84.8<br>84.8 | 0.0960 | N/A | 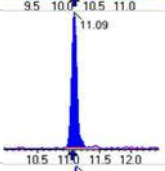 | 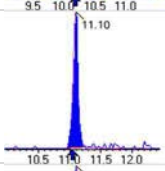 | |
| PFDoA | ( 613.0 / 569.0 ) 46521<br>( 613.0 / 169.0 ) 6369 | ( 11.90 , 1.00 ) ( 0.00 , N/A , 0.3) | 285.5<br>143.9 | 0.1369<br>86.6<br>86.6 | 0.0962 | N/A | 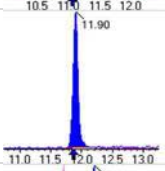 | 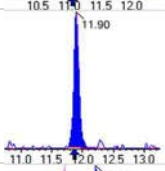 | |
| PFTrDA | ( 663.0 / 619.0 ) 41893<br>( 663.0 / 169.0 ) 13170 | ( 12.50 , 1.05 ) ( N/A , 0.02 , -0.5) | 306.5<br>186.1 | 0.3144<br>116.7<br>116.7 | 0.0901 | N/A | 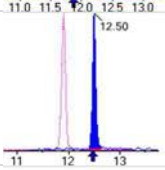 | 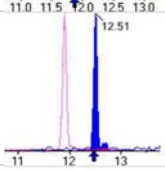 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 37262<br>( 713.0 / 169.0 ) 8926 | ( 12.99 , 1.00 )<br>( 0.00 , N/A , -0.1) | 212.5<br>105.1 | 0.2395<br>92.1<br>92.1 | 0.0963 | N/A | 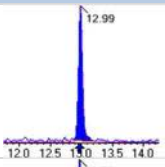 | 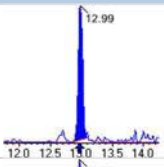 | |
| PFHxDA | ( 813.0 / 769.0 ) 33878<br>( 813.0 / 169.0 ) 9263 | ( 13.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 212.8<br>100.6 | 0.2734<br>126.0<br>126.0 | 0.0983 | N/A | 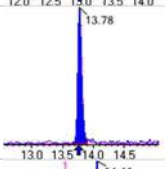 | 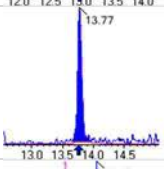 | |
| PFODA | ( 913.0 / 869.0 ) 23238<br>( 913.0 / 169.0 ) 8574 | ( 14.41 , 1.05 )<br>( N/A , 0.02 , 0.3) | 111.1<br>50.7 | 0.3690<br>96.6<br>96.6 | 0.1004 | N/A | 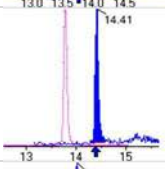 | 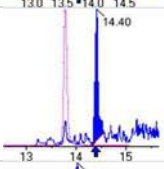 | |
| PFBS | ( 299.0 / 80.0 ) 50426<br>( 299.0 / 99.0 ) 41032 | ( 6.48 , 1.00 )<br>( 0.00 , N/A , -0.1) | 556.9<br>235.3 | 0.8137<br>114.5<br>114.5 | 0.0815 | N/A | 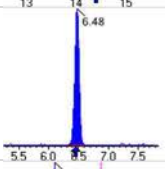 | 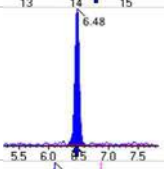 | |
| PFPeS | ( 349.0 / 80.0 ) 123999<br>( 349.0 / 99.0 ) 42294 | ( 7.73 , 0.88 )<br>( N/A , 0.03 , 0.0) | 595.5<br>374.4 | 0.3411<br>100.3<br>100.3 | 0.0913 | N/A | 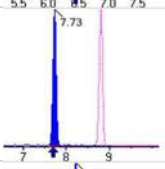 | 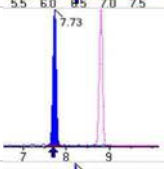 | |
| PFHxS | ( 399.0 / 80.0 ) 132475<br>( 399.0 / 99.0 ) 45070 | ( 8.81 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1203.5<br>2202.5 | 0.3402<br>108.8<br>108.8 | 0.0877 | N/A | 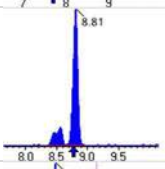 | 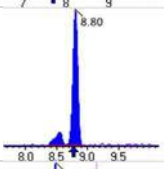 | |
| PFHpS | ( 449.0 / 80.0 ) 108095<br>( 449.0 / 99.0 ) 29112 | ( 9.78 , 0.92 )<br>( N/A , 0.04 , 0.0) | 536.0<br>464.4 | 0.2693<br>100.8<br>100.8 | 0.0870 | N/A | 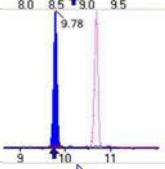 | 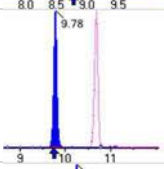 | |
| PFOS | ( 499.0 / 80.0 ) 112318<br>( 499.0 / 99.0 ) 28129 | ( 10.68 , 1.00 )<br>( 0.00 , N/A , 0.4) | 603.9<br>14525.9 | 0.2504<br>105.9<br>105.9 | 0.0899 | N/A | 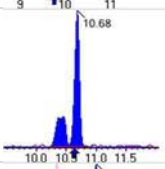 | 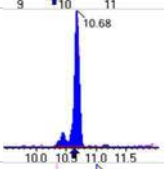 | |
| PFNS | ( 549.0 / 80.0 ) 111684<br>( 549.0 / 99.0 ) 29098 | ( 11.52 , 1.08 )<br>( N/A , 0.04 , -0.2) | 646.5<br>351.3 | 0.2605<br>98.1<br>98.1 | 0.0916 | N/A | 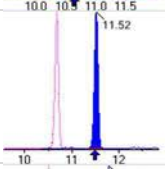 | 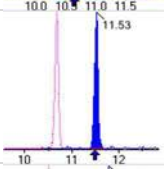 | |
| PFDS | ( 599.0 / 80.0 ) 134832<br>( 599.0 / 99.0 ) 37343 | ( 12.19 , 1.14 )<br>( N/A , 0.03 , -0.1) | 653.9<br>334.4 | 0.2770<br>110.4<br>110.4 | 0.0928 | N/A | 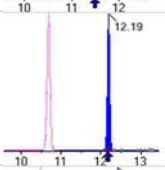 | 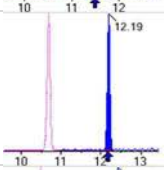 | |
| PFDoS | ( 699.0 / 80.0 ) 104822<br>( 699.0 / 99.0 ) 23043 | ( 13.08 , 1.22 )<br>( N/A , 0.02 , 0.1) | 847.9<br>268.9 | 0.2198<br>95.3<br>95.3 | 0.0844 | N/A | 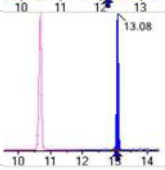 | 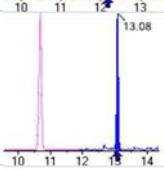 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 121312<br>( 327.0 / 81.0 ) 111526 | ( 5.61 , 1.00 ) ( 0.00 , N/A , -0.1) | 1649.4<br>615.1 | 0.9193<br>104.9<br>104.9 | 0.3547 | N/A | 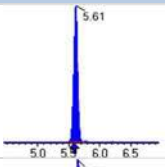 | 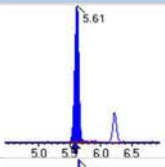 | |
| 6:2FTS | ( 427.0 / 407.0 ) 107117<br>( 427.0 / 81.0 ) 132681 | ( 7.74 , 1.00 ) ( 0.00 , N/A , 0.2) | 1262.1<br>1015.6 | 1.2387<br>97.5<br>97.5 | 0.3533 | N/A | 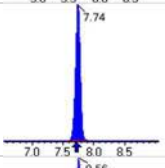 | 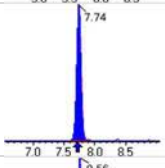 | |
| 8:2FTS | ( 527.0 / 507.0 ) 141528<br>( 527.0 / 81.0 ) 133044 | ( 9.56 , 1.00 ) ( -0.01 , N/A , -0.1) | 879.7<br>748.6 | 0.9401<br>99.1<br>99.1 | 0.3741 | N/A | 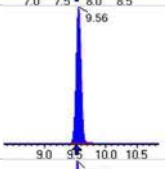 | 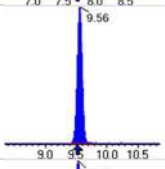 | |
| 10:2FTS | ( 627.0 / 607.0 ) 115526<br>( 627.0 / 81.0 ) 155798 | ( 11.23 , 1.00 ) ( 0.01 , N/A , 0.2) | 918.4<br>436.3 | 1.3486<br>99.8<br>99.8 | 0.3753 | N/A | 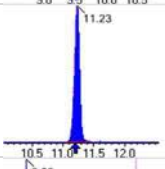 | 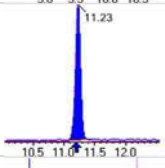 | |
| PFBSA | ( 297.9 / 78.0 ) 96966<br>( 297.9 / 278.0 ) 206 | ( 8.08 , 0.57 ) ( N/A , 0.02 , 1.3) | 396.3<br>4.2 | 0.0021<br>151.4<br>151.4 | 0.0968 | N/A | 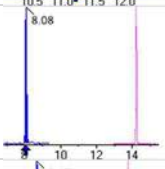 | 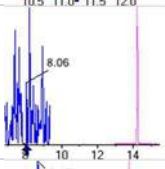 | |
| PFHxSA | ( 397.9 / 78.0 ) 122222<br>( 397.9 / 378.0 ) 429 | ( 10.95 , 0.75 ) ( N/A , 0.02 , -0.2) | 797.1<br>20.4 | 0.0035<br>92.2<br>92.2 | 0.0974 | N/A | 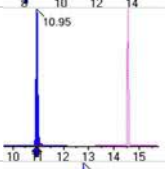 | 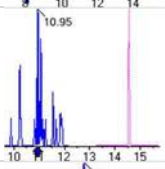 | |
| PFOSA | ( 498.0 / 78.0 ) 103305<br>( 498.0 / 478.0 ) 1207 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.2) | 872.8<br>35.7 | 0.0117<br>81.0<br>81.0 | 0.0949 | N/A | 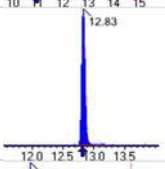 | 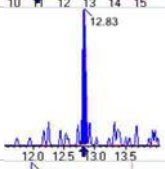 | |
| TFSI | ( 279.7 / 147.0 ) 204349<br>( 279.7 / 211.0 ) 17973 | ( 8.40 , 0.65 ) ( N/A , 0.04 , 0.0) | 53.4<br>36.1 | 0.0879<br>106.6<br>106.6 | 0.0883 | N/A | 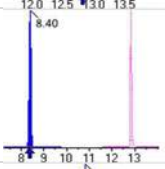 | 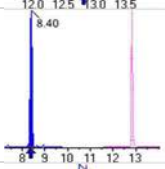 | |
| NMeFOSA | ( 512.0 / 219.0 ) 78690<br>( 512.0 / 169.0 ) 60518 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 3.4) | 743.3<br>323.4 | 0.7691<br>104.6<br>104.6 | 0.3586 | N/A | 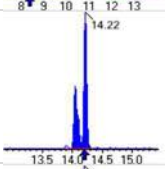 | 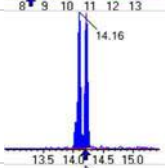 | |
| NEtFOSA | ( 526.0 / 219.0 ) 100051<br>( 526.0 / 169.0 ) 125891 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 1.8) | 820.4<br>865.9 | 1.2583<br>99.3<br>99.3 | 0.3726 | N/A | 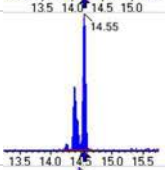 | 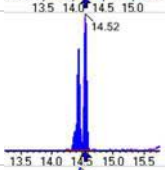 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 26083<br>( 570.0 / 483.0 ) 11125 | ( 10.47 , 1.00 ) ( 0.01 , N/A , 0.2) | 15618.7<br>155.0 | 0.4265<br>98.5<br>98.5 | 0.0999 | N/A | 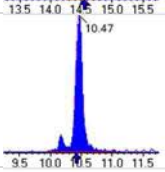 | 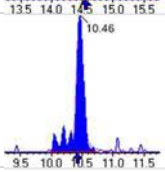 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 23924<br>( 584.0 / 526.0 ) 15004 | ( 11.00 , 1.00 )<br>( 0.02 , N/A , 0.9) | 2524.5<br>162.6 | 0.6272<br>101.3<br>101.3 | 0.0901 | N/A | 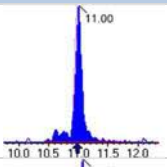 | 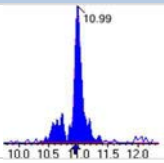 | |
| NMeFOSE | ( 616.0 / 59.0 ) 43798 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 255.9 | N/A<br>0.0<br>0.0 | 0.3846 | N/A | 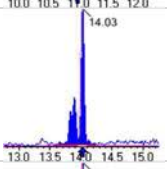 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 38625 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 397.7 | N/A<br>0.0<br>0.0 | 0.3704 | N/A | 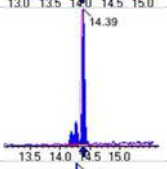 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 9456<br>( 285.0 / 185.0 ) 24600 | ( 6.63 , 1.00 )<br>( 0.00 , N/A , 0.3) | 361.2<br>257.0 | 2.6015<br>83.5<br>83.5 | 0.1083 | N/A | 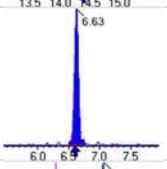 | 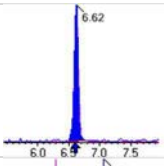 | |
| ADONA | ( 377.0 / 85.0 ) 98316<br>( 377.0 / 251.0 ) 11269 | ( 7.70 , 1.16 )<br>( N/A , 0.03 , -0.1) | 701.4<br>143.0 | 0.1146<br>107.5<br>107.5 | 0.0884 | N/A | 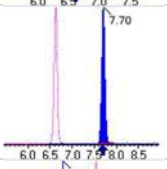 | 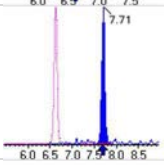 | |
| PFMPA | ( 229.0 / 85.0 ) 18639 | ( 4.21 , 0.86 )<br>( N/A , 0.02 , 0.0) | 629.9 | N/A<br>0.0<br>0.0 | 0.1764 | N/A | 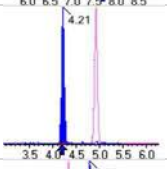 | | |
| PFMBA | ( 279.0 / 85.0 ) 50706 | ( 5.30 , 1.08 )<br>( N/A , 0.02 , 0.0) | 757.5 | N/A<br>0.0<br>0.0 | 0.1813 | N/A | 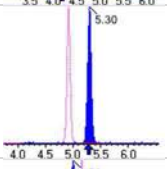 | | |
| NFDHA | ( 295.0 / 201.0 ) 24333<br>( 295.0 / 85.0 ) 24357 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , -0.1) | 935.5<br>379.9 | 1.0010<br>92.5<br>92.5 | 0.1960 | N/A | 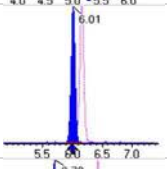 | 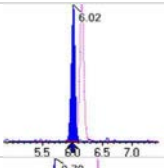 | |
| PFECHS | ( 461.0 / 98.9 ) 61546<br>( 461.0 / 381.2 ) 24546 | ( 9.70 , 0.91 )<br>( N/A , 0.03 , 0.0) | 1082.3<br>2413.0 | 0.3988<br>102.1<br>102.1 | 0.0873 | N/A | 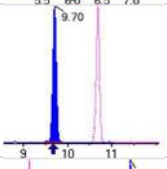 | 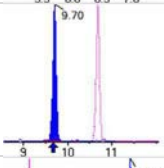 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 119480<br>( 533.0 / 353.0 ) 38220 | ( 11.34 , 1.71 )<br>( N/A , 0.04 , 0.2) | 1071.2<br>364.0 | 0.3199<br>99.5<br>99.5 | 0.0871 | N/A | 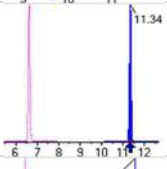 | 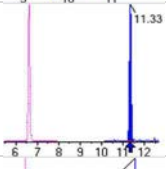 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 90010<br>( 633.0 / 453.0 ) 30548 | ( 12.59 , 1.90 )<br>( N/A , 0.02 , 0.2) | 1140.6<br>427.2 | 0.3394<br>103.9<br>103.9 | 0.0837 | N/A | 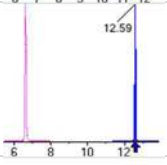 | 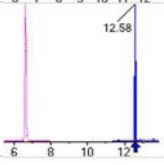 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 39824<br>( 315.0 / 83.0 ) 30264 | ( 7.08 , 1.15 )<br>( N/A , 0.02 , -0.7) | 738.9<br>150.8 | 0.7599<br>132.6<br>132.6 | 0.1483 | N/A | 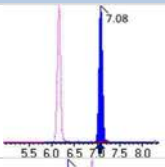 | 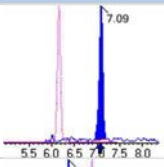 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5064<br>( 241.0 / 117.0 ) 10499 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , -0.5) | 188.3<br>51.6 | 2.0731<br>93.4<br>93.4 | 0.3124 | N/A | 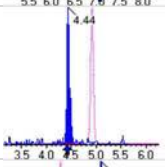 | 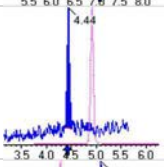 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30684<br>( 341.0 / 217.0 ) 46927 | ( 7.02 , 1.14 )<br>( N/A , 0.02 , 0.4) | 289.8<br>170.2 | 1.5294<br>102.2<br>102.2 | 0.3545 | N/A | 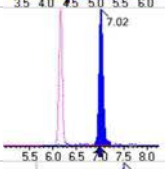 | 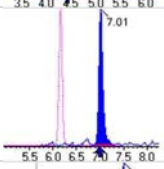 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 42697<br>( 441.0 / 337.0 ) 41711 | ( 9.44 , 1.53 )<br>( N/A , 0.03 , 0.4) | 3495.7<br>1294.5 | 0.9769<br>109.8<br>109.8 | 0.3354 | N/A | 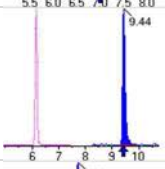 | 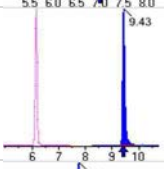 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 27612<br>( 357.2 / 243.0 ) 3484 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , -0.1) | 249.0<br>31.9 | 0.1262<br>119.5<br>119.5 | 0.0822 | N/A | 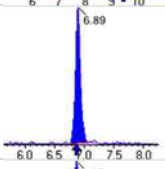 | 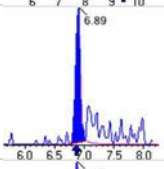 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 21799<br>( 457.2 / 343.0 ) 787 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , 0.0) | 260.4<br>35.3 | 0.0361<br>92.2<br>92.2 | 0.0927 | N/A | 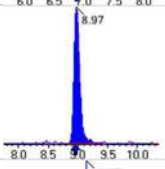 | 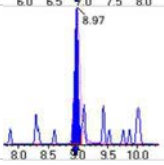 | |
| TDCA | ( 499.0 / 80.0 ) 81929 | ( 10.67 , 1.00 )<br>( N/A , 0.04 , 0.0) | 1064.2 | N/A<br>0.0<br>0.0 | 0.0964 | N/A | 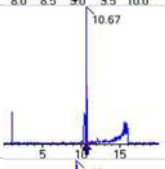 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 340327 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1372.3 | N/A | 1.1297<br>[ 1.0000 ] | 113.0%<br>{ 112.2% } | 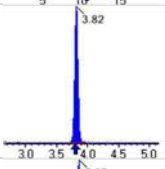 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 158640 | ( 6.16 , N/A )<br>( N/A , 0.03 , N/A ) | 7626318.1 | N/A | 1.0317<br>[ 1.0000 ] | 103.2%<br>{ 96.1% } | 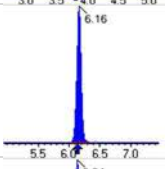 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 450854 | ( 8.34 , N/A )<br>( N/A , 0.03 , N/A ) | 3550.0 | N/A | 1.0106<br>[ 1.0000 ] | 101.1%<br>{ 99.2% } | 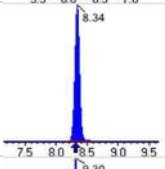 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 333991 | ( 9.30 , N/A )<br>( N/A , 0.03 , N/A ) | 945.7 | N/A | 0.9991<br>[ 1.0000 ] | 99.9%<br>{ 102.5% } | 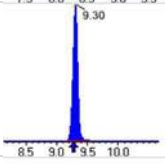 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 314067 | ( 10.22 , N/A ) ( N/A , 0.03 , N/A ) | 7620.3 | N/A | 0.9471 [ 1.0000 ] | 94.7% { 92.4% } | 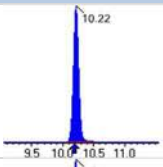 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1157344 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 4794.8 | N/A | 1.0357 [ 1.0000 ] | 103.6% { 101.6% } | 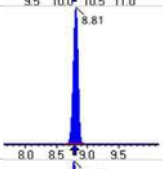 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 991669 | ( 10.69 , N/A ) ( N/A , 0.04 , N/A ) | 3275.0 | N/A | 1.0158 [ 1.0000 ] | 101.6% { 99.6% } | 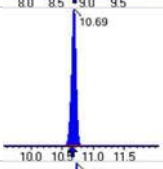 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3055452 | ( 3.82 , N/A ) ( N/A , 0.02 , N/A ) | 49731.0 | N/A | 8.1414 [ 8.0000 ] | 101.8% { 115.0% } | 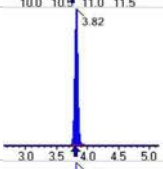 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1311252 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 6150.7 | N/A | 4.6074 [ 4.0000 ] | 115.2% { 113.2% } | 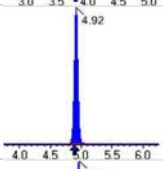 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 737112 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 18992.8 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 107.7% } | 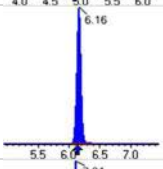 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 743928 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 5060.0 | N/A | 2.0912 [ 2.0000 ] | 104.6% { 105.6% } | 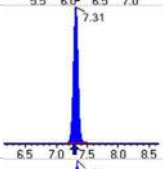 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 976702 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 2744.6 | N/A | 2.0546 [ 2.0000 ] | 102.7% { 102.4% } | 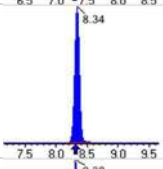 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 337221 | ( 9.30 , N/A ) ( N/A , 0.03 , N/A ) | 3446.6 | N/A | 1.0456 [ 1.0000 ] | 104.6% { 108.5% } | 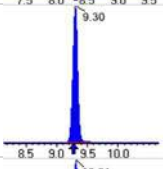 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 411273 | ( 10.21 , N/A ) ( N/A , 0.04 , N/A ) | 1512.9 | N/A | 1.1348 [ 1.0000 ] | 113.5% { 106.9% } | 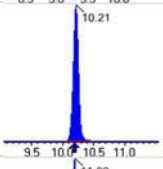 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 486595 | ( 11.09 , N/A ) ( N/A , 0.04 , N/A ) | 778.9 | N/A | 1.1043 [ 1.0000 ] | 110.4% { 97.8% } | 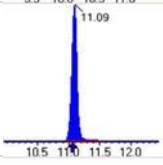 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 472249 | ( 11.90 , N/A ) ( N/A , 0.04 , N/A ) | 1056.3 | N/A | 1.0672 [ 1.0000 ] | 106.7% { 94.7% } | 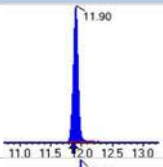 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 407605 | ( 12.99 , N/A ) ( N/A , 0.03 , N/A ) | 1351.1 | N/A | 1.0571 [ 1.0000 ] | 105.7% { 96.1% } | 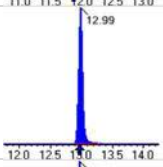 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 713892 | ( 13.78 , N/A ) ( N/A , 0.02 , N/A ) | 2875.4 | N/A | 2.1797 [ 2.0000 ] | 109.0% { 100.8% } | 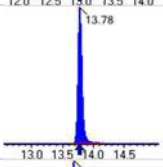 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2379010 | ( 6.48 , N/A ) ( N/A , 0.02 , N/A ) | 1504.2 | N/A | 2.1097 [ 2.0000 ] | 105.5% { 103.0% } | 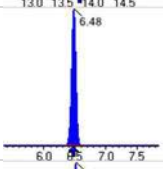 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1705833 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 5434.1 | N/A | 2.0142 [ 2.0000 ] | 100.7% { 103.7% } | 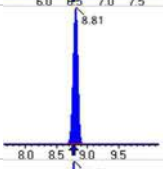 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2162723 | ( 10.68 , N/A ) ( N/A , 0.04 , N/A ) | 1971.1 | N/A | 2.0486 [ 2.0000 ] | 102.4% { 103.0% } | 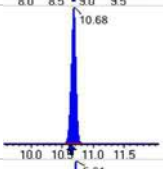 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 508045 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 85.0 | N/A | 5.0410 [ 4.0000 ] | 126.0% { 141.2% } | 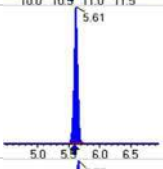 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1365290 | ( 7.75 , N/A ) ( N/A , 0.02 , N/A ) | 5720.7 | N/A | 4.3623 [ 4.0000 ] | 109.1% { 127.1% } | 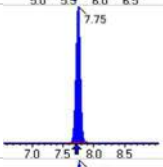 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527227 | ( 9.57 , N/A ) ( N/A , 0.03 , N/A ) | 1210.9 | N/A | 4.8979 [ 4.0000 ] | 122.4% { 131.1% } | 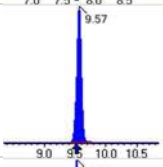 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2993081 | ( 11.22 , N/A ) ( N/A , 0.04 , N/A ) | 1518.0 | N/A | 8.3623 [ 8.0000 ] | 104.5% { 119.5% } | 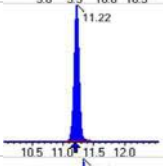 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2230755 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1617.1 | N/A | 1.9499 [ 2.0000 ] | 97.5% { 95.8% } | 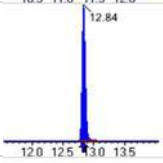 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 435676 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2829.0 | N/A | 2.0623 [ 2.0000 ] | 103.1% { 102.9% } | 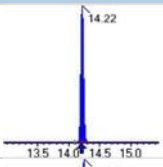 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 489431 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2668.7 | N/A | 2.0170 [ 2.0000 ] | 100.8% { 98.5% } | 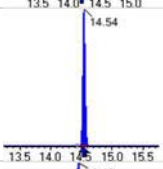 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1108890 | ( 10.46 , N/A ) ( N/A , 0.04 , N/A ) | 2729.9 | N/A | 4.1016 [ 4.0000 ] | 102.5% { 102.6% } | 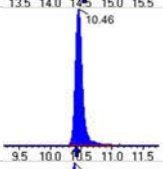 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1101168 | ( 10.99 , N/A ) ( N/A , 0.04 , N/A ) | 1686.3 | N/A | 4.2908 [ 4.0000 ] | 107.3% { 105.1% } | 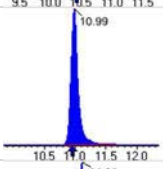 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2011783 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2565.0 | N/A | 20.3807 [ 20.0000 ] | 101.9% { 106.9% } | 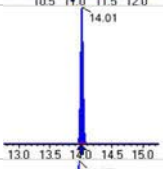 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2360344 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5759.2 | N/A | 19.7391 [ 20.0000 ] | 98.7% { 100.0% } | 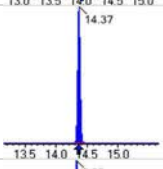 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1230457 | ( 6.63 , N/A ) ( N/A , 0.02 , N/A ) | 2090.3 | N/A | 8.4040 [ 8.0000 ] | 105.0% { 108.5% } | 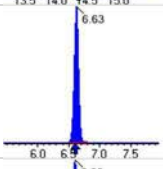 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 624710 | ( 6.90 , N/A ) ( N/A , 0.02 , N/A ) | 1187.0 | N/A | 2.2427 [ 2.0000 ] | 112.1% { 106.6% } | 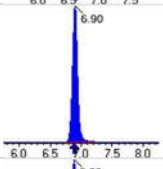 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 557510 | ( 8.99 , N/A ) ( N/A , 0.03 , N/A ) | 815.6 | N/A | 2.1438 [ 2.0000 ] | 107.2% { 98.8% } | 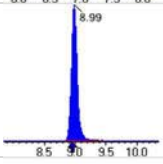 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 310943<br>( 163.0 / 69.0 ) 7678 | ( 2.83 , 0.74 )<br>( N/A , 0.02 , 0.0) | 1967.3<br>326.9 | 0.0247<br>98.5<br>98.5 | 0.9837 | N/A | 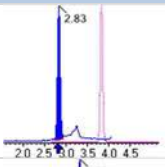 | 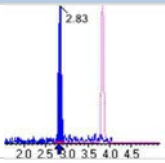 | |
| PFBA | ( 213.0 / 169.0 ) 661236 | ( 3.83 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1272.3 | N/A<br>0.0<br>0.0 | 1.9563 | N/A | 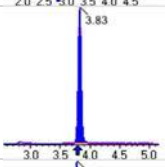 | | |
| PFPeA | ( 263.0 / 219.0 ) 289941<br>( 263.0 / 69.0 ) 3532 | ( 4.93 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1405.2<br>63.0 | 0.0122<br>110.9<br>110.9 | 0.9598 | N/A | 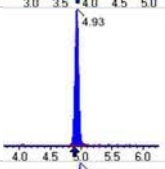 | 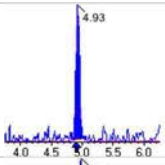 | |
| PFHxA | ( 313.0 / 269.0 ) 156981<br>( 313.0 / 119.0 ) 20723 | ( 6.18 , 1.00 )<br>( 0.00 , N/A , 0.2) | 878.4<br>407.6 | 0.1320<br>118.8<br>118.8 | 0.4806 | N/A | 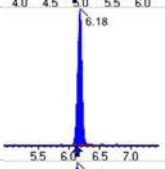 | 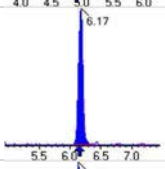 | |
| PFHpA | ( 363.0 / 319.0 ) 172554<br>( 363.0 / 169.0 ) 53621 | ( 7.33 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1075.9<br>812.3 | 0.3107<br>99.7<br>99.7 | 0.4836 | N/A | 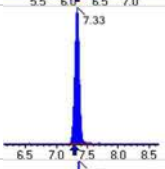 | 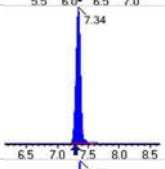 | |
| PFOA | ( 413.0 / 369.0 ) 238705<br>( 413.0 / 169.0 ) 84264 | ( 8.36 , 1.00 )<br>( 0.00 , N/A , -0.2) | 351.7<br>608.9 | 0.3530<br>97.6<br>97.6 | 0.4876 | N/A | 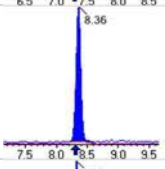 | 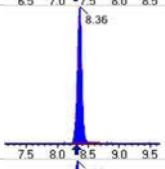 | |
| PFNA | ( 463.0 / 419.0 ) 158575<br>( 463.0 / 169.0 ) 40887 | ( 9.32 , 1.00 )<br>( 0.00 , N/A , 0.1) | 636.8<br>465.1 | 0.2578<br>98.2<br>98.2 | 0.4784 | N/A | 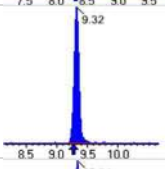 | 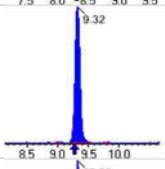 | |
| PFDA | ( 513.0 / 469.0 ) 200638<br>( 513.0 / 169.0 ) 24392 | ( 10.24 , 1.00 )<br>( 0.00 , N/A , 0.6) | 1137.9<br>1734.9 | 0.1216<br>103.6<br>103.6 | 0.5048 | N/A | 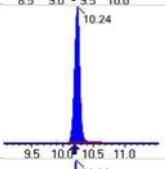 | 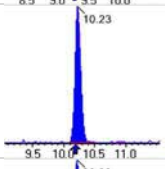 | |
| PFUnA | ( 563.0 / 519.0 ) 228676<br>( 563.0 / 169.0 ) 30079 | ( 11.11 , 1.00 )<br>( 0.00 , N/A , 0.0) | 715.4<br>476.1 | 0.1315<br>88.8<br>88.8 | 0.4938 | N/A | 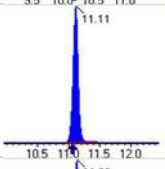 | 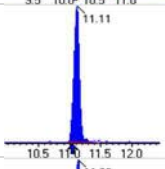 | |
| PFDoA | ( 613.0 / 569.0 ) 234860<br>( 613.0 / 169.0 ) 34508 | ( 11.93 , 1.00 )<br>( 0.00 , N/A , -0.2) | 810.5<br>413.2 | 0.1469<br>92.9<br>92.9 | 0.4915 | N/A | 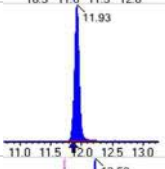 | 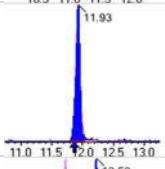 | |
| PFTrDA | ( 663.0 / 619.0 ) 227333<br>( 663.0 / 169.0 ) 60335 | ( 12.52 , 1.05 )<br>( N/A , 0.04 , -0.1) | 1013.5<br>578.2 | 0.2654<br>98.5<br>98.5 | 0.4948 | N/A | 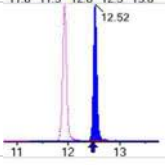 | 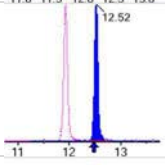 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 179647<br>( 713.0 / 169.0 ) 46122 | ( 13.01 , 1.00 )<br>( 0.00 , N/A , -0.1) | 704.5<br>458.2 | 0.2567<br>98.8<br>98.8 | 0.4555 | N/A | 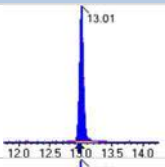 | 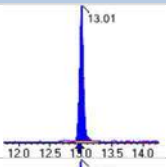 | |
| PFHxDA | ( 813.0 / 769.0 ) 165149<br>( 813.0 / 169.0 ) 38097 | ( 13.79 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1062.4<br>327.6 | 0.2307<br>106.3<br>106.3 | 0.4418 | N/A | 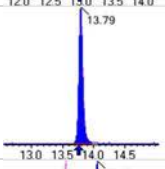 | 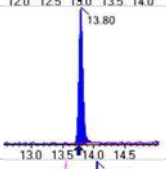 | |
| PFODA | ( 913.0 / 869.0 ) 111560<br>( 913.0 / 169.0 ) 38584 | ( 14.43 , 1.05 )<br>( N/A , 0.04 , 0.4) | 496.5<br>208.1 | 0.3459<br>90.5<br>90.5 | 0.4442 | N/A | 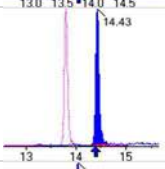 | 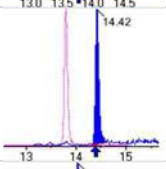 | |
| PFBS | ( 299.0 / 80.0 ) 253629<br>( 299.0 / 99.0 ) 181646 | ( 6.49 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1914.5<br>671.6 | 0.7162<br>100.7<br>100.7 | 0.4251 | N/A | 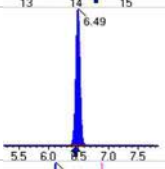 | 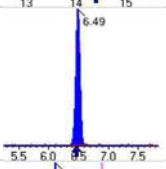 | |
| PFPeS | ( 349.0 / 80.0 ) 633829<br>( 349.0 / 99.0 ) 225776 | ( 7.75 , 0.88 )<br>( N/A , 0.05 , 0.1) | 1816.0<br>1482.7 | 0.3562<br>104.7<br>104.7 | 0.4887 | N/A | 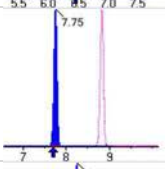 | 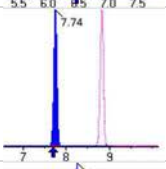 | |
| PFHxS | ( 399.0 / 80.0 ) 642355<br>( 399.0 / 99.0 ) 215749 | ( 8.83 , 1.00 )<br>( 0.00 , N/A , -0.3) | 2085.8<br>13437.8 | 0.3359<br>107.4<br>107.4 | 0.4454 | N/A | 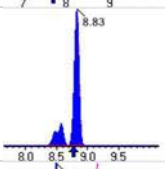 | 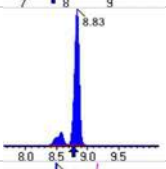 | |
| PFHpS | ( 449.0 / 80.0 ) 543830<br>( 449.0 / 99.0 ) 149492 | ( 9.80 , 0.92 )<br>( N/A , 0.06 , 0.1) | 1273.7<br>1315.7 | 0.2749<br>102.9<br>102.9 | 0.4428 | N/A | 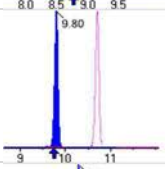 | 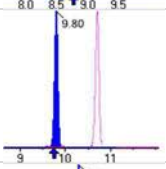 | |
| PFOS | ( 499.0 / 80.0 ) 572706<br>( 499.0 / 99.0 ) 136320 | ( 10.70 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1216.4<br>3334.6 | 0.2380<br>100.6<br>100.6 | 0.4635 | N/A | 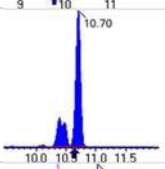 | 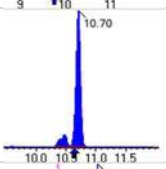 | |
| PFNS | ( 549.0 / 80.0 ) 565862<br>( 549.0 / 99.0 ) 155751 | ( 11.55 , 1.08 )<br>( N/A , 0.06 , 0.1) | 1110.5<br>1287.3 | 0.2752<br>103.6<br>103.6 | 0.4696 | N/A | 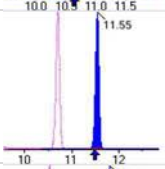 | 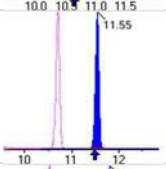 | |
| PFDS | ( 599.0 / 80.0 ) 693240<br>( 599.0 / 99.0 ) 185589 | ( 12.21 , 1.14 )<br>( N/A , 0.05 , 0.0) | 2270.0<br>1626.4 | 0.2677<br>106.8<br>106.8 | 0.4827 | N/A | 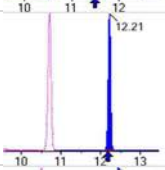 | 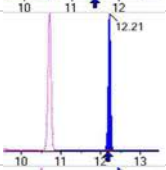 | |
| PFDoS | ( 699.0 / 80.0 ) 582541<br>( 699.0 / 99.0 ) 126432 | ( 13.10 , 1.22 )<br>( N/A , 0.04 , 0.2) | 1802.3<br>1069.7 | 0.2170<br>94.1<br>94.1 | 0.4747 | N/A | 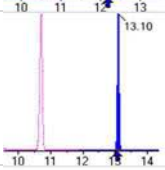 | 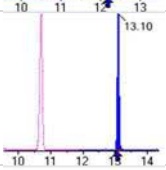 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 568863<br>( 327.0 / 81.0 ) 517089 | ( 5.63 , 1.00 ) ( 0.00 , N/A , 0.0) | 4690.0<br>2125.1 | 0.9090<br>103.7<br>103.7 | 1.9116 | N/A | 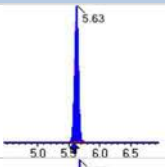 | 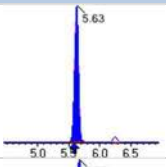 | |
| 6:2FTS | ( 427.0 / 407.0 ) 557782<br>( 427.0 / 81.0 ) 680418 | ( 7.77 , 1.00 ) ( 0.00 , N/A , 0.1) | 3238.1<br>2975.8 | 1.2199<br>96.0<br>96.0 | 1.8228 | N/A | 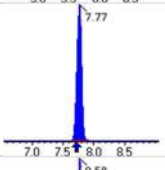 | 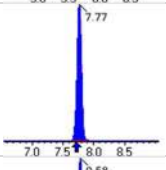 | |
| 8:2FTS | ( 527.0 / 507.0 ) 693443<br>( 527.0 / 81.0 ) 633282 | ( 9.58 , 1.00 ) ( -0.01 , N/A , -0.3) | 1358.7<br>1361.1 | 0.9132<br>96.3<br>96.3 | 1.9368 | N/A | 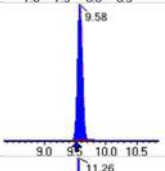 | 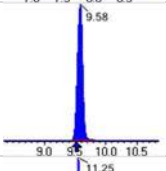 | |
| 10:2FTS | ( 627.0 / 607.0 ) 629399<br>( 627.0 / 81.0 ) 834823 | ( 11.26 , 1.00 ) ( 0.01 , N/A , 0.1) | 1152.2<br>861.4 | 1.3264<br>98.1<br>98.1 | 2.0829 | N/A | 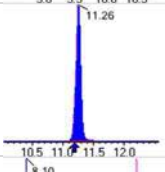 | 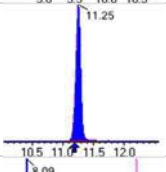 | |
| PFBSA | ( 297.9 / 78.0 ) 487321<br>( 297.9 / 278.0 ) 780 | ( 8.10 , 0.57 ) ( N/A , 0.04 , 0.4) | 1208.4<br>6.8 | 0.0016<br>114.0<br>114.0 | 0.5177 | N/A | 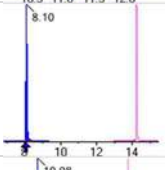 | 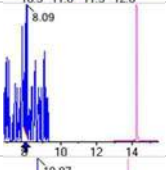 | |
| PFHxSA | ( 397.9 / 78.0 ) 606921<br>( 397.9 / 378.0 ) 2805 | ( 10.98 , 0.75 ) ( N/A , 0.05 , 0.4) | 1097.4<br>119.5 | 0.0046<br>121.4<br>121.4 | 0.4943 | N/A | 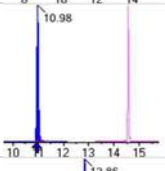 | 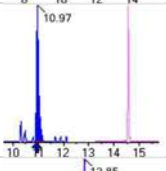 | |
| PFOSA | ( 498.0 / 78.0 ) 590052<br>( 498.0 / 478.0 ) 7112 | ( 12.86 , 1.00 ) ( -0.01 , N/A , 0.3) | 1639.6<br>208.1 | 0.0121<br>83.5<br>83.5 | 0.5259 | N/A | 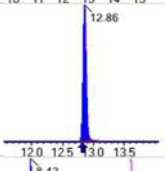 | 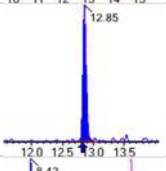 | |
| TFSI | ( 279.7 / 147.0 ) 1243476<br>( 279.7 / 211.0 ) 106931 | ( 8.42 , 0.65 ) ( N/A , 0.05 , -0.4) | 54.8<br>47.5 | 0.0860<br>104.3<br>104.3 | 0.5214 | N/A | 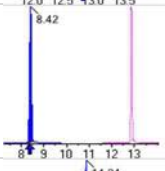 | 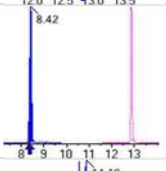 | |
| NMeFOSA | ( 512.0 / 219.0 ) 426127<br>( 512.0 / 169.0 ) 319988 | ( 14.24 , 1.00 ) ( 0.00 , N/A , 3.2) | 2163.1<br>859.2 | 0.7509<br>102.2<br>102.2 | 2.0666 | N/A | 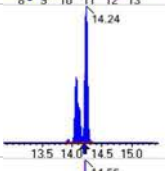 | 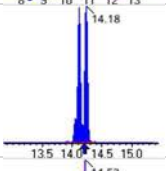 | |
| NEtFOSA | ( 526.0 / 219.0 ) 524100<br>( 526.0 / 169.0 ) 656319 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.2) | 2777.6<br>2450.8 | 1.2523<br>98.9<br>98.9 | 1.9952 | N/A | 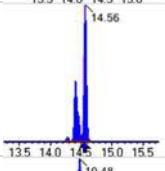 | 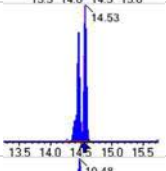 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 133021<br>( 570.0 / 483.0 ) 55215 | ( 10.48 , 1.00 ) ( 0.00 , N/A , 0.0) | 23737.5<br>349.5 | 0.4151<br>95.9<br>95.9 | 0.5229 | N/A | 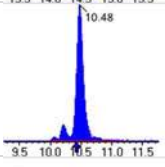 | 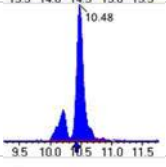 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 128438<br>( 584.0 / 526.0 ) 78717 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.1) | 2142.9<br>363.8 | 0.6129<br>99.0<br>99.0 | 0.5037 | N/A | 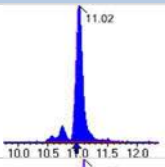 | 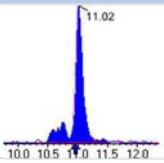 | |
| NMeFOSE | ( 616.0 / 59.0 ) 220612 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 854.8 | N/A<br>0.0<br>0.0 | 1.9957 | N/A | 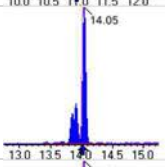 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 215942 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 1420.0 | N/A<br>0.0<br>0.0 | 1.9529 | N/A | 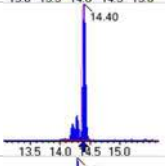 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 40032<br>( 285.0 / 185.0 ) 124909 | ( 6.64 , 1.00 ) ( 0.00 , N/A , 0.1) | 843.5<br>688.0 | 3.1203<br>100.1<br>100.1 | 0.4944 | N/A | 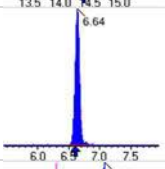 | 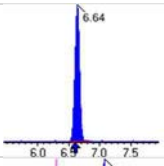 | |
| ADONA | ( 377.0 / 85.0 ) 510988<br>( 377.0 / 251.0 ) 52833 | ( 7.73 , 1.16 ) ( N/A , 0.05 , 0.0) | 1500.2<br>449.5 | 0.1034<br>97.0<br>97.0 | 0.4955 | N/A | 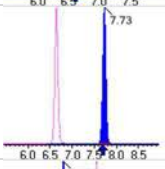 | 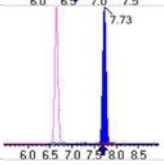 | |
| PFMPA | ( 229.0 / 85.0 ) 93591 | ( 4.22 , 0.86 ) ( N/A , 0.03 , 0.0) | 1985.4 | N/A<br>0.0<br>0.0 | 0.9785 | N/A | 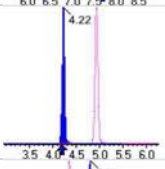 | | |
| PFMBA | ( 279.0 / 85.0 ) 234107 | ( 5.31 , 1.08 ) ( N/A , 0.04 , 0.0) | 2513.1 | N/A<br>0.0<br>0.0 | 0.9248 | N/A | 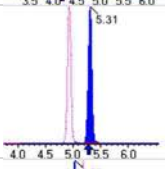 | | |
| NFDHA | ( 295.0 / 201.0 ) 110288<br>( 295.0 / 85.0 ) 112077 | ( 6.03 , 0.98 ) ( N/A , 0.04 , 0.0) | 2224.6<br>1148.6 | 1.0162<br>94.0<br>94.0 | 0.9713 | N/A | 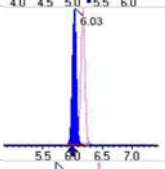 | 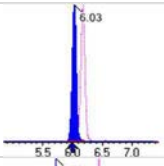 | |
| PFECHS | ( 461.0 / 98.9 ) 297735<br>( 461.0 / 381.2 ) 116128 | ( 9.73 , 0.91 ) ( N/A , 0.06 , 0.0) | 2432.6<br>2342.2 | 0.3900<br>99.9<br>99.9 | 0.4273 | N/A | 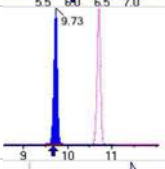 | 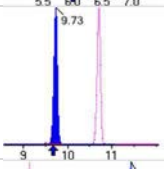 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 598633<br>( 533.0 / 353.0 ) 194205 | ( 11.36 , 1.71 ) ( N/A , 0.06 , 0.1) | 2809.7<br>1446.8 | 0.3244<br>100.9<br>100.9 | 0.4704 | N/A | 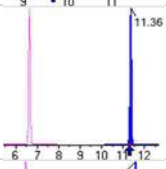 | 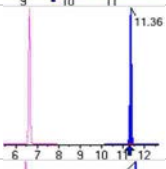 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 470152<br>( 633.0 / 453.0 ) 155946 | ( 12.61 , 1.90 ) ( N/A , 0.04 , 0.0) | 2652.7<br>1448.7 | 0.3317<br>101.6<br>101.6 | 0.4717 | N/A | 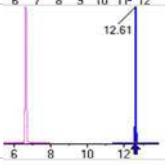 | 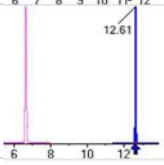 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 217343<br>( 315.0 / 83.0 ) 134472 | ( 7.10 , 1.15 )<br>( N/A , 0.05 , 0.0) | 2291.9<br>540.0 | 0.6187<br>108.0<br>108.0 | 0.8847 | N/A | 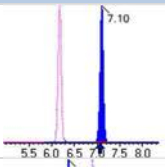 | 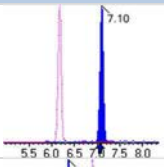 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25883<br>( 241.0 / 117.0 ) 60022 | ( 4.45 , 0.90 )<br>( N/A , 0.03 , 0.0) | 671.2<br>250.8 | 2.3189<br>104.5<br>104.5 | 1.7636 | N/A | 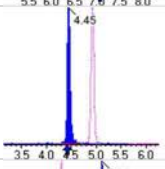 | 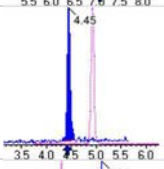 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 168888<br>( 341.0 / 217.0 ) 227443 | ( 7.04 , 1.14 )<br>( N/A , 0.04 , 0.1) | 742.2<br>609.0 | 1.3467<br>89.9<br>89.9 | 2.1334 | N/A | 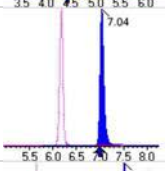 | 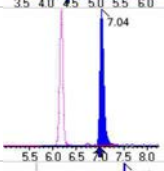 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 220429<br>( 441.0 / 337.0 ) 201280 | ( 9.46 , 1.53 )<br>( N/A , 0.05 , 0.0) | 104912.9<br>64729.3 | 0.9131<br>102.6<br>102.6 | 1.8929 | N/A | 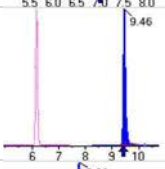 | 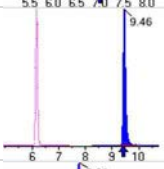 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 167714<br>( 357.2 / 243.0 ) 16619 | ( 6.91 , 1.00 )<br>( -0.01 , N/A , 0.2) | 833.4<br>153.3 | 0.0991<br>93.9<br>93.9 | 0.5154 | N/A | 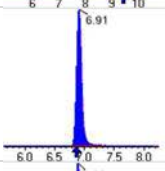 | 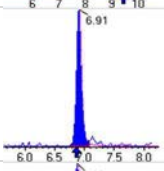 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 113188<br>( 457.2 / 343.0 ) 5020 | ( 9.00 , 1.00 )<br>( -0.01 , N/A , 0.7) | 441.4<br>125.4 | 0.0444<br>113.3<br>113.3 | 0.4888 | N/A | 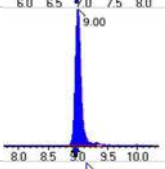 | 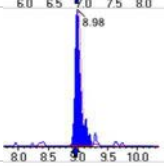 | |
| TDCA | ( 499.0 / 80.0 ) 406104 | ( 10.69 , 1.00 )<br>( N/A , 0.06 , 0.0) | 5419.9 | N/A<br>0.0<br>0.0 | 0.4836 | N/A | 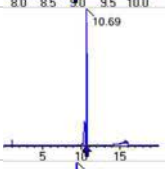 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 336642 | ( 3.83 , N/A )<br>( N/A , 0.03 , N/A ) | 1413.5 | N/A | 1.1175<br>[ 1.0000 ] | 111.7%<br>{ 111.0% } | 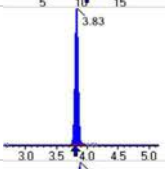 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 162950 | ( 6.18 , N/A )<br>( N/A , 0.04 , N/A ) | 25775.9 | N/A | 1.0597<br>[ 1.0000 ] | 106.0%<br>{ 98.8% } | 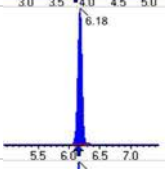 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 471625 | ( 8.36 , N/A )<br>( N/A , 0.05 , N/A ) | 3856.5 | N/A | 1.0571<br>[ 1.0000 ] | 105.7%<br>{ 103.7% } | 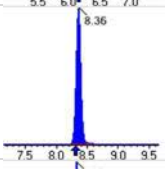 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 366298 | ( 9.32 , N/A )<br>( N/A , 0.05 , N/A ) | 1150.8 | N/A | 1.0957<br>[ 1.0000 ] | 109.6%<br>{ 112.4% } | 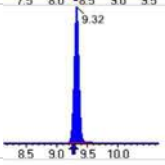 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 352892 | ( 10.24 , N/A ) ( N/A , 0.06 , N/A ) | 4145.1 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 103.8% } | 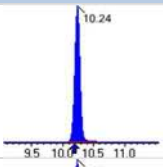 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1150496 | ( 8.83 , N/A ) ( N/A , 0.05 , N/A ) | 5167.9 | N/A | 1.0296 [ 1.0000 ] | 103.0% { 101.0% } | 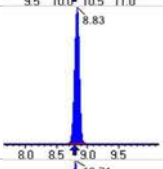 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1023027 | ( 10.71 , N/A ) ( N/A , 0.06 , N/A ) | 3434.6 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 102.8% } | 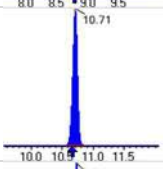 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2858238 | ( 3.83 , N/A ) ( N/A , 0.03 , N/A ) | 46367.4 | N/A | 7.6993 [ 8.0000 ] | 96.2% { 107.6% } | 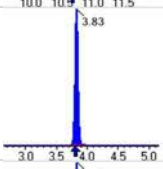 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1187020 | ( 4.93 , N/A ) ( N/A , 0.04 , N/A ) | 4924.0 | N/A | 4.0606 [ 4.0000 ] | 101.5% { 102.5% } | 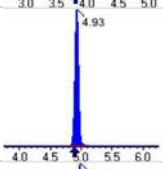 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 674193 | ( 6.17 , N/A ) ( N/A , 0.04 , N/A ) | 6432.9 | N/A | 1.9269 [ 2.0000 ] | 96.3% { 98.5% } | 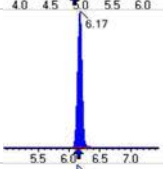 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 724563 | ( 7.34 , N/A ) ( N/A , 0.04 , N/A ) | 6899.7 | N/A | 1.9828 [ 2.0000 ] | 99.1% { 102.8% } | 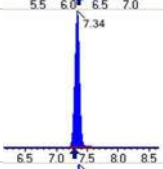 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 962855 | ( 8.36 , N/A ) ( N/A , 0.05 , N/A ) | 2546.6 | N/A | 1.9363 [ 2.0000 ] | 96.8% { 101.0% } | 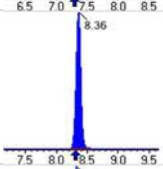 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330799 | ( 9.32 , N/A ) ( N/A , 0.05 , N/A ) | 3687.4 | N/A | 0.9352 [ 1.0000 ] | 93.5% { 106.4% } | 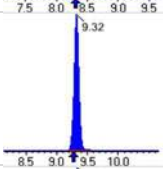 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 399081 | ( 10.24 , N/A ) ( N/A , 0.06 , N/A ) | 1103.5 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 103.7% } | 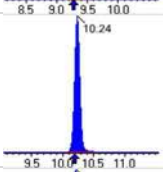 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 495888 | ( 11.11 , N/A ) ( N/A , 0.06 , N/A ) | 897.7 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 99.7% } | 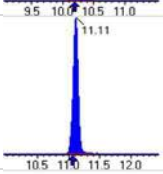 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 466902 | ( 11.93 , N/A ) ( N/A , 0.06 , N/A ) | 1334.4 | N/A | 0.9391 [ 1.0000 ] | 93.9% { 93.6% } | 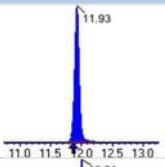  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 415288 | ( 13.01 , N/A ) ( N/A , 0.04 , N/A ) | 1605.9 | N/A | 0.9585 [ 1.0000 ] | 95.9% { 97.9% } | 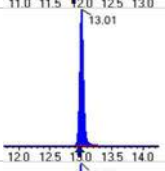  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 774592 | ( 13.80 , N/A ) ( N/A , 0.03 , N/A ) | 3175.6 | N/A | 2.1048 [ 2.0000 ] | 105.2% { 109.3% } | 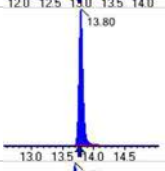  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2294919 | ( 6.50 , N/A ) ( N/A , 0.04 , N/A ) | 1384.9 | N/A | 2.0473 [ 2.0000 ] | 102.4% { 99.3% } | 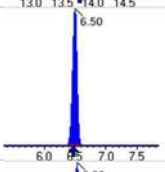  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1628854 | ( 8.83 , N/A ) ( N/A , 0.06 , N/A ) | 5208.7 | N/A | 1.9348 [ 2.0000 ] | 96.7% { 99.0% } | 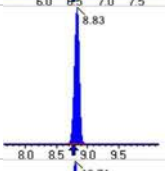  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2137804 | ( 10.71 , N/A ) ( N/A , 0.06 , N/A ) | 1781.1 | N/A | 1.9629 [ 2.0000 ] | 98.1% { 101.8% } | 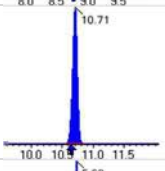  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 442074 | ( 5.62 , N/A ) ( N/A , 0.03 , N/A ) | 83.9 | N/A | 4.4125 [ 4.0000 ] | 110.3% { 122.9% } | 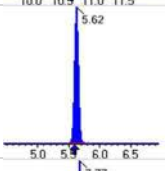  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1377793 | ( 7.77 , N/A ) ( N/A , 0.05 , N/A ) | 4009.0 | N/A | 4.4284 [ 4.0000 ] | 110.7% { 128.3% } | 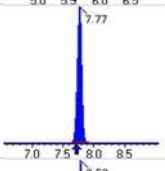  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1445457 | ( 9.59 , N/A ) ( N/A , 0.06 , N/A ) | 1277.8 | N/A | 4.6632 [ 4.0000 ] | 116.6% { 124.1% } | 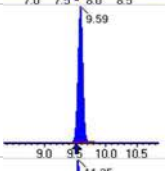  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2937999 | ( 11.25 , N/A ) ( N/A , 0.06 , N/A ) | 1355.8 | N/A | 8.2573 [ 8.0000 ] | 103.2% { 117.3% } | 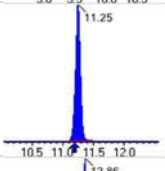  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2299133 | ( 12.86 , N/A ) ( N/A , 0.04 , N/A ) | 1788.2 | N/A | 1.9481 [ 2.0000 ] | 97.4% { 98.7% } | 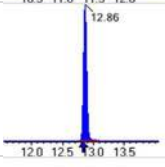  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 409452 | ( 14.23 , N/A ) ( N/A , 0.03 , N/A ) | 2926.6 | N/A | 1.8788 [ 2.0000 ] | 93.9% { 96.7% } | 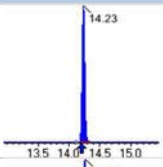  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 478765 | ( 14.56 , N/A ) ( N/A , 0.03 , N/A ) | 3083.5 | N/A | 1.9125 [ 2.0000 ] | 95.6% { 96.3% } | 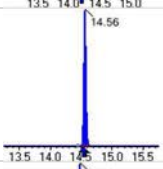  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1080521 | ( 10.48 , N/A ) ( N/A , 0.06 , N/A ) | 2696.1 | N/A | 3.8741 [ 4.0000 ] | 96.9% { 99.9% } | 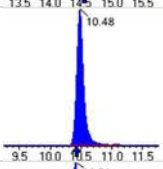  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1057392 | ( 11.01 , N/A ) ( N/A , 0.06 , N/A ) | 1787.5 | N/A | 3.9939 [ 4.0000 ] | 99.8% { 100.9% } | 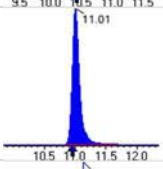  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1953011 | ( 14.03 , N/A ) ( N/A , 0.03 , N/A ) | 3118.9 | N/A | 19.1788 [ 20.0000 ] | 95.9% { 103.8% } | 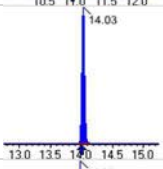  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2502947 | ( 14.38 , N/A ) ( N/A , 0.03 , N/A ) | 7328.7 | N/A | 20.2900 [ 20.0000 ] | 101.5% { 106.1% } | 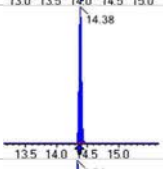  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1141036 | ( 6.64 , N/A ) ( N/A , 0.04 , N/A ) | 2430.9 | N/A | 7.5871 [ 8.0000 ] | 94.8% { 100.6% } | 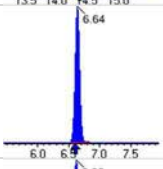  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 605471 | ( 6.92 , N/A ) ( N/A , 0.04 , N/A ) | 1140.2 | N/A | 1.9345 [ 2.0000 ] | 96.7% { 103.3% } | 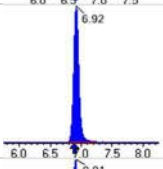  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 549106 | ( 9.01 , N/A ) ( N/A , 0.05 , N/A ) | 570.8 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 97.3% } | 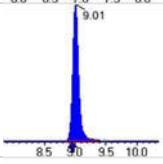  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 612990<br>( 163.0 / 69.0 ) 16536 | ( 2.83 , 0.74 )<br>( N/A , 0.02 , 0.0) | 3780.7<br>781.6 | 0.0270<br>107.6<br>107.6 | 1.9057 | N/A | 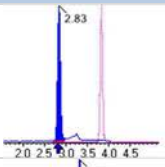 | 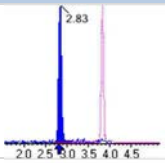 | |
| PFBA | ( 213.0 / 169.0 ) 1388429 | ( 3.82 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2403.5 | N/A<br>0.0<br>0.0 | 4.0365 | N/A | 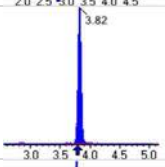 | | |
| PFPeA | ( 263.0 / 219.0 ) 565688<br>( 263.0 / 69.0 ) 6040 | ( 4.92 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2080.7<br>99.9 | 0.0107<br>97.2<br>97.2 | 1.9476 | N/A | 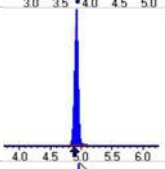 | 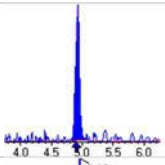 | |
| PFHxA | ( 313.0 / 269.0 ) 334351<br>( 313.0 / 119.0 ) 40474 | ( 6.16 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1584.7<br>664.3 | 0.1211<br>108.9<br>108.9 | 1.0133 | N/A | 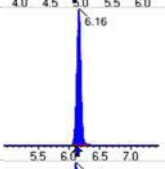 | 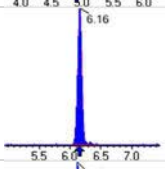 | |
| PFHpA | ( 363.0 / 319.0 ) 342568<br>( 363.0 / 169.0 ) 107781 | ( 7.32 , 1.00 )<br>( 0.00 , N/A , -0.3) | 1367.4<br>931.2 | 0.3146<br>101.0<br>101.0 | 0.9382 | N/A | 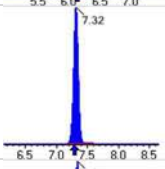 | 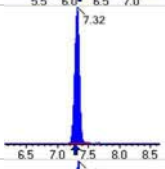 | |
| PFOA | ( 413.0 / 369.0 ) 508802<br>( 413.0 / 169.0 ) 176356 | ( 8.34 , 1.00 )<br>( 0.00 , N/A , -0.1) | 567.5<br>765.7 | 0.3466<br>95.8<br>95.8 | 1.0316 | N/A | 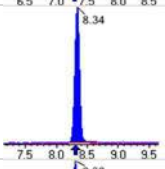 | 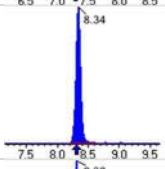 | |
| PFNA | ( 463.0 / 419.0 ) 355117<br>( 463.0 / 169.0 ) 80506 | ( 9.30 , 1.00 )<br>( 0.00 , N/A , -0.1) | 794.1<br>671.7 | 0.2267<br>86.4<br>86.4 | 1.1255 | N/A | 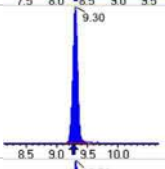 | 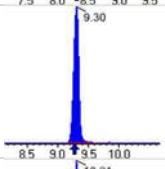 | |
| PFDA | ( 513.0 / 469.0 ) 404718<br>( 513.0 / 169.0 ) 45562 | ( 10.21 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1884.7<br>5987.3 | 0.1126<br>95.9<br>95.9 | 1.0112 | N/A | 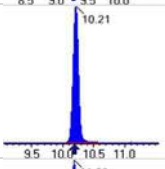 | 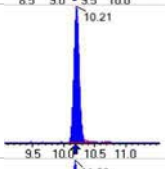 | |
| PFUnA | ( 563.0 / 519.0 ) 443955<br>( 563.0 / 169.0 ) 70225 | ( 11.09 , 1.00 )<br>( 0.00 , N/A , 0.0) | 849.2<br>438.0 | 0.1582<br>106.8<br>106.8 | 0.9830 | N/A | 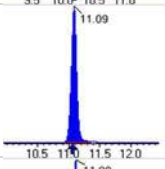 | 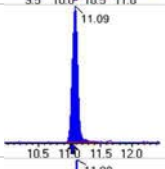 | |
| PFDoA | ( 613.0 / 569.0 ) 506969<br>( 613.0 / 169.0 ) 77211 | ( 11.90 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1109.9<br>593.1 | 0.1523<br>96.3<br>96.3 | 1.0702 | N/A | 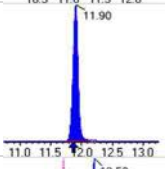 | 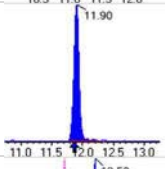 | |
| PFTrDA | ( 663.0 / 619.0 ) 480883<br>( 663.0 / 169.0 ) 128223 | ( 12.50 , 1.05 )<br>( N/A , 0.03 , 0.0) | 1260.4<br>800.9 | 0.2666<br>98.9<br>98.9 | 1.0558 | N/A | 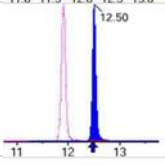 | 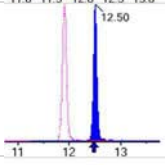 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 422129<br>( 713.0 / 169.0 ) 103015 | ( 12.99 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1302.8<br>567.0 | 0.2440<br>93.9<br>93.9 | 1.0617 | N/A | 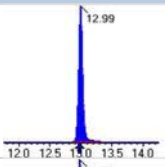 | 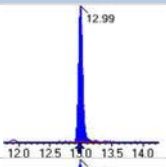 | |
| PFHxDA | ( 813.0 / 769.0 ) 371447<br>( 813.0 / 169.0 ) 79944 | ( 13.78 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1477.9<br>499.7 | 0.2152<br>99.2<br>99.2 | 0.9870 | N/A | 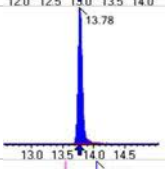 | 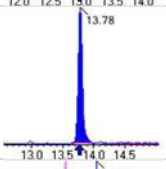 | |
| PFODA | ( 913.0 / 869.0 ) 229944<br>( 913.0 / 169.0 ) 82961 | ( 14.41 , 1.05 )<br>( N/A , 0.02 , 0.0) | 931.8<br>422.0 | 0.3608<br>94.4<br>94.4 | 0.9094 | N/A | 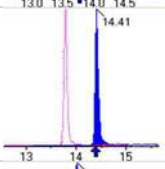 | 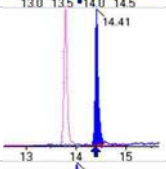 | |
| PFBS | ( 299.0 / 80.0 ) 512751<br>( 299.0 / 99.0 ) 380503 | ( 6.48 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2573.7<br>1359.8 | 0.7421<br>104.4<br>104.4 | 0.9019 | N/A | 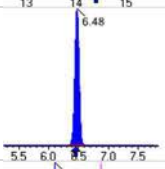 | 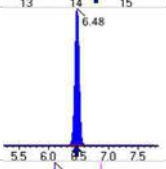 | |
| PFPeS | ( 349.0 / 80.0 ) 1340450<br>( 349.0 / 99.0 ) 474624 | ( 7.73 , 0.88 )<br>( N/A , 0.03 , 0.1) | 2054.9<br>1903.1 | 0.3541<br>104.1<br>104.1 | 0.9700 | N/A | 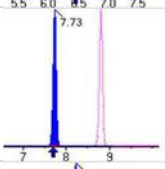 | 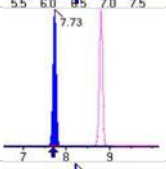 | |
| PFHxS | ( 399.0 / 80.0 ) 1377311<br>( 399.0 / 99.0 ) 455656 | ( 8.81 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2505.3<br>5989.5 | 0.3308<br>105.8<br>105.8 | 0.8962 | N/A | 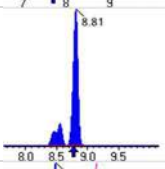 | 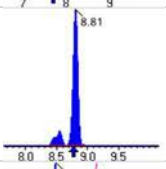 | |
| PFHpS | ( 449.0 / 80.0 ) 1223414<br>( 449.0 / 99.0 ) 317627 | ( 9.78 , 0.92 )<br>( N/A , 0.04 , 0.1) | 1978.1<br>1574.7 | 0.2596<br>97.2<br>97.2 | 0.9698 | N/A | 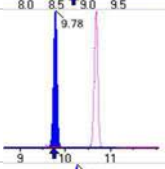 | 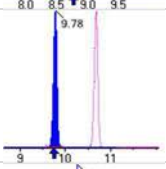 | |
| PFOS | ( 499.0 / 80.0 ) 1168809<br>( 499.0 / 99.0 ) 278995 | ( 10.68 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1895.0<br>4434.8 | 0.2387<br>100.9<br>100.9 | 0.9208 | N/A | 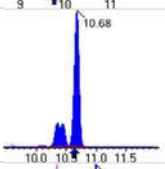 | 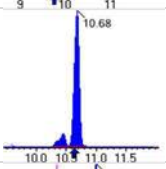 | |
| PFNS | ( 549.0 / 80.0 ) 1266067<br>( 549.0 / 99.0 ) 325636 | ( 11.52 , 1.08 )<br>( N/A , 0.03 , -0.1) | 2491.0<br>2087.0 | 0.2572<br>96.8<br>96.8 | 1.0229 | N/A | 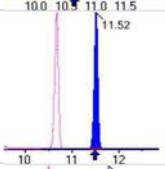 | 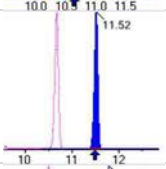 | |
| PFDS | ( 599.0 / 80.0 ) 1471573<br>( 599.0 / 99.0 ) 388343 | ( 12.19 , 1.14 )<br>( N/A , 0.03 , 0.1) | 2343.1<br>1626.9 | 0.2639<br>105.2<br>105.2 | 0.9974 | N/A | 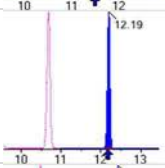 | 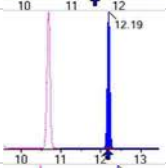 | |
| PFDoS | ( 699.0 / 80.0 ) 1270035<br>( 699.0 / 99.0 ) 292971 | ( 13.09 , 1.23 )<br>( N/A , 0.03 , 0.0) | 3083.8<br>1775.3 | 0.2307<br>100.0<br>100.0 | 1.0074 | N/A | 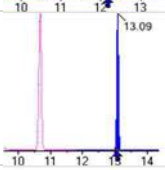 | 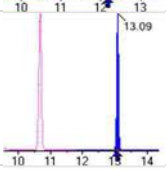 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1189216<br>( 327.0 / 81.0 ) 1045131 | ( 5.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 4319.4<br>3072.5 | 0.8788<br>100.3<br>100.3 | 3.9766 | N/A | 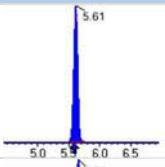 | 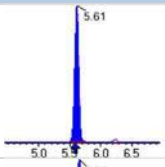 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1202168<br>( 427.0 / 81.0 ) 1500552 | ( 7.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 3476.9<br>3155.6 | 1.2482<br>98.2<br>98.2 | 3.9585 | N/A | 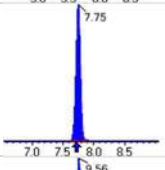 | 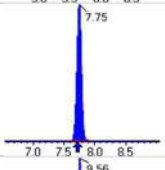 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1431110<br>( 527.0 / 81.0 ) 1398272 | ( 9.56 , 1.00 ) ( -0.01 , N/A , 0.1) | 1337.7<br>1454.3 | 0.9771<br>103.0<br>103.0 | 4.1726 | N/A | 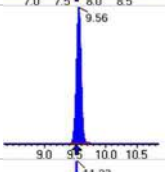 | 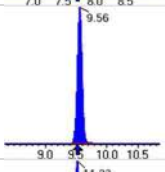 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1198194<br>( 627.0 / 81.0 ) 1672583 | ( 11.23 , 1.00 ) ( 0.01 , N/A , 0.0) | 1205.6<br>916.8 | 1.3959<br>103.3<br>103.3 | 3.7187 | N/A | 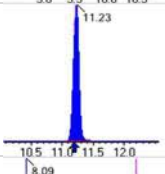 | 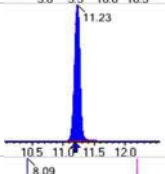 | |
| PFBSA | ( 297.9 / 78.0 ) 1015134<br>( 297.9 / 278.0 ) 1168 | ( 8.09 , 0.57 ) ( N/A , 0.03 , -0.1) | 1173.2<br>26.0 | 0.0012<br>81.9<br>81.9 | 1.0586 | N/A | 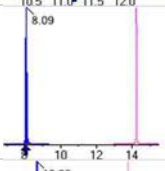 | 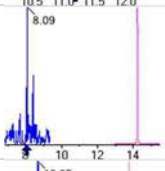 | |
| PFHxSA | ( 397.9 / 78.0 ) 1322546<br>( 397.9 / 378.0 ) 5197 | ( 10.96 , 0.75 ) ( N/A , 0.03 , 0.4) | 1583.9<br>115.0 | 0.0039<br>103.2<br>103.2 | 1.0213 | N/A | 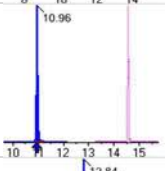 | 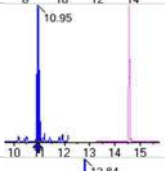 | |
| PFOSA | ( 498.0 / 78.0 ) 1198508<br>( 498.0 / 478.0 ) 17170 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.1) | 2052.8<br>451.2 | 0.0143<br>99.3<br>99.3 | 1.0190 | N/A | 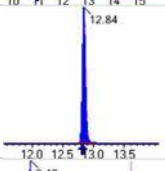 | 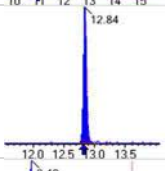 | |
| TFSI | ( 279.7 / 147.0 ) 2545387<br>( 279.7 / 211.0 ) 214730 | ( 8.40 , 0.65 ) ( N/A , 0.04 , 0.1) | 55.2<br>50.8 | 0.0844<br>102.3<br>102.3 | 1.0180 | N/A | 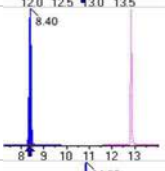 | 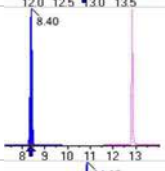 | |
| NMeFOSA | ( 512.0 / 219.0 ) 886837<br>( 512.0 / 169.0 ) 642807 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.0) | 2828.3<br>1325.1 | 0.7248<br>98.6<br>98.6 | 4.2219 | N/A | 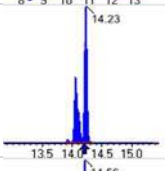 | 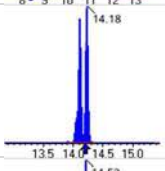 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1114931<br>( 526.0 / 169.0 ) 1406540 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 1.9) | 3659.4<br>3014.4 | 1.2615<br>99.6<br>99.6 | 4.0243 | N/A | 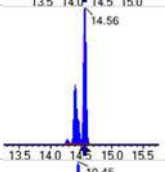 | 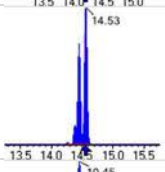 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 259677<br>( 570.0 / 483.0 ) 124103 | ( 10.45 , 1.00 ) ( 0.00 , N/A , -0.2) | 509.2<br>568.4 | 0.4779<br>110.4<br>110.4 | 0.9417 | N/A | 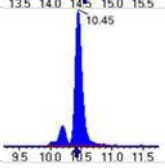 | 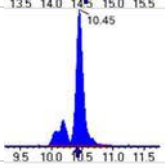 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 263370<br>( 584.0 / 526.0 ) 158943 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1352.2<br>485.9 | 0.6035<br>97.5<br>97.5 | 1.0020 | N/A | 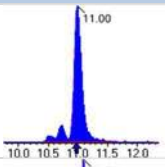 | 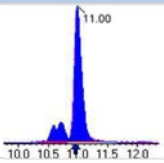 | |
| NMeFOSE | ( 616.0 / 59.0 ) 479403 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1618.1 | N/A<br>0.0<br>0.0 | 4.1809 | N/A | 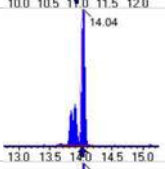 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 443936 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 2129.4 | N/A<br>0.0<br>0.0 | 4.1469 | N/A | 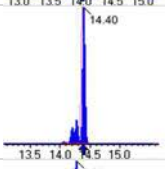 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 81256<br>( 285.0 / 185.0 ) 261962 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1184.7<br>1438.3 | 3.2239<br>103.5<br>103.5 | 0.9826 | N/A | 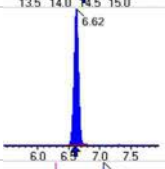 | 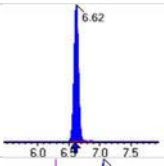 | |
| ADONA | ( 377.0 / 85.0 ) 1054309<br>( 377.0 / 251.0 ) 113162 | ( 7.71 , 1.16 )<br>( N/A , 0.03 , 0.2) | 1731.0<br>813.0 | 0.1073<br>100.7<br>100.7 | 1.0011 | N/A | 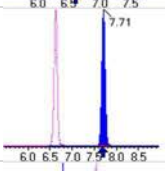 | 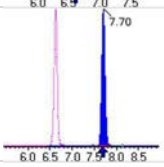 | |
| PFMPA | ( 229.0 / 85.0 ) 190593 | ( 4.22 , 0.86 )<br>( N/A , 0.03 , 0.0) | 3471.4 | N/A<br>0.0<br>0.0 | 2.0726 | N/A | 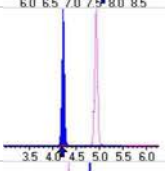 | | |
| PFMBA | ( 279.0 / 85.0 ) 509395 | ( 5.30 , 1.08 )<br>( N/A , 0.03 , 0.0) | 3490.1 | N/A<br>0.0<br>0.0 | 2.0929 | N/A | 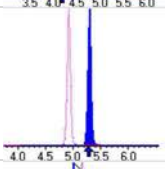 | | |
| NFDHA | ( 295.0 / 201.0 ) 242543<br>( 295.0 / 85.0 ) 246492 | ( 6.02 , 0.98 )<br>( N/A , 0.02 , 0.1) | 2487.6<br>1958.5 | 1.0163<br>94.0<br>94.0 | 2.1146 | N/A | 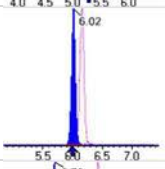 | 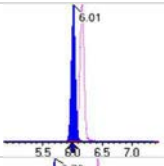 | |
| PFECHS | ( 461.0 / 98.9 ) 673717<br>( 461.0 / 381.2 ) 256956 | ( 9.70 , 0.91 )<br>( N/A , 0.03 , 0.0) | 3406.4<br>3344.4 | 0.3814<br>97.7<br>97.7 | 0.9412 | N/A | 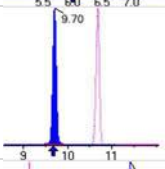 | 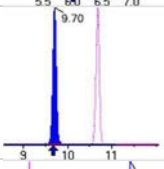 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1267391<br>( 533.0 / 353.0 ) 404449 | ( 11.33 , 1.71 )<br>( N/A , 0.03 , 0.0) | 2736.4<br>1979.9 | 0.3191<br>99.3<br>99.3 | 0.9752 | N/A | 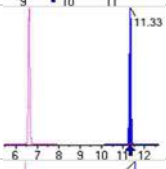 | 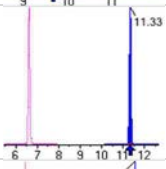 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1035128<br>( 633.0 / 453.0 ) 356304 | ( 12.59 , 1.90 )<br>( N/A , 0.03 , -0.1) | 2900.8<br>2755.5 | 0.3442<br>105.4<br>105.4 | 1.0168 | N/A | 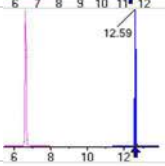 | 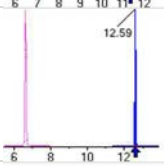 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 444787<br>( 315.0 / 83.0 ) 281789 | ( 7.08 , 1.15 )<br>( N/A , 0.03 , 0.0) | 2108.1<br>1019.0 | 0.6335<br>110.6<br>110.6 | 1.7923 | N/A | 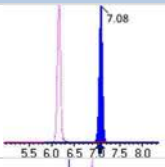 | 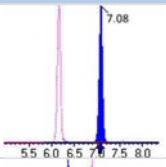 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 56590<br>( 241.0 / 117.0 ) 130386 | ( 4.45 , 0.90 )<br>( N/A , 0.03 , 0.2) | 984.1<br>493.6 | 2.3041<br>103.8<br>103.8 | 4.0105 | N/A | 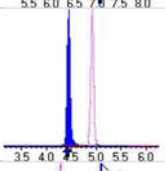 | 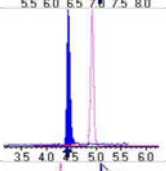 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 329958<br>( 341.0 / 217.0 ) 491130 | ( 7.02 , 1.14 )<br>( N/A , 0.03 , 0.1) | 1035.3<br>923.0 | 1.4885<br>99.4<br>99.4 | 4.1261 | N/A | 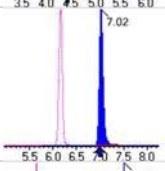 | 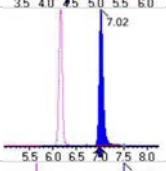 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 476429<br>( 441.0 / 337.0 ) 398092 | ( 9.44 , 1.53 )<br>( N/A , 0.03 , 0.0) | 3726.9<br>7336.1 | 0.8356<br>93.9<br>93.9 | 4.0499 | N/A | 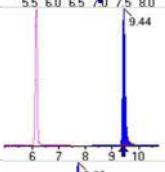 | 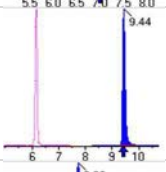 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 331465<br>( 357.2 / 243.0 ) 34187 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , -0.1) | 974.1<br>303.3 | 0.1031<br>97.7<br>97.7 | 0.9901 | N/A | 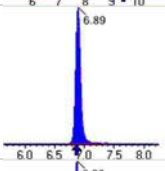 | 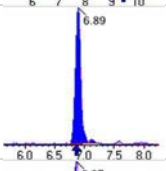 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 244506<br>( 457.2 / 343.0 ) 10166 | ( 8.98 , 1.00 )<br>( -0.01 , N/A , 0.6) | 683.8<br>240.6 | 0.0416<br>106.3<br>106.3 | 0.9893 | N/A | 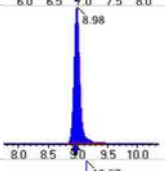 | 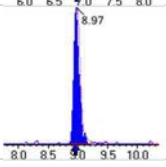 | |
| TDCA | ( 499.0 / 80.0 ) 871639 | ( 10.67 , 1.00 )<br>( N/A , 0.03 , 0.0) | 7745.0 | N/A<br>0.0<br>0.0 | 1.0105 | N/A | 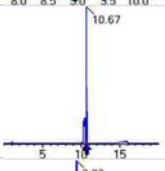 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 334919 | ( 3.83 , N/A )<br>( N/A , 0.03 , N/A ) | 1399.0 | N/A | 1.1118<br>[ 1.0000 ] | 111.2%<br>{ 110.5% } | 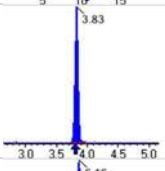 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 159043 | ( 6.16 , N/A )<br>( N/A , 0.02 , N/A ) | 24519.8 | N/A | 1.0343<br>[ 1.0000 ] | 103.4%<br>{ 96.4% } | 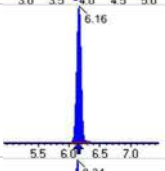 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 482772 | ( 8.34 , N/A )<br>( N/A , 0.03 , N/A ) | 3154.8 | N/A | 1.0821<br>[ 1.0000 ] | 108.2%<br>{ 106.2% } | 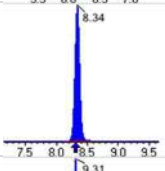 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 369101 | ( 9.31 , N/A )<br>( N/A , 0.03 , N/A ) | 1133.1 | N/A | 1.1041<br>[ 1.0000 ] | 110.4%<br>{ 113.3% } | 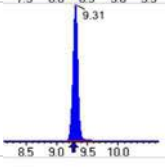 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 364723 | ( 10.22 , N/A ) ( N/A , 0.03 , N/A ) | 7515.0 | N/A | 1.0998 [ 1.0000 ] | 110.0% { 107.3% } | 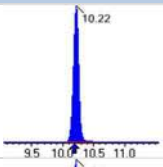 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1202697 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 4335.0 | N/A | 1.0763 [ 1.0000 ] | 107.6% { 105.5% } | 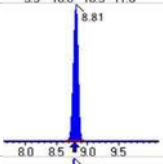 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1101241 | ( 10.68 , N/A ) ( N/A , 0.03 , N/A ) | 3170.9 | N/A | 1.1281 [ 1.0000 ] | 112.8% { 110.6% } | 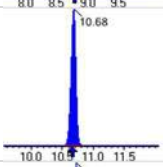 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2908654 | ( 3.82 , N/A ) ( N/A , 0.03 , N/A ) | 61466.5 | N/A | 7.8754 [ 8.0000 ] | 98.4% { 109.5% } | 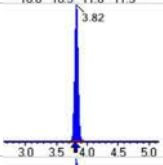 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1141238 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 5291.6 | N/A | 3.9999 [ 4.0000 ] | 100.0% { 98.5% } | 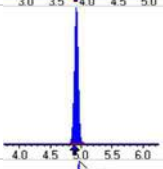 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 681059 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 7693.9 | N/A | 1.9944 [ 2.0000 ] | 99.7% { 99.5% } | 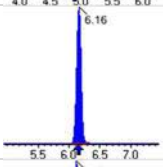 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 741498 | ( 7.32 , N/A ) ( N/A , 0.03 , N/A ) | 6936.5 | N/A | 2.0790 [ 2.0000 ] | 104.0% { 105.2% } | 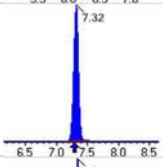 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 969992 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 3350.5 | N/A | 1.9056 [ 2.0000 ] | 95.3% { 101.7% } | 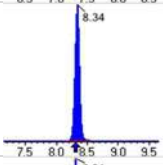 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 314850 | ( 9.31 , N/A ) ( N/A , 0.03 , N/A ) | 3265.2 | N/A | 0.8834 [ 1.0000 ] | 88.3% { 101.3% } | 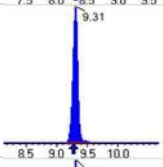 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 401889 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 1190.9 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 104.4% } | 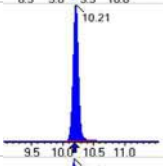 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 483647 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 940.7 | N/A | 0.9452 [ 1.0000 ] | 94.5% { 97.2% } | 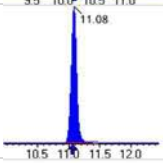 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 462842 | ( 11.90 , N/A ) ( N/A , 0.04 , N/A ) | 1233.1 | N/A | 0.9007 [ 1.0000 ] | 90.1% { 92.8% } | 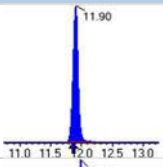 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 418674 | ( 12.99 , N/A ) ( N/A , 0.03 , N/A ) | 1347.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 98.7% } | 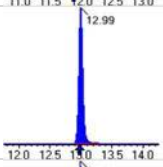 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 779866 | ( 13.79 , N/A ) ( N/A , 0.02 , N/A ) | 3224.9 | N/A | 2.0504 [ 2.0000 ] | 102.5% { 110.1% } | 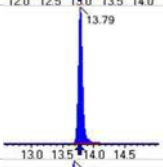 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2186633 | ( 6.48 , N/A ) ( N/A , 0.03 , N/A ) | 1297.4 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 94.7% } | 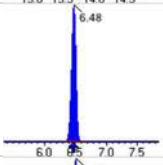 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1735528 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 5114.4 | N/A | 1.9720 [ 2.0000 ] | 98.6% { 105.5% } | 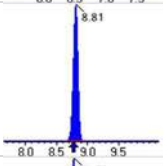 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2195983 | ( 10.68 , N/A ) ( N/A , 0.04 , N/A ) | 1375.4 | N/A | 1.8731 [ 2.0000 ] | 93.7% { 104.5% } | 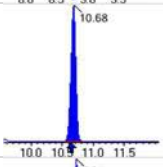 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 444248 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 88.3 | N/A | 4.2417 [ 4.0000 ] | 106.0% { 123.5% } | 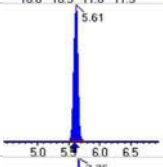 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1367408 | ( 7.75 , N/A ) ( N/A , 0.03 , N/A ) | 3658.9 | N/A | 4.2043 [ 4.0000 ] | 105.1% { 127.3% } | 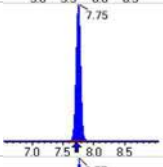 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1384682 | ( 9.57 , N/A ) ( N/A , 0.03 , N/A ) | 1244.0 | N/A | 4.2733 [ 4.0000 ] | 106.8% { 118.9% } | 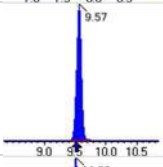 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3132754 | ( 11.22 , N/A ) ( N/A , 0.04 , N/A ) | 1243.0 | N/A | 8.4225 [ 8.0000 ] | 105.3% { 125.1% } | 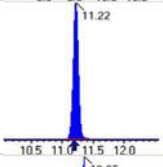 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2410276 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2087.1 | N/A | 1.8972 [ 2.0000 ] | 94.9% { 103.5% } | 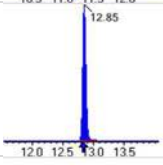 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 417102 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 3490.5 | N/A | 1.7780 [ 2.0000 ] | 88.9% { 98.5% } | 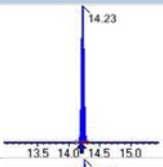  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 504968 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2723.4 | N/A | 1.8739 [ 2.0000 ] | 93.7% { 101.6% } | 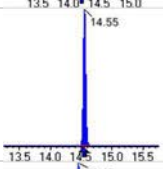  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1171210 | ( 10.45 , N/A ) ( N/A , 0.04 , N/A ) | 3279.5 | N/A | 3.9011 [ 4.0000 ] | 97.5% { 108.3% } | 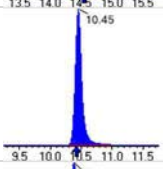  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1089970 | ( 10.99 , N/A ) ( N/A , 0.04 , N/A ) | 1553.4 | N/A | 3.8246 [ 4.0000 ] | 95.6% { 104.0% } | 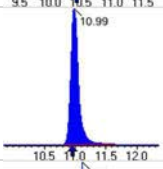  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2025755 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2600.8 | N/A | 18.4803 [ 20.0000 ] | 92.4% { 107.6% } | 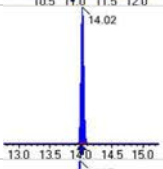  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2423173 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5098.6 | N/A | 18.2482 [ 20.0000 ] | 91.2% { 102.7% } | 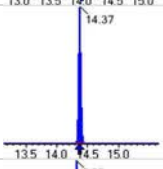  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1165366 | ( 6.63 , N/A ) ( N/A , 0.02 , N/A ) | 1867.0 | N/A | 7.9393 [ 8.0000 ] | 99.2% { 102.7% } | 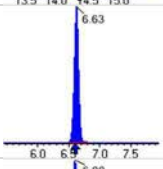  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 622901 | ( 6.90 , N/A ) ( N/A , 0.02 , N/A ) | 949.0 | N/A | 1.9256 [ 2.0000 ] | 96.3% { 106.3% } | 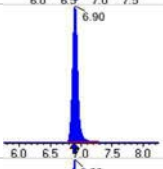  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 586096 | ( 8.99 , N/A ) ( N/A , 0.04 , N/A ) | 731.2 | N/A | 1.9407 [ 2.0000 ] | 97.0% { 103.9% } | 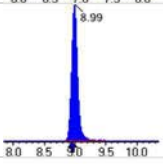  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1192766<br>( 163.0 / 69.0 ) 30696 | ( 2.82 , 0.74 ) ( N/A , 0.01 , 0.0) | 7360.2<br>1436.6 | 0.0257<br>102.7<br>102.7 | 3.9928 | N/A | 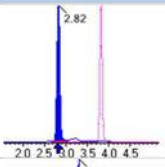 | 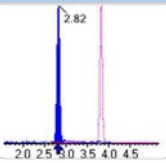 | |
| PFBA | ( 213.0 / 169.0 ) 2619162 | ( 3.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 4598.2 | N/A<br>0.0<br>0.0 | 8.1991 | N/A | 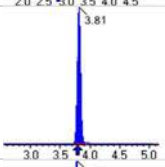 | | |
| PFPeA | ( 263.0 / 219.0 ) 1144181<br>( 263.0 / 69.0 ) 14596 | ( 4.92 , 1.00 ) ( 0.00 , N/A , 0.1) | 3363.5<br>252.6 | 0.0128<br>116.2<br>116.2 | 3.9714 | N/A | 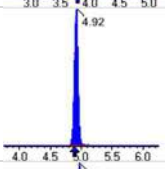 | 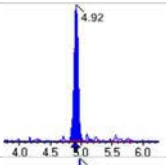 | |
| PFHxA | ( 313.0 / 269.0 ) 651995<br>( 313.0 / 119.0 ) 74725 | ( 6.17 , 1.00 ) ( 0.00 , N/A , -0.2) | 2066.1<br>806.7 | 0.1146<br>103.1<br>103.1 | 2.0746 | N/A | 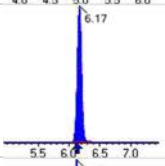 | 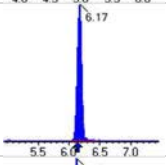 | |
| PFHpA | ( 363.0 / 319.0 ) 684849<br>( 363.0 / 169.0 ) 212071 | ( 7.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 1361.8<br>1077.8 | 0.3097<br>99.4<br>99.4 | 2.1093 | N/A | 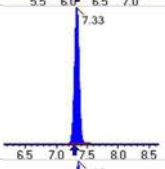 | 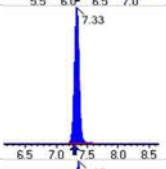 | |
| PFOA | ( 413.0 / 369.0 ) 915234<br>( 413.0 / 169.0 ) 343403 | ( 8.35 , 1.00 ) ( 0.00 , N/A , 0.0) | 820.8<br>1166.4 | 0.3752<br>103.7<br>103.7 | 1.9107 | N/A | 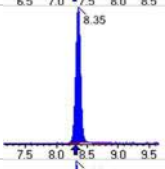 | 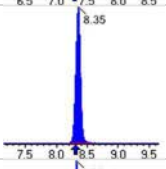 | |
| PFNA | ( 463.0 / 419.0 ) 650157<br>( 463.0 / 169.0 ) 169103 | ( 9.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 953.7<br>754.7 | 0.2601<br>99.1<br>99.1 | 1.9288 | N/A | 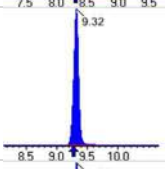 | 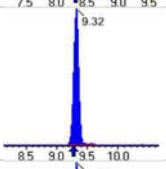 | |
| PFDA | ( 513.0 / 469.0 ) 764087<br>( 513.0 / 169.0 ) 89045 | ( 10.23 , 1.00 ) ( 0.00 , N/A , 0.1) | 2369.9<br>6644.6 | 0.1165<br>99.3<br>99.3 | 1.9479 | N/A | 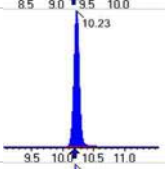 | 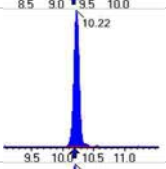 | |
| PFUnA | ( 563.0 / 519.0 ) 881450<br>( 563.0 / 169.0 ) 129776 | ( 11.10 , 1.00 ) ( 0.00 , N/A , 0.1) | 1124.1<br>790.8 | 0.1472<br>99.4<br>99.4 | 1.9871 | N/A | 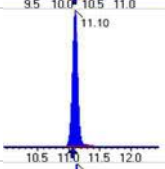 | 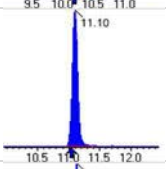 | |
| PFDoA | ( 613.0 / 569.0 ) 961447<br>( 613.0 / 169.0 ) 149773 | ( 11.92 , 1.00 ) ( 0.00 , N/A , -0.1) | 1394.5<br>984.7 | 0.1558<br>98.5<br>98.5 | 2.0919 | N/A | 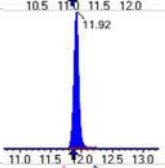 | 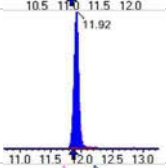 | |
| PFTrDA | ( 663.0 / 619.0 ) 925673<br>( 663.0 / 169.0 ) 238189 | ( 12.51 , 1.05 ) ( N/A , 0.04 , 0.0) | 1175.4<br>1106.1 | 0.2573<br>95.5<br>95.5 | 2.0949 | N/A | 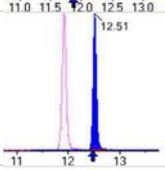 | 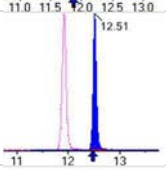 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 789614<br>( 713.0 / 169.0 ) 196961 | ( 13.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1525.6<br>728.6 | 0.2494<br>95.9<br>95.9 | 2.0854 | N/A | 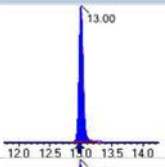 | 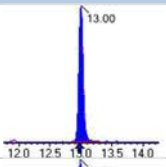 | |
| PFHxDA | ( 813.0 / 769.0 ) 686456<br>( 813.0 / 169.0 ) 163993 | ( 13.79 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1551.4<br>876.9 | 0.2389<br>110.1<br>110.1 | 1.9988 | N/A | 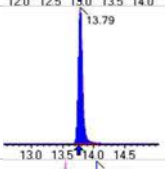 | 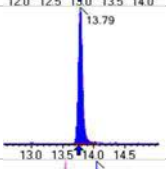 | |
| PFODA | ( 913.0 / 869.0 ) 473575<br>( 913.0 / 169.0 ) 163980 | ( 14.41 , 1.05 )<br>( N/A , 0.03 , -0.1) | 1363.7<br>708.9 | 0.3463<br>90.6<br>90.6 | 2.0523 | N/A | 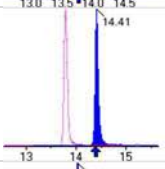 | 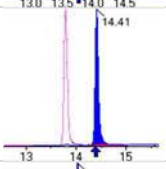 | |
| PFBS | ( 299.0 / 80.0 ) 1016211<br>( 299.0 / 99.0 ) 716732 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2704.7<br>1896.9 | 0.7053<br>99.2<br>99.2 | 1.7932 | N/A | 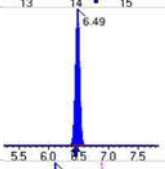 | 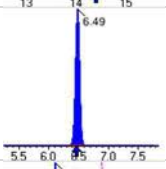 | |
| PFPeS | ( 349.0 / 80.0 ) 2622602<br>( 349.0 / 99.0 ) 894077 | ( 7.74 , 0.88 )<br>( N/A , 0.04 , -0.1) | 2816.5<br>2245.2 | 0.3409<br>100.2<br>100.2 | 2.0635 | N/A | 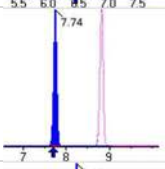 | 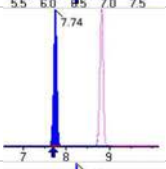 | |
| PFHxS | ( 399.0 / 80.0 ) 2694227<br>( 399.0 / 99.0 ) 874878 | ( 8.82 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3518.0<br>5529.2 | 0.3247<br>103.8<br>103.8 | 1.9063 | N/A | 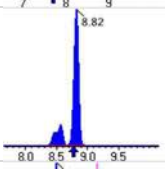 | 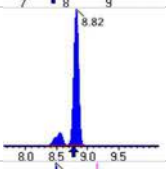 | |
| PFHpS | ( 449.0 / 80.0 ) 2314127<br>( 449.0 / 99.0 ) 623358 | ( 9.80 , 0.92 )<br>( N/A , 0.05 , 0.2) | 1890.4<br>1605.5 | 0.2694<br>100.8<br>100.8 | 2.0446 | N/A | 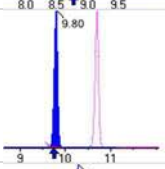 | 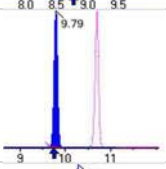 | |
| PFOS | ( 499.0 / 80.0 ) 2231365<br>( 499.0 / 99.0 ) 527855 | ( 10.69 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2239.5<br>11894.3 | 0.2366<br>100.0<br>100.0 | 1.9595 | N/A | 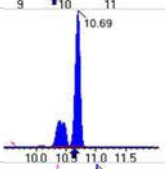 | 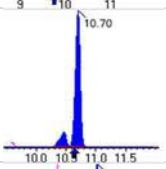 | |
| PFNS | ( 549.0 / 80.0 ) 2370352<br>( 549.0 / 99.0 ) 610267 | ( 11.54 , 1.08 )<br>( N/A , 0.05 , -0.2) | 2618.3<br>2854.3 | 0.2575<br>96.9<br>96.9 | 2.1346 | N/A | 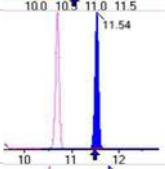 | 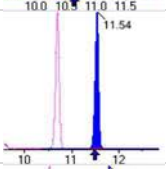 | |
| PFDS | ( 599.0 / 80.0 ) 2814247<br>( 599.0 / 99.0 ) 746124 | ( 12.21 , 1.14 )<br>( N/A , 0.04 , 0.0) | 2777.1<br>2163.0 | 0.2651<br>105.7<br>105.7 | 2.1262 | N/A | 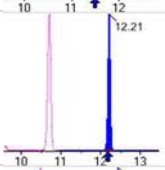 | 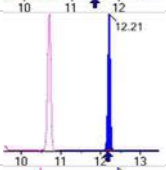 | |
| PFDoS | ( 699.0 / 80.0 ) 2408642<br>( 699.0 / 99.0 ) 553330 | ( 13.09 , 1.22 )<br>( N/A , 0.03 , 0.0) | 4354.8<br>2728.1 | 0.2297<br>99.6<br>99.6 | 2.1297 | N/A | 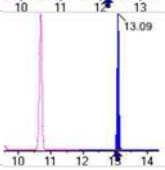 | 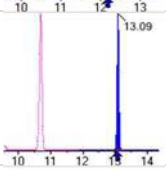 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2088900<br>( 327.0 / 81.0 ) 1849173 | ( 5.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5156.9<br>3365.6 | 0.8852<br>101.0<br>101.0 | 7.4640 | N/A | 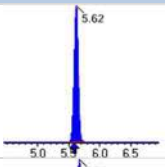 | 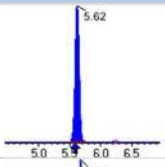 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2120725<br>( 427.0 / 81.0 ) 2578247 | ( 7.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4279.1<br>3420.2 | 1.2157<br>95.7<br>95.7 | 7.7701 | N/A | 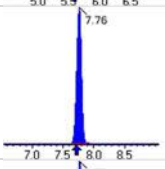 | 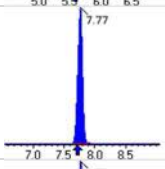 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2622268<br>( 527.0 / 81.0 ) 2640248 | ( 9.58 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1702.1<br>1794.5 | 1.0069<br>106.2<br>106.2 | 8.0740 | N/A | 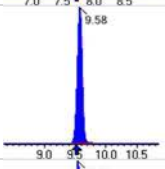 | 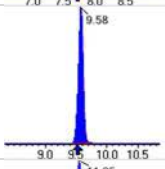 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2297999<br>( 627.0 / 81.0 ) 3060459 | ( 11.24 , 1.00 )<br>( 0.01 , N/A , -0.3) | 1321.6<br>1107.1 | 1.3318<br>98.5<br>98.5 | 7.7053 | N/A | 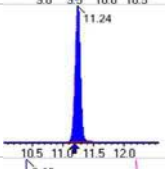 | 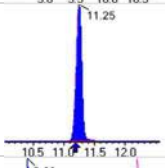 | |
| PFBSA | ( 297.9 / 78.0 ) 2012058<br>( 297.9 / 278.0 ) 2356 | ( 8.10 , 0.57 )<br>( N/A , 0.04 , -0.6) | 1618.0<br>38.8 | 0.0012<br>83.4<br>83.4 | 2.2464 | N/A | 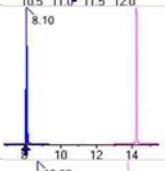 | 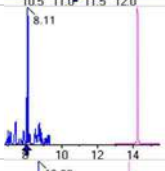 | |
| PFHxSA | ( 397.9 / 78.0 ) 2477197<br>( 397.9 / 378.0 ) 12448 | ( 10.98 , 0.75 )<br>( N/A , 0.05 , -0.1) | 1137.5<br>293.6 | 0.0050<br>132.0<br>132.0 | 2.0703 | N/A | 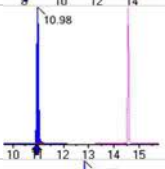 | 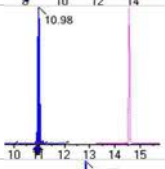 | |
| PFOSA | ( 498.0 / 78.0 ) 2382790<br>( 498.0 / 478.0 ) 33562 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2468.5<br>717.2 | 0.0141<br>97.6<br>97.6 | 2.1050 | N/A | 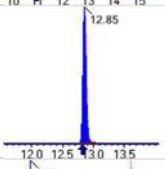 | 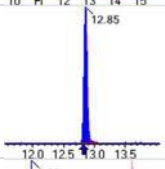 | |
| TFSI | ( 279.7 / 147.0 ) 5007205<br>( 279.7 / 211.0 ) 424277 | ( 8.41 , 0.65 )<br>( N/A , 0.05 , 0.1) | 62.8<br>60.0 | 0.0847<br>102.7<br>102.7 | 2.0807 | N/A | 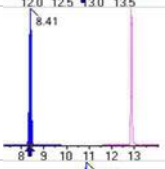 | 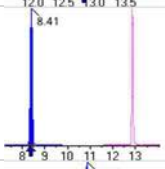 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1749980<br>( 512.0 / 169.0 ) 1299362 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.0) | 3106.0<br>1058.1 | 0.7425<br>101.0<br>101.0 | 8.9196 | N/A | 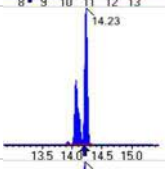 | 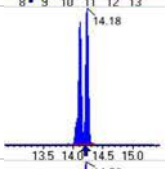 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2160938<br>( 526.0 / 169.0 ) 2761580 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3906.8<br>3197.4 | 1.2780<br>100.9<br>100.9 | 8.4413 | N/A | 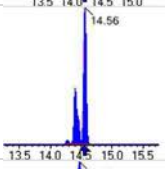 | 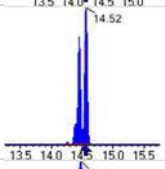 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 504995<br>( 570.0 / 483.0 ) 229734 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2294.9<br>1724.6 | 0.4549<br>105.1<br>105.1 | 2.0006 | N/A | 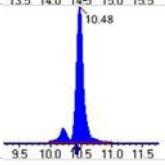 | 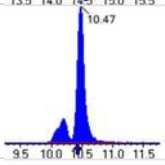 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 493083<br>( 584.0 / 526.0 ) 302551 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.1) | 2634.7<br>666.2 | 0.6136<br>99.1<br>99.1 | 2.0274 | N/A | 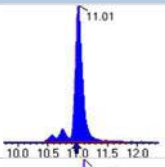 | 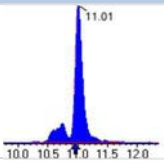 | |
| NMeFOSE | ( 616.0 / 59.0 ) 918411 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 2116.6 | N/A<br>0.0<br>0.0 | 8.1742 | N/A | 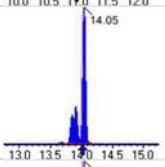 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 854995 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 2966.2 | N/A<br>0.0<br>0.0 | 7.8835 | N/A | 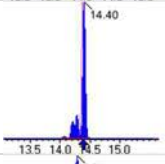 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 151391<br>( 285.0 / 185.0 ) 504958 | ( 6.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 1472.1<br>1614.7 | 3.3355<br>107.0<br>107.0 | 1.8568 | N/A | 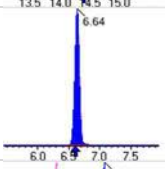 | 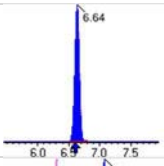 | |
| ADONA | ( 377.0 / 85.0 ) 2020002<br>( 377.0 / 251.0 ) 210829 | ( 7.72 , 1.16 ) ( N/A , 0.05 , 0.2) | 1688.7<br>1047.7 | 0.1044<br>97.9<br>97.9 | 1.9454 | N/A | 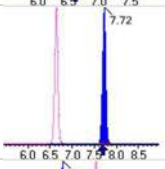 | 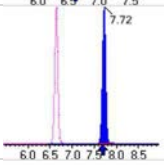 | |
| PFMPA | ( 229.0 / 85.0 ) 367437 | ( 4.21 , 0.86 ) ( N/A , 0.02 , 0.0) | 4251.4 | N/A<br>0.0<br>0.0 | 4.0283 | N/A | 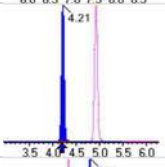 | | |
| PFMBA | ( 279.0 / 85.0 ) 949637 | ( 5.30 , 1.08 ) ( N/A , 0.03 , 0.0) | 5581.6 | N/A<br>0.0<br>0.0 | 3.9334 | N/A | 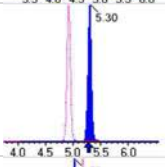 | | |
| NFDHA | ( 295.0 / 201.0 ) 454277<br>( 295.0 / 85.0 ) 518489 | ( 6.03 , 0.98 ) ( N/A , 0.03 , 0.0) | 2806.5<br>2289.3 | 1.1414<br>105.5<br>105.5 | 4.1581 | N/A | 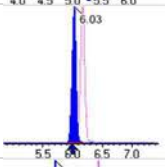 | 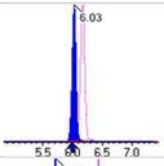 | |
| PFECHS | ( 461.0 / 98.9 ) 1208151<br>( 461.0 / 381.2 ) 513039 | ( 9.72 , 0.91 ) ( N/A , 0.05 , 0.0) | 4199.3<br>4547.3 | 0.4246<br>108.8<br>108.8 | 1.8814 | N/A | 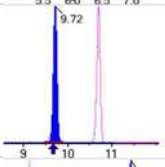 | 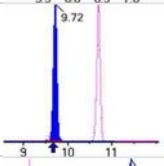 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 2411929<br>( 533.0 / 353.0 ) 810272 | ( 11.35 , 1.71 ) ( N/A , 0.05 , 0.0) | 2782.3<br>2421.8 | 0.3359<br>104.5<br>104.5 | 1.8823 | N/A | 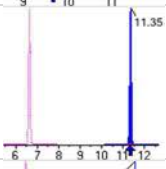 | 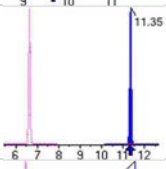 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1906502<br>( 633.0 / 453.0 ) 634584 | ( 12.60 , 1.90 ) ( N/A , 0.04 , 0.0) | 3389.8<br>2328.6 | 0.3329<br>101.9<br>101.9 | 1.8995 | N/A | 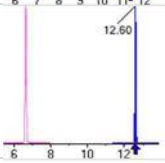 | 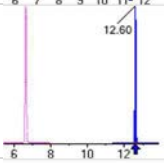 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 924297<br>( 315.0 / 83.0 ) 495246 | ( 7.09 , 1.15 )<br>( N/A , 0.04 , 0.1) | 2671.6<br>1353.1 | 0.5358<br>93.5<br>93.5 | 3.9103 | N/A | 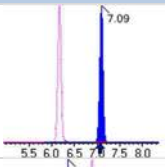 | 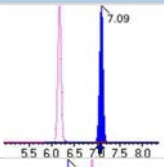 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 104621<br>( 241.0 / 117.0 ) 247496 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , -0.1) | 1617.9<br>840.6 | 2.3656<br>106.6<br>106.6 | 7.4748 | N/A | 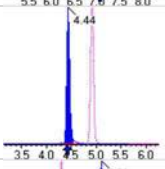 | 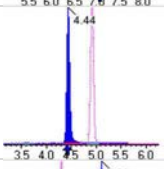 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 659083<br>( 341.0 / 217.0 ) 973555 | ( 7.03 , 1.14 )<br>( N/A , 0.04 , 0.0) | 1145.6<br>1150.2 | 1.4771<br>98.7<br>98.7 | 8.6528 | N/A | 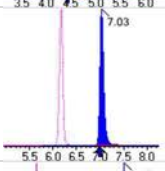 | 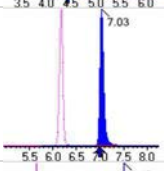 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 900697<br>( 441.0 / 337.0 ) 812428 | ( 9.46 , 1.53 )<br>( N/A , 0.05 , 0.0) | 4896.4<br>36251.7 | 0.9020<br>101.3<br>101.3 | 8.0383 | N/A | 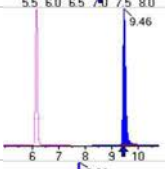 | 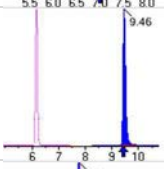 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 643408<br>( 357.2 / 243.0 ) 70965 | ( 6.91 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1339.3<br>459.1 | 0.1103<br>104.5<br>104.5 | 2.0795 | N/A | 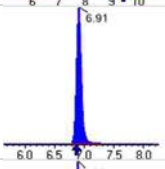 | 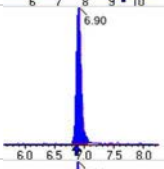 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 491480<br>( 457.2 / 343.0 ) 19210 | ( 8.99 , 1.00 )<br>( -0.01 , N/A , 0.2) | 760.7<br>219.5 | 0.0391<br>99.9<br>99.9 | 2.1727 | N/A | 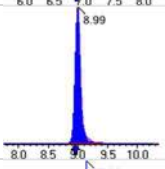 | 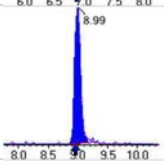 | |
| TDCA | ( 499.0 / 80.0 ) 1687279 | ( 10.69 , 1.00 )<br>( N/A , 0.05 , 0.0) | 15998.8 | N/A<br>0.0<br>0.0 | 2.1803 | N/A | 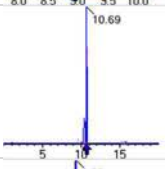 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 295986 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1248.7 | N/A | 0.9825<br>[ 1.0000 ] | 98.3%<br>{ 97.6% } | 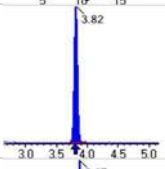 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 149378 | ( 6.17 , N/A )<br>( N/A , 0.04 , N/A ) | 119082.3 | N/A | 0.9715<br>[ 1.0000 ] | 97.1%<br>{ 90.5% } | 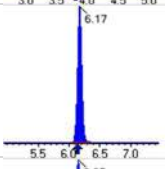 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 425892 | ( 8.35 , N/A )<br>( N/A , 0.04 , N/A ) | 3638.8 | N/A | 0.9546<br>[ 1.0000 ] | 95.5%<br>{ 93.7% } | 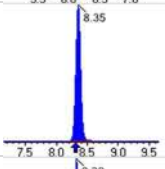 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317861 | ( 9.32 , N/A )<br>( N/A , 0.05 , N/A ) | 1164.1 | N/A | 0.9508<br>[ 1.0000 ] | 95.1%<br>{ 97.5% } | 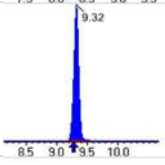 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 327849 | ( 10.23 , N/A ) ( N/A , 0.05 , N/A ) | 8291.8 | N/A | 0.9886 [ 1.0000 ] | 98.9% { 96.4% } | 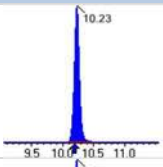 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1069801 | ( 8.82 , N/A ) ( N/A , 0.05 , N/A ) | 4716.7 | N/A | 0.9574 [ 1.0000 ] | 95.7% { 93.9% } | 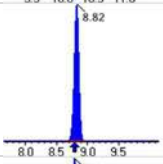 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 941416 | ( 10.70 , N/A ) ( N/A , 0.05 , N/A ) | 3293.9 | N/A | 0.9644 [ 1.0000 ] | 96.4% { 94.6% } | 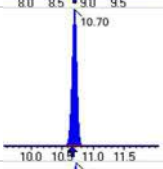 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2701285 | ( 3.81 , N/A ) ( N/A , 0.02 , N/A ) | 56552.0 | N/A | 8.2759 [ 8.0000 ] | 103.4% { 101.7% } | 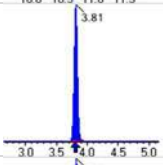 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1132032 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 5141.1 | N/A | 4.2243 [ 4.0000 ] | 105.6% { 97.7% } | 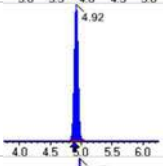 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 648702 | ( 6.17 , N/A ) ( N/A , 0.04 , N/A ) | 6211.3 | N/A | 2.0225 [ 2.0000 ] | 101.1% { 94.7% } | 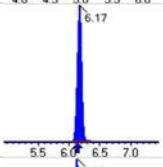 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659326 | ( 7.33 , N/A ) ( N/A , 0.04 , N/A ) | 4612.8 | N/A | 1.9682 [ 2.0000 ] | 98.4% { 93.6% } | 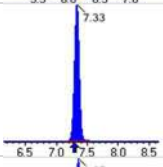 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 942089 | ( 8.35 , N/A ) ( N/A , 0.05 , N/A ) | 3344.2 | N/A | 2.0980 [ 2.0000 ] | 104.9% { 98.8% } | 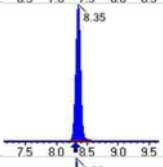 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 336383 | ( 9.32 , N/A ) ( N/A , 0.05 , N/A ) | 2517.4 | N/A | 1.0959 [ 1.0000 ] | 109.6% { 108.2% } | 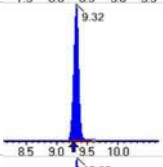 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 393878 | ( 10.23 , N/A ) ( N/A , 0.05 , N/A ) | 1236.8 | N/A | 1.0411 [ 1.0000 ] | 104.1% { 102.3% } | 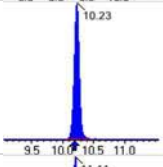 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 475029 | ( 11.11 , N/A ) ( N/A , 0.05 , N/A ) | 1009.6 | N/A | 1.0327 [ 1.0000 ] | 103.3% { 95.5% } | 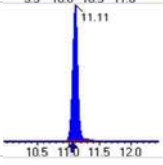 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 449047 | ( 11.92 , N/A ) ( N/A , 0.05 , N/A ) | 1328.0 | N/A | 0.9721 [ 1.0000 ] | 97.2% { 90.0% } | 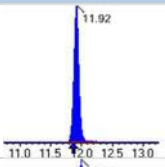 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 398686 | ( 13.00 , N/A ) ( N/A , 0.04 , N/A ) | 1829.1 | N/A | 0.9905 [ 1.0000 ] | 99.1% { 94.0% } | 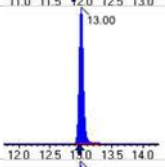 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 711674 | ( 13.79 , N/A ) ( N/A , 0.02 , N/A ) | 3142.8 | N/A | 2.0816 [ 2.0000 ] | 104.1% { 100.5% } | 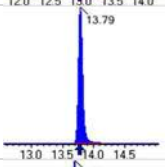 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2179603 | ( 6.49 , N/A ) ( N/A , 0.03 , N/A ) | 1290.4 | N/A | 2.0911 [ 2.0000 ] | 104.6% { 94.4% } | 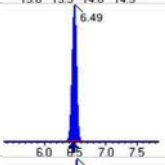 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1596157 | ( 8.82 , N/A ) ( N/A , 0.05 , N/A ) | 6148.5 | N/A | 2.0389 [ 2.0000 ] | 101.9% { 97.0% } | 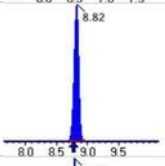 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1970109 | ( 10.70 , N/A ) ( N/A , 0.05 , N/A ) | 1259.7 | N/A | 1.9658 [ 2.0000 ] | 98.3% { 93.8% } | 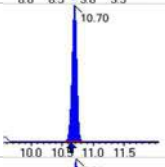 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 415740 | ( 5.62 , N/A ) ( N/A , 0.03 , N/A ) | 87.2 | N/A | 4.4626 [ 4.0000 ] | 111.6% { 115.5% } | 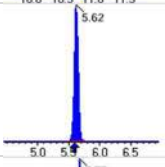 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1228923 | ( 7.77 , N/A ) ( N/A , 0.04 , N/A ) | 3779.8 | N/A | 4.2479 [ 4.0000 ] | 106.2% { 114.4% } | 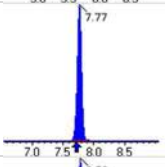 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1311211 | ( 9.58 , N/A ) ( N/A , 0.05 , N/A ) | 1343.1 | N/A | 4.5492 [ 4.0000 ] | 113.7% { 112.6% } | 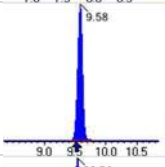 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2899664 | ( 11.24 , N/A ) ( N/A , 0.06 , N/A ) | 1891.9 | N/A | 8.7643 [ 8.0000 ] | 109.6% { 115.8% } | 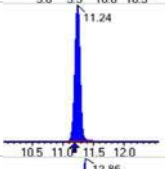 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2319798 | ( 12.86 , N/A ) ( N/A , 0.03 , N/A ) | 1830.7 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 99.6% } | 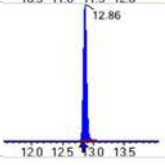 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 389582 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 2084.1 | N/A | 1.9426 [ 2.0000 ] | 97.1% { 92.0% } | 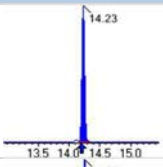  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 466589 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2902.8 | N/A | 2.0255 [ 2.0000 ] | 101.3% { 93.9% } | 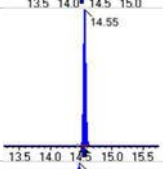  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1072122 | ( 10.47 , N/A ) ( N/A , 0.06 , N/A ) | 2757.6 | N/A | 4.1773 [ 4.0000 ] | 104.4% { 99.2% } | 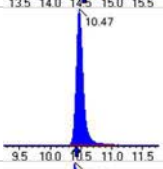  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1008512 | ( 11.00 , N/A ) ( N/A , 0.06 , N/A ) | 1763.4 | N/A | 4.1395 [ 4.0000 ] | 103.5% { 96.2% } | 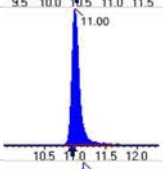  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1984960 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 2836.8 | N/A | 21.1824 [ 20.0000 ] | 105.9% { 105.5% } | 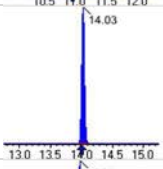  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2454876 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 5979.2 | N/A | 21.6255 [ 20.0000 ] | 108.1% { 104.0% } | 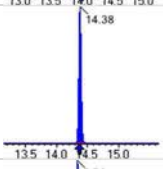  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148987 | ( 6.64 , N/A ) ( N/A , 0.04 , N/A ) | 2506.6 | N/A | 8.3341 [ 8.0000 ] | 104.2% { 101.3% } | 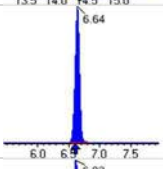  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575717 | ( 6.92 , N/A ) ( N/A , 0.04 , N/A ) | 1216.0 | N/A | 1.9800 [ 2.0000 ] | 99.0% { 98.2% } | 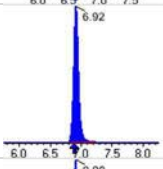  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 536414 | ( 9.00 , N/A ) ( N/A , 0.05 , N/A ) | 794.9 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 95.1% } | 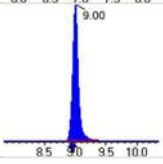  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2896659<br>( 163.0 / 69.0 ) 72613 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.2) | 15036.3<br>3067.3 | 0.0251<br>100.0<br>100.0 | 9.8578 | N/A | 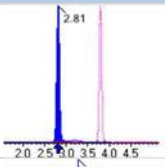 | 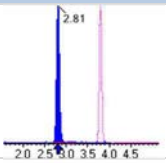 | |
| PFBA | ( 213.0 / 169.0 ) 6141279 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 7081.0 | N/A<br>0.0<br>0.0 | 19.5443 | N/A | 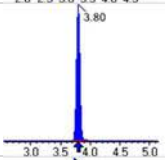 | | |
| PFPeA | ( 263.0 / 219.0 ) 2815339<br>( 263.0 / 69.0 ) 30920 | ( 4.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 5200.9<br>437.8 | 0.0110<br>100.0<br>100.0 | 9.5499 | N/A | 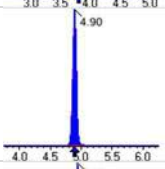 | 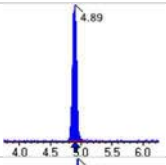 | |
| PFHxA | ( 313.0 / 269.0 ) 1537054<br>( 313.0 / 119.0 ) 170783 | ( 6.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 2942.0<br>1354.1 | 0.1111<br>100.0<br>100.0 | 4.6336 | N/A | 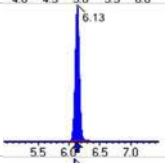 | 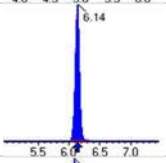 | |
| PFHpA | ( 363.0 / 319.0 ) 1626195<br>( 363.0 / 169.0 ) 506800 | ( 7.29 , 1.00 ) ( 0.00 , N/A , 0.0) | 1520.9<br>1256.4 | 0.3116<br>100.0<br>100.0 | 4.6857 | N/A | 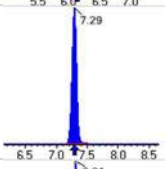 | 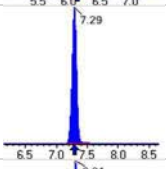 | |
| PFOA | ( 413.0 / 369.0 ) 2241902<br>( 413.0 / 169.0 ) 810969 | ( 8.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1228.2<br>1124.5 | 0.3617<br>100.0<br>100.0 | 4.6236 | N/A | 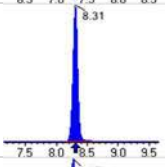 | 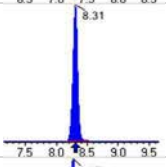 | |
| PFNA | ( 463.0 / 419.0 ) 1548787<br>( 463.0 / 169.0 ) 406513 | ( 9.27 , 1.00 ) ( -0.01 , N/A , 0.0) | 1191.6<br>1069.1 | 0.2625<br>100.0<br>100.0 | 4.9712 | N/A | 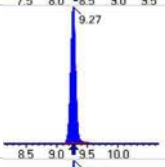 | 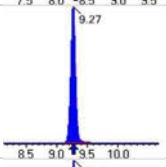 | |
| PFDA | ( 513.0 / 469.0 ) 1768941<br>( 513.0 / 169.0 ) 207647 | ( 10.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 3473.7<br>2696.0 | 0.1174<br>100.0<br>100.0 | 4.6148 | N/A | 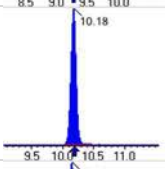 | 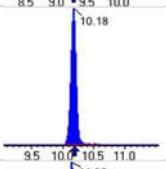 | |
| PFUnA | ( 563.0 / 519.0 ) 2132736<br>( 563.0 / 169.0 ) 315834 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 983.9<br>664.8 | 0.1481<br>100.0<br>100.0 | 4.5923 | N/A | 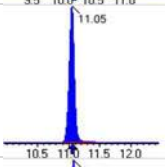 | 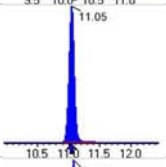 | |
| PFDoA | ( 613.0 / 569.0 ) 2329744<br>( 613.0 / 169.0 ) 368367 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1469.3<br>1190.7 | 0.1581<br>100.0<br>100.0 | 4.5629 | N/A | 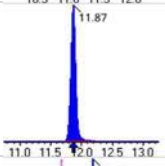 | 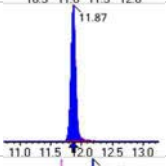 | |
| PFTrDA | ( 663.0 / 619.0 ) 2335306<br>( 663.0 / 169.0 ) 629323 | ( 12.47 , 1.05 ) ( N/A , 0.00 , 0.0) | 1617.7<br>1255.7 | 0.2695<br>100.0<br>100.0 | 4.7571 | N/A | 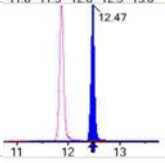 | 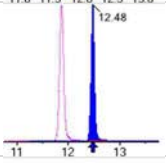 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1893340<br>( 713.0 / 169.0 ) 492228 | ( 12.96 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1540.7<br>1153.6 | 0.2600<br>100.0<br>100.0 | 4.7015 | N/A | 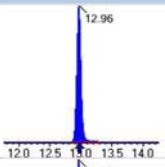 | 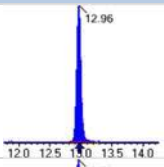 | |
| PFHxDA | ( 813.0 / 769.0 ) 1682359<br>( 813.0 / 169.0 ) 365028 | ( 13.76 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2286.0<br>1135.8 | 0.2170<br>100.0<br>100.0 | 4.9209 | N/A | 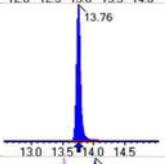 | 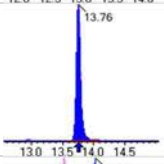 | |
| PFODA | ( 913.0 / 869.0 ) 1040102<br>( 913.0 / 169.0 ) 397315 | ( 14.38 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1613.4<br>1062.5 | 0.3820<br>100.0<br>100.0 | 4.5281 | N/A | 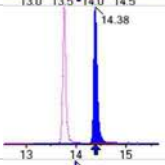 | 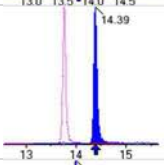 | |
| PFBS | ( 299.0 / 80.0 ) 2470833<br>( 299.0 / 99.0 ) 1756548 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4520.0<br>2789.0 | 0.7109<br>100.0<br>100.0 | 4.1141 | N/A | 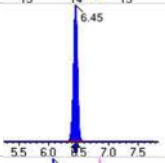 | 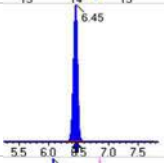 | |
| PFPeS | ( 349.0 / 80.0 ) 6245142<br>( 349.0 / 99.0 ) 2123897 | ( 7.70 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2664.4<br>3558.8 | 0.3401<br>100.0<br>100.0 | 4.7658 | N/A | 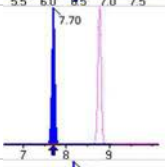 | 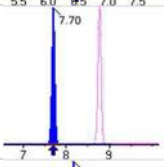 | |
| PFHxS | ( 399.0 / 80.0 ) 6662479<br>( 399.0 / 99.0 ) 2083343 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4634.6<br>7041.2 | 0.3127<br>100.0<br>100.0 | 4.5720 | N/A | 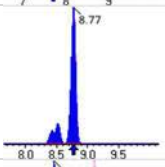 | 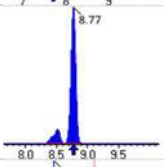 | |
| PFHpS | ( 449.0 / 80.0 ) 5583795<br>( 449.0 / 99.0 ) 1491858 | ( 9.75 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2809.4<br>2620.8 | 0.2672<br>100.0<br>100.0 | 4.6269 | N/A | 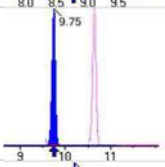 | 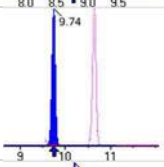 | |
| PFOS | ( 499.0 / 80.0 ) 5338415<br>( 499.0 / 99.0 ) 1262797 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3004.8<br>4975.0 | 0.2365<br>100.0<br>100.0 | 4.3966 | N/A | 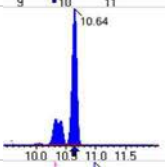 | 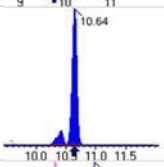 | |
| PFNS | ( 549.0 / 80.0 ) 5531273<br>( 549.0 / 99.0 ) 1469562 | ( 11.49 , 1.08 )<br>( N/A , 0.00 , 0.2) | 2749.5<br>2095.6 | 0.2657<br>100.0<br>100.0 | 4.6714 | N/A | 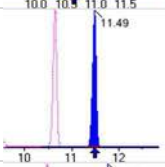 | 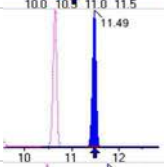 | |
| PFDS | ( 599.0 / 80.0 ) 6932369<br>( 599.0 / 99.0 ) 1738495 | ( 12.17 , 1.14 )<br>( N/A , 0.00 , 0.0) | 3750.8<br>2858.0 | 0.2508<br>100.0<br>100.0 | 4.9120 | N/A | 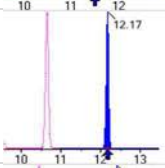 | 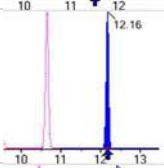 | |
| PFDoS | ( 699.0 / 80.0 ) 5850833<br>( 699.0 / 99.0 ) 1349552 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.0) | 4828.8<br>4621.0 | 0.2307<br>100.0<br>100.0 | 4.8516 | N/A | 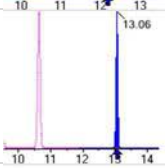 | 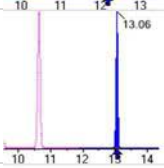 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 4567618<br>( 327.0 / 81.0 ) 4001943 | ( 5.59 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4763.7<br>3804.3 | 0.8762<br>100.0<br>100.0 | 18.8567 | N/A | 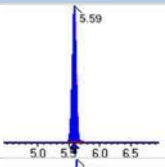 | 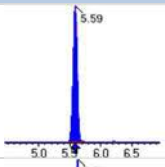 | |
| 6:2FTS | ( 427.0 / 407.0 ) 4418720<br>( 427.0 / 81.0 ) 5613773 | ( 7.72 , 1.00 )<br>( -0.01 , N/A , -0.3) | 3929.7<br>3706.1 | 1.2705<br>100.0<br>100.0 | 18.5251 | N/A | 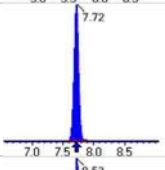 | 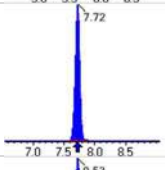 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5786740<br>( 527.0 / 81.0 ) 5487076 | ( 9.53 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1549.2<br>1273.7 | 0.9482<br>100.0<br>100.0 | 20.0600 | N/A | 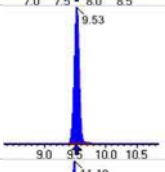 | 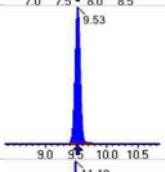 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4971050<br>( 627.0 / 81.0 ) 6719275 | ( 11.19 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1138.2<br>1309.4 | 1.3517<br>100.0<br>100.0 | 19.3038 | N/A | 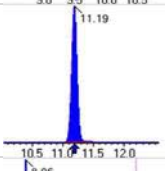 | 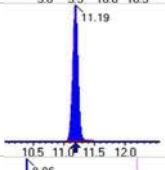 | |
| PFBSA | ( 297.9 / 78.0 ) 4660437<br>( 297.9 / 278.0 ) 6543 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , 0.2) | 1090.0<br>92.6 | 0.0014<br>100.0<br>100.0 | 4.7886 | N/A | 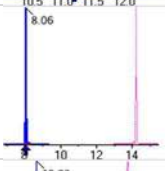 | 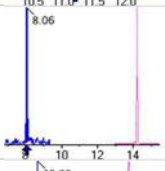 | |
| PFHxSA | ( 397.9 / 78.0 ) 6088955<br>( 397.9 / 378.0 ) 23184 | ( 10.93 , 0.75 )<br>( N/A , 0.00 , 0.1) | 1453.6<br>288.7 | 0.0038<br>100.0<br>100.0 | 4.7782 | N/A | 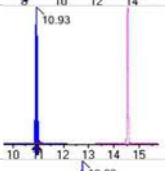 | 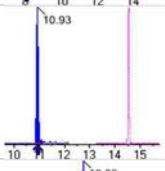 | |
| PFOSA | ( 498.0 / 78.0 ) 5581904<br>( 498.0 / 478.0 ) 80548 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2176.7<br>828.8 | 0.0144<br>100.0<br>100.0 | 4.9127 | N/A | 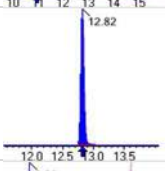 | 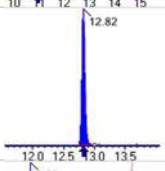 | |
| TFSI | ( 279.7 / 147.0 ) 12018072<br>( 279.7 / 211.0 ) 991097 | ( 8.36 , 0.65 )<br>( N/A , 0.00 , 0.0) | 70.0<br>61.2 | 0.0825<br>100.0<br>100.0 | 4.9754 | N/A | 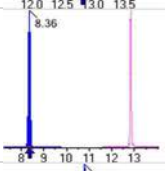 | 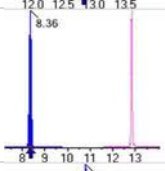 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4136100<br>( 512.0 / 169.0 ) 3040082 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.1) | 3601.6<br>1346.0 | 0.7350<br>100.0<br>100.0 | 19.4015 | N/A | 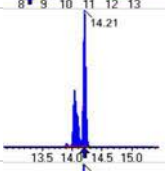 | 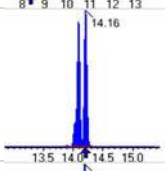 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5272521<br>( 526.0 / 169.0 ) 6678528 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.1) | 4965.7<br>4309.5 | 1.2667<br>100.0<br>100.0 | 19.3393 | N/A | 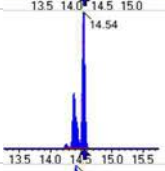 | 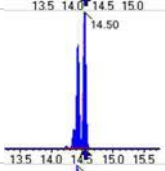 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1266534<br>( 570.0 / 483.0 ) 548402 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , -0.2) | 4168.6<br>1584.8 | 0.4330<br>100.0<br>100.0 | 4.9755 | N/A | 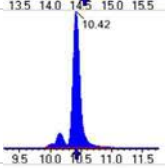 | 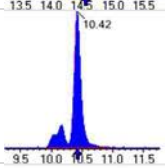 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1215456<br>( 584.0 / 526.0 ) 752561 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.1) | 2140.4<br>802.7 | 0.6192<br>100.0<br>100.0 | 4.8084 | N/A | 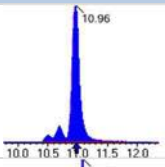 | 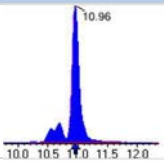 | |
| NMeFOSE | ( 616.0 / 59.0 ) 2107237 | ( 14.02 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3196.3 | N/A<br>0.0<br>0.0 | 19.7811 | N/A | 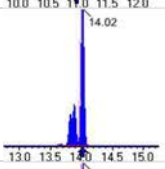 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2097072 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4259.2 | N/A<br>0.0<br>0.0 | 20.1165 | N/A | 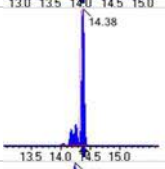 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 383740<br>( 285.0 / 185.0 ) 1195799 | ( 6.60 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1667.6<br>1885.9 | 3.1162<br>100.0<br>100.0 | 4.7678 | N/A | 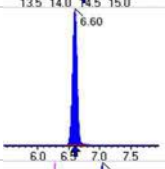 | 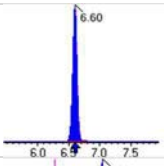 | |
| ADONA | ( 377.0 / 85.0 ) 4983578<br>( 377.0 / 251.0 ) 531307 | ( 7.68 , 1.16 )<br>( N/A , 0.00 , -0.1) | 1596.0<br>1569.5 | 0.1066<br>100.0<br>100.0 | 4.8620 | N/A | 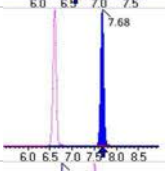 | 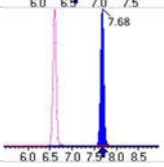 | |
| PFMPA | ( 229.0 / 85.0 ) 884560 | ( 4.19 , 0.86 )<br>( N/A , 0.00 , 0.0) | 8668.8 | N/A<br>0.0<br>0.0 | 9.4772 | N/A | 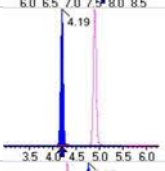 | | |
| PFMBA | ( 279.0 / 85.0 ) 2280385 | ( 5.27 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5544.9 | N/A<br>0.0<br>0.0 | 9.2307 | N/A | 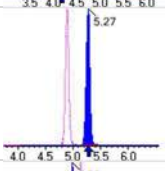 | | |
| NFDHA | ( 295.0 / 201.0 ) 1119266<br>( 295.0 / 85.0 ) 1210627 | ( 5.99 , 0.98 )<br>( N/A , 0.00 , -0.1) | 2611.1<br>2676.9 | 1.0816<br>100.0<br>100.0 | 9.7062 | N/A | 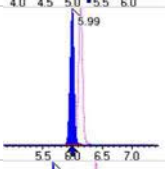 | 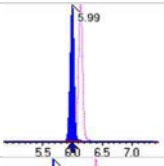 | |
| PFECHS | ( 461.0 / 98.9 ) 2922607<br>( 461.0 / 381.2 ) 1141147 | ( 9.67 , 0.91 )<br>( N/A , 0.00 , 0.0) | 3902.9<br>4329.5 | 0.3905<br>100.0<br>100.0 | 4.2682 | N/A | 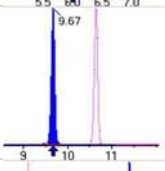 | 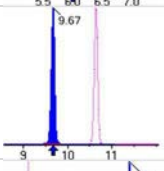 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5871891<br>( 533.0 / 353.0 ) 1887630 | ( 11.30 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2755.4<br>2594.1 | 0.3215<br>100.0<br>100.0 | 4.6421 | N/A | 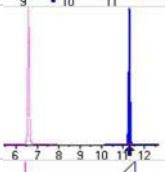 | 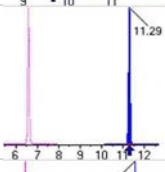 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4724946<br>( 633.0 / 453.0 ) 1543120 | ( 12.56 , 1.90 )<br>( N/A , 0.00 , 0.0) | 4004.8<br>2990.5 | 0.3266<br>100.0<br>100.0 | 4.7689 | N/A | 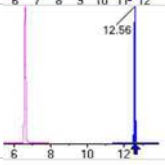 | 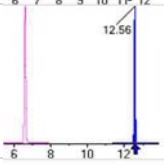 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2146025<br>( 315.0 / 83.0 ) 1229605 | ( 7.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2953.2<br>2319.6 | 0.5730<br>100.0<br>100.0 | 8.6015 | N/A | 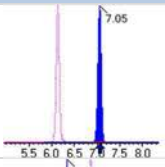 | 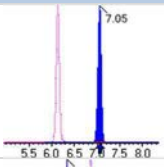 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 272272<br>( 241.0 / 117.0 ) 604079 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.0) | 2617.6<br>1994.7 | 2.2187<br>100.0<br>100.0 | 19.0109 | N/A | 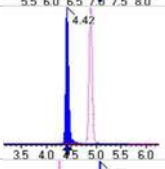 | 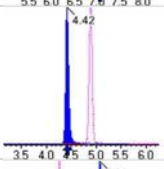 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1547604<br>( 341.0 / 217.0 ) 2317035 | ( 7.00 , 1.14 )<br>( N/A , 0.00 , 0.1) | 1143.1<br>1153.5 | 1.4972<br>100.0<br>100.0 | 19.2496 | N/A | 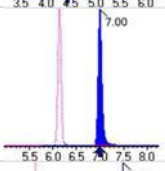 | 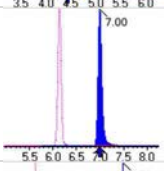 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2228212<br>( 441.0 / 337.0 ) 1983202 | ( 9.41 , 1.53 )<br>( N/A , 0.00 , -0.1) | 7555.6<br>6797.3 | 0.8900<br>100.0<br>100.0 | 18.8403 | N/A | 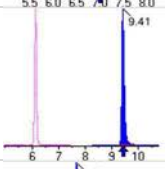 | 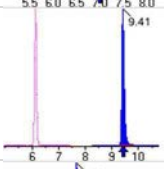 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1540114<br>( 357.2 / 243.0 ) 162569 | ( 6.87 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1398.7<br>675.5 | 0.1056<br>100.0<br>100.0 | 4.8900 | N/A | 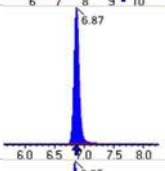 | 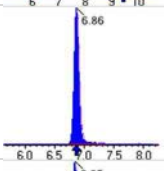 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1159358<br>( 457.2 / 343.0 ) 45367 | ( 8.95 , 1.00 )<br>( -0.01 , N/A , 0.0) | 709.0<br>447.7 | 0.0391<br>100.0<br>100.0 | 4.8723 | N/A | 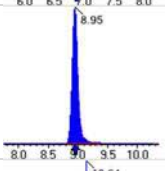 | 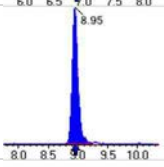 | |
| TDCA | ( 499.0 / 80.0 ) 3910401 | ( 10.64 , 1.00 )<br>( N/A , 0.00 , 0.0) | 23040.8 | N/A<br>0.0<br>0.0 | 4.7390 | N/A | 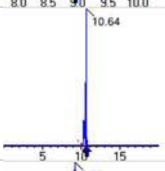 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 303221 | ( 3.80 , N/A )<br>( N/A , 0.00 , N/A ) | 1260.9 | N/A | 1.0065<br>[ 1.0000 ] | 100.7%<br>{ 100.0% } | 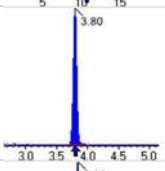 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 165003 | ( 6.14 , N/A )<br>( N/A , 0.00 , N/A ) | 136099.4 | N/A | 1.0731<br>[ 1.0000 ] | 107.3%<br>{ 100.0% } | 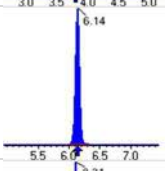 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 454682 | ( 8.31 , N/A )<br>( N/A , 0.00 , N/A ) | 3812.0 | N/A | 1.0192<br>[ 1.0000 ] | 101.9%<br>{ 100.0% } | 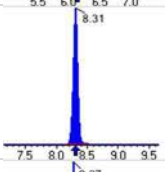 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 325896 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1082.0 | N/A | 0.9749<br>[ 1.0000 ] | 97.5%<br>{ 100.0% } | 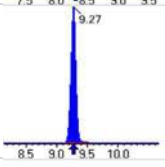 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 340046 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 17935.0 | N/A | 1.0254 [ 1.0000 ] | 102.5% { 100.0% } | 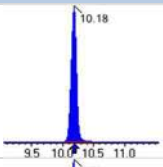  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1139651 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4282.1 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 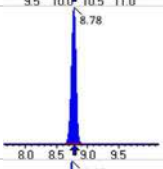  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 995584 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 4670.3 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 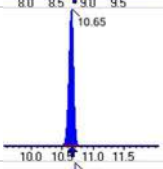  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2657124 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 43637.8 | N/A | 7.9464 [ 8.0000 ] | 99.3% { 100.0% } | 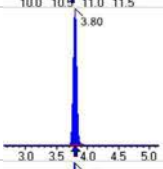  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1158355 | ( 4.89 , N/A ) ( N/A , 0.00 , N/A ) | 6074.2 | N/A | 3.9132 [ 4.0000 ] | 97.8% { 100.0% } | 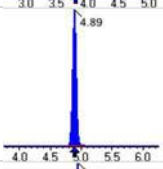  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 684701 | ( 6.13 , N/A ) ( N/A , 0.00 , N/A ) | 8902.8 | N/A | 1.9326 [ 2.0000 ] | 96.6% { 100.0% } | 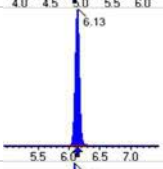  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 704754 | ( 7.29 , N/A ) ( N/A , 0.00 , N/A ) | 5580.3 | N/A | 1.9046 [ 2.0000 ] | 95.2% { 100.0% } | 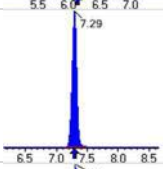  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 953656 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 3562.5 | N/A | 1.9893 [ 2.0000 ] | 99.5% { 100.0% } | 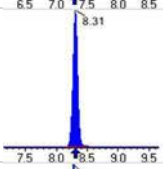  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 310906 | ( 9.27 , N/A ) ( N/A , 0.00 , N/A ) | 2463.6 | N/A | 0.9879 [ 1.0000 ] | 98.8% { 100.0% } | 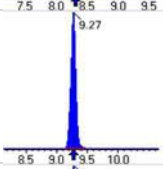  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 384895 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 1132.1 | N/A | 0.9809 [ 1.0000 ] | 98.1% { 100.0% } | 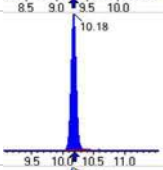  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 497340 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 832.8 | N/A | 1.0425 [ 1.0000 ] | 104.2% { 100.0% } | 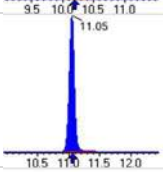  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 498870 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1510.0 | N/A | 1.0413 [ 1.0000 ] | 104.1% { 100.0% } | 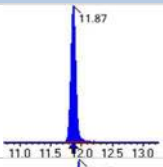  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 424042 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1339.5 | N/A | 1.0157 [ 1.0000 ] | 101.6% { 100.0% } | 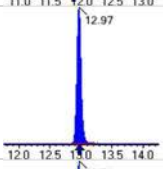  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 708437 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3403.3 | N/A | 1.9978 [ 2.0000 ] | 99.9% { 100.0% } | 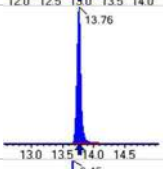  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2309943 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1219.6 | N/A | 2.0803 [ 2.0000 ] | 104.0% { 100.0% } | 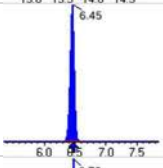  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1645728 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 5644.6 | N/A | 1.9734 [ 2.0000 ] | 98.7% { 100.0% } | 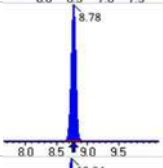  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2100694 | ( 10.64 , N/A ) ( N/A , 0.00 , N/A ) | 1507.8 | N/A | 1.9820 [ 2.0000 ] | 99.1% { 100.0% } | 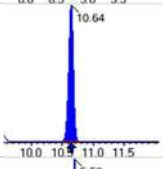  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 359830 | ( 5.59 , N/A ) ( N/A , 0.00 , N/A ) | 84.4 | N/A | 3.6258 [ 4.0000 ] | 90.6% { 100.0% } | 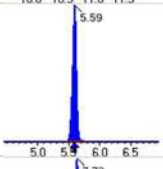  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1074003 | ( 7.73 , N/A ) ( N/A , 0.00 , N/A ) | 5008.6 | N/A | 3.4848 [ 4.0000 ] | 87.1% { 100.0% } | 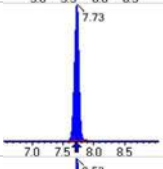  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1164627 | ( 9.53 , N/A ) ( N/A , 0.00 , N/A ) | 1043.7 | N/A | 3.7930 [ 4.0000 ] | 94.8% { 100.0% } | 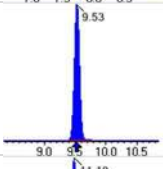  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2503774 | ( 11.18 , N/A ) ( N/A , 0.00 , N/A ) | 1638.9 | N/A | 7.1039 [ 8.0000 ] | 88.8% { 100.0% } | 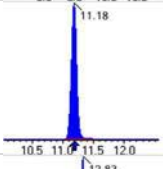  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2328466 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2616.5 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 100.0% } | 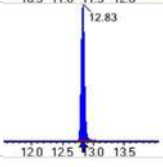  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 423319 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2725.6 | N/A | 1.9960 [ 2.0000 ] | 99.8% { 100.0% } | 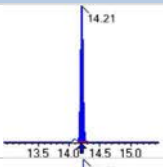  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 496914 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 3542.0 | N/A | 2.0398 [ 2.0000 ] | 102.0% { 100.0% } | 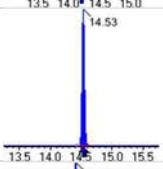  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1081175 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2605.9 | N/A | 3.9834 [ 4.0000 ] | 99.6% { 100.0% } | 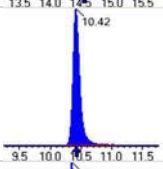  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1048167 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 1847.6 | N/A | 4.0682 [ 4.0000 ] | 101.7% { 100.0% } | 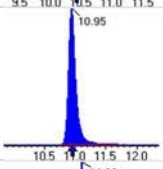  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1882014 | ( 14.00 , N/A ) ( N/A , 0.00 , N/A ) | 2694.7 | N/A | 18.9910 [ 20.0000 ] | 95.0% { 100.0% } | 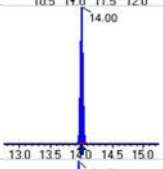  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2359639 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 4853.3 | N/A | 19.6556 [ 20.0000 ] | 98.3% { 100.0% } | 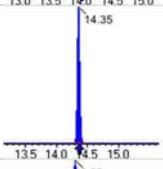  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1134242 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2358.9 | N/A | 7.4481 [ 8.0000 ] | 93.1% { 100.0% } | 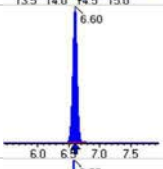  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 586030 | ( 6.88 , N/A ) ( N/A , 0.00 , N/A ) | 1615.1 | N/A | 1.9431 [ 2.0000 ] | 97.2% { 100.0% } | 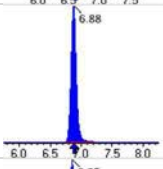  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 564269 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 604.6 | N/A | 2.0041 [ 2.0000 ] | 100.2% { 100.0% } | 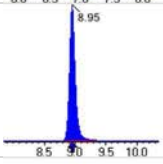  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 5378030<br>( 163.0 / 69.0 ) 135866 | ( 2.83 , 0.74 ) ( N/A , 0.02 , 0.0) | 28525.5<br>5580.8 | 0.0253<br>100.8<br>100.8 | 20.7339 | N/A | 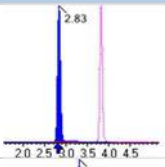 | 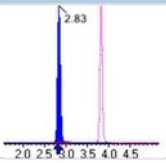 | |
| PFBA | ( 213.0 / 169.0 ) 11319821 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 10292.4 | N/A<br>0.0<br>0.0 | 40.8109 | N/A | 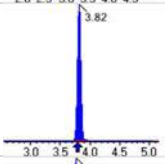 | | |
| PFPeA | ( 263.0 / 219.0 ) 5426856<br>( 263.0 / 69.0 ) 64070 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.1) | 6484.6<br>796.2 | 0.0118<br>107.5<br>107.5 | 19.8576 | N/A | 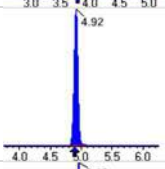 | 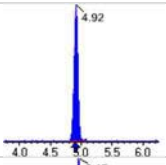 | |
| PFHxA | ( 313.0 / 269.0 ) 3132131<br>( 313.0 / 119.0 ) 352582 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 2919.8<br>2514.3 | 0.1126<br>101.3<br>101.3 | 10.0740 | N/A | 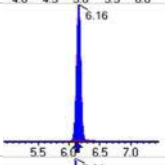 | 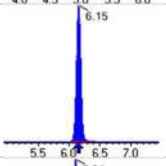 | |
| PFHpA | ( 363.0 / 319.0 ) 3316003<br>( 363.0 / 169.0 ) 973035 | ( 7.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1611.7<br>1562.3 | 0.2934<br>94.2<br>94.2 | 10.3656 | N/A | 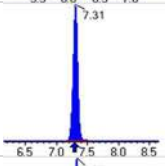 | 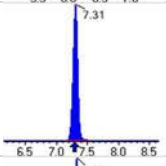 | |
| PFOA | ( 413.0 / 369.0 ) 4435417<br>( 413.0 / 169.0 ) 1605144 | ( 8.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 1451.3<br>1758.0 | 0.3619<br>100.0<br>100.0 | 9.3611 | N/A | 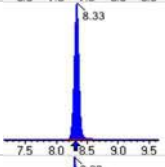 | 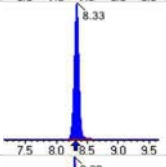 | |
| PFNA | ( 463.0 / 419.0 ) 3071368<br>( 463.0 / 169.0 ) 754950 | ( 9.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 1373.7<br>1257.6 | 0.2458<br>93.6<br>93.6 | 10.0666 | N/A | 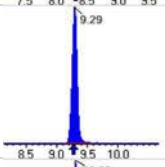 | 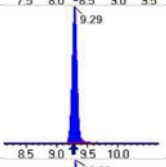 | |
| PFDA | ( 513.0 / 469.0 ) 3483470<br>( 513.0 / 169.0 ) 425656 | ( 10.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 3900.1<br>4832.9 | 0.1222<br>104.1<br>104.1 | 9.3078 | N/A | 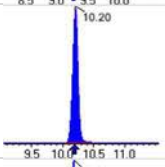 | 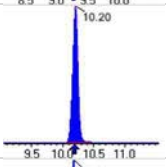 | |
| PFUnA | ( 563.0 / 519.0 ) 4012760<br>( 563.0 / 169.0 ) 611536 | ( 11.08 , 1.00 ) ( 0.00 , N/A , 0.0) | 1096.4<br>925.9 | 0.1524<br>102.9<br>102.9 | 9.6647 | N/A | 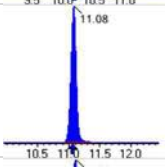 | 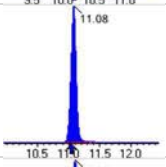 | |
| PFDoA | ( 613.0 / 569.0 ) 4687393<br>( 613.0 / 169.0 ) 681381 | ( 11.89 , 1.00 ) ( 0.00 , N/A , 0.1) | 1397.6<br>1270.3 | 0.1454<br>91.9<br>91.9 | 9.6086 | N/A | 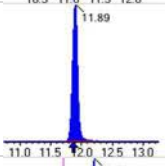 | 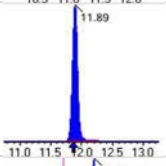 | |
| PFTrDA | ( 663.0 / 619.0 ) 4597133<br>( 663.0 / 169.0 ) 1185711 | ( 12.50 , 1.05 ) ( N/A , 0.02 , 0.1) | 1653.1<br>1316.2 | 0.2579<br>95.7<br>95.7 | 9.8014 | N/A | 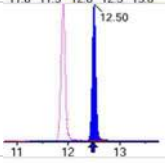 | 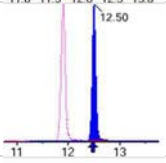 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3744996<br>( 713.0 / 169.0 ) 978784 | ( 12.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1989.0<br>1160.5 | 0.2614<br>100.5<br>100.5 | 9.6620 | N/A | 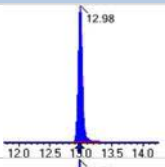 | 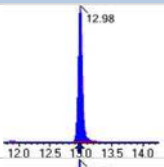 | |
| PFHxDA | ( 813.0 / 769.0 ) 3079749<br>( 813.0 / 169.0 ) 761911 | ( 13.78 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2580.8<br>1678.0 | 0.2474<br>114.0<br>114.0 | 10.2254 | N/A | 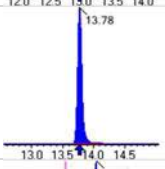 | 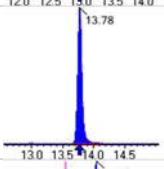 | |
| PFODA | ( 913.0 / 869.0 ) 2190436<br>( 913.0 / 169.0 ) 793319 | ( 14.40 , 1.05 )<br>( N/A , 0.02 , 0.1) | 2664.5<br>1927.3 | 0.3622<br>94.8<br>94.8 | 10.8244 | N/A | 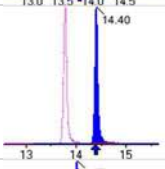 | 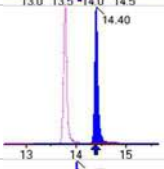 | |
| PFBS | ( 299.0 / 80.0 ) 4798533<br>( 299.0 / 99.0 ) 3500195 | ( 6.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4308.3<br>3466.7 | 0.7294<br>102.6<br>102.6 | 8.8005 | N/A | 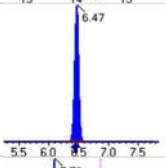 | 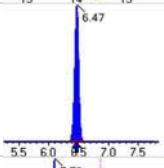 | |
| PFPeS | ( 349.0 / 80.0 ) 12278795<br>( 349.0 / 99.0 ) 4316220 | ( 7.72 , 0.88 )<br>( N/A , 0.02 , 0.1) | 3181.8<br>3225.6 | 0.3515<br>103.4<br>103.4 | 9.5481 | N/A | 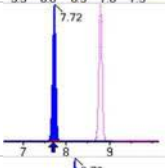 | 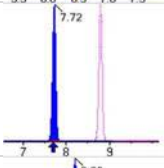 | |
| PFHxS | ( 399.0 / 80.0 ) 12534184<br>( 399.0 / 99.0 ) 4132575 | ( 8.79 , 1.00 )<br>( 0.00 , N/A , -0.2) | 4084.9<br>4986.6 | 0.3297<br>105.4<br>105.4 | 8.7645 | N/A | 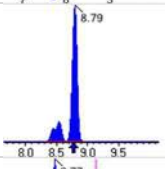 | 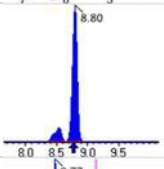 | |
| PFHpS | ( 449.0 / 80.0 ) 11262481<br>( 449.0 / 99.0 ) 2908577 | ( 9.77 , 0.92 )<br>( N/A , 0.02 , -0.1) | 2270.6<br>2305.9 | 0.2583<br>96.7<br>96.7 | 10.0195 | N/A | 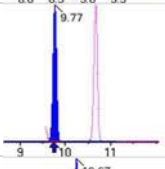 | 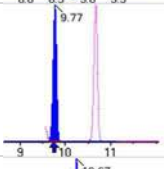 | |
| PFOS | ( 499.0 / 80.0 ) 10174885<br>( 499.0 / 99.0 ) 2343775 | ( 10.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3555.4<br>6439.0 | 0.2303<br>97.4<br>97.4 | 8.9968 | N/A | 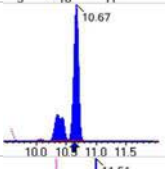 | 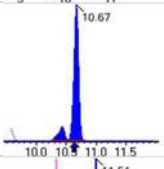 | |
| PFNS | ( 549.0 / 80.0 ) 10908192<br>( 549.0 / 99.0 ) 2799302 | ( 11.51 , 1.08 )<br>( N/A , 0.02 , 0.0) | 2448.8<br>2619.5 | 0.2566<br>96.6<br>96.6 | 9.8908 | N/A | 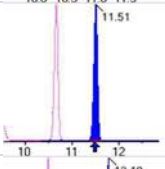 | 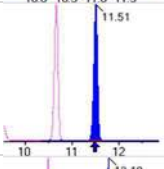 | |
| PFDS | ( 599.0 / 80.0 ) 13371200<br>( 599.0 / 99.0 ) 3616978 | ( 12.19 , 1.14 )<br>( N/A , 0.02 , -0.1) | 3474.9<br>3189.0 | 0.2705<br>107.9<br>107.9 | 10.1718 | N/A | 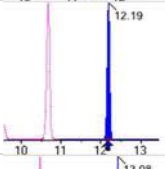 | 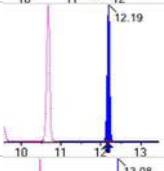 | |
| PFDoS | ( 699.0 / 80.0 ) 11771848<br>( 699.0 / 99.0 ) 2814513 | ( 13.08 , 1.23 )<br>( N/A , 0.02 , 0.0) | 5374.9<br>4638.4 | 0.2391<br>103.7<br>103.7 | 10.4802 | N/A | 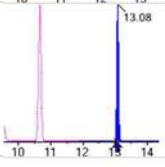 | 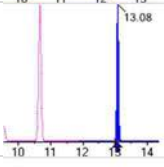 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 8592242<br>( 327.0 / 81.0 ) 7650817 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5605.3<br>4278.6 | 0.8904<br>101.6<br>101.6 | 35.7047 | N/A | 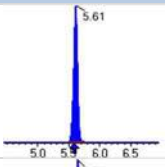 | 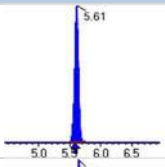 | |
| 6:2FTS | ( 427.0 / 407.0 ) 7990655<br>( 427.0 / 81.0 ) 9527692 | ( 7.74 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3864.3<br>3689.9 | 1.1924<br>93.9<br>93.9 | 40.5006 | N/A | 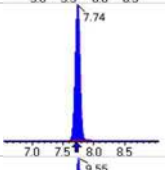 | 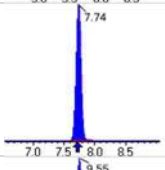 | |
| 8:2FTS | ( 527.0 / 507.0 ) 9595304<br>( 527.0 / 81.0 ) 9786215 | ( 9.55 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1355.0<br>1104.9 | 1.0199<br>107.6<br>107.6 | 37.6973 | N/A | 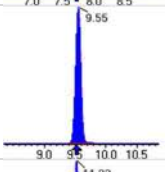 | 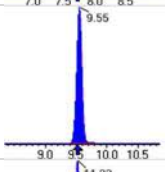 | |
| 10:2FTS | ( 627.0 / 607.0 ) 8687929<br>( 627.0 / 81.0 ) 12244324 | ( 11.22 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1659.8<br>1314.4 | 1.4093<br>104.3<br>104.3 | 38.3765 | N/A | 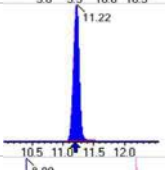 | 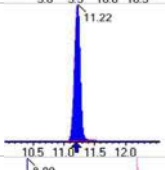 | |
| PFBSA | ( 297.9 / 78.0 ) 9133692<br>( 297.9 / 278.0 ) 13739 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , -0.1) | 1488.2<br>182.2 | 0.0015<br>107.1<br>107.1 | 9.7878 | N/A | 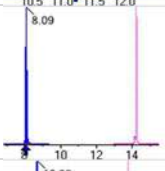 | 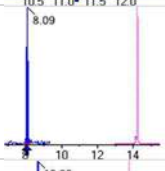 | |
| PFHxSA | ( 397.9 / 78.0 ) 12137835<br>( 397.9 / 378.0 ) 53364 | ( 10.96 , 0.75 )<br>( N/A , 0.03 , 0.1) | 1171.0<br>774.1 | 0.0044<br>115.5<br>115.5 | 10.0852 | N/A | 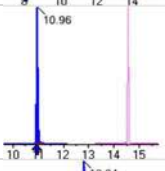 | 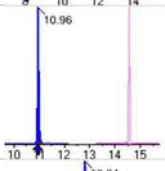 | |
| PFOSA | ( 498.0 / 78.0 ) 10671873<br>( 498.0 / 478.0 ) 160855 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2515.3<br>1421.2 | 0.0151<br>104.5<br>104.5 | 10.0617 | N/A | 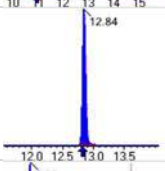 | 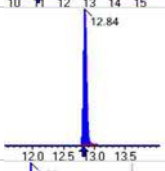 | |
| TFSI | ( 279.7 / 147.0 ) 22530344<br>( 279.7 / 211.0 ) 1911938 | ( 8.39 , 0.65 )<br>( N/A , 0.02 , 0.1) | 53.3<br>48.5 | 0.0849<br>102.9<br>102.9 | 9.9920 | N/A | 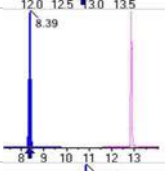 | 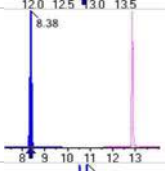 | |
| NMeFOSA | ( 512.0 / 219.0 ) 8130231<br>( 512.0 / 169.0 ) 6149169 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3599.8<br>1357.7 | 0.7563<br>102.9<br>102.9 | 39.7742 | N/A | 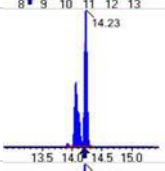 | 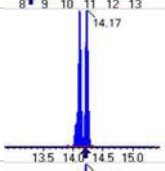 | |
| NEtFOSA | ( 526.0 / 219.0 ) 10354406<br>( 526.0 / 169.0 ) 13053493 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.2) | 5503.3<br>4335.3 | 1.2607<br>99.5<br>99.5 | 40.2129 | N/A | 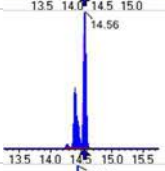 | 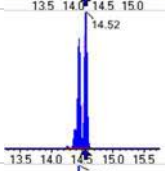 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 2308133<br>( 570.0 / 483.0 ) 1062326 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4404.5<br>2054.0 | 0.4603<br>106.3<br>106.3 | 9.6417 | N/A | 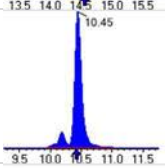 | 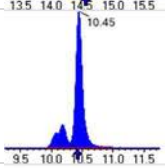 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 2363088<br>( 584.0 / 526.0 ) 1416941 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 2328.3<br>780.6 | 0.5996<br>96.8<br>96.8 | 10.3771 | N/A | 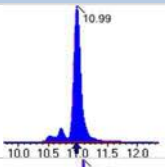 | 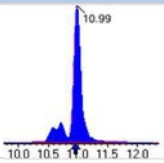 | |
| NMeFOSE | ( 616.0 / 59.0 ) 4146482 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3949.5 | N/A<br>0.0<br>0.0 | 39.2888 | N/A | 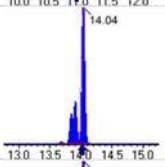 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 4024952 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 5910.1 | N/A<br>0.0<br>0.0 | 41.7380 | N/A | 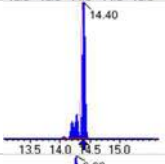 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 779811<br>( 285.0 / 185.0 ) 2434064 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1760.1<br>2684.8 | 3.1214<br>100.2<br>100.2 | 10.1190 | N/A | 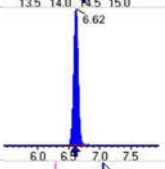 | 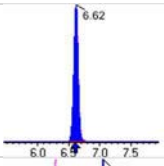 | |
| ADONA | ( 377.0 / 85.0 ) 9549476<br>( 377.0 / 251.0 ) 1011087 | ( 7.69 , 1.16 )<br>( N/A , 0.02 , -0.1) | 1502.1<br>1731.9 | 0.1059<br>99.3<br>99.3 | 9.7301 | N/A | 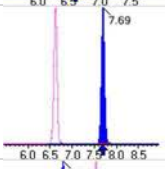 | 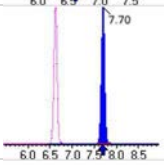 | |
| PFMPA | ( 229.0 / 85.0 ) 1760592 | ( 4.21 , 0.86 )<br>( N/A , 0.02 , 0.0) | 10301.2 | N/A<br>0.0<br>0.0 | 20.3480 | N/A | 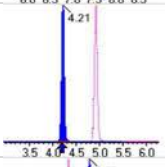 | | |
| PFMBA | ( 279.0 / 85.0 ) 4537528 | ( 5.29 , 1.08 )<br>( N/A , 0.02 , 0.0) | 6337.8 | N/A<br>0.0<br>0.0 | 19.8133 | N/A | 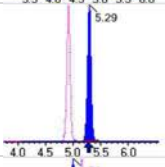 | | |
| NFDHA | ( 295.0 / 201.0 ) 2147243<br>( 295.0 / 85.0 ) 2304599 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , 0.0) | 4016.5<br>3445.4 | 1.0733<br>99.2<br>99.2 | 19.8669 | N/A | 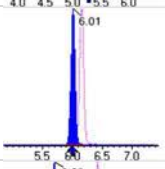 | 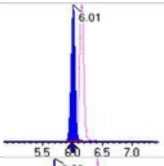 | |
| PFECHS | ( 461.0 / 98.9 ) 6036450<br>( 461.0 / 381.2 ) 2400206 | ( 9.69 , 0.91 )<br>( N/A , 0.02 , 0.0) | 4046.6<br>3700.0 | 0.3976<br>101.8<br>101.8 | 9.4649 | N/A | 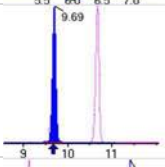 | 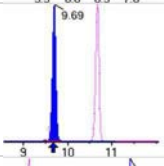 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 11351431<br>( 533.0 / 353.0 ) 3607678 | ( 11.32 , 1.71 )<br>( N/A , 0.03 , 0.1) | 2980.4<br>2942.3 | 0.3178<br>98.9<br>98.9 | 9.3725 | N/A | 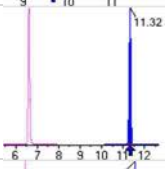 | 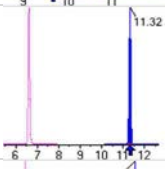 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 9357015<br>( 633.0 / 453.0 ) 3111352 | ( 12.59 , 1.90 )<br>( N/A , 0.02 , 0.0) | 4205.4<br>3482.4 | 0.3325<br>101.8<br>101.8 | 9.8634 | N/A | 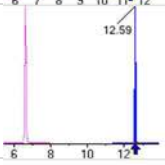 | 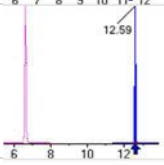 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 4279396<br>( 315.0 / 83.0 ) 2385965 | ( 7.07 , 1.15 )<br>( N/A , 0.02 , 0.0) | 3819.0<br>2750.6 | 0.5575<br>97.3<br>97.3 | 18.3000 | N/A | 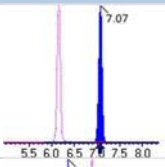 | 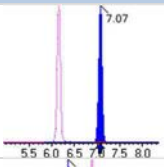 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 532284<br>( 241.0 / 117.0 ) 1172088 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , 0.0) | 2830.4<br>3075.7 | 2.2020<br>99.2<br>99.2 | 40.0916 | N/A | 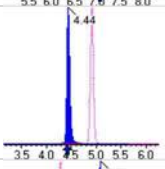 | 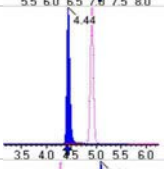 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 2711685<br>( 341.0 / 217.0 ) 4385230 | ( 7.01 , 1.14 )<br>( N/A , 0.01 , -0.1) | 1251.4<br>1238.0 | 1.6172<br>108.0<br>108.0 | 35.9858 | N/A | 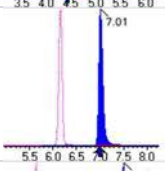 | 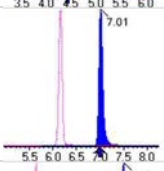 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 4368920<br>( 441.0 / 337.0 ) 3755395 | ( 9.43 , 1.53 )<br>( N/A , 0.03 , 0.0) | 9552.5<br>15824.3 | 0.8596<br>96.6<br>96.6 | 39.4127 | N/A | 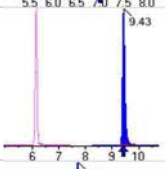 | 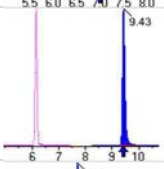 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3143361<br>( 357.2 / 243.0 ) 310708 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1159.6<br>1200.9 | 0.0988<br>93.6<br>93.6 | 10.1713 | N/A | 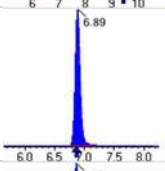 | 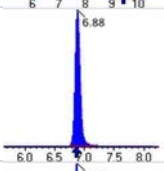 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2225595<br>( 457.2 / 343.0 ) 90091 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , -0.2) | 789.8<br>414.7 | 0.0405<br>103.4<br>103.4 | 9.7142 | N/A | 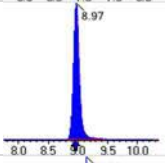 | 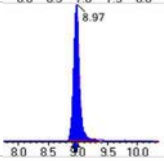 | |
| TDCA | ( 499.0 / 80.0 ) 7683017 | ( 10.66 , 1.00 )<br>( N/A , 0.03 , 0.0) | 56902.2 | N/A<br>0.0<br>0.0 | 9.9965 | N/A | 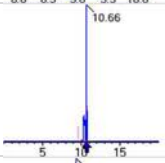 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262567 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1160.3 | N/A | 0.8716<br>[ 1.0000 ] | 87.2%<br>{ 86.6% } | 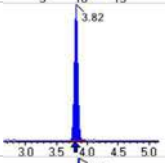 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135233 | ( 6.16 , N/A )<br>( N/A , 0.02 , N/A ) | 78054.9 | N/A | 0.8795<br>[ 1.0000 ] | 87.9%<br>{ 82.0% } | 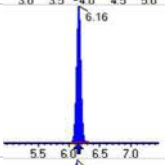 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 422380 | ( 8.33 , N/A )<br>( N/A , 0.02 , N/A ) | 5583.3 | N/A | 0.9468<br>[ 1.0000 ] | 94.7%<br>{ 92.9% } | 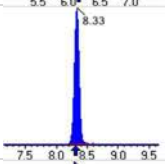 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 310194 | ( 9.29 , N/A )<br>( N/A , 0.02 , N/A ) | 1025.1 | N/A | 0.9279<br>[ 1.0000 ] | 92.8%<br>{ 95.2% } | 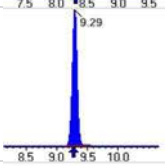 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 302748 | ( 10.21 , N/A ) ( N/A , 0.02 , N/A ) | 16568.3 | N/A | 0.9129 [ 1.0000 ] | 91.3% { 89.0% } | 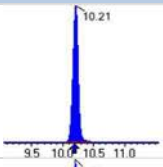 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1003889 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 5154.4 | N/A | 0.8984 [ 1.0000 ] | 89.8% { 88.1% } | 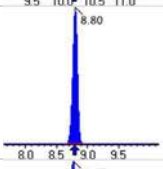 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 863468 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 3120.4 | N/A | 0.8845 [ 1.0000 ] | 88.5% { 86.7% } | 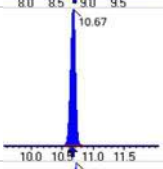 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2345500 | ( 3.82 , N/A ) ( N/A , 0.02 , N/A ) | 50599.2 | N/A | 8.1006 [ 8.0000 ] | 101.3% { 88.3% } | 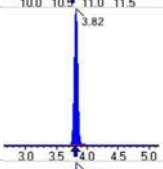 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1073819 | ( 4.92 , N/A ) ( N/A , 0.02 , N/A ) | 5717.5 | N/A | 4.4262 [ 4.0000 ] | 110.7% { 92.7% } | 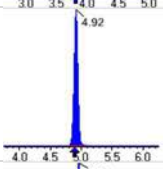 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 641756 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 6787.6 | N/A | 2.2102 [ 2.0000 ] | 110.5% { 93.7% } | 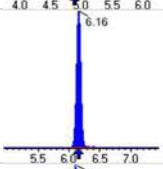 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 649624 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 4697.3 | N/A | 2.1421 [ 2.0000 ] | 107.1% { 92.2% } | 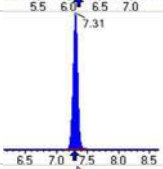 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 931882 | ( 8.33 , N/A ) ( N/A , 0.02 , N/A ) | 3437.8 | N/A | 2.0925 [ 2.0000 ] | 104.6% { 97.7% } | 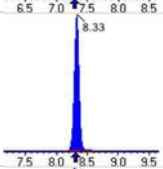 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 304469 | ( 9.29 , N/A ) ( N/A , 0.02 , N/A ) | 3269.4 | N/A | 1.0164 [ 1.0000 ] | 101.6% { 97.9% } | 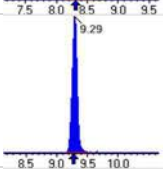 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 375790 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 933.5 | N/A | 1.0757 [ 1.0000 ] | 107.6% { 97.6% } | 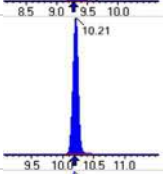 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 444632 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 940.9 | N/A | 1.0468 [ 1.0000 ] | 104.7% { 89.4% } | 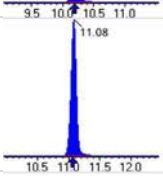 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 476638 | ( 11.90 , N/A ) ( N/A , 0.03 , N/A ) | 1326.4 | N/A | 1.1174 [ 1.0000 ] | 111.7% { 95.5% } | 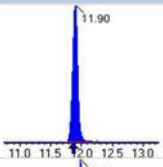  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 408133 | ( 12.99 , N/A ) ( N/A , 0.02 , N/A ) | 1337.5 | N/A | 1.0980 [ 1.0000 ] | 109.8% { 96.2% } | 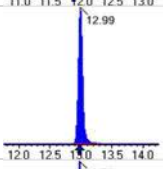  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624120 | ( 13.78 , N/A ) ( N/A , 0.01 , N/A ) | 2406.2 | N/A | 1.9768 [ 2.0000 ] | 98.8% { 88.1% } | 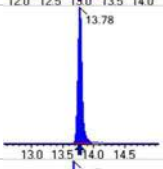  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2097152 | ( 6.47 , N/A ) ( N/A , 0.02 , N/A ) | 1371.9 | N/A | 2.1441 [ 2.0000 ] | 107.2% { 90.8% } | 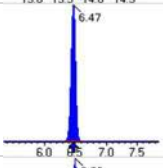  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1615084 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 4539.2 | N/A | 2.1986 [ 2.0000 ] | 109.9% { 98.1% } | 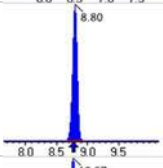  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1956628 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 1284.8 | N/A | 2.1286 [ 2.0000 ] | 106.4% { 93.1% } | 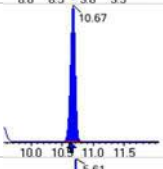  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 357483 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 85.6 | N/A | 4.0892 [ 4.0000 ] | 102.2% { 99.3% } | 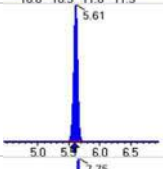  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 888360 | ( 7.75 , N/A ) ( N/A , 0.02 , N/A ) | 3787.7 | N/A | 3.2723 [ 4.0000 ] | 81.8% { 82.7% } | 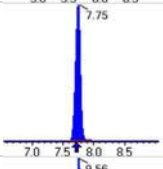  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1027619 | ( 9.56 , N/A ) ( N/A , 0.03 , N/A ) | 1368.7 | N/A | 3.7994 [ 4.0000 ] | 95.0% { 88.2% } | 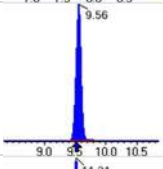  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2201104 | ( 11.21 , N/A ) ( N/A , 0.03 , N/A ) | 1146.7 | N/A | 7.0897 [ 8.0000 ] | 88.6% { 87.9% } | 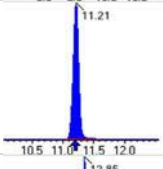  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2173596 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2055.0 | N/A | 2.1820 [ 2.0000 ] | 109.1% { 93.3% } | 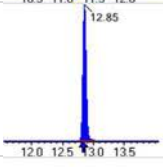  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 405894 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 1926.1 | N/A | 2.2066 [ 2.0000 ] | 110.3% { 95.9% } | 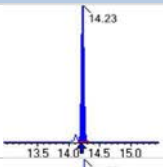  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 469313 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 3199.5 | N/A | 2.2212 [ 2.0000 ] | 111.1% { 94.4% } | 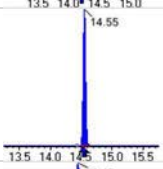  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1016769 | ( 10.45 , N/A ) ( N/A , 0.03 , N/A ) | 2312.1 | N/A | 4.3192 [ 4.0000 ] | 108.0% { 94.0% } | 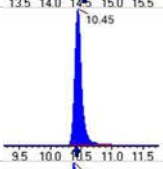  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 944281 | ( 10.98 , N/A ) ( N/A , 0.03 , N/A ) | 1708.9 | N/A | 4.2258 [ 4.0000 ] | 105.6% { 90.1% } | 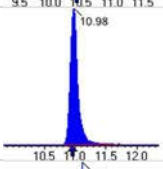  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1864536 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2580.2 | N/A | 21.6934 [ 20.0000 ] | 108.5% { 99.1% } | 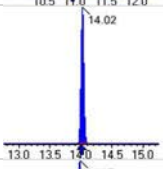  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2182801 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5363.0 | N/A | 20.9646 [ 20.0000 ] | 104.8% { 92.5% } | 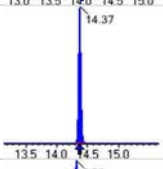  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1086016 | ( 6.62 , N/A ) ( N/A , 0.02 , N/A ) | 2282.1 | N/A | 8.7013 [ 8.0000 ] | 108.8% { 95.7% } | 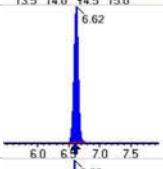  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575029 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 1035.8 | N/A | 2.1416 [ 2.0000 ] | 107.1% { 98.1% } | 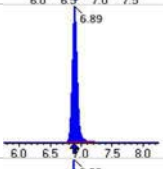  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 543301 | ( 8.98 , N/A ) ( N/A , 0.02 , N/A ) | 735.2 | N/A | 2.1673 [ 2.0000 ] | 108.4% { 96.3% } | 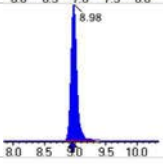  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 10176145<br>( 163.0 / 69.0 ) 255215 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.1) | 46589.2<br>10044.5 | 0.0251<br>100.0<br>100.0 | 44.5845 | N/A | 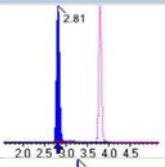 | 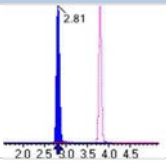 | |
| PFBA | ( 213.0 / 169.0 ) 20395510 | ( 3.79 , 1.00 ) ( 0.00 , N/A , 0.0) | 13501.8 | N/A<br>0.0<br>0.0 | 83.5631 | N/A | 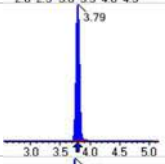 | | |
| PFPeA | ( 263.0 / 219.0 ) 10570659<br>( 263.0 / 69.0 ) 121834 | ( 4.89 , 1.00 ) ( 0.00 , N/A , -0.1) | 7156.8<br>1484.6 | 0.0115<br>104.9<br>104.9 | 42.2517 | N/A | 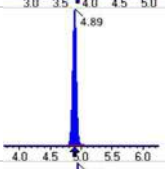 | 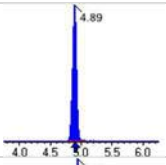 | |
| PFHxA | ( 313.0 / 269.0 ) 6402934<br>( 313.0 / 119.0 ) 705276 | ( 6.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 2751.9<br>2726.8 | 0.1101<br>99.1<br>99.1 | 20.8495 | N/A | 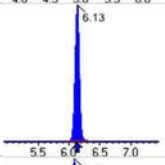 | 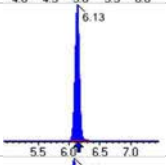 | |
| PFHpA | ( 363.0 / 319.0 ) 7156998<br>( 363.0 / 169.0 ) 2136784 | ( 7.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 2119.9<br>1751.1 | 0.2986<br>95.8<br>95.8 | 21.5222 | N/A | 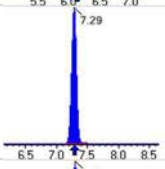 | 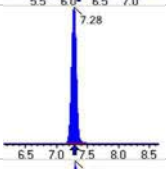 | |
| PFOA | ( 413.0 / 369.0 ) 9517339<br>( 413.0 / 169.0 ) 3410061 | ( 8.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 1524.7<br>1286.1 | 0.3583<br>99.1<br>99.1 | 20.3493 | N/A | 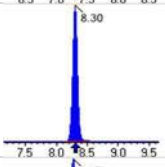 | 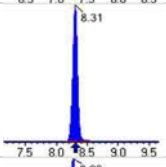 | |
| PFNA | ( 463.0 / 419.0 ) 7034413<br>( 463.0 / 169.0 ) 1640515 | ( 9.27 , 1.00 ) ( 0.00 , N/A , 0.1) | 1501.1<br>1553.0 | 0.2332<br>88.9<br>88.9 | 21.2492 | N/A | 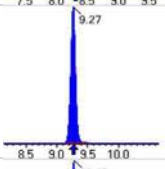 | 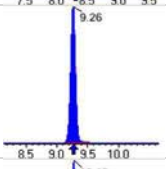 | |
| PFDA | ( 513.0 / 469.0 ) 7750833<br>( 513.0 / 169.0 ) 905812 | ( 10.18 , 1.00 ) ( 0.00 , N/A , -0.1) | 4849.1<br>4129.0 | 0.1169<br>99.6<br>99.6 | 22.3085 | N/A | 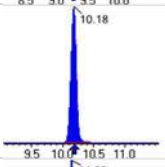 | 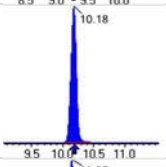 | |
| PFUnA | ( 563.0 / 519.0 ) 8863100<br>( 563.0 / 169.0 ) 1264545 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 1109.3<br>939.8 | 0.1427<br>96.3<br>96.3 | 22.4705 | N/A | 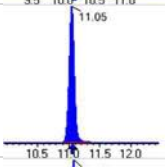 | 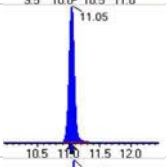 | |
| PFDoA | ( 613.0 / 569.0 ) 9923328<br>( 613.0 / 169.0 ) 1491951 | ( 11.87 , 1.00 ) ( 0.00 , N/A , -0.1) | 1665.9<br>1336.8 | 0.1503<br>95.1<br>95.1 | 20.8357 | N/A | 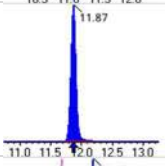 | 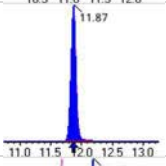 | |
| PFTrDA | ( 663.0 / 619.0 ) 9577578<br>( 663.0 / 169.0 ) 2584915 | ( 12.47 , 1.05 ) ( N/A , 0.00 , 0.0) | 1454.1<br>1603.0 | 0.2699<br>100.2<br>100.2 | 20.9161 | N/A | 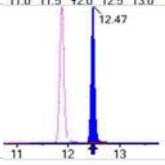 | 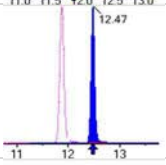 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 8442959<br>( 713.0 / 169.0 ) 2100131 | ( 12.96 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2115.6<br>1469.2 | 0.2487<br>95.7<br>95.7 | 22.4689 | N/A | 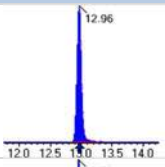 | 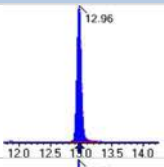 | |
| PFHxDA | ( 813.0 / 769.0 ) 6878569<br>( 813.0 / 169.0 ) 1592222 | ( 13.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2614.7<br>1755.8 | 0.2315<br>106.7<br>106.7 | 22.0788 | N/A | 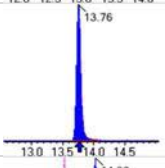 | 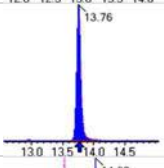 | |
| PFODA | ( 913.0 / 869.0 ) 4588493<br>( 913.0 / 169.0 ) 1518219 | ( 14.39 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2651.3<br>1740.1 | 0.3309<br>86.6<br>86.6 | 21.9208 | N/A | 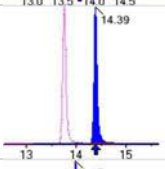 | 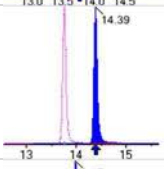 | |
| PFBS | ( 299.0 / 80.0 ) 10383809<br>( 299.0 / 99.0 ) 7131765 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5358.7<br>4536.0 | 0.6868<br>96.6<br>96.6 | 19.3808 | N/A | 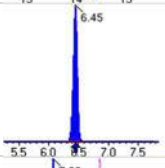 | 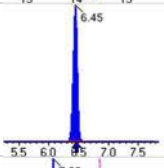 | |
| PFPeS | ( 349.0 / 80.0 ) 23552483<br>( 349.0 / 99.0 ) 8452143 | ( 7.69 , 0.88 )<br>( N/A , 0.00 , 0.1) | 3072.6<br>2543.3 | 0.3589<br>105.5<br>105.5 | 18.6129 | N/A | 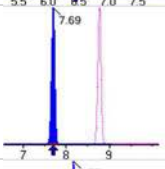 | 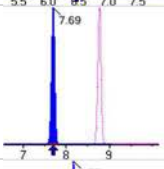 | |
| PFHxS | ( 399.0 / 80.0 ) 27689170<br>( 399.0 / 99.0 ) 9109943 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5583.7<br>6389.4 | 0.3290<br>105.2<br>105.2 | 19.6770 | N/A | 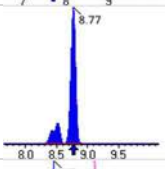 | 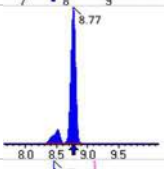 | |
| PFHpS | ( 449.0 / 80.0 ) 24478977<br>( 449.0 / 99.0 ) 6562983 | ( 9.74 , 0.92 )<br>( N/A , 0.00 , -0.1) | 2047.2<br>2514.2 | 0.2681<br>100.3<br>100.3 | 20.4607 | N/A | 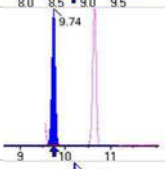 | 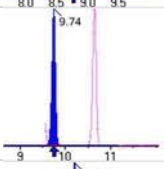 | |
| PFOS | ( 499.0 / 80.0 ) 23005511<br>( 499.0 / 99.0 ) 5286051 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3783.4<br>7622.8 | 0.2298<br>97.1<br>97.1 | 19.1119 | N/A | 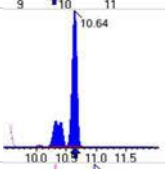 | 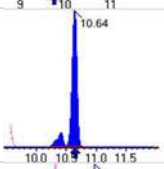 | |
| PFNS | ( 549.0 / 80.0 ) 22163737<br>( 549.0 / 99.0 ) 5972003 | ( 11.48 , 1.08 )<br>( N/A , 0.00 , -0.1) | 2978.6<br>2825.6 | 0.2694<br>101.4<br>101.4 | 18.8813 | N/A | 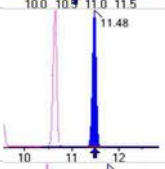 | 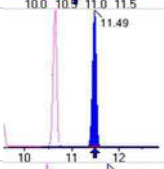 | |
| PFDS | ( 599.0 / 80.0 ) 26863005<br>( 599.0 / 99.0 ) 7218997 | ( 12.16 , 1.14 )<br>( N/A , 0.00 , 0.0) | 4167.7<br>2957.6 | 0.2687<br>107.2<br>107.2 | 19.1997 | N/A | 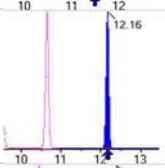 | 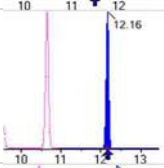 | |
| PFDoS | ( 699.0 / 80.0 ) 24829854<br>( 699.0 / 99.0 ) 5800476 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.1) | 4855.0<br>5320.2 | 0.2336<br>101.3<br>101.3 | 20.7687 | N/A | 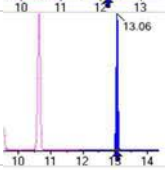 | 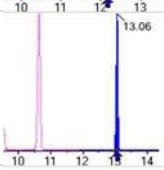 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 16197449<br>( 327.0 / 81.0 ) 13997678 | ( 5.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5148.0<br>4822.5 | 0.8642<br>98.6<br>98.6 | 78.1567 | N/A | 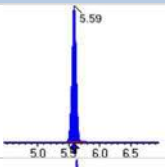 | 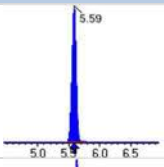 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 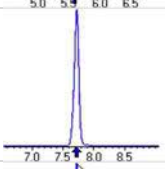 | 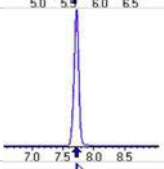 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 17863064<br>( 527.0 / 81.0 ) 17515353 | ( 9.53 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1042.8<br>1331.0 | 0.9805<br>103.4<br>103.4 | 79.7829 | N/A | 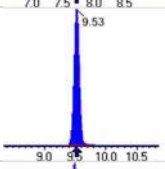 | 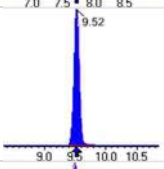 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 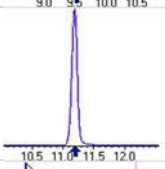 | 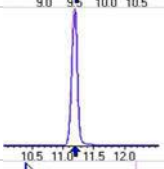 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 18953981<br>( 297.9 / 278.0 ) 25925 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , -0.1) | 1270.3<br>379.7 | 0.0014<br>97.4<br>97.4 | 19.6284 | N/A | 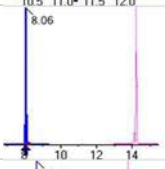 | 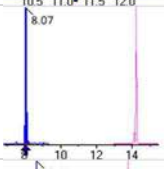 | |
| PFHxSA | ( 397.9 / 78.0 ) 25302275<br>( 397.9 / 378.0 ) 118514 | ( 10.94 , 0.75 )<br>( N/A , 0.00 , 0.0) | 950.6<br>805.4 | 0.0047<br>123.0<br>123.0 | 20.8502 | N/A | 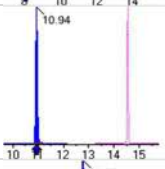 | 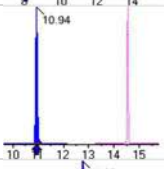 | |
| PFOSA | ( 498.0 / 78.0 ) 21767174<br>( 498.0 / 478.0 ) 326808 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2568.1<br>1223.6 | 0.0150<br>104.0<br>104.0 | 20.4745 | N/A | 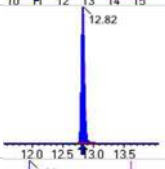 | 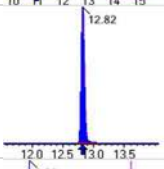 | |
| TFSI | ( 279.7 / 147.0 ) 45027999<br>( 279.7 / 211.0 ) 4193887 | ( 8.36 , 0.65 )<br>( N/A , 0.00 , 0.0) | 59.9<br>64.0 | 0.0931<br>112.9<br>112.9 | 19.9226 | N/A | 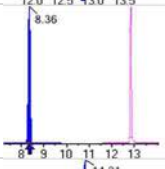 | 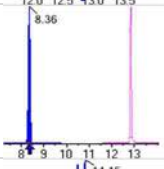 | |
| NMeFOSA | ( 512.0 / 219.0 ) 16854818<br>( 512.0 / 169.0 ) 12793598 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.2) | 3743.0<br>1315.9 | 0.7590<br>103.3<br>103.3 | 79.6837 | N/A | 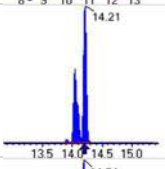 | 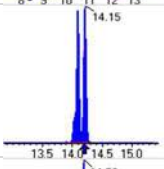 | |
| NEtFOSA | ( 526.0 / 219.0 ) 21489682<br>( 526.0 / 169.0 ) 26814196 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4844.9<br>3997.4 | 1.2478<br>98.5<br>98.5 | 82.7706 | N/A | 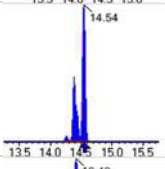 | 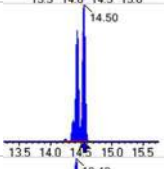 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5096367<br>( 570.0 / 483.0 ) 2366062 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , -0.1) | 5277.0<br>1602.9 | 0.4643<br>107.2<br>107.2 | 21.2312 | N/A | 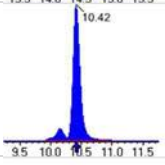 | 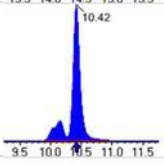 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 4739449<br>( 584.0 / 526.0 ) 2989120 | ( 10.96 , 1.00 ) ( 0.01 , N/A , -0.1) | 2282.2<br>847.2 | 0.6307<br>101.9<br>101.9 | 20.2414 | N/A | 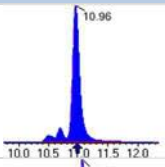 | 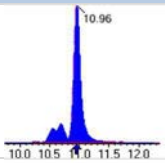 | |
| NMeFOSE | ( 616.0 / 59.0 ) 8768305 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 4477.2 | N/A<br>0.0<br>0.0 | 83.4843 | N/A | 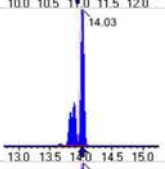 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 8513376 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 6626.1 | N/A<br>0.0<br>0.0 | 83.6180 | N/A | 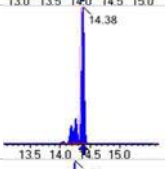 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1580033<br>( 285.0 / 185.0 ) 5012729 | ( 6.60 , 1.00 ) ( 0.00 , N/A , 0.1) | 2229.3<br>2535.1 | 3.1725<br>101.8<br>101.8 | 20.0355 | N/A | 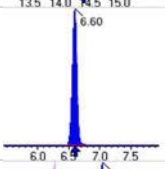 | 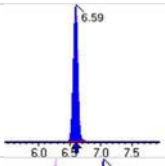 | |
| ADONA | ( 377.0 / 85.0 ) 18233087<br>( 377.0 / 251.0 ) 2030458 | ( 7.67 , 1.16 ) ( N/A , 0.00 , 0.0) | 2018.1<br>1590.1 | 0.1114<br>104.5<br>104.5 | 18.1546 | N/A | 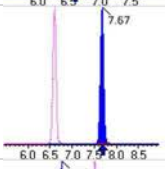 | 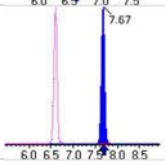 | |
| PFMPA | ( 229.0 / 85.0 ) 3381731 | ( 4.19 , 0.86 ) ( N/A , 0.00 , 0.0) | 11762.1 | N/A<br>0.0<br>0.0 | 42.6938 | N/A | 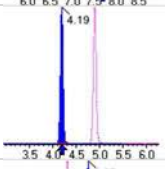 | | |
| PFMBA | ( 279.0 / 85.0 ) 9237814 | ( 5.27 , 1.08 ) ( N/A , 0.00 , 0.0) | 5748.9 | N/A<br>0.0<br>0.0 | 44.0627 | N/A | 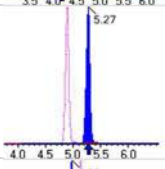 | | |
| NFDHA | ( 295.0 / 201.0 ) 4354470<br>( 295.0 / 85.0 ) 4370009 | ( 5.99 , 0.98 ) ( N/A , 0.00 , 0.0) | 3176.7<br>3052.2 | 1.0036<br>92.8<br>92.8 | 40.7884 | N/A | 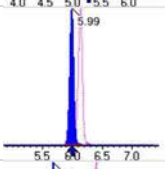 | 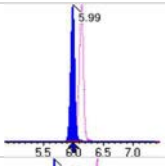 | |
| PFECHS | ( 461.0 / 98.9 ) 13296955<br>( 461.0 / 381.2 ) 5237179 | ( 9.67 , 0.91 ) ( N/A , 0.00 , -0.1) | 4939.7<br>3903.0 | 0.3939<br>100.9<br>100.9 | 19.5883 | N/A | 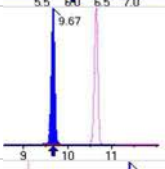 | 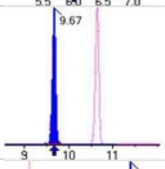 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 23589267<br>( 533.0 / 353.0 ) 7781403 | ( 11.29 , 1.71 ) ( N/A , 0.00 , 0.0) | 3258.8<br>2639.8 | 0.3299<br>102.6<br>102.6 | 19.0330 | N/A | 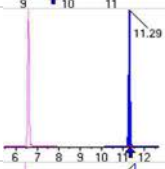 | 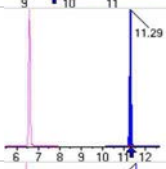 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 19087969<br>( 633.0 / 453.0 ) 6373552 | ( 12.56 , 1.90 ) ( N/A , 0.00 , 0.0) | 3508.3<br>3457.4 | 0.3339<br>102.2<br>102.2 | 19.6624 | N/A | 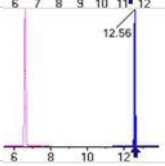 | 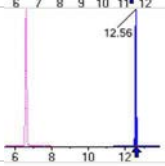 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 8808687<br>( 315.0 / 83.0 ) 4783189 | ( 7.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 3188.4<br>2987.6 | 0.5430<br>94.8<br>94.8 | 38.1359 | N/A | 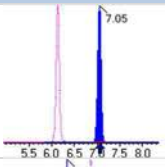 | 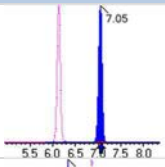 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1088429<br>( 241.0 / 117.0 ) 2486287 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.0) | 3414.7<br>4447.8 | 2.2843<br>103.0<br>103.0 | 89.5517 | N/A | 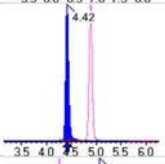 | 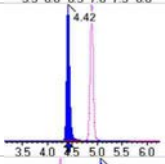 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6098749<br>( 341.0 / 217.0 ) 9093487 | ( 6.99 , 1.14 )<br>( N/A , 0.00 , -0.1) | 1229.7<br>1195.5 | 1.4910<br>99.6<br>99.6 | 81.9381 | N/A | 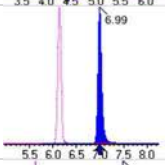 | 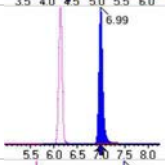 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 9501359<br>( 441.0 / 337.0 ) 8344402 | ( 9.41 , 1.53 )<br>( N/A , 0.00 , 0.2) | 7203.2<br>8254.3 | 0.8782<br>98.7<br>98.7 | 86.7763 | N/A | 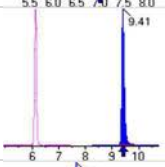 | 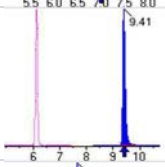 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6396862<br>( 357.2 / 243.0 ) 655276 | ( 6.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1515.1<br>1338.9 | 0.1024<br>97.0<br>97.0 | 21.9761 | N/A | 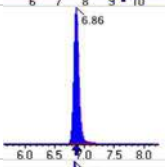 | 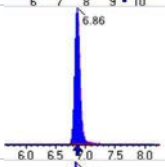 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 4680526<br>( 457.2 / 343.0 ) 185609 | ( 8.94 , 1.00 )<br>( -0.01 , N/A , 0.0) | 830.0<br>537.4 | 0.0397<br>101.3<br>101.3 | 21.2094 | N/A | 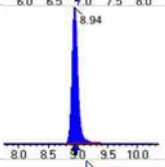 | 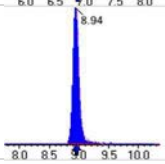 | |
| TDCA | ( 499.0 / 80.0 ) 16629936 | ( 10.63 , 1.00 )<br>( N/A , 0.00 , 0.0) | 28206.5 | N/A<br>0.0<br>0.0 | 20.3292 | N/A | 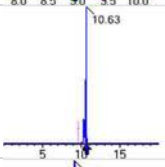 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235092 | ( 3.79 , N/A )<br>( N/A , 0.00 , N/A ) | 1016.1 | N/A | 0.7804<br>[ 1.0000 ] | 78.0%<br>{ 77.5% } | 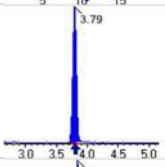 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 159182 | ( 6.13 , N/A )<br>( N/A , 0.00 , N/A ) | 67563.9 | N/A | 1.0352<br>[ 1.0000 ] | 103.5%<br>{ 96.5% } | 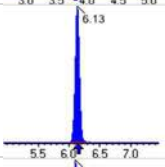 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 453426 | ( 8.31 , N/A )<br>( N/A , 0.00 , N/A ) | 4956.7 | N/A | 1.0163<br>[ 1.0000 ] | 101.6%<br>{ 99.7% } | 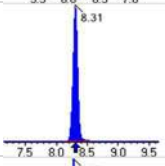 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 345349 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1196.8 | N/A | 1.0331<br>[ 1.0000 ] | 103.3%<br>{ 106.0% } | 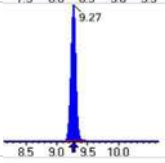 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 338705 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 4585.7 | N/A | 1.0213 [ 1.0000 ] | 102.1% { 99.6% } | 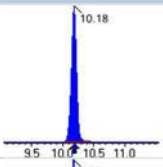 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1128464 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 3883.8 | N/A | 1.0099 [ 1.0000 ] | 101.0% { 99.0% } | 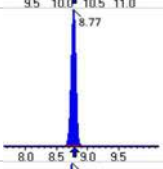 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 995635 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 3109.8 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 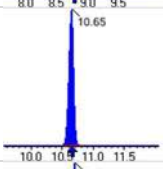 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2063917 | ( 3.79 , N/A ) ( N/A , 0.00 , N/A ) | 42093.7 | N/A | 7.9611 [ 8.0000 ] | 99.5% { 77.7% } | 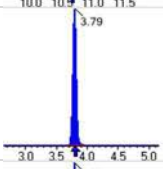 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 983031 | ( 4.89 , N/A ) ( N/A , 0.00 , N/A ) | 5658.2 | N/A | 3.4424 [ 4.0000 ] | 86.1% { 84.9% } | 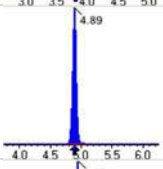 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 633894 | ( 6.13 , N/A ) ( N/A , 0.00 , N/A ) | 6704.1 | N/A | 1.8547 [ 2.0000 ] | 92.7% { 92.6% } | 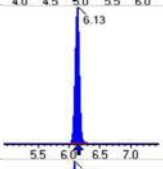 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 675286 | ( 7.29 , N/A ) ( N/A , -0.01 , N/A ) | 4480.6 | N/A | 1.8917 [ 2.0000 ] | 94.6% { 95.8% } | 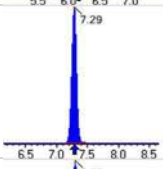 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 919850 | ( 8.30 , N/A ) ( N/A , 0.00 , N/A ) | 3529.1 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 96.5% } | 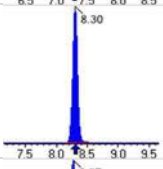 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330354 | ( 9.27 , N/A ) ( N/A , -0.01 , N/A ) | 3992.9 | N/A | 0.9906 [ 1.0000 ] | 99.1% { 106.3% } | 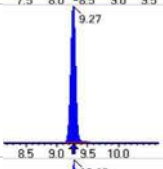 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348865 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 979.0 | N/A | 0.8926 [ 1.0000 ] | 89.3% { 90.6% } | 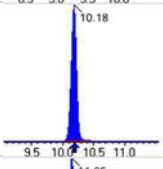 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 422397 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1068.9 | N/A | 0.8889 [ 1.0000 ] | 88.9% { 84.9% } | 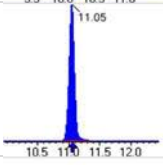 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 465333 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1351.3 | N/A | 0.9751 [ 1.0000 ] | 97.5% { 93.3% } | 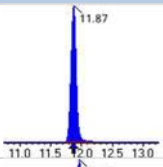  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 395666 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1572.4 | N/A | 0.9515 [ 1.0000 ] | 95.1% { 93.3% } | 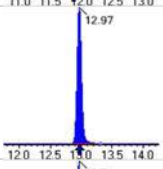  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 645585 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3103.6 | N/A | 1.8277 [ 2.0000 ] | 91.4% { 91.1% } | 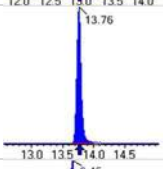  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2060709 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1117.4 | N/A | 1.8742 [ 2.0000 ] | 93.7% { 89.2% } | 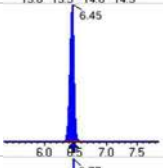  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1589199 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 6298.2 | N/A | 1.9245 [ 2.0000 ] | 96.2% { 96.6% } | 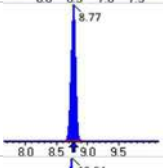  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2082551 | ( 10.64 , N/A ) ( N/A , 0.00 , N/A ) | 1186.2 | N/A | 1.9648 [ 2.0000 ] | 98.2% { 99.1% } | 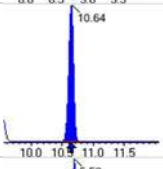  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 307861 | ( 5.59 , N/A ) ( N/A , -0.01 , N/A ) | 79.4 | N/A | 3.1329 [ 4.0000 ] | 78.3% { 85.6% } | 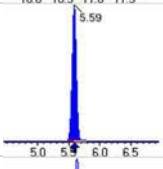  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 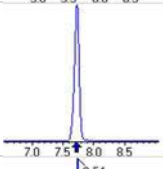 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 903919 | ( 9.54 , N/A ) ( N/A , 0.00 , N/A ) | 1042.3 | N/A | 2.9731 [ 4.0000 ] | 74.3% { 77.6% } | 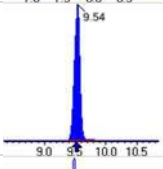  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 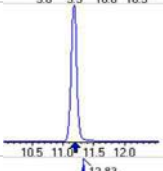 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2178712 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1847.3 | N/A | 1.8968 [ 2.0000 ] | 94.8% { 93.6% } | 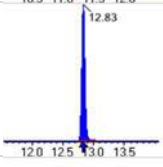  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 420016 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1539.5 | N/A | 1.9803 [ 2.0000 ] | 99.0% { 99.2% } | 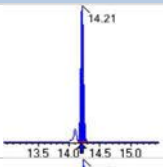  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 473213 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2428.6 | N/A | 1.9424 [ 2.0000 ] | 97.1% { 95.2% } | 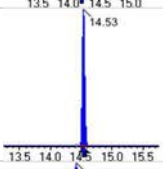  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1019536 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2558.0 | N/A | 3.7561 [ 4.0000 ] | 93.9% { 94.3% } | 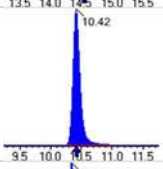  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 970920 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 2066.6 | N/A | 3.7682 [ 4.0000 ] | 94.2% { 92.6% } | 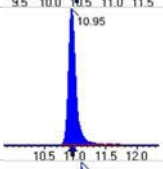  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1855542 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 3273.2 | N/A | 18.7229 [ 20.0000 ] | 93.6% { 98.6% } | 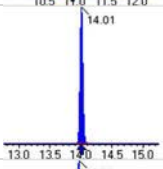  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2304558 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5380.4 | N/A | 19.1958 [ 20.0000 ] | 96.0% { 97.7% } | 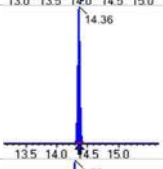  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1111343 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2562.9 | N/A | 7.5646 [ 8.0000 ] | 94.6% { 98.0% } | 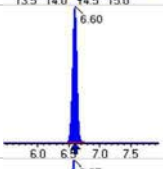  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 541611 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 1147.3 | N/A | 1.8030 [ 2.0000 ] | 90.1% { 92.4% } | 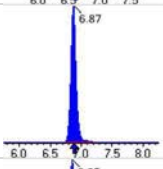  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 523319 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 621.1 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 92.7% } | 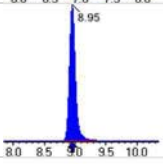  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 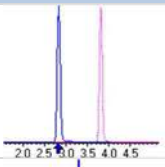 | 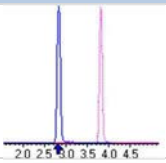 | NR, |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 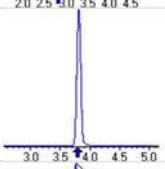 | | NR, |
| PFPeA | ( 263.0 / 219.0 )<br>22700897<br>( 263.0 / 69.0 )<br>261520 | ( 4.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 7496.5<br>2671.3 | 0.0115<br>104.9<br>104.9 | 106.2319 | N/A | 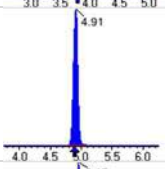 | 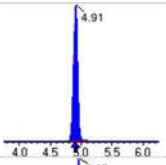 | |
| PFHxA | ( 313.0 / 269.0 )<br>14952955<br>( 313.0 / 119.0 )<br>1634831 | ( 6.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3037.2<br>3640.2 | 0.1093<br>98.4<br>98.4 | 53.9185 | N/A | 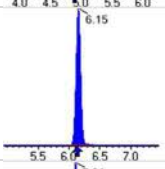 | 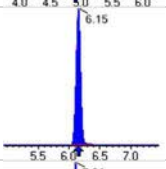 | |
| PFHpA | ( 363.0 / 319.0 )<br>16576643<br>( 363.0 / 169.0 )<br>4950298 | ( 7.31 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1818.1<br>1504.2 | 0.2986<br>95.8<br>95.8 | 54.9822 | N/A | 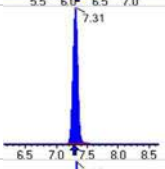 | 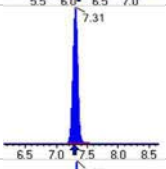 | |
| PFOA | ( 413.0 / 369.0 )<br>21523866<br>( 413.0 / 169.0 )<br>7868863 | ( 8.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1380.8<br>1423.8 | 0.3656<br>101.1<br>101.1 | 49.2835 | N/A | 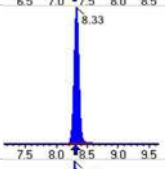 | 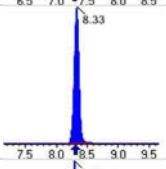 | |
| PFNA | ( 463.0 / 419.0 )<br>15957600<br>( 463.0 / 169.0 )<br>3864370 | ( 9.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1284.7<br>1228.8 | 0.2422<br>92.3<br>92.3 | 51.6247 | N/A | 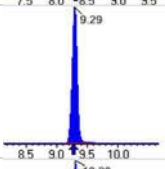 | 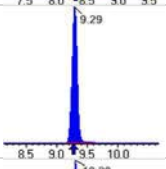 | |
| PFDA | ( 513.0 / 469.0 )<br>17806822<br>( 513.0 / 169.0 )<br>2160213 | ( 10.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4639.2<br>4232.5 | 0.1213<br>103.3<br>103.3 | 52.8327 | N/A | 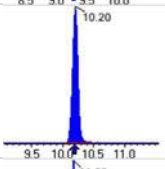 | 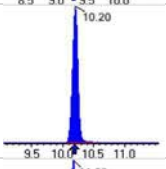 | |
| PFUnA | ( 563.0 / 519.0 )<br>20457199<br>( 563.0 / 169.0 )<br>3062448 | ( 11.08 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1110.4<br>1116.5 | 0.1497<br>101.1<br>101.1 | 53.3596 | N/A | 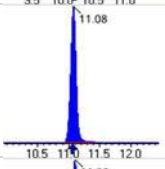 | 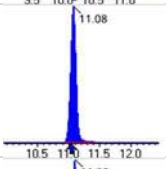 | |
| PFDoA | ( 613.0 / 569.0 )<br>22716961<br>( 613.0 / 169.0 )<br>3338606 | ( 11.89 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1723.5<br>1651.0 | 0.1470<br>92.9<br>92.9 | 51.1595 | N/A | 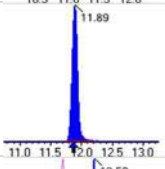 | 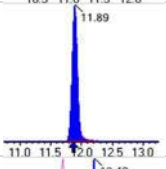 | |
| PFTrDA | ( 663.0 / 619.0 )<br>21950044<br>( 663.0 / 169.0 )<br>5851407 | ( 12.50 , 1.05 )<br>( N/A , 0.02 , 0.0) | 1439.0<br>1349.9 | 0.2666<br>98.9<br>98.9 | 51.4143 | N/A | 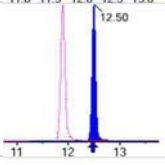 | 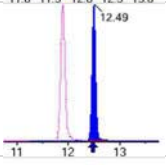 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 17928976<br>( 713.0 / 169.0 ) 4641610 | ( 12.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1836.1<br>1585.2 | 0.2589<br>99.6<br>99.6 | 49.6050 | N/A | 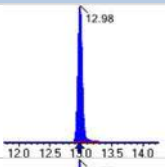 | 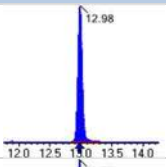 | |
| PFHxDA | ( 813.0 / 769.0 ) 14485066<br>( 813.0 / 169.0 ) 3562659 | ( 13.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2697.5<br>1867.8 | 0.2460<br>113.4<br>113.4 | 51.7987 | N/A | 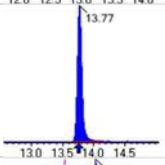 | 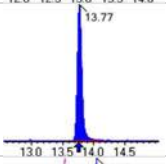 | |
| PFODA | ( 913.0 / 869.0 ) 10221420<br>( 913.0 / 169.0 ) 3533512 | ( 14.40 , 1.05 )<br>( N/A , 0.01 , -0.1) | 2291.6<br>2038.1 | 0.3457<br>90.5<br>90.5 | 54.4024 | N/A | 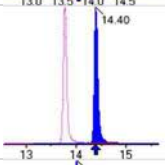 | 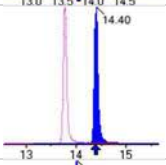 | |
| PFBS | ( 299.0 / 80.0 ) 23185289<br>( 299.0 / 99.0 ) 16750665 | ( 6.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4415.8<br>3731.3 | 0.7225<br>101.6<br>101.6 | 47.1020 | N/A | 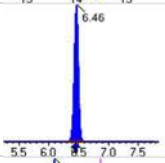 | 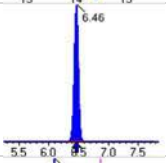 | |
| PFPeS | ( 349.0 / 80.0 ) 47785585<br>( 349.0 / 99.0 ) 17953209 | ( 7.72 , 0.88 )<br>( N/A , 0.02 , 0.1) | 2343.6<br>2424.1 | 0.3757<br>110.5<br>110.5 | 38.8162 | N/A | 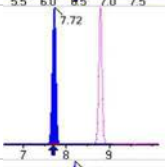 | 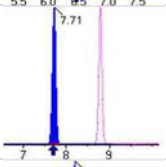 | |
| PFHxS | ( 399.0 / 80.0 ) 61332254<br>( 399.0 / 99.0 ) 21513265 | ( 8.80 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5068.9<br>8254.3 | 0.3508<br>112.2<br>112.2 | 44.7998 | N/A | 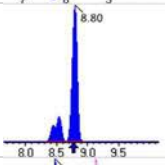 | 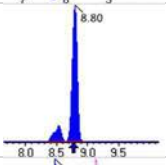 | |
| PFHpS | ( 449.0 / 80.0 ) 51985297<br>( 449.0 / 99.0 ) 15377952 | ( 9.77 , 0.92 )<br>( N/A , 0.03 , 0.0) | 1960.2<br>2069.6 | 0.2958<br>110.7<br>110.7 | 45.6583 | N/A | 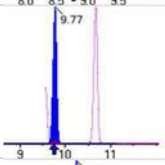 | 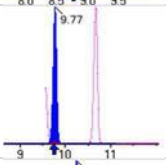 | |
| PFOS | ( 499.0 / 80.0 ) 54945052<br>( 499.0 / 99.0 ) 13114814 | ( 10.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3980.2<br>10975.4 | 0.2387<br>100.9<br>100.9 | 47.9639 | N/A | 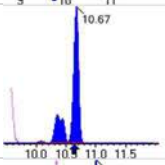 | 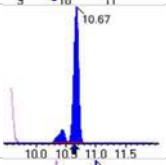 | |
| PFNS | ( 549.0 / 80.0 ) 48380518<br>( 549.0 / 99.0 ) 13891796 | ( 11.51 , 1.08 )<br>( N/A , 0.02 , 0.1) | 2683.5<br>3132.6 | 0.2871<br>108.1<br>108.1 | 43.3085 | N/A | 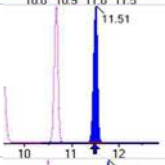 | 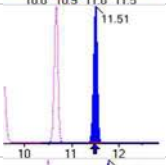 | |
| PFDS | ( 599.0 / 80.0 ) 52690985<br>( 599.0 / 99.0 ) 15132609 | ( 12.19 , 1.14 )<br>( N/A , 0.02 , 0.0) | 2895.8<br>3543.8 | 0.2872<br>114.5<br>114.5 | 39.5721 | N/A | 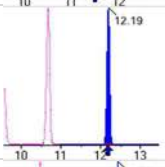 | 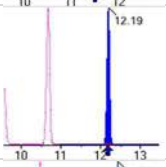 | |
| PFDoS | ( 699.0 / 80.0 ) 47435382<br>( 699.0 / 99.0 ) 12739149 | ( 13.08 , 1.23 )<br>( N/A , 0.02 , 0.0) | 5050.5<br>5543.0 | 0.2686<br>116.4<br>116.4 | 41.6919 | N/A | 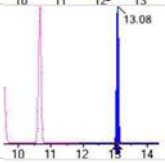 | 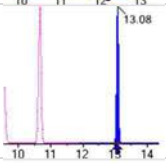 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 34123443<br>( 327.0 / 81.0 ) 29616232 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5634.8<br>5125.2 | 0.8679<br>99.1<br>99.1 | 178.8228 | N/A | 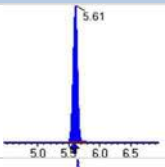 | 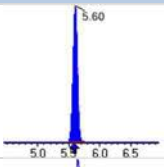 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 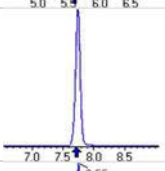 | 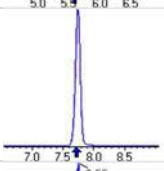 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 33973276<br>( 527.0 / 81.0 ) 35801989 | ( 9.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1084.5<br>1080.4 | 1.0538<br>111.1<br>111.1 | 153.4928 | N/A | 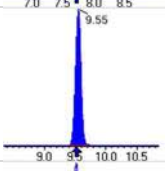 | 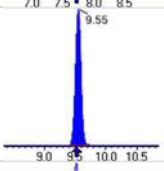 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 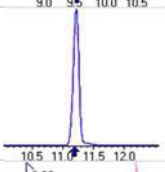 | 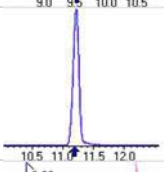 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 42485406<br>( 297.9 / 278.0 ) 69244 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , 0.2) | 1345.4<br>545.1 | 0.0016<br>116.1<br>116.1 | 44.8414 | N/A | 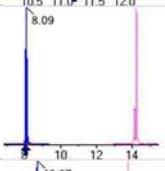 | 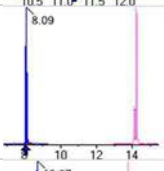 | |
| PFHxSA | ( 397.9 / 78.0 ) 53995591<br>( 397.9 / 378.0 ) 273817 | ( 10.97 , 0.75 )<br>( N/A , 0.03 , 0.0) | 1080.5<br>859.3 | 0.0051<br>133.2<br>133.2 | 48.7212 | N/A | 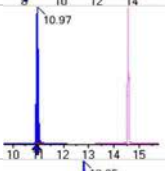 | 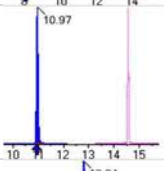 | |
| PFOSA | ( 498.0 / 78.0 ) 45375539<br>( 498.0 / 478.0 ) 788888 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1782.2<br>2134.8 | 0.0174<br>120.5<br>120.5 | 45.7564 | N/A | 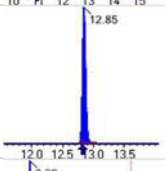 | 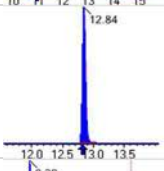 | |
| TFSI | ( 279.7 / 147.0 ) 90676570<br>( 279.7 / 211.0 ) 10184991 | ( 8.38 , 0.65 )<br>( N/A , 0.02 , 0.0) | 40.7<br>60.2 | 0.1123<br>136.2<br>136.2 | 43.0109 | N/A | 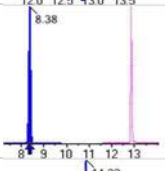 | 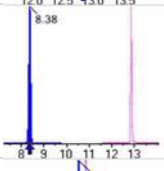 | |
| NMeFOSA | ( 512.0 / 219.0 ) 38984304<br>( 512.0 / 169.0 ) 29736833 | ( 14.22 , 1.00 )<br>( -0.01 , N/A , 3.3) | 3560.7<br>1538.2 | 0.7628<br>103.8<br>103.8 | 187.8405 | N/A | 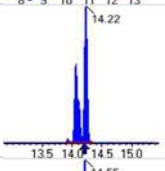 | 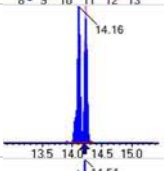 | |
| NEtFOSA | ( 526.0 / 219.0 ) 47551636<br>( 526.0 / 169.0 ) 59451862 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4466.9<br>3567.8 | 1.2503<br>98.7<br>98.7 | 200.5495 | N/A | 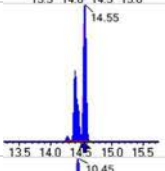 | 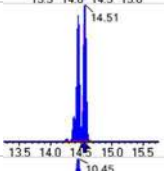 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 11111770<br>( 570.0 / 483.0 ) 5096487 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , -0.2) | 6823.7<br>1415.8 | 0.4587<br>105.9<br>105.9 | 49.6174 | N/A | 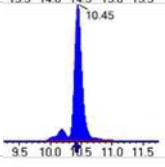 | 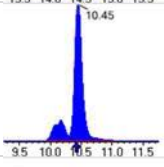 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 10999372<br>( 584.0 / 526.0 ) 6518005 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3040.2<br>779.2 | 0.5926<br>95.7<br>95.7 | 53.2321 | N/A | 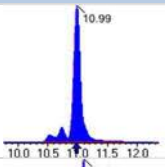 | 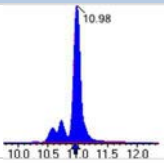 | |
| NMeFOSE | ( 616.0 / 59.0 ) 20722850 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7835.0 | N/A<br>0.0<br>0.0 | 191.7557 | N/A | 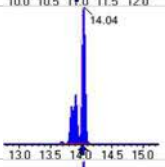 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 19023553 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 7423.3 | N/A<br>0.0<br>0.0 | 196.1770 | N/A | 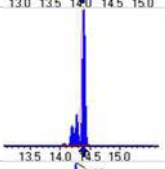 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 3880780<br>( 285.0 / 185.0 ) 12031984 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1950.8<br>2585.5 | 3.1004<br>99.5<br>99.5 | 52.4977 | N/A | 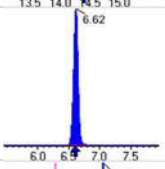 | 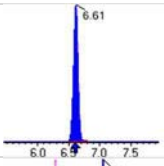 | |
| ADONA | ( 377.0 / 85.0 ) 39511304<br>( 377.0 / 251.0 ) 4415561 | ( 7.70 , 1.16 )<br>( N/A , 0.02 , 0.1) | 2027.7<br>1824.5 | 0.1118<br>104.8<br>104.8 | 41.9697 | N/A | 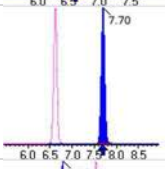 | 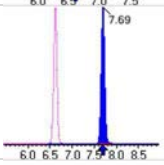 | |
| PFMPA | ( 229.0 / 85.0 ) 7195628 | ( 4.20 , 0.86 )<br>( N/A , 0.01 , 0.0) | 12023.2 | N/A<br>0.0<br>0.0 | 106.3568 | N/A | 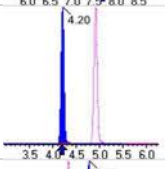 | | |
| PFMBA | ( 279.0 / 85.0 ) 20119580 | ( 5.29 , 1.08 )<br>( N/A , 0.02 , 0.0) | 6179.8 | N/A<br>0.0<br>0.0 | 112.3546 | N/A | 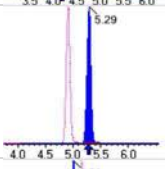 | | |
| NFDHA | ( 295.0 / 201.0 ) 9333499<br>( 295.0 / 85.0 ) 10336335 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , 0.1) | 3365.3<br>3282.3 | 1.1074<br>102.4<br>102.4 | 96.8147 | N/A | 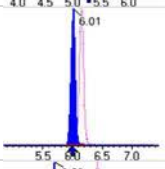 | 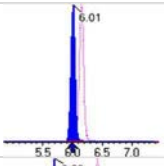 | |
| PFECHS | ( 461.0 / 98.9 ) 32358475<br>( 461.0 / 381.2 ) 13289552 | ( 9.69 , 0.91 )<br>( N/A , 0.03 , 0.1) | 4390.6<br>5012.6 | 0.4107<br>105.2<br>105.2 | 50.0894 | N/A | 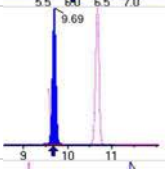 | 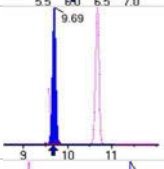 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 53486666<br>( 533.0 / 353.0 ) 18536995 | ( 11.32 , 1.71 )<br>( N/A , 0.02 , -0.1) | 2863.1<br>2611.8 | 0.3466<br>107.8<br>107.8 | 46.0390 | N/A | 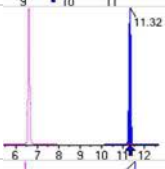 | 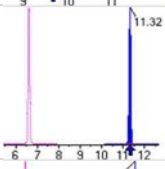 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 39812300<br>( 633.0 / 453.0 ) 13709837 | ( 12.58 , 1.90 )<br>( N/A , 0.02 , 0.0) | 3750.7<br>3839.2 | 0.3444<br>105.4<br>105.4 | 43.7502 | N/A | 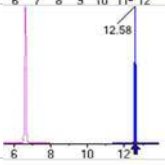 | 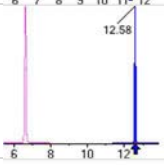 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 19009470<br>( 315.0 / 83.0 ) 10888523 | ( 7.07 , 1.15 )<br>( N/A , 0.02 , 0.0) | 3279.5<br>3491.5 | 0.5728<br>100.0<br>100.0 | 91.1356 | N/A | 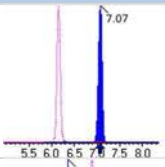 | 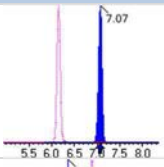 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2757370<br>( 241.0 / 117.0 ) 6072336 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , 0.0) | 5358.8<br>6970.8 | 2.2022<br>99.3<br>99.3 | 265.6068 | N/A | 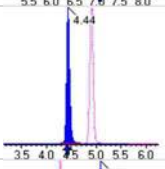 | 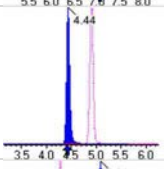 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14081726<br>( 341.0 / 217.0 ) 20939293 | ( 7.01 , 1.14 )<br>( N/A , 0.01 , 0.0) | 1178.8<br>1145.3 | 1.4870<br>99.3<br>99.3 | 209.5060 | N/A | 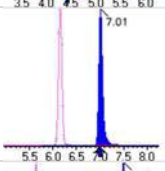 | 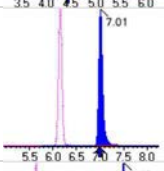 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 23451208<br>( 441.0 / 337.0 ) 20299435 | ( 9.43 , 1.53 )<br>( N/A , 0.02 , 0.0) | 6456.1<br>9898.3 | 0.8656<br>97.3<br>97.3 | 237.1788 | N/A | 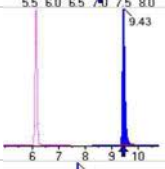 | 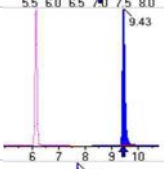 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 15436633<br>( 357.2 / 243.0 ) 1584531 | ( 6.88 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1657.1<br>1390.7 | 0.1026<br>97.2<br>97.2 | 51.1494 | N/A | 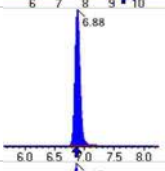 | 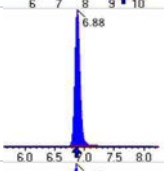 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 11162809<br>( 457.2 / 343.0 ) 463570 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , 0.0) | 876.5<br>788.8 | 0.0415<br>106.1<br>106.1 | 50.6578 | N/A | 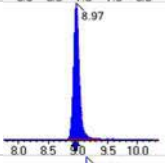 | 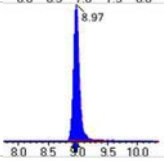 | |
| TDCA | ( 499.0 / 80.0 ) 39073100 | ( 10.66 , 1.00 )<br>( N/A , 0.03 , 0.0) | 118176.8 | N/A<br>0.0<br>0.0 | 50.1904 | N/A | 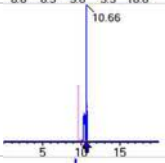 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A ) | N/A | N/A | 0.0000<br>[ 1.0000 ] | 0.0%<br>{ 0.0% } | 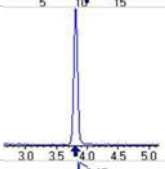 | | NR,IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 140712 | ( 6.15 , N/A )<br>( N/A , 0.02 , N/A ) | 25724.0 | N/A | 0.9151<br>[ 1.0000 ] | 91.5%<br>{ 85.3% } | 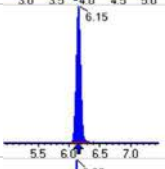 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 407424 | ( 8.33 , N/A )<br>( N/A , 0.02 , N/A ) | 3784.7 | N/A | 0.9132<br>[ 1.0000 ] | 91.3%<br>{ 89.6% } | 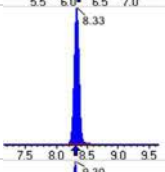 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 305683 | ( 9.30 , N/A )<br>( N/A , 0.03 , N/A ) | 999.0 | N/A | 0.9144<br>[ 1.0000 ] | 91.4%<br>{ 93.8% } | 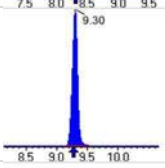 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 311971 | ( 10.21 , N/A ) ( N/A , 0.02 , N/A ) | 6527.7 | N/A | 0.9407 [ 1.0000 ] | 94.1% { 91.7% } | 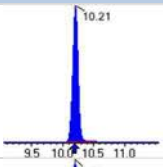 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1087130 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 3242.6 | N/A | 0.9729 [ 1.0000 ] | 97.3% { 95.4% } | 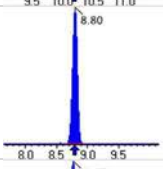 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 897533 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 3839.6 | N/A | 0.9194 [ 1.0000 ] | 91.9% { 90.2% } | 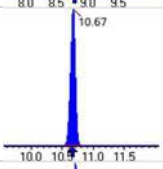 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 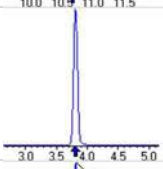 | | NR,S1, |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 839648 | ( 4.91 , N/A ) ( N/A , 0.02 , N/A ) | 4764.2 | N/A | 3.3262 [ 4.0000 ] | 83.2% { 72.5% } | 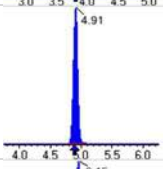 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 572429 | ( 6.15 , N/A ) ( N/A , 0.02 , N/A ) | 6808.0 | N/A | 1.8946 [ 2.0000 ] | 94.7% { 83.6% } | 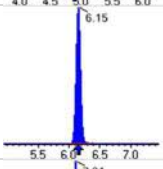 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 612233 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 5440.4 | N/A | 1.9402 [ 2.0000 ] | 97.0% { 86.9% } | 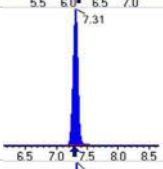 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858954 | ( 8.33 , N/A ) ( N/A , 0.02 , N/A ) | 3396.8 | N/A | 1.9996 [ 2.0000 ] | 100.0% { 90.1% } | 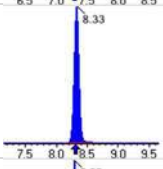 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 308464 | ( 9.29 , N/A ) ( N/A , 0.02 , N/A ) | 3598.0 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 99.2% } | 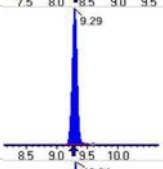 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 338425 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 1131.0 | N/A | 0.9401 [ 1.0000 ] | 94.0% { 87.9% } | 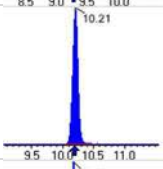 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 410565 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 820.9 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 82.6% } | 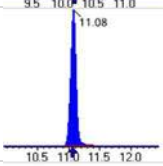 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433850 | ( 11.89 , N/A ) ( N/A , 0.02 , N/A ) | 1561.5 | N/A | 0.9870 [ 1.0000 ] | 98.7% { 87.0% } | 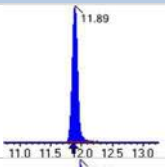 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 380580 | ( 12.99 , N/A ) ( N/A , 0.02 , N/A ) | 1366.1 | N/A | 0.9936 [ 1.0000 ] | 99.4% { 89.8% } | 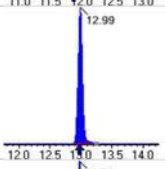 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579472 | ( 13.78 , N/A ) ( N/A , 0.01 , N/A ) | 2801.8 | N/A | 1.7812 [ 2.0000 ] | 89.1% { 81.8% } | 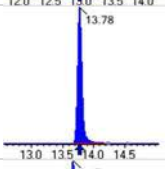 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1893233 | ( 6.47 , N/A ) ( N/A , 0.01 , N/A ) | 1395.4 | N/A | 1.7874 [ 2.0000 ] | 89.4% { 82.0% } | 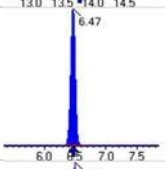 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1546106 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 4379.2 | N/A | 1.9435 [ 2.0000 ] | 97.2% { 93.9% } | 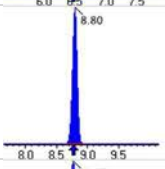 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1981905 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 616.6 | N/A | 2.0742 [ 2.0000 ] | 103.7% { 94.3% } | 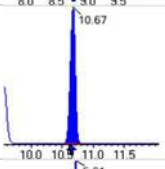 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 283468 | ( 5.61 , N/A ) ( N/A , 0.01 , N/A ) | 75.0 | N/A | 2.9943 [ 4.0000 ] | 74.9% { 78.8% } | 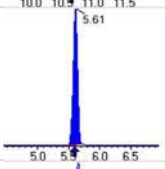 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 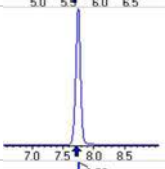 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 893578 | ( 9.56 , N/A ) ( N/A , 0.03 , N/A ) | 1072.7 | N/A | 3.0508 [ 4.0000 ] | 76.3% { 76.7% } | 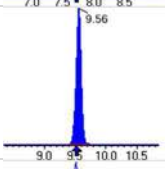 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 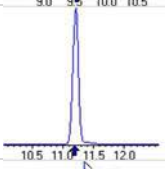 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2032266 | ( 12.85 , N/A ) ( N/A , 0.03 , N/A ) | 1776.7 | N/A | 1.9627 [ 2.0000 ] | 98.1% { 87.3% } | 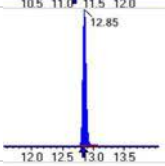 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 412108 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 1946.8 | N/A | 2.1554 [ 2.0000 ] | 107.8% { 97.4% } | 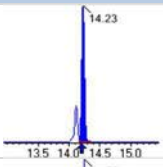  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 432162 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2675.4 | N/A | 1.9678 [ 2.0000 ] | 98.4% { 87.0% } | 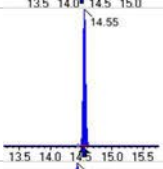  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 951188 | ( 10.44 , N/A ) ( N/A , 0.03 , N/A ) | 1462.8 | N/A | 3.8873 [ 4.0000 ] | 97.2% { 88.0% } | 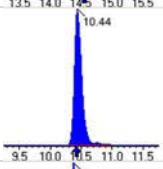  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 856821 | ( 10.98 , N/A ) ( N/A , 0.03 , N/A ) | 1852.7 | N/A | 3.6889 [ 4.0000 ] | 92.2% { 81.7% } | 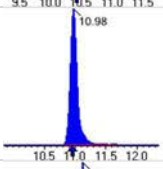  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1909243 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 3516.7 | N/A | 21.3705 [ 20.0000 ] | 106.9% { 101.4% } | 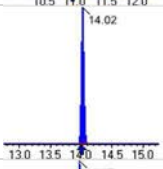  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2194972 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5592.6 | N/A | 20.2813 [ 20.0000 ] | 101.4% { 93.0% } | 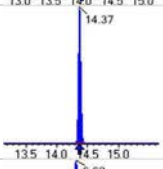  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1041744 | ( 6.62 , N/A ) ( N/A , 0.02 , N/A ) | 2598.2 | N/A | 8.0216 [ 8.0000 ] | 100.3% { 91.8% } | 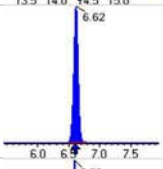  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561544 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 1277.3 | N/A | 2.0295 [ 2.0000 ] | 101.5% { 95.8% } | 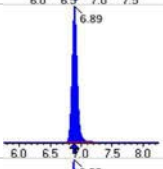  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 522549 | ( 8.98 , N/A ) ( N/A , 0.02 , N/A ) | 533.5 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 92.6% } | 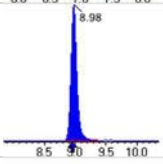  | | |

# EPA 1633A

Initial Calibration: SD00991 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 56754<br>( 163.0 / 69.0 ) 1270 | ( 2.79 , 0.74 ) ( N/A , 0.00 , -0.4) | 384.2<br>53.0 | 0.0224<br>82.4<br>82.4 | 0.1977 | N/A | 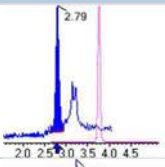 | 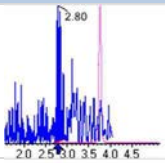 | |
| PFBA | ( 213.0 / 169.0 ) 136258 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 106.2 | N/A<br>0.0<br>0.0 | 0.4489 | N/A | 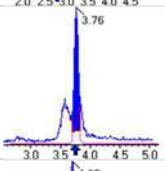 | | |
| PFPeA | ( 263.0 / 219.0 ) 51948<br>( 263.0 / 69.0 ) 452 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -1.2) | 324.2<br>10.2 | 0.0087<br>72.8<br>72.8 | 0.2066 | N/A | 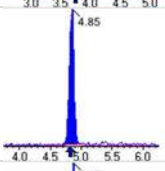 | 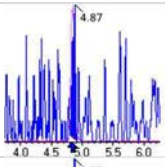 | |
| PFHxA | ( 313.0 / 269.0 ) 28303<br>( 313.0 / 119.0 ) 2598 | ( 6.07 , 1.00 ) ( 0.00 , N/A , -0.6) | 211.6<br>65.5 | 0.0918<br>79.1<br>79.1 | 0.1048 | N/A | 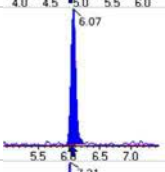 | 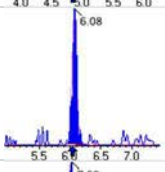 | |
| PFHpA | ( 363.0 / 319.0 ) 29431<br>( 363.0 / 169.0 ) 10099 | ( 7.21 , 1.00 ) ( 0.00 , N/A , -0.5) | 207.3<br>144.2 | 0.3431<br>113.2<br>113.2 | 0.0936 | N/A | 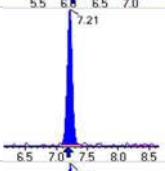 | 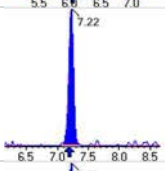 | |
| PFOA | ( 413.0 / 369.0 ) 52214<br>( 413.0 / 169.0 ) 20858 | ( 8.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 69.2<br>131.3 | 0.3995<br>109.3<br>109.3 | 0.0973 | N/A | 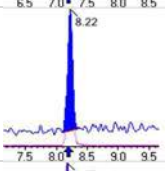 | 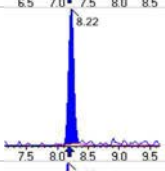 | |
| PFNA | ( 463.0 / 419.0 ) 24013<br>( 463.0 / 169.0 ) 7912 | ( 9.17 , 1.00 ) ( 0.01 , N/A , 0.5) | 245.2<br>151.2 | 0.3295<br>129.1<br>129.1 | 0.0870 | N/A | 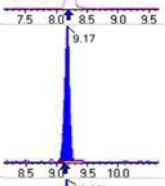 | 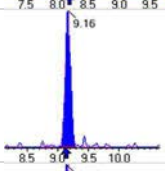 | |
| PFDA | ( 513.0 / 469.0 ) 38668<br>( 513.0 / 169.0 ) 3883 | ( 10.06 , 1.00 ) ( -0.01 , N/A , 0.0) | 462.4<br>300.3 | 0.1004<br>85.7<br>85.7 | 0.1143 | N/A | 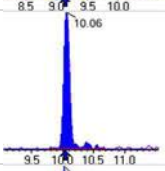 | 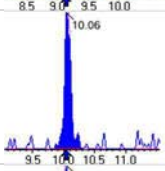 | |
| PFUnA | ( 563.0 / 519.0 ) 36147<br>( 563.0 / 169.0 ) 4589 | ( 10.93 , 1.00 ) ( 0.00 , N/A , -1.0) | 249.6<br>92.0 | 0.1270<br>89.6<br>89.6 | 0.0946 | N/A | 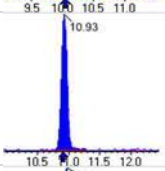 | 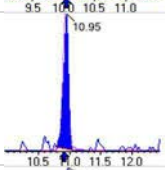 | |
| PFDoA | ( 613.0 / 569.0 ) 40420<br>( 613.0 / 169.0 ) 7186 | ( 11.76 , 1.00 ) ( 0.00 , N/A , -0.5) | 255.5<br>118.2 | 0.1778<br>112.5<br>112.5 | 0.0950 | N/A | 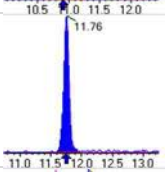 | 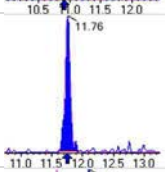 | |
| PFTrDA | ( 663.0 / 619.0 ) 40921<br>( 663.0 / 169.0 ) 9844 | ( 12.38 , 1.05 ) ( N/A , 0.01 , -0.1) | 299.5<br>147.5 | 0.2406<br>93.5<br>93.5 | 0.0984 | N/A | 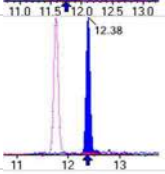 | 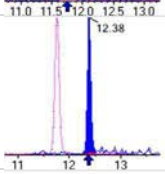 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30255<br>( 713.0 / 169.0 ) 9045 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 201.3<br>91.0 | 0.2990<br>110.8<br>110.8 | 0.0932 | N/A | 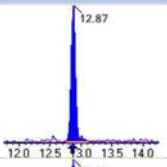 | 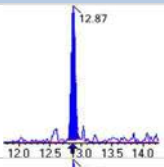 | |
| PFHxDA | ( 813.0 / 769.0 ) 27334<br>( 813.0 / 169.0 ) 7950 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.3) | 174.8<br>67.9 | 0.2908<br>118.9<br>118.9 | 0.1034 | N/A | 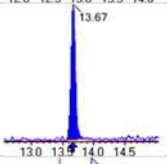 | 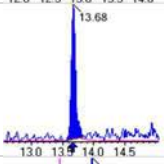 | |
| PFODA | ( 913.0 / 869.0 ) 15819<br>( 913.0 / 169.0 ) 6681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , -0.4) | 73.9<br>28.2 | 0.4223<br>117.9<br>117.9 | 0.0956 | N/A | 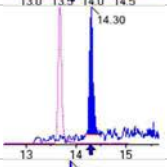 | 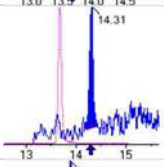 | |
| PFBS | ( 299.0 / 80.0 ) 35573<br>( 299.0 / 99.0 ) 26416 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.2) | 334.4<br>161.3 | 0.7426<br>105.0<br>105.0 | 0.0792 | N/A | 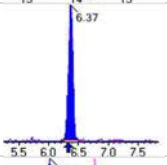 | 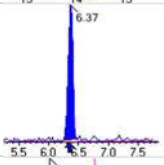 | |
| PFPeS | ( 349.0 / 80.0 ) 97489<br>( 349.0 / 99.0 ) 33196 | ( 7.61 , 0.88 )<br>( N/A , 0.02 , 0.1) | 355.9<br>243.8 | 0.3405<br>94.7<br>94.7 | 0.0909 | N/A | 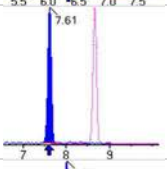 | 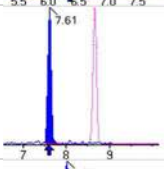 | |
| PFHxS | ( 399.0 / 80.0 ) 110405<br>( 399.0 / 99.0 ) 38767 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , -0.1) | 482.8<br>534.8 | 0.3511<br>110.3<br>110.3 | 0.0887 | N/A | 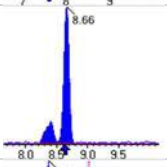 | 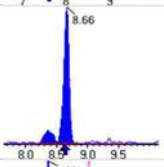 | |
| PFHpS | ( 449.0 / 80.0 ) 83548<br>( 449.0 / 99.0 ) 26287 | ( 9.63 , 0.92 )<br>( N/A , 0.02 , 0.3) | 322.3<br>244.1 | 0.3146<br>118.9<br>118.9 | 0.0858 | N/A | 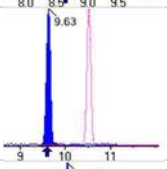 | 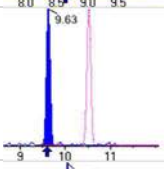 | |
| PFOS | ( 499.0 / 80.0 ) 87691<br>( 499.0 / 99.0 ) 22883 | ( 10.52 , 1.00 )<br>( 0.00 , N/A , 0.4) | 345.3<br>1768.7 | 0.2609<br>111.6<br>111.6 | 0.0934 | N/A | 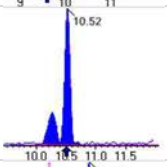 | 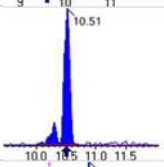 | |
| PFNS | ( 549.0 / 80.0 ) 83900<br>( 549.0 / 99.0 ) 23316 | ( 11.37 , 1.08 )<br>( N/A , 0.03 , 0.3) | 349.0<br>203.8 | 0.2779<br>102.0<br>102.0 | 0.0954 | N/A | 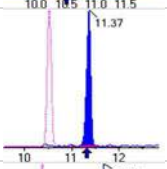 | 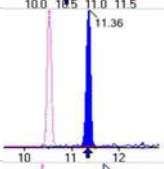 | |
| PFDS | ( 599.0 / 80.0 ) 108245<br>( 599.0 / 99.0 ) 28207 | ( 12.06 , 1.15 )<br>( N/A , 0.01 , -0.3) | 392.8<br>137.7 | 0.2606<br>95.8<br>95.8 | 0.1008 | N/A | 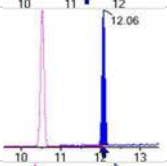 | 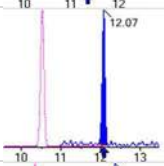 | |
| PFDoS | ( 699.0 / 80.0 ) 90182<br>( 699.0 / 99.0 ) 22019 | ( 12.98 , 1.23 )<br>( N/A , 0.01 , -0.1) | 480.9<br>258.2 | 0.2442<br>104.5<br>104.5 | 0.0953 | N/A | 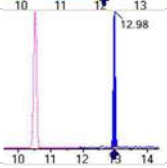 | 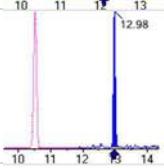 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 138266<br>( 327.0 / 81.0 ) 132939 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1481.0<br>723.3 | 0.9615<br>110.2<br>110.2 | 0.3493 | N/A | 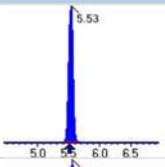 | 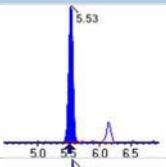 | |
| 6:2FTS | ( 427.0 / 407.0 ) 137083<br>( 427.0 / 81.0 ) 177481 | ( 7.65 , 1.00 )<br>( -0.01 , N/A , -0.3) | 1795.6<br>972.6 | 1.2947<br>103.2<br>103.2 | 0.3738 | N/A | 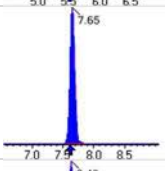 | 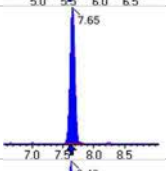 | |
| 8:2FTS | ( 527.0 / 507.0 ) 135114<br>( 527.0 / 81.0 ) 148723 | ( 9.43 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1178.6<br>706.0 | 1.1007<br>101.2<br>101.2 | 0.3727 | N/A | 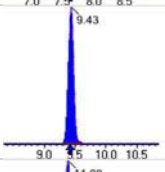 | 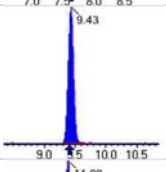 | |
| 10:2FTS | ( 627.0 / 607.0 ) 113285<br>( 627.0 / 81.0 ) 169067 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.0) | 776.4<br>354.6 | 1.4924<br>103.7<br>103.7 | 0.3842 | N/A | 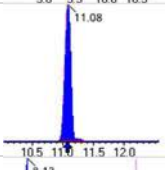 | 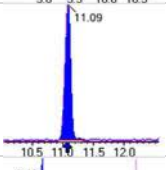 | |
| PFBSA | ( 297.9 / 78.0 ) 77257<br>( 297.9 / 278.0 ) 42 | ( 8.13 , 0.57 )<br>( N/A , 0.02 , 0.5) | 590.4<br>6.4 | 0.0005<br>39.4<br>39.4 | 0.0966 | N/A | 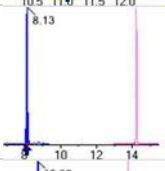 | 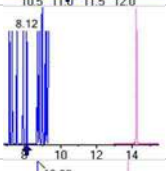 | |
| PFHxSA | ( 397.9 / 78.0 ) 102666<br>( 397.9 / 378.0 ) 421 | ( 10.99 , 0.76 )<br>( N/A , 0.02 , 0.9) | 582.4<br>24.9 | 0.0041<br>100.4<br>100.4 | 0.0979 | N/A | 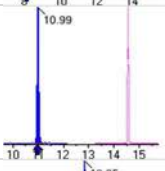 | 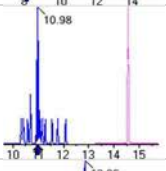 | |
| PFOSA | ( 498.0 / 78.0 ) 74467<br>( 498.0 / 478.0 ) 886 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.5) | 606.2<br>33.7 | 0.0119<br>84.8<br>84.8 | 0.0950 | N/A | 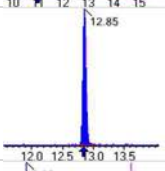 | 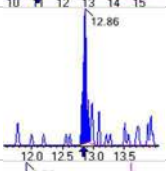 | |
| TFSI | ( 279.7 / 147.0 ) 175179<br>( 279.7 / 211.0 ) 15047 | ( 8.23 , 0.64 )<br>( N/A , 0.03 , -0.2) | 46.0<br>21.9 | 0.0859<br>102.2<br>102.2 | 0.0849 | N/A | 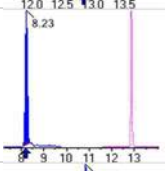 | 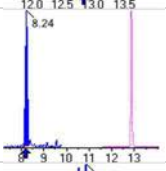 | |
| NMeFOSA | ( 512.0 / 219.0 ) 57698<br>( 512.0 / 169.0 ) 44722 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 560.7<br>223.4 | 0.7751<br>103.6<br>103.6 | 0.3745 | N/A | 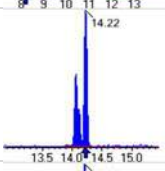 | 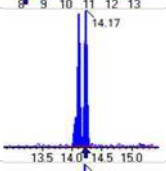 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72453<br>( 526.0 / 169.0 ) 88312 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.5) | 828.6<br>691.6 | 1.2189<br>98.7<br>98.7 | 0.3790 | N/A | 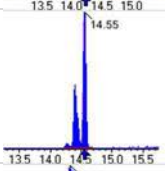 | 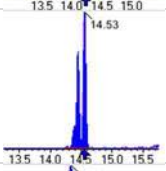 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 21494<br>( 570.0 / 483.0 ) 9989 | ( 10.33 , 1.00 )<br>( 0.01 , N/A , 0.1) | 69489.4<br>2801.3 | 0.4647<br>106.0<br>106.0 | 0.1015 | N/A | 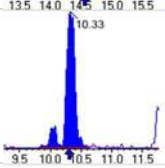 | 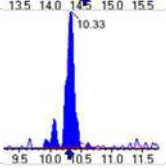 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 18396<br>( 584.0 / 526.0 ) 12082 | ( 10.86 , 1.00 ) ( 0.01 , N/A , 0.6) | 62964.4<br>389.2 | 0.6568<br>106.5<br>106.5 | 0.0917 | N/A | 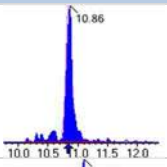 | 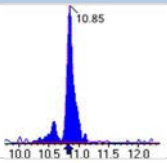 | |
| NMeFOSE | ( 616.0 / 59.0 ) 32728 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 202.5 | N/A<br>0.0<br>0.0 | 0.4046 | N/A | 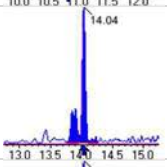 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 24283 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 263.9 | N/A<br>0.0<br>0.0 | 0.3613 | N/A | 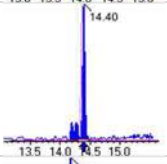 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7677<br>( 285.0 / 185.0 ) 19134 | ( 6.53 , 1.00 ) ( 0.00 , N/A , -0.1) | 309.3<br>127.0 | 2.4924<br>90.1<br>90.1 | 0.1012 | N/A | 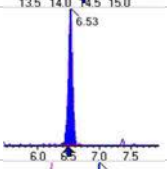 | 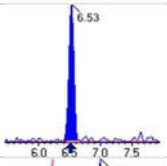 | |
| ADONA | ( 377.0 / 85.0 ) 86497<br>( 377.0 / 251.0 ) 6881 | ( 7.61 , 1.16 ) ( N/A , 0.02 , -0.1) | 669.7<br>111.4 | 0.0796<br>78.0<br>78.0 | 0.0977 | N/A | 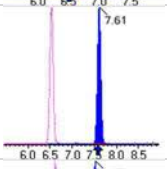 | 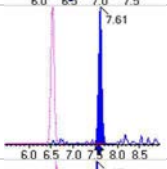 | |
| PFEESA | ( 315.0 / 135.0 ) 32797<br>( 315.0 / 83.0 ) 24495 | ( 6.97 , 1.15 ) ( N/A , 0.02 , -0.2) | 555.1<br>75.6 | 0.7469<br>134.0<br>134.0 | 0.1691 | N/A | 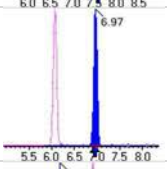 | 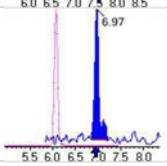 | |
| PFMPA | ( 229.0 / 85.0 ) 14437 | ( 4.15 , 0.86 ) ( N/A , 0.01 , 0.0) | 396.2 | N/A<br>0.0<br>0.0 | 0.1810 | N/A | 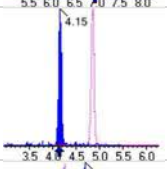 | | |
| PFMBA | ( 279.0 / 85.0 ) 38487 | ( 5.21 , 1.08 ) ( N/A , 0.00 , 0.0) | 415.6 | N/A<br>0.0<br>0.0 | 0.1775 | N/A | 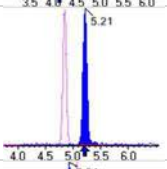 | | |
| NFDHA | ( 295.0 / 201.0 ) 19867<br>( 295.0 / 85.0 ) 19074 | ( 5.94 , 0.98 ) ( N/A , 0.02 , 0.4) | 825.6<br>224.5 | 0.9601<br>89.0<br>89.0 | 0.1970 | N/A | 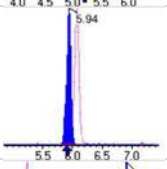 | 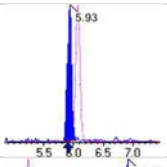 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86451<br>( 533.0 / 353.0 ) 30185 | ( 11.17 , 1.71 ) ( N/A , 0.02 , -0.2) | 1132.8<br>400.3 | 0.3492<br>111.6<br>111.6 | 0.0904 | N/A | 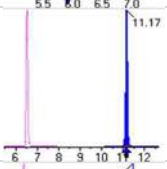 | 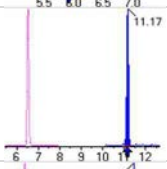 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 69462<br>( 633.0 / 453.0 ) 22673 | ( 12.48 , 1.91 ) ( N/A , 0.01 , -0.1) | 820.0<br>211.9 | 0.3264<br>98.3<br>98.3 | 0.0945 | N/A | 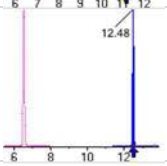 | 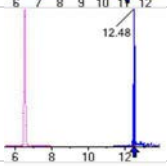 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 44635<br>( 461.0 / 381.2 ) 17189 | ( 9.55 , 0.91 )<br>( N/A , 0.02 , 0.6) | 466.0<br>312.6 | 0.3851<br>96.6<br>96.6 | 0.0843 | N/A | 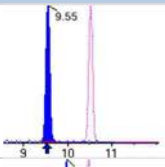 | 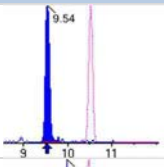 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 4575<br>( 241.0 / 117.0 ) 11441 | ( 4.41 , 0.91 )<br>( N/A , 0.01 , -0.2) | 329.5<br>126.3 | 2.5007<br>118.7<br>118.7 | 0.3199 | N/A | 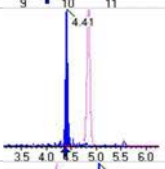 | 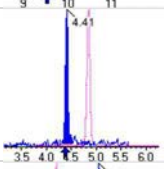 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30417<br>( 341.0 / 217.0 ) 46943 | ( 6.97 , 1.15 )<br>( N/A , 0.02 , 0.2) | 303.3<br>268.0 | 1.5433<br>101.6<br>101.6 | 0.4060 | N/A | 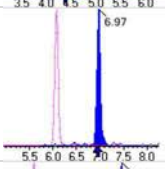 | 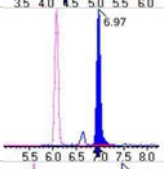 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54097<br>( 441.0 / 337.0 ) 44506 | ( 9.36 , 1.54 )<br>( N/A , 0.02 , -0.2) | 24010.5<br>4188.6 | 0.8227<br>89.7<br>89.7 | 0.4401 | N/A | 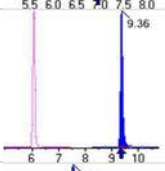 | 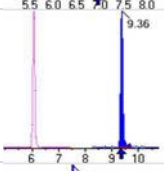 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 33721<br>( 357.2 / 243.0 ) 2710 | ( 6.81 , 1.00 )<br>( 0.00 , N/A , 0.5) | 224.8<br>46.5 | 0.0804<br>72.9<br>72.9 | 0.0953 | N/A | 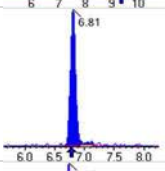 | 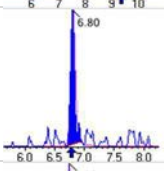 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 18228<br>( 457.2 / 343.0 ) 723 | ( 8.85 , 1.00 )<br>( -0.01 , N/A , -0.3) | 328.9<br>66.3 | 0.0397<br>95.7<br>95.7 | 0.0750 | N/A | 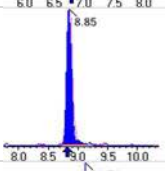 | 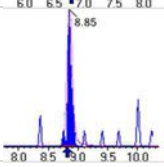 | |
| TDCA | ( 499.0 / 80.0 ) 62947 | ( 10.51 , 1.00 )<br>( N/A , 0.02 , 0.0) | 745.7 | N/A<br>0.0<br>0.0 | 0.0984 | N/A | 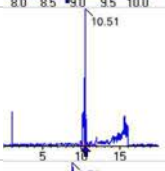 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269964 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1513.6 | N/A | 1.1322<br>[ 1.0000 ] | 113.2%<br>{ 115.2% } | 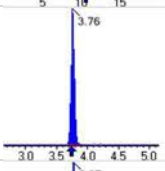 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111056 | ( 6.07 , N/A )<br>( N/A , 0.01 , N/A ) | 118187.6 | N/A | 0.8754<br>[ 1.0000 ] | 87.5%<br>{ 92.9% } | 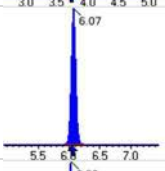 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 395428 | ( 8.23 , N/A )<br>( N/A , 0.03 , N/A ) | 3733.5 | N/A | 1.0003<br>[ 1.0000 ] | 100.0%<br>{ 104.1% } | 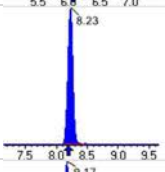 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 274681 | ( 9.17 , N/A )<br>( N/A , 0.02 , N/A ) | 866.2 | N/A | 0.9658<br>[ 1.0000 ] | 96.6%<br>{ 103.2% } | 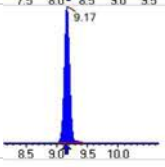 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 296205 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 4479.4 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 110.6% } | 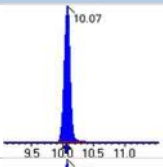 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 887857 | ( 8.67 , N/A ) ( N/A , 0.02 , N/A ) | 5438.8 | N/A | 0.9355 [ 1.0000 ] | 93.6% { 98.6% } | 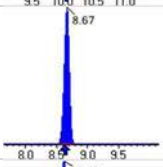 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 744274 | ( 10.53 , N/A ) ( N/A , 0.02 , N/A ) | 1977.9 | N/A | 0.9772 [ 1.0000 ] | 97.7% { 106.2% } | 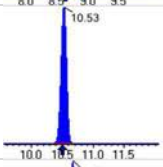 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2435804 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 41491.6 | N/A | 7.8981 [ 8.0000 ] | 98.7% { 115.2% } | 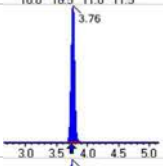 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 995379 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 6790.9 | N/A | 4.8037 [ 4.0000 ] | 120.1% { 108.0% } | 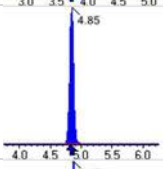 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 562315 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 10449.6 | N/A | 2.2192 [ 2.0000 ] | 111.0% { 101.6% } | 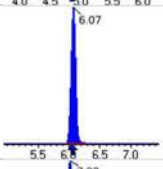 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 641086 | ( 7.22 , N/A ) ( N/A , 0.02 , N/A ) | 5851.9 | N/A | 2.2744 [ 2.0000 ] | 113.7% { 103.5% } | 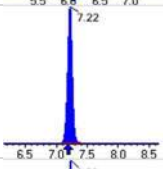 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879761 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3170.1 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 107.3% } | 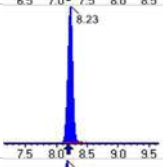 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274748 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 3274.8 | N/A | 1.0201 [ 1.0000 ] | 102.0% { 104.6% } | 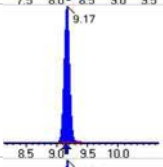 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331041 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1094.7 | N/A | 0.9973 [ 1.0000 ] | 99.7% { 104.5% } | 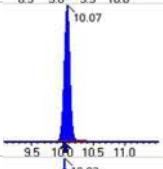 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412925 | ( 10.93 , N/A ) ( N/A , 0.02 , N/A ) | 1057.2 | N/A | 1.0573 [ 1.0000 ] | 105.7% { 114.3% } | 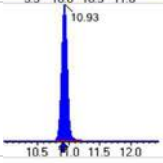 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 422727 | ( 11.76 , N/A ) ( N/A , 0.02 , N/A ) | 1235.8 | N/A | 1.0629 [ 1.0000 ] | 106.3% { 120.2% } | 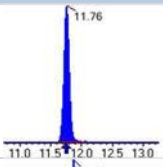 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 346712 | ( 12.88 , N/A ) ( N/A , 0.01 , N/A ) | 1297.7 | N/A | 1.0237 [ 1.0000 ] | 102.4% { 111.0% } | 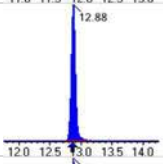 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554558 | ( 13.68 , N/A ) ( N/A , 0.01 , N/A ) | 2058.7 | N/A | 1.9179 [ 2.0000 ] | 95.9% { 107.5% } | 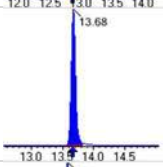 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729492 | ( 6.37 , N/A ) ( N/A , 0.02 , N/A ) | 1031.7 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 108.6% } | 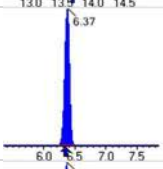 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400831 | ( 8.66 , N/A ) ( N/A , 0.03 , N/A ) | 3163.0 | N/A | 2.1878 [ 2.0000 ] | 109.4% { 109.4% } | 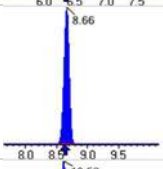 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1625759 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1645.8 | N/A | 2.0259 [ 2.0000 ] | 101.3% { 104.0% } | 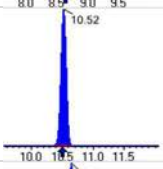 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 603279 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 91.6 | N/A | 4.3589 [ 4.0000 ] | 109.0% { 114.9% } | 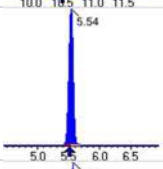 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1771435 | ( 7.66 , N/A ) ( N/A , 0.03 , N/A ) | 3327.3 | N/A | 4.2767 [ 4.0000 ] | 106.9% { 104.2% } | 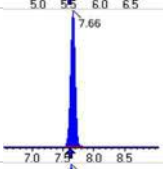 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527095 | ( 9.44 , N/A ) ( N/A , 0.02 , N/A ) | 1433.7 | N/A | 4.7009 [ 4.0000 ] | 117.5% { 115.7% } | 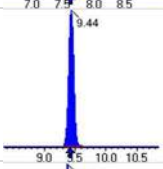 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3060105 | ( 11.07 , N/A ) ( N/A , 0.02 , N/A ) | 1576.9 | N/A | 9.0135 [ 8.0000 ] | 112.7% { 117.8% } | 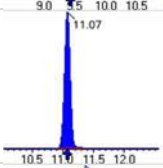 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1567982 | ( 12.86 , N/A ) ( N/A , 0.01 , N/A ) | 1673.5 | N/A | 2.2048 [ 2.0000 ] | 110.2% { 117.6% } | 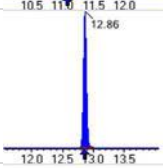 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 310360 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1785.9 | N/A | 2.0576 [ 2.0000 ] | 102.9% { 111.9% } | 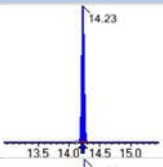  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 341394 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2508.3 | N/A | 2.1106 [ 2.0000 ] | 105.5% { 108.2% } | 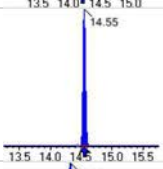  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 888303 | ( 10.32 , N/A ) ( N/A , 0.02 , N/A ) | 2741.2 | N/A | 4.3020 [ 4.0000 ] | 107.6% { 106.0% } | 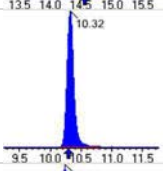  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 820340 | ( 10.84 , N/A ) ( N/A , 0.02 , N/A ) | 1993.4 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 108.5% } | 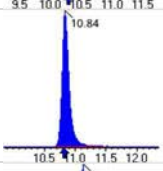  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475020 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 21.7611 [ 20.0000 ] | 108.8% { 109.6% } | 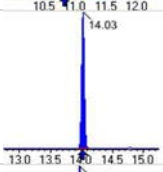  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1513000 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3678.2 | N/A | 21.9921 [ 20.0000 ] | 110.0% { 114.9% } | 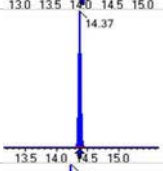  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1029123 | ( 6.53 , N/A ) ( N/A , 0.01 , N/A ) | 2714.8 | N/A | 8.9159 [ 8.0000 ] | 111.4% { 105.2% } | 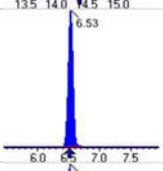  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 665466 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1425.6 | N/A | 2.0722 [ 2.0000 ] | 103.6% { 115.3% } | 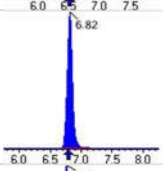  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 596324 | ( 8.86 , N/A ) ( N/A , 0.02 , N/A ) | 778.6 | N/A | 2.0397 [ 2.0000 ] | 102.0% { 111.0% } | 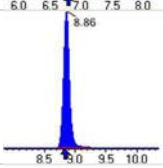  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 270243<br>( 163.0 / 69.0 ) 6407 | ( 2.78 , 0.74 ) ( N/A , 0.00 , -0.3) | 1728.8<br>290.1 | 0.0237<br>87.3<br>87.3 | 0.9507 | N/A | 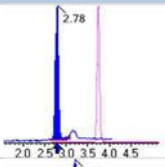 | 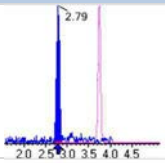 | |
| PFBA | ( 213.0 / 169.0 ) 601138 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 533.4 | N/A<br>0.0<br>0.0 | 2.0004 | N/A | 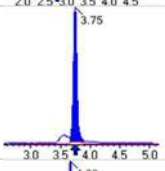 | | |
| PFPeA | ( 263.0 / 219.0 ) 236977<br>( 263.0 / 69.0 ) 2370 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.4) | 1167.2<br>40.3 | 0.0100<br>83.8<br>83.8 | 0.9417 | N/A | 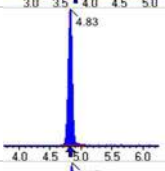 | 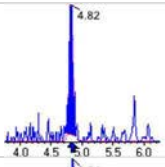 | |
| PFHxA | ( 313.0 / 269.0 ) 139970<br>( 313.0 / 119.0 ) 15702 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 805.1<br>325.5 | 0.1122<br>96.6<br>96.6 | 0.4869 | N/A | 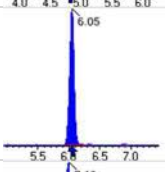 | 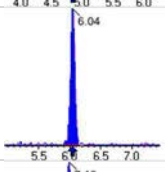 | |
| PFHpA | ( 363.0 / 319.0 ) 153182<br>( 363.0 / 169.0 ) 47571 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 795.4<br>513.0 | 0.3106<br>102.5<br>102.5 | 0.4856 | N/A | 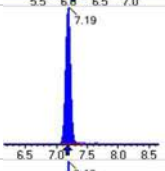 | 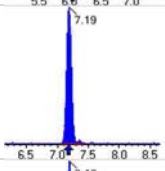 | |
| PFOA | ( 413.0 / 369.0 ) 219264<br>( 413.0 / 169.0 ) 76818 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 244.8<br>400.1 | 0.3503<br>95.8<br>95.8 | 0.5151 | N/A | 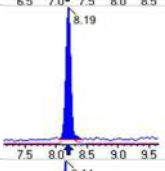 | 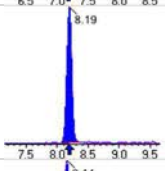 | |
| PFNA | ( 463.0 / 419.0 ) 137279<br>( 463.0 / 169.0 ) 33380 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 798.0<br>432.7 | 0.2432<br>95.2<br>95.2 | 0.5090 | N/A | 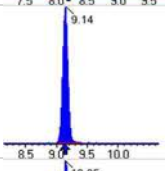 | 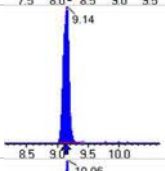 | |
| PFDA | ( 513.0 / 469.0 ) 168954<br>( 513.0 / 169.0 ) 20337 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.5) | 1427.3<br>879.5 | 0.1204<br>102.7<br>102.7 | 0.5207 | N/A | 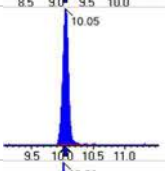 | 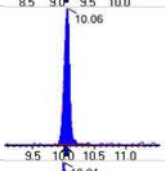 | |
| PFUnA | ( 563.0 / 519.0 ) 171379<br>( 563.0 / 169.0 ) 24402 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.3) | 762.3<br>223.0 | 0.1424<br>100.5<br>100.5 | 0.4723 | N/A | 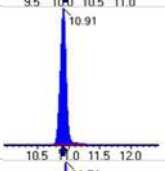 | 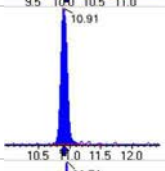 | |
| PFDoA | ( 613.0 / 569.0 ) 185419<br>( 613.0 / 169.0 ) 28647 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.1) | 650.7<br>310.6 | 0.1545<br>97.7<br>97.7 | 0.4817 | N/A | 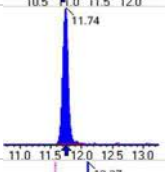 | 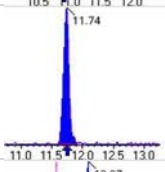 | |
| PFTrDA | ( 663.0 / 619.0 ) 187393<br>( 663.0 / 169.0 ) 51467 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.2) | 715.2<br>527.9 | 0.2746<br>106.7<br>106.7 | 0.4977 | N/A | 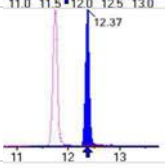 | 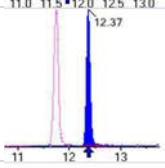 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 158224<br>( 713.0 / 169.0 ) 40722 | ( 12.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 963.7<br>336.5 | 0.2574<br>95.4<br>95.4 | 0.5074 | N/A | 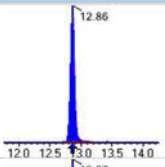 | 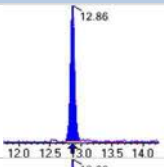 | |
| PFHxDA | ( 813.0 / 769.0 ) 137951<br>( 813.0 / 169.0 ) 33076 | ( 13.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 845.2<br>255.3 | 0.2398<br>98.0<br>98.0 | 0.5012 | N/A | 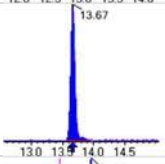 | 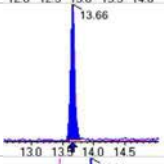 | |
| PFODA | ( 913.0 / 869.0 ) 87214<br>( 913.0 / 169.0 ) 26681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 415.1<br>133.0 | 0.3059<br>85.4<br>85.4 | 0.5065 | N/A | 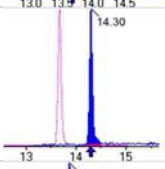 | 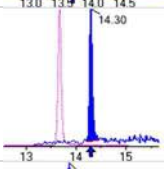 | |
| PFBS | ( 299.0 / 80.0 ) 198065<br>( 299.0 / 99.0 ) 132926 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1381.9<br>709.2 | 0.6711<br>94.9<br>94.9 | 0.4518 | N/A | 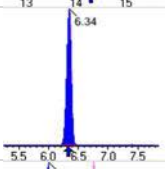 | 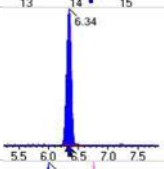 | |
| PFPeS | ( 349.0 / 80.0 ) 497722<br>( 349.0 / 99.0 ) 172204 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.0) | 1143.3<br>1025.2 | 0.3460<br>96.2<br>96.2 | 0.4717 | N/A | 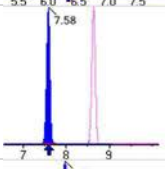 | 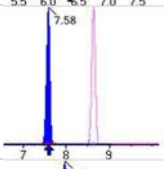 | |
| PFHxS | ( 399.0 / 80.0 ) 542542<br>( 399.0 / 99.0 ) 185937 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1189.0<br>1277.1 | 0.3427<br>107.6<br>107.6 | 0.4426 | N/A | 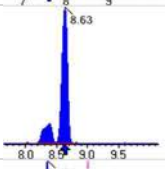 | 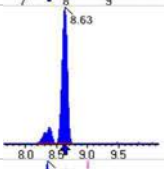 | |
| PFHpS | ( 449.0 / 80.0 ) 454824<br>( 449.0 / 99.0 ) 118403 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 980.7<br>650.1 | 0.2603<br>98.4<br>98.4 | 0.4757 | N/A | 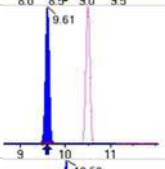 | 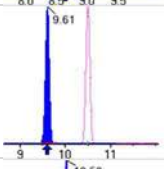 | |
| PFOS | ( 499.0 / 80.0 ) 424655<br>( 499.0 / 99.0 ) 97429 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.2) | 865.6<br>2087.7 | 0.2294<br>98.2<br>98.2 | 0.4608 | N/A | 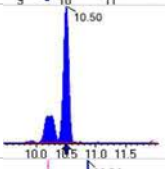 | 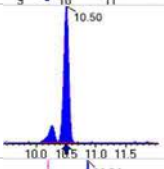 | |
| PFNS | ( 549.0 / 80.0 ) 419634<br>( 549.0 / 99.0 ) 115472 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 999.8<br>699.2 | 0.2752<br>101.0<br>101.0 | 0.4863 | N/A | 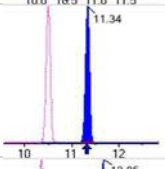 | 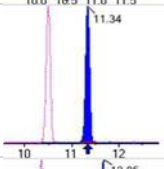 | |
| PFDS | ( 599.0 / 80.0 ) 531726<br>( 599.0 / 99.0 ) 138592 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 979.2<br>576.8 | 0.2606<br>95.9<br>95.9 | 0.5047 | N/A | 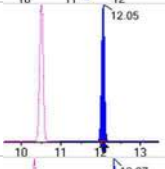 | 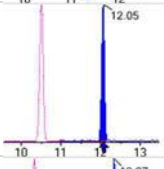 | |
| PFDoS | ( 699.0 / 80.0 ) 448366<br>( 699.0 / 99.0 ) 109465 | ( 12.97 , 1.23 )<br>( N/A , 0.00 , 0.0) | 1926.4<br>1068.2 | 0.2441<br>104.5<br>104.5 | 0.4827 | N/A | 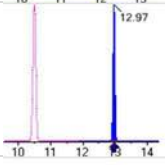 | 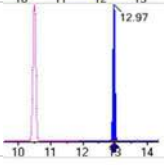 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 754240<br>( 327.0 / 81.0 ) 686574 | ( 5.51 , 1.00 ) ( -0.01 , N/A , -0.2) | 3506.2<br>1884.3 | 0.9103<br>104.3<br>104.3 | 1.9200 | N/A | 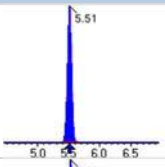 | 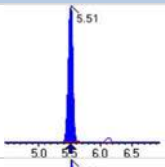 | |
| 6:2FTS | ( 427.0 / 407.0 ) 743646<br>( 427.0 / 81.0 ) 871699 | ( 7.63 , 1.00 ) ( -0.01 , N/A , 0.3) | 3382.5<br>2278.6 | 1.1722<br>93.5<br>93.5 | 1.9637 | N/A | 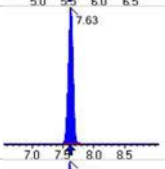 | 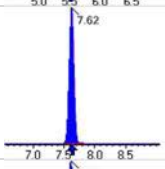 | |
| 8:2FTS | ( 527.0 / 507.0 ) 720596<br>( 527.0 / 81.0 ) 776814 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 1864.9<br>1134.6 | 1.0780<br>99.1<br>99.1 | 2.0117 | N/A | 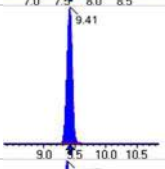 | 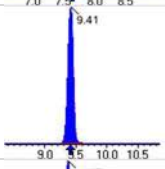 | |
| 10:2FTS | ( 627.0 / 607.0 ) 538928<br>( 627.0 / 81.0 ) 829622 | ( 11.07 , 1.00 ) ( 0.01 , N/A , 0.1) | 1479.4<br>1094.4 | 1.5394<br>106.9<br>106.9 | 1.8031 | N/A | 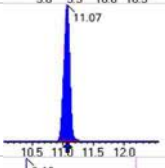 | 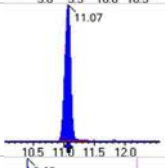 | |
| PFBSA | ( 297.9 / 78.0 ) 377825<br>( 297.9 / 278.0 ) 593 | ( 8.10 , 0.57 ) ( N/A , -0.01 , -1.1) | 1359.0<br>35.1 | 0.0016<br>114.8<br>114.8 | 0.4989 | N/A | 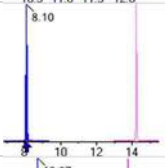 | 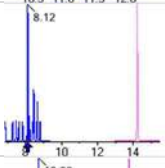 | |
| PFHxSA | ( 397.9 / 78.0 ) 506230<br>( 397.9 / 378.0 ) 2031 | ( 10.97 , 0.75 ) ( N/A , 0.00 , -0.3) | 1295.9<br>58.9 | 0.0040<br>98.2<br>98.2 | 0.5209 | N/A | 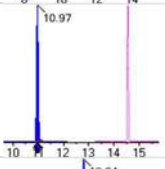 | 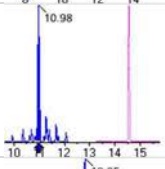 | |
| PFOSA | ( 498.0 / 78.0 ) 387069<br>( 498.0 / 478.0 ) 4980 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.2) | 1381.2<br>211.1 | 0.0129<br>91.7<br>91.7 | 0.5254 | N/A | 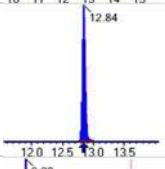 | 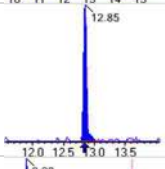 | |
| TFSI | ( 279.7 / 147.0 ) 914573<br>( 279.7 / 211.0 ) 73594 | ( 8.20 , 0.64 ) ( N/A , 0.00 , 0.1) | 56.4<br>41.8 | 0.0805<br>95.8<br>95.8 | 0.4714 | N/A | 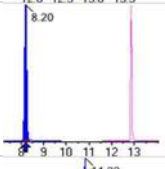 | 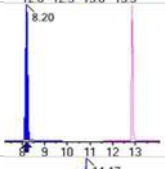 | |
| NMeFOSA | ( 512.0 / 219.0 ) 289760<br>( 512.0 / 169.0 ) 219586 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.9) | 1564.6<br>722.0 | 0.7578<br>101.3<br>101.3 | 1.9861 | N/A | 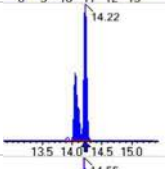 | 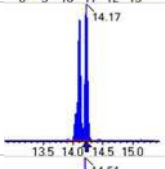 | |
| NEtFOSA | ( 526.0 / 219.0 ) 357885<br>( 526.0 / 169.0 ) 435343 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.2) | 2096.7<br>1693.7 | 1.2164<br>98.5<br>98.5 | 2.0207 | N/A | 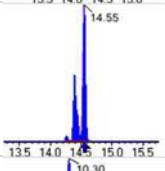 | 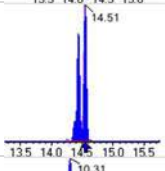 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 101165<br>( 570.0 / 483.0 ) 44729 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 1433.8<br>321.8 | 0.4421<br>100.8<br>100.8 | 0.5077 | N/A | 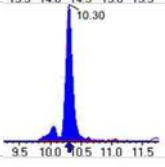 | 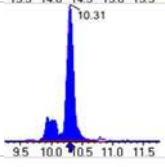 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 101975<br>( 584.0 / 526.0 ) 55503 | ( 10.84 , 1.00 )<br>( 0.01 , N/A , -0.1) | 3375617.3<br>499.1 | 0.5443<br>88.3<br>88.3 | 0.5375 | N/A | 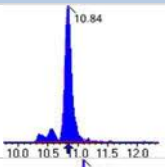 | 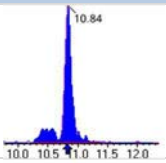 | |
| NMeFOSE | ( 616.0 / 59.0 ) 147340 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 760.5 | N/A<br>0.0<br>0.0 | 2.0427 | N/A | 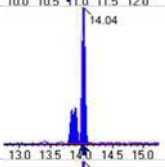 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 117168 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 956.6 | N/A<br>0.0<br>0.0 | 1.9790 | N/A | 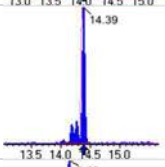 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 35584<br>( 285.0 / 185.0 ) 106028 | ( 6.50 , 1.00 )<br>( -0.01 , N/A , -0.2) | 642.7<br>688.7 | 2.9796<br>107.7<br>107.7 | 0.4650 | N/A | 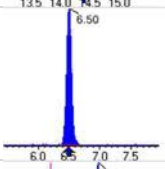 | 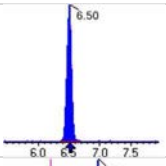 | |
| ADONA | ( 377.0 / 85.0 ) 413542<br>( 377.0 / 251.0 ) 38104 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.1) | 1102.2<br>428.3 | 0.0921<br>90.4<br>90.4 | 0.4632 | N/A | 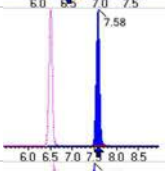 | 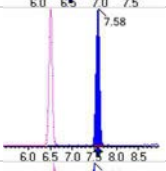 | |
| PFEESA | ( 315.0 / 135.0 ) 179792<br>( 315.0 / 83.0 ) 102089 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 1604.0<br>254.7 | 0.5678<br>101.9<br>101.9 | 0.8709 | N/A | 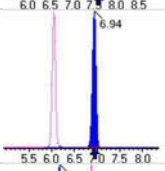 | 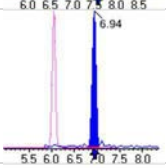 | |
| PFMPA | ( 229.0 / 85.0 ) 71647 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 1573.5 | N/A<br>0.0<br>0.0 | 0.8972 | N/A | 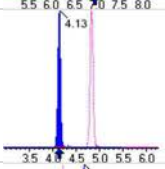 | | |
| PFMBA | ( 279.0 / 85.0 ) 202423 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 1629.0 | N/A<br>0.0<br>0.0 | 0.9326 | N/A | 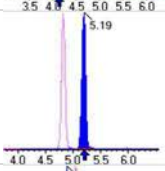 | | |
| NFDHA | ( 295.0 / 201.0 ) 108804<br>( 295.0 / 85.0 ) 115646 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 2039.9<br>957.9 | 1.0629<br>98.5<br>98.5 | 1.0138 | N/A | 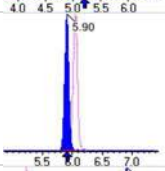 | 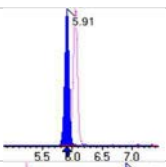 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 441071<br>( 533.0 / 353.0 ) 140189 | ( 11.15 , 1.71 )<br>( N/A , 0.01 , 0.1) | 2047.3<br>1154.6 | 0.3178<br>101.6<br>101.6 | 0.4574 | N/A | 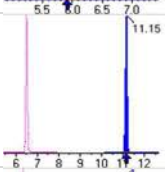 | 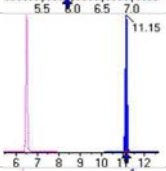 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 340892<br>( 633.0 / 453.0 ) 116659 | ( 12.46 , 1.92 )<br>( N/A , 0.00 , -0.1) | 2111.2<br>1169.2 | 0.3422<br>103.0<br>103.0 | 0.4597 | N/A | 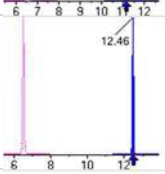 | 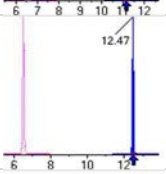 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 226835<br>( 461.0 / 381.2 ) 88383 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2081.7<br>1590.3 | 0.3896<br>97.8<br>97.8 | 0.4363 | N/A | 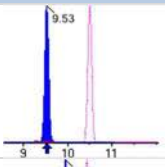 | 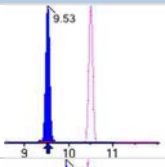 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25450<br>( 241.0 / 117.0 ) 56322 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.0) | 836.2<br>518.4 | 2.2130<br>105.0<br>105.0 | 1.7777 | N/A | 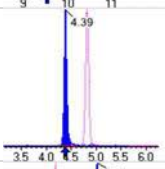 | 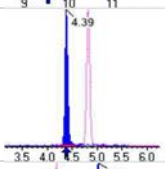 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 171905<br>( 341.0 / 217.0 ) 241610 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 759.6<br>653.2 | 1.4055<br>92.5<br>92.5 | 2.1563 | N/A | 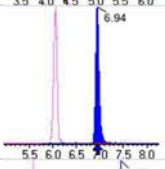 | 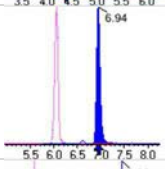 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 258113<br>( 441.0 / 337.0 ) 220700 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.1) | 3902.4<br>4652.4 | 0.8551<br>93.2<br>93.2 | 1.9730 | N/A | 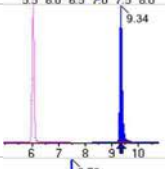 | 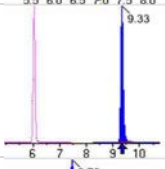 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172883<br>( 357.2 / 243.0 ) 19248 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 854.8<br>275.3 | 0.1113<br>101.0<br>101.0 | 0.4857 | N/A | 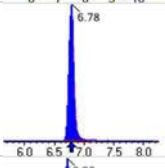 | 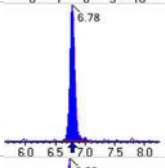 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 121222<br>( 457.2 / 343.0 ) 4083 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , -0.7) | 565.3<br>104.4 | 0.0337<br>81.2<br>81.2 | 0.5056 | N/A | 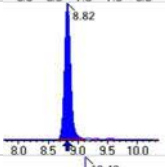 | 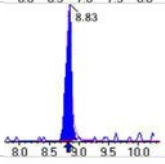 | |
| TDCA | ( 499.0 / 80.0 ) 308828 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 2696.4 | N/A<br>0.0<br>0.0 | 0.4916 | N/A | 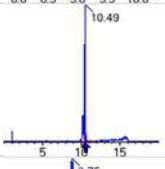 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261563 | ( 3.75 , N/A )<br>( N/A , -0.01 , N/A ) | 1100.3 | N/A | 1.0970<br>[ 1.0000 ] | 109.7%<br>{ 111.6% } | 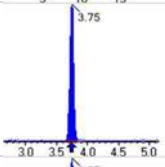 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125307 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 10148.5 | N/A | 0.9878<br>[ 1.0000 ] | 98.8%<br>{ 104.9% } | 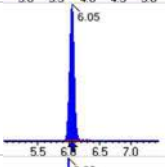 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390460 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 5378.3 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 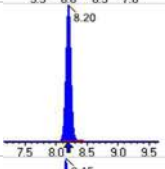 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278335 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 1109.0 | N/A | 0.9786<br>[ 1.0000 ] | 97.9%<br>{ 104.5% } | 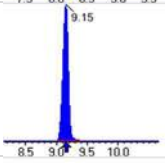 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307138 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6465.5 | N/A | 1.0517 [ 1.0000 ] | 105.2% { 114.7% } | 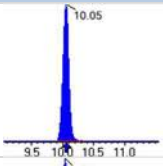 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981307 | ( 8.64 , N/A ) ( N/A , -0.01 , N/A ) | 6565.2 | N/A | 1.0340 [ 1.0000 ] | 103.4% { 109.0% } | 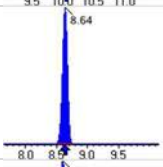 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 789235 | ( 10.51 , N/A ) ( N/A , 0.00 , N/A ) | 2423.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 112.6% } | 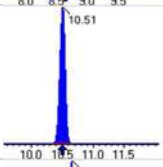 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2411767 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 38473.3 | N/A | 8.0713 [ 8.0000 ] | 100.9% { 114.0% } | 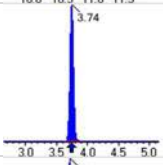 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 996419 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5316.2 | N/A | 4.2618 [ 4.0000 ] | 106.5% { 108.1% } | 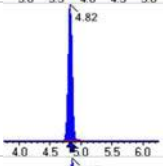 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 598415 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 7772.4 | N/A | 2.0930 [ 2.0000 ] | 104.7% { 108.1% } | 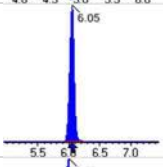 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642898 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4139.3 | N/A | 2.0214 [ 2.0000 ] | 101.1% { 103.8% } | 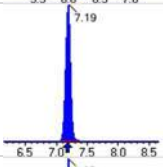 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 837262 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2865.2 | N/A | 2.0013 [ 2.0000 ] | 100.1% { 102.1% } | 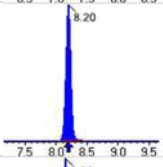 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 268319 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2813.0 | N/A | 0.9832 [ 1.0000 ] | 98.3% { 102.2% } | 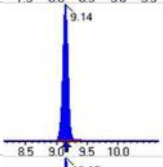 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317534 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1393.5 | N/A | 0.9225 [ 1.0000 ] | 92.3% { 100.3% } | 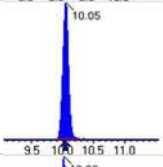 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392266 | ( 10.92 , N/A ) ( N/A , 0.00 , N/A ) | 889.3 | N/A | 0.9687 [ 1.0000 ] | 96.9% { 108.6% } | 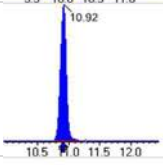 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382608 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1180.8 | N/A | 0.9278 [ 1.0000 ] | 92.8% { 108.8% } | 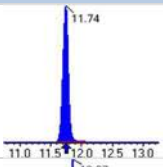 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 332937 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1583.7 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 106.5% } | 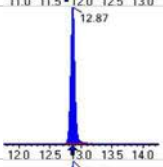 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577159 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 1.9250 [ 2.0000 ] | 96.3% { 111.8% } | 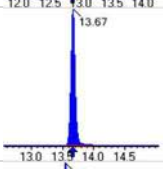 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1688757 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 883.0 | N/A | 1.9047 [ 2.0000 ] | 95.2% { 106.0% } | 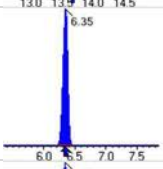 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1378939 | ( 8.63 , N/A ) ( N/A , 0.00 , N/A ) | 4407.3 | N/A | 1.9485 [ 2.0000 ] | 97.4% { 107.7% } | 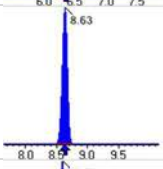 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1595802 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1706.0 | N/A | 1.8753 [ 2.0000 ] | 93.8% { 102.1% } | 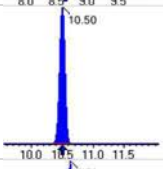 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598745 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 79.8 | N/A | 3.9141 [ 4.0000 ] | 97.9% { 114.1% } | 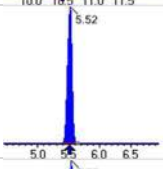 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1829265 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3435.0 | N/A | 3.9958 [ 4.0000 ] | 99.9% { 107.6% } | 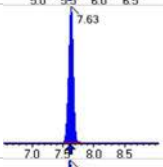 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1508713 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1476.9 | N/A | 4.2020 [ 4.0000 ] | 105.1% { 114.3% } | 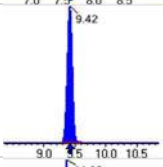 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3102262 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1234.2 | N/A | 8.2675 [ 8.0000 ] | 103.3% { 119.5% } | 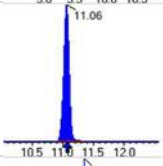 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1473534 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1630.0 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 110.5% } | 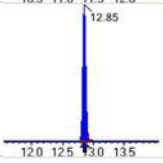 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 293876 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2091.2 | N/A | 1.8374 [ 2.0000 ] | 91.9% { 105.9% } | 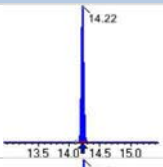 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316276 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2498.1 | N/A | 1.8439 [ 2.0000 ] | 92.2% { 100.3% } | 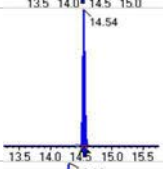 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 835724 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2699.7 | N/A | 3.8168 [ 4.0000 ] | 95.4% { 99.7% } | 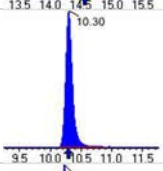 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 775814 | ( 10.83 , N/A ) ( N/A , 0.01 , N/A ) | 2136.8 | N/A | 3.8876 [ 4.0000 ] | 97.2% { 102.6% } | 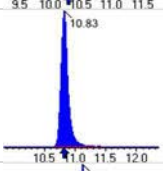 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1315136 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2600.8 | N/A | 18.2970 [ 20.0000 ] | 91.5% { 97.7% } | 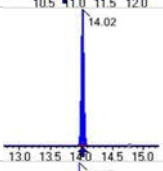 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1332738 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4801.6 | N/A | 18.2683 [ 20.0000 ] | 91.3% { 101.2% } | 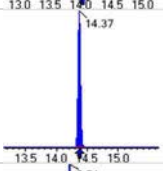 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1038084 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2605.4 | N/A | 7.9707 [ 8.0000 ] | 99.6% { 106.2% } | 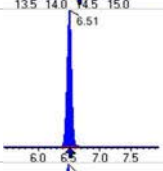 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 669550 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1235.7 | N/A | 2.0107 [ 2.0000 ] | 100.5% { 116.0% } | 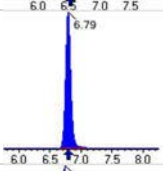 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 587942 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 696.3 | N/A | 1.9395 [ 2.0000 ] | 97.0% { 109.4% } | 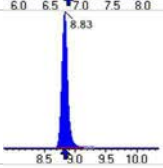 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 572081<br>( 163.0 / 69.0 ) 15453 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , -0.1) | 3331.6<br>685.8 | 0.0270<br>99.5<br>99.5 | 1.8766 | N/A | 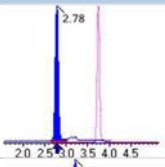 | 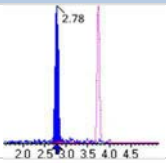 | |
| PFBA | ( 213.0 / 169.0 ) 1291256 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 977.6 | N/A<br>0.0<br>0.0 | 4.0067 | N/A | 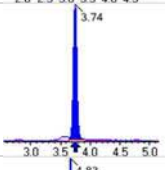 | | |
| PFPeA | ( 263.0 / 219.0 ) 515447<br>( 263.0 / 69.0 ) 5565 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , -0.6) | 2722.5<br>101.7 | 0.0108<br>90.4<br>90.4 | 1.9936 | N/A | 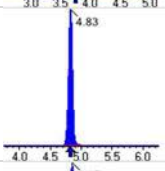 | 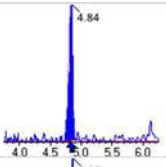 | |
| PFHxA | ( 313.0 / 269.0 ) 299582<br>( 313.0 / 119.0 ) 31742 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1493.9<br>435.1 | 0.1060<br>91.3<br>91.3 | 0.9811 | N/A | 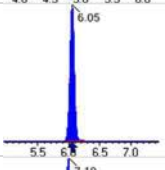 | 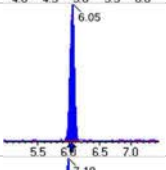 | |
| PFHpA | ( 363.0 / 319.0 ) 337151<br>( 363.0 / 169.0 ) 99321 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1122.0<br>1188.9 | 0.2946<br>97.2<br>97.2 | 1.0032 | N/A | 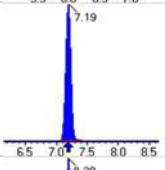 | 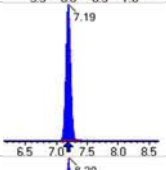 | |
| PFOA | ( 413.0 / 369.0 ) 460701<br>( 413.0 / 169.0 ) 156073 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , -0.2) | 411.7<br>644.7 | 0.3388<br>92.7<br>92.7 | 0.9980 | N/A | 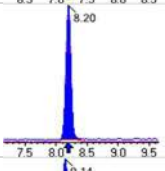 | 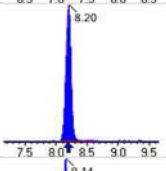 | |
| PFNA | ( 463.0 / 419.0 ) 295897<br>( 463.0 / 169.0 ) 74193 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 828.0<br>576.3 | 0.2507<br>98.2<br>98.2 | 0.9829 | N/A | 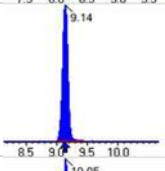 | 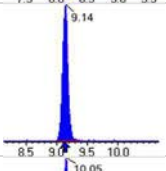 | |
| PFDA | ( 513.0 / 469.0 ) 352635<br>( 513.0 / 169.0 ) 43955 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2404.3<br>865.6 | 0.1246<br>106.4<br>106.4 | 1.0071 | N/A | 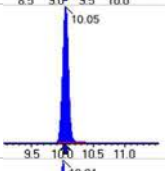 | 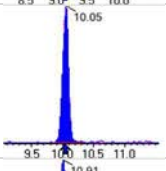 | |
| PFUnA | ( 563.0 / 519.0 ) 381432<br>( 563.0 / 169.0 ) 53955 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 999.2<br>403.6 | 0.1415<br>99.8<br>99.8 | 1.0353 | N/A | 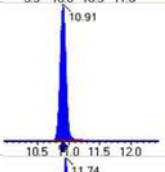 | 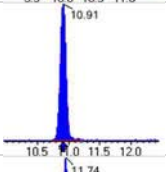 | |
| PFDoA | ( 613.0 / 569.0 ) 427017<br>( 613.0 / 169.0 ) 60201 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1103.2<br>515.1 | 0.1410<br>89.2<br>89.2 | 1.0255 | N/A | 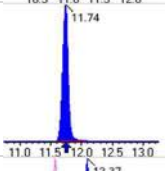 | 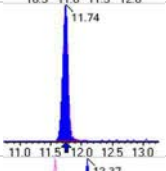 | |
| PFTrDA | ( 663.0 / 619.0 ) 399605<br>( 663.0 / 169.0 ) 106227 | ( 12.37 , 1.05 )<br>( N/A , -0.01 , 0.0) | 1077.2<br>701.1 | 0.2658<br>103.3<br>103.3 | 0.9810 | N/A | 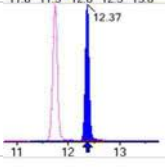 | 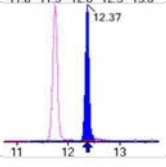 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 342493<br>( 713.0 / 169.0 ) 87584 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1309.5<br>476.1 | 0.2557<br>94.7<br>94.7 | 1.0520 | N/A | 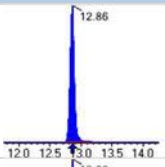 | 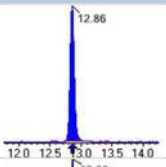 | |
| PFHxDA | ( 813.0 / 769.0 ) 295487<br>( 813.0 / 169.0 ) 71255 | ( 13.66 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1293.3<br>536.6 | 0.2411<br>98.6<br>98.6 | 0.9920 | N/A | 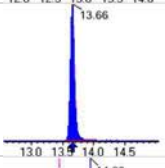 | 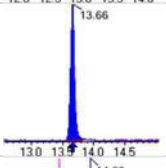 | |
| PFODA | ( 913.0 / 869.0 ) 188029<br>( 913.0 / 169.0 ) 59688 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , 0.2) | 765.7<br>286.7 | 0.3174<br>88.6<br>88.6 | 1.0090 | N/A | 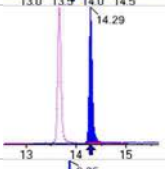 | 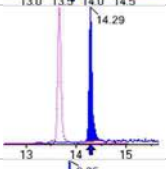 | |
| PFBS | ( 299.0 / 80.0 ) 407079<br>( 299.0 / 99.0 ) 304744 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2093.0<br>1197.3 | 0.7486<br>105.9<br>105.9 | 0.8714 | N/A | 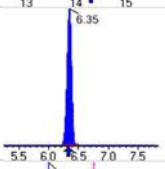 | 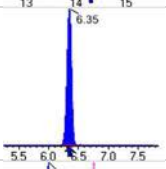 | |
| PFPeS | ( 349.0 / 80.0 ) 1109577<br>( 349.0 / 99.0 ) 395272 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.2) | 1653.8<br>1364.1 | 0.3562<br>99.1<br>99.1 | 1.0024 | N/A | 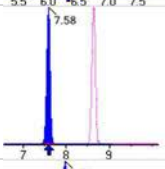 | 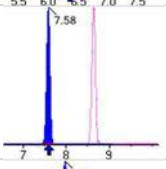 | |
| PFHxS | ( 399.0 / 80.0 ) 1171862<br>( 399.0 / 99.0 ) 378800 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1877.4<br>2472.1 | 0.3232<br>101.5<br>101.5 | 0.9114 | N/A | 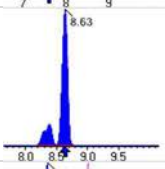 | 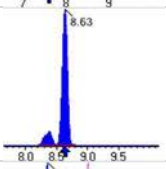 | |
| PFHpS | ( 449.0 / 80.0 ) 990486<br>( 449.0 / 99.0 ) 270859 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1237.4<br>959.9 | 0.2735<br>103.3<br>103.3 | 0.9914 | N/A | 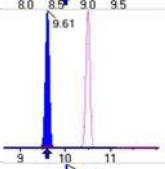 | 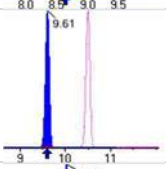 | |
| PFOS | ( 499.0 / 80.0 ) 915045<br>( 499.0 / 99.0 ) 214297 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1166.7<br>2416.7 | 0.2342<br>100.2<br>100.2 | 0.9501 | N/A | 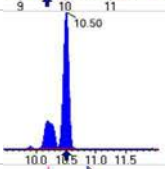 | 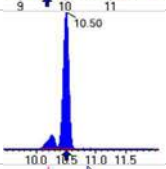 | |
| PFNS | ( 549.0 / 80.0 ) 896593<br>( 549.0 / 99.0 ) 249551 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1601.3<br>1206.4 | 0.2783<br>102.1<br>102.1 | 0.9943 | N/A | 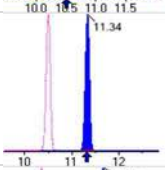 | 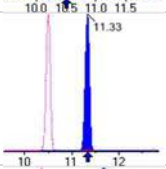 | |
| PFDS | ( 599.0 / 80.0 ) 1127572<br>( 599.0 / 99.0 ) 302383 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1436.2<br>916.8 | 0.2682<br>98.6<br>98.6 | 1.0241 | N/A | 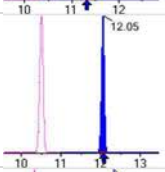 | 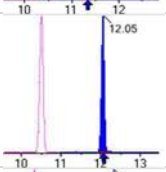 | |
| PFDoS | ( 699.0 / 80.0 ) 1018920<br>( 699.0 / 99.0 ) 244059 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.1) | 2808.2<br>1602.4 | 0.2395<br>102.5<br>102.5 | 1.0497 | N/A | 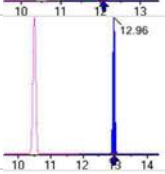 | 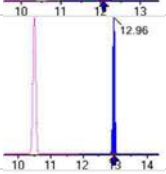 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1636735<br>( 327.0 / 81.0 ) 1473856 | ( 5.52 , 1.00 ) ( -0.01 , N/A , -0.2) | 5204.7<br>2602.4 | 0.9005<br>103.2<br>103.2 | 3.7254 | N/A | 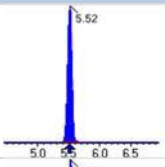 | 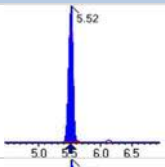 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1622158<br>( 427.0 / 81.0 ) 2083355 | ( 7.63 , 1.00 ) ( 0.00 , N/A , 0.1) | 4238.9<br>2696.5 | 1.2843<br>102.4<br>102.4 | 3.9122 | N/A | 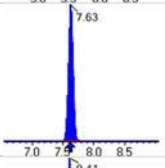 | 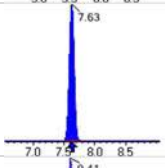 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1596229<br>( 527.0 / 81.0 ) 1699957 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.2) | 1759.6<br>1660.8 | 1.0650<br>97.9<br>97.9 | 4.0286 | N/A | 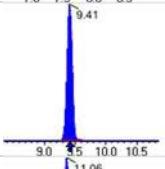 | 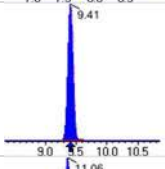 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1186863<br>( 627.0 / 81.0 ) 1648684 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.2) | 1185.3<br>1102.0 | 1.3891<br>96.5<br>96.5 | 4.0027 | N/A | 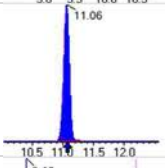 | 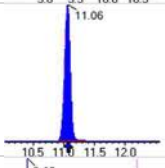 | |
| PFBSA | ( 297.9 / 78.0 ) 868869<br>( 297.9 / 278.0 ) 1723 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.3) | 1316.9<br>72.3 | 0.0020<br>145.1<br>145.1 | 1.0646 | N/A | 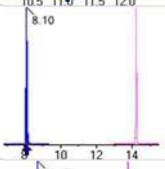 | 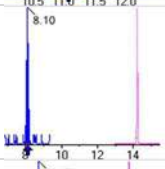 | |
| PFHxSA | ( 397.9 / 78.0 ) 1138067<br>( 397.9 / 378.0 ) 5913 | ( 10.97 , 0.75 ) ( N/A , 0.00 , 0.2) | 1254.0<br>145.3 | 0.0052<br>127.2<br>127.2 | 1.0822 | N/A | 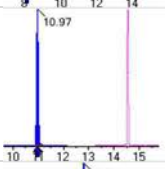 | 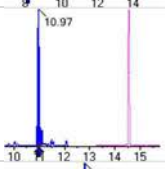 | |
| PFOSA | ( 498.0 / 78.0 ) 762063<br>( 498.0 / 478.0 ) 11669 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 1669.7<br>330.8 | 0.0153<br>109.1<br>109.1 | 0.9531 | N/A | 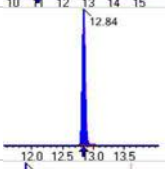 | 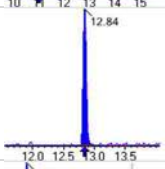 | |
| TFSI | ( 279.7 / 147.0 ) 1968069<br>( 279.7 / 211.0 ) 180774 | ( 8.21 , 0.64 ) ( N/A , 0.00 , 0.0) | 64.3<br>58.0 | 0.0919<br>109.3<br>109.3 | 0.9348 | N/A | 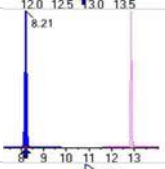 | 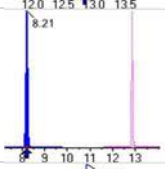 | |
| NMeFOSA | ( 512.0 / 219.0 ) 676418<br>( 512.0 / 169.0 ) 494118 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.5) | 2998.4<br>1222.2 | 0.7305<br>97.6<br>97.6 | 4.3018 | N/A | 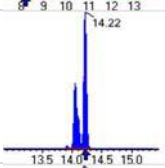 | 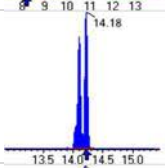 | |
| NEtFOSA | ( 526.0 / 219.0 ) 784152<br>( 526.0 / 169.0 ) 968317 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.1) | 3542.8<br>2523.2 | 1.2349<br>100.0<br>100.0 | 4.0920 | N/A | 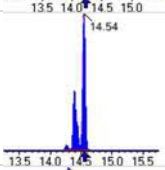 | 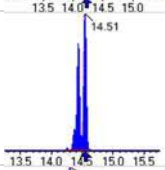 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 217987<br>( 570.0 / 483.0 ) 97828 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2749.9<br>7363.6 | 0.4488<br>102.3<br>102.3 | 1.0587 | N/A | 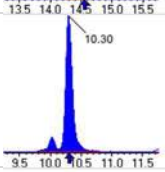 | 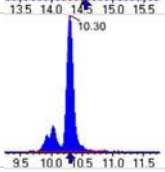 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 215279<br>( 584.0 / 526.0 ) 113495 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1923.7<br>570.6 | 0.5272<br>85.5<br>85.5 | 1.0388 | N/A | 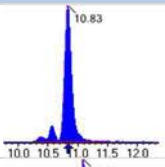 | 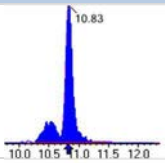 | |
| NMeFOSE | ( 616.0 / 59.0 ) 322501 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1109.7 | N/A<br>0.0<br>0.0 | 3.8876 | N/A | 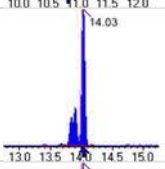 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 275023 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1504.4 | N/A<br>0.0<br>0.0 | 4.0518 | N/A | 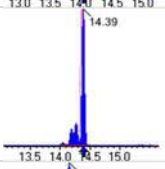 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78310<br>( 285.0 / 185.0 ) 225338 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1215.6<br>1094.8 | 2.8775<br>104.1<br>104.1 | 0.9672 | N/A | 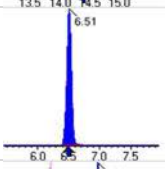 | 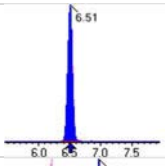 | |
| ADONA | ( 377.0 / 85.0 ) 925674<br>( 377.0 / 251.0 ) 94429 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1684.4<br>863.1 | 0.1020<br>100.1<br>100.1 | 0.9800 | N/A | 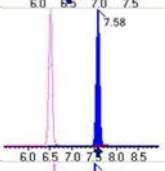 | 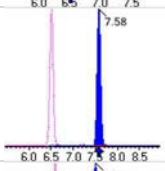 | |
| PFEESA | ( 315.0 / 135.0 ) 374674<br>( 315.0 / 83.0 ) 221014 | ( 6.94 , 1.15 )<br>( N/A , 0.00 , 0.2) | 1629.8<br>585.3 | 0.5899<br>105.8<br>105.8 | 1.7087 | N/A | 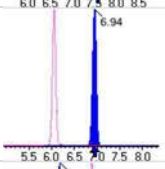 | 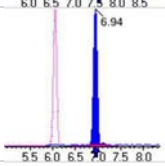 | |
| PFMPA | ( 229.0 / 85.0 ) 165620 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 2153.7 | N/A<br>0.0<br>0.0 | 2.0187 | N/A | 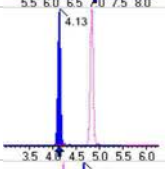 | | |
| PFMBA | ( 279.0 / 85.0 ) 459608 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 3304.8 | N/A<br>0.0<br>0.0 | 2.0611 | N/A | 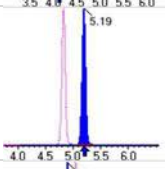 | | |
| NFDHA | ( 295.0 / 201.0 ) 233407<br>( 295.0 / 85.0 ) 232887 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.0) | 1871.1<br>1404.3 | 0.9978<br>92.5<br>92.5 | 2.0475 | N/A | 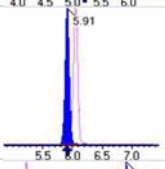 | 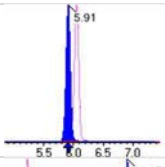 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 977169<br>( 533.0 / 353.0 ) 307774 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.0) | 2252.5<br>1904.5 | 0.3150<br>100.7<br>100.7 | 0.9578 | N/A | 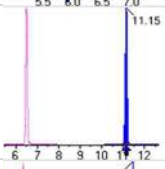 | 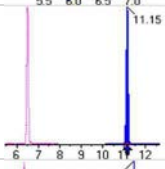 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 766742<br>( 633.0 / 453.0 ) 257032 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 3376.0<br>1473.6 | 0.3352<br>100.9<br>100.9 | 0.9772 | N/A | 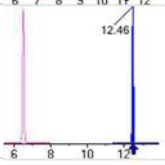 | 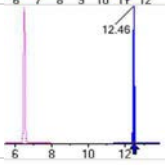 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 518904<br>( 461.0 / 381.2 ) 203061 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2559.7<br>2244.6 | 0.3913<br>98.2<br>98.2 | 0.9551 | N/A | 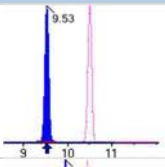 | 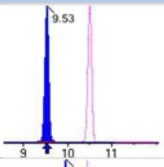 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 58421<br>( 241.0 / 117.0 ) 131714 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.1) | 1288.6<br>1011.6 | 2.2545<br>107.0<br>107.0 | 3.9721 | N/A | 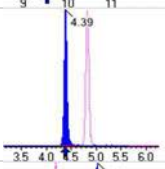 | 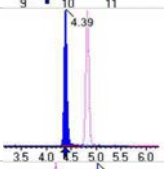 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 362070<br>( 341.0 / 217.0 ) 543142 | ( 6.95 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1018.7<br>864.9 | 1.5001<br>98.7<br>98.7 | 4.2758 | N/A | 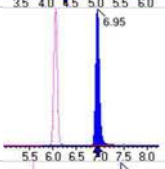 | 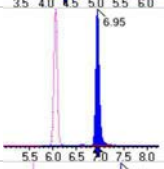 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 552565<br>( 441.0 / 337.0 ) 493299 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , -0.1) | 3905.8<br>9480.9 | 0.8927<br>97.3<br>97.3 | 3.9764 | N/A | 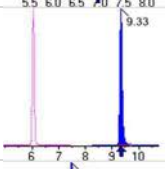 | 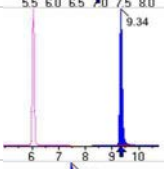 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 363940<br>( 357.2 / 243.0 ) 37601 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1173.5<br>370.6 | 0.1033<br>93.7<br>93.7 | 0.9982 | N/A | 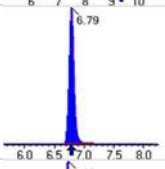 | 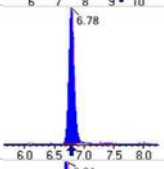 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 254977<br>( 457.2 / 343.0 ) 9972 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.6) | 714.0<br>141.1 | 0.0391<br>94.3<br>94.3 | 0.9768 | N/A | 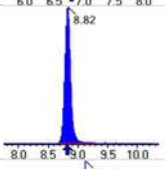 | 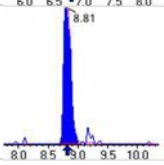 | |
| TDCA | ( 499.0 / 80.0 ) 680639 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 4167.6 | N/A<br>0.0<br>0.0 | 1.0368 | N/A | 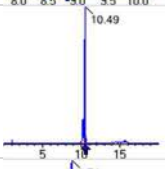 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284719 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1250.4 | N/A | 1.1941<br>[ 1.0000 ] | 119.4%<br>{ 121.5% } | 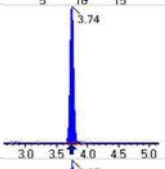 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145345 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 124720.9 | N/A | 1.1457<br>[ 1.0000 ] | 114.6%<br>{ 121.6% } | 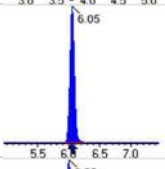 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441486 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3424.8 | N/A | 1.1168<br>[ 1.0000 ] | 111.7%<br>{ 116.2% } | 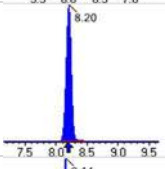 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 318843 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 964.0 | N/A | 1.1211<br>[ 1.0000 ] | 112.1%<br>{ 119.8% } | 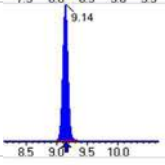 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303537 | ( 10.05 , N/A ) ( N/A , 0.01 , N/A ) | 4251.2 | N/A | 1.0394 [ 1.0000 ] | 103.9% { 113.3% } | 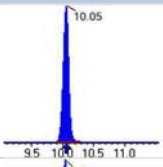 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056155 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 5014.7 | N/A | 1.1129 [ 1.0000 ] | 111.3% { 117.3% } | 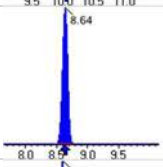 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 845268 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.3 | N/A | 1.1098 [ 1.0000 ] | 111.0% { 120.6% } | 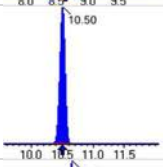 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2586413 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 42750.2 | N/A | 7.9518 [ 8.0000 ] | 99.4% { 122.3% } | 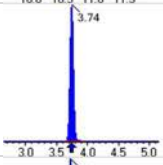 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1023700 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5286.2 | N/A | 3.7748 [ 4.0000 ] | 94.4% { 111.1% } | 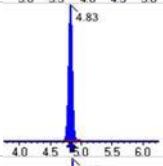 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 635630 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 14493.6 | N/A | 1.9167 [ 2.0000 ] | 95.8% { 114.9% } | 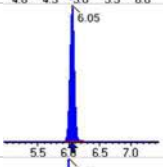 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 684966 | ( 7.19 , N/A ) ( N/A , 0.00 , N/A ) | 3794.1 | N/A | 1.8568 [ 2.0000 ] | 92.8% { 110.6% } | 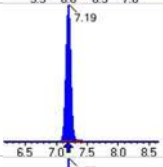 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 928103 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 3322.1 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 113.2% } | 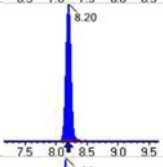 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299515 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2214.7 | N/A | 0.9581 [ 1.0000 ] | 95.8% { 114.0% } | 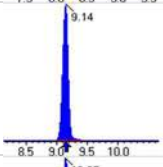 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342697 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1103.1 | N/A | 1.0075 [ 1.0000 ] | 100.7% { 108.2% } | 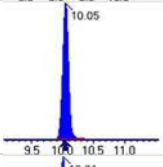 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 398315 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 933.5 | N/A | 0.9953 [ 1.0000 ] | 99.5% { 110.2% } | 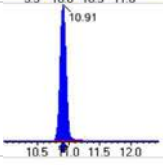 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413909 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1336.1 | N/A | 1.0156 [ 1.0000 ] | 101.6% { 117.7% } | 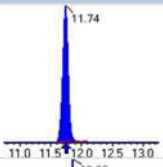  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 347613 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1409.1 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 111.2% } | 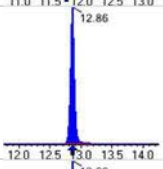  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624611 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2743.3 | N/A | 2.1080 [ 2.0000 ] | 105.4% { 121.0% } | 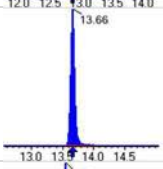  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1799397 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 935.1 | N/A | 1.8857 [ 2.0000 ] | 94.3% { 112.9% } | 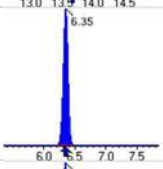  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1446436 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3951.6 | N/A | 1.8990 [ 2.0000 ] | 95.0% { 112.9% } | 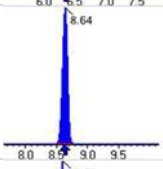  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1667685 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1621.2 | N/A | 1.8298 [ 2.0000 ] | 91.5% { 106.7% } | 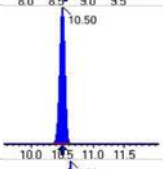  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 669628 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 86.3 | N/A | 4.0673 [ 4.0000 ] | 101.7% { 127.6% } | 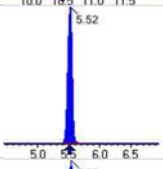  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2002935 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4006.0 | N/A | 4.0651 [ 4.0000 ] | 101.6% { 117.8% } | 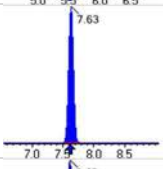  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1668856 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1752.0 | N/A | 4.3187 [ 4.0000 ] | 108.0% { 126.5% } | 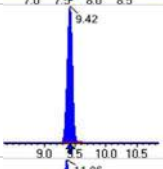  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3077655 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1620.4 | N/A | 7.6206 [ 8.0000 ] | 95.3% { 118.5% } | 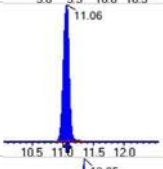  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1599050 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2792.1 | N/A | 1.9799 [ 2.0000 ] | 99.0% { 119.9% } | 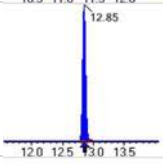  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 316727 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2067.3 | N/A | 1.8490 [ 2.0000 ] | 92.4% { 114.2% } | 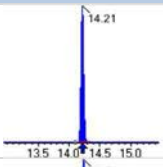 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 342216 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2475.5 | N/A | 1.8629 [ 2.0000 ] | 93.1% { 108.5% } | 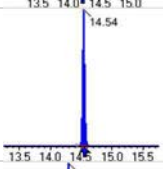 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863550 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2856.7 | N/A | 3.6825 [ 4.0000 ] | 92.1% { 103.1% } | 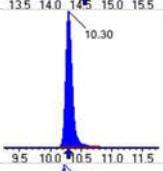 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 847460 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1855.6 | N/A | 3.9651 [ 4.0000 ] | 99.1% { 112.1% } | 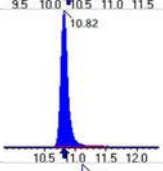 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1512548 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2500.9 | N/A | 19.6485 [ 20.0000 ] | 98.2% { 112.4% } | 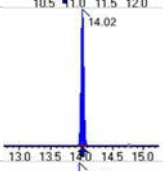 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1527927 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3992.3 | N/A | 19.5555 [ 20.0000 ] | 97.8% { 116.0% } | 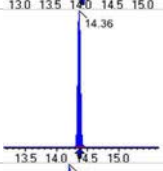 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1098397 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 1915.2 | N/A | 7.2711 [ 8.0000 ] | 90.9% { 112.3% } | 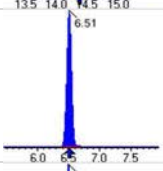 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 685864 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1284.4 | N/A | 2.0841 [ 2.0000 ] | 104.2% { 118.8% } | 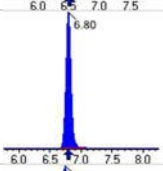 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640047 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 831.7 | N/A | 2.1364 [ 2.0000 ] | 106.8% { 119.1% } | 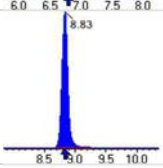 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1167070<br>( 163.0 / 69.0 ) 30804 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 6613.1<br>1428.5 | 0.0264<br>97.2<br>97.2 | 4.0742 | N/A | 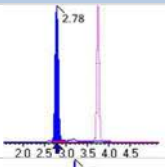 | 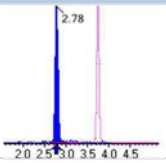 | |
| PFBA | ( 213.0 / 169.0 ) 2380850 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1790.8 | N/A<br>0.0<br>0.0 | 7.8622 | N/A | 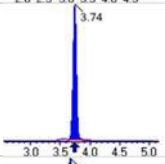 | | |
| PFPeA | ( 263.0 / 219.0 ) 982336<br>( 263.0 / 69.0 ) 11786 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.4) | 3478.0<br>129.5 | 0.0120<br>100.5<br>100.5 | 3.9724 | N/A | 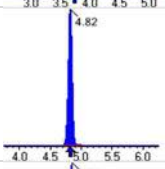 | 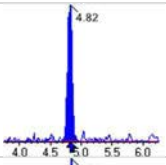 | |
| PFHxA | ( 313.0 / 269.0 ) 545073<br>( 313.0 / 119.0 ) 68593 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1809.3<br>693.8 | 0.1258<br>108.4<br>108.4 | 1.9499 | N/A | 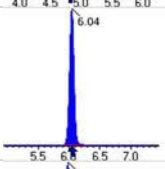 | 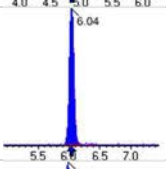 | |
| PFHpA | ( 363.0 / 319.0 ) 643126<br>( 363.0 / 169.0 ) 190819 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1661.0<br>1337.1 | 0.2967<br>97.9<br>97.9 | 2.1051 | N/A | 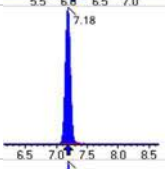 | 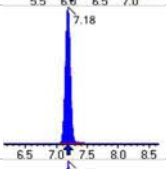 | |
| PFOA | ( 413.0 / 369.0 ) 872213<br>( 413.0 / 169.0 ) 301378 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 570.6<br>871.9 | 0.3455<br>94.5<br>94.5 | 2.1989 | N/A | 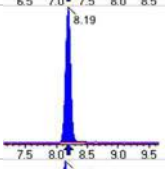 | 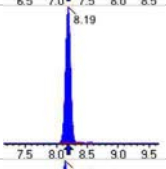 | |
| PFNA | ( 463.0 / 419.0 ) 567165<br>( 463.0 / 169.0 ) 151317 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1085.3<br>759.0 | 0.2668<br>104.5<br>104.5 | 2.0790 | N/A | 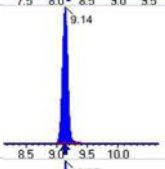 | 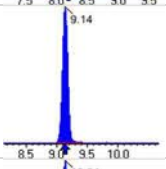 | |
| PFDA | ( 513.0 / 469.0 ) 636050<br>( 513.0 / 169.0 ) 72425 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2724.0<br>2618.5 | 0.1139<br>97.2<br>97.2 | 1.9766 | N/A | 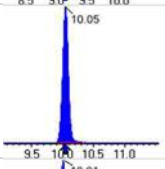 | 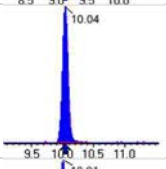 | |
| PFUnA | ( 563.0 / 519.0 ) 707227<br>( 563.0 / 169.0 ) 104233 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1094.1<br>630.7 | 0.1474<br>104.0<br>104.0 | 2.0313 | N/A | 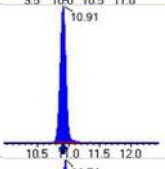 | 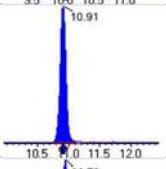 | |
| PFDoA | ( 613.0 / 569.0 ) 782512<br>( 613.0 / 169.0 ) 130444 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1319.2<br>723.5 | 0.1667<br>105.5<br>105.5 | 2.0593 | N/A | 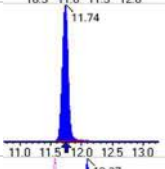 | 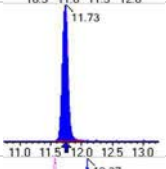 | |
| PFTrDA | ( 663.0 / 619.0 ) 789089<br>( 663.0 / 169.0 ) 212271 | ( 12.37 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1336.2<br>873.5 | 0.2690<br>104.5<br>104.5 | 2.1228 | N/A | 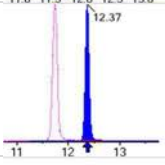 | 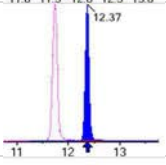 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 637286<br>( 713.0 / 169.0 ) 170472 | ( 12.86 , 1.00 ) ( 0.00 , N/A , 0.1) | 1613.6<br>792.6 | 0.2675<br>99.1<br>99.1 | 2.0366 | N/A | 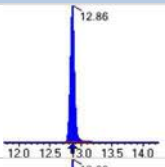 | 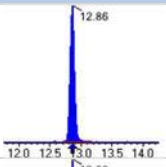 | |
| PFHxDA | ( 813.0 / 769.0 ) 562479<br>( 813.0 / 169.0 ) 139657 | ( 13.66 , 1.00 ) ( 0.00 , N/A , 0.1) | 1879.1<br>883.2 | 0.2483<br>101.5<br>101.5 | 2.0439 | N/A | 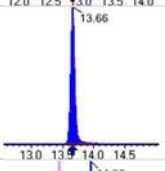 | 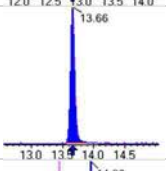 | |
| PFODA | ( 913.0 / 869.0 ) 345836<br>( 913.0 / 169.0 ) 120025 | ( 14.29 , 1.05 ) ( N/A , 0.00 , 0.1) | 1113.8<br>518.3 | 0.3471<br>96.9<br>96.9 | 2.0088 | N/A | 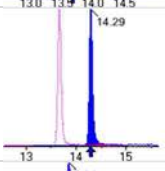 | 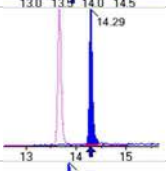 | |
| PFBS | ( 299.0 / 80.0 ) 807070<br>( 299.0 / 99.0 ) 599114 | ( 6.34 , 1.00 ) ( 0.00 , N/A , 0.1) | 2517.2<br>1691.5 | 0.7423<br>105.0<br>105.0 | 1.8154 | N/A | 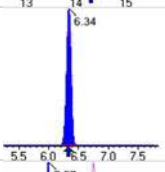 | 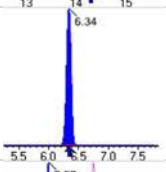 | |
| PFPeS | ( 349.0 / 80.0 ) 2047999<br>( 349.0 / 99.0 ) 717347 | ( 7.57 , 0.88 ) ( N/A , -0.01 , 0.0) | 2149.2<br>1871.5 | 0.3503<br>97.4<br>97.4 | 2.0232 | N/A | 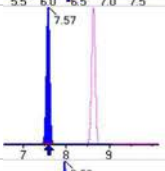 | 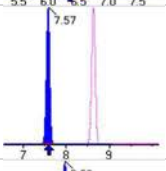 | |
| PFHxS | ( 399.0 / 80.0 ) 2275361<br>( 399.0 / 99.0 ) 716614 | ( 8.63 , 1.00 ) ( 0.00 , N/A , -0.3) | 2510.6<br>3505.7 | 0.3149<br>98.9<br>98.9 | 1.9353 | N/A | 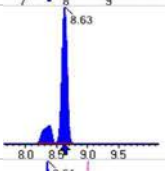 | 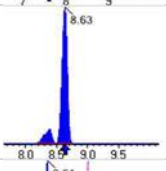 | |
| PFHpS | ( 449.0 / 80.0 ) 1804024<br>( 449.0 / 99.0 ) 504967 | ( 9.61 , 0.91 ) ( N/A , 0.00 , 0.1) | 1569.3<br>1421.3 | 0.2799<br>105.8<br>105.8 | 1.8460 | N/A | 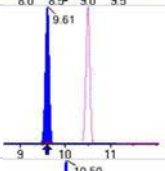 | 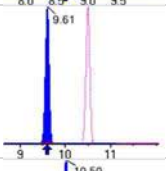 | |
| PFOS | ( 499.0 / 80.0 ) 1717687<br>( 499.0 / 99.0 ) 415698 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1681.3<br>3443.9 | 0.2420<br>103.5<br>103.5 | 1.8234 | N/A | 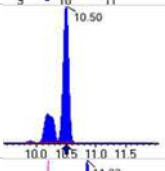 | 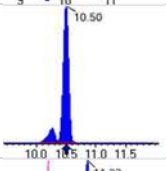 | |
| PFNS | ( 549.0 / 80.0 ) 1727422<br>( 549.0 / 99.0 ) 477926 | ( 11.33 , 1.08 ) ( N/A , 0.00 , 0.0) | 2123.3<br>1732.9 | 0.2767<br>101.5<br>101.5 | 1.9585 | N/A | 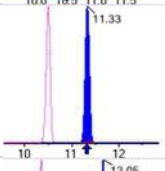 | 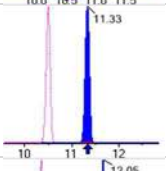 | |
| PFDS | ( 599.0 / 80.0 ) 2215571<br>( 599.0 / 99.0 ) 567898 | ( 12.05 , 1.15 ) ( N/A , 0.00 , 0.0) | 2083.6<br>1457.0 | 0.2563<br>94.3<br>94.3 | 2.0572 | N/A | 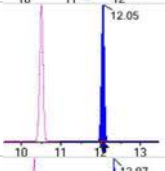 | 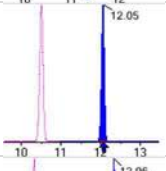 | |
| PFDoS | ( 699.0 / 80.0 ) 1929958<br>( 699.0 / 99.0 ) 452362 | ( 12.97 , 1.23 ) ( N/A , 0.00 , 0.2) | 3211.3<br>2064.4 | 0.2344<br>100.3<br>100.3 | 2.0327 | N/A | 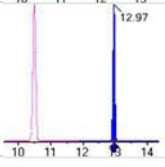 | 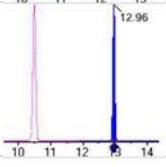 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3165018<br>( 327.0 / 81.0 ) 2801149 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.1) | 5253.6<br>3183.2 | 0.8850<br>101.4<br>101.4 | 7.7285 | N/A | 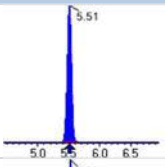 | 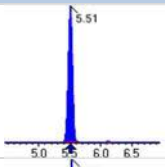 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2962118<br>( 427.0 / 81.0 ) 3791569 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 4973.3<br>4315.3 | 1.2800<br>102.1<br>102.1 | 8.2415 | N/A | 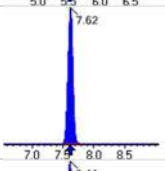 | 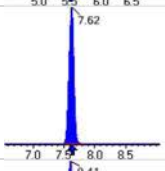 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2967875<br>( 527.0 / 81.0 ) 3049271 | ( 9.41 , 1.00 ) ( -0.01 , N/A , 0.3) | 1388.1<br>1687.5 | 1.0274<br>94.5<br>94.5 | 9.3020 | N/A | 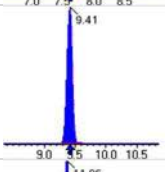 | 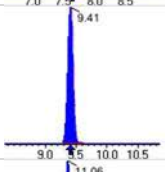 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2212496<br>( 627.0 / 81.0 ) 3256559 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1502.8<br>1201.7 | 1.4719<br>102.2<br>102.2 | 8.4769 | N/A | 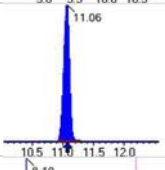 | 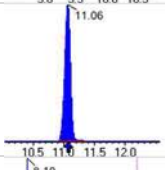 | |
| PFBSA | ( 297.9 / 78.0 ) 1506188<br>( 297.9 / 278.0 ) 2085 | ( 8.10 , 0.57 ) ( N/A , -0.01 , 0.1) | 1678.4<br>162.1 | 0.0014<br>101.3<br>101.3 | 1.8931 | N/A | 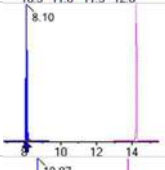 | 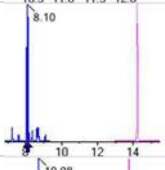 | |
| PFHxSA | ( 397.9 / 78.0 ) 2033326<br>( 397.9 / 378.0 ) 7799 | ( 10.97 , 0.75 ) ( N/A , 0.00 , -0.5) | 1288.8<br>260.0 | 0.0038<br>93.9<br>93.9 | 1.9498 | N/A | 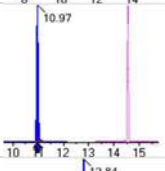 | 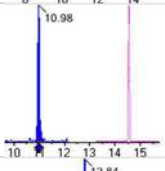 | |
| PFOSA | ( 498.0 / 78.0 ) 1456812<br>( 498.0 / 478.0 ) 21062 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.1) | 2311.6<br>609.7 | 0.0145<br>103.0<br>103.0 | 2.0599 | N/A | 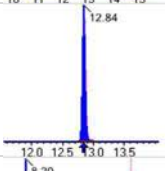 | 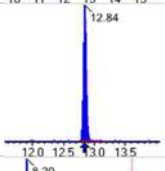 | |
| TFSI | ( 279.7 / 147.0 ) 3946578<br>( 279.7 / 211.0 ) 343736 | ( 8.20 , 0.64 ) ( N/A , -0.01 , -0.1) | 58.0<br>63.6 | 0.0871<br>103.7<br>103.7 | 2.1192 | N/A | 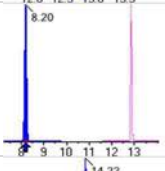 | 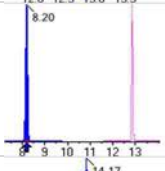 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1289595<br>( 512.0 / 169.0 ) 982667 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.8) | 2679.7<br>1218.1 | 0.7620<br>101.8<br>101.8 | 8.4131 | N/A | 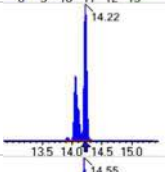 | 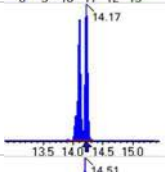 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1550489<br>( 526.0 / 169.0 ) 1954696 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.1) | 3681.3<br>2879.5 | 1.2607<br>102.1<br>102.1 | 8.1588 | N/A | 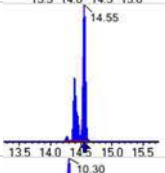 | 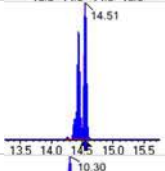 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 387312<br>( 570.0 / 483.0 ) 170497 | ( 10.30 , 1.00 ) ( 0.01 , N/A , 0.0) | 2659.6<br>1694.2 | 0.4402<br>100.4<br>100.4 | 2.0441 | N/A | 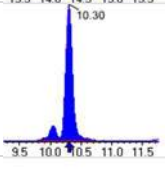 | 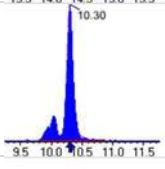 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 371840<br>( 584.0 / 526.0 ) 223765 | ( 10.83 , 1.00 ) ( 0.01 , N/A , 0.1) | 1679.5<br>567.2 | 0.6018<br>97.6<br>97.6 | 2.0307 | N/A | 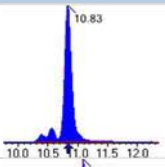 | 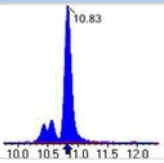 | |
| NMeFOSE | ( 616.0 / 59.0 ) 587826 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 1822.9 | N/A<br>0.0<br>0.0 | 8.0538 | N/A | 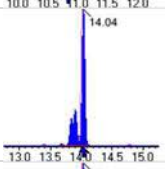 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 498830 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 2471.3 | N/A<br>0.0<br>0.0 | 8.3350 | N/A | 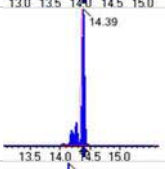 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 155250<br>( 285.0 / 185.0 ) 430625 | ( 6.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1419.6<br>1605.4 | 2.7738<br>100.3<br>100.3 | 1.9504 | N/A | 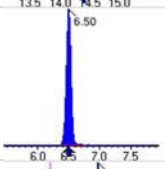 | 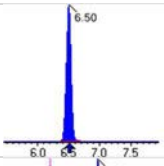 | |
| ADONA | ( 377.0 / 85.0 ) 1788880<br>( 377.0 / 251.0 ) 182995 | ( 7.57 , 1.17 ) ( N/A , -0.01 , 0.0) | 1568.4<br>1057.9 | 0.1023<br>100.4<br>100.4 | 1.9263 | N/A | 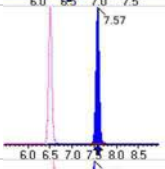 | 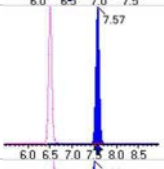 | |
| PFEESA | ( 315.0 / 135.0 ) 717362<br>( 315.0 / 83.0 ) 425934 | ( 6.93 , 1.15 ) ( N/A , -0.01 , -0.1) | 3571.8<br>934.1 | 0.5938<br>106.5<br>106.5 | 3.5735 | N/A | 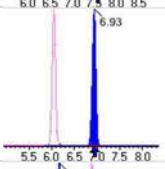 | 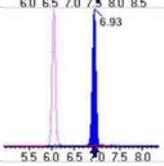 | |
| PFMPA | ( 229.0 / 85.0 ) 325814 | ( 4.13 , 0.86 ) ( N/A , -0.02 , 0.0) | 4750.1 | N/A<br>0.0<br>0.0 | 4.1520 | N/A | 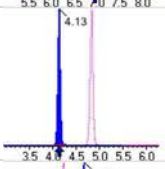 | | |
| PFMBA | ( 279.0 / 85.0 ) 859316 | ( 5.19 , 1.08 ) ( N/A , -0.02 , 0.0) | 4011.9 | N/A<br>0.0<br>0.0 | 4.0290 | N/A | 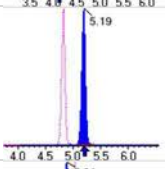 | | |
| NFDHA | ( 295.0 / 201.0 ) 433621<br>( 295.0 / 85.0 ) 453198 | ( 5.91 , 0.98 ) ( N/A , -0.02 , 0.0) | 2536.7<br>1960.5 | 1.0451<br>96.9<br>96.9 | 4.1550 | N/A | 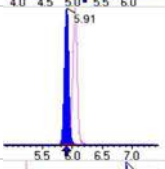 | 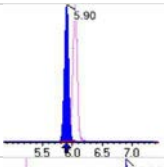 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1841173<br>( 533.0 / 353.0 ) 582312 | ( 11.15 , 1.71 ) ( N/A , 0.00 , 0.1) | 3390.1<br>2790.6 | 0.3163<br>101.1<br>101.1 | 1.8356 | N/A | 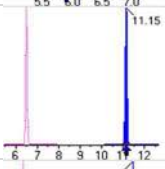 | 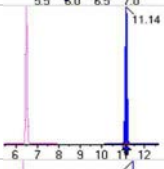 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1399623<br>( 633.0 / 453.0 ) 481280 | ( 12.46 , 1.92 ) ( N/A , 0.00 , 0.0) | 3352.1<br>2343.7 | 0.3439<br>103.5<br>103.5 | 1.8145 | N/A | 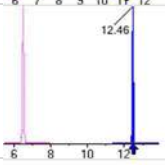 | 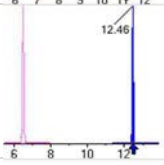 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 988702<br>( 461.0 / 381.2 ) 369799 | ( 9.52 , 0.91 ) ( N/A , 0.00 , 0.1) | 3569.1<br>2525.0 | 0.3740<br>93.9<br>93.9 | 1.8604 | N/A | 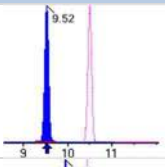 | 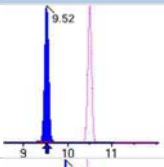 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 107582<br>( 241.0 / 117.0 ) 252826 | ( 4.38 , 0.91 ) ( N/A , -0.02 , 0.1) | 1855.3<br>1674.9 | 2.3501<br>111.5<br>111.5 | 7.6476 | N/A | 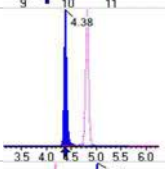 | 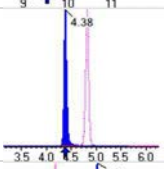 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 600676<br>( 341.0 / 217.0 ) 948229 | ( 6.94 , 1.15 ) ( N/A , -0.01 , 0.0) | 1068.2<br>1017.6 | 1.5786<br>103.9<br>103.9 | 7.7484 | N/A | 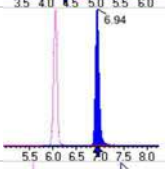 | 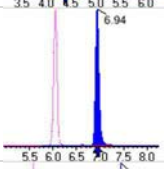 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 908795<br>( 441.0 / 337.0 ) 796144 | ( 9.33 , 1.54 ) ( N/A , 0.00 , 0.1) | 4807.8<br>10397.6 | 0.8760<br>95.5<br>95.5 | 7.1437 | N/A | 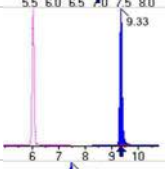 | 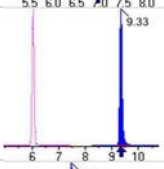 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 656805<br>( 357.2 / 243.0 ) 69587 | ( 6.78 , 1.00 ) ( -0.01 , N/A , -0.1) | 1423.9<br>609.7 | 0.1059<br>96.1<br>96.1 | 2.0942 | N/A | 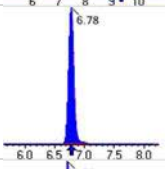 | 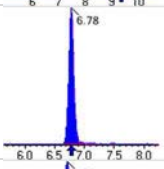 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 424616<br>( 457.2 / 343.0 ) 18607 | ( 8.82 , 1.00 ) ( -0.01 , N/A , 0.2) | 720.9<br>173.8 | 0.0438<br>105.7<br>105.7 | 2.0751 | N/A | 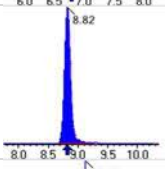 | 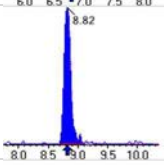 | |
| TDCA | ( 499.0 / 80.0 ) 1243423 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 9081.2 | N/A<br>0.0<br>0.0 | 1.9364 | N/A | 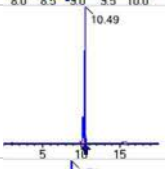 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256028 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1098.6 | N/A | 1.0738 [ 1.0000 ] | 107.4% { 109.3% } | 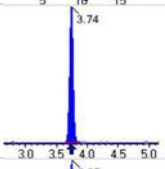 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127760 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 116465.1 | N/A | 1.0071 [ 1.0000 ] | 100.7% { 106.9% } | 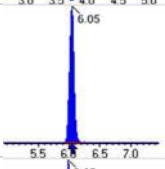 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 375777 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3449.1 | N/A | 0.9506 [ 1.0000 ] | 95.1% { 98.9% } | 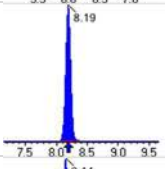 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 261656 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 1169.2 | N/A | 0.9200 [ 1.0000 ] | 92.0% { 98.3% } | 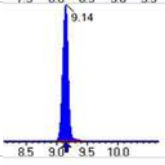 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273361 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6361.8 | N/A | 0.9361 [ 1.0000 ] | 93.6% { 102.0% } | 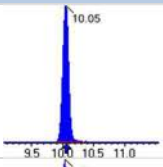 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 895978 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 6222.1 | N/A | 0.9441 [ 1.0000 ] | 94.4% { 99.5% } | 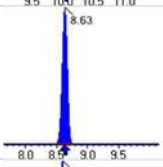 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715584 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.4 | N/A | 0.9395 [ 1.0000 ] | 94.0% { 102.1% } | 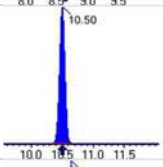 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2430274 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40566.0 | N/A | 8.3091 [ 8.0000 ] | 103.9% { 114.9% } | 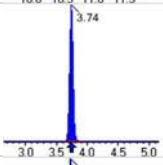 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979123 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5288.2 | N/A | 4.1074 [ 4.0000 ] | 102.7% { 106.2% } | 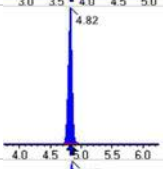 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581916 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 6715.1 | N/A | 1.9963 [ 2.0000 ] | 99.8% { 105.2% } | 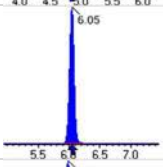 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 622669 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5519.9 | N/A | 1.9202 [ 2.0000 ] | 96.0% { 100.5% } | 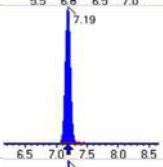 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806392 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2713.5 | N/A | 2.0028 [ 2.0000 ] | 100.1% { 98.4% } | 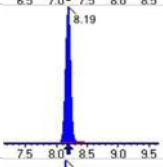 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 271437 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2533.1 | N/A | 1.0580 [ 1.0000 ] | 105.8% { 103.4% } | 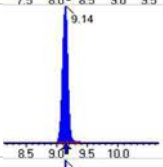 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314936 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1334.1 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 99.5% } | 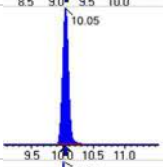 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376422 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 888.9 | N/A | 1.0444 [ 1.0000 ] | 104.4% { 104.2% } | 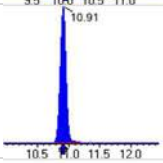 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 377714 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1130.3 | N/A | 1.0291 [ 1.0000 ] | 102.9% { 107.4% } | 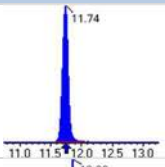 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334117 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1287.0 | N/A | 1.0689 [ 1.0000 ] | 106.9% { 106.9% } | 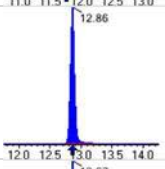 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577032 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2353.0 | N/A | 2.1624 [ 2.0000 ] | 108.1% { 111.8% } | 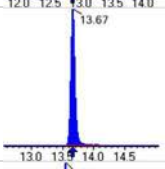 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712494 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1082.5 | N/A | 2.1155 [ 2.0000 ] | 105.8% { 107.5% } | 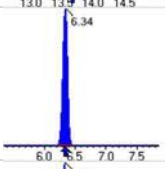 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1322704 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5231.9 | N/A | 2.0471 [ 2.0000 ] | 102.4% { 103.3% } | 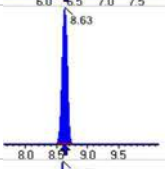 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1631255 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1422.0 | N/A | 2.1142 [ 2.0000 ] | 105.7% { 104.4% } | 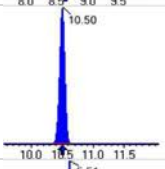 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 624175 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.1 | N/A | 4.4690 [ 4.0000 ] | 111.7% { 118.9% } | 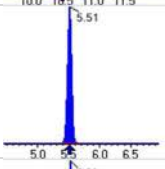 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1736153 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4394.5 | N/A | 4.1536 [ 4.0000 ] | 103.8% { 102.1% } | 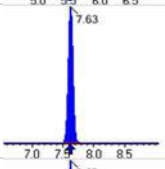 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1343832 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1566.8 | N/A | 4.0993 [ 4.0000 ] | 102.5% { 101.9% } | 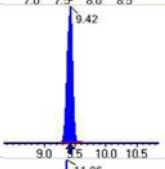 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2709064 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1402.5 | N/A | 7.9071 [ 8.0000 ] | 98.8% { 104.3% } | 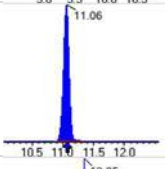 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1414425 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1760.1 | N/A | 2.0687 [ 2.0000 ] | 103.4% { 106.1% } | 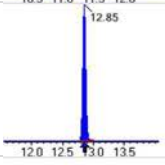 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 308758 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2279.8 | N/A | 2.1291 [ 2.0000 ] | 106.5% { 111.3% } | 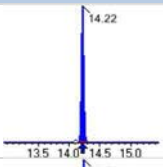  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339372 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2361.4 | N/A | 2.1822 [ 2.0000 ] | 109.1% { 107.6% } | 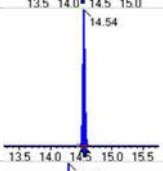  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 794659 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 1882.2 | N/A | 4.0028 [ 4.0000 ] | 100.1% { 94.8% } | 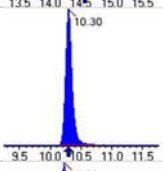  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 748744 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2202.1 | N/A | 4.1381 [ 4.0000 ] | 103.5% { 99.0% } | 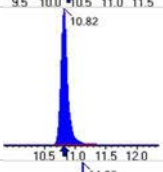  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1330777 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2545.4 | N/A | 20.4202 [ 20.0000 ] | 102.1% { 98.9% } | 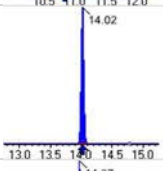  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347196 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3939.5 | N/A | 20.3672 [ 20.0000 ] | 101.8% { 102.3% } | 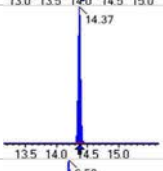  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1079864 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 1987.0 | N/A | 8.1322 [ 8.0000 ] | 101.7% { 110.4% } | 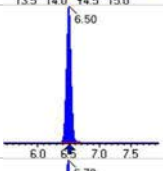  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 590008 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1397.6 | N/A | 1.9907 [ 2.0000 ] | 99.5% { 102.2% } | 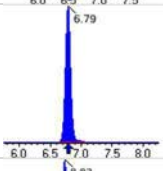  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 501757 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 686.7 | N/A | 1.8597 [ 2.0000 ] | 93.0% { 93.4% } | 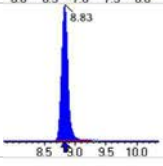  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2317898<br>( 163.0 / 69.0 ) 62952 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 13254.7<br>2982.2 | 0.0272<br>100.0<br>100.0 | 9.2970 | N/A | 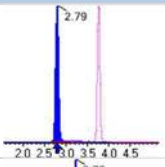 | 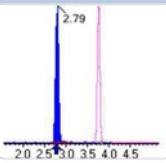 | |
| PFBA | ( 213.0 / 169.0 ) 4838830 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 3323.8 | N/A<br>0.0<br>0.0 | 18.3594 | N/A | 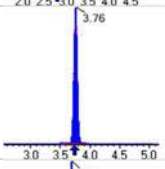 | | |
| PFPeA | ( 263.0 / 219.0 ) 2128919<br>( 263.0 / 69.0 ) 25420 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.1) | 5361.1<br>340.3 | 0.0119<br>100.0<br>100.0 | 9.1456 | N/A | 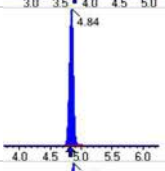 | 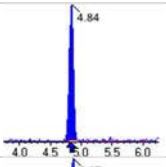 | |
| PFHxA | ( 313.0 / 269.0 ) 1219406<br>( 313.0 / 119.0 ) 141590 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2354.3<br>1418.0 | 0.1161<br>100.0<br>100.0 | 4.5868 | N/A | 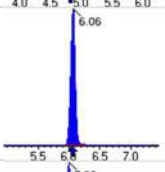 | 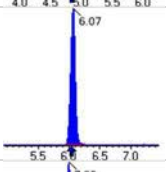 | |
| PFHpA | ( 363.0 / 319.0 ) 1387492<br>( 363.0 / 169.0 ) 420528 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 1776.8<br>1251.9 | 0.3031<br>100.0<br>100.0 | 4.5659 | N/A | 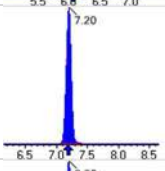 | 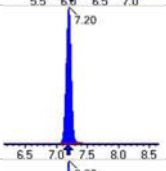 | |
| PFOA | ( 413.0 / 369.0 ) 1841616<br>( 413.0 / 169.0 ) 673207 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 773.3<br>1201.4 | 0.3656<br>100.0<br>100.0 | 4.5711 | N/A | 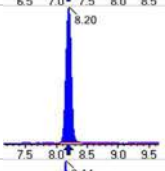 | 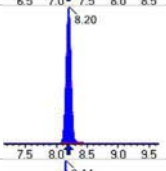 | |
| PFNA | ( 463.0 / 419.0 ) 1251905<br>( 463.0 / 169.0 ) 319604 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1250.5<br>1086.4 | 0.2553<br>100.0<br>100.0 | 4.7429 | N/A | 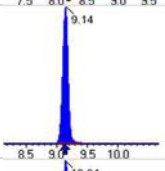 | 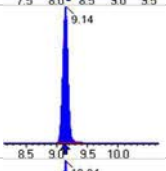 | |
| PFDA | ( 513.0 / 469.0 ) 1434654<br>( 513.0 / 169.0 ) 168105 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3306.9<br>1965.1 | 0.1172<br>100.0<br>100.0 | 4.4342 | N/A | 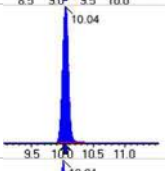 | 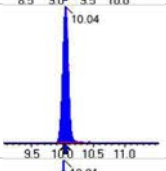 | |
| PFUnA | ( 563.0 / 519.0 ) 1605332<br>( 563.0 / 169.0 ) 227512 | ( 10.91 , 1.00 ) ( 0.00 , N/A , -0.2) | 1211.8<br>818.3 | 0.1417<br>100.0<br>100.0 | 4.8033 | N/A | 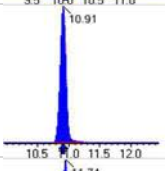 | 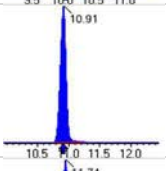 | |
| PFDoA | ( 613.0 / 569.0 ) 1716228<br>( 613.0 / 169.0 ) 271263 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1381.0<br>1036.4 | 0.1581<br>100.0<br>100.0 | 4.8505 | N/A | 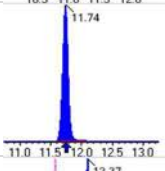 | 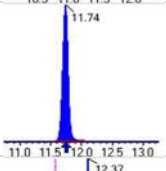 | |
| PFTrDA | ( 663.0 / 619.0 ) 1712256<br>( 663.0 / 169.0 ) 440712 | ( 12.37 , 1.05 ) ( N/A , 0.00 , -0.1) | 1318.3<br>1430.7 | 0.2574<br>100.0<br>100.0 | 4.9471 | N/A | 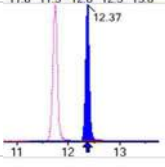 | 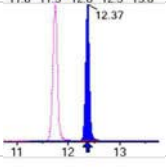 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1428181<br>( 713.0 / 169.0 ) 385493 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1791.2<br>1117.8 | 0.2699<br>100.0<br>100.0 | 4.8801 | N/A | 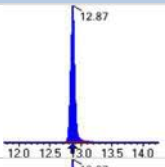 | 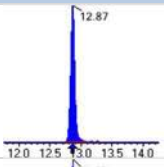 | |
| PFHxDA | ( 813.0 / 769.0 ) 1138852<br>( 813.0 / 169.0 ) 278641 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1735.3<br>1315.5 | 0.2447<br>100.0<br>100.0 | 4.6269 | N/A | 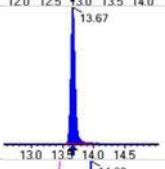 | 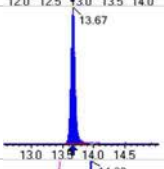 | |
| PFODA | ( 913.0 / 869.0 ) 731197<br>( 913.0 / 169.0 ) 261984 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1733.9<br>942.0 | 0.3583<br>100.0<br>100.0 | 4.7485 | N/A | 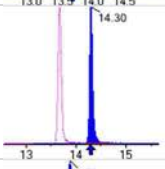 | 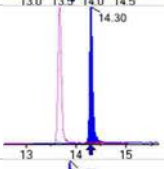 | |
| PFBS | ( 299.0 / 80.0 ) 1759688<br>( 299.0 / 99.0 ) 1244474 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4249.9<br>3308.4 | 0.7072<br>100.0<br>100.0 | 4.2546 | N/A | 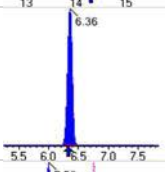 | 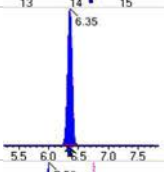 | |
| PFPeS | ( 349.0 / 80.0 ) 4474419<br>( 349.0 / 99.0 ) 1609058 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2447.9<br>2689.5 | 0.3596<br>100.0<br>100.0 | 4.5657 | N/A | 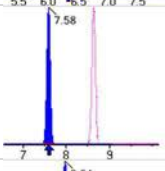 | 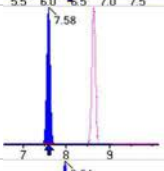 | |
| PFHxS | ( 399.0 / 80.0 ) 5007143<br>( 399.0 / 99.0 ) 1594633 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3769.6<br>5809.6 | 0.3185<br>100.0<br>100.0 | 4.3987 | N/A | 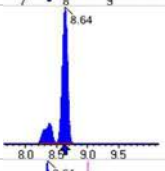 | 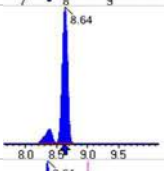 | |
| PFHpS | ( 449.0 / 80.0 ) 4180068<br>( 449.0 / 99.0 ) 1106181 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1994.9<br>1790.0 | 0.2646<br>100.0<br>100.0 | 4.4654 | N/A | 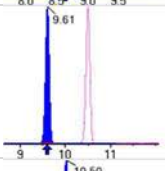 | 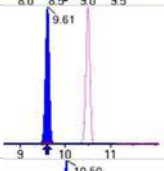 | |
| PFOS | ( 499.0 / 80.0 ) 3790499<br>( 499.0 / 99.0 ) 885961 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2368.6<br>8764.9 | 0.2337<br>100.0<br>100.0 | 4.2007 | N/A | 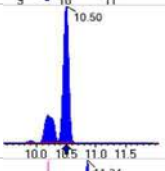 | 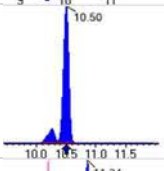 | |
| PFNS | ( 549.0 / 80.0 ) 3830828<br>( 549.0 / 99.0 ) 1044035 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2949.8<br>2999.3 | 0.2725<br>100.0<br>100.0 | 4.5343 | N/A | 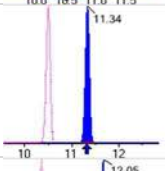 | 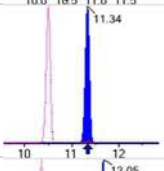 | |
| PFDS | ( 599.0 / 80.0 ) 4687891<br>( 599.0 / 99.0 ) 1274601 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2654.5<br>1953.7 | 0.2719<br>100.0<br>100.0 | 4.5442 | N/A | 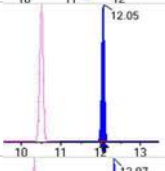 | 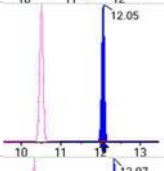 | |
| PFDoS | ( 699.0 / 80.0 ) 4217083<br>( 699.0 / 99.0 ) 985007 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3687.0<br>3177.3 | 0.2336<br>100.0<br>100.0 | 4.6370 | N/A | 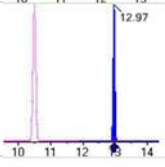 | 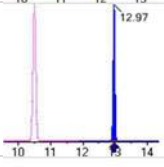 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6427716<br>( 327.0 / 81.0 ) 5608160 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4802.8<br>3822.4 | 0.8725<br>100.0<br>100.0 | 18.6621 | N/A | 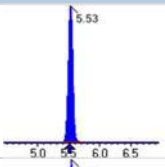 | 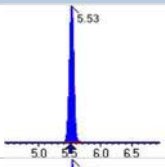 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6162619<br>( 427.0 / 81.0 ) 7728420 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4425.7<br>3867.2 | 1.2541<br>100.0<br>100.0 | 17.5116 | N/A | 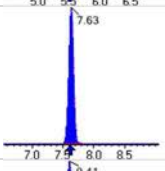 | 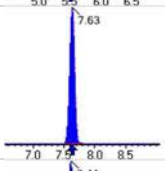 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5813599<br>( 527.0 / 81.0 ) 6323842 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1535.7<br>1692.5 | 1.0878<br>100.0<br>100.0 | 18.5585 | N/A | 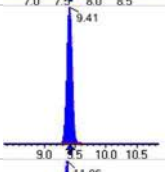 | 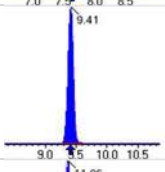 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4546994<br>( 627.0 / 81.0 ) 6545746 | ( 11.06 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1429.6<br>1779.0 | 1.4396<br>100.0<br>100.0 | 18.1733 | N/A | 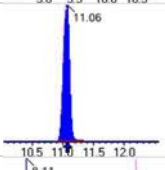 | 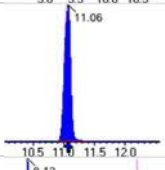 | |
| PFBSA | ( 297.9 / 78.0 ) 3784890<br>( 297.9 / 278.0 ) 5173 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , -0.7) | 2391.2<br>252.6 | 0.0014<br>100.0<br>100.0 | 5.2941 | N/A | 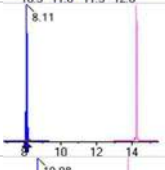 | 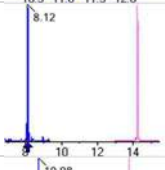 | |
| PFHxSA | ( 397.9 / 78.0 ) 4138663<br>( 397.9 / 378.0 ) 16909 | ( 10.98 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1475.0<br>328.4 | 0.0041<br>100.0<br>100.0 | 4.2697 | N/A | 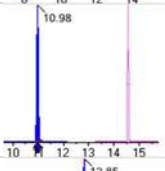 | 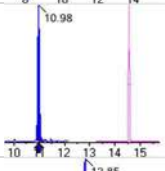 | |
| PFOSA | ( 498.0 / 78.0 ) 3268359<br>( 498.0 / 478.0 ) 45862 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2465.7<br>1324.9 | 0.0140<br>100.0<br>100.0 | 4.9031 | N/A | 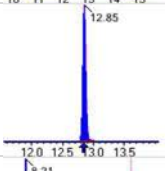 | 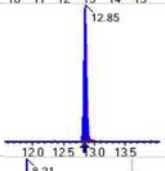 | |
| TFSI | ( 279.7 / 147.0 ) 8554250<br>( 279.7 / 211.0 ) 718623 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 65.6<br>60.6 | 0.0840<br>100.0<br>100.0 | 4.8735 | N/A | 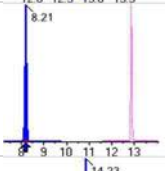 | 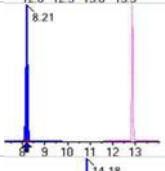 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2617190<br>( 512.0 / 169.0 ) 1958777 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 2.6) | 3160.0<br>1591.2 | 0.7484<br>100.0<br>100.0 | 19.0008 | N/A | 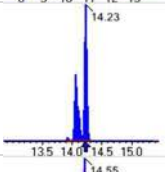 | 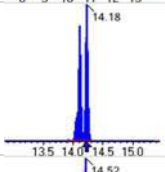 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3302859<br>( 526.0 / 169.0 ) 4077880 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4176.5<br>3268.5 | 1.2347<br>100.0<br>100.0 | 18.6986 | N/A | 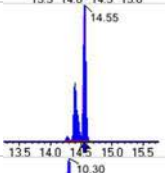 | 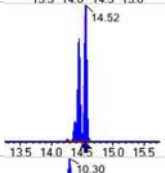 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 941372<br>( 570.0 / 483.0 ) 412806 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2558.8<br>1637.7 | 0.4385<br>100.0<br>100.0 | 4.7122 | N/A | 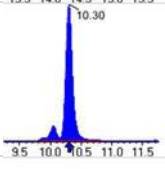 | 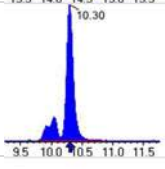 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 830082<br>( 584.0 / 526.0 ) 511873 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1802.1<br>671.1 | 0.6167<br>100.0<br>100.0 | 4.4891 | N/A | 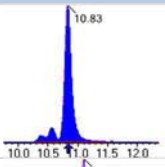 | 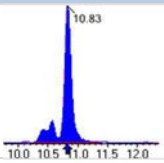 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1309209 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2267.5 | N/A<br>0.0<br>0.0 | 17.7400 | N/A | 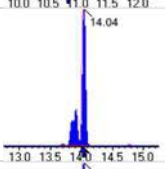 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1093975 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3642.1 | N/A<br>0.0<br>0.0 | 18.6997 | N/A | 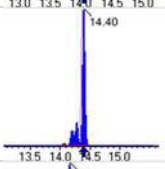 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 350291<br>( 285.0 / 185.0 ) 968672 | ( 6.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1900.4<br>2107.7 | 2.7653<br>100.0<br>100.0 | 4.8596 | N/A | 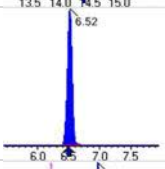 | 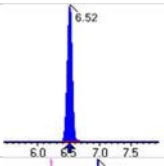 | |
| ADONA | ( 377.0 / 85.0 ) 3944718<br>( 377.0 / 251.0 ) 402093 | ( 7.59 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1901.3<br>1951.7 | 0.1019<br>100.0<br>100.0 | 4.6907 | N/A | 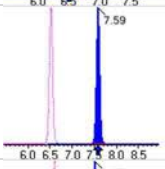 | 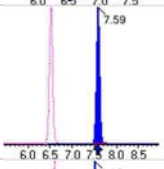 | |
| PFEESA | ( 315.0 / 135.0 ) 1573841<br>( 315.0 / 83.0 ) 877164 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 3219.1<br>1327.1 | 0.5573<br>100.0<br>100.0 | 8.2438 | N/A | 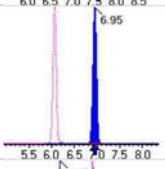 | 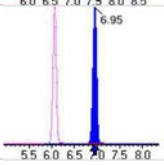 | |
| PFMPA | ( 229.0 / 85.0 ) 686112 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 5599.0 | N/A<br>0.0<br>0.0 | 9.2883 | N/A | 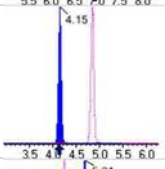 | | |
| PFMBA | ( 279.0 / 85.0 ) 1810024 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5286.0 | N/A<br>0.0<br>0.0 | 9.0155 | N/A | 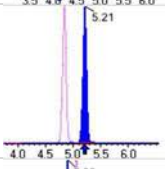 | | |
| NFDHA | ( 295.0 / 201.0 ) 855237<br>( 295.0 / 85.0 ) 922794 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3414.5<br>3145.8 | 1.0790<br>100.0<br>100.0 | 8.6171 | N/A | 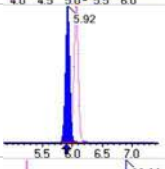 | 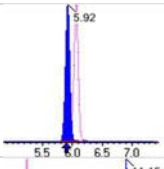 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4165488<br>( 533.0 / 353.0 ) 1303420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , -0.1) | 2574.2<br>3005.6 | 0.3129<br>100.0<br>100.0 | 4.5860 | N/A | 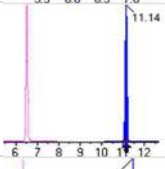 | 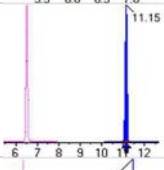 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3346515<br>( 633.0 / 453.0 ) 1111515 | ( 12.47 , 1.91 )<br>( N/A , 0.00 , -0.1) | 3618.9<br>2674.6 | 0.3321<br>100.0<br>100.0 | 4.7909 | N/A | 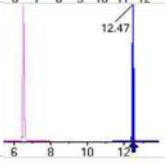 | 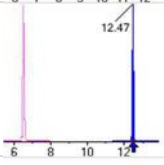 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2114337<br>( 461.0 / 381.2 ) 842629 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , -0.1) | 2784.3<br>3053.0 | 0.3985<br>100.0<br>100.0 | 4.1534 | N/A | 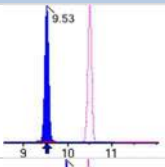 | 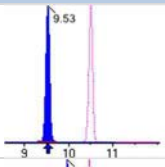 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 238302<br>( 241.0 / 117.0 ) 502064 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2642.2<br>2673.1 | 2.1068<br>100.0<br>100.0 | 17.9956 | N/A | 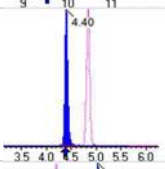 | 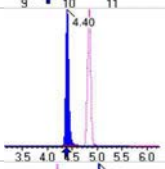 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1331676<br>( 341.0 / 217.0 ) 2023067 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1058.3<br>1362.0 | 1.5192<br>100.0<br>100.0 | 18.0626 | N/A | 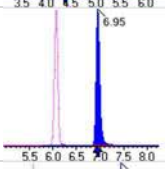 | 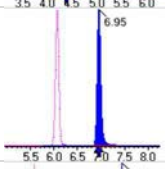 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2128903<br>( 441.0 / 337.0 ) 1952501 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4363.7<br>7659.6 | 0.9171<br>100.0<br>100.0 | 17.5963 | N/A | 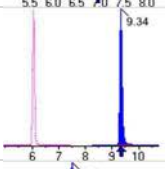 | 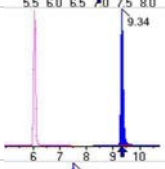 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1497038<br>( 357.2 / 243.0 ) 165062 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1712.0<br>900.3 | 0.1103<br>100.0<br>100.0 | 4.8782 | N/A | 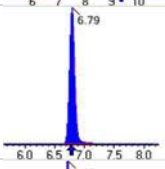 | 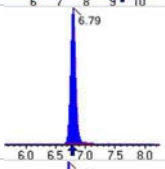 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1119562<br>( 457.2 / 343.0 ) 46429 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.1) | 781.1<br>326.6 | 0.0415<br>100.0<br>100.0 | 5.1103 | N/A | 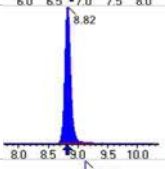 | 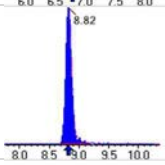 | |
| TDCA | ( 499.0 / 80.0 ) 2892255 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 15801.2 | N/A<br>0.0<br>0.0 | 4.7022 | N/A | 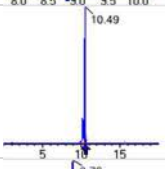 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 234275 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1105.2 | N/A | 0.9826<br>[ 1.0000 ] | 98.3%<br>{ 100.0% } | 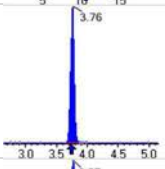 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119482 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 4024.8 | N/A | 0.9419<br>[ 1.0000 ] | 94.2%<br>{ 100.0% } | 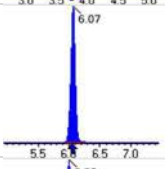 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379944 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3214.4 | N/A | 0.9611<br>[ 1.0000 ] | 96.1%<br>{ 100.0% } | 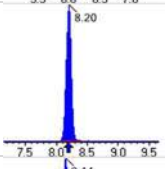 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 266244 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1068.8 | N/A | 0.9361<br>[ 1.0000 ] | 93.6%<br>{ 100.0% } | 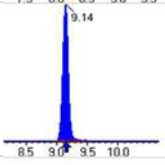 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 267877 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 4037.1 | N/A | 0.9173 [ 1.0000 ] | 91.7% { 100.0% } | 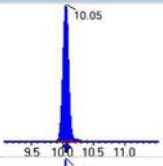 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 900173 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4526.5 | N/A | 0.9485 [ 1.0000 ] | 94.9% { 100.0% } | 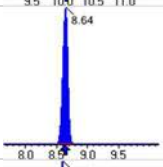 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 700749 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2461.4 | N/A | 0.9201 [ 1.0000 ] | 92.0% { 100.0% } | 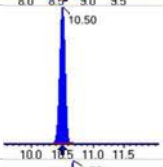 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115201 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 29283.2 | N/A | 7.9034 [ 8.0000 ] | 98.8% { 100.0% } | 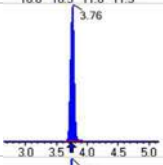 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 921682 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5969.4 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 100.0% } | 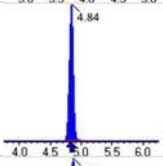 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 553414 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6046.0 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 100.0% } | 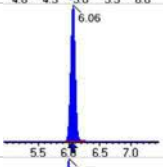 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 619345 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 4798.4 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 100.0% } | 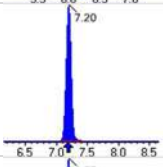 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 819908 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2642.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 100.0% } | 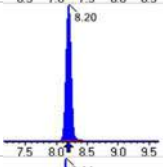 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262623 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 3992.5 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 100.0% } | 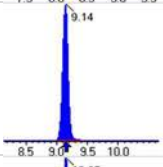 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316652 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 937.0 | N/A | 1.0548 [ 1.0000 ] | 105.5% { 100.0% } | 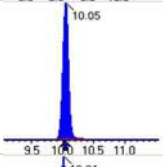 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 361334 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 805.5 | N/A | 1.0231 [ 1.0000 ] | 102.3% { 100.0% } | 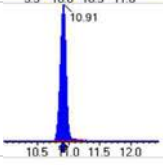 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351702 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1444.1 | N/A | 0.9778 [ 1.0000 ] | 97.8% { 100.0% } | 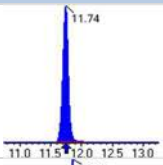  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 312483 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1264.0 | N/A | 1.0202 [ 1.0000 ] | 102.0% { 100.0% } | 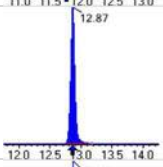  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 516108 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2242.9 | N/A | 1.9737 [ 2.0000 ] | 98.7% { 100.0% } | 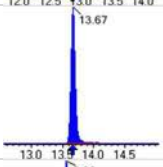  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1593184 | ( 6.36 , N/A ) ( N/A , 0.00 , N/A ) | 1038.1 | N/A | 1.9589 [ 2.0000 ] | 97.9% { 100.0% } | 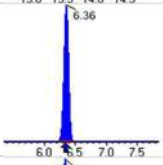  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1280605 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3673.4 | N/A | 1.9727 [ 2.0000 ] | 98.6% { 100.0% } | 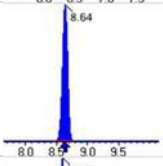  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1562530 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1579.3 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 100.0% } | 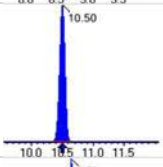  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524953 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 86.3 | N/A | 3.7410 [ 4.0000 ] | 93.5% { 100.0% } | 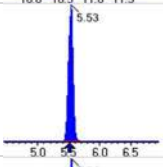  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1699930 | ( 7.64 , N/A ) ( N/A , 0.00 , N/A ) | 3997.9 | N/A | 4.0480 [ 4.0000 ] | 101.2% { 100.0% } | 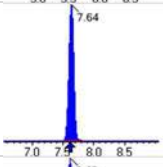  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1319404 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1220.6 | N/A | 4.0060 [ 4.0000 ] | 100.1% { 100.0% } | 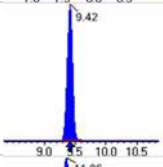  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2596951 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1243.7 | N/A | 7.5446 [ 8.0000 ] | 94.3% { 100.0% } | 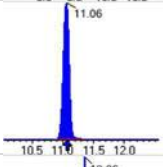  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1333164 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2944.9 | N/A | 1.9911 [ 2.0000 ] | 99.6% { 100.0% } | 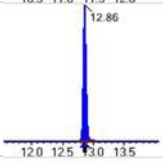  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 277449 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1901.8 | N/A | 1.9537 [ 2.0000 ] | 97.7% { 100.0% } | 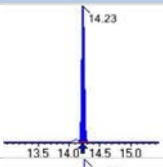  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315440 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2388.3 | N/A | 2.0713 [ 2.0000 ] | 103.6% { 100.0% } | 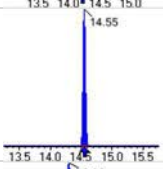  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 837819 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2395.5 | N/A | 4.3096 [ 4.0000 ] | 107.7% { 100.0% } | 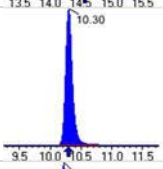  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 756123 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2001.2 | N/A | 4.2674 [ 4.0000 ] | 106.7% { 100.0% } | 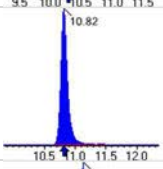  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1345588 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2202.6 | N/A | 21.0846 [ 20.0000 ] | 105.4% { 100.0% } | 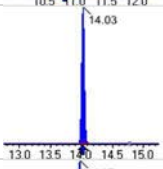  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316921 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4403.9 | N/A | 20.3309 [ 20.0000 ] | 101.7% { 100.0% } | 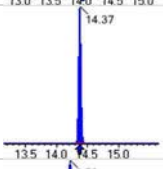  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977892 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2111.7 | N/A | 7.8745 [ 8.0000 ] | 98.4% { 100.0% } | 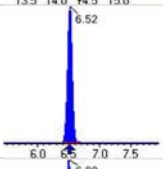  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 577314 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1093.1 | N/A | 1.9878 [ 2.0000 ] | 99.4% { 100.0% } | 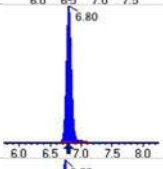  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 537205 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 658.4 | N/A | 2.0318 [ 2.0000 ] | 101.6% { 100.0% } | 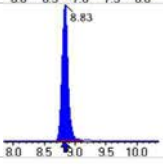  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 4976227<br>( 163.0 / 69.0 ) 132304 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 25558.3<br>5992.4 | 0.0266<br>97.9<br>97.9 | 19.9572 | N/A | 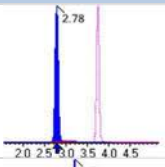 | 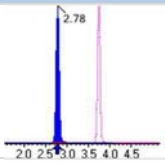 | |
| PFBA | ( 213.0 / 169.0 ) 10221233 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5237.8 | N/A<br>0.0<br>0.0 | 38.7767 | N/A | 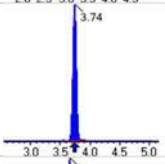 | | |
| PFPeA | ( 263.0 / 219.0 ) 4600759<br>( 263.0 / 69.0 ) 53659 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , -0.2) | 7458.7<br>673.0 | 0.0117<br>97.7<br>97.7 | 19.6841 | N/A | 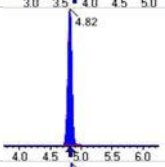 | 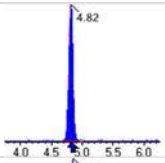 | |
| PFHxA | ( 313.0 / 269.0 ) 2674025<br>( 313.0 / 119.0 ) 304997 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , -0.2) | 3132.9<br>2330.2 | 0.1141<br>98.2<br>98.2 | 9.7037 | N/A | 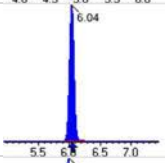 | 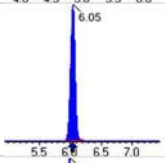 | |
| PFHpA | ( 363.0 / 319.0 ) 3133962<br>( 363.0 / 169.0 ) 979167 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1898.2<br>1646.0 | 0.3124<br>103.1<br>103.1 | 9.6945 | N/A | 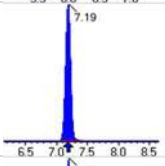 | 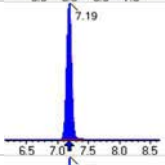 | |
| PFOA | ( 413.0 / 369.0 ) 4116055<br>( 413.0 / 169.0 ) 1484961 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1022.2<br>1403.5 | 0.3608<br>98.7<br>98.7 | 9.3377 | N/A | 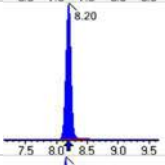 | 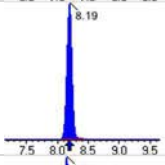 | |
| PFNA | ( 463.0 / 419.0 ) 2850976<br>( 463.0 / 169.0 ) 722819 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1530.8<br>1452.7 | 0.2535<br>99.3<br>99.3 | 9.7006 | N/A | 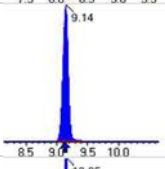 | 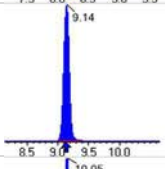 | |
| PFDA | ( 513.0 / 469.0 ) 3194205<br>( 513.0 / 169.0 ) 393804 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3654.4<br>3624.5 | 0.1233<br>105.2<br>105.2 | 9.1536 | N/A | 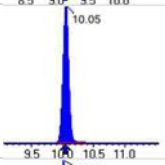 | 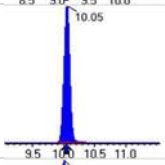 | |
| PFUnA | ( 563.0 / 519.0 ) 3630994<br>( 563.0 / 169.0 ) 527822 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1014.1<br>931.4 | 0.1454<br>102.6<br>102.6 | 9.9823 | N/A | 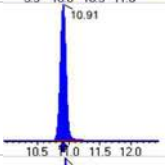 | 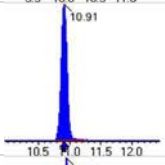 | |
| PFDoA | ( 613.0 / 569.0 ) 4033515<br>( 613.0 / 169.0 ) 625874 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1766.4<br>1315.4 | 0.1552<br>98.2<br>98.2 | 10.0099 | N/A | 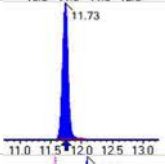 | 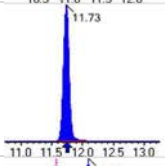 | |
| PFTrDA | ( 663.0 / 619.0 ) 3904086<br>( 663.0 / 169.0 ) 1037013 | ( 12.36 , 1.05 )<br>( N/A , -0.01 , -0.1) | 1403.0<br>1491.0 | 0.2656<br>103.2<br>103.2 | 9.9045 | N/A | 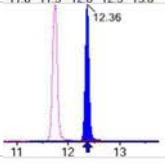 | 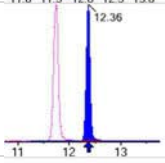 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3274865<br>( 713.0 / 169.0 ) 872542 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1863.1<br>1420.4 | 0.2664<br>98.7<br>98.7 | 10.0480 | N/A | 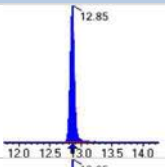 | 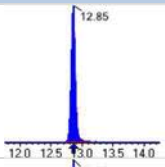 | |
| PFHxDA | ( 813.0 / 769.0 ) 2771994<br>( 813.0 / 169.0 ) 672443 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2671.6<br>1712.5 | 0.2426<br>99.1<br>99.1 | 9.5663 | N/A | 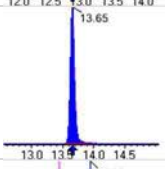 | 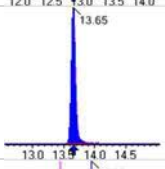 | |
| PFODA | ( 913.0 / 869.0 ) 1755825<br>( 913.0 / 169.0 ) 595303 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , -0.1) | 2292.7<br>1524.1 | 0.3390<br>94.6<br>94.6 | 9.6858 | N/A | 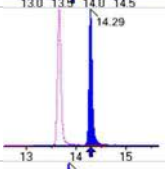 | 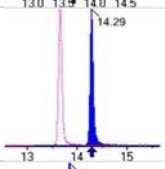 | |
| PFBS | ( 299.0 / 80.0 ) 3954355<br>( 299.0 / 99.0 ) 2802024 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3950.8<br>3555.4 | 0.7086<br>100.2<br>100.2 | 8.8614 | N/A | 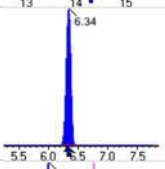 | 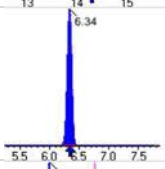 | |
| PFPeS | ( 349.0 / 80.0 ) 10113671<br>( 349.0 / 99.0 ) 3414890 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.1) | 3006.5<br>2142.2 | 0.3377<br>93.9<br>93.9 | 9.7116 | N/A | 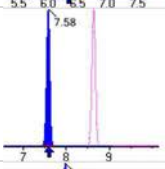 | 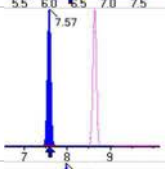 | |
| PFHxS | ( 399.0 / 80.0 ) 10933094<br>( 399.0 / 99.0 ) 3587030 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3851.3<br>3667.5 | 0.3281<br>103.0<br>103.0 | 9.0385 | N/A | 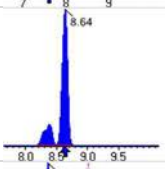 | 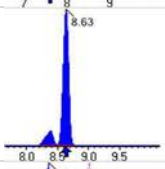 | |
| PFHpS | ( 449.0 / 80.0 ) 10182649<br>( 449.0 / 99.0 ) 2481015 | ( 9.61 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2251.9<br>2141.8 | 0.2437<br>92.1<br>92.1 | 9.8391 | N/A | 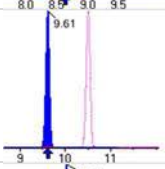 | 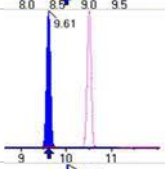 | |
| PFOS | ( 499.0 / 80.0 ) 8996676<br>( 499.0 / 99.0 ) 2052837 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3105.0<br>5613.8 | 0.2282<br>97.6<br>97.6 | 9.0184 | N/A | 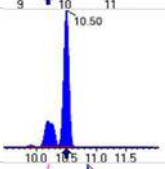 | 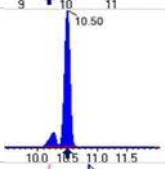 | |
| PFNS | ( 549.0 / 80.0 ) 8681127<br>( 549.0 / 99.0 ) 2337302 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2556.4<br>2538.4 | 0.2692<br>98.8<br>98.8 | 9.2942 | N/A | 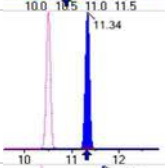 | 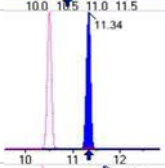 | |
| PFDS | ( 599.0 / 80.0 ) 10573938<br>( 599.0 / 99.0 ) 2638031 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3076.0<br>2562.7 | 0.2495<br>91.8<br>91.8 | 9.2712 | N/A | 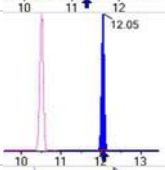 | 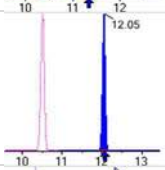 | |
| PFDoS | ( 699.0 / 80.0 ) 10115664<br>( 699.0 / 99.0 ) 2234349 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.0) | 4057.4<br>3770.2 | 0.2209<br>94.6<br>94.6 | 10.0609 | N/A | 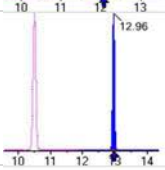 | 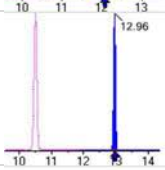 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12141384<br>( 327.0 / 81.0 ) 11228944 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 5417.9<br>3453.7 | 0.9248<br>106.0<br>106.0 | 37.7355 | N/A | 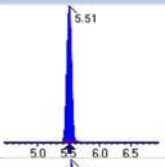 | 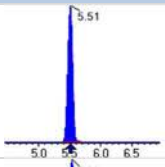 | |
| 6:2FTS | ( 427.0 / 407.0 ) 10900294<br>( 427.0 / 81.0 ) 14811616 | ( 7.63 , 1.00 ) ( 0.00 , N/A , 0.1) | 4185.7<br>4990.4 | 1.3588<br>108.4<br>108.4 | 35.7625 | N/A | 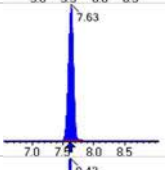 | 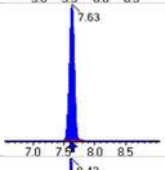 | |
| 8:2FTS | ( 527.0 / 507.0 ) 11942343<br>( 527.0 / 81.0 ) 12425264 | ( 9.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 1621.8<br>1564.2 | 1.0404<br>95.6<br>95.6 | 35.7744 | N/A | 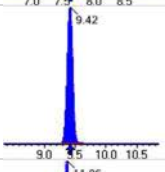 | 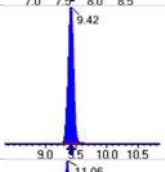 | |
| 10:2FTS | ( 627.0 / 607.0 ) 9925774<br>( 627.0 / 81.0 ) 13942585 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.4) | 1561.8<br>1571.2 | 1.4047<br>97.6<br>97.6 | 38.6373 | N/A | 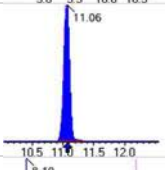 | 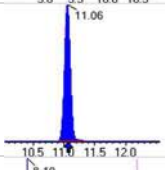 | |
| PFBSA | ( 297.9 / 78.0 ) 8323910<br>( 297.9 / 278.0 ) 11763 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.4) | 1757.1<br>273.7 | 0.0014<br>103.4<br>103.4 | 10.3645 | N/A | 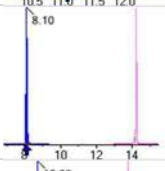 | 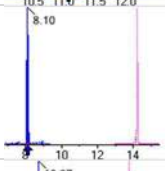 | |
| PFHxSA | ( 397.9 / 78.0 ) 10756836<br>( 397.9 / 378.0 ) 44787 | ( 10.98 , 0.76 ) ( N/A , 0.00 , 0.1) | 1403.3<br>850.1 | 0.0042<br>101.9<br>101.9 | 10.4696 | N/A | 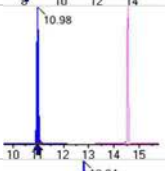 | 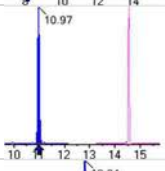 | |
| PFOSA | ( 498.0 / 78.0 ) 7435186<br>( 498.0 / 478.0 ) 96496 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 2452.2<br>1261.2 | 0.0130<br>92.5<br>92.5 | 10.0824 | N/A | 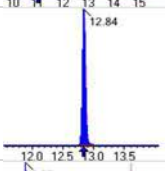 | 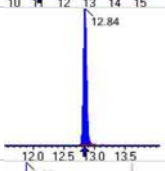 | |
| TFSI | ( 279.7 / 147.0 ) 19532191<br>( 279.7 / 211.0 ) 1661545 | ( 8.20 , 0.64 ) ( N/A , 0.00 , -0.1) | 66.5<br>62.7 | 0.0851<br>101.3<br>101.3 | 10.0587 | N/A | 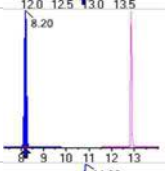 | 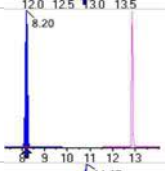 | |
| NMeFOSA | ( 512.0 / 219.0 ) 6233211<br>( 512.0 / 169.0 ) 4662319 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.9) | 3243.4<br>1391.3 | 0.7480<br>99.9<br>99.9 | 40.2840 | N/A | 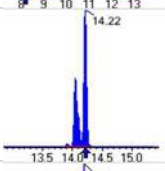 | 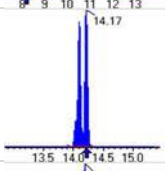 | |
| NEtFOSA | ( 526.0 / 219.0 ) 7427048<br>( 526.0 / 169.0 ) 9493854 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 4701.3<br>3802.9 | 1.2783<br>103.5<br>103.5 | 39.6683 | N/A | 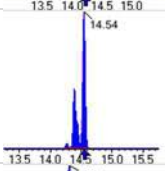 | 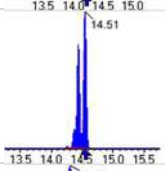 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1945852<br>( 570.0 / 483.0 ) 893329 | ( 10.31 , 1.00 ) ( 0.00 , N/A , 0.2) | 3953.1<br>1913.0 | 0.4591<br>104.7<br>104.7 | 9.3754 | N/A | 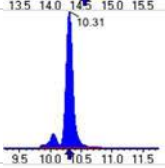 | 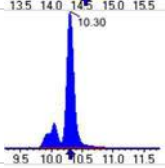 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1886130<br>( 584.0 / 526.0 ) 1111226 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1796.1<br>739.5 | 0.5892<br>95.5<br>95.5 | 9.8885 | N/A | 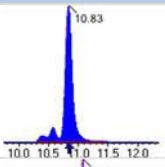 | 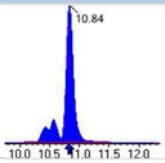 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3070058 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3573.3 | N/A<br>0.0<br>0.0 | 38.7608 | N/A | 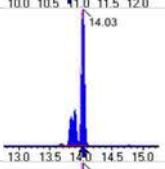 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2588455 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4718.1 | N/A<br>0.0<br>0.0 | 40.2337 | N/A | 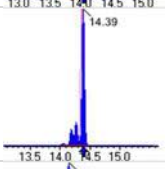 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 774472<br>( 285.0 / 185.0 ) 2152195 | ( 6.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1908.8<br>2139.2 | 2.7789<br>100.5<br>100.5 | 9.8848 | N/A | 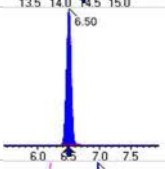 | 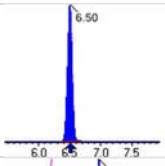 | |
| ADONA | ( 377.0 / 85.0 ) 8831827<br>( 377.0 / 251.0 ) 872179 | ( 7.58 , 1.17 )<br>( N/A , -0.01 , 0.2) | 2174.0<br>1762.1 | 0.0988<br>96.9<br>96.9 | 9.6620 | N/A | 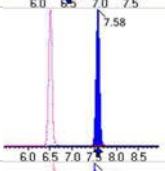 | 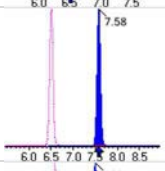 | |
| PFEESA | ( 315.0 / 135.0 ) 3656765<br>( 315.0 / 83.0 ) 1984703 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 3111.9<br>1767.9 | 0.5427<br>97.4<br>97.4 | 18.4785 | N/A | 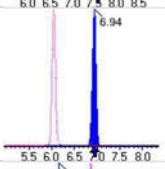 | 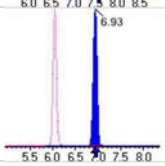 | |
| PFMPA | ( 229.0 / 85.0 ) 1521484 | ( 4.13 , 0.86 )<br>( N/A , -0.02 , 0.0) | 8416.3 | N/A<br>0.0<br>0.0 | 20.5135 | N/A | 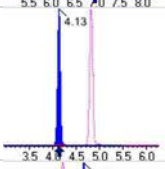 | | |
| PFMBA | ( 279.0 / 85.0 ) 4133561 | ( 5.19 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6193.2 | N/A<br>0.0<br>0.0 | 20.5050 | N/A | 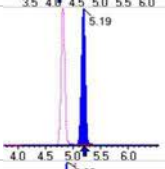 | | |
| NFDHA | ( 295.0 / 201.0 ) 2053635<br>( 295.0 / 85.0 ) 2216174 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 3475.3<br>2940.0 | 1.0791<br>100.0<br>100.0 | 19.9620 | N/A | 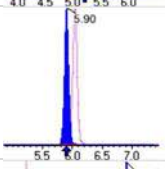 | 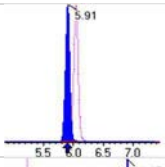 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 9136171<br>( 533.0 / 353.0 ) 2848253 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2897.4<br>2497.0 | 0.3118<br>99.6<br>99.6 | 9.2537 | N/A | 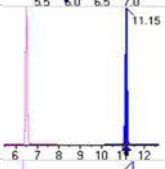 | 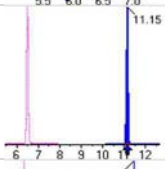 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 7304357<br>( 633.0 / 453.0 ) 2453189 | ( 12.46 , 1.92 )<br>( N/A , -0.01 , 0.1) | 3572.6<br>3729.2 | 0.3359<br>101.1<br>101.1 | 9.6204 | N/A | 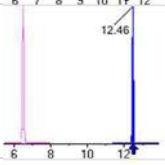 | 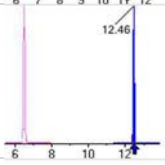 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 5039330<br>( 461.0 / 381.2 ) 1905718 | ( 9.53 , 0.91 )<br>( N/A , 0.01 , 0.3) | 3789.8<br>3403.6 | 0.3782<br>94.9<br>94.9 | 8.9542 | N/A | 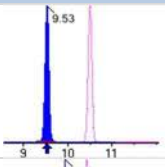 | 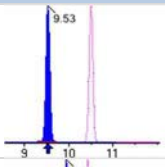 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 538629<br>( 241.0 / 117.0 ) 1253240 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 3197.1<br>4283.1 | 2.3267<br>110.4<br>110.4 | 40.5098 | N/A | 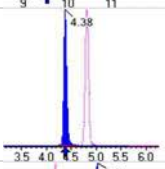 | 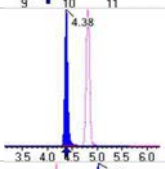 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 3029615<br>( 341.0 / 217.0 ) 4650574 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1393.7<br>1345.8 | 1.5350<br>101.0<br>101.0 | 39.6437 | N/A | 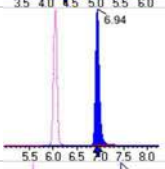 | 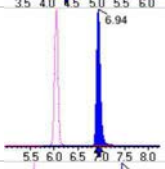 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5123403<br>( 441.0 / 337.0 ) 4460709 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , -0.1) | 5551.5<br>5955.7 | 0.8707<br>94.9<br>94.9 | 40.8535 | N/A | 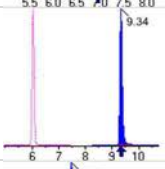 | 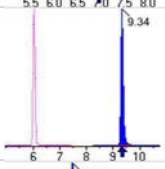 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3452949<br>( 357.2 / 243.0 ) 358650 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1773.4<br>994.0 | 0.1039<br>94.2<br>94.2 | 10.0613 | N/A | 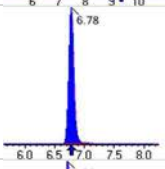 | 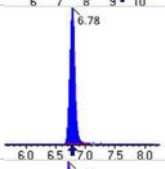 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2505275<br>( 457.2 / 343.0 ) 105248 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 860.7<br>599.2 | 0.0420<br>101.3<br>101.3 | 10.2092 | N/A | 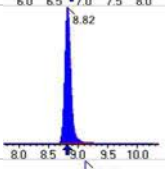 | 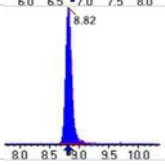 | |
| TDCA | ( 499.0 / 80.0 ) 6236770 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 25056.2 | N/A<br>0.0<br>0.0 | 9.1716 | N/A | 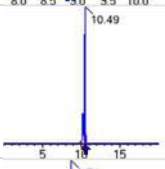 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 219824 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 996.6 | N/A | 0.9219<br>[ 1.0000 ] | 92.2%<br>{ 93.8% } | 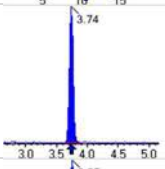 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124014 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 119243.9 | N/A | 0.9776<br>[ 1.0000 ] | 97.8%<br>{ 103.8% } | 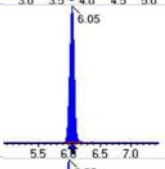 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390461 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3609.6 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 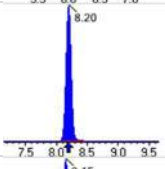 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 275253 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 905.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 103.4% } | 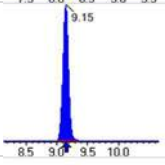 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286139 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 6661.6 | N/A | 0.9798 [ 1.0000 ] | 98.0% { 106.8% } | 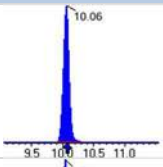 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 911912 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4728.4 | N/A | 0.9609 [ 1.0000 ] | 96.1% { 101.3% } | 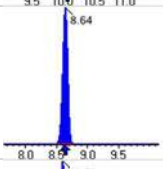 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727281 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2280.6 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 103.8% } | 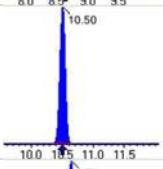 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115448 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 30999.9 | N/A | 8.4239 [ 8.0000 ] | 105.3% { 100.0% } | 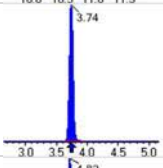 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 925445 | ( 4.82 , N/A ) ( N/A , -0.03 , N/A ) | 4720.5 | N/A | 3.9995 [ 4.0000 ] | 100.0% { 100.4% } | 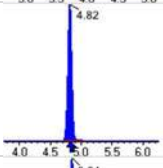 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 573646 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 8004.1 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 103.7% } | 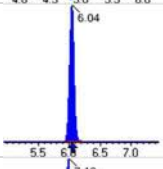 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 658863 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5435.3 | N/A | 2.0932 [ 2.0000 ] | 104.7% { 106.4% } | 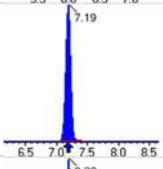 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 890902 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2701.9 | N/A | 2.1295 [ 2.0000 ] | 106.5% { 108.7% } | 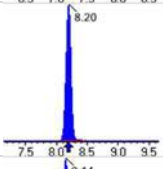 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292416 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2988.5 | N/A | 1.0835 [ 1.0000 ] | 108.3% { 111.3% } | 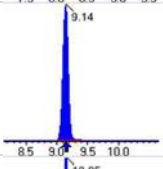 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341522 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1370.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 107.9% } | 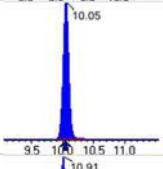 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393261 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1047.7 | N/A | 1.0424 [ 1.0000 ] | 104.2% { 108.8% } | 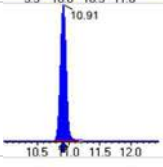 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 400532 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1477.9 | N/A | 1.0425 [ 1.0000 ] | 104.3% { 113.9% } | 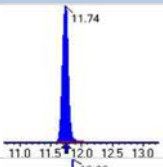  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348002 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1107.0 | N/A | 1.0636 [ 1.0000 ] | 106.4% { 111.4% } | 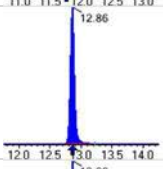  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607589 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2704.1 | N/A | 2.1752 [ 2.0000 ] | 108.8% { 117.7% } | 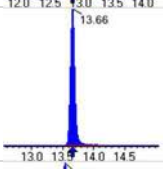  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1718936 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1168.5 | N/A | 2.0863 [ 2.0000 ] | 104.3% { 107.9% } | 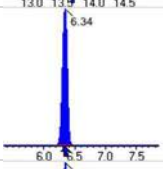  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1360815 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3521.2 | N/A | 2.0692 [ 2.0000 ] | 103.5% { 106.3% } | 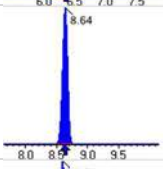  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1727455 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1864.4 | N/A | 2.2029 [ 2.0000 ] | 110.1% { 110.6% } | 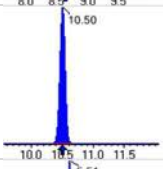  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 490391 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.9 | N/A | 3.4497 [ 4.0000 ] | 86.2% { 93.4% } | 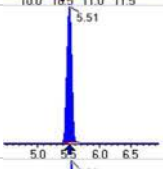  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1472319 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3472.6 | N/A | 3.4608 [ 4.0000 ] | 86.5% { 86.6% } | 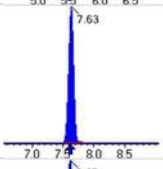  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1406025 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1127.1 | N/A | 4.2140 [ 4.0000 ] | 105.4% { 106.6% } | 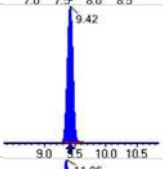  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2666437 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1321.4 | N/A | 7.6467 [ 8.0000 ] | 95.6% { 102.7% } | 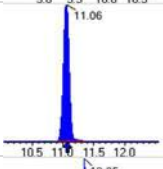  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1474856 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2149.7 | N/A | 2.1223 [ 2.0000 ] | 106.1% { 110.6% } | 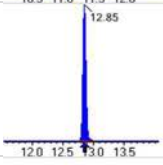  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 311674 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1807.7 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 112.3% } | 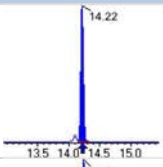  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334355 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2233.0 | N/A | 2.1154 [ 2.0000 ] | 105.8% { 106.0% } | 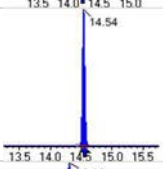  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 870435 | ( 10.30 , N/A ) ( N/A , 0.01 , N/A ) | 2098.7 | N/A | 4.3140 [ 4.0000 ] | 107.8% { 103.9% } | 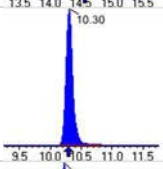  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 779965 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2137.1 | N/A | 4.2413 [ 4.0000 ] | 106.0% { 103.2% } | 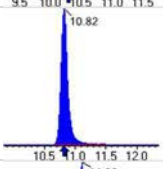  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1444142 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2682.5 | N/A | 21.8033 [ 20.0000 ] | 109.0% { 107.3% } | 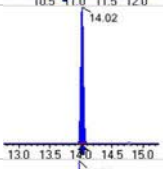  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1448227 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 4302.5 | N/A | 21.5424 [ 20.0000 ] | 107.7% { 110.0% } | 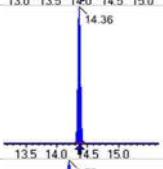  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1062925 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2462.9 | N/A | 8.2465 [ 8.0000 ] | 103.1% { 108.7% } | 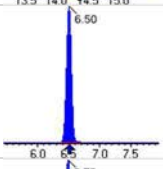  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 645613 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1154.9 | N/A | 2.0811 [ 2.0000 ] | 104.1% { 111.8% } | 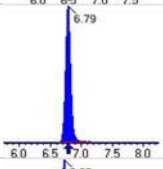  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 601731 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 832.3 | N/A | 2.1306 [ 2.0000 ] | 106.5% { 112.0% } | 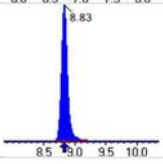  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 9647783<br>( 163.0 / 69.0 ) 248180 | ( 2.77 , 0.74 ) ( N/A , -0.02 , 0.0) | 43056.1<br>9147.9 | 0.0257<br>94.7<br>94.7 | 44.1686 | N/A | 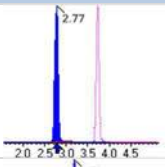 | 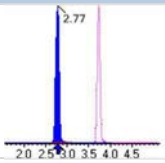 | |
| PFBA | ( 213.0 / 169.0 ) 19202801 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 7585.4 | N/A<br>0.0<br>0.0 | 83.1608 | N/A | 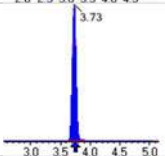 | | |
| PFPeA | ( 263.0 / 219.0 ) 9729713<br>( 263.0 / 69.0 ) 109623 | ( 4.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 6819.6<br>1166.1 | 0.0113<br>94.4<br>94.4 | 42.6830 | N/A | 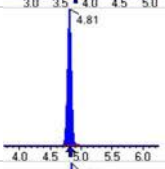 | 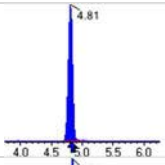 | |
| PFHxA | ( 313.0 / 269.0 ) 5855022<br>( 313.0 / 119.0 ) 657854 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3525.9<br>3080.6 | 0.1124<br>96.8<br>96.8 | 21.0786 | N/A | 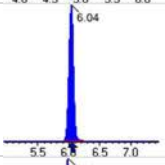 | 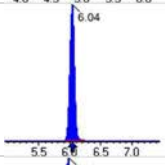 | |
| PFHpA | ( 363.0 / 319.0 ) 6773290<br>( 363.0 / 169.0 ) 1976592 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1787.9<br>1424.4 | 0.2918<br>96.3<br>96.3 | 21.3548 | N/A | 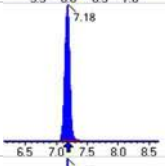 | 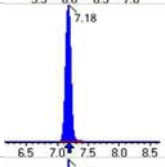 | |
| PFOA | ( 413.0 / 369.0 ) 8939778<br>( 413.0 / 169.0 ) 3151658 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1127.7<br>1395.0 | 0.3525<br>96.4<br>96.4 | 21.1396 | N/A | 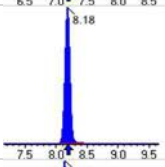 | 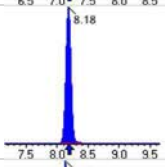 | |
| PFNA | ( 463.0 / 419.0 ) 6037894<br>( 463.0 / 169.0 ) 1493594 | ( 9.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1348.3<br>1184.5 | 0.2474<br>96.9<br>96.9 | 21.7350 | N/A | 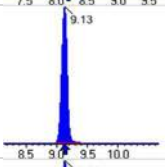 | 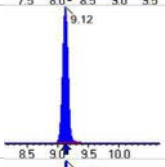 | |
| PFDA | ( 513.0 / 469.0 ) 6762404<br>( 513.0 / 169.0 ) 825163 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 4792.5<br>4492.2 | 0.1220<br>104.1<br>104.1 | 19.9979 | N/A | 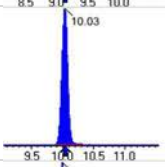 | 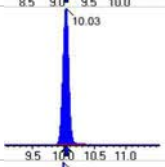 | |
| PFUnA | ( 563.0 / 519.0 ) 7387064<br>( 563.0 / 169.0 ) 1075499 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1049.6<br>1214.6 | 0.1456<br>102.7<br>102.7 | 20.9526 | N/A | 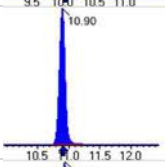 | 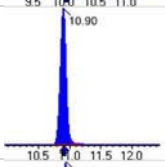 | |
| PFDoA | ( 613.0 / 569.0 ) 8414637<br>( 613.0 / 169.0 ) 1279847 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.1) | 1974.2<br>1748.5 | 0.1521<br>96.2<br>96.2 | 21.0663 | N/A | 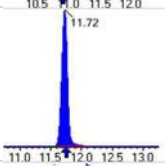 | 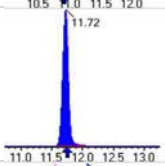 | |
| PFTrDA | ( 663.0 / 619.0 ) 7977805<br>( 663.0 / 169.0 ) 2091790 | ( 12.35 , 1.05 ) ( N/A , -0.02 , -0.1) | 1535.5<br>1229.9 | 0.2622<br>101.9<br>101.9 | 20.4176 | N/A | 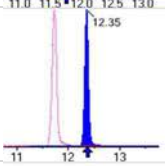 | 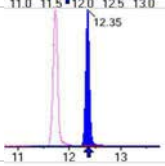 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6332836<br>( 713.0 / 169.0 ) 1709460 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1729.0<br>1376.3 | 0.2699<br>100.0<br>100.0 | 20.1993 | N/A | 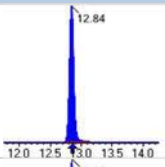 | 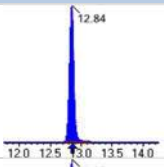 | |
| PFHxDA | ( 813.0 / 769.0 ) 5638902<br>( 813.0 / 169.0 ) 1397067 | ( 13.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2906.6<br>1972.3 | 0.2478<br>101.3<br>101.3 | 20.4809 | N/A | 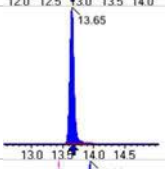 | 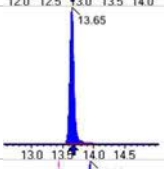 | |
| PFODA | ( 913.0 / 869.0 ) 3499803<br>( 913.0 / 169.0 ) 1172832 | ( 14.28 , 1.05 )<br>( N/A , -0.02 , 0.0) | 2345.2<br>1896.8 | 0.3351<br>93.5<br>93.5 | 20.3190 | N/A | 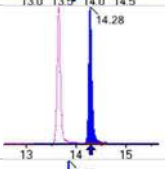 | 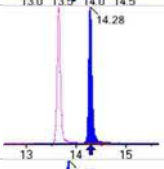 | |
| PFBS | ( 299.0 / 80.0 ) 8605541<br>( 299.0 / 99.0 ) 6210338 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3746.5<br>3688.7 | 0.7217<br>102.0<br>102.0 | 18.7196 | N/A | 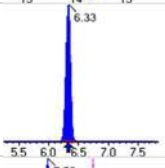 | 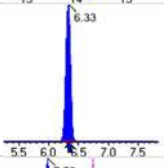 | |
| PFPeS | ( 349.0 / 80.0 ) 20173078<br>( 349.0 / 99.0 ) 6917231 | ( 7.56 , 0.88 )<br>( N/A , -0.02 , 0.0) | 3260.6<br>2666.4 | 0.3429<br>95.4<br>95.4 | 19.2674 | N/A | 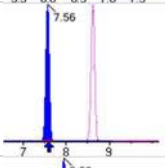 | 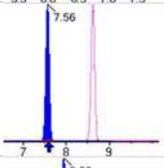 | |
| PFHxS | ( 399.0 / 80.0 ) 22725319<br>( 399.0 / 99.0 ) 7646781 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4713.5<br>6241.9 | 0.3365<br>105.7<br>105.7 | 18.6865 | N/A | 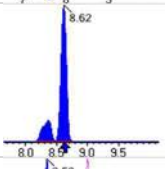 | 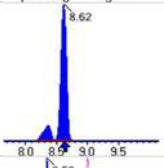 | |
| PFHpS | ( 449.0 / 80.0 ) 20274394<br>( 449.0 / 99.0 ) 5555187 | ( 9.59 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2318.9<br>2835.7 | 0.2740<br>103.5<br>103.5 | 20.6440 | N/A | 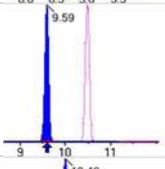 | 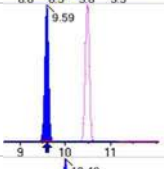 | |
| PFOS | ( 499.0 / 80.0 ) 18767964<br>( 499.0 / 99.0 ) 4295232 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3739.6<br>5295.9 | 0.2289<br>97.9<br>97.9 | 19.8251 | N/A | 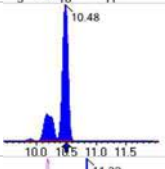 | 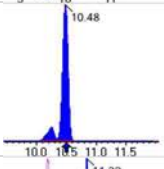 | |
| PFNS | ( 549.0 / 80.0 ) 18086906<br>( 549.0 / 99.0 ) 4780266 | ( 11.32 , 1.08 )<br>( N/A , -0.01 , 0.1) | 2954.4<br>3018.0 | 0.2643<br>97.0<br>97.0 | 20.4057 | N/A | 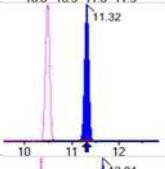 | 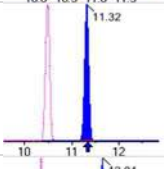 | |
| PFDS | ( 599.0 / 80.0 ) 20905375<br>( 599.0 / 99.0 ) 5646584 | ( 12.04 , 1.15 )<br>( N/A , -0.02 , 0.1) | 3970.4<br>3658.7 | 0.2701<br>99.3<br>99.3 | 19.3156 | N/A | 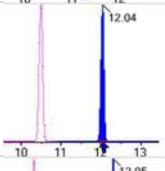 | 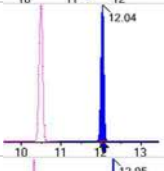 | |
| PFDoS | ( 699.0 / 80.0 ) 19306218<br>( 699.0 / 99.0 ) 4469745 | ( 12.95 , 1.23 )<br>( N/A , -0.02 , 0.0) | 4489.1<br>4098.7 | 0.2315<br>99.1<br>99.1 | 20.2345 | N/A | 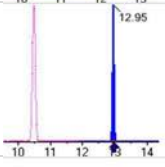 | 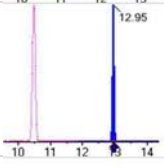 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 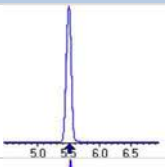 | 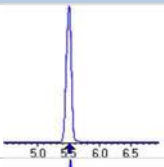 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 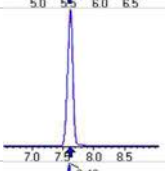 | 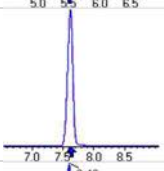 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>21815878<br>( 527.0 / 81.0 )<br>21959418 | ( 9.40 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1473.9<br>1574.1 | 1.0066<br>92.5<br>92.5 | 76.5421 | N/A | 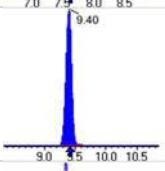 | 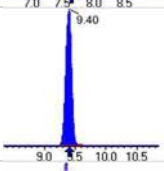 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 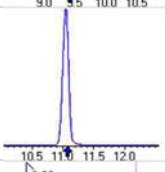 | 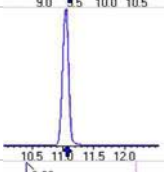 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>16725985<br>( 297.9 / 278.0 )<br>24255 | ( 8.09 , 0.57 )<br>( N/A , -0.02 , 0.2) | 1517.0<br>776.4 | 0.0015<br>106.1<br>106.1 | 20.2686 | N/A | 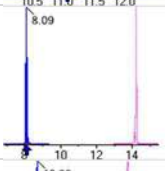 | 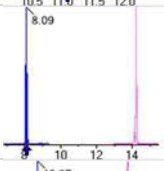 | |
| PFHxSA | ( 397.9 / 78.0 )<br>21492712<br>( 397.9 / 378.0 )<br>91450 | ( 10.96 , 0.75 )<br>( N/A , -0.01 , -0.1) | 1346.4<br>847.0 | 0.0043<br>104.1<br>104.1 | 20.9006 | N/A | 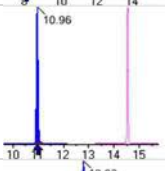 | 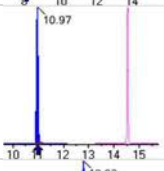 | |
| PFOSA | ( 498.0 / 78.0 )<br>14753844<br>( 498.0 / 478.0 )<br>214805 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3170.7<br>2253.7 | 0.0146<br>103.8<br>103.8 | 21.1703 | N/A | 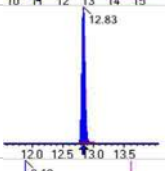 | 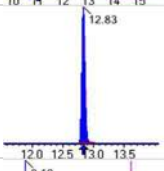 | |
| TFSI | ( 279.7 / 147.0 )<br>39395227<br>( 279.7 / 211.0 )<br>3549226 | ( 8.19 , 0.64 )<br>( N/A , -0.02 , 0.1) | 64.0<br>55.4 | 0.0901<br>107.2<br>107.2 | 21.4677 | N/A | 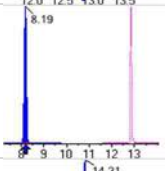 | 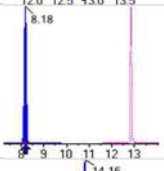 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>13014238<br>( 512.0 / 169.0 )<br>9825343 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3652.8<br>1356.9 | 0.7550<br>100.9<br>100.9 | 81.8558 | N/A | 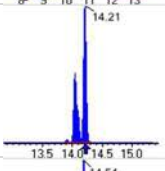 | 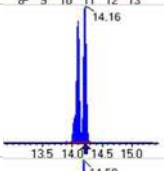 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>15594093<br>( 526.0 / 169.0 )<br>19500224 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4569.2<br>3815.8 | 1.2505<br>101.3<br>101.3 | 83.2165 | N/A | 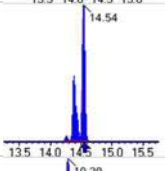 | 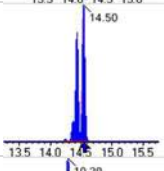 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4070736<br>( 570.0 / 483.0 )<br>1893315 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3587.1<br>1948.3 | 0.4651<br>106.1<br>106.1 | 20.6918 | N/A | 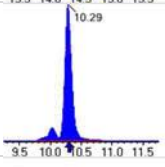 | 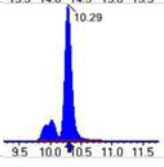 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 3731836<br>( 584.0 / 526.0 ) 2286417 | ( 10.81 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1729.9<br>773.9 | 0.6127<br>99.4<br>99.4 | 20.2888 | N/A | 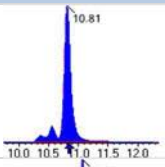 | 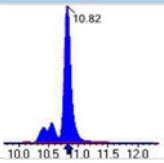 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6128623 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4554.8 | N/A<br>0.0<br>0.0 | 85.4742 | N/A | 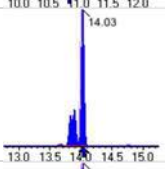 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5195417 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7894.3 | N/A<br>0.0<br>0.0 | 85.6651 | N/A | 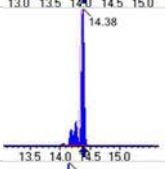 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1720793<br>( 285.0 / 185.0 ) 4583880 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2261.5<br>2416.9 | 2.6638<br>96.3<br>96.3 | 21.8580 | N/A | 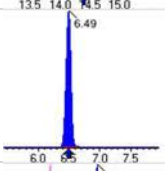 | 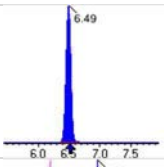 | |
| ADONA | ( 377.0 / 85.0 ) 17774690<br>( 377.0 / 251.0 ) 1760043 | ( 7.56 , 1.16 )<br>( N/A , -0.02 , -0.1) | 2163.5<br>2341.5 | 0.0990<br>97.1<br>97.1 | 19.3525 | N/A | 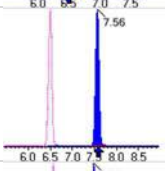 | 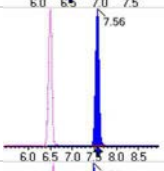 | |
| PFEESA | ( 315.0 / 135.0 ) 7875914<br>( 315.0 / 83.0 ) 4276233 | ( 6.92 , 1.15 )<br>( N/A , -0.02 , 0.0) | 3888.8<br>2934.4 | 0.5430<br>97.4<br>97.4 | 39.4834 | N/A | 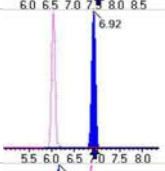 | 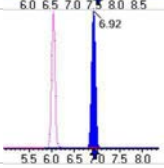 | |
| PFMPA | ( 229.0 / 85.0 ) 3131989 | ( 4.12 , 0.86 )<br>( N/A , -0.03 , 0.0) | 8390.9 | N/A<br>0.0<br>0.0 | 43.2975 | N/A | 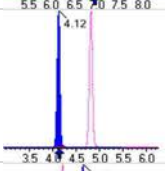 | | |
| PFMBA | ( 279.0 / 85.0 ) 8569933 | ( 5.18 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6457.3 | N/A<br>0.0<br>0.0 | 43.5896 | N/A | 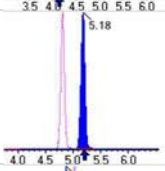 | | |
| NFDHA | ( 295.0 / 201.0 ) 4231075<br>( 295.0 / 85.0 ) 4662644 | ( 5.90 , 0.98 )<br>( N/A , -0.03 , 0.0) | 3412.8<br>4004.1 | 1.1020<br>102.1<br>102.1 | 40.8014 | N/A | 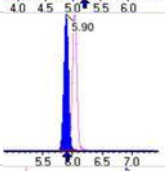 | 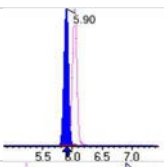 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19556832<br>( 533.0 / 353.0 ) 6135024 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.1) | 2536.0<br>3191.0 | 0.3137<br>100.3<br>100.3 | 19.7139 | N/A | 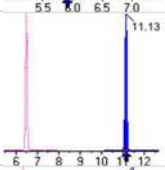 | 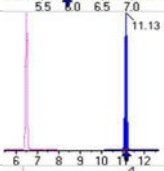 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14798782<br>( 633.0 / 453.0 ) 4988130 | ( 12.45 , 1.92 )<br>( N/A , -0.02 , 0.0) | 3882.5<br>3613.8 | 0.3371<br>101.5<br>101.5 | 19.3980 | N/A | 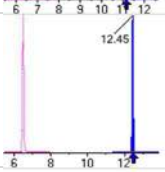 | 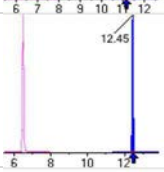 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10780581<br>( 461.0 / 381.2 ) 4171218 | ( 9.51 , 0.91 )<br>( N/A , -0.01 , 0.0) | 3973.4<br>5001.9 | 0.3869<br>97.1<br>97.1 | 20.1859 | N/A | 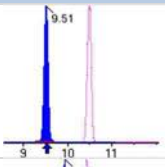 | 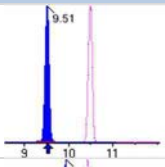 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1199816<br>( 241.0 / 117.0 ) 2599094 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 4619.1<br>5835.8 | 2.1662<br>102.8<br>102.8 | 92.5241 | N/A | 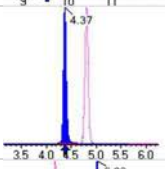 | 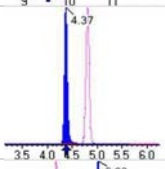 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6037188<br>( 341.0 / 217.0 ) 9245366 | ( 6.93 , 1.15 )<br>( N/A , -0.02 , 0.1) | 1108.9<br>1195.3 | 1.5314<br>100.8<br>100.8 | 78.3727 | N/A | 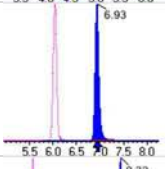 | 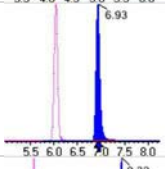 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10461798<br>( 441.0 / 337.0 ) 8986336 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 6894.1<br>7952.6 | 0.8590<br>93.7<br>93.7 | 82.7600 | N/A | 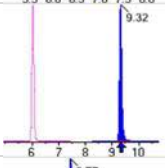 | 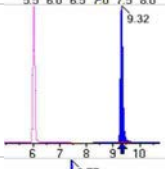 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6947700<br>( 357.2 / 243.0 ) 729149 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1649.6<br>1284.1 | 0.1049<br>95.2<br>95.2 | 20.7843 | N/A | 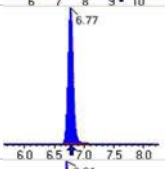 | 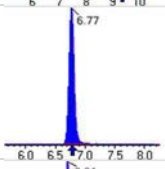 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5159787<br>( 457.2 / 343.0 ) 209477 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1021.2<br>820.8 | 0.0406<br>97.9<br>97.9 | 22.0825 | N/A | 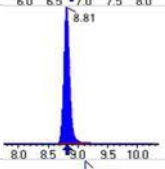 | 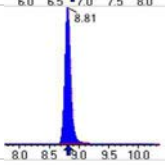 | |
| TDCA | ( 499.0 / 80.0 ) 14278125 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 61589.3 | N/A<br>0.0<br>0.0 | 22.1263 | N/A | 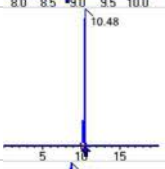 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 213815 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 908.6 | N/A | 0.8967<br>[ 1.0000 ] | 89.7%<br>{ 91.3% } | 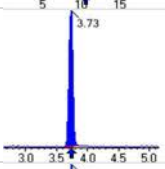 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130959 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 14399.3 | N/A | 1.0323<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 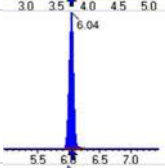 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 423217 | ( 8.18 , N/A )<br>( N/A , -0.02 , N/A ) | 3205.1 | N/A | 1.0706<br>[ 1.0000 ] | 107.1%<br>{ 111.4% } | 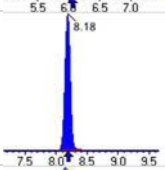 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317274 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1199.3 | N/A | 1.1156<br>[ 1.0000 ] | 111.6%<br>{ 119.2% } | 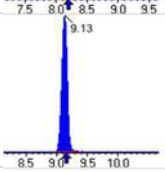 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307005 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 6206.5 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 114.6% } | 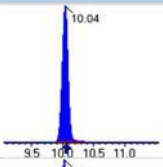 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1022285 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 4039.3 | N/A | 1.0772 [ 1.0000 ] | 107.7% { 113.6% } | 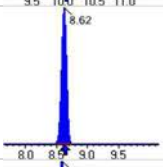 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 784809 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2679.6 | N/A | 1.0304 [ 1.0000 ] | 103.0% { 112.0% } | 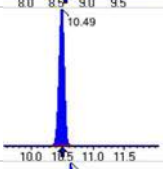 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1853173 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 31229.1 | N/A | 7.5869 [ 8.0000 ] | 94.8% { 87.6% } | 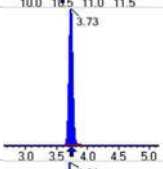 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 902569 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4796.3 | N/A | 3.6938 [ 4.0000 ] | 92.3% { 97.9% } | 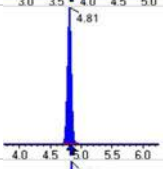 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 578230 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 6570.9 | N/A | 1.9352 [ 2.0000 ] | 96.8% { 104.5% } | 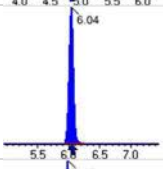 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 646447 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 5437.1 | N/A | 1.9449 [ 2.0000 ] | 97.2% { 104.4% } | 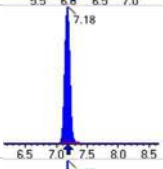 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 836012 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 2325.3 | N/A | 1.8436 [ 2.0000 ] | 92.2% { 102.0% } | 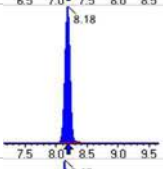 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276398 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2897.8 | N/A | 0.8885 [ 1.0000 ] | 88.8% { 105.2% } | 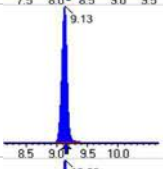 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 330952 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 920.3 | N/A | 0.9619 [ 1.0000 ] | 96.2% { 104.5% } | 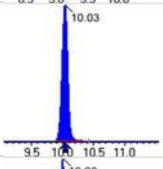 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 381172 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1015.8 | N/A | 0.9417 [ 1.0000 ] | 94.2% { 105.5% } | 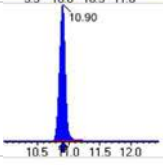 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 397037 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1215.8 | N/A | 0.9632 [ 1.0000 ] | 96.3% { 112.9% } | 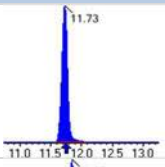 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334756 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 1243.4 | N/A | 0.9536 [ 1.0000 ] | 95.4% { 107.1% } | 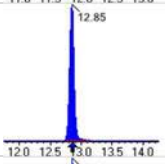 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577308 | ( 13.65 , N/A ) ( N/A , -0.02 , N/A ) | 2610.4 | N/A | 1.9264 [ 2.0000 ] | 96.3% { 111.9% } | 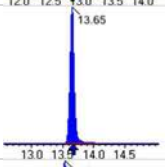 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1770797 | ( 6.33 , N/A ) ( N/A , -0.03 , N/A ) | 1012.2 | N/A | 1.9172 [ 2.0000 ] | 95.9% { 111.1% } | 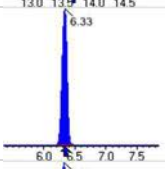 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1368143 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 5008.8 | N/A | 1.8558 [ 2.0000 ] | 92.8% { 106.8% } | 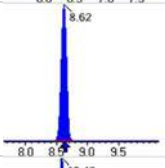 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1639289 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1716.2 | N/A | 1.9372 [ 2.0000 ] | 96.9% { 104.9% } | 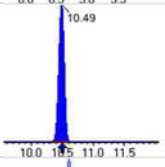 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 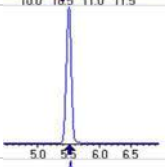 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 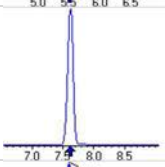 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1200464 | ( 9.40 , N/A ) ( N/A , -0.02 , N/A ) | 1165.9 | N/A | 3.2095 [ 4.0000 ] | 80.2% { 91.0% } | 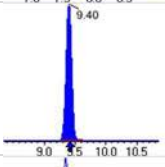 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 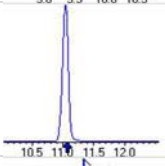 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393797 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2113.9 | N/A | 1.8587 [ 2.0000 ] | 92.9% { 104.5% } | 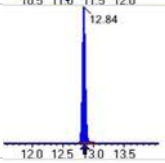 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 320251 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 1578.0 | N/A | 2.0135 [ 2.0000 ] | 100.7% { 115.4% } | 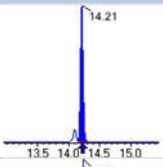 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334646 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 2115.5 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 106.1% } | 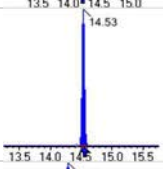 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825069 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2394.9 | N/A | 3.7894 [ 4.0000 ] | 94.7% { 98.5% } | 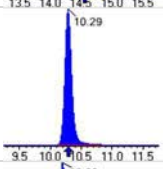 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 752141 | ( 10.80 , N/A ) ( N/A , -0.02 , N/A ) | 1637.7 | N/A | 3.7902 [ 4.0000 ] | 94.8% { 99.5% } | 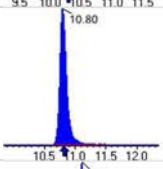 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1307327 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 2301.3 | N/A | 18.2909 [ 20.0000 ] | 91.5% { 97.2% } | 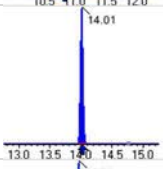 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365219 | ( 14.36 , N/A ) ( N/A , -0.02 , N/A ) | 4099.9 | N/A | 18.8191 [ 20.0000 ] | 94.1% { 103.7% } | 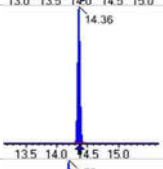 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068027 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2447.7 | N/A | 7.8467 [ 8.0000 ] | 98.1% { 109.2% } | 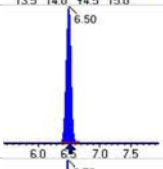 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 628842 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1472.0 | N/A | 1.8893 [ 2.0000 ] | 94.5% { 108.9% } | 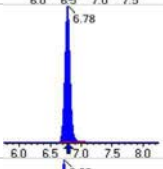 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 572954 | ( 8.82 , N/A ) ( N/A , -0.02 , N/A ) | 739.0 | N/A | 1.8909 [ 2.0000 ] | 94.5% { 106.7% } | 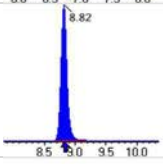 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 18974629<br>( 163.0 / 69.0 ) 488087 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 70690.9<br>13739.8 | 0.0257<br>94.7<br>94.7 | 107.2343 | N/A | 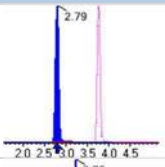 | 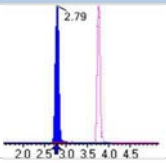 | |
| PFBA | ( 213.0 / 169.0 ) 36143718 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6528.7 | N/A<br>0.0<br>0.0 | 193.2239 | N/A | 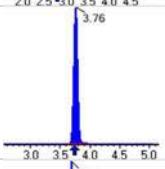 | | |
| PFPeA | ( 263.0 / 219.0 ) 21275073<br>( 263.0 / 69.0 ) 243959 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 7762.8<br>1933.6 | 0.0115<br>96.0<br>96.0 | 106.9360 | N/A | 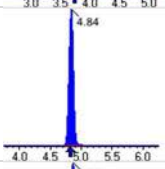 | 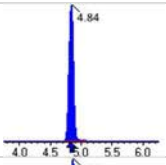 | |
| PFHxA | ( 313.0 / 269.0 ) 13819927<br>( 313.0 / 119.0 ) 1515042 | ( 6.06 , 1.00 ) ( 0.00 , N/A , -0.1) | 2643.2<br>2771.6 | 0.1096<br>94.4<br>94.4 | 54.0335 | N/A | 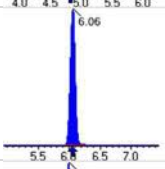 | 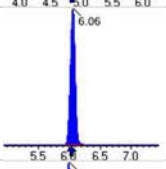 | |
| PFHpA | ( 363.0 / 319.0 ) 16363723<br>( 363.0 / 169.0 ) 4845368 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 2319.6<br>2179.9 | 0.2961<br>97.7<br>97.7 | 54.3504 | N/A | 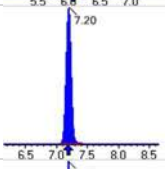 | 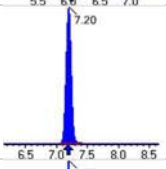 | |
| PFOA | ( 413.0 / 369.0 ) 20511400<br>( 413.0 / 169.0 ) 7143544 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 1200.9<br>1228.6 | 0.3483<br>95.3<br>95.3 | 49.7336 | N/A | 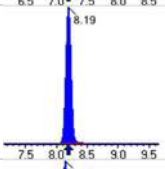 | 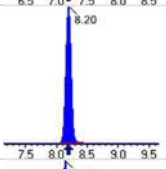 | |
| PFNA | ( 463.0 / 419.0 ) 15160237<br>( 463.0 / 169.0 ) 3759387 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1194.0<br>1234.6 | 0.2480<br>97.1<br>97.1 | 54.2235 | N/A | 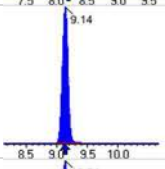 | 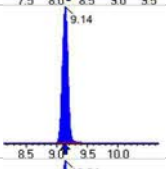 | |
| PFDA | ( 513.0 / 469.0 ) 16549921<br>( 513.0 / 169.0 ) 1960035 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 4733.0<br>3460.2 | 0.1184<br>101.1<br>101.1 | 50.8911 | N/A | 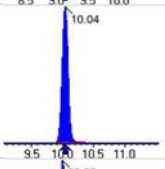 | 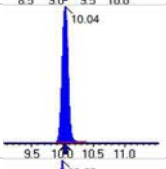 | |
| PFUnA | ( 563.0 / 519.0 ) 17529105<br>( 563.0 / 169.0 ) 2579837 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1095.8<br>945.9 | 0.1472<br>103.8<br>103.8 | 52.5694 | N/A | 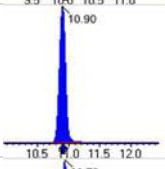 | 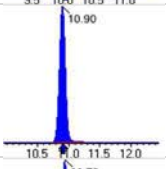 | |
| PFDoA | ( 613.0 / 569.0 ) 19672736<br>( 613.0 / 169.0 ) 2984947 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1817.3<br>1597.9 | 0.1517<br>96.0<br>96.0 | 50.3317 | N/A | 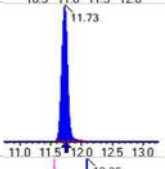 | 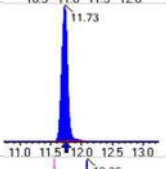 | |
| PFTrDA | ( 663.0 / 619.0 ) 18692956<br>( 663.0 / 169.0 ) 4857776 | ( 12.36 , 1.05 ) ( N/A , -0.01 , 0.0) | 1465.4<br>1395.6 | 0.2599<br>101.0<br>101.0 | 48.8903 | N/A | 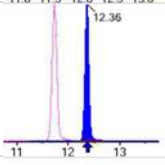 | 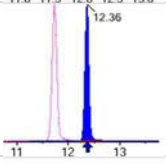 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 14422438<br>( 713.0 / 169.0 ) 3869832 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1604.9<br>1603.7 | 0.2683<br>99.4<br>99.4 | 49.6150 | N/A | 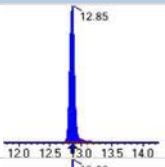 | 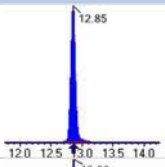 | |
| PFHxDA | ( 813.0 / 769.0 ) 12985593<br>( 813.0 / 169.0 ) 3309620 | ( 13.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3023.2<br>2100.0 | 0.2549<br>104.2<br>104.2 | 52.2078 | N/A | 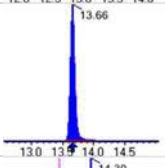 | 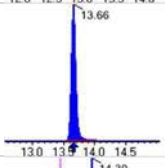 | |
| PFODA | ( 913.0 / 869.0 ) 8428626<br>( 913.0 / 169.0 ) 2699374 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2761.4<br>2328.9 | 0.3203<br>89.4<br>89.4 | 54.1669 | N/A | 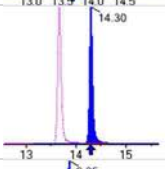 | 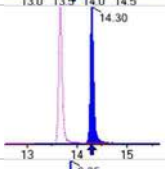 | |
| PFBS | ( 299.0 / 80.0 ) 20178278<br>( 299.0 / 99.0 ) 14705802 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4435.5<br>4419.2 | 0.7288<br>103.1<br>103.1 | 46.4917 | N/A | 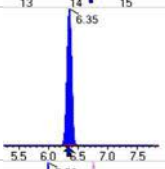 | 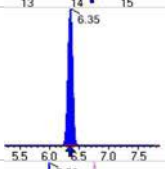 | |
| PFPeS | ( 349.0 / 80.0 ) 41380196<br>( 349.0 / 99.0 ) 14964570 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2699.2<br>2609.5 | 0.3616<br>100.6<br>100.6 | 39.6330 | N/A | 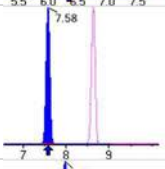 | 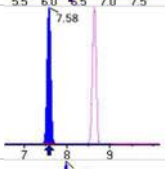 | |
| PFHxS | ( 399.0 / 80.0 ) 55723597<br>( 399.0 / 99.0 ) 18950635 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4944.5<br>6249.7 | 0.3401<br>106.8<br>106.8 | 45.9485 | N/A | 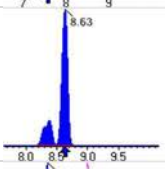 | 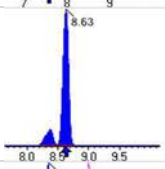 | |
| PFHpS | ( 449.0 / 80.0 ) 48346852<br>( 449.0 / 99.0 ) 13585169 | ( 9.60 , 0.92 )<br>( N/A , 0.00 , 0.0) | 2463.5<br>2621.1 | 0.2810<br>106.2<br>106.2 | 48.9228 | N/A | 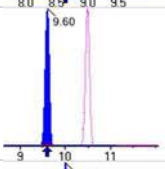 | 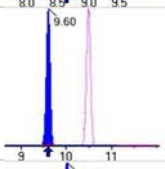 | |
| PFOS | ( 499.0 / 80.0 ) 46166280<br>( 499.0 / 99.0 ) 10682806 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , -0.3) | 3771.6<br>6407.9 | 0.2314<br>99.0<br>99.0 | 48.4641 | N/A | 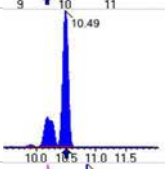 | 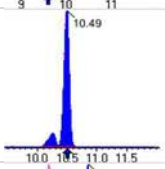 | |
| PFNS | ( 549.0 / 80.0 ) 41110649<br>( 549.0 / 99.0 ) 11520445 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , -0.1) | 2974.0<br>3168.7 | 0.2802<br>102.8<br>102.8 | 46.0934 | N/A | 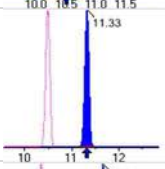 | 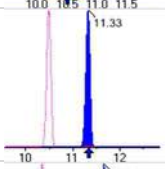 | |
| PFDS | ( 599.0 / 80.0 ) 45339968<br>( 599.0 / 99.0 ) 12673501 | ( 12.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 3051.7<br>3599.9 | 0.2795<br>102.8<br>102.8 | 41.6321 | N/A | 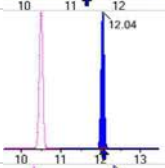 | 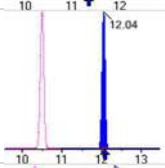 | |
| PFDoS | ( 699.0 / 80.0 ) 39685043<br>( 699.0 / 99.0 ) 9961357 | ( 12.96 , 1.24 )<br>( N/A , -0.01 , 0.0) | 3541.3<br>4746.4 | 0.2510<br>107.5<br>107.5 | 41.3351 | N/A | 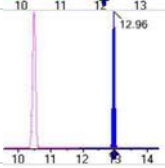 | 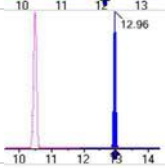 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 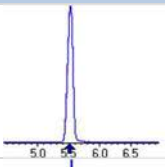 | 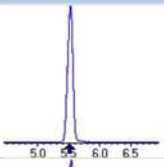 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 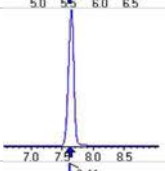 | 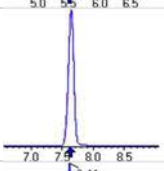 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>41238569<br>( 527.0 / 81.0 )<br>42183724 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1165.4<br>1290.5 | 1.0229<br>94.0<br>94.0 | 155.9708 | N/A | 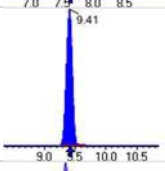 | 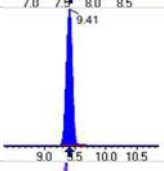 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 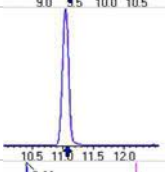 | 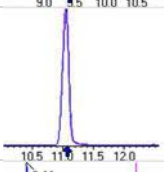 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>38451265<br>( 297.9 / 278.0 )<br>57954 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , 0.0) | 1670.7<br>874.9 | 0.0015<br>110.3<br>110.3 | 45.8105 | N/A | 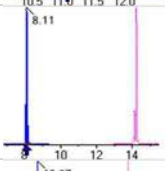 | 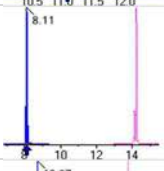 | |
| PFHxSA | ( 397.9 / 78.0 )<br>47457548<br>( 397.9 / 378.0 )<br>219987 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1106.1<br>1093.7 | 0.0046<br>113.5<br>113.5 | 48.8276 | N/A | 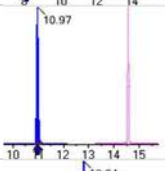 | 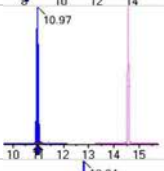 | |
| PFOSA | ( 498.0 / 78.0 )<br>33121164<br>( 498.0 / 478.0 )<br>519111 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2063.1<br>1533.3 | 0.0157<br>111.7<br>111.7 | 48.4514 | N/A | 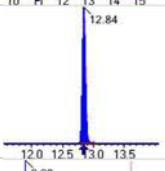 | 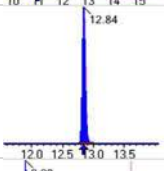 | |
| TFSI | ( 279.7 / 147.0 )<br>89551922<br>( 279.7 / 211.0 )<br>9318714 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.0) | 61.5<br>64.2 | 0.1041<br>123.9<br>123.9 | 49.7502 | N/A | 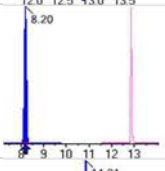 | 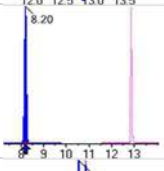 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>31158072<br>( 512.0 / 169.0 )<br>23786332 | ( 14.21 , 1.00 )<br>( -0.01 , N/A , 2.6) | 3423.3<br>1507.4 | 0.7634<br>102.0<br>102.0 | 192.6744 | N/A | 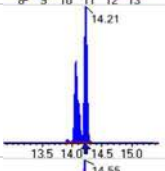 | 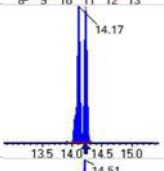 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>36572268<br>( 526.0 / 169.0 )<br>45187617 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4357.1<br>3467.4 | 1.2356<br>100.1<br>100.1 | 206.4874 | N/A | 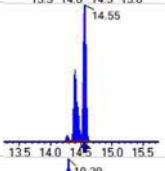 | 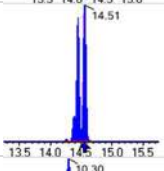 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>9584003<br>( 570.0 / 483.0 )<br>4353591 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3124.3<br>1697.0 | 0.4543<br>103.6<br>103.6 | 48.7309 | N/A | 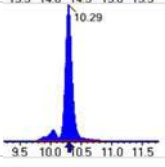 | 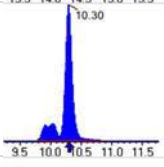 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8573256<br>( 584.0 / 526.0 ) 5089065 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1535.4<br>691.5 | 0.5936<br>96.3<br>96.3 | 52.6411 | N/A | 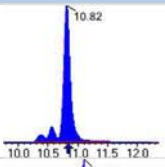 | 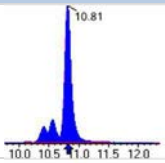 | |
| NMeFOSE | ( 616.0 / 59.0 ) 15619595 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 6843.3 | N/A<br>0.0<br>0.0 | 212.8361 | N/A | 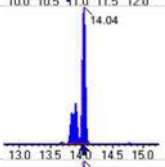 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 12847687 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 8204.0 | N/A<br>0.0<br>0.0 | 208.1601 | N/A | 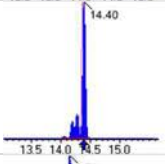 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4124497<br>( 285.0 / 185.0 ) 11215111 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2319.1<br>2629.5 | 2.7191<br>98.3<br>98.3 | 53.1094 | N/A | 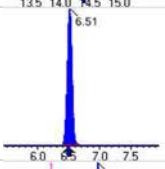 | 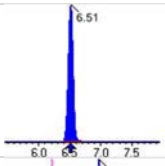 | |
| ADONA | ( 377.0 / 85.0 ) 37268440<br>( 377.0 / 251.0 ) 3924149 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1824.1<br>1716.0 | 0.1053<br>103.3<br>103.3 | 41.1334 | N/A | 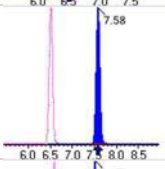 | 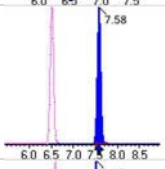 | |
| PFEESA | ( 315.0 / 135.0 ) 17270325<br>( 315.0 / 83.0 ) 9569584 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4689.4<br>2913.5 | 0.5541<br>99.4<br>99.4 | 94.0283 | N/A | 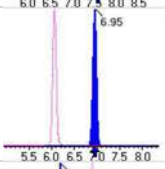 | 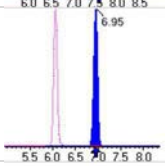 | |
| PFMPA | ( 229.0 / 85.0 ) 7031121 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 11838.0 | N/A<br>0.0<br>0.0 | 111.3690 | N/A | 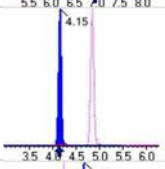 | | |
| PFMBA | ( 279.0 / 85.0 ) 19312765 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 5832.4 | N/A<br>0.0<br>0.0 | 112.5505 | N/A | 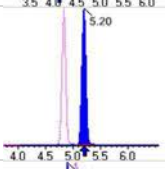 | | |
| NFDHA | ( 295.0 / 201.0 ) 10109374<br>( 295.0 / 85.0 ) 10024417 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.2) | 2773.1<br>3906.7 | 0.9916<br>91.9<br>91.9 | 105.8748 | N/A | 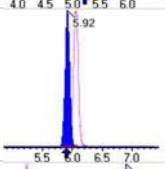 | 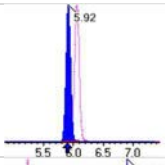 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 46137015<br>( 533.0 / 353.0 ) 15129295 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.0) | 2626.2<br>3001.4 | 0.3279<br>104.8<br>104.8 | 47.1457 | N/A | 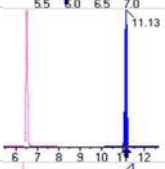 | 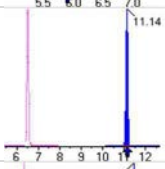 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 34117971<br>( 633.0 / 453.0 ) 11179213 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 4219.2<br>3394.1 | 0.3277<br>98.7<br>98.7 | 45.3348 | N/A | 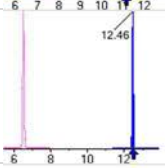 | 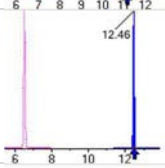 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 28343319<br>( 461.0 / 381.2 ) 10851018 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4228.4<br>5758.6 | 0.3828<br>96.1<br>96.1 | 52.7417 | N/A | 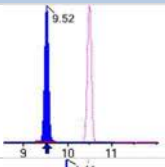 | 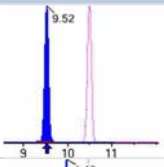 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2927372<br>( 241.0 / 117.0 ) 6626809 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4507.1<br>8408.0 | 2.2637<br>107.4<br>107.4 | 258.6519 | N/A | 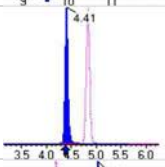 | 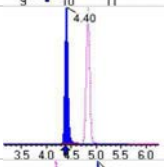 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14119793<br>( 341.0 / 217.0 ) 20897347 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1091.2<br>1008.4 | 1.4800<br>97.4<br>97.4 | 199.0686 | N/A | 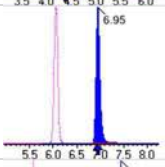 | 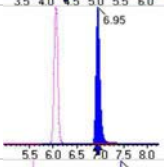 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 25389555<br>( 441.0 / 337.0 ) 22326814 | ( 9.33 , 1.54 )<br>( N/A , -0.01 , 0.1) | 7581.4<br>11370.4 | 0.8794<br>95.9<br>95.9 | 218.1292 | N/A | 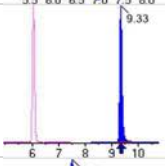 | 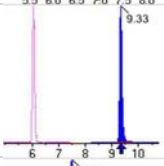 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 16158195<br>( 357.2 / 243.0 ) 1678319 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1736.3<br>1407.1 | 0.1039<br>94.2<br>94.2 | 50.4495 | N/A | 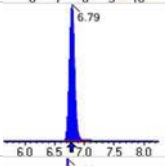 | 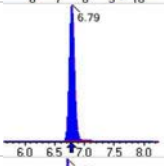 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 12612139<br>( 457.2 / 343.0 ) 508517 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 892.6<br>781.7 | 0.0403<br>97.2<br>97.2 | 53.8903 | N/A | 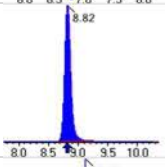 | 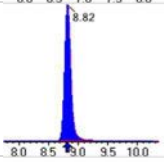 | |
| TDCA | ( 499.0 / 80.0 ) 34553361 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 58261.0 | N/A<br>0.0<br>0.0 | 53.2138 | N/A | 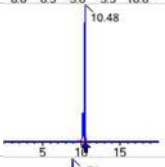 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 167285 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 708.8 | N/A | 0.7016<br>[ 1.0000 ] | 70.2%<br>{ 71.4% } | 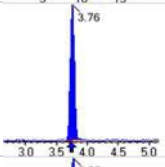 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130924 | ( 6.06 , N/A )<br>( N/A , 0.00 , N/A ) | 6147.8 | N/A | 1.0321<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 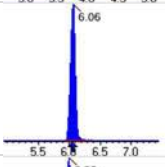 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 365760 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2442.2 | N/A | 0.9252<br>[ 1.0000 ] | 92.5%<br>{ 96.3% } | 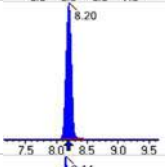 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282978 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 970.5 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 106.3% } | 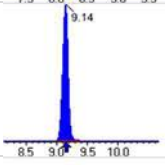 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294951 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 3067.1 | N/A | 1.0100 [ 1.0000 ] | 101.0% { 110.1% } | 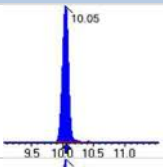 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 936593 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3290.6 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 104.0% } | 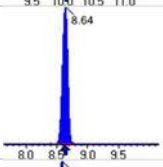 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785932 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2145.3 | N/A | 1.0319 [ 1.0000 ] | 103.2% { 112.2% } | 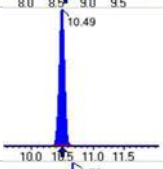 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1501211 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 26047.2 | N/A | 7.8555 [ 8.0000 ] | 98.2% { 71.0% } | 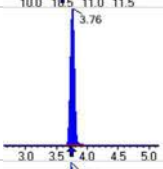 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 787740 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 4786.2 | N/A | 3.2247 [ 4.0000 ] | 80.6% { 85.5% } | 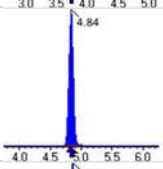 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 532422 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6348.1 | N/A | 1.7823 [ 2.0000 ] | 89.1% { 96.2% } | 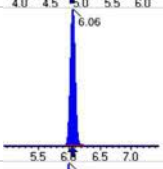 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613632 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 3886.1 | N/A | 1.8466 [ 2.0000 ] | 92.3% { 99.1% } | 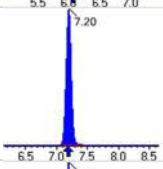 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 772186 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2358.8 | N/A | 1.9704 [ 2.0000 ] | 98.5% { 94.2% } | 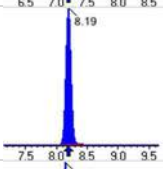 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 278181 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2465.4 | N/A | 1.0026 [ 1.0000 ] | 100.3% { 105.9% } | 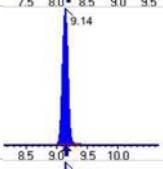 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318276 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1070.1 | N/A | 0.9629 [ 1.0000 ] | 96.3% { 100.5% } | 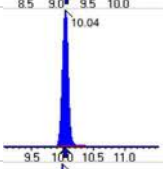 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 360507 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 905.9 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 99.8% } | 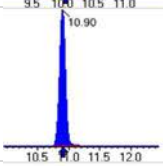 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388515 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1338.0 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 110.5% } | 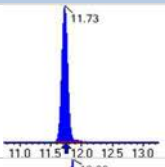  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310379 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1125.7 | N/A | 0.9203 [ 1.0000 ] | 92.0% { 99.3% } | 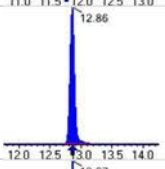  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521541 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 1978.3 | N/A | 1.8114 [ 2.0000 ] | 90.6% { 101.1% } | 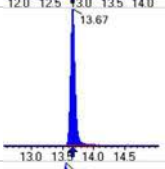  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1671847 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 1059.8 | N/A | 1.9757 [ 2.0000 ] | 98.8% { 104.9% } | 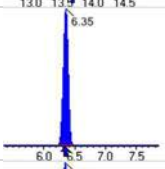  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1364325 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3793.2 | N/A | 2.0199 [ 2.0000 ] | 101.0% { 106.5% } | 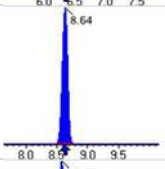  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1649524 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1301.1 | N/A | 1.9466 [ 2.0000 ] | 97.3% { 105.6% } | 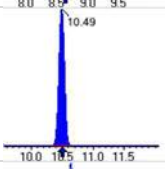  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 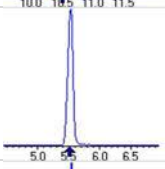  | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 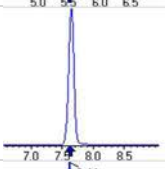  | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1113619 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1147.4 | N/A | 3.2497 [ 4.0000 ] | 81.2% { 84.4% } | 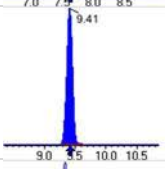  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 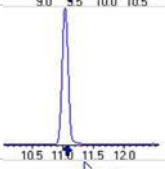  | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1367165 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1785.0 | N/A | 1.8206 [ 2.0000 ] | 91.0% { 102.6% } | 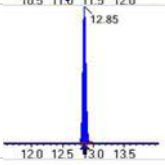  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 325737 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1453.6 | N/A | 2.0451 [ 2.0000 ] | 102.3% { 117.4% } | 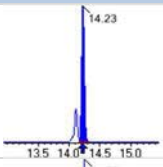  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316296 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2128.6 | N/A | 1.8518 [ 2.0000 ] | 92.6% { 100.3% } | 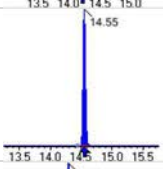  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 824817 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 1731.0 | N/A | 3.7828 [ 4.0000 ] | 94.6% { 98.4% } | 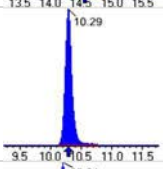  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 665968 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 1789.7 | N/A | 3.3512 [ 4.0000 ] | 83.8% { 88.1% } | 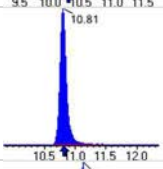  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1338076 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2515.8 | N/A | 18.6944 [ 20.0000 ] | 93.5% { 99.4% } | 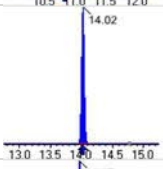  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1389356 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4052.7 | N/A | 19.1244 [ 20.0000 ] | 95.6% { 105.5% } | 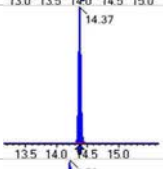  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1053570 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2170.3 | N/A | 7.7425 [ 8.0000 ] | 96.8% { 107.7% } | 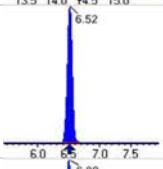  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 602520 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1431.9 | N/A | 1.8842 [ 2.0000 ] | 94.2% { 104.4% } | 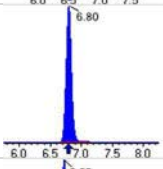  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 573873 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 871.6 | N/A | 1.9713 [ 2.0000 ] | 98.6% { 106.8% } | 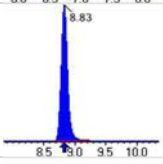  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0076L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.85L | -3.7L | 30.00L |
| PFPeAL | 4.00L | 3.72L | -6.9L | 30.00L |
| PFHxAL | 4.00L | 3.79L | -5.4L | 30.00L |
| PFHpAL | 4.00L | 3.66L | -8.6L | 30.00L |
| PFOAL | 4.00L | 3.17L | -20.8L | 30.00L |
| PFNAL | 4.00L | 3.83L | -4.3L | 30.00L |
| PFDAL | 4.00L | 3.82L | -4.6L | 30.00L |
| PFUnAL | 4.00L | 3.51L | -12.3L | 30.00L |
| PFDoAL | 4.00L | 3.25L | -18.9L | 30.00L |
| PFTrDAL | 4.00L | 3.37L | -15.8L | 30.00L |
| PFTeDAL | 4.00L | 4.07L | 1.9L | 30.00L |
| PFHxDAL | 4.00L | 3.19L | -20.4L | 30.00L |
| PFODAL | 4.00L | 3.15L | -21.2L | 30.00L |
| PFBSL | 4.00L | 3.87L | -3.1L | 30.00L |
| PFPeSL | 4.00L | 3.84L | -3.9L | 30.00L |
| PFHxSL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFHpSL | 4.00L | 3.80L | -5.0L | 30.00L |
| PFOSL | 4.00L | 3.54L | -11.5L | 30.00L |
| PFNSL | 4.00L | 3.70L | -7.5L | 30.00L |
| PFDSL | 4.00L | 4.06L | 1.5L | 30.00L |
| PFDoSL | 4.00L | 3.98L | -0.5L | 30.00L |
| 4:2FTSL | 4.00L | 3.85L | -3.9L | 30.00L |
| 6:2FTSL | 4.00L | 3.90L | -2.6L | 30.00L |
| 8:2FTSL | 4.00L | 3.75L | -6.2L | 30.00L |
| 10:2FTSL | 3.86L | 4.06L | 5.2L | 30.00L |
| PFOSAL | 4.00L | 3.98L | -0.5L | 30.00L |
| NMeFOSAL | 4.00L | 3.32L | -16.9L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0076L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.65L | -8.7L | 30.00L |
| NMeFOSAAL | 4.00L | 3.85L | -3.7L | 30.00L |
| NEtFOSAAL | 4.00L | 3.81L | -4.9L | 30.00L |
| NMeFOSEL | 4.00L | 3.94L | -1.5L | 30.00L |
| NEtFOSEL | 4.00L | 4.65L | 16.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.35L | -16.4L | 30.00L |
| ADONAL | 4.00L | 3.60L | -10.1L | 30.00L |
| PFEESAL | 4.00L | 3.38L | -15.4L | 30.00L |
| PFMPAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFMBAL | 4.00L | 3.39L | -15.2L | 30.00L |
| NFDHAL | 4.00L | 3.94L | -1.4L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.47L | -13.2L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 3.72L | -7.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.46L | -13.5L | 30.00L |
| 5:3FTCAL | 4.00L | 3.89L | -2.8L | 30.00L |
| 7:3FTCAL | 4.00L | 3.92L | -2.1L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.75L | 9.4L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.43L | 10.7L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.12L | 6.2L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.25L | 12.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.10L | 10.3L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.13L | 12.7L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.14L | 14.1L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.21L | 20.6L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.21L | 20.7L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.52L | 26.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.01L | 0.6L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.14L | 6.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0076L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.17L | 8.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.57L | 14.3L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.13L | 3.4L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.62L | 15.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 8.69L | 8.6L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.14L | 6.9L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.23L | 11.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.32L | 15.9L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.52L | 13.0L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.62L | 15.4L | 30.00L |
| D7-NMEFOSEL | 20.0L | 23.4L | 16.8L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.6L | 13.2L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 9.31L | 16.4L | 30.00L |

* Values outside of QC limitsL

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Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 960012<br>( 163.0 / 69.0 ) 24140 | ( 2.82 , 0.74 ) ( N/A , 0.01 , 0.0) | 6179.9<br>1318.1 | 0.0251<br>100.3<br>100.3 | 3.3855 | N/A | 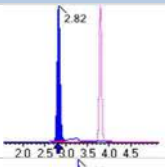 | 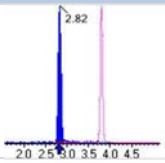 | |
| PFBA | ( 213.0 / 169.0 ) 1168041 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 2371.2 | N/A<br>0.0<br>0.0 | 3.8520 | N/A | 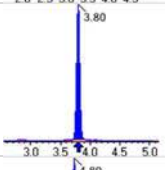 | | |
| PFPeA | ( 263.0 / 219.0 ) 980882<br>( 263.0 / 69.0 ) 12973 | ( 4.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 3446.6<br>234.0 | 0.0132<br>120.4<br>120.4 | 3.7234 | N/A | 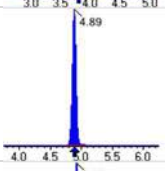 | 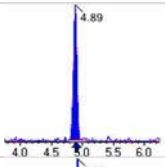 | |
| PFHxA | ( 313.0 / 269.0 ) 1090317<br>( 313.0 / 119.0 ) 126098 | ( 6.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 2560.9<br>1671.2 | 0.1157<br>104.1<br>104.1 | 3.7855 | N/A | 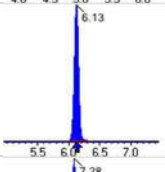 | 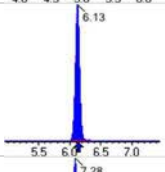 | |
| PFHpA | ( 363.0 / 319.0 ) 1184297<br>( 363.0 / 169.0 ) 360697 | ( 7.28 , 1.00 ) ( 0.00 , N/A , -0.1) | 1966.5<br>1170.9 | 0.3046<br>97.7<br>97.7 | 3.6554 | N/A | 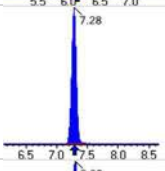 | 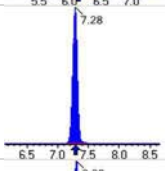 | |
| PFOA | ( 413.0 / 369.0 ) 1504917<br>( 413.0 / 169.0 ) 534568 | ( 8.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 848.3<br>779.3 | 0.3552<br>98.2<br>98.2 | 3.1674 | N/A | 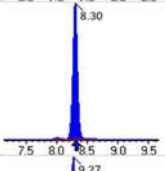 | 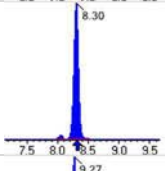 | MI5 DG 2024-03-13 |
| PFNA | ( 463.0 / 419.0 ) 1155444<br>( 463.0 / 169.0 ) 302002 | ( 9.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 1235.3<br>970.2 | 0.2614<br>99.6<br>99.6 | 3.8271 | N/A | 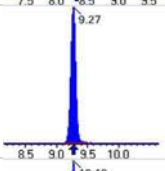 | 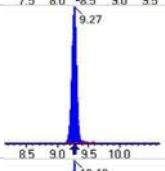 | |
| PFDA | ( 513.0 / 469.0 ) 1333493<br>( 513.0 / 169.0 ) 150349 | ( 10.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 2839.1<br>4132.0 | 0.1127<br>96.1<br>96.1 | 3.8164 | N/A | 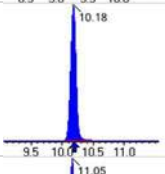 | 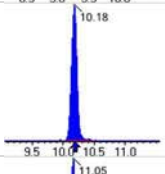 | |
| PFUnA | ( 563.0 / 519.0 ) 1415133<br>( 563.0 / 169.0 ) 203765 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.0) | 954.4<br>542.2 | 0.1440<br>97.2<br>97.2 | 3.5077 | N/A | 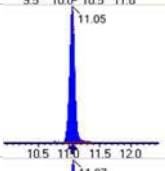 | 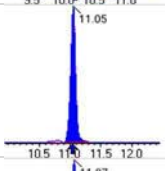 | |
| PFDoA | ( 613.0 / 569.0 ) 1522339<br>( 613.0 / 169.0 ) 223220 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 1216.3<br>726.0 | 0.1466<br>92.7<br>92.7 | 3.2452 | N/A | 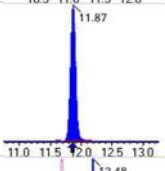 | 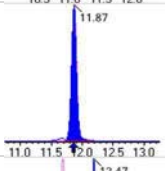 | |
| PFTrDA | ( 663.0 / 619.0 ) 1519440<br>( 663.0 / 169.0 ) 399428 | ( 12.48 , 1.05 ) ( N/A , 0.00 , 0.1) | 1082.7<br>705.9 | 0.2629<br>97.5<br>97.5 | 3.3689 | N/A | 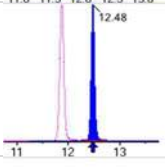 | 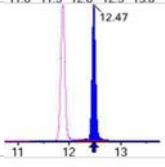 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1547325<br>( 713.0 / 169.0 ) 369471 | ( 12.96 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1598.8<br>774.0 | 0.2388<br>91.8<br>91.8 | 4.0743 | N/A | 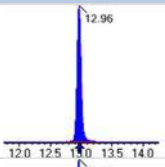 | 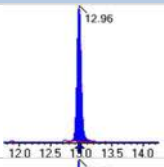 | |
| PFHxDA | ( 813.0 / 769.0 ) 1091864<br>( 813.0 / 169.0 ) 257584 | ( 13.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1694.2<br>868.3 | 0.2359<br>108.7<br>108.7 | 3.1855 | N/A | 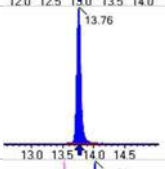 | 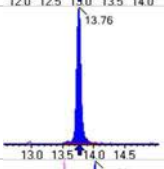 | |
| PFODA | ( 913.0 / 869.0 ) 725581<br>( 913.0 / 169.0 ) 246290 | ( 14.38 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1453.6<br>924.2 | 0.3394<br>88.9<br>88.9 | 3.1507 | N/A | 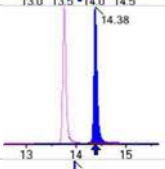 | 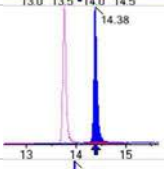 | |
| PFBS | ( 299.0 / 80.0 ) 1958171<br>( 299.0 / 99.0 ) 1431313 | ( 6.44 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4821.8<br>3013.6 | 0.7309<br>102.8<br>102.8 | 3.8746 | N/A | 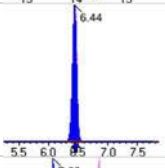 | 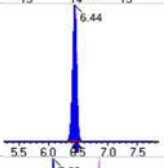 | |
| PFPeS | ( 349.0 / 80.0 ) 4744093<br>( 349.0 / 99.0 ) 1609699 | ( 7.69 , 0.88 )<br>( N/A , -0.01 , 0.0) | 3035.0<br>3228.8 | 0.3393<br>99.8<br>99.8 | 3.8426 | N/A | 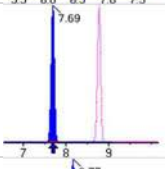 | 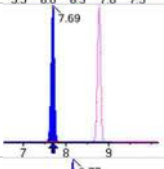 | |
| PFHxS | ( 399.0 / 80.0 ) 5120898<br>( 399.0 / 99.0 ) 1702580 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3958.3<br>5730.4 | 0.3325<br>106.3<br>106.3 | 3.7298 | N/A | 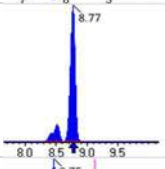 | 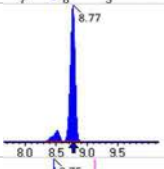 | |
| PFHpS | ( 449.0 / 80.0 ) 4144968<br>( 449.0 / 99.0 ) 1137014 | ( 9.75 , 0.92 )<br>( N/A , 0.00 , 0.0) | 1404.8<br>2127.7 | 0.2743<br>102.7<br>102.7 | 3.7999 | N/A | 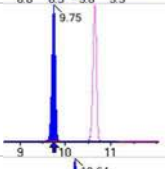 | 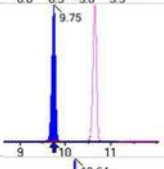 | |
| PFOS | ( 499.0 / 80.0 ) 3884446<br>( 499.0 / 99.0 ) 846912 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2363.0<br>19909.8 | 0.2180<br>92.2<br>92.2 | 3.5394 | N/A | 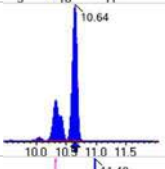 | 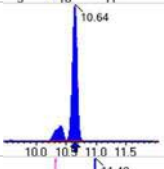 | |
| PFNS | ( 549.0 / 80.0 ) 3958884<br>( 549.0 / 99.0 ) 1101392 | ( 11.48 , 1.08 )<br>( N/A , 0.00 , -0.1) | 2811.4<br>2589.0 | 0.2782<br>104.7<br>104.7 | 3.6990 | N/A | 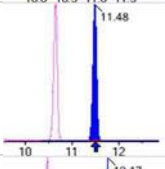 | 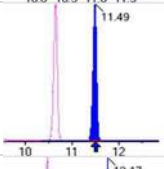 | |
| PFDS | ( 599.0 / 80.0 ) 5177392<br>( 599.0 / 99.0 ) 1344953 | ( 12.17 , 1.14 )<br>( N/A , 0.00 , 0.0) | 3992.8<br>3560.7 | 0.2598<br>103.6<br>103.6 | 4.0586 | N/A | 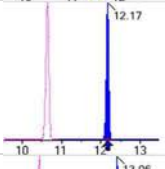 | 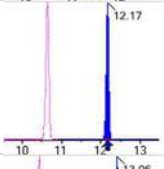 | |
| PFDoS | ( 699.0 / 80.0 ) 4338419<br>( 699.0 / 99.0 ) 1038626 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.0) | 4248.8<br>2853.2 | 0.2394<br>103.8<br>103.8 | 3.9801 | N/A | 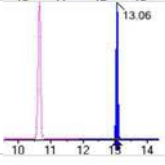 | 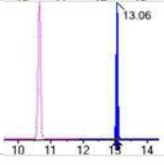 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1022473<br>( 327.0 / 81.0 ) 867299 | ( 5.58 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4383.6<br>2501.8 | 0.8482<br>96.8<br>96.8 | 3.8457 | N/A | 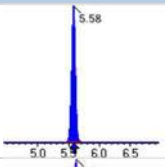 | 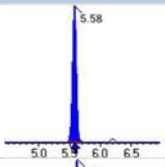 | |
| 6:2FTS | ( 427.0 / 407.0 ) 959749<br>( 427.0 / 81.0 ) 1050251 | ( 7.71 , 1.00 )<br>( 0.00 , N/A , 0.2) | 3454.5<br>3314.6 | 1.0943<br>86.1<br>86.1 | 3.8974 | N/A | 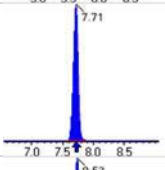 | 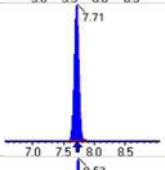 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1148897<br>( 527.0 / 81.0 ) 1137689 | ( 9.53 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1249.3<br>1342.3 | 0.9902<br>104.4<br>104.4 | 3.7537 | N/A | 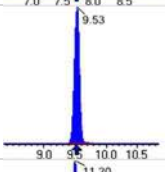 | 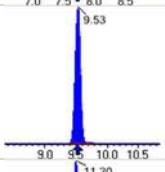 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1112399<br>( 627.0 / 81.0 ) 1536261 | ( 11.20 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1195.1<br>998.5 | 1.3810<br>102.2<br>102.2 | 4.0591 | N/A | 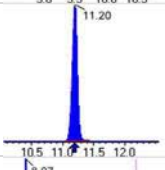 | 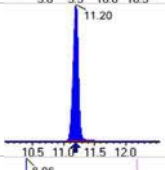 | |
| PFBSA | ( 297.9 / 78.0 ) 3794956<br>( 297.9 / 278.0 ) 6394 | ( 8.07 , 0.57 )<br>( N/A , 0.01 , 0.2) | 1263.9<br>83.5 | 0.0017<br>120.0<br>120.0 | 4.2276 | N/A | 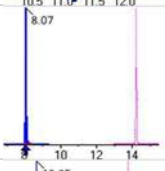 | 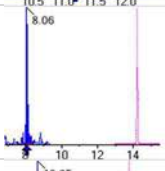 | |
| PFHxSA | ( 397.9 / 78.0 ) 4290810<br>( 397.9 / 378.0 ) 22446 | ( 10.95 , 0.75 )<br>( N/A , 0.01 , -0.2) | 682.1<br>275.2 | 0.0052<br>137.4<br>137.4 | 3.5831 | N/A | 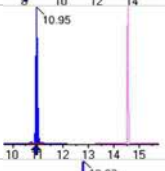 | 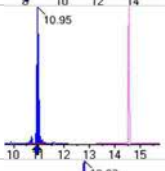 | MI4 ABK 3/13/24 |
| PFOSA | ( 498.0 / 78.0 ) 3945625<br>( 498.0 / 478.0 ) 54682 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.1) | 921.3<br>455.9 | 0.0139<br>96.0<br>96.0 | 3.9818 | N/A | 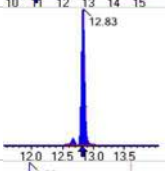 | 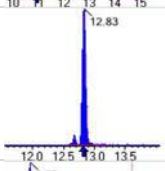 | MI4 ABK 3/13/24 |
| TFSI | ( 279.7 / 147.0 ) 7895986<br>( 279.7 / 211.0 ) 704864 | ( 8.36 , 0.65 )<br>( N/A , -0.01 , 0.2) | 57.4<br>54.9 | 0.0893<br>108.2<br>108.2 | 3.7482 | N/A | 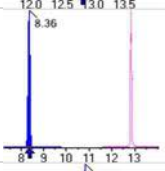 | 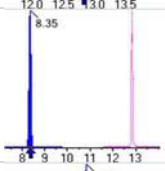 | |
| NMeFOSA | ( 512.0 / 219.0 ) 653625<br>( 512.0 / 169.0 ) 418140 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5759.3<br>2386.7 | 0.6397<br>87.0<br>87.0 | 3.3241 | N/A | 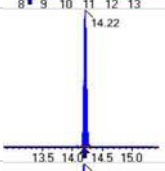 | 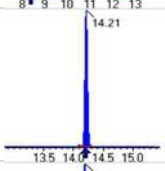 | |
| NEtFOSA | ( 526.0 / 219.0 ) 935275<br>( 526.0 / 169.0 ) 1006483 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 0.0) | 6956.6<br>5886.3 | 1.0761<br>85.0<br>85.0 | 3.6505 | N/A | 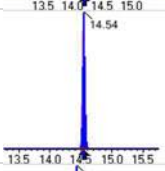 | 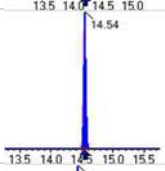 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 920311<br>( 570.0 / 483.0 ) 421673 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , -0.1) | 6919.9<br>1886.4 | 0.4582<br>105.8<br>105.8 | 3.8528 | N/A | 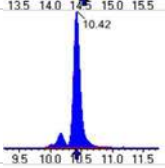 | 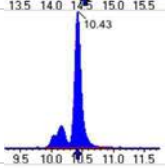 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (10)
Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 902817<br>( 584.0 / 526.0 ) 543021 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1977.4<br>685.9 | 0.6015<br>97.1<br>97.1 | 3.8059 | N/A | 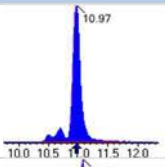 | 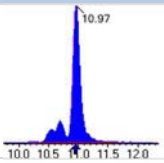 | |
| NMeFOSE | ( 616.0 / 59.0 ) 426612 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3035.5 | N/A<br>0.0<br>0.0 | 3.9383 | N/A | 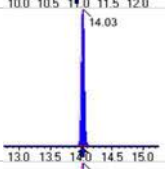 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 462041 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 5371.3 | N/A<br>0.0<br>0.0 | 4.6537 | N/A | 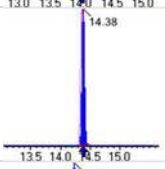 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 265795<br>( 285.0 / 185.0 ) 867547 | ( 6.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1555.4<br>1546.6 | 3.2640<br>104.7<br>104.7 | 3.3451 | N/A | 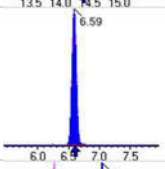 | 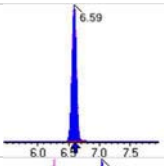 | |
| ADONA | ( 377.0 / 85.0 ) 3640673<br>( 377.0 / 251.0 ) 374734 | ( 7.67 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1627.1<br>1227.3 | 0.1029<br>96.5<br>96.5 | 3.5978 | N/A | 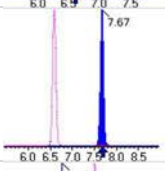 | 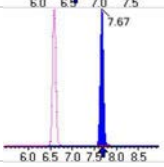 | |
| PFMPA | ( 229.0 / 85.0 ) 283218 | ( 4.19 , 0.86 )<br>( N/A , -0.01 , 0.0) | 4172.7 | N/A<br>0.0<br>0.0 | 3.3957 | N/A | 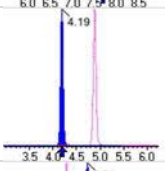 | | |
| PFMBA | ( 279.0 / 85.0 ) 748985 | ( 5.26 , 1.08 )<br>( N/A , -0.01 , 0.0) | 4515.5 | N/A<br>0.0<br>0.0 | 3.3928 | N/A | 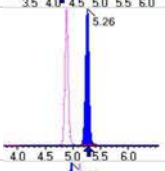 | | |
| NFDHA | ( 295.0 / 201.0 ) 394803<br>( 295.0 / 85.0 ) 413378 | ( 5.98 , 0.98 )<br>( N/A , -0.01 , -0.2) | 2334.3<br>2269.5 | 1.0470<br>96.8<br>96.8 | 3.9431 | N/A | 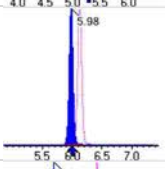 | 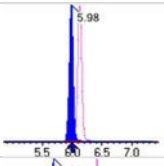 | |
| PFECHS | ( 461.0 / 98.9 ) 2241130<br>( 461.0 / 381.2 ) 851667 | ( 9.67 , 0.91 )<br>( N/A , 0.00 , 0.1) | 2238.1<br>2255.1 | 0.3800<br>97.3<br>97.3 | 3.6211 | N/A | 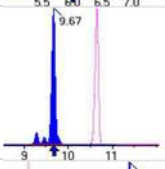 | 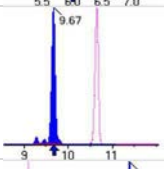 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4338051<br>( 533.0 / 353.0 ) 1382815 | ( 11.30 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3566.4<br>2412.4 | 0.3188<br>99.2<br>99.2 | 3.4739 | N/A | 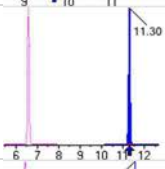 | 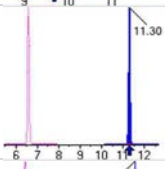 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3635672<br>( 633.0 / 453.0 ) 1218785 | ( 12.57 , 1.91 )<br>( N/A , 0.00 , 0.0) | 3125.5<br>2891.4 | 0.3352<br>102.6<br>102.6 | 3.7170 | N/A | 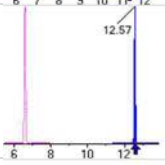 | 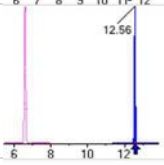 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 732928<br>( 315.0 / 83.0 ) 430320 | ( 7.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 2694.6<br>1447.1 | 0.5871<br>102.5<br>102.5 | 3.3833 | N/A | 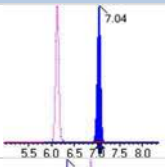 | 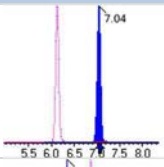 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 44296<br>( 241.0 / 117.0 ) 106197 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.1) | 675.9<br>443.8 | 2.3974<br>108.1<br>108.1 | 3.4612 | N/A | 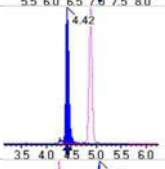 | 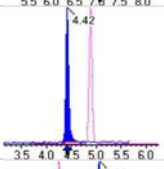 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 271454<br>( 341.0 / 217.0 ) 392115 | ( 6.99 , 1.14 )<br>( N/A , 0.00 , 0.1) | 838.6<br>769.5 | 1.4445<br>96.5<br>96.5 | 3.8886 | N/A | 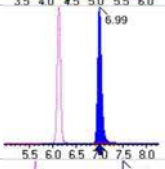 | 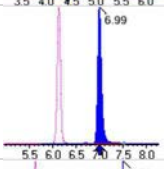 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 402129<br>( 441.0 / 337.0 ) 338035 | ( 9.42 , 1.54 )<br>( N/A , 0.01 , 0.1) | 2390.3<br>3196.5 | 0.8406<br>94.4<br>94.4 | 3.9159 | N/A | 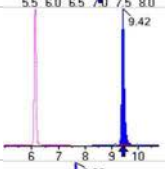 | 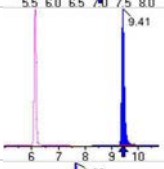 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1154034<br>( 357.2 / 243.0 ) 118377 | ( 6.86 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1241.4<br>729.6 | 0.1026<br>97.2<br>97.2 | 3.7351 | N/A | 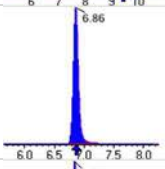 | 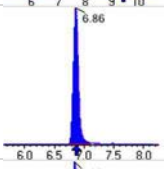 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 884567<br>( 457.2 / 343.0 ) 34980 | ( 8.94 , 1.00 )<br>( -0.01 , N/A , -0.2) | 659.7<br>430.9 | 0.0395<br>101.1<br>101.1 | 3.9899 | N/A | 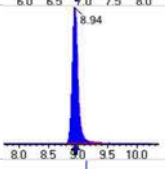 | 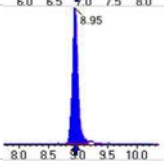 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 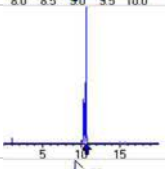 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 265638 | ( 3.80 , N/A )<br>( N/A , 0.00 , N/A ) | 1102.0 | N/A | 0.8818<br>[ 1.0000 ] | 88.2%<br>{ 87.6% } | 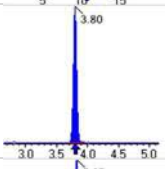 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130299 | ( 6.13 , N/A )<br>( N/A , -0.01 , N/A ) | 5646.2 | N/A | 0.8474<br>[ 1.0000 ] | 84.7%<br>{ 79.0% } | 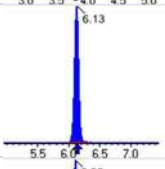 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 405261 | ( 8.30 , N/A )<br>( N/A , -0.01 , N/A ) | 8311.7 | N/A | 0.9084<br>[ 1.0000 ] | 90.8%<br>{ 89.1% } | 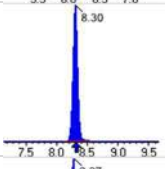 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282851 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1074.0 | N/A | 0.8461<br>[ 1.0000 ] | 84.6%<br>{ 86.8% } | 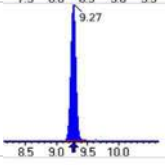 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 269853 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 7039.7 | N/A | 0.8137 [ 1.0000 ] | 81.4% { 79.4% } | 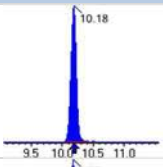 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 991747 | ( 8.77 , N/A ) ( N/A , -0.01 , N/A ) | 4735.8 | N/A | 0.8875 [ 1.0000 ] | 88.8% { 87.0% } | 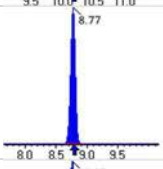 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 823232 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 2848.3 | N/A | 0.8433 [ 1.0000 ] | 84.3% { 82.7% } | 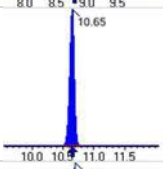 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2564182 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 52437.7 | N/A | 8.7534 [ 8.0000 ] | 109.4% { 96.5% } | 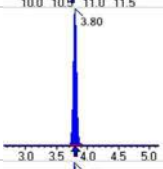 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1035099 | ( 4.89 , N/A ) ( N/A , -0.01 , N/A ) | 5490.9 | N/A | 4.4281 [ 4.0000 ] | 110.7% { 89.4% } | 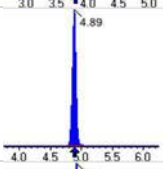 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 594514 | ( 6.13 , N/A ) ( N/A , -0.01 , N/A ) | 7927.5 | N/A | 2.1250 [ 2.0000 ] | 106.3% { 86.8% } | 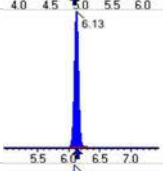 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 657917 | ( 7.28 , N/A ) ( N/A , -0.01 , N/A ) | 4103.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 93.4% } | 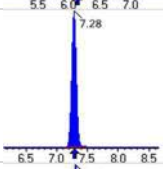 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 934465 | ( 8.30 , N/A ) ( N/A , 0.00 , N/A ) | 3809.8 | N/A | 2.1870 [ 2.0000 ] | 109.3% { 98.0% } | 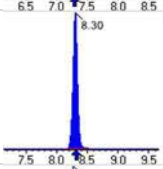 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 301279 | ( 9.27 , N/A ) ( N/A , -0.01 , N/A ) | 2676.2 | N/A | 1.1030 [ 1.0000 ] | 110.3% { 96.9% } | 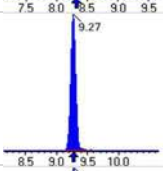 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 350842 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 1337.7 | N/A | 1.1267 [ 1.0000 ] | 112.7% { 91.2% } | 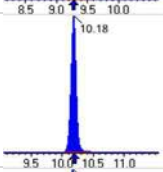 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432041 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1147.3 | N/A | 1.1412 [ 1.0000 ] | 114.1% { 86.9% } | 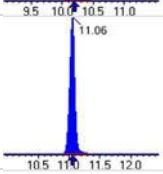 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 458339 | ( 11.87 , N/A ) ( N/A , 0.01 , N/A ) | 1453.0 | N/A | 1.2055 [ 1.0000 ] | 120.6% { 91.9% } | 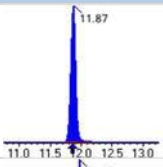 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 399892 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1437.5 | N/A | 1.2070 [ 1.0000 ] | 120.7% { 94.3% } | 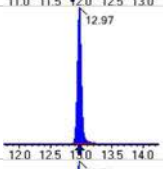 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 710258 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3142.5 | N/A | 2.5239 [ 2.0000 ] | 126.2% { 100.3% } | 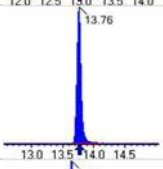 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1943804 | ( 6.44 , N/A ) ( N/A , -0.01 , N/A ) | 1332.8 | N/A | 2.0116 [ 2.0000 ] | 100.6% { 84.1% } | 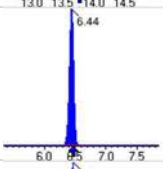 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1550553 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 4650.3 | N/A | 2.1366 [ 2.0000 ] | 106.8% { 94.2% } | 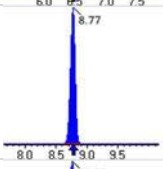 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1898767 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 1632.8 | N/A | 2.1666 [ 2.0000 ] | 108.3% { 90.4% } | 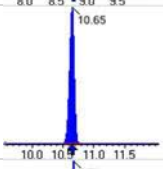 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 394958 | ( 5.58 , N/A ) ( N/A , -0.01 , N/A ) | 81.1 | N/A | 4.5732 [ 4.0000 ] | 114.3% { 109.8% } | 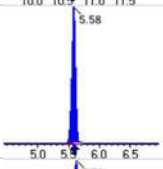 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1108790 | ( 7.72 , N/A ) ( N/A , -0.01 , N/A ) | 4344.9 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 103.2% } | 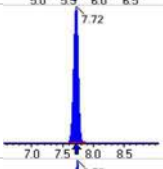 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1235693 | ( 9.53 , N/A ) ( N/A , 0.00 , N/A ) | 1481.0 | N/A | 4.6246 [ 4.0000 ] | 115.6% { 106.1% } | 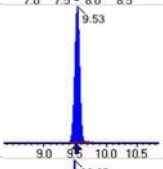 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2664551 | ( 11.19 , N/A ) ( N/A , 0.01 , N/A ) | 1653.1 | N/A | 8.6875 [ 8.0000 ] | 108.6% { 106.4% } | 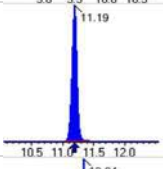 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2030706 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2445.6 | N/A | 2.1382 [ 2.0000 ] | 106.9% { 87.2% } | 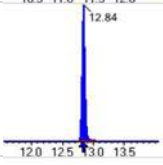 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 390446 | ( 14.21 , N/A ) ( N/A , 0.01 , N/A ) | 2867.0 | N/A | 2.2264 [ 2.0000 ] | 111.3% { 92.2% } | 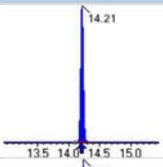  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 466969 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2783.5 | N/A | 2.3181 [ 2.0000 ] | 115.9% { 94.0% } | 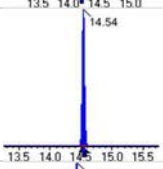  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1014564 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2082.7 | N/A | 4.5205 [ 4.0000 ] | 113.0% { 93.8% } | 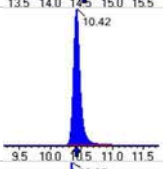  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 983632 | ( 10.95 , N/A ) ( N/A , 0.01 , N/A ) | 1957.9 | N/A | 4.6170 [ 4.0000 ] | 115.4% { 93.8% } | 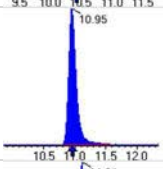  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1913754 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2608.4 | N/A | 23.3544 [ 20.0000 ] | 116.8% { 101.7% } | 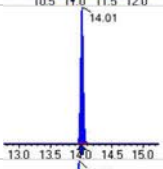  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2247315 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4304.5 | N/A | 22.6391 [ 20.0000 ] | 113.2% { 95.2% } | 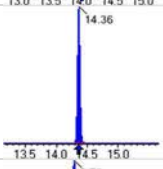  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1119738 | ( 6.59 , N/A ) ( N/A , -0.01 , N/A ) | 2851.6 | N/A | 9.3112 [ 8.0000 ] | 116.4% { 98.7% } | 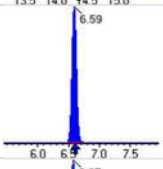  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 574894 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 1420.6 | N/A | 2.4020 [ 2.0000 ] | 120.1% { 98.1% } | 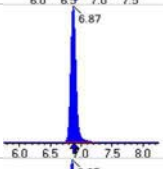  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 525740 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 697.0 | N/A | 2.3529 [ 2.0000 ] | 117.6% { 93.2% } | 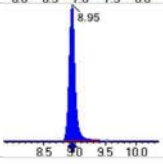  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0076L

**lient:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.86L | -3.5L | 30.00L |
| PFPeAL | 4.00L | 3.91L | -2.3L | 30.00L |
| PFHxAL | 4.00L | 3.64L | -9.1L | 30.00L |
| PFHpAL | 4.00L | 3.53L | -11.6L | 30.00L |
| PFOAL | 4.00L | 3.36L | -16.0L | 30.00L |
| PFNAL | 4.00L | 3.77L | -5.7L | 30.00L |
| PFDAL | 4.00L | 3.78L | -5.6L | 30.00L |
| PFUnAL | 4.00L | 3.59L | -10.1L | 30.00L |
| PFDoAL | 4.00L | 3.31L | -17.2L | 30.00L |
| PFTrDAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFTeDAL | 4.00L | 4.12L | 2.9L | 30.00L |
| PFHxDAL | 4.00L | 3.10L | -22.5L | 30.00L |
| PFODAL | 4.00L | 3.04L | -24.1L | 30.00L |
| PFBSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFPeSL | 4.00L | 4.10L | 2.4L | 30.00L |
| PFHxSL | 4.00L | 3.93L | -1.8L | 30.00L |
| PFHpSL | 4.00L | 3.70L | -7.4L | 30.00L |
| PFOSL | 4.00L | 3.53L | -11.8L | 30.00L |
| PFNSL | 4.00L | 3.75L | -6.3L | 30.00L |
| PFDSL | 4.00L | 3.87L | -3.3L | 30.00L |
| PFDoSL | 4.00L | 3.66L | -8.4L | 30.00L |
| 4:2FTSL | 4.00L | 4.00L | -0.01L | 30.00L |
| 6:2FTSL | 4.00L | 3.91L | -2.2L | 30.00L |
| 8:2FTSL | 4.00L | 4.28L | 7.1L | 30.00L |
| 10:2FTSL | 3.86L | 3.98L | 3.1L | 30.00L |
| PFOSAL | 4.00L | 3.81L | -4.7L | 30.00L |
| NMeFOSAL | 4.00L | 3.34L | -16.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0076L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.59L | -10.4L | 30.00L |
| NMeFOSAAL | 4.00L | 3.74L | -6.4L | 30.00L |
| NEtFOSAAL | 4.00L | 3.49L | -12.8L | 30.00L |
| NMeFOSEL | 4.00L | 4.03L | 0.8L | 30.00L |
| NEtFOSEL | 4.00L | 4.57L | 14.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.93L | -1.7L | 30.00L |
| ADONAL | 4.00L | 3.63L | -9.3L | 30.00L |
| PFEESAL | 4.00L | 3.30L | -17.6L | 30.00L |
| PFMPAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFMBAL | 4.00L | 3.42L | -14.4L | 30.00L |
| NFDHAL | 4.00L | 3.55L | -11.3L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.87L | -3.4L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 4.00L | 0.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.60L | -10.0L | 30.00L |
| 5:3FTCAL | 4.00L | 3.95L | -1.3L | 30.00L |
| 7:3FTCAL | 4.00L | 3.72L | -7.0L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.63L | 7.9L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.53L | 13.3L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.23L | 11.5L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.11L | 11.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.07L | 7.4L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.08L | 8.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.09L | 9.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.28L | 14.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.44L | 21.9L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.28L | 13.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0076L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.76L | 19.1L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.88L | 22.1L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.86L | 21.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 10.3L | 29.1L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.16L | 7.8L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.17L | 8.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.19L | 9.5L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.59L | 14.9L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D7-NMEFOSEL | 20.0L | 22.7L | 13.6L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.3L | 11.7L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.74L | 9.3L | 30.00L |

* Values outside of QC limitsL

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Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 962397<br>( 163.0 / 69.0 ) 25274 | ( 2.80 , 0.74 ) ( N/A , 0.01 , 0.1) | 6782.6<br>1223.6 | 0.0263<br>96.7<br>96.7 | 3.3415 | N/A | 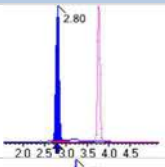 | 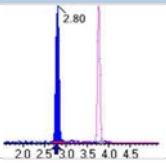 | |
| PFBA | ( 213.0 / 169.0 ) 1175661 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 937.3 | N/A<br>0.0<br>0.0 | 3.8614 | N/A | 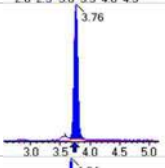 | | |
| PFPeA | ( 263.0 / 219.0 ) 978897<br>( 263.0 / 69.0 ) 10248 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 3495.1<br>136.4 | 0.0105<br>87.7<br>87.7 | 3.9064 | N/A | 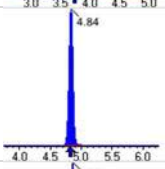 | 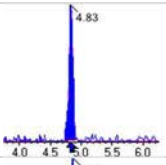 | |
| PFHxA | ( 313.0 / 269.0 ) 1080521<br>( 313.0 / 119.0 ) 119388 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.9<br>990.2 | 0.1105<br>95.2<br>95.2 | 3.6367 | N/A | 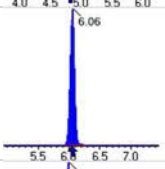 | 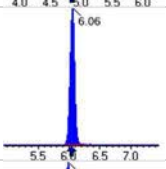 | |
| PFHpA | ( 363.0 / 319.0 ) 1143038<br>( 363.0 / 169.0 ) 356252 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1509.0<br>1329.3 | 0.3117<br>102.8<br>102.8 | 3.5350 | N/A | 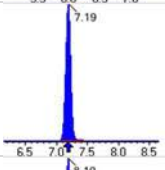 | 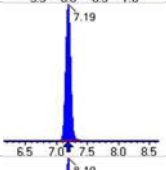 | |
| PFOA | ( 413.0 / 369.0 ) 1461316<br>( 413.0 / 169.0 ) 523450 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 588.7<br>754.1 | 0.3582<br>98.0<br>98.0 | 3.3594 | N/A | 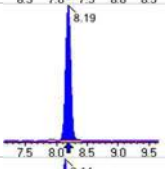 | 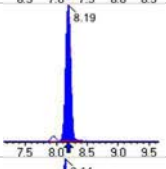 | |
| PFNA | ( 463.0 / 419.0 ) 1118591<br>( 463.0 / 169.0 ) 289643 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.2<br>983.5 | 0.2589<br>101.4<br>101.4 | 3.7732 | N/A | 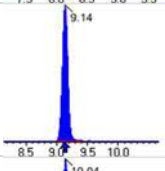 | 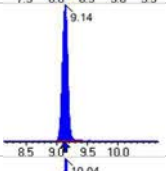 | |
| PFDA | ( 513.0 / 469.0 ) 1264134<br>( 513.0 / 169.0 ) 157234 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2953.9<br>1885.8 | 0.1244<br>106.1<br>106.1 | 3.7761 | N/A | 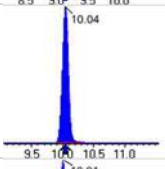 | 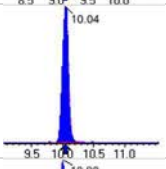 | |
| PFUnA | ( 563.0 / 519.0 ) 1294321<br>( 563.0 / 169.0 ) 184407 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 893.4<br>429.0 | 0.1425<br>100.5<br>100.5 | 3.5942 | N/A | 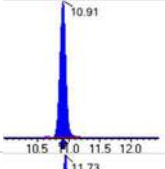 | 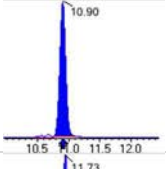 | |
| PFDoA | ( 613.0 / 569.0 ) 1365550<br>( 613.0 / 169.0 ) 224325 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1128.0<br>583.1 | 0.1643<br>103.9<br>103.9 | 3.3107 | N/A | 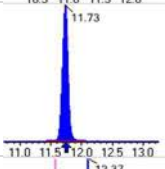 | 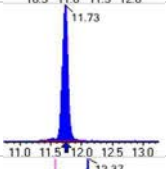 | |
| PFTrDA | ( 663.0 / 619.0 ) 1370908<br>( 663.0 / 169.0 ) 363516 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.0) | 1167.0<br>776.2 | 0.2652<br>103.0<br>103.0 | 3.3977 | N/A | 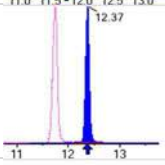 | 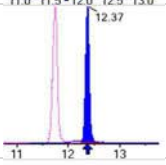 | |

APPL
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Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1309098<br>( 713.0 / 169.0 ) 347062 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1509.2<br>784.5 | 0.2651<br>98.2<br>98.2 | 4.1165 | N/A | 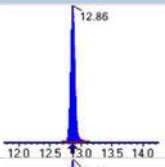 | 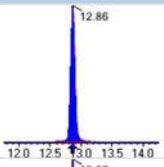 | |
| PFHxDA | ( 813.0 / 769.0 ) 897399<br>( 813.0 / 169.0 ) 229591 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1782.4<br>984.2 | 0.2558<br>104.6<br>104.6 | 3.0982 | N/A | 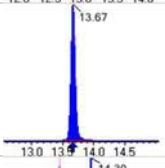 | 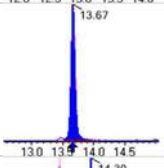 | |
| PFODA | ( 913.0 / 869.0 ) 550450<br>( 913.0 / 169.0 ) 180510 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1511.9<br>649.4 | 0.3279<br>91.5<br>91.5 | 3.0377 | N/A | 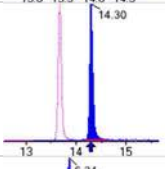 | 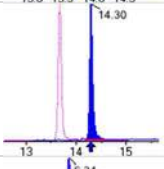 | |
| PFBS | ( 299.0 / 80.0 ) 1756089<br>( 299.0 / 99.0 ) 1281223 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3552.9<br>3591.0 | 0.7296<br>103.2<br>103.2 | 3.6666 | N/A | 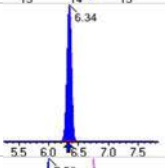 | 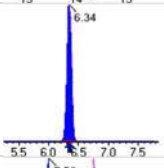 | |
| PFPeS | ( 349.0 / 80.0 ) 4305626<br>( 349.0 / 99.0 ) 1490386 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , -0.1) | 2601.1<br>2414.4 | 0.3461<br>96.3<br>96.3 | 4.0953 | N/A | 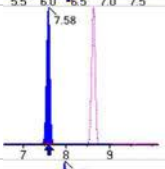 | 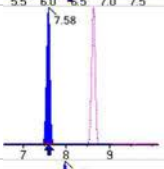 | |
| PFHxS | ( 399.0 / 80.0 ) 4796231<br>( 399.0 / 99.0 ) 1513608 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3672.2<br>5896.7 | 0.3156<br>99.1<br>99.1 | 3.9275 | N/A | 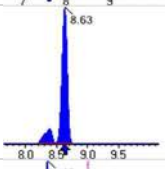 | 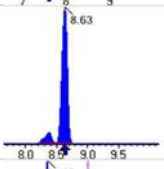 | |
| PFHpS | ( 449.0 / 80.0 ) 3732941<br>( 449.0 / 99.0 ) 1001282 | ( 9.60 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2007.8<br>1891.4 | 0.2682<br>101.4<br>101.4 | 3.7048 | N/A | 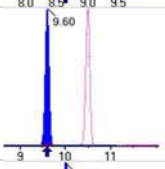 | 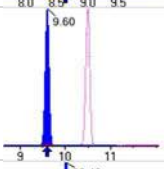 | |
| PFOS | ( 499.0 / 80.0 ) 3424865<br>( 499.0 / 99.0 ) 734477 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1720.3<br>3896.8 | 0.2145<br>91.8<br>91.8 | 3.5262 | N/A | 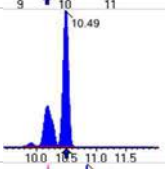 | 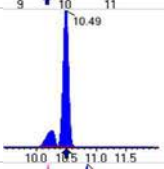 | |
| PFNS | ( 549.0 / 80.0 ) 3407348<br>( 549.0 / 99.0 ) 929910 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2946.3<br>1937.3 | 0.2729<br>100.1<br>100.1 | 3.7468 | N/A | 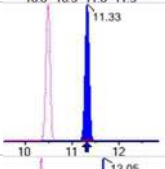 | 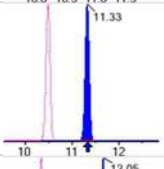 | |
| PFDS | ( 599.0 / 80.0 ) 4296316<br>( 599.0 / 99.0 ) 1123221 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3304.8<br>2395.7 | 0.2614<br>96.2<br>96.2 | 3.8691 | N/A | 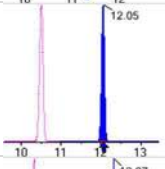 | 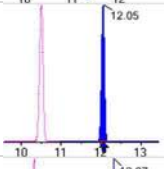 | |
| PFDoS | ( 699.0 / 80.0 ) 3586345<br>( 699.0 / 99.0 ) 846775 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3630.7<br>2702.9 | 0.2361<br>101.1<br>101.1 | 3.6636 | N/A | 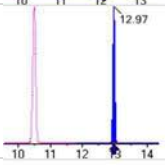 | 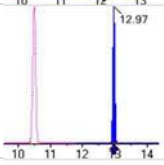 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1631620<br>( 327.0 / 81.0 ) 1506467 | ( 5.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 4752.9<br>2173.4 | 0.9233<br>105.8<br>105.8 | 3.9996 | N/A | 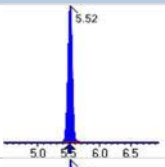 | 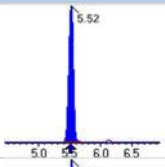 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1545553<br>( 427.0 / 81.0 ) 1968397 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 3426.6<br>2929.0 | 1.2736<br>101.6<br>101.6 | 3.9140 | N/A | 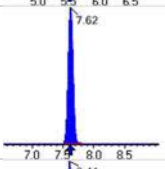 | 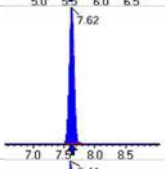 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1515669<br>( 527.0 / 81.0 ) 1596380 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 1461.7<br>1647.7 | 1.0533<br>96.8<br>96.8 | 4.2844 | N/A | 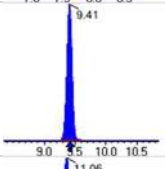 | 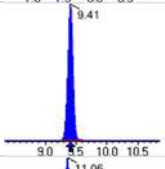 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1267274<br>( 627.0 / 81.0 ) 1749805 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1302.1<br>1148.2 | 1.3808<br>95.9<br>95.9 | 3.9787 | N/A | 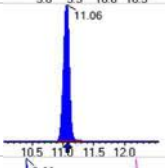 | 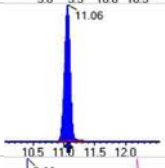 | |
| PFBSA | ( 297.9 / 78.0 ) 3621025<br>( 297.9 / 278.0 ) 4711 | ( 8.11 , 0.57 ) ( N/A , 0.00 , 0.2) | 1692.7<br>159.7 | 0.0013<br>95.2<br>95.2 | 4.4829 | N/A | 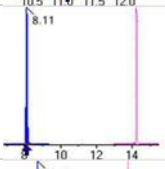 | 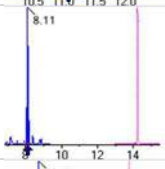 | |
| PFHxSA | ( 397.9 / 78.0 ) 4011801<br>( 397.9 / 378.0 ) 16835 | ( 10.98 , 0.75 ) ( N/A , 0.00 , 0.0) | 854.3<br>330.5 | 0.0042<br>102.7<br>102.7 | 3.8415 | N/A | 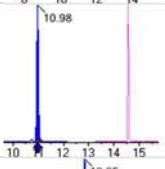 | 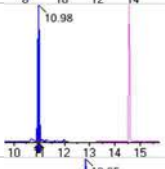 | |
| PFOSA | ( 498.0 / 78.0 ) 2805456<br>( 498.0 / 478.0 ) 40688 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.2) | 937.8<br>497.9 | 0.0145<br>103.4<br>103.4 | 3.8140 | N/A | 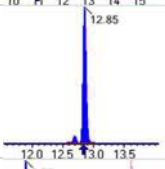 | 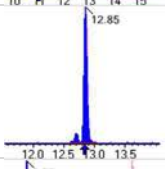 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 ) 7301953<br>( 279.7 / 211.0 ) 635631 | ( 8.20 , 0.64 ) ( N/A , -0.01 , 0.0) | 52.1<br>66.4 | 0.0870<br>103.6<br>103.6 | 3.7699 | N/A | 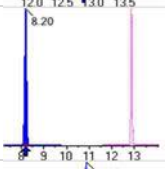 | 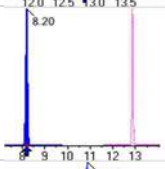 | |
| NMeFOSA | ( 512.0 / 219.0 ) 519804<br>( 512.0 / 169.0 ) 328008 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 5814.7<br>2023.3 | 0.6310<br>84.3<br>84.3 | 3.3402 | N/A | 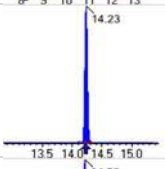 | 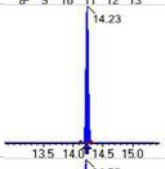 | |
| NEtFOSA | ( 526.0 / 219.0 ) 682268<br>( 526.0 / 169.0 ) 720469 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 0.0) | 6107.0<br>4732.1 | 1.0560<br>85.5<br>85.5 | 3.5850 | N/A | 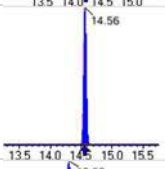 | 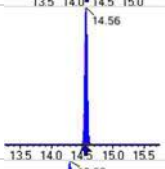 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 812540<br>( 570.0 / 483.0 ) 375737 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2801.5<br>1944.1 | 0.4624<br>105.5<br>105.5 | 3.7449 | N/A | 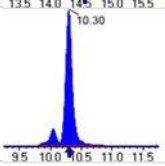 | 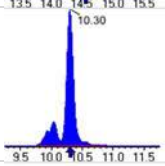 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 733069<br>( 584.0 / 526.0 ) 451026 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1461.0<br>814.2 | 0.6153<br>99.8<br>99.8 | 3.4878 | N/A | 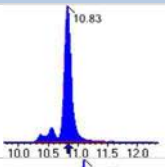 | 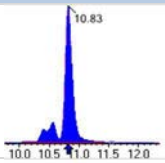 | |
| NMeFOSE | ( 616.0 / 59.0 ) 326625 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2612.6 | N/A<br>0.0<br>0.0 | 4.0313 | N/A | 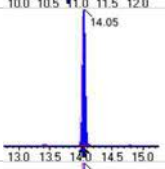 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 299443 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4202.9 | N/A<br>0.0<br>0.0 | 4.5715 | N/A | 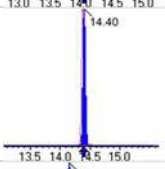 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 308973<br>( 285.0 / 185.0 ) 797962 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1326.1<br>2486.0 | 2.5826<br>93.4<br>93.4 | 3.9307 | N/A | 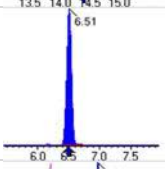 | 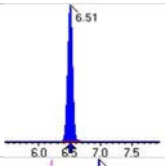 | |
| ADONA | ( 377.0 / 85.0 ) 3325389<br>( 377.0 / 251.0 ) 344342 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.0) | 1872.8<br>1723.5 | 0.1035<br>101.6<br>101.6 | 3.6262 | N/A | 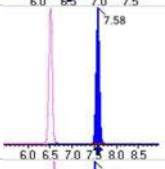 | 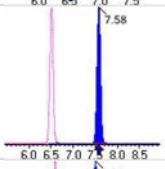 | |
| PFEESA | ( 315.0 / 135.0 ) 703088<br>( 315.0 / 83.0 ) 404699 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 2387.2<br>769.5 | 0.5756<br>103.3<br>103.3 | 3.2953 | N/A | 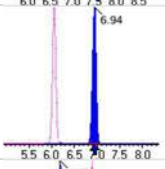 | 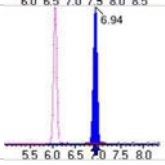 | |
| PFMPA | ( 229.0 / 85.0 ) 296369 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 3321.0 | N/A<br>0.0<br>0.0 | 3.7270 | N/A | 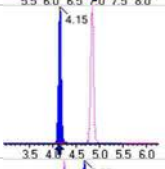 | | |
| PFMBA | ( 279.0 / 85.0 ) 739601 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3653.3 | N/A<br>0.0<br>0.0 | 3.4221 | N/A | 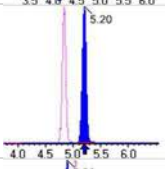 | | |
| NFDHA | ( 295.0 / 201.0 ) 393340<br>( 295.0 / 85.0 ) 422944 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2490.4<br>1874.9 | 1.0753<br>99.7<br>99.7 | 3.5461 | N/A | 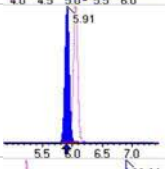 | 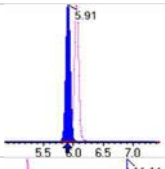 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3829034<br>( 533.0 / 353.0 ) 1211420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3048.6<br>2273.9 | 0.3164<br>101.1<br>101.1 | 3.8658 | N/A | 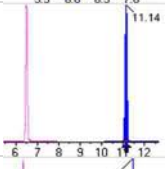 | 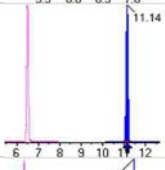 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3049840<br>( 633.0 / 453.0 ) 1009005 | ( 12.47 , 1.92 )<br>( N/A , 0.00 , 0.1) | 4050.8<br>2878.1 | 0.3308<br>99.6<br>99.6 | 4.0039 | N/A | 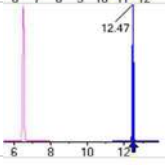 | 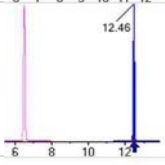 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1920262<br>( 461.0 / 381.2 ) 718117 | ( 9.52 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2117.4<br>2583.3 | 0.3740<br>93.8<br>93.8 | 3.5045 | N/A | 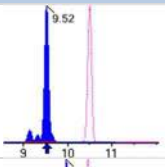 | 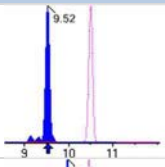 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 51311<br>( 241.0 / 117.0 ) 125661 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1068.2<br>1017.9 | 2.4490<br>116.2<br>116.2 | 3.5994 | N/A | 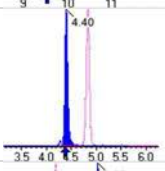 | 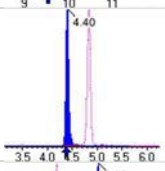 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 325323<br>( 341.0 / 217.0 ) 467661 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.2) | 983.3<br>713.5 | 1.4375<br>94.6<br>94.6 | 3.9483 | N/A | 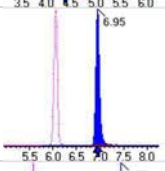 | 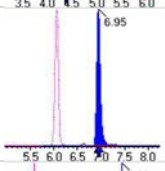 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 503088<br>( 441.0 / 337.0 ) 447992 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 2199.0<br>3436.5 | 0.8905<br>97.1<br>97.1 | 3.7207 | N/A | 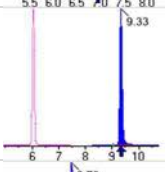 | 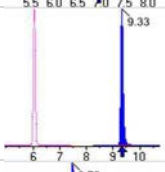 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1368915<br>( 357.2 / 243.0 ) 138696 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1462.3<br>919.1 | 0.1013<br>91.9<br>91.9 | 3.7993 | N/A | 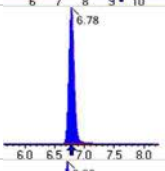 | 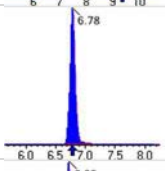 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1040258<br>( 457.2 / 343.0 ) 44906 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 751.1<br>400.9 | 0.0432<br>104.1<br>104.1 | 4.0322 | N/A | 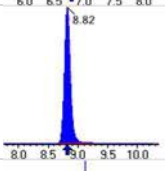 | 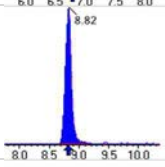 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 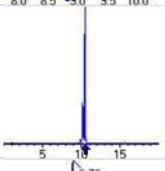 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 247846 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1075.6 | N/A | 1.0395<br>[ 1.0000 ] | 103.9%<br>{ 105.8% } | 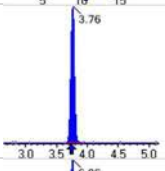 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117348 | ( 6.06 , N/A )<br>( N/A , -0.01 , N/A ) | 16220.9 | N/A | 0.9251<br>[ 1.0000 ] | 92.5%<br>{ 98.2% } | 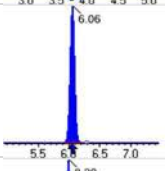 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370834 | ( 8.20 , N/A )<br>( N/A , -0.01 , N/A ) | 3643.5 | N/A | 0.9381<br>[ 1.0000 ] | 93.8%<br>{ 97.6% } | 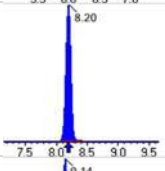 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270783 | ( 9.14 , N/A )<br>( N/A , -0.01 , N/A ) | 892.5 | N/A | 0.9521<br>[ 1.0000 ] | 95.2%<br>{ 101.7% } | 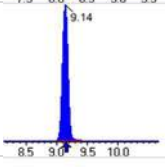 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272326 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 13544.9 | N/A | 0.9325 [ 1.0000 ] | 93.3% { 101.7% } | 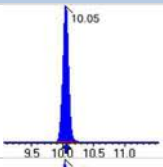 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 837221 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4279.8 | N/A | 0.8822 [ 1.0000 ] | 88.2% { 93.0% } | 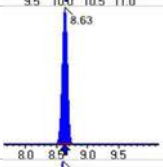 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713825 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2190.3 | N/A | 0.9372 [ 1.0000 ] | 93.7% { 101.9% } | 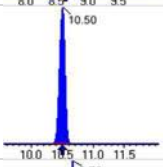 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2443491 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 41170.2 | N/A | 8.6301 [ 8.0000 ] | 107.9% { 115.5% } | 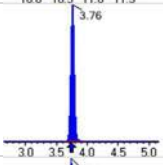 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 992188 | ( 4.84 , N/A ) ( N/A , -0.01 , N/A ) | 5611.5 | N/A | 4.5315 [ 4.0000 ] | 113.3% { 107.6% } | 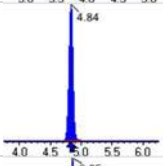 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 618494 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 6938.9 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 111.8% } | 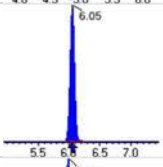 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659031 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4583.8 | N/A | 2.2127 [ 2.0000 ] | 110.6% { 106.4% } | 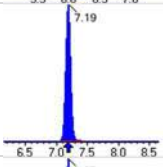 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 885699 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2803.9 | N/A | 2.2291 [ 2.0000 ] | 111.5% { 108.0% } | 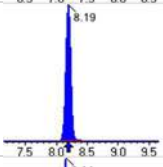 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294966 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2846.1 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 112.3% } | 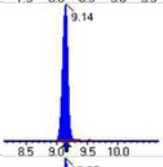 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 327639 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1335.9 | N/A | 1.0736 [ 1.0000 ] | 107.4% { 103.5% } | 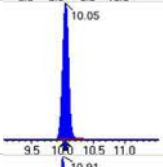 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389334 | ( 10.91 , N/A ) ( N/A , -0.01 , N/A ) | 1101.6 | N/A | 1.0844 [ 1.0000 ] | 108.4% { 107.7% } | 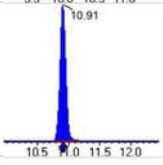 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409989 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1223.9 | N/A | 1.1213 [ 1.0000 ] | 112.1% { 116.6% } | 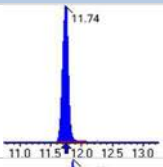  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 339554 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1486.2 | N/A | 1.0905 [ 1.0000 ] | 109.0% { 108.7% } | 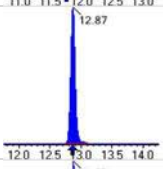  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607345 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2904.6 | N/A | 2.2847 [ 2.0000 ] | 114.2% { 117.7% } | 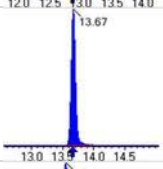  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1844891 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 1003.0 | N/A | 2.4390 [ 2.0000 ] | 121.9% { 115.8% } | 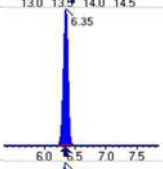  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373837 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4235.8 | N/A | 2.2754 [ 2.0000 ] | 113.8% { 107.3% } | 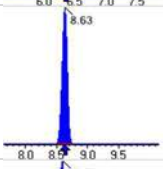  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1681874 | ( 10.50 , N/A ) ( N/A , -0.01 , N/A ) | 1417.8 | N/A | 2.1852 [ 2.0000 ] | 109.3% { 107.6% } | 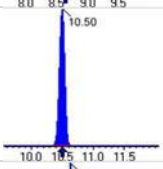  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 621764 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.3 | N/A | 4.7641 [ 4.0000 ] | 119.1% { 118.4% } | 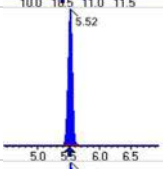  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1907472 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 3543.7 | N/A | 4.8837 [ 4.0000 ] | 122.1% { 112.2% } | 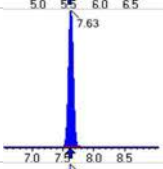  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490025 | ( 9.41 , N/A ) ( N/A , 0.00 , N/A ) | 1234.3 | N/A | 4.8642 [ 4.0000 ] | 121.6% { 112.9% } | 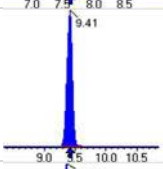  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3305966 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1721.4 | N/A | 10.3266 [ 8.0000 ] | 129.1% { 127.3% } | 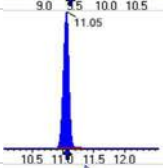  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1471109 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 1781.5 | N/A | 2.1569 [ 2.0000 ] | 107.8% { 110.3% } | 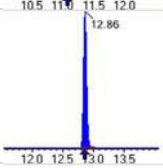  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 313468 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 2395.1 | N/A | 2.1669 [ 2.0000 ] | 108.3% { 113.0% } | 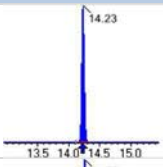  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339856 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 2214.0 | N/A | 2.1907 [ 2.0000 ] | 109.5% { 107.7% } | 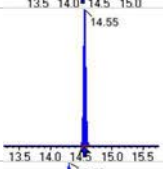  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 909945 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2882.7 | N/A | 4.5948 [ 4.0000 ] | 114.9% { 108.6% } | 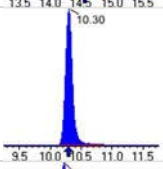  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 859454 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1808.0 | N/A | 4.7617 [ 4.0000 ] | 119.0% { 113.7% } | 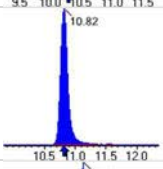  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1477259 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 2309.5 | N/A | 22.7237 [ 20.0000 ] | 113.6% { 109.8% } | 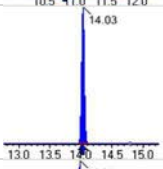  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1474480 | ( 14.38 , N/A ) ( N/A , 0.00 , N/A ) | 3886.4 | N/A | 22.3464 [ 20.0000 ] | 111.7% { 112.0% } | 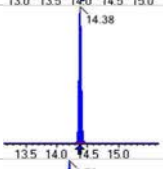  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1066376 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2035.6 | N/A | 8.7432 [ 8.0000 ] | 109.3% { 109.0% } | 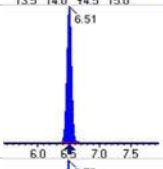  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677811 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1143.2 | N/A | 2.2957 [ 2.0000 ] | 114.8% { 117.4% } | 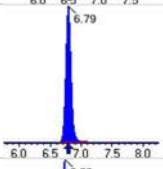  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 632603 | ( 8.83 , N/A ) ( N/A , -0.01 , N/A ) | 843.1 | N/A | 2.3536 [ 2.0000 ] | 117.7% { 117.8% } | 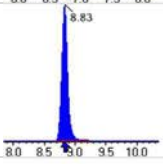  | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0076L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2411010L

**Laboratory ID:W**SD00977-LCV1L

**Sequence:W**SD00977L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.402L | 0.4L | 30.00L |
| PFPeAL | 0.200L | 0.196L | -1.9L | 30.00L |
| PFHxAL | 0.100L | 0.0996L | -0.4L | 30.00L |
| PFHpAL | 0.100L | 0.102L | 1.7L | 30.00L |
| PFOAL | 0.100L | 0.117L | 16.5L | 30.00L |
| PFNAL | 0.100L | 0.0880L | -12.0L | 30.00L |
| PFDAL | 0.100L | 0.107L | 6.7L | 30.00L |
| PFUnAL | 0.100L | 0.0864L | -13.6L | 30.00L |
| PFDoAL | 0.100L | 0.0949L | -5.1L | 30.00L |
| PFTrDAL | 0.100L | 0.0938L | -6.2L | 30.00L |
| PFTeDAL | 0.100L | 0.0886L | -11.4L | 30.00L |
| PFHxDAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFODAL | 0.100L | 0.0973L | -2.7L | 30.00L |
| PFBSL | 0.0885L | 0.0738L | -16.6L | 30.00L |
| PFPeSL | 0.0940L | 0.0882L | -6.2L | 30.00L |
| PFHxSL | 0.0915L | 0.0911L | -0.4L | 30.00L |
| PFHpSL | 0.0955L | 0.0870L | -8.9L | 30.00L |
| PFOSL | 0.0930L | 0.100L | 7.9L | 30.00L |
| PFNSL | 0.0960L | 0.0905L | -5.8L | 30.00L |
| PFDSL | 0.0965L | 0.0906L | -6.1L | 30.00L |
| PFDoSL | 0.0970L | 0.0855L | -11.9L | 30.00L |
| 4:2FTSL | 0.375L | 0.318L | -15.3L | 30.00L |
| 6:2FTSL | 0.380L | 0.367L | -3.4L | 30.00L |
| 8:2FTSL | 0.384L | 0.362L | -5.7L | 30.00L |
| 10:2FTSL | 0.386L | 0.371L | -4.0L | 30.00L |
| PFOSAL | 0.100L | 0.102L | 2.3L | 30.00L |
| NMeFOSAL | 0.400L | 0.373L | -6.8L | 30.00L |
| NEtFOSAL | 0.400L | 0.379L | -5.2L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0076L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2411010L

**Laboratory ID:W**SD00977-LCV1L

**Sequence:W**SD00977L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0860L | -14.0L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0899L | -10.1L | 30.00L |
| NMeFOSEL | 0.400L | 0.412L | 2.9L | 30.00L |
| NEtFOSEL | 0.400L | 0.392L | -1.9L | 30.00L |
| HFPO-DAL | 0.100L | 0.101L | 1.4L | 30.00L |
| ADONAL | 0.0945L | 0.0892L | -5.6L | 30.00L |
| PFEESAL | 0.178L | 0.160L | -9.8L | 30.00L |
| PFMPAL | 0.200L | 0.163L | -18.4L | 30.00L |
| PFMBAL | 0.200L | 0.177L | -11.6L | 30.00L |
| NFDHAL | 0.200L | 0.183L | -8.7L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0801L | -14.3L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0757L | -19.8L | 30.00L |
| 3:3FTCAL | 0.400L | 0.418L | 4.6L | 30.00L |
| 5:3FTCAL | 0.400L | 0.400L | -0.02L | 30.00L |
| 7:3FTCAL | 0.400L | 0.394L | -1.5L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 60266<br>( 163.0 / 69.0 ) 1344 | ( 2.80 , 0.74 ) ( N/A , 0.03 , -0.8) | 322.5<br>44.3 | 0.0223<br>89.0<br>85.3 | 0.1744<br>[ 0.2000 ] | 87.2% | 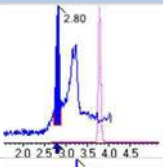 | 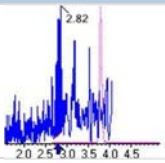 | |
| PFBA | ( 213.0 / 169.0 ) 148478 | ( 3.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 240.1 | N/A<br>0.0<br>0.0 | 0.4017<br>[ 0.4000 ] | 100.4% | 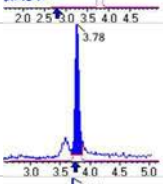 | | |
| PFPeA | ( 263.0 / 219.0 ) 65824<br>( 263.0 / 69.0 ) 572 | ( 4.86 , 1.00 ) ( 0.00 , N/A , 1.1) | 301.0<br>12.2 | 0.0087<br>79.1<br>74.4 | 0.1961<br>[ 0.2000 ] | 98.1% | 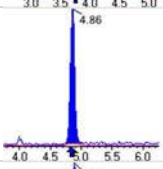 | 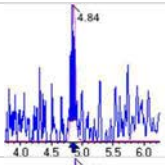 | |
| PFHxA | ( 313.0 / 269.0 ) 38261<br>( 313.0 / 119.0 ) 5163 | ( 6.08 , 1.00 ) ( 0.00 , N/A , 0.0) | 232.9<br>93.7 | 0.1350<br>121.5<br>118.8 | 0.0996<br>[ 0.1000 ] | 99.6% | 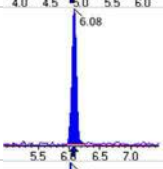 | 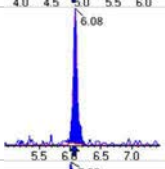 | |
| PFHpA | ( 363.0 / 319.0 ) 40690<br>( 363.0 / 169.0 ) 10806 | ( 7.23 , 1.00 ) ( 0.00 , N/A , 0.4) | 233.2<br>191.2 | 0.2656<br>85.2<br>90.3 | 0.1017<br>[ 0.1000 ] | 101.7% | 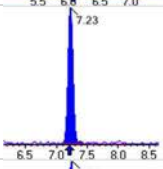 | 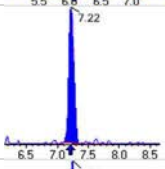 | |
| PFOA | ( 413.0 / 369.0 ) 61726<br>( 413.0 / 169.0 ) 20598 | ( 8.24 , 1.00 ) ( 0.00 , N/A , 0.0) | 98.1<br>142.9 | 0.3337<br>92.2<br>94.0 | 0.1165<br>[ 0.1000 ] | 116.5% | 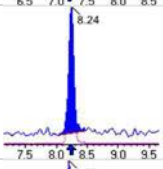 | 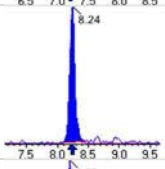 | |
| PFNA | ( 463.0 / 419.0 ) 33460<br>( 463.0 / 169.0 ) 9422 | ( 9.20 , 1.00 ) ( 0.00 , N/A , -0.1) | 219.8<br>222.7 | 0.2816<br>107.3<br>114.4 | 0.0880<br>[ 0.1000 ] | 88.0% | 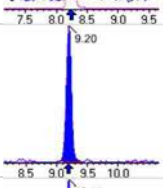 | 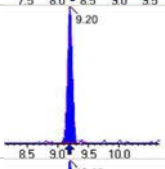 | |
| PFDA | ( 513.0 / 469.0 ) 47154<br>( 513.0 / 169.0 ) 6751 | ( 10.10 , 1.00 ) ( 0.00 , N/A , -0.2) | 349.9<br>1267.7 | 0.1432<br>122.0<br>118.6 | 0.1067<br>[ 0.1000 ] | 106.7% | 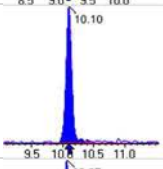 | 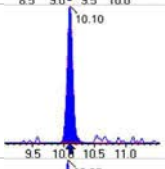 | |
| PFUnA | ( 563.0 / 519.0 ) 43045<br>( 563.0 / 169.0 ) 7242 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.3) | 225.3<br>143.0 | 0.1683<br>113.6<br>116.3 | 0.0864<br>[ 0.1000 ] | 86.4% | 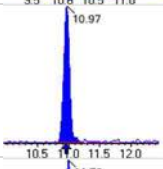 | 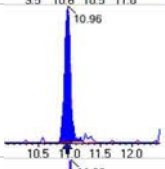 | |
| PFDoA | ( 613.0 / 569.0 ) 48564<br>( 613.0 / 169.0 ) 8261 | ( 11.79 , 1.00 ) ( 0.00 , N/A , -0.5) | 228.3<br>85.5 | 0.1701<br>107.6<br>111.2 | 0.0949<br>[ 0.1000 ] | 94.9% | 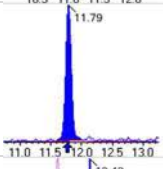 | 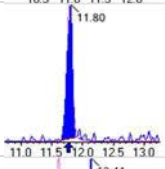 | |
| PFTrDA | ( 663.0 / 619.0 ) 46126<br>( 663.0 / 169.0 ) 13023 | ( 12.42 , 1.05 ) ( N/A , 0.02 , 0.3) | 311.2<br>125.5 | 0.2823<br>104.8<br>110.8 | 0.0938<br>[ 0.1000 ] | 93.8% | 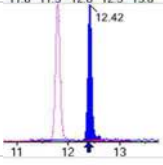 | 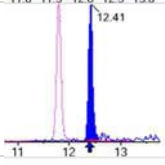 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 37942<br>( 713.0 / 169.0 ) 11025 | ( 12.91 , 1.00 )<br>( 0.00 , N/A , 0.1) | 196.5<br>110.6 | 0.2906<br>111.8<br>110.0 | 0.0886<br>[ 0.1000 ] | 88.6% | 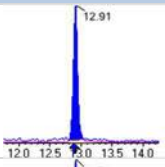 | 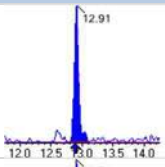 | |
| PFHxDA | ( 813.0 / 769.0 ) 34209<br>( 813.0 / 169.0 ) 7104 | ( 13.71 , 1.00 )<br>( 0.00 , N/A , 0.3) | 247.2<br>54.8 | 0.2077<br>95.7<br>81.5 | 0.0959<br>[ 0.1000 ] | 95.9% | 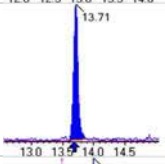 | 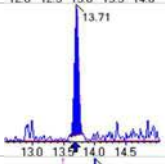 | |
| PFODA | ( 913.0 / 869.0 ) 23309<br>( 913.0 / 169.0 ) 6383 | ( 14.35 , 1.05 )<br>( N/A , 0.03 , -0.2) | 133.8<br>37.0 | 0.2739<br>71.7<br>82.6 | 0.0973<br>[ 0.1000 ] | 97.3% | 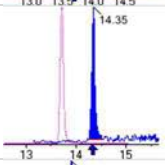 | 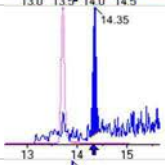 | |
| PFBS | ( 299.0 / 80.0 ) 46058<br>( 299.0 / 99.0 ) 35610 | ( 6.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 450.4<br>156.2 | 0.7732<br>108.8<br>107.3 | 0.0738<br>[ 0.0885 ] | 83.4% | 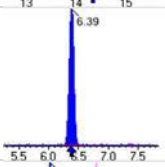 | 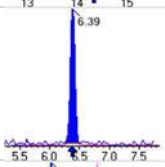 | |
| PFPeS | ( 349.0 / 80.0 ) 123312<br>( 349.0 / 99.0 ) 45154 | ( 7.63 , 0.88 )<br>( N/A , 0.01 , 0.1) | 510.8<br>369.2 | 0.3662<br>107.7<br>106.7 | 0.0882<br>[ 0.0938 ] | 94.0% | 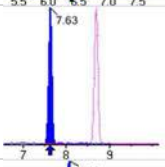 | 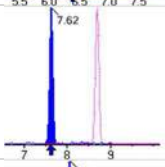 | |
| PFHxS | ( 399.0 / 80.0 ) 141687<br>( 399.0 / 99.0 ) 44985 | ( 8.70 , 1.00 )<br>( 0.00 , N/A , 0.3) | 762.8<br>871.7 | 0.3175<br>101.5<br>99.0 | 0.0911<br>[ 0.0911 ] | 100.1% | 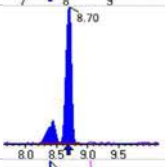 | 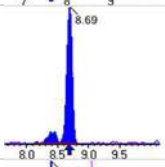 | |
| PFHpS | ( 449.0 / 80.0 ) 109645<br>( 449.0 / 99.0 ) 32376 | ( 9.67 , 0.92 )<br>( N/A , 0.01 , 0.4) | 444.4<br>296.6 | 0.2953<br>110.5<br>109.9 | 0.0870<br>[ 0.0951 ] | 91.4% | 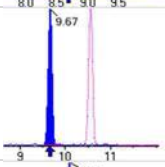 | 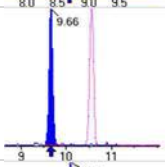 | |
| PFOS | ( 499.0 / 80.0 ) 127200<br>( 499.0 / 99.0 ) 30506 | ( 10.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 485.9<br>985.4 | 0.2398<br>101.4<br>109.5 | 0.1003<br>[ 0.0927 ] | 108.1% | 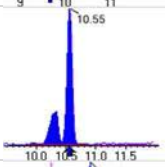 | 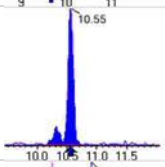 | |
| PFNS | ( 549.0 / 80.0 ) 111880<br>( 549.0 / 99.0 ) 28799 | ( 11.40 , 1.08 )<br>( N/A , 0.01 , -0.2) | 526.8<br>263.9 | 0.2574<br>96.9<br>93.9 | 0.0905<br>[ 0.0960 ] | 94.2% | 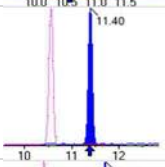 | 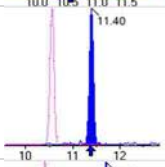 | |
| PFDS | ( 599.0 / 80.0 ) 133580<br>( 599.0 / 99.0 ) 37547 | ( 12.11 , 1.15 )<br>( N/A , 0.02 , 0.3) | 500.0<br>263.6 | 0.2811<br>112.1<br>110.8 | 0.0906<br>[ 0.0963 ] | 94.1% | 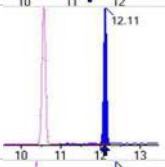 | 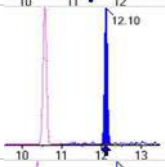 | |
| PFDoS | ( 699.0 / 80.0 ) 107648<br>( 699.0 / 99.0 ) 26647 | ( 13.02 , 1.23 )<br>( N/A , 0.03 , -0.1) | 688.9<br>258.8 | 0.2475<br>107.3<br>109.4 | 0.0855<br>[ 0.0970 ] | 88.1% | 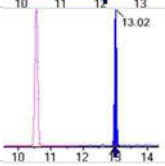 | 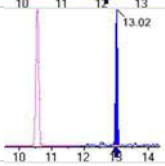 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 154447<br>( 327.0 / 81.0 ) 164849 | ( 5.55 , 1.00 ) ( -0.01 , N/A , 0.1) | 1589.8<br>619.2 | 1.0673<br>121.8<br>116.7 | 0.3176<br>[ 0.3738 ] | 85.0% | 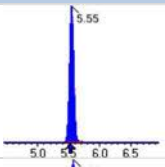 | 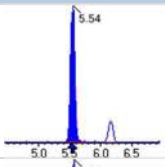 | |
| 6:2FTS | ( 427.0 / 407.0 ) 163995<br>( 427.0 / 81.0 ) 182965 | ( 7.66 , 1.00 ) ( -0.01 , N/A , 0.0) | 1751.3<br>1451.9 | 1.1157<br>87.8<br>87.9 | 0.3670<br>[ 0.3796 ] | 96.7% | 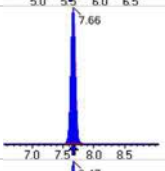 | 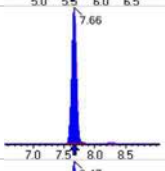 | |
| 8:2FTS | ( 527.0 / 507.0 ) 183812<br>( 527.0 / 81.0 ) 186811 | ( 9.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 1048.9<br>887.1 | 1.0163<br>107.2<br>102.0 | 0.3620<br>[ 0.3833 ] | 94.4% | 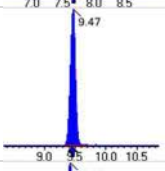 | 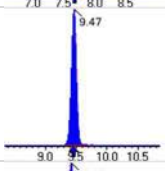 | |
| 10:2FTS | ( 627.0 / 607.0 ) 147066<br>( 627.0 / 81.0 ) 208836 | ( 11.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 684.1<br>353.6 | 1.4200<br>105.1<br>103.7 | 0.3707<br>[ 0.3865 ] | 95.9% | 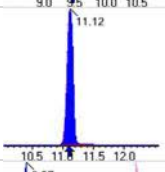 | 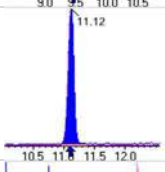 | |
| PFBSA | ( 297.9 / 78.0 ) 99379<br>( 297.9 / 278.0 ) 192 | ( 8.07 , 0.57 ) ( N/A , 0.01 , 0.3) | 509.7<br>4.4 | 0.0019<br>137.5<br>122.1 | 0.1000<br>[ 0.1000 ] | 100.0% | 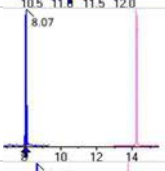 | 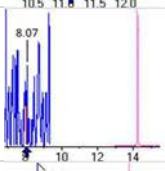 | |
| PFHxSA | ( 397.9 / 78.0 ) 122494<br>( 397.9 / 378.0 ) 574 | ( 10.95 , 0.75 ) ( N/A , 0.01 , 0.7) | 634.8<br>35.3 | 0.0047<br>123.1<br>112.0 | 0.0988<br>[ 0.1000 ] | 98.8% | 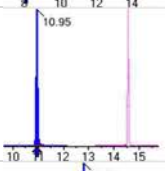 | 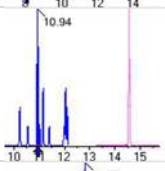 | |
| PFOSA | ( 498.0 / 78.0 ) 120368<br>( 498.0 / 478.0 ) 1847 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.5) | 739.1<br>75.9 | 0.0153<br>106.3<br>112.1 | 0.1023<br>[ 0.1000 ] | 102.3% | 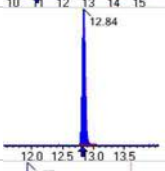 | 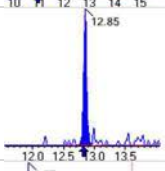 | |
| TFSI | ( 279.7 / 147.0 ) 282474<br>( 279.7 / 211.0 ) 24008 | ( 8.27 , 0.64 ) ( N/A , 0.02 , -0.1) | 59.2<br>24.4 | 0.0850<br>103.1<br>99.9 | 0.1130<br>[ 0.0979 ] | 115.3% | 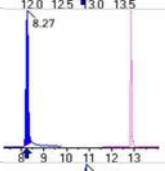 | 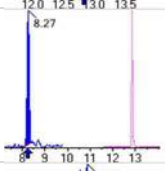 | |
| NMeFOSA | ( 512.0 / 219.0 ) 81103<br>( 512.0 / 169.0 ) 61309 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.1) | 880.2<br>804.6 | 0.7559<br>102.8<br>99.0 | 0.3726<br>[ 0.4000 ] | 93.2% | 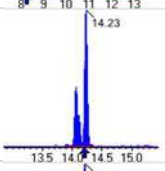 | 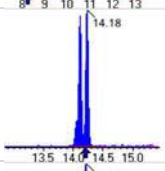 | |
| NEtFOSA | ( 526.0 / 219.0 ) 100654<br>( 526.0 / 169.0 ) 124870 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.2) | 884.3<br>785.7 | 1.2406<br>97.9<br>98.3 | 0.3793<br>[ 0.4000 ] | 94.8% | 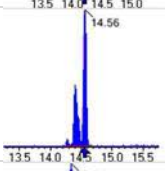 | 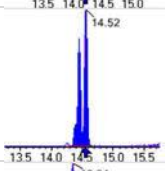 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 27139<br>( 570.0 / 483.0 ) 14926 | ( 10.34 , 1.00 ) ( 0.00 , N/A , -0.1) | 16768.9<br>242.3 | 0.5500<br>127.0<br>120.7 | 0.0860<br>[ 0.1000 ] | 86.0% | 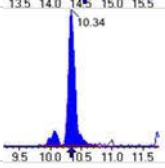 | 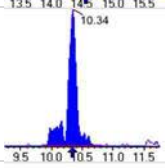 | MI4 ABK 3/18/24 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 27278<br>( 584.0 / 526.0 ) 20488 | ( 10.88 , 1.00 )<br>( 0.02 , N/A , 0.0) | 15383.3<br>556.1 | 0.7511<br>121.3<br>124.7 | 0.0899<br>[ 0.1000 ] | 89.9% | 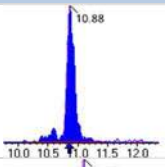 | 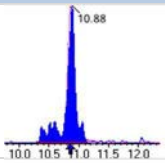 | |
| NMeFOSE | ( 616.0 / 59.0 ) 47110 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 308.0 | N/A<br>0.0<br>0.0 | 0.4117<br>[ 0.4000 ] | 102.9% | 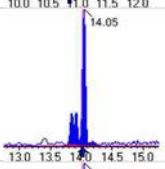 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 37279 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 362.5 | N/A<br>0.0<br>0.0 | 0.3924<br>[ 0.4000 ] | 98.1% | 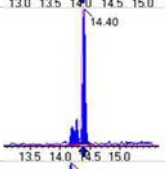 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 9630<br>( 285.0 / 185.0 ) 28989 | ( 6.54 , 1.00 )<br>( 0.00 , N/A , 0.1) | 202.1<br>193.5 | 3.0103<br>96.6<br>108.6 | 0.1014<br>[ 0.1000 ] | 101.4% | 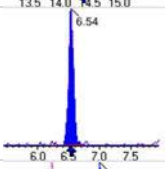 | 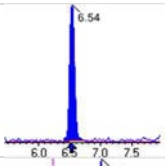 | |
| ADONA | ( 377.0 / 85.0 ) 107929<br>( 377.0 / 251.0 ) 11488 | ( 7.62 , 1.16 )<br>( N/A , 0.01 , -0.2) | 856.6<br>96.8 | 0.1064<br>99.8<br>100.6 | 0.0892<br>[ 0.0943 ] | 94.7% | 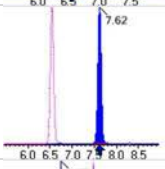 | 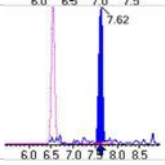 | |
| PFMPA | ( 229.0 / 85.0 ) 17335 | ( 4.17 , 0.86 )<br>( N/A , 0.03 , 0.0) | 450.7 | N/A<br>0.0<br>0.0 | 0.1632<br>[ 0.2000 ] | 81.6% | 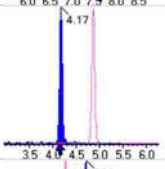 | | |
| PFMBA | ( 279.0 / 85.0 ) 49742 | ( 5.23 , 1.08 )<br>( N/A , 0.02 , 0.0) | 647.5 | N/A<br>0.0<br>0.0 | 0.1769<br>[ 0.2000 ] | 88.4% | 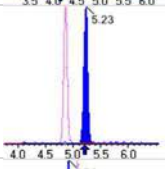 | | |
| NFDHA | ( 295.0 / 201.0 ) 24378<br>( 295.0 / 85.0 ) 24427 | ( 5.94 , 0.98 )<br>( N/A , 0.01 , -0.3) | 645.3<br>267.0 | 1.0020<br>92.6<br>93.6 | 0.1825<br>[ 0.2000 ] | 91.3% | 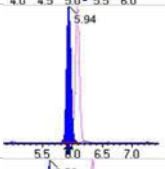 | 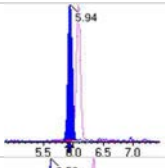 | |
| PFECHS | ( 461.0 / 98.9 ) 64083<br>( 461.0 / 381.2 ) 23316 | ( 9.59 , 0.91 )<br>( N/A , 0.01 , -0.1) | 745.5<br>4475.3 | 0.3638<br>93.2<br>93.0 | 0.0896<br>[ 0.0924 ] | 97.0% | 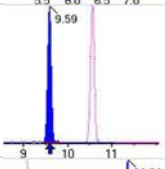 | 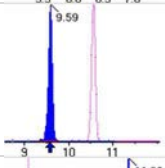 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 119606<br>( 533.0 / 353.0 ) 36493 | ( 11.21 , 1.71 )<br>( N/A , 0.01 , 0.2) | 1493.1<br>339.4 | 0.3051<br>94.9<br>98.0 | 0.0801<br>[ 0.0933 ] | 85.9% | 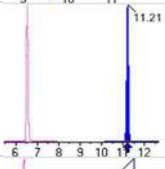 | 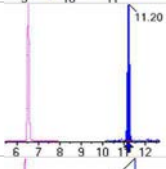 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 88564<br>( 633.0 / 453.0 ) 29491 | ( 12.51 , 1.91 )<br>( N/A , 0.02 , 0.0) | 1072.7<br>283.6 | 0.3330<br>102.0<br>100.4 | 0.0757<br>[ 0.0943 ] | 80.3% | 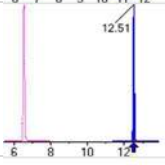 | 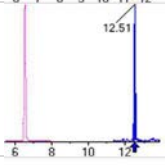 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 46383<br>( 315.0 / 83.0 ) 34321 | ( 6.98 , 1.15 )<br>( N/A , 0.01 , -0.1) | 479.2<br>77.4 | 0.7399<br>129.1<br>125.1 | 0.1605<br>[ 0.1785 ] | 89.9% | 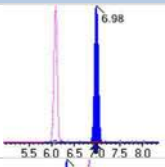 | 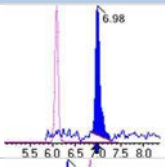 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 6820<br>( 241.0 / 117.0 ) 11694 | ( 4.40 , 0.91 )<br>( N/A , 0.03 , -0.1) | 309.8<br>62.7 | 1.7147<br>77.3<br>77.1 | 0.4183<br>[ 0.4000 ] | 104.6% | 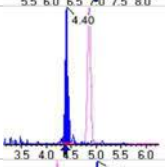 | 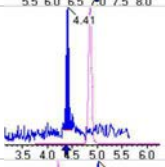 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 37246<br>( 341.0 / 217.0 ) 54681 | ( 6.94 , 1.14 )<br>( N/A , 0.01 , 0.0) | 249.3<br>188.1 | 1.4681<br>98.1<br>95.8 | 0.3999<br>[ 0.4000 ] | 100.0% | 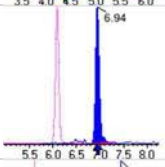 | 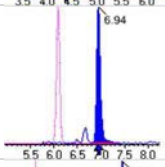 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 53953<br>( 441.0 / 337.0 ) 42819 | ( 9.34 , 1.54 )<br>( N/A , 0.01 , 0.0) | 4256.8<br>216437.5 | 0.7936<br>89.2<br>91.6 | 0.3938<br>[ 0.4000 ] | 98.5% | 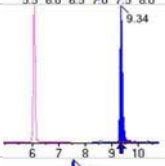 | 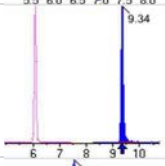 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 31197<br>( 357.2 / 243.0 ) 3077 | ( 6.81 , 1.00 )<br>( -0.01 , N/A , -0.2) | 209.8<br>48.5 | 0.0986<br>93.5<br>92.3 | 0.0827<br>[ 0.1000 ] | 82.7% | 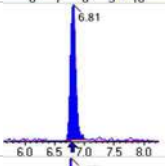 | 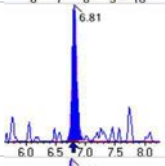 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 25379<br>( 457.2 / 343.0 ) 1136 | ( 8.87 , 1.00 )<br>( -0.01 , N/A , 0.5) | 229.0<br>52.5 | 0.0448<br>114.4<br>117.8 | 0.0927<br>[ 0.1000 ] | 92.7% | 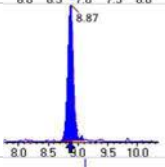 | 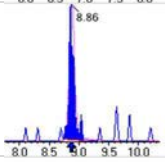 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 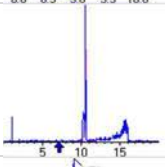 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 331763 | ( 3.78 , N/A )<br>( N/A , 0.03 , N/A ) | 1009.2 | N/A | 1.1013<br>[ 1.0000 ] | 110.1%<br>{ 98.0% } | 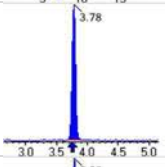 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 169221 | ( 6.09 , N/A )<br>( N/A , 0.02 , N/A ) | 16880.5 | N/A | 1.1005<br>[ 1.0000 ] | 110.0%<br>{ 99.3% } | 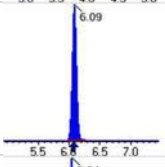 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 474496 | ( 8.24 , N/A )<br>( N/A , 0.01 , N/A ) | 8837.0 | N/A | 1.0636<br>[ 1.0000 ] | 106.4%<br>{ 97.2% } | 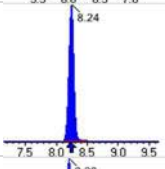 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 379001 | ( 9.20 , N/A )<br>( N/A , 0.01 , N/A ) | 1172.0 | N/A | 1.1337<br>[ 1.0000 ] | 113.4%<br>{ 98.5% } | 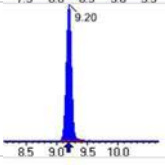 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-LCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 370420 | ( 10.10 , N/A ) ( N/A , 0.01 , N/A ) | 8141.5 | N/A | 1.1170 [ 1.0000 ] | 111.7% { 98.1% } | 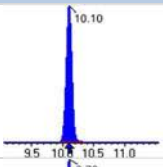 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1157910 | ( 8.70 , N/A ) ( N/A , 0.01 , N/A ) | 5524.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 92.4% } | 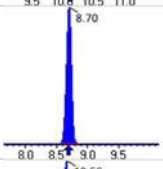 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1027891 | ( 10.56 , N/A ) ( N/A , 0.01 , N/A ) | 2385.0 | N/A | 1.0530 [ 1.0000 ] | 105.3% { 97.2% } | 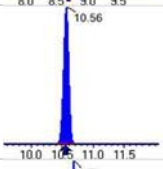 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3125268 | ( 3.78 , N/A ) ( N/A , 0.03 , N/A ) | 58898.6 | N/A | 8.5424 [ 8.0000 ] | 106.8% { 110.0% } | 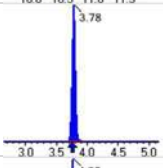 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1318650 | ( 4.86 , N/A ) ( N/A , 0.02 , N/A ) | 6185.3 | N/A | 4.3437 [ 4.0000 ] | 108.6% { 103.0% } | 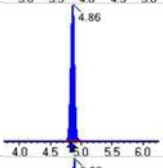 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 793127 | ( 6.09 , N/A ) ( N/A , 0.02 , N/A ) | 7882.0 | N/A | 2.1829 [ 2.0000 ] | 109.1% { 104.6% } | 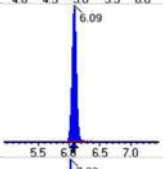 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 812572 | ( 7.23 , N/A ) ( N/A , 0.01 , N/A ) | 4975.0 | N/A | 2.1413 [ 2.0000 ] | 107.1% { 99.0% } | 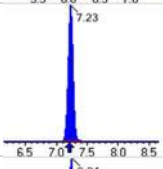 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1041932 | ( 8.24 , N/A ) ( N/A , 0.01 , N/A ) | 2945.6 | N/A | 2.0827 [ 2.0000 ] | 104.1% { 95.9% } | 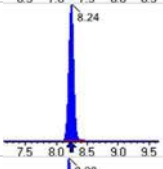 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 379377 | ( 9.20 , N/A ) ( N/A , 0.01 , N/A ) | 3310.1 | N/A | 1.0366 [ 1.0000 ] | 103.7% { 100.3% } | 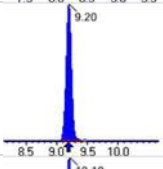 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 443708 | ( 10.10 , N/A ) ( N/A , 0.01 , N/A ) | 1361.9 | N/A | 1.0380 [ 1.0000 ] | 103.8% { 94.1% } | 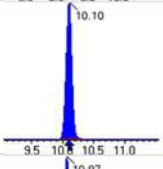 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 533461 | ( 10.97 , N/A ) ( N/A , 0.01 , N/A ) | 1010.6 | N/A | 1.0265 [ 1.0000 ] | 102.6% { 105.2% } | 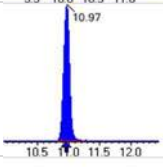 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-LCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 499843 | ( 11.79 , N/A ) ( N/A , 0.02 , N/A ) | 1398.8 | N/A | 0.9577 [ 1.0000 ] | 95.8% { 96.3% } | 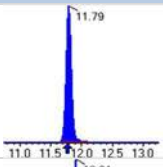  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 451057 | ( 12.91 , N/A ) ( N/A , 0.02 , N/A ) | 1611.9 | N/A | 0.9918 [ 1.0000 ] | 99.2% { 101.9% } | 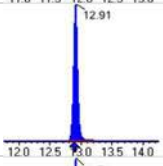  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 739065 | ( 13.71 , N/A ) ( N/A , 0.02 , N/A ) | 3147.2 | N/A | 1.9132 [ 2.0000 ] | 95.7% { 91.8% } | 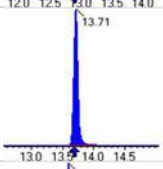  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2400656 | ( 6.39 , N/A ) ( N/A , 0.02 , N/A ) | 922.5 | N/A | 2.1279 [ 2.0000 ] | 106.4% { 100.7% } | 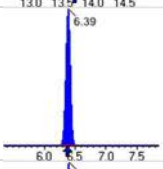  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1755588 | ( 8.70 , N/A ) ( N/A , 0.01 , N/A ) | 5071.1 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 99.6% } | 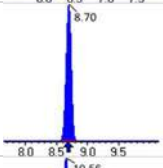  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2194024 | ( 10.56 , N/A ) ( N/A , 0.01 , N/A ) | 1915.9 | N/A | 2.0050 [ 2.0000 ] | 100.3% { 98.3% } | 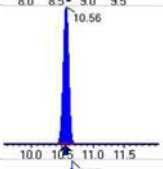  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 722361 | ( 5.55 , N/A ) ( N/A , 0.02 , N/A ) | 105.1 | N/A | 7.1640 [ 4.0000 ] | 179.1% { 130.6% } | 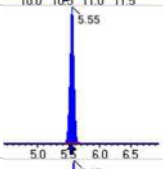  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2011872 | ( 7.67 , N/A ) ( N/A , 0.01 , N/A ) | 4911.2 | N/A | 6.4250 [ 4.0000 ] | 160.6% { 123.6% } | 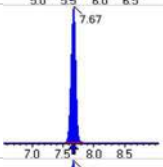  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 2049949 | ( 9.47 , N/A ) ( N/A , 0.01 , N/A ) | 1752.3 | N/A | 6.5711 [ 4.0000 ] | 164.3% { 120.1% } | 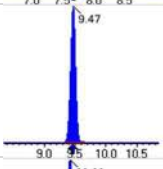  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3856771 | ( 11.11 , N/A ) ( N/A , 0.02 , N/A ) | 1807.9 | N/A | 10.7701 [ 8.0000 ] | 134.6% { 103.9% } | 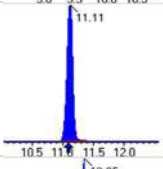  | | S2, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2410614 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2294.3 | N/A | 2.0329 [ 2.0000 ] | 101.6% { 99.5% } | 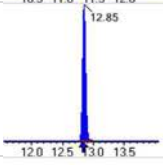  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 432201 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 2305.1 | N/A | 1.9738 [ 2.0000 ] | 98.7% { 101.1% } | 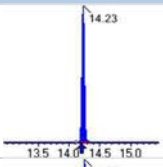 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 483638 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2653.7 | N/A | 1.9229 [ 2.0000 ] | 96.1% { 99.9% } | 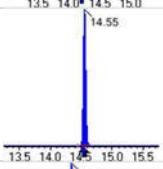 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1340984 | ( 10.34 , N/A ) ( N/A , 0.01 , N/A ) | 2814.2 | N/A | 4.7853 [ 4.0000 ] | 119.6% { 101.6% } | 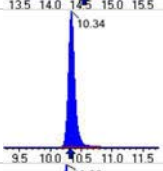 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1257983 | ( 10.86 , N/A ) ( N/A , 0.01 , N/A ) | 1676.8 | N/A | 4.7291 [ 4.0000 ] | 118.2% { 102.1% } | 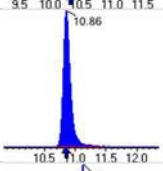 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2021500 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 2922.3 | N/A | 19.7574 [ 20.0000 ] | 98.8% { 108.7% } | 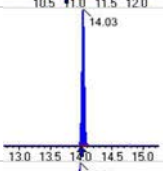 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2150207 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 4803.4 | N/A | 17.3481 [ 20.0000 ] | 86.7% { 102.7% } | 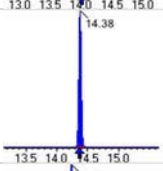 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1338453 | ( 6.54 , N/A ) ( N/A , 0.01 , N/A ) | 1962.9 | N/A | 8.5700 [ 8.0000 ] | 107.1% { 95.4% } | 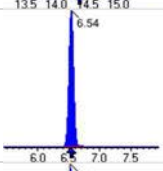 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 701656 | ( 6.82 , N/A ) ( N/A , 0.01 , N/A ) | 1296.8 | N/A | 2.1357 [ 2.0000 ] | 106.8% { 98.6% } | 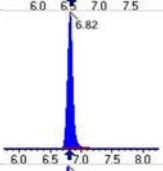 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 649166 | ( 8.88 , N/A ) ( N/A , 0.01 , N/A ) | 605.6 | N/A | 2.1165 [ 2.0000 ] | 105.8% { 96.9% } | 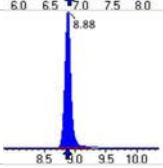 | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0076L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.412L | 2.9L | 30.00L |
| PFPeAL | 0.200L | 0.208L | 4.0L | 30.00L |
| PFHxAL | 0.100L | 0.0989L | -1.1L | 30.00L |
| PFHpAL | 0.100L | 0.0936L | -6.4L | 30.00L |
| PFOAL | 0.100L | 0.112L | 12.0L | 30.00L |
| PFNAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFDAL | 0.100L | 0.109L | 8.9L | 30.00L |
| PFUnAL | 0.100L | 0.101L | 1.3L | 30.00L |
| PFDoAL | 0.100L | 0.105L | 4.9L | 30.00L |
| PFTrDAL | 0.100L | 0.0940L | -6.0L | 30.00L |
| PFTeDAL | 0.100L | 0.0978L | -2.2L | 30.00L |
| PFHxDAL | 0.100L | 0.0965L | -3.5L | 30.00L |
| PFODAL | 0.100L | 0.0984L | -1.6L | 30.00L |
| PFBSL | 0.0885L | 0.0922L | 4.2L | 30.00L |
| PFPeSL | 0.0940L | 0.0887L | -5.6L | 30.00L |
| PFHxSL | 0.0915L | 0.0881L | -3.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0824L | -13.7L | 30.00L |
| PFOSL | 0.0930L | 0.0974L | 4.8L | 30.00L |
| PFNSL | 0.0960L | 0.0859L | -10.5L | 30.00L |
| PFDSL | 0.0965L | 0.0905L | -6.2L | 30.00L |
| PFDoSL | 0.0970L | 0.0876L | -9.7L | 30.00L |
| 4:2FTSL | 0.375L | 0.354L | -5.6L | 30.00L |
| 6:2FTSL | 0.380L | 0.399L | 5.0L | 30.00L |
| 8:2FTSL | 0.384L | 0.364L | -5.1L | 30.00L |
| 10:2FTSL | 0.386L | 0.360L | -6.7L | 30.00L |
| PFOSAL | 0.100L | 0.0896L | -10.4L | 30.00L |
| NMeFOSAL | 0.400L | 0.385L | -3.6L | 30.00L |
| NEtFOSAL | 0.400L | 0.359L | -10.3L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0076L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0869L | -13.1L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0961L | -3.9L | 30.00L |
| NMeFOSEL | 0.400L | 0.387L | -3.3L | 30.00L |
| NEtFOSEL | 0.400L | 0.386L | -3.4L | 30.00L |
| HFPO-DAL | 0.100L | 0.0941L | -5.9L | 30.00L |
| ADONAL | 0.0945L | 0.0894L | -5.3L | 30.00L |
| PFEESAL | 0.178L | 0.175L | -1.5L | 30.00L |
| PFMPAL | 0.200L | 0.174L | -12.9L | 30.00L |
| PFMBAL | 0.200L | 0.179L | -10.5L | 30.00L |
| NFDHAL | 0.200L | 0.189L | -5.3L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0865L | -7.5L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0829L | -12.3L | 30.00L |
| 3:3FTCAL | 0.400L | 0.308L | -23.0L | 30.00L |
| 5:3FTCAL | 0.400L | 0.387L | -3.1L | 30.00L |
| 7:3FTCAL | 0.400L | 0.383L | -4.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 47067<br>( 163.0 / 69.0 ) 1316 | ( 2.78 , 0.74 ) ( N/A , -0.02 , -0.4) | 355.9<br>61.6 | 0.0280<br>103.0<br>106.1 | 0.1478<br>[ 0.2000 ] | 73.9% | 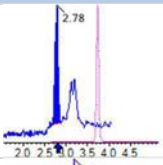 | 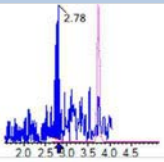 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 138592 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 108.4 | N/A<br>0.0<br>0.0 | 0.4116<br>[ 0.4000 ] | 102.9% | 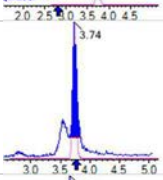 | | MI5 ABK 3/19/24 |
| PFPeA | ( 263.0 / 219.0 ) 60330<br>( 263.0 / 69.0 ) 274 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 1.0) | 334.1<br>11.7 | 0.0045<br>38.0<br>40.9 | 0.2080<br>[ 0.2000 ] | 104.0% | 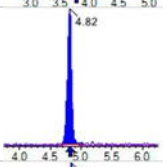 | 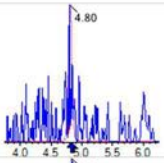 | |
| PFHxA | ( 313.0 / 269.0 ) 31048<br>( 313.0 / 119.0 ) 3804 | ( 6.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 218.1<br>76.3 | 0.1225<br>105.5<br>104.7 | 0.0989<br>[ 0.1000 ] | 98.9% | 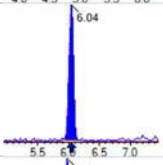 | 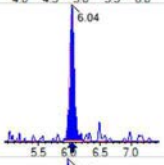 | |
| PFHpA | ( 363.0 / 319.0 ) 32104<br>( 363.0 / 169.0 ) 10165 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.1) | 282.8<br>149.1 | 0.3166<br>104.5<br>107.3 | 0.0936<br>[ 0.1000 ] | 93.6% | 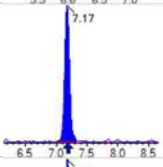 | 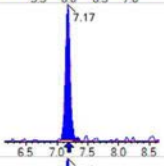 | |
| PFOA | ( 413.0 / 369.0 ) 61826<br>( 413.0 / 169.0 ) 21484 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 84.0<br>115.4 | 0.3475<br>95.1<br>101.2 | 0.1120<br>[ 0.1000 ] | 112.0% | 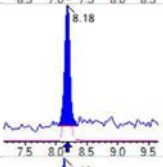 | 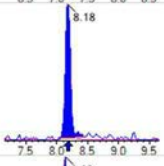 | |
| PFNA | ( 463.0 / 419.0 ) 29580<br>( 463.0 / 169.0 ) 6943 | ( 9.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 240.2<br>119.7 | 0.2347<br>91.9<br>97.6 | 0.0959<br>[ 0.1000 ] | 95.9% | 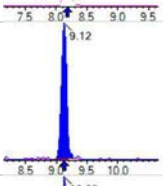 | 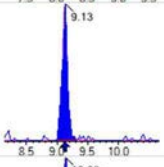 | |
| PFDA | ( 513.0 / 469.0 ) 40655<br>( 513.0 / 169.0 ) 5291 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.3) | 500.2<br>217.6 | 0.1301<br>111.1<br>108.7 | 0.1089<br>[ 0.1000 ] | 108.9% | 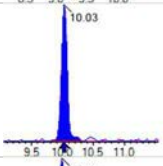 | 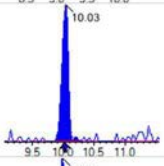 | |
| PFUnA | ( 563.0 / 519.0 ) 40509<br>( 563.0 / 169.0 ) 6769 | ( 10.89 , 1.00 ) ( 0.00 , N/A , -0.5) | 276.0<br>131.2 | 0.1671<br>117.9<br>117.6 | 0.1013<br>[ 0.1000 ] | 101.3% | 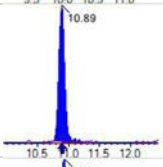 | 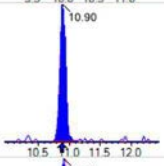 | |
| PFDoA | ( 613.0 / 569.0 ) 45754<br>( 613.0 / 169.0 ) 6839 | ( 11.71 , 1.00 ) ( -0.01 , N/A , 0.6) | 261.3<br>77.8 | 0.1495<br>94.6<br>101.1 | 0.1049<br>[ 0.1000 ] | 104.9% | 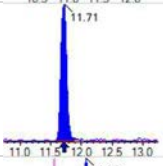 | 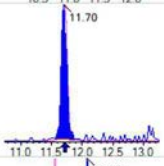 | |
| PFTrDA | ( 663.0 / 619.0 ) 40077<br>( 663.0 / 169.0 ) 12540 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 189.2<br>161.2 | 0.3129<br>121.6<br>120.8 | 0.0940<br>[ 0.1000 ] | 94.0% | 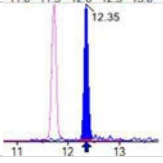 | 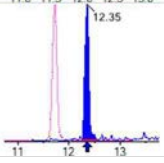 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 32062<br>( 713.0 / 169.0 ) 9163 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 280.6<br>82.3 | 0.2858<br>105.9<br>107.5 | 0.0978<br>[ 0.1000 ] | 97.8% | 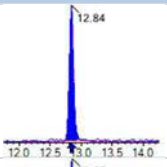 | 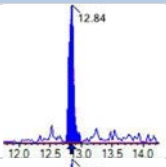 | |
| PFHxDA | ( 813.0 / 769.0 ) 26666<br>( 813.0 / 169.0 ) 5158 | ( 13.65 , 1.00 )<br>( 0.00 , N/A , -0.1) | 205.7<br>48.2 | 0.1934<br>79.1<br>75.8 | 0.0965<br>[ 0.1000 ] | 96.5% | 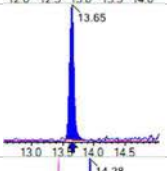 | 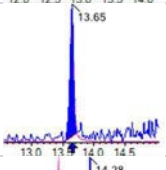 | |
| PFODA | ( 913.0 / 869.0 ) 17005<br>( 913.0 / 169.0 ) 6421 | ( 14.28 , 1.05 )<br>( N/A , -0.01 , -0.5) | 92.3<br>35.7 | 0.3776<br>105.4<br>110.8 | 0.0984<br>[ 0.1000 ] | 98.4% | 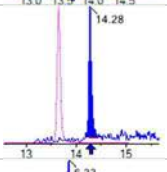 | 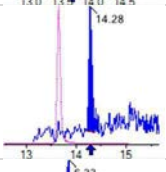 | |
| PFBS | ( 299.0 / 80.0 ) 44646<br>( 299.0 / 99.0 ) 27872 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.0) | 383.3<br>165.4 | 0.6243<br>88.3<br>84.9 | 0.0922<br>[ 0.0885 ] | 104.2% | 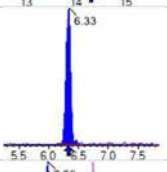 | 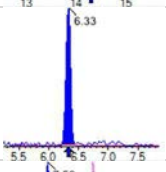 | |
| PFPeS | ( 349.0 / 80.0 ) 101159<br>( 349.0 / 99.0 ) 36023 | ( 7.56 , 0.88 )<br>( N/A , 0.00 , -0.2) | 377.7<br>381.4 | 0.3561<br>99.0<br>101.1 | 0.0887<br>[ 0.0938 ] | 94.5% | 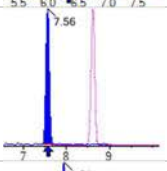 | 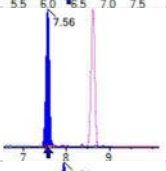 | |
| PFHxS | ( 399.0 / 80.0 ) 116709<br>( 399.0 / 99.0 ) 38098 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 575.1<br>430.6 | 0.3264<br>102.5<br>97.6 | 0.0881<br>[ 0.0911 ] | 96.7% | 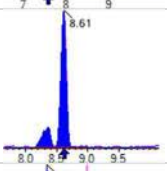 | 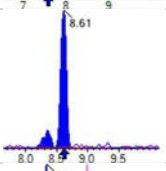 | |
| PFHpS | ( 449.0 / 80.0 ) 87202<br>( 449.0 / 99.0 ) 26573 | ( 9.59 , 0.91 )<br>( N/A , 0.01 , 0.2) | 325.7<br>293.6 | 0.3047<br>115.1<br>115.1 | 0.0824<br>[ 0.0951 ] | 86.6% | 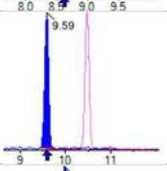 | 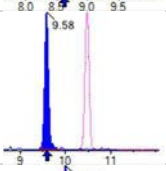 | |
| PFOS | ( 499.0 / 80.0 ) 99408<br>( 499.0 / 99.0 ) 23088 | ( 10.47 , 1.00 )<br>( 0.00 , N/A , -0.6) | 316.8<br>8184.8 | 0.2323<br>99.4<br>96.7 | 0.0974<br>[ 0.0927 ] | 105.1% | 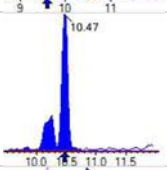 | 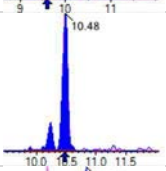 | |
| PFNS | ( 549.0 / 80.0 ) 82027<br>( 549.0 / 99.0 ) 23150 | ( 11.31 , 1.08 )<br>( N/A , 0.00 , 0.1) | 271.8<br>203.4 | 0.2822<br>103.6<br>104.7 | 0.0859<br>[ 0.0960 ] | 89.5% | 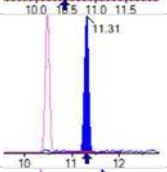 | 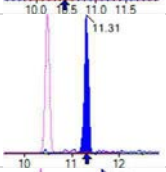 | |
| PFDS | ( 599.0 / 80.0 ) 105536<br>( 599.0 / 99.0 ) 29516 | ( 12.03 , 1.15 )<br>( N/A , 0.00 , -0.2) | 384.1<br>182.1 | 0.2797<br>102.9<br>104.6 | 0.0905<br>[ 0.0963 ] | 94.0% | 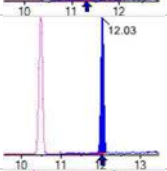 | 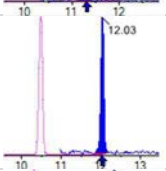 | |
| PFDoS | ( 699.0 / 80.0 ) 90038<br>( 699.0 / 99.0 ) 21141 | ( 12.95 , 1.24 )<br>( N/A , 0.00 , 0.2) | 633.3<br>245.9 | 0.2348<br>100.5<br>102.5 | 0.0876<br>[ 0.0970 ] | 90.3% | 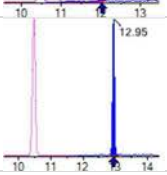 | 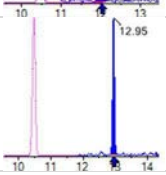 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 171899<br>( 327.0 / 81.0 ) 150442 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1717.6<br>683.9 | 0.8752<br>100.3<br>97.2 | 0.3539<br>[ 0.3738 ] | 94.7% | 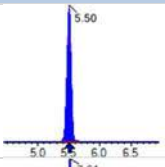 | 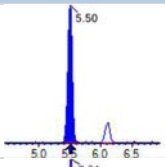 | |
| 6:2FTS | ( 427.0 / 407.0 ) 166522<br>( 427.0 / 81.0 ) 197744 | ( 7.61 , 1.00 ) ( -0.01 , N/A , 0.0) | 2378.9<br>1070.7 | 1.1875<br>94.7<br>89.7 | 0.3988<br>[ 0.3796 ] | 105.1% | 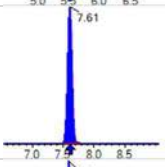 | 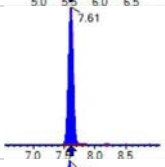 | |
| 8:2FTS | ( 527.0 / 507.0 ) 144163<br>( 527.0 / 81.0 ) 157932 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.1) | 941.2<br>658.7 | 1.0955<br>100.7<br>107.5 | 0.3643<br>[ 0.3833 ] | 95.1% | 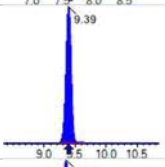 | 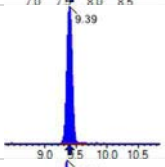 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119303<br>( 627.0 / 81.0 ) 176570 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 738.6<br>403.5 | 1.4800<br>102.8<br>101.5 | 0.3600<br>[ 0.3865 ] | 93.2% | 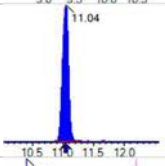 | 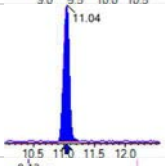 | |
| PFBSA | ( 297.9 / 78.0 ) 85442<br>( 297.9 / 278.0 ) 256 | ( 8.10 , 0.57 ) ( N/A , 0.00 , -2.0) | 513.5<br>10.9 | 0.0030<br>219.5<br>193.6 | 0.1039<br>[ 0.1000 ] | 103.9% | 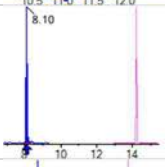 | 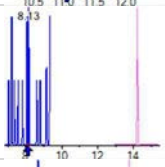 | |
| PFHxSA | ( 397.9 / 78.0 ) 109513<br>( 397.9 / 378.0 ) 757 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.1) | 794.2<br>30.1 | 0.0069<br>169.2<br>165.2 | 0.0991<br>[ 0.1000 ] | 99.1% | 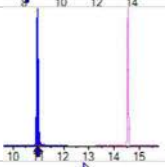 | 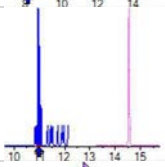 | |
| PFOSA | ( 498.0 / 78.0 ) 72856<br>( 498.0 / 478.0 ) 1203 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.8) | 695.3<br>58.1 | 0.0165<br>117.6<br>110.9 | 0.0896<br>[ 0.1000 ] | 89.6% | 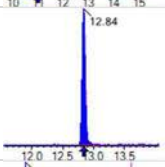 | 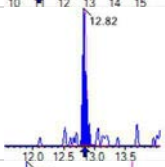 | |
| TFSI | ( 279.7 / 147.0 ) 192505<br>( 279.7 / 211.0 ) 18747 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.2) | 49.6<br>23.7 | 0.0974<br>115.9<br>113.8 | 0.0899<br>[ 0.0979 ] | 91.8% | 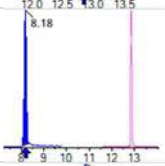 | 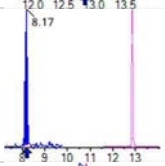 | |
| NMeFOSA | ( 512.0 / 219.0 ) 61072<br>( 512.0 / 169.0 ) 45751 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.5) | 689.5<br>323.4 | 0.7491<br>100.1<br>98.8 | 0.3855<br>[ 0.4000 ] | 96.4% | 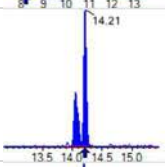 | 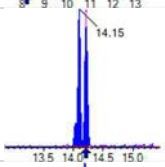 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72281<br>( 526.0 / 169.0 ) 87162 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 814.9<br>622.0 | 1.2059<br>97.7<br>97.1 | 0.3588<br>[ 0.4000 ] | 89.7% | 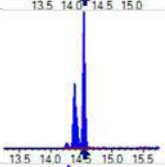 | 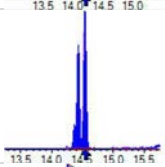 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 19339<br>( 570.0 / 483.0 ) 9536 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 1.4) | 48407.4<br>49763.3 | 0.4931<br>112.5<br>105.5 | 0.0869<br>[ 0.1000 ] | 86.9% | 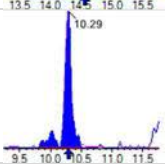 | 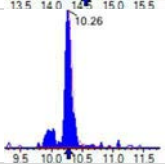 | MI4 ABK 3/19/24 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21192<br>( 584.0 / 526.0 ) 11046 | ( 10.82 , 1.00 )<br>( 0.02 , N/A , 0.8) | 143962.1<br>234.0 | 0.5212<br>84.5<br>88.1 | 0.0961<br>[ 0.1000 ] | 96.1% | 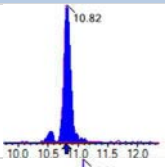 | 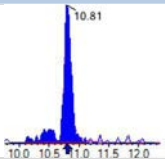 | MI4 ABK 3/19/24 |
| NMeFOSE | ( 616.0 / 59.0 ) 31285 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 199.9 | N/A<br>0.0<br>0.0 | 0.3866<br>[ 0.4000 ] | 96.7% | 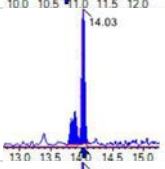 | | MI3 ABK 3/19/24 |
| NEtFOSE | ( 630.0 / 59.0 ) 25347 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 258.7 | N/A<br>0.0<br>0.0 | 0.3864<br>[ 0.4000 ] | 96.6% | 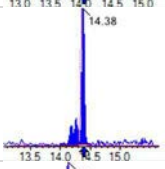 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7969<br>( 285.0 / 185.0 ) 22073 | ( 6.48 , 1.00 )<br>( -0.01 , N/A , -0.3) | 172.6<br>171.4 | 2.7698<br>100.2<br>105.0 | 0.0941<br>[ 0.1000 ] | 94.1% | 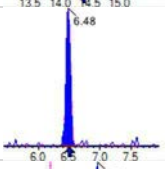 | 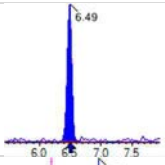 | |
| ADONA | ( 377.0 / 85.0 ) 88358<br>( 377.0 / 251.0 ) 9014 | ( 7.56 , 1.17 )<br>( N/A , 0.00 , 0.2) | 604.2<br>141.8 | 0.1020<br>100.1<br>97.6 | 0.0894<br>[ 0.0943 ] | 94.9% | 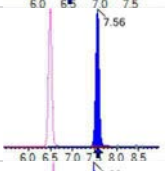 | 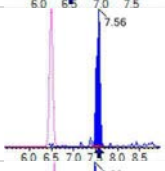 | |
| PFEESA | ( 315.0 / 135.0 ) 39560<br>( 315.0 / 83.0 ) 25099 | ( 6.92 , 1.15 )<br>( N/A , -0.01 , -0.4) | 780.1<br>83.9 | 0.6345<br>113.8<br>112.0 | 0.1754<br>[ 0.1785 ] | 98.3% | 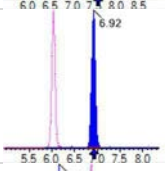 | 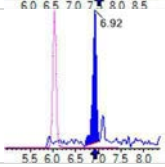 | |
| PFMPA | ( 229.0 / 85.0 ) 16031 | ( 4.12 , 0.86 )<br>( N/A , -0.02 , 0.0) | 334.6 | N/A<br>0.0<br>0.0 | 0.1742<br>[ 0.2000 ] | 87.1% | 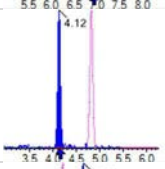 | | |
| PFMBA | ( 279.0 / 85.0 ) 44800 | ( 5.18 , 1.08 )<br>( N/A , -0.01 , 0.0) | 597.2 | N/A<br>0.0<br>0.0 | 0.1791<br>[ 0.2000 ] | 89.5% | 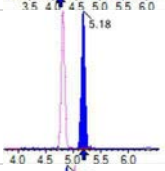 | | |
| NFDHA | ( 295.0 / 201.0 ) 22208<br>( 295.0 / 85.0 ) 22515 | ( 5.90 , 0.98 )<br>( N/A , 0.00 , 0.2) | 653.0<br>208.4 | 1.0138<br>94.0<br>100.8 | 0.1894<br>[ 0.2000 ] | 94.7% | 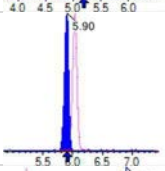 | 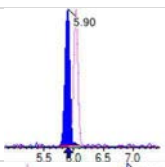 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 92247<br>( 533.0 / 353.0 ) 27025 | ( 11.13 , 1.71 )<br>( N/A , 0.01 , 0.3) | 1045.0<br>479.6 | 0.2930<br>93.6<br>88.9 | 0.0865<br>[ 0.0933 ] | 92.6% | 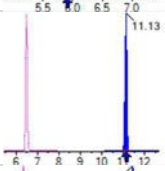 | 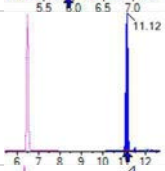 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 67993<br>( 633.0 / 453.0 ) 23083 | ( 12.44 , 1.92 )<br>( N/A , 0.00 , -0.2) | 1180.5<br>305.0 | 0.3395<br>102.2<br>99.2 | 0.0829<br>[ 0.0943 ] | 87.9% | 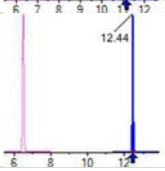 | 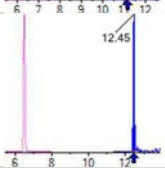 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 47255<br>( 461.0 / 381.2 ) 20429 | ( 9.51 , 0.91 ) ( N/A , 0.00 , 0.1) | 785.8<br>377.2 | 0.4323<br>108.5<br>109.0 | 0.0821<br>[ 0.0924 ] | 88.9% | 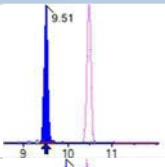 | 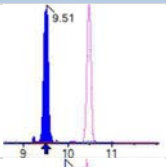 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5084<br>( 241.0 / 117.0 ) 13448 | ( 4.38 , 0.91 ) ( N/A , -0.01 , 0.0) | 299.2<br>194.9 | 2.6448<br>125.5<br>121.9 | 0.3081<br>[ 0.4000 ] | 77.0% | 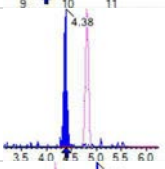 | 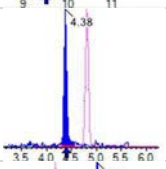 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 33751<br>( 341.0 / 217.0 ) 52605 | ( 6.93 , 1.15 ) ( N/A , -0.01 , 0.0) | 268.0<br>252.9 | 1.5586<br>102.6<br>107.1 | 0.3875<br>[ 0.4000 ] | 96.9% | 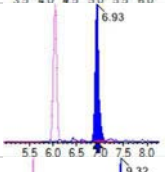 | 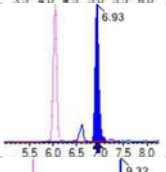 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54752<br>( 441.0 / 337.0 ) 50432 | ( 9.32 , 1.54 ) ( N/A , 0.00 , 0.0) | 6985.1<br>5483054.5 | 0.9211<br>100.4<br>105.3 | 0.3831<br>[ 0.4000 ] | 95.8% | 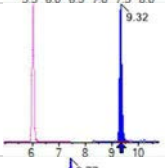 | 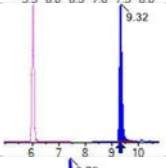 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 35681<br>( 357.2 / 243.0 ) 5762 | ( 6.77 , 1.00 ) ( -0.01 , N/A , 0.2) | 296.0<br>77.3 | 0.1615<br>146.5<br>155.1 | 0.0905<br>[ 0.1000 ] | 90.5% | 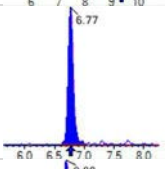 | 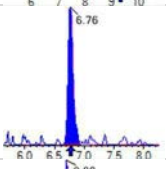 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24379<br>( 457.2 / 343.0 ) 1534 | ( 8.80 , 1.00 ) ( -0.02 , N/A , -0.4) | 217.0<br>80.7 | 0.0629<br>151.7<br>138.8 | 0.0887<br>[ 0.1000 ] | 88.7% | 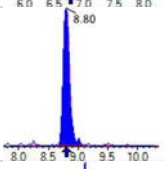 | 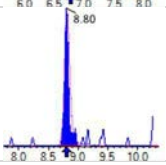 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 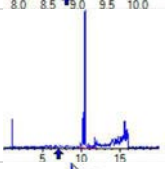 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282417 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1316.3 | N/A | 1.1845<br>[ 1.0000 ] | 118.4%<br>{ 119.4% } | 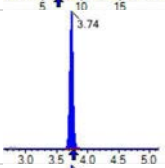 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 132714 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 6222.6 | N/A | 1.0462<br>[ 1.0000 ] | 104.6%<br>{ 104.8% } | 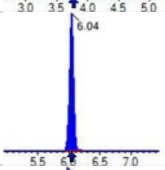 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 445408 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3769.0 | N/A | 1.1267<br>[ 1.0000 ] | 112.7%<br>{ 117.4% } | 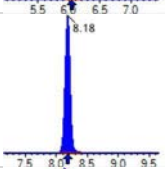 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317549 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 1127.4 | N/A | 1.1165<br>[ 1.0000 ] | 111.7%<br>{ 112.9% } | 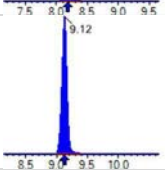 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303337 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3256.1 | N/A | 1.0387 [ 1.0000 ] | 103.9% { 104.9% } | 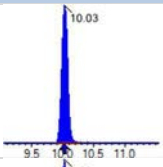 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1014053 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 5000.9 | N/A | 1.0685 [ 1.0000 ] | 106.9% { 108.6% } | 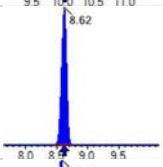 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 795109 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1897.5 | N/A | 1.0439 [ 1.0000 ] | 104.4% { 111.7% } | 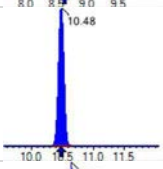 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2702588 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40570.3 | N/A | 8.3767 [ 8.0000 ] | 104.7% { 120.7% } | 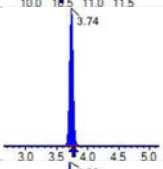 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1148479 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6049.7 | N/A | 4.6380 [ 4.0000 ] | 115.9% { 117.7% } | 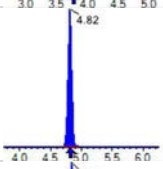 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 653814 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 9511.1 | N/A | 2.1592 [ 2.0000 ] | 108.0% { 110.8% } | 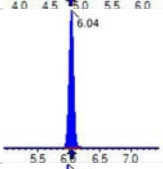 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 699408 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 7443.9 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 106.5% } | 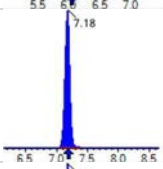 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 929590 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 4049.2 | N/A | 1.9478 [ 2.0000 ] | 97.4% { 107.8% } | 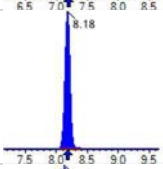 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 307041 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3378.4 | N/A | 0.9861 [ 1.0000 ] | 98.6% { 113.8% } | 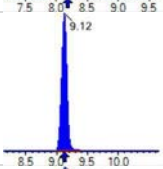 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 365279 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 996.8 | N/A | 1.0745 [ 1.0000 ] | 107.5% { 113.5% } | 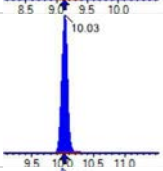 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432373 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 808.4 | N/A | 1.0811 [ 1.0000 ] | 108.1% { 116.2% } | 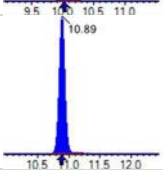 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433394 | ( 11.72 , N/A ) ( N/A , 0.00 , N/A ) | 1303.4 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 116.2% } | 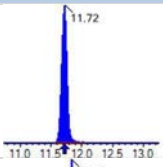  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 350124 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1144.3 | N/A | 1.0095 [ 1.0000 ] | 100.9% { 107.2% } | 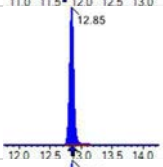  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579308 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2648.7 | N/A | 1.9564 [ 2.0000 ] | 97.8% { 114.7% } | 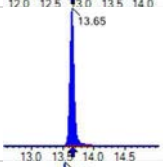  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1865423 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1146.5 | N/A | 2.0361 [ 2.0000 ] | 101.8% { 111.2% } | 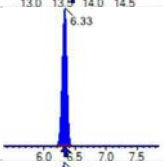  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1489931 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4743.7 | N/A | 2.0374 [ 2.0000 ] | 101.9% { 113.0% } | 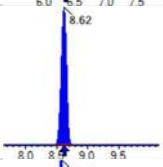  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1766562 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1601.6 | N/A | 2.0606 [ 2.0000 ] | 103.0% { 114.0% } | 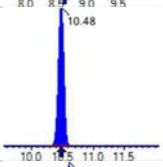  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 740312 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 90.1 | N/A | 4.6833 [ 4.0000 ] | 117.1% { 125.7% } | 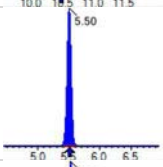  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2016832 | ( 7.62 , N/A ) ( N/A , 0.01 , N/A ) | 3498.2 | N/A | 4.2632 [ 4.0000 ] | 106.6% { 121.0% } | 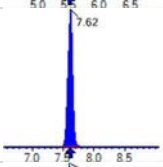  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1666535 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1318.4 | N/A | 4.4917 [ 4.0000 ] | 112.3% { 121.8% } | 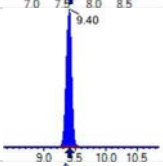  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3439402 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1774.5 | N/A | 8.8699 [ 8.0000 ] | 110.9% { 134.7% } | 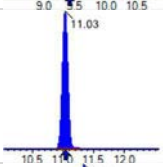  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1626298 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2527.3 | N/A | 2.1406 [ 2.0000 ] | 107.0% { 118.4% } | 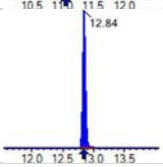  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 319120 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1934.6 | N/A | 1.9804 [ 2.0000 ] | 99.0% { 110.8% } | 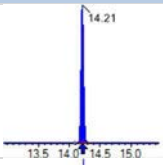  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 359797 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2191.0 | N/A | 2.0821 [ 2.0000 ] | 104.1% { 117.3% } | 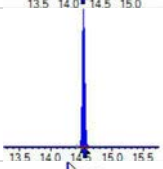  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 933377 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2330.1 | N/A | 4.2313 [ 4.0000 ] | 105.8% { 110.4% } | 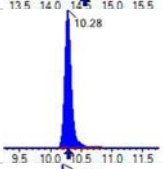  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 901988 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1892.3 | N/A | 4.4865 [ 4.0000 ] | 112.2% { 117.1% } | 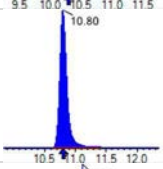  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475303 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1625.0 | N/A | 20.3737 [ 20.0000 ] | 101.9% { 107.3% } | 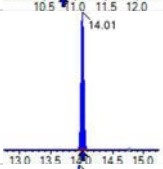  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1476802 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4748.1 | N/A | 20.0935 [ 20.0000 ] | 100.5% { 114.5% } | 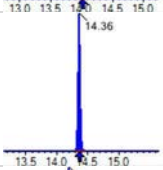  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148686 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2151.5 | N/A | 8.3276 [ 8.0000 ] | 104.1% { 112.3% } | 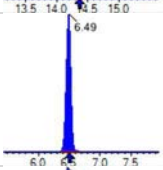  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 741493 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1122.8 | N/A | 2.2546 [ 2.0000 ] | 112.7% { 120.2% } | 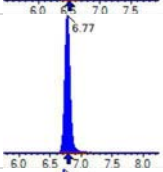  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 674096 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 797.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 121.8% } | 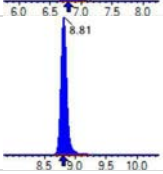  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV1 A | PFBA | 20.0A | 19.8A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.58A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.59A | 91.8A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 5.04A | 101A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.50A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.36A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 5.00A | 100A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.80A | 96.1A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.85A | 97.0A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.75A | 95.1A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.44A | 88.9A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.05A | 81.0A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.27A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.75A | 101A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.55A | 99.3A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.87A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.61A | 99.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.68A | 97.5A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.96A | 103A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.86A | 100A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.8A | 94.7A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 99.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.0A | 99.1A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 18.5A | 96.0A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.90A | 98.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.4A | 96.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.97A | 99.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.96A | 99.1A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV1A | NMeFOSEA | 20.0A | 18.9A | 94.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.00A | 100A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.15A | 87.9A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.46A | 95.1A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.58A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.94A | 99.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.26A | 92.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 3.95A | 84.4A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 3.78A | 80.2A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 19.4A | 97.1A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.7A | 98.6A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 20.8A | 104A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 3174694<br>( 163.0 / 69.0 ) 83041 | ( 2.77 , 0.74 ) ( N/A , 0.00 , 0.1) | 12365.4<br>2320.0 | 0.0262<br>104.3<br>100.0 | 10.1087<br>[ 10.0000 ] | 101.1% | 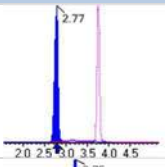 | 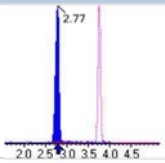 | |
| PFBA | ( 213.0 / 169.0 ) 6642382 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 6140.6 | N/A<br>0.0<br>0.0 | 19.7787<br>[ 20.0000 ] | 98.9% | 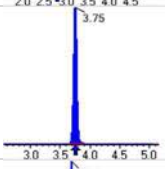 | | |
| PFPeA | ( 263.0 / 219.0 ) 3123710<br>( 263.0 / 69.0 ) 36508 | ( 4.84 , 1.00 ) ( 0.00 , N/A , -0.1) | 5371.6<br>428.5 | 0.0117<br>106.4<br>100.0 | 9.5850<br>[ 10.0000 ] | 95.8% | 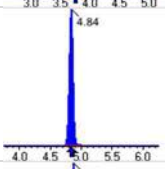 | 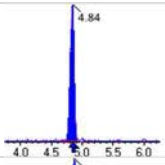 | |
| PFHxA | ( 313.0 / 269.0 ) 1686321<br>( 313.0 / 119.0 ) 191629 | ( 6.07 , 1.00 ) ( 0.00 , N/A , 0.0) | 2318.9<br>1505.5 | 0.1136<br>102.3<br>100.0 | 4.5886<br>[ 5.0000 ] | 91.8% | 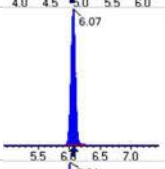 | 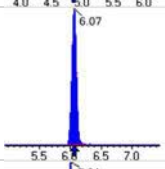 | |
| PFHpA | ( 363.0 / 319.0 ) 2037948<br>( 363.0 / 169.0 ) 599281 | ( 7.21 , 1.00 ) ( 0.00 , N/A , 0.0) | 1791.7<br>1691.7 | 0.2941<br>94.4<br>100.0 | 5.0403<br>[ 5.0000 ] | 100.8% | 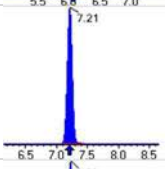 | 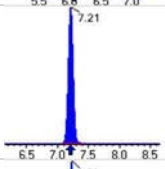 | |
| PFOA | ( 413.0 / 369.0 ) 2484828<br>( 413.0 / 169.0 ) 881936 | ( 8.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 887.1<br>1230.1 | 0.3549<br>98.1<br>100.0 | 4.4979<br>[ 5.0000 ] | 90.0% | 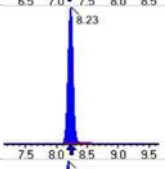 | 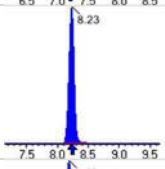 | |
| PFNA | ( 463.0 / 419.0 ) 1792898<br>( 463.0 / 169.0 ) 441254 | ( 9.19 , 1.00 ) ( 0.00 , N/A , 0.2) | 1352.2<br>998.6 | 0.2461<br>93.8<br>100.0 | 4.7318<br>[ 5.0000 ] | 94.6% | 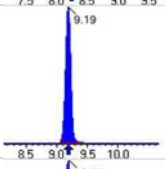 | 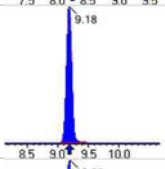 | |
| PFDA | ( 513.0 / 469.0 ) 2047543<br>( 513.0 / 169.0 ) 247203 | ( 10.09 , 1.00 ) ( 0.00 , N/A , -0.1) | 3136.7<br>2418.4 | 0.1207<br>102.9<br>100.0 | 4.3624<br>[ 5.0000 ] | 87.2% | 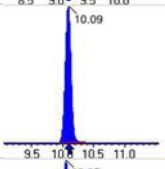 | 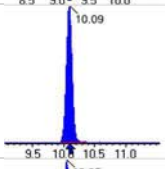 | |
| PFUnA | ( 563.0 / 519.0 ) 2367935<br>( 563.0 / 169.0 ) 342570 | ( 10.95 , 1.00 ) ( 0.00 , N/A , 0.1) | 1181.4<br>942.7 | 0.1447<br>97.7<br>100.0 | 5.0014<br>[ 5.0000 ] | 100.0% | 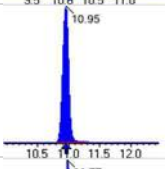 | 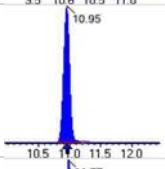 | |
| PFDoA | ( 613.0 / 569.0 ) 2553072<br>( 613.0 / 169.0 ) 390512 | ( 11.77 , 1.00 ) ( 0.00 , N/A , -0.1) | 1434.0<br>1218.1 | 0.1530<br>96.7<br>100.0 | 4.8047<br>[ 5.0000 ] | 96.1% | 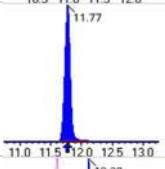 | 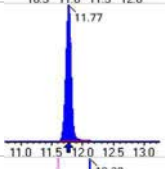 | |
| PFTrDA | ( 663.0 / 619.0 ) 2478327<br>( 663.0 / 169.0 ) 631257 | ( 12.39 , 1.05 ) ( N/A , 0.00 , 0.1) | 1520.4<br>1107.7 | 0.2547<br>94.5<br>100.0 | 4.8511<br>[ 5.0000 ] | 97.0% | 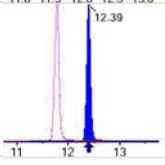 | 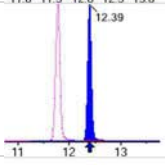 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1998540<br>( 713.0 / 169.0 ) 527816 | ( 12.88 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2006.5<br>1598.5 | 0.2641<br>101.6<br>100.0 | 4.7533<br>[ 5.0000 ] | 95.1% | 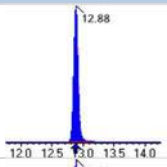 | 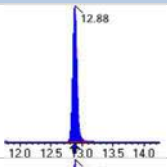 | |
| PFHxDA | ( 813.0 / 769.0 ) 1725869<br>( 813.0 / 169.0 ) 439478 | ( 13.68 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2150.8<br>1518.9 | 0.2546<br>117.4<br>100.0 | 4.4428<br>[ 5.0000 ] | 88.9% | 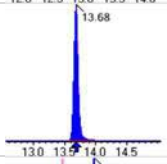 | 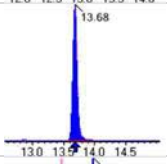 | |
| PFODA | ( 913.0 / 869.0 ) 1056626<br>( 913.0 / 169.0 ) 350452 | ( 14.32 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2291.1<br>1014.0 | 0.3317<br>86.8<br>100.0 | 4.0483<br>[ 5.0000 ] | 81.0% | 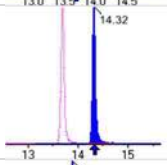 | 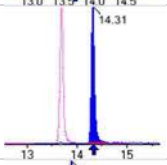 | |
| PFBS | ( 299.0 / 80.0 ) 2646515<br>( 299.0 / 99.0 ) 1907738 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4009.3<br>2894.7 | 0.7208<br>101.4<br>100.0 | 4.2699<br>[ 4.4237 ] | 96.5% | 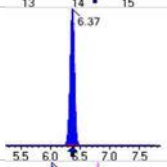 | 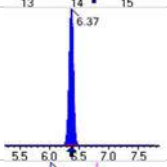 | |
| PFPeS | ( 349.0 / 80.0 ) 6665534<br>( 349.0 / 99.0 ) 2287312 | ( 7.61 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2610.3<br>2584.4 | 0.3432<br>100.9<br>100.0 | 4.7475<br>[ 4.6919 ] | 101.2% | 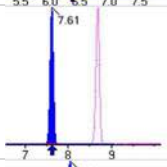 | 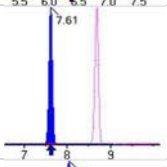 | |
| PFHxS | ( 399.0 / 80.0 ) 7097901<br>( 399.0 / 99.0 ) 2277470 | ( 8.68 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3861.5<br>5217.5 | 0.3209<br>102.6<br>100.0 | 4.5460<br>[ 4.5549 ] | 99.8% | 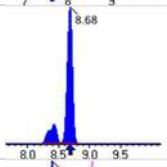 | 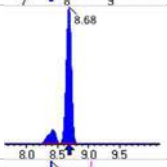 | |
| PFHpS | ( 449.0 / 80.0 ) 6242754<br>( 449.0 / 99.0 ) 1676972 | ( 9.66 , 0.92 )<br>( N/A , 0.00 , 0.0) | 1899.3<br>2344.8 | 0.2686<br>100.5<br>100.0 | 4.8696<br>[ 4.7570 ] | 102.4% | 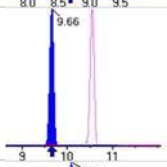 | 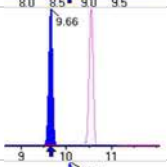 | |
| PFOS | ( 499.0 / 80.0 ) 5943699<br>( 499.0 / 99.0 ) 1302117 | ( 10.55 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2893.7<br>4064.5 | 0.2191<br>92.6<br>100.0 | 4.6081<br>[ 4.6375 ] | 99.4% | 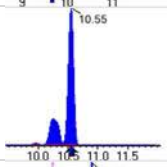 | 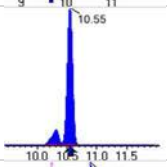 | |
| PFNS | ( 549.0 / 80.0 ) 5889152<br>( 549.0 / 99.0 ) 1614120 | ( 11.38 , 1.08 )<br>( N/A , 0.00 , 0.2) | 2555.9<br>3077.1 | 0.2741<br>103.2<br>100.0 | 4.6821<br>[ 4.7994 ] | 97.6% | 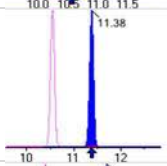 | 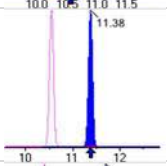 | |
| PFDS | ( 599.0 / 80.0 ) 7438396<br>( 599.0 / 99.0 ) 1886532 | ( 12.08 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3139.3<br>2931.9 | 0.2536<br>101.1<br>100.0 | 4.9615<br>[ 4.8155 ] | 103.0% | 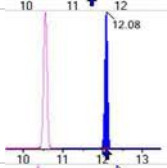 | 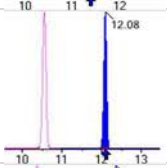 | |
| PFDoS | ( 699.0 / 80.0 ) 6232312<br>( 699.0 / 99.0 ) 1410441 | ( 12.99 , 1.23 )<br>( N/A , 0.00 , 0.1) | 4043.7<br>3711.8 | 0.2263<br>98.1<br>100.0 | 4.8650<br>[ 4.8478 ] | 100.4% | 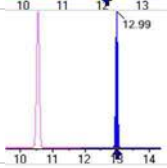 | 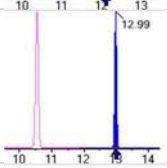 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6627853<br>( 327.0 / 81.0 ) 6059705 | ( 5.53 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4357.3<br>2914.4 | 0.9143<br>104.4<br>100.0 | 17.7964<br>[ 18.6906 ] | 95.2% | 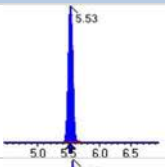 | 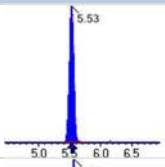 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6855467<br>( 427.0 / 81.0 ) 8698261 | ( 7.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3796.6<br>4110.7 | 1.2688<br>99.9<br>100.0 | 18.9630<br>[ 18.9808 ] | 99.9% | 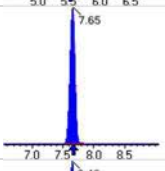 | 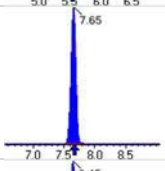 | |
| 8:2FTS | ( 527.0 / 507.0 ) 8039610<br>( 527.0 / 81.0 ) 8010457 | ( 9.46 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1506.6<br>1389.7 | 0.9964<br>105.1<br>100.0 | 19.0199<br>[ 19.1658 ] | 99.2% | 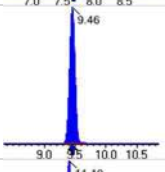 | 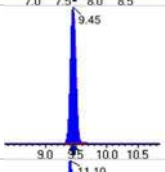 | |
| 10:2FTS | ( 627.0 / 607.0 ) 7073127<br>( 627.0 / 81.0 ) 9687609 | ( 11.10 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1429.7<br>1658.0 | 1.3696<br>101.3<br>100.0 | 18.5326<br>[ 19.3236 ] | 95.9% | 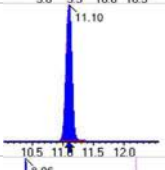 | 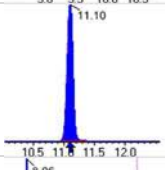 | |
| PFBSA | ( 297.9 / 78.0 ) 5469720<br>( 297.9 / 278.0 ) 8653 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , -0.2) | 1344.3<br>117.8 | 0.0016<br>112.7<br>100.0 | 5.5670<br>[ 5.0000 ] | 111.3% | 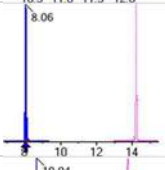 | 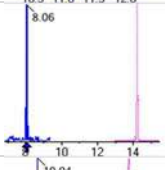 | |
| PFHxSA | ( 397.9 / 78.0 ) 6590564<br>( 397.9 / 378.0 ) 27585 | ( 10.94 , 0.75 )<br>( N/A , 0.00 , -0.1) | 1246.1<br>707.4 | 0.0042<br>109.9<br>100.0 | 5.3064<br>[ 5.0000 ] | 106.1% | 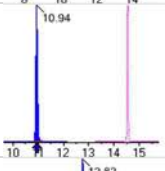 | 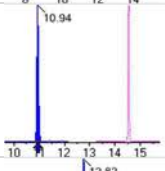 | |
| PFOSA | ( 498.0 / 78.0 ) 5790391<br>( 498.0 / 478.0 ) 79267 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2304.7<br>1185.1 | 0.0137<br>94.9<br>100.0 | 4.8999<br>[ 5.0000 ] | 98.0% | 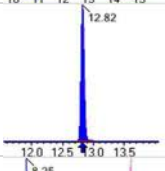 | 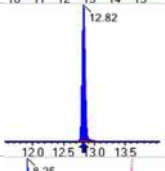 | |
| TFSI | ( 279.7 / 147.0 ) 13168969<br>( 279.7 / 211.0 ) 1119909 | ( 8.25 , 0.64 )<br>( N/A , 0.00 , -0.1) | 58.4<br>51.9 | 0.0850<br>103.1<br>100.0 | 5.2418<br>[ 4.8967 ] | 107.0% | 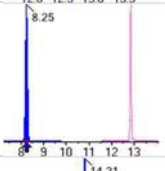 | 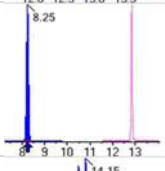 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4251106<br>( 512.0 / 169.0 ) 3245330 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3463.2<br>3987.2 | 0.7634<br>103.9<br>100.0 | 19.7521<br>[ 20.0000 ] | 98.8% | 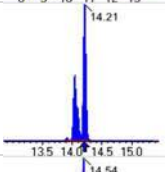 | 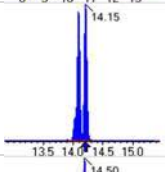 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5145059<br>( 526.0 / 169.0 ) 6494130 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.1) | 4955.0<br>4293.0 | 1.2622<br>99.6<br>100.0 | 19.3627<br>[ 20.0000 ] | 96.8% | 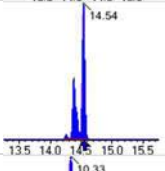 | 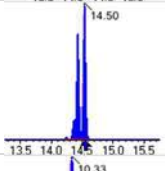 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1546207<br>( 570.0 / 483.0 ) 704515 | ( 10.33 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4118.7<br>2203.1 | 0.4556<br>105.2<br>100.0 | 4.9743<br>[ 5.0000 ] | 99.5% | 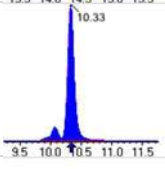 | 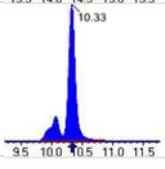 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1472487<br>( 584.0 / 526.0 ) 887260 | ( 10.86 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1963.0<br>838.6 | 0.6026<br>97.3<br>100.0 | 4.9570<br>[ 5.0000 ] | 99.1% | 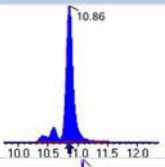 | 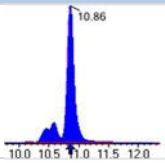 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1984558 | ( 14.02 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2656.7 | N/A<br>0.0<br>0.0 | 18.8596<br>[ 20.0000 ] | 94.3% | 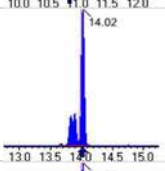 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1828397 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4092.1 | N/A<br>0.0<br>0.0 | 19.7667<br>[ 20.0000 ] | 98.8% | 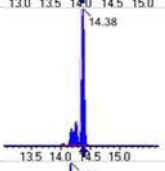 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 498372<br>( 285.0 / 185.0 ) 1381090 | ( 6.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2115.7<br>2283.5 | 2.7712<br>88.9<br>100.0 | 5.0034<br>[ 5.0000 ] | 100.1% | 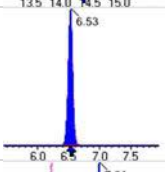 | 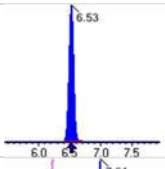 | |
| ADONA | ( 377.0 / 85.0 ) 5262744<br>( 377.0 / 251.0 ) 556853 | ( 7.61 , 1.17 )<br>( N/A , 0.00 , -0.1) | 1911.8<br>1801.9 | 0.1058<br>99.2<br>100.0 | 4.1487<br>[ 4.7135 ] | 88.0% | 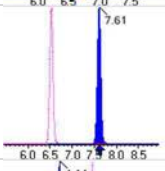 | 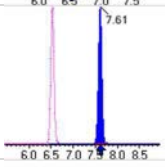 | |
| PFMPA | ( 229.0 / 85.0 ) 988437 | ( 4.14 , 0.86 )<br>( N/A , 0.00 , 0.0) | 6421.1 | N/A<br>0.0<br>0.0 | 9.5797<br>[ 10.0000 ] | 95.8% | 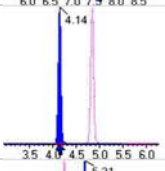 | | |
| PFMBA | ( 279.0 / 85.0 ) 2713739 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5669.6 | N/A<br>0.0<br>0.0 | 9.9368<br>[ 10.0000 ] | 99.4% | 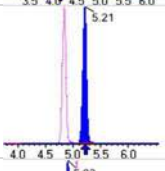 | | |
| NFDHA | ( 295.0 / 201.0 ) 1183430<br>( 295.0 / 85.0 ) 1266424 | ( 5.93 , 0.98 )<br>( N/A , 0.00 , -0.1) | 2804.5<br>2924.9 | 1.0701<br>98.9<br>100.0 | 9.2633<br>[ 10.0000 ] | 92.6% | 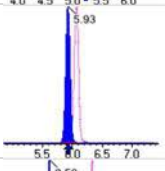 | 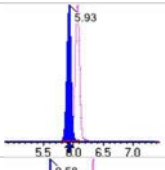 | |
| PFECHS | ( 461.0 / 98.9 ) 3132646<br>( 461.0 / 381.2 ) 1225790 | ( 9.58 , 0.91 )<br>( N/A , 0.00 , 0.0) | 3929.0<br>3985.3 | 0.3913<br>100.2<br>100.0 | 4.3068<br>[ 4.6193 ] | 93.2% | 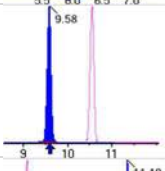 | 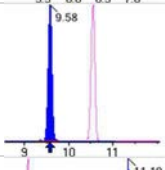 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 6183344<br>( 533.0 / 353.0 ) 1925373 | ( 11.19 , 1.72 )<br>( N/A , 0.00 , 0.1) | 1944.9<br>2412.8 | 0.3114<br>96.9<br>100.0 | 3.9500<br>[ 4.6663 ] | 84.6% | 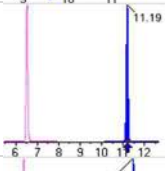 | 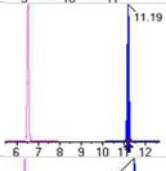 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4640356<br>( 633.0 / 453.0 ) 1538927 | ( 12.49 , 1.91 )<br>( N/A , 0.00 , 0.1) | 3572.0<br>3578.2 | 0.3316<br>101.5<br>100.0 | 3.7844<br>[ 4.7160 ] | 80.2% | 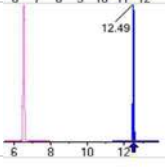 | 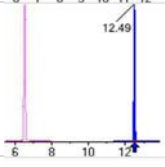 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2338345<br>( 315.0 / 83.0 ) 1382996 | ( 6.97 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3378.6<br>1359.0 | 0.5914<br>103.2<br>100.0 | 8.4597<br>[ 8.9246 ] | 94.8% | 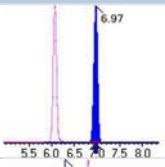 | 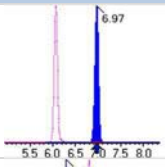 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 307328<br>( 241.0 / 117.0 ) 683877 | ( 4.38 , 0.90 )<br>( N/A , 0.00 , 0.0) | 2555.1<br>2427.0 | 2.2252<br>100.3<br>100.0 | 19.4113<br>[ 20.0000 ] | 97.1% | 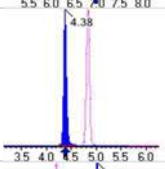 | 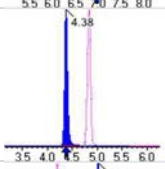 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1756540<br>( 341.0 / 217.0 ) 2692926 | ( 6.93 , 1.14 )<br>( N/A , 0.00 , 0.0) | 1295.8<br>1197.8 | 1.5331<br>102.4<br>100.0 | 19.7209<br>[ 20.0000 ] | 98.6% | 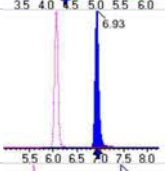 | 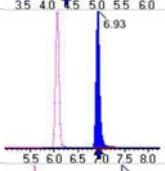 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2725727<br>( 441.0 / 337.0 ) 2362510 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4216.1<br>8862.1 | 0.8667<br>97.4<br>100.0 | 20.8028<br>[ 20.0000 ] | 104.0% | 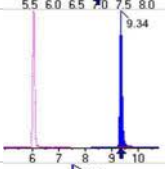 | 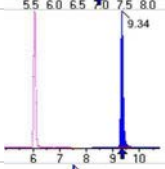 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1863736<br>( 357.2 / 243.0 ) 199134 | ( 6.80 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1388.0<br>715.5 | 0.1068<br>101.2<br>100.0 | 4.8742<br>[ 5.0000 ] | 97.5% | 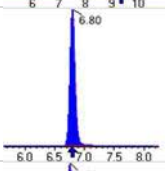 | 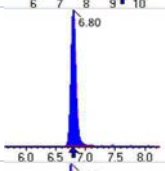 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1413019<br>( 457.2 / 343.0 ) 53711 | ( 8.86 , 1.00 )<br>( -0.01 , N/A , 0.3) | 861.7<br>350.7 | 0.0380<br>97.1<br>100.0 | 5.0035<br>[ 5.0000 ] | 100.1% | 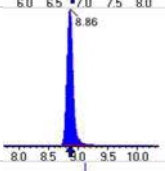 | 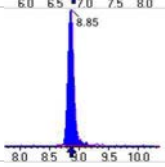 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 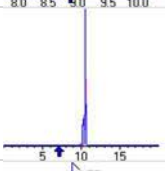 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 338470 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1130.9 | N/A | 1.1236<br>[ 1.0000 ] | 112.4%<br>{ 100.0% } | 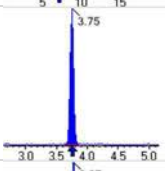 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 170419 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 6745.2 | N/A | 1.1083<br>[ 1.0000 ] | 110.8%<br>{ 100.0% } | 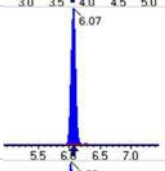 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 488098 | ( 8.23 , N/A )<br>( N/A , 0.00 , N/A ) | 4236.2 | N/A | 1.0941<br>[ 1.0000 ] | 109.4%<br>{ 100.0% } | 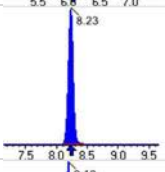 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 384657 | ( 9.19 , N/A )<br>( N/A , 0.00 , N/A ) | 1088.8 | N/A | 1.1506<br>[ 1.0000 ] | 115.1%<br>{ 100.0% } | 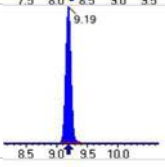 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 377626 | ( 10.09 , N/A ) ( N/A , 0.00 , N/A ) | 5511.4 | N/A | 1.1387 [ 1.0000 ] | 113.9% { 100.0% } | 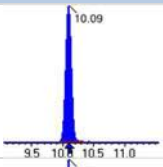 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1253433 | ( 8.69 , N/A ) ( N/A , 0.00 , N/A ) | 4563.7 | N/A | 1.1217 [ 1.0000 ] | 112.2% { 100.0% } | 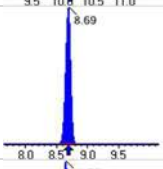 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1057854 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 2855.6 | N/A | 1.0836 [ 1.0000 ] | 108.4% { 100.0% } | 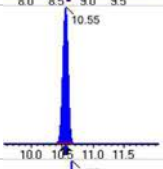 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2839873 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 39469.0 | N/A | 7.6085 [ 8.0000 ] | 95.1% { 100.0% } | 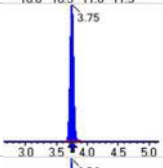 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1280529 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5016.6 | N/A | 4.1884 [ 4.0000 ] | 104.7% { 100.0% } | 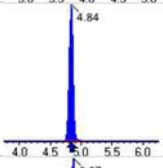 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 758566 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 10694.4 | N/A | 2.0731 [ 2.0000 ] | 103.7% { 100.0% } | 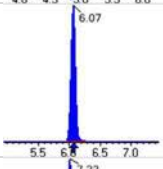 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 821068 | ( 7.22 , N/A ) ( N/A , 0.00 , N/A ) | 5879.6 | N/A | 2.1485 [ 2.0000 ] | 107.4% { 100.0% } | 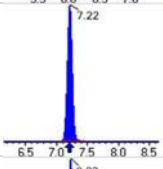 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1086518 | ( 8.23 , N/A ) ( N/A , 0.00 , N/A ) | 3276.9 | N/A | 2.1113 [ 2.0000 ] | 105.6% { 100.0% } | 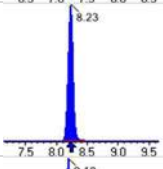 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 378118 | ( 9.19 , N/A ) ( N/A , 0.00 , N/A ) | 2733.8 | N/A | 1.0180 [ 1.0000 ] | 101.8% { 100.0% } | 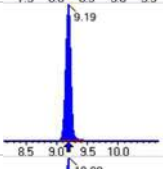 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 471292 | ( 10.09 , N/A ) ( N/A , 0.00 , N/A ) | 1201.0 | N/A | 1.0815 [ 1.0000 ] | 108.2% { 100.0% } | 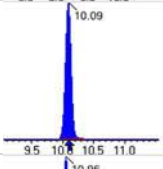 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 507019 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 921.9 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 100.0% } | 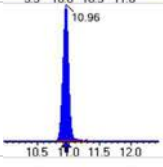 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 519171 | ( 11.78 , N/A ) ( N/A , 0.00 , N/A ) | 1544.9 | N/A | 0.9758 [ 1.0000 ] | 97.6% { 100.0% } | 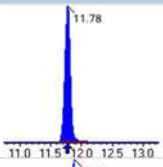  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 442720 | ( 12.89 , N/A ) ( N/A , 0.00 , N/A ) | 1503.2 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 100.0% } | 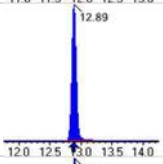  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 804983 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 3329.8 | N/A | 2.0441 [ 2.0000 ] | 102.2% { 100.0% } | 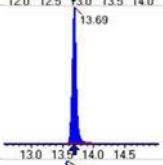  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2383917 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 936.3 | N/A | 1.9520 [ 2.0000 ] | 97.6% { 100.0% } | 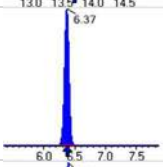  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1763300 | ( 8.68 , N/A ) ( N/A , 0.00 , N/A ) | 4818.5 | N/A | 1.9225 [ 2.0000 ] | 96.1% { 100.0% } | 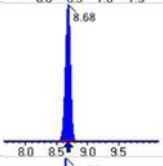  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2231526 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 1633.7 | N/A | 1.9815 [ 2.0000 ] | 99.1% { 100.0% } | 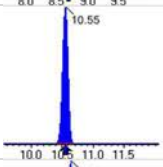  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 553240 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 93.4 | N/A | 5.0686 [ 4.0000 ] | 126.7% { 100.0% } | 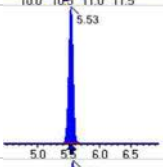  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1627788 | ( 7.66 , N/A ) ( N/A , 0.00 , N/A ) | 4229.8 | N/A | 4.8023 [ 4.0000 ] | 120.1% { 100.0% } | 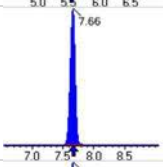  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1706512 | ( 9.46 , N/A ) ( N/A , 0.00 , N/A ) | 1400.6 | N/A | 5.0533 [ 4.0000 ] | 126.3% { 100.0% } | 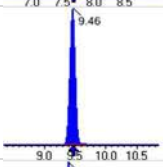  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3710769 | ( 11.09 , N/A ) ( N/A , 0.00 , N/A ) | 1393.8 | N/A | 9.5727 [ 8.0000 ] | 119.7% { 100.0% } | 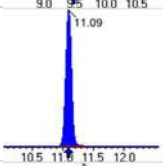  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2421762 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1732.1 | N/A | 1.9844 [ 2.0000 ] | 99.2% { 100.0% } | 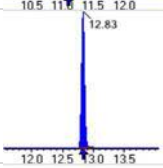  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 427365 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2001.3 | N/A | 1.8964 [ 2.0000 ] | 94.8% { 100.0% } | 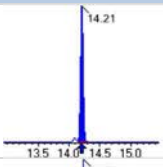  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 484313 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 3563.9 | N/A | 1.8710 [ 2.0000 ] | 93.6% { 100.0% } | 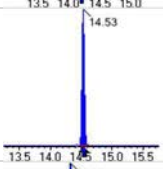  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1320240 | ( 10.33 , N/A ) ( N/A , 0.00 , N/A ) | 2451.5 | N/A | 4.5778 [ 4.0000 ] | 114.4% { 100.0% } | 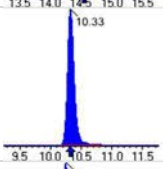  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1231764 | ( 10.85 , N/A ) ( N/A , 0.00 , N/A ) | 1863.4 | N/A | 4.4994 [ 4.0000 ] | 112.5% { 100.0% } | 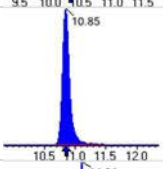  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1859054 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2629.6 | N/A | 17.6551 [ 20.0000 ] | 88.3% { 100.0% } | 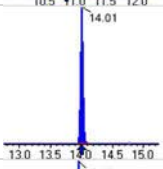  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2093731 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5303.1 | N/A | 16.4140 [ 20.0000 ] | 82.1% { 100.0% } | 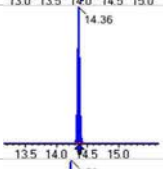  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1403696 | ( 6.53 , N/A ) ( N/A , 0.00 , N/A ) | 2367.6 | N/A | 8.9245 [ 8.0000 ] | 111.6% { 100.0% } | 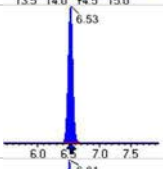  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 711465 | ( 6.81 , N/A ) ( N/A , 0.00 , N/A ) | 1241.2 | N/A | 2.1243 [ 2.0000 ] | 106.2% { 100.0% } | 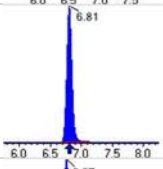  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 669684 | ( 8.87 , N/A ) ( N/A , 0.00 , N/A ) | 767.8 | N/A | 2.1417 [ 2.0000 ] | 107.1% { 100.0% } | 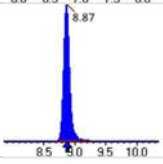  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV2 A | PFBA | 20.0A | 19.4A | 97.0A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.14A | 91.4A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.51A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 5.01A | 100A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.57A | 91.4A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.58A | 91.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.57A | 91.3A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.75A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.78A | 75.5A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.23A | 95.7A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.66A | 99.2A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.53A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.76A | 99.6A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.44A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.68A | 97.4A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.00A | 104A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.80A | 99.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.7A | 94.3A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.9A | 99.3A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.0A | 93.9A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.1A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 5.03A | 101A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 20.0A | 100A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 20.1A | 100A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 5.00A | 100A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.94A | 98.8A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV2A | NMeFOSEA | 20.0A | 18.1A | 90.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 20.9A | 105A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.32A | 91.6A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.41A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.49A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.68A | 96.8A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.45A | 94.5A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 3.87A | 82.7A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 3.92A | 83.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 19.1A | 95.4A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.5A | 97.4A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 21.4A | 107A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2813739<br>( 163.0 / 69.0 ) 75599 | ( 2.79 , 0.74 ) ( N/A , 0.01 , -0.1) | 12504.1<br>2679.5 | 0.0269<br>107.2<br>102.7 | 9.8165<br>[ 10.0000 ] | 98.2% | 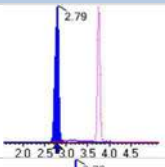 | 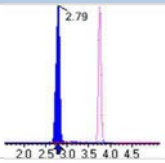 | |
| PFBA | ( 213.0 / 169.0 ) 5947230 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6769.0 | N/A<br>0.0<br>0.0 | 19.4030<br>[ 20.0000 ] | 97.0% | 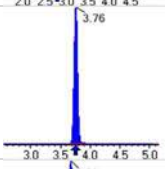 | | |
| PFPeA | ( 263.0 / 219.0 ) 2584630<br>( 263.0 / 69.0 ) 29976 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 4492.1<br>323.9 | 0.0116<br>105.6<br>99.2 | 9.1393<br>[ 10.0000 ] | 91.4% | 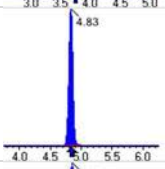 | 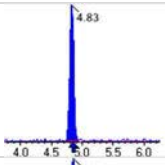 | |
| PFHxA | ( 313.0 / 269.0 ) 1429872<br>( 313.0 / 119.0 ) 166793 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.0) | 2469.2<br>1393.2 | 0.1166<br>105.0<br>102.7 | 4.5066<br>[ 5.0000 ] | 90.1% | 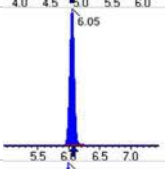 | 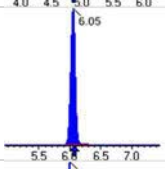 | |
| PFHpA | ( 363.0 / 319.0 ) 1705423<br>( 363.0 / 169.0 ) 514823 | ( 7.19 , 1.00 ) ( 0.00 , N/A , -0.2) | 1972.4<br>1907.6 | 0.3019<br>96.9<br>102.7 | 4.8426<br>[ 5.0000 ] | 96.9% | 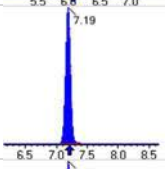 | 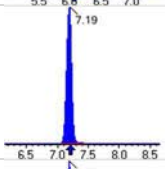 | |
| PFOA | ( 413.0 / 369.0 ) 2299992<br>( 413.0 / 169.0 ) 822846 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1112.3<br>1746.5 | 0.3578<br>98.9<br>100.8 | 4.7620<br>[ 5.0000 ] | 95.2% | 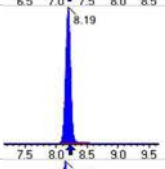 | 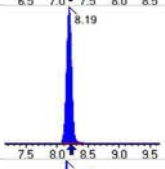 | |
| PFNA | ( 463.0 / 419.0 ) 1598005<br>( 463.0 / 169.0 ) 395340 | ( 9.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 1200.8<br>1038.7 | 0.2474<br>94.3<br>100.5 | 5.0080<br>[ 5.0000 ] | 100.2% | 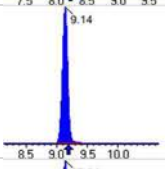 | 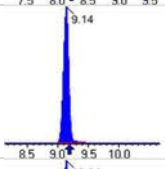 | |
| PFDA | ( 513.0 / 469.0 ) 1820529<br>( 513.0 / 169.0 ) 220880 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3652.3<br>2313.7 | 0.1213<br>103.4<br>100.5 | 4.5678<br>[ 5.0000 ] | 91.4% | 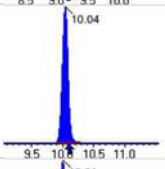 | 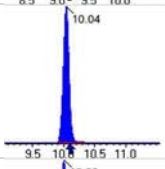 | |
| PFUnA | ( 563.0 / 519.0 ) 2006319<br>( 563.0 / 169.0 ) 300741 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.0) | 1089.1<br>966.6 | 0.1499<br>101.2<br>103.6 | 4.5773<br>[ 5.0000 ] | 91.5% | 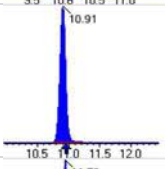 | 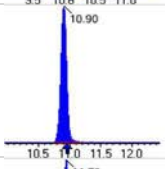 | |
| PFDoA | ( 613.0 / 569.0 ) 2228583<br>( 613.0 / 169.0 ) 353082 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.1) | 1859.8<br>1176.8 | 0.1584<br>100.2<br>103.6 | 4.5662<br>[ 5.0000 ] | 91.3% | 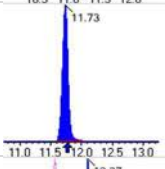 | 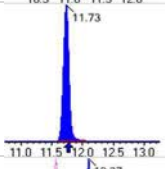 | |
| PFTrDA | ( 663.0 / 619.0 ) 2227083<br>( 663.0 / 169.0 ) 591398 | ( 12.37 , 1.05 ) ( N/A , -0.02 , 0.0) | 1643.4<br>1283.1 | 0.2655<br>98.5<br>104.3 | 4.7461<br>[ 5.0000 ] | 94.9% | 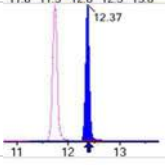 | 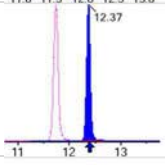 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1843760<br>( 713.0 / 169.0 ) 483408 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1392.0<br>1429.5 | 0.2622<br>100.8<br>99.3 | 4.7594<br>[ 5.0000 ] | 95.2% | 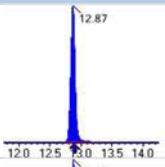 | 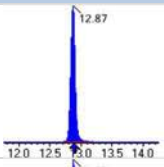 | |
| PFHxDA | ( 813.0 / 769.0 ) 1594527<br>( 813.0 / 169.0 ) 362073 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2621.4<br>1197.1 | 0.2271<br>104.7<br>89.2 | 4.7099<br>[ 5.0000 ] | 94.2% | 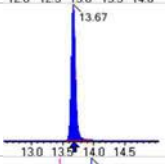 | 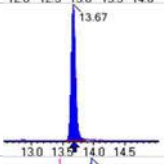 | |
| PFODA | ( 913.0 / 869.0 ) 858932<br>( 913.0 / 169.0 ) 304039 | ( 14.30 , 1.05 )<br>( N/A , -0.01 , 0.0) | 1934.0<br>979.1 | 0.3540<br>92.7<br>106.7 | 3.7762<br>[ 5.0000 ] | 75.5% | 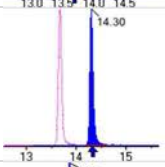 | 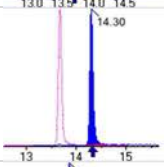 | |
| PFBS | ( 299.0 / 80.0 ) 2255884<br>( 299.0 / 99.0 ) 1614432 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3338.6<br>2977.6 | 0.7157<br>100.7<br>99.3 | 4.2311<br>[ 4.4237 ] | 95.6% | 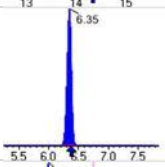 | 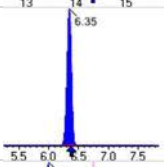 | |
| PFPeS | ( 349.0 / 80.0 ) 5761016<br>( 349.0 / 99.0 ) 1959597 | ( 7.58 , 0.88 )<br>( N/A , -0.03 , 0.0) | 3290.5<br>2661.0 | 0.3401<br>100.0<br>99.1 | 4.6618<br>[ 4.6919 ] | 99.4% | 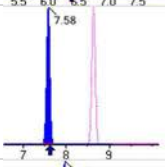 | 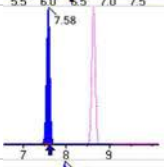 | |
| PFHxS | ( 399.0 / 80.0 ) 6227845<br>( 399.0 / 99.0 ) 1965097 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4466.2<br>5530.3 | 0.3155<br>100.9<br>98.3 | 4.5317<br>[ 4.5549 ] | 99.5% | 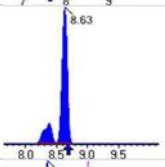 | 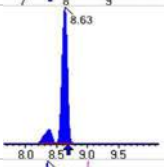 | |
| PFHpS | ( 449.0 / 80.0 ) 5356320<br>( 449.0 / 99.0 ) 1467211 | ( 9.60 , 0.91 )<br>( N/A , -0.05 , 0.1) | 2240.5<br>2901.2 | 0.2739<br>102.5<br>102.0 | 4.7618<br>[ 4.7570 ] | 100.1% | 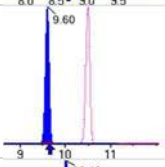 | 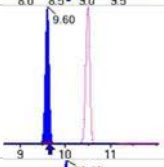 | |
| PFOS | ( 499.0 / 80.0 ) 5023335<br>( 499.0 / 99.0 ) 1179770 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 3228.5<br>4989.0 | 0.2349<br>99.3<br>107.2 | 4.4386<br>[ 4.6375 ] | 95.7% | 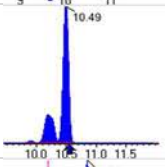 | 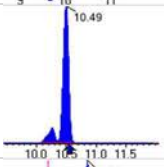 | |
| PFNS | ( 549.0 / 80.0 ) 5160249<br>( 549.0 / 99.0 ) 1310001 | ( 11.33 , 1.08 )<br>( N/A , -0.05 , -0.1) | 2790.1<br>2318.0 | 0.2539<br>95.6<br>92.6 | 4.6756<br>[ 4.7994 ] | 97.4% | 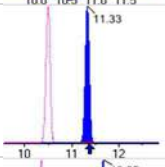 | 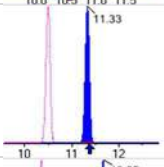 | |
| PFDS | ( 599.0 / 80.0 ) 6580286<br>( 599.0 / 99.0 ) 1679394 | ( 12.05 , 1.15 )<br>( N/A , -0.03 , 0.0) | 3584.4<br>2967.8 | 0.2552<br>101.8<br>100.6 | 5.0022<br>[ 4.8155 ] | 103.9% | 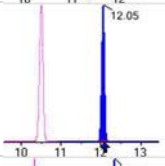 | 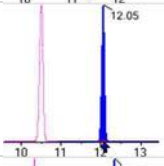 | |
| PFDoS | ( 699.0 / 80.0 ) 5398081<br>( 699.0 / 99.0 ) 1283454 | ( 12.98 , 1.24 )<br>( N/A , -0.02 , 0.0) | 4092.8<br>3529.7 | 0.2378<br>103.1<br>105.1 | 4.8024<br>[ 4.8478 ] | 99.1% | 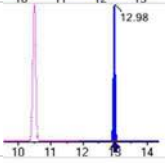 | 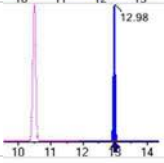 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5992292<br>( 327.0 / 81.0 ) 5370488 | ( 5.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5151.1<br>3602.6 | 0.8962<br>102.3<br>98.0 | 17.7257<br>[ 18.6906 ] | 94.8% | 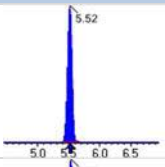 | 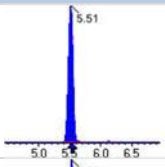 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6154975<br>( 427.0 / 81.0 ) 7437999 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4029.3<br>4036.9 | 1.2085<br>95.1<br>95.2 | 18.8641<br>[ 18.9808 ] | 99.4% | 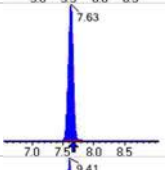 | 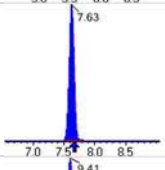 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6801356<br>( 527.0 / 81.0 ) 6832224 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1420.7<br>1358.4 | 1.0045<br>105.9<br>100.8 | 18.0358<br>[ 19.1658 ] | 94.1% | 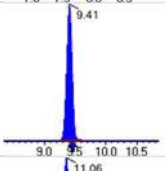 | 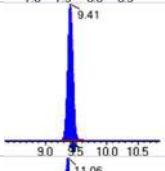 | |
| 10:2FTS | ( 627.0 / 607.0 ) 6344465<br>( 627.0 / 81.0 ) 8737112 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1430.8<br>1329.9 | 1.3771<br>101.9<br>100.5 | 19.1063<br>[ 19.3236 ] | 98.9% | 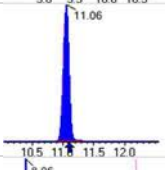 | 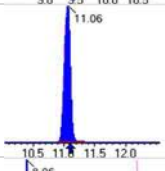 | |
| PFBSA | ( 297.9 / 78.0 ) 4574003<br>( 297.9 / 278.0 ) 7071 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , 0.3) | 1300.3<br>101.0 | 0.0015<br>110.1<br>97.7 | 5.2948<br>[ 5.0000 ] | 105.9% | 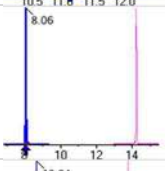 | 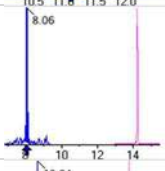 | |
| PFHxSA | ( 397.9 / 78.0 ) 6152439<br>( 397.9 / 378.0 ) 24582 | ( 10.94 , 0.75 )<br>( N/A , -0.01 , -0.3) | 1281.1<br>475.2 | 0.0040<br>104.9<br>95.5 | 5.6539<br>[ 5.0000 ] | 113.1% | 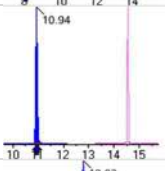 | 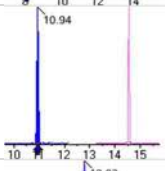 | |
| PFOSA | ( 498.0 / 78.0 ) 4968742<br>( 498.0 / 478.0 ) 67884 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2378.2<br>1078.5 | 0.0137<br>94.7<br>99.8 | 5.0321<br>[ 5.0000 ] | 100.6% | 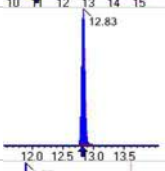 | 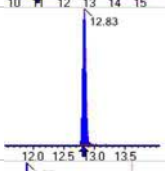 | |
| TFSI | ( 279.7 / 147.0 ) 11189508<br>( 279.7 / 211.0 ) 935384 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , 0.0) | 66.1<br>53.1 | 0.0836<br>101.4<br>98.3 | 5.3305<br>[ 4.8967 ] | 108.9% | 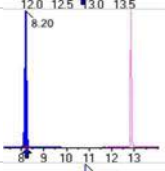 | 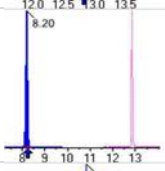 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3788887<br>( 512.0 / 169.0 ) 2894017 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3509.8<br>4212.3 | 0.7638<br>103.9<br>100.1 | 20.0227<br>[ 20.0000 ] | 100.1% | 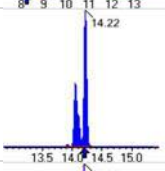 | 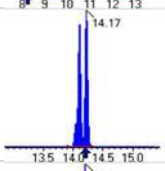 | |
| NEtFOSA | ( 526.0 / 219.0 ) 4668978<br>( 526.0 / 169.0 ) 5828963 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.1) | 5203.6<br>4200.0 | 1.2484<br>98.6<br>98.9 | 20.0548<br>[ 20.0000 ] | 100.3% | 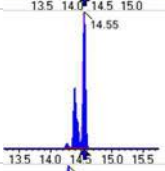 | 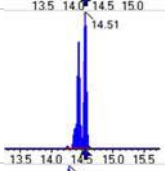 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1333208<br>( 570.0 / 483.0 ) 620732 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2091.8<br>1632.9 | 0.4656<br>107.5<br>102.2 | 4.9975<br>[ 5.0000 ] | 100.0% | 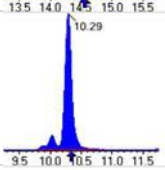 | 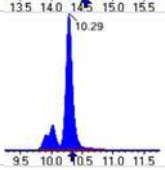 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1307338<br>( 584.0 / 526.0 ) 774362 | ( 10.82 , 1.00 ) ( 0.01 , N/A , -0.1) | 1854.2<br>771.4 | 0.5923<br>95.7<br>98.3 | 4.9413<br>[ 5.0000 ] | 98.8% | 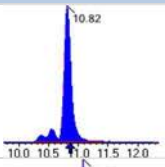 | 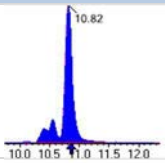 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1839084 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 3172.7 | N/A<br>0.0<br>0.0 | 18.1378<br>[ 20.0000 ] | 90.7% | 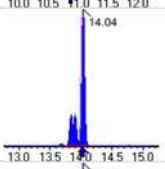 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1660301 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 4451.3 | N/A<br>0.0<br>0.0 | 20.9419<br>[ 20.0000 ] | 104.7% | 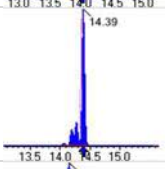 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 411172<br>( 285.0 / 185.0 ) 1168459 | ( 6.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1919.6<br>2550.9 | 2.8418<br>91.2<br>102.5 | 4.7599<br>[ 5.0000 ] | 95.2% | 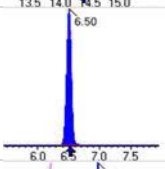 | 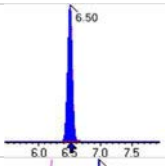 | |
| ADONA | ( 377.0 / 85.0 ) 4757619<br>( 377.0 / 251.0 ) 482400 | ( 7.58 , 1.16 ) ( N/A , -0.03 , 0.0) | 2127.2<br>1553.8 | 0.1014<br>95.1<br>95.8 | 4.3247<br>[ 4.7135 ] | 91.8% | 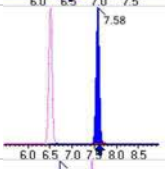 | 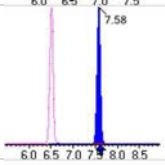 | |
| PFMPA | ( 229.0 / 85.0 ) 849271 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 6940.6 | N/A<br>0.0<br>0.0 | 9.4852<br>[ 10.0000 ] | 94.9% | 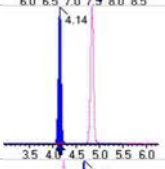 | | |
| PFMBA | ( 279.0 / 85.0 ) 2295207 | ( 5.20 , 1.08 ) ( N/A , -0.01 , 0.0) | 5857.9 | N/A<br>0.0<br>0.0 | 9.6849<br>[ 10.0000 ] | 96.8% | 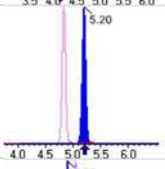 | | |
| NFDHA | ( 295.0 / 201.0 ) 1042365<br>( 295.0 / 85.0 ) 1069969 | ( 5.91 , 0.98 ) ( N/A , -0.02 , 0.3) | 3159.1<br>3331.2 | 1.0265<br>94.9<br>95.9 | 9.4506<br>[ 10.0000 ] | 94.5% | 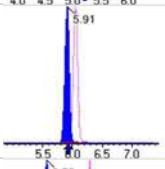 | 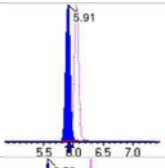 | |
| PFECHS | ( 461.0 / 98.9 ) 2759895<br>( 461.0 / 381.2 ) 1099162 | ( 9.52 , 0.91 ) ( N/A , -0.06 , 0.0) | 4654.6<br>4548.4 | 0.3983<br>102.0<br>101.8 | 4.3243<br>[ 4.6193 ] | 93.6% | 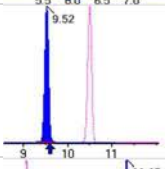 | 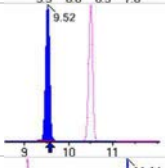 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5254308<br>( 533.0 / 353.0 ) 1710161 | ( 11.15 , 1.71 ) ( N/A , -0.05 , 0.0) | 2603.8<br>2965.2 | 0.3255<br>101.2<br>104.5 | 3.8703<br>[ 4.6663 ] | 82.9% | 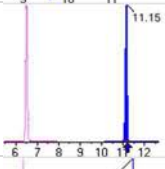 | 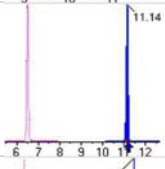 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4166493<br>( 633.0 / 453.0 ) 1423620 | ( 12.47 , 1.92 ) ( N/A , -0.02 , 0.1) | 4258.8<br>5061.4 | 0.3417<br>104.6<br>103.0 | 3.9182<br>[ 4.7160 ] | 83.1% | 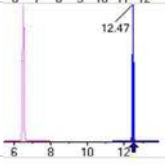 | 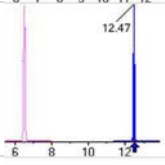 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2006132<br>( 315.0 / 83.0 ) 1153783 | ( 6.94 , 1.15 )<br>( N/A , -0.03 , 0.0) | 2897.7<br>1582.0 | 0.5751<br>100.4<br>97.2 | 8.4066<br>[ 8.9246 ] | 94.2% | 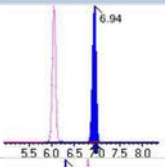 | 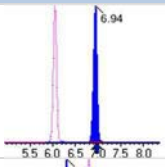 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 262096<br>( 241.0 / 117.0 ) 606687 | ( 4.39 , 0.91 )<br>( N/A , 0.01 , 0.0) | 2181.6<br>1984.7 | 2.3147<br>104.3<br>104.0 | 19.0769<br>[ 20.0000 ] | 95.4% | 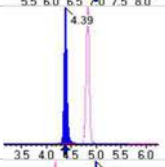 | 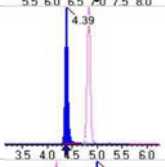 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1497513<br>( 341.0 / 217.0 ) 2267355 | ( 6.92 , 1.14 )<br>( N/A , -0.01 , 0.0) | 1120.2<br>1179.9 | 1.5141<br>101.1<br>98.8 | 19.4738<br>[ 20.0000 ] | 97.4% | 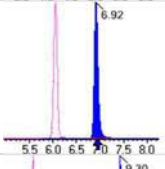 | 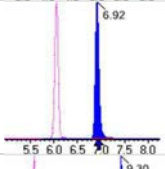 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2426420<br>( 441.0 / 337.0 ) 2204238 | ( 9.30 , 1.54 )<br>( N/A , -0.03 , 0.1) | 4861.7<br>7944.9 | 0.9084<br>102.1<br>104.8 | 21.4495<br>[ 20.0000 ] | 107.2% | 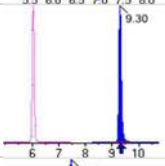 | 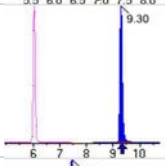 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1682997<br>( 357.2 / 243.0 ) 175378 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1582.8<br>710.5 | 0.1042<br>98.7<br>97.5 | 4.7996<br>[ 5.0000 ] | 96.0% | 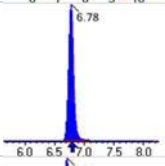 | 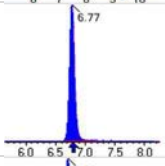 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1277601<br>( 457.2 / 343.0 ) 54029 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.3) | 793.4<br>379.1 | 0.0423<br>108.1<br>111.3 | 4.9043<br>[ 5.0000 ] | 98.1% | 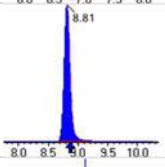 | 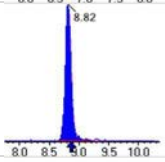 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 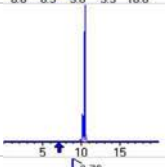 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 291753 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 1192.4 | N/A | 0.9685<br>[ 1.0000 ] | 96.8%<br>{ 86.2% } | 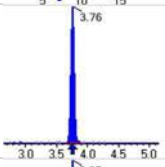 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 147623 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 21483.3 | N/A | 0.9600<br>[ 1.0000 ] | 96.0%<br>{ 86.6% } | 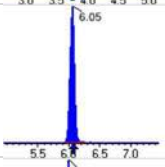 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 451692 | ( 8.20 , N/A )<br>( N/A , -0.04 , N/A ) | 4332.8 | N/A | 1.0125<br>[ 1.0000 ] | 101.2%<br>{ 92.5% } | 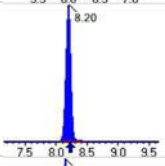 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 333006 | ( 9.14 , N/A )<br>( N/A , -0.05 , N/A ) | 1054.5 | N/A | 0.9961<br>[ 1.0000 ] | 99.6%<br>{ 86.6% } | 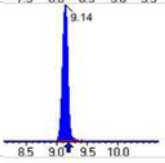 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 348109 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 7207.2 | N/A | 1.0497 [ 1.0000 ] | 105.0% { 92.2% } | 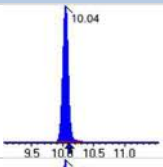 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1088550 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 4908.2 | N/A | 0.9742 [ 1.0000 ] | 97.4% { 86.8% } | 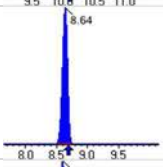 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 935430 | ( 10.50 , N/A ) ( N/A , -0.05 , N/A ) | 2799.3 | N/A | 0.9582 [ 1.0000 ] | 95.8% { 88.4% } | 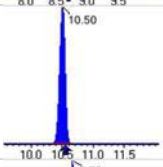 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2591906 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 43296.7 | N/A | 8.0561 [ 8.0000 ] | 100.7% { 91.3% } | 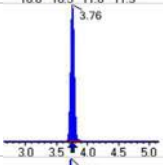 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1111205 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 4775.6 | N/A | 4.1959 [ 4.0000 ] | 104.9% { 86.8% } | 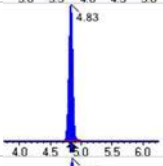 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 654909 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 12533.6 | N/A | 2.0662 [ 2.0000 ] | 103.3% { 86.3% } | 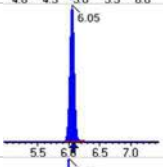 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 715144 | ( 7.19 , N/A ) ( N/A , -0.02 , N/A ) | 6205.0 | N/A | 2.1603 [ 2.0000 ] | 108.0% { 87.1% } | 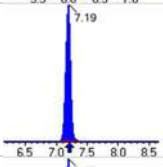 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 949932 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 2949.2 | N/A | 1.9946 [ 2.0000 ] | 99.7% { 87.4% } | 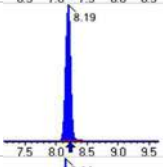 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 318427 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 2854.3 | N/A | 0.9902 [ 1.0000 ] | 99.0% { 84.2% } | 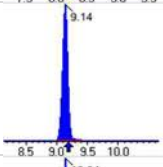 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 400197 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 882.6 | N/A | 0.9963 [ 1.0000 ] | 99.6% { 84.9% } | 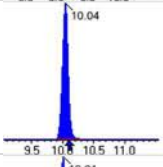 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 469397 | ( 10.91 , N/A ) ( N/A , -0.05 , N/A ) | 1195.8 | N/A | 0.9611 [ 1.0000 ] | 96.1% { 92.6% } | 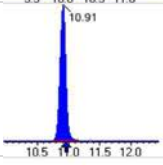 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 476854 | ( 11.73 , N/A ) ( N/A , -0.04 , N/A ) | 1354.7 | N/A | 0.9723 [ 1.0000 ] | 97.2% { 91.8% } | 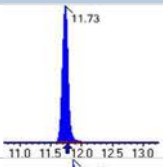  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 407913 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1297.7 | N/A | 0.9544 [ 1.0000 ] | 95.4% { 92.1% } | 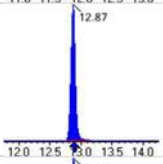  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 701532 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 2837.0 | N/A | 1.9325 [ 2.0000 ] | 96.6% { 87.1% } | 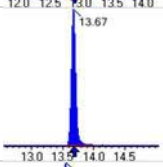  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2050648 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 1203.4 | N/A | 1.9335 [ 2.0000 ] | 96.7% { 86.0% } | 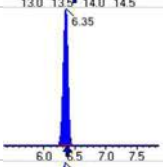  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1552031 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 5465.5 | N/A | 1.9484 [ 2.0000 ] | 97.4% { 88.0% } | 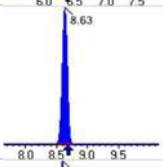  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1958016 | ( 10.50 , N/A ) ( N/A , -0.05 , N/A ) | 1761.2 | N/A | 1.9662 [ 2.0000 ] | 98.3% { 87.7% } | 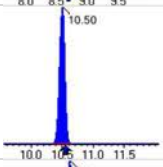  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 502185 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 84.0 | N/A | 5.2977 [ 4.0000 ] | 132.4% { 90.8% } | 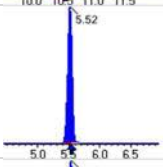  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1469125 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 4194.4 | N/A | 4.9907 [ 4.0000 ] | 124.8% { 90.3% } | 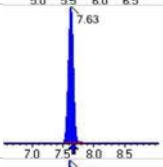  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1522451 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1272.5 | N/A | 5.1911 [ 4.0000 ] | 129.8% { 89.2% } | 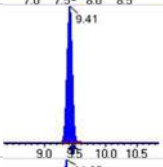  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3228556 | ( 11.05 , N/A ) ( N/A , -0.05 , N/A ) | 1350.1 | N/A | 9.5903 [ 8.0000 ] | 119.9% { 87.0% } | 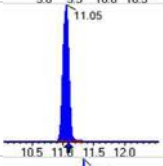  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2023523 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1801.6 | N/A | 1.8751 [ 2.0000 ] | 93.8% { 83.6% } | 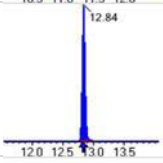  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 375750 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2003.0 | N/A | 1.8856 [ 2.0000 ] | 94.3% { 87.9% } | 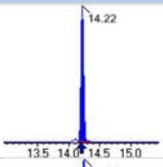 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 424333 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2743.7 | N/A | 1.8538 [ 2.0000 ] | 92.7% { 87.6% } | 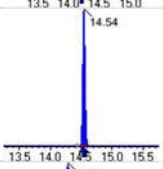 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1133082 | ( 10.29 , N/A ) ( N/A , -0.04 , N/A ) | 2664.2 | N/A | 4.4430 [ 4.0000 ] | 111.1% { 85.8% } | 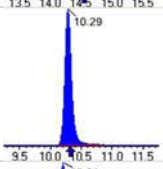 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1097091 | ( 10.81 , N/A ) ( N/A , -0.05 , N/A ) | 1982.0 | N/A | 4.5319 [ 4.0000 ] | 113.3% { 89.1% } | 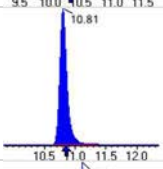 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1791336 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2928.5 | N/A | 19.2384 [ 20.0000 ] | 96.2% { 96.4% } | 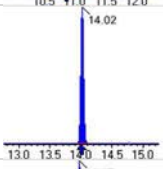 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1794552 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5650.2 | N/A | 15.9097 [ 20.0000 ] | 79.5% { 85.7% } | 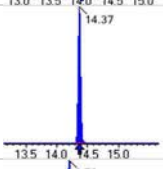 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1217332 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 2175.5 | N/A | 8.9348 [ 8.0000 ] | 111.7% { 86.7% } | 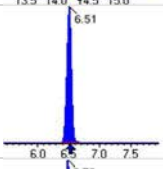 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 652450 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1081.0 | N/A | 2.1133 [ 2.0000 ] | 105.7% { 91.7% } | 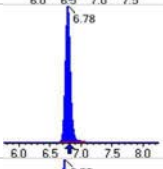 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 617752 | ( 8.82 , N/A ) ( N/A , -0.04 , N/A ) | 715.1 | N/A | 2.1432 [ 2.0000 ] | 107.2% { 92.2% } | 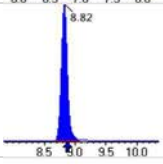 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV3 A | PFBA | 20.0A | 20.6A | 103A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.43A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.66A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.93A | 98.7A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.68A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.82A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.80A | 96.0A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.91A | 98.2A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.84A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.21A | 84.2A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.32A | 97.8A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.50A | 95.7A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.42A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.73A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.47A | 96.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.76A | 99.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.04A | 105A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.20A | 107A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.2A | 97.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.8A | 93.6A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.0A | 93.7A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 18.2A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.96A | 99.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.8A | 94.0A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.5A | 97.7A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.97A | 99.3A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV3A | NMeFOSEA | 20.0A | 17.6A | 88.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.6A | 97.8A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.65A | 93.1A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.34A | 92.0A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.58A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.87A | 98.7A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 10.0A | 100A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 10.2A | 102A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.07A | 86.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.05A | 85.8A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.7A | 104A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 22.1A | 110A | ng/mLA | +/- 30.00%A |

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Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2659078<br>( 163.0 / 69.0 ) 71391 | ( 2.76 , 0.74 )<br>( N/A , -0.02 , -0.1) | 11983.6<br>2487.4 | 0.0268<br>107.1<br>102.6 | 10.3902<br>[ 10.0000 ] | 103.9% | 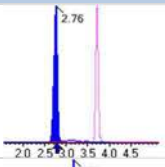 | 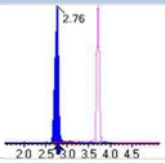 | |
| PFBA | ( 213.0 / 169.0 ) 5628250 | ( 3.72 , 1.00 )<br>( 0.00 , N/A , 0.0) | 7388.8 | N/A<br>0.0<br>0.0 | 20.5658<br>[ 20.0000 ] | 102.8% | 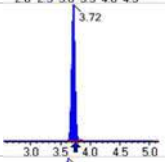 | | |
| PFPeA | ( 263.0 / 219.0 ) 2218642<br>( 263.0 / 69.0 ) 28569 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4734.5<br>381.0 | 0.0129<br>117.2<br>110.2 | 9.4344<br>[ 10.0000 ] | 94.3% | 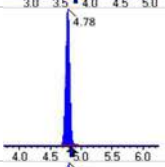 | 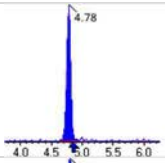 | |
| PFHxA | ( 313.0 / 269.0 ) 1313750<br>( 313.0 / 119.0 ) 159580 | ( 6.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2738.5<br>1797.4 | 0.1215<br>109.3<br>106.9 | 4.6617<br>[ 5.0000 ] | 93.2% | 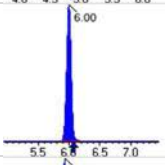 | 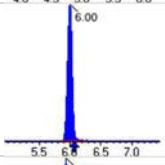 | |
| PFHpA | ( 363.0 / 319.0 ) 1510333<br>( 363.0 / 169.0 ) 466389 | ( 7.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1370.6<br>1084.9 | 0.3088<br>99.1<br>105.0 | 4.9328<br>[ 5.0000 ] | 98.7% | 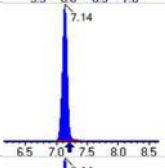 | 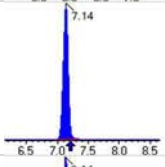 | |
| PFOA | ( 413.0 / 369.0 ) 2047457<br>( 413.0 / 169.0 ) 743749 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 872.2<br>1339.6 | 0.3633<br>100.4<br>102.3 | 4.6777<br>[ 5.0000 ] | 93.6% | 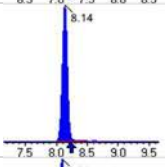 | 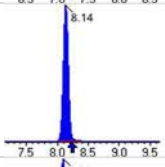 | |
| PFNA | ( 463.0 / 419.0 ) 1324281<br>( 463.0 / 169.0 ) 346760 | ( 9.09 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1152.3<br>1154.7 | 0.2618<br>99.8<br>106.4 | 4.8196<br>[ 5.0000 ] | 96.4% | 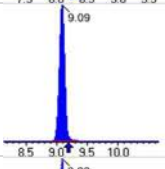 | 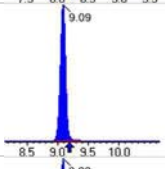 | |
| PFDA | ( 513.0 / 469.0 ) 1582193<br>( 513.0 / 169.0 ) 198333 | ( 9.99 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3218.5<br>9340.9 | 0.1254<br>106.8<br>103.8 | 4.7609<br>[ 5.0000 ] | 95.2% | 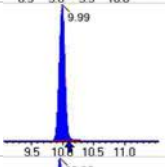 | 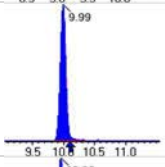 | |
| PFUnA | ( 563.0 / 519.0 ) 1835882<br>( 563.0 / 169.0 ) 282743 | ( 10.86 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1000.4<br>892.9 | 0.1540<br>104.0<br>106.5 | 4.7624<br>[ 5.0000 ] | 95.2% | 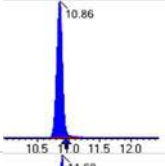 | 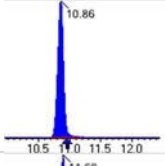 | |
| PFDoA | ( 613.0 / 569.0 ) 2132843<br>( 613.0 / 169.0 ) 316335 | ( 11.68 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1585.4<br>1032.3 | 0.1483<br>93.8<br>97.0 | 4.7981<br>[ 5.0000 ] | 96.0% | 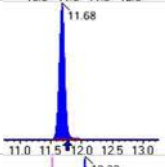 | 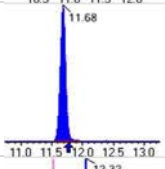 | |
| PFTrDA | ( 663.0 / 619.0 ) 2098605<br>( 663.0 / 169.0 ) 567704 | ( 12.32 , 1.05 )<br>( N/A , -0.07 , 0.1) | 1433.4<br>1207.9 | 0.2705<br>100.4<br>106.2 | 4.9104<br>[ 5.0000 ] | 98.2% | 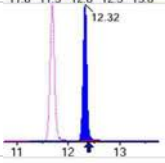 | 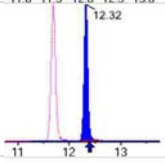 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1728439<br>( 713.0 / 169.0 ) 448629 | ( 12.82 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1736.0<br>1472.3 | 0.2596<br>99.8<br>98.3 | 4.7754<br>[ 5.0000 ] | 95.5% | 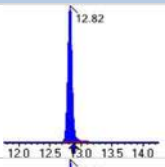 | 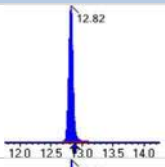 | |
| PFHxDA | ( 813.0 / 769.0 ) 1473173<br>( 813.0 / 169.0 ) 361143 | ( 13.63 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2014.1<br>1252.8 | 0.2451<br>113.0<br>96.3 | 4.8385<br>[ 5.0000 ] | 96.8% | 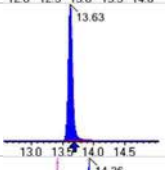 | 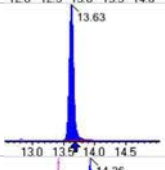 | |
| PFODA | ( 913.0 / 869.0 ) 860959<br>( 913.0 / 169.0 ) 295664 | ( 14.26 , 1.05 )<br>( N/A , -0.05 , -0.1) | 1953.4<br>948.6 | 0.3434<br>89.9<br>103.5 | 4.2087<br>[ 5.0000 ] | 84.2% | 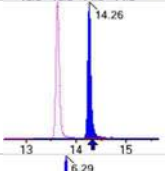 | 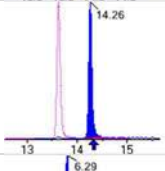 | |
| PFBS | ( 299.0 / 80.0 ) 2019206<br>( 299.0 / 99.0 ) 1478303 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4463.3<br>3203.8 | 0.7321<br>103.0<br>101.6 | 4.3249<br>[ 4.4237 ] | 97.8% | 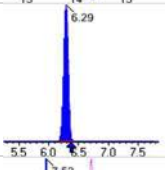 | 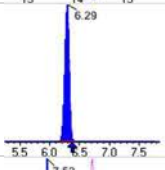 | |
| PFPeS | ( 349.0 / 80.0 ) 5155049<br>( 349.0 / 99.0 ) 1865519 | ( 7.52 , 0.88 )<br>( N/A , -0.09 , -0.1) | 3020.5<br>2515.4 | 0.3619<br>106.4<br>105.5 | 4.4991<br>[ 4.6919 ] | 95.9% | 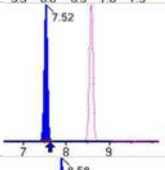 | 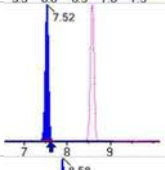 | |
| PFHxS | ( 399.0 / 80.0 ) 5627474<br>( 399.0 / 99.0 ) 1806876 | ( 8.58 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4253.5<br>4284.6 | 0.3211<br>102.7<br>100.1 | 4.4165<br>[ 4.5549 ] | 97.0% | 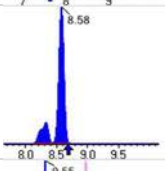 | 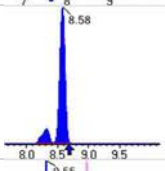 | |
| PFHpS | ( 449.0 / 80.0 ) 4873316<br>( 449.0 / 99.0 ) 1313871 | ( 9.55 , 0.91 )<br>( N/A , -0.10 , 0.0) | 1786.0<br>1637.2 | 0.2696<br>100.9<br>100.4 | 4.7262<br>[ 4.7570 ] | 99.4% | 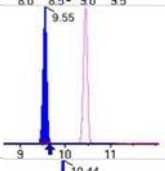 | 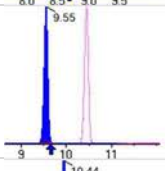 | |
| PFOS | ( 499.0 / 80.0 ) 4637730<br>( 499.0 / 99.0 ) 1048528 | ( 10.44 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2652.8<br>4787.3 | 0.2261<br>95.6<br>103.2 | 4.4703<br>[ 4.6375 ] | 96.4% | 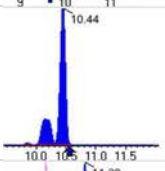 | 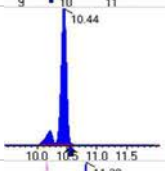 | |
| PFNS | ( 549.0 / 80.0 ) 4815835<br>( 549.0 / 99.0 ) 1291876 | ( 11.28 , 1.08 )<br>( N/A , -0.10 , 0.1) | 2997.6<br>3387.4 | 0.2683<br>101.0<br>97.9 | 4.7602<br>[ 4.7994 ] | 99.2% | 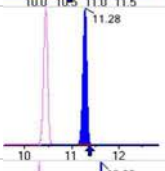 | 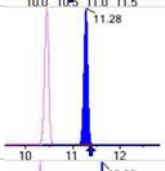 | |
| PFDS | ( 599.0 / 80.0 ) 6078596<br>( 599.0 / 99.0 ) 1553978 | ( 12.00 , 1.15 )<br>( N/A , -0.08 , 0.0) | 3622.6<br>2642.1 | 0.2556<br>101.9<br>100.8 | 5.0408<br>[ 4.8155 ] | 104.7% | 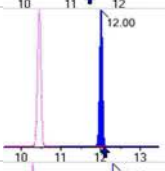 | 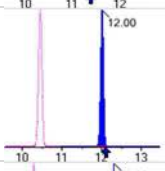 | |
| PFDoS | ( 699.0 / 80.0 ) 5355733<br>( 699.0 / 99.0 ) 1261487 | ( 12.93 , 1.24 )<br>( N/A , -0.06 , 0.0) | 4035.4<br>4043.5 | 0.2355<br>102.1<br>104.1 | 5.1977<br>[ 4.8478 ] | 107.2% | 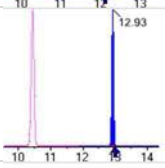 | 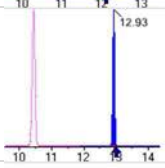 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5471720<br>( 327.0 / 81.0 ) 5019632 | ( 5.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4008.9<br>3781.6 | 0.9174<br>104.7<br>100.3 | 18.2413<br>[ 18.6906 ] | 97.6% | 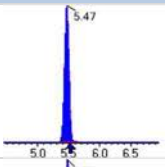 | 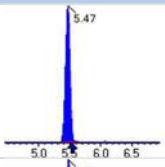 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5567971<br>( 427.0 / 81.0 ) 7094179 | ( 7.57 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4976.9<br>4175.7 | 1.2741<br>100.3<br>100.4 | 17.7879<br>[ 18.9808 ] | 93.7% | 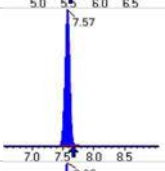 | 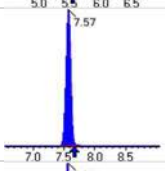 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6191454<br>( 527.0 / 81.0 ) 6268775 | ( 9.36 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1803.6<br>1591.9 | 1.0125<br>106.8<br>101.6 | 17.9843<br>[ 19.1658 ] | 93.8% | 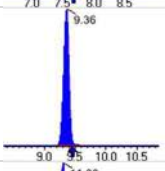 | 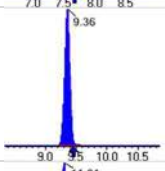 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5709007<br>( 627.0 / 81.0 ) 8297298 | ( 11.00 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1409.8<br>1469.2 | 1.4534<br>107.5<br>106.1 | 18.1990<br>[ 19.3236 ] | 94.2% | 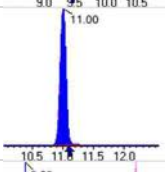 | 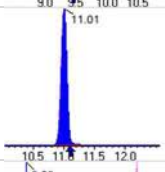 | |
| PFBSA | ( 297.9 / 78.0 ) 4119488<br>( 297.9 / 278.0 ) 6487 | ( 8.03 , 0.57 )<br>( N/A , -0.04 , 0.2) | 1782.2<br>145.7 | 0.0016<br>112.1<br>99.5 | 4.8341<br>[ 5.0000 ] | 96.7% | 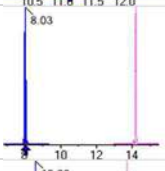 | 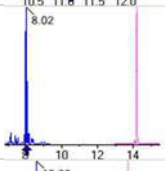 | |
| PFHxSA | ( 397.9 / 78.0 ) 5746659<br>( 397.9 / 378.0 ) 23238 | ( 10.90 , 0.75 )<br>( N/A , -0.04 , -0.1) | 1781.4<br>562.2 | 0.0040<br>106.2<br>96.6 | 5.5705<br>[ 5.0000 ] | 111.4% | 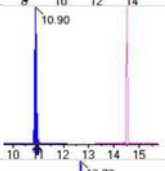 | 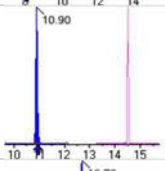 | |
| PFOSA | ( 498.0 / 78.0 ) 4394143<br>( 498.0 / 478.0 ) 61794 | ( 12.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2309.2<br>1088.7 | 0.0141<br>97.5<br>102.7 | 4.9590<br>[ 5.0000 ] | 99.2% | 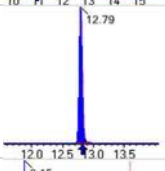 | 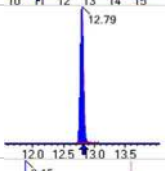 | |
| TFSI | ( 279.7 / 147.0 ) 9805472<br>( 279.7 / 211.0 ) 857511 | ( 8.15 , 0.64 )<br>( N/A , -0.10 , 0.0) | 61.4<br>58.3 | 0.0875<br>106.0<br>102.8 | 5.2052<br>[ 4.8967 ] | 106.3% | 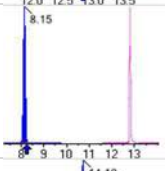 | 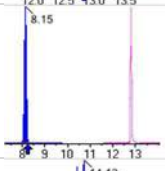 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3507891<br>( 512.0 / 169.0 ) 2593001 | ( 14.18 , 1.00 )<br>( 0.00 , N/A , 3.0) | 3192.4<br>3583.5 | 0.7392<br>100.6<br>96.8 | 18.7923<br>[ 20.0000 ] | 94.0% | 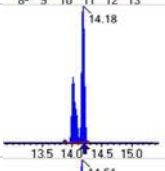 | 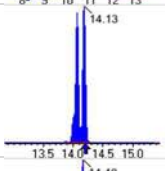 | |
| NEtFOSA | ( 526.0 / 219.0 ) 4311434<br>( 526.0 / 169.0 ) 5461866 | ( 14.51 , 1.00 )<br>( 0.01 , N/A , 2.1) | 5000.8<br>4048.6 | 1.2668<br>100.0<br>100.4 | 19.5343<br>[ 20.0000 ] | 97.7% | 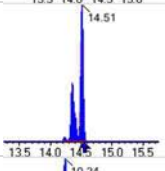 | 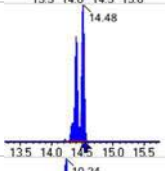 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1196279<br>( 570.0 / 483.0 ) 565234 | ( 10.24 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2590.1<br>2199.9 | 0.4725<br>109.1<br>103.7 | 4.7216<br>[ 5.0000 ] | 94.4% | 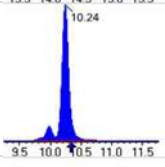 | 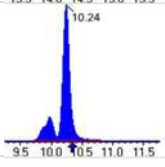 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1208643<br>( 584.0 / 526.0 ) 720149 | ( 10.77 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1450.7<br>855.6 | 0.5958<br>96.2<br>98.9 | 4.9659<br>[ 5.0000 ] | 99.3% | 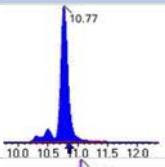 | 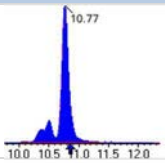 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1744688 | ( 14.00 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3039.7 | N/A<br>0.0<br>0.0 | 17.6133<br>[ 20.0000 ] | 88.1% | 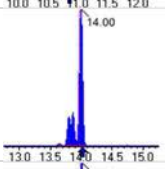 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1534356 | ( 14.35 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3506.1 | N/A<br>0.0<br>0.0 | 19.5584<br>[ 20.0000 ] | 97.8% | 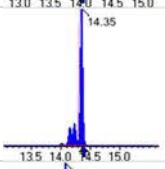 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 358228<br>( 285.0 / 185.0 ) 1045227 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2015.5<br>2359.1 | 2.9178<br>93.6<br>105.3 | 4.6546<br>[ 5.0000 ] | 93.1% | 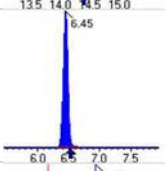 | 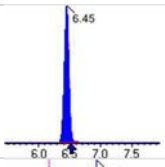 | |
| ADONA | ( 377.0 / 85.0 ) 4256800<br>( 377.0 / 251.0 ) 455332 | ( 7.52 , 1.17 )<br>( N/A , -0.08 , 0.0) | 2084.5<br>1460.0 | 0.1070<br>100.3<br>101.1 | 4.3431<br>[ 4.7135 ] | 92.1% | 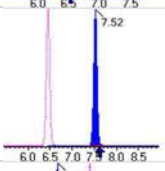 | 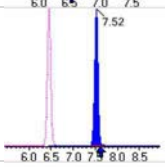 | |
| PFMPA | ( 229.0 / 85.0 ) 735192 | ( 4.10 , 0.86 )<br>( N/A , -0.04 , 0.0) | 7136.9 | N/A<br>0.0<br>0.0 | 9.8744<br>[ 10.0000 ] | 98.7% | 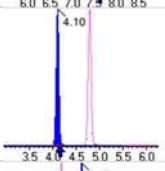 | | |
| PFMBA | ( 279.0 / 85.0 ) 1971742 | ( 5.15 , 1.08 )<br>( N/A , -0.06 , 0.0) | 4875.4 | N/A<br>0.0<br>0.0 | 10.0054<br>[ 10.0000 ] | 100.1% | 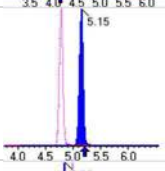 | | |
| NFDHA | ( 295.0 / 201.0 ) 997614<br>( 295.0 / 85.0 ) 1035348 | ( 5.86 , 0.98 )<br>( N/A , -0.07 , 0.0) | 3934.0<br>2756.1 | 1.0378<br>96.0<br>97.0 | 10.1830<br>[ 10.0000 ] | 101.8% | 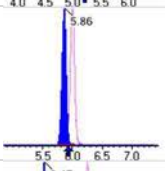 | 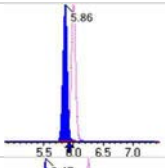 | |
| PFECHS | ( 461.0 / 98.9 ) 2497329<br>( 461.0 / 381.2 ) 959826 | ( 9.47 , 0.91 )<br>( N/A , -0.11 , -0.1) | 3294.8<br>3300.8 | 0.3843<br>98.4<br>98.2 | 4.2686<br>[ 4.6193 ] | 92.4% | 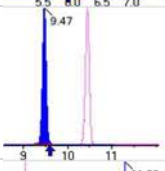 | 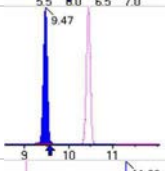 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4920756<br>( 533.0 / 353.0 ) 1602297 | ( 11.09 , 1.72 )<br>( N/A , -0.10 , -0.1) | 2716.7<br>2417.4 | 0.3256<br>101.3<br>104.6 | 4.0683<br>[ 4.6663 ] | 87.2% | 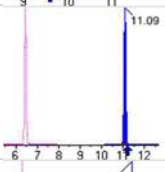 | 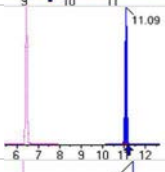 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3836714<br>( 633.0 / 453.0 ) 1332353 | ( 12.42 , 1.93 )<br>( N/A , -0.07 , 0.1) | 2898.5<br>3132.2 | 0.3473<br>106.3<br>104.7 | 4.0497<br>[ 4.7160 ] | 85.9% | 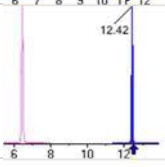 | 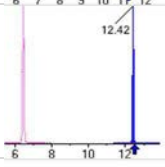 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 1819515<br>( 315.0 / 83.0 ) 1024876 | ( 6.88 , 1.15 )<br>( N/A , -0.08 , 0.0) | 2861.5<br>1179.2 | 0.5633<br>98.3<br>95.2 | 8.5840<br>[ 8.9246 ] | 96.2% | 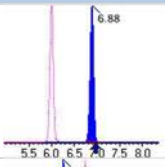 | 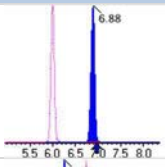 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 236669<br>( 241.0 / 117.0 ) 544596 | ( 4.34 , 0.91 )<br>( N/A , -0.03 , 0.0) | 2623.0<br>1927.0 | 2.3011<br>103.7<br>103.4 | 20.7157<br>[ 20.0000 ] | 103.6% | 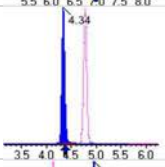 | 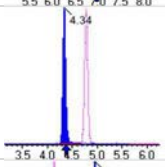 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1396480<br>( 341.0 / 217.0 ) 2114322 | ( 6.87 , 1.15 )<br>( N/A , -0.06 , 0.1) | 1484.3<br>1161.6 | 1.5140<br>101.1<br>98.8 | 20.4453<br>[ 20.0000 ] | 102.2% | 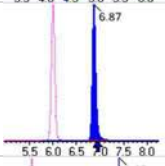 | 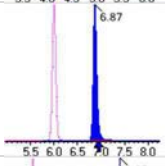 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2219255<br>( 441.0 / 337.0 ) 1917064 | ( 9.26 , 1.54 )<br>( N/A , -0.08 , 0.2) | 4985.4<br>7618.6 | 0.8638<br>97.1<br>99.7 | 22.0870<br>[ 20.0000 ] | 110.4% | 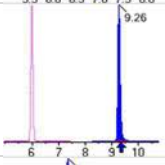 | 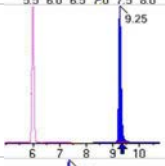 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1529490<br>( 357.2 / 243.0 ) 164299 | ( 6.72 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1401.1<br>1046.8 | 0.1074<br>101.8<br>100.5 | 4.8746<br>[ 5.0000 ] | 97.5% | 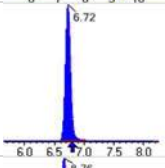 | 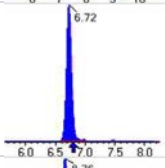 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1190775<br>( 457.2 / 343.0 ) 50208 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , 0.2) | 812.0<br>373.2 | 0.0422<br>107.7<br>110.9 | 4.9806<br>[ 5.0000 ] | 99.6% | 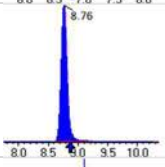 | 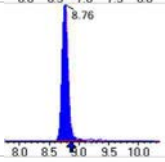 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 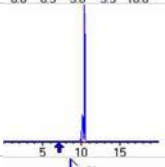 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269556 | ( 3.72 , N/A )<br>( N/A , -0.03 , N/A ) | 1246.3 | N/A | 0.8948<br>[ 1.0000 ] | 89.5%<br>{ 79.6% } | 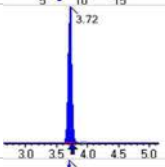 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135868 | ( 6.00 , N/A )<br>( N/A , -0.07 , N/A ) | 129852.0 | N/A | 0.8836<br>[ 1.0000 ] | 88.4%<br>{ 79.7% } | 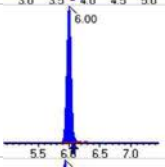 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 410104 | ( 8.14 , N/A )<br>( N/A , -0.09 , N/A ) | 4603.5 | N/A | 0.9192<br>[ 1.0000 ] | 91.9%<br>{ 84.0% } | 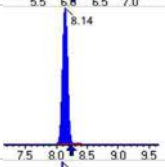 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 297879 | ( 9.09 , N/A )<br>( N/A , -0.10 , N/A ) | 1207.6 | N/A | 0.8911<br>[ 1.0000 ] | 89.1%<br>{ 77.4% } | 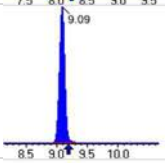 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 298211 | ( 9.99 , N/A ) ( N/A , -0.10 , N/A ) | 3359.0 | N/A | 0.8992 [ 1.0000 ] | 89.9% { 79.0% } | 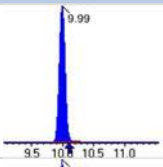 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1020416 | ( 8.59 , N/A ) ( N/A , -0.10 , N/A ) | 3795.5 | N/A | 0.9132 [ 1.0000 ] | 91.3% { 81.4% } | 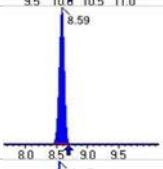 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 826123 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 2767.6 | N/A | 0.8463 [ 1.0000 ] | 84.6% { 78.1% } | 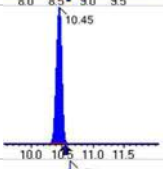 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2314201 | ( 3.71 , N/A ) ( N/A , -0.03 , N/A ) | 35555.6 | N/A | 7.7852 [ 8.0000 ] | 97.3% { 81.5% } | 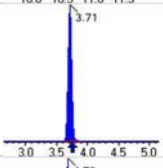 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 924025 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5928.7 | N/A | 3.7909 [ 4.0000 ] | 94.8% { 72.2% } | 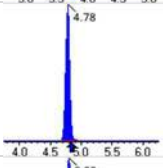 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581706 | ( 6.00 , N/A ) ( N/A , -0.07 , N/A ) | 7357.1 | N/A | 1.9940 [ 2.0000 ] | 99.7% { 76.7% } | 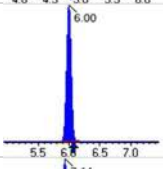 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 621756 | ( 7.14 , N/A ) ( N/A , -0.08 , N/A ) | 4005.9 | N/A | 2.0407 [ 2.0000 ] | 102.0% { 75.7% } | 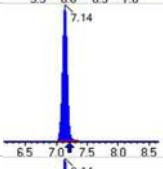 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 860866 | ( 8.14 , N/A ) ( N/A , -0.09 , N/A ) | 2802.8 | N/A | 1.9909 [ 2.0000 ] | 99.5% { 79.2% } | 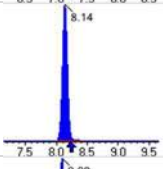 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274201 | ( 9.09 , N/A ) ( N/A , -0.10 , N/A ) | 3350.4 | N/A | 0.9532 [ 1.0000 ] | 95.3% { 72.5% } | 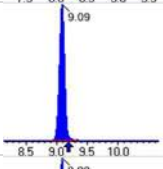 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 333694 | ( 9.99 , N/A ) ( N/A , -0.10 , N/A ) | 1107.4 | N/A | 0.9697 [ 1.0000 ] | 97.0% { 70.8% } | 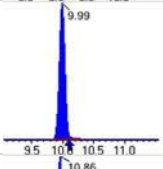 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412823 | ( 10.86 , N/A ) ( N/A , -0.10 , N/A ) | 806.7 | N/A | 0.9867 [ 1.0000 ] | 98.7% { 81.4% } | 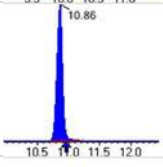 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 434312 | ( 11.69 , N/A ) ( N/A , -0.09 , N/A ) | 1447.5 | N/A | 1.0337 [ 1.0000 ] | 103.4% { 83.7% } | 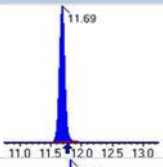 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 381121 | ( 12.82 , N/A ) ( N/A , -0.06 , N/A ) | 1386.8 | N/A | 1.0410 [ 1.0000 ] | 104.1% { 86.1% } | 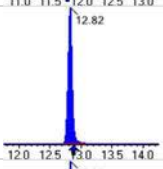 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 630920 | ( 13.63 , N/A ) ( N/A , -0.06 , N/A ) | 2306.6 | N/A | 2.0288 [ 2.0000 ] | 101.4% { 78.4% } | 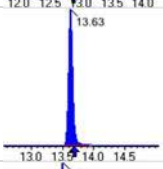 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1795723 | ( 6.29 , N/A ) ( N/A , -0.07 , N/A ) | 1152.6 | N/A | 1.8062 [ 2.0000 ] | 90.3% { 75.3% } | 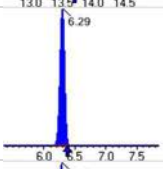 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1438991 | ( 8.58 , N/A ) ( N/A , -0.10 , N/A ) | 4808.4 | N/A | 1.9271 [ 2.0000 ] | 96.4% { 81.6% } | 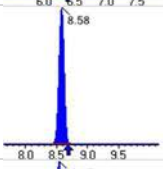 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1794882 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 1580.8 | N/A | 2.0409 [ 2.0000 ] | 102.0% { 80.4% } | 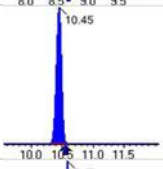 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 445596 | ( 5.47 , N/A ) ( N/A , -0.06 , N/A ) | 88.7 | N/A | 5.0146 [ 4.0000 ] | 125.4% { 80.5% } | 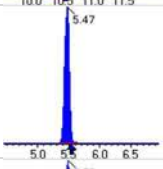 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1409420 | ( 7.58 , N/A ) ( N/A , -0.08 , N/A ) | 4297.1 | N/A | 5.1076 [ 4.0000 ] | 127.7% { 86.6% } | 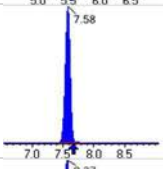 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1389896 | ( 9.37 , N/A ) ( N/A , -0.09 , N/A ) | 1567.1 | N/A | 5.0556 [ 4.0000 ] | 126.4% { 81.4% } | 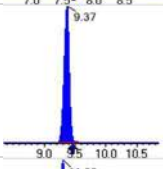 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3050028 | ( 11.00 , N/A ) ( N/A , -0.09 , N/A ) | 1066.3 | N/A | 9.6649 [ 8.0000 ] | 120.8% { 82.2% } | 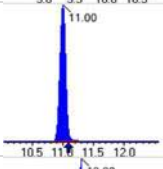 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1815896 | ( 12.80 , N/A ) ( N/A , -0.03 , N/A ) | 1980.0 | N/A | 1.9053 [ 2.0000 ] | 95.3% { 75.0% } | 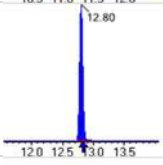 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 370661 | ( 14.18 , N/A ) ( N/A , -0.03 , N/A ) | 2345.5 | N/A | 2.1062 [ 2.0000 ] | 105.3% { 86.7% } | 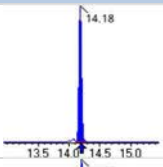  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 402279 | ( 14.50 , N/A ) ( N/A , -0.03 , N/A ) | 2587.7 | N/A | 1.9900 [ 2.0000 ] | 99.5% { 83.1% } | 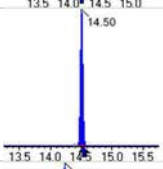  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1076130 | ( 10.24 , N/A ) ( N/A , -0.09 , N/A ) | 2495.9 | N/A | 4.7780 [ 4.0000 ] | 119.5% { 81.5% } | 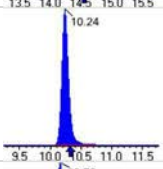  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1009240 | ( 10.76 , N/A ) ( N/A , -0.09 , N/A ) | 1898.3 | N/A | 4.7207 [ 4.0000 ] | 118.0% { 81.9% } | 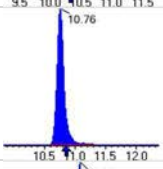  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1749997 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 3075.9 | N/A | 21.2812 [ 20.0000 ] | 106.4% { 94.1% } | 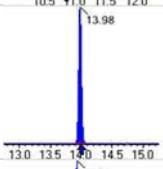  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1775739 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 3726.4 | N/A | 17.8259 [ 20.0000 ] | 89.1% { 84.8% } | 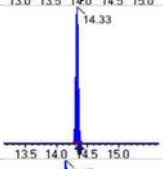  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1084568 | ( 6.45 , N/A ) ( N/A , -0.07 , N/A ) | 1943.4 | N/A | 8.6491 [ 8.0000 ] | 108.1% { 77.3% } | 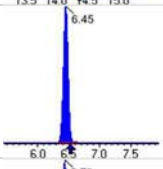  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 583817 | ( 6.73 , N/A ) ( N/A , -0.07 , N/A ) | 1224.0 | N/A | 2.2074 [ 2.0000 ] | 110.4% { 82.1% } | 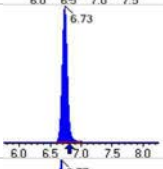  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 566949 | ( 8.77 , N/A ) ( N/A , -0.09 , N/A ) | 803.4 | N/A | 2.2960 [ 2.0000 ] | 114.8% { 84.7% } | 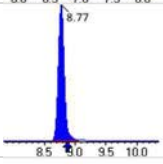  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | PFBA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.10A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.47A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.50A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.43A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.78A | 95.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.44A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.54A | 90.8A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.08A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.53A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.58A | 95.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.24A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.54A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.39A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.67A | 96.3A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.4A | 92.5A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 99.9A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.4A | 101A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.5A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.52A | 90.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.3A | 91.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.8A | 94.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | NMeFOSEA | 20.0A | 17.8A | 88.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 95.9A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.05A | 101A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.40A | 93.2A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.95A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.02A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.04A | 90.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.17A | 91.7A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.30A | 91.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.53A | 96.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 17.8A | 89.1A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 17.9A | 89.5A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2372019<br>( 163.0 / 69.0 ) 62514 | ( 2.80 , 0.74 ) ( N/A , 0.00 , 0.1) | 13913.0<br>2584.8 | 0.0264<br>97.0<br>100.0 | 8.9879<br>[ 10.0000 ] | 89.9% | 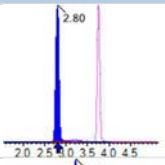 | 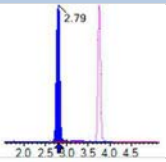 | |
| PFBA | ( 213.0 / 169.0 ) 4986352 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.8 | N/A<br>0.0<br>0.0 | 17.8727<br>[ 20.0000 ] | 89.4% | 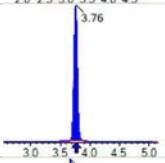 | | |
| PFPeA | ( 263.0 / 219.0 ) 2243443<br>( 263.0 / 69.0 ) 24889 | ( 4.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 5617.4<br>382.6 | 0.0111<br>92.9<br>100.0 | 9.1014<br>[ 10.0000 ] | 91.0% | 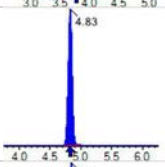 | 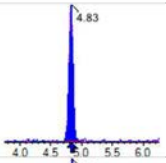 | |
| PFHxA | ( 313.0 / 269.0 ) 1266538<br>( 313.0 / 119.0 ) 148224 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.1) | 2320.7<br>1439.8 | 0.1170<br>100.8<br>100.0 | 4.4684<br>[ 5.0000 ] | 89.4% | 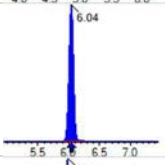 | 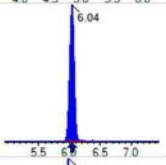 | |
| PFHpA | ( 363.0 / 319.0 ) 1450446<br>( 363.0 / 169.0 ) 428196 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 1901.5<br>1629.8 | 0.2952<br>97.4<br>100.0 | 4.5031<br>[ 5.0000 ] | 90.1% | 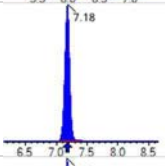 | 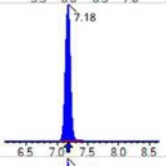 | |
| PFOA | ( 413.0 / 369.0 ) 2002153<br>( 413.0 / 169.0 ) 687361 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 897.9<br>1153.0 | 0.3433<br>93.9<br>100.0 | 4.7249<br>[ 5.0000 ] | 94.5% | 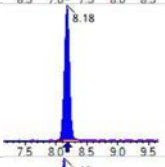 | 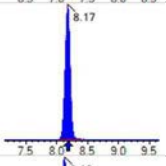 | |
| PFNA | ( 463.0 / 419.0 ) 1283413<br>( 463.0 / 169.0 ) 308707 | ( 9.12 , 1.00 ) ( 0.00 , N/A , 0.1) | 1323.8<br>992.2 | 0.2405<br>94.2<br>100.0 | 4.7313<br>[ 5.0000 ] | 94.6% | 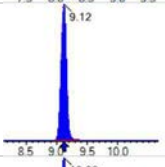 | 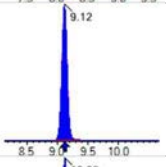 | |
| PFDA | ( 513.0 / 469.0 ) 1457239<br>( 513.0 / 169.0 ) 174432 | ( 10.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 3628.8<br>1931.7 | 0.1197<br>102.2<br>100.0 | 4.4330<br>[ 5.0000 ] | 88.7% | 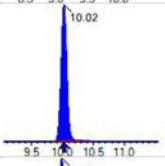 | 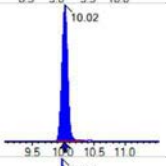 | |
| PFUnA | ( 563.0 / 519.0 ) 1643541<br>( 563.0 / 169.0 ) 233570 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 959.0<br>907.0 | 0.1421<br>100.3<br>100.0 | 4.7773<br>[ 5.0000 ] | 95.5% | 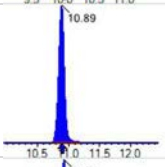 | 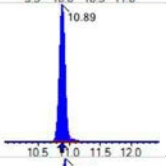 | |
| PFDoA | ( 613.0 / 569.0 ) 1793459<br>( 613.0 / 169.0 ) 265167 | ( 11.71 , 1.00 ) ( 0.00 , N/A , 0.0) | 1158.4<br>870.7 | 0.1479<br>93.5<br>100.0 | 4.7806<br>[ 5.0000 ] | 95.6% | 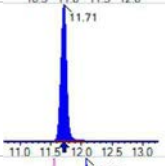 | 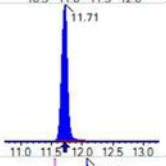 | |
| PFTrDA | ( 663.0 / 619.0 ) 1689975<br>( 663.0 / 169.0 ) 437674 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 1578.2<br>1081.4 | 0.2590<br>100.6<br>100.0 | 4.6051<br>[ 5.0000 ] | 92.1% | 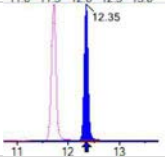 | 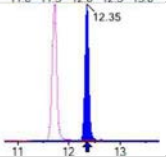 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1356735<br>( 713.0 / 169.0 ) 360534 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1740.6<br>1078.6 | 0.2657<br>98.5<br>100.0 | 4.4375<br>[ 5.0000 ] | 88.7% | 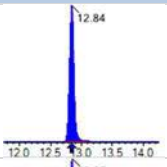 | 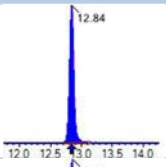 | |
| PFHxDA | ( 813.0 / 769.0 ) 1109449<br>( 813.0 / 169.0 ) 283268 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1965.8<br>1206.1 | 0.2553<br>104.4<br>100.0 | 4.6054<br>[ 5.0000 ] | 92.1% | 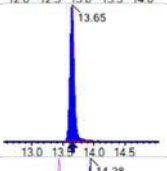 | 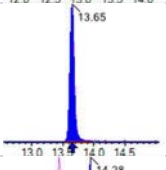 | |
| PFODA | ( 913.0 / 869.0 ) 683892<br>( 913.0 / 169.0 ) 233111 | ( 14.28 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2010.8<br>850.7 | 0.3409<br>95.1<br>100.0 | 4.5379<br>[ 5.0000 ] | 90.8% | 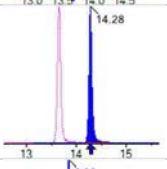 | 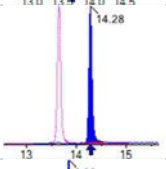 | |
| PFBS | ( 299.0 / 80.0 ) 1776776<br>( 299.0 / 99.0 ) 1306667 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3528.0<br>2910.9 | 0.7354<br>104.0<br>100.0 | 4.0783<br>[ 4.4237 ] | 92.2% | 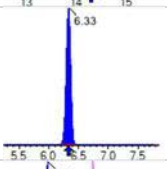 | 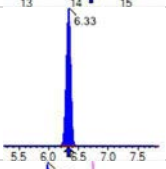 | |
| PFPeS | ( 349.0 / 80.0 ) 4572433<br>( 349.0 / 99.0 ) 1610319 | ( 7.56 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2516.4<br>2164.2 | 0.3522<br>97.9<br>100.0 | 4.5312<br>[ 4.6919 ] | 96.6% | 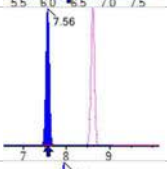 | 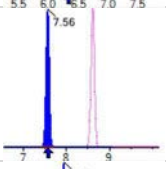 | |
| PFHxS | ( 399.0 / 80.0 ) 4833210<br>( 399.0 / 99.0 ) 1616028 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3301.5<br>4483.9 | 0.3344<br>105.0<br>100.0 | 4.1236<br>[ 4.5549 ] | 90.5% | 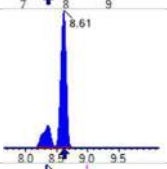 | 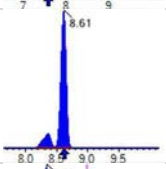 | |
| PFHpS | ( 449.0 / 80.0 ) 4254224<br>( 449.0 / 99.0 ) 1126368 | ( 9.58 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2066.6<br>2304.9 | 0.2648<br>100.0<br>100.0 | 4.5831<br>[ 4.7570 ] | 96.3% | 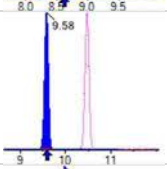 | 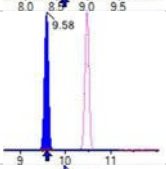 | |
| PFOS | ( 499.0 / 80.0 ) 3789953<br>( 499.0 / 99.0 ) 909936 | ( 10.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2527.5<br>9767.3 | 0.2401<br>102.7<br>100.0 | 4.2357<br>[ 4.6375 ] | 91.3% | 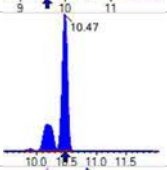 | 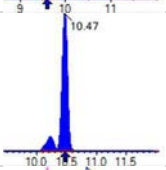 | |
| PFNS | ( 549.0 / 80.0 ) 3806892<br>( 549.0 / 99.0 ) 1025720 | ( 11.31 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2649.7<br>2424.8 | 0.2694<br>98.9<br>100.0 | 4.5441<br>[ 4.7994 ] | 94.7% | 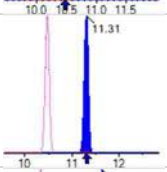 | 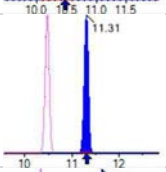 | |
| PFDS | ( 599.0 / 80.0 ) 4494028<br>( 599.0 / 99.0 ) 1201321 | ( 12.03 , 1.15 )<br>( N/A , 0.00 , 0.0) | 2480.1<br>2375.2 | 0.2673<br>98.3<br>100.0 | 4.3932<br>[ 4.8155 ] | 91.2% | 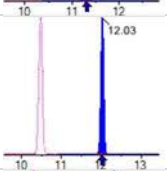 | 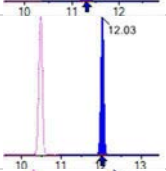 | |
| PFDoS | ( 699.0 / 80.0 ) 4211625<br>( 699.0 / 99.0 ) 964350 | ( 12.95 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3894.8<br>3231.8 | 0.2290<br>98.0<br>100.0 | 4.6702<br>[ 4.8478 ] | 96.3% | 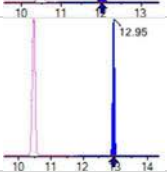 | 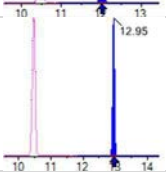 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6723472<br>( 327.0 / 81.0 ) 6052601 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.1) | 5893.7<br>4257.3 | 0.9002<br>103.2<br>100.0 | 17.3957<br>[ 18.6906 ] | 93.1% | 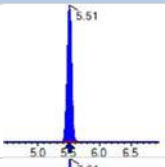 | 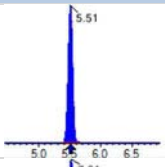 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6550499<br>( 427.0 / 81.0 ) 8675827 | ( 7.61 , 1.00 ) ( 0.00 , N/A , -0.1) | 4655.5<br>4712.5 | 1.3245<br>105.6<br>100.0 | 18.9841<br>[ 18.9808 ] | 100.0% | 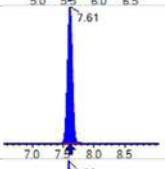 | 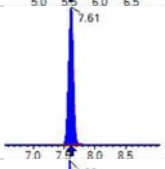 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6285503<br>( 527.0 / 81.0 ) 6405924 | ( 9.39 , 1.00 ) ( 0.00 , N/A , 0.1) | 1836.8<br>1754.0 | 1.0192<br>93.7<br>100.0 | 19.3547<br>[ 19.1658 ] | 101.0% | 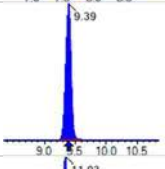 | 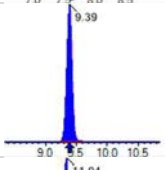 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4792812<br>( 627.0 / 81.0 ) 6991963 | ( 11.03 , 1.00 ) ( 0.01 , N/A , -0.1) | 1314.8<br>1502.6 | 1.4588<br>101.3<br>100.0 | 19.4893<br>[ 19.3236 ] | 100.9% | 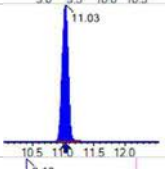 | 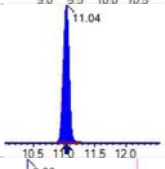 | |
| PFBSA | ( 297.9 / 78.0 ) 3525714<br>( 297.9 / 278.0 ) 5463 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.5) | 1695.3<br>251.5 | 0.0015<br>113.4<br>100.0 | 4.7511<br>[ 5.0000 ] | 95.0% | 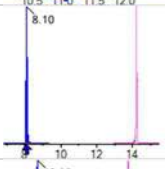 | 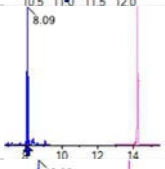 | |
| PFHxSA | ( 397.9 / 78.0 ) 4197148<br>( 397.9 / 378.0 ) 17568 | ( 10.96 , 0.75 ) ( N/A , 0.00 , 0.0) | 1478.3<br>418.3 | 0.0042<br>102.4<br>100.0 | 4.4538<br>[ 5.0000 ] | 89.1% | 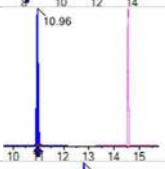 | 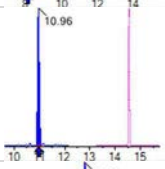 | |
| PFOSA | ( 498.0 / 78.0 ) 3104104<br>( 498.0 / 478.0 ) 46212 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 2218.1<br>1112.6 | 0.0149<br>106.1<br>100.0 | 4.5183<br>[ 5.0000 ] | 90.4% | 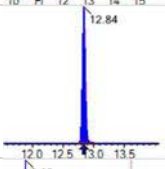 | 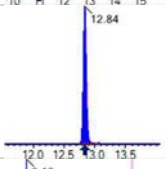 | |
| TFSI | ( 279.7 / 147.0 ) 8803222<br>( 279.7 / 211.0 ) 753322 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.0) | 60.2<br>54.6 | 0.0856<br>101.9<br>100.0 | 4.8663<br>[ 4.8967 ] | 99.4% | 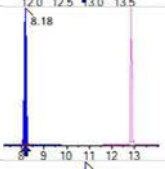 | 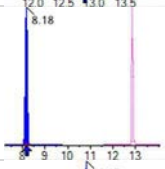 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2614289<br>( 512.0 / 169.0 ) 1982385 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.5) | 3210.8<br>1364.9 | 0.7583<br>101.3<br>100.0 | 18.2851<br>[ 20.0000 ] | 91.4% | 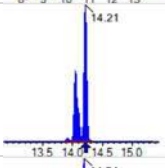 | 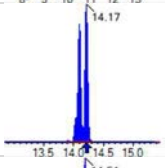 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3236003<br>( 526.0 / 169.0 ) 4018548 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.2) | 4263.0<br>4095.8 | 1.2418<br>100.6<br>100.0 | 18.8439<br>[ 20.0000 ] | 94.2% | 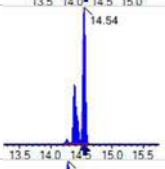 | 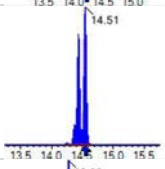 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 913337<br>( 570.0 / 483.0 ) 426919 | ( 10.28 , 1.00 ) ( 0.01 , N/A , 0.2) | 2705.3<br>1697.2 | 0.4674<br>106.6<br>100.0 | 4.5300<br>[ 5.0000 ] | 90.6% | 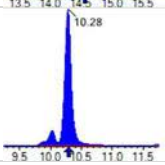 | 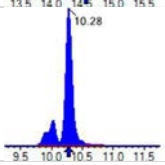 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 887553<br>( 584.0 / 526.0 ) 524891 | ( 10.81 , 1.00 ) ( 0.01 , N/A , 0.0) | 1604.5<br>743.0 | 0.5914<br>95.9<br>100.0 | 4.7124<br>[ 5.0000 ] | 94.2% | 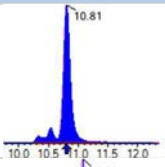 | 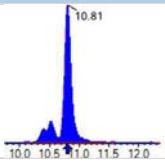 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1339066 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 2300.7 | N/A<br>0.0<br>0.0 | 17.7635<br>[ 20.0000 ] | 88.8% | 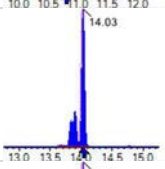 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1098743 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 3411.8 | N/A<br>0.0<br>0.0 | 19.1717<br>[ 20.0000 ] | 95.9% | 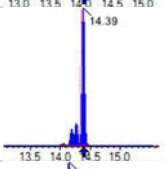 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 380390<br>( 285.0 / 185.0 ) 1003592 | ( 6.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 1880.8<br>2181.2 | 2.6383<br>95.4<br>100.0 | 5.0462<br>[ 5.0000 ] | 100.9% | 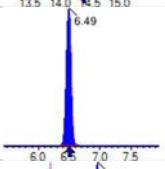 | 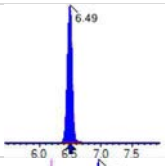 | |
| ADONA | ( 377.0 / 85.0 ) 3869589<br>( 377.0 / 251.0 ) 404618 | ( 7.56 , 1.16 ) ( N/A , 0.00 , 0.0) | 1810.2<br>1474.1 | 0.1046<br>102.6<br>100.0 | 4.4000<br>[ 4.7135 ] | 93.3% | 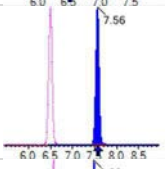 | 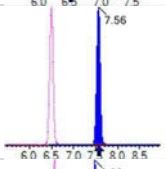 | |
| PFEESA | ( 315.0 / 135.0 ) 1617314<br>( 315.0 / 83.0 ) 915772 | ( 6.92 , 1.15 ) ( N/A , 0.00 , 0.1) | 3997.6<br>1231.2 | 0.5662<br>101.6<br>100.0 | 7.9456<br>[ 8.9246 ] | 89.0% | 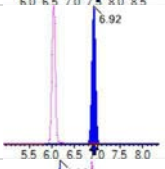 | 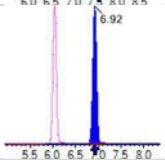 | |
| PFMPA | ( 229.0 / 85.0 ) 705416 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 6992.0 | N/A<br>0.0<br>0.0 | 9.0183<br>[ 10.0000 ] | 90.2% | 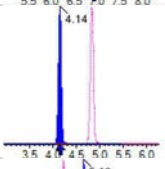 | | |
| PFMBA | ( 279.0 / 85.0 ) 1921542 | ( 5.19 , 1.08 ) ( N/A , 0.00 , 0.0) | 5369.8 | N/A<br>0.0<br>0.0 | 9.0384<br>[ 10.0000 ] | 90.4% | 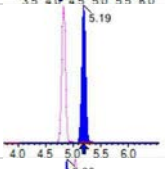 | | |
| NFDHA | ( 295.0 / 201.0 ) 969933<br>( 295.0 / 85.0 ) 975334 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.2) | 2782.9<br>3168.6 | 1.0056<br>93.2<br>100.0 | 9.1661<br>[ 10.0000 ] | 91.7% | 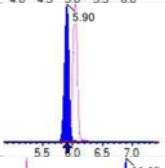 | 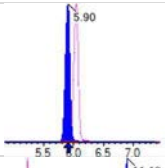 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4087296<br>( 533.0 / 353.0 ) 1347063 | ( 11.12 , 1.71 ) ( N/A , 0.00 , 0.0) | 2680.8<br>2619.2 | 0.3296<br>105.3<br>100.0 | 4.3029<br>[ 4.6663 ] | 92.2% | 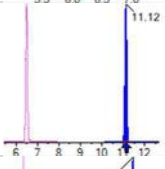 | 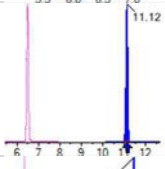 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3311751<br>( 633.0 / 453.0 ) 1133851 | ( 12.44 , 1.92 ) ( N/A , 0.00 , 0.2) | 4100.5<br>2989.7 | 0.3424<br>103.1<br>100.0 | 4.5336<br>[ 4.7160 ] | 96.1% | 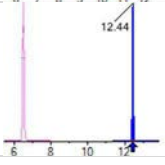 | 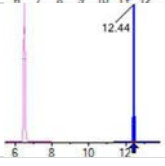 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2140660<br>( 461.0 / 381.2 ) 848710 | ( 9.50 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3568.0<br>3221.6 | 0.3965<br>99.5<br>100.0 | 4.2408<br>[ 4.6193 ] | 91.8% | 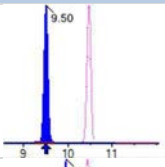 | 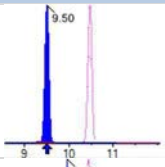 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 250641<br>( 241.0 / 117.0 ) 543725 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2462.4<br>2395.7 | 2.1693<br>103.0<br>100.0 | 17.8744<br>[ 20.0000 ] | 89.4% | 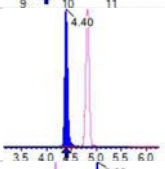 | 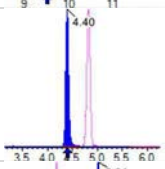 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1400179<br>( 341.0 / 217.0 ) 2037968 | ( 6.93 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1226.3<br>1321.6 | 1.4555<br>95.8<br>100.0 | 17.8129<br>[ 20.0000 ] | 89.1% | 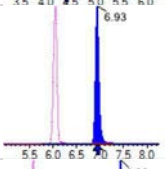 | 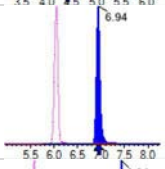 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2309905<br>( 441.0 / 337.0 ) 2020407 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , 0.1) | 4835.4<br>5971.4 | 0.8747<br>95.4<br>100.0 | 17.9072<br>[ 20.0000 ] | 89.5% | 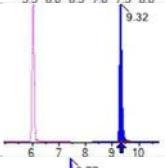 | 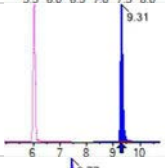 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1550464<br>( 357.2 / 243.0 ) 161386 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1205.4<br>827.6 | 0.1041<br>94.4<br>100.0 | 4.7278<br>[ 5.0000 ] | 94.6% | 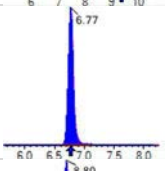 | 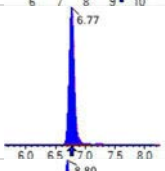 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1154425<br>( 457.2 / 343.0 ) 52338 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -0.2) | 931.8<br>340.3 | 0.0453<br>109.3<br>100.0 | 5.1167<br>[ 5.0000 ] | 102.3% | 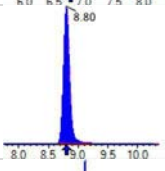 | 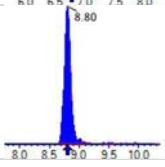 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 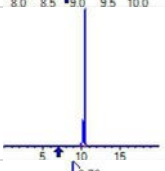 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 236533 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1101.8 | N/A | 0.9920<br>[ 1.0000 ] | 99.2%<br>{ 100.0% } | 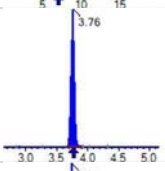 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126603 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 69331.2 | N/A | 0.9980<br>[ 1.0000 ] | 99.8%<br>{ 100.0% } | 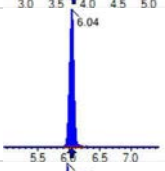 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379350 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3677.7 | N/A | 0.9596<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 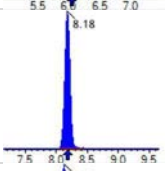 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281253 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 841.7 | N/A | 0.9889<br>[ 1.0000 ] | 98.9%<br>{ 100.0% } | 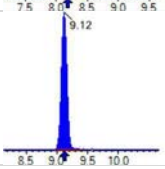 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 289297 | ( 10.03 , N/A ) ( N/A , 0.00 , N/A ) | 3430.1 | N/A | 0.9907 [ 1.0000 ] | 99.1% { 100.0% } | 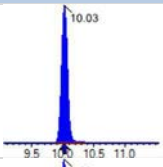 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 933370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4734.1 | N/A | 0.9835 [ 1.0000 ] | 98.3% { 100.0% } | 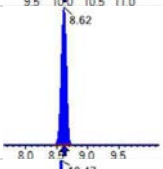 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 711998 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2262.1 | N/A | 0.9348 [ 1.0000 ] | 93.5% { 100.0% } | 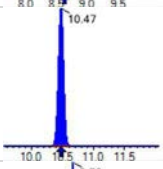 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2239045 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 37591.9 | N/A | 8.2862 [ 8.0000 ] | 103.6% { 100.0% } | 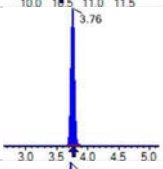 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 975984 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 6092.8 | N/A | 4.1317 [ 4.0000 ] | 103.3% { 100.0% } | 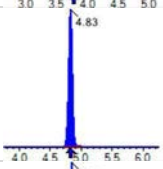 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 590039 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 15322.1 | N/A | 2.0426 [ 2.0000 ] | 102.1% { 100.0% } | 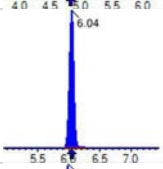 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 656479 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 4259.1 | N/A | 2.0430 [ 2.0000 ] | 102.2% { 100.0% } | 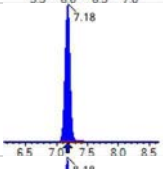 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862246 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3033.4 | N/A | 2.1213 [ 2.0000 ] | 106.1% { 100.0% } | 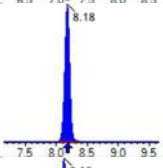 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269897 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3269.5 | N/A | 0.9787 [ 1.0000 ] | 97.9% { 100.0% } | 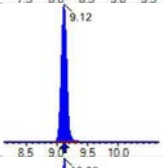 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321721 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 932.0 | N/A | 0.9923 [ 1.0000 ] | 99.2% { 100.0% } | 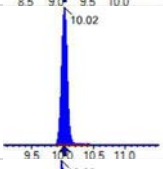 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 371951 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 1176.3 | N/A | 0.9752 [ 1.0000 ] | 97.5% { 100.0% } | 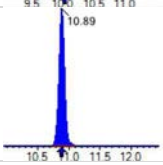 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 372900 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 1140.4 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 100.0% } | 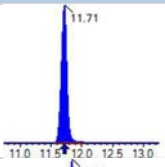 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 326459 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1457.1 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 100.0% } | 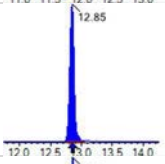 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 505124 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2276.2 | N/A | 1.7887 [ 2.0000 ] | 89.4% { 100.0% } | 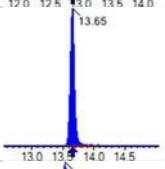 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1678205 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1604.5 | N/A | 1.9901 [ 2.0000 ] | 99.5% { 100.0% } | 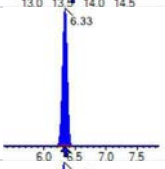 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1318602 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 4229.8 | N/A | 1.9590 [ 2.0000 ] | 97.9% { 100.0% } | 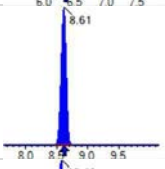 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1549392 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1607.9 | N/A | 2.0183 [ 2.0000 ] | 100.9% { 100.0% } | 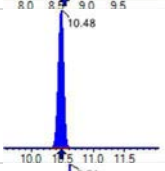 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 589081 | ( 5.51 , N/A ) ( N/A , 0.00 , N/A ) | 92.9 | N/A | 4.0487 [ 4.0000 ] | 101.2% { 100.0% } | 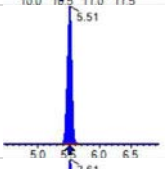 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1666770 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 4013.9 | N/A | 3.8278 [ 4.0000 ] | 95.7% { 100.0% } | 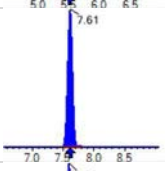 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1367825 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1522.8 | N/A | 4.0053 [ 4.0000 ] | 100.1% { 100.0% } | 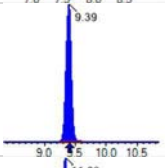 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2552514 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1280.0 | N/A | 7.1518 [ 8.0000 ] | 89.4% { 100.0% } | 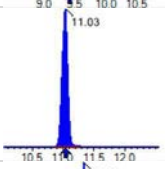 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1373982 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 3023.7 | N/A | 2.0196 [ 2.0000 ] | 101.0% { 100.0% } | 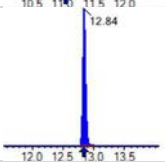 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 287989 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1960.3 | N/A | 1.9959 [ 2.0000 ] | 99.8% { 100.0% } | 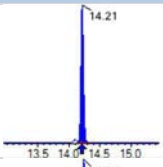  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 306672 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2411.5 | N/A | 1.9819 [ 2.0000 ] | 99.1% { 100.0% } | 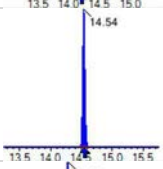  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 845576 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2402.7 | N/A | 4.2807 [ 4.0000 ] | 107.0% { 100.0% } | 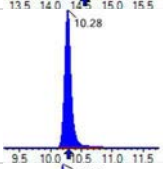  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 770166 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1846.4 | N/A | 4.2779 [ 4.0000 ] | 106.9% { 100.0% } | 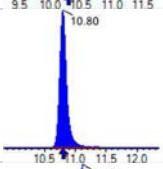  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1374456 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2535.5 | N/A | 21.1966 [ 20.0000 ] | 106.0% { 100.0% } | 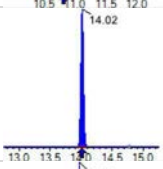  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1290095 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3979.5 | N/A | 19.6021 [ 20.0000 ] | 98.0% { 100.0% } | 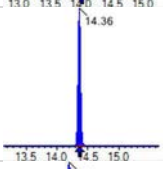  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022651 | ( 6.50 , N/A ) ( N/A , 0.00 , N/A ) | 2065.9 | N/A | 7.7718 [ 8.0000 ] | 97.1% { 100.0% } | 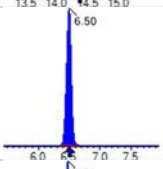  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 616938 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1272.7 | N/A | 1.9669 [ 2.0000 ] | 98.3% { 100.0% } | 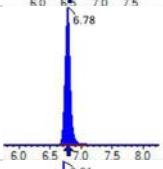  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 553242 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 748.1 | N/A | 1.9376 [ 2.0000 ] | 96.9% { 100.0% } | 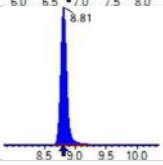  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | PFBA | 20.0A | 18.4A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 8.81A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.49A | 89.8A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.74A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.66A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.29A | 85.8A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.51A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.45A | 88.9A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.64A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.86A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.36A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.61A | 96.5A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.35A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.46A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.51A | 93.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.9A | 95.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 100A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.7A | 97.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.7A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.45A | 89.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.2A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.6A | 93.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.32A | 86.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.5A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | NMeFOSEA | 20.0A | 17.7A | 88.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 18.5A | 92.3A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.66A | 93.3A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.73A | 100A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.57A | 85.1A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.30A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.97A | 89.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.19A | 91.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 96.0A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.39A | 93.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.2A | 85.8A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.3A | 91.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2378964<br>( 163.0 / 69.0 ) 64297 | ( 2.77 , 0.74 ) ( N/A , -0.03 , 0.0) | 14801.2<br>2730.5 | 0.0270<br>99.5<br>102.6 | 9.3340<br>[ 10.0000 ] | 93.3% | 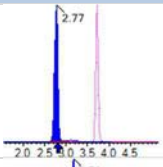 | 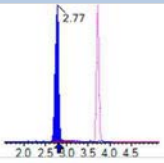 | |
| PFBA | ( 213.0 / 169.0 ) 4962164 | ( 3.72 , 1.00 ) ( 0.00 , N/A , 0.0) | 1056.7 | N/A<br>0.0<br>0.0 | 18.4170<br>[ 20.0000 ] | 92.1% | 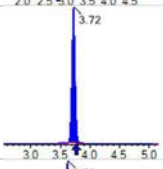 | | |
| PFPeA | ( 263.0 / 219.0 ) 1964295<br>( 263.0 / 69.0 ) 23803 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 5001.8<br>313.7 | 0.0121<br>101.5<br>109.2 | 8.8051<br>[ 10.0000 ] | 88.1% | 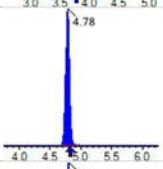 | 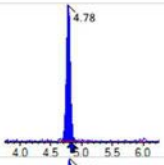 | |
| PFHxA | ( 313.0 / 269.0 ) 1139298<br>( 313.0 / 119.0 ) 135752 | ( 6.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 2222.6<br>989.0 | 0.1192<br>102.6<br>101.8 | 4.4896<br>[ 5.0000 ] | 89.8% | 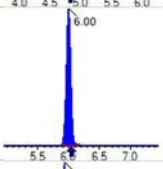 | 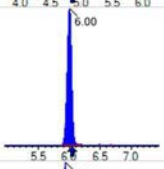 | |
| PFHpA | ( 363.0 / 319.0 ) 1368859<br>( 363.0 / 169.0 ) 405628 | ( 7.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 1710.5<br>1989.9 | 0.2963<br>97.8<br>100.4 | 4.7419<br>[ 5.0000 ] | 94.8% | 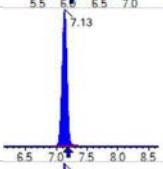 | 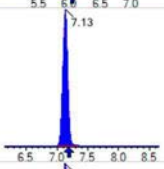 | |
| PFOA | ( 413.0 / 369.0 ) 1786147<br>( 413.0 / 169.0 ) 651972 | ( 8.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 798.7<br>1080.4 | 0.3650<br>99.9<br>106.3 | 4.8440<br>[ 5.0000 ] | 96.9% | 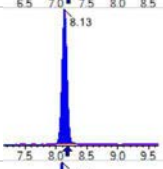 | 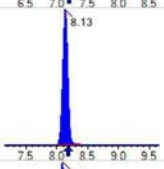 | |
| PFNA | ( 463.0 / 419.0 ) 1103867<br>( 463.0 / 169.0 ) 297773 | ( 9.08 , 1.00 ) ( 0.00 , N/A , 0.1) | 1157.8<br>1207.6 | 0.2698<br>105.7<br>112.1 | 4.6624<br>[ 5.0000 ] | 93.2% | 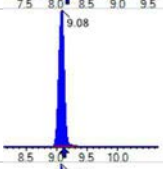 | 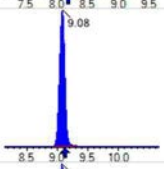 | |
| PFDA | ( 513.0 / 469.0 ) 1303129<br>( 513.0 / 169.0 ) 162758 | ( 9.98 , 1.00 ) ( -0.01 , N/A , 0.0) | 2898.2<br>7014.5 | 0.1249<br>106.6<br>104.3 | 4.2894<br>[ 5.0000 ] | 85.8% | 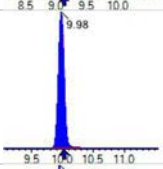 | 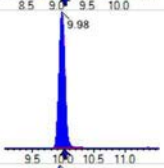 | |
| PFUnA | ( 563.0 / 519.0 ) 1504447<br>( 563.0 / 169.0 ) 214421 | ( 10.84 , 1.00 ) ( 0.00 , N/A , 0.3) | 1010.8<br>921.6 | 0.1425<br>100.6<br>100.3 | 4.7775<br>[ 5.0000 ] | 95.5% | 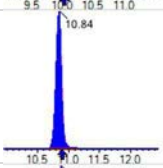 | 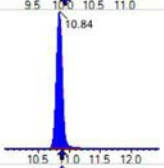 | |
| PFDoA | ( 613.0 / 569.0 ) 1613864<br>( 613.0 / 169.0 ) 252110 | ( 11.67 , 1.00 ) ( -0.01 , N/A , 0.1) | 1840.5<br>968.7 | 0.1562<br>98.8<br>105.7 | 4.5106<br>[ 5.0000 ] | 90.2% | 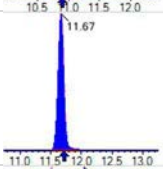 | 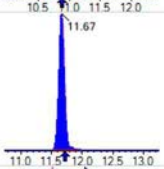 | |
| PFTrDA | ( 663.0 / 619.0 ) 1556368<br>( 663.0 / 169.0 ) 404634 | ( 12.31 , 1.05 ) ( N/A , -0.04 , 0.0) | 1518.3<br>1018.4 | 0.2600<br>101.0<br>100.4 | 4.4468<br>[ 5.0000 ] | 88.9% | 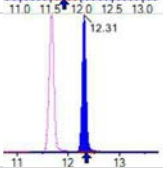 | 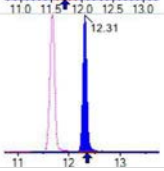 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1336619<br>( 713.0 / 169.0 ) 352276 | ( 12.81 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1673.3<br>1445.2 | 0.2636<br>97.6<br>99.2 | 4.7175<br>[ 5.0000 ] | 94.4% | 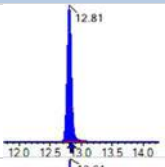 | 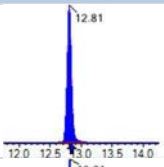 | |
| PFHxDA | ( 813.0 / 769.0 ) 1045243<br>( 813.0 / 169.0 ) 247123 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2235.2<br>1365.9 | 0.2364<br>96.6<br>92.6 | 4.6391<br>[ 5.0000 ] | 92.8% | 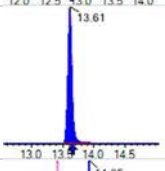 | 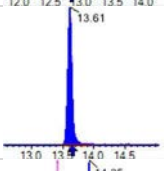 | |
| PFODA | ( 913.0 / 869.0 ) 638713<br>( 913.0 / 169.0 ) 212994 | ( 14.25 , 1.05 )<br>( N/A , -0.03 , 0.0) | 1665.4<br>773.2 | 0.3335<br>93.1<br>97.8 | 4.5313<br>[ 5.0000 ] | 90.6% | 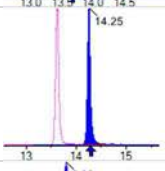 | 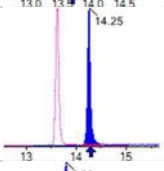 | |
| PFBS | ( 299.0 / 80.0 ) 1627685<br>( 299.0 / 99.0 ) 1224818 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3238.3<br>3086.7 | 0.7525<br>106.4<br>102.3 | 3.8554<br>[ 4.4237 ] | 87.2% | 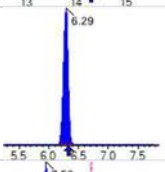 | 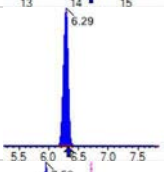 | |
| PFPeS | ( 349.0 / 80.0 ) 4267064<br>( 349.0 / 99.0 ) 1508835 | ( 7.52 , 0.88 )<br>( N/A , -0.04 , 0.0) | 2601.9<br>2729.5 | 0.3536<br>98.3<br>100.4 | 4.3633<br>[ 4.6919 ] | 93.0% | 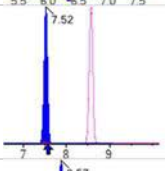 | 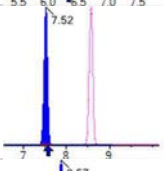 | |
| PFHxS | ( 399.0 / 80.0 ) 4682444<br>( 399.0 / 99.0 ) 1568239 | ( 8.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3191.0<br>5120.3 | 0.3349<br>105.2<br>100.2 | 4.1222<br>[ 4.5549 ] | 90.5% | 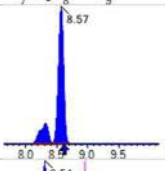 | 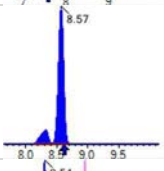 | |
| PFHpS | ( 449.0 / 80.0 ) 3963620<br>( 449.0 / 99.0 ) 1056950 | ( 9.54 , 0.91 )<br>( N/A , -0.04 , 0.2) | 1866.9<br>1788.5 | 0.2667<br>100.8<br>100.7 | 4.6124<br>[ 4.7570 ] | 97.0% | 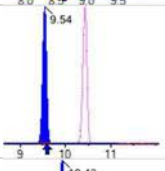 | 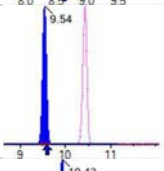 | |
| PFOS | ( 499.0 / 80.0 ) 3603689<br>( 499.0 / 99.0 ) 817942 | ( 10.43 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2425.1<br>5017.0 | 0.2270<br>97.1<br>94.5 | 4.3504<br>[ 4.6375 ] | 93.8% | 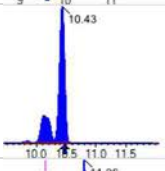 | 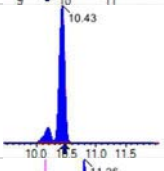 | |
| PFNS | ( 549.0 / 80.0 ) 3468340<br>( 549.0 / 99.0 ) 965249 | ( 11.26 , 1.08 )<br>( N/A , -0.05 , 0.0) | 2102.5<br>2163.0 | 0.2783<br>102.1<br>103.3 | 4.4719<br>[ 4.7994 ] | 93.2% | 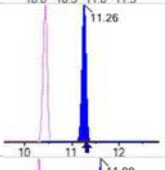 | 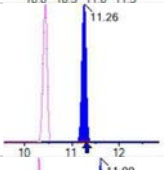 | |
| PFDS | ( 599.0 / 80.0 ) 4222164<br>( 599.0 / 99.0 ) 1106568 | ( 11.99 , 1.15 )<br>( N/A , -0.04 , 0.0) | 2905.0<br>2256.8 | 0.2621<br>96.4<br>98.0 | 4.4583<br>[ 4.8155 ] | 92.6% | 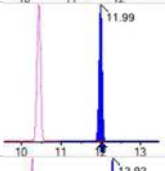 | 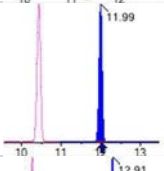 | |
| PFDoS | ( 699.0 / 80.0 ) 3767492<br>( 699.0 / 99.0 ) 863898 | ( 12.92 , 1.24 )<br>( N/A , -0.03 , 0.1) | 3602.5<br>2723.8 | 0.2293<br>98.2<br>100.1 | 4.5126<br>[ 4.8478 ] | 93.1% | 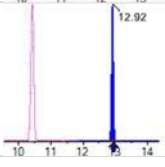 | 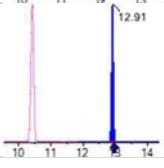 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6590145<br>( 327.0 / 81.0 ) 6177428 | ( 5.47 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5348.5<br>3700.4 | 0.9374<br>107.4<br>104.1 | 17.8690<br>[ 18.6906 ] | 95.6% | 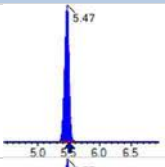 | 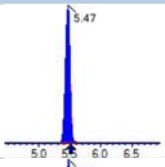 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5994527<br>( 427.0 / 81.0 ) 7759723 | ( 7.57 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4461.7<br>4269.3 | 1.2945<br>103.2<br>97.7 | 18.9906<br>[ 18.9808 ] | 100.1% | 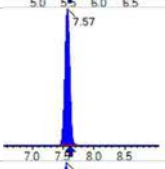 | 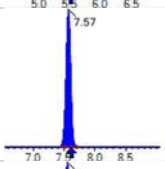 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5876343<br>( 527.0 / 81.0 ) 5982935 | ( 9.35 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1353.8<br>1577.4 | 1.0181<br>93.6<br>99.9 | 18.7255<br>[ 19.1658 ] | 97.7% | 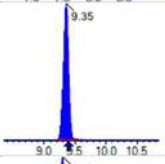 | 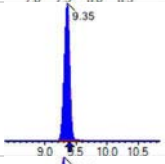 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4526371<br>( 627.0 / 81.0 ) 6382279 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1513.8<br>1069.6 | 1.4100<br>97.9<br>96.7 | 19.7053<br>[ 19.3236 ] | 102.0% | 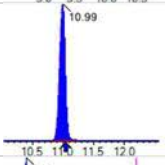 | 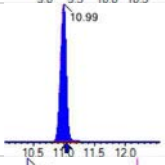 | |
| PFBSA | ( 297.9 / 78.0 ) 3334810<br>( 297.9 / 278.0 ) 4485 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , -0.3) | 1741.3<br>202.5 | 0.0013<br>98.4<br>86.8 | 4.7654<br>[ 5.0000 ] | 95.3% | 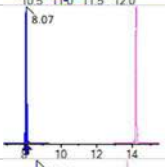 | 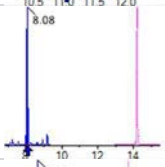 | |
| PFHxSA | ( 397.9 / 78.0 ) 3958312<br>( 397.9 / 378.0 ) 17623 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1103.5<br>335.6 | 0.0045<br>109.0<br>106.4 | 4.4831<br>[ 5.0000 ] | 89.7% | 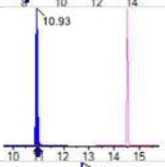 | 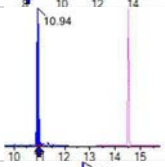 | |
| PFOSA | ( 498.0 / 78.0 ) 2879733<br>( 498.0 / 478.0 ) 42636 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2046.3<br>862.4 | 0.0148<br>105.5<br>99.5 | 4.4547<br>[ 5.0000 ] | 89.1% | 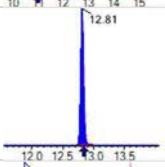 | 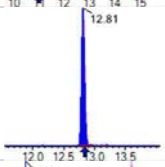 | |
| TFSI | ( 279.7 / 147.0 ) 7825439<br>( 279.7 / 211.0 ) 668795 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , -0.1) | 58.3<br>53.6 | 0.0855<br>101.7<br>99.9 | 4.5972<br>[ 4.8967 ] | 93.9% | 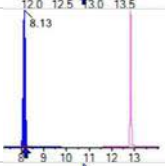 | 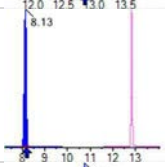 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2456061<br>( 512.0 / 169.0 ) 1821625 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.4) | 3631.2<br>1412.5 | 0.7417<br>99.1<br>97.8 | 18.2166<br>[ 20.0000 ] | 91.1% | 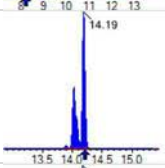 | 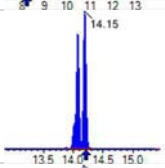 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2997658<br>( 526.0 / 169.0 ) 3780141 | ( 14.52 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4360.4<br>3570.2 | 1.2610<br>102.1<br>101.5 | 18.6306<br>[ 20.0000 ] | 93.2% | 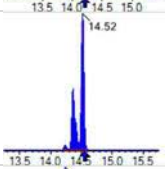 | 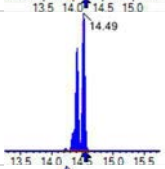 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 850093<br>( 570.0 / 483.0 ) 406893 | ( 10.24 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3275.4<br>1659.4 | 0.4786<br>109.2<br>102.4 | 4.3212<br>[ 5.0000 ] | 86.4% | 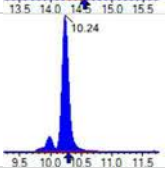 | 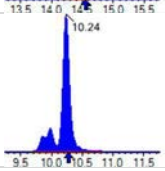 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 838599<br>( 584.0 / 526.0 ) 474799 | ( 10.77 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1574.6<br>700.1 | 0.5662<br>91.8<br>95.7 | 4.6763<br>[ 5.0000 ] | 93.5% | 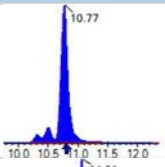 | 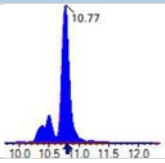 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1240906 | ( 14.01 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2612.3 | N/A<br>0.0<br>0.0 | 17.7211<br>[ 20.0000 ] | 88.6% | 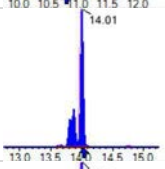 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1028639 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3543.8 | N/A<br>0.0<br>0.0 | 18.4632<br>[ 20.0000 ] | 92.3% | 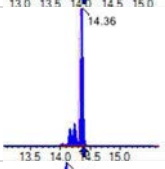 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 320064<br>( 285.0 / 185.0 ) 938906 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1645.8<br>1827.1 | 2.9335<br>106.1<br>111.2 | 4.6629<br>[ 5.0000 ] | 93.3% | 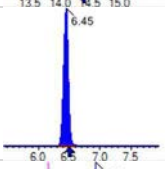 | 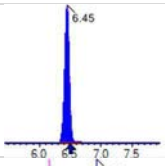 | |
| ADONA | ( 377.0 / 85.0 ) 3785743<br>( 377.0 / 251.0 ) 388915 | ( 7.52 , 1.17 )<br>( N/A , -0.04 , 0.0) | 1953.2<br>1653.5 | 0.1027<br>100.8<br>98.2 | 4.7274<br>[ 4.7135 ] | 100.3% | 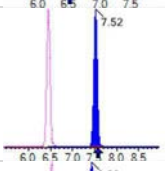 | 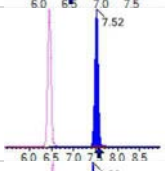 | |
| PFEESA | ( 315.0 / 135.0 ) 1379581<br>( 315.0 / 83.0 ) 835352 | ( 6.88 , 1.15 )<br>( N/A , -0.05 , -0.1) | 2846.8<br>1383.0 | 0.6055<br>108.6<br>106.9 | 7.5704<br>[ 8.9246 ] | 84.8% | 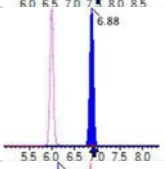 | 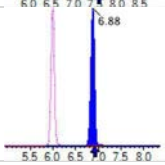 | |
| PFMPA | ( 229.0 / 85.0 ) 658152 | ( 4.10 , 0.86 )<br>( N/A , -0.04 , 0.0) | 5900.9 | N/A<br>0.0<br>0.0 | 9.2969<br>[ 10.0000 ] | 93.0% | 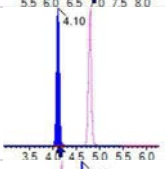 | | |
| PFMBA | ( 279.0 / 85.0 ) 1725265 | ( 5.15 , 1.08 )<br>( N/A , -0.04 , 0.0) | 5457.6 | N/A<br>0.0<br>0.0 | 8.9667<br>[ 10.0000 ] | 89.7% | 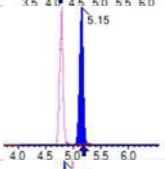 | | |
| NFDHA | ( 295.0 / 201.0 ) 870715<br>( 295.0 / 85.0 ) 937888 | ( 5.86 , 0.98 )<br>( N/A , -0.04 , 0.0) | 3410.7<br>3099.7 | 1.0771<br>99.8<br>107.1 | 9.1909<br>[ 10.0000 ] | 91.9% | 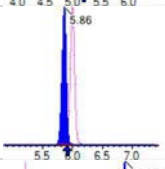 | 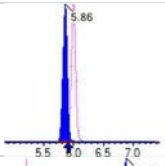 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3886723<br>( 533.0 / 353.0 ) 1262079 | ( 11.07 , 1.72 )<br>( N/A , -0.05 , -0.1) | 3185.7<br>2377.6 | 0.3247<br>103.8<br>98.5 | 4.4936<br>[ 4.6663 ] | 96.3% | 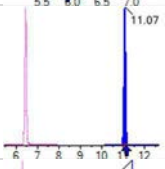 | 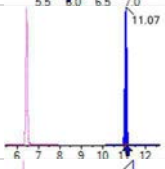 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2918297<br>( 633.0 / 453.0 ) 1027198 | ( 12.41 , 1.92 )<br>( N/A , -0.04 , 0.1) | 3388.9<br>2348.3 | 0.3520<br>106.0<br>102.8 | 4.3873<br>[ 4.7160 ] | 93.0% | 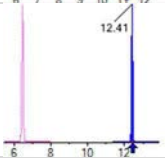 | 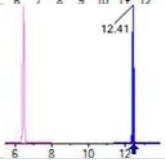 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1973970<br>( 461.0 / 381.2 ) 810159 | ( 9.46 , 0.91 )<br>( N/A , -0.04 , -0.1) | 3144.8<br>3066.2 | 0.4104<br>103.0<br>103.5 | 4.2241<br>[ 4.6193 ] | 91.4% | 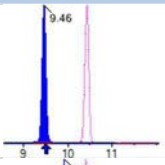 | 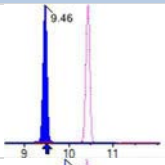 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 217843<br>( 241.0 / 117.0 ) 492517 | ( 4.36 , 0.91 )<br>( N/A , -0.04 , 0.0) | 2089.0<br>2396.0 | 2.2609<br>107.3<br>104.2 | 17.1654<br>[ 20.0000 ] | 85.8% | 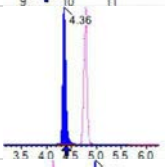 | 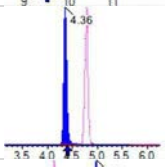 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1290079<br>( 341.0 / 217.0 ) 1923890 | ( 6.90 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1222.8<br>1122.5 | 1.4913<br>98.2<br>102.5 | 18.3319<br>[ 20.0000 ] | 91.7% | 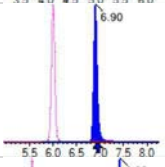 | 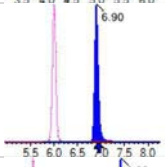 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2244279<br>( 441.0 / 337.0 ) 1995764 | ( 9.28 , 1.55 )<br>( N/A , -0.03 , 0.0) | 4730.2<br>12438.0 | 0.8893<br>97.0<br>101.7 | 19.4335<br>[ 20.0000 ] | 97.2% | 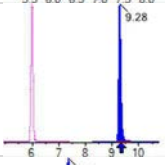 | 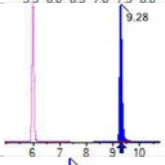 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1575139<br>( 357.2 / 243.0 ) 159747 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1389.7<br>885.7 | 0.1014<br>92.0<br>97.4 | 5.2833<br>[ 5.0000 ] | 105.7% | 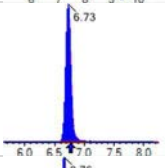 | 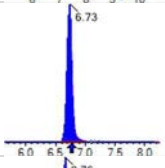 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1101155<br>( 457.2 / 343.0 ) 46469 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 784.0<br>415.8 | 0.0422<br>101.8<br>93.1 | 5.2508<br>[ 5.0000 ] | 105.0% | 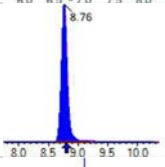 | 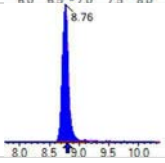 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 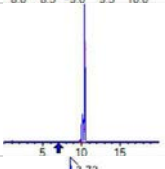 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238528 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1223.5 | N/A | 1.0004<br>[ 1.0000 ] | 100.0%<br>{ 100.8% } | 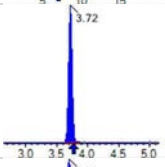 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117813 | ( 6.00 , N/A )<br>( N/A , -0.04 , N/A ) | 19470.1 | N/A | 0.9287<br>[ 1.0000 ] | 92.9%<br>{ 93.1% } | 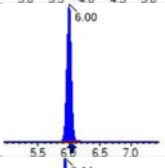 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353797 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 2717.8 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 93.3% } | 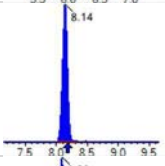 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 246426 | ( 9.08 , N/A )<br>( N/A , -0.04 , N/A ) | 1158.6 | N/A | 0.8665<br>[ 1.0000 ] | 86.6%<br>{ 87.6% } | 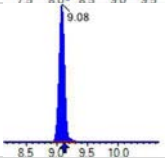 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 239242 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 4215.1 | N/A | 0.8192 [ 1.0000 ] | 81.9% { 82.7% } | 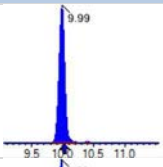 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 854562 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3664.1 | N/A | 0.9005 [ 1.0000 ] | 90.0% { 91.6% } | 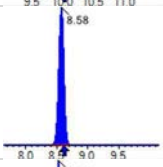 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 650661 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1902.2 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 91.4% } | 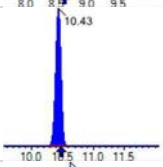 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2162335 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 39646.7 | N/A | 7.9354 [ 8.0000 ] | 99.2% { 96.6% } | 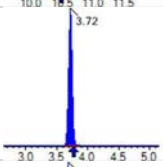 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 883302 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 4911.8 | N/A | 4.0183 [ 4.0000 ] | 100.5% { 90.5% } | 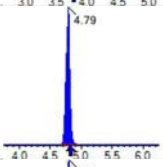 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 528251 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6662.7 | N/A | 1.9652 [ 2.0000 ] | 98.3% { 89.5% } | 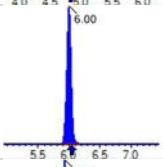 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588344 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5166.4 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 89.6% } | 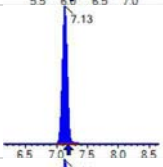 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 750222 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 2782.3 | N/A | 1.9790 [ 2.0000 ] | 99.0% { 87.0% } | 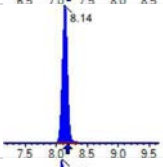 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235567 | ( 9.08 , N/A ) ( N/A , -0.04 , N/A ) | 4040.1 | N/A | 0.9749 [ 1.0000 ] | 97.5% { 87.3% } | 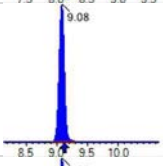 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 297330 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1218.8 | N/A | 1.1090 [ 1.0000 ] | 110.9% { 92.4% } | 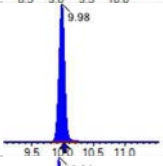 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 340461 | ( 10.84 , N/A ) ( N/A , -0.04 , N/A ) | 887.2 | N/A | 1.0794 [ 1.0000 ] | 107.9% { 91.5% } | 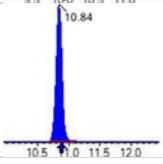 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 355643 | ( 11.67 , N/A ) ( N/A , -0.04 , N/A ) | 1210.1 | N/A | 1.1071 [ 1.0000 ] | 110.7% { 95.4% } | 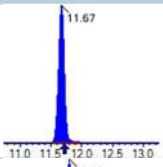 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 302523 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1505.7 | N/A | 1.1059 [ 1.0000 ] | 110.6% { 92.7% } | 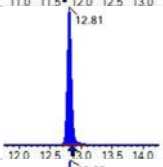 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472442 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 2123.3 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 93.5% } | 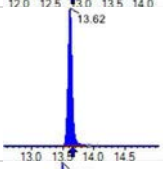 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1626264 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1235.1 | N/A | 2.1063 [ 2.0000 ] | 105.3% { 96.9% } | 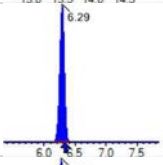 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1277887 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 3706.7 | N/A | 2.0735 [ 2.0000 ] | 103.7% { 96.9% } | 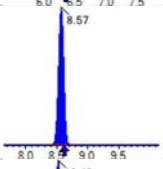 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1434404 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1519.4 | N/A | 2.0446 [ 2.0000 ] | 102.2% { 92.6% } | 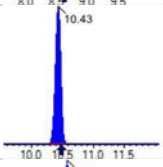 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 562105 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 93.4 | N/A | 4.2196 [ 4.0000 ] | 105.5% { 95.4% } | 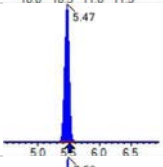 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1524781 | ( 7.58 , N/A ) ( N/A , -0.04 , N/A ) | 3290.4 | N/A | 3.8247 [ 4.0000 ] | 95.6% { 91.5% } | 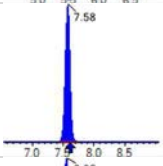 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1321750 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1361.5 | N/A | 4.2273 [ 4.0000 ] | 105.7% { 96.6% } | 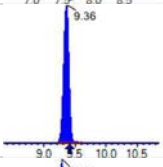 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2384194 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1345.3 | N/A | 7.2962 [ 8.0000 ] | 91.2% { 93.4% } | 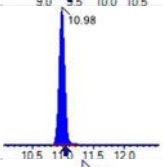 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1292885 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1723.3 | N/A | 2.0796 [ 2.0000 ] | 104.0% { 94.1% } | 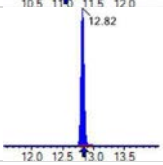 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 271577 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1986.4 | N/A | 2.0596 [ 2.0000 ] | 103.0% { 94.3% } | 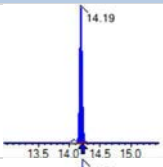  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 287336 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2556.1 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 93.7% } | 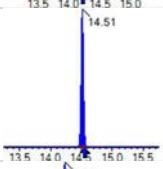  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825052 | ( 10.23 , N/A ) ( N/A , -0.04 , N/A ) | 2783.2 | N/A | 4.5706 [ 4.0000 ] | 114.3% { 97.6% } | 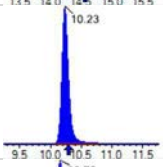  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 733311 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1886.2 | N/A | 4.4572 [ 4.0000 ] | 111.4% { 95.2% } | 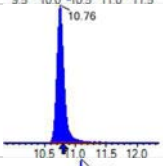  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1276745 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 2423.0 | N/A | 21.5459 [ 20.0000 ] | 107.7% { 92.9% } | 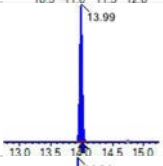  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1254125 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 3850.5 | N/A | 20.8519 [ 20.0000 ] | 104.3% { 97.2% } | 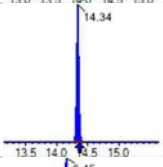  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 931197 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2356.5 | N/A | 7.6047 [ 8.0000 ] | 95.1% { 91.1% } | 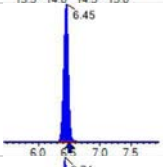  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 560849 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1169.2 | N/A | 2.1622 [ 2.0000 ] | 108.1% { 90.9% } | 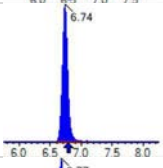  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514238 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 662.4 | N/A | 2.1778 [ 2.0000 ] | 108.9% { 92.9% } | 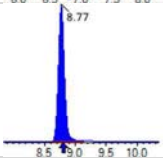  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | PFBA | 20.0A | 18.2A | 91.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.32A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.62A | 92.4A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.59A | 91.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.58A | 91.7A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.84A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.54A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.44A | 88.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.11A | 82.2A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.97A | 89.9A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.46A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.04A | 88.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.50A | 94.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.22A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.43A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.71A | 97.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.8A | 100A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.8A | 92.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.5A | 106A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.59A | 91.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.6A | 93.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 95.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.56A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | NMeFOSEA | 20.0A | 17.6A | 87.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.79A | 95.8A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.80A | 102A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.82A | 87.8A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.1A | 101A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.36A | 93.6A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.09A | 90.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 95.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.44A | 94.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.7A | 93.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.7A | 98.6A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2367399<br>( 163.0 / 69.0 ) 64584 | ( 2.76 , 0.74 ) ( N/A , -0.04 , -0.1) | 15329.5<br>3014.2 | 0.0273<br>100.4<br>103.5 | 9.2456<br>[ 10.0000 ] | 92.5% | 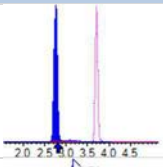 | 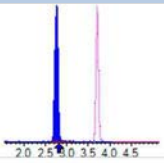 | |
| PFBA | ( 213.0 / 169.0 ) 4938197 | ( 3.71 , 1.00 ) ( 0.00 , N/A , 0.0) | 1010.4 | N/A<br>0.0<br>0.0 | 18.2431<br>[ 20.0000 ] | 91.2% | 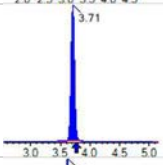 | | |
| PFPeA | ( 263.0 / 219.0 ) 1952041<br>( 263.0 / 69.0 ) 22313 | ( 4.78 , 1.00 ) ( 0.00 , N/A , -0.2) | 6296.0<br>311.0 | 0.0114<br>95.7<br>103.0 | 9.3156<br>[ 10.0000 ] | 93.2% | 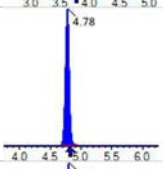 | 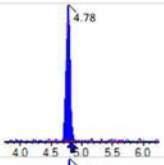 | |
| PFHxA | ( 313.0 / 269.0 ) 1143503<br>( 313.0 / 119.0 ) 136657 | ( 6.00 , 1.00 ) ( 0.00 , N/A , 0.1) | 2490.5<br>1220.4 | 0.1195<br>102.9<br>102.1 | 4.4029<br>[ 5.0000 ] | 88.1% | 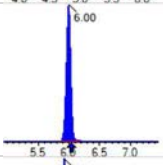 | 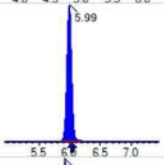 | |
| PFHpA | ( 363.0 / 319.0 ) 1327067<br>( 363.0 / 169.0 ) 392839 | ( 7.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1685.8<br>1722.7 | 0.2960<br>97.7<br>100.3 | 4.6211<br>[ 5.0000 ] | 92.4% | 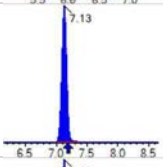 | 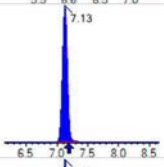 | |
| PFOA | ( 413.0 / 369.0 ) 1774774<br>( 413.0 / 169.0 ) 664651 | ( 8.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 671.5<br>1155.4 | 0.3745<br>102.4<br>109.1 | 4.5926<br>[ 5.0000 ] | 91.9% | 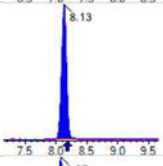 | 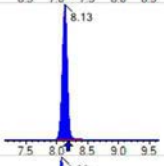 | |
| PFNA | ( 463.0 / 419.0 ) 1093482<br>( 463.0 / 169.0 ) 288536 | ( 9.07 , 1.00 ) ( 0.00 , N/A , 0.1) | 1019.0<br>1085.4 | 0.2639<br>103.4<br>109.7 | 4.5828<br>[ 5.0000 ] | 91.7% | 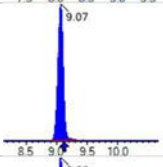 | 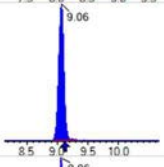 | |
| PFDA | ( 513.0 / 469.0 ) 1344408<br>( 513.0 / 169.0 ) 158845 | ( 9.96 , 1.00 ) ( 0.00 , N/A , 0.3) | 3615.1<br>3512.0 | 0.1182<br>100.8<br>98.7 | 4.7227<br>[ 5.0000 ] | 94.5% | 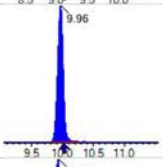 | 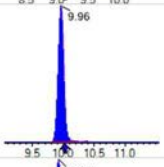 | |
| PFUnA | ( 563.0 / 519.0 ) 1452979<br>( 563.0 / 169.0 ) 216965 | ( 10.83 , 1.00 ) ( 0.00 , N/A , 0.1) | 1064.1<br>802.3 | 0.1493<br>105.4<br>105.1 | 4.8313<br>[ 5.0000 ] | 96.6% | 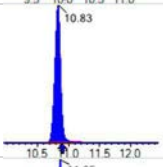 | 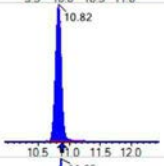 | |
| PFDoA | ( 613.0 / 569.0 ) 1678445<br>( 613.0 / 169.0 ) 250811 | ( 11.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 1502.8<br>1014.6 | 0.1494<br>94.5<br>101.1 | 4.8405<br>[ 5.0000 ] | 96.8% | 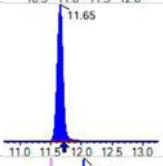 | 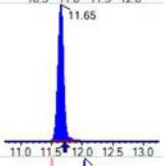 | |
| PFTrDA | ( 663.0 / 619.0 ) 1588969<br>( 663.0 / 169.0 ) 395314 | ( 12.30 , 1.06 ) ( N/A , -0.05 , 0.0) | 1670.0<br>1085.0 | 0.2488<br>96.7<br>96.1 | 4.6846<br>[ 5.0000 ] | 93.7% | 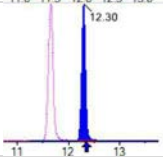 | 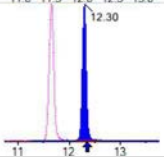 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1292021<br>( 713.0 / 169.0 ) 331808 | ( 12.80 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1599.4<br>1158.0 | 0.2568<br>95.1<br>96.6 | 4.5354<br>[ 5.0000 ] | 90.7% | 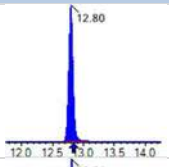 | 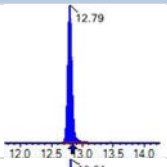 | |
| PFHxDA | ( 813.0 / 769.0 ) 959448<br>( 813.0 / 169.0 ) 244513 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2115.3<br>1085.7 | 0.2548<br>104.2<br>99.8 | 4.4410<br>[ 5.0000 ] | 88.8% | 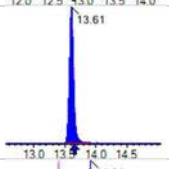 | 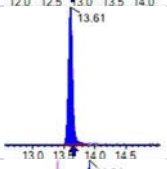 | |
| PFODA | ( 913.0 / 869.0 ) 555525<br>( 913.0 / 169.0 ) 176212 | ( 14.24 , 1.05 )<br>( N/A , -0.04 , 0.1) | 1533.3<br>666.2 | 0.3172<br>88.5<br>93.1 | 4.1103<br>[ 5.0000 ] | 82.2% | 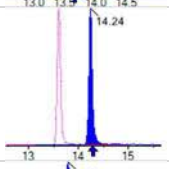 | 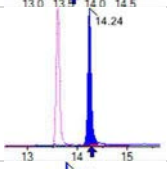 | |
| PFBS | ( 299.0 / 80.0 ) 1656522<br>( 299.0 / 99.0 ) 1193997 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3188.4<br>2361.7 | 0.7208<br>101.9<br>98.0 | 3.9717<br>[ 4.4237 ] | 89.8% | 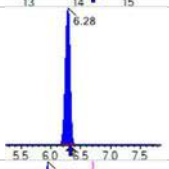 | 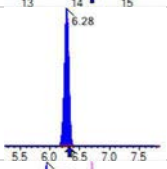 | |
| PFPeS | ( 349.0 / 80.0 ) 4364826<br>( 349.0 / 99.0 ) 1539819 | ( 7.51 , 0.88 )<br>( N/A , -0.05 , 0.0) | 2505.8<br>2399.7 | 0.3528<br>98.1<br>100.2 | 4.4621<br>[ 4.6919 ] | 95.1% | 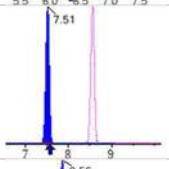 | 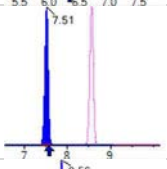 | |
| PFHxS | ( 399.0 / 80.0 ) 4588863<br>( 399.0 / 99.0 ) 1488980 | ( 8.56 , 1.00 )<br>( -0.01 , N/A , -0.1) | 3633.0<br>3900.2 | 0.3245<br>101.9<br>97.0 | 4.0388<br>[ 4.5549 ] | 88.7% | 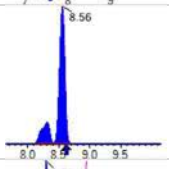 | 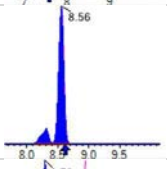 | |
| PFHpS | ( 449.0 / 80.0 ) 3918478<br>( 449.0 / 99.0 ) 1063335 | ( 9.53 , 0.91 )<br>( N/A , -0.06 , 0.2) | 2329.7<br>2231.5 | 0.2714<br>102.5<br>102.5 | 4.4966<br>[ 4.7570 ] | 94.5% | 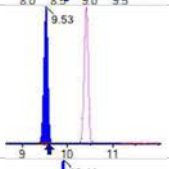 | 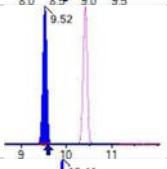 | |
| PFOS | ( 499.0 / 80.0 ) 3542371<br>( 499.0 / 99.0 ) 835566 | ( 10.41 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2549.2<br>5061.5 | 0.2359<br>100.9<br>98.2 | 4.2171<br>[ 4.6375 ] | 90.9% | 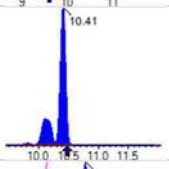 | 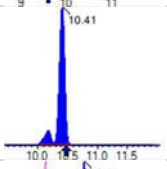 | |
| PFNS | ( 549.0 / 80.0 ) 3512432<br>( 549.0 / 99.0 ) 956650 | ( 11.24 , 1.08 )<br>( N/A , -0.06 , 0.1) | 2489.8<br>2059.6 | 0.2724<br>99.9<br>101.1 | 4.4660<br>[ 4.7994 ] | 93.1% | 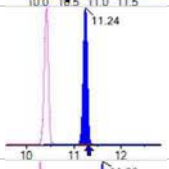 | 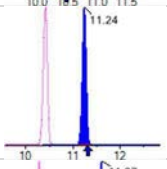 | |
| PFDS | ( 599.0 / 80.0 ) 4256592<br>( 599.0 / 99.0 ) 1131746 | ( 11.98 , 1.15 )<br>( N/A , -0.05 , 0.1) | 2251.2<br>1959.5 | 0.2659<br>97.8<br>99.5 | 4.4324<br>[ 4.8155 ] | 92.0% | 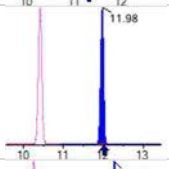 | 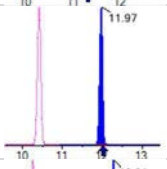 | |
| PFDoS | ( 699.0 / 80.0 ) 3983483<br>( 699.0 / 99.0 ) 924754 | ( 12.91 , 1.24 )<br>( N/A , -0.04 , 0.0) | 4923.6<br>3458.4 | 0.2321<br>99.4<br>101.4 | 4.7052<br>[ 4.8478 ] | 97.1% | 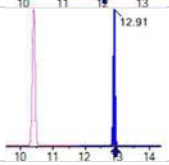 | 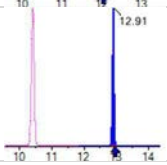 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6925673<br>( 327.0 / 81.0 ) 6151043 | ( 5.46 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5410.5<br>3125.5 | 0.8882<br>101.8<br>98.7 | 18.8218<br>[ 18.6906 ] | 100.7% | 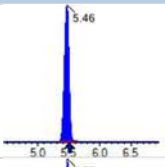 | 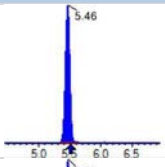 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6149806<br>( 427.0 / 81.0 ) 7739720 | ( 7.57 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4376.2<br>4638.3 | 1.2585<br>100.4<br>95.0 | 18.7627<br>[ 18.9808 ] | 98.9% | 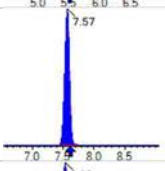 | 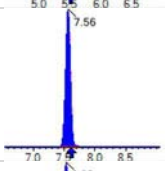 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5762780<br>( 527.0 / 81.0 ) 6401646 | ( 9.33 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1453.4<br>1746.1 | 1.1109<br>102.1<br>109.0 | 17.7583<br>[ 19.1658 ] | 92.7% | 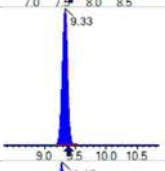 | 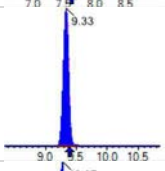 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4974834<br>( 627.0 / 81.0 ) 6986472 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1627.2<br>1202.9 | 1.4044<br>97.6<br>96.3 | 20.4850<br>[ 19.3236 ] | 106.0% | 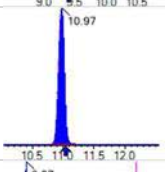 | 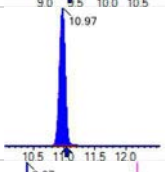 | |
| PFBSA | ( 297.9 / 78.0 ) 3152738<br>( 297.9 / 278.0 ) 4804 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , 0.4) | 1679.8<br>110.1 | 0.0015<br>111.5<br>98.3 | 4.6672<br>[ 5.0000 ] | 93.3% | 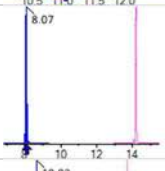 | 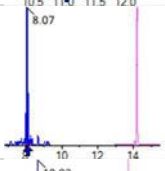 | |
| PFHxSA | ( 397.9 / 78.0 ) 4125480<br>( 397.9 / 378.0 ) 18513 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1667.8<br>440.1 | 0.0045<br>109.8<br>107.2 | 4.8956<br>[ 5.0000 ] | 97.9% | 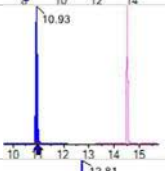 | 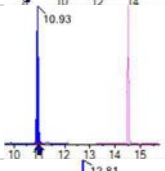 | |
| PFOSA | ( 498.0 / 78.0 ) 2839233<br>( 498.0 / 478.0 ) 42245 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2289.2<br>995.4 | 0.0149<br>106.0<br>99.9 | 4.5918<br>[ 5.0000 ] | 91.8% | 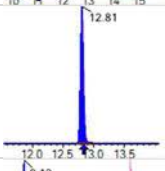 | 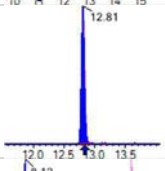 | |
| TFSI | ( 279.7 / 147.0 ) 7714508<br>( 279.7 / 211.0 ) 650024 | ( 8.13 , 0.63 )<br>( N/A , -0.06 , 0.1) | 61.5<br>54.1 | 0.0843<br>100.3<br>98.5 | 4.7382<br>[ 4.8967 ] | 96.8% | 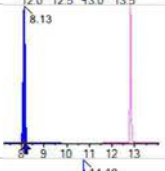 | 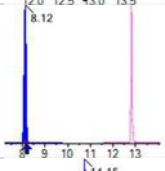 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2422123<br>( 512.0 / 169.0 ) 1722291 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.2) | 3506.2<br>1475.4 | 0.7111<br>95.0<br>93.8 | 18.6108<br>[ 20.0000 ] | 93.1% | 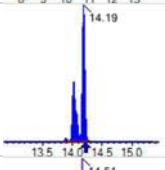 | 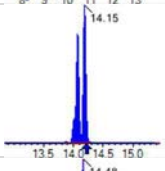 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2919094<br>( 526.0 / 169.0 ) 3586942 | ( 14.51 , 1.00 )<br>( 0.01 , N/A , 2.1) | 4109.1<br>3423.3 | 1.2288<br>99.5<br>99.0 | 19.0089<br>[ 20.0000 ] | 95.0% | 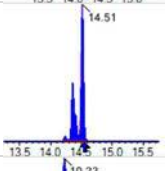 | 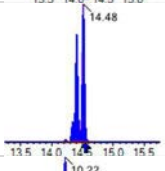 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 883998<br>( 570.0 / 483.0 ) 425739 | ( 10.22 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2187.1<br>2061.2 | 0.4816<br>109.8<br>103.0 | 4.5556<br>[ 5.0000 ] | 91.1% | 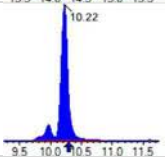 | 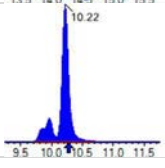 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 846492<br>( 584.0 / 526.0 ) 505649 | ( 10.75 , 1.00 ) ( 0.01 , N/A , 0.1) | 1320.3<br>728.3 | 0.5973<br>96.9<br>101.0 | 4.6690<br>[ 5.0000 ] | 93.4% | 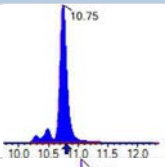 | 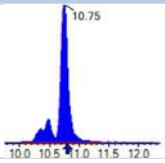 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1174210 | ( 14.00 , 1.00 ) ( 0.02 , N/A , 0.0) | 2175.0 | N/A<br>0.0<br>0.0 | 17.5573<br>[ 20.0000 ] | 87.8% | 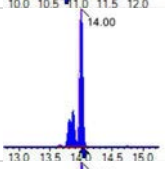 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 952667 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 3367.8 | N/A<br>0.0<br>0.0 | 19.1064<br>[ 20.0000 ] | 95.5% | 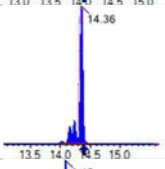 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 335333<br>( 285.0 / 185.0 ) 921530 | ( 6.45 , 1.00 ) ( 0.00 , N/A , 0.2) | 1679.9<br>2119.9 | 2.7481<br>99.4<br>104.2 | 4.7893<br>[ 5.0000 ] | 95.8% | 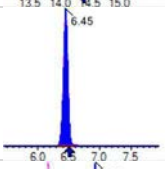 | 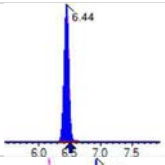 | |
| ADONA | ( 377.0 / 85.0 ) 3917027<br>( 377.0 / 251.0 ) 395090 | ( 7.52 , 1.17 ) ( N/A , -0.05 , 0.1) | 1912.2<br>1698.7 | 0.1009<br>99.0<br>96.5 | 4.7951<br>[ 4.7135 ] | 101.7% | 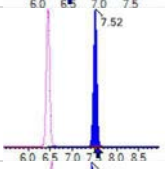 | 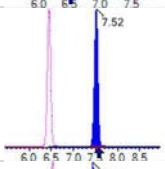 | |
| PFEESA | ( 315.0 / 135.0 ) 1457699<br>( 315.0 / 83.0 ) 880051 | ( 6.87 , 1.15 ) ( N/A , -0.05 , 0.1) | 3024.4<br>1480.6 | 0.6037<br>108.3<br>106.6 | 7.8158<br>[ 8.9246 ] | 87.6% | 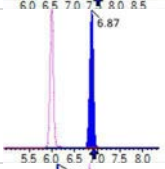 | 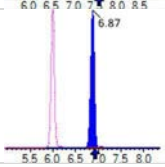 | |
| PFMPA | ( 229.0 / 85.0 ) 670808 | ( 4.09 , 0.86 ) ( N/A , -0.05 , 0.0) | 7073.3 | N/A<br>0.0<br>0.0 | 10.0880<br>[ 10.0000 ] | 100.9% | 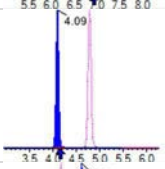 | | |
| PFMBA | ( 279.0 / 85.0 ) 1691235 | ( 5.15 , 1.08 ) ( N/A , -0.04 , 0.0) | 5263.2 | N/A<br>0.0<br>0.0 | 9.3578<br>[ 10.0000 ] | 93.6% | 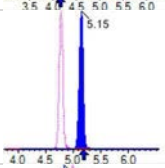 | | |
| NFDHA | ( 295.0 / 201.0 ) 881152<br>( 295.0 / 85.0 ) 924860 | ( 5.85 , 0.98 ) ( N/A , -0.05 , 0.1) | 3525.4<br>3071.2 | 1.0496<br>97.3<br>104.4 | 9.0879<br>[ 10.0000 ] | 90.9% | 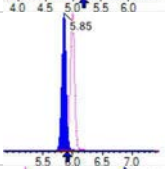 | 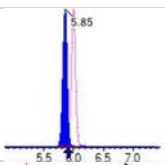 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3959168<br>( 533.0 / 353.0 ) 1253384 | ( 11.05 , 1.71 ) ( N/A , -0.06 , -0.1) | 2476.5<br>1972.7 | 0.3166<br>101.2<br>96.1 | 4.4873<br>[ 4.6663 ] | 96.2% | 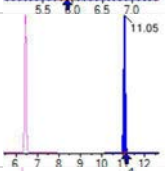 | 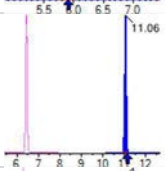 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3014684<br>( 633.0 / 453.0 ) 1022326 | ( 12.40 , 1.92 ) ( N/A , -0.05 , 0.0) | 3608.7<br>2766.0 | 0.3391<br>102.1<br>99.0 | 4.4431<br>[ 4.7160 ] | 94.2% | 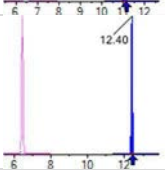 | 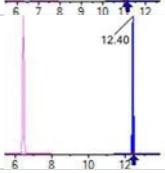 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2020350<br>( 461.0 / 381.2 ) 812351 | ( 9.44 , 0.91 )<br>( N/A , -0.06 , 0.1) | 3414.9<br>2997.1 | 0.4021<br>100.9<br>101.4 | 4.2634<br>[ 4.6193 ] | 92.3% | 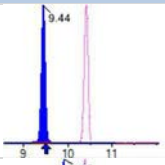 | 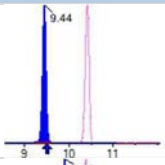 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 243703<br>( 241.0 / 117.0 ) 527396 | ( 4.35 , 0.91 )<br>( N/A , -0.05 , 0.0) | 2235.1<br>3091.4 | 2.1641<br>102.7<br>99.8 | 20.4440<br>[ 20.0000 ] | 102.2% | 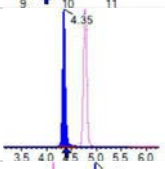 | 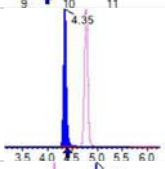 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1349798<br>( 341.0 / 217.0 ) 2078273 | ( 6.89 , 1.15 )<br>( N/A , -0.04 , -0.1) | 1371.5<br>1269.5 | 1.5397<br>101.3<br>105.8 | 18.7409<br>[ 20.0000 ] | 93.7% | 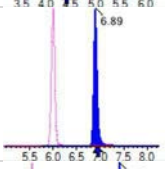 | 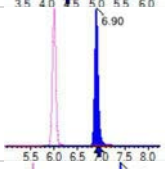 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2330546<br>( 441.0 / 337.0 ) 2001106 | ( 9.27 , 1.55 )<br>( N/A , -0.05 , 0.0) | 5147.2<br>7268.1 | 0.8586<br>93.6<br>98.2 | 19.7180<br>[ 20.0000 ] | 98.6% | 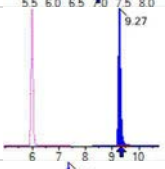 | 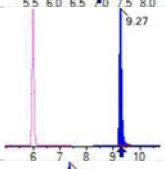 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1617558<br>( 357.2 / 243.0 ) 167412 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1281.5<br>830.5 | 0.1035<br>93.9<br>99.4 | 4.9832<br>[ 5.0000 ] | 99.7% | 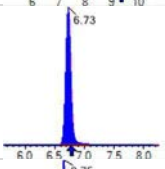 | 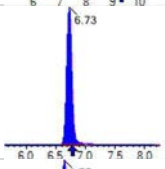 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1115931<br>( 457.2 / 343.0 ) 49442 | ( 8.75 , 1.00 )<br>( -0.01 , N/A , 0.2) | 803.9<br>345.3 | 0.0443<br>106.8<br>97.7 | 5.1052<br>[ 5.0000 ] | 102.1% | 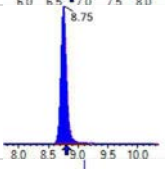 | 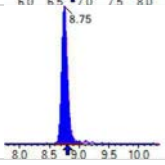 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 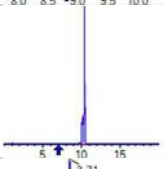 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235544 | ( 3.71 , N/A )<br>( N/A , -0.05 , N/A ) | 1044.9 | N/A | 0.9879<br>[ 1.0000 ] | 98.8%<br>{ 99.6% } | 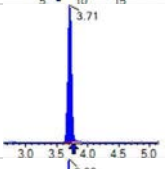 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116031 | ( 6.00 , N/A )<br>( N/A , -0.05 , N/A ) | 17659879.2 | N/A | 0.9147<br>[ 1.0000 ] | 91.5%<br>{ 91.6% } | 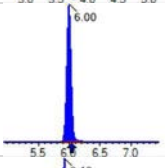 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 357603 | ( 8.13 , N/A )<br>( N/A , -0.05 , N/A ) | 6031.4 | N/A | 0.9046<br>[ 1.0000 ] | 90.5%<br>{ 94.3% } | 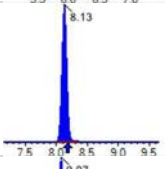 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 244998 | ( 9.07 , N/A )<br>( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8614<br>[ 1.0000 ] | 86.1%<br>{ 87.1% } | 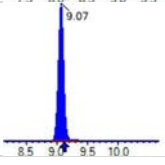 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246940 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6188.6 | N/A | 0.8456 [ 1.0000 ] | 84.6% { 85.4% } | 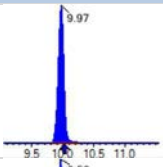 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 851608 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 4143.3 | N/A | 0.8973 [ 1.0000 ] | 89.7% { 91.2% } | 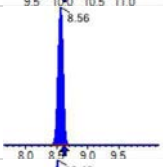 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 651713 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 1691.7 | N/A | 0.8557 [ 1.0000 ] | 85.6% { 91.5% } | 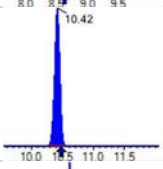 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2172396 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 33235.4 | N/A | 8.0733 [ 8.0000 ] | 100.9% { 97.0% } | 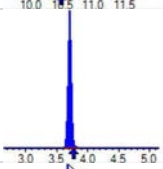 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 829688 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 4857.0 | N/A | 3.8324 [ 4.0000 ] | 95.8% { 85.0% } | 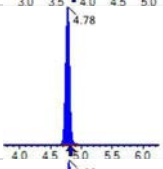 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 540642 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6844.7 | N/A | 2.0422 [ 2.0000 ] | 102.1% { 91.6% } | 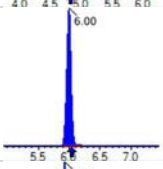 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 585294 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 4036.3 | N/A | 1.9875 [ 2.0000 ] | 99.4% { 89.2% } | 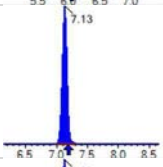 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 786424 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 2817.1 | N/A | 2.0525 [ 2.0000 ] | 102.6% { 91.2% } | 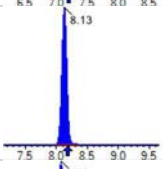 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 237405 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 2978.9 | N/A | 0.9883 [ 1.0000 ] | 98.8% { 88.0% } | 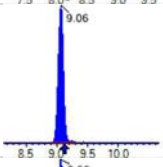 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 278603 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 929.4 | N/A | 1.0067 [ 1.0000 ] | 100.7% { 86.6% } | 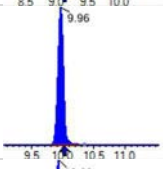 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 325150 | ( 10.83 , N/A ) ( N/A , -0.06 , N/A ) | 729.4 | N/A | 0.9987 [ 1.0000 ] | 99.9% { 87.4% } | 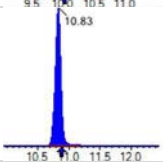 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 344666 | ( 11.66 , N/A ) ( N/A , -0.06 , N/A ) | 1474.6 | N/A | 1.0395 [ 1.0000 ] | 104.0% { 92.4% } | 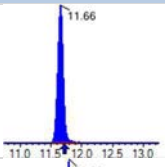 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 304176 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1304.7 | N/A | 1.0773 [ 1.0000 ] | 107.7% { 93.2% } | 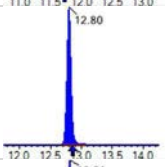 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 453000 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2095.0 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 89.7% } | 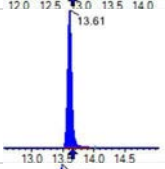 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1606611 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1072.8 | N/A | 2.0881 [ 2.0000 ] | 104.4% { 95.7% } | 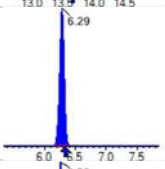 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1278226 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3790.9 | N/A | 2.0813 [ 2.0000 ] | 104.1% { 96.9% } | 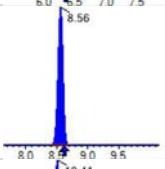 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1454557 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 1435.6 | N/A | 2.0700 [ 2.0000 ] | 103.5% { 93.9% } | 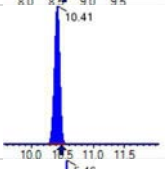 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 560822 | ( 5.46 , N/A ) ( N/A , -0.05 , N/A ) | 91.4 | N/A | 4.2246 [ 4.0000 ] | 105.6% { 95.2% } | 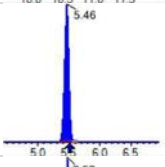 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1583281 | ( 7.57 , N/A ) ( N/A , -0.04 , N/A ) | 3703.7 | N/A | 3.9852 [ 4.0000 ] | 99.6% { 95.0% } | 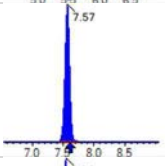 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1366805 | ( 9.34 , N/A ) ( N/A , -0.05 , N/A ) | 1239.8 | N/A | 4.3866 [ 4.0000 ] | 109.7% { 99.9% } | 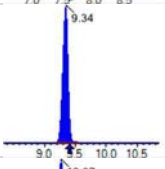 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2520675 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1178.2 | N/A | 7.7406 [ 8.0000 ] | 96.8% { 98.8% } | 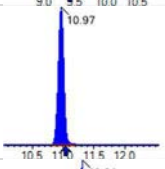 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1236625 | ( 12.81 , N/A ) ( N/A , -0.03 , N/A ) | 2642.7 | N/A | 1.9859 [ 2.0000 ] | 99.3% { 90.0% } | 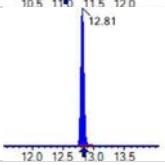 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 262151 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 1726.6 | N/A | 1.9849 [ 2.0000 ] | 99.2% { 91.0% } | 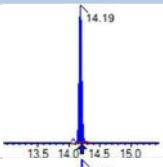 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 274237 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2488.6 | N/A | 1.9362 [ 2.0000 ] | 96.8% { 89.4% } | 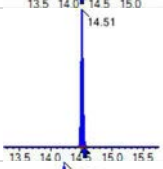 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 813803 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 1927.7 | N/A | 4.5010 [ 4.0000 ] | 112.5% { 96.2% } | 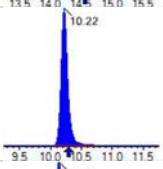 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 741370 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1704.4 | N/A | 4.4989 [ 4.0000 ] | 112.5% { 96.3% } | 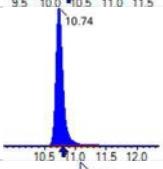 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1219399 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2240.0 | N/A | 20.5449 [ 20.0000 ] | 102.7% { 88.7% } | 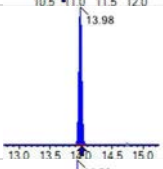 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1122403 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 3817.3 | N/A | 18.6317 [ 20.0000 ] | 93.2% { 87.0% } | 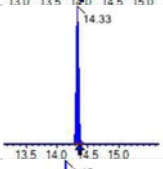 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 949887 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2293.1 | N/A | 7.8766 [ 8.0000 ] | 98.5% { 92.9% } | 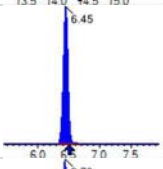 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 610638 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 978.4 | N/A | 2.2808 [ 2.0000 ] | 114.0% { 99.0% } | 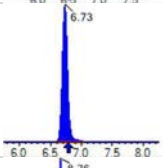 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 535993 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 806.6 | N/A | 2.1991 [ 2.0000 ] | 110.0% { 96.9% } | 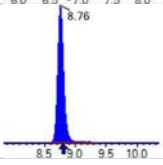 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00912L | Instrument:N | SaphiraL |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01830 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .01770 | ng/mL0 | .10 | U |
| | PFHxDA0 | .040 | ng/mL0 | .10 | U |
| | PFODA0 | .08910 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06860 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02530 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .02610 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00912L | Instrument:N | SaphiraL |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .07760 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.440 | ng/mL0 | | |
| | 13C5-PFPEA0 | 3.960 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.020 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.090 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.080 | ng/mL0 | | |
| | 13C6-PFDA | 0.980 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9890 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.910 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.960 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.080 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.430 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.530 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.210 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.50 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.060 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.040 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.220 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.390 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00912L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | D7-NMEFOSE0 | 23.60 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.40 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.540 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 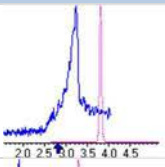 | 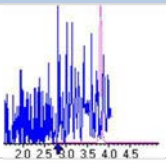 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 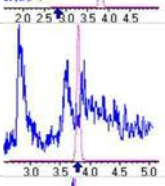 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 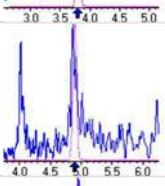 | 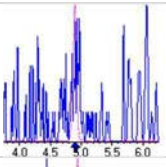 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 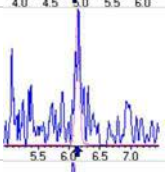 | 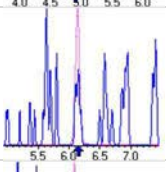 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 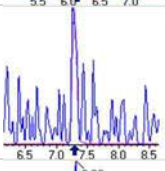 | 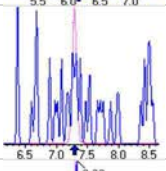 | |
| PFOA | ( 413.0 / 369.0 )<br>8051<br>( 413.0 / 169.0 )<br>3686 | ( 8.32 , 1.00 )<br>( 0.01 , N/A , 0.2) | 17.5<br>27.6 | 0.4578<br>126.6<br>126.6 | 0.0183 | N/A | 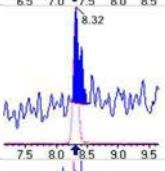 | 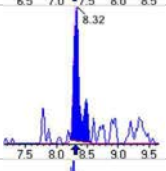 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 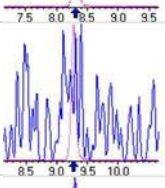 | 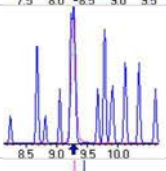 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 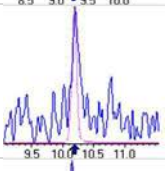 | 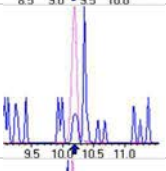 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 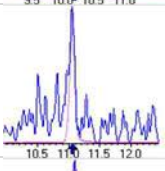 | 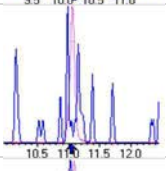 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 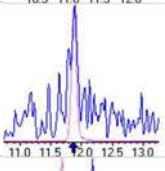 | 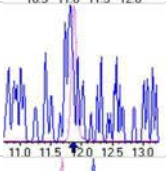 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 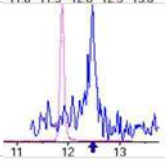 | 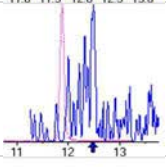 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6095<br>( 713.0 / 169.0 ) 1955 | ( 12.95 , 1.00 )<br>( -0.03 , N/A , -1.9) | 24.0<br>18.1 | 0.3208<br>123.4<br>123.4 | 0.0177 | N/A | 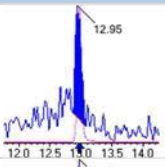 | 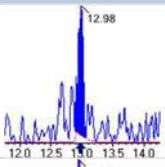 | |
| PFHxDA | ( 813.0 / 769.0 ) 11232<br>( 813.0 / 169.0 ) 2907 | ( 13.77 , 1.00 )<br>( 0.00 , N/A , 0.7) | 48.7<br>23.1 | 0.2588<br>119.3<br>119.3 | 0.0400 | N/A | 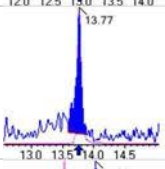 | 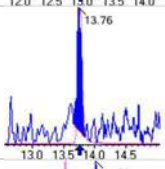 | |
| PFODA | ( 913.0 / 869.0 ) 16821<br>( 913.0 / 169.0 ) 4625 | ( 14.39 , 1.05 )<br>( N/A , 0.00 , 0.4) | 56.9<br>29.4 | 0.2750<br>72.0<br>72.0 | 0.0891 | N/A | 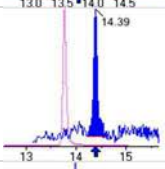 | 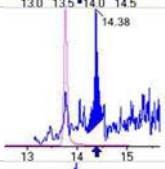 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 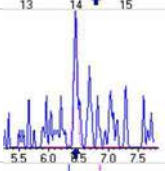 | 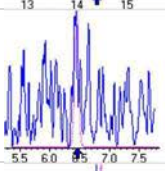 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 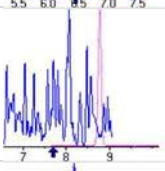 | 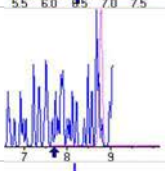 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 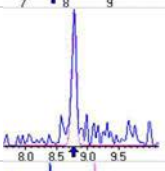 | 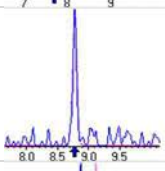 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 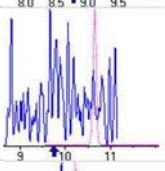 | 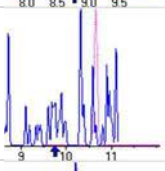 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 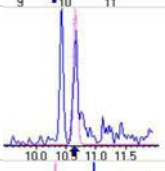 | 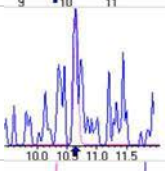 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 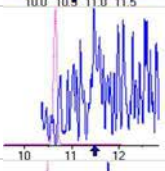 | 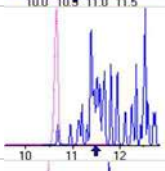 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 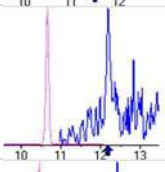 | 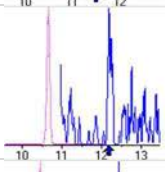 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 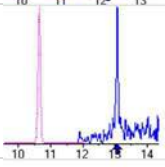 | 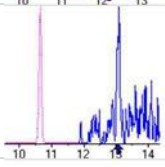 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 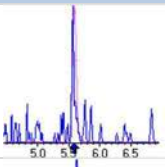 | 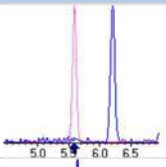 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 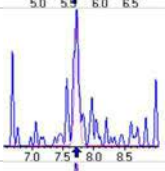 | 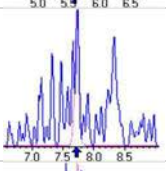 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 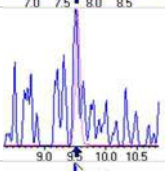 | 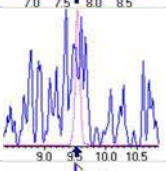 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17567<br>( 627.0 / 81.0 ) 23554 | ( 11.20 , 1.00 ) ( 0.01 , N/A , -0.2) | 96.5<br>58.1 | 1.3408<br>99.2<br>99.2 | 0.0686 | N/A | 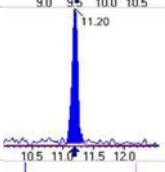 | 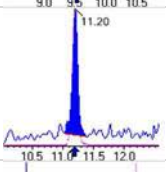 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 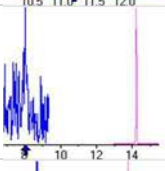 | 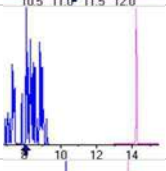 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 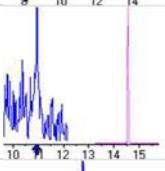 | 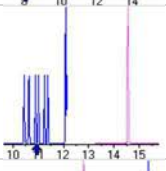 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 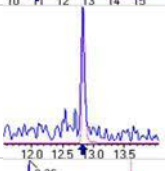 | 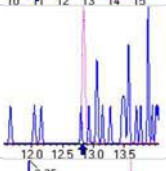 | |
| TFSI | ( 279.7 / 147.0 ) 58193<br>( 279.7 / 211.0 ) 5712 | ( 8.36 , 0.65 ) ( N/A , -0.01 , 0.6) | 33.3<br>13.4 | 0.0982<br>119.0<br>119.0 | 0.0288 | N/A | 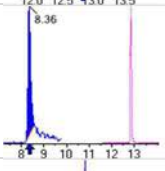 | 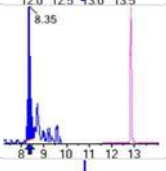 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 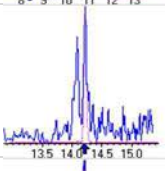 | 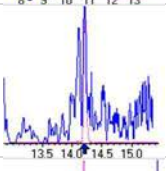 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 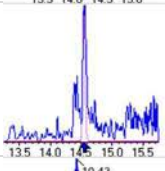 | 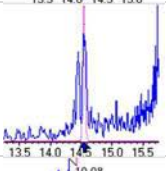 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5625<br>( 570.0 / 483.0 ) 2369 | ( 10.43 , 1.00 ) ( 0.00 , N/A , 20.5) | 109.0<br>614.2 | 0.4211<br>97.3<br>97.3 | 0.0253 | N/A | 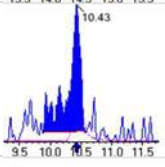 | 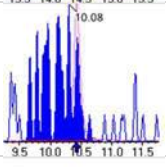 | MI2 DG 2024-03-13 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 5863<br>( 584.0 / 526.0 ) 3543 | ( 10.87 , 0.99 )<br>( -0.09 , N/A , 1.9) | 35.3<br>17.3 | 0.6042<br>97.6<br>97.6 | 0.0261 | N/A | 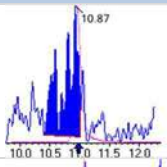 | 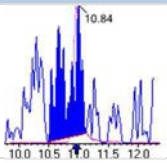 | MI2 DG 2024-03-13 |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 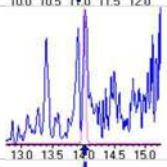 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 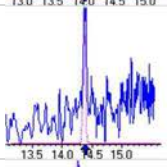 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 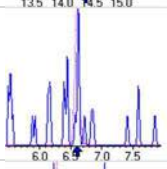 | 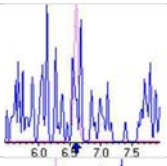 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 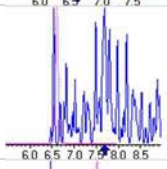 | 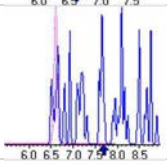 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 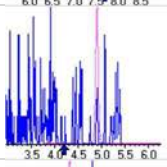 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 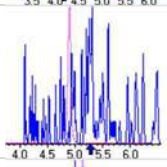 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 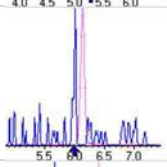 | 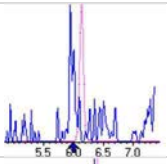 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 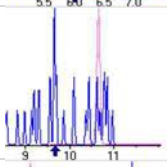 | 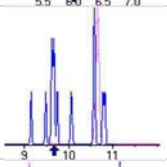 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 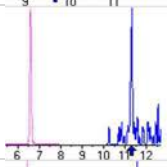 | 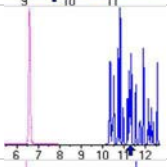 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 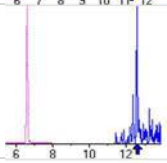 | 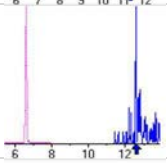 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 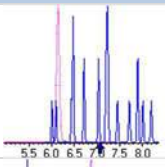 | 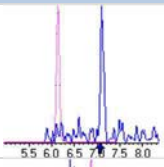 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 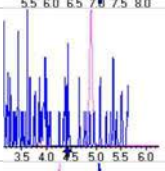 | 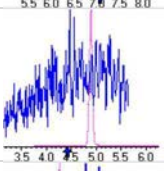 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 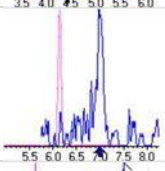 | 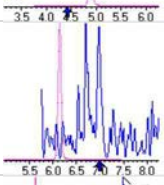 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 7778<br>( 441.0 / 337.0 ) 5397 | ( 9.43 , 1.54 ) ( N/A , 0.02 , 0.4) | 97.1<br>58.9 | 0.6939<br>78.0<br>78.0 | 0.0776 | N/A | 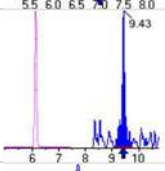 | 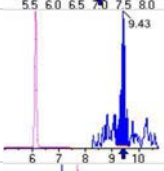 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 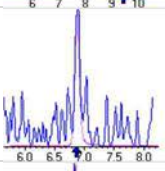 | 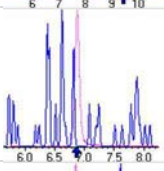 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 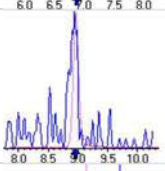 | 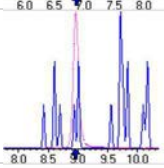 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 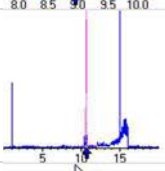 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 260995 | ( 3.80 , N/A ) ( N/A , 0.01 , N/A ) | 1112.0 | N/A | 0.8664 [ 1.0000 ] | 86.6% { 86.1% } | 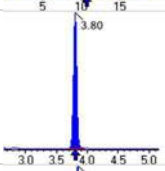 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 133399 | ( 6.14 , N/A ) ( N/A , 0.00 , N/A ) | 1191075.8 | N/A | 0.8675 [ 1.0000 ] | 86.8% { 80.8% } | 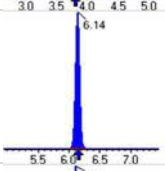 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 391680 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 4086.5 | N/A | 0.8779 [ 1.0000 ] | 87.8% { 86.1% } | 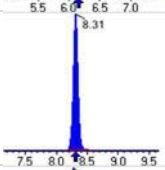 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 285591 | ( 9.28 , N/A ) ( N/A , 0.00 , N/A ) | 1057.3 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 87.6% } | 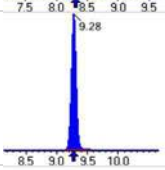 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 293203 | ( 10.19 , N/A ) ( N/A , 0.01 , N/A ) | 5654.1 | N/A | 0.8841 [ 1.0000 ] | 88.4% { 86.2% } | 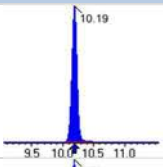 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 947581 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4753.1 | N/A | 0.8480 [ 1.0000 ] | 84.8% { 83.1% } | 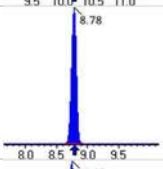 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 819814 | ( 10.66 , N/A ) ( N/A , 0.01 , N/A ) | 2978.4 | N/A | 0.8398 [ 1.0000 ] | 84.0% { 82.3% } | 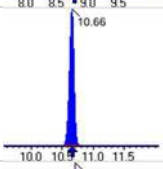 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2427954 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 46047.2 | N/A | 8.4358 [ 8.0000 ] | 105.4% { 91.4% } | 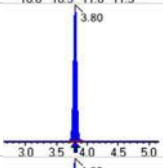 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 946891 | ( 4.90 , N/A ) ( N/A , 0.00 , N/A ) | 5582.9 | N/A | 3.9566 [ 4.0000 ] | 98.9% { 81.7% } | 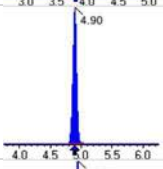 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 579960 | ( 6.14 , N/A ) ( N/A , 0.00 , N/A ) | 8466.9 | N/A | 2.0248 [ 2.0000 ] | 101.2% { 84.7% } | 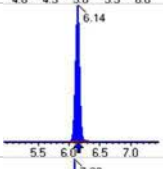 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 615403 | ( 7.29 , N/A ) ( N/A , 0.00 , N/A ) | 3732.9 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 87.3% } | 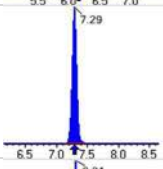 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 864634 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 4278.2 | N/A | 2.0937 [ 2.0000 ] | 104.7% { 90.7% } | 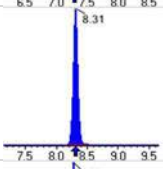 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 297361 | ( 9.28 , N/A ) ( N/A , 0.00 , N/A ) | 3188.0 | N/A | 1.0782 [ 1.0000 ] | 107.8% { 95.6% } | 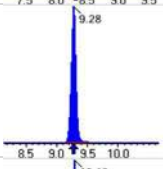 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331668 | ( 10.19 , N/A ) ( N/A , 0.01 , N/A ) | 1106.6 | N/A | 0.9803 [ 1.0000 ] | 98.0% { 86.2% } | 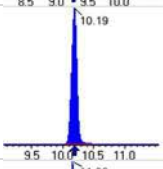 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 406678 | ( 11.06 , N/A ) ( N/A , 0.01 , N/A ) | 998.5 | N/A | 0.9886 [ 1.0000 ] | 98.9% { 81.8% } | 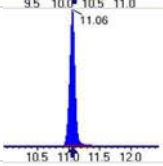 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 419013 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1322.8 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 84.0% } | 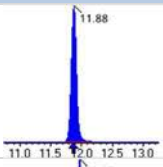 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362156 | ( 12.97 , N/A ) ( N/A , 0.01 , N/A ) | 1626.7 | N/A | 1.0061 [ 1.0000 ] | 100.6% { 85.4% } | 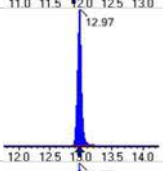 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 582518 | ( 13.77 , N/A ) ( N/A , 0.00 , N/A ) | 2735.5 | N/A | 1.9051 [ 2.0000 ] | 95.3% { 82.2% } | 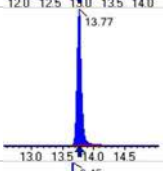 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1811355 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1138.1 | N/A | 1.9619 [ 2.0000 ] | 98.1% { 78.4% } | 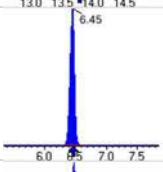 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440683 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4930.4 | N/A | 2.0777 [ 2.0000 ] | 103.9% { 87.5% } | 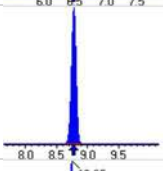 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1717212 | ( 10.65 , N/A ) ( N/A , 0.01 , N/A ) | 2191.5 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 81.7% } | 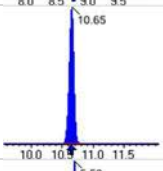 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 365723 | ( 5.59 , N/A ) ( N/A , 0.00 , N/A ) | 81.5 | N/A | 4.4321 [ 4.0000 ] | 110.8% { 101.6% } | 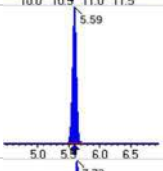 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1161421 | ( 7.73 , N/A ) ( N/A , 0.00 , N/A ) | 3440.9 | N/A | 4.5323 [ 4.0000 ] | 113.3% { 108.1% } | 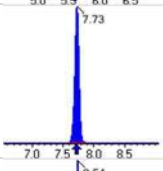 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1075546 | ( 9.54 , N/A ) ( N/A , 0.01 , N/A ) | 1550.9 | N/A | 4.2129 [ 4.0000 ] | 105.3% { 92.4% } | 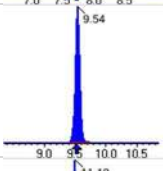 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2491297 | ( 11.19 , N/A ) ( N/A , 0.01 , N/A ) | 1870.1 | N/A | 8.5012 [ 8.0000 ] | 106.3% { 99.5% } | 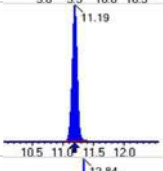 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1945955 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1547.5 | N/A | 2.0575 [ 2.0000 ] | 102.9% { 83.6% } | 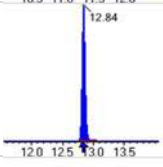 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 355520 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2647.3 | N/A | 2.0357 [ 2.0000 ] | 101.8% { 84.0% } | 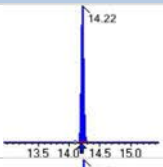 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 419000 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2792.3 | N/A | 2.0887 [ 2.0000 ] | 104.4% { 84.3% } | 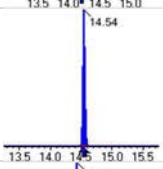 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 943187 | ( 10.43 , N/A ) ( N/A , 0.01 , N/A ) | 2295.4 | N/A | 4.2200 [ 4.0000 ] | 105.5% { 87.2% } | 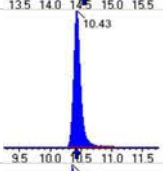 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 930349 | ( 10.96 , N/A ) ( N/A , 0.01 , N/A ) | 1550.3 | N/A | 4.3851 [ 4.0000 ] | 109.6% { 88.8% } | 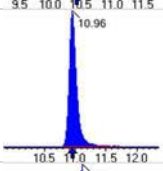 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1925084 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 3121.2 | N/A | 23.5906 [ 20.0000 ] | 118.0% { 102.3% } | 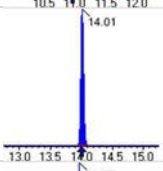 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2016954 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4547.0 | N/A | 20.4032 [ 20.0000 ] | 102.0% { 85.5% } | 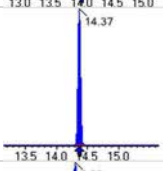 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 928272 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2592.2 | N/A | 7.5397 [ 8.0000 ] | 94.2% { 81.8% } | 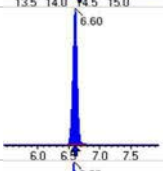 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 455043 | ( 6.88 , N/A ) ( N/A , 0.00 , N/A ) | 1157.8 | N/A | 1.7499 [ 2.0000 ] | 87.5% { 77.6% } | 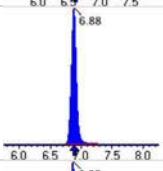 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 435679 | ( 8.96 , N/A ) ( N/A , 0.01 , N/A ) | 649.4 | N/A | 1.7946 [ 2.0000 ] | 89.7% { 77.2% } | 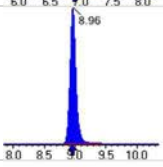 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .02840 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01320 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .0550 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.770 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.260 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.180 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.160 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.040 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.010 | ng/mL0 | | |
| | 13C6-PFDA | 0.9470 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9440 | ng/mL0 | | |
| | 13C2-PFDOA | 0.8990 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9050 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.680 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.190 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.010 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 7.390 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.550 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 6.590 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.70 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.060 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.870 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.830 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.550 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.740 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | C |
|---|---|---|---|---|---|
| SD0 977-CCB10 | D7-NMEFOSE0 | 19.80 | ng/mL0 | | |
| | D9-NETFOSE0 | 17.0 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.610 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 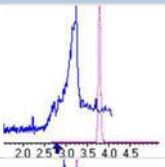 | 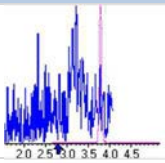 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 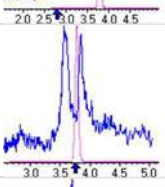 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 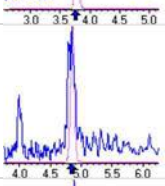 | 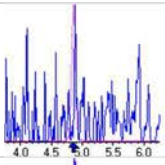 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 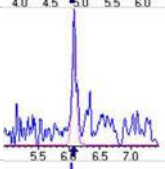 | 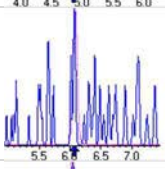 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 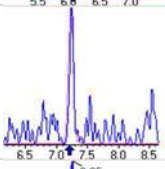 | 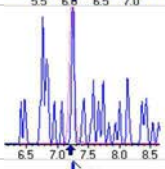 | |
| PFOA | ( 413.0 / 369.0 )<br>14144<br>( 413.0 / 169.0 )<br>4473 | ( 8.25 , 1.00 )<br>( 0.01 , N/A , 0.7) | 24.2<br>39.7 | 0.3162<br>87.4<br>89.1 | 0.0284 | N/A | 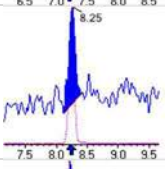 | 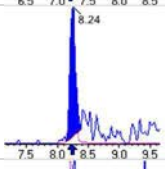 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 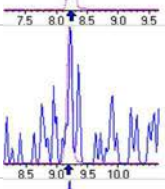 | 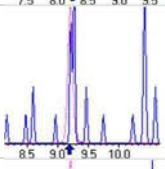 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 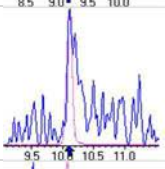 | 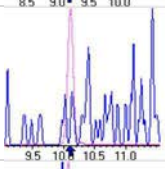 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 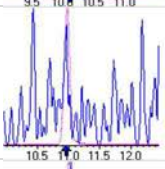 | 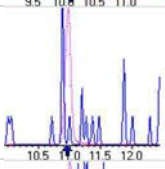 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 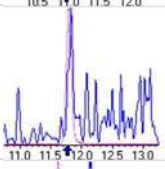 | 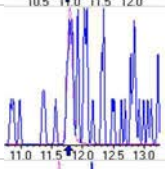 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 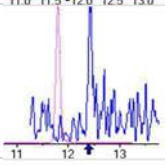 | 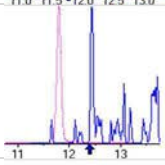 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 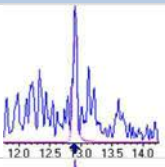 | 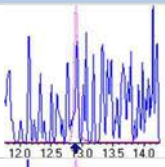 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 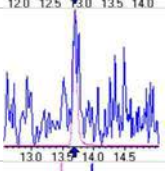 | 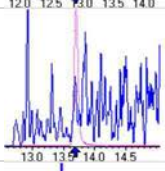 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 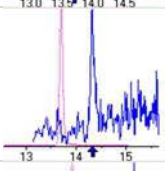 | 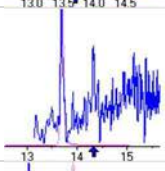 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 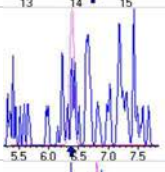 | 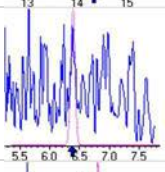 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 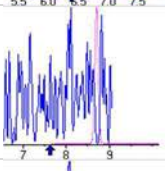 | 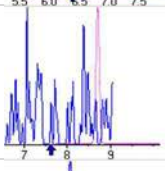 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 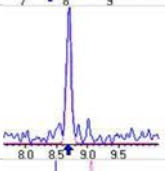 | 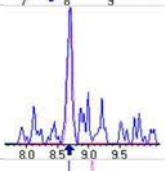 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 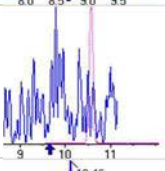 | 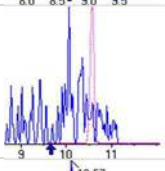 | |
| PFOS | ( 499.0 / 80.0 )<br>15835<br>( 499.0 / 99.0 )<br>3754 | ( 10.46 , 0.99 )<br>( -0.11 , N/A , -6.3) | 50.0<br>185.8 | 0.2371<br>100.2<br>108.2 | 0.0132 | N/A | 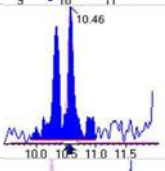 | 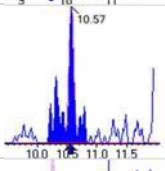 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 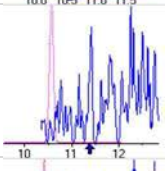 | 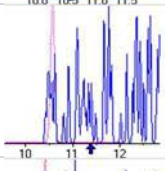 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 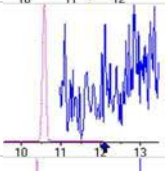 | 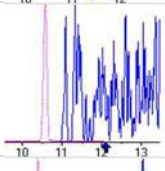 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 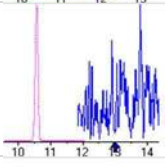 | 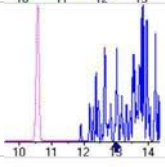 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 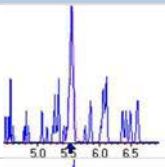 | 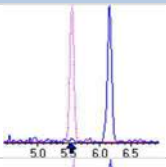 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 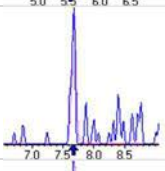 | 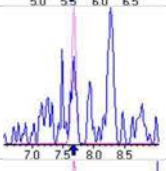 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 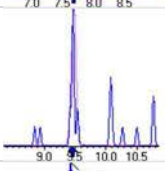 | 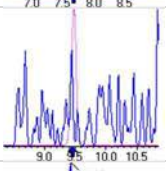 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19808<br>( 627.0 / 81.0 )<br>29848 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.1) | 261.4<br>94.1 | 1.5069<br>111.5<br>110.0 | 0.0550 | N/A | 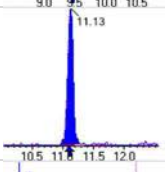 | 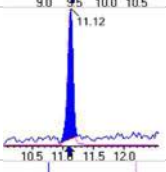 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 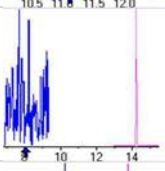 | 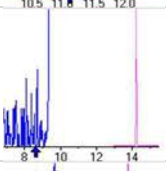 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 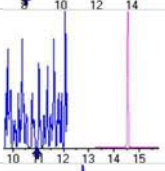 | 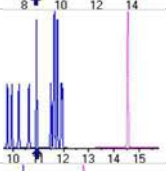 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 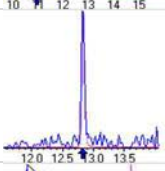 | 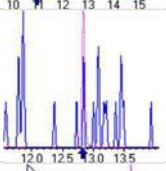 | |
| TFSI | ( 279.7 / 147.0 )<br>72738<br>( 279.7 / 211.0 )<br>6401 | ( 8.26 , 0.64 )<br>( N/A , 0.01 , -0.5) | 30.7<br>15.3 | 0.0880<br>106.7<br>103.5 | 0.0305 | N/A | 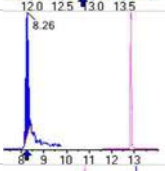 | 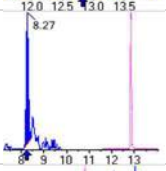 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 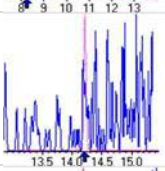 | 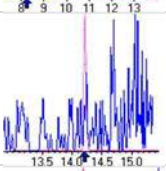 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 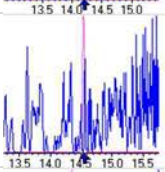 | 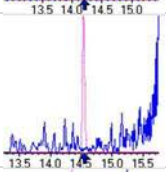 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 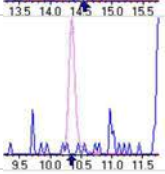 | 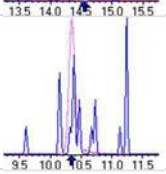 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 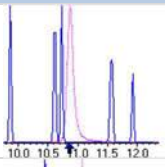 | 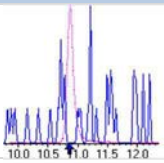 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 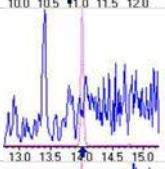 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 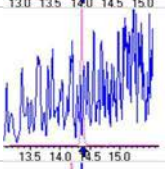 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 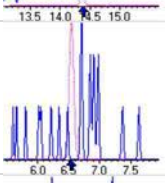 | 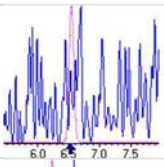 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 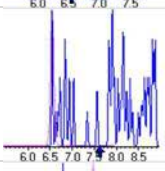 | 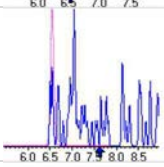 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 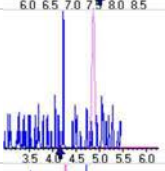 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 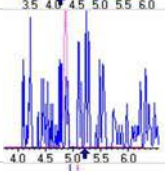 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 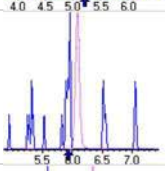 | 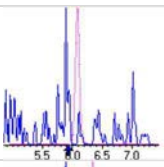 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 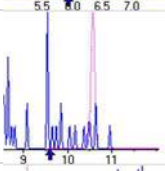 | 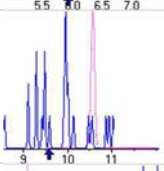 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 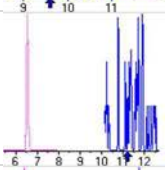 | 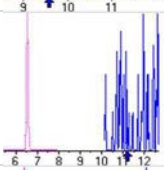 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 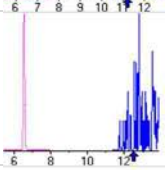 | 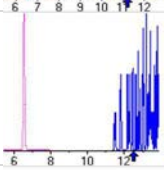 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 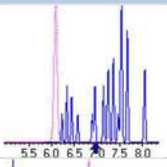 | 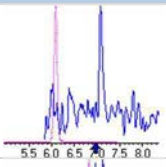 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 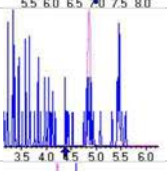 | 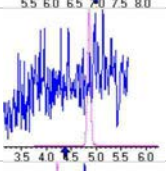 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 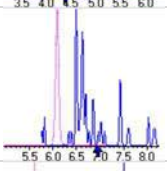 | 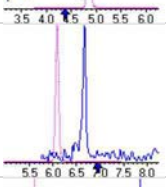 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 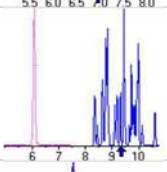 | 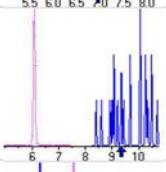 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 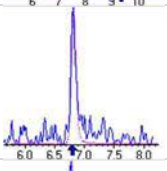 | 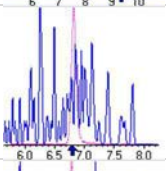 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 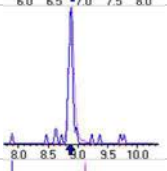 | 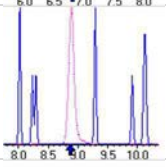 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 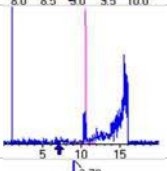 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 345870 | ( 3.78 , N/A )<br>( N/A , 0.03 , N/A ) | 1005.6 | N/A | 1.1481<br>[ 1.0000 ] | 114.8%<br>{ 102.2% } | 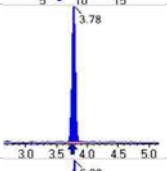 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 160083 | ( 6.09 , N/A )<br>( N/A , 0.02 , N/A ) | 6747.5 | N/A | 1.0411<br>[ 1.0000 ] | 104.1%<br>{ 93.9% } | 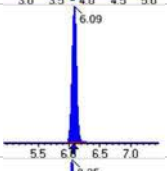 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 455152 | ( 8.25 , N/A )<br>( N/A , 0.02 , N/A ) | 4980.5 | N/A | 1.0202<br>[ 1.0000 ] | 102.0%<br>{ 93.3% } | 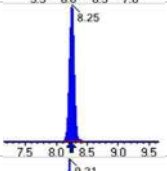 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 365439 | ( 9.21 , N/A )<br>( N/A , 0.02 , N/A ) | 912.6 | N/A | 1.0932<br>[ 1.0000 ] | 109.3%<br>{ 95.0% } | 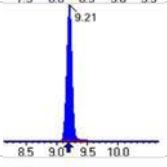 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 371989 | ( 10.12 , N/A ) ( N/A , 0.02 , N/A ) | 7805.9 | N/A | 1.1217 [ 1.0000 ] | 112.2% { 98.5% } | 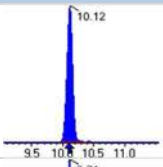 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1061485 | ( 8.71 , N/A ) ( N/A , 0.02 , N/A ) | 5428.0 | N/A | 0.9499 [ 1.0000 ] | 95.0% { 84.7% } | 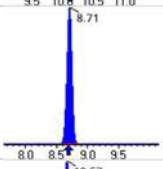 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 969392 | ( 10.57 , N/A ) ( N/A , 0.02 , N/A ) | 3010.9 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 91.6% } | 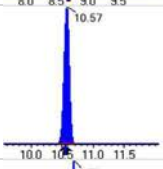 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2964097 | ( 3.78 , N/A ) ( N/A , 0.03 , N/A ) | 51192.4 | N/A | 7.7714 [ 8.0000 ] | 97.1% { 104.4% } | 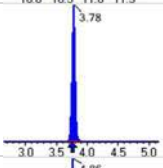 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1222627 | ( 4.86 , N/A ) ( N/A , 0.02 , N/A ) | 6918.7 | N/A | 4.2573 [ 4.0000 ] | 106.4% { 95.5% } | 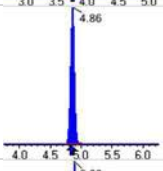 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 750951 | ( 6.09 , N/A ) ( N/A , 0.02 , N/A ) | 7223.4 | N/A | 2.1848 [ 2.0000 ] | 109.2% { 99.0% } | 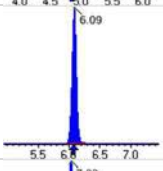 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 774131 | ( 7.23 , N/A ) ( N/A , 0.02 , N/A ) | 5846.6 | N/A | 2.1564 [ 2.0000 ] | 107.8% { 94.3% } | 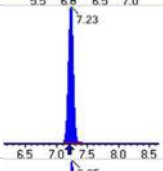 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 980074 | ( 8.25 , N/A ) ( N/A , 0.02 , N/A ) | 3687.2 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 90.2% } | 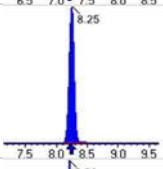 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 357915 | ( 9.21 , N/A ) ( N/A , 0.02 , N/A ) | 3023.1 | N/A | 1.0142 [ 1.0000 ] | 101.4% { 94.7% } | 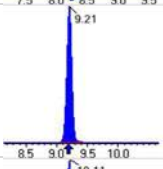 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 406466 | ( 10.11 , N/A ) ( N/A , 0.02 , N/A ) | 1281.7 | N/A | 0.9469 [ 1.0000 ] | 94.7% { 86.2% } | 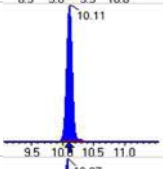 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 492558 | ( 10.97 , N/A ) ( N/A , 0.02 , N/A ) | 1093.8 | N/A | 0.9438 [ 1.0000 ] | 94.4% { 97.1% } | 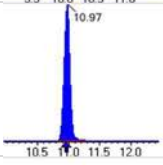 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 471134 | ( 11.80 , N/A ) ( N/A , 0.02 , N/A ) | 1690.9 | N/A | 0.8989 [ 1.0000 ] | 89.9% { 90.7% } | 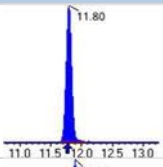  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 413166 | ( 12.90 , N/A ) ( N/A , 0.02 , N/A ) | 1636.1 | N/A | 0.9047 [ 1.0000 ] | 90.5% { 93.3% } | 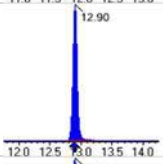  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 651590 | ( 13.70 , N/A ) ( N/A , 0.01 , N/A ) | 3123.2 | N/A | 1.6797 [ 2.0000 ] | 84.0% { 80.9% } | 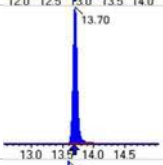  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2262653 | ( 6.39 , N/A ) ( N/A , 0.02 , N/A ) | 1098.0 | N/A | 2.1877 [ 2.0000 ] | 109.4% { 94.9% } | 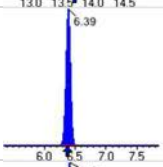  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1604208 | ( 8.71 , N/A ) ( N/A , 0.02 , N/A ) | 5081.5 | N/A | 2.0653 [ 2.0000 ] | 103.3% { 91.0% } | 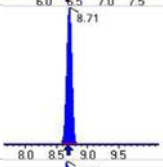  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2069628 | ( 10.57 , N/A ) ( N/A , 0.02 , N/A ) | 2252.5 | N/A | 2.0055 [ 2.0000 ] | 100.3% { 92.7% } | 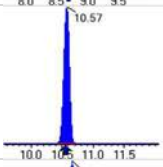  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 682964 | ( 5.55 , N/A ) ( N/A , 0.02 , N/A ) | 94.6 | N/A | 7.3885 [ 4.0000 ] | 184.7% { 123.4% } | 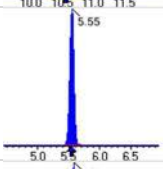  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1879831 | ( 7.68 , N/A ) ( N/A , 0.02 , N/A ) | 3496.6 | N/A | 6.5487 [ 4.0000 ] | 163.7% { 115.5% } | 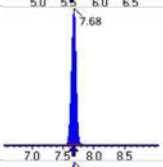  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1883547 | ( 9.48 , N/A ) ( N/A , 0.02 , N/A ) | 1910.1 | N/A | 6.5861 [ 4.0000 ] | 164.7% { 110.4% } | 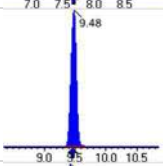  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3504089 | ( 11.12 , N/A ) ( N/A , 0.03 , N/A ) | 1157.7 | N/A | 10.6741 [ 8.0000 ] | 133.4% { 94.4% } | 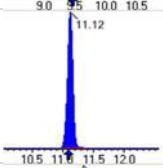  | | S2, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2298300 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2755.3 | N/A | 2.0551 [ 2.0000 ] | 102.8% { 94.9% } | 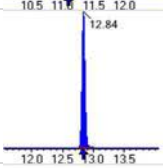  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 386187 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1937.4 | N/A | 1.8701 [ 2.0000 ] | 93.5% { 90.4% } | 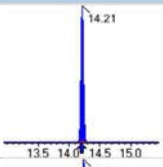 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 435152 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 3734.6 | N/A | 1.8345 [ 2.0000 ] | 91.7% { 89.8% } | 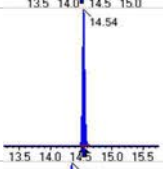 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1201633 | ( 10.35 , N/A ) ( N/A , 0.02 , N/A ) | 3046.5 | N/A | 4.5468 [ 4.0000 ] | 113.7% { 91.0% } | 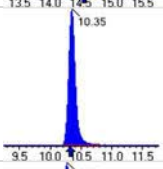 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1189723 | ( 10.87 , N/A ) ( N/A , 0.02 , N/A ) | 1687.2 | N/A | 4.7424 [ 4.0000 ] | 118.6% { 96.6% } | 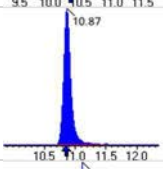 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1914898 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2465.5 | N/A | 19.8450 [ 20.0000 ] | 99.2% { 103.0% } | 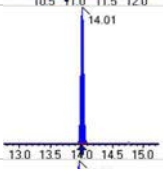 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1992354 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4286.9 | N/A | 17.0445 [ 20.0000 ] | 85.2% { 95.2% } | 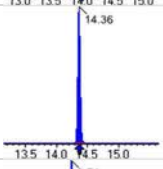 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1271716 | ( 6.54 , N/A ) ( N/A , 0.02 , N/A ) | 2543.2 | N/A | 8.6075 [ 8.0000 ] | 107.6% { 90.6% } | 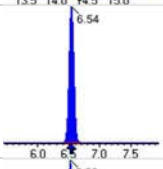 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 613797 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1141.1 | N/A | 1.8604 [ 2.0000 ] | 93.0% { 86.3% } | 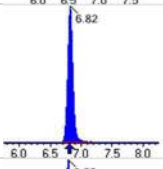 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 578178 | ( 8.89 , N/A ) ( N/A , 0.02 , N/A ) | 949.0 | N/A | 1.8771 [ 2.0000 ] | 93.9% { 86.3% } | 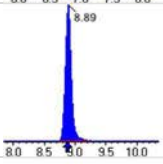 | | |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB20 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .02160 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05910 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB20 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.190 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.450 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.180 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.20 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.040 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.0 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9450 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9480 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9280 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.720 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.990 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.020 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.080 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 6.620 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.930 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 6.210 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.30 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.140 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.0 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.90 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.950 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.920 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | C |
|---|---|---|---|---|---|
| SD0 977-CCB20 | D7-NMEFOSE0 | 20.90 | ng/mL0 | | |
| | D9-NETFOSE0 | 18.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 9.010 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 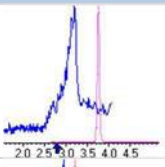 | 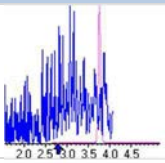 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 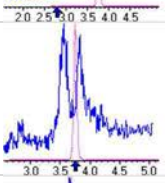 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 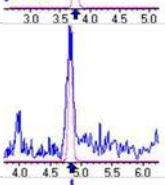 | 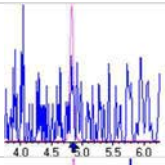 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 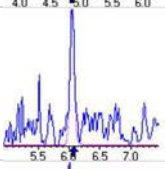 | 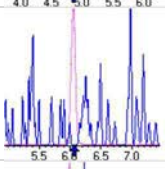 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 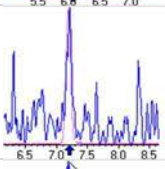 | 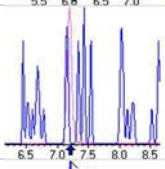 | |
| PFOA | ( 413.0 / 369.0 )<br>10459<br>( 413.0 / 169.0 )<br>3204 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , -0.1) | 18.2<br>24.1 | 0.3063<br>84.7<br>86.3 | 0.0216 | N/A | 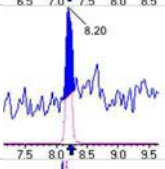 | 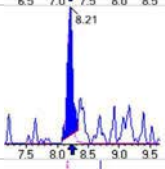 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 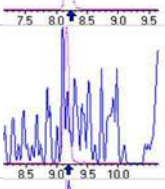 | 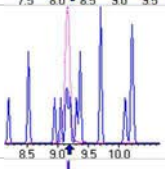 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 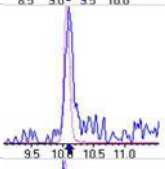 | 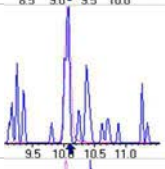 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 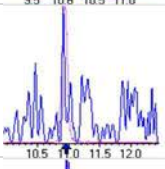 | 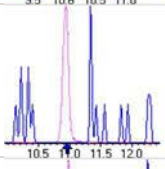 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 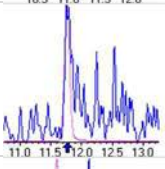 | 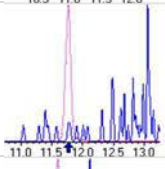 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 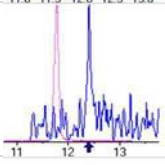 | 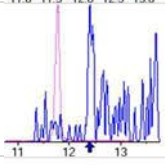 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 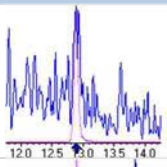 | 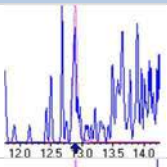 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 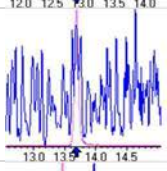 | 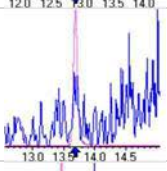 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 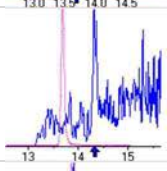 | 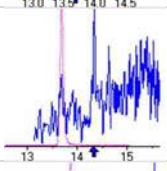 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 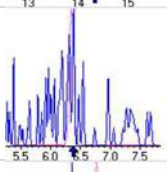 | 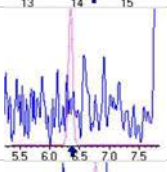 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 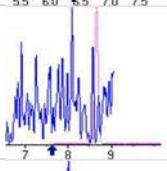 | 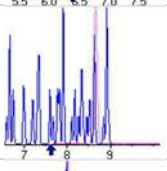 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 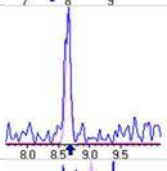 | 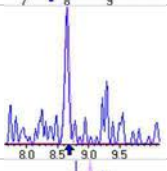 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 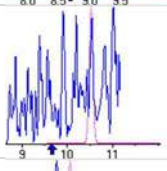 | 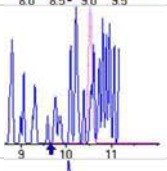 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 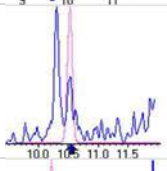 | 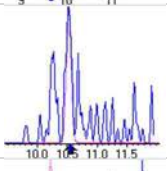 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 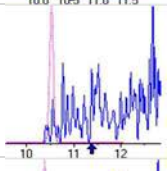 | 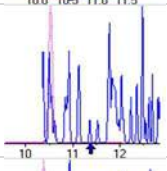 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 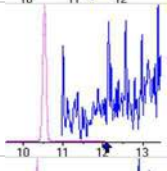 | 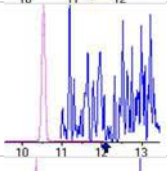 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 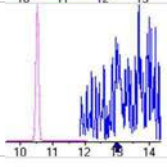 | 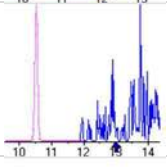 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 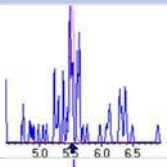 | 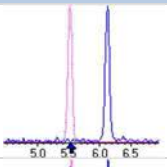 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 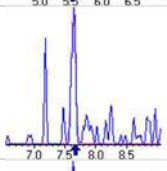 | 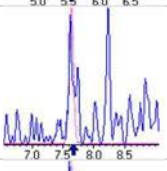 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 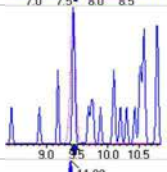 | 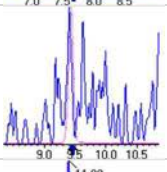 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20043<br>( 627.0 / 81.0 )<br>26592 | ( 11.09 , 1.00 )<br>( 0.01 , N/A , -0.1) | 183.1<br>81.8 | 1.3268<br>98.2<br>96.9 | 0.0591 | N/A | 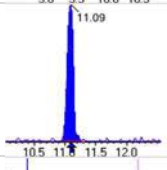 | 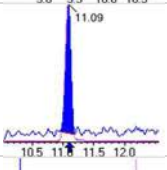 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 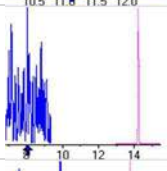 | 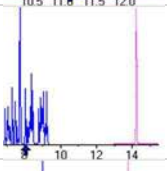 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 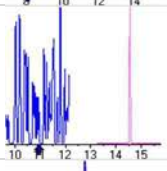 | 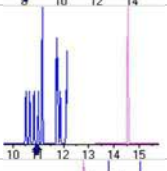 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 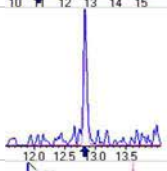 | 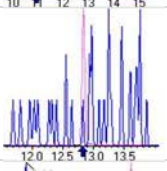 | |
| TFSI | ( 279.7 / 147.0 )<br>72770<br>( 279.7 / 211.0 )<br>6761 | ( 8.21 , 0.64 )<br>( N/A , -0.04 , -1.1) | 31.7<br>13.9 | 0.0929<br>112.7<br>109.2 | 0.0324 | N/A | 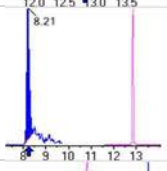 | 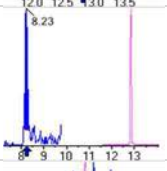 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 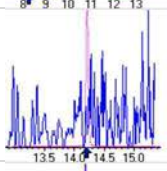 | 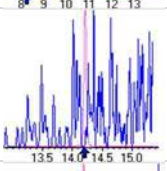 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 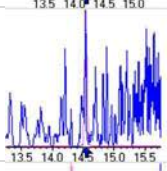 | 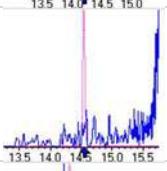 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 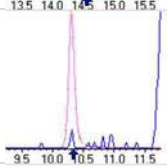 | 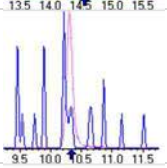 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 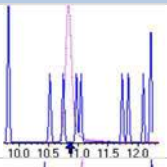 | 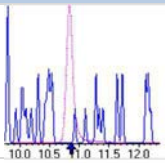 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 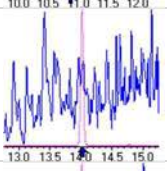 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 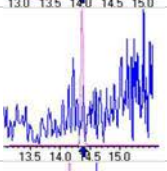 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 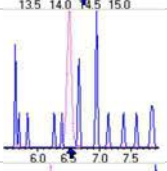 | 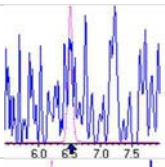 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 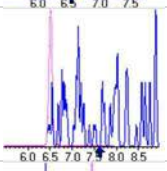 | 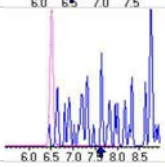 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 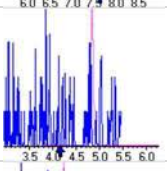 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 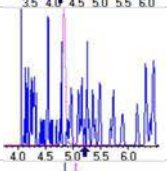 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 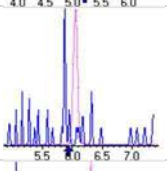 | 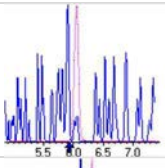 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 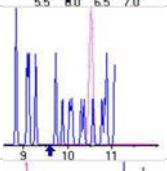 | 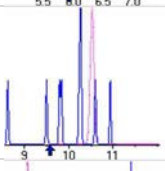 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 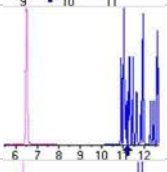 | 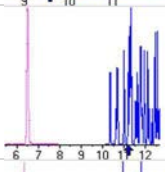 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 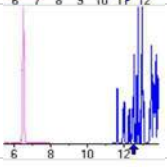 | 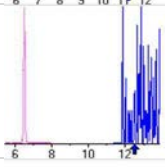 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 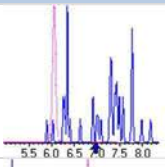 | 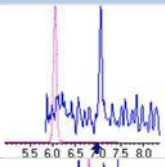 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 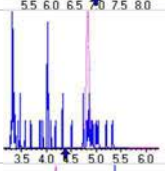 | 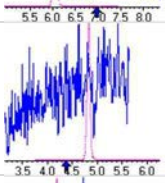 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 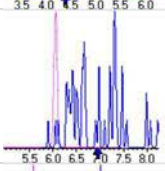 | 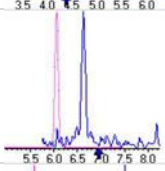 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 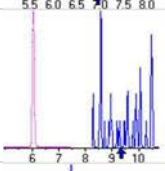 | 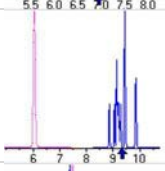 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 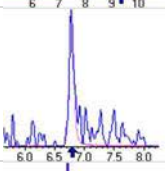 | 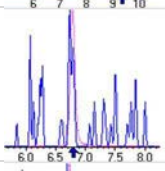 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 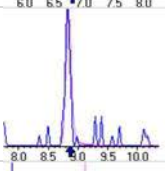 | 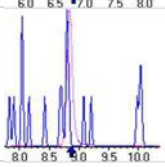 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 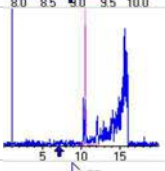 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 293565 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1077.2 | N/A | 0.9745<br>[ 1.0000 ] | 97.4%<br>{ 86.7% } | 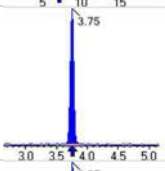 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 140051 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 15347.4 | N/A | 0.9108<br>[ 1.0000 ] | 91.1%<br>{ 82.2% } | 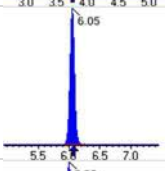 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441882 | ( 8.20 , N/A )<br>( N/A , -0.03 , N/A ) | 3273.1 | N/A | 0.9905<br>[ 1.0000 ] | 99.0%<br>{ 90.5% } | 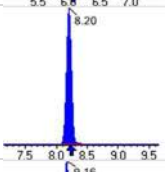 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 331524 | ( 9.16 , N/A )<br>( N/A , -0.03 , N/A ) | 1396.4 | N/A | 0.9917<br>[ 1.0000 ] | 99.2%<br>{ 86.2% } | 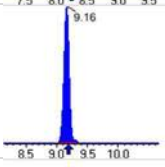 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 335708 | ( 10.07 , N/A ) ( N/A , -0.03 , N/A ) | 13049.7 | N/A | 1.0123 [ 1.0000 ] | 101.2% { 88.9% } | 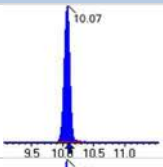 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1038796 | ( 8.66 , N/A ) ( N/A , -0.03 , N/A ) | 4832.8 | N/A | 0.9296 [ 1.0000 ] | 93.0% { 82.9% } | 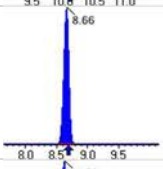 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 879040 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 2540.4 | N/A | 0.9005 [ 1.0000 ] | 90.0% { 83.1% } | 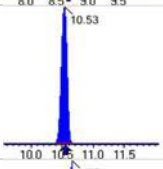 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2650457 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 44037.5 | N/A | 8.1872 [ 8.0000 ] | 102.3% { 93.3% } | 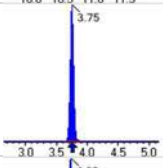 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1117635 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5028.0 | N/A | 4.4483 [ 4.0000 ] | 111.2% { 87.3% } | 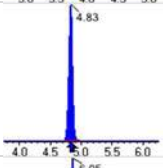 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 656524 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 40784.4 | N/A | 2.1832 [ 2.0000 ] | 109.2% { 86.5% } | 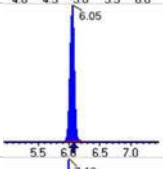 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 689422 | ( 7.19 , N/A ) ( N/A , -0.02 , N/A ) | 4375.8 | N/A | 2.1952 [ 2.0000 ] | 109.8% { 84.0% } | 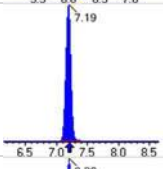 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 950385 | ( 8.20 , N/A ) ( N/A , -0.03 , N/A ) | 3382.8 | N/A | 2.0399 [ 2.0000 ] | 102.0% { 87.5% } | 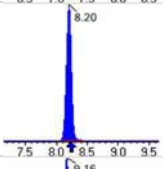 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 320206 | ( 9.16 , N/A ) ( N/A , -0.03 , N/A ) | 8014.2 | N/A | 1.0002 [ 1.0000 ] | 100.0% { 84.7% } | 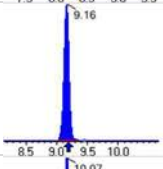 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 388754 | ( 10.07 , N/A ) ( N/A , -0.03 , N/A ) | 934.5 | N/A | 1.0035 [ 1.0000 ] | 100.4% { 82.5% } | 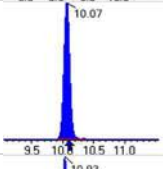 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 444984 | ( 10.93 , N/A ) ( N/A , -0.02 , N/A ) | 1141.4 | N/A | 0.9448 [ 1.0000 ] | 94.5% { 87.8% } | 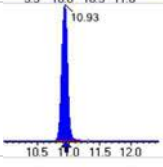 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 448585 | ( 11.77 , N/A ) ( N/A , -0.01 , N/A ) | 1674.3 | N/A | 0.9484 [ 1.0000 ] | 94.8% { 86.4% } | 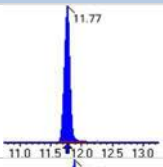  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 382676 | ( 12.89 , N/A ) ( N/A , 0.00 , N/A ) | 1330.9 | N/A | 0.9285 [ 1.0000 ] | 92.8% { 86.4% } | 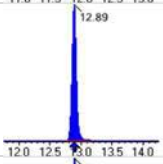  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 602217 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2663.3 | N/A | 1.7202 [ 2.0000 ] | 86.0% { 74.8% } | 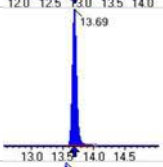  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2018408 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 1027.4 | N/A | 1.9942 [ 2.0000 ] | 99.7% { 84.7% } | 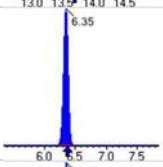  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1539095 | ( 8.66 , N/A ) ( N/A , -0.03 , N/A ) | 4754.3 | N/A | 2.0247 [ 2.0000 ] | 101.2% { 87.3% } | 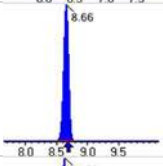  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1950811 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 1668.8 | N/A | 2.0846 [ 2.0000 ] | 104.2% { 87.4% } | 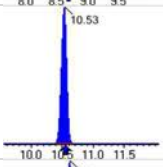  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598629 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.2 | N/A | 6.6176 [ 4.0000 ] | 165.4% { 108.2% } | 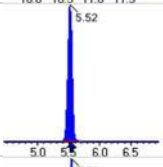  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1947113 | ( 7.64 , N/A ) ( N/A , -0.02 , N/A ) | 5115.4 | N/A | 6.9312 [ 4.0000 ] | 173.3% { 119.6% } | 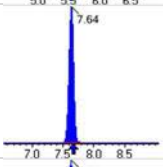  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1738354 | ( 9.44 , N/A ) ( N/A , -0.02 , N/A ) | 1432.3 | N/A | 6.2112 [ 4.0000 ] | 155.3% { 101.9% } | 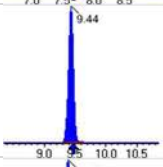  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3295703 | ( 11.08 , N/A ) ( N/A , -0.01 , N/A ) | 1506.4 | N/A | 10.2586 [ 8.0000 ] | 128.2% { 88.8% } | 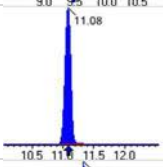  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2165905 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2839.5 | N/A | 2.1358 [ 2.0000 ] | 106.8% { 89.4% } | 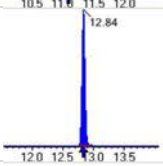  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 374054 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2061.3 | N/A | 1.9975 [ 2.0000 ] | 99.9% { 87.5% } | 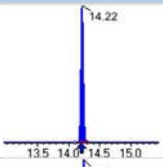  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 408084 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2636.7 | N/A | 1.8972 [ 2.0000 ] | 94.9% { 84.3% } | 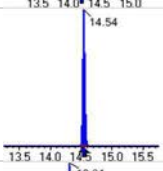  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1185252 | ( 10.31 , N/A ) ( N/A , -0.02 , N/A ) | 2349.0 | N/A | 4.9458 [ 4.0000 ] | 123.6% { 89.8% } | 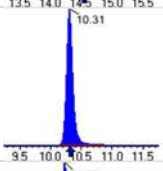  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1119438 | ( 10.83 , N/A ) ( N/A , -0.02 , N/A ) | 2056.2 | N/A | 4.9209 [ 4.0000 ] | 123.0% { 90.9% } | 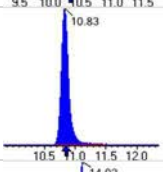  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1828426 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2859.8 | N/A | 20.8964 [ 20.0000 ] | 104.5% { 98.4% } | 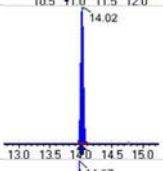  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1922460 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5075.3 | N/A | 18.1370 [ 20.0000 ] | 90.7% { 91.8% } | 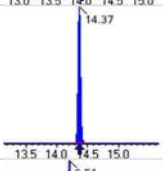  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1164850 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 2327.7 | N/A | 9.0119 [ 8.0000 ] | 112.6% { 83.0% } | 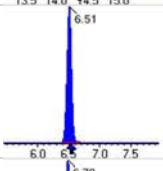  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575589 | ( 6.79 , N/A ) ( N/A , -0.02 , N/A ) | 1078.5 | N/A | 1.9332 [ 2.0000 ] | 96.7% { 80.9% } | 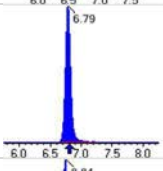  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 558612 | ( 8.84 , N/A ) ( N/A , -0.03 , N/A ) | 830.8 | N/A | 2.0096 [ 2.0000 ] | 100.5% { 83.4% } | 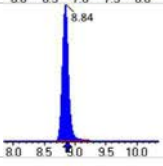  | | |

# ANALYSIS SEQUENCE BLANKS

Laboratory: APPL, L CL
Client: Tidewater, Inc.L
Sequence: SD00977L
Calibration: 2411010L
SDG: 24C0076L
Project: JPL-GW MonitoringL
Instrument: SaphiraL

| Lab Sample ID | Analyte | Found | Units | RL | C |
|---|---|---|---|---|---|
| SD0 977-CCB30 | PFBA | .0 | ng/mL | .40 | U |
| | PFPeA | .0 | ng/mL | .20 | U |
| | PFHxA | .0 | ng/mL | .10 | U |
| | PFHpA | .0 | ng/mL | .10 | U |
| | PFOA | .03340 | ng/mL | .10 | U |
| | PFNA | .0 | ng/mL | .10 | U |
| | PFDA | .0 | ng/mL | .10 | U |
| | PFUnA | .0 | ng/mL | .10 | U |
| | PFDoA | .0 | ng/mL | .10 | U |
| | PFTrDA | .0 | ng/mL | .10 | U |
| | PFTeDA | .0 | ng/mL | .10 | U |
| | PFHxDA | .0 | ng/mL | .10 | U |
| | PFODA | .0 | ng/mL | .10 | U |
| | PFBS | .0 | ng/mL | .10 | U |
| | PFPeS | .0 | ng/mL | .10 | U |
| | PFHxS | .0 | ng/mL | .10 | U |
| | PFHpS | .0 | ng/mL | .10 | U |
| | PFOS | .0 | ng/mL | .10 | U |
| | PFNS | .0 | ng/mL | .10 | U |
| | PFDS | .0 | ng/mL | .10 | U |
| | PFDoS | .0 | ng/mL | .10 | U |
| | 4:2FTS | .0 | ng/mL | .40 | U |
| | 6:2FTS | .0 | ng/mL | .40 | U |
| | 8:2FTS | .0 | ng/mL | .40 | U |
| | 10:2FTS | .05730 | ng/mL | .40 | U |
| | PFOSA | .0 | ng/mL | .10 | U |
| | NMeFOSA | .0 | ng/mL | .40 | U |
| | NEtFOSA | .0 | ng/mL | .40 | U |
| | NMeFOSAA | .0 | ng/mL | .10 | U |
| | NEtFOSAA | .0 | ng/mL | .10 | U |
| | NMeFOSE | .0 | ng/mL | .40 | U |
| | NEtFOSE | .0 | ng/mL | .40 | U |
| | HFPO-DA | .0 | ng/mL | .20 | U |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB30 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.120 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.370 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.160 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.320 | ng/mL0 | | |
| | 13C8-PFOA0 | 1.970 | ng/mL0 | | |
| | 13C9-PFNA | 0.9610 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.010 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.970 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9920 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.820 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.890 | ng/mL0 | | |
| | 13C3-PFHXS0 | 1.990 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.930 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 6.390 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.070 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 5.650 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.20 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.880 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.890 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.840 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.540 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 977-CCB30 | D7-NMEFOSE0 | 19.90 | ng/mL0 | | |
| | D9-NETFOSE0 | 16.80 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 9.150 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 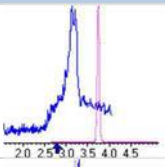 | 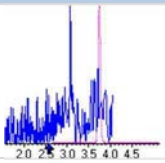 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 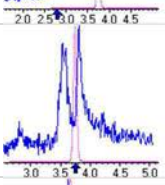 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 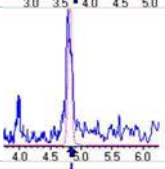 | 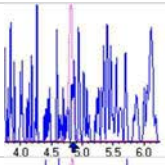 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 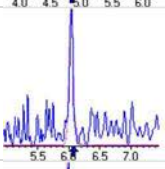 | 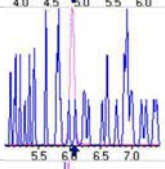 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 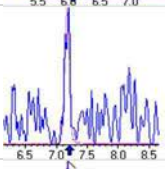 | 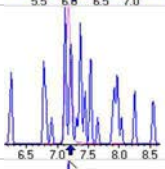 | |
| PFOA | ( 413.0 / 369.0 )<br>14518<br>( 413.0 / 169.0 )<br>4774 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.3) | 27.4<br>37.1 | 0.3288<br>90.9<br>92.6 | 0.0334 | N/A | 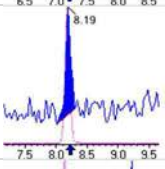 | 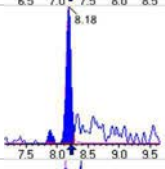 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 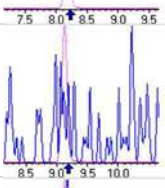 | 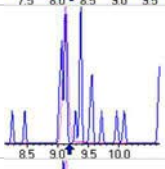 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 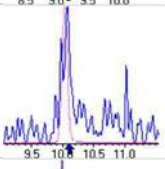 | 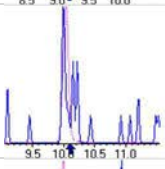 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 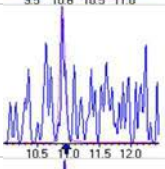 | 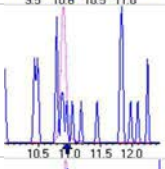 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 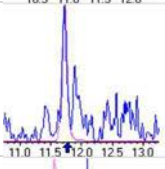 | 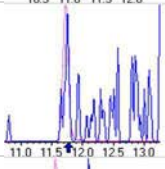 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 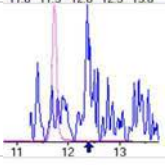 | 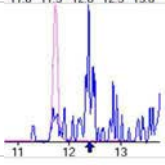 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 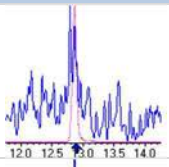 | 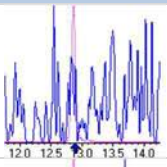 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 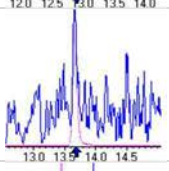 | 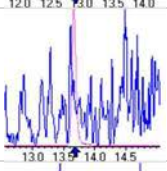 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 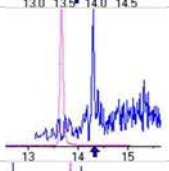 | 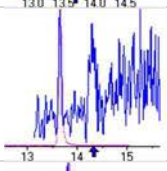 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 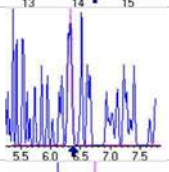 | 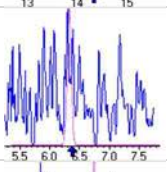 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 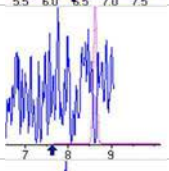 | 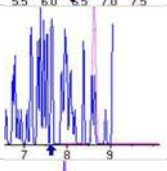 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 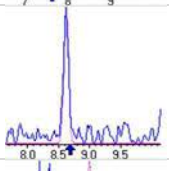 | 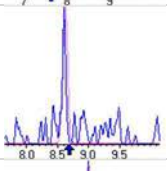 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 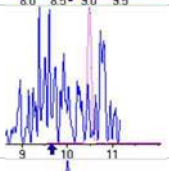 | 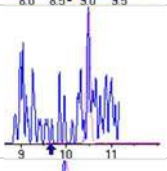 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 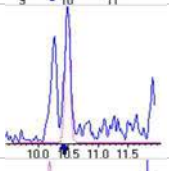 | 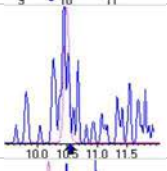 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 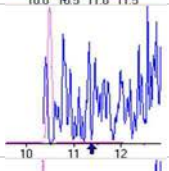 | 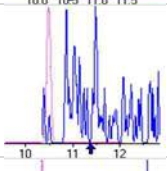 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 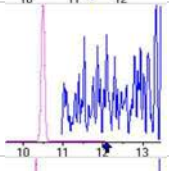 | 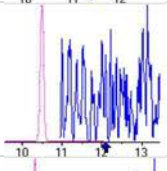 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 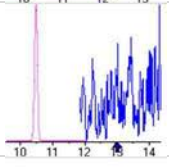 | 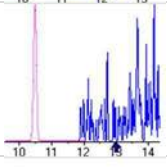 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 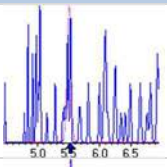 | 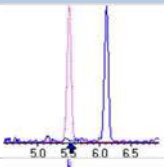 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 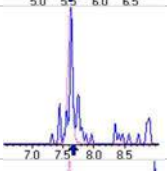 | 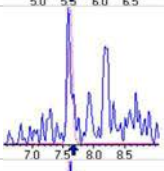 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 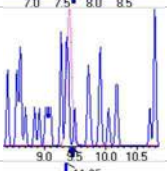 | 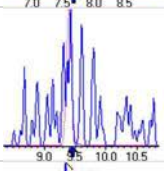 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>18251<br>( 627.0 / 81.0 )<br>23092 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.4) | 184.2<br>64.7 | 1.2653<br>93.6<br>92.4 | 0.0573 | N/A | 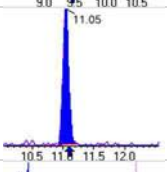 | 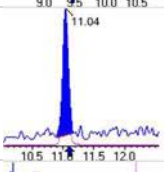 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 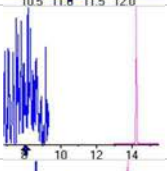 | 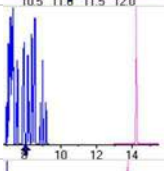 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 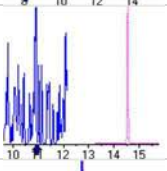 | 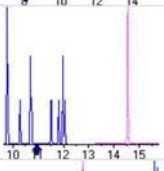 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 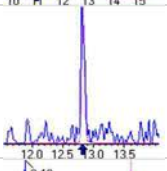 | 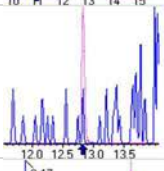 | |
| TFSI | ( 279.7 / 147.0 )<br>71866<br>( 279.7 / 211.0 )<br>5907 | ( 8.18 , 0.64 )<br>( N/A , -0.07 , 1.1) | 36.0<br>15.2 | 0.0822<br>99.7<br>96.6 | 0.0379 | N/A | 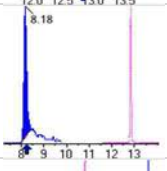 | 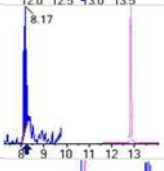 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 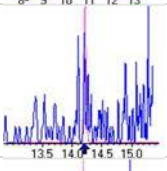 | 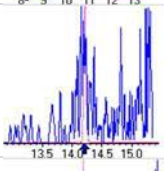 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 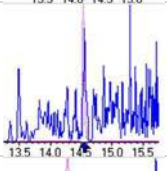 | 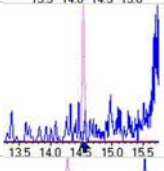 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 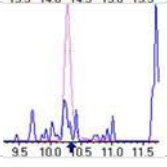 | 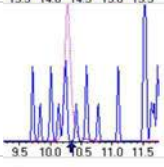 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 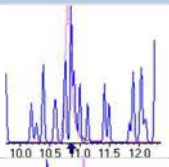 | 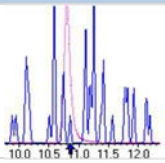 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 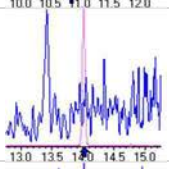 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 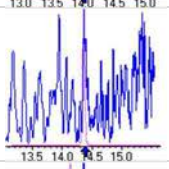 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 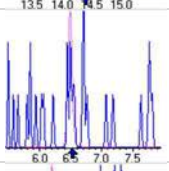 | 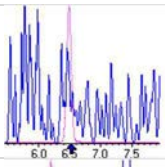 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 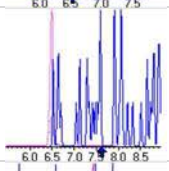 | 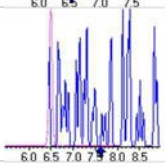 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 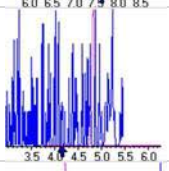 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 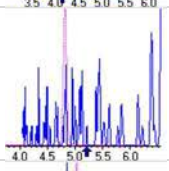 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 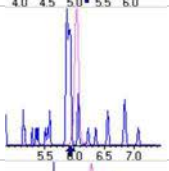 | 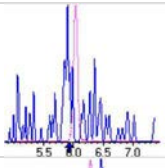 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 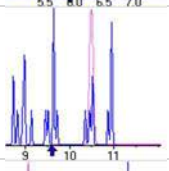 | 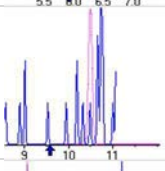 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 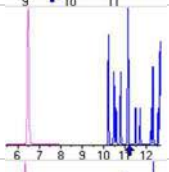 | 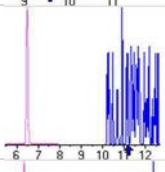 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 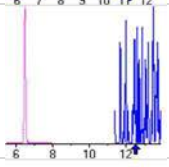 | 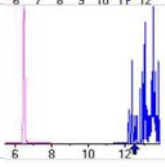 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 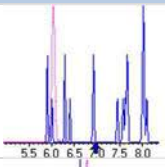 | 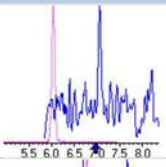 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 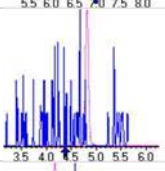 | 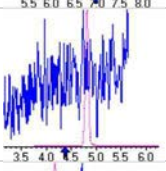 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 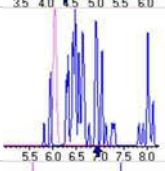 | 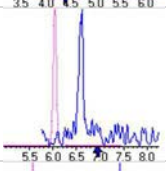 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 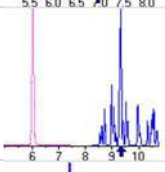 | 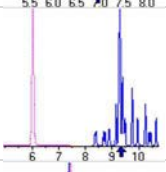 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 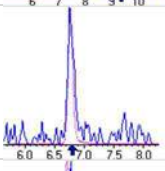 | 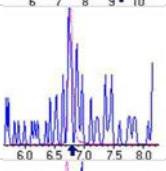 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 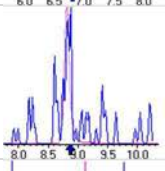 | 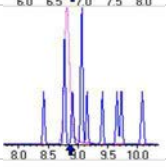 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 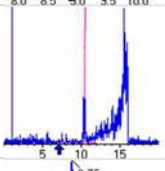 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277327 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1113.5 | N/A | 0.9206<br>[ 1.0000 ] | 92.1%<br>{ 81.9% } | 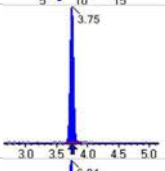 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 123996 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 5907.0 | N/A | 0.8064<br>[ 1.0000 ] | 80.6%<br>{ 72.8% } | 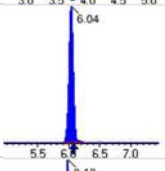 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 411116 | ( 8.18 , N/A )<br>( N/A , -0.05 , N/A ) | 3672.0 | N/A | 0.9215<br>[ 1.0000 ] | 92.2%<br>{ 84.2% } | 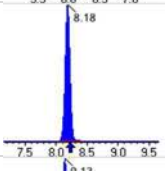 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 301639 | ( 9.13 , N/A )<br>( N/A , -0.06 , N/A ) | 1200.2 | N/A | 0.9023<br>[ 1.0000 ] | 90.2%<br>{ 78.4% } | 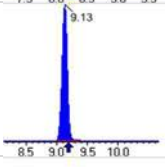 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299924 | ( 10.04 , N/A ) ( N/A , -0.06 , N/A ) | 22617.3 | N/A | 0.9044 [ 1.0000 ] | 90.4% { 79.4% } | 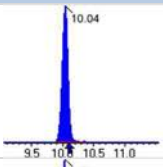  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981850 | ( 8.63 , N/A ) ( N/A , -0.06 , N/A ) | 4216.5 | N/A | 0.8787 [ 1.0000 ] | 87.9% { 78.3% } | 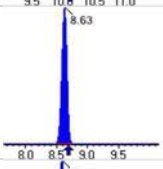  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 842856 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 2466.2 | N/A | 0.8634 [ 1.0000 ] | 86.3% { 79.7% } | 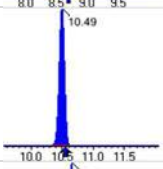  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2484783 | ( 3.74 , N/A ) ( N/A , 0.00 , N/A ) | 43882.2 | N/A | 8.1249 [ 8.0000 ] | 101.6% { 87.5% } | 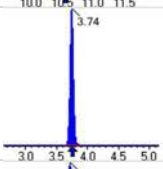  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 971599 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 6010.9 | N/A | 4.3678 [ 4.0000 ] | 109.2% { 75.9% } | 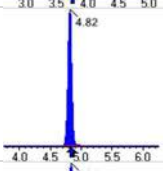  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 574957 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 12440.4 | N/A | 2.1596 [ 2.0000 ] | 108.0% { 75.8% } | 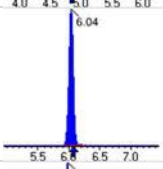  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 643920 | ( 7.18 , N/A ) ( N/A , -0.04 , N/A ) | 4180.1 | N/A | 2.3157 [ 2.0000 ] | 115.8% { 78.4% } | 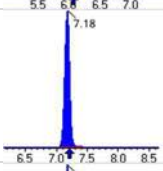  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 854273 | ( 8.18 , N/A ) ( N/A , -0.05 , N/A ) | 3087.4 | N/A | 1.9708 [ 2.0000 ] | 98.5% { 78.6% } | 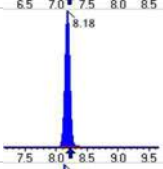  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 280021 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 2673.8 | N/A | 0.9613 [ 1.0000 ] | 96.1% { 74.1% } | 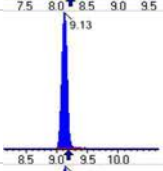  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 351267 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 1202.2 | N/A | 1.0149 [ 1.0000 ] | 101.5% { 74.5% } | 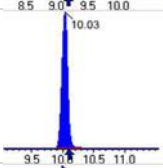  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 423192 | ( 10.90 , N/A ) ( N/A , -0.06 , N/A ) | 1013.4 | N/A | 1.0057 [ 1.0000 ] | 100.6% { 83.5% } | 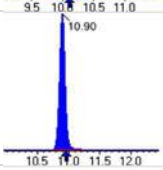  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409819 | ( 11.73 , N/A ) ( N/A , -0.05 , N/A ) | 1551.8 | N/A | 0.9698 [ 1.0000 ] | 97.0% { 78.9% } | 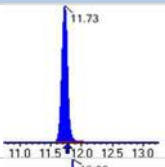  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 365414 | ( 12.86 , N/A ) ( N/A , -0.03 , N/A ) | 1326.0 | N/A | 0.9924 [ 1.0000 ] | 99.2% { 82.5% } | 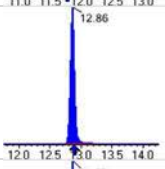  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 568914 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 2402.0 | N/A | 1.8189 [ 2.0000 ] | 90.9% { 70.7% } | 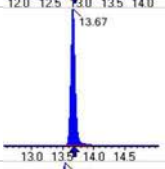  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1803407 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 1135.7 | N/A | 1.8851 [ 2.0000 ] | 94.3% { 75.6% } | 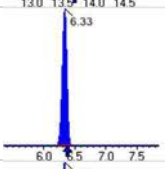  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1429796 | ( 8.63 , N/A ) ( N/A , -0.06 , N/A ) | 5941.9 | N/A | 1.9900 [ 2.0000 ] | 99.5% { 81.1% } | 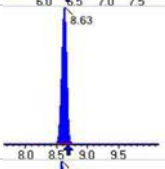  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1734433 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1662.2 | N/A | 1.9330 [ 2.0000 ] | 96.6% { 77.7% } | 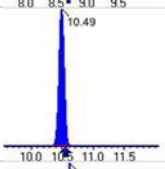  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 546239 | ( 5.51 , N/A ) ( N/A , -0.03 , N/A ) | 84.4 | N/A | 6.3887 [ 4.0000 ] | 159.7% { 98.7% } | 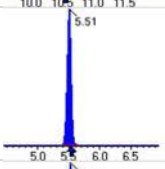  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1612529 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 4789.3 | N/A | 6.0731 [ 4.0000 ] | 151.8% { 99.1% } | 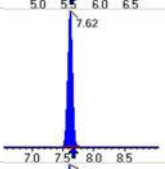  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1495650 | ( 9.40 , N/A ) ( N/A , -0.05 , N/A ) | 2240.4 | N/A | 5.6540 [ 4.0000 ] | 141.3% { 87.6% } | 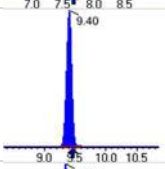  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3099468 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1334.7 | N/A | 10.2074 [ 8.0000 ] | 127.6% { 83.5% } | 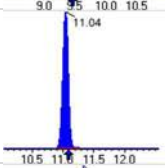  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1830279 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1952.5 | N/A | 1.8823 [ 2.0000 ] | 94.1% { 75.6% } | 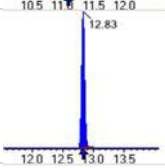  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 340167 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2304.5 | N/A | 1.8945 [ 2.0000 ] | 94.7% { 79.6% } | 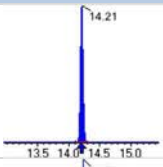 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 379077 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2386.0 | N/A | 1.8380 [ 2.0000 ] | 91.9% { 78.3% } | 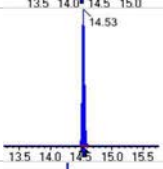 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1042588 | ( 10.28 , N/A ) ( N/A , -0.05 , N/A ) | 2217.4 | N/A | 4.5372 [ 4.0000 ] | 113.4% { 79.0% } | 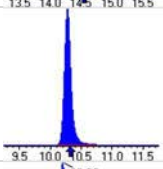 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 990088 | ( 10.80 , N/A ) ( N/A , -0.05 , N/A ) | 1940.8 | N/A | 4.5391 [ 4.0000 ] | 113.5% { 80.4% } | 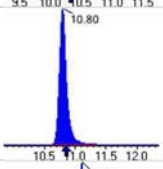 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1665616 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2694.4 | N/A | 19.8530 [ 20.0000 ] | 99.3% { 89.6% } | 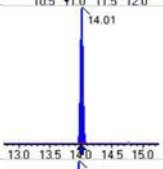 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1706737 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5171.8 | N/A | 16.7931 [ 20.0000 ] | 84.0% { 81.5% } | 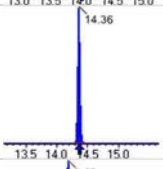 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1047501 | ( 6.49 , N/A ) ( N/A , -0.04 , N/A ) | 2205.1 | N/A | 9.1533 [ 8.0000 ] | 114.4% { 74.6% } | 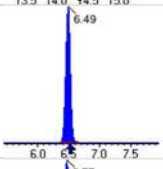 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 532068 | ( 6.77 , N/A ) ( N/A , -0.04 , N/A ) | 1337.5 | N/A | 2.0002 [ 2.0000 ] | 100.0% { 74.8% } | 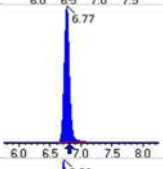 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514021 | ( 8.81 , N/A ) ( N/A , -0.05 , N/A ) | 711.7 | N/A | 2.0698 [ 2.0000 ] | 103.5% { 76.8% } | 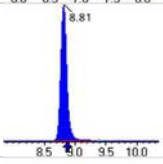 | | |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB40 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01820 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | 0.01130 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .04820 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB40 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.970 | ng/mL0 | | |
| | 13C5-PFPEA0 | 3.950 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.090 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.010 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.040 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.050 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.850 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.80 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.030 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 6.070 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.160 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 5.850 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.20 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.910 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.030 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.930 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.820 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.840 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 977-CCB40 | D7-NMEFOSE0 | 21.40 | ng/mL0 | | |
| | D9-NETFOSE0 | 17.60 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.460 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 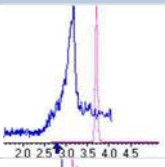 | 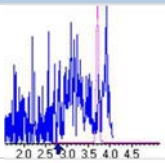 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 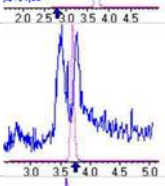 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 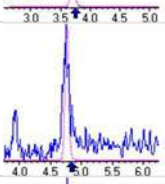 | 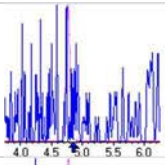 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 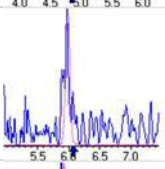 | 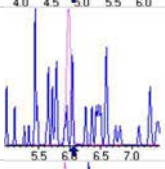 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 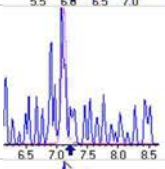 | 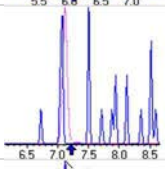 | |
| PFOA | ( 413.0 / 369.0 )<br>7839<br>( 413.0 / 169.0 )<br>3400 | ( 8.13 , 1.00 )<br>( 0.01 , N/A , 0.0) | 13.1<br>36.8 | 0.4337<br>119.9<br>122.2 | 0.0182 | N/A | 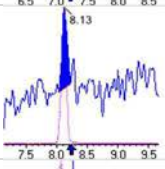 | 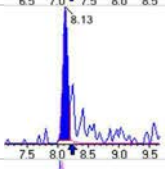 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 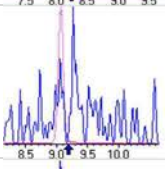 | 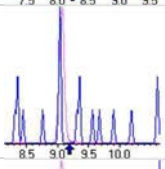 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 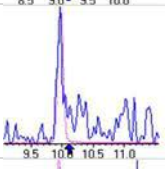 | 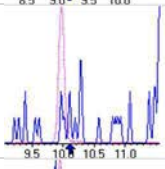 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 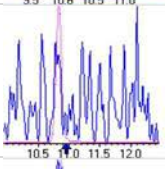 | 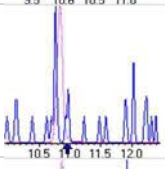 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 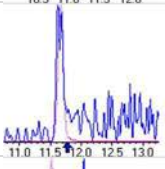 | 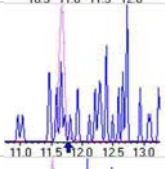 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 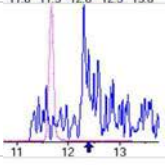 | 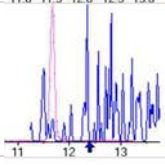 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 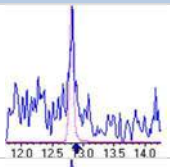 | 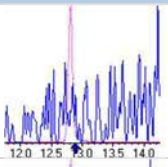 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 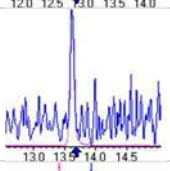 | 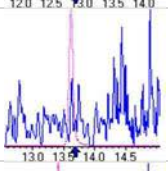 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 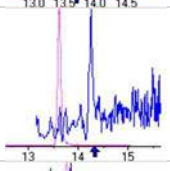 | 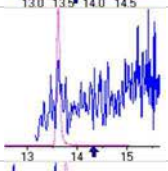 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 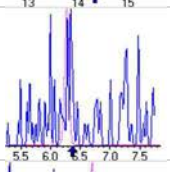 | 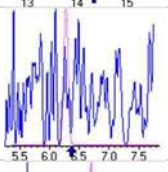 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 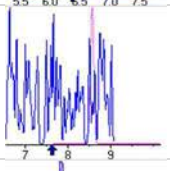 | 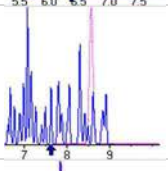 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 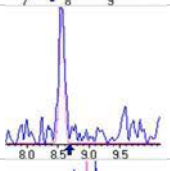 | 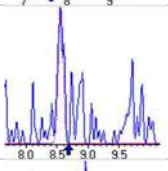 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 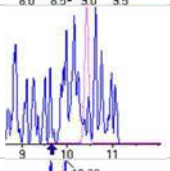 | 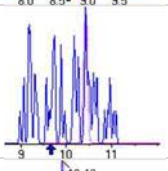 | |
| PFOS | ( 499.0 / 80.0 )<br>10752<br>( 499.0 / 99.0 )<br>2261 | ( 10.32 , 0.99 )<br>( -0.11 , N/A , -6.0) | 59.3<br>1486.1 | 0.2103<br>88.9<br>96.0 | 0.0113 | N/A | 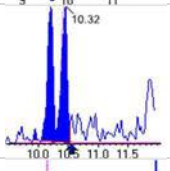 | 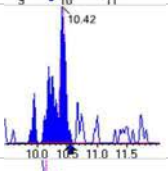 | MI2 DG<br>2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 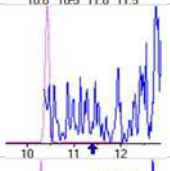 | 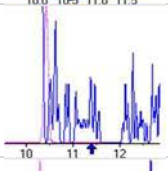 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 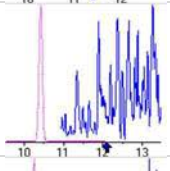 | 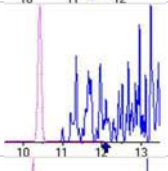 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 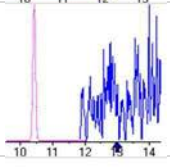 | 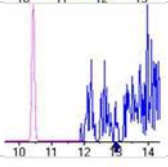 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 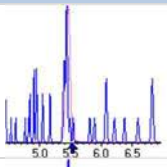 | 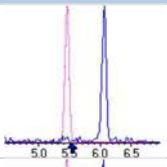 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 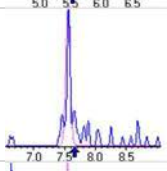 | 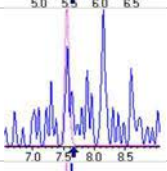 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 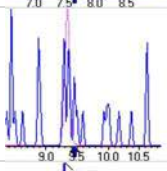 | 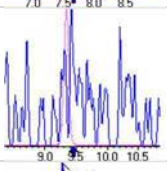 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14933<br>( 627.0 / 81.0 ) 22242 | ( 10.99 , 1.00 ) ( 0.01 , N/A , 0.6) | 166.1<br>56.7 | 1.4894<br>110.2<br>108.7 | 0.0482 | N/A | 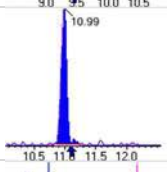 | 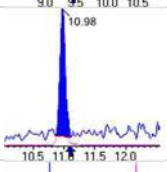 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 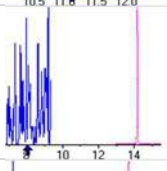 | 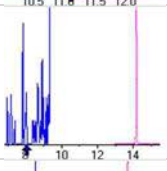 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 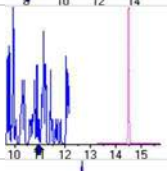 | 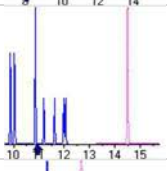 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 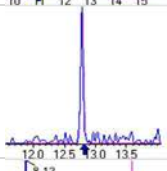 | 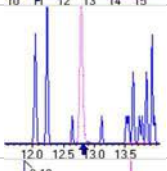 | |
| TFSI | ( 279.7 / 147.0 ) 56821<br>( 279.7 / 211.0 ) 2378 | ( 8.12 , 0.64 ) ( N/A , -0.13 , 1.5) | 29.6<br>10.4 | 0.0419<br>50.8<br>49.2 | 0.0326 | N/A | 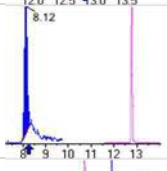 | 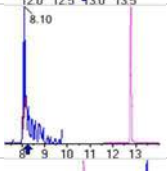 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 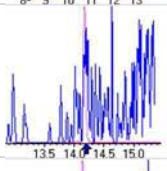 | 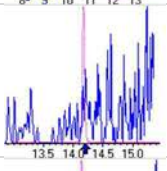 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 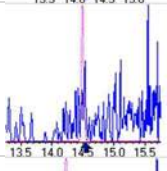 | 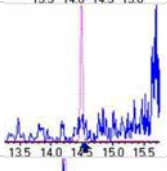 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 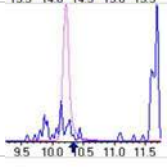 | 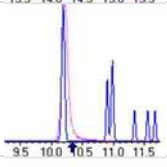 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 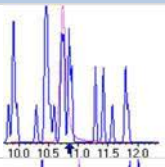 | 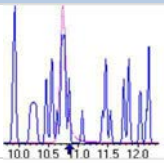 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 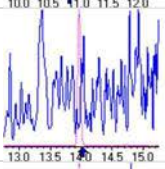 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 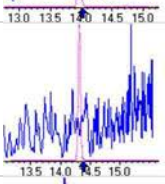 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 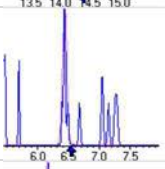 | 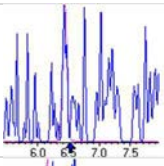 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 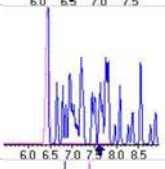 | 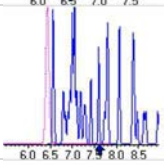 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 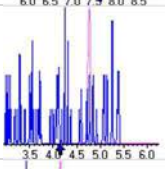 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 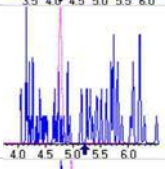 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 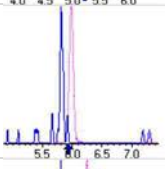 | 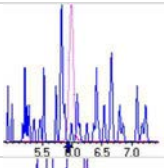 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 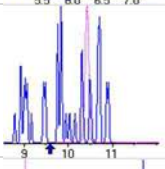 | 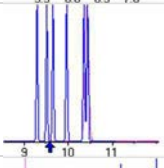 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 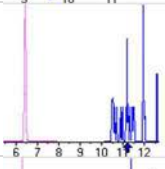 | 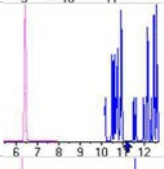 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 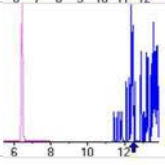 | 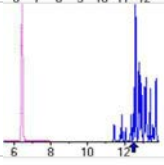 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 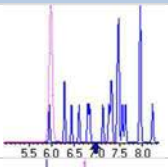 | 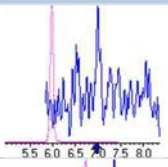 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 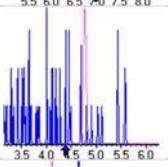 | 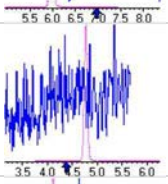 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 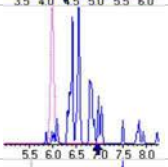 | 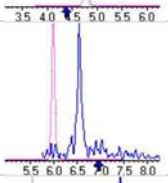 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 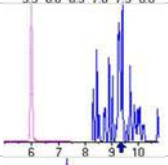 | 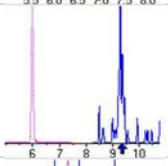 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 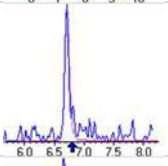 | 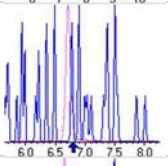 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 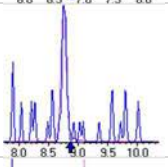 | 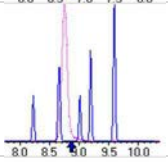 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 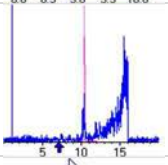 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 260456 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 1214.4 | N/A | 0.8646 [ 1.0000 ] | 86.5% { 77.0% } | 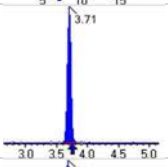 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126389 | ( 5.98 , N/A ) ( N/A , -0.08 , N/A ) | 18057.3 | N/A | 0.8219 [ 1.0000 ] | 82.2% { 74.2% } | 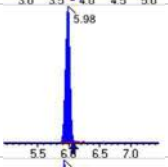 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 384909 | ( 8.12 , N/A ) ( N/A , -0.11 , N/A ) | 4238.3 | N/A | 0.8628 [ 1.0000 ] | 86.3% { 78.9% } | 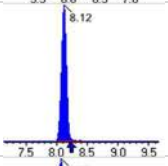 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 267435 | ( 9.07 , N/A ) ( N/A , -0.12 , N/A ) | 964.3 | N/A | 0.8000 [ 1.0000 ] | 80.0% { 69.5% } | 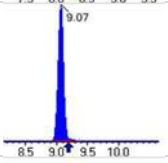 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272198 | ( 9.97 , N/A ) ( N/A , -0.12 , N/A ) | 6430.9 | N/A | 0.8208 [ 1.0000 ] | 82.1% { 72.1% } | 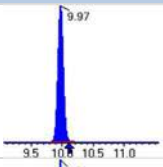 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 952644 | ( 8.56 , N/A ) ( N/A , -0.12 , N/A ) | 4466.1 | N/A | 0.8525 [ 1.0000 ] | 85.3% { 76.0% } | 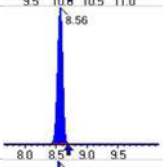 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 761892 | ( 10.43 , N/A ) ( N/A , -0.12 , N/A ) | 2996.8 | N/A | 0.7805 [ 1.0000 ] | 78.0% { 72.0% } | 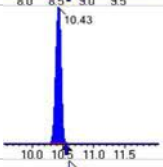 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2288430 | ( 3.70 , N/A ) ( N/A , -0.04 , N/A ) | 36782.3 | N/A | 7.9675 [ 8.0000 ] | 99.6% { 80.6% } | 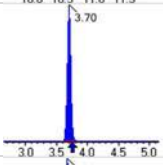 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 895136 | ( 4.77 , N/A ) ( N/A , -0.07 , N/A ) | 4617.2 | N/A | 3.9479 [ 4.0000 ] | 98.7% { 69.9% } | 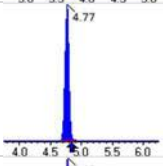 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 561835 | ( 5.98 , N/A ) ( N/A , -0.08 , N/A ) | 8630.7 | N/A | 2.0703 [ 2.0000 ] | 103.5% { 74.1% } | 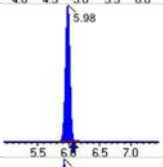 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 586375 | ( 7.12 , N/A ) ( N/A , -0.10 , N/A ) | 6081.6 | N/A | 2.0689 [ 2.0000 ] | 103.4% { 71.4% } | 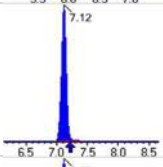 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 846255 | ( 8.12 , N/A ) ( N/A , -0.11 , N/A ) | 3621.6 | N/A | 2.0852 [ 2.0000 ] | 104.3% { 77.9% } | 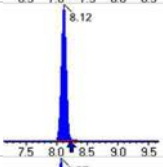 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262117 | ( 9.07 , N/A ) ( N/A , -0.12 , N/A ) | 3156.8 | N/A | 1.0150 [ 1.0000 ] | 101.5% { 69.3% } | 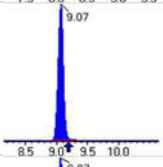 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 326302 | ( 9.97 , N/A ) ( N/A , -0.12 , N/A ) | 1066.1 | N/A | 1.0388 [ 1.0000 ] | 103.9% { 69.2% } | 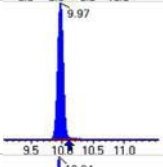 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 397750 | ( 10.84 , N/A ) ( N/A , -0.12 , N/A ) | 682.4 | N/A | 1.0415 [ 1.0000 ] | 104.2% { 78.4% } | 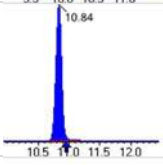 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 393119 | ( 11.67 , N/A ) ( N/A , -0.11 , N/A ) | 1472.7 | N/A | 1.0251 [ 1.0000 ] | 102.5% { 75.7% } | 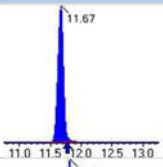  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 349655 | ( 12.81 , N/A ) ( N/A , -0.08 , N/A ) | 1299.8 | N/A | 1.0463 [ 1.0000 ] | 104.6% { 79.0% } | 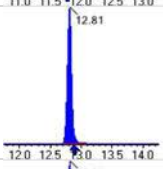  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 524227 | ( 13.62 , N/A ) ( N/A , -0.07 , N/A ) | 2649.8 | N/A | 1.8468 [ 2.0000 ] | 92.3% { 65.1% } | 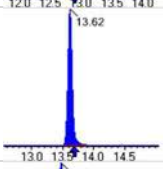  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1675356 | ( 6.28 , N/A ) ( N/A , -0.09 , N/A ) | 1079.3 | N/A | 1.8050 [ 2.0000 ] | 90.2% { 70.3% } | 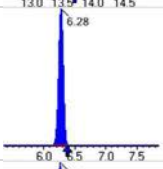  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1416650 | ( 8.56 , N/A ) ( N/A , -0.13 , N/A ) | 4626.9 | N/A | 2.0322 [ 2.0000 ] | 101.6% { 80.3% } | 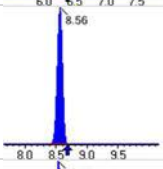  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1647583 | ( 10.43 , N/A ) ( N/A , -0.12 , N/A ) | 1919.8 | N/A | 2.0313 [ 2.0000 ] | 101.6% { 73.8% } | 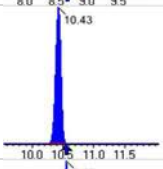  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 503715 | ( 5.46 , N/A ) ( N/A , -0.08 , N/A ) | 79.9 | N/A | 6.0719 [ 4.0000 ] | 151.8% { 91.0% } | 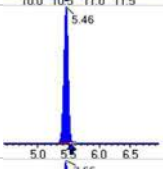  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1586499 | ( 7.55 , N/A ) ( N/A , -0.11 , N/A ) | 4070.2 | N/A | 6.1583 [ 4.0000 ] | 154.0% { 97.5% } | 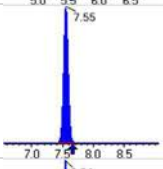  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1501509 | ( 9.34 , N/A ) ( N/A , -0.12 , N/A ) | 1445.3 | N/A | 5.8501 [ 4.0000 ] | 146.3% { 88.0% } | 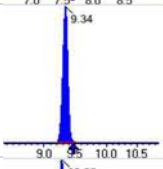  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3014309 | ( 10.98 , N/A ) ( N/A , -0.11 , N/A ) | 1619.6 | N/A | 10.2313 [ 8.0000 ] | 127.9% { 81.2% } | 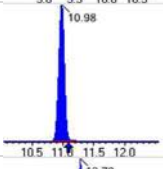  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1677837 | ( 12.79 , N/A ) ( N/A , -0.04 , N/A ) | 2719.0 | N/A | 1.9089 [ 2.0000 ] | 95.4% { 69.3% } | 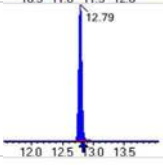  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 329008 | ( 14.17 , N/A ) ( N/A , -0.04 , N/A ) | 2610.8 | N/A | 2.0271 [ 2.0000 ] | 101.4% { 77.0% } | 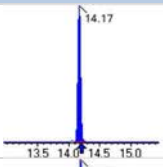 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 360667 | ( 14.49 , N/A ) ( N/A , -0.04 , N/A ) | 2666.8 | N/A | 1.9346 [ 2.0000 ] | 96.7% { 74.5% } | 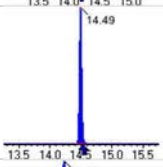 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1000188 | ( 10.22 , N/A ) ( N/A , -0.11 , N/A ) | 2372.5 | N/A | 4.8153 [ 4.0000 ] | 120.4% { 75.8% } | 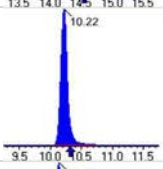 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 955267 | ( 10.74 , N/A ) ( N/A , -0.11 , N/A ) | 1763.7 | N/A | 4.8449 [ 4.0000 ] | 121.1% { 77.6% } | 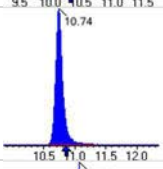 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1622343 | ( 13.97 , N/A ) ( N/A , -0.04 , N/A ) | 2848.8 | N/A | 21.3921 [ 20.0000 ] | 107.0% { 87.3% } | 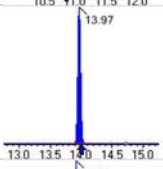 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1616439 | ( 14.32 , N/A ) ( N/A , -0.04 , N/A ) | 3503.3 | N/A | 17.5948 [ 20.0000 ] | 88.0% { 77.2% } | 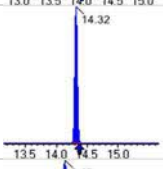 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 986977 | ( 6.43 , N/A ) ( N/A , -0.09 , N/A ) | 2310.2 | N/A | 8.4611 [ 8.0000 ] | 105.8% { 70.3% } | 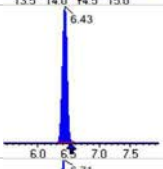 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 510495 | ( 6.71 , N/A ) ( N/A , -0.09 , N/A ) | 1216.6 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 71.8% } | 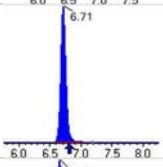 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 505506 | ( 8.75 , N/A ) ( N/A , -0.12 , N/A ) | 937.8 | N/A | 2.2429 [ 2.0000 ] | 112.1% { 75.5% } | 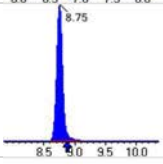 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0180 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .01650 | ng/mL0 | .10 | U |
| | PFTrDA0 | .01630 | ng/mL0 | .10 | U |
| | PFTeDA0 | .02330 | ng/mL0 | .10 | U |
| | PFHxDA0 | .03360 | ng/mL0 | .10 | U |
| | PFODA0 | .03890 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .08510 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02580 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .04090 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .08930 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.990 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.030 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.010 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.050 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA | 0.9990 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9920 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.940 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.020 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.730 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.450 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.110 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.880 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.050 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.360 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00991L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | D7-NMEFOSE0 | 21.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.740 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 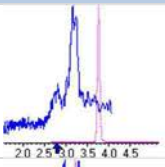 | 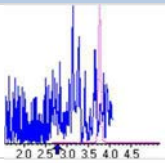 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 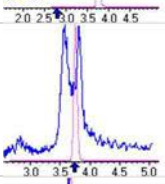 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 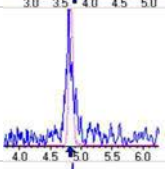 | 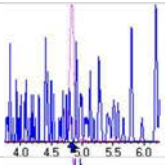 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 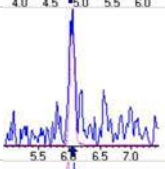 | 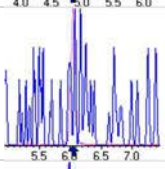 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 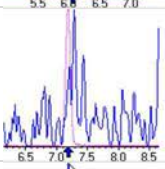 | 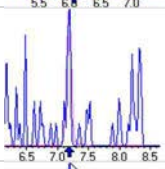 | |
| PFOA | ( 413.0 / 369.0 )<br>16821<br>( 413.0 / 169.0 )<br>7137 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.0) | 26.9<br>42.2 | 0.4243<br>116.1<br>116.1 | 0.0180 | N/A | 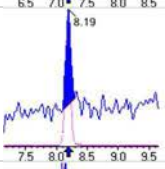 | 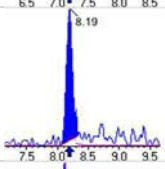 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 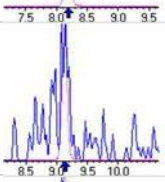 | 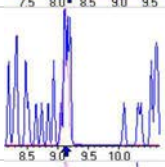 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 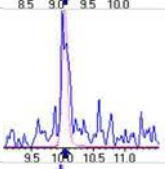 | 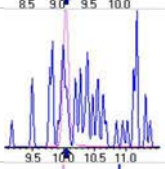 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 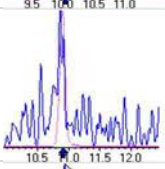 | 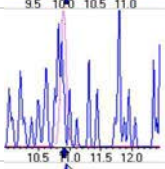 | |
| PFDoA | ( 613.0 / 569.0 )<br>6139<br>( 613.0 / 169.0 )<br>1421 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , -0.2) | 31.7<br>19.2 | 0.2314<br>146.4<br>146.4 | 0.0165 | N/A | 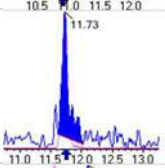 | 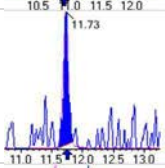 | |
| PFTrDA | ( 663.0 / 619.0 )<br>5903<br>( 663.0 / 169.0 )<br>N/A | ( 12.38 , 1.06 )<br>( N/A , 0.01 , #Value!) | 35.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0163 | N/A | 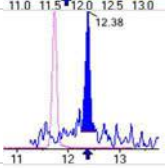 | 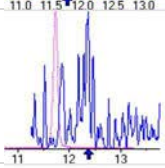 | IR1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>6942<br>( 713.0 / 169.0 )<br>N/A | ( 12.85 , 1.00 )<br>( -0.01 , N/A , #Value!) | 33.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0233 | N/A | 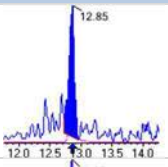 | 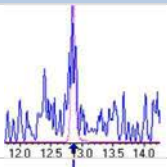 | IR1, |
| PFHxDA | ( 813.0 / 769.0 )<br>8386<br>( 813.0 / 169.0 )<br>N/A | ( 13.65 , 1.00 )<br>( -0.01 , N/A , #Value!) | 40.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0336 | N/A | 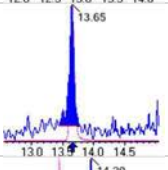 | 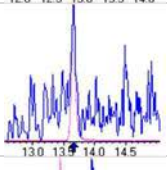 | IR1, |
| PFODA | ( 913.0 / 869.0 )<br>6084<br>( 913.0 / 169.0 )<br>N/A | ( 14.29 , 1.05 )<br>( N/A , -0.01 , #Value!) | 34.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0389 | N/A | 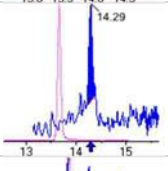 | 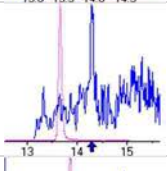 | IR1,MI1 DG 2024-03-19 |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 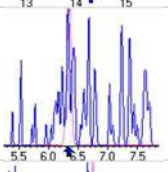 | 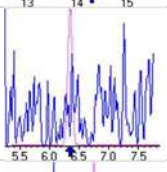 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 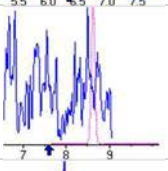 | 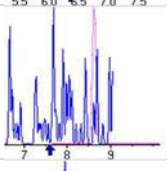 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 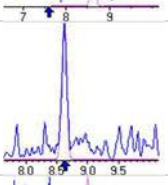 | 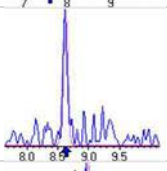 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 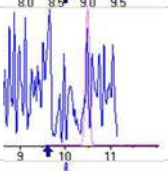 | 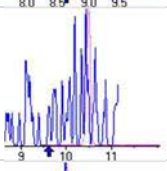 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 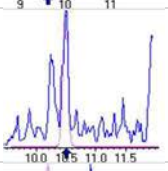 | 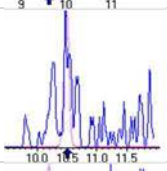 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 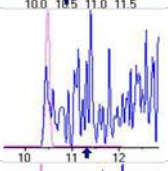 | 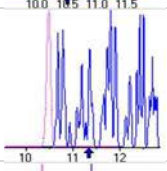 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 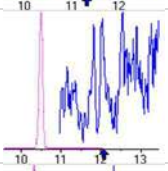 | 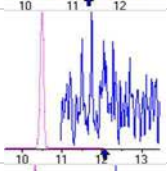 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 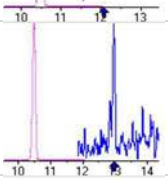 | 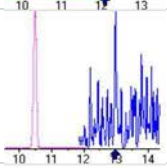 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 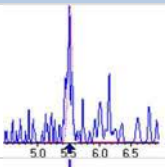 | 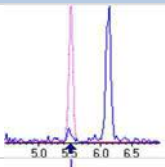 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 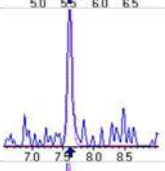 | 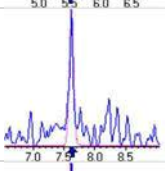 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 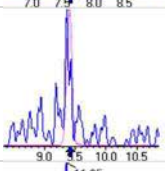 | 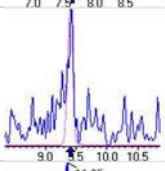 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>22276<br>( 627.0 / 81.0 )<br>24748 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 88.3<br>58.0 | 1.1110<br>77.2<br>77.2 | 0.0851 | N/A | 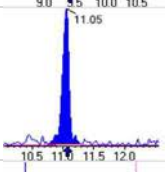 | 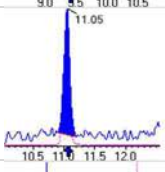 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 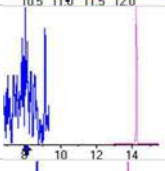 | 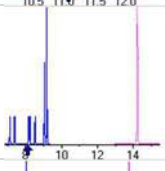 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 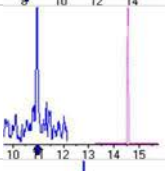 | 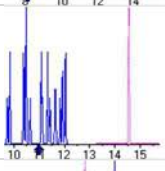 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 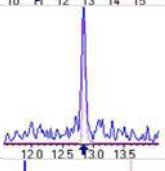 | 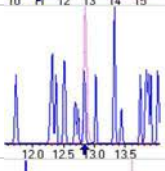 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 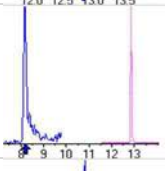 | 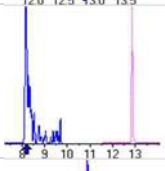 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 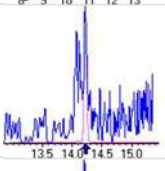 | 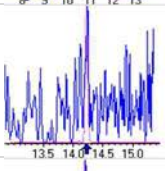 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 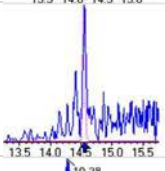 | 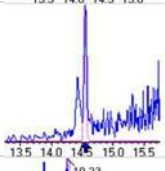 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>5287<br>( 570.0 / 483.0 )<br>1419 | ( 10.28 , 1.00 )<br>( -0.01 , N/A , 2.9) | 55.9<br>17.5 | 0.2684<br>61.2<br>61.2 | 0.0258 | N/A | 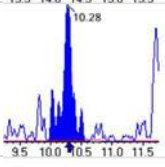 | 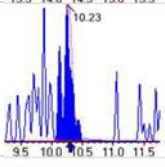 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8150<br>( 584.0 / 526.0 ) 2179 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 2.1) | 98.9<br>33.1 | 0.2674<br>43.4<br>43.4 | 0.0409 | N/A | 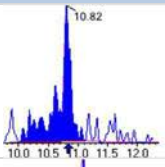 | 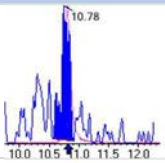 | IR1, |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 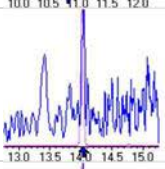 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 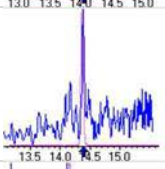 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 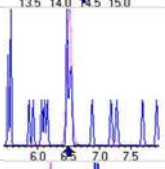 | 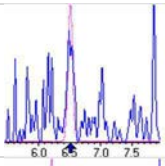 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 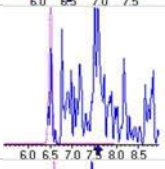 | 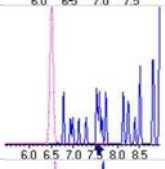 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 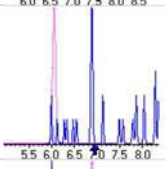 | 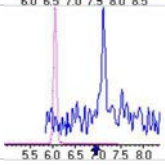 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 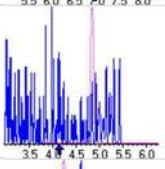 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 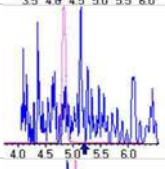 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 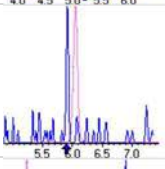 | 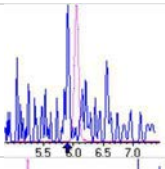 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 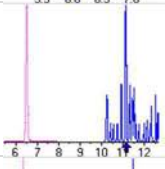 | 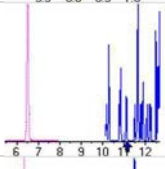 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 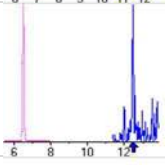 | 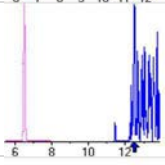 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 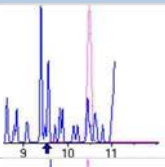 | 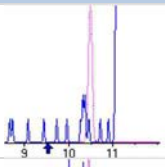 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 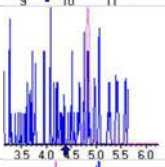 | 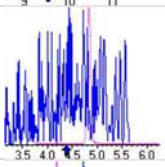 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 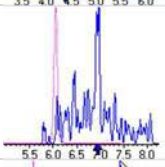 | 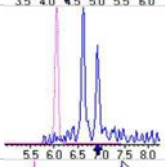 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>10942<br>( 441.0 / 337.0 )<br>9168 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 114.3<br>118.7 | 0.8378<br>91.3<br>91.3 | 0.0893 | N/A | 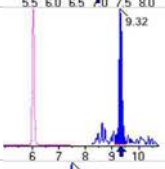 | 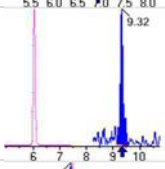 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4865<br>( 357.2 / 243.0 )<br>388 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 1.4) | 25.0<br>10.8 | 0.0797<br>72.3<br>72.3 | 0.0164 | N/A | 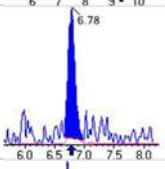 | 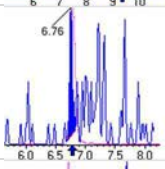 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 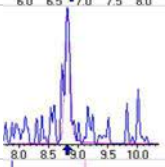 | 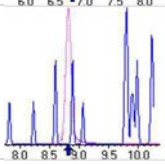 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 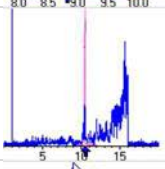 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>247666 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1205.7 | N/A | 1.0387<br>[ 1.0000 ] | 103.9%<br>{ 105.7% } | 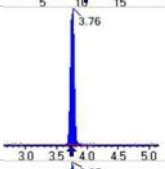 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>118801 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 67668.7 | N/A | 0.9365<br>[ 1.0000 ] | 93.7%<br>{ 99.4% } | 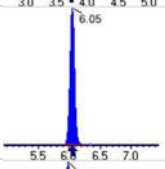 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>364915 | ( 8.19 , N/A )<br>( N/A , -0.02 , N/A ) | 6572.7 | N/A | 0.9231<br>[ 1.0000 ] | 92.3%<br>{ 96.0% } | 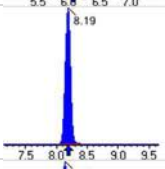 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>273094 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 870.1 | N/A | 0.9602<br>[ 1.0000 ] | 96.0%<br>{ 102.6% } | 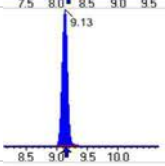 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277135 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 10730.3 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 103.5% } | 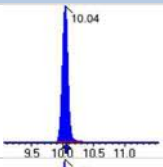 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 876072 | ( 8.63 , N/A ) ( N/A , -0.02 , N/A ) | 3965.9 | N/A | 0.9231 [ 1.0000 ] | 92.3% { 97.3% } | 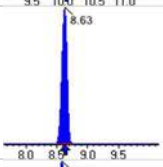 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 709520 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2022.8 | N/A | 0.9316 [ 1.0000 ] | 93.2% { 101.3% } | 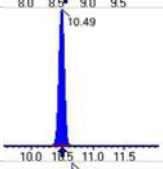 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2260276 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 35338.6 | N/A | 7.9888 [ 8.0000 ] | 99.9% { 106.9% } | 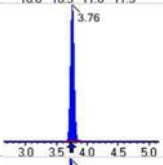 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 892559 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 4410.8 | N/A | 4.0266 [ 4.0000 ] | 100.7% { 96.8% } | 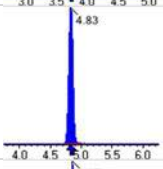 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560711 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 8995.9 | N/A | 2.0686 [ 2.0000 ] | 103.4% { 101.3% } | 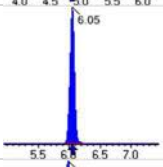 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 605194 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4503.5 | N/A | 2.0071 [ 2.0000 ] | 100.4% { 97.7% } | 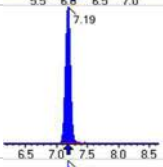 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 802821 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3104.8 | N/A | 2.0533 [ 2.0000 ] | 102.7% { 97.9% } | 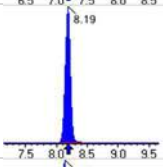 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 267971 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2951.0 | N/A | 1.0008 [ 1.0000 ] | 100.1% { 102.0% } | 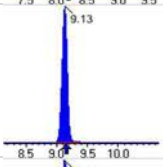 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 310319 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 918.4 | N/A | 0.9992 [ 1.0000 ] | 99.9% { 98.0% } | 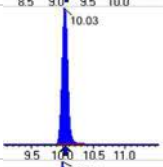 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 370129 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1009.3 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 102.4% } | 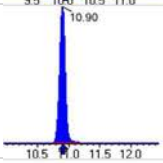 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368993 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1246.5 | N/A | 0.9916 [ 1.0000 ] | 99.2% { 104.9% } | 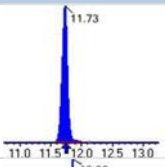  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318629 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1132.2 | N/A | 1.0055 [ 1.0000 ] | 100.6% { 102.0% } | 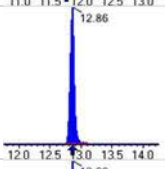  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 523684 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2356.1 | N/A | 1.9358 [ 2.0000 ] | 96.8% { 101.5% } | 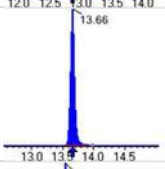  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570777 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 921.3 | N/A | 1.9845 [ 2.0000 ] | 99.2% { 98.6% } | 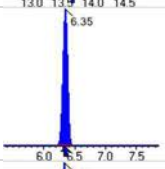  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1291658 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 4087.7 | N/A | 2.0444 [ 2.0000 ] | 102.2% { 100.9% } | 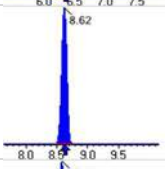  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1543909 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1768.0 | N/A | 2.0181 [ 2.0000 ] | 100.9% { 98.8% } | 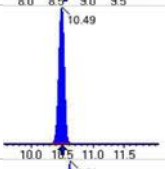  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 645670 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 92.6 | N/A | 4.7279 [ 4.0000 ] | 118.2% { 123.0% } | 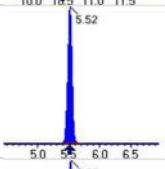  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1820502 | ( 7.62 , N/A ) ( N/A , -0.01 , N/A ) | 4674.4 | N/A | 4.4543 [ 4.0000 ] | 111.4% { 107.1% } | 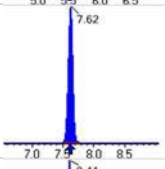  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1444855 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1529.9 | N/A | 4.5076 [ 4.0000 ] | 112.7% { 109.5% } | 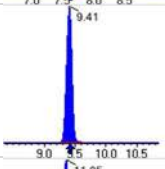  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2718422 | ( 11.05 , N/A ) ( N/A , -0.01 , N/A ) | 1222.5 | N/A | 8.1147 [ 8.0000 ] | 101.4% { 104.7% } | 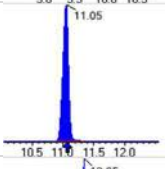  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1357608 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2272.1 | N/A | 2.0025 [ 2.0000 ] | 100.1% { 101.8% } | 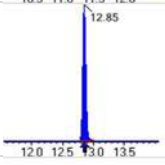  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 270641 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1748.6 | N/A | 1.8822 [ 2.0000 ] | 94.1% { 97.5% } | 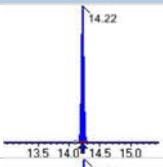  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315933 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2465.7 | N/A | 2.0489 [ 2.0000 ] | 102.4% { 100.2% } | 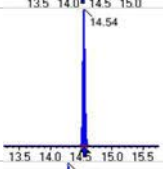  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 858949 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2747.6 | N/A | 4.3636 [ 4.0000 ] | 109.1% { 102.5% } | 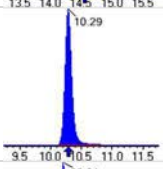  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 815282 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 2006.1 | N/A | 4.5444 [ 4.0000 ] | 113.6% { 107.8% } | 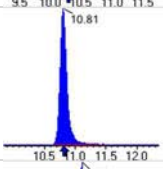  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1364206 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2290.3 | N/A | 21.1120 [ 20.0000 ] | 105.6% { 101.4% } | 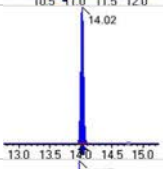  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316295 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4403.7 | N/A | 20.0701 [ 20.0000 ] | 100.4% { 100.0% } | 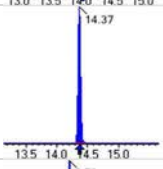  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 955791 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2026.1 | N/A | 7.7407 [ 8.0000 ] | 96.8% { 97.7% } | 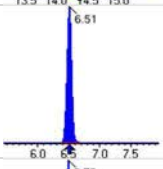  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559796 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1426.0 | N/A | 1.8631 [ 2.0000 ] | 93.2% { 97.0% } | 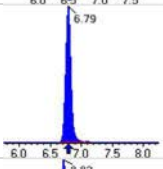  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 528642 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 671.7 | N/A | 1.9327 [ 2.0000 ] | 96.6% { 98.4% } | 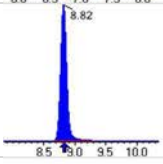  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06640 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 4.190 | ng/mL0 | | |
| | 13C5-PFHXA | 2.040 | ng/mL0 | | |
| | 13C4-PFHPA | 2.020 | ng/mL0 | | |
| | 13C8-PFOA | 1.990 | ng/mL0 | | |
| | 13C9-PFNA | .9910 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | 1.040 | ng/mL0 | | |
| | 13C2-PFDOA | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.920 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.090 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.0 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.020 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.170 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.940 | ng/mL0 | | |
| | 13C8-PFOSA | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA | 1.910 | ng/mL0 | | |
| | D5-NETFOSA | 1.980 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.320 | ng/mL0 | | |
| | D5-NETFOSAA | 4.410 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | D7-NMEFOSE0 | 20.0 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.80 | ng/mL0 | | |
| | 13C3-HFPO-DA | 8.040 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 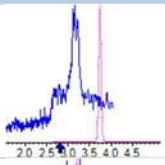 | 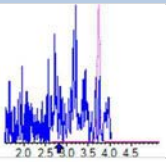 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 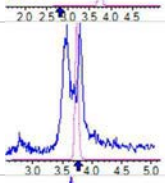 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 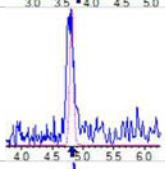 | 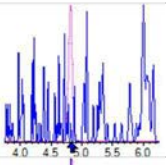 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 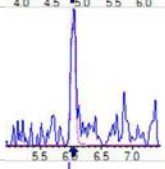 | 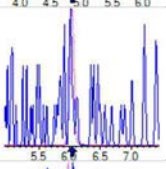 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 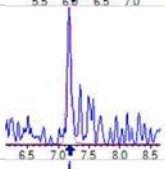 | 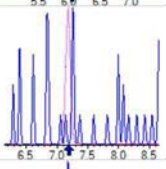 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 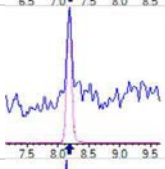 | 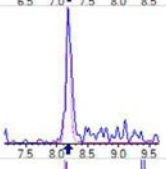 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 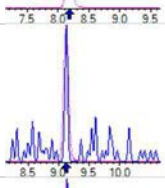 | 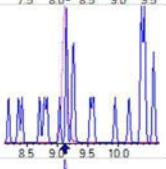 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 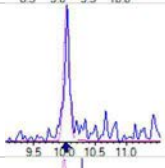 | 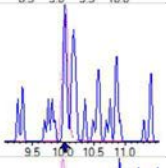 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 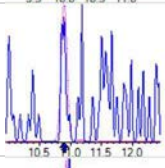 | 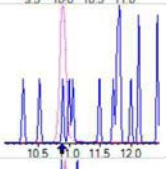 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 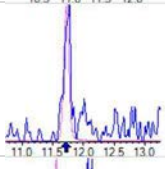 | 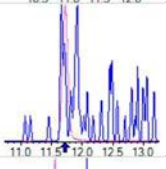 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 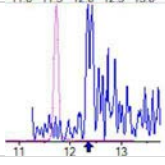 | 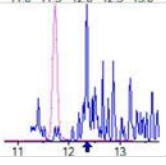 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 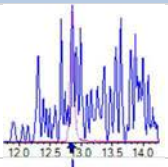 | 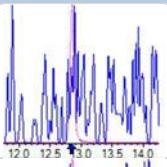 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 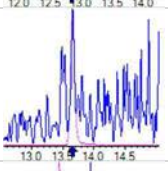 | 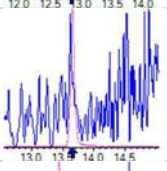 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 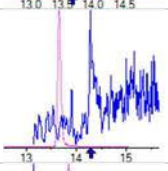 | 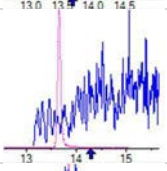 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 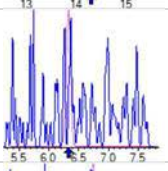 | 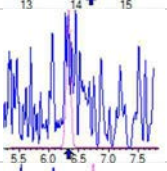 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 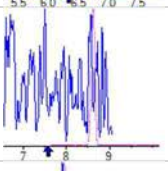 | 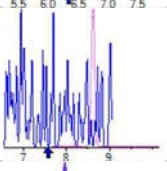 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 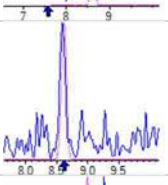 | 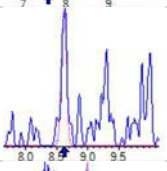 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 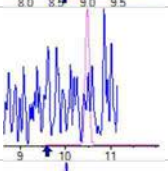 | 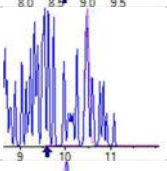 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 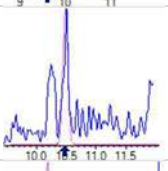 | 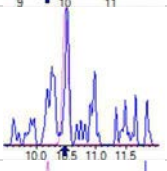 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 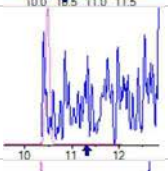 | 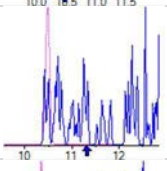 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 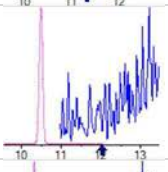 | 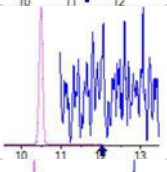 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 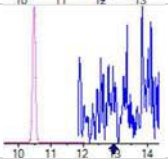 | 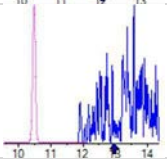 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 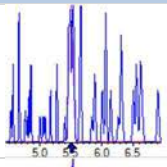 | 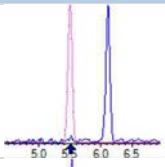 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 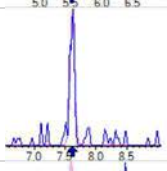 | 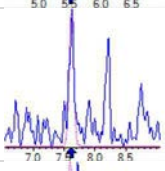 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 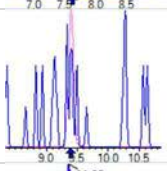 | 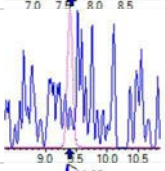 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17573<br>( 627.0 / 81.0 )<br>22471 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.2) | 194.8<br>62.5 | 1.2787<br>88.8<br>87.7 | 0.0664 | N/A | 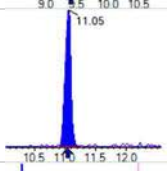 | 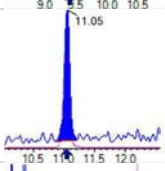 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 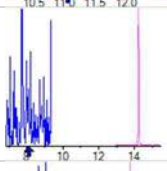 | 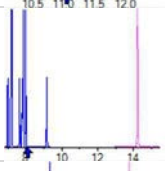 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 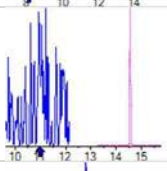 | 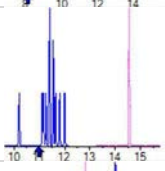 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 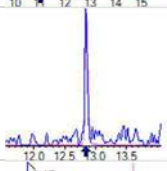 | 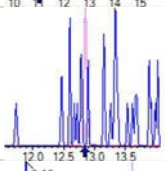 | |
| TFSI | ( 279.7 / 147.0 )<br>33493<br>( 279.7 / 211.0 )<br>2373 | ( 8.17 , 0.64 )<br>( N/A , -0.01 , 0.6) | 28.1<br>10.4 | 0.0709<br>84.3<br>82.8 | 0.0183 | N/A | 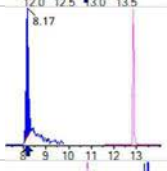 | 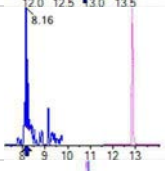 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 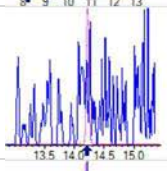 | 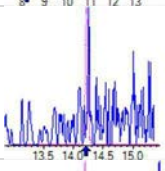 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 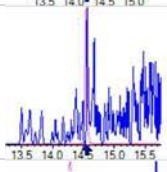 | 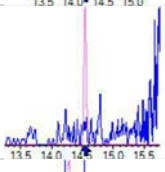 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 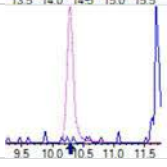 | 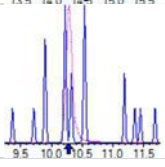 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 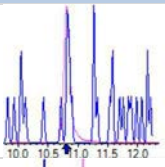 | 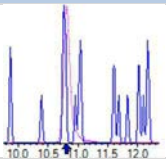 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 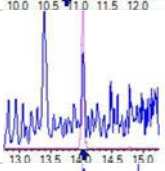 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 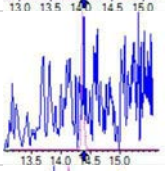 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 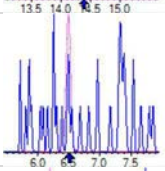 | 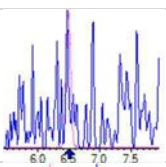 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 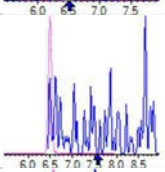 | 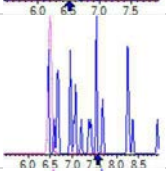 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 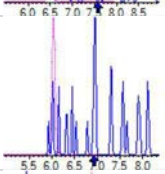 | 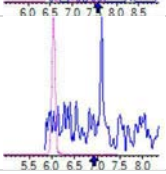 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 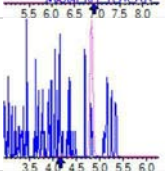 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 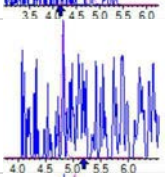 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 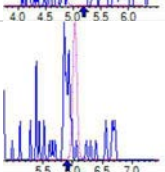 | 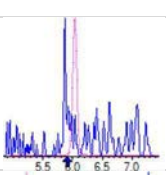 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 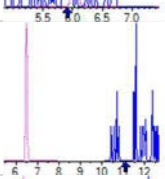 | 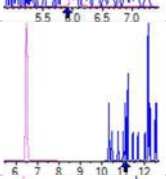 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 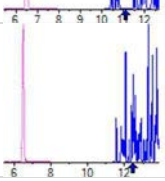 | 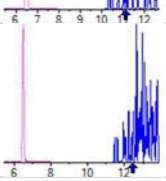 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 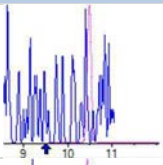 | 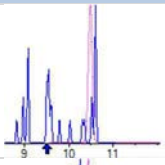 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 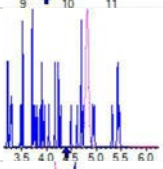 | 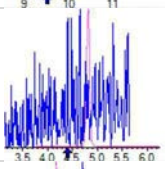 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 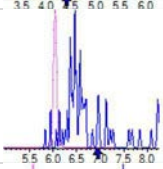 | 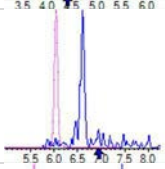 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 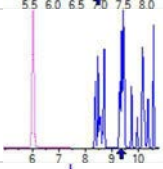 | 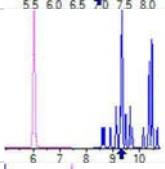 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 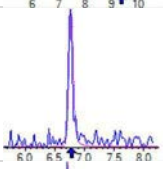 | 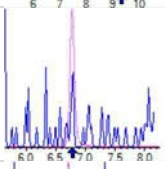 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 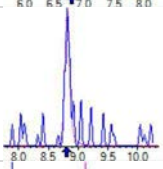 | 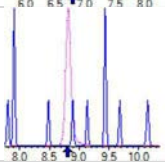 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 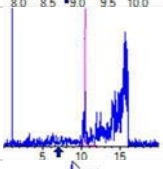 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 252590 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1169.3 | N/A | 1.0594 [ 1.0000 ] | 105.9% { 106.8% } | 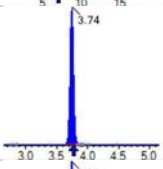 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122266 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 114320.5 | N/A | 0.9638 [ 1.0000 ] | 96.4% { 96.6% } | 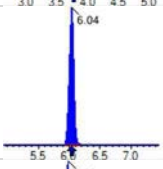 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 402138 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 4161.9 | N/A | 1.0173 [ 1.0000 ] | 101.7% { 106.0% } | 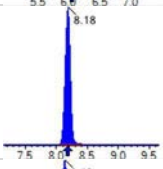 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 291558 | ( 9.13 , N/A ) ( N/A , 0.01 , N/A ) | 684.5 | N/A | 1.0251 [ 1.0000 ] | 102.5% { 103.7% } | 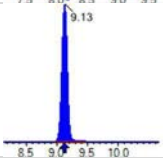 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274577 | ( 10.04 , N/A ) ( N/A , 0.01 , N/A ) | 14456.6 | N/A | 0.9402 [ 1.0000 ] | 94.0% { 94.9% } | 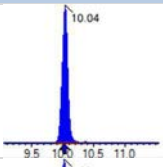 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 905428 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6077.8 | N/A | 0.9541 [ 1.0000 ] | 95.4% { 97.0% } | 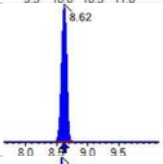 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 729908 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1900.4 | N/A | 0.9583 [ 1.0000 ] | 95.8% { 102.5% } | 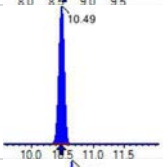 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2389209 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 43004.3 | N/A | 8.2799 [ 8.0000 ] | 103.5% { 106.7% } | 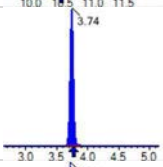 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 955725 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 4880.4 | N/A | 4.1894 [ 4.0000 ] | 104.7% { 97.9% } | 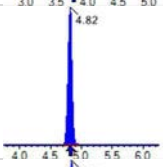 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 570234 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 7465.5 | N/A | 2.0441 [ 2.0000 ] | 102.2% { 96.6% } | 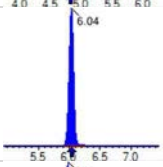 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626841 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 8203.0 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 95.5% } | 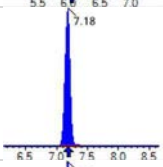 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858291 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3713.4 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 99.5% } | 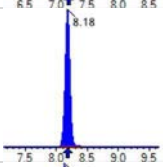 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283296 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3188.1 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 105.0% } | 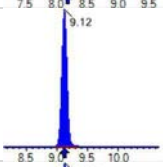 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318936 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 1166.8 | N/A | 1.0365 [ 1.0000 ] | 103.6% { 99.1% } | 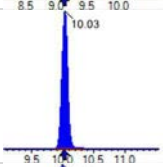 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377227 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 709.9 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 101.4% } | 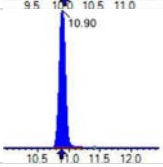 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389990 | ( 11.72 , N/A ) ( N/A , 0.01 , N/A ) | 1430.8 | N/A | 1.0578 [ 1.0000 ] | 105.8% { 104.6% } | 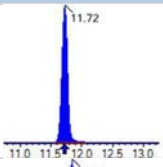 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 313526 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1142.9 | N/A | 0.9986 [ 1.0000 ] | 99.9% { 96.0% } | 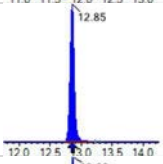 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 514127 | ( 13.66 , N/A ) ( N/A , 0.01 , N/A ) | 2227.5 | N/A | 1.9181 [ 2.0000 ] | 95.9% { 101.8% } | 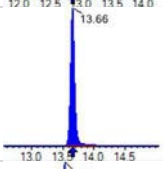 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712691 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1107.7 | N/A | 2.0936 [ 2.0000 ] | 104.7% { 102.1% } | 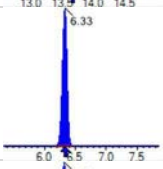 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1329370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 3457.9 | N/A | 2.0359 [ 2.0000 ] | 101.8% { 100.8% } | 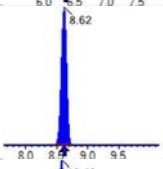 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1575798 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1773.4 | N/A | 2.0023 [ 2.0000 ] | 100.1% { 101.7% } | 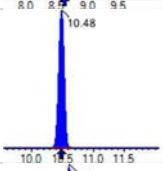 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 707959 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 95.5 | N/A | 5.0159 [ 4.0000 ] | 125.4% { 120.2% } | 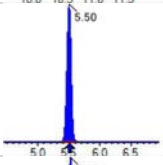 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1763439 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 4459.2 | N/A | 4.1748 [ 4.0000 ] | 104.4% { 105.8% } | 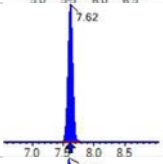 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1531812 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1414.8 | N/A | 4.6239 [ 4.0000 ] | 115.6% { 112.0% } | 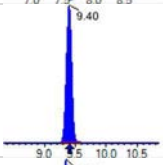 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2748065 | ( 11.04 , N/A ) ( N/A , 0.01 , N/A ) | 1470.7 | N/A | 7.9373 [ 8.0000 ] | 99.2% { 107.7% } | 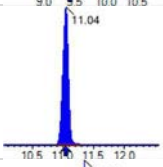 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393050 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1858.7 | N/A | 1.9974 [ 2.0000 ] | 99.9% { 101.4% } | 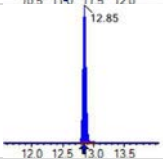 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 282412 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 1812.0 | N/A | 1.9092 [ 2.0000 ] | 95.5% { 98.1% } | 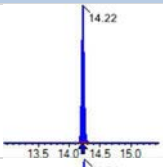 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 314683 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2067.0 | N/A | 1.9837 [ 2.0000 ] | 99.2% { 102.6% } | 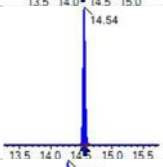 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 875018 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2373.2 | N/A | 4.3211 [ 4.0000 ] | 108.0% { 103.5% } | 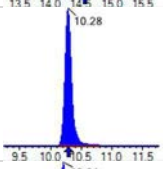 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 813569 | ( 10.81 , N/A ) ( N/A , 0.01 , N/A ) | 2416.9 | N/A | 4.4082 [ 4.0000 ] | 110.2% { 105.6% } | 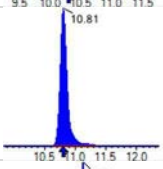 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1326325 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2458.9 | N/A | 19.9525 [ 20.0000 ] | 99.8% { 96.5% } | 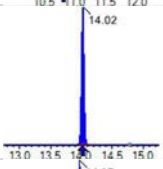 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1334342 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4307.1 | N/A | 19.7770 [ 20.0000 ] | 98.9% { 103.4% } | 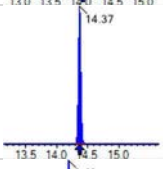 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022222 | ( 6.49 , N/A ) ( N/A , 0.00 , N/A ) | 2755.3 | N/A | 8.0441 [ 8.0000 ] | 100.6% { 100.0% } | 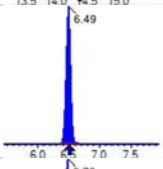 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 613673 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1140.8 | N/A | 2.0614 [ 2.0000 ] | 103.1% { 99.5% } | 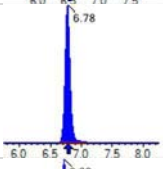 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 558218 | ( 8.82 , N/A ) ( N/A , 0.01 , N/A ) | 840.8 | N/A | 2.0598 [ 2.0000 ] | 103.0% { 100.9% } | 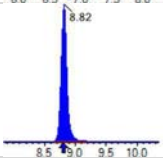 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06510 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 3.820 | ng/mL0 | | |
| | 13C5-PFHXA | 1.860 | ng/mL0 | | |
| | 13C4-PFHPA | 1.860 | ng/mL0 | | |
| | 13C8-PFOA | 2.080 | ng/mL0 | | |
| | 13C9-PFNA | 1.060 | ng/mL0 | | |
| | 13C6-PFDA | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA | .9920 | ng/mL0 | | |
| | 13C2-PFDOA | .9850 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.880 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.020 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.0 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.580 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.010 | ng/mL0 | | |
| | 13C8-PFOSA | 2.10 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.20 | ng/mL0 | | |
| | D5-NETFOSAA | 4.430 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | D7-NMEFOSE0 | 21.30 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.70 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.20 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 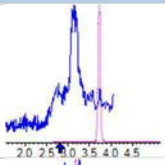 | 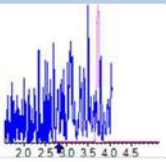 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 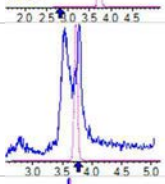 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 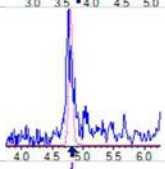 | 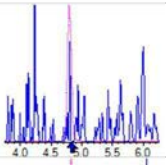 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 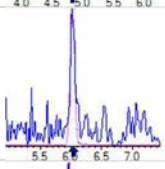 | 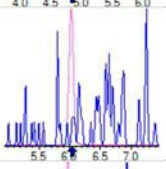 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 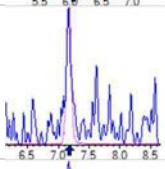 | 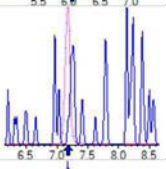 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 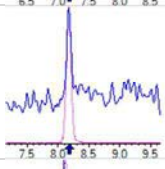 | 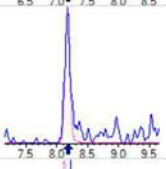 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 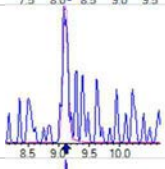 | 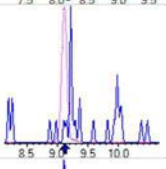 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 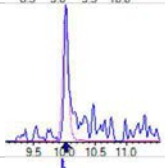 | 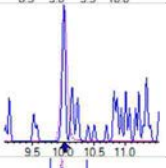 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 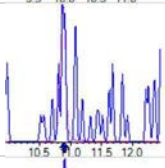 | 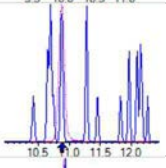 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 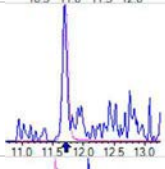 | 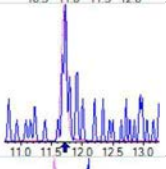 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 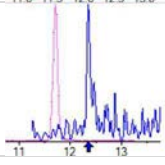 | 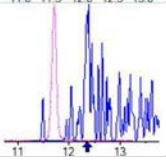 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 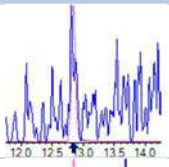 | 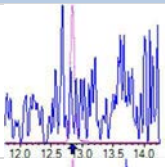 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 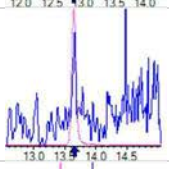 | 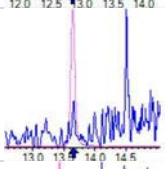 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 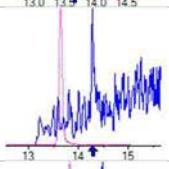 | 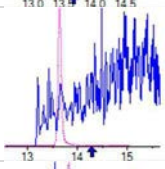 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 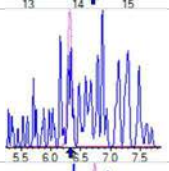 | 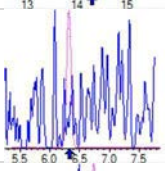 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 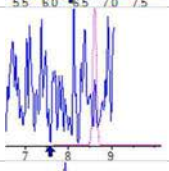 | 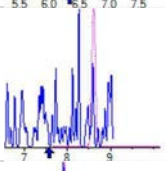 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 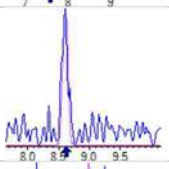 | 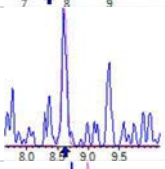 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 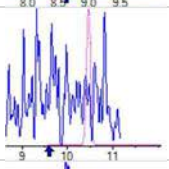 | 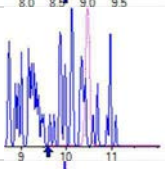 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 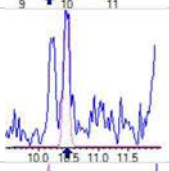 | 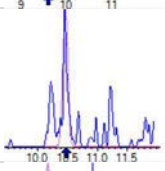 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 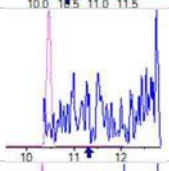 | 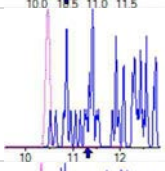 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 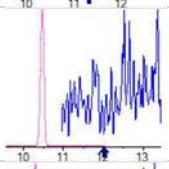 | 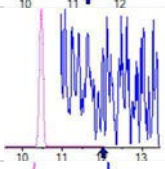 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 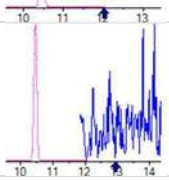 | 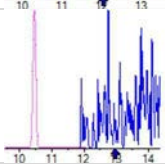 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 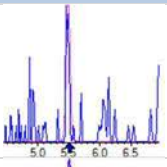 | 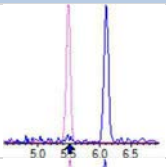 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 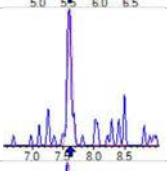 | 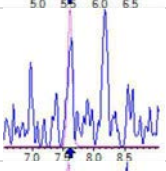 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 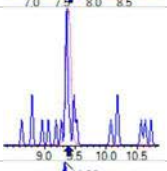 | 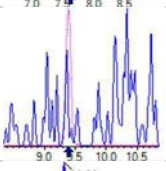 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17813<br>( 627.0 / 81.0 )<br>22348 | ( 11.02 , 1.00 )<br>( 0.00 , N/A , 0.2) | 178.8<br>70.7 | 1.2546<br>87.2<br>86.0 | 0.0651 | N/A | 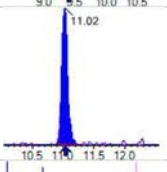 | 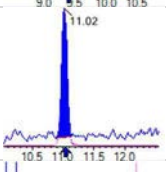 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 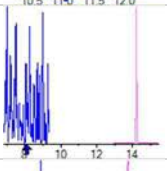 | 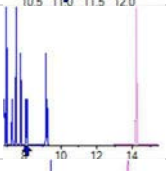 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 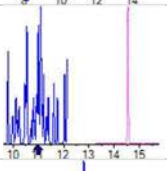 | 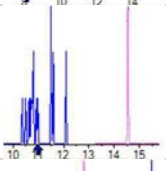 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 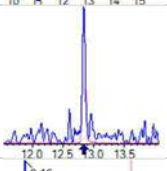 | 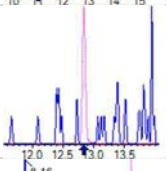 | |
| TFSI | ( 279.7 / 147.0 )<br>27003<br>( 279.7 / 211.0 )<br>3131 | ( 8.16 , 0.64 )<br>( N/A , -0.02 , 0.4) | 20.5<br>9.3 | 0.1159<br>138.0<br>135.5 | 0.0136 | N/A | 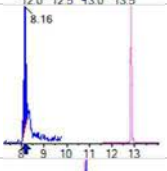 | 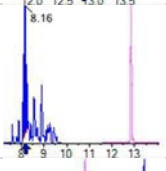 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 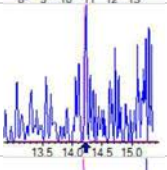 | 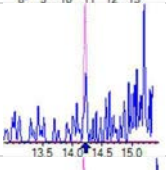 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 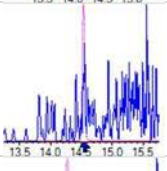 | 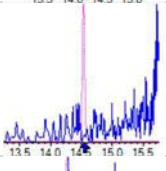 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 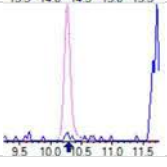 | 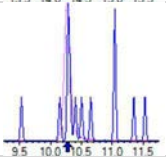 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 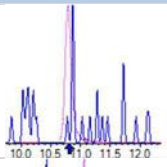 | 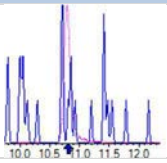 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 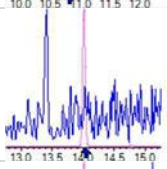 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 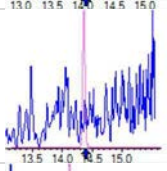 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 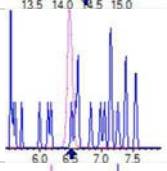 | 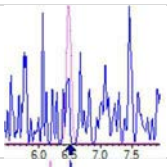 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 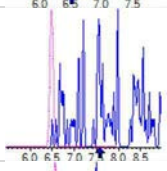 | 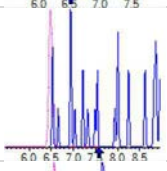 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 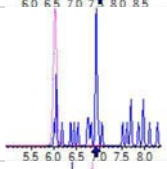 | 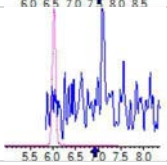 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 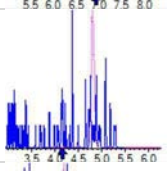 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 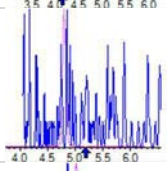 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 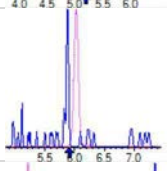 | 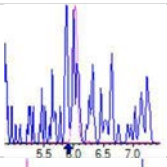 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 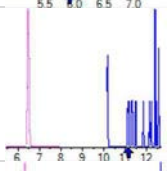 | 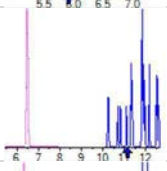 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 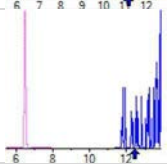 | 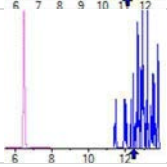 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 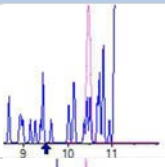 | 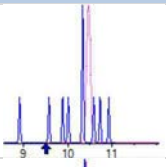 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 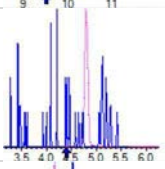 | 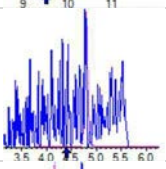 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 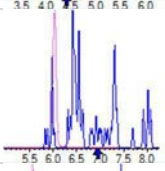 | 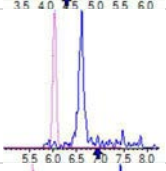 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 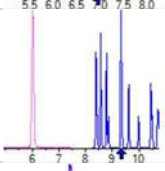 | 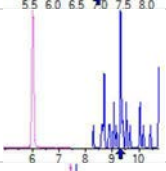 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 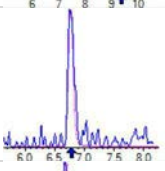 | 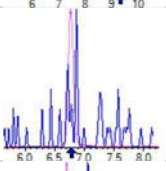 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 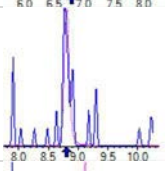 | 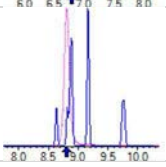 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 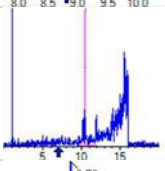 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262976 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1264.8 | N/A | 1.1029 [ 1.0000 ] | 110.3% { 111.2% } | 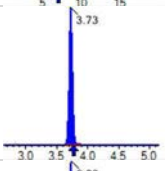 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 137190 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 19929.4 | N/A | 1.0815 [ 1.0000 ] | 108.1% { 108.4% } | 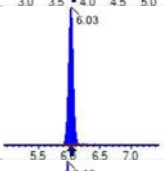 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 389167 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3796.0 | N/A | 0.9844 [ 1.0000 ] | 98.4% { 102.6% } | 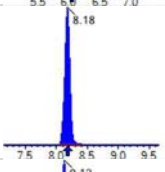 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281293 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 1262.5 | N/A | 0.9890 [ 1.0000 ] | 98.9% { 100.0% } | 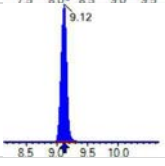 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288262 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 4306.6 | N/A | 0.9871 [ 1.0000 ] | 98.7% { 99.6% } | 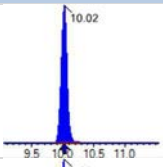 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 926810 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 5981.5 | N/A | 0.9766 [ 1.0000 ] | 97.7% { 99.3% } | 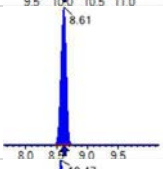 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 753068 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 2288.2 | N/A | 0.9887 [ 1.0000 ] | 98.9% { 105.8% } | 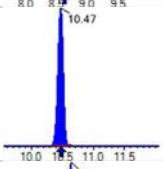 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2487333 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 38314.3 | N/A | 8.2795 [ 8.0000 ] | 103.5% { 111.1% } | 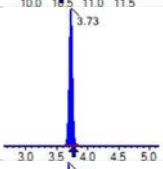 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 977534 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5291.4 | N/A | 3.8189 [ 4.0000 ] | 95.5% { 100.2% } | 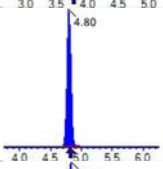 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581828 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 7266.8 | N/A | 1.8588 [ 2.0000 ] | 92.9% { 98.6% } | 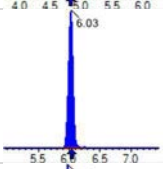 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 647498 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5005.1 | N/A | 1.8596 [ 2.0000 ] | 93.0% { 98.6% } | 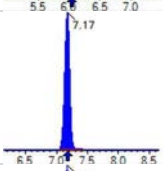 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 869174 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 2744.5 | N/A | 2.0844 [ 2.0000 ] | 104.2% { 100.8% } | 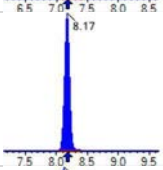 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291733 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 2397.4 | N/A | 1.0577 [ 1.0000 ] | 105.8% { 108.1% } | 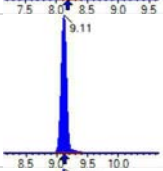 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331768 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 969.7 | N/A | 1.0270 [ 1.0000 ] | 102.7% { 103.1% } | 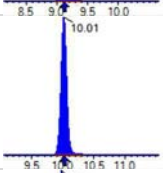 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377077 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 991.8 | N/A | 0.9922 [ 1.0000 ] | 99.2% { 101.4% } | 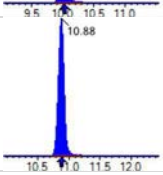 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 381053 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1267.8 | N/A | 0.9845 [ 1.0000 ] | 98.5% { 102.2% } | 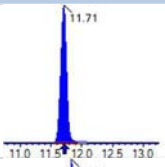 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 329264 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1433.7 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 100.9% } | 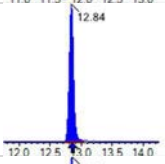 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 527627 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2239.7 | N/A | 1.8751 [ 2.0000 ] | 93.8% { 104.5% } | 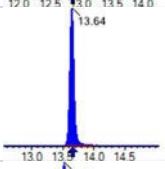 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1695256 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1354.8 | N/A | 2.0245 [ 2.0000 ] | 101.2% { 101.0% } | 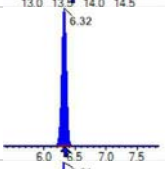 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1339799 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 3617.9 | N/A | 2.0045 [ 2.0000 ] | 100.2% { 101.6% } | 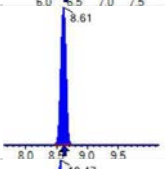 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1599091 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 1759.5 | N/A | 1.9694 [ 2.0000 ] | 98.5% { 103.2% } | 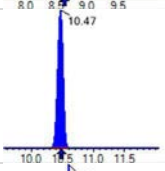 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 712444 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 90.6 | N/A | 4.9313 [ 4.0000 ] | 123.3% { 120.9% } | 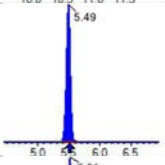 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2019774 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3521.8 | N/A | 4.6714 [ 4.0000 ] | 116.8% { 121.2% } | 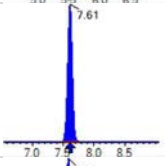 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1553917 | ( 9.39 , N/A ) ( N/A , -0.01 , N/A ) | 1827.4 | N/A | 4.5824 [ 4.0000 ] | 114.6% { 113.6% } | 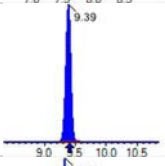 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2837927 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1437.4 | N/A | 8.0077 [ 8.0000 ] | 100.1% { 111.2% } | 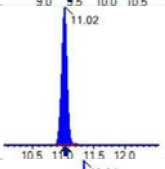 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1512693 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2531.1 | N/A | 2.1023 [ 2.0000 ] | 105.1% { 110.1% } | 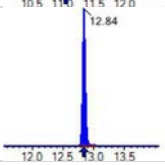 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 289802 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1757.3 | N/A | 1.8989 [ 2.0000 ] | 94.9% { 100.6% } | 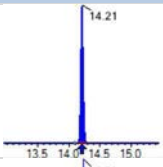  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 320055 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2531.6 | N/A | 1.9556 [ 2.0000 ] | 97.8% { 104.4% } | 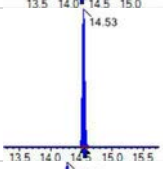  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877073 | ( 10.27 , N/A ) ( N/A , -0.01 , N/A ) | 2449.7 | N/A | 4.1981 [ 4.0000 ] | 105.0% { 103.7% } | 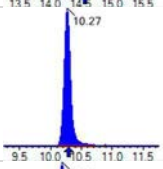  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 844352 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1833.1 | N/A | 4.4342 [ 4.0000 ] | 110.9% { 109.6% } | 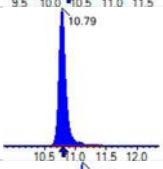  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1459612 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2263.5 | N/A | 21.2823 [ 20.0000 ] | 106.4% { 106.2% } | 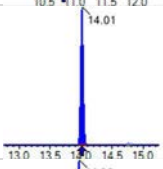  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1442578 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4066.8 | N/A | 20.7236 [ 20.0000 ] | 103.6% { 111.8% } | 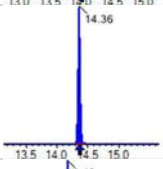  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1026816 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 2225.9 | N/A | 7.2012 [ 8.0000 ] | 90.0% { 100.4% } | 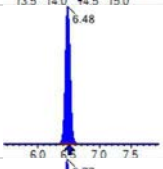  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603581 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1163.2 | N/A | 1.9313 [ 2.0000 ] | 96.6% { 97.8% } | 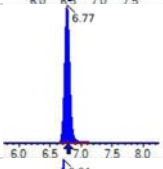  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 592829 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 726.4 | N/A | 2.0837 [ 2.0000 ] | 104.2% { 107.2% } | 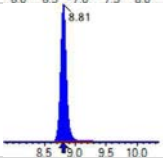  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .02240 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0120 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05620 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.980 | ng/mL0 | | |
| | 13C5-PFPEA | 4.0 | ng/mL0 | | |
| | 13C5-PFHXA | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA | 1.990 | ng/mL0 | | |
| | 13C8-PFOA | 1.980 | ng/mL0 | | |
| | 13C9-PFNA | .9090 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | .9980 | ng/mL0 | | |
| | 13C2-PFDOA | .9780 | ng/mL0 | | |
| | 13C2-PFTEDA | .9790 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.80 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.910 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.980 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.40 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.50 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.050 | ng/mL0 | | |
| | 13C8-PFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSA | 1.920 | ng/mL0 | | |
| | D5-NETFOSA | 1.880 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.170 | ng/mL0 | | |
| | D5-NETFOSAA | 4.270 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | D7-NMEFOSE0 | 20.20 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.30 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.970 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 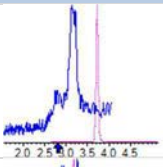 | 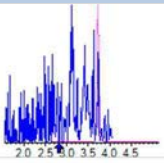 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 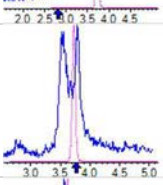 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 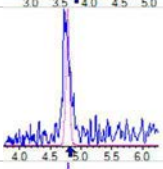 | 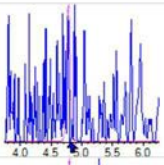 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 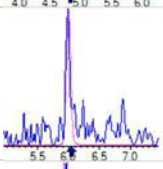 | 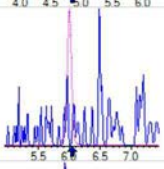 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 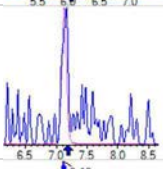 | 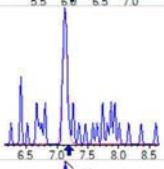 | |
| PFOA | ( 413.0 / 369.0 )<br>18323<br>( 413.0 / 169.0 )<br>6829 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , -0.2) | 17.8<br>41.7 | 0.3727<br>101.9<br>108.6 | 0.0224 | N/A | 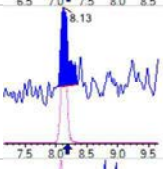 | 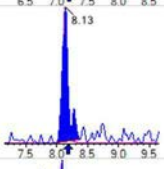 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 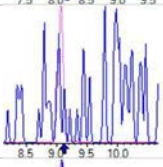 | 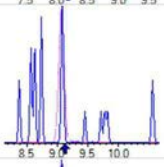 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 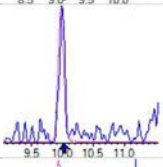 | 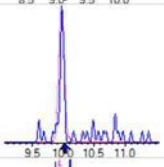 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 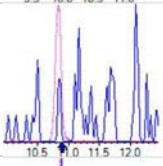 | 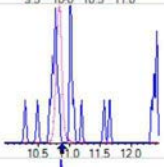 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 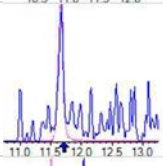 | 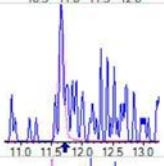 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 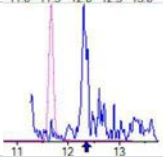 | 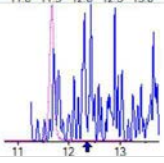 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 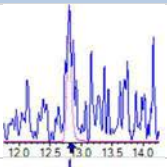 | 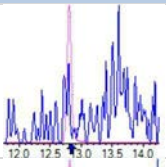 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 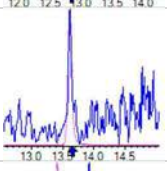 | 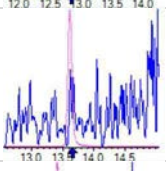 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 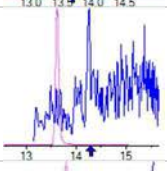 | 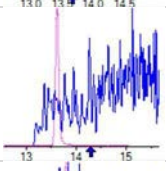 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 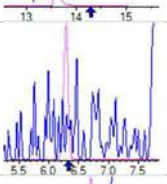 | 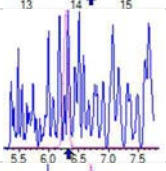 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 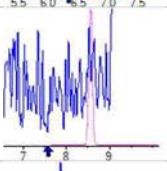 | 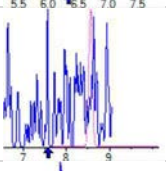 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 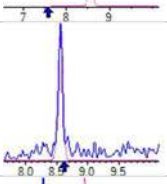 | 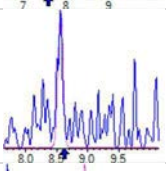 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 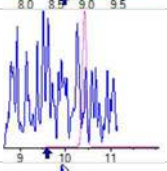 | 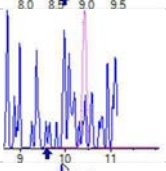 | |
| PFOS | ( 499.0 / 80.0 )<br>10478<br>( 499.0 / 99.0 )<br>2581 | ( 10.41 , 1.00 )<br>( -0.02 , N/A , -0.9) | 49.9<br>308.2 | 0.2463<br>105.4<br>102.6 | 0.0120 | N/A | 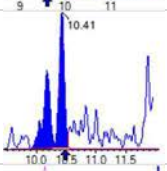 | 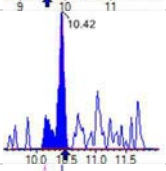 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 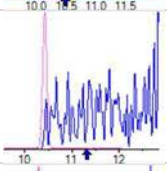 | 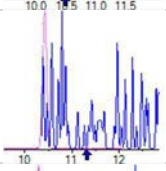 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 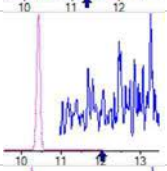 | 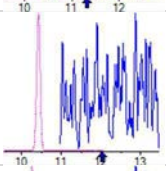 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 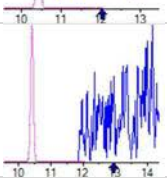 | 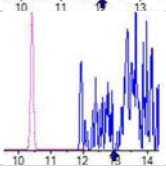 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 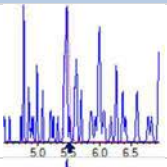 | 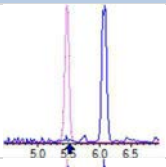 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 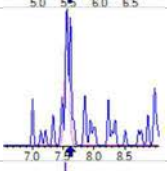 | 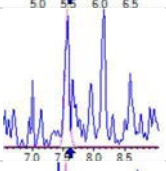 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 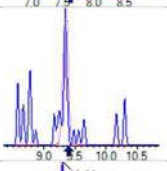 | 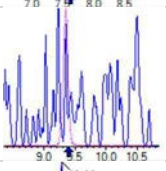 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14755<br>( 627.0 / 81.0 )<br>25191 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.4) | 151.5<br>73.6 | 1.7073<br>118.6<br>117.0 | 0.0562 | N/A | 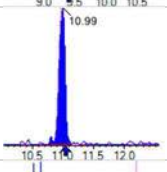 | 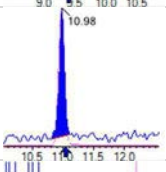 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 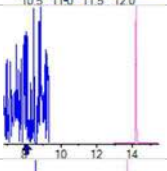 | 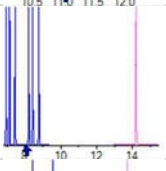 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 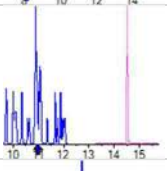 | 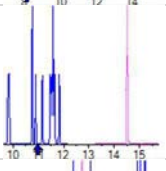 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 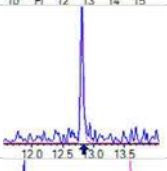 | 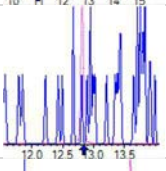 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 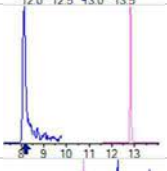 | 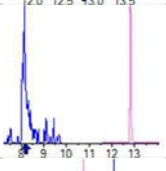 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 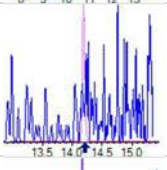 | 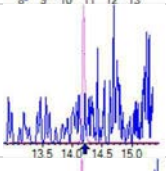 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 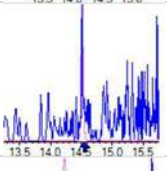 | 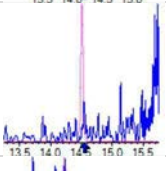 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 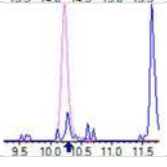 | 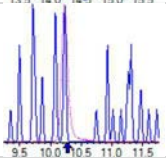 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 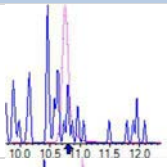 | 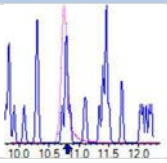 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 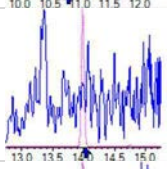 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 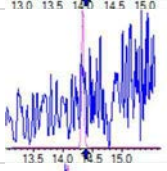 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 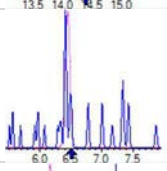 | 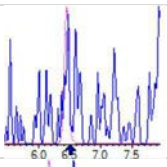 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 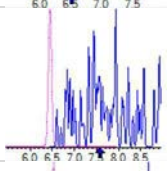 | 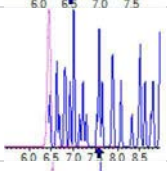 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 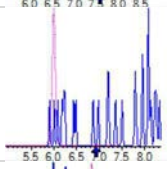 | 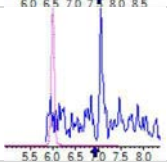 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 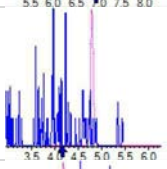 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 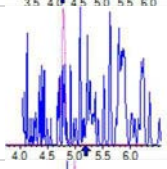 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 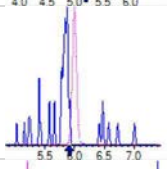 | 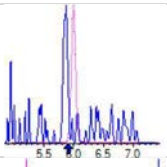 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 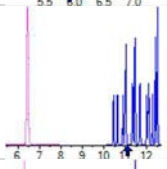 | 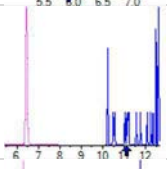 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 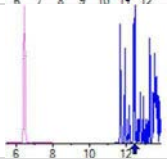 | 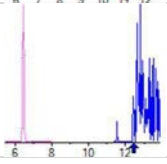 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 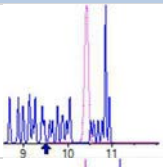 | 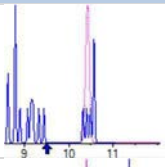 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 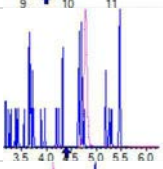 | 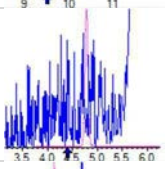 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 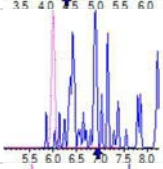 | 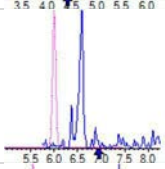 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 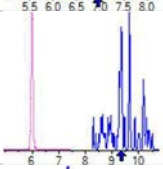 | 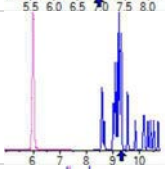 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 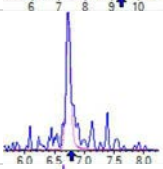 | 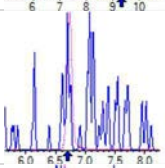 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 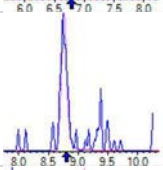 | 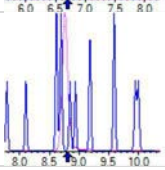 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 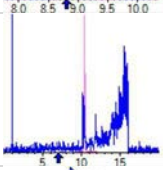 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256296 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 1342.9 | N/A | 1.0749 [ 1.0000 ] | 107.5% { 108.4% } | 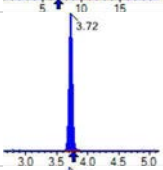 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117918 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 20197.0 | N/A | 0.9295 [ 1.0000 ] | 93.0% { 93.1% } | 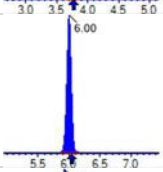 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 372812 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 6218.0 | N/A | 0.9431 [ 1.0000 ] | 94.3% { 98.3% } | 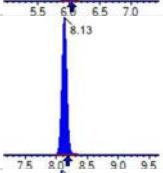 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277069 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 1006.7 | N/A | 0.9742 [ 1.0000 ] | 97.4% { 98.5% } | 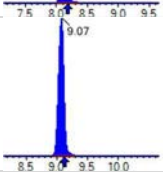 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273034 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1301.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 94.4% } | 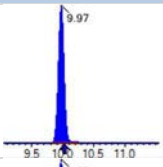 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 886188 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 4958.5 | N/A | 0.9338 [ 1.0000 ] | 93.4% { 94.9% } | 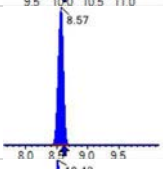 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 733959 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1895.2 | N/A | 0.9637 [ 1.0000 ] | 96.4% { 103.1% } | 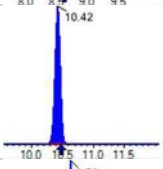 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2335173 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 40991.8 | N/A | 7.9756 [ 8.0000 ] | 99.7% { 104.3% } | 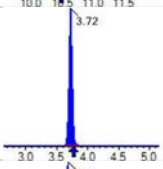 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 880098 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 5161.0 | N/A | 4.0001 [ 4.0000 ] | 100.0% { 90.2% } | 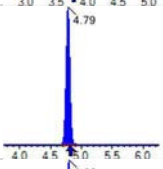 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 555973 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 11242.8 | N/A | 2.0664 [ 2.0000 ] | 103.3% { 94.2% } | 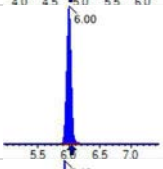 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 596480 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5847.9 | N/A | 1.9930 [ 2.0000 ] | 99.7% { 90.9% } | 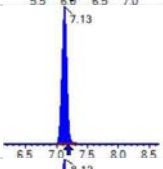 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 792769 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2469.3 | N/A | 1.9846 [ 2.0000 ] | 99.2% { 91.9% } | 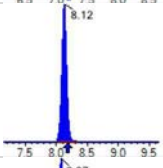 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 246839 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 3156.7 | N/A | 0.9086 [ 1.0000 ] | 90.9% { 91.5% } | 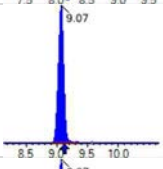 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317562 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 988.0 | N/A | 1.0379 [ 1.0000 ] | 103.8% { 98.7% } | 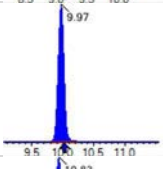 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 359228 | ( 10.83 , N/A ) ( N/A , -0.05 , N/A ) | 994.3 | N/A | 0.9979 [ 1.0000 ] | 99.8% { 96.6% } | 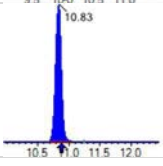 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 358593 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1376.9 | N/A | 0.9782 [ 1.0000 ] | 97.8% { 96.2% } | 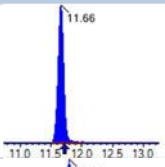 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305570 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1339.8 | N/A | 0.9788 [ 1.0000 ] | 97.9% { 93.6% } | 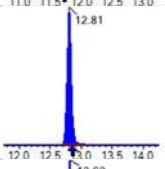 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 479691 | ( 13.62 , N/A ) ( N/A , -0.04 , N/A ) | 2261.1 | N/A | 1.7998 [ 2.0000 ] | 90.0% { 95.0% } | 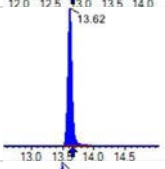 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1646009 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 932.0 | N/A | 2.0558 [ 2.0000 ] | 102.8% { 98.1% } | 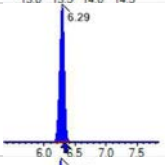 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1314731 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3337.1 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 99.7% } | 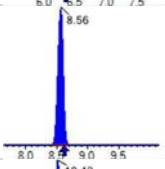 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1507737 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1958.6 | N/A | 1.9052 [ 2.0000 ] | 95.3% { 97.3% } | 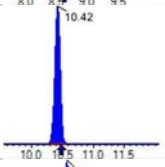 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 688420 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 92.2 | N/A | 4.9834 [ 4.0000 ] | 124.6% { 116.9% } | 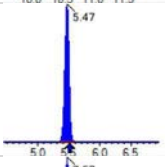 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1818303 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 3961.1 | N/A | 4.3982 [ 4.0000 ] | 110.0% { 109.1% } | 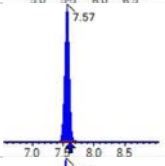 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1459191 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1728.0 | N/A | 4.5003 [ 4.0000 ] | 112.5% { 106.7% } | 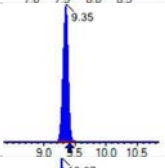 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2726916 | ( 10.97 , N/A ) ( N/A , -0.05 , N/A ) | 1591.3 | N/A | 8.0472 [ 8.0000 ] | 100.6% { 106.8% } | 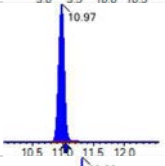 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1346002 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 3079.1 | N/A | 1.9193 [ 2.0000 ] | 96.0% { 98.0% } | 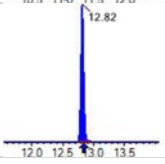 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 286199 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 2013.6 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 99.4% } | 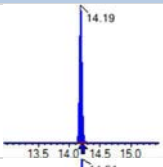  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 299849 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2282.7 | N/A | 1.8798 [ 2.0000 ] | 94.0% { 97.8% } | 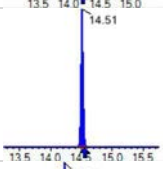  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 849550 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 2448.5 | N/A | 4.1722 [ 4.0000 ] | 104.3% { 100.5% } | 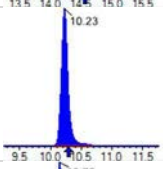  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792134 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 2202.4 | N/A | 4.2683 [ 4.0000 ] | 106.7% { 102.9% } | 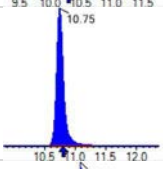  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1353135 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 1956.5 | N/A | 20.2435 [ 20.0000 ] | 101.2% { 98.4% } | 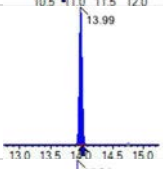  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1307174 | ( 14.34 , N/A ) ( N/A , -0.03 , N/A ) | 3568.0 | N/A | 19.2674 [ 20.0000 ] | 96.3% { 101.3% } | 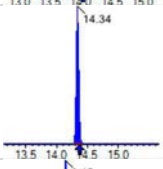  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977389 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2164.6 | N/A | 7.9749 [ 8.0000 ] | 99.7% { 95.6% } | 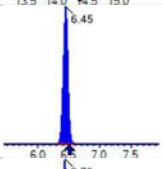  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603450 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1377.5 | N/A | 2.0385 [ 2.0000 ] | 101.9% { 97.8% } | 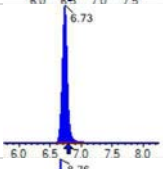  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 547420 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 720.5 | N/A | 2.0314 [ 2.0000 ] | 101.6% { 98.9% } | 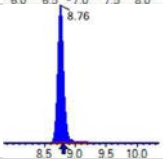  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0076L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | 0.01130 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .01660 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01040 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06450 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0076L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.890 | ng/mL0 | | |
| | 13C5-PFPEA | 3.730 | ng/mL0 | | |
| | 13C5-PFHXA | 1.910 | ng/mL0 | | |
| | 13C4-PFHPA | 1.880 | ng/mL0 | | |
| | 13C8-PFOA | 1.90 | ng/mL0 | | |
| | 13C9-PFNA | 1.010 | ng/mL0 | | |
| | 13C6-PFDA | .9790 | ng/mL0 | | |
| | 13C7-PFUnA | 1.050 | ng/mL0 | | |
| | 13C2-PFDOA | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.040 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.770 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.10 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.960 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.440 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.30 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.70 | ng/mL0 | | |
| | 13C8-PFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.570 | ng/mL0 | | |
| | D5-NETFOSAA | 4.630 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0076L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | D7-NMEFOSE0 | 19.50 | ng/mL0 | | |
| | D9-NETFOSE0 | 18.60 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.620 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 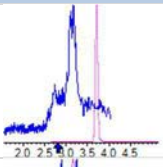 | 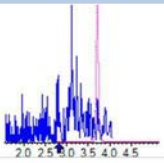 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 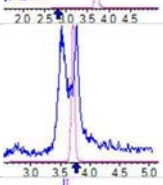 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 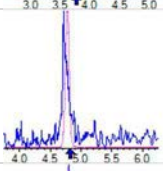 | 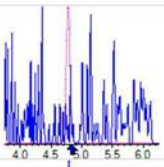 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 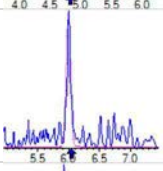 | 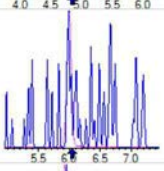 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 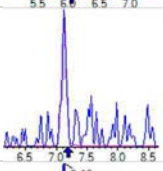 | 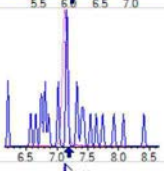 | |
| PFOA | ( 413.0 / 369.0 )<br>13637<br>( 413.0 / 169.0 )<br>6334 | ( 8.12 , 1.00 )<br>( 0.00 , N/A , -0.8) | 18.3<br>46.8 | 0.4644<br>127.1<br>135.3 | 0.0113 | N/A | 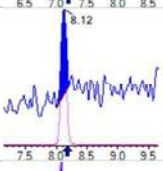 | 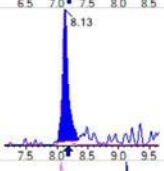 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 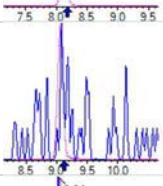 | 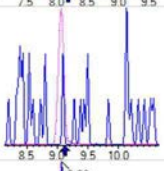 | |
| PFDA | ( 513.0 / 469.0 )<br>4646<br>( 513.0 / 169.0 )<br>996 | ( 9.94 , 1.00 )<br>( -0.02 , N/A , -2.0) | 61.2<br>164.4 | 0.2145<br>183.0<br>179.2 | 0.0166 | N/A | 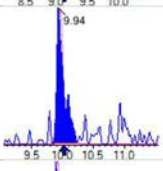 | 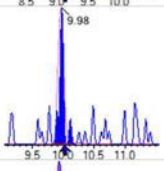 | IR2, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 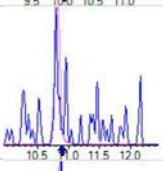 | 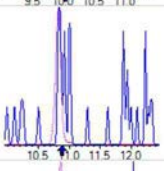 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 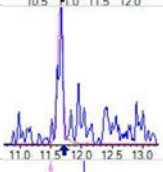 | 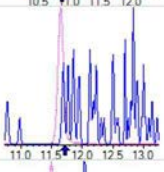 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 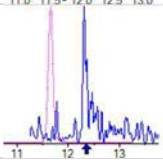 | 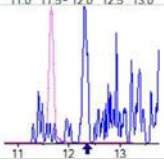 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 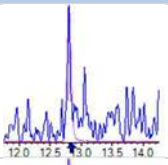 | 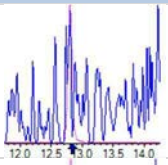 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 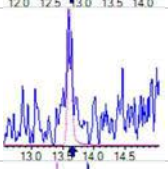 | 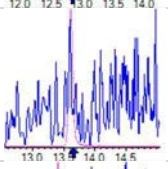 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 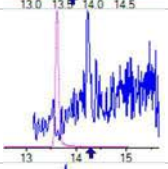 | 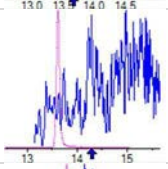 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 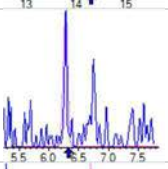 | 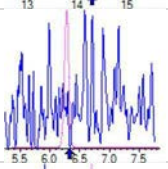 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 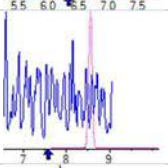 | 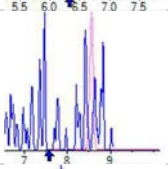 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 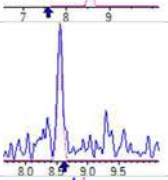 | 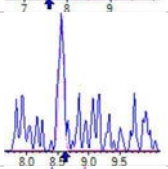 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 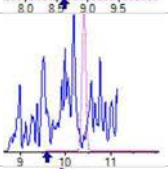 | 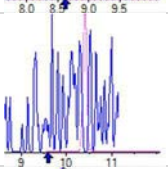 | |
| PFOS | ( 499.0 / 80.0 )<br>8916<br>( 499.0 / 99.0 )<br>2079 | ( 10.41 , 1.00 )<br>( 0.00 , N/A , -0.5) | 41.4<br>168.0 | 0.2331<br>99.7<br>97.1 | 0.0104 | N/A | 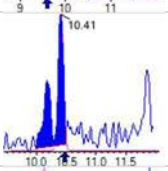 | 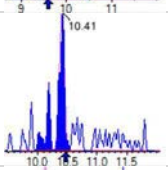 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 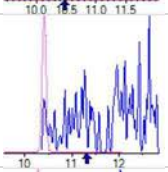 | 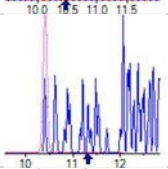 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 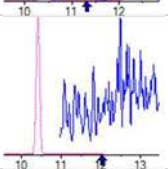 | 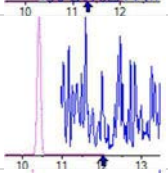 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 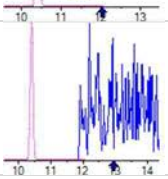 | 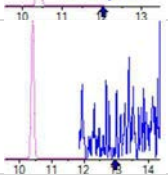 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (37)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 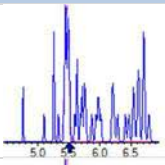 | 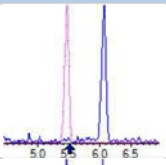 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 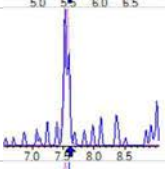 | 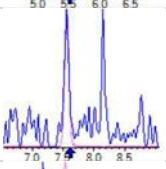 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 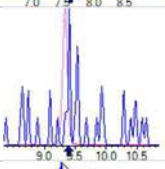 | 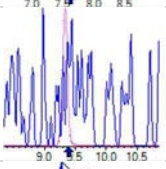 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15745<br>( 627.0 / 81.0 )<br>18532 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.3) | 164.1<br>43.8 | 1.1770<br>81.8<br>80.7 | 0.0645 | N/A | 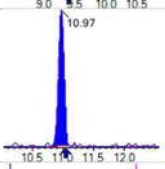 | 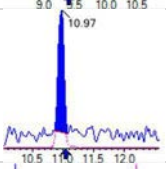 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 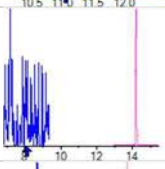 | 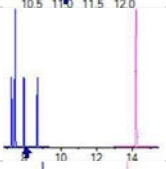 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 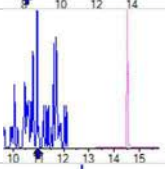 | 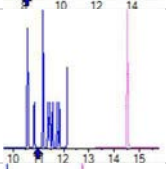 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 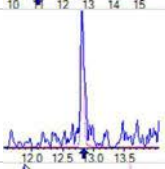 | 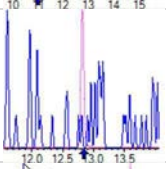 | |
| TFSI | ( 279.7 / 147.0 )<br>27475<br>( 279.7 / 211.0 )<br>1556 | ( 8.12 , 0.63 )<br>( N/A , -0.06 , 0.8) | 22.0<br>11.1 | 0.0567<br>67.4<br>66.2 | 0.0165 | N/A | 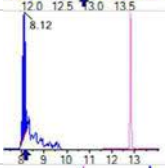 | 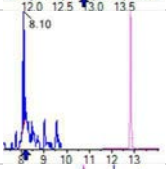 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 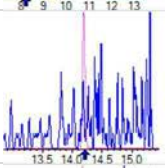 | 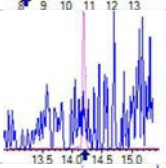 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 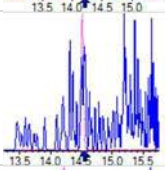 | 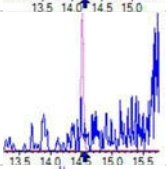 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 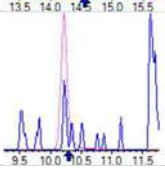 | 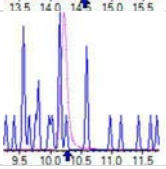 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 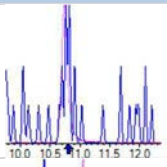 | 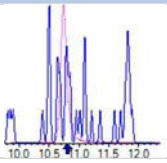 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 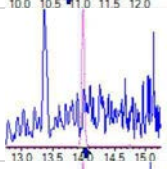 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 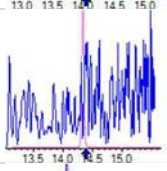 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 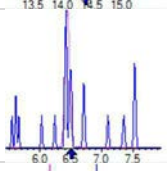 | 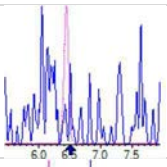 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 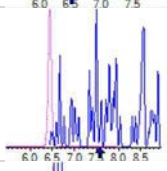 | 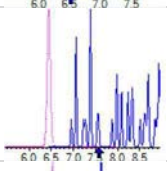 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 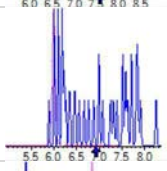 | 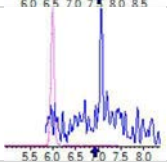 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 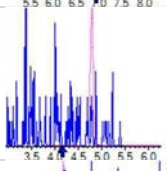 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 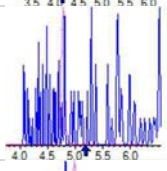 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 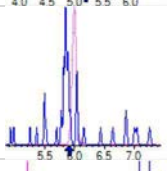 | 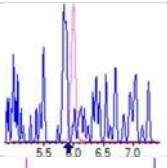 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 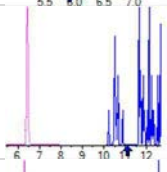 | 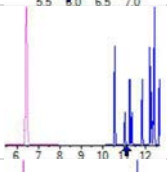 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 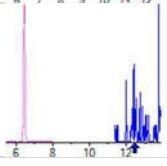 | 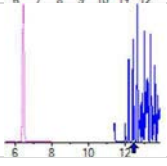 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 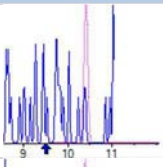 | 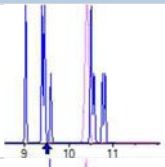 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 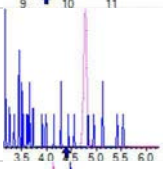 | 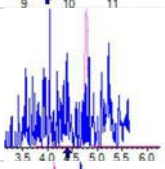 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 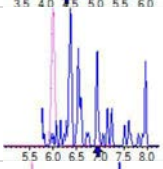 | 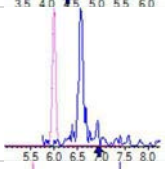 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 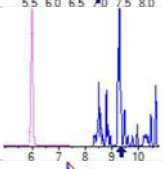 | 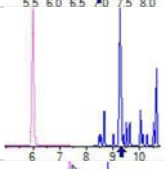 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4079<br>( 357.2 / 243.0 ) 585 | ( 6.72 , 1.00 ) ( -0.01 , N/A , -1.6) | 36.5<br>9.1 | 0.1433<br>130.0<br>137.7 | 0.0127 | N/A | 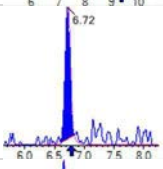 | 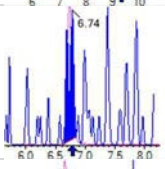 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 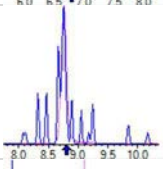 | 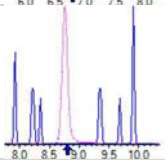 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 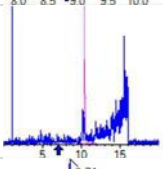 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261851 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 1337.6 | N/A | 1.0982<br>[ 1.0000 ] | 109.8%<br>{ 110.7% } | 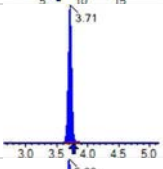 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122225 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 1949.5 | N/A | 0.9635<br>[ 1.0000 ] | 96.3%<br>{ 96.5% } | 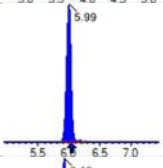 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378012 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 4414.7 | N/A | 0.9562<br>[ 1.0000 ] | 95.6%<br>{ 99.6% } | 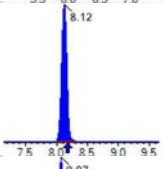 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 243570 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8564<br>[ 1.0000 ] | 85.6%<br>{ 86.6% } | 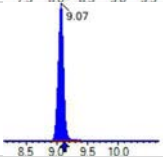 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 249043 | ( 9.97 , N/A ) ( N/A , -0.06 , N/A ) | 13496.6 | N/A | 0.8528 [ 1.0000 ] | 85.3% { 86.1% } | 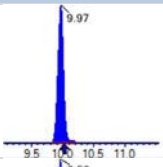 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 860348 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4025.5 | N/A | 0.9066 [ 1.0000 ] | 90.7% { 92.2% } | 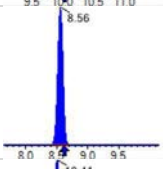 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 676863 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2296.0 | N/A | 0.8887 [ 1.0000 ] | 88.9% { 95.1% } | 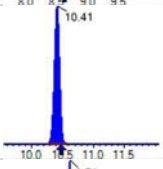 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2361568 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 42554.0 | N/A | 7.8946 [ 8.0000 ] | 98.7% { 105.5% } | 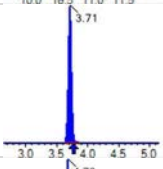 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 850898 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5022.0 | N/A | 3.7311 [ 4.0000 ] | 93.3% { 87.2% } | 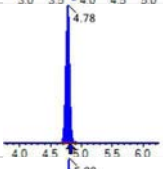 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 533907 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 10215.7 | N/A | 1.9145 [ 2.0000 ] | 95.7% { 90.5% } | 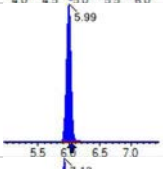 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 584136 | ( 7.12 , N/A ) ( N/A , -0.05 , N/A ) | 6396.9 | N/A | 1.8830 [ 2.0000 ] | 94.1% { 89.0% } | 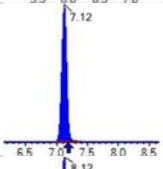 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 770117 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2454.9 | N/A | 1.9014 [ 2.0000 ] | 95.1% { 89.3% } | 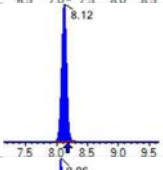 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 240789 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 3328.3 | N/A | 1.0082 [ 1.0000 ] | 100.8% { 89.2% } | 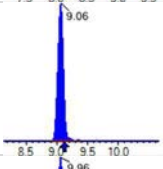 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 273272 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1159.4 | N/A | 0.9791 [ 1.0000 ] | 97.9% { 84.9% } | 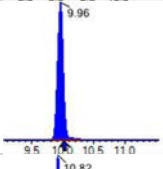 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 344337 | ( 10.82 , N/A ) ( N/A , -0.06 , N/A ) | 928.5 | N/A | 1.0487 [ 1.0000 ] | 104.9% { 92.6% } | 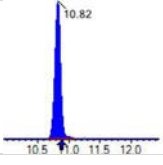 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 343936 | ( 11.65 , N/A ) ( N/A , -0.06 , N/A ) | 1056.5 | N/A | 1.0286 [ 1.0000 ] | 102.9% { 92.2% } | 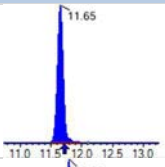  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295022 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1239.8 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 90.4% } | 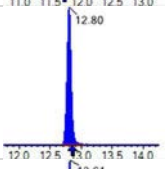  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 429520 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2258.1 | N/A | 1.7668 [ 2.0000 ] | 88.3% { 85.0% } | 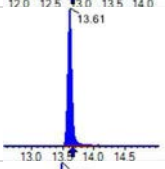  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1603797 | ( 6.28 , N/A ) ( N/A , -0.05 , N/A ) | 990.1 | N/A | 2.0632 [ 2.0000 ] | 103.2% { 95.6% } | 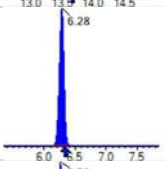  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1303820 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4967.6 | N/A | 2.1014 [ 2.0000 ] | 105.1% { 98.9% } | 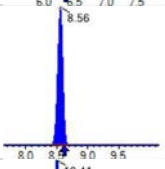  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1479061 | ( 10.41 , N/A ) ( N/A , -0.07 , N/A ) | 1616.5 | N/A | 2.0266 [ 2.0000 ] | 101.3% { 95.5% } | 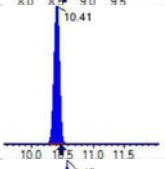  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 665228 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 97.6 | N/A | 4.9601 [ 4.0000 ] | 124.0% { 112.9% } | 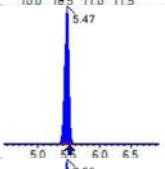  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1780844 | ( 7.56 , N/A ) ( N/A , -0.05 , N/A ) | 4514.1 | N/A | 4.4369 [ 4.0000 ] | 110.9% { 106.8% } | 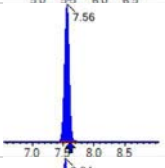  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1354290 | ( 9.34 , N/A ) ( N/A , -0.06 , N/A ) | 1695.0 | N/A | 4.3022 [ 4.0000 ] | 107.6% { 99.0% } | 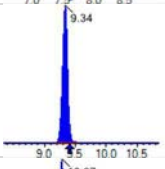  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2534783 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1126.8 | N/A | 7.7049 [ 8.0000 ] | 96.3% { 99.3% } | 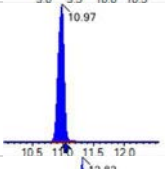  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1264522 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 2176.7 | N/A | 1.9552 [ 2.0000 ] | 97.8% { 92.0% } | 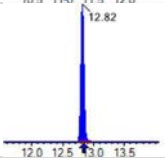  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (37)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 260773 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1698.6 | N/A | 1.9011 [ 2.0000 ] | 95.1% { 90.5% } | 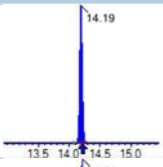 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 281981 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2400.9 | N/A | 1.9169 [ 2.0000 ] | 95.8% { 91.9% } | 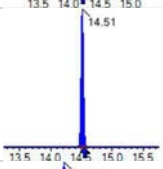 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 857289 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 2460.4 | N/A | 4.5653 [ 4.0000 ] | 114.1% { 101.4% } | 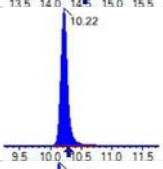 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792921 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1959.0 | N/A | 4.6330 [ 4.0000 ] | 115.8% { 103.0% } | 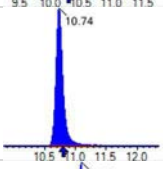 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1199404 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 2280.1 | N/A | 19.4572 [ 20.0000 ] | 97.3% { 87.3% } | 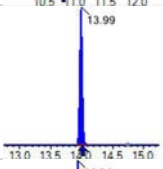 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1160864 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 4100.8 | N/A | 18.5541 [ 20.0000 ] | 92.8% { 90.0% } | 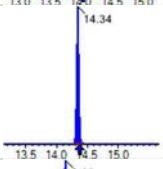 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 967466 | ( 6.44 , N/A ) ( N/A , -0.05 , N/A ) | 2453.2 | N/A | 7.6157 [ 8.0000 ] | 95.2% { 94.6% } | 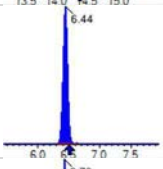 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603151 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1238.1 | N/A | 2.2338 [ 2.0000 ] | 111.7% { 97.8% } | 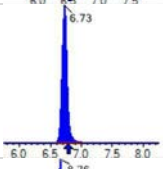 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 530105 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 742.7 | N/A | 2.1566 [ 2.0000 ] | 107.8% { 95.8% } | 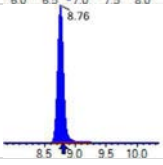 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 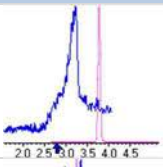 | 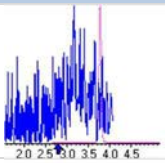 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 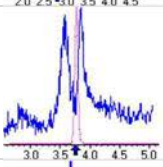 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 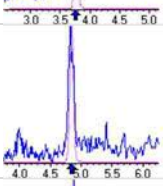 | 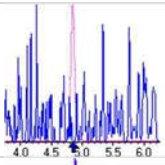 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 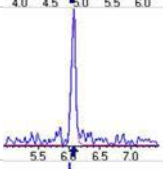 | 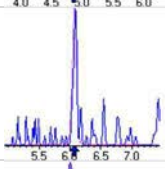 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 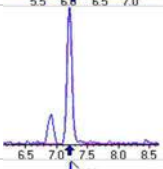 | 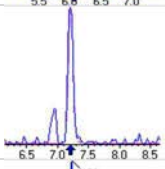 | |
| PFOA | ( 413.0 / 369.0 )<br>3553688<br>( 413.0 / 169.0 )<br>1356979 | ( 8.23 , 1.00 )<br>( 0.00 , N/A , 0.0) | 465.7<br>343.8 | 0.3819<br>105.6<br>107.6 | 7.4995 | N/A | 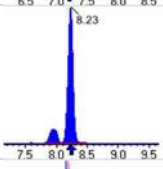 | 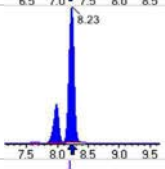 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 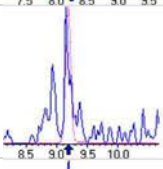 | 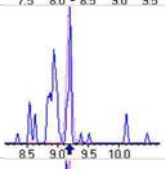 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 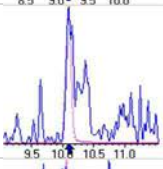 | 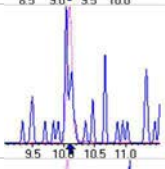 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 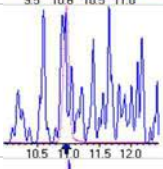 | 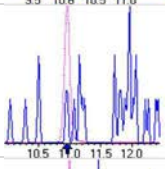 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 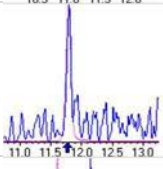 | 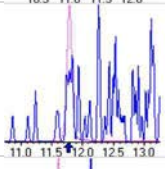 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 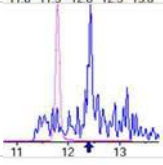 | 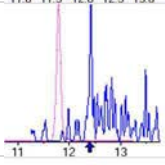 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 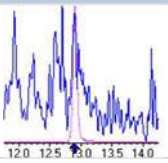 | 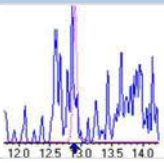 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 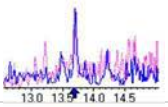 | 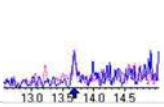 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 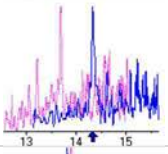 | 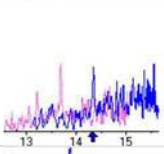 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 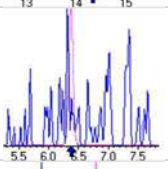 | 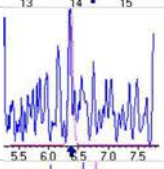 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 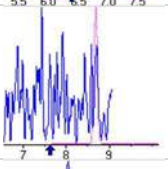 | 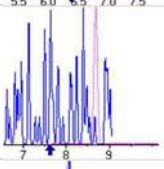 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 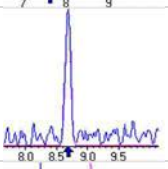 | 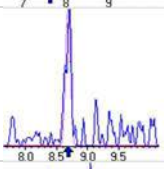 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 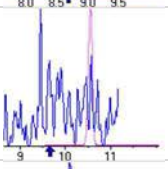 | 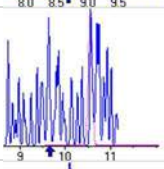 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 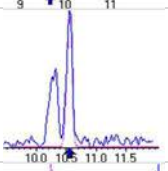 | 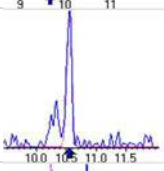 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 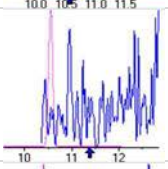 | 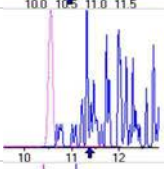 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 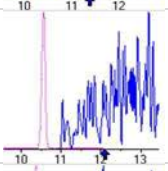 | 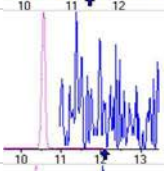 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 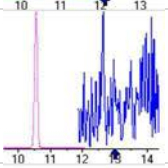 | 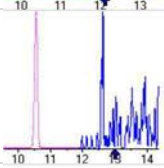 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 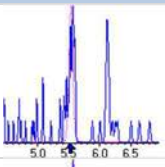 | 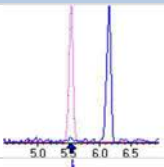 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 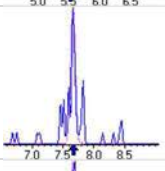 | 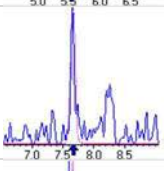 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 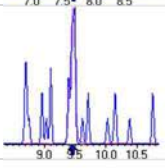 | 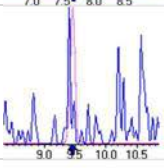 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 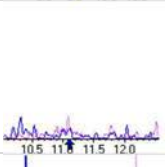 | 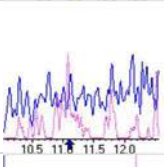 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 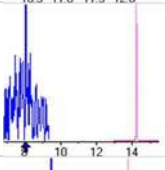 | 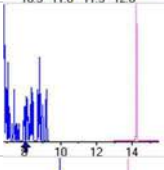 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 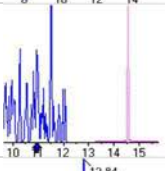 | 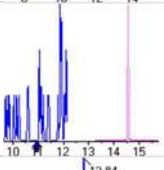 | |
| PFOSA | ( 498.0 / 78.0 )<br>9810888<br>( 498.0 / 478.0 )<br>144265 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 422.8<br>513.8 | 0.0147<br>101.9<br>107.4 | 9.2394 | N/A | 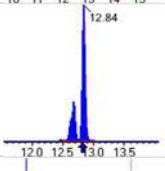 | 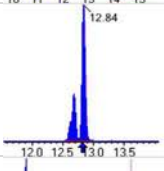 | MI4 ABK 3/18/24 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 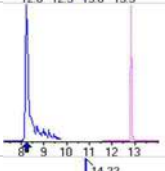 | 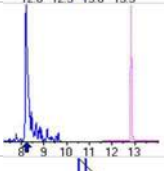 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1638004<br>( 512.0 / 169.0 )<br>1267456 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3056.4<br>3474.8 | 0.7738<br>105.3<br>101.4 | 8.2168 | N/A | 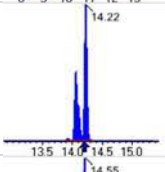 | 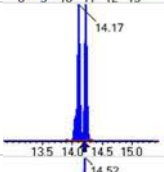 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>2047565<br>( 526.0 / 169.0 )<br>2577314 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3916.0<br>2904.6 | 1.2587<br>99.4<br>99.7 | 8.3543 | N/A | 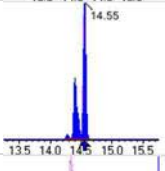 | 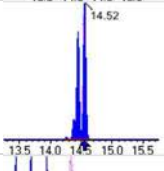 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 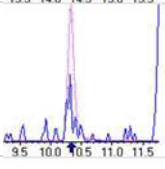 | 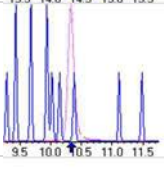 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 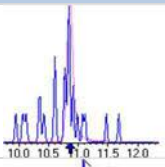 | 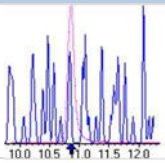 | |
| NMeFOSE | ( 616.0 / 59.0 ) 890678 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 1909.3 | N/A<br>0.0<br>0.0 | 8.7351 | N/A | 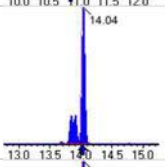 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 807579 | ( 14.40 , 1.00 ) ( 0.03 , N/A , 0.0) | 2662.8 | N/A<br>0.0<br>0.0 | 9.2417 | N/A | 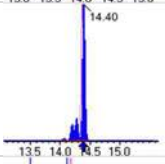 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 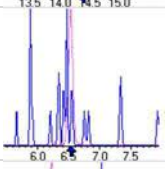 | 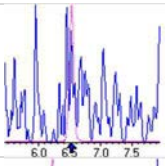 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 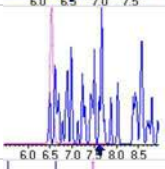 | 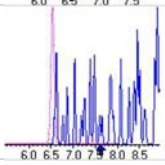 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 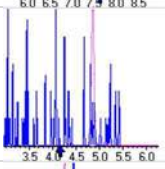 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 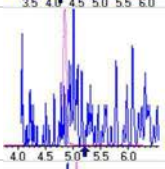 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 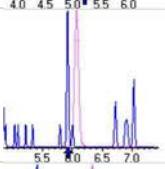 | 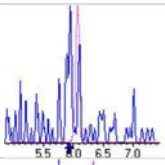 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 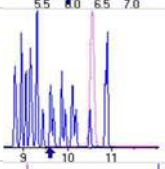 | 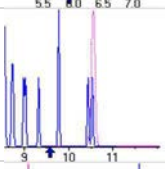 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 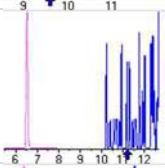 | 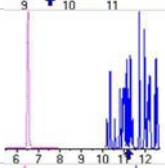 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 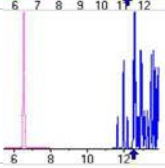 | 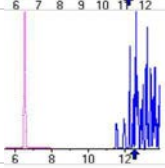 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 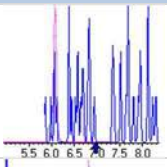 | 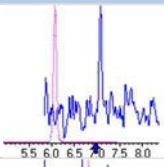 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 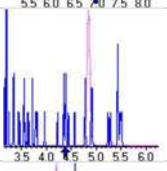 | 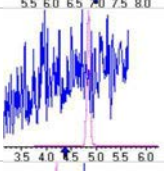 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 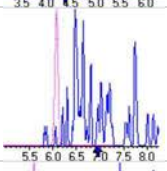 | 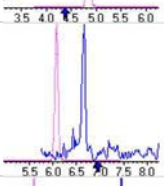 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 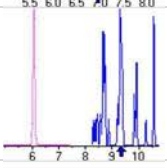 | 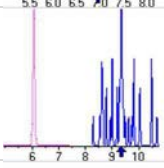 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 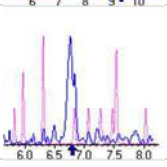 | 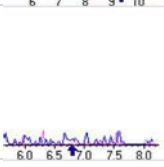 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 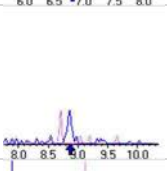 | 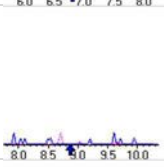 | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 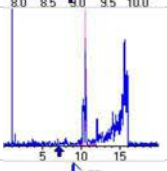 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 283891 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 959.6 | N/A | 0.9424 [ 1.0000 ] | 94.2% { 83.9% } | 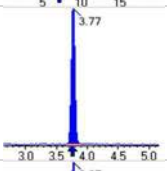 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 139255 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 86297.2 | N/A | 0.9056 [ 1.0000 ] | 90.6% { 81.7% } | 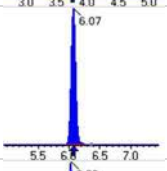 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 400810 | ( 8.23 , N/A ) ( N/A , 0.00 , N/A ) | 3928.5 | N/A | 0.8984 [ 1.0000 ] | 89.8% { 82.1% } | 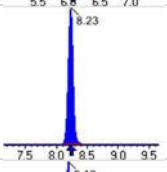 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 306589 | ( 9.19 , N/A ) ( N/A , 0.00 , N/A ) | 1059.9 | N/A | 0.9171 [ 1.0000 ] | 91.7% { 79.7% } | 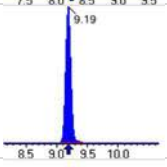 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 319345 | ( 10.10 , N/A ) ( N/A , 0.00 , N/A ) | 6101.1 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 84.6% } | 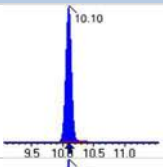 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 975602 | ( 8.69 , N/A ) ( N/A , 0.00 , N/A ) | 6566.7 | N/A | 0.8731 [ 1.0000 ] | 87.3% { 77.8% } | 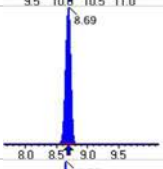 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 867764 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 2795.6 | N/A | 0.8889 [ 1.0000 ] | 88.9% { 82.0% } | 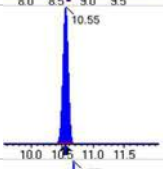 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2696743 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 46968.8 | N/A | 8.6140 [ 8.0000 ] | 107.7% { 95.0% } | 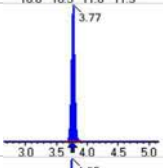 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1193598 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 5760.6 | N/A | 4.7778 [ 4.0000 ] | 119.4% { 93.2% } | 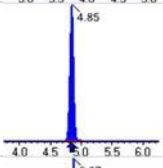 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 705656 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 8496.0 | N/A | 2.3600 [ 2.0000 ] | 118.0% { 93.0% } | 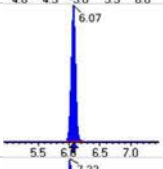 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 714073 | ( 7.22 , N/A ) ( N/A , 0.00 , N/A ) | 6537.9 | N/A | 2.2866 [ 2.0000 ] | 114.3% { 87.0% } | 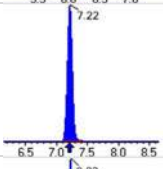 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 931964 | ( 8.23 , N/A ) ( N/A , 0.00 , N/A ) | 2671.7 | N/A | 2.2053 [ 2.0000 ] | 110.3% { 85.8% } | 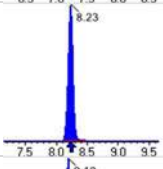 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330694 | ( 9.19 , N/A ) ( N/A , 0.00 , N/A ) | 2951.7 | N/A | 1.1170 [ 1.0000 ] | 111.7% { 87.5% } | 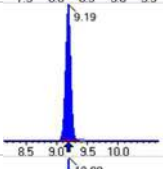 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 406615 | ( 10.09 , N/A ) ( N/A , 0.00 , N/A ) | 807.0 | N/A | 1.1034 [ 1.0000 ] | 110.3% { 86.3% } | 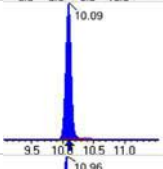 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 478979 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 1145.3 | N/A | 1.0691 [ 1.0000 ] | 106.9% { 94.5% } | 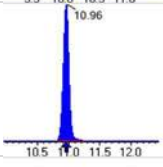 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 441982 | ( 11.79 , N/A ) ( N/A , 0.01 , N/A ) | 1480.5 | N/A | 0.9823 [ 1.0000 ] | 98.2% { 85.1% } | 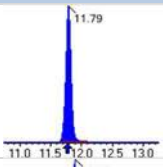  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 379220 | ( 12.90 , N/A ) ( N/A , 0.01 , N/A ) | 1357.0 | N/A | 0.9672 [ 1.0000 ] | 96.7% { 85.7% } | 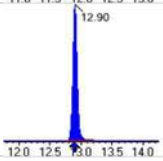  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 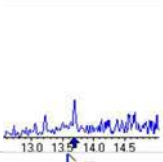 | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2093476 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 1032.9 | N/A | 2.2024 [ 2.0000 ] | 110.1% { 87.8% } | 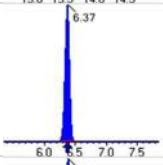  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1580913 | ( 8.69 , N/A ) ( N/A , 0.00 , N/A ) | 4189.6 | N/A | 2.2145 [ 2.0000 ] | 110.7% { 89.7% } | 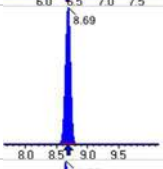  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1990751 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 2030.0 | N/A | 2.1550 [ 2.0000 ] | 107.7% { 89.2% } | 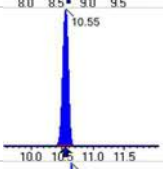  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 620394 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 102.9 | N/A | 7.3025 [ 4.0000 ] | 182.6% { 112.1% } | 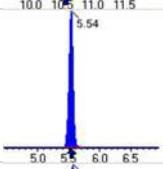  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1809660 | ( 7.66 , N/A ) ( N/A , 0.00 , N/A ) | 4557.8 | N/A | 6.8592 [ 4.0000 ] | 171.5% { 111.2% } | 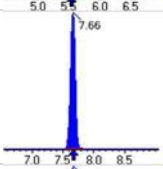  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1811799 | ( 9.46 , N/A ) ( N/A , 0.00 , N/A ) | 1606.6 | N/A | 6.8930 [ 4.0000 ] | 172.3% { 106.2% } | 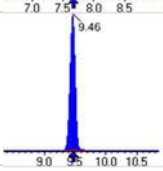  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 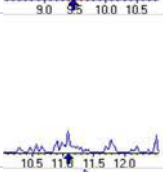 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2176072 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 3039.9 | N/A | 2.1737 [ 2.0000 ] | 108.7% { 89.9% } | 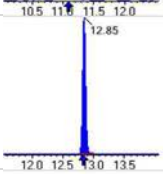  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 395841 | ( 14.22 , N/A ) ( N/A , 0.02 , N/A ) | 2465.3 | N/A | 2.1413 [ 2.0000 ] | 107.1% { 92.6% } | 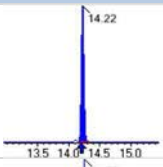  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 446713 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2943.4 | N/A | 2.1038 [ 2.0000 ] | 105.2% { 92.2% } | 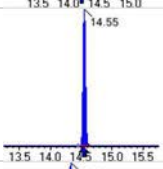  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1185914 | ( 10.33 , N/A ) ( N/A , 0.00 , N/A ) | 2025.8 | N/A | 5.0128 [ 4.0000 ] | 125.3% { 89.8% } | 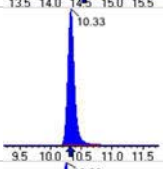  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1166049 | ( 10.86 , N/A ) ( N/A , 0.01 , N/A ) | 1996.1 | N/A | 5.1924 [ 4.0000 ] | 129.8% { 94.7% } | 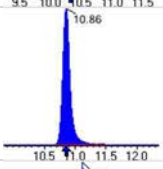  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1801413 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2283.9 | N/A | 20.8553 [ 20.0000 ] | 104.3% { 96.9% } | 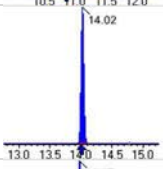  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1977975 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5417.2 | N/A | 18.9033 [ 20.0000 ] | 94.5% { 94.5% } | 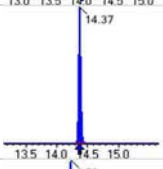  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1227195 | ( 6.53 , N/A ) ( N/A , 0.00 , N/A ) | 2300.2 | N/A | 9.5485 [ 8.0000 ] | 119.4% { 87.4% } | 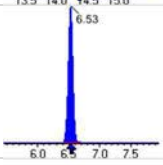  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 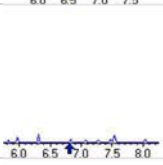  | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 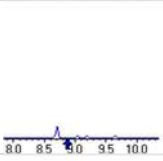  | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (5)
Acquired: 2024/03/18 - 14:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 34322<br>( 499.0 / 99.0 ) N/A | ( 9.95 , 0.94 ) ( -0.60 , N/A , #Value!) | 12.6 | N/A<br>0.0<br>0.0 | 0.0296 | N/A | 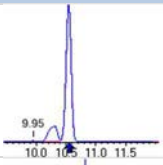 | 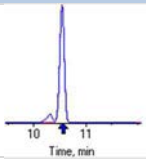 | |
| TDCA | ( 499.0 / 80.0 ) 6208057 | ( 7.04 , 0.67 ) ( N/A , #Value! , 0.0) | 24040.6 | N/A<br>0.0<br>0.0 | 7.8866 | N/A | 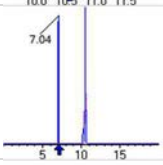 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.95 - 7.04 = 2.90 Pass $T$

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 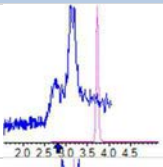 | 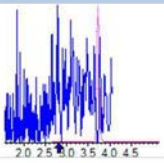 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 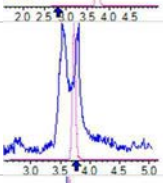 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 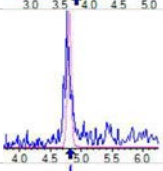 | 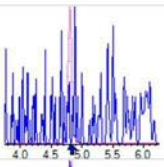 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 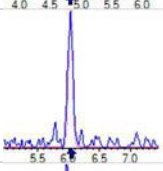 | 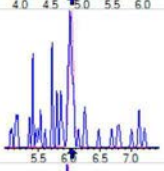 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 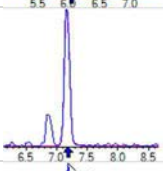 | 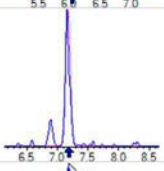 | |
| PFOA | ( 413.0 / 369.0 )<br>3210508<br>( 413.0 / 169.0 )<br>1253633 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.1) | 390.5<br>334.5 | 0.3905<br>106.8<br>113.7 | 7.3269 | N/A | 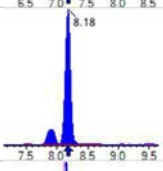 | 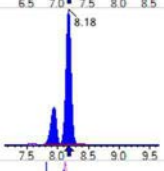 | MI4 ABK<br>3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 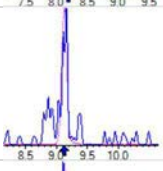 | 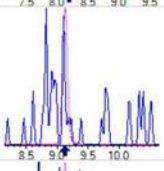 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 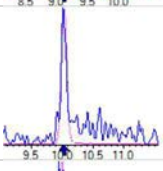 | 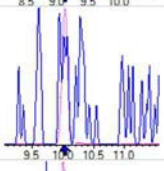 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 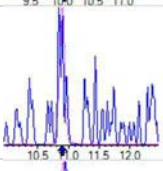 | 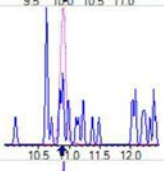 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 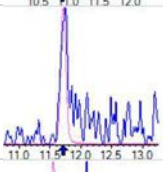 | 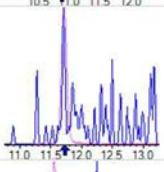 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 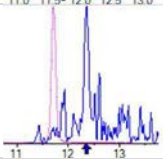 | 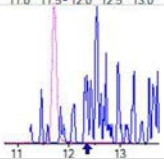 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 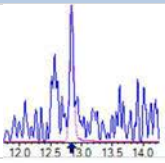 | 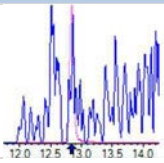 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 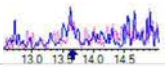 | 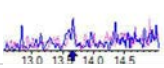 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 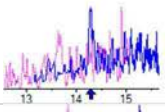 | 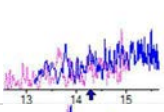 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 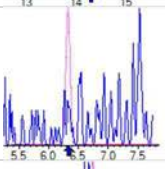 | 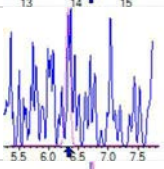 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 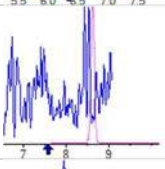 | 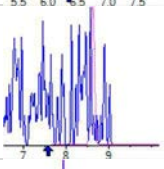 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 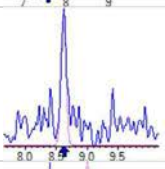 | 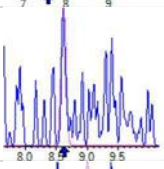 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 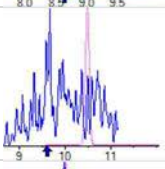 | 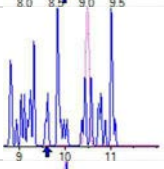 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 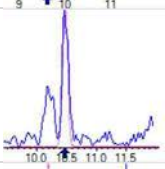 | 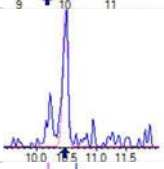 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 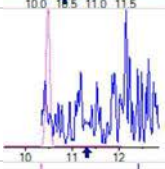 | 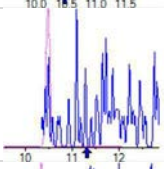 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 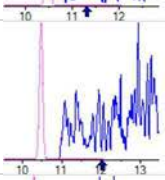 | 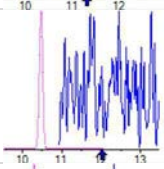 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 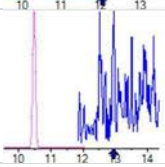 | 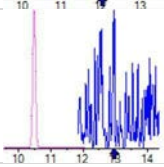 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 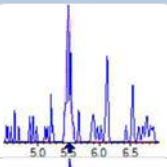 | 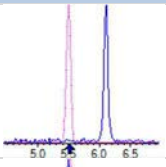 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 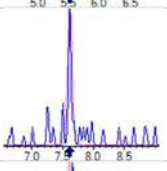 | 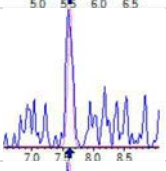 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 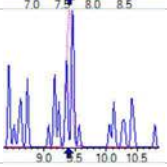 | 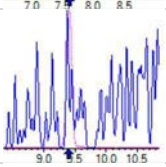 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 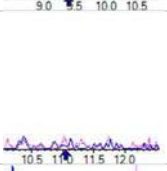 | 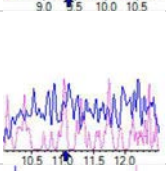 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 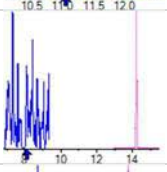 | 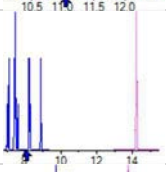 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 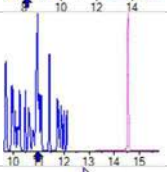 | 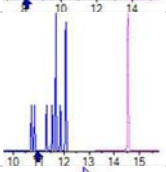 | |
| PFOSA | ( 498.0 / 78.0 )<br>6877109<br>( 498.0 / 478.0 )<br>99030 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 429.6<br>334.5 | 0.0144<br>102.6<br>96.7 | 9.4296 | N/A | 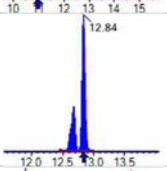 | 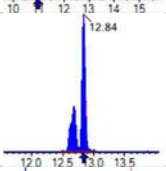 | MI4 ABK 3/19/24 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 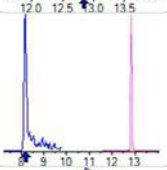 | 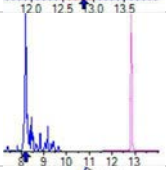 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1285923<br>( 512.0 / 169.0 )<br>940847 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.8) | 3496.8<br>1493.3 | 0.7317<br>97.8<br>96.5 | 8.5401 | N/A | 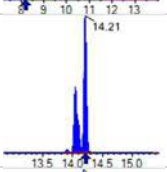 | 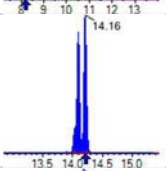 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>1506523<br>( 526.0 / 169.0 )<br>1906366 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.0) | 3724.9<br>3295.0 | 1.2654<br>102.5<br>101.9 | 8.4436 | N/A | 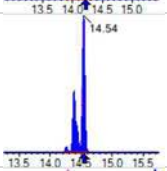 | 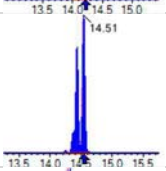 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 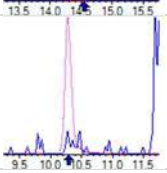 | 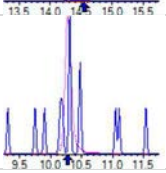 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 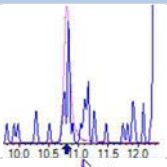 | 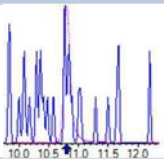 | |
| NMeFOSE | ( 616.0 / 59.0 ) 747241 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 1656.5 | N/A<br>0.0<br>0.0 | 9.5158 | N/A | 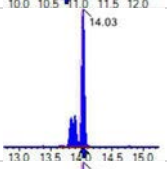 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 614232 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 2466.7 | N/A<br>0.0<br>0.0 | 9.4444 | N/A | 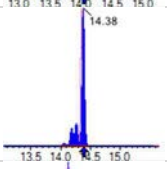 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 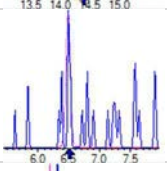 | 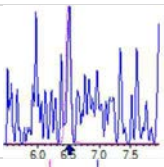 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 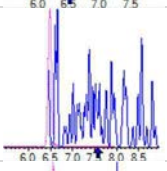 | 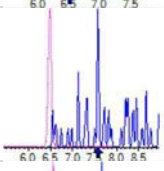 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 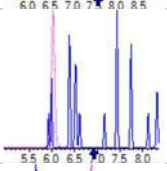 | 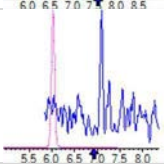 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 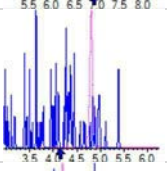 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 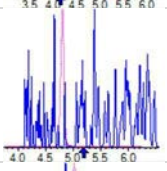 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 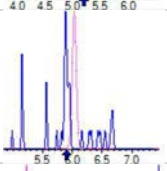 | 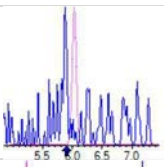 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 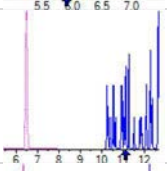 | 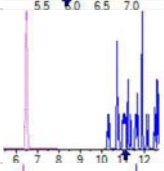 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 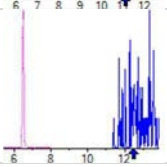 | 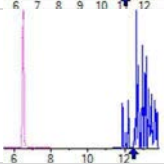 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 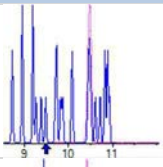 | 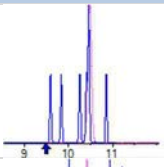 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 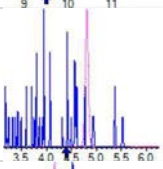 | 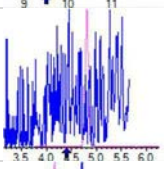 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 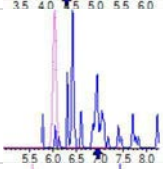 | 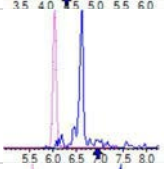 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 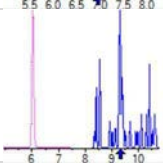 | 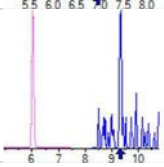 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 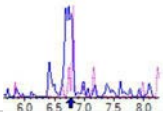 | 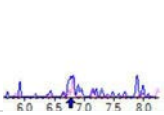 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 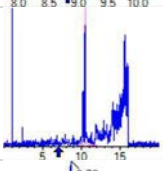 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261979 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1320.1 | N/A | 1.0987<br>[ 1.0000 ] | 109.9%<br>{ 110.8% } | 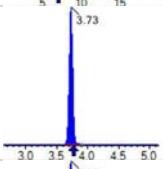 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122507 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 105609.8 | N/A | 0.9657<br>[ 1.0000 ] | 96.6%<br>{ 96.8% } | 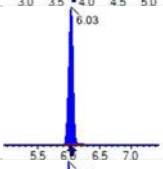 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379384 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 4686.4 | N/A | 0.9597<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 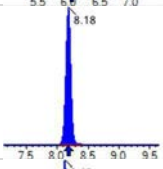 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 269870 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 731.1 | N/A | 0.9489<br>[ 1.0000 ] | 94.9%<br>{ 96.0% } | 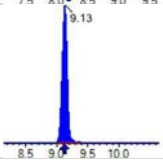 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281459 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3561.4 | N/A | 0.9638 [ 1.0000 ] | 96.4% { 97.3% } | 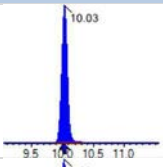 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 857437 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6887.8 | N/A | 0.9035 [ 1.0000 ] | 90.3% { 91.9% } | 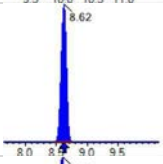 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 685748 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1960.7 | N/A | 0.9004 [ 1.0000 ] | 90.0% { 96.3% } | 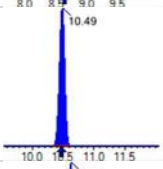 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2587544 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 42428.4 | N/A | 8.6458 [ 8.0000 ] | 108.1% { 115.6% } | 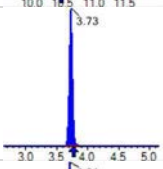 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1010634 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 6226.7 | N/A | 4.4214 [ 4.0000 ] | 110.5% { 103.6% } | 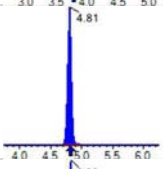 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 607029 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 8072.2 | N/A | 2.1717 [ 2.0000 ] | 108.6% { 102.9% } | 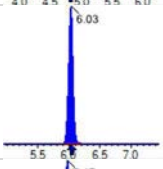 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 655104 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5211.4 | N/A | 2.1069 [ 2.0000 ] | 105.3% { 99.8% } | 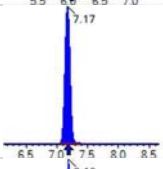 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 888575 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 3594.6 | N/A | 2.1859 [ 2.0000 ] | 109.3% { 103.1% } | 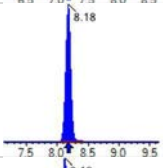 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 277647 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 2559.1 | N/A | 1.0493 [ 1.0000 ] | 104.9% { 102.9% } | 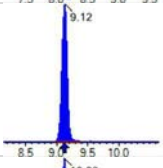 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331598 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 999.2 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 103.1% } | 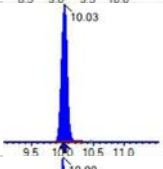 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393599 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 1043.4 | N/A | 1.0607 [ 1.0000 ] | 106.1% { 105.8% } | 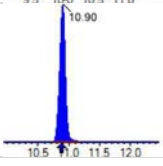 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392681 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 960.1 | N/A | 1.0391 [ 1.0000 ] | 103.9% { 105.3% } | 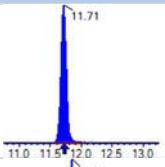 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327075 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1060.3 | N/A | 1.0163 [ 1.0000 ] | 101.6% { 100.2% } | 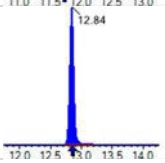 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729415 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1189.6 | N/A | 2.2324 [ 2.0000 ] | 111.6% { 103.1% } | 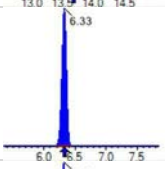 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1348867 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4105.7 | N/A | 2.1814 [ 2.0000 ] | 109.1% { 102.3% } | 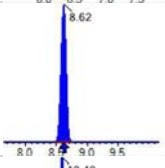 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1602565 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1826.7 | N/A | 2.1674 [ 2.0000 ] | 108.4% { 103.4% } | 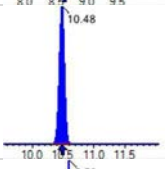 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 709206 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 97.6 | N/A | 5.3060 [ 4.0000 ] | 132.7% { 120.4% } | 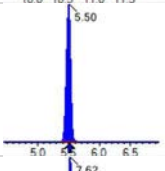 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1825907 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 3054.8 | N/A | 4.5647 [ 4.0000 ] | 114.1% { 109.5% } | 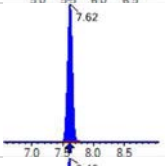 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1614348 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1240.5 | N/A | 5.1458 [ 4.0000 ] | 128.6% { 118.0% } | 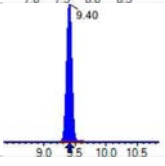 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1458588 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2083.8 | N/A | 2.2261 [ 2.0000 ] | 111.3% { 106.2% } | 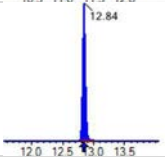 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 303300 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2184.5 | N/A | 2.1824 [ 2.0000 ] | 109.1% { 105.3% } | 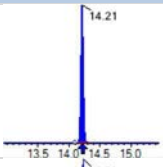  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 318629 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2334.3 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 103.9% } | 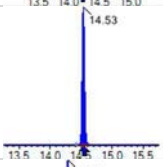  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 884165 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2410.3 | N/A | 4.6474 [ 4.0000 ] | 116.2% { 104.6% } | 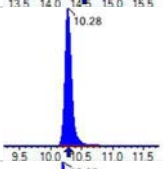  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 837390 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1815.5 | N/A | 4.8294 [ 4.0000 ] | 120.7% { 108.7% } | 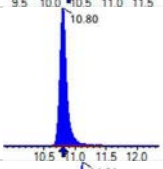  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1431759 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1901.3 | N/A | 22.9256 [ 20.0000 ] | 114.6% { 104.2% } | 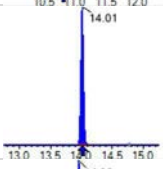  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1464004 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4722.6 | N/A | 23.0960 [ 20.0000 ] | 115.5% { 113.5% } | 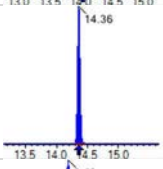  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068447 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2382.1 | N/A | 8.3913 [ 8.0000 ] | 104.9% { 104.5% } | 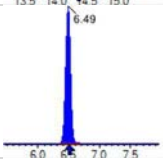  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 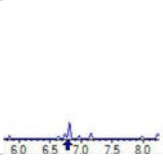 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 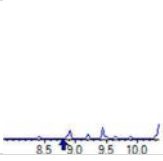 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (5)
Acquired: 2024/03/19 - 17:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26550<br>( 499.0 / 99.0 ) N/A | ( 9.89 , 0.94 ) ( -0.60 , N/A , #Value!) | 7.8 | N/A<br>0.0<br>0.0 | 0.0297 | N/A | 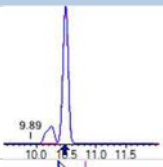 | 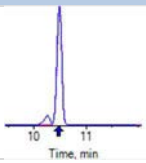 | |
| TDCA | ( 499.0 / 80.0 ) 7504397 | ( 7.03 , 0.67 ) ( N/A , #Value! , 0.0) | 33165.9 | N/A<br>0.0<br>0.0 | 12.3258 | N/A | 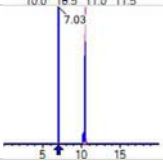 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.89 - 7.03 = 2.87 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | 0.125a | 0.065a | 0.80a | Ja |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.197a | 0.15a | 0.40a | MI3, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0970a | 0.064a | 0.40a | Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>18869<br>( 163.0 / 69.0 )<br>830 | ( 2.83 , 0.76 )<br>( N/A , 0.04 , -1.2) | 51.3<br>73.6 | 0.0440<br>162.0<br>167.0 | 0.0591 | N/A | 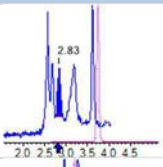 | 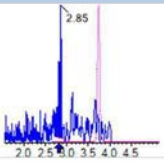 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 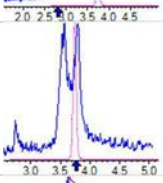 | | |
| PFPeA | ( 263.0 / 219.0 )<br>8344<br>( 263.0 / 69.0 )<br>141 | ( 4.78 , 0.99 )<br>( -0.03 , N/A , -2.7) | 39.4<br>6.3 | 0.0170<br>142.0<br>152.8 | 0.0313 | N/A | 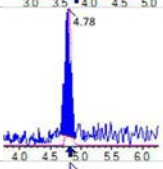 | 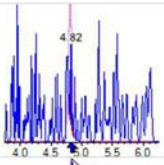 | |
| PFHxA | ( 313.0 / 269.0 )<br>4080<br>( 313.0 / 119.0 )<br>482 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , -0.8) | 26.4<br>11.8 | 0.1181<br>101.7<br>100.9 | 0.0133 | N/A | 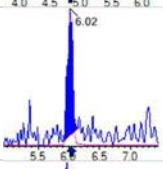 | 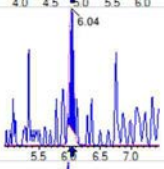 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 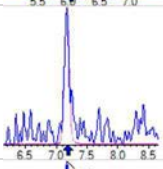 | 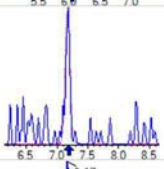 | |
| PFOA | ( 413.0 / 369.0 )<br>32923<br>( 413.0 / 169.0 )<br>11691 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.0) | 23.7<br>84.1 | 0.3551<br>97.1<br>103.4 | 0.0492 | N/A | 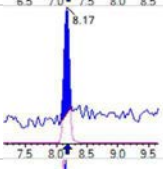 | 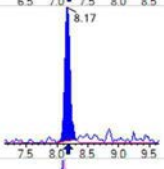 | MI3 ABK 3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 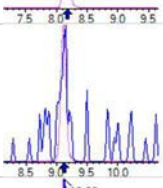 | 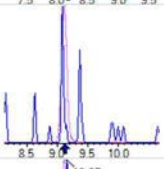 | |
| PFDA | ( 513.0 / 469.0 )<br>4474<br>( 513.0 / 169.0 )<br>582 | ( 10.03 , 1.00 )<br>( 0.01 , N/A , -2.8) | 67.5<br>83.6 | 0.1300<br>110.9<br>108.6 | 0.0132 | N/A | 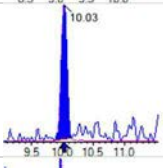 | 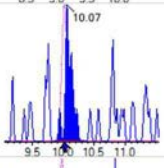 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 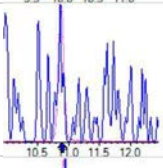 | 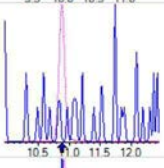 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 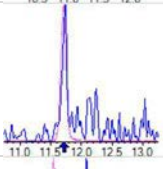 | 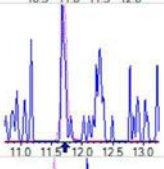 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 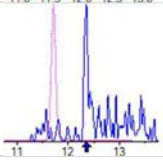 | 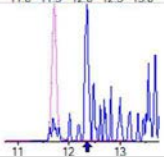 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 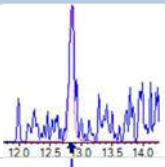 | 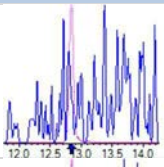 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 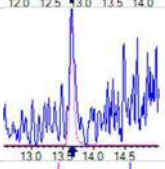 | 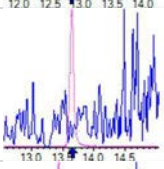 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 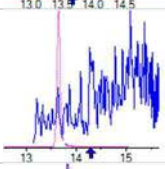 | 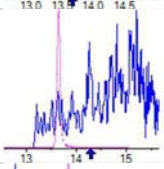 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 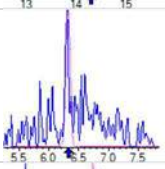 | 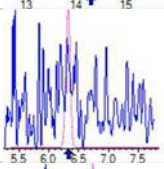 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 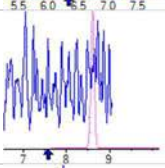 | 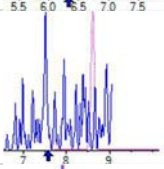 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 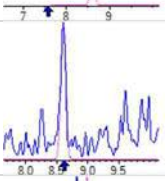 | 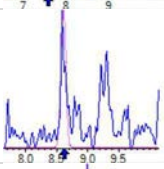 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 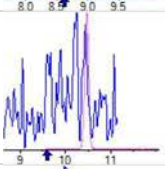 | 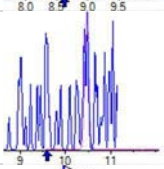 | |
| PFOS | ( 499.0 / 80.0 ) 23264<br>( 499.0 / 99.0 ) 4894 | ( 10.41 , 0.99 )<br>( -0.06 , N/A , -2.9) | 56.5<br>178.4 | 0.2104<br>90.0<br>87.6 | 0.0243 | N/A | 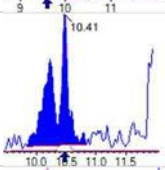 | 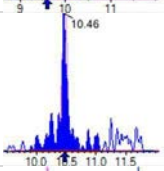 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 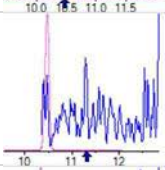 | 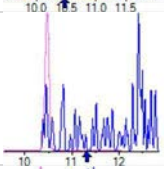 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 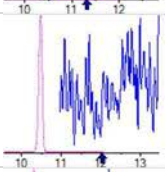 | 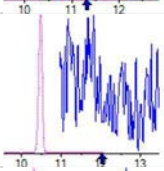 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 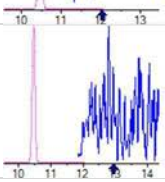 | 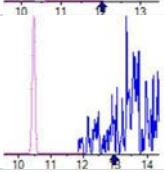 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 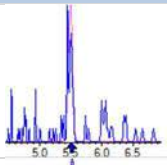 | 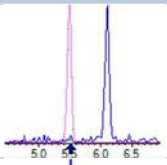 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 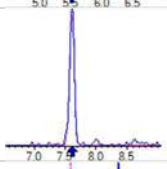 | 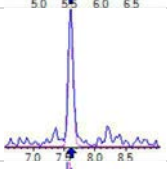 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 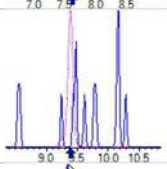 | 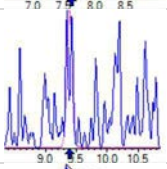 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18339<br>( 627.0 / 81.0 ) 23897 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.2) | 199.5<br>68.8 | 1.3031<br>90.5<br>89.3 | 0.0579 | N/A | 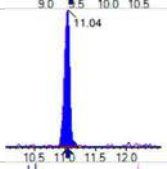 | 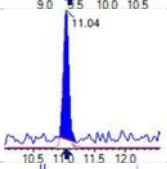 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 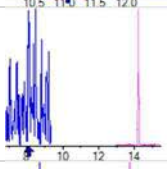 | 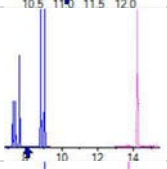 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 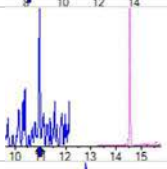 | 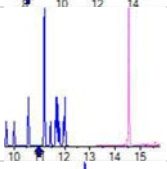 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 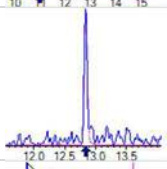 | 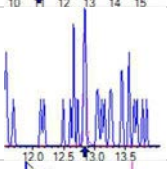 | |
| TFSI | ( 279.7 / 147.0 ) 37266<br>( 279.7 / 211.0 ) 3288 | ( 8.17 , 0.64 ) ( N/A , -0.01 , -0.1) | 22.6<br>10.6 | 0.0882<br>105.0<br>103.1 | 0.0250 | N/A | 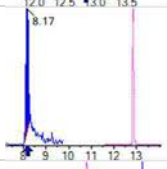 | 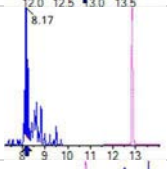 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 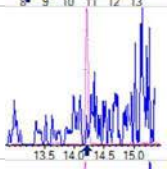 | 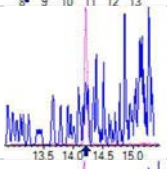 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 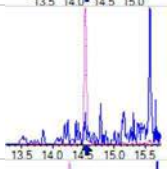 | 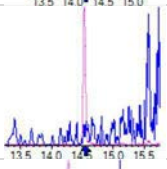 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 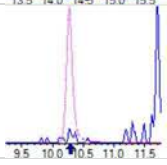 | 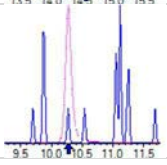 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 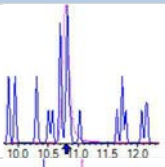 | 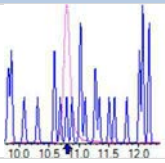 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 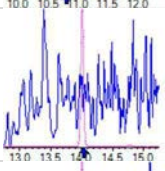 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 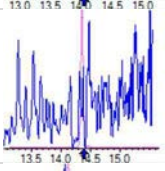 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 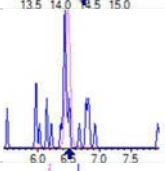 | 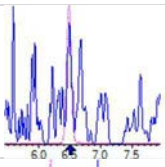 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 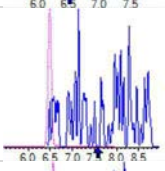 | 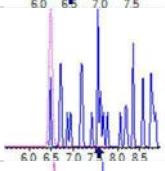 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 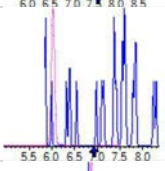 | 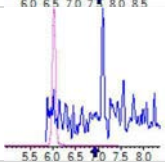 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 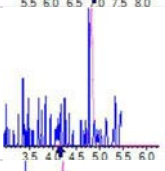 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 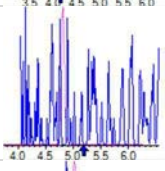 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 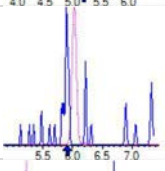 | 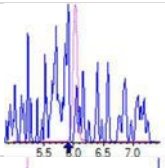 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 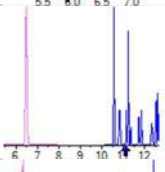 | 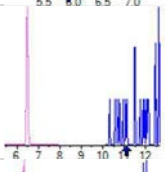 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 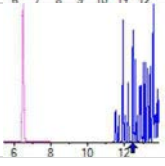 | 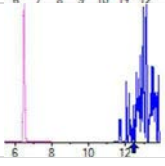 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 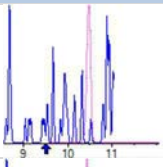 | 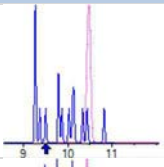 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 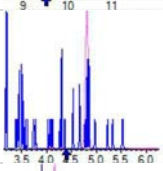 | 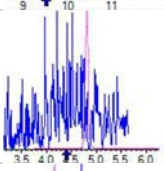 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 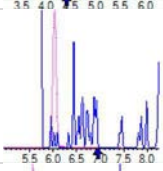 | 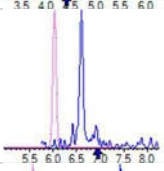 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 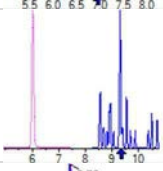 | 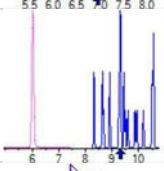 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 7894<br>( 357.2 / 243.0 ) 687 | ( 6.76 , 1.00 ) ( -0.01 , N/A , 0.0) | 73.0<br>14.7 | 0.0870<br>78.9<br>83.6 | 0.0241 | N/A | 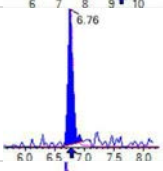 | 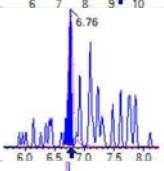 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 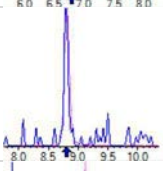 | 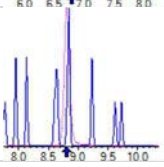 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 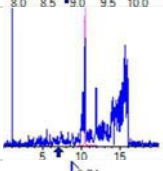 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 301695 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1263.5 | N/A | 1.2653 [ 1.0000 ] | 126.5% { 127.5% } | 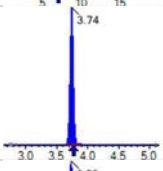 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 148385 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 132704.9 | N/A | 1.1697 [ 1.0000 ] | 117.0% { 117.2% } | 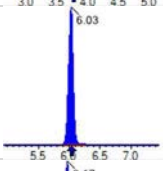 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 455871 | ( 8.17 , N/A ) ( N/A , -0.01 , N/A ) | 4804.6 | N/A | 1.1532 [ 1.0000 ] | 115.3% { 120.2% } | 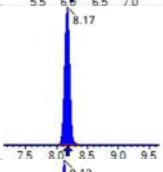 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 346446 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 932.8 | N/A | 1.2181 [ 1.0000 ] | 121.8% { 123.2% } | 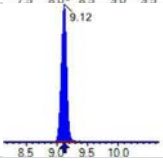 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 336363 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 3373.5 | N/A | 1.1518 [ 1.0000 ] | 115.2% { 116.3% } | 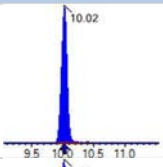 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1092779 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 5452.7 | N/A | 1.1515 [ 1.0000 ] | 115.1% { 117.1% } | 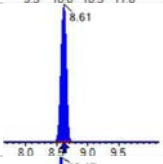 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 891333 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2064.7 | N/A | 1.1703 [ 1.0000 ] | 117.0% { 125.2% } | 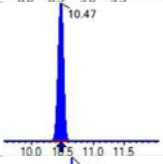 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2709380 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 41655.5 | N/A | 7.8612 [ 8.0000 ] | 98.3% { 121.0% } | 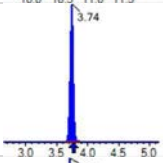 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1054301 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 5300.1 | N/A | 3.8080 [ 4.0000 ] | 95.2% { 108.0% } | 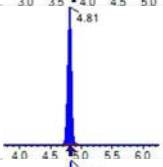 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 636903 | ( 6.03 , N/A ) ( N/A , -0.02 , N/A ) | 8114.4 | N/A | 1.8812 [ 2.0000 ] | 94.1% { 107.9% } | 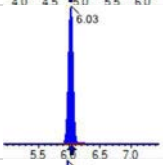 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 679691 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 6025.3 | N/A | 1.8048 [ 2.0000 ] | 90.2% { 103.5% } | 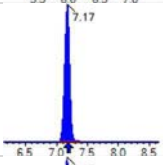 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 913079 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 3257.1 | N/A | 1.8693 [ 2.0000 ] | 93.5% { 105.9% } | 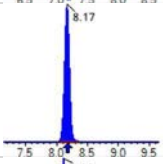 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 282753 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 2868.2 | N/A | 0.8324 [ 1.0000 ] | 83.2% { 104.8% } | 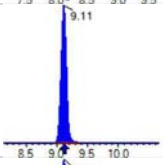 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 332274 | ( 10.02 , N/A ) ( N/A , -0.01 , N/A ) | 1265.6 | N/A | 0.8815 [ 1.0000 ] | 88.1% { 103.3% } | 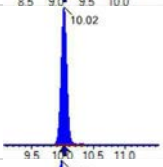 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 380512 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 883.1 | N/A | 0.8580 [ 1.0000 ] | 85.8% { 102.3% } | 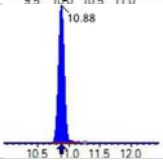 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0208-BLK1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 374351 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1501.2 | N/A | 0.8289 [ 1.0000 ] | 82.9% { 100.4% } | 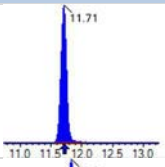  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 288773 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1224.7 | N/A | 0.7508 [ 1.0000 ] | 75.1% { 88.5% } | 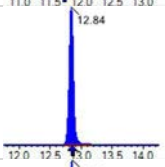  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 447847 | ( 13.65 , N/A ) ( N/A , -0.01 , N/A ) | 2668.3 | N/A | 1.3639 [ 2.0000 ] | 68.2% { 88.7% } | 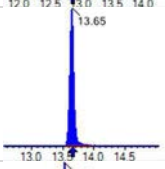  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1832360 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1101.5 | N/A | 1.8559 [ 2.0000 ] | 92.8% { 109.2% } | 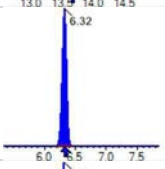  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1499935 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 3652.9 | N/A | 1.9033 [ 2.0000 ] | 95.2% { 113.8% } | 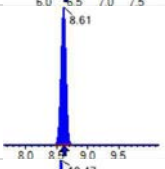  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1661220 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1734.7 | N/A | 1.7285 [ 2.0000 ] | 86.4% { 107.2% } | 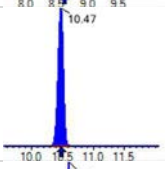  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 773701 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 91.9 | N/A | 4.5419 [ 4.0000 ] | 113.5% { 131.3% } | 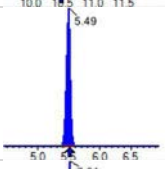  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1996233 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3869.3 | N/A | 3.9157 [ 4.0000 ] | 97.9% { 119.8% } | 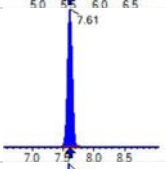  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1567213 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1509.1 | N/A | 3.9197 [ 4.0000 ] | 98.0% { 114.6% } | 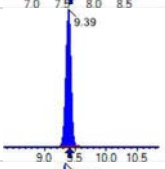  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3285759 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1452.1 | N/A | 7.8632 [ 8.0000 ] | 98.3% { 128.7% } | 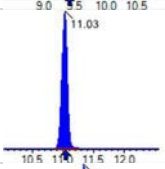  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1132908 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1684.7 | N/A | 1.3302 [ 2.0000 ] | 66.5% { 82.5% } | 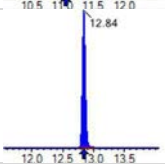  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 78591 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 781.3 | N/A | 0.4351 [ 2.0000 ] | 21.8% { 27.3% } | 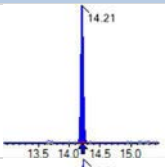  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 69020 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 646.0 | N/A | 0.3563 [ 2.0000 ] | 17.8% { 22.5% } | 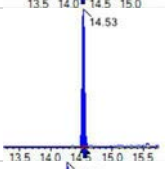  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 857040 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2549.7 | N/A | 3.4658 [ 4.0000 ] | 86.6% { 101.4% } | 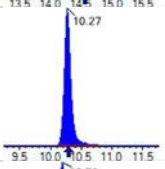  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 766900 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1816.0 | N/A | 3.4027 [ 4.0000 ] | 85.1% { 99.6% } | 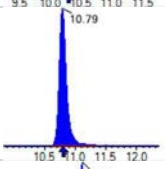  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 891958 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1921.6 | N/A | 10.9880 [ 20.0000 ] | 54.9% { 64.9% } | 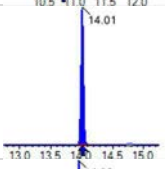  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 850189 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3449.8 | N/A | 10.3190 [ 20.0000 ] | 51.6% { 65.9% } | 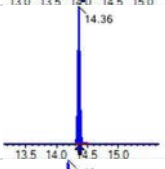  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1135121 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2081.2 | N/A | 7.3602 [ 8.0000 ] | 92.0% { 111.0% } | 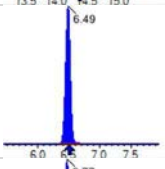  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 615006 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1124.4 | N/A | 1.6864 [ 2.0000 ] | 84.3% { 99.7% } | 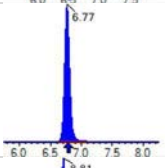  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 704029 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 831.6 | N/A | 2.1206 [ 2.0000 ] | 106.0% { 127.3% } | 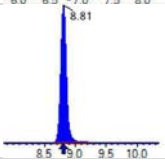  | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BS1a | File ID:a | S2024-03-18A (8)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 15:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.8a | 0.21a | 1.6a | |
| PFPeAa | 8.37a | 0.065a | 0.80a | |
| PFHxAa | 4.17a | 0.055a | 0.40a | |
| PFHpAa | 3.87a | 0.041a | 0.40a | |
| PFOAa | 4.07a | 0.15a | 0.40a | |
| PFNAa | 4.06a | 0.082a | 0.40a | |
| PFDAa | 3.94a | 0.10a | 0.40a | |
| PFUnAa | 4.01a | 0.16a | 0.40a | |
| PFDoAa | 3.97a | 0.11a | 0.40a | |
| PFTrDAa | 4.04a | 0.20a | 0.40a | |
| PFTeDAa | 3.93a | 0.20a | 0.40a | |
| PFHxDAa | 3.95a | 0.20a | 0.40a | |
| PFODAa | 3.42a | 0.20a | 0.40a | |
| PFBSa | 3.51a | 0.037a | 0.40a | |
| PFPeSa | 3.94a | 0.063a | 0.40a | |
| PFHxSa | 3.88a | 0.032a | 0.40a | |
| PFHpSa | 4.19a | 0.051a | 0.40a | |
| PFOSa | 3.89a | 0.064a | 0.40a | |
| PFNSa | 3.87a | 0.12a | 0.40a | |
| PFDSa | 3.70a | 0.15a | 0.40a | |
| PFDoSa | 3.62a | 0.12a | 0.40a | |
| 4:2FTSa | 16.1a | 0.29a | 1.6a | |
| 6:2FTSa | 15.5a | 0.31a | 1.6a | |
| 8:2FTSa | 16.4a | 0.082a | 1.6a | |
| 10:2FTSa | 18.5a | 0.40a | 1.6a | |
| PFOSAa | 4.27a | 0.10a | 0.40a | |
| NMeFOSAa | 19.4a | 0.47a | 1.6a | |
| NEtFOSAa | 15.9a | 0.41a | 1.6a | |
| NMeFOSAAa | 3.98a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BS1a | File ID:a | S2024-03-18A (8)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 15:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 14.7a | 1.0a | 1.6a | |
| NEtFOSEa | 15.9a | 1.0a | 1.6a | |
| HFPO-DAa | 3.98a | 0.17a | 0.80a | |
| ADONAa | 3.76a | 0.12a | 0.80a | |
| PFEESAa | 7.06a | 0.11a | 0.80a | |
| PFMPAa | 8.43a | 0.054a | 0.80a | |
| PFMBAa | 8.17a | 0.091a | 0.80a | |
| NFDHAa | 8.20a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.12a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 3.03a | 0.21a | 0.80a | |
| 3:3FTCAa | 16.6a | 0.57a | 1.6a | |
| 5:3FTCAa | 16.7a | 0.44a | 1.6a | |
| 7:3FTCAa | 17.7a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 734330<br>( 163.0 / 69.0 ) 18995 | ( 2.83 , 0.75 ) ( N/A , 0.06 , 0.0) | 2620.1<br>930.1 | 0.0259<br>103.2<br>98.9 | 2.2714<br>[ 2.0000 ] | 113.6% | 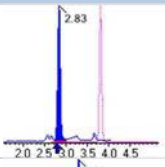 | 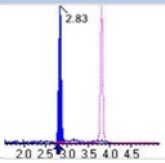 | |
| PFBA | ( 213.0 / 169.0 ) 1454068 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 2843.7 | N/A<br>0.0<br>0.0 | 4.2059<br>[ 4.0000 ] | 105.1% | 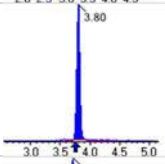 | | |
| PFPeA | ( 263.0 / 219.0 ) 636640<br>( 263.0 / 69.0 ) 7201 | ( 4.87 , 1.00 ) ( 0.00 , N/A , -0.1) | 1904.1<br>98.6 | 0.0113<br>103.0<br>96.8 | 2.0930<br>[ 2.0000 ] | 104.6% | 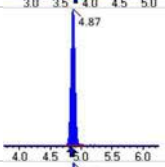 | 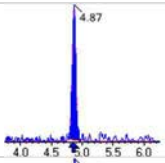 | |
| PFHxA | ( 313.0 / 269.0 ) 363770<br>( 313.0 / 119.0 ) 40313 | ( 6.07 , 1.00 ) ( 0.00 , N/A , -0.1) | 1280.6<br>485.6 | 0.1108<br>99.7<br>97.5 | 1.0425<br>[ 1.0000 ] | 104.2% | 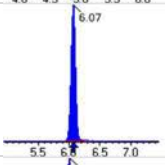 | 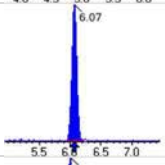 | |
| PFHpA | ( 363.0 / 319.0 ) 388981<br>( 363.0 / 169.0 ) 120752 | ( 7.21 , 1.00 ) ( 0.00 , N/A , 0.1) | 1228.5<br>939.2 | 0.3104<br>99.6<br>105.6 | 0.9680<br>[ 1.0000 ] | 96.8% | 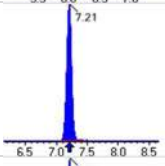 | 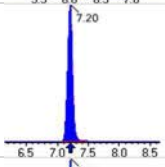 | |
| PFOA | ( 413.0 / 369.0 ) 557609<br>( 413.0 / 169.0 ) 196666 | ( 8.21 , 1.00 ) ( 0.00 , N/A , 0.0) | 447.2<br>857.4 | 0.3527<br>97.5<br>99.4 | 1.0184<br>[ 1.0000 ] | 101.8% | 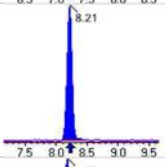 | 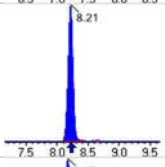 | |
| PFNA | ( 463.0 / 419.0 ) 371718<br>( 463.0 / 169.0 ) 91440 | ( 9.17 , 1.00 ) ( 0.00 , N/A , 0.2) | 1083.4<br>821.9 | 0.2460<br>93.7<br>100.0 | 1.0157<br>[ 1.0000 ] | 101.6% | 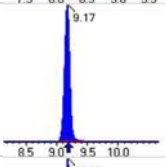 | 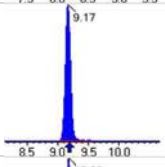 | |
| PFDA | ( 513.0 / 469.0 ) 410376<br>( 513.0 / 169.0 ) 48564 | ( 10.08 , 1.00 ) ( 0.00 , N/A , 0.3) | 1492.3<br>1662.9 | 0.1183<br>100.8<br>98.0 | 0.9861<br>[ 1.0000 ] | 98.6% | 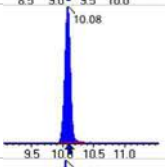 | 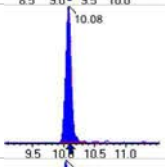 | |
| PFUnA | ( 563.0 / 519.0 ) 460132<br>( 563.0 / 169.0 ) 64562 | ( 10.94 , 1.00 ) ( 0.00 , N/A , 0.2) | 718.8<br>772.6 | 0.1403<br>94.7<br>97.0 | 1.0025<br>[ 1.0000 ] | 100.3% | 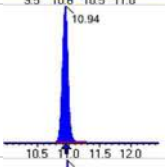 | 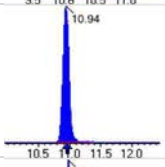 | |
| PFDoA | ( 613.0 / 569.0 ) 446280<br>( 613.0 / 169.0 ) 71605 | ( 11.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 1102.7<br>599.3 | 0.1604<br>101.5<br>104.9 | 0.9933<br>[ 1.0000 ] | 99.3% | 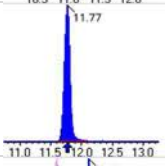 | 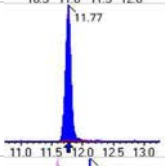 | |
| PFTrDA | ( 663.0 / 619.0 ) 436577<br>( 663.0 / 169.0 ) 114982 | ( 12.39 , 1.05 ) ( N/A , 0.00 , 0.0) | 982.0<br>690.4 | 0.2634<br>97.7<br>103.4 | 1.0107<br>[ 1.0000 ] | 101.1% | 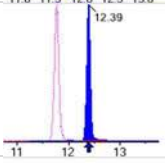 | 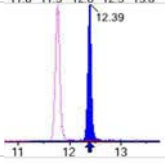 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 333756<br>( 713.0 / 169.0 ) 86539 | ( 12.88 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1181.6<br>548.7 | 0.2593<br>99.7<br>98.2 | 0.9832<br>[ 1.0000 ] | 98.3% | 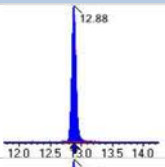 | 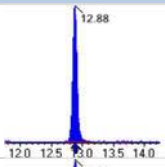 | |
| PFHxDA | ( 813.0 / 769.0 ) 244134<br>( 813.0 / 169.0 ) 64989 | ( 13.68 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1250.7<br>403.8 | 0.2662<br>122.7<br>104.5 | 0.9885<br>[ 1.0000 ] | 98.8% | 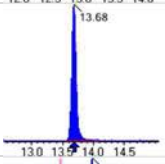 | 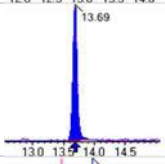 | |
| PFODA | ( 913.0 / 869.0 ) 141696<br>( 913.0 / 169.0 ) 50722 | ( 14.32 , 1.05 )<br>( N/A , 0.00 , 0.4) | 647.3<br>215.8 | 0.3580<br>93.7<br>107.9 | 0.8539<br>[ 1.0000 ] | 85.4% | 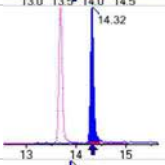 | 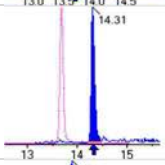 | |
| PFBS | ( 299.0 / 80.0 ) 518265<br>( 299.0 / 99.0 ) 388078 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1946.3<br>1563.9 | 0.7488<br>105.3<br>103.9 | 0.8785<br>[ 0.8847 ] | 99.3% | 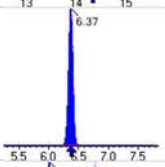 | 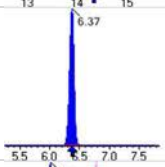 | |
| PFPeS | ( 349.0 / 80.0 ) 1314463<br>( 349.0 / 99.0 ) 442372 | ( 7.60 , 0.88 )<br>( N/A , -0.01 , 0.0) | 2211.1<br>1664.5 | 0.3365<br>99.0<br>98.1 | 0.9849<br>[ 0.9384 ] | 105.0% | 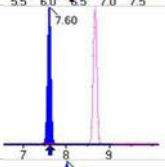 | 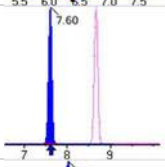 | |
| PFHxS | ( 399.0 / 80.0 ) 1440821<br>( 399.0 / 99.0 ) 465023 | ( 8.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2292.9<br>3365.5 | 0.3227<br>103.2<br>100.6 | 0.9707<br>[ 0.9110 ] | 106.6% | 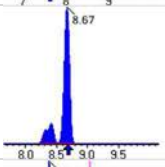 | 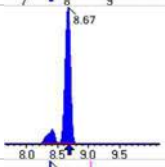 | |
| PFHpS | ( 449.0 / 80.0 ) 1277740<br>( 449.0 / 99.0 ) 334815 | ( 9.64 , 0.91 )<br>( N/A , -0.02 , 0.0) | 1536.6<br>1099.5 | 0.2620<br>98.1<br>97.5 | 1.0474<br>[ 0.9514 ] | 110.1% | 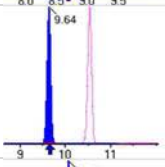 | 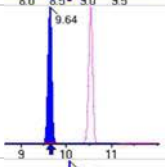 | |
| PFOS | ( 499.0 / 80.0 ) 1192429<br>( 499.0 / 99.0 ) 275896 | ( 10.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1567.2<br>3090.7 | 0.2314<br>97.8<br>105.6 | 0.9715<br>[ 0.9275 ] | 104.7% | 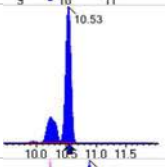 | 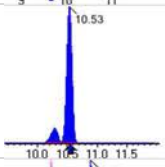 | |
| PFNS | ( 549.0 / 80.0 ) 1156662<br>( 549.0 / 99.0 ) 322559 | ( 11.37 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2025.5<br>1554.4 | 0.2789<br>105.0<br>101.7 | 0.9664<br>[ 0.9599 ] | 100.7% | 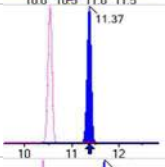 | 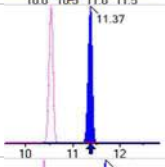 | |
| PFDS | ( 599.0 / 80.0 ) 1320853<br>( 599.0 / 99.0 ) 343707 | ( 12.08 , 1.15 )<br>( N/A , 0.00 , 0.0) | 2081.8<br>1467.0 | 0.2602<br>103.8<br>102.6 | 0.9259<br>[ 0.9631 ] | 96.1% | 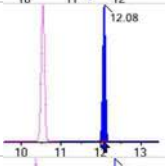 | 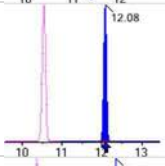 | |
| PFDoS | ( 699.0 / 80.0 ) 1104541<br>( 699.0 / 99.0 ) 269462 | ( 12.99 , 1.23 )<br>( N/A , 0.00 , 0.0) | 2787.8<br>2064.3 | 0.2440<br>105.8<br>107.8 | 0.9061<br>[ 0.9696 ] | 93.5% | 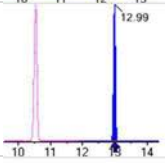 | 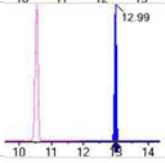 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1616072<br>( 327.0 / 81.0 ) 1472415 | ( 5.54 , 1.00 ) ( 0.00 , N/A , 0.1) | 4985.0<br>2611.6 | 0.9111<br>104.0<br>99.7 | 4.0295<br>[ 3.7381 ] | 107.8% | 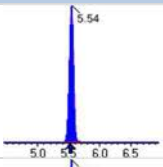 | 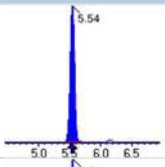 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1604354<br>( 427.0 / 81.0 ) 2023733 | ( 7.64 , 1.00 ) ( -0.01 , N/A , 0.0) | 3602.9<br>3047.8 | 1.2614<br>99.3<br>99.4 | 3.8676<br>[ 3.7962 ] | 101.9% | 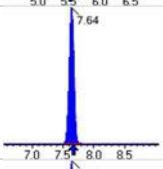 | 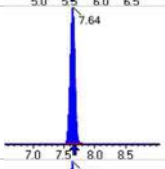 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1737160<br>( 527.0 / 81.0 ) 1896762 | ( 9.44 , 1.00 ) ( 0.00 , N/A , 0.4) | 1470.2<br>1729.7 | 1.0919<br>115.2<br>109.6 | 4.0907<br>[ 3.8332 ] | 106.7% | 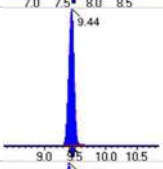 | 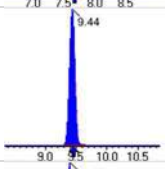 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1607645<br>( 627.0 / 81.0 ) 2056530 | ( 11.09 , 1.00 ) ( 0.01 , N/A , 0.1) | 1169.0<br>1125.4 | 1.2792<br>94.6<br>93.4 | 4.6238<br>[ 3.8647 ] | 119.6% | 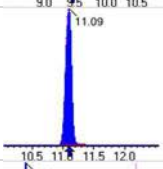 | 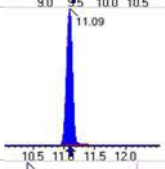 | |
| PFBSA | ( 297.9 / 78.0 ) 627573<br>( 297.9 / 278.0 ) 1064 | ( 8.06 , 0.57 ) ( N/A , 0.00 , -0.9) | 1084.6<br>12.6 | 0.0017<br>120.7<br>107.2 | 2.6201<br>[ 1.0000 ] | 262.0% | 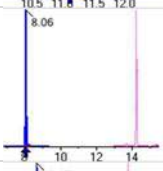 | 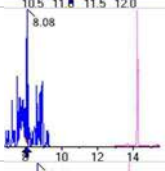 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 1041171<br>( 397.9 / 378.0 ) 4142 | ( 10.95 , 0.75 ) ( N/A , 0.00 , 0.4) | 1360.0<br>155.8 | 0.0040<br>104.5<br>95.0 | 3.9724<br>[ 1.0000 ] | 397.2% | 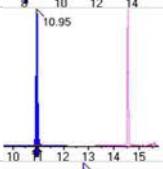 | 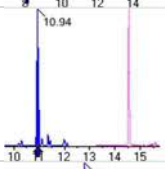 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 948122<br>( 498.0 / 478.0 ) 15463 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.0) | 1573.4<br>484.1 | 0.0163<br>113.0<br>119.1 | 1.0672<br>[ 1.0000 ] | 106.7% | 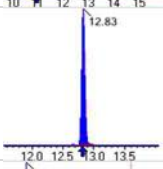 | 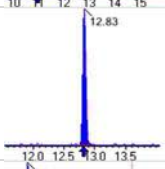 | |
| TFSI | ( 279.7 / 147.0 ) 2587033<br>( 279.7 / 211.0 ) 225514 | ( 8.24 , 0.64 ) ( N/A , -0.01 , 0.2) | 58.3<br>42.9 | 0.0872<br>105.7<br>102.5 | 1.3697<br>[ 0.9793 ] | 139.9% | 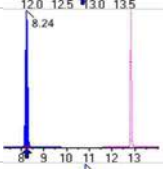 | 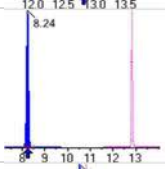 | |
| NMeFOSA | ( 512.0 / 219.0 ) 254806<br>( 512.0 / 169.0 ) 184466 | ( 14.20 , 1.00 ) ( -0.02 , N/A , 2.7) | 1309.3<br>1952.3 | 0.7239<br>98.5<br>94.8 | 4.8564<br>[ 4.0000 ] | 121.4% | 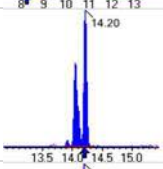 | 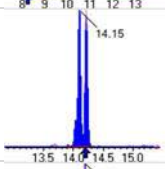 | |
| NEtFOSA | ( 526.0 / 219.0 ) 222463<br>( 526.0 / 169.0 ) 285853 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.5) | 1381.2<br>1194.9 | 1.2849<br>101.4<br>101.8 | 3.9672<br>[ 4.0000 ] | 99.2% | 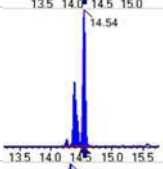 | 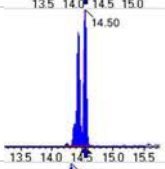 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 273292<br>( 570.0 / 483.0 ) 133704 | ( 10.33 , 1.00 ) ( 0.01 , N/A , 0.2) | 477.0<br>9263.3 | 0.4892<br>113.0<br>107.4 | 0.9942<br>[ 1.0000 ] | 99.4% | 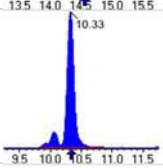 | 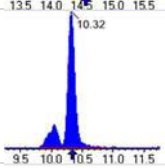 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 264203<br>( 584.0 / 526.0 ) 165344 | ( 10.85 , 1.00 ) ( 0.01 , N/A , 0.4) | 1385.8<br>661.5 | 0.6258<br>101.1<br>103.9 | 1.0307<br>[ 1.0000 ] | 103.1% | 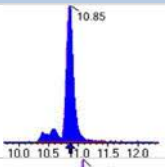 | 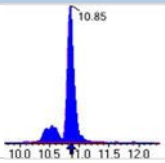 | |
| NMeFOSE | ( 616.0 / 59.0 ) 236095 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 895.9 | N/A<br>0.0<br>0.0 | 3.6716<br>[ 4.0000 ] | 91.8% | 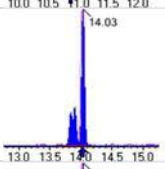 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 215172 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 1259.2 | N/A<br>0.0<br>0.0 | 3.9733<br>[ 4.0000 ] | 99.3% | 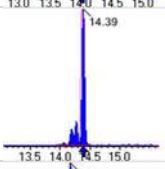 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 92007<br>( 285.0 / 185.0 ) 270517 | ( 6.52 , 1.00 ) ( 0.00 , N/A , -0.1) | 1333.5<br>1238.9 | 2.9402<br>94.4<br>106.1 | 0.9960<br>[ 1.0000 ] | 99.6% | 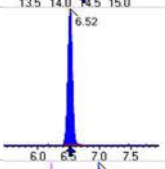 | 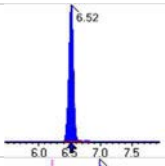 | |
| ADONA | ( 377.0 / 85.0 ) 1107358<br>( 377.0 / 251.0 ) 111506 | ( 7.60 , 1.16 ) ( N/A , -0.01 , 0.0) | 1996.5<br>613.6 | 0.1007<br>94.5<br>95.2 | 0.9412<br>[ 0.9427 ] | 99.8% | 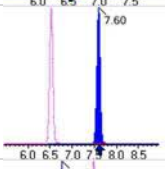 | 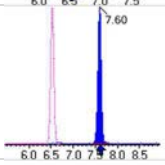 | |
| PFMPA | ( 229.0 / 85.0 ) 203039 | ( 4.19 , 0.86 ) ( N/A , 0.05 , 0.0) | 3215.9 | N/A<br>0.0<br>0.0 | 2.1083<br>[ 2.0000 ] | 105.4% | 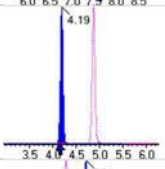 | | |
| PFMBA | ( 279.0 / 85.0 ) 520781 | ( 5.23 , 1.07 ) ( N/A , 0.02 , 0.0) | 3276.7 | N/A<br>0.0<br>0.0 | 2.0431<br>[ 2.0000 ] | 102.2% | 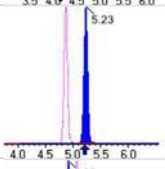 | | |
| NFDHA | ( 295.0 / 201.0 ) 248698<br>( 295.0 / 85.0 ) 263249 | ( 5.93 , 0.98 ) ( N/A , 0.01 , 0.1) | 2333.6<br>1551.5 | 1.0585<br>97.9<br>98.9 | 2.0502<br>[ 2.0000 ] | 102.5% | 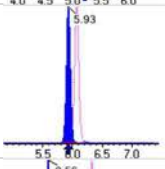 | 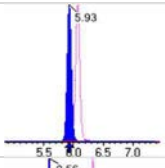 | |
| PFECHS | ( 461.0 / 98.9 ) 639468<br>( 461.0 / 381.2 ) 244098 | ( 9.56 , 0.91 ) ( N/A , -0.02 , 0.2) | 2682.0<br>2266.8 | 0.3817<br>97.8<br>97.6 | 0.9239<br>[ 0.9239 ] | 100.0% | 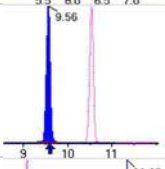 | 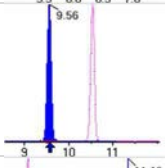 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1131020<br>( 533.0 / 353.0 ) 366128 | ( 11.18 , 1.71 ) ( N/A , -0.01 , 0.1) | 2601.2<br>1864.1 | 0.3237<br>100.7<br>104.0 | 0.7790<br>[ 0.9333 ] | 83.5% | 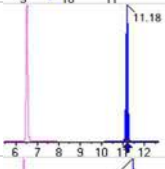 | 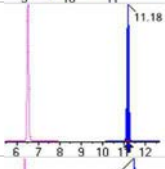 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 862256<br>( 633.0 / 453.0 ) 297692 | ( 12.49 , 1.91 ) ( N/A , -0.01 , 0.0) | 2825.2<br>1780.3 | 0.3452<br>105.7<br>104.1 | 0.7582<br>[ 0.9432 ] | 80.4% | 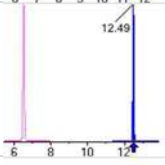 | 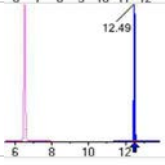 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 463254<br>( 315.0 / 83.0 ) 255769 | ( 6.96 , 1.15 )<br>( N/A , -0.01 , -0.1) | 2711.9<br>483.1 | 0.5521<br>96.4<br>93.4 | 1.7651<br>[ 1.7849 ] | 98.9% | 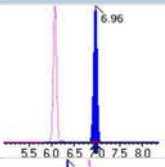 | 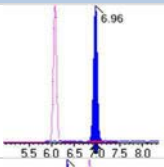 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 61479<br>( 241.0 / 117.0 ) 136160 | ( 4.42 , 0.91 )<br>( N/A , 0.05 , 0.1) | 1260.5<br>505.4 | 2.2147<br>99.8<br>99.5 | 4.1604<br>[ 4.0000 ] | 104.0% | 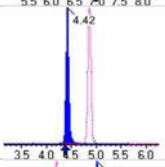 | 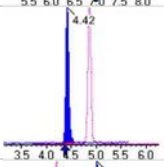 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 352311<br>( 341.0 / 217.0 ) 525542 | ( 6.93 , 1.14 )<br>( N/A , 0.00 , 0.0) | 1213.2<br>750.5 | 1.4917<br>99.6<br>97.3 | 4.1657<br>[ 4.0000 ] | 104.1% | 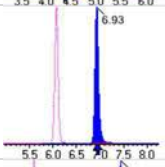 | 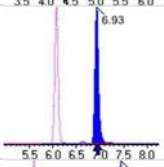 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 550545<br>( 441.0 / 337.0 ) 482699 | ( 9.32 , 1.54 )<br>( N/A , -0.01 , 0.0) | 4322.9<br>28587.3 | 0.8768<br>98.5<br>101.2 | 4.4252<br>[ 4.0000 ] | 110.6% | 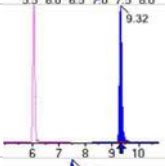 | 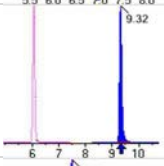 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 354922<br>( 357.2 / 243.0 ) 34389 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1142.8<br>270.3 | 0.0969<br>91.8<br>90.7 | 1.1689<br>[ 1.0000 ] | 116.9% | 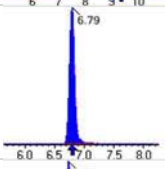 | 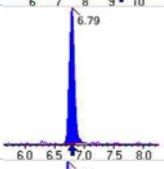 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 285993<br>( 457.2 / 343.0 ) 12618 | ( 8.84 , 1.00 )<br>( -0.01 , N/A , 0.8) | 701.8<br>182.8 | 0.0441<br>112.8<br>116.1 | 1.1593<br>[ 1.0000 ] | 115.9% | 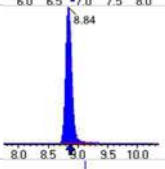 | 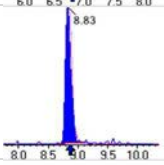 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 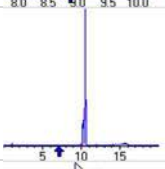 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 351985 | ( 3.80 , N/A )<br>( N/A , 0.05 , N/A ) | 1308.7 | N/A | 1.1684<br>[ 1.0000 ] | 116.8%<br>{ 104.0% } | 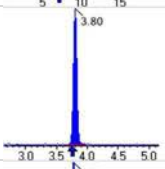 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 172324 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 18413.6 | N/A | 1.1207<br>[ 1.0000 ] | 112.1%<br>{ 101.1% } | 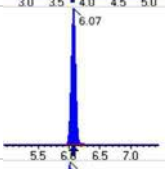 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 536571 | ( 8.22 , N/A )<br>( N/A , -0.01 , N/A ) | 3406.7 | N/A | 1.2027<br>[ 1.0000 ] | 120.3%<br>{ 109.9% } | 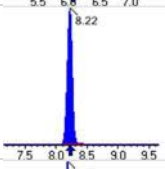 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 391650 | ( 9.17 , N/A )<br>( N/A , -0.02 , N/A ) | 1016.6 | N/A | 1.1716<br>[ 1.0000 ] | 117.2%<br>{ 101.8% } | 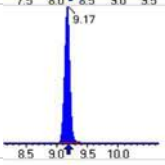 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 399787 | ( 10.08 , N/A ) ( N/A , -0.01 , N/A ) | 6137.3 | N/A | 1.2055 [ 1.0000 ] | 120.6% { 105.9% } | 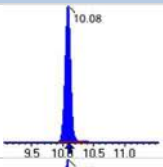 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1294241 | ( 8.67 , N/A ) ( N/A , -0.02 , N/A ) | 5332.3 | N/A | 1.1582 [ 1.0000 ] | 115.8% { 103.3% } | 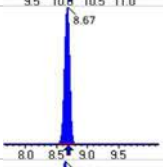 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1111159 | ( 10.54 , N/A ) ( N/A , -0.01 , N/A ) | 2954.8 | N/A | 1.1383 [ 1.0000 ] | 113.8% { 105.0% } | 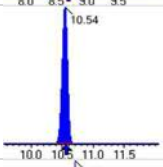 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2923468 | ( 3.80 , N/A ) ( N/A , 0.06 , N/A ) | 57699.2 | N/A | 7.5317 [ 8.0000 ] | 94.1% { 102.9% } | 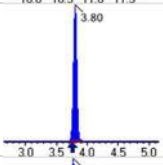 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1195186 | ( 4.87 , N/A ) ( N/A , 0.03 , N/A ) | 5992.3 | N/A | 3.8661 [ 4.0000 ] | 96.7% { 93.3% } | 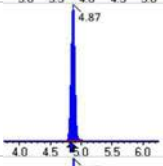 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 720273 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 9995.6 | N/A | 1.9467 [ 2.0000 ] | 97.3% { 95.0% } | 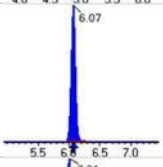 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 816048 | ( 7.21 , N/A ) ( N/A , -0.01 , N/A ) | 4462.3 | N/A | 2.1117 [ 2.0000 ] | 105.6% { 99.4% } | 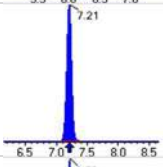 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1076825 | ( 8.22 , N/A ) ( N/A , -0.01 , N/A ) | 3205.1 | N/A | 1.9034 [ 2.0000 ] | 95.2% { 99.1% } | 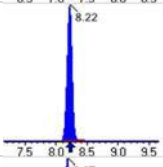 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 365210 | ( 9.17 , N/A ) ( N/A , -0.02 , N/A ) | 3336.5 | N/A | 0.9657 [ 1.0000 ] | 96.6% { 96.6% } | 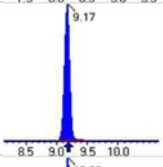 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 417850 | ( 10.08 , N/A ) ( N/A , -0.01 , N/A ) | 1102.3 | N/A | 0.9057 [ 1.0000 ] | 90.6% { 88.7% } | 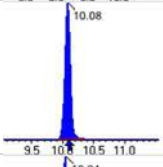 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 491508 | ( 10.94 , N/A ) ( N/A , -0.01 , N/A ) | 904.6 | N/A | 0.8763 [ 1.0000 ] | 87.6% { 96.9% } | 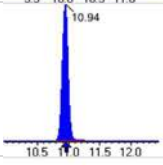 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 438963 | ( 11.77 , N/A ) ( N/A , -0.01 , N/A ) | 1368.8 | N/A | 0.7793 [ 1.0000 ] | 77.9% { 84.6% } | 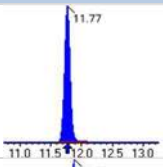  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 357457 | ( 12.88 , N/A ) ( N/A , 0.00 , N/A ) | 1374.5 | N/A | 0.7283 [ 1.0000 ] | 72.8% { 80.7% } | 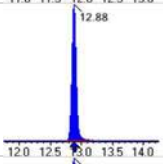  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 511800 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2004.4 | N/A | 1.2276 [ 2.0000 ] | 61.4% { 63.6% } | 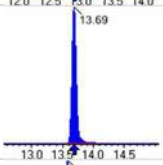  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2268986 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 1097.1 | N/A | 1.7993 [ 2.0000 ] | 90.0% { 95.2% } | 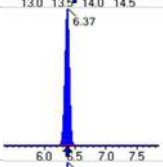  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1676229 | ( 8.67 , N/A ) ( N/A , -0.01 , N/A ) | 4098.2 | N/A | 1.7699 [ 2.0000 ] | 88.5% { 95.1% } | 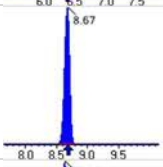  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2123456 | ( 10.54 , N/A ) ( N/A , -0.01 , N/A ) | 2097.5 | N/A | 1.7951 [ 2.0000 ] | 89.8% { 95.2% } | 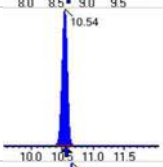  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 595779 | ( 5.55 , N/A ) ( N/A , 0.01 , N/A ) | 92.4 | N/A | 5.2862 [ 4.0000 ] | 132.2% { 107.7% } | 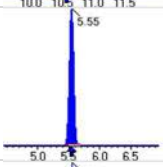  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1867804 | ( 7.65 , N/A ) ( N/A , -0.01 , N/A ) | 3458.9 | N/A | 5.3366 [ 4.0000 ] | 133.4% { 114.7% } | 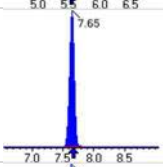  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1714451 | ( 9.44 , N/A ) ( N/A , -0.02 , N/A ) | 2111.3 | N/A | 4.9168 [ 4.0000 ] | 122.9% { 100.5% } | 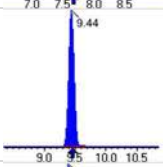  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3380485 | ( 11.08 , N/A ) ( N/A , -0.01 , N/A ) | 1455.8 | N/A | 8.4457 [ 8.0000 ] | 105.6% { 91.1% } | 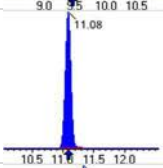  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1820685 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2093.7 | N/A | 1.4203 [ 2.0000 ] | 71.0% { 75.2% } | 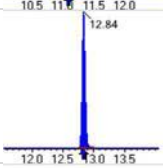  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 104185 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 903.3 | N/A | 0.4401 [ 2.0000 ] | 22.0% { 24.4% } | 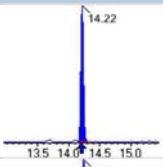  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 102206 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 829.4 | N/A | 0.3759 [ 2.0000 ] | 18.8% { 21.1% } | 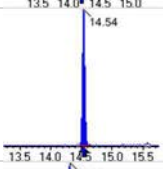  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1167535 | ( 10.32 , N/A ) ( N/A , -0.01 , N/A ) | 3034.7 | N/A | 3.8541 [ 4.0000 ] | 96.4% { 88.4% } | 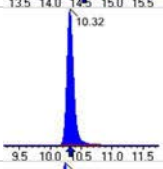  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1062912 | ( 10.84 , N/A ) ( N/A , -0.01 , N/A ) | 1936.8 | N/A | 3.6964 [ 4.0000 ] | 92.4% { 86.3% } | 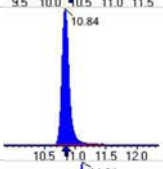  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1136042 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2323.6 | N/A | 10.2712 [ 20.0000 ] | 51.4% { 61.1% } | 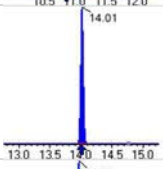  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1225807 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4029.2 | N/A | 9.1488 [ 20.0000 ] | 45.7% { 58.5% } | 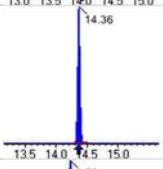  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1301850 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2537.1 | N/A | 8.1855 [ 8.0000 ] | 102.3% { 92.7% } | 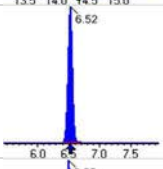  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 564986 | ( 6.80 , N/A ) ( N/A , -0.01 , N/A ) | 1023.8 | N/A | 1.5934 [ 2.0000 ] | 79.7% { 79.4% } | 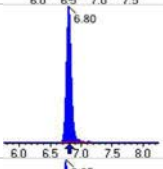  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 585027 | ( 8.85 , N/A ) ( N/A , -0.02 , N/A ) | 846.2 | N/A | 1.7673 [ 2.0000 ] | 88.4% { 87.4% } | 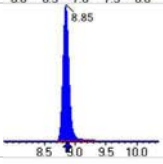  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MRL1a | File ID:a | S2024-03-18A (9)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:14a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 3.29a | 0.21a | 1.6a | |
| PFPeAa | 1.54a | 0.065a | 0.80a | |
| PFHxAa | 0.724a | 0.055a | 0.40a | |
| PFHpAa | 0.780a | 0.041a | 0.40a | |
| PFOAa | 0.959a | 0.15a | 0.40a | MI4a |
| PFNAa | 0.780a | 0.082a | 0.40a | |
| PFDAa | 0.827a | 0.10a | 0.40a | |
| PFUnAa | 0.774a | 0.16a | 0.40a | |
| PFDoAa | 0.755a | 0.11a | 0.40a | |
| PFTrDAa | 0.754a | 0.20a | 0.40a | |
| PFTeDAa | 0.791a | 0.20a | 0.40a | |
| PFHxDAa | 0.973a | 0.20a | 0.40a | |
| PFODAa | 0.829a | 0.20a | 0.40a | |
| PFBSa | 0.691a | 0.037a | 0.40a | |
| PFPeSa | 0.779a | 0.063a | 0.40a | |
| PFHxSa | 0.752a | 0.032a | 0.40a | |
| PFHpSa | 0.774a | 0.051a | 0.40a | |
| PFOSa | 0.776a | 0.064a | 0.40a | |
| PFNSa | 0.707a | 0.12a | 0.40a | |
| PFDSa | 0.716a | 0.15a | 0.40a | |
| PFDoSa | 0.662a | 0.12a | 0.40a | |
| 4:2FTSa | 3.05a | 0.29a | 1.6a | |
| 6:2FTSa | 3.03a | 0.31a | 1.6a | |
| 8:2FTSa | 2.97a | 0.082a | 1.6a | |
| 10:2FTSa | 4.19a | 0.40a | 1.6a | |
| PFOSAa | 0.781a | 0.10a | 0.40a | |
| NMeFOSAa | 3.56a | 0.47a | 1.6a | |
| NEtFOSAa | 3.01a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.774a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0076a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MRL1a | File ID:a | S2024-03-18A (9)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:14a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 3.09a | 1.0a | 1.6a | |
| NEtFOSEa | 3.18a | 1.0a | 1.6a | |
| HFPO-DAa | 0.816a | 0.17a | 0.80a | |
| ADONAa | 0.749a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.36a | 0.11a | 0.80a | |
| PFMPAa | 1.52a | 0.054a | 0.80a | |
| PFMBAa | 1.48a | 0.091a | 0.80a | |
| NFDHAa | 1.51a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.648a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.636a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 3.07a | 0.57a | 1.6a | |
| 5:3FTCAa | 3.11a | 0.44a | 1.6a | |
| 7:3FTCAa | 3.27a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 173585<br>( 163.0 / 69.0 ) 4542 | ( 2.82 , 0.75 )<br>( N/A , 0.05 , -0.1) | 816.2<br>220.4 | 0.0262<br>104.4<br>100.0 | 0.5387<br>[ 0.4000 ] | 134.7% | 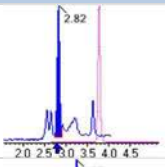 | 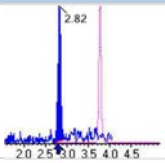 | |
| PFBA | ( 213.0 / 169.0 ) 283001 | ( 3.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 490.7 | N/A<br>0.0<br>0.0 | 0.8213<br>[ 0.8000 ] | 102.7% | 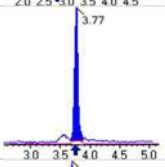 | | |
| PFPeA | ( 263.0 / 219.0 ) 122854<br>( 263.0 / 69.0 ) 1382 | ( 4.85 , 1.00 )<br>( 0.00 , N/A , 0.4) | 541.7<br>21.2 | 0.0112<br>102.4<br>96.2 | 0.3846<br>[ 0.4000 ] | 96.2% | 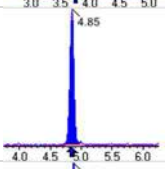 | 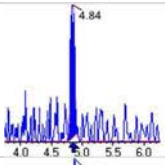 | |
| PFHxA | ( 313.0 / 269.0 ) 65828<br>( 313.0 / 119.0 ) 7903 | ( 6.07 , 1.00 )<br>( 0.00 , N/A , -0.2) | 349.0<br>218.4 | 0.1201<br>108.1<br>105.7 | 0.1811<br>[ 0.2000 ] | 90.5% | 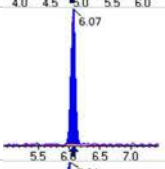 | 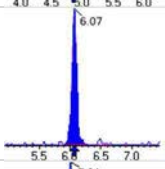 | |
| PFHpA | ( 363.0 / 319.0 ) 76910<br>( 363.0 / 169.0 ) 24450 | ( 7.21 , 1.00 )<br>( 0.00 , N/A , -0.1) | 431.7<br>301.1 | 0.3179<br>102.0<br>108.1 | 0.1949<br>[ 0.2000 ] | 97.5% | 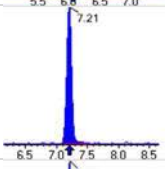 | 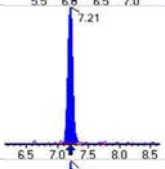 | |
| PFOA | ( 413.0 / 369.0 ) 129039<br>( 413.0 / 169.0 ) 50602 | ( 8.21 , 1.00 )<br>( 0.00 , N/A , 0.0) | 193.7<br>299.3 | 0.3921<br>108.4<br>110.5 | 0.2398<br>[ 0.2000 ] | 119.9% | 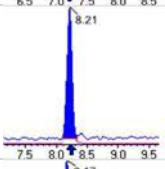 | 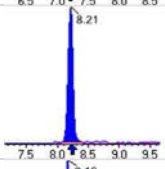 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 ) 71719<br>( 463.0 / 169.0 ) 18414 | ( 9.17 , 1.00 )<br>( 0.00 , N/A , 0.4) | 446.8<br>307.8 | 0.2568<br>97.8<br>104.3 | 0.1950<br>[ 0.2000 ] | 97.5% | 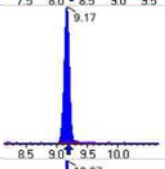 | 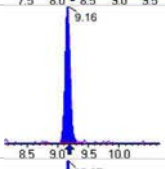 | |
| PFDA | ( 513.0 / 469.0 ) 88038<br>( 513.0 / 169.0 ) 10103 | ( 10.07 , 1.00 )<br>( 0.00 , N/A , -0.2) | 579.0<br>1959.4 | 0.1148<br>97.8<br>95.0 | 0.2067<br>[ 0.2000 ] | 103.4% | 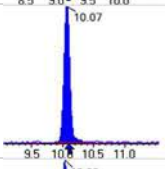 | 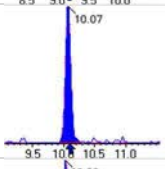 | |
| PFUnA | ( 563.0 / 519.0 ) 87337<br>( 563.0 / 169.0 ) 12157 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 362.7<br>149.4 | 0.1392<br>94.0<br>96.2 | 0.1935<br>[ 0.2000 ] | 96.7% | 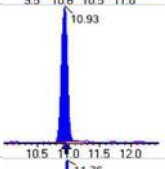 | 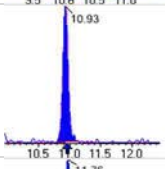 | |
| PFDoA | ( 613.0 / 569.0 ) 90922<br>( 613.0 / 169.0 ) 14972 | ( 11.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 455.5<br>172.2 | 0.1647<br>104.1<br>107.7 | 0.1888<br>[ 0.2000 ] | 94.4% | 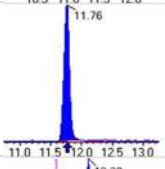 | 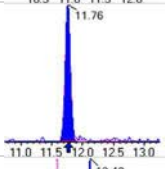 | |
| PFTrDA | ( 663.0 / 619.0 ) 87282<br>( 663.0 / 169.0 ) 22134 | ( 12.39 , 1.05 )<br>( N/A , 0.00 , -0.6) | 464.1<br>255.6 | 0.2536<br>94.1<br>99.6 | 0.1885<br>[ 0.2000 ] | 94.3% | 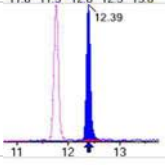 | 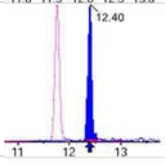 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 66925<br>( 713.0 / 169.0 ) 18367 | ( 12.89 , 1.00 )<br>( 0.00 , N/A , 0.1) | 359.2<br>199.1 | 0.2744<br>105.6<br>103.9 | 0.1978<br>[ 0.2000 ] | 98.9% | 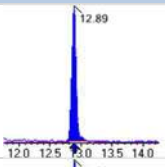 | 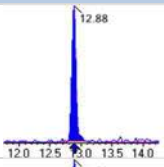 | |
| PFHxDA | ( 813.0 / 769.0 ) 56030<br>( 813.0 / 169.0 ) 13457 | ( 13.69 , 1.00 )<br>( -0.01 , N/A , 0.1) | 376.4<br>122.6 | 0.2402<br>110.7<br>94.3 | 0.2433<br>[ 0.2000 ] | 121.7% | 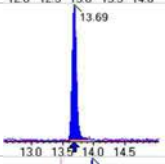 | 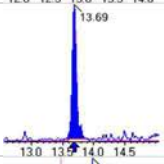 | |
| PFODA | ( 913.0 / 869.0 ) 32061<br>( 913.0 / 169.0 ) 11213 | ( 14.32 , 1.05 )<br>( N/A , 0.00 , -0.3) | 179.1<br>61.5 | 0.3497<br>91.6<br>105.4 | 0.2072<br>[ 0.2000 ] | 103.6% | 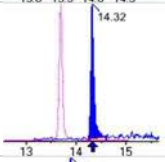 | 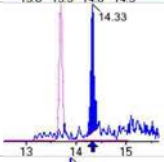 | |
| PFBS | ( 299.0 / 80.0 ) 98466<br>( 299.0 / 99.0 ) 73185 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.1) | 512.0<br>358.4 | 0.7433<br>104.5<br>103.1 | 0.1728<br>[ 0.1769 ] | 97.6% | 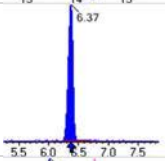 | 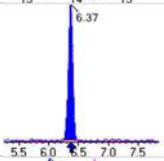 | |
| PFPeS | ( 349.0 / 80.0 ) 262829<br>( 349.0 / 99.0 ) 88678 | ( 7.60 , 0.88 )<br>( N/A , -0.01 , 0.0) | 823.5<br>610.8 | 0.3374<br>99.2<br>98.3 | 0.1948<br>[ 0.1877 ] | 103.8% | 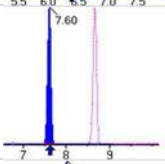 | 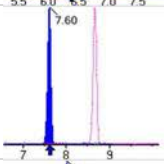 | |
| PFHxS | ( 399.0 / 80.0 ) 282283<br>( 399.0 / 99.0 ) 86978 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1027.1<br>1997.7 | 0.3081<br>98.5<br>96.0 | 0.1881<br>[ 0.1822 ] | 103.3% | 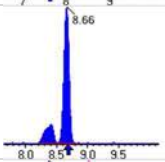 | 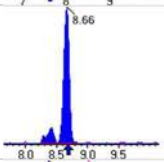 | |
| PFHpS | ( 449.0 / 80.0 ) 245944<br>( 449.0 / 99.0 ) 61438 | ( 9.63 , 0.91 )<br>( N/A , -0.03 , 0.2) | 728.3<br>433.1 | 0.2498<br>93.5<br>93.0 | 0.1935<br>[ 0.1903 ] | 101.7% | 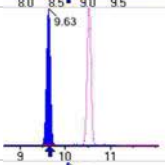 | 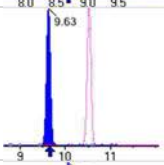 | |
| PFOS | ( 499.0 / 80.0 ) 248020<br>( 499.0 / 99.0 ) 55419 | ( 10.53 , 1.00 )<br>( 0.00 , N/A , -0.2) | 709.6<br>5405.6 | 0.2234<br>94.5<br>102.0 | 0.1940<br>[ 0.1855 ] | 104.6% | 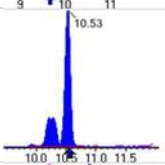 | 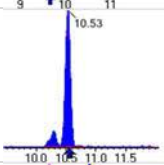 | |
| PFNS | ( 549.0 / 80.0 ) 220441<br>( 549.0 / 99.0 ) 58614 | ( 11.36 , 1.08 )<br>( N/A , -0.02 , 0.0) | 844.7<br>462.1 | 0.2659<br>100.1<br>97.0 | 0.1768<br>[ 0.1920 ] | 92.1% | 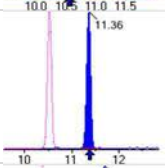 | 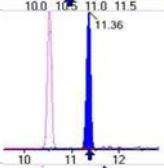 | |
| PFDS | ( 599.0 / 80.0 ) 266115<br>( 599.0 / 99.0 ) 71015 | ( 12.08 , 1.15 )<br>( N/A , 0.00 , 0.2) | 802.8<br>573.3 | 0.2669<br>106.4<br>105.2 | 0.1791<br>[ 0.1926 ] | 93.0% | 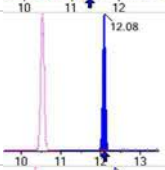 | 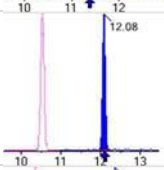 | |
| PFDoS | ( 699.0 / 80.0 ) 210059<br>( 699.0 / 99.0 ) 48239 | ( 12.99 , 1.23 )<br>( N/A , 0.00 , -0.3) | 1155.7<br>528.2 | 0.2296<br>99.6<br>101.5 | 0.1654<br>[ 0.1939 ] | 85.3% | 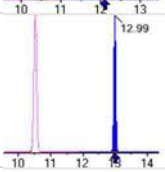 | 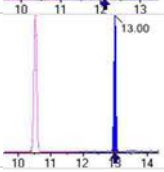 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 322015<br>( 327.0 / 81.0 ) 298078 | ( 5.53 , 1.00 ) ( 0.00 , N/A , 0.0) | 2778.8<br>1079.5 | 0.9257<br>105.7<br>101.2 | 0.7613<br>[ 0.7476 ] | 101.8% | 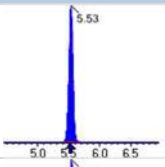 | 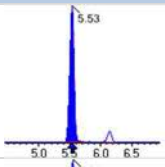 | |
| 6:2FTS | ( 427.0 / 407.0 ) 347337<br>( 427.0 / 81.0 ) 441339 | ( 7.64 , 1.00 ) ( -0.01 , N/A , -0.3) | 2720.9<br>1954.1 | 1.2706<br>100.0<br>100.1 | 0.7568<br>[ 0.7592 ] | 99.7% | 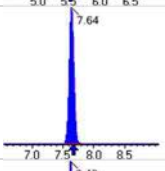 | 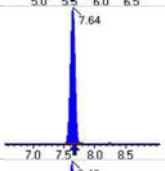 | |
| 8:2FTS | ( 527.0 / 507.0 ) 363025<br>( 527.0 / 81.0 ) 360062 | ( 9.43 , 1.00 ) ( -0.01 , N/A , 0.0) | 1506.2<br>1216.0 | 0.9918<br>104.6<br>99.5 | 0.7418<br>[ 0.7666 ] | 96.8% | 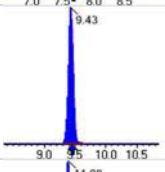 | 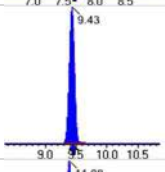 | |
| 10:2FTS | ( 627.0 / 607.0 ) 348053<br>( 627.0 / 81.0 ) 465665 | ( 11.08 , 1.00 ) ( 0.00 , N/A , -0.1) | 1124.9<br>759.3 | 1.3379<br>99.0<br>97.7 | 1.0481<br>[ 0.7729 ] | 135.6% | 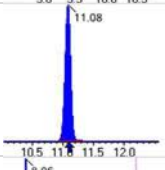 | 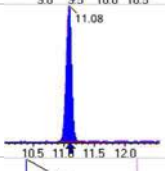 | |
| PFBSA | ( 297.9 / 78.0 ) 115851<br>( 297.9 / 278.0 ) 415 | ( 8.06 , 0.57 ) ( N/A , 0.00 , 1.0) | 511.0<br>12.0 | 0.0036<br>255.0<br>226.3 | 0.4403<br>[ 0.2000 ] | 220.1% | 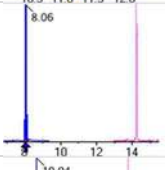 | 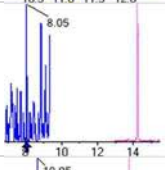 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 186308<br>( 397.9 / 378.0 ) 618 | ( 10.94 , 0.75 ) ( N/A , 0.00 , -0.5) | 703.2<br>22.2 | 0.0033<br>87.1<br>79.2 | 0.6601<br>[ 0.2000 ] | 330.1% | 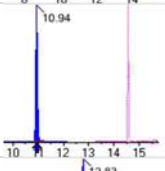 | 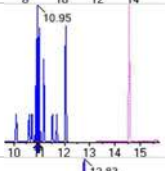 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 173836<br>( 498.0 / 478.0 ) 2638 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.3) | 1107.7<br>117.8 | 0.0152<br>105.2<br>110.8 | 0.1953<br>[ 0.2000 ] | 97.7% | 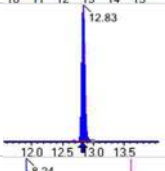 | 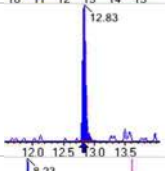 | |
| TFSI | ( 279.7 / 147.0 ) 557104<br>( 279.7 / 211.0 ) 46380 | ( 8.24 , 0.64 ) ( N/A , -0.01 , 0.1) | 52.6<br>27.5 | 0.0833<br>101.0<br>97.9 | 0.2945<br>[ 0.1959 ] | 150.3% | 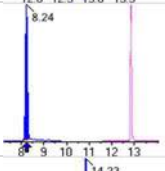 | 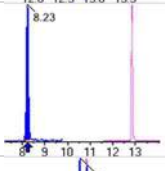 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 51354<br>( 512.0 / 169.0 ) 37652 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.5) | 508.0<br>507.4 | 0.7332<br>99.8<br>96.0 | 0.8910<br>[ 0.8000 ] | 111.4% | 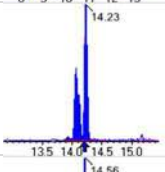 | 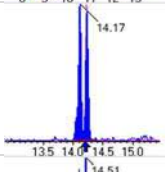 | |
| NEtFOSA | ( 526.0 / 219.0 ) 45401<br>( 526.0 / 169.0 ) 55920 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 2.6) | 456.7<br>365.2 | 1.2317<br>97.2<br>97.6 | 0.7519<br>[ 0.8000 ] | 94.0% | 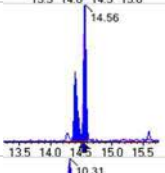 | 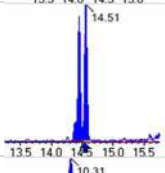 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 52574<br>( 570.0 / 483.0 ) 26319 | ( 10.31 , 1.00 ) ( 0.01 , N/A , 0.2) | 30723.5<br>254.1 | 0.5006<br>115.6<br>109.9 | 0.1936<br>[ 0.2000 ] | 96.8% | 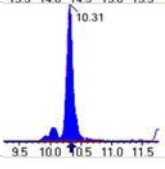 | 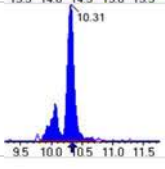 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 53748<br>( 584.0 / 526.0 ) 33376 | ( 10.84 , 1.00 ) ( 0.01 , N/A , 0.1) | 228637.3<br>292.9 | 0.6210<br>100.3<br>103.1 | 0.1965<br>[ 0.2000 ] | 98.3% | 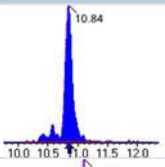 | 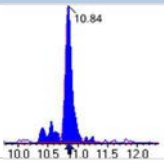 | |
| NMeFOSE | ( 616.0 / 59.0 ) 49569 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 251.6 | N/A<br>0.0<br>0.0 | 0.7720<br>[ 0.8000 ] | 96.5% | 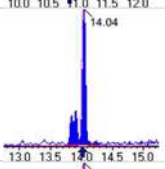 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 43451 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 425.2 | N/A<br>0.0<br>0.0 | 0.7942<br>[ 0.8000 ] | 99.3% | 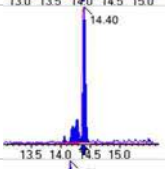 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 18260<br>( 285.0 / 185.0 ) 48198 | ( 6.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 481.8<br>322.1 | 2.6395<br>84.7<br>95.2 | 0.2040<br>[ 0.2000 ] | 102.0% | 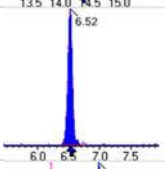 | 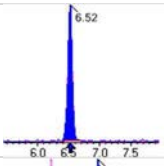 | |
| ADONA | ( 377.0 / 85.0 ) 213339<br>( 377.0 / 251.0 ) 20645 | ( 7.59 , 1.16 ) ( N/A , -0.01 , 0.3) | 936.4<br>181.7 | 0.0968<br>90.8<br>91.5 | 0.1872<br>[ 0.1885 ] | 99.3% | 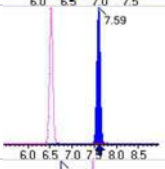 | 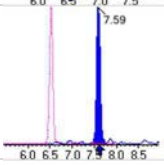 | |
| PFMPA | ( 229.0 / 85.0 ) 38382 | ( 4.16 , 0.86 ) ( N/A , 0.02 , 0.0) | 1135.1 | N/A<br>0.0<br>0.0 | 0.3795<br>[ 0.4000 ] | 94.9% | 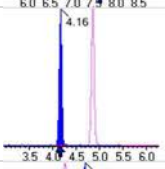 | | |
| PFMBA | ( 279.0 / 85.0 ) 99048 | ( 5.22 , 1.08 ) ( N/A , 0.01 , 0.0) | 1072.0 | N/A<br>0.0<br>0.0 | 0.3700<br>[ 0.4000 ] | 92.5% | 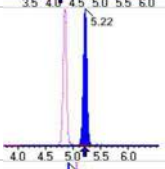 | | |
| NFDHA | ( 295.0 / 201.0 ) 47706<br>( 295.0 / 85.0 ) 45614 | ( 5.93 , 0.98 ) ( N/A , 0.00 , 0.1) | 885.0<br>457.0 | 0.9562<br>88.4<br>89.4 | 0.3775<br>[ 0.4000 ] | 94.4% | 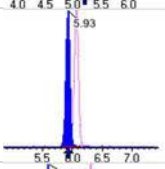 | 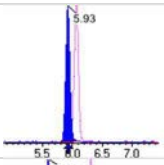 | |
| PFECHS | ( 461.0 / 98.9 ) 125562<br>( 461.0 / 381.2 ) 47738 | ( 9.55 , 0.91 ) ( N/A , -0.03 , 0.1) | 1341.3<br>6133.2 | 0.3802<br>97.4<br>97.2 | 0.1741<br>[ 0.1848 ] | 94.2% | 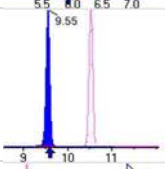 | 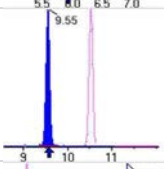 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 228023<br>( 533.0 / 353.0 ) 75308 | ( 11.17 , 1.71 ) ( N/A , -0.02 , 0.0) | 1363.3<br>781.4 | 0.3303<br>102.7<br>106.1 | 0.1621<br>[ 0.1867 ] | 86.8% | 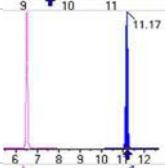 | 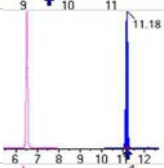 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 175138<br>( 633.0 / 453.0 ) 60471 | ( 12.49 , 1.91 ) ( N/A , 0.00 , 0.0) | 1502.7<br>598.0 | 0.3453<br>105.7<br>104.1 | 0.1589<br>[ 0.1886 ] | 84.3% | 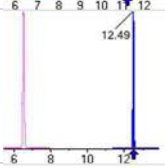 | 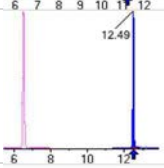 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 92689<br>( 315.0 / 83.0 ) 51044 | ( 6.96 , 1.15 )<br>( N/A , -0.01 , -0.1) | 854.3<br>137.9 | 0.5507<br>96.1<br>93.1 | 0.3390<br>[ 0.3570 ] | 95.0% | 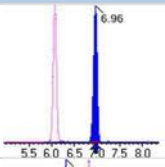 | 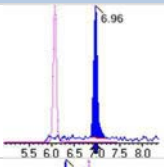 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 11891<br>( 241.0 / 117.0 ) 26692 | ( 4.40 , 0.91 )<br>( N/A , 0.02 , 0.2) | 436.0<br>127.6 | 2.2447<br>101.2<br>100.9 | 0.7663<br>[ 0.8000 ] | 95.8% | 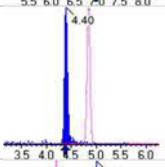 | 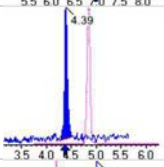 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 68445<br>( 341.0 / 217.0 ) 100881 | ( 6.93 , 1.14 )<br>( N/A , 0.00 , 0.1) | 489.4<br>333.4 | 1.4739<br>98.4<br>96.1 | 0.7769<br>[ 0.8000 ] | 97.1% | 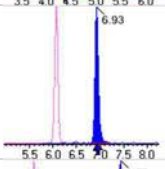 | 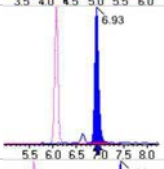 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 106039<br>( 441.0 / 337.0 ) 97040 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , -0.1) | 2305.3<br>43089.2 | 0.9151<br>102.8<br>105.6 | 0.8182<br>[ 0.8000 ] | 102.3% | 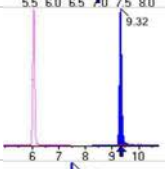 | 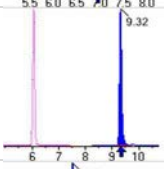 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 68767<br>( 357.2 / 243.0 ) 7023 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.2) | 368.7<br>73.9 | 0.1021<br>96.8<br>95.6 | 0.2444<br>[ 0.2000 ] | 122.2% | 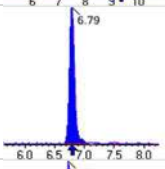 | 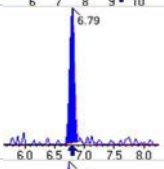 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 54236<br>( 457.2 / 343.0 ) 1890 | ( 8.84 , 1.00 )<br>( -0.01 , N/A , -0.1) | 424.1<br>70.4 | 0.0348<br>89.0<br>91.7 | 0.2438<br>[ 0.2000 ] | 121.9% | 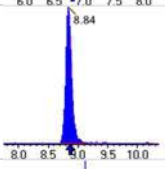 | 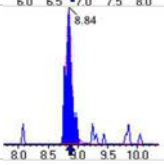 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 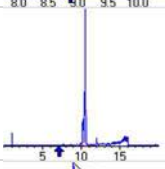 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 319277 | ( 3.77 , N/A )<br>( N/A , 0.02 , N/A ) | 1214.6 | N/A | 1.0598<br>[ 1.0000 ] | 106.0%<br>{ 94.3% } | 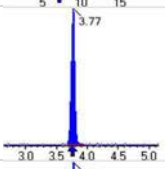 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 161192 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 21642.0 | N/A | 1.0483<br>[ 1.0000 ] | 104.8%<br>{ 94.6% } | 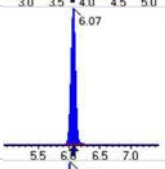 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 503857 | ( 8.21 , N/A )<br>( N/A , -0.02 , N/A ) | 4519.7 | N/A | 1.1294<br>[ 1.0000 ] | 112.9%<br>{ 103.2% } | 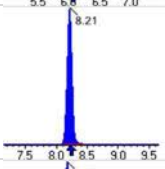 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 356708 | ( 9.17 , N/A )<br>( N/A , -0.02 , N/A ) | 1507.6 | N/A | 1.0670<br>[ 1.0000 ] | 106.7%<br>{ 92.7% } | 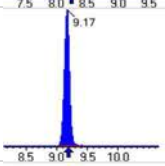 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 372359 | ( 10.07 , N/A ) ( N/A , -0.02 , N/A ) | 26295.7 | N/A | 1.1228 [ 1.0000 ] | 112.3% { 98.6% } | 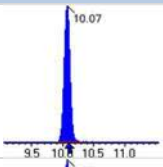 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1209505 | ( 8.67 , N/A ) ( N/A , -0.02 , N/A ) | 5604.4 | N/A | 1.0824 [ 1.0000 ] | 108.2% { 96.5% } | 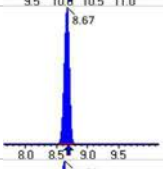 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1017479 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 2422.0 | N/A | 1.0423 [ 1.0000 ] | 104.2% { 96.2% } | 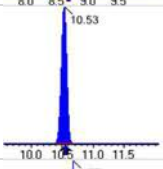 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2913941 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 51029.1 | N/A | 8.2762 [ 8.0000 ] | 103.5% { 102.6% } | 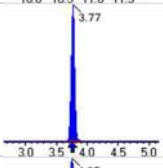 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1255052 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 5960.4 | N/A | 4.3401 [ 4.0000 ] | 108.5% { 98.0% } | 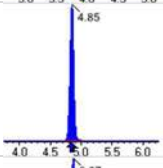 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 750315 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 8862.4 | N/A | 2.1679 [ 2.0000 ] | 108.4% { 98.9% } | 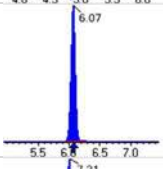 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 801156 | ( 7.21 , N/A ) ( N/A , -0.01 , N/A ) | 4779.9 | N/A | 2.2164 [ 2.0000 ] | 110.8% { 97.6% } | 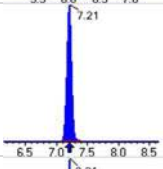 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1058262 | ( 8.21 , N/A ) ( N/A , -0.02 , N/A ) | 3498.1 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 97.4% } | 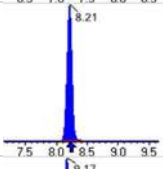 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 367078 | ( 9.17 , N/A ) ( N/A , -0.02 , N/A ) | 3363.5 | N/A | 1.0657 [ 1.0000 ] | 106.6% { 97.1% } | 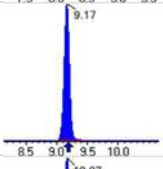 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 427585 | ( 10.07 , N/A ) ( N/A , -0.02 , N/A ) | 1297.9 | N/A | 0.9951 [ 1.0000 ] | 99.5% { 90.7% } | 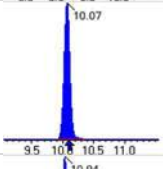 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 483391 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1001.3 | N/A | 0.9253 [ 1.0000 ] | 92.5% { 95.3% } | 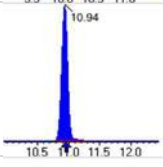 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 470519 | ( 11.76 , N/A ) ( N/A , -0.01 , N/A ) | 1383.1 | N/A | 0.8969 [ 1.0000 ] | 89.7% { 90.6% } | 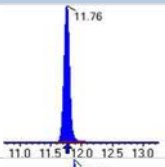  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 356222 | ( 12.89 , N/A ) ( N/A , 0.00 , N/A ) | 1474.3 | N/A | 0.7792 [ 1.0000 ] | 77.9% { 80.5% } | 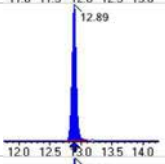  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 477166 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2747.5 | N/A | 1.2288 [ 2.0000 ] | 61.4% { 59.3% } | 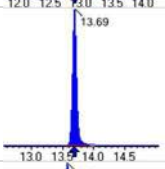  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2192179 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 891.3 | N/A | 1.8602 [ 2.0000 ] | 93.0% { 92.0% } | 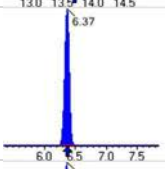  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1694635 | ( 8.66 , N/A ) ( N/A , -0.02 , N/A ) | 4843.1 | N/A | 1.9147 [ 2.0000 ] | 95.7% { 96.1% } | 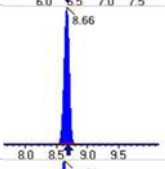  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2212141 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 1720.5 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 99.1% } | 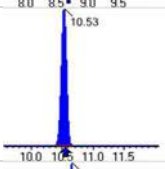  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 628304 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 89.8 | N/A | 5.9653 [ 4.0000 ] | 149.1% { 113.6% } | 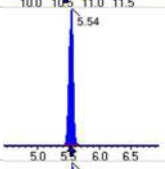  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2066537 | ( 7.65 , N/A ) ( N/A , -0.01 , N/A ) | 4507.8 | N/A | 6.3181 [ 4.0000 ] | 158.0% { 127.0% } | 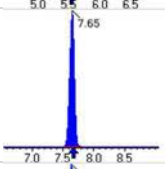  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1975850 | ( 9.44 , N/A ) ( N/A , -0.02 , N/A ) | 1633.2 | N/A | 6.0634 [ 4.0000 ] | 151.6% { 115.8% } | 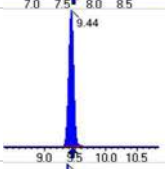  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3228781 | ( 11.08 , N/A ) ( N/A , -0.01 , N/A ) | 1376.1 | N/A | 8.6318 [ 8.0000 ] | 107.9% { 87.0% } | 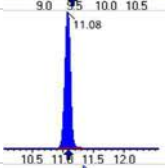  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1823728 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2054.9 | N/A | 1.5537 [ 2.0000 ] | 77.7% { 75.3% } | 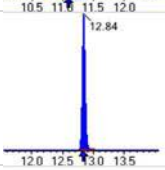  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 114452 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 876.7 | N/A | 0.5280 [ 2.0000 ] | 26.4% { 26.8% } | 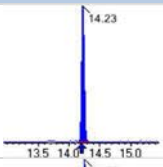  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 110054 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 1086.4 | N/A | 0.4420 [ 2.0000 ] | 22.1% { 22.7% } | 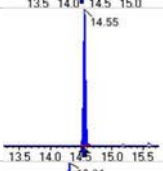  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1153518 | ( 10.31 , N/A ) ( N/A , -0.02 , N/A ) | 2439.3 | N/A | 4.1584 [ 4.0000 ] | 104.0% { 87.4% } | 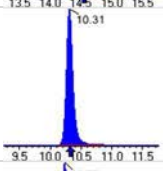  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1134106 | ( 10.83 , N/A ) ( N/A , -0.02 , N/A ) | 2090.0 | N/A | 4.3071 [ 4.0000 ] | 107.7% { 92.1% } | 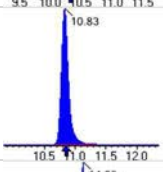  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1134308 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 1817.0 | N/A | 11.1998 [ 20.0000 ] | 56.0% { 61.0% } | 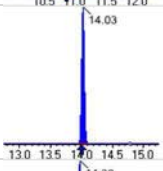  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1238441 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 4204.9 | N/A | 10.0941 [ 20.0000 ] | 50.5% { 59.1% } | 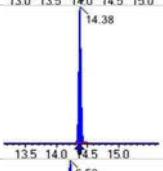  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1261400 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2185.3 | N/A | 8.4789 [ 8.0000 ] | 106.0% { 89.9% } | 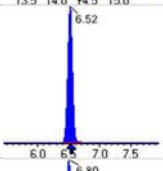  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 523587 | ( 6.80 , N/A ) ( N/A , -0.01 , N/A ) | 1383.6 | N/A | 1.5854 [ 2.0000 ] | 79.3% { 73.6% } | 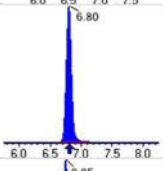  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 527606 | ( 8.85 , N/A ) ( N/A , -0.02 , N/A ) | 948.3 | N/A | 1.7112 [ 2.0000 ] | 85.6% { 78.8% } | 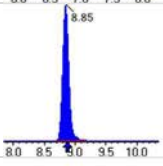  | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | PPL, LLC | Work Order: | 24C0076 |
| Client: | Tidewater, Inc. | Project: | JPL-GW Monitoring |
| Batch: | BDC0208 | Batch Matrix: | Water |
| | | Preparation: | EPA 1633A |

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-4-4- | 24C0076-01- | 03/14/24 12:39- | 531.10- | 2.00- |
| MW-4-3- | 24C0076-02- | 03/14/24 12:39- | 534.65 | 2.00- |
| MW-4-2- | 24C0076-03- | 03/14/24 12:39- | 537.94- | 2.00- |
| DUP-2-031224- | 24C0076-04- | 03/14/24 12:39- | 520.78- | 2.00- |
| MW-4-1- | 24C0076-05 | 03/14/24 12:39- | 544.74- | 2.00- |
| MW-14-4- | 24C0076-06- | 03/14/24 12:39- | 534.63- | 2.00- |
| MW-14-3- | 24C0076-07- | 03/14/24 12:39- | 545.13- | 2.00- |
| MW-14-2- | 24C0076-08- | 03/14/24 12:39- | 538.84- | 2.00- |
| MW-14-1- | 24C0076-09- | 03/14/24 12:39- | 534.85 | 2.00- |
| EB-2-031224- | 24C0076-10- | 03/14/24 12:39- | 516.06- | 2.00- |
| FB-2-031224- | 24C0076-11- | 03/14/24 12:39- | 528.36- | 2.00- |
| Blank- | BDC0208-BLK1- | 03/14/24 12:39- | 500.00- | 2.00- |
| LCS- | BDC0208-BS1- | 03/14/24 12:39- | 500.00- | 2.00- |
| MRL Check- | BDC0208-MRL1- | 03/14/24 12:39- | 500.00- | 2.00- |

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/18/2024 2:24 pm

BDC0208

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0076-01 A | MW-4-4 A | 576.476 | 45.379 | 7 | 3/14/2024 12:39:00PM | 531.097 | 2 | | 200 , 200 | |
| 24C0076-02 A | MW-4-3 A | 580.271 | 45.624 | 7 | 3/14/2024 12:39:00PM | 534.647 | 2 | | 200 , 200 | |
| 24C0076-03 A | MW-4-2 A | 583.444 | 45.507 | 7 | 3/14/2024 12:39:00PM | 537.937 | 2 | | 200 , 200 | |
| 24C0076-04 A | DUP-2-031224 A | 566.26 | 45.479 | 7 | 3/14/2024 12:39:00PM | 520.781 | 2 | | 200 , 200 | |
| 24C0076-05 A | MW-4-1 A | 590.52 | 45.782 | 7 | 3/14/2024 12:39:00PM | 544.738 | 2 | | 200 , 200 | |
| 24C0076-06 A | MW-14-4 A | 580.098 | 45.469 | 7 | 3/14/2024 12:39:00PM | 534.629 | 2 | | 200 , 200 | |
| 24C0076-07 A | MW-14-3 A | 590.993 | 45.864 | 7 | 3/14/2024 12:39:00PM | 545.129 | 2 | | 200 , 200 | |
| 24C0076-08 A | MW-14-2 A | 584.184 | 45.342 | 7 | 3/14/2024 12:39:00PM | 538.842 | 2 | | 200 , 200 | |
| 24C0076-09 A | MW-14-1 A | 580.781 | 45.936 | 7 | 3/14/2024 12:39:00PM | 534.845 | 2 | | 200 , 200 | |
| 24C0076-10 A | EB-2-031224 A | 561.394 | 45.332 | 6 | 3/14/2024 12:39:00PM | 516.062 | 2 | | 200 , 200 | |
| 24C0076-11 A | FB-2-031224 A | 573.663 | 45.303 | 6 | 3/14/2024 12:39:00PM | 528.36 | 2 | | 200 , 200 | |
| 24C0083-01 A | MW-21-3 C | 587.788 | 45.611 | 7 | 3/14/2024 12:39:00PM | 542.177 | 2 | | 200 , 200 | |
| 24C0083-02 A | MW-21-2 C | 607.659 | 45.829 | 7 | 3/14/2024 12:39:00PM | 561.83 | 2 | | 200 , 200 | |
| 24C0083-03 A | MW-21-1 C | 583.352 | 45.215 | 7 | 3/14/2024 12:39:00PM | 538.137 | 2 | | 200 , 200 | |
| 24C0083-04 A | FB-3-031324 C | 576.893 | 45.359 | 7 | 3/14/2024 12:39:00PM | 531.534 | 2 | | 200 , 200 | |
| 24C0083-05 A | EB-3-031324 C | 569.399 | 45.67 | 6 | 3/14/2024 12:39:00PM | 523.729 | 2 | | 200 , 200 | |
| 24C0083-06 A | MW-19-3 C | 575.785 | 46.002 | 7 | 3/14/2024 12:39:00PM | 529.783 | 2 | | 200 , 200 | |
| 24C0083-07 A | MW-19-2 C | 572.807 | 45.37 | 7 | 3/14/2024 12:39:00PM | 527.437 | 2 | | 200 , 200 | |
| 24C0083-08 A | MW-19-1 C | 587.639 | 46.028 | 7 | 3/14/2024 12:39:00PM | 541.611 | 2 | | 200 , 200 | |
| 0208-BLK1 | Blank | | | | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 0208-BS1 | LCS | | | | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| 0208-MRL1 | MRL Check | | | | 3/14/2024 12:39:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |
| 0208-MS1 | Matrix Spike [24C0083-07 | 591.013 | 45.83 | | 3/14/2024 12:39:00PM | 545.183 | 2 | 200 , 200 | 200 , 200 | |
| 0208-MSD1 | Matrix Spike Dup [24C008 | 583.514 | 46.113 | | 3/14/2024 12:39:00PM | 537.401 | 2 | 200 , 200 | 200 , 200 | |

**alyses**
33

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0552 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0280 | 1633 EIS MIXB 20-80ng/mL |

g Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/18/2024 2:24 pm

BDC0208

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:**
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:**
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0482 | Am. Ac. preservative | R021040 |
| 24C0044 | Reagent - 0.05MFA wash | x |
| 24C0045 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |
| 24C0046 | Reagent -0.3M Formic Acid | 50009265 |

Batch Comments:

Spiked By: MNM2
Witness By: ABK1 @13:40 3/14/24
pH Lot: 10BDH3431
Biotage Cartridge Lot:24003101PB
Concentration: 11:45, 12:14 03/18/24
IIS: 24B0645
arbon Lot: 148517

ng Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





Table of Contents

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/14/2024 12:41 pm

BDC0208

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID (ID's Confirmed By: mnm²) | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0076-01 A | MW-4-4 A | 576.476 | 45.379 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-02 A | MW-4-3 A | 580.271 | 46.624 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-03 A | MW-4-2 A | 583.444 | 45.507 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-04 A | DUP-2-031224 A | 566.260 | 45.439 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-05 A | MW-4-1 A | 590.520 | 45.782 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-06 A | MW-14-4 A | 580.098 | 45.469 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-07 A | MW-14-3 A | 590.993 | 45.864 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-08 A | MW-14-2 A | 584.184 | 45.342 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-09 A | MW-14-1 A | 580.781 | 45.936 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-10 A | EB-2-031224 A | 561.344 | 45.332 | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-11 A | FB-2-031224 A | 573.163 | 45.303 | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-01 A | MW-21-3 C | 587.788 | 45.161 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-02 A | MW-21-2 C | 607.659 | 45.829 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-03 A | MW-21-1 C | 583.352 | 45.215 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-04 A | FB-3-031324 C | 576.893 | 45.359 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-05 A | EB-3-031324 C | 569.329 | 45.620 | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-06 A | MW-19-3 C | 575.785 | 46.002 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-07 A | MW-19-2 C | 572.807 | 45.370 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-08 A | MW-19-1 C | 587.639 | 46.076 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| BDC0208-BLK1 | Blank | | | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| BDC0208-BS1 | LCS | | | 6 | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0208-MRL1 | MRL Check | | | 6 | 3/14/2024 12:39:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0208-MS1 | Matrix Spike [24C0083-07] B | 591.013 | 45.830 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0208-MSD1 | Matrix Spike Dup [24C0083-07] C | 583.514 | 46.113 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**
1633

**Spiking Solution(s)**
~~24B0011~~ / ~~24B0398~~ ✓ PFAS - MIX 1633 10ng/mL rev1
1633 MIX B 5C 10ng/mL

24B0012
24B0397

**Surrogate Solution(s)**
24B0555 ✓ MPFAC-HIF-ES 20.0ng/mL
[redacted] 1633 EIS MIXB 20-80ng/mL ✓

AmAc 24C0280

mnm²/abk1 13:40 03/14/24
Spiking Witnessed By — Date

PIT 3/18/2024
Preparation Reviewed By — Date

PIT 3/18/2024
Extracts Received By — Date

mnm²/abk1 11:00 03/15/24 - FORGOT TO ADD 2ND SPIKE & SURROGATE

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/14/2024 12:41 pm

BDC0208

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:**
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:**
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|

AmAc – 24A0482
AmOH 1% – 24C0045
FA 0.3 – 24C0046
FA 0.05 – 24C0044

Batch Comments:

Spiked By:
Witness By:
pH Lot: \0BDH3431
Biotage Cartridge Lot: 24003101PB
Concentration: 11:45, 12:14 03/18/24
IIS: 24B0645
Carbon Lot: 148517

| _____ | _____ | mhm² | _____ | _____ | _____ |
|---|---|---|---|---|---|
| piking Witnessed By | Date | Preparation Reviewed By | Date | Extracts Received By | Date |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00912A | Instrument:A | SaphiraA |
| Calibration: | 2411010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00912-CAL1A | S2024-03-12A (1)A | 03/12/24 18:28A |
| Cal Standardl | SD00912-CAL2A | S2024-03-12A (2)A | 03/12/24 18:49A |
| Cal Standardl | SD00912-CAL3A | S2024-03-12A (3)A | 03/12/24 19:09A |
| Cal Standardl | SD00912-CAL4A | S2024-03-12A (4)A | 03/12/24 19:30A |
| Cal Standardl | SD00912-CAL5A | S2024-03-12A (5)A | 03/12/24 19:50A |
| Cal Standardl | SD00912-CAL6A | S2024-03-12A (6)A | 03/12/24 20:11A |
| Cal Standardl | SD00912-CAL7A | S2024-03-12A (7)A | 03/12/24 20:31A |
| Cal Standardl | SD00912-CAL8A | S2024-03-12A (8)A | 03/12/24 20:52A |
| Initial Cal Blankl | SD00912-ICB1A | S2024-03-12A (9)A | 03/12/24 21:12A |
| Secondary Cal Checkl | SD00912-SCV1A | S2024-03-12A (10)A | 03/12/24 21:33A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00977A | Instrument:A | SaphiraA |
| Calibration: | 2411010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration BlankI | SD00977-CCB1A | S2024-03-18A (1)A | 03/18/24 13:30A |
| Low Cal CheckI | SD00977-LCV1A | S2024-03-18A (2)A | 03/18/24 13:51A |
| Calibration CheckI | SD00977-CCV1A | S2024-03-18A (3)A | 03/18/24 14:11A |
| Performance MixI | SD00977-PEM1A | S2024-03-18A (4)A | 03/18/24 14:32A |
| Performance MixI | SD00977-PEM2A | S2024-03-18A (5)A | 03/18/24 14:52A |
| Calibration BlankI | SD00977-CCB2A | S2024-03-18A (6)A | 03/18/24 15:13A |
| LCSI | BDC0208-BS1A | S2024-03-18A (8)A | 03/18/24 15:54A |
| MRL CheckI | BDC0208-MRL1A | S2024-03-18A (9)A | 03/18/24 16:14A |
| MW-4-4I | 24C0076-01A | S2024-03-18A (12)A | 03/18/24 17:16A |
| MW-4-3I | 24C0076-02A | S2024-03-18A (13)A | 03/18/24 17:36A |
| MW-4-2I | 24C0076-03A | S2024-03-18A (14)A | 03/18/24 17:57A |
| DUP-2-031224I | 24C0076-04A | S2024-03-18A (15)A | 03/18/24 18:17A |
| MW-4-1I | 24C0076-05A | S2024-03-18A (16)A | 03/18/24 18:38A |
| MW-14-4I | 24C0076-06A | S2024-03-18A (17)A | 03/18/24 18:59A |
| MW-14-3I | 24C0076-07A | S2024-03-18A (18)A | 03/18/24 19:19A |
| MW-14-2I | 24C0076-08A | S2024-03-18A (19)A | 03/18/24 19:40A |
| MW-14-1I | 24C0076-09A | S2024-03-18A (20)A | 03/18/24 20:00A |
| EB-2-031224I | 24C0076-10A | S2024-03-18A (21)A | 03/18/24 20:21A |
| Calibration CheckI | SD00977-CCV2A | S2024-03-18A (22)A | 03/18/24 20:41A |
| Calibration BlankI | SD00977-CCB3A | S2024-03-18A (23)A | 03/18/24 21:02A |
| FB-2-031224I | 24C0076-11A | S2024-03-18A (24)A | 03/18/24 21:22A |
| Calibration CheckI | SD00977-CCV3A | S2024-03-18A (34)A | 03/19/24 00:47A |
| Calibration BlankI | SD00977-CCB4A | S2024-03-18A (35)A | 03/19/24 01:08A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00991A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00991-CAL1A | S2024-03-19A (1)A | 03/19/24 12:02A |
| Cal Standardl | SD00991-CAL2A | S2024-03-19A (2)A | 03/19/24 12:22A |
| Cal Standardl | SD00991-CAL3A | S2024-03-19A (3)A | 03/19/24 12:43A |
| Cal Standardl | SD00991-CAL4A | S2024-03-19A (4)A | 03/19/24 13:03A |
| Cal Standardl | SD00991-CAL5A | S2024-03-19A (5)A | 03/19/24 13:24A |
| Cal Standardl | SD00991-CAL6A | S2024-03-19A (6)A | 03/19/24 13:44A |
| Cal Standardl | SD00991-CAL7A | S2024-03-19A (7)A | 03/19/24 14:05A |
| Cal Standardl | SD00991-CAL8A | S2024-03-19A (8)A | 03/19/24 14:25A |
| Initial Cal Blankl | SD00991-ICB1A | S2024-03-19A (9)A | 03/19/24 14:46A |
| Secondary Cal Checkl | SD00991-SCV1A | S2024-03-19A (10)A | 03/19/24 15:06A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0076A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01003A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD01003-CCB1A | S2024-03-19B (1)A | 03/19/24 16:28A |
| Low Cal Checkl | SD01003-LCV1A | S2024-03-19B (2)A | 03/19/24 16:49A |
| Calibration Checkl | SD01003-CCV1A | S2024-03-19B (3)A | 03/19/24 17:09A |
| Performance Mixl | SD01003-PEM1A | S2024-03-19B (4)A | 03/19/24 17:30A |
| Performance Mixl | SD01003-PEM2A | S2024-03-19B (5)A | 03/19/24 17:51A |
| Calibration Blankl | SD01003-CCB2A | S2024-03-19B (6)A | 03/19/24 18:11A |
| Blankl | BDC0208-BLK1A | S2024-03-19B (7)A | 03/19/24 18:32A |
| Calibration Checkl | SD01003-CCV2A | S2024-03-19B (24)A | 03/20/24 00:20A |
| Calibration Blankl | SD01003-CCB3A | S2024-03-19B (25)A | 03/20/24 00:41A |
| Calibration Checkl | SD01003-CCV3A | S2024-03-19B (36)A | 03/20/24 04:27A |
| Calibration Blankl | SD01003-CCB4A | S2024-03-19B (37)A | 03/20/24 04:47A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**
**CAS #:** 356-02-5

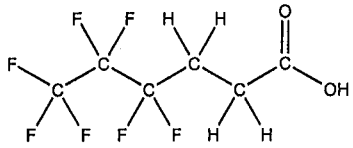

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

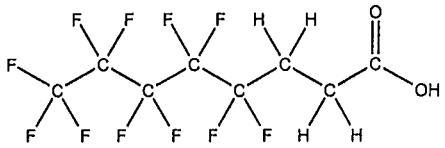

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

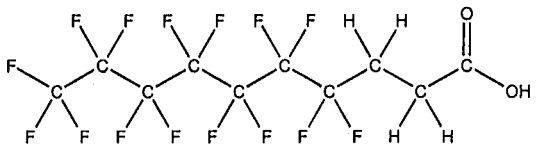

**MOLECULAR FORMULA:** $C_{10}H_5F_{15}O_2$
**MOLECULAR WEIGHT:** 442.12
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 11/12/2020
**EXPIRY DATE:** (mm/dd/yyyy) 11/12/2025
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

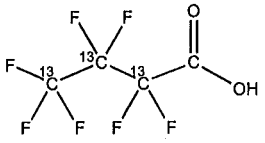

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

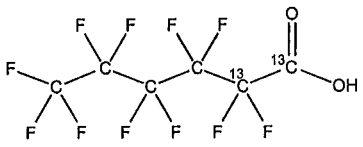

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_{11}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 10/04/2021
**EXPIRY DATE:** (mm/dd/yyyy) 10/04/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

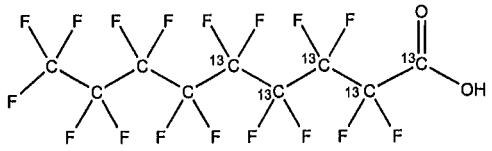

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

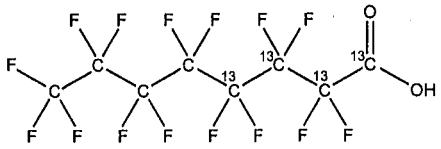

**MOLECULAR FORMULA:** $^{13}C_4{}^{12}C_4HF_{15}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 418.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 12/07/2021
**EXPIRY DATE:** (mm/dd/yyyy) 12/07/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record0

## 22A0120

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

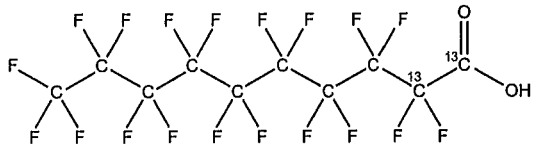

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFOS | **LOT NUMBER:** | MPFOS0821 |
| **COMPOUND:** | Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | 960315-53-1 |

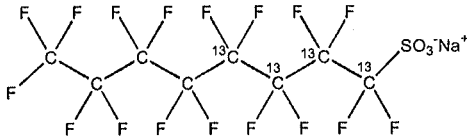

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2,3,4$-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 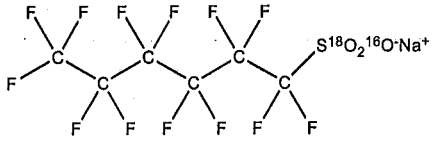 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |



**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

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| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

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DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

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# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_2CH_3$ | 73.8 |
| 2 | N-Ethylperfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CFSO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 0.1 |
| 3 | N-Ethylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 2.3 |
| 4 | N-Ethylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 2.6 |
| 5 | N-Ethylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 6.2 |
| 6 | N-Ethylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 14.8 |
| 7 | N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 0.2 |

* Percent of total N-ethylperfluorooctanesulfonamide isomers only.
** Systematic Name: N-Ethylperfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

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# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

**23A0 220**

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

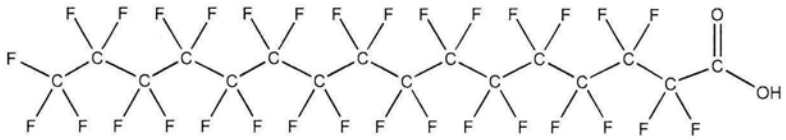

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

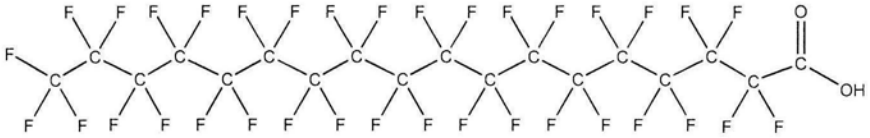

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

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**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

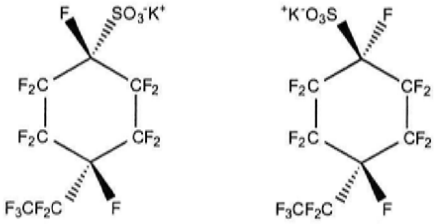


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

**MOLECULAR FORMULA:** $C_8F_{15}SO_3K$ **MOLECULAR WEIGHT:** 500.22

**CONCENTRATION:** 50.0 ± 2.5 µg/mL (K salt)
46.2 ± 2.3 µg/mL (PFECHS acid)
46.1 ± 2.3 µg/mL (PFECHS anion)

**SOLVENT(S):** Methanol

**CHEMICAL PURITY:** >98%

**LAST TESTED:** (mm/dd/yyyy) 03/28/2022

**EXPIRY DATE:** (mm/dd/yyyy) 03/28/2027

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0155C

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FBSA-I
**COMPOUND:** Perfluoro-1-butanesulfonamide

**LOT NUMBER:** FBSA0123I

**STRUCTURE:**

**CAS #:** 30334-69-1

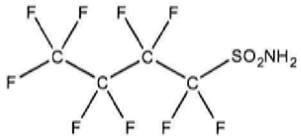

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide

**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**

**CAS #:** 41997-13-1

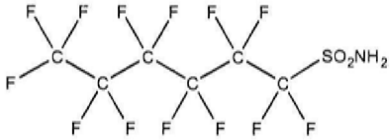

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

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**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| Formulated By: | Prashant Chauhan | 051723 DATE |
|---|---|---|
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4448& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Hydrodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994). B

**Method:** 1633M1
**Column:** $CB_{18}$ (150mm X 2.1mm ID X 5µm df)
**Column Temperature:** 40°C B
**Flowrate:** 0.30ml/min.
**Injection Volume:** 1µL B
**Mobile Phase:**
A: 10mM Ammonium Acetate in Water
: Methanol:Acetonitrile (80%:20%)
**Mobile Phase Profile:**
Time=00 45%A:55%B
Time=07 30%A:70%B
Time=12 10%A:90%B
Time=21 10%A:90%B
Time=31 45%A:55%B
Time=41 45%A:55%B
**Detector:** MSD (API-ES, Negative Polarity, SIM)
**Analyst:** Pedro Rentas B

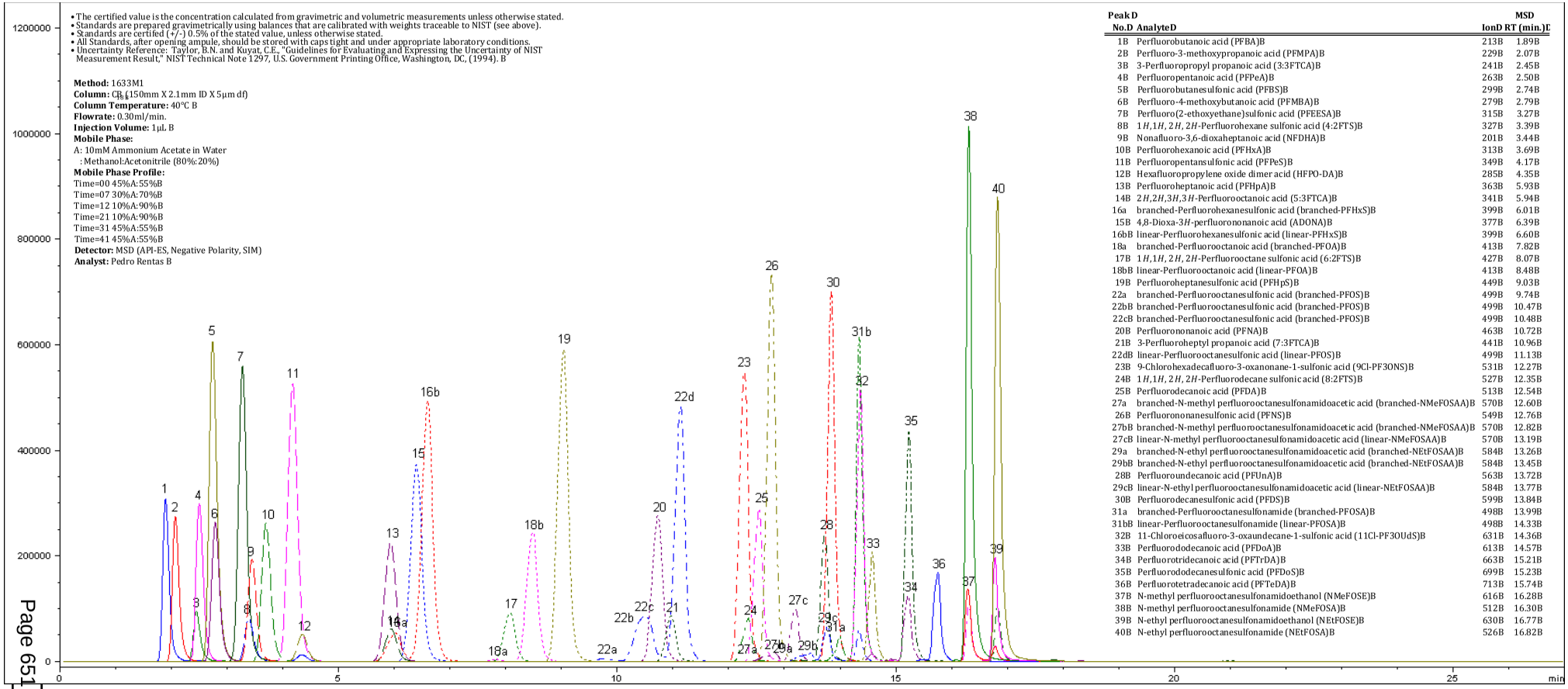


| Peak No. | D Analyte | D Ion | MSD RT (min.) | D |
|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B 1.89 B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B 2.07 B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B 2.45 B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B 2.50 B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B 2.74 B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B 2.79 B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B 3.27 B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B 3.39 B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B 3.44 B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B 3.69 B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B 4.17 B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B 4.35 B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B 5.93 B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B 5.94 B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B 6.01 B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B 6.39 B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B 6.60 B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B 7.82 B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B 8.07 B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B 8.48 B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B 9.03 B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B 9.74 B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B 10.47 B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B 10.48 B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B 10.72 B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B 10.96 B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B 11.13 B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B 12.27 B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B 12.35 B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B 12.54 B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B 12.60 B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B 12.76 B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B 12.82 B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B 13.19 B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B 13.26 B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B 13.45 B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B 13.72 B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B 13.77 B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B 13.84 B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B 13.99 B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B 14.33 B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B 14.36 B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B 14.57 B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B 15.21 B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B 15.23 B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B 15.74 B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B 16.28 B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B 16.30 B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B 16.77 B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B 16.82 B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

bsolute Standards, Inc.
)0-368-1131
ww.absolutestandards.com

*Certified Reference Material CRM*

ANAB ISO 17034 Accred d
AR-1539 Certificate Nu r
https://Absolutestandards. n



ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

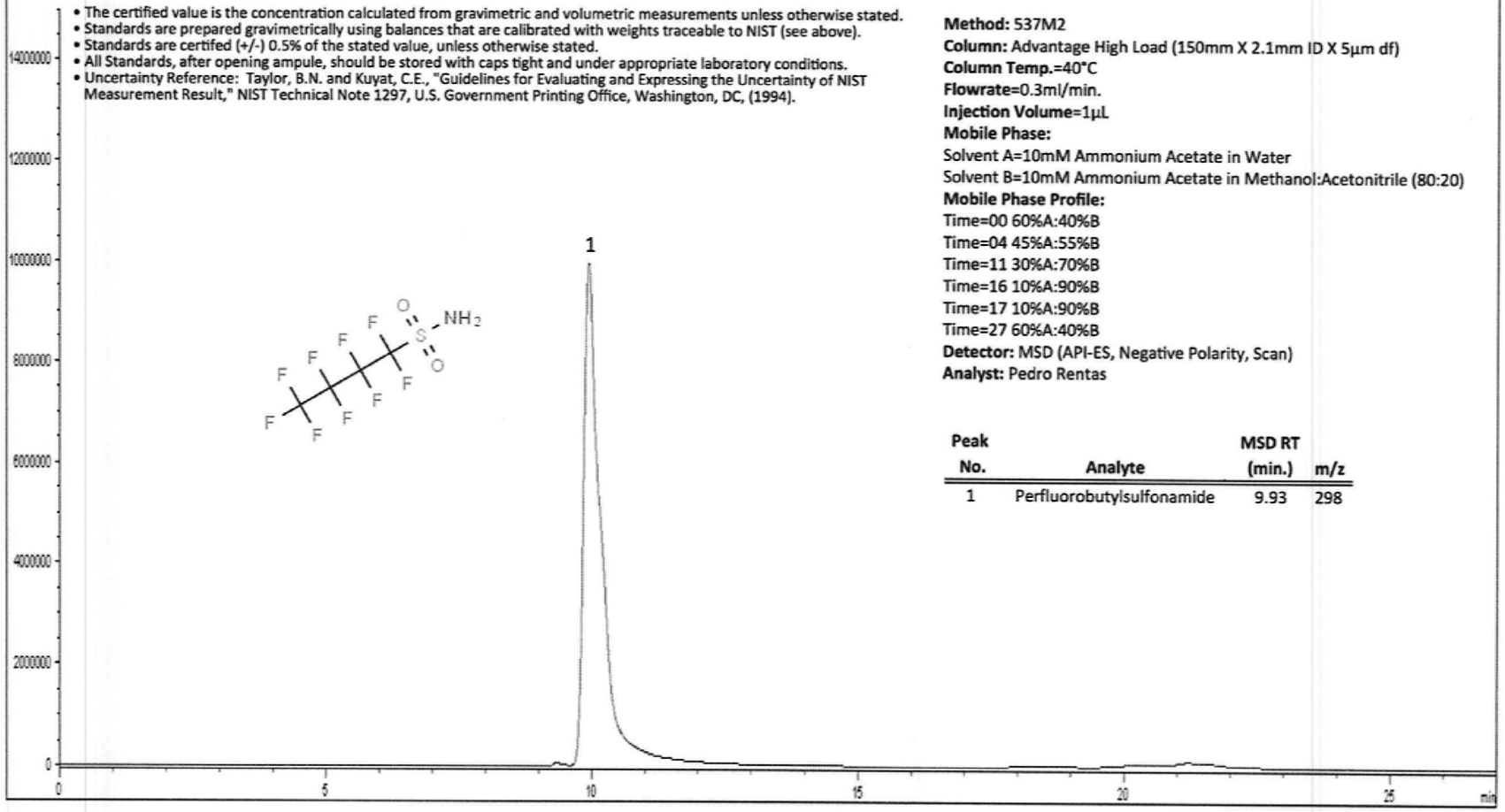


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

bsolute Standards, Inc.
0-368-1131
ww.absolutestandards.com

*Certified Reference Material CRM*

ANAB ISO 17034 Accred
AR-1539 Certificate Num
https://Absolutestandards.



ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 091125 | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 23060 | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 091120 |
| Formulated By: | Benson Chan | DATE |
| | | 091120 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

bsolute Standards, Inc.
0-368-1131
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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | | 25.0 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

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DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

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# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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DOCUMENTATION

# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

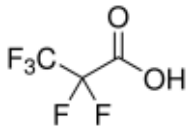


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0011B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0011** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

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New Haven, CT 06513
USA

AccuStandard®

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www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity³ % | Prepared Concentration² (µg/mL) | Certified Analyte Concentration¹ (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

² All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

³ Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

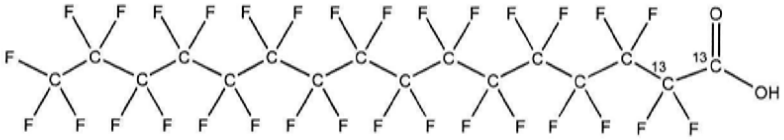

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

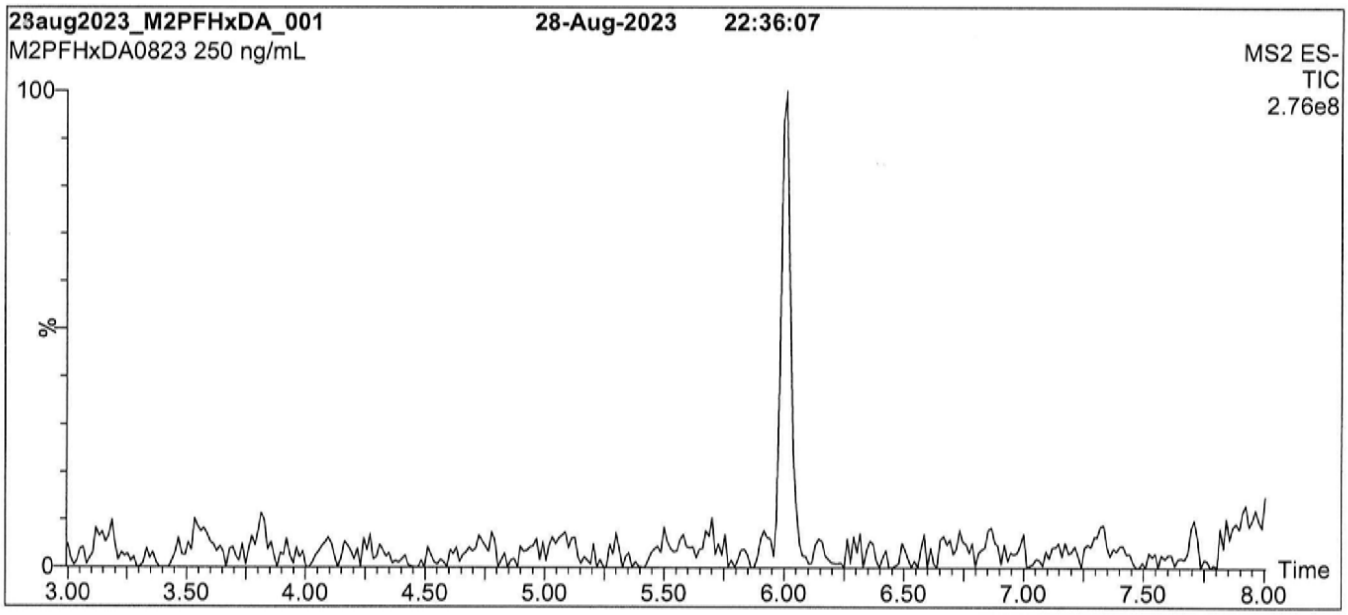


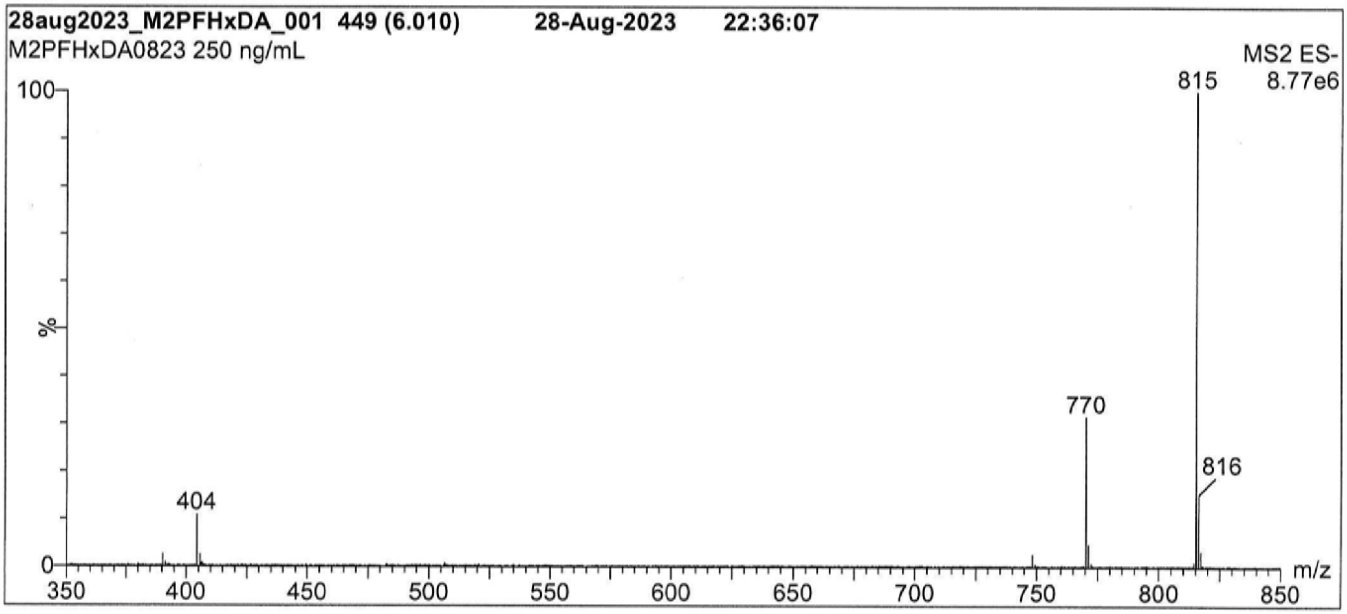


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

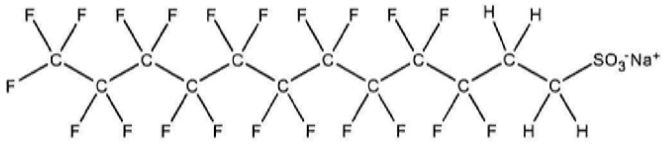


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{12}H_4F_{21}SO_3Na$ | **MOLECULAR WEIGHT:** | 650.18 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt) | **SOLVENT(S):** | Methanol |
| | 48.3 ± 2.4 µg/mL (10:2FTS acid) | | |
| | 48.2 ± 2.4 µg/mL (10:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 09/13/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 09/13/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

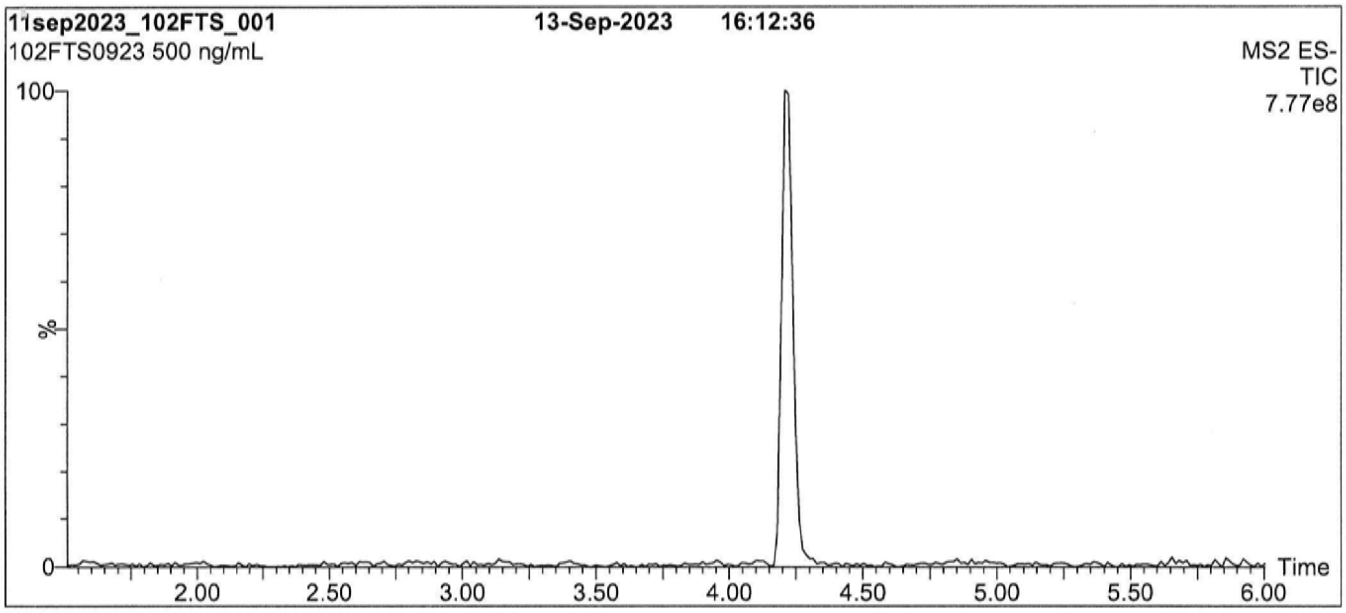


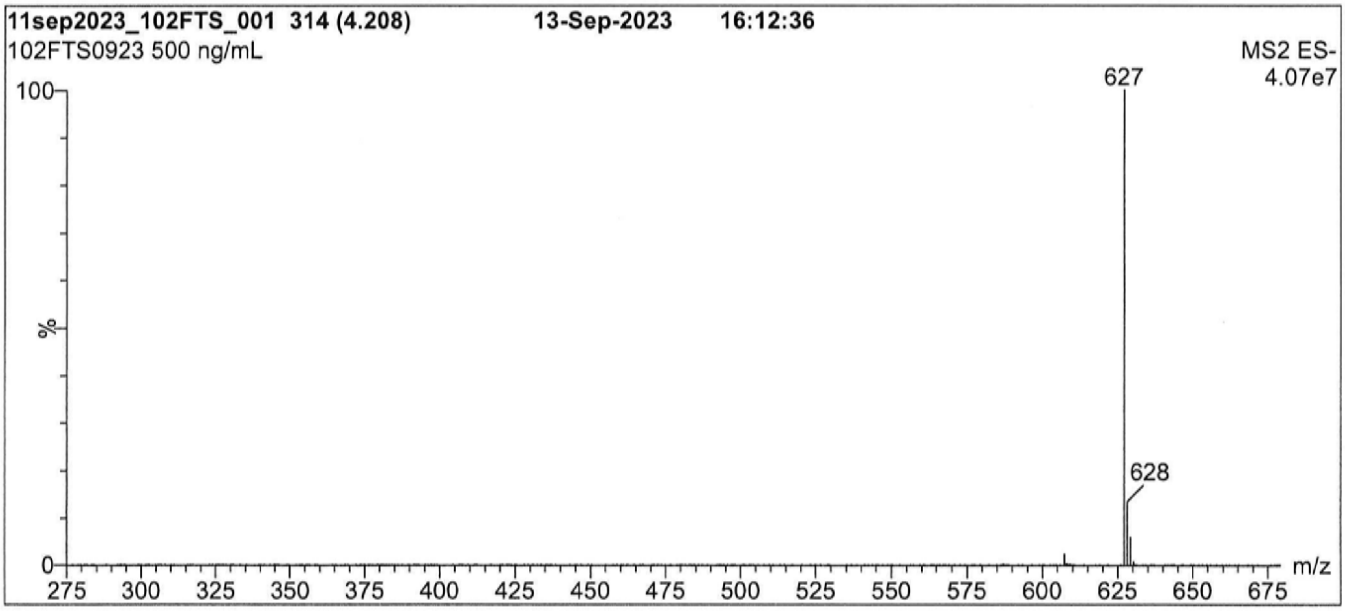


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

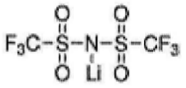

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

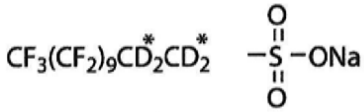

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

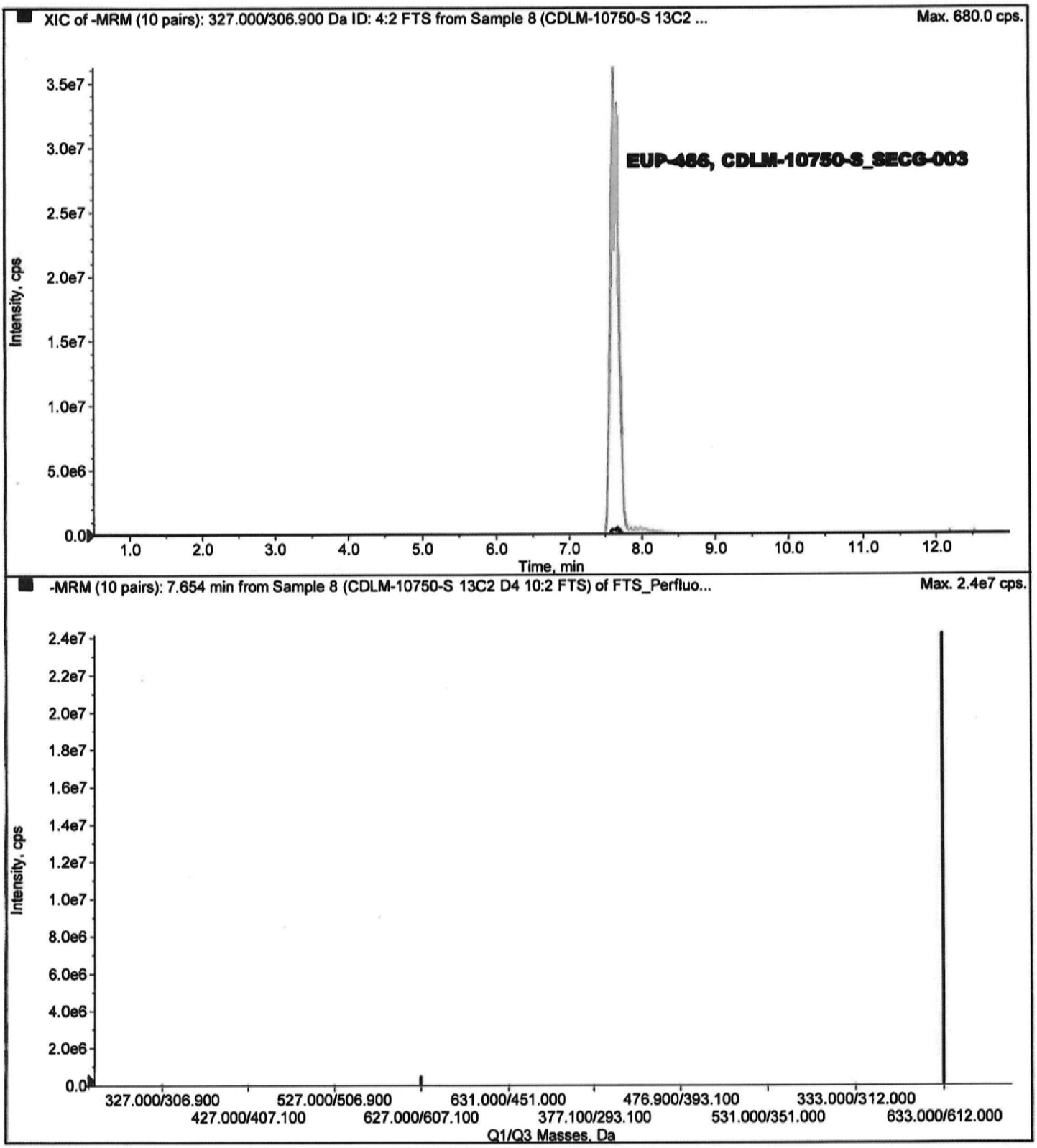

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

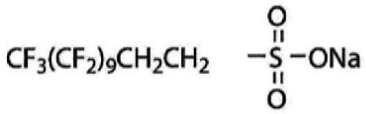

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FOUEA | **LOT NUMBER:** | FOUEA1123 |
| **COMPOUND:** | 2H-Perfluoro-2-decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 70887-84-2 |

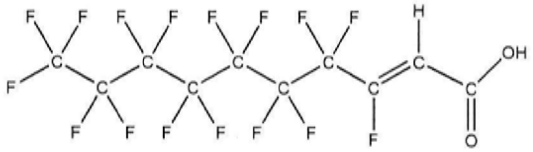

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

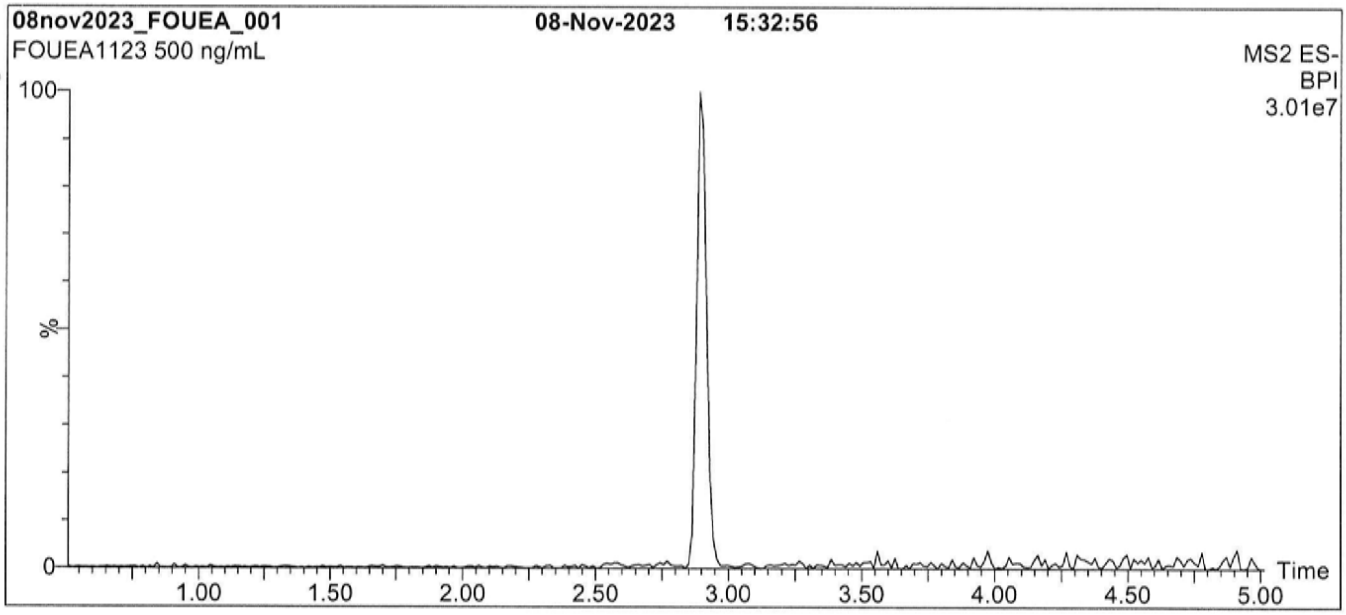


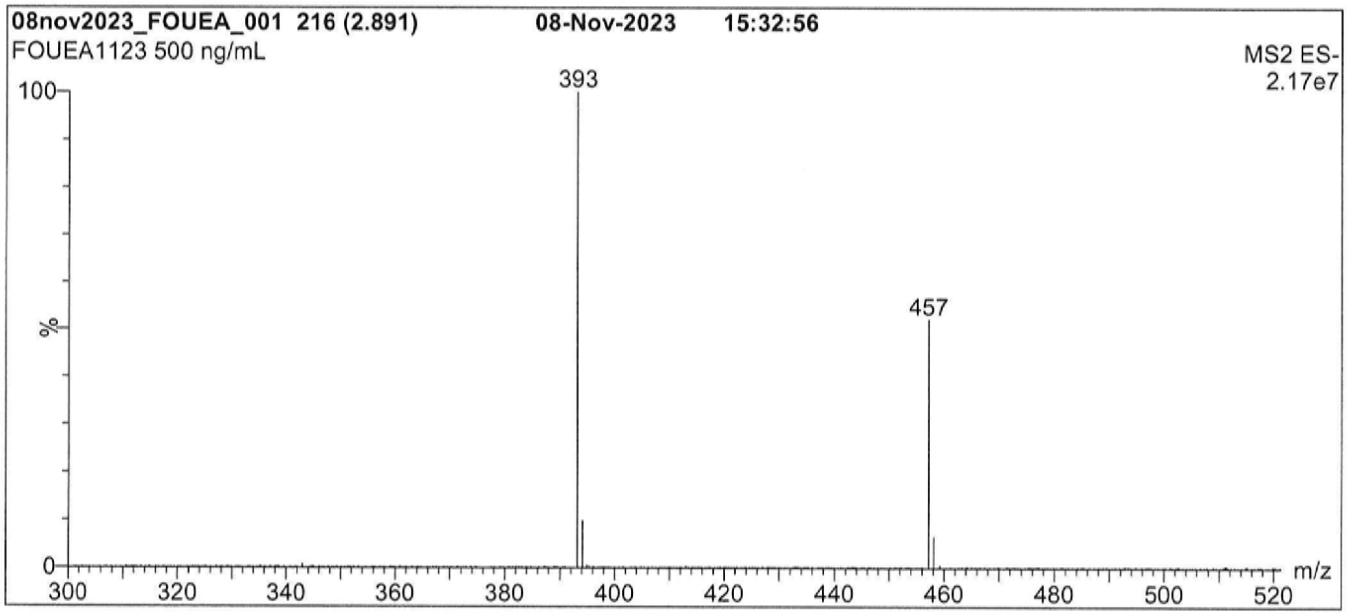


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

## 24B0292

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

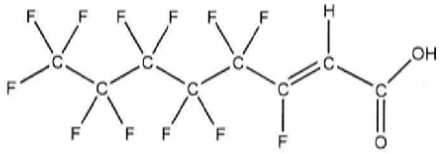

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

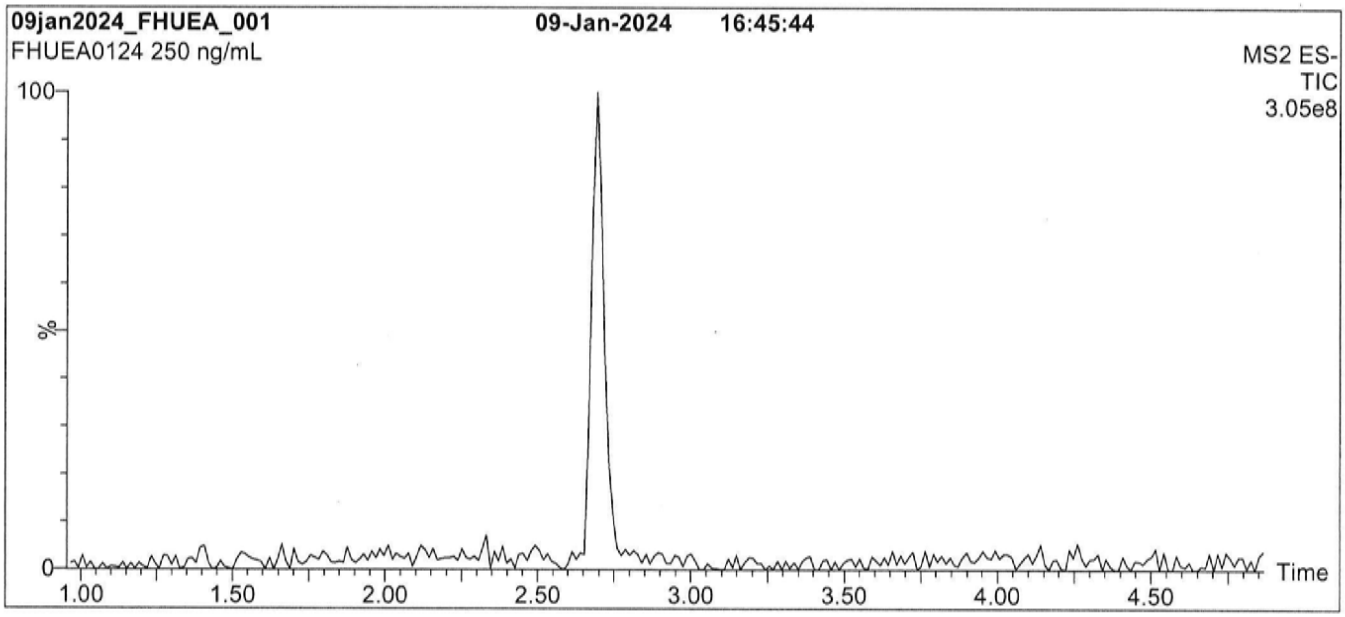


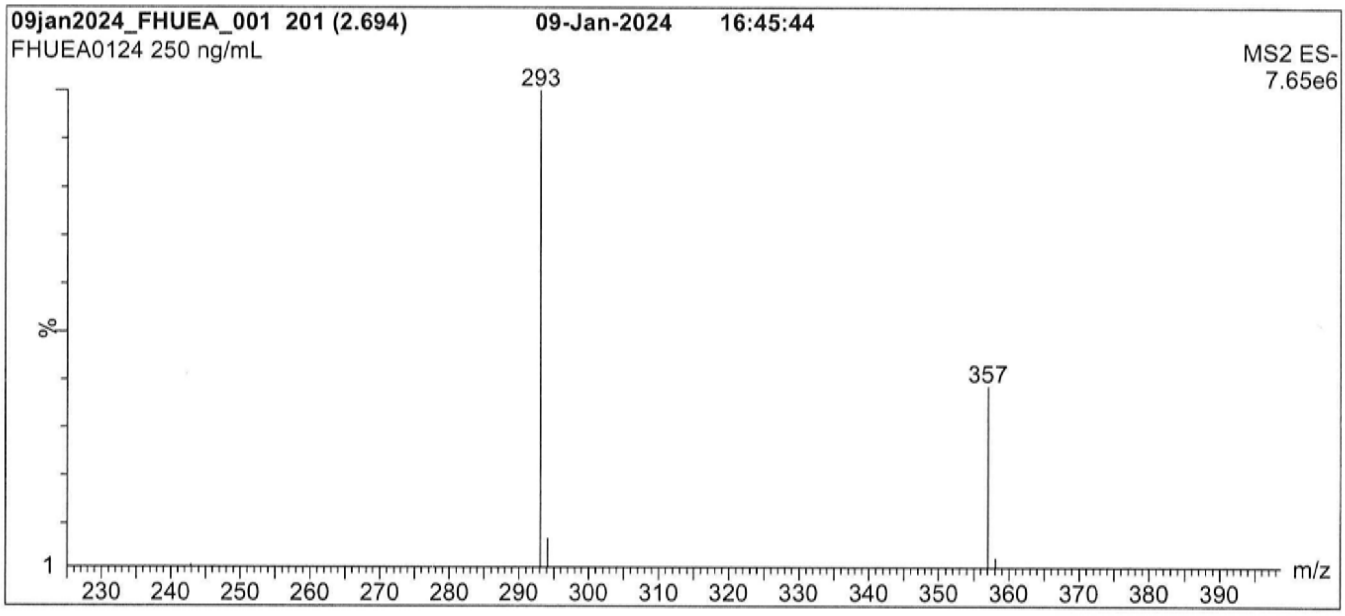


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

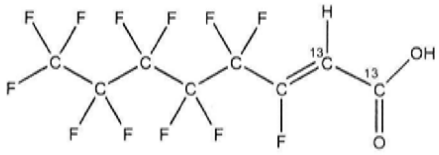

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-($1,2\text{-}^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-($1,2\text{-}^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

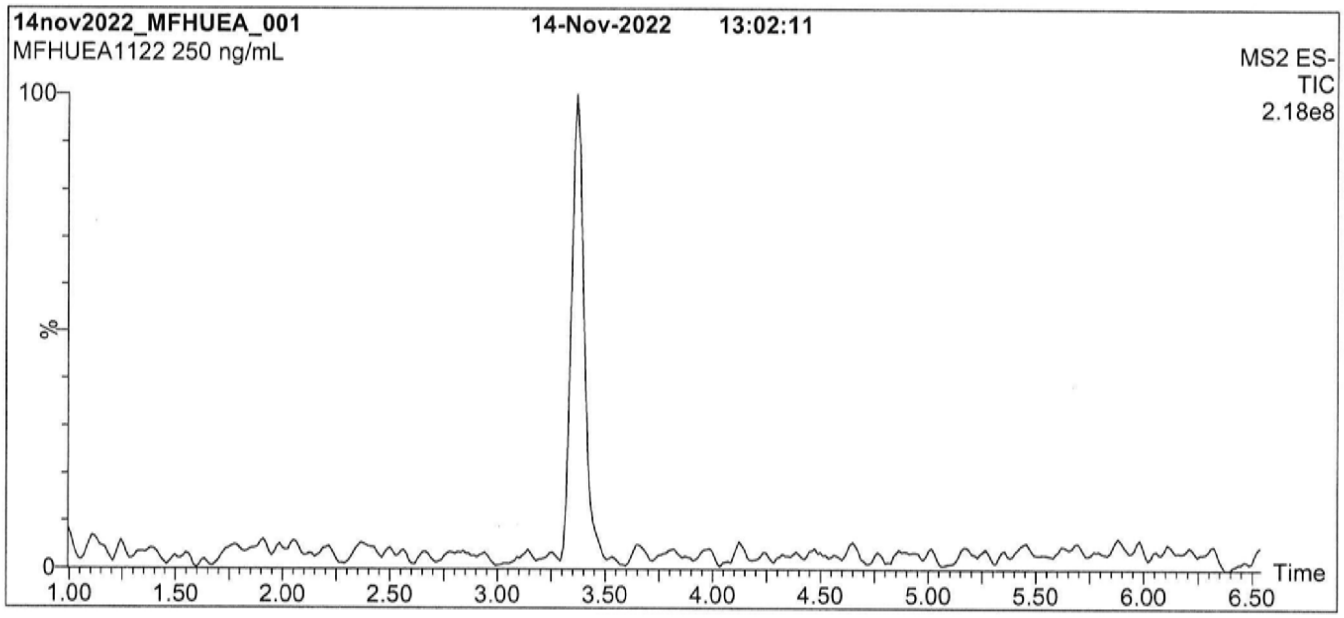


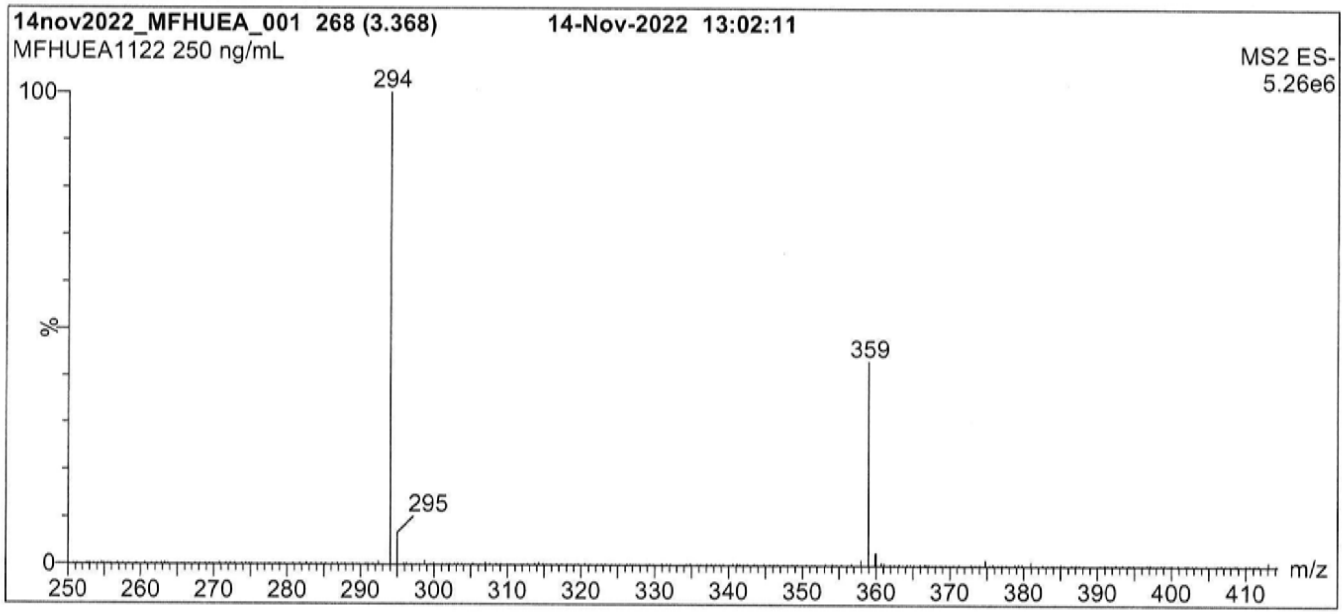


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

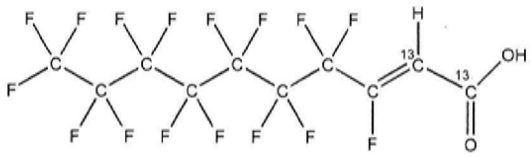

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

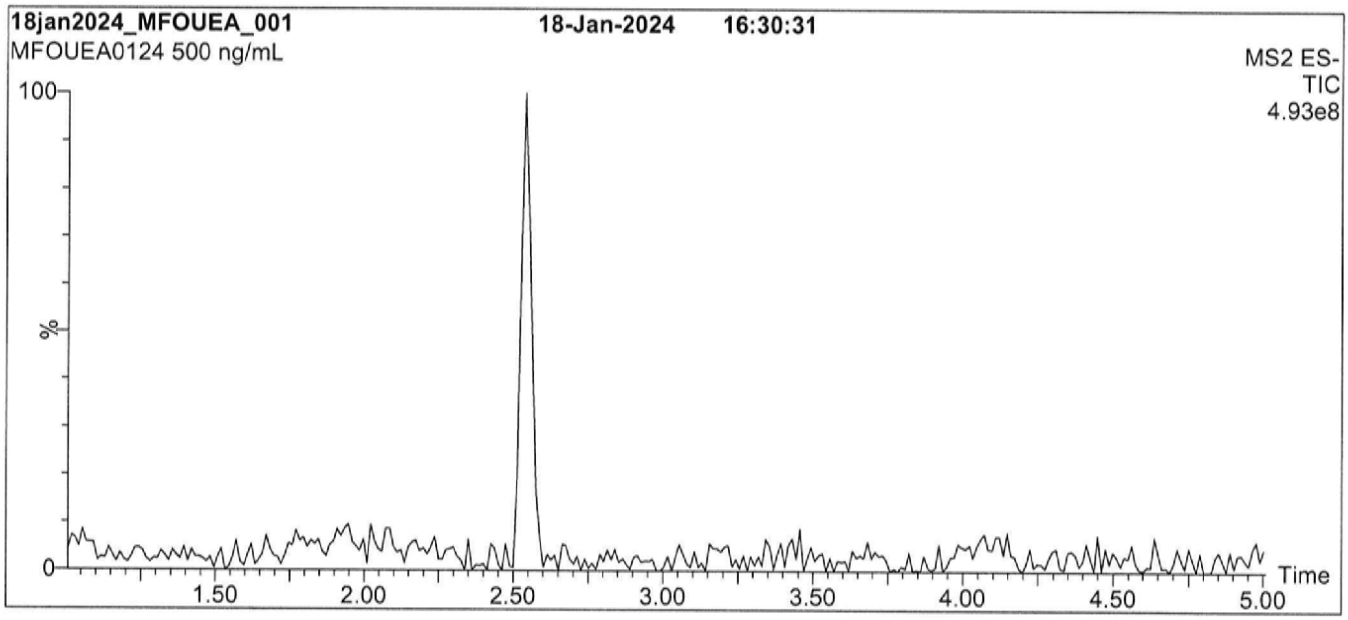


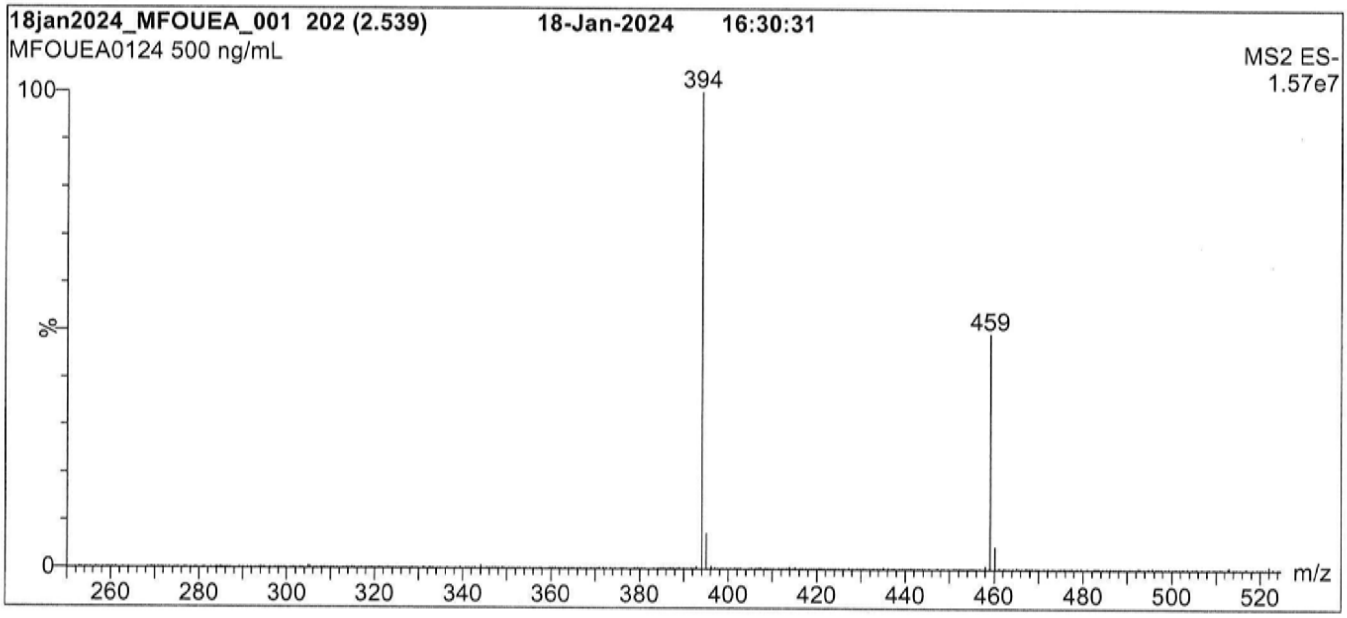


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0470B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0470B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |

# Analytical Standard RecordB

**24B0470** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.025s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.025s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0474B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

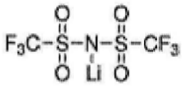

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# Analytical Standard RecordB

## 24C0281B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/12/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 16:39 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

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NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

March 28, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0083L

Enclosed are the results of analyses for samples received by our laboratory on 3/14/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

# Data Validatable Report

## Analysis Case Narrativen

n

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical t justification are provided as data qualifiers. t

The extracted internal standards 13C7-PFUnA, 13C2-PFDoA, and 13C2-PFTeDA recovered above the upper control limit in the t BDC0208-MS1 performed on sample 07 - MW-19-2.t

## Samples in this Reportn

| Lab IDn | Sample n | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0083-01o | MW-21-3o | Watero | 03/13/2024 08:10o | 03/14/2024o |
| 24C0083-02o | MW-21-2o | Watero | 03/13/2024 08:35o | 03/14/2024o |
| 24C0083-03o | MW-21-1o | Watero | 03/13/2024 09:00o | 03/14/2024o |
| 24C0083-04o | FB-3-031324o | Watero | 03/13/2024 09:10o | 03/14/2024o |
| 24C0083-05o | EB-3-031324o | Watero | 03/13/2024 09:20o | 03/14/2024o |
| 24C0083-06o | MW-19-3o | Watero | 03/13/2024 11:10o | 03/14/2024o |
| 24C0083-07o | MW-19-2o | Watero | 03/13/2024 11:30o | 03/14/2024o |
| 24C0083-08o | MW-19-1o | Watero | 03/13/2024 12:10o | 03/14/2024o |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0083-01t | | | |
| | 500mL Pt | 1t | |
| 24C0083-02t | | | |
| | 500mL Pt | 1t | |
| 24C0083-03t | | | |
| | 500mL Pt | 1t | |
| 24C0083-04t | | | |
| | 500mL Pt | 1t | |
| 24C0083-05t | | | |
| | 500mL Pt | 1t | |
| 24C0083-06t | | | |
| | 500mL Pt | 1t | |
| 24C0083-07t | | | |
| | 500mL Pt | 3t | |
| 24C0083-08t | | | |
| | 500mL Pt | 1t | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Sample Results

**Sample: MW-21-3**
**24C0083-01 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | 5.9o | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 9.5o | 0.74o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 6.9o | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 2.4o | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 5.2o MI5o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | 0.12o IR1, Jo | 0.37o | 0.075o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo IR2, o | 0.37o | 0.093o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 5.3o | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 1.4o | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 4.4o | 0.37o | 0.029o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.22o Jo | 0.37o | 0.047o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 3.1o MI2o | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo MI5, o | 0.37o | 0.096o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | 1.5o | 0.93o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *75.2%o* | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *91.4%o* | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: MW-21-3 (Continued)**
**24C0083-01 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *92.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *94.4%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.2%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *99.4%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *98.8%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *91.1%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *83.0%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *76.7%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *75.7%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *92.9%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *95.0%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *93.1%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *158%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *152%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *117%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *95.7%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *81.1%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *33.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *27.4%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *93.9%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *98.8%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *65.7%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *53.5%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *95.7%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: MW-21-2**

**24C0083-02 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | 7.0o | 1.4o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 13o | 0.71o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 9.4o | 0.36o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 2.7o | 0.36o | 0.036o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 2.8o MI5o | 0.36o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | 0.36o | 0.073o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo MI2, o | 0.36o | 0.090o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | 0.36o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | 0.36o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | 0.36o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 6.8o | 0.36o | 0.033o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 1.4o | 0.36o | 0.056o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 4.8o | 0.36o | 0.028o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.069o MI6, Jo | 0.36o | 0.046o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.2o MI2o | 0.36o | 0.057o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | 0.36o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | 0.36o | 0.13o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | 0.36o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | 1.4o | 0.26o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | 1.4o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | 1.4o | 0.073o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | 1.4o | 0.36o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | 0.36o | 0.093o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | 1.4o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | 1.4o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | 0.36o | 0.094o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | 0.36o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | 1.4o | 0.90o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | 1.4o | 0.93o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | 0.71o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | 0.71o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | 0.71o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | 0.71o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | 0.71o | 0.081o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | 0.71o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | 0.71o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | 0.71o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | 1.4o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | 1.4o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | 1.4o | 0.49o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *81.5%o* | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *92.7%o* | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: MW-21-2 (Continued)**
**24C0083-02 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *96.0%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *102%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *100%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *94.5%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *92.9%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *91.2%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *88.7%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *74.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *74.4%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *90.0%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *102%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *95.7%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *147%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *144%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *116%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *102%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *88.8%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *38.4%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *26.9%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *105%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *108%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *62.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *48.5%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *96.5%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.*
*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: MW-21-1**

**24C0083-03 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | 7.9o | 1.5o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 14o | 0.74o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 12o | 0.37o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 6.0o | 0.37o | 0.038o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 9.3o MI5o | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | 0.37o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo IR2, o | 0.37o | 0.094o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 7.4o | 0.37o | 0.034o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 1.8o | 0.37o | 0.058o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 12o | 0.37o | 0.029o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.19o Jo | 0.37o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.38o IR1, MI2o | 0.37o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | 0.37o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | 1.5o | 0.94o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *91.8%o* | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *97.8%o* | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: MW-21-1 (Continued)**
**24C0083-03 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *98.5%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *105%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.5%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *97.0%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *96.5%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *87.0%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *90.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *80.7%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *83.5%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *90.8%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *99.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *97.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *137%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *145%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *123%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *105%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *82.4%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *31.9%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *22.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *97.6%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *107%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *62.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *52.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *101%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: FB-3-031324**

**24C0083-04 (Water)a**

| Analyteo | Result | /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | NDo | | 0.75o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | NDo | | 0.38o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | NDo | | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.23o | Jo | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | | 0.38o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | | 0.38o | 0.095o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | NDo | | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | NDo | | 0.38o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | NDo | | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.38o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | NDo | MI2, o | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.38o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.98o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.75o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *99.7%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *97.5%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: FB-3-031324 (Continued)**
**24C0083-04 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *96.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *105%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *96.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *99.2%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *96.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *93.3%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *88.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *81.4%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *81.0%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *90.4%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *95.7%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *101%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *149%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *148%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *132%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *119%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *60.9%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *19.7%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *13.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *110%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *107%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *35.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *27.0%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *107%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: EB-3-031324**

**24C0083-05 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | |
| PFBAo | NDo | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 0.13o Jo | 0.76o | 0.062o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | NDo | 0.38o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | NDo | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.29o Jo | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | NDo | 0.38o | 0.078o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo IR1, o | 0.38o | 0.097o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo IR1, o | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | NDo | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | NDo | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | NDo | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | 0.38o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 0.079o MI2, Jo | 0.38o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | 1.5o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | 1.5o | 0.078o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | 0.38o | 0.099o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | 1.5o | 1.0o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | 0.76o | 0.17o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | 0.76o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | 0.76o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | 0.76o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | 0.76o | 0.087o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | 0.76o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | 1.5o | 0.55o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | 1.5o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *98.0%o* | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *99.6%o* | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: EB-3-031324 (Continued)**
**24C0083-05 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *103%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *108%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *98.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *98.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *97.8%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *92.8%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *91.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *83.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *75.7%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *95.8%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *101%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *99.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *157%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *150%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *131%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *119%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *77.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *26.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *19.3%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *117%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *113%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *49.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *35.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *110%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: MW-19-3**

**24C0083-06 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | 1.7o | | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 2.4o | | 0.76o | 0.061o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 2.3o | | 0.38o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 1.1o | | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 3.2o | MI5o | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | 0.15o | Jo | 0.38o | 0.077o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | 0.26o | Jo | 0.38o | 0.096o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | IR1, o | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 1.4o | | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 0.95o | | 0.38o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 5.0o | | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.10o | Jo | 0.38o | 0.048o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.3o | MI2o | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.078o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | MI5, o | 0.38o | 0.098o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.99o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.76o | 0.16o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.76o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.76o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.76o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.76o | 0.086o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.76o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.76o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *88.4%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *97.5%o* | | *40-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: MW-19-3 (Continued)**
**24C0083-06 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *98.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *109%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *102%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *106%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *96.7%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *93.1%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *90.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *81.3%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *74.5%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *95.0%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *99.7%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *98.4%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *181%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *168%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *123%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *96.4%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *77.1%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *24.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *20.8%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *100%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *111%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *48.3%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *39.6%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *103%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: MW-19-2**

**24C0083-07 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | 4.1o | | 1.5o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 3.2o | | 0.76o | 0.062o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 2.9o | | 0.38o | 0.052o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 1.5o | | 0.38o | 0.039o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 4.9o | MI5o | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | 0.15o | Jo | 0.38o | 0.078o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | 0.31o | IR2, o MI2, Jo | 0.38o | 0.096o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | IR2, o | 0.38o | 0.15o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | 0.23o | IR1, Jo | 0.38o | 0.19o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 3.2o | | 0.38o | 0.035o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | 1.0o | | 0.38o | 0.059o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 5.6o | | 0.38o | 0.030o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | 0.18o | Jo | 0.38o | 0.049o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 2.1o | MI2o | 0.38o | 0.060o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.38o | 0.14o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.38o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.28o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.30o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.078o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.38o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.38o | 0.099o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.45o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | 0.23o | IR2, Jo | 0.38o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.38o | 0.11o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.99o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.76o | 0.17o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.76o | 0.12o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.76o | 0.10o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.76o | 0.051o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.76o | 0.086o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.76o | 0.29o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.76o | 0.20o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.42o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/18/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *76.4%o* | | *5-130o* | | | *03/18/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: MW-19-2 (Continued)**
**24C0083-07 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFPEA* | *90.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C5-PFHXA* | *92.9%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *98.4%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *92.6%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *96.8%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *89.3%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *126%* | | *30-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *122%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *107%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *95.2%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *92.0%* | | *40-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *96.7%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *96.4%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *147%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *145%* | | *40-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *106%* | | *40-300* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *86.7%* | | *0-200* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *78.2%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *26.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *22.2%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *90.9%* | | *40-170* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *100%* | | *25-135* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *47.9%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *41.3%* | | *10-130* | | | *03/18/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *93.8%* | | *40-130* | | | *03/18/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Sample Results

**(Continued)a**

**Sample: MW-19-1**

**24C0083-08 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances** | | | | | | | | | |
| PFBAo | 0.75o | Jo | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFPeAo | 0.32o | Jo | 0.74o | 0.060o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFHxAo | 0.17o | Jo | 0.37o | 0.051o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFHpAo | 0.13o | Jo | 0.37o | 0.038o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFOAo | 0.54o | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFNAo | 0.094o | MI5, Jo | 0.37o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFDAo | NDo | | 0.37o | 0.094o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFBSo | 0.39o | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFHxSo | 0.49o | | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFOSo | 1.4o | MI5o | 0.37o | 0.059o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0208o |
| *Surrogate: 13C4-PFBAo* | *90.4%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *100%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Sample Results
**(Continued)**

**Sample: MW-19-1 (Continued)**
**24C0083-08 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- nd Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *101%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *108%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *96.8%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *94.9%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *99.4%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *99.1%* | | *30-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *95.4%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *80.3%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *87.4%* | | *0-200* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *94.8%* | | *40-135* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *98.7%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *92.1%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *154%* | | *40-200* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *160%* | | *40-200* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *105%* | | *40-300* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *100%* | | *0-200* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *80.1%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *41.6%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *32.6%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *94.3%* | | *40-170* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *94.8%* | | *25-135* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *66.9%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *54.0%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *104%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0208 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0208-BLK1)u** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/19/24 18:32o | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/Lo | | | | | | |
| PFPeAo | 0.125 Jo | 0.80o | 0.065o | ng/Lo | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/Lo | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/Lo | | | | | | |
| PFOAo | 0.197 MI3, Jo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/Lo | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/Lo | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/Lo | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/Lo | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/Lo | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/Lo | | | | | | |
| PFOSo | 0.0970 Jo | 0.40o | 0.064o | ng/Lo | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/Lo | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/Lo | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/Lo | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/Lo | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/Lo | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/Lo | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/Lo | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/Lo | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/Lo | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/Lo | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/Lo | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/Lo | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/Lo | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/Lo | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/Lo | | | | | | |
| *Surrogate: 13C4-PFBAo* | *31.4o* | | | *ng/Lo* | *32.0o* | | *98.3o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *15.2o* | | | *ng/Lo* | *16.0o* | | *95.2o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.52o* | | | *ng/Lo* | *8.00o* | | *94.1o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.22o* | | | *ng/Lo* | *8.00o* | | *90.2o* | *40-130o* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0208-BLK1)u** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/19/24 18:32o | | | | | |
| *Surrogate: 13C8-PFOAo* | *7.48o* | | | *ng/Lo* | *8.00o* | | *93.5o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *3.33o* | | | *ng/Lo* | *4.00o* | | *83.2o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *3.53o* | | | *ng/Lo* | *4.00o* | | *88.1o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *3.43o* | | | *ng/Lo* | *4.00o* | | *85.8o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.32o* | | | *ng/Lo* | *4.00o* | | *82.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.00o* | | | *ng/Lo* | *4.00o* | | *75.1o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.46o* | | | *ng/Lo* | *8.00o* | | *68.2o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *7.42o* | | | *ng/Lo* | *8.00o* | | *92.8o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.61o* | | | *ng/Lo* | *8.00o* | | *95.2o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *6.91o* | | | *ng/Lo* | *8.00o* | | *86.4o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.2o* | | | *ng/Lo* | *16.0o* | | *114o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *15.7o* | | | *ng/Lo* | *16.0o* | | *97.9o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *15.7o* | | | *ng/Lo* | *16.0o* | | *98.0o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *31.5o* | | | *ng/Lo* | *32.0o* | | *98.3o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *5.32o* | | | *ng/Lo* | *8.00o* | | *66.5o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *1.74o* | | | *ng/Lo* | *8.00o* | | *21.8o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *1.43o* | | | *ng/Lo* | *8.00o* | | *17.8o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.9o* | | | *ng/Lo* | *16.0o* | | *86.6o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *13.6o* | | | *ng/Lo* | *16.0o* | | *85.1o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *44.0o* | | | *ng/Lo* | *80.0o* | | *54.9o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *41.3o* | | | *ng/Lo* | *80.0o* | | *51.6o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *29.4o* | | | *ng/Lo* | *32.0o* | | *92.0o* | *40-130o* | | |
| **LCS (BDC0208-BS1)u** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/18/24 15:54o | | | | | |
| PFBAo | 16.8o | | 0.21o | ng/Lo | 16.0o | | 105o | 70-140o | | |
| PFPeAo | 8.37o | | 0.065o | ng/Lo | 8.00o | | 105o | 65-135o | | |
| PFHxAo | 4.17o | | 0.055o | ng/Lo | 4.00o | | 104o | 70-145o | | |
| PFHpAo | 3.87o | | 0.041o | ng/Lo | 4.00o | | 96.8o | 70-150o | | |
| PFOAo | 4.07o | | 0.15o | ng/Lo | 4.00o | | 102o | 70-150o | | |
| PFNAo | 4.06o | | 0.082o | ng/Lo | 4.00o | | 102o | 70-150o | | |
| PFDAo | 3.94o | | 0.10o | ng/Lo | 4.00o | | 98.6o | 70-140o | | |
| PFUnAo | 4.01o | | 0.16o | ng/Lo | 4.00o | | 100o | 70-145o | | |
| PFDoAo | 3.97o | | 0.11o | ng/Lo | 4.00o | | 99.3o | 70-140o | | |
| PFTrDAo | 4.04o | | 0.20o | ng/Lo | 4.00o | | 101o | 65-140o | | |
| PFTeDAo | 3.93o | | 0.20o | ng/Lo | 4.00o | | 98.3o | 60-140o | | |
| PFHxDAo | 3.95o | | 0.20o | ng/Lo | 4.00o | | 98.8o | 40-150o | | |
| PFODAo | 3.42o | | 0.20o | ng/Lo | 4.00o | | 85.4o | 40-150o | | |
| PFBSo | 3.51o | | 0.037o | ng/Lo | 3.54o | | 99.3o | 60-145o | | |
| PFPeSo | 3.94o | | 0.063o | ng/Lo | 3.76o | | 105o | 65-140o | | |
| PFHxSo | 3.88o | | 0.032o | ng/Lo | 3.66o | | 106o | 65-145o | | |
| PFHpSo | 4.19o | | 0.051o | ng/Lo | 3.82o | | 110o | 70-150o | | |
| PFOSo | 3.89o | | 0.064o | ng/Lo | 3.72o | | 104o | 55-150o | | |
| PFNSo | 3.87o | | 0.12o | ng/Lo | 3.84o | | 101o | 65-145o | | |
| PFDSo | 3.70o | | 0.15o | ng/Lo | 3.86o | | 95.9o | 60-145o | | |
| PFDoSo | 3.62o | | 0.12o | ng/Lo | 3.88o | | 93.4o | 50-145o | | |
| 4:2FTSo | 16.1o | | 0.29o | ng/Lo | 15.0o | | 107o | 70-145o | | |
| 6:2FTSo | 15.5o | | 0.31o | ng/Lo | 15.2o | | 102o | 65-155o | | |
| 8:2FTSo | 16.4o | | 0.082o | ng/Lo | 15.4o | | 107o | 60-150o | | |
| 10:2FTSo | 18.5o | | 0.40o | ng/Lo | 15.4o | | 120o | 0-200o | | |
| PFOSAo | 4.27o | | 0.10o | ng/Lo | 4.00o | | 107o | 70-145o | | |

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*No duplication of this report is allowed, except in its entirety.o*

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0208-BS1)u** | | | | | Prepared: 03/14/24 12:39 | | Analyzed: 03/18/24 15:54o | | | |
| NMeFOSAo | 19.4o | | 0.47o | ng/L | 16.0o | | 121 | 60-150 | | |
| NEtFOSAo | 15.9o | | 0.41o | ng/L | 16.0o | | 99.2 | 65-145 | | |
| NMeFOSAAo | 3.98o | | 0.11o | ng/L | 4.00o | | 99.4 | 50-140 | | |
| NEtFOSAAo | 4.12o | | 0.11o | ng/L | 4.00o | | 103 | 70-145 | | |
| NMeFOSEo | 14.7o | | 1.0o | ng/L | 16.0o | | 91.8 | 70-145 | | |
| NEtFOSEo | 15.9o | | 1.0o | ng/L | 16.0o | | 99.3 | 70-135 | | |
| HFPO-DAo | 3.98o | | 0.17o | ng/L | 4.00o | | 99.6 | 70-140 | | |
| ADONAo | 3.76o | | 0.12o | ng/L | 3.78o | | 99.6 | 65-145 | | |
| PFEESAo | 7.06o | | 0.11o | ng/L | 7.12o | | 99.2 | 70-140 | | |
| PFMPAo | 8.43o | | 0.054o | ng/L | 8.00o | | 105 | 55-140 | | |
| PFMBAo | 8.17o | | 0.091o | ng/L | 8.00o | | 102 | 60-150 | | |
| NFDHAo | 8.20o | | 0.30o | ng/L | 8.00o | | 103 | 50-150 | | |
| 9Cl-PF3ONSo | 3.12o | | 0.21o | ng/L | 3.74o | | 83.3 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.03o | | 0.21o | ng/L | 3.78o | | 80.2 | 55-160 | | |
| 3:3FTCAo | 16.6o | | 0.57o | ng/L | 16.0o | | 104 | 65-130 | | |
| 5:3FTCAo | 16.7o | | 0.44o | ng/L | 16.0o | | 104 | 70-135 | | |
| 7:3FTCAo | 17.7o | | 0.55o | ng/L | 16.0o | | 111 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *30.1o* | | | *ng/Lo* | *32.0o* | | *94.1* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *15.5o* | | | *ng/Lo* | *16.0o* | | *96.7* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *7.79o* | | | *ng/Lo* | *8.00o* | | *97.3* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.45o* | | | *ng/Lo* | *8.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.61o* | | | *ng/Lo* | *8.00o* | | *95.2* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.86o* | | | *ng/Lo* | *4.00o* | | *96.6* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.62o* | | | *ng/Lo* | *4.00o* | | *90.6* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *3.51o* | | | *ng/Lo* | *4.00o* | | *87.6* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.12o* | | | *ng/Lo* | *4.00o* | | *77.9* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *2.91o* | | | *ng/Lo* | *4.00o* | | *72.8* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *4.91o* | | | *ng/Lo* | *8.00o* | | *61.4* | *0-200* | | |
| *Surrogate: 13C3-PFBSo* | *7.20o* | | | *ng/Lo* | *8.00o* | | *90.0* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *7.08o* | | | *ng/Lo* | *8.00o* | | *88.5* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *7.18o* | | | *ng/Lo* | *8.00o* | | *89.8* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *21.1o* | | | *ng/Lo* | *16.0o* | | *132* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *21.3o* | | | *ng/Lo* | *16.0o* | | *133* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.7o* | | | *ng/Lo* | *16.0o* | | *123* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *33.8o* | | | *ng/Lo* | *32.0o* | | *106* | *0-200* | | |
| *Surrogate: 13C8-PFOSAo* | *5.68o* | | | *ng/Lo* | *8.00o* | | *71.0* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.76o* | | | *ng/Lo* | *8.00o* | | *22.0* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.50o* | | | *ng/Lo* | *8.00o* | | *18.8* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *15.4o* | | | *ng/Lo* | *16.0o* | | *96.4* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *14.8o* | | | *ng/Lo* | *16.0o* | | *92.4* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *41.1o* | | | *ng/Lo* | *80.0o* | | *51.4* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *36.6o* | | | *ng/Lo* | *80.0o* | | *45.7* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.7o* | | | *ng/Lo* | *32.0o* | | *102* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0208-MRL1)u** | | | | | Prepared: 03/14/24 12:39 | Analyzed: 03/18/24 16:14o | | | | |
| PFBAo | 3.29o | | 0.21o | ng/Lo | 3.20o | | 103o | 70-140 | | |
| PFPeAo | 1.54o | | 0.065o | ng/Lo | 1.60o | | 96.2o | 65-135 | | |
| PFHxAo | 0.724o | | 0.055o | ng/Lo | 0.800o | | 90.5o | 70-145 | | |
| PFHpAo | 0.780o | | 0.041o | ng/Lo | 0.800o | | 97.5o | 70-150 | | |
| PFOAo | 0.959oMI4o | | 0.15o | ng/Lo | 0.800o | | 120o | 70-150 | | |
| PFNAo | 0.780o | | 0.082o | ng/Lo | 0.800o | | 97.5o | 70-150 | | |
| PFDAo | 0.827o | | 0.10o | ng/Lo | 0.800o | | 103o | 70-140 | | |
| PFUnAo | 0.774o | | 0.16o | ng/Lo | 0.800o | | 96.7o | 70-145 | | |
| PFDoAo | 0.755o | | 0.11o | ng/Lo | 0.800o | | 94.4o | 70-140 | | |
| PFTrDAo | 0.754o | | 0.20o | ng/Lo | 0.800o | | 94.3o | 65-140 | | |
| PFTeDAo | 0.791o | | 0.20o | ng/Lo | 0.800o | | 98.9o | 60-140 | | |
| PFHxDAo | 0.973o | | 0.20o | ng/Lo | 0.800o | | 122o | 40-150 | | |
| PFODAo | 0.829o | | 0.20o | ng/Lo | 0.800o | | 104o | 40-150 | | |
| PFBSo | 0.691o | | 0.037o | ng/Lo | 0.708o | | 97.6o | 60-145 | | |
| PFPeSo | 0.779o | | 0.063o | ng/Lo | 0.752o | | 104o | 65-140 | | |
| PFHxSo | 0.752o | | 0.032o | ng/Lo | 0.732o | | 103o | 65-145 | | |
| PFHpSo | 0.774o | | 0.051o | ng/Lo | 0.764o | | 101o | 70-150 | | |
| PFOSo | 0.776o | | 0.064o | ng/Lo | 0.744o | | 104o | 55-150 | | |
| PFNSo | 0.707o | | 0.12o | ng/Lo | 0.768o | | 92.1o | 65-145 | | |
| PFDSo | 0.716o | | 0.15o | ng/Lo | 0.772o | | 92.8o | 60-145 | | |
| PFDoSo | 0.662o | | 0.12o | ng/Lo | 0.776o | | 85.3o | 50-145 | | |
| 4:2FTSo | 3.05o | | 0.29o | ng/Lo | 3.00o | | 102o | 70-145 | | |
| 6:2FTSo | 3.03o | | 0.31o | ng/Lo | 3.04o | | 99.6o | 65-155 | | |
| 8:2FTSo | 2.97o | | 0.082o | ng/Lo | 3.07o | | 96.6o | 60-150 | | |
| 10:2FTSo | 4.19o | | 0.40o | ng/Lo | 3.09o | | 136o | 0-200 | | |
| PFOSAo | 0.781o | | 0.10o | ng/Lo | 0.800o | | 97.7o | 70-145 | | |
| NMeFOSAo | 3.56o | | 0.47o | ng/Lo | 3.20o | | 111o | 60-150 | | |
| NEtFOSAo | 3.01o | | 0.41o | ng/Lo | 3.20o | | 94.0o | 65-145 | | |
| NMeFOSAAo | 0.774o | | 0.11o | ng/Lo | 0.800o | | 96.8o | 50-140 | | |
| NEtFOSAAo | 0.786o | | 0.11o | ng/Lo | 0.800o | | 98.3o | 70-145 | | |
| NMeFOSEo | 3.09o | | 1.0o | ng/Lo | 3.20o | | 96.5o | 70-145 | | |
| NEtFOSEo | 3.18o | | 1.0o | ng/Lo | 3.20o | | 99.3o | 70-135 | | |
| HFPO-DAo | 0.816o | | 0.17o | ng/Lo | 0.800o | | 102o | 70-140 | | |
| ADONAo | 0.749odo | | 0.12o | ng/Lo | 0.756o | | 99.0o | 65-145 | | |
| PFEESAo | 1.36o | | 0.11o | ng/Lo | 1.42o | | 95.2o | 70-140 | | |
| PFMPAo | 1.52o | | 0.054o | ng/Lo | 1.60o | | 94.9o | 55-140 | | |
| PFMBAo | 1.48o | | 0.091o | ng/Lo | 1.60o | | 92.5o | 60-150 | | |
| NFDHAo | 1.51o | | 0.30o | ng/Lo | 1.60o | | 94.4o | 50-150 | | |
| 9Cl-PF3ONSo | 0.648odo | | 0.21o | ng/Lo | 0.748o | | 86.7o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.636odo | | 0.21o | ng/Lo | 0.756o | | 84.1o | 55-160 | | |
| 3:3FTCAo | 3.07o | | 0.57o | ng/Lo | 3.20o | | 95.8o | 65-130 | | |
| 5:3FTCAo | 3.11o | | 0.44o | ng/Lo | 3.20o | | 97.1o | 70-135 | | |
| 7:3FTCAo | 3.27o | | 0.55o | ng/Lo | 3.20o | | 102o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.1o* | | | *ng/Lo* | *32.0o* | | *103o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.4o* | | | *ng/Lo* | *16.0o* | | *109o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.67o* | | | *ng/Lo* | *8.00o* | | *108o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.87o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *7.97o* | | | *ng/Lo* | *8.00o* | | *99.6o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.26o* | | | *ng/Lo* | *4.00o* | | *107o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *3.98o* | | | *ng/Lo* | *4.00o* | | *99.5o* | *40-130 o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0208-MRL1)u** | | | | Prepared: 03/14/24 12:39 Analyzed: 03/18/24 16:14o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *3.70o* | | | *ng/Lo* | *4.00o* | | *92.5o* | *30-130 o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.59o* | | | *ng/Lo* | *4.00o* | | *89.7o* | *10-130 o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.12o* | | | *ng/Lo* | *4.00o* | | *77.9o* | *10-130 o* | | |
| *Surrogate: 13C2-PFHxDAo* | *4.92o* | | | *ng/Lo* | *8.00o* | | *61.4o* | *0-200 o* | | |
| *Surrogate: 13C3-PFBSo* | *7.44o* | | | *ng/Lo* | *8.00o* | | *93.0o* | *40-135 o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.66o* | | | *ng/Lo* | *8.00o* | | *95.7o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOSo* | *8.17o* | | | *ng/Lo* | *8.00o* | | *102o* | *40-130 o* | | |
| *Surrogate: 13C2-4:2FTSo* | *23.9o* | | | *ng/Lo* | *16.0o* | | *149o* | *40-200 o* | | |
| *Surrogate: 13C2-6:2FTSo* | *25.3o* | | | *ng/Lo* | *16.0o* | | *158o* | *40-200 o* | | |
| *Surrogate: 13C2-8:2FTSo* | *24.3o* | | | *ng/Lo* | *16.0o* | | *152o* | *40-300 o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *34.5o* | | | *ng/Lo* | *32.0o* | | *108o* | *0-200 o* | | |
| *Surrogate: 13C8-PFOSAo* | *6.21o* | | | *ng/Lo* | *8.00o* | | *77.7o* | *40-130 o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.11o* | | | *ng/Lo* | *8.00o* | | *26.4o* | *10-130 o* | | |
| *Surrogate: D5-NETFOSAo* | *1.77o* | | | *ng/Lo* | *8.00o* | | *22.1o* | *10-130 o* | | |
| *Surrogate: D3-NMEFOSAAo* | *16.6o* | | | *ng/Lo* | *16.0o* | | *104o* | *40-170 o* | | |
| *Surrogate: D5-NETFOSAAo* | *17.2o* | | | *ng/Lo* | *16.0o* | | *108o* | *25-135 o* | | |
| *Surrogate: D7-NMEFOSEo* | *44.8o* | | | *ng/Lo* | *80.0o* | | *56.0o* | *10-130 o* | | |
| *Surrogate: D9-NETFOSEo* | *40.4o* | | | *ng/Lo* | *80.0o* | | *50.5o* | *10-130 o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *33.9o* | | | *ng/Lo* | *32.0o* | | *106o* | *40-130 o* | | |
| **Matrix Spike (BDC0208-MS1)u** | **Source: 24C0083-07u** | | | Prepared: 03/14/24 12:39 Analyzed: 03/18/24 16:35o | | | | | | |
| PFBAo | 17.0o | | 0.19o | ng/Lo | 14.7o | 4.08o | 88.3o | 70-140o | | |
| PFPeAo | 9.72o | | 0.060o | ng/Lo | 7.34o | 3.19o | 88.9o | 65-135o | | |
| PFHxAo | 6.06o | | 0.050o | ng/Lo | 3.67o | 2.87o | 86.9o | 70-145o | | |
| PFHpAo | 4.93o | | 0.038o | ng/Lo | 3.67o | 1.53o | 92.7o | 70-150o | | |
| PFOAo | 8.03oMI4o | | 0.14o | ng/Lo | 3.67o | 4.90o | 85.1o | 70-150o | | |
| PFNAo | 3.46o | | 0.075o | ng/Lo | 3.67o | 0.148o | 90.2o | 70-150o | | |
| PFDAo | 3.64o | | 0.093o | ng/Lo | 3.67o | 0.307o | 90.9o | 70-140o | | |
| PFUnAo | 3.55o | | 0.15o | ng/Lo | 3.67o | NDo | 96.8o | 70-145o | | |
| PFDoAo | 3.61o | | 0.10o | ng/Lo | 3.67o | NDo | 98.3o | 70-140o | | |
| PFTrDAo | 3.38o | | 0.19o | ng/Lo | 3.67o | NDo | 92.1o | 65-140o | | |
| PFTeDAo | 3.67o | | 0.18o | ng/Lo | 3.67o | NDo | 100o | 60-140o | | |
| PFHxDAo | 3.64o | | 0.18o | ng/Lo | 3.67o | NDo | 99.2o | 40-150o | | |
| PFODAo | 3.25o | | 0.18o | ng/Lo | 3.67o | 0.227o | 82.4o | 40-150o | | |
| PFBSo | 6.41o | | 0.034o | ng/Lo | 3.25o | 3.17o | 100o | 60-145o | | |
| PFPeSo | 4.40o | | 0.058o | ng/Lo | 3.45o | 1.01o | 98.5o | 65-140o | | |
| PFHxSo | 9.16o | | 0.029o | ng/Lo | 3.36o | 5.55o | 107o | 65-145o | | |
| PFHpSo | 4.26o | | 0.047o | ng/Lo | 3.50o | 0.181o | 116o | 70-150o | | |
| PFOSo | 5.93o | | 0.058o | ng/Lo | 3.41o | 2.15o | 111o | 55-150o | | |
| PFNSo | 3.61o | | 0.11o | ng/Lo | 3.52o | NDo | 102o | 65-145o | | |
| PFDSo | 3.48o | | 0.14o | ng/Lo | 3.54o | NDo | 98.2o | 60-145o | | |
| PFDoSo | 3.39o | | 0.11o | ng/Lo | 3.56o | NDo | 95.4o | 50-145o | | |
| 4:2FTSo | 13.4o | | 0.27o | ng/Lo | 13.8o | NDo | 97.2o | 70-145o | | |
| 6:2FTSo | 13.1o | | 0.29o | ng/Lo | 13.9o | NDo | 93.7o | 65-155o | | |
| 8:2FTSo | 14.1o | | 0.075o | ng/Lo | 14.1o | NDo | 100o | 60-150o | | |
| 10:2FTSo | 17.3o | | 0.37o | ng/Lo | 14.2o | NDo | 122o | 0-200o | | |
| PFOSAo | 3.63o | | 0.095o | ng/Lo | 3.67o | NDo | 98.9o | 70-145o | | |
| NMeFOSAo | 14.8o | | 0.43o | ng/Lo | 14.7o | NDo | 101o | 60-150o | | |
| NEtFOSAo | 14.1o | | 0.38o | ng/Lo | 14.7o | NDo | 96.4o | 65-145o | | |
| NMeFOSAAo | 3.40o | | 0.097o | ng/Lo | 3.67o | 0.226o | 86.6o | 50-140o | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:03o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0208-MS1)u** | **Source: 24C0083-07** | | | | Prepared: 03/14/24 12:39 | | Analyzed: 03/18/24 16:35 | | | |
| NEtFOSAAo | 3.88o | | 0.11o | ng/L | 3.67o | NDo | 106 | 70-145 | | |
| NMeFOSEo | 13.5o | | 0.93o | ng/L | 14.7o | NDo | 92.1 | 70-145 | | |
| NEtFOSEo | 14.9o | | 0.96o | ng/L | 14.7o | NDo | 102 | 70-135 | | |
| HFPO-DAo | 3.69o | | 0.16o | ng/L | 3.67o | NDo | 101 | 70-140 | | |
| ADONAo | 3.23o | | 0.11o | ng/L | 3.47o | NDo | 93.0 | 65-145 | | |
| PFEESAo | 6.28o | | 0.10o | ng/L | 6.53o | NDo | 96.2 | 70-140 | | |
| PFMPAo | 6.19o | | 0.049o | ng/L | 7.34o | NDo | 84.3 | 55-140 | | |
| PFMBAo | 7.11o | | 0.083o | ng/L | 7.34o | NDo | 96.9 | 60-150 | | |
| NFDHAo | 6.62o | | 0.28o | ng/L | 7.34o | NDo | 90.3 | 50-150 | | |
| 9Cl-PF3ONSo | 2.99o | | 0.19o | ng/L | 3.43o | NDo | 87.1 | 70-155 | | |
| 11Cl-PF3OUDSo | 2.71o | | 0.19o | ng/L | 3.47o | NDo | 78.1 | 55-160 | | |
| 3:3FTCAo | 13.0o | | 0.53o | ng/L | 14.7o | NDo | 88.4 | 65-130 | | |
| 5:3FTCAo | 15.1o | | 0.41o | ng/L | 14.7o | NDo | 103 | 70-135 | | |
| 7:3FTCAo | 15.6o | | 0.51o | ng/L | 14.7o | NDo | 106 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *25.6o* | | | *ng/Lo* | *29.3o* | | *87.2* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *15.1o* | | | *ng/Lo* | *14.7o* | | *103* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *7.59o* | | | *ng/Lo* | *7.34o* | | *103* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.06o* | | | *ng/Lo* | *7.34o* | | *110* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.40o* | | | *ng/Lo* | *7.34o* | | *101* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.72o* | | | *ng/Lo* | *3.67o* | | *101* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.76o* | | | *ng/Lo* | *3.67o* | | *103* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *6.66&2o* | | | *ng/L* | *3.67o* | | *182* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *6.55&2o* | | | *ng/L* | *3.67o* | | *179* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *5.87&2o* | | | *ng/L* | *3.67o* | | *160* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *12.1o* | | | *ng/Lo* | *7.34o* | | *165* | *0-200* | | |
| *Surrogate: 13C3-PFBSo* | *7.06o* | | | *ng/Lo* | *7.34o* | | *96.2* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *7.39o* | | | *ng/Lo* | *7.34o* | | *101* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *7.15o* | | | *ng/Lo* | *7.34o* | | *97.4* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *22.3o* | | | *ng/Lo* | *14.7o* | | *152* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *22.5o* | | | *ng/Lo* | *14.7o* | | *153* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.0o* | | | *ng/Lo* | *14.7o* | | *130* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *29.6o* | | | *ng/Lo* | *29.3o* | | *101* | *0-200* | | |
| *Surrogate: 13C8-PFOSAo* | *6.57o* | | | *ng/Lo* | *7.34o* | | *89.5* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.08o* | | | *ng/Lo* | *7.34o* | | *28.4* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.83o* | | | *ng/Lo* | *7.34o* | | *24.9* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *14.0o* | | | *ng/Lo* | *14.7o* | | *95.2* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *15.5o* | | | *ng/Lo* | *14.7o* | | *106* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *44.2o* | | | *ng/Lo* | *73.4o* | | *60.3* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *34.4o* | | | *ng/Lo* | *73.4o* | | *46.9* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *30.4o* | | | *ng/Lo* | *29.3o* | | *104* | *40-130* | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0208-MSD1)u** | **Source: 24C0083-07u** | | | Prepared: 03/14/24 12:39 | Analyzed: 03/18/24 16:55o | | | | | |
| PFBAo | 16.8o | | 0.19o | ng/Lo | 14.9o | 4.08o | 85.6o | 70-140o | 1.32o | 30o |
| PFPeAo | 10.0o | | 0.060o | ng/Lo | 7.44o | 3.19o | 91.5o | 65-135o | 2.90o | 30o |
| PFHxAo | 6.12o | | 0.051o | ng/Lo | 3.72o | 2.87o | 87.3o | 70-145o | 0.980o | 30o |
| PFHpAo | 5.11o | | 0.038o | ng/Lo | 3.72o | 1.53o | 96.0o | 70-150o | 3.43o | 30o |
| PFOAo | 8.22oMI4o | | 0.14o | ng/Lo | 3.72o | 4.90o | 89.1o | 70-150o | 2.37o | 30o |
| PFNAo | 3.74o | | 0.076o | ng/Lo | 3.72o | 0.148o | 96.5o | 70-150o | 7.84o | 30o |
| PFDAo | 3.45o | | 0.094o | ng/Lo | 3.72o | 0.307o | 84.4o | 70-140o | 5.53o | 30o |
| PFUnAo | 3.62o | | 0.15o | ng/Lo | 3.72o | NDo | 97.3o | 70-145o | 2.03o | 30o |
| PFDoAo | 3.69o | | 0.10o | ng/Lo | 3.72o | NDo | 99.1o | 70-140o | 2.26o | 30o |
| PFTrDAo | 3.44o | | 0.19o | ng/Lo | 3.72o | NDo | 92.3o | 65-140o | 1.69o | 30o |
| PFTeDAo | 3.56o | | 0.18o | ng/Lo | 3.72o | NDo | 95.7o | 60-140o | 3.10o | 30o |
| PFHxDAo | 3.53o | | 0.19o | ng/Lo | 3.72o | NDo | 94.9o | 40-150o | 2.94o | 30o |
| PFODAo | 3.26o | | 0.19o | ng/Lo | 3.72o | 0.227o | 81.5o | 40-150o | 0.403o | 30o |
| PFBSo | 6.68o | | 0.034o | ng/Lo | 3.29o | 3.17o | 107o | 60-145o | 4.02o | 30o |
| PFPeSo | 4.54o | | 0.058o | ng/Lo | 3.50o | 1.01o | 101o | 65-140o | 3.05o | 30o |
| PFHxSo | 9.52o | | 0.029o | ng/Lo | 3.41o | 5.55o | 117o | 65-145o | 3.93o | 30o |
| PFHpSo | 3.87o | | 0.048o | ng/Lo | 3.55o | 0.181o | 104o | 70-150o | 9.49o | 30o |
| PFOSo | 5.84o | | 0.059o | ng/Lo | 3.46o | 2.15o | 107o | 55-150o | 1.56o | 30o |
| PFNSo | 3.41o | | 0.11o | ng/Lo | 3.57o | NDo | 95.4o | 65-145o | 5.69o | 30o |
| PFDSo | 3.55o | | 0.14o | ng/Lo | 3.59o | NDo | 98.8o | 60-145o | 2.09o | 30o |
| PFDoSo | 3.28o | | 0.11o | ng/Lo | 3.61o | NDo | 90.8o | 50-145o | 3.53o | 30o |
| 4:2FTSo | 13.0o | | 0.27o | ng/Lo | 14.0o | NDo | 93.2o | 70-145o | 2.74o | 30o |
| 6:2FTSo | 13.5o | | 0.29o | ng/Lo | 14.1o | NDo | 95.2o | 65-155o | 3.00o | 30o |
| 8:2FTSo | 14.2o | | 0.076o | ng/Lo | 14.3o | NDo | 99.6o | 60-150o | 0.836o | 30o |
| 10:2FTSo | 16.1o | | 0.37o | ng/Lo | 14.4o | NDo | 112o | 0-200o | 7.61o | 200o |
| PFOSAo | 3.91o | | 0.097o | ng/Lo | 3.72o | NDo | 105o | 70-145o | 7.48o | 30o |
| NMeFOSAo | 14.8o | | 0.44o | ng/Lo | 14.9o | NDo | 99.4o | 60-150o | 0.218o | 30o |
| NEtFOSAo | 14.4o | | 0.38o | ng/Lo | 14.9o | NDo | 96.8o | 65-145o | 1.90o | 30o |
| NMeFOSAAo | 3.51o | | 0.098o | ng/Lo | 3.72o | 0.226o | 88.3o | 50-140o | 3.11o | 30o |
| NEtFOSAAo | 3.61o | | 0.11o | ng/Lo | 3.72o | NDo | 97.0o | 70-145o | 7.37o | 30o |
| NMeFOSEo | 14.3o | | 0.94o | ng/Lo | 14.9o | NDo | 96.0o | 70-145o | 5.54o | 30o |
| NEtFOSEo | 14.5o | | 0.97o | ng/Lo | 14.9o | NDo | 97.6o | 70-135o | 2.55o | 30o |
| HFPO-DAo | 3.73o | | 0.16o | ng/Lo | 3.72o | NDo | 100o | 70-140o | 0.998o | 30o |
| ADONAo | 3.44o | | 0.11o | ng/Lo | 3.52o | NDo | 97.9o | 65-145o | 6.53o | 30o |
| PFEESAo | 6.37o | | 0.10o | ng/Lo | 6.62o | NDo | 96.2o | 70-140o | 1.38o | 30o |
| PFMPAo | 6.67o | | 0.050o | ng/Lo | 7.44o | NDo | 89.6o | 55-140o | 7.51o | 30o |
| PFMBAo | 7.00o | | 0.084o | ng/Lo | 7.44o | NDo | 94.1o | 60-150o | 1.53o | 30o |
| NFDHAo | 6.82o | | 0.28o | ng/Lo | 7.44o | NDo | 91.6o | 50-150o | 2.93o | 30o |
| 9Cl-PF3ONSo | 3.02o | | 0.19o | ng/Lo | 3.48o | NDo | 86.7o | 70-155o | 0.940o | 30o |
| 11Cl-PF3OUDSo | 2.82o | | 0.19o | ng/Lo | 3.52o | NDo | 80.1o | 55-160o | 3.91o | 30o |
| 3:3FTCAo | 13.8o | | 0.53o | ng/Lo | 14.9o | NDo | 93.0o | 65-130o | 6.49o | 30o |
| 5:3FTCAo | 15.3o | | 0.41o | ng/Lo | 14.9o | NDo | 103o | 70-135o | 1.34o | 30o |
| 7:3FTCAo | 16.2o | | 0.51o | ng/Lo | 14.9o | NDo | 108o | 50-145o | 3.30o | 30o |
| *Surrogate: 13C4-PFBAo* | *25.2o* | | | *ng/Lo* | *29.8o* | | *84.5o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *14.7o* | | | *ng/Lo* | *14.9o* | | *98.6o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.57o* | | | *ng/Lo* | *7.44o* | | *102o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.05o* | | | *ng/Lo* | *7.44o* | | *108o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *7.18o* | | | *ng/Lo* | *7.44o* | | *96.4o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *3.69o* | | | *ng/Lo* | *3.72o* | | *99.2o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *3.62o* | | | *ng/Lo* | *3.72o* | | *97.3o* | *40-130 o* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:03 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0208-MSD1)** | **Source: 24C0083-07** | | | | | Prepared: 03/14/24 12:39 Analyzed: 03/18/24 16:55 | | | | | |
| *Surrogate: 13C7-PFUnA* | *4.00* | | | | *ng/L* | *3.72* | | *107* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.75* | | | | *ng/L* | *3.72* | | *101* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.59* | | | | *ng/L* | *3.72* | | *96.5* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *6.78* | | | | *ng/L* | *7.44* | | *91.1* | *0-200* | | |
| *Surrogate: 13C3-PFBS* | *6.58* | | | | *ng/L* | *7.44* | | *88.4* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *6.84* | | | | *ng/L* | *7.44* | | *91.9* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *6.87* | | | | *ng/L* | *7.44* | | *92.3* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *21.5* | | | | *ng/L* | *14.9* | | *144* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *21.5* | | | | *ng/L* | *14.9* | | *144* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *18.5* | | | | *ng/L* | *14.9* | | *124* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *32.2* | | | | *ng/L* | *29.8* | | *108* | *0-200* | | |
| *Surrogate: 13C8-PFOSA* | *5.40* | | | | *ng/L* | *7.44* | | *72.6* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *1.94* | | | | *ng/L* | *7.44* | | *26.1* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *1.38* | | | | *ng/L* | *7.44* | | *18.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *14.7* | | | | *ng/L* | *14.9* | | *98.7* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *15.2* | | | | *ng/L* | *14.9* | | *102* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *34.6* | | | | *ng/L* | *74.4* | | *46.5* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *30.3* | | | | *ng/L* | *74.4* | | *40.6* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *30.3* | | | | *ng/L* | *29.8* | | *102* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:03o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI3o | Manual integration, peaks split o |
| MI4o | Manual integration, peak unsplit o |
| MI5o | Manual integration, whole peak was not integrated o |
| MI6o | Manual integration, wrong peak integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0083** R

Printed: 03/28/2024 11:04 ami

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/14/2024 09:50 AMi
Date Due:i 03/28/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Steven Crupi

| Analysisa | Commentsa |
|---|---|

**24C0083-01 MW-21-3 [Water] Sampled 3/13/2024 8:10:00AMR**
1633i NASA Listi

**24C0083-02 MW-21-2 [Water] Sampled 3/13/2024 8:35:00AMR**
1633i NASA Listi

**24C0083-03 MW-21-1 [Water] Sampled 3/13/2024 9:00:00AMR**
1633i NASA Listi

**24C0083-04 FB-3-031324 [Water] Sampled 3/13/2024 9:10:00AMR**
1633i NASA Listi

**24C0083-05 EB-3-031324 [Water] Sampled 3/13/2024 9:20:00AMR**
1633i NASA Listi

**24C0083-06 MW-19-3 [Water] Sampled 3/13/2024 11:10:00AMR**
1633i NASA Listi

**24C0083-07 MW-19-2 [Water] Sampled 3/13/2024 11:30:00AMR**
***Sample Comments: MS.MSDR***
1633i NASA Listi

**24C0083-08 MW-19-1 [Water] Sampled 3/13/2024 12:10:00PMR**
1633i NASA Listi

APPL
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A METIRI GROUP COMPANY

# WORK ORDER

**24C0083** R

Printed: 03/28/2024 11:04 ami

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0083C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **0.9°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yes i |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yes i |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yes i |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yes i |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yes i |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | Yes i |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | No i |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | No i |

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

24C0083

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: (626)-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: (614)-792-2897 | Address: 3761 A Hucks Dr OH, 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh2o.net | | Email: david.conner@tideh2o.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Think Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | | Analysis Requested/Method Number: PFAS 1633 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-21-3 | | 03/13/24 | 0810 | | 1 | X | | | | X | Laboratory, please select 2 SDGs for level IV Validation |
| MW-21-2 | | | 0835 | | 1 | X | | | | X | |
| MW-21-1 | | | 0900 | | 1 | X | | | | X | |
| FB-3-031324 | | | 0910 | | 1 | X | | | | X | |
| EB-3-031324 | | | 0920 | | 1 | X | | | | X | |
| MW-19-3 | | | 1110 | | 1 | X | | | | X | |
| MW-19-2 | | | 1130 | | 3 | X | | | | X | MS/MSD |
| MW-19-1 | | | 1210 | | 1 | X | | | | X | |

Date Shipped:
Carrier:
Waybill No.:

Bottle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/13/24 | 1300 | Nicole Park | Nicole Park | 3/13/24 | 1600 | FEDEX 7755 3303 7949 |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/14/24 | 0950 | Allen R. Cruz |

White: Return to client with report Yellow: Laboratory Copy See reverse side for Container Preservative and Sampling Information

1.7°/0.9°C



Table of Contents

0.9°C IRB

ARC 3/14/24

# PFASA

SAMPLE DATAM

# ANALYSIS DATA SHEETL

## MW-21-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-01- | File ID:- | S2024-03-18A (25)- |
| Sampled:- | 03/13/24 08:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 21:43- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 542.177 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 5.9- | 0.19- | 1.5- | |
| PFPeA- | 9.5- | 0.060- | 0.74- | |
| PFHxA- | 6.9- | 0.051- | 0.37- | |
| PFHpA- | 2.4- | 0.038- | 0.37- | |
| PFOA- | 5.2- | 0.14- | 0.37- | MI5- |
| PFNA- | 0.12- | 0.075- | 0.37- | IR1, J- |
| PFDA- | ND- | 0.093- | 0.37- | IR2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 5.3- | 0.034- | 0.37- | |
| PFPeS- | 1.4- | 0.058- | 0.37- | |
| PFHxS- | 4.4- | 0.029- | 0.37- | |
| PFHpS- | 0.22- | 0.047- | 0.37- | J- |
| PFOS- | 3.1- | 0.059- | 0.37- | MI2- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | MI5, U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-21-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-01- | File ID:- | S2024-03-18A (25)- |
| Sampled:- | 03/13/24 08:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 21:43- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 542.177 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (25)
Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 96906<br>( 163.0 / 69.0 ) 2688 | ( 2.82 , 0.75 ) ( N/A , 0.05 , 0.0) | 411.6<br>170.5 | 0.0277<br>110.7<br>106.1 | 0.4519 | N/A | 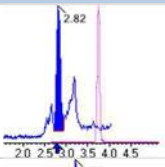 | 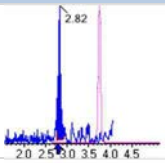 | MI4 DG 2024-03-19 |
| PFBA | ( 213.0 / 169.0 ) 365429 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 752.5 | N/A<br>0.0<br>0.0 | 1.5936 | N/A | 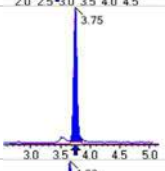 | | |
| PFPeA | ( 263.0 / 219.0 ) 705457<br>( 263.0 / 69.0 ) 8751 | ( 4.82 , 1.00 ) ( 0.00 , N/A , -0.2) | 1966.2<br>114.6 | 0.0124<br>112.9<br>106.1 | 2.5767 | N/A | 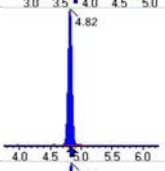 | 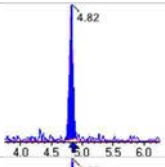 | |
| PFHxA | ( 313.0 / 269.0 ) 591182<br>( 313.0 / 119.0 ) 68741 | ( 6.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 994.2<br>692.8 | 0.1163<br>104.6<br>102.3 | 1.8776 | N/A | 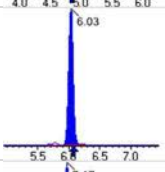 | 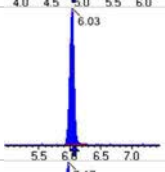 | |
| PFHpA | ( 363.0 / 319.0 ) 219678<br>( 363.0 / 169.0 ) 61316 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.0) | 403.4<br>438.9 | 0.2791<br>89.6<br>94.9 | 0.6427 | N/A | 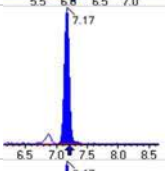 | 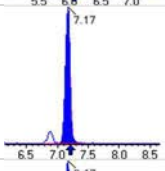 | |
| PFOA | ( 413.0 / 369.0 ) 696304<br>( 413.0 / 169.0 ) 266256 | ( 8.17 , 1.00 ) ( 0.00 , N/A , 0.1) | 381.8<br>307.3 | 0.3824<br>105.7<br>107.7 | 1.4123 | N/A | 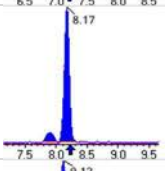 | 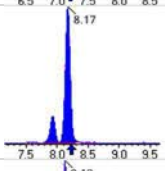 | MI5 PIT 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) 11292<br>( 463.0 / 169.0 ) 1466 | ( 9.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 32.6<br>16.9 | 0.1299<br>49.5<br>52.8 | 0.0338 | N/A | 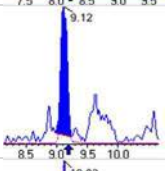 | 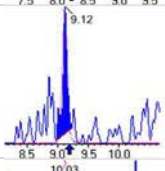 | IR1, |
| PFDA | ( 513.0 / 469.0 ) 6643<br>( 513.0 / 169.0 ) 1188 | ( 10.03 , 1.00 ) ( 0.01 , N/A , -0.3) | 67.6<br>24.8 | 0.1789<br>152.4<br>148.1 | 0.0180 | N/A | 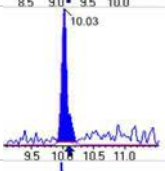 | 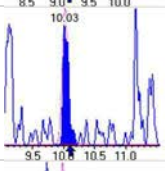 | IR2, |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 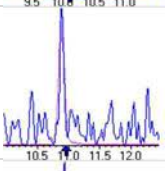 | 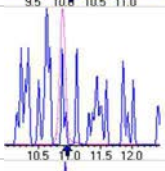 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 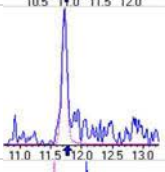 | 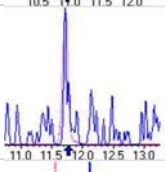 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 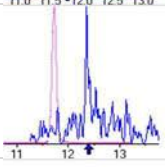 | 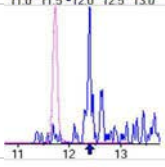 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (25)
Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 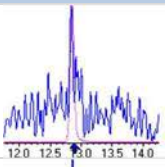 | 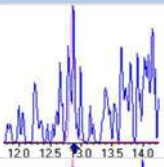 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 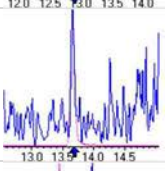 | 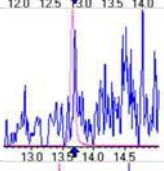 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 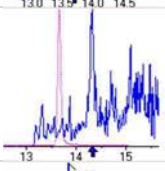 | 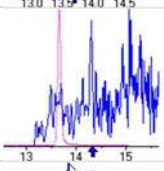 | |
| PFBS | ( 299.0 / 80.0 )<br>752011<br>( 299.0 / 99.0 )<br>530947 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1134.8<br>1299.8 | 0.7060<br>99.3<br>97.9 | 1.4497 | N/A | 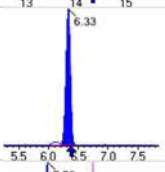 | 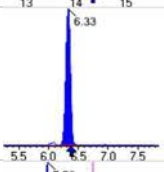 | |
| PFPeS | ( 349.0 / 80.0 )<br>455331<br>( 349.0 / 99.0 )<br>157392 | ( 7.56 , 0.88 )<br>( N/A , -0.05 , 0.0) | 289.3<br>374.5 | 0.3457<br>101.6<br>100.7 | 0.3735 | N/A | 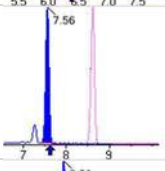 | 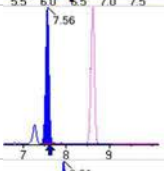 | |
| PFHxS | ( 399.0 / 80.0 )<br>1619794<br>( 399.0 / 99.0 )<br>457014 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1170.1<br>1758.5 | 0.2821<br>90.2<br>87.9 | 1.1947 | N/A | 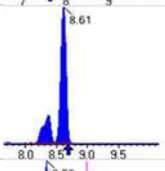 | 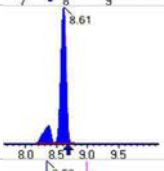 | |
| PFHpS | ( 449.0 / 80.0 )<br>63835<br>( 449.0 / 99.0 )<br>13430 | ( 9.59 , 0.92 )<br>( N/A , -0.07 , -0.2) | 109.7<br>55.6 | 0.2104<br>78.7<br>78.3 | 0.0589 | N/A | 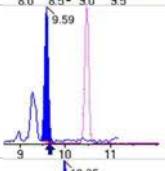 | 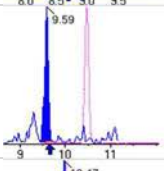 | |
| PFOS | ( 499.0 / 80.0 )<br>915124<br>( 499.0 / 99.0 )<br>158823 | ( 10.35 , 0.99 )<br>( -0.13 , N/A , -7.2) | 452.2<br>755.0 | 0.1736<br>73.4<br>79.2 | 0.8393 | N/A | 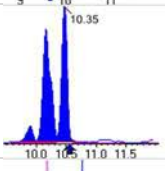 | 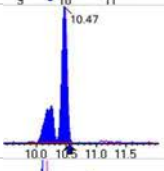 | MI2 DG<br>2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 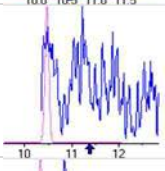 | 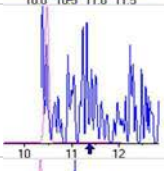 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 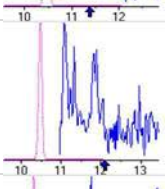 | 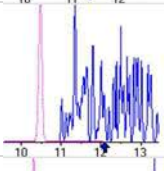 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 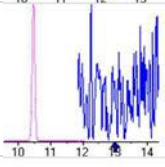 | 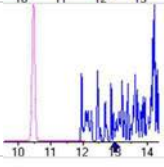 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (25)
Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 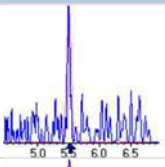 | 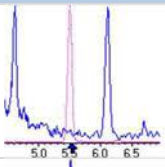 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 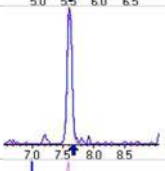 | 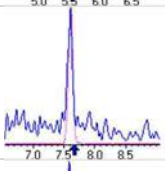 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 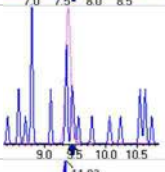 | 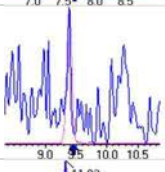 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>13350<br>( 627.0 / 81.0 )<br>20806 | ( 11.03 , 1.00 )<br>( 0.01 , N/A , 0.7) | 176.3<br>57.9 | 1.5584<br>115.3<br>113.8 | 0.0498 | N/A | 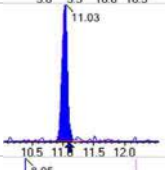 | 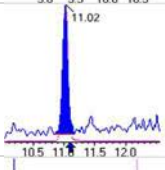 | |
| PFBSA | ( 297.9 / 78.0 )<br>70928<br>( 297.9 / 278.0 )<br>131 | ( 8.05 , 0.57 )<br>( N/A , -0.01 , -0.9) | 461.7<br>3.9 | 0.0019<br>132.0<br>117.2 | 0.2262 | N/A | 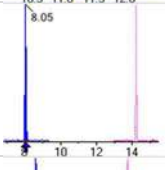 | 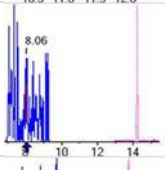 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 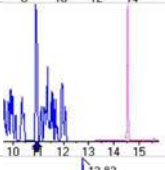 | 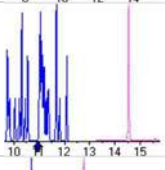 | |
| PFOSA | ( 498.0 / 78.0 )<br>13030<br>( 498.0 / 478.0 )<br>192 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.4) | 153.3<br>4.4 | 0.0147<br>102.2<br>107.7 | 0.0150 | N/A | 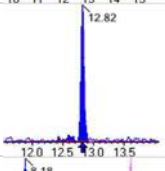 | 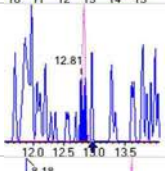 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 )<br>78814<br>( 279.7 / 211.0 )<br>5928 | ( 8.18 , 0.64 )<br>( N/A , -0.07 , 0.0) | 31.9<br>15.1 | 0.0752<br>91.2<br>88.5 | 0.0427 | N/A | 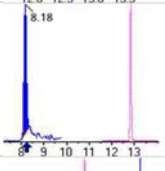 | 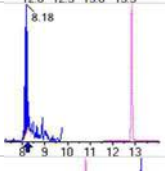 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 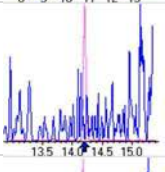 | 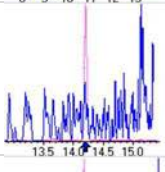 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 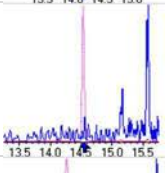 | 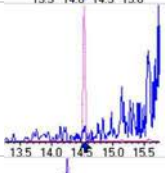 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 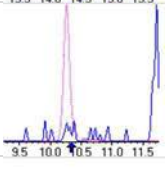 | 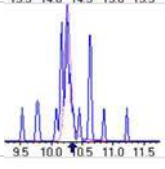 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (25)
Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 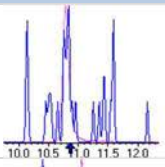 | 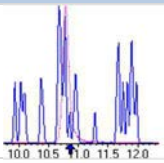 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 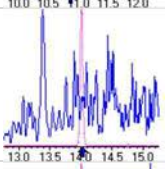 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 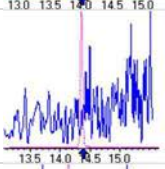 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 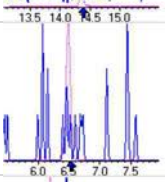 | 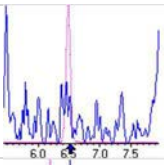 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 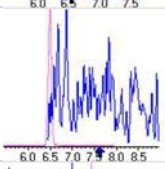 | 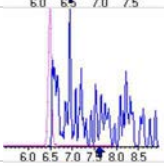 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 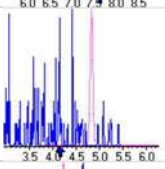 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 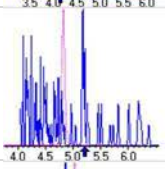 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 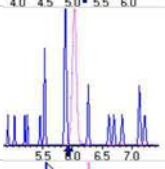 | 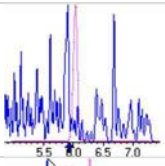 | |
| PFECHS | ( 461.0 / 98.9 )<br>12849<br>( 461.0 / 381.2 )<br>3704 | ( 9.51 , 0.91 )<br>( N/A , -0.07 , -0.6) | 57.0<br>31.1 | 0.2883<br>73.8<br>73.7 | 0.0209 | N/A | 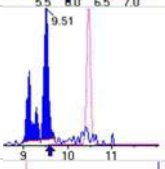 | 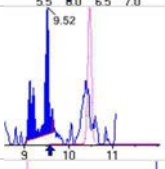 | MI5 DG<br>2024-03-19 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 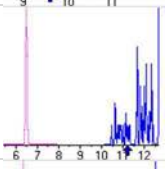 | 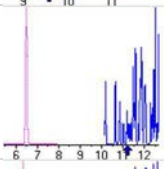 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 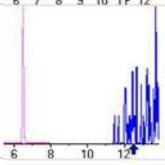 | 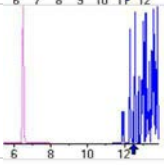 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (25)
Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 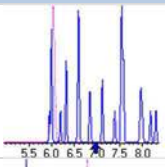 | 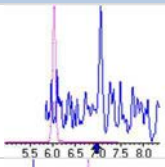 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 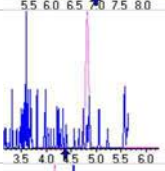 | 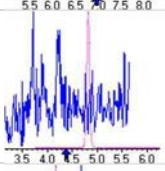 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 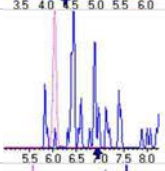 | 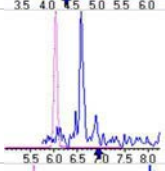 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 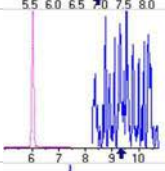 | 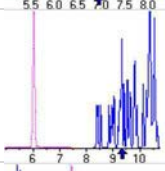 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 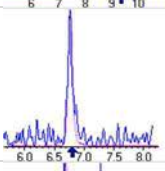 | 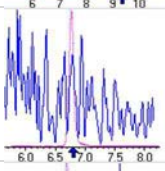 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 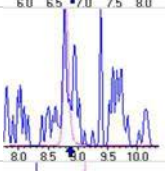 | 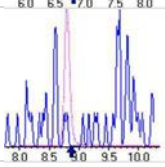 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 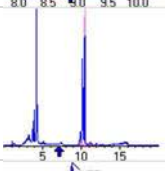 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 292189 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1313.9 | N/A | 0.9699<br>[ 1.0000 ] | 97.0%<br>{ 86.3% } | 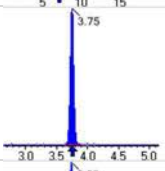 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 163997 | ( 6.03 , N/A )<br>( N/A , -0.03 , N/A ) | 24275.4 | N/A | 1.0665<br>[ 1.0000 ] | 106.7%<br>{ 96.2% } | 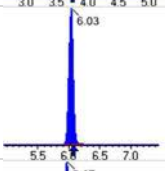 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 463694 | ( 8.17 , N/A )<br>( N/A , -0.06 , N/A ) | 3236.0 | N/A | 1.0394<br>[ 1.0000 ] | 103.9%<br>{ 95.0% } | 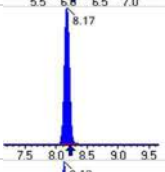 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 347694 | ( 9.12 , N/A )<br>( N/A , -0.07 , N/A ) | 913.2 | N/A | 1.0401<br>[ 1.0000 ] | 104.0%<br>{ 90.4% } | 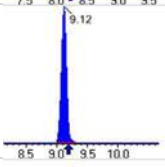 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 324262 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 4106.7 | N/A | 0.9778 [ 1.0000 ] | 97.8% { 85.9% } | 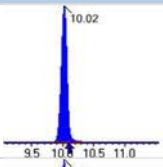 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1101804 | ( 8.62 , N/A ) ( N/A , -0.07 , N/A ) | 4687.0 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 87.9% } | 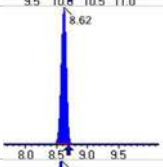 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 951596 | ( 10.48 , N/A ) ( N/A , -0.08 , N/A ) | 1137.2 | N/A | 0.9748 [ 1.0000 ] | 97.5% { 90.0% } | 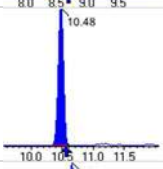 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1939140 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 33163.1 | N/A | 6.0182 [ 8.0000 ] | 75.2% { 68.3% } | 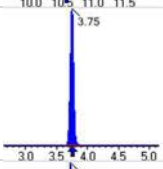 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1075747 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5394.3 | N/A | 3.6564 [ 4.0000 ] | 91.4% { 84.0% } | 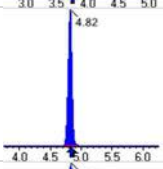 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 649890 | ( 6.03 , N/A ) ( N/A , -0.03 , N/A ) | 6105.9 | N/A | 1.8456 [ 2.0000 ] | 92.3% { 85.7% } | 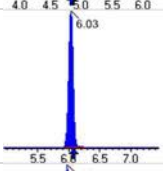 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 694084 | ( 7.17 , N/A ) ( N/A , -0.04 , N/A ) | 5710.5 | N/A | 1.8873 [ 2.0000 ] | 94.4% { 84.5% } | 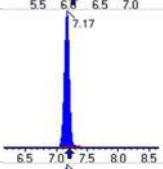 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 969679 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 3080.8 | N/A | 1.9834 [ 2.0000 ] | 99.2% { 89.2% } | 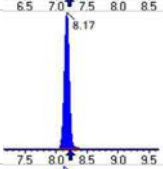 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 333593 | ( 9.12 , N/A ) ( N/A , -0.07 , N/A ) | 1766.5 | N/A | 0.9936 [ 1.0000 ] | 99.4% { 88.2% } | 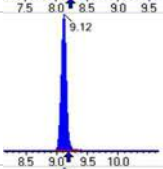 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 369830 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 1051.2 | N/A | 0.9884 [ 1.0000 ] | 98.8% { 78.5% } | 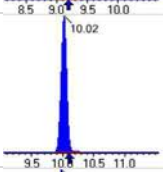 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 414248 | ( 10.89 , N/A ) ( N/A , -0.07 , N/A ) | 959.0 | N/A | 0.9106 [ 1.0000 ] | 91.1% { 81.7% } | 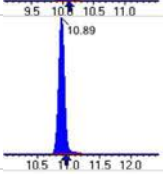 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-01 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 379277 | ( 11.72 , N/A ) ( N/A , -0.06 , N/A ) | 1364.8 | N/A | 0.8302 [ 1.0000 ] | 83.0% { 73.1% } | 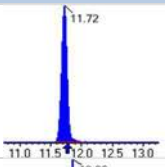 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305395 | ( 12.86 , N/A ) ( N/A , -0.03 , N/A ) | 1362.6 | N/A | 0.7671 [ 1.0000 ] | 76.7% { 69.0% } | 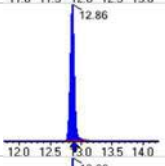 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 512255 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2486.6 | N/A | 1.5149 [ 2.0000 ] | 75.7% { 63.6% } | 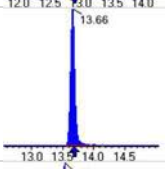 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1995106 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 1012.4 | N/A | 1.8585 [ 2.0000 ] | 92.9% { 83.7% } | 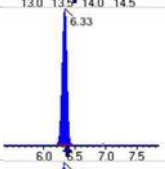 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1531205 | ( 8.62 , N/A ) ( N/A , -0.07 , N/A ) | 3899.4 | N/A | 1.8992 [ 2.0000 ] | 95.0% { 86.8% } | 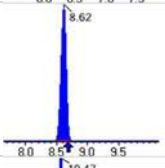 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1886402 | ( 10.47 , N/A ) ( N/A , -0.08 , N/A ) | 1290.0 | N/A | 1.8621 [ 2.0000 ] | 93.1% { 84.5% } | 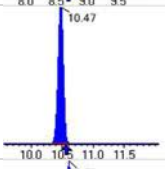 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 607313 | ( 5.50 , N/A ) ( N/A , -0.03 , N/A ) | 74.7 | N/A | 6.3297 [ 4.0000 ] | 158.2% { 109.8% } | 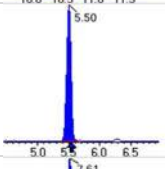 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1805744 | ( 7.61 , N/A ) ( N/A , -0.05 , N/A ) | 1976.5 | N/A | 6.0604 [ 4.0000 ] | 151.5% { 110.9% } | 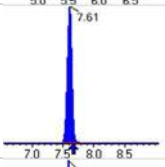 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1390610 | ( 9.39 , N/A ) ( N/A , -0.07 , N/A ) | 1090.5 | N/A | 4.6846 [ 4.0000 ] | 117.1% { 81.5% } | 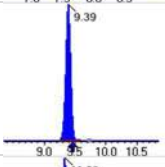 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2608843 | ( 11.02 , N/A ) ( N/A , -0.07 , N/A ) | 1468.2 | N/A | 7.6562 [ 8.0000 ] | 95.7% { 70.3% } | 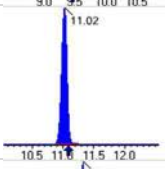 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1779859 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2128.9 | N/A | 1.6213 [ 2.0000 ] | 81.1% { 73.5% } | 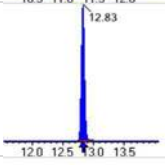 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (25)
Acquired: 2024/03/18 - 21:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 136388 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1108.1 | N/A | 0.6728 [ 2.0000 ] | 33.6% { 31.9% } | 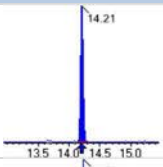  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 127511 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 1326.6 | N/A | 0.5476 [ 2.0000 ] | 27.4% { 26.3% } | 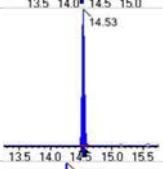  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 974132 | ( 10.26 , N/A ) ( N/A , -0.07 , N/A ) | 2610.1 | N/A | 3.7549 [ 4.0000 ] | 93.9% { 73.8% } | 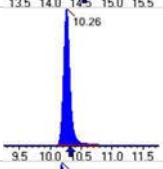  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 972755 | ( 10.78 , N/A ) ( N/A , -0.07 , N/A ) | 1975.0 | N/A | 3.9501 [ 4.0000 ] | 98.8% { 79.0% } | 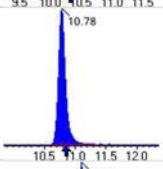  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1243757 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2443.2 | N/A | 13.1307 [ 20.0000 ] | 65.7% { 66.9% } | 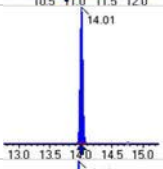  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1227006 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3253.9 | N/A | 10.6933 [ 20.0000 ] | 53.5% { 58.6% } | 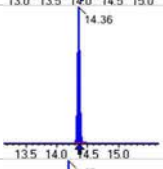  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1158491 | ( 6.49 , N/A ) ( N/A , -0.04 , N/A ) | 2336.5 | N/A | 7.6540 [ 8.0000 ] | 95.7% { 82.5% } | 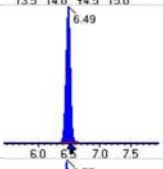  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 580805 | ( 6.77 , N/A ) ( N/A , -0.04 , N/A ) | 1476.9 | N/A | 2.0196 [ 2.0000 ] | 101.0% { 81.6% } | 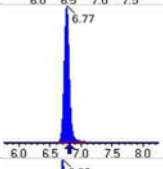  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 597085 | ( 8.80 , N/A ) ( N/A , -0.07 , N/A ) | 649.4 | N/A | 2.2238 [ 2.0000 ] | 111.2% { 89.2% } | 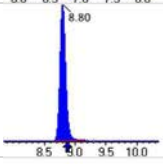  | | |

# ANALYSIS DATA SHEETL

## MW-21-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-02- | File ID:- | S2024-03-18A (26)- |
| Sampled:- | 03/13/24 08:35- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 22:03- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 561.83 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 7.0- | 0.19- | 1.4- | |
| PFPeA- | 13- | 0.058- | 0.71- | |
| PFHxA- | 9.4- | 0.049- | 0.36- | |
| PFHpA- | 2.7- | 0.036- | 0.36- | |
| PFOA- | 2.8- | 0.14- | 0.36- | MI5- |
| PFNA- | ND- | 0.073- | 0.36- | U- |
| PFDA- | ND- | 0.090- | 0.36- | MI2, U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 6.8- | 0.033- | 0.36- | |
| PFPeS- | 1.4- | 0.056- | 0.36- | |
| PFHxS- | 4.8- | 0.028- | 0.36- | |
| PFHpS- | 0.069- | 0.046- | 0.36- | MI6, J- |
| PFOS- | 1.2- | 0.057- | 0.36- | MI2- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.13- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.073- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.093- | 0.36- | U- |
| NMeFOSA- | ND- | 0.42- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.094- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

## MW-21-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-02- | File ID:- | S2024-03-18A (26)- |
| Sampled:- | 03/13/24 08:35- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 22:03- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 561.83 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.90- | 1.4- | U- |
| NEtFOSE- | ND- | 0.93- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.71- | U- |
| ADONA- | ND- | 0.11- | 0.71- | U- |
| PFEESA- | ND- | 0.097- | 0.71- | U- |
| PFMPA- | ND- | 0.048- | 0.71- | U- |
| PFMBA- | ND- | 0.081- | 0.71- | U- |
| NFDHA- | ND- | 0.27- | 0.71- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.71- | U- |
| 11Cl-PF3OUDS- | ND- | 0.18- | 0.71- | U- |
| 3:3FTCA- | ND- | 0.51- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.39- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.49- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 105378<br>( 163.0 / 69.0 ) 2731 | ( 2.81 , 0.75 )<br>( N/A , 0.03 , 0.1) | 637.5<br>159.5 | 0.0259<br>103.4<br>99.1 | 0.5096 | N/A | 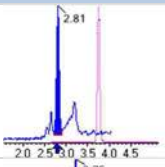 | 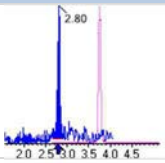 | |
| PFBA | ( 213.0 / 169.0 ) 435323 | ( 3.75 , 1.00 )<br>( 0.00 , N/A , 0.0) | 813.2 | N/A<br>0.0<br>0.0 | 1.9688 | N/A | 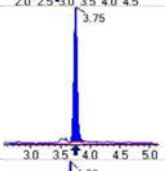 | | |
| PFPeA | ( 263.0 / 219.0 ) 823051<br>( 263.0 / 69.0 ) 9751 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2239.2<br>143.6 | 0.0118<br>107.9<br>101.4 | 3.5507 | N/A | 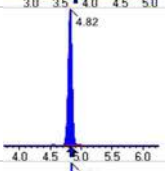 | 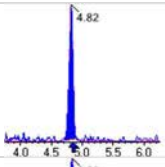 | |
| PFHxA | ( 313.0 / 269.0 ) 725857<br>( 313.0 / 119.0 ) 79416 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1207.9<br>778.3 | 0.1094<br>98.5<br>96.3 | 2.6545 | N/A | 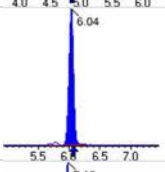 | 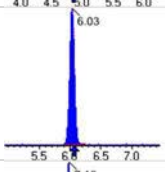 | |
| PFHpA | ( 363.0 / 319.0 ) 234618<br>( 363.0 / 169.0 ) 70927 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 497.3<br>337.6 | 0.3023<br>97.0<br>102.8 | 0.7611 | N/A | 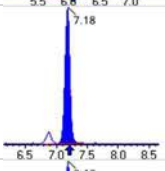 | 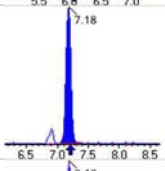 | |
| PFOA | ( 413.0 / 369.0 ) 331159<br>( 413.0 / 169.0 ) 137872 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 214.4<br>176.9 | 0.4163<br>115.1<br>117.3 | 0.7852 | N/A | 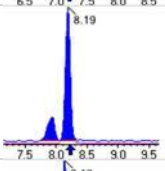 | 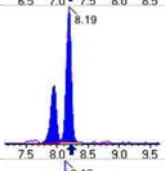 | MI5 PIT 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) 5005<br>( 463.0 / 169.0 ) 1193 | ( 9.13 , 1.00 )<br>( 0.00 , N/A , 0.3) | 26.9<br>21.6 | 0.2384<br>90.8<br>96.9 | 0.0185 | N/A | 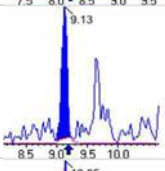 | 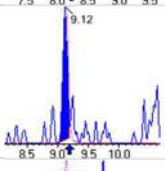 | |
| PFDA | ( 513.0 / 469.0 ) 3957<br>( 513.0 / 169.0 ) 597 | ( 10.05 , 1.00 )<br>( 0.01 , N/A , -1.1) | 39.9<br>31.5 | 0.1508<br>128.5<br>124.9 | 0.0124 | N/A | 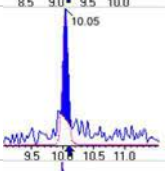 | 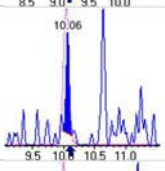 | MI2 PIT 3/19/24 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 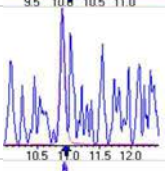 | 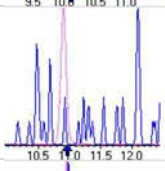 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 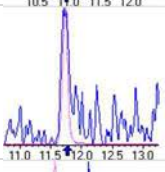 | 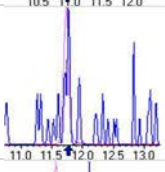 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 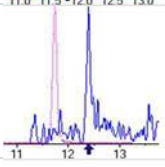 | 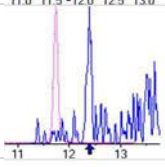 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 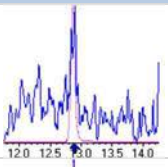 | 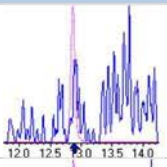 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 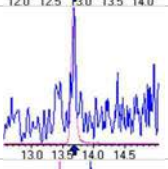 | 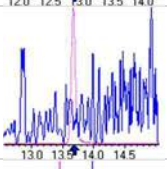 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 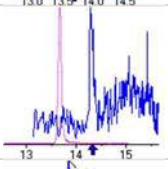 | 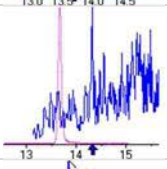 | |
| PFBS | ( 299.0 / 80.0 )<br>849423<br>( 299.0 / 99.0 )<br>622624 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1387.9<br>1340.7 | 0.7330<br>103.1<br>101.7 | 1.9242 | N/A | 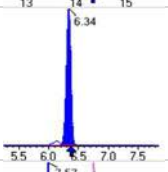 | 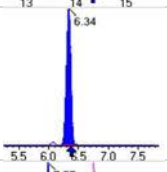 | |
| PFPeS | ( 349.0 / 80.0 )<br>460265<br>( 349.0 / 99.0 )<br>161065 | ( 7.57 , 0.88 )<br>( N/A , -0.04 , 0.2) | 345.8<br>417.1 | 0.3499<br>102.9<br>102.0 | 0.3993 | N/A | 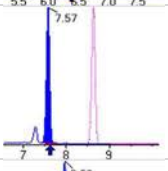 | 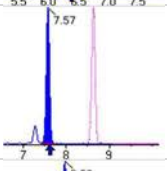 | |
| PFHxS | ( 399.0 / 80.0 )<br>1730332<br>( 399.0 / 99.0 )<br>512295 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1572.9<br>1945.5 | 0.2961<br>94.7<br>92.3 | 1.3497 | N/A | 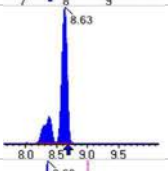 | 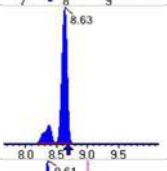 | |
| PFHpS | ( 449.0 / 80.0 )<br>17867<br>( 449.0 / 99.0 )<br>5311 | ( 9.60 , 0.92 )<br>( N/A , -0.06 , -0.6) | 55.0<br>24.9 | 0.2973<br>111.3<br>110.7 | 0.0193 | N/A | 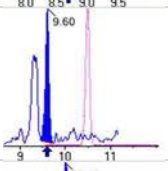 | 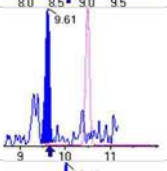 | MI6 PIT 3/19/24 |
| PFOS | ( 499.0 / 80.0 )<br>310592<br>( 499.0 / 99.0 )<br>64388 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , 0.0) | 302.1<br>633.4 | 0.2073<br>87.6<br>94.6 | 0.3327 | N/A | 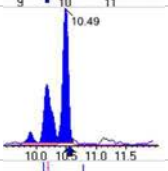 | 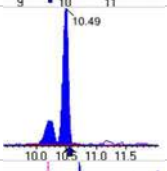 | MI2 DG 2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 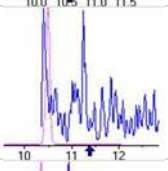 | 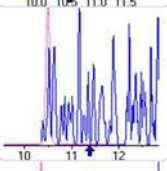 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 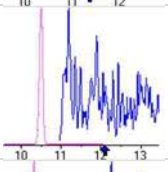 | 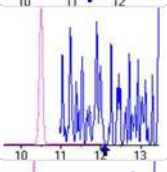 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 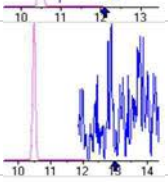 | 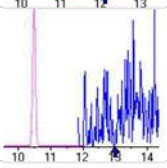 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 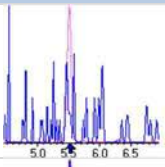 | 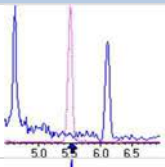 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 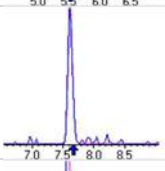 | 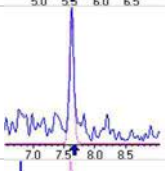 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 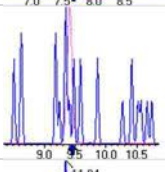 | 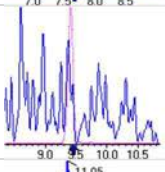 | |
| 10:2FTS | ( 627.0 / 607.0 ) 15878<br>( 627.0 / 81.0 ) 18179 | ( 11.04 , 1.00 ) ( 0.00 , N/A , -0.6) | 240.0<br>45.2 | 1.1449<br>84.7<br>83.6 | 0.0635 | N/A | 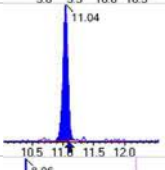 | 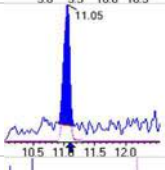 | |
| PFBSA | ( 297.9 / 78.0 ) 47515<br>( 297.9 / 278.0 ) N/A | ( 8.06 , 0.57 ) ( N/A , 0.00 , #Value!) | 409.8<br>N/A | N/A<br>0.0<br>0.0 | 0.1593 | N/A | 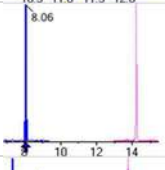 | 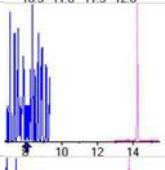 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 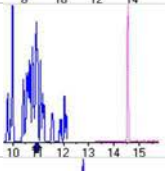 | 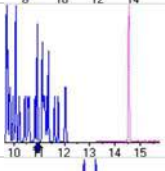 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 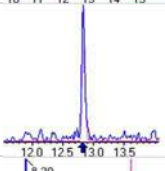 | 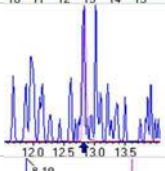 | |
| TFSI | ( 279.7 / 147.0 ) 111977<br>( 279.7 / 211.0 ) 7914 | ( 8.20 , 0.64 ) ( N/A , -0.05 , 0.2) | 43.3<br>17.2 | 0.0707<br>85.7<br>83.1 | 0.0665 | N/A | 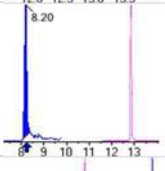 | 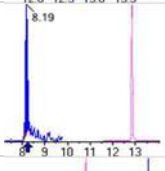 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 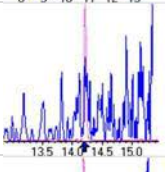 | 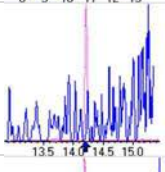 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 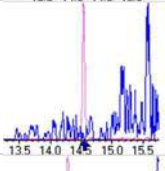 | 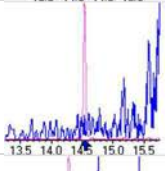 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 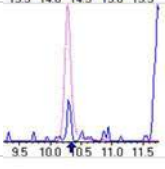 | 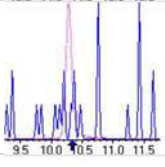 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 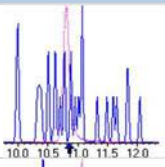 | 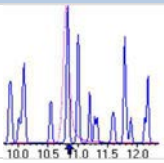 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 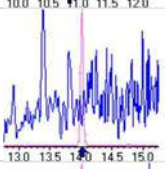 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 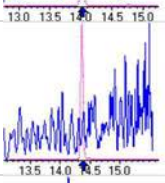 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 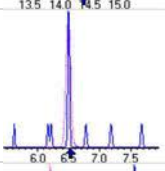 | 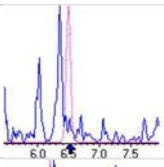 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 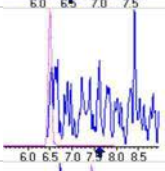 | 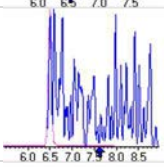 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 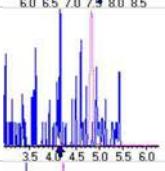 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 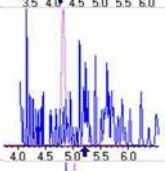 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 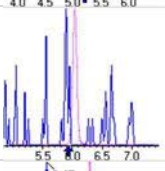 | 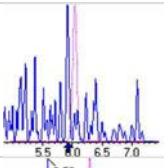 | |
| PFECHS | ( 461.0 / 98.9 )<br>10121<br>( 461.0 / 381.2 )<br>3580 | ( 9.47 , 0.90 )<br>( N/A , -0.11 , -3.4) | 47.6<br>28.1 | 0.3537<br>90.6<br>90.4 | 0.0192 | N/A | 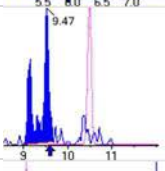 | 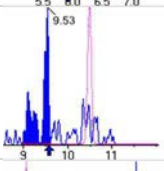 | MI5 DG<br>2024-03-19 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 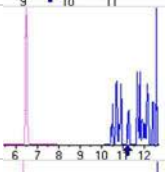 | 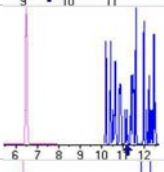 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 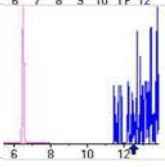 | 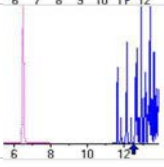 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 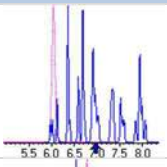 | 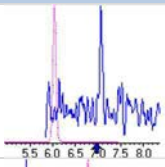 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 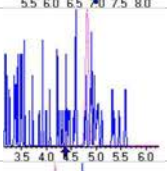 | 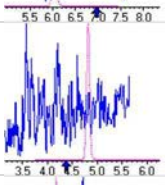 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 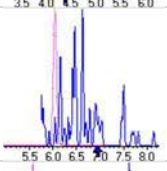 | 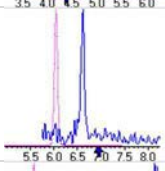 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 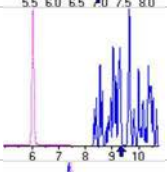 | 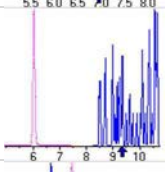 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 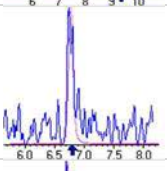 | 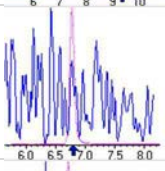 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 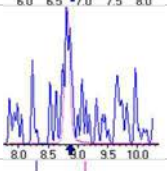 | 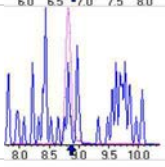 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 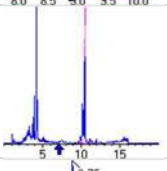 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 260093 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1232.3 | N/A | 0.8634<br>[ 1.0000 ] | 86.3%<br>{ 76.8% } | 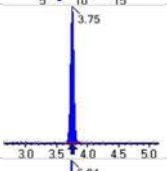 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 136930 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 23670.5 | N/A | 0.8905<br>[ 1.0000 ] | 89.0%<br>{ 80.3% } | 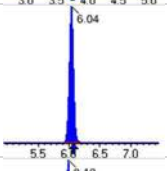 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 393020 | ( 8.19 , N/A )<br>( N/A , -0.04 , N/A ) | 3252.1 | N/A | 0.8810<br>[ 1.0000 ] | 88.1%<br>{ 80.5% } | 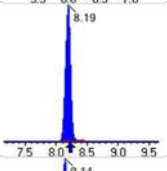 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 295950 | ( 9.14 , N/A )<br>( N/A , -0.05 , N/A ) | 957.3 | N/A | 0.8853<br>[ 1.0000 ] | 88.5%<br>{ 76.9% } | 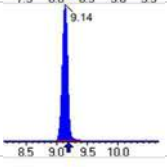 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299223 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 2776.1 | N/A | 0.9023 [ 1.0000 ] | 90.2% { 79.2% } | 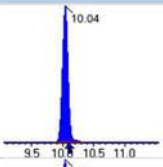 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 968172 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 4536.8 | N/A | 0.8664 [ 1.0000 ] | 86.6% { 77.2% } | 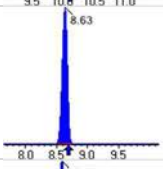 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 792728 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1059.0 | N/A | 0.8121 [ 1.0000 ] | 81.2% { 74.9% } | 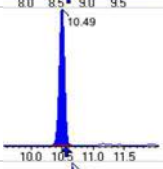 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1869782 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 39315.0 | N/A | 6.5190 [ 8.0000 ] | 81.5% { 65.8% } | 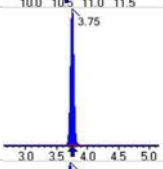 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 910793 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 4558.9 | N/A | 3.7077 [ 4.0000 ] | 92.7% { 71.1% } | 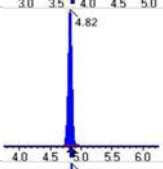 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 564414 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 15943.5 | N/A | 1.9197 [ 2.0000 ] | 96.0% { 74.4% } | 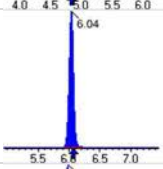 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626000 | ( 7.18 , N/A ) ( N/A , -0.03 , N/A ) | 4040.3 | N/A | 2.0386 [ 2.0000 ] | 101.9% { 76.2% } | 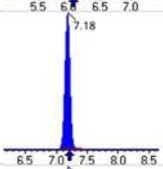 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 829477 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 2764.7 | N/A | 2.0017 [ 2.0000 ] | 100.1% { 76.3% } | 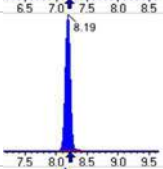 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269971 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 2274.9 | N/A | 0.9447 [ 1.0000 ] | 94.5% { 71.4% } | 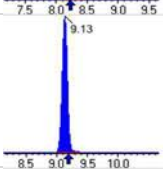 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 320843 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 925.2 | N/A | 0.9292 [ 1.0000 ] | 92.9% { 68.1% } | 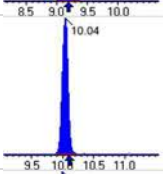 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 382974 | ( 10.90 , N/A ) ( N/A , -0.05 , N/A ) | 957.9 | N/A | 0.9123 [ 1.0000 ] | 91.2% { 75.5% } | 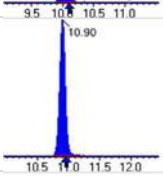 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-02 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (26)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 373986 | ( 11.73 , N/A ) ( N/A , -0.04 , N/A ) | 1264.2 | N/A | 0.8871 [ 1.0000 ] | 88.7% { 72.0% } | 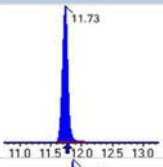 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 273888 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1211.8 | N/A | 0.7455 [ 1.0000 ] | 74.6% { 61.9% } | 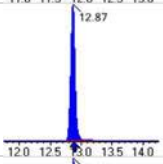 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 464359 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 2497.4 | N/A | 1.4881 [ 2.0000 ] | 74.4% { 57.7% } | 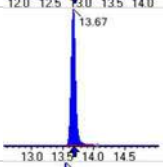 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1697893 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 915.1 | N/A | 1.7999 [ 2.0000 ] | 90.0% { 71.2% } | 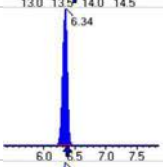 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1447790 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 3253.9 | N/A | 2.0436 [ 2.0000 ] | 102.2% { 82.1% } | 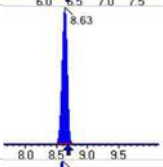 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1615140 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1396.9 | N/A | 1.9139 [ 2.0000 ] | 95.7% { 72.4% } | 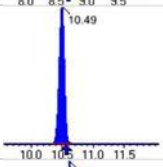 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 496924 | ( 5.51 , N/A ) ( N/A , -0.03 , N/A ) | 78.1 | N/A | 5.8940 [ 4.0000 ] | 147.4% { 89.8% } | 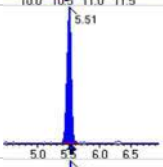 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1512656 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 2085.7 | N/A | 5.7775 [ 4.0000 ] | 144.4% { 92.9% } | 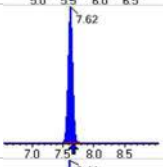 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1206007 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1183.6 | N/A | 4.6234 [ 4.0000 ] | 115.6% { 70.7% } | 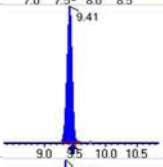 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2431878 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1886.4 | N/A | 8.1220 [ 8.0000 ] | 101.5% { 65.5% } | 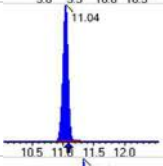 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1624369 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1974.5 | N/A | 1.7762 [ 2.0000 ] | 88.8% { 67.1% } | 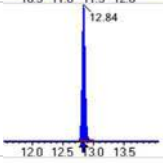 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (26)
Acquired: 2024/03/18 - 22:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 129771 | ( 14.21 , N/A ) ( N/A , 0.01 , N/A ) | 913.7 | N/A | 0.7685 [ 2.0000 ] | 38.4% { 30.4% } | 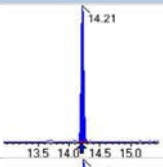  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 104232 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 1057.0 | N/A | 0.5373 [ 2.0000 ] | 26.9% { 21.5% } | 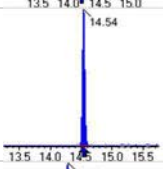  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 906253 | ( 10.28 , N/A ) ( N/A , -0.05 , N/A ) | 1967.8 | N/A | 4.1933 [ 4.0000 ] | 104.8% { 68.6% } | 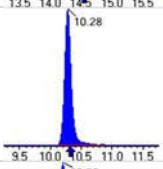  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 886678 | ( 10.80 , N/A ) ( N/A , -0.05 , N/A ) | 2046.8 | N/A | 4.3221 [ 4.0000 ] | 108.1% { 72.0% } | 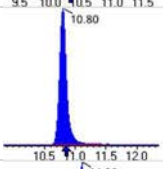  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 991576 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 1997.6 | N/A | 12.5662 [ 20.0000 ] | 62.8% { 53.3% } | 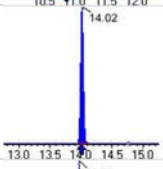  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 927146 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 3364.8 | N/A | 9.6993 [ 20.0000 ] | 48.5% { 44.3% } | 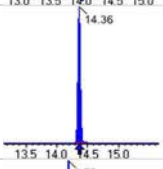  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 975565 | ( 6.50 , N/A ) ( N/A , -0.03 , N/A ) | 2236.6 | N/A | 7.7195 [ 8.0000 ] | 96.5% { 69.5% } | 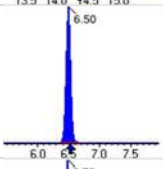  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 483034 | ( 6.78 , N/A ) ( N/A , -0.03 , N/A ) | 1394.1 | N/A | 1.8201 [ 2.0000 ] | 91.0% { 67.9% } | 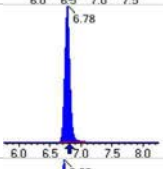  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 488514 | ( 8.82 , N/A ) ( N/A , -0.05 , N/A ) | 668.7 | N/A | 1.9717 [ 2.0000 ] | 98.6% { 72.9% } | 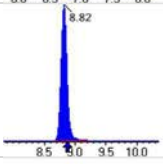  | | |

# ANALYSIS DATA SHEETL

## MW-21-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-03- | File ID:- | S2024-03-18A (27)- |
| Sampled:- | 03/13/24 09:00- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 22:24- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 538.137 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 7.9- | 0.19- | 1.5- | |
| PFPeA- | 14- | 0.060- | 0.74- | |
| PFHxA- | 12- | 0.051- | 0.37- | |
| PFHpA- | 6.0- | 0.038- | 0.37- | |
| PFOA- | 9.3- | 0.14- | 0.37- | MI5- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | IR2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 7.4- | 0.034- | 0.37- | |
| PFPeS- | 1.8- | 0.058- | 0.37- | |
| PFHxS- | 12- | 0.029- | 0.37- | |
| PFHpS- | 0.19- | 0.048- | 0.37- | J- |
| PFOS- | 0.38- | 0.059- | 0.37- | IR1, MI2- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-21-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-03- | File ID:- | S2024-03-18A (27)- |
| Sampled:- | 03/13/24 09:00- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 22:24- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 538.137 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (27)
Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 192360<br>( 163.0 / 69.0 ) 4276 | ( 2.83 , 0.75 )<br>( N/A , 0.06 , 0.0) | 1052.0<br>209.2 | 0.0222<br>88.7<br>85.0 | 0.7371 | N/A | 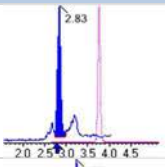 | 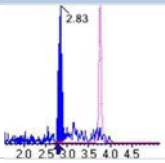 | |
| PFBA | ( 213.0 / 169.0 ) 589984 | ( 3.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1192.4 | N/A<br>0.0<br>0.0 | 2.1141 | N/A | 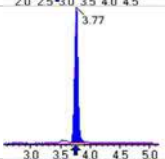 | | |
| PFPeA | ( 263.0 / 219.0 ) 974998<br>( 263.0 / 69.0 ) 11268 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2834.2<br>161.0 | 0.0116<br>105.2<br>98.9 | 3.7477 | N/A | 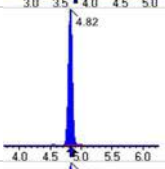 | 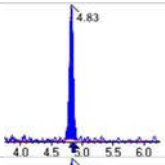 | |
| PFHxA | ( 313.0 / 269.0 ) 1002677<br>( 313.0 / 119.0 ) 109026 | ( 6.03 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1150.0<br>953.9 | 0.1087<br>97.9<br>95.7 | 3.3625 | N/A | 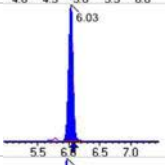 | 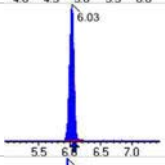 | |
| PFHpA | ( 363.0 / 319.0 ) 542399<br>( 363.0 / 169.0 ) 165238 | ( 7.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 713.5<br>612.0 | 0.3046<br>97.8<br>103.6 | 1.6063 | N/A | 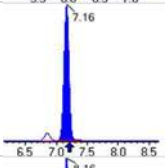 | 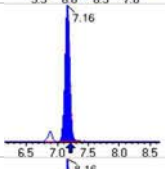 | |
| PFOA | ( 413.0 / 369.0 ) 1153396<br>( 413.0 / 169.0 ) 523463 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 305.2<br>230.3 | 0.4538<br>125.5<br>127.9 | 2.4936 | N/A | 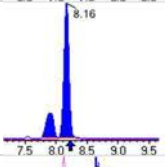 | 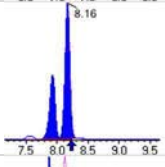 | MI5 PIT 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 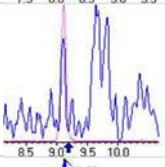 | 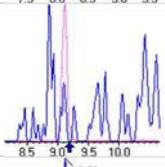 | |
| PFDA | ( 513.0 / 469.0 ) 5240<br>( 513.0 / 169.0 ) 1074 | ( 10.03 , 1.00 )<br>( 0.01 , N/A , -0.2) | 33.4<br>127.2 | 0.2049<br>174.6<br>169.7 | 0.0146 | N/A | 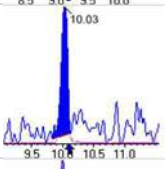 | 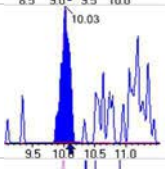 | IR2, |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 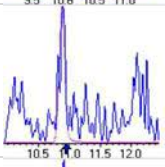 | 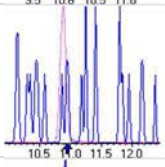 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 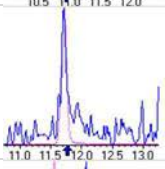 | 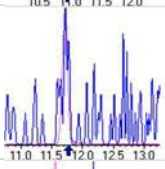 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 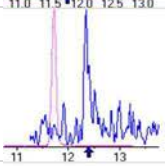 | 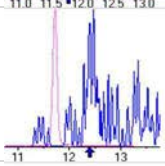 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 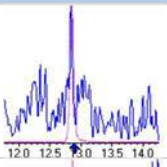 | 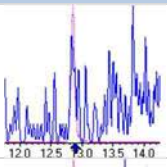 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 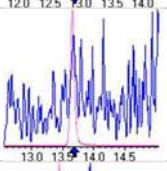 | 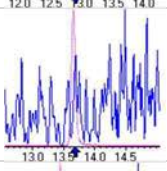 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 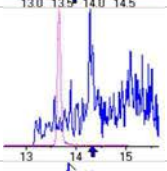 | 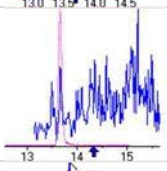 | |
| PFBS | ( 299.0 / 80.0 )<br>985695<br>( 299.0 / 99.0 )<br>748591 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1426.9<br>1589.2 | 0.7595<br>106.8<br>105.4 | 1.9935 | N/A | 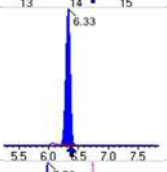 | 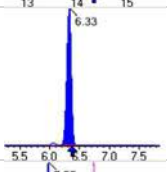 | |
| PFPeS | ( 349.0 / 80.0 )<br>615840<br>( 349.0 / 99.0 )<br>219203 | ( 7.56 , 0.88 )<br>( N/A , -0.06 , 0.2) | 543.0<br>573.7 | 0.3559<br>104.7<br>103.7 | 0.4935 | N/A | 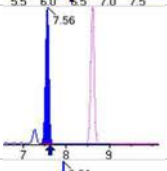 | 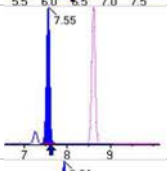 | |
| PFHxS | ( 399.0 / 80.0 )<br>4540397<br>( 399.0 / 99.0 )<br>1425766 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2096.1<br>2962.1 | 0.3140<br>100.4<br>97.9 | 3.2718 | N/A | 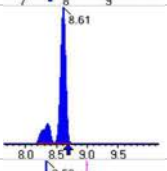 | 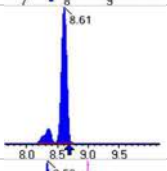 | |
| PFHpS | ( 449.0 / 80.0 )<br>53184<br>( 449.0 / 99.0 )<br>14448 | ( 9.58 , 0.92 )<br>( N/A , -0.08 , -0.1) | 64.4<br>62.6 | 0.2717<br>101.7<br>101.1 | 0.0500 | N/A | 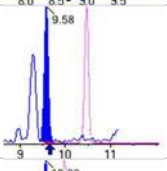 | 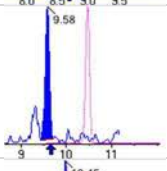 | |
| PFOS | ( 499.0 / 80.0 )<br>109716<br>( 499.0 / 99.0 )<br>12090 | ( 10.22 , 0.98 )<br>( -0.25 , N/A , -13.9) | 71.2<br>74.0 | 0.1102<br>46.6<br>50.3 | 0.1025 | N/A | 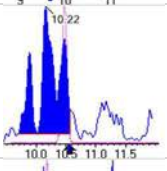 | 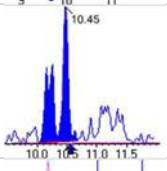 | IR1,MI2 DG 2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 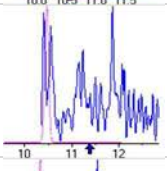 | 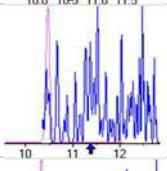 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 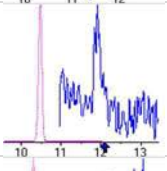 | 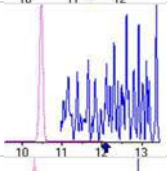 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 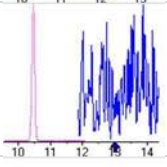 | 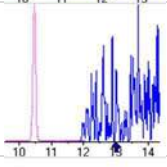 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 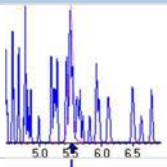 | 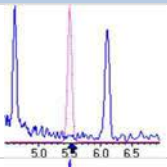 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 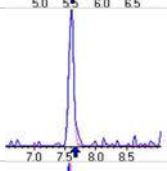 | 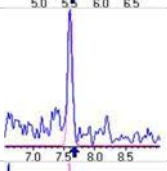 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 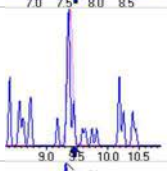 | 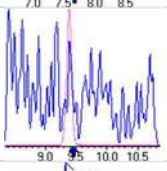 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>13884<br>( 627.0 / 81.0 )<br>22533 | ( 11.02 , 1.00 )<br>( 0.00 , N/A , -0.7) | 229.1<br>72.8 | 1.6230<br>120.1<br>118.5 | 0.0482 | N/A | 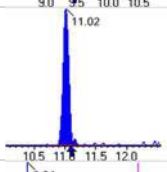 | 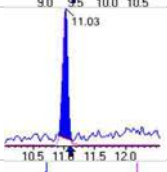 | |
| PFBSA | ( 297.9 / 78.0 )<br>32840<br>( 297.9 / 278.0 )<br>N/A | ( 8.04 , 0.57 )<br>( N/A , -0.02 , #Value!) | 255.4<br>N/A | N/A<br>0.0<br>0.0 | 0.1175 | N/A | 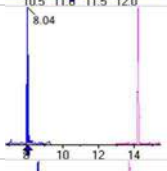 | 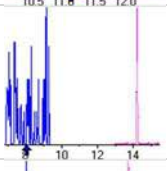 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 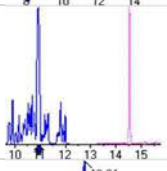 | 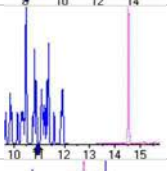 | |
| PFOSA | ( 498.0 / 78.0 )<br>8491<br>( 498.0 / 478.0 )<br>181 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , -3.0) | 98.7<br>7.7 | 0.0213<br>147.7<br>155.6 | 0.0102 | N/A | 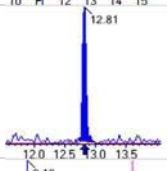 | 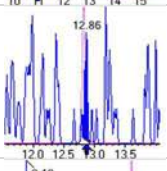 | |
| TFSI | ( 279.7 / 147.0 )<br>174567<br>( 279.7 / 211.0 )<br>16305 | ( 8.18 , 0.64 )<br>( N/A , -0.07 , 0.2) | 50.0<br>19.0 | 0.0934<br>113.3<br>109.8 | 0.0990 | N/A | 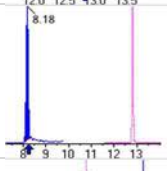 | 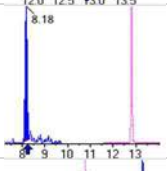 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 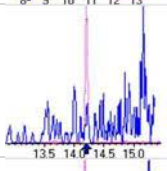 | 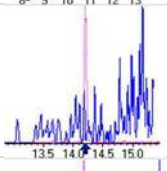 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 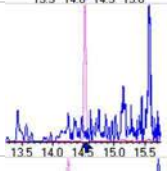 | 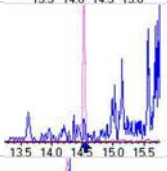 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 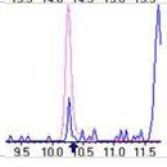 | 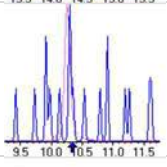 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (27)
Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 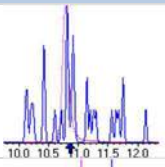 | 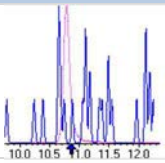 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 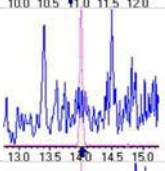 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 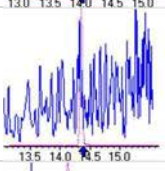 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 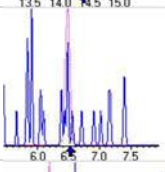 | 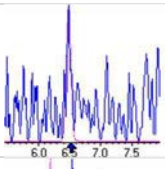 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 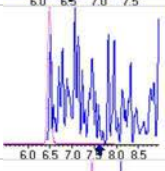 | 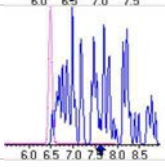 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 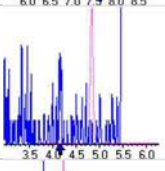 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 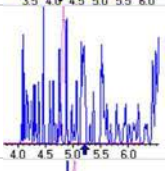 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 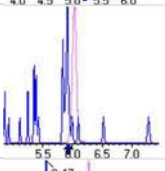 | 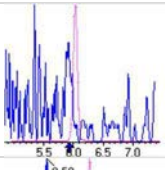 | |
| PFECHS | ( 461.0 / 98.9 )<br>26863<br>( 461.0 / 381.2 )<br>7059 | ( 9.47 , 0.90 )<br>( N/A , -0.11 , -1.7) | 82.8<br>35.6 | 0.2628<br>67.3<br>67.2 | 0.0445 | N/A | 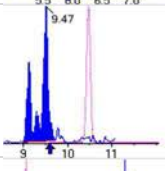 | 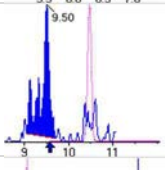 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 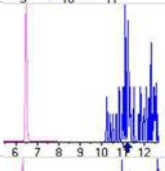 | 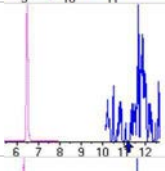 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 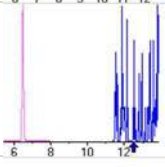 | 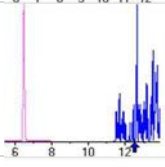 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 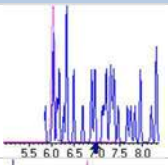 | 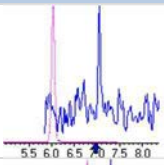 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 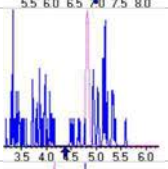 | 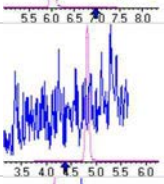 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 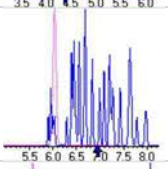 | 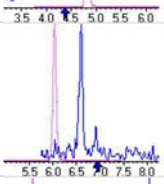 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 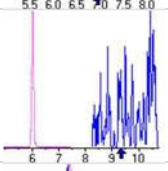 | 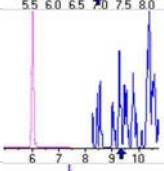 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 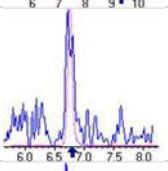 | 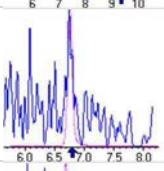 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 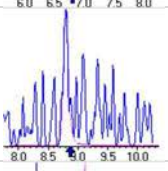 | 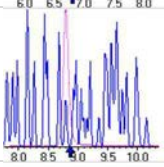 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 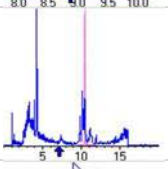 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 291279 | ( 3.76 , N/A )<br>( N/A , 0.02 , N/A ) | 1252.8 | N/A | 0.9669<br>[ 1.0000 ] | 96.7%<br>{ 86.1% } | 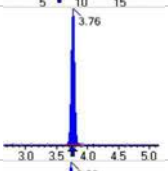 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145587 | ( 6.03 , N/A )<br>( N/A , -0.04 , N/A ) | 22927.8 | N/A | 0.9468<br>[ 1.0000 ] | 94.7%<br>{ 85.4% } | 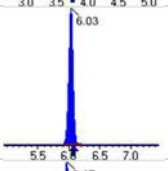 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 433438 | ( 8.17 , N/A )<br>( N/A , -0.06 , N/A ) | 2898.7 | N/A | 0.9715<br>[ 1.0000 ] | 97.2%<br>{ 88.8% } | 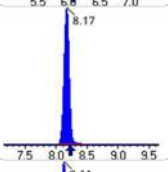 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 314361 | ( 9.11 , N/A )<br>( N/A , -0.07 , N/A ) | 1028.4 | N/A | 0.9404<br>[ 1.0000 ] | 94.0%<br>{ 81.7% } | 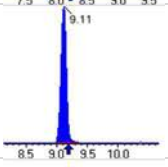 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 323358 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 3539.5 | N/A | 0.9751 [ 1.0000 ] | 97.5% { 85.6% } | 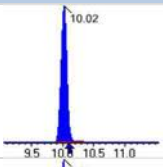 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1075246 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 4103.2 | N/A | 0.9622 [ 1.0000 ] | 96.2% { 85.8% } | 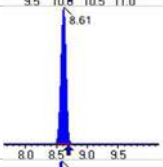 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 893785 | ( 10.48 , N/A ) ( N/A , -0.08 , N/A ) | 1369.4 | N/A | 0.9156 [ 1.0000 ] | 91.6% { 84.5% } | 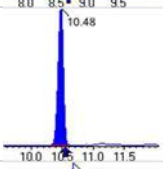 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2359872 | ( 3.76 , N/A ) ( N/A , 0.02 , N/A ) | 42230.4 | N/A | 7.3468 [ 8.0000 ] | 91.8% { 83.1% } | 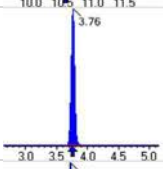 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1022230 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5350.6 | N/A | 3.9139 [ 4.0000 ] | 97.8% { 79.8% } | 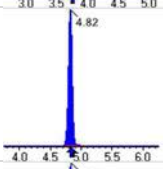 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 615513 | ( 6.03 , N/A ) ( N/A , -0.04 , N/A ) | 12977.8 | N/A | 1.9690 [ 2.0000 ] | 98.5% { 81.1% } | 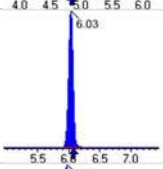 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 685694 | ( 7.17 , N/A ) ( N/A , -0.05 , N/A ) | 7758.4 | N/A | 2.1003 [ 2.0000 ] | 105.0% { 83.5% } | 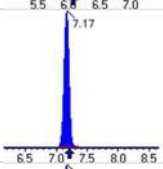 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 909724 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 2796.0 | N/A | 1.9906 [ 2.0000 ] | 99.5% { 83.7% } | 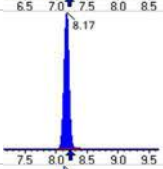 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294432 | ( 9.11 , N/A ) ( N/A , -0.08 , N/A ) | 1826.0 | N/A | 0.9699 [ 1.0000 ] | 97.0% { 77.9% } | 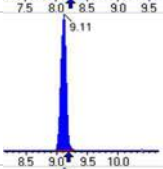 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 360162 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 875.4 | N/A | 0.9652 [ 1.0000 ] | 96.5% { 76.4% } | 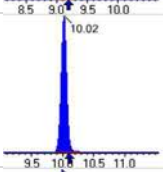 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 394513 | ( 10.88 , N/A ) ( N/A , -0.07 , N/A ) | 867.8 | N/A | 0.8696 [ 1.0000 ] | 87.0% { 77.8% } | 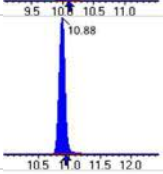 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-03 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 412856 | ( 11.72 , N/A ) ( N/A , -0.06 , N/A ) | 1183.7 | N/A | 0.9062 [ 1.0000 ] | 90.6% { 79.5% } | 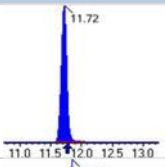 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 320188 | ( 12.85 , N/A ) ( N/A , -0.04 , N/A ) | 1606.5 | N/A | 0.8065 [ 1.0000 ] | 80.7% { 72.3% } | 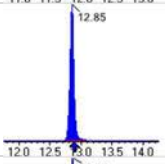 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 563288 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2182.8 | N/A | 1.6704 [ 2.0000 ] | 83.5% { 70.0% } | 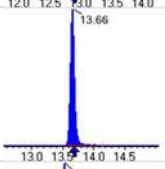 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1901742 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 1328.1 | N/A | 1.8153 [ 2.0000 ] | 90.8% { 79.8% } | 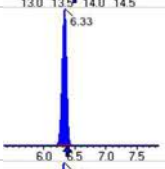 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1567256 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 3272.9 | N/A | 1.9919 [ 2.0000 ] | 99.6% { 88.9% } | 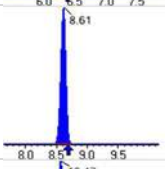 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1851962 | ( 10.47 , N/A ) ( N/A , -0.08 , N/A ) | 1216.7 | N/A | 1.9464 [ 2.0000 ] | 97.3% { 83.0% } | 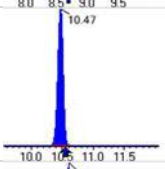 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 511852 | ( 5.50 , N/A ) ( N/A , -0.03 , N/A ) | 82.2 | N/A | 5.4665 [ 4.0000 ] | 136.7% { 92.5% } | 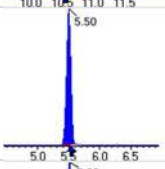 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1691151 | ( 7.60 , N/A ) ( N/A , -0.05 , N/A ) | 2360.3 | N/A | 5.8160 [ 4.0000 ] | 145.4% { 103.9% } | 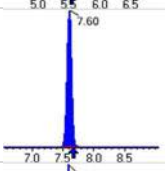 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1420369 | ( 9.39 , N/A ) ( N/A , -0.07 , N/A ) | 1108.2 | N/A | 4.9030 [ 4.0000 ] | 122.6% { 83.2% } | 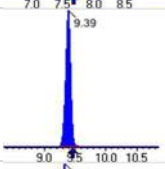 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2802015 | ( 11.02 , N/A ) ( N/A , -0.08 , N/A ) | 1805.6 | N/A | 8.4262 [ 8.0000 ] | 105.3% { 75.5% } | 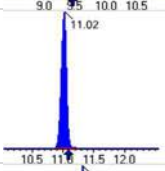 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1698998 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 2314.8 | N/A | 1.6477 [ 2.0000 ] | 82.4% { 70.2% } | 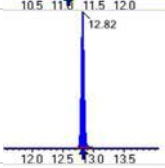 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (27)
Acquired: 2024/03/18 - 22:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 121617 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 963.9 | N/A | 0.6387 [ 2.0000 ] | 31.9% { 28.5% } | 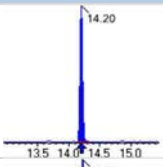 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 99865 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 826.2 | N/A | 0.4566 [ 2.0000 ] | 22.8% { 20.6% } | 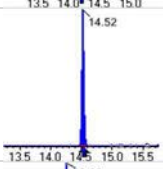 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 950854 | ( 10.26 , N/A ) ( N/A , -0.07 , N/A ) | 2389.1 | N/A | 3.9022 [ 4.0000 ] | 97.6% { 72.0% } | 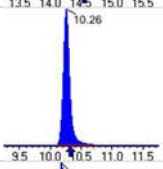 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 991795 | ( 10.78 , N/A ) ( N/A , -0.07 , N/A ) | 1981.9 | N/A | 4.2879 [ 4.0000 ] | 107.2% { 80.5% } | 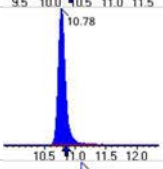 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1114321 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1587.7 | N/A | 12.5251 [ 20.0000 ] | 62.6% { 59.9% } | 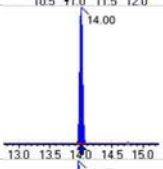 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1133296 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 4064.3 | N/A | 10.5155 [ 20.0000 ] | 52.6% { 54.1% } | 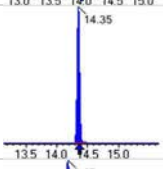 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1089709 | ( 6.48 , N/A ) ( N/A , -0.04 , N/A ) | 2663.8 | N/A | 8.1100 [ 8.0000 ] | 101.4% { 77.6% } | 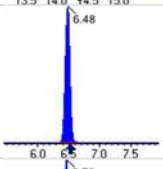 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 545002 | ( 6.76 , N/A ) ( N/A , -0.05 , N/A ) | 1264.6 | N/A | 1.9004 [ 2.0000 ] | 95.0% { 76.6% } | 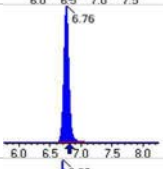 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 545772 | ( 8.80 , N/A ) ( N/A , -0.07 , N/A ) | 720.3 | N/A | 2.0384 [ 2.0000 ] | 101.9% { 81.5% } | 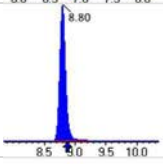 | | |

# ANALYSIS DATA SHEETL

FB-3-031324-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0083- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0083-04- | File ID: | S2024-03-18A (28)- |
| Sampled: | 03/13/24 09:10- | Prepared: | 03/14/24 12:39 | Analyzed: | 03/18/24 22:44 |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 531.534 mL / 2 mL- | | | Instrument: | Saphira |
| Batch: | BDC0208- | Sequence: | SD00977 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.5 | U |
| PFPeA- | ND- | 0.061- | 0.75 | U |
| PFHxA- | ND- | 0.052- | 0.38 | U |
| PFHpA- | ND- | 0.039- | 0.38 | U |
| PFOA- | 0.23- | 0.14- | 0.38 | J |
| PFNA- | ND- | 0.077- | 0.38 | U |
| PFDA- | ND- | 0.095- | 0.38 | U |
| PFUnA- | ND- | 0.15- | 0.38 | U |
| PFDoA- | ND- | 0.11- | 0.38 | U |
| PFTrDA- | ND- | 0.19- | 0.38 | U |
| PFTeDA- | ND- | 0.19- | 0.38 | U |
| PFHxDA- | ND- | 0.19- | 0.38 | U |
| PFODA- | ND- | 0.19- | 0.38 | U |
| PFBS- | ND- | 0.035- | 0.38 | U |
| PFPeS- | ND- | 0.059- | 0.38 | U |
| PFHxS- | ND- | 0.030- | 0.38 | U |
| PFHpS- | ND- | 0.048- | 0.38 | U |
| PFOS- | ND- | 0.060- | 0.38 | MI2, U |
| PFNS- | ND- | 0.12- | 0.38 | U |
| PFDS- | ND- | 0.14- | 0.38 | U |
| PFDoS- | ND- | 0.12- | 0.38 | U |
| 4:2FTS- | ND- | 0.27- | 1.5 | U |
| 6:2FTS- | ND- | 0.30- | 1.5 | U |
| 8:2FTS- | ND- | 0.077- | 1.5 | U |
| 10:2FTS- | ND- | 0.38- | 1.5 | U |
| PFOSA- | ND- | 0.098- | 0.38 | U |
| NMeFOSA- | ND- | 0.45- | 1.5 | U |
| NEtFOSA- | ND- | 0.39- | 1.5 | U |
| NMeFOSAA- | ND- | 0.10- | 0.38 | U |
| NEtFOSAA- | ND- | 0.11- | 0.38 | U |

# ANALYSIS DATA SHEETL

FB-3-031324-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0083- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0083-04- | File ID: | S2024-03-18A (28)- |
| Sampled: | 03/13/24 09:10- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 22:44- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 531.534 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.051- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>46247<br>( 163.0 / 69.0 )<br>1351 | ( 2.81 , 0.75 )<br>( N/A , 0.04 , 0.2) | 224.1<br>71.4 | 0.0292<br>116.5<br>111.6 | 0.1665 | N/A | 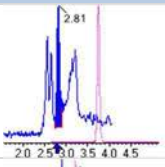 | 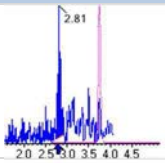 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 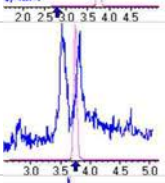 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 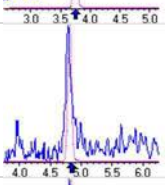 | 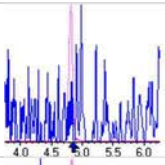 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 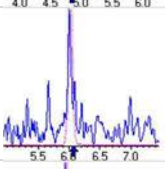 | 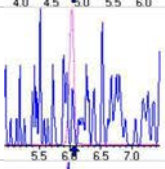 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 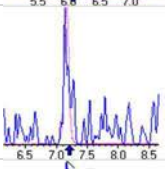 | 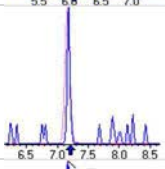 | |
| PFOA | ( 413.0 / 369.0 )<br>27234<br>( 413.0 / 169.0 )<br>11200 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , -0.3) | 52.4<br>82.3 | 0.4112<br>113.7<br>115.9 | 0.0603 | N/A | 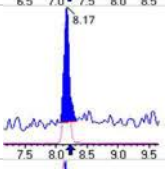 | 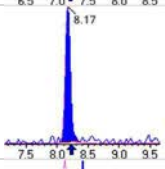 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 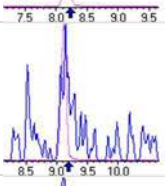 | 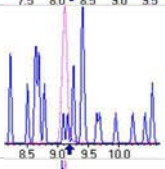 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 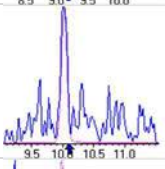 | 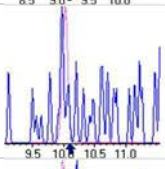 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 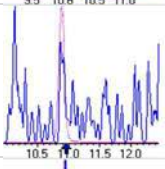 | 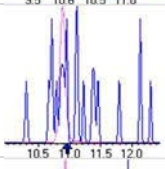 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 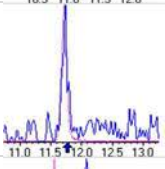 | 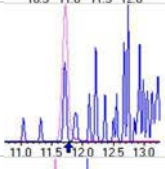 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 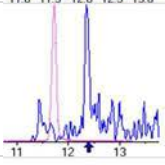 | 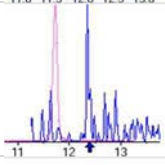 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (28)
Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 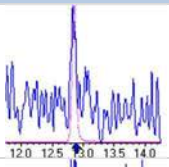 | 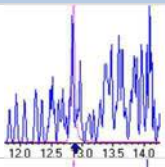 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 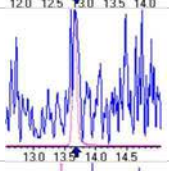 | 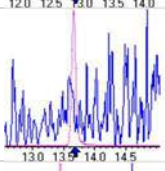 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 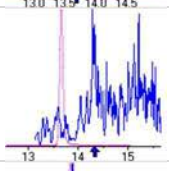 | 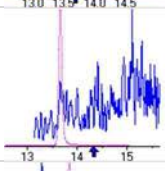 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 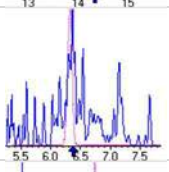 | 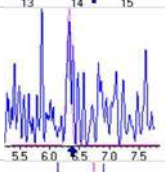 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 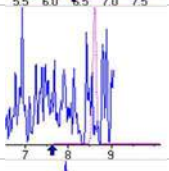 | 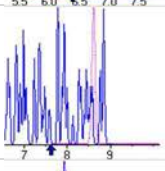 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 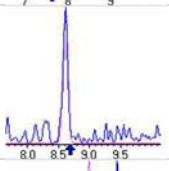 | 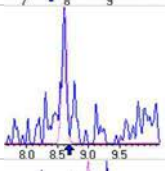 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 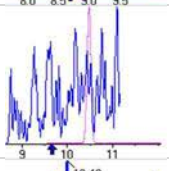 | 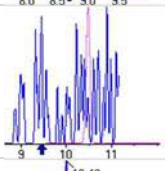 | |
| PFOS | ( 499.0 / 80.0 )<br>13941<br>( 499.0 / 99.0 )<br>3084 | ( 10.40 , 0.99 )<br>( -0.08 , N/A , -5.1) | 40.9<br>2137.4 | 0.2212<br>93.5<br>101.0 | 0.0136 | N/A | 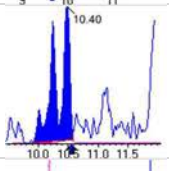 | 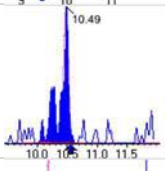 | MI2 DG<br>2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 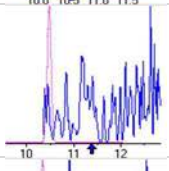 | 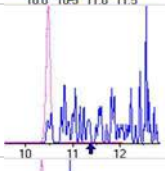 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 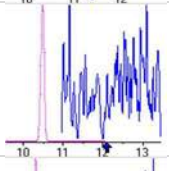 | 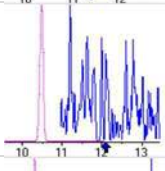 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 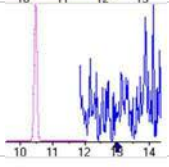 | 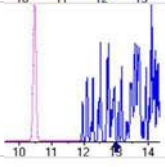 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (28)
Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 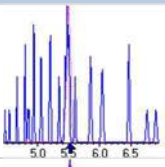 | 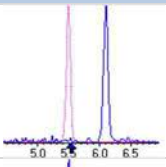 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 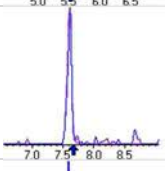 | 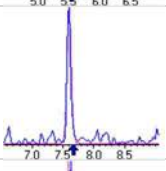 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 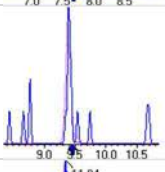 | 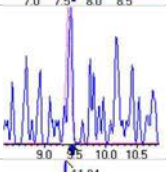 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17030<br>( 627.0 / 81.0 ) 20051 | ( 11.04 , 1.00 ) ( 0.01 , N/A , -0.1) | 208.8<br>56.0 | 1.1774<br>87.1<br>86.0 | 0.0542 | N/A | 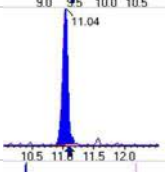 | 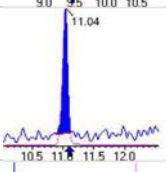 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 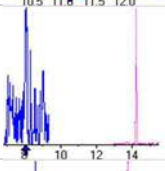 | 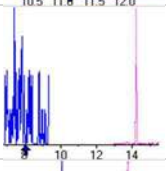 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 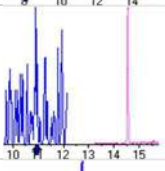 | 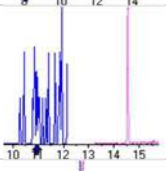 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 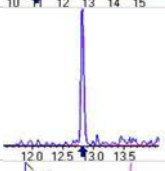 | 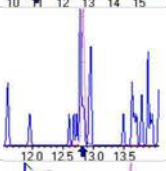 | |
| TFSI | ( 279.7 / 147.0 ) 66168<br>( 279.7 / 211.0 ) 4478 | ( 8.18 , 0.64 ) ( N/A , -0.07 , 0.7) | 34.0<br>11.6 | 0.0677<br>82.1<br>79.6 | 0.0549 | N/A | 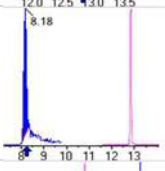 | 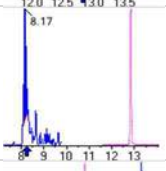 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 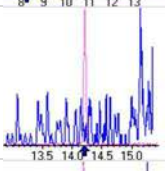 | 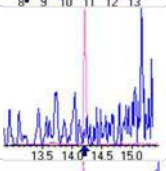 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 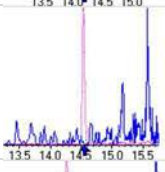 | 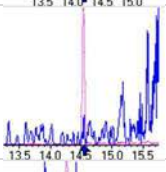 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 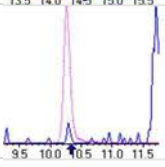 | 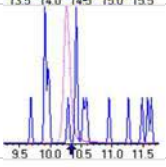 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (28)
Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 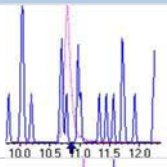 | 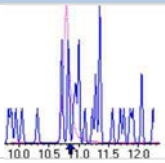 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 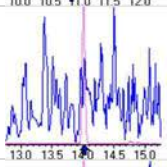 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 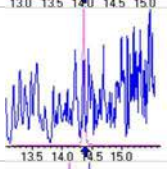 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 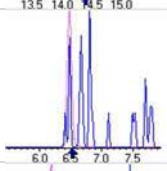 | 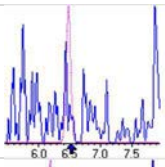 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 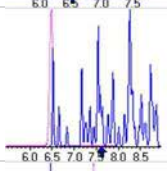 | 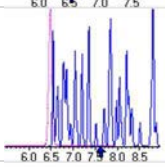 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 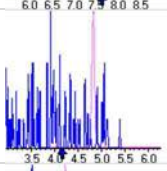 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 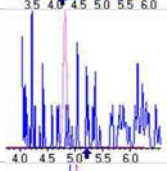 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 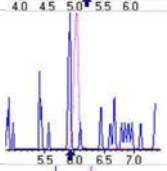 | 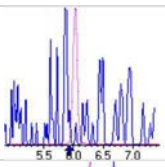 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 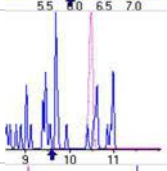 | 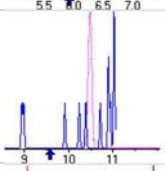 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 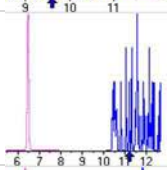 | 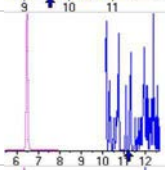 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 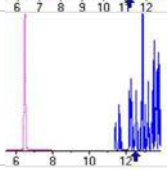 | 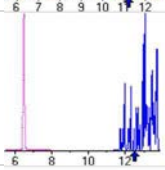 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (28)
Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 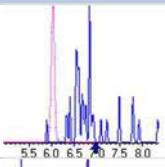 | 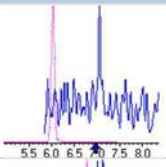 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 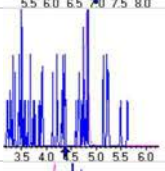 | 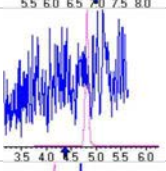 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 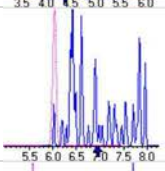 | 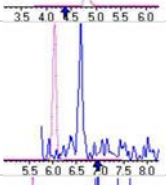 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 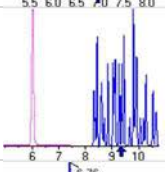 | 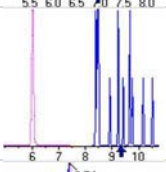 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4289<br>( 357.2 / 243.0 ) 507 | ( 6.76 , 1.00 ) ( 0.00 , N/A , 1.1) | 40.9<br>8.2 | 0.1181<br>111.9<br>110.5 | 0.0156 | N/A | 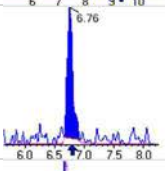 | 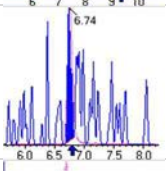 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 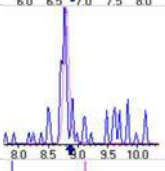 | 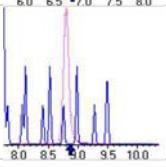 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 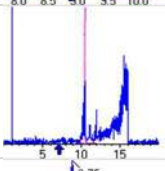 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 285620 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 1184.6 | N/A | 0.9481 [ 1.0000 ] | 94.8% { 84.4% } | 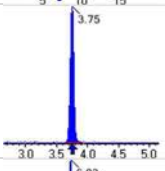 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 136987 | ( 6.03 , N/A ) ( N/A , -0.04 , N/A ) | 56947.3 | N/A | 0.8909 [ 1.0000 ] | 89.1% { 80.4% } | 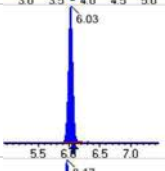 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 437637 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 3295.3 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 89.7% } | 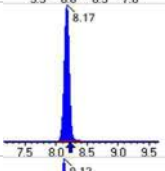 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 306733 | ( 9.12 , N/A ) ( N/A , -0.07 , N/A ) | 918.9 | N/A | 0.9175 [ 1.0000 ] | 91.8% { 79.7% } | 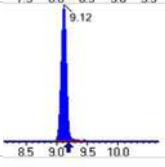 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 297647 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 7231.2 | N/A | 0.8975 [ 1.0000 ] | 89.8% { 78.8% } | 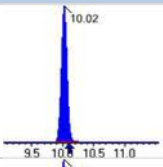 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1036960 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 3931.9 | N/A | 0.9280 [ 1.0000 ] | 92.8% { 82.7% } | 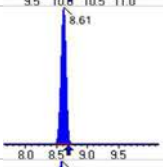 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 826856 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 2082.7 | N/A | 0.8470 [ 1.0000 ] | 84.7% { 78.2% } | 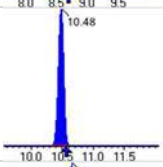 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2512023 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 39400.6 | N/A | 7.9754 [ 8.0000 ] | 99.7% { 88.5% } | 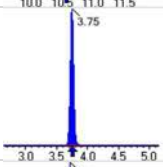 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 958360 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5156.4 | N/A | 3.8997 [ 4.0000 ] | 97.5% { 74.8% } | 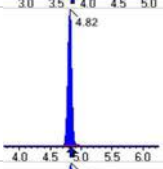 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 566599 | ( 6.03 , N/A ) ( N/A , -0.04 , N/A ) | 6838.6 | N/A | 1.9264 [ 2.0000 ] | 96.3% { 74.7% } | 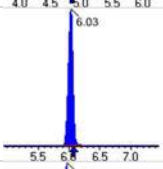 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642755 | ( 7.16 , N/A ) ( N/A , -0.05 , N/A ) | 5551.7 | N/A | 2.0923 [ 2.0000 ] | 104.6% { 78.3% } | 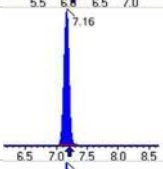 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 888611 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 3395.1 | N/A | 1.9258 [ 2.0000 ] | 96.3% { 81.8% } | 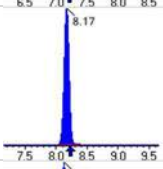 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 293693 | ( 9.11 , N/A ) ( N/A , -0.07 , N/A ) | 3491.1 | N/A | 0.9915 [ 1.0000 ] | 99.2% { 77.7% } | 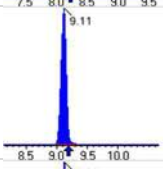 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331919 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 851.1 | N/A | 0.9664 [ 1.0000 ] | 96.6% { 70.4% } | 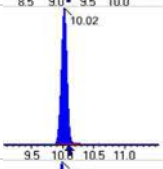 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389731 | ( 10.89 , N/A ) ( N/A , -0.07 , N/A ) | 959.8 | N/A | 0.9333 [ 1.0000 ] | 93.3% { 76.9% } | 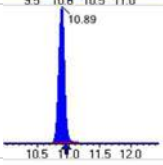 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-04 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 369744 | ( 11.72 , N/A ) ( N/A , -0.06 , N/A ) | 1336.7 | N/A | 0.8817 [ 1.0000 ] | 88.2% { 71.2% } | 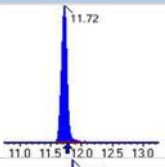 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 297567 | ( 12.85 , N/A ) ( N/A , -0.03 , N/A ) | 1619.0 | N/A | 0.8143 [ 1.0000 ] | 81.4% { 67.2% } | 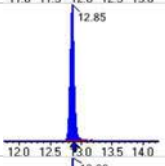 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 502793 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2642.9 | N/A | 1.6198 [ 2.0000 ] | 81.0% { 62.5% } | 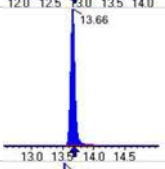 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1827363 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 942.3 | N/A | 1.8087 [ 2.0000 ] | 90.4% { 76.7% } | 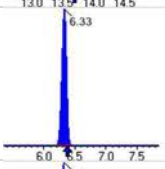 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1452647 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 3933.2 | N/A | 1.9144 [ 2.0000 ] | 95.7% { 82.4% } | 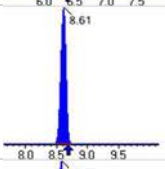 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1775182 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 1644.0 | N/A | 2.0167 [ 2.0000 ] | 100.8% { 79.6% } | 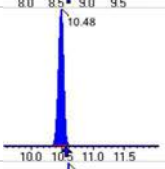 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 539402 | ( 5.50 , N/A ) ( N/A , -0.04 , N/A ) | 93.6 | N/A | 5.9734 [ 4.0000 ] | 149.3% { 97.5% } | 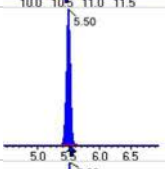 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1663107 | ( 7.60 , N/A ) ( N/A , -0.05 , N/A ) | 4743.1 | N/A | 5.9307 [ 4.0000 ] | 148.3% { 102.2% } | 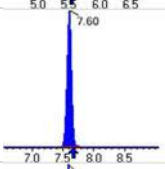 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1478649 | ( 9.39 , N/A ) ( N/A , -0.06 , N/A ) | 1832.6 | N/A | 5.2926 [ 4.0000 ] | 132.3% { 86.6% } | 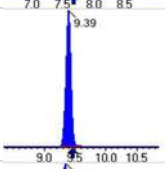 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3056570 | ( 11.03 , N/A ) ( N/A , -0.06 , N/A ) | 1588.3 | N/A | 9.5311 [ 8.0000 ] | 119.1% { 82.4% } | 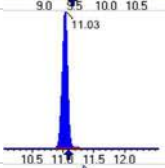 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1161062 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1976.9 | N/A | 1.2172 [ 2.0000 ] | 60.9% { 47.9% } | 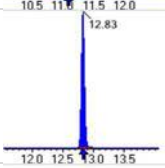 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (28)
Acquired: 2024/03/18 - 22:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 69543 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 638.0 | N/A | 0.3948 [ 2.0000 ] | 19.7% { 16.3% } | 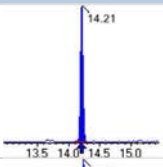 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 53508 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 492.1 | N/A | 0.2645 [ 2.0000 ] | 13.2% { 11.0% } | 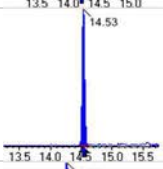 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 993095 | ( 10.26 , N/A ) ( N/A , -0.06 , N/A ) | 2071.3 | N/A | 4.4055 [ 4.0000 ] | 110.1% { 75.2% } | 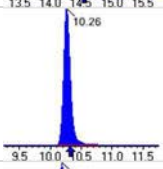 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 914121 | ( 10.79 , N/A ) ( N/A , -0.06 , N/A ) | 2068.3 | N/A | 4.2720 [ 4.0000 ] | 106.8% { 74.2% } | 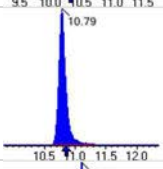 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 585768 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1519.0 | N/A | 7.1170 [ 20.0000 ] | 35.6% { 31.5% } | 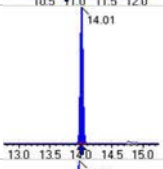 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 538942 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2184.3 | N/A | 5.4054 [ 20.0000 ] | 27.0% { 25.7% } | 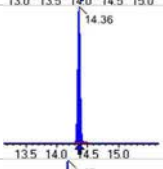 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1080727 | ( 6.48 , N/A ) ( N/A , -0.05 , N/A ) | 3233.8 | N/A | 8.5481 [ 8.0000 ] | 106.9% { 77.0% } | 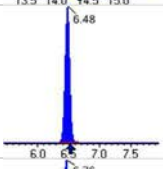 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 511915 | ( 6.76 , N/A ) ( N/A , -0.05 , N/A ) | 1056.8 | N/A | 1.9392 [ 2.0000 ] | 97.0% { 72.0% } | 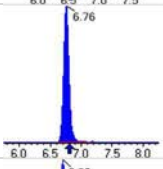 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514276 | ( 8.80 , N/A ) ( N/A , -0.07 , N/A ) | 802.2 | N/A | 2.0867 [ 2.0000 ] | 104.3% { 76.8% } | 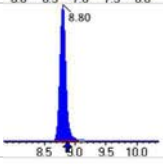 | | |

# ANALYSIS DATA SHEETL

EB-3-031324-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0083- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0083-05- | File ID: | S2024-03-18A (29)- |
| Sampled: | 03/13/24 09:20- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 23:05- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 523.729 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977- | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.5- | U- |
| PFPeA- | 0.13- | 0.062- | 0.76- | J- |
| PFHxA- | ND- | 0.052- | 0.38- | U- |
| PFHpA- | ND- | 0.039- | 0.38- | U- |
| PFOA- | 0.29- | 0.15- | 0.38- | J- |
| PFNA- | ND- | 0.078- | 0.38- | U- |
| PFDA- | ND- | 0.097- | 0.38- | IR1, U- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | IR1, U- |
| PFBS- | ND- | 0.035- | 0.38- | U- |
| PFPeS- | ND- | 0.060- | 0.38- | U- |
| PFHxS- | ND- | 0.030- | 0.38- | U- |
| PFHpS- | ND- | 0.049- | 0.38- | U- |
| PFOS- | 0.079- | 0.061- | 0.38- | MI2, J- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.28- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.099- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

EB-3-031324-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0083- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0083-05- | File ID: | S2024-03-18A (29)- |
| Sampled: | 03/13/24 09:20- | Prepared: | 03/14/24 12:39- | Analyzed: | 03/18/24 23:05- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 523.729 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0208- | Sequence: | SD00977 | Calibration: | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.97- | 1.5- | U- |
| NEtFOSE- | ND- | 1.0- | 1.5- | U- |
| HFPO-DA- | ND- | 0.17- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.051- | 0.76- | U- |
| PFMBA- | ND- | 0.087- | 0.76- | U- |
| NFDHA- | ND- | 0.29- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.55- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.53- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 43920<br>( 163.0 / 69.0 ) 1271 | ( 2.82 , 0.75 )<br>( N/A , 0.05 , -0.1) | 240.2<br>64.1 | 0.0289<br>115.4<br>110.6 | 0.1514 | N/A | 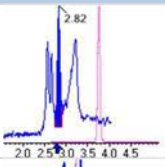 | 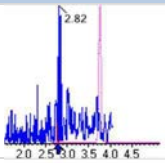 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 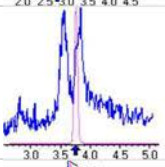 | | |
| PFPeA | ( 263.0 / 219.0 ) 9142<br>( 263.0 / 69.0 ) 132 | ( 4.80 , 1.00 )<br>( -0.02 , N/A , -0.9) | 38.7<br>4.1 | 0.0144<br>131.2<br>123.3 | 0.0350 | N/A | 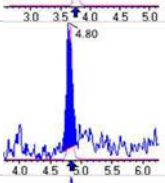 | 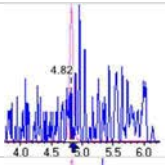 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 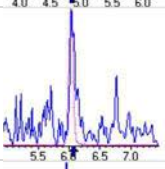 | 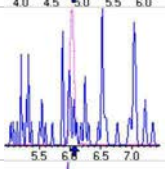 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 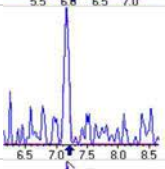 | 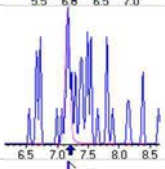 | |
| PFOA | ( 413.0 / 369.0 ) 35128<br>( 413.0 / 169.0 ) 11522 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , -0.6) | 67.5<br>97.8 | 0.3280<br>90.7<br>92.4 | 0.0758 | N/A | 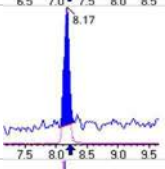 | 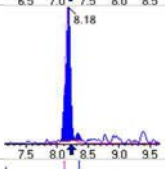 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 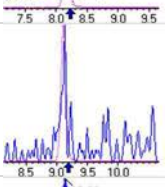 | 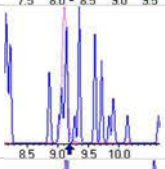 | |
| PFDA | ( 513.0 / 469.0 ) 4889<br>( 513.0 / 169.0 ) N/A | ( 10.03 , 1.00 )<br>( 0.01 , N/A , #Value!) | 39.8<br>N/A | N/A<br>0.0<br>0.0 | 0.0137 | N/A | 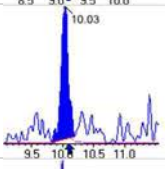 | 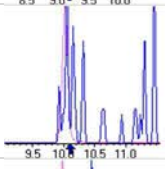 | IR1, |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 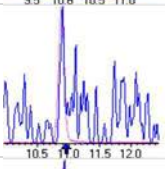 | 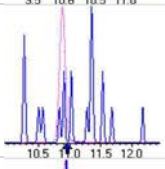 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 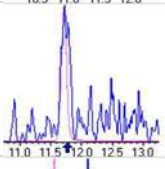 | 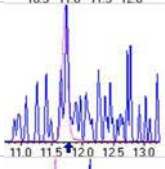 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 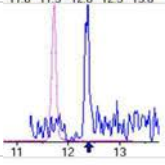 | 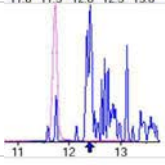 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (29)
Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 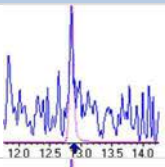 | 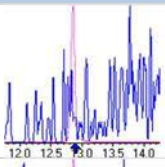 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 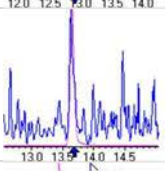 | 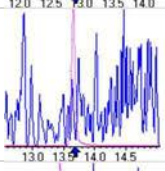 | |
| PFODA | ( 913.0 / 869.0 )<br>3631<br>( 913.0 / 169.0 )<br>N/A | ( 14.29 , 1.05 )<br>( N/A , -0.02 , #Value!) | 23.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0223 | N/A | 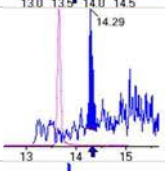 | 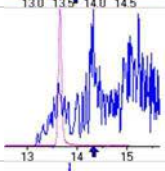 | IR1, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 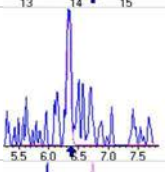 | 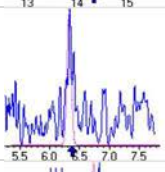 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 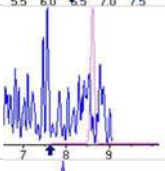 | 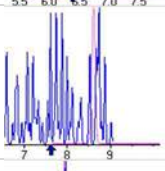 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 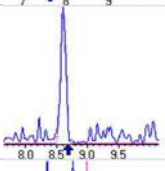 | 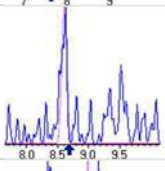 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 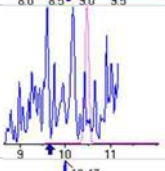 | 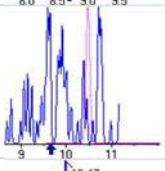 | |
| PFOS | ( 499.0 / 80.0 )<br>21252<br>( 499.0 / 99.0 )<br>4170 | ( 10.47 , 1.00 )<br>( -0.01 , N/A , -0.3) | 75.4<br>119.5 | 0.1962<br>82.9<br>89.6 | 0.0207 | N/A | 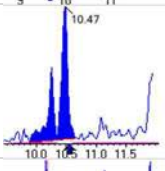 | 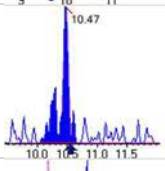 | MI2 PIT<br>3/19/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 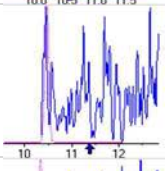 | 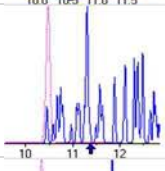 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 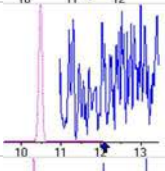 | 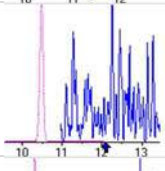 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 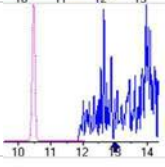 | 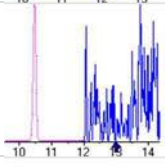 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (29)
Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 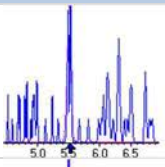 | 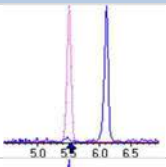 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 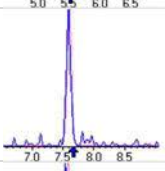 | 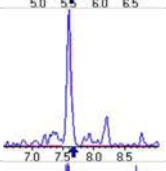 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 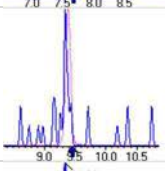 | 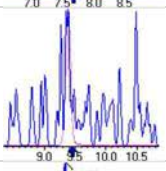 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16723<br>( 627.0 / 81.0 )<br>22423 | ( 11.03 , 1.00 )<br>( 0.01 , N/A , 0.4) | 289.8<br>54.4 | 1.3408<br>99.2<br>97.9 | 0.0528 | N/A | 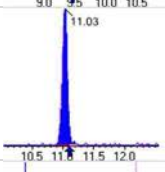 | 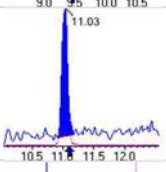 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 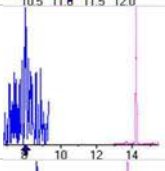 | 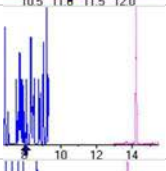 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 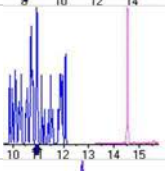 | 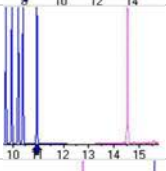 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 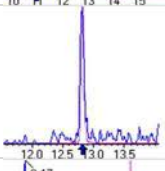 | 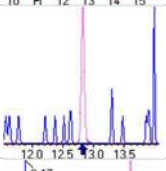 | |
| TFSI | ( 279.7 / 147.0 )<br>73999<br>( 279.7 / 211.0 )<br>7758 | ( 8.17 , 0.64 )<br>( N/A , -0.08 , 0.1) | 28.5<br>20.8 | 0.1048<br>127.1<br>123.3 | 0.0474 | N/A | 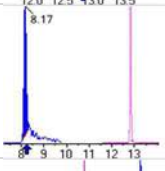 | 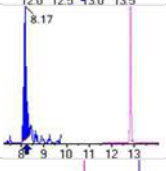 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 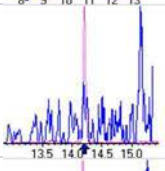 | 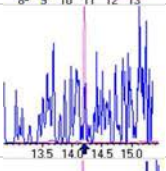 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 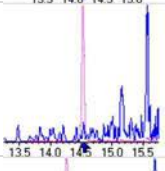 | 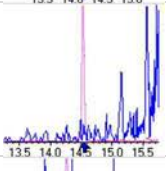 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 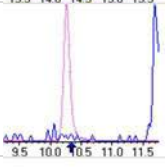 | 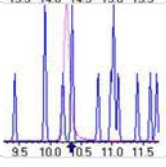 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (29)
Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 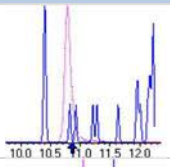 | 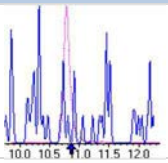 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 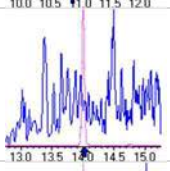 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 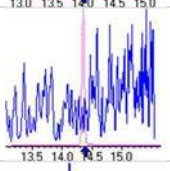 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 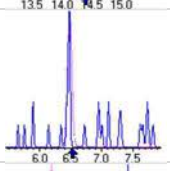 | 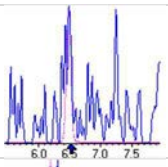 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 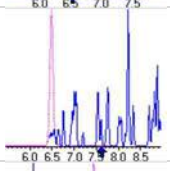 | 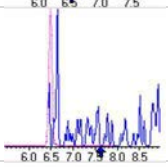 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 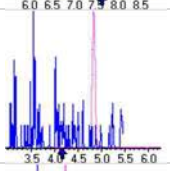 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 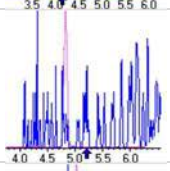 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 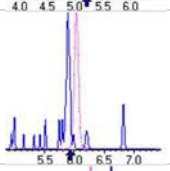 | 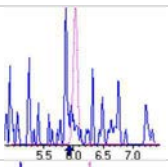 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 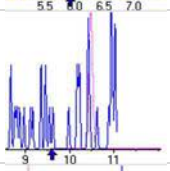 | 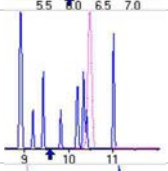 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 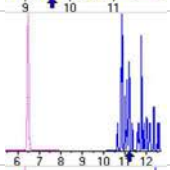 | 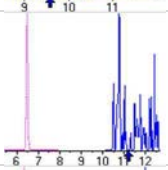 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 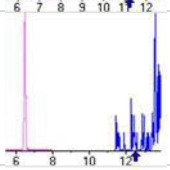 | 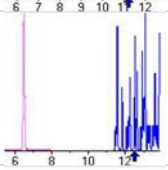 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 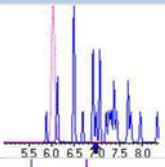 | 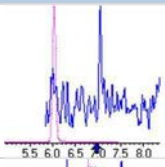 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 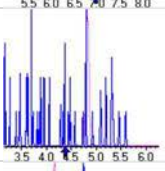 | 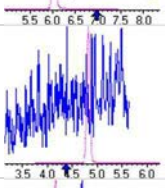 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 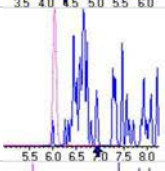 | 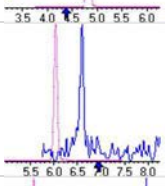 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 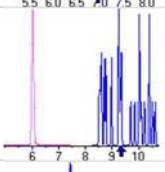 | 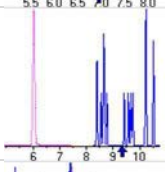 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 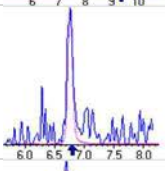 | 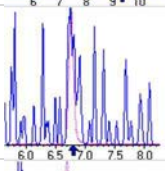 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 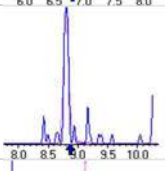 | 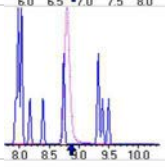 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 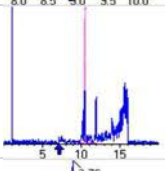 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>303435 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 1456.1 | N/A | 1.0073<br>[ 1.0000 ] | 100.7%<br>{ 89.6% } | 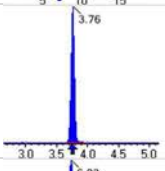 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>143478 | ( 6.03 , N/A )<br>( N/A , -0.03 , N/A ) | 92818.1 | N/A | 0.9331<br>[ 1.0000 ] | 93.3%<br>{ 84.2% } | 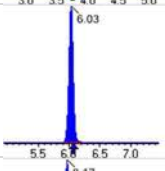 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>439663 | ( 8.17 , N/A )<br>( N/A , -0.06 , N/A ) | 3507.0 | N/A | 0.9855<br>[ 1.0000 ] | 98.5%<br>{ 90.1% } | 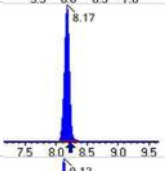 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>309384 | ( 9.12 , N/A )<br>( N/A , -0.07 , N/A ) | 1214.2 | N/A | 0.9255<br>[ 1.0000 ] | 92.5%<br>{ 80.4% } | 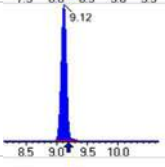 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 318394 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 15959.8 | N/A | 0.9601 [ 1.0000 ] | 96.0% { 84.3% } | 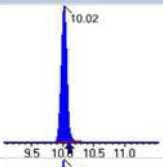 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1045909 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 4909.7 | N/A | 0.9360 [ 1.0000 ] | 93.6% { 83.4% } | 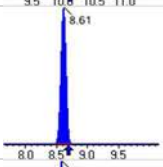 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 840362 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 2175.0 | N/A | 0.8609 [ 1.0000 ] | 86.1% { 79.4% } | 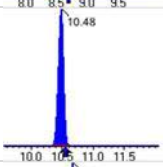 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2623075 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 43664.8 | N/A | 7.8391 [ 8.0000 ] | 98.0% { 92.4% } | 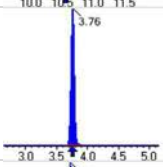 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1025011 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5575.1 | N/A | 3.9822 [ 4.0000 ] | 99.6% { 80.0% } | 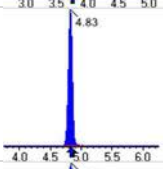 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 632589 | ( 6.03 , N/A ) ( N/A , -0.03 , N/A ) | 13575.0 | N/A | 2.0534 [ 2.0000 ] | 102.7% { 83.4% } | 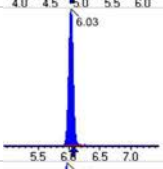 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 696616 | ( 7.17 , N/A ) ( N/A , -0.05 , N/A ) | 5499.2 | N/A | 2.1651 [ 2.0000 ] | 108.3% { 84.8% } | 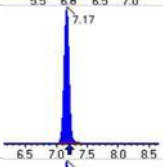 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 911363 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 2755.4 | N/A | 1.9660 [ 2.0000 ] | 98.3% { 83.9% } | 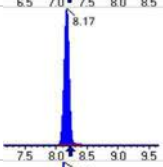 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 293613 | ( 9.11 , N/A ) ( N/A , -0.08 , N/A ) | 3223.0 | N/A | 0.9828 [ 1.0000 ] | 98.3% { 77.7% } | 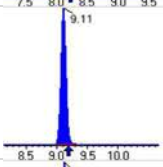 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 359185 | ( 10.02 , N/A ) ( N/A , -0.07 , N/A ) | 984.9 | N/A | 0.9776 [ 1.0000 ] | 97.8% { 76.2% } | 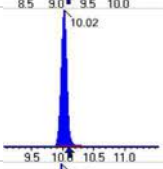 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 414707 | ( 10.88 , N/A ) ( N/A , -0.07 , N/A ) | 1026.8 | N/A | 0.9284 [ 1.0000 ] | 92.8% { 81.8% } | 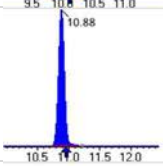 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-05 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 412002 | ( 11.72 , N/A ) ( N/A , -0.06 , N/A ) | 1296.8 | N/A | 0.9184 [ 1.0000 ] | 91.8% { 79.4% } | 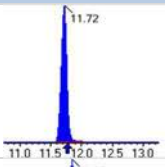 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327570 | ( 12.85 , N/A ) ( N/A , -0.04 , N/A ) | 1295.2 | N/A | 0.8380 [ 1.0000 ] | 83.8% { 74.0% } | 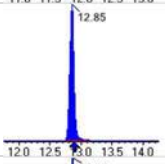 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 502640 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 2977.7 | N/A | 1.5138 [ 2.0000 ] | 75.7% { 62.4% } | 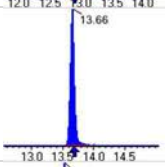 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1953292 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 1281.9 | N/A | 1.9168 [ 2.0000 ] | 95.8% { 81.9% } | 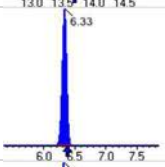 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1546713 | ( 8.61 , N/A ) ( N/A , -0.07 , N/A ) | 4510.5 | N/A | 2.0209 [ 2.0000 ] | 101.0% { 87.7% } | 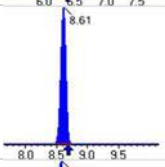 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1776957 | ( 10.48 , N/A ) ( N/A , -0.07 , N/A ) | 1614.6 | N/A | 1.9862 [ 2.0000 ] | 99.3% { 79.6% } | 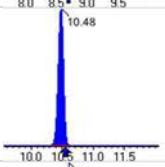 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 570330 | ( 5.50 , N/A ) ( N/A , -0.03 , N/A ) | 99.1 | N/A | 6.2619 [ 4.0000 ] | 156.5% { 103.1% } | 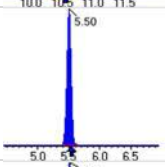 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1702488 | ( 7.60 , N/A ) ( N/A , -0.05 , N/A ) | 4166.0 | N/A | 6.0192 [ 4.0000 ] | 150.5% { 104.6% } | 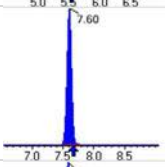 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1478505 | ( 9.39 , N/A ) ( N/A , -0.07 , N/A ) | 1755.8 | N/A | 5.2468 [ 4.0000 ] | 131.2% { 86.6% } | 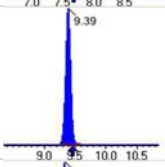 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3080921 | ( 11.03 , N/A ) ( N/A , -0.07 , N/A ) | 1260.4 | N/A | 9.5249 [ 8.0000 ] | 119.1% { 83.0% } | 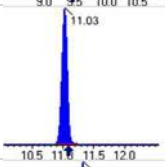 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1504627 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 3242.5 | N/A | 1.5520 [ 2.0000 ] | 77.6% { 62.1% } | 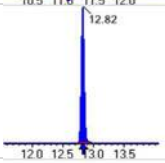 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (29)
Acquired: 2024/03/18 - 23:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 93700 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 682.0 | N/A | 0.5234 [ 2.0000 ] | 26.2% { 21.9% } | 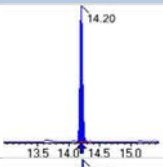 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 79499 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 767.7 | N/A | 0.3866 [ 2.0000 ] | 19.3% { 16.4% } | 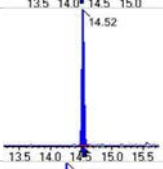 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1069754 | ( 10.26 , N/A ) ( N/A , -0.06 , N/A ) | 2097.3 | N/A | 4.6693 [ 4.0000 ] | 116.7% { 81.0% } | 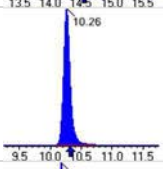 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 981179 | ( 10.78 , N/A ) ( N/A , -0.07 , N/A ) | 1794.0 | N/A | 4.5116 [ 4.0000 ] | 112.8% { 79.7% } | 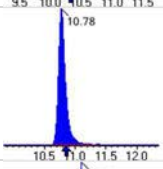 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 830088 | ( 14.00 , N/A ) ( N/A , 0.00 , N/A ) | 1503.6 | N/A | 9.9234 [ 20.0000 ] | 49.6% { 44.7% } | 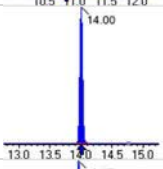 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 726114 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 3062.0 | N/A | 7.1657 [ 20.0000 ] | 35.8% { 34.7% } | 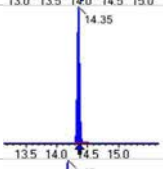 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1165682 | ( 6.48 , N/A ) ( N/A , -0.04 , N/A ) | 2375.4 | N/A | 8.8029 [ 8.0000 ] | 110.0% { 83.0% } | 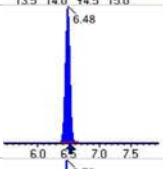 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 489936 | ( 6.76 , N/A ) ( N/A , -0.04 , N/A ) | 1296.7 | N/A | 1.7350 [ 2.0000 ] | 86.7% { 68.9% } | 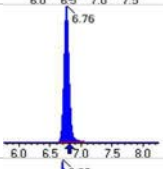 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 513462 | ( 8.80 , N/A ) ( N/A , -0.07 , N/A ) | 696.9 | N/A | 1.9476 [ 2.0000 ] | 97.4% { 76.7% } | 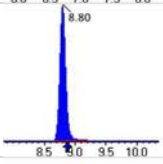 | | |

# ANALYSIS DATA SHEETL

MW-19-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-06- | File ID:- | S2024-03-18A (30)- |
| Sampled:- | 03/13/24 11:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 23:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 529.783 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 1.7- | 0.20- | 1.5- | |
| PFPeA- | 2.4- | 0.061- | 0.76- | |
| PFHxA- | 2.3- | 0.052- | 0.38- | |
| PFHpA- | 1.1- | 0.039- | 0.38- | |
| PFOA- | 3.2- | 0.14- | 0.38- | MI5- |
| PFNA- | 0.15- | 0.077- | 0.38- | J- |
| PFDA- | 0.26- | 0.096- | 0.38- | J- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | IR1, U- |
| PFBS- | 1.4- | 0.035- | 0.38- | |
| PFPeS- | 0.95- | 0.059- | 0.38- | |
| PFHxS- | 5.0- | 0.030- | 0.38- | |
| PFHpS- | 0.10- | 0.048- | 0.38- | J- |
| PFOS- | 1.3- | 0.060- | 0.38- | MI2- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.098- | 0.38- | MI5, U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

MW-19-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-06- | File ID:- | S2024-03-18A (30)- |
| Sampled:- | 03/13/24 11:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 23:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 529.783 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.99- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.051- | 0.76- | U- |
| PFMBA- | ND- | 0.086- | 0.76- | U- |
| NFDHA- | ND- | 0.28- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 62059<br>( 163.0 / 69.0 ) 1745 | ( 2.80 , 0.75 )<br>( N/A , 0.03 , 0.1) | 251.7<br>61.8 | 0.0281<br>112.2<br>107.5 | 0.2601 | N/A | 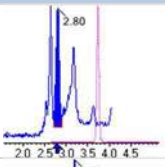 | 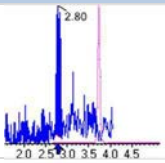 | |
| PFBA | ( 213.0 / 169.0 ) 117287 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 209.8 | N/A<br>0.0<br>0.0 | 0.4596 | N/A | 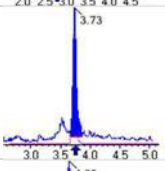 | | |
| PFPeA | ( 263.0 / 219.0 ) 155375<br>( 263.0 / 69.0 ) 2193 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , 0.2) | 626.2<br>30.5 | 0.0141<br>128.5<br>120.8 | 0.6280 | N/A | 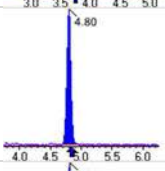 | 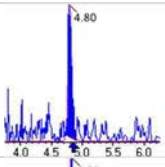 | |
| PFHxA | ( 313.0 / 269.0 ) 174403<br>( 313.0 / 119.0 ) 21648 | ( 6.01 , 1.00 )<br>( 0.00 , N/A , -0.3) | 548.9<br>272.5 | 0.1241<br>111.7<br>109.2 | 0.6140 | N/A | 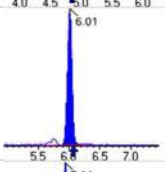 | 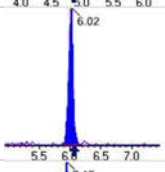 | |
| PFHpA | ( 363.0 / 319.0 ) 99864<br>( 363.0 / 169.0 ) 29787 | ( 7.14 , 1.00 )<br>( 0.00 , N/A , -0.3) | 333.4<br>249.4 | 0.2983<br>95.7<br>101.4 | 0.2972 | N/A | 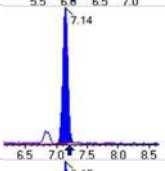 | 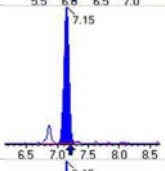 | |
| PFOA | ( 413.0 / 369.0 ) 391586<br>( 413.0 / 169.0 ) 147150 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , 0.1) | 253.3<br>259.7 | 0.3758<br>103.9<br>105.9 | 0.8381 | N/A | 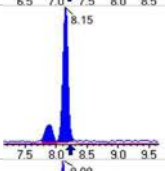 | 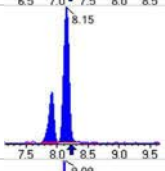 | MI5 PIT 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) 12517<br>( 463.0 / 169.0 ) 3332 | ( 9.09 , 1.00 )<br>( 0.00 , N/A , 0.1) | 47.1<br>19.6 | 0.2662<br>101.4<br>108.2 | 0.0396 | N/A | 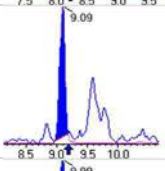 | 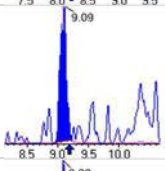 | |
| PFDA | ( 513.0 / 469.0 ) 23641<br>( 513.0 / 169.0 ) 1549 | ( 9.99 , 1.00 )<br>( 0.00 , N/A , -0.1) | 171.4<br>50.2 | 0.0655<br>55.8<br>54.3 | 0.0692 | N/A | 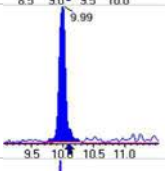 | 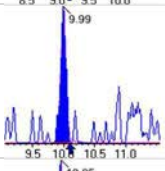 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) 896 | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>27.0 | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 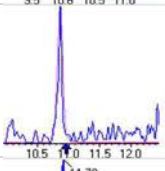 | 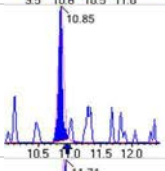 | |
| PFDoA | ( 613.0 / 569.0 ) 5227<br>( 613.0 / 169.0 ) 741 | ( 11.70 , 1.00 )<br>( 0.00 , N/A , -1.1) | 34.4<br>12.6 | 0.1418<br>89.7<br>92.7 | 0.0131 | N/A | 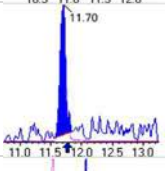 | 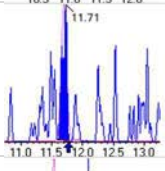 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 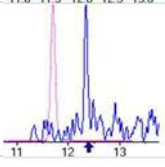 | 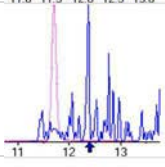 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (30)
Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 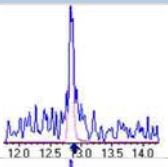 | 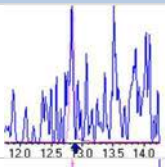 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 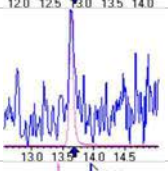 | 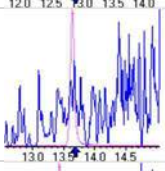 | |
| PFODA | ( 913.0 / 869.0 )<br>2131<br>( 913.0 / 169.0 )<br>N/A | ( 14.28 , 1.05 )<br>( N/A , -0.04 , #Value!) | 12.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0138 | N/A | 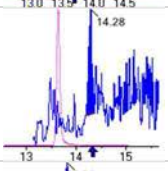 | 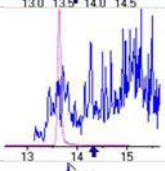 | IR1, |
| PFBS | ( 299.0 / 80.0 )<br>181218<br>( 299.0 / 99.0 )<br>144049 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , 0.1) | 261.2<br>533.9 | 0.7949<br>111.8<br>110.3 | 0.3619 | N/A | 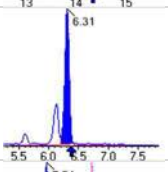 | 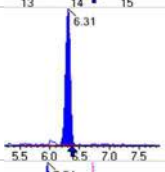 | |
| PFPeS | ( 349.0 / 80.0 )<br>303286<br>( 349.0 / 99.0 )<br>100601 | ( 7.54 , 0.88 )<br>( N/A , -0.08 , -0.1) | 228.3<br>373.6 | 0.3317<br>97.5<br>96.7 | 0.2509 | N/A | 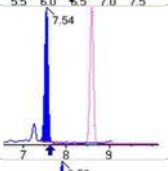 | 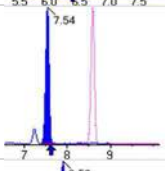 | |
| PFHxS | ( 399.0 / 80.0 )<br>1772623<br>( 399.0 / 99.0 )<br>499408 | ( 8.59 , 1.00 )<br>( 0.00 , N/A , 0.1) | 969.6<br>2240.9 | 0.2817<br>90.1<br>87.8 | 1.3185 | N/A | 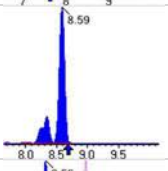 | 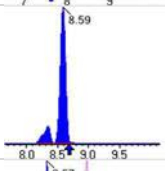 | |
| PFHpS | ( 449.0 / 80.0 )<br>26051<br>( 449.0 / 99.0 )<br>9701 | ( 9.56 , 0.92 )<br>( N/A , -0.09 , -0.3) | 43.1<br>42.8 | 0.3724<br>139.4<br>138.6 | 0.0264 | N/A | 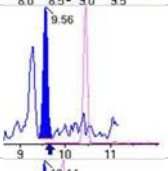 | 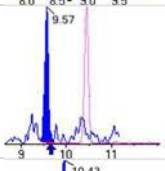 | |
| PFOS | ( 499.0 / 80.0 )<br>338026<br>( 499.0 / 99.0 )<br>46856 | ( 10.14 , 0.97 )<br>( -0.31 , N/A , -17.2) | 186.4<br>184.3 | 0.1386<br>58.6<br>63.3 | 0.3399 | N/A | 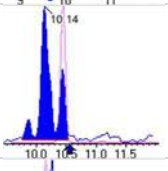 | 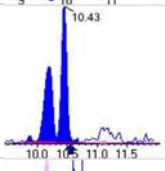 | MI2 PIT 3/19/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 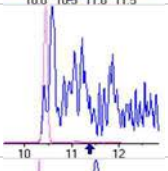 | 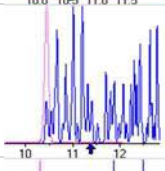 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 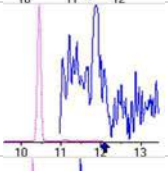 | 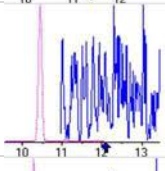 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 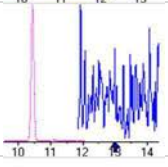 | 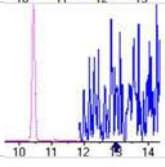 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (30)
Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 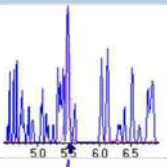 | 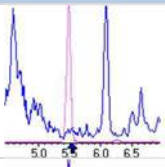 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 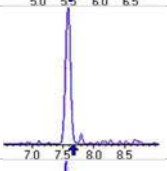 | 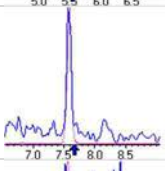 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 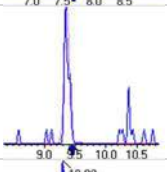 | 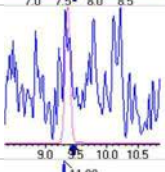 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>13047<br>( 627.0 / 81.0 )<br>21176 | ( 10.99 , 1.00 )<br>( 0.00 , N/A , -0.2) | 160.9<br>41.4 | 1.6231<br>120.1<br>118.5 | 0.0511 | N/A | 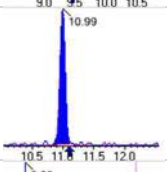 | 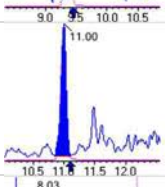 | |
| PFBSA | ( 297.9 / 78.0 )<br>56158<br>( 297.9 / 278.0 )<br>230 | ( 8.03 , 0.57 )<br>( N/A , -0.03 , -0.2) | 403.3<br>6.2 | 0.0041<br>291.9<br>259.0 | 0.2881 | N/A | 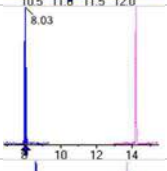 | 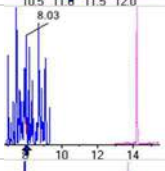 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 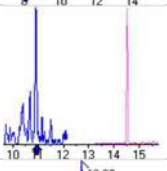 | 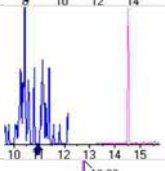 | |
| PFOSA | ( 498.0 / 78.0 )<br>7367<br>( 498.0 / 478.0 )<br>473 | ( 12.80 , 1.00 )<br>( -0.01 , N/A , -2.0) | 80.1<br>14.1 | 0.0642<br>444.6<br>468.6 | 0.0103 | N/A | 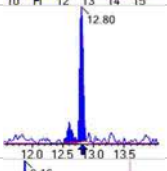 | 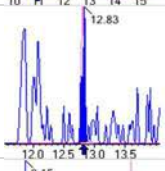 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 )<br>71273<br>( 279.7 / 211.0 )<br>6405 | ( 8.16 , 0.64 )<br>( N/A , -0.09 , 0.5) | 33.5<br>13.2 | 0.0899<br>109.0<br>105.7 | 0.0470 | N/A | 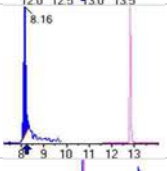 | 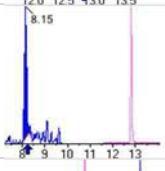 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 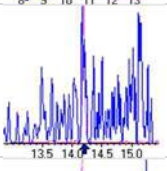 | 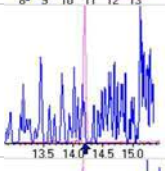 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 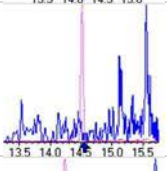 | 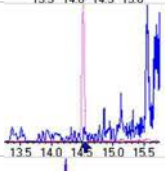 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 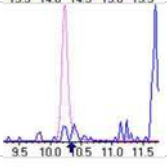 | 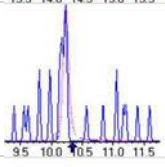 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (30)
Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 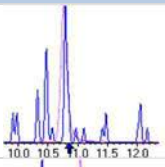 | 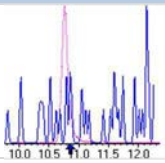 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 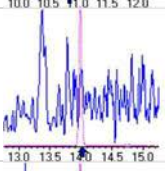 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 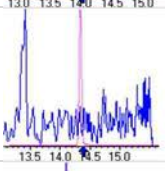 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 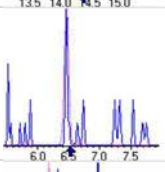 | 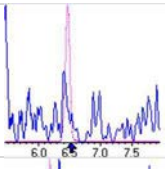 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 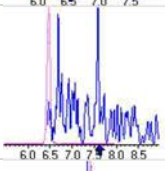 | 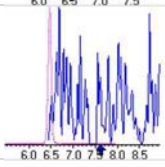 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 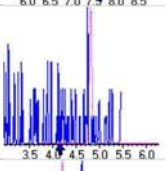 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 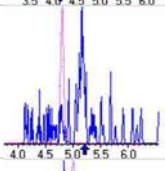 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 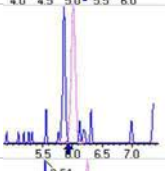 | 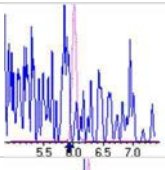 | |
| PFECHS | ( 461.0 / 98.9 )<br>9596<br>( 461.0 / 381.2 )<br>2840 | ( 9.51 , 0.91 )<br>( N/A , -0.07 , -0.8) | 29.0<br>13.7 | 0.2959<br>75.8<br>75.6 | 0.0171 | N/A | 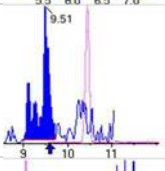 | 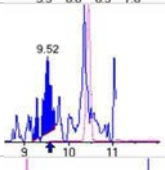 | MI5 DG<br>2024-03-19 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 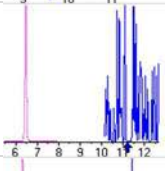 | 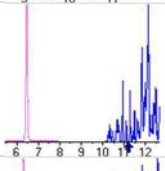 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 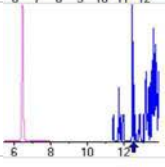 | 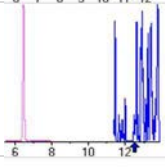 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (30)
Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 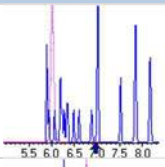 | 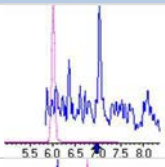 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 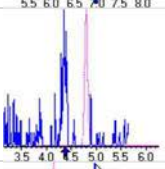 | 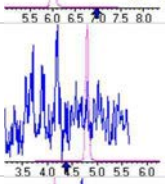 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>4260<br>( 341.0 / 217.0 )<br>6550 | ( 6.88 , 1.14 )<br>( N/A , -0.05 , 0.0) | 52.6<br>26.2 | 1.5375<br>102.7<br>100.3 | 0.0619 | N/A | 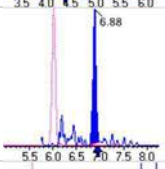 | 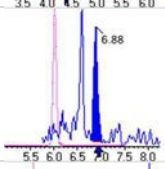 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 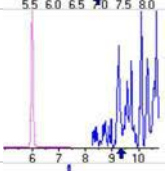 | 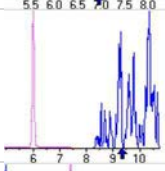 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 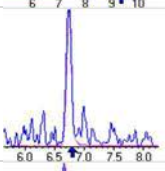 | 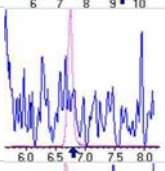 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 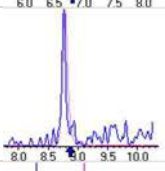 | 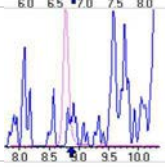 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 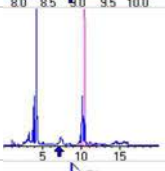 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>276688 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1178.8 | N/A | 0.9185<br>[ 1.0000 ] | 91.8%<br>{ 81.7% } | 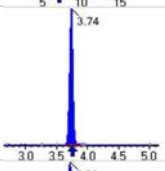 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>138949 | ( 6.01 , N/A )<br>( N/A , -0.05 , N/A ) | 12221.3 | N/A | 0.9036<br>[ 1.0000 ] | 90.4%<br>{ 81.5% } | 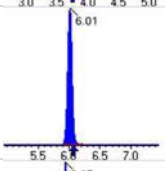 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>427792 | ( 8.15 , N/A )<br>( N/A , -0.08 , N/A ) | 3184.6 | N/A | 0.9589<br>[ 1.0000 ] | 95.9%<br>{ 87.6% } | 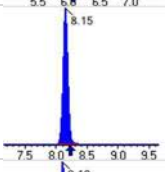 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>308392 | ( 9.10 , N/A )<br>( N/A , -0.09 , N/A ) | 708.5 | N/A | 0.9225<br>[ 1.0000 ] | 92.3%<br>{ 80.2% } | 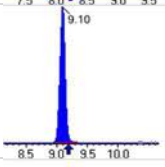 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307181 | ( 10.00 , N/A ) ( N/A , -0.09 , N/A ) | 3138.3 | N/A | 0.9263 [ 1.0000 ] | 92.6% { 81.3% } | 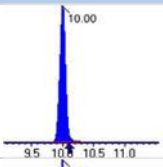 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1040752 | ( 8.59 , N/A ) ( N/A , -0.09 , N/A ) | 3342.9 | N/A | 0.9314 [ 1.0000 ] | 93.1% { 83.0% } | 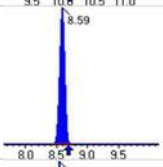 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 821409 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 796.4 | N/A | 0.8414 [ 1.0000 ] | 84.1% { 77.6% } | 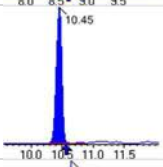 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2157817 | ( 3.73 , N/A ) ( N/A , -0.01 , N/A ) | 40377.8 | N/A | 7.0720 [ 8.0000 ] | 88.4% { 76.0% } | 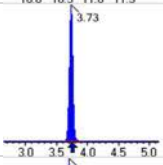 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 972085 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5396.2 | N/A | 3.8997 [ 4.0000 ] | 97.5% { 75.9% } | 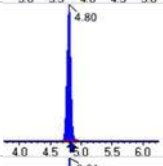 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 586340 | ( 6.01 , N/A ) ( N/A , -0.05 , N/A ) | 5368.0 | N/A | 1.9653 [ 2.0000 ] | 98.3% { 77.3% } | 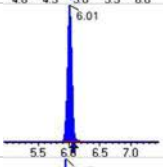 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 682337 | ( 7.15 , N/A ) ( N/A , -0.07 , N/A ) | 5096.8 | N/A | 2.1898 [ 2.0000 ] | 109.5% { 83.1% } | 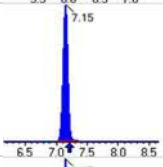 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 918955 | ( 8.15 , N/A ) ( N/A , -0.08 , N/A ) | 3302.8 | N/A | 2.0374 [ 2.0000 ] | 101.9% { 84.6% } | 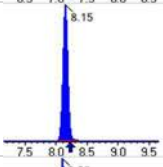 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 315481 | ( 9.09 , N/A ) ( N/A , -0.09 , N/A ) | 1594.3 | N/A | 1.0594 [ 1.0000 ] | 105.9% { 83.4% } | 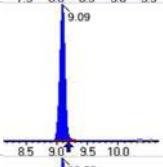 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342945 | ( 10.00 , N/A ) ( N/A , -0.09 , N/A ) | 1094.6 | N/A | 0.9675 [ 1.0000 ] | 96.7% { 72.8% } | 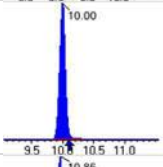 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 401091 | ( 10.86 , N/A ) ( N/A , -0.09 , N/A ) | 1231.9 | N/A | 0.9307 [ 1.0000 ] | 93.1% { 79.1% } | 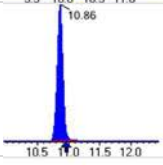 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-06 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 390410 | ( 11.70 , N/A ) ( N/A , -0.08 , N/A ) | 1042.4 | N/A | 0.9021 [ 1.0000 ] | 90.2% { 75.2% } | 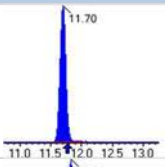 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 306477 | ( 12.83 , N/A ) ( N/A , -0.05 , N/A ) | 1060.5 | N/A | 0.8126 [ 1.0000 ] | 81.3% { 69.2% } | 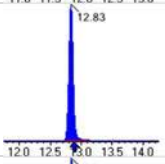 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 477066 | ( 13.64 , N/A ) ( N/A , -0.05 , N/A ) | 2147.9 | N/A | 1.4892 [ 2.0000 ] | 74.5% { 59.3% } | 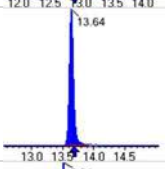 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1926006 | ( 6.31 , N/A ) ( N/A , -0.06 , N/A ) | 1197.8 | N/A | 1.8993 [ 2.0000 ] | 95.0% { 80.8% } | 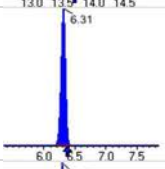 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1518323 | ( 8.59 , N/A ) ( N/A , -0.09 , N/A ) | 3326.7 | N/A | 1.9937 [ 2.0000 ] | 99.7% { 86.1% } | 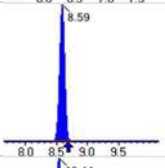 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1720384 | ( 10.44 , N/A ) ( N/A , -0.11 , N/A ) | 772.3 | N/A | 1.9674 [ 2.0000 ] | 98.4% { 77.1% } | 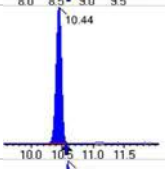 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 657363 | ( 5.48 , N/A ) ( N/A , -0.05 , N/A ) | 80.1 | N/A | 7.2532 [ 4.0000 ] | 181.3% { 118.8% } | 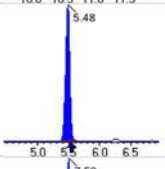 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1889770 | ( 7.59 , N/A ) ( N/A , -0.07 , N/A ) | 1910.6 | N/A | 6.7145 [ 4.0000 ] | 167.9% { 116.1% } | 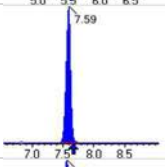 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1378766 | ( 9.37 , N/A ) ( N/A , -0.09 , N/A ) | 893.5 | N/A | 4.9171 [ 4.0000 ] | 122.9% { 80.8% } | 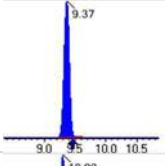 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2481230 | ( 10.99 , N/A ) ( N/A , -0.10 , N/A ) | 1627.8 | N/A | 7.7089 [ 8.0000 ] | 96.4% { 66.9% } | 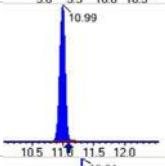 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1460870 | ( 12.81 , N/A ) ( N/A , -0.02 , N/A ) | 2116.9 | N/A | 1.5416 [ 2.0000 ] | 77.1% { 60.3% } | 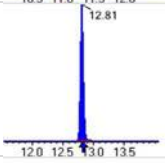 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (30)
Acquired: 2024/03/18 - 23:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 84771 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 666.6 | N/A | 0.4845 [ 2.0000 ] | 24.2% { 19.8% } | 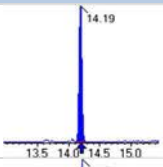 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 83683 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 714.1 | N/A | 0.4163 [ 2.0000 ] | 20.8% { 17.3% } | 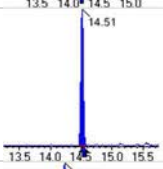 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 899939 | ( 10.23 , N/A ) ( N/A , -0.10 , N/A ) | 2729.7 | N/A | 4.0187 [ 4.0000 ] | 100.5% { 68.2% } | 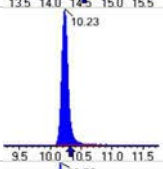 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 942232 | ( 10.76 , N/A ) ( N/A , -0.09 , N/A ) | 1672.9 | N/A | 4.4325 [ 4.0000 ] | 110.8% { 76.5% } | 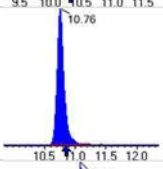 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 789923 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 1912.7 | N/A | 9.6612 [ 20.0000 ] | 48.3% { 42.5% } | 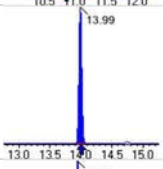 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 784658 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2989.9 | N/A | 7.9221 [ 20.0000 ] | 39.6% { 37.5% } | 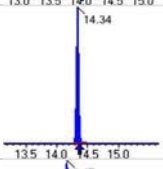 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1054613 | ( 6.47 , N/A ) ( N/A , -0.06 , N/A ) | 2349.8 | N/A | 8.2237 [ 8.0000 ] | 102.8% { 75.1% } | 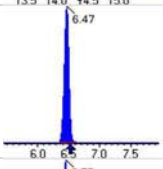 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 593051 | ( 6.75 , N/A ) ( N/A , -0.06 , N/A ) | 1314.8 | N/A | 2.1768 [ 2.0000 ] | 108.8% { 83.4% } | 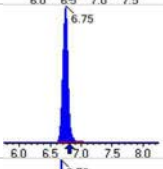 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 590345 | ( 8.78 , N/A ) ( N/A , -0.09 , N/A ) | 838.4 | N/A | 2.3210 [ 2.0000 ] | 116.0% { 88.2% } | 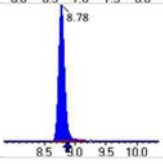 | | |

# ANALYSIS DATA SHEETL

## MW-19-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-07- | File ID:- | S2024-03-18A (31)- |
| Sampled:- | 03/13/24 11:30- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 23:46- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 527.437 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 4.1- | 0.20- | 1.5- | |
| PFPeA- | 3.2- | 0.062- | 0.76- | |
| PFHxA- | 2.9- | 0.052- | 0.38- | |
| PFHpA- | 1.5- | 0.039- | 0.38- | |
| PFOA- | 4.9- | 0.14- | 0.38- | MI5- |
| PFNA- | 0.15- | 0.078- | 0.38- | J- |
| PFDA- | 0.31- | 0.096- | 0.38- | IR2, MI2, J- |
| PFUnA- | ND- | 0.15- | 0.38- | IR2, U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | 0.23- | 0.19- | 0.38- | IR1, J- |
| PFBS- | 3.2- | 0.035- | 0.38- | |
| PFPeS- | 1.0- | 0.059- | 0.38- | |
| PFHxS- | 5.6- | 0.030- | 0.38- | |
| PFHpS- | 0.18- | 0.049- | 0.38- | J- |
| PFOS- | 2.1- | 0.060- | 0.38- | MI2- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.28- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.099- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | 0.23- | 0.10- | 0.38- | IR2, J- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

MW-19-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-07- | File ID:- | S2024-03-18A (31)- |
| Sampled:- | 03/13/24 11:30- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/18/24 23:46- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 527.437 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.96- | 1.5- | U- |
| NEtFOSE- | ND- | 0.99- | 1.5- | U- |
| HFPO-DA- | ND- | 0.17- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.051- | 0.76- | U- |
| PFMBA- | ND- | 0.086- | 0.76- | U- |
| NFDHA- | ND- | 0.29- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (31)
Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 183795<br>( 163.0 / 69.0 ) 5273 | ( 2.84 , 0.75 )<br>( N/A , 0.06 , -0.4) | 974.8<br>207.8 | 0.0287<br>114.5<br>109.7 | 1.0074 | N/A | 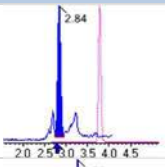 | 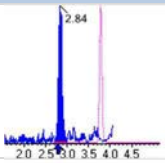 | |
| PFBA | ( 213.0 / 169.0 ) 210130 | ( 3.78 , 1.00 )<br>( 0.00 , N/A , 0.0) | 397.9 | N/A<br>0.0<br>0.0 | 1.0771 | N/A | 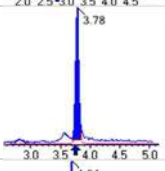 | | |
| PFPeA | ( 263.0 / 219.0 ) 194603<br>( 263.0 / 69.0 ) 2441 | ( 4.84 , 1.00 )<br>( 0.00 , N/A , 0.5) | 462.4<br>21.3 | 0.0125<br>114.2<br>107.3 | 0.8417 | N/A | 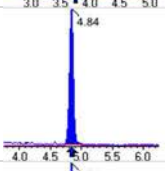 | 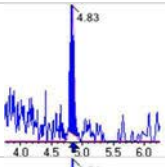 | |
| PFHxA | ( 313.0 / 269.0 ) 204688<br>( 313.0 / 119.0 ) 22494 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.3) | 564.6<br>212.6 | 0.1099<br>98.9<br>96.7 | 0.7575 | N/A | 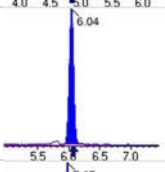 | 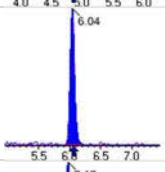 | |
| PFHpA | ( 363.0 / 319.0 ) 122874<br>( 363.0 / 169.0 ) 36689 | ( 7.17 , 1.00 )<br>( 0.00 , N/A , 0.3) | 323.9<br>270.3 | 0.2986<br>95.8<br>101.5 | 0.4048 | N/A | 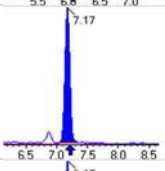 | 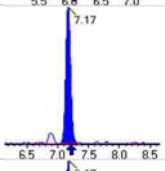 | |
| PFOA | ( 413.0 / 369.0 ) 522934<br>( 413.0 / 169.0 ) 206448 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.1) | 311.0<br>335.7 | 0.3948<br>109.1<br>111.2 | 1.2929 | N/A | 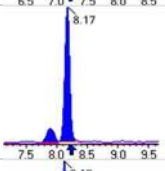 | 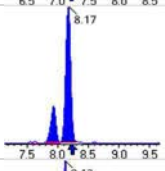 | MI5 PIT 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) 11238<br>( 463.0 / 169.0 ) 2028 | ( 9.12 , 1.00 )<br>( 0.00 , N/A , -0.1) | 34.9<br>15.4 | 0.1805<br>68.8<br>73.3 | 0.0390 | N/A | 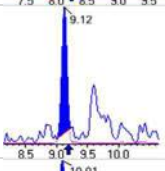 | 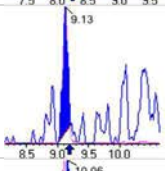 | |
| PFDA | ( 513.0 / 469.0 ) 15861<br>( 513.0 / 169.0 ) 3278 | ( 10.01 , 1.00 )<br>( 0.00 , N/A , -3.3) | 91.0<br>77.3 | 0.2067<br>176.1<br>171.2 | 0.0808 | N/A | 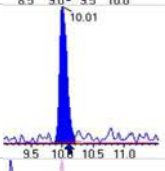 | 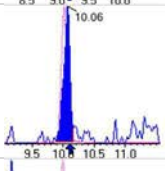 | IR2,MI2 DG 2024-03-19 |
| PFUnA | ( 563.0 / 519.0 ) 3004<br>( 563.0 / 169.0 ) 737 | ( 10.89 , 1.00 )<br>( 0.00 , N/A , -1.8) | 18.3<br>12.8 | 0.2453<br>165.6<br>169.6 | 0.0095 | N/A | 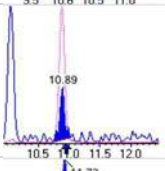 | 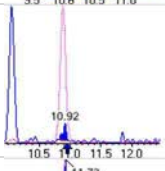 | IR2, |
| PFDoA | ( 613.0 / 569.0 ) 7539<br>( 613.0 / 169.0 ) 1068 | ( 11.73 , 1.00 )<br>( 0.01 , N/A , -0.2) | 44.3<br>29.8 | 0.1417<br>89.6<br>92.6 | 0.0224 | N/A | 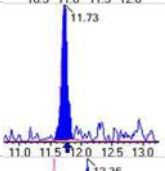 | 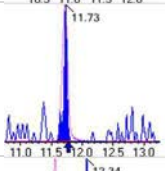 | |
| PFTrDA | ( 663.0 / 619.0 ) 5003<br>( 663.0 / 169.0 ) 1779 | ( 12.36 , 1.05 )<br>( N/A , -0.03 , 1.5) | 34.9<br>25.9 | 0.3557<br>132.0<br>139.6 | 0.0155 | N/A | 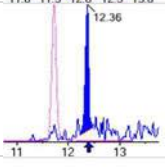 | 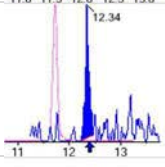 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (31)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>6100<br>( 713.0 / 169.0 )<br>1453 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 42.9<br>18.0 | 0.2382<br>91.6<br>90.2 | 0.0256 | N/A | 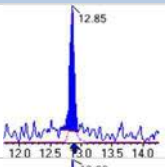 | 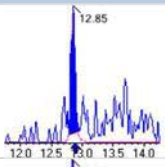 | |
| PFHxDA | ( 813.0 / 769.0 )<br>7541<br>( 813.0 / 169.0 )<br>1417 | ( 13.66 , 1.00 )<br>( 0.00 , N/A , 1.0) | 51.8<br>13.9 | 0.1879<br>86.6<br>73.8 | 0.0411 | N/A | 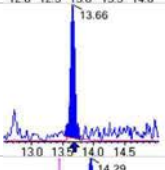 | 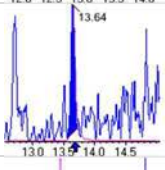 | |
| PFODA | ( 913.0 / 869.0 )<br>7387<br>( 913.0 / 169.0 )<br>1160 | ( 14.29 , 1.05 )<br>( N/A , -0.02 , 39.2) | 28.1<br>5.7 | 0.1570<br>41.1<br>47.3 | 0.0600 | N/A | 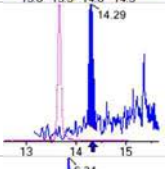 | 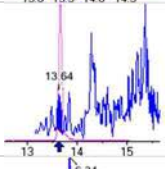 | IR1, |
| PFBS | ( 299.0 / 80.0 )<br>378371<br>( 299.0 / 99.0 )<br>272614 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 487.6<br>845.4 | 0.7205<br>101.3<br>100.0 | 0.8357 | N/A | 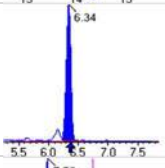 | 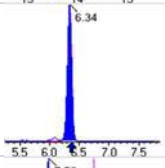 | |
| PFPeS | ( 349.0 / 80.0 )<br>290001<br>( 349.0 / 99.0 )<br>105627 | ( 7.56 , 0.88 )<br>( N/A , -0.05 , 0.0) | 241.2<br>319.5 | 0.3642<br>107.1<br>106.1 | 0.2651 | N/A | 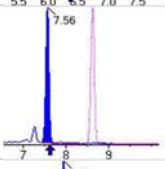 | 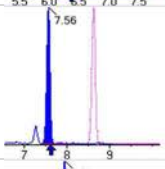 | |
| PFHxS | ( 399.0 / 80.0 )<br>1782078<br>( 399.0 / 99.0 )<br>528304 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1216.1<br>1773.5 | 0.2965<br>94.8<br>92.4 | 1.4649 | N/A | 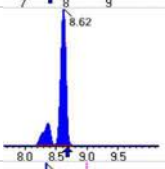 | 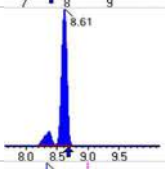 | |
| PFHpS | ( 449.0 / 80.0 )<br>40547<br>( 449.0 / 99.0 )<br>12119 | ( 9.58 , 0.92 )<br>( N/A , -0.08 , 0.2) | 69.2<br>39.7 | 0.2989<br>111.9<br>111.3 | 0.0477 | N/A | 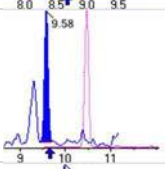 | 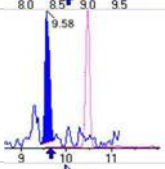 | |
| PFOS | ( 499.0 / 80.0 )<br>483789<br>( 499.0 / 99.0 )<br>85929 | ( 10.36 , 0.99 )<br>( -0.11 , N/A , -6.4) | 259.1<br>428.9 | 0.1776<br>75.1<br>81.1 | 0.5661 | N/A | 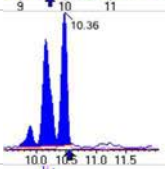 | 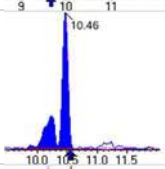 | MI2 PIT 3/19/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 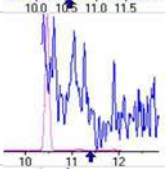 | 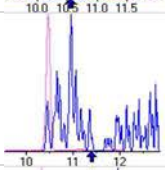 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 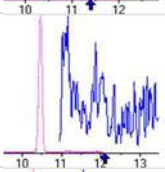 | 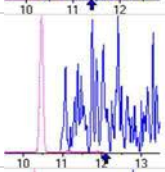 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 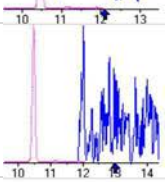 | 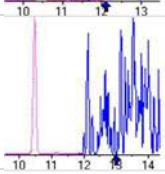 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (31)
Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 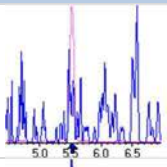 | 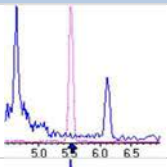 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 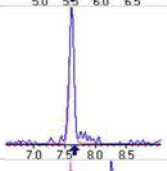 | 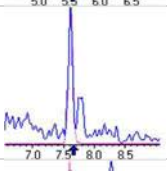 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 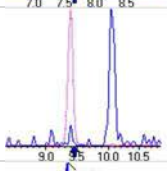 | 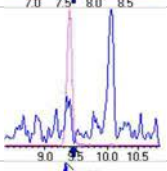 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>10088<br>( 627.0 / 81.0 )<br>15252 | ( 11.04 , 1.00 )<br>( 0.02 , N/A , 0.7) | 109.3<br>41.5 | 1.5119<br>111.9<br>110.4 | 0.0471 | N/A | 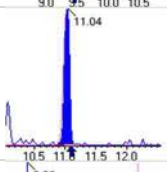 | 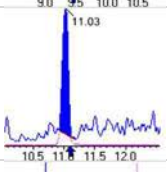 | |
| PFBSA | ( 297.9 / 78.0 )<br>35914<br>( 297.9 / 278.0 )<br>38 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , 3.5) | 234.2<br>2.0 | 0.0011<br>76.2<br>67.6 | 0.1946 | N/A | 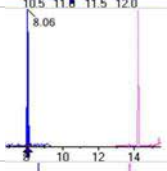 | 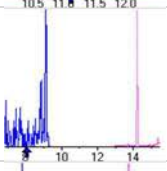 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 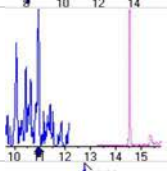 | 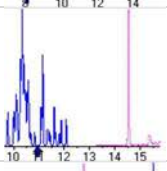 | |
| PFOSA | ( 498.0 / 78.0 )<br>7496<br>( 498.0 / 478.0 )<br>220 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , -0.4) | 93.6<br>9.7 | 0.0294<br>203.7<br>214.7 | 0.0118 | N/A | 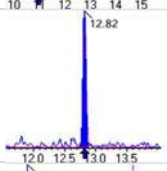 | 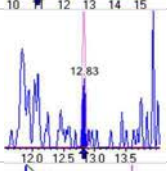 | |
| TFSI | ( 279.7 / 147.0 )<br>81532<br>( 279.7 / 211.0 )<br>5494 | ( 8.18 , 0.64 )<br>( N/A , -0.07 , 0.2) | 35.4<br>15.2 | 0.0674<br>81.7<br>79.2 | 0.0604 | N/A | 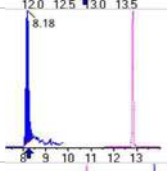 | 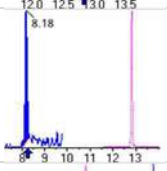 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 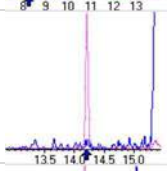 | 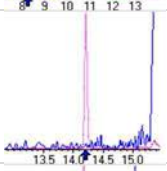 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 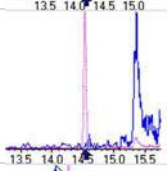 | 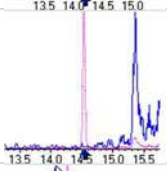 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>10024<br>( 570.0 / 483.0 )<br>7981 | ( 10.05 , 0.98 )<br>( -0.21 , N/A , -0.4) | 42123.6<br>410.1 | 0.7962<br>183.9<br>174.7 | 0.0597 | N/A | 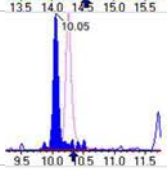 | 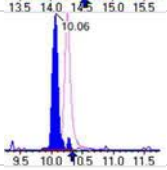 | IR2, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (31)
Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 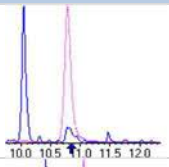 | 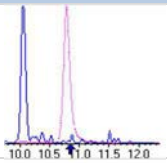 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 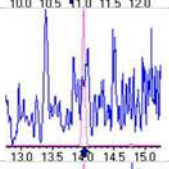 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 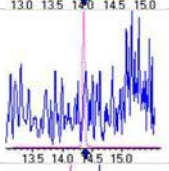 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 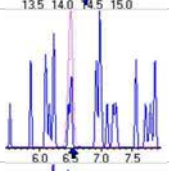 | 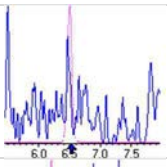 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 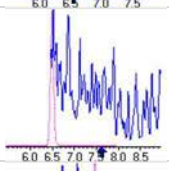 | 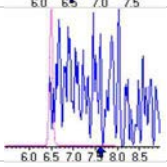 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 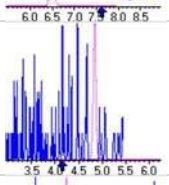 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 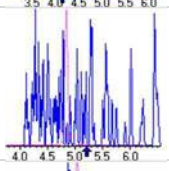 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 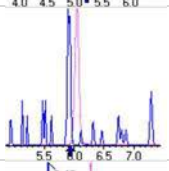 | 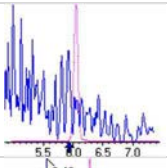 | |
| PFECHS | ( 461.0 / 98.9 )<br>22791<br>( 461.0 / 381.2 )<br>9718 | ( 9.48 , 0.91 )<br>( N/A , -0.10 , -0.5) | 63.1<br>31.8 | 0.4264<br>109.2<br>109.0 | 0.0473 | N/A | 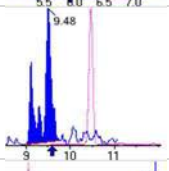 | 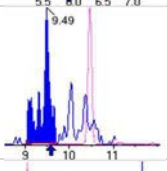 | MI4 ABK 3/19/24 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 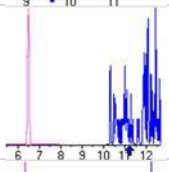 | 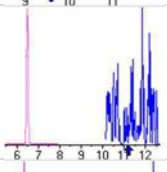 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 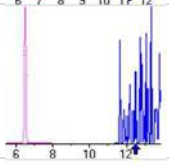 | 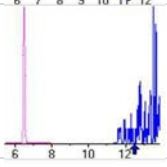 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (31)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 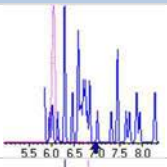 | 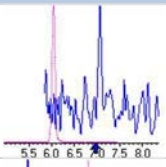 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 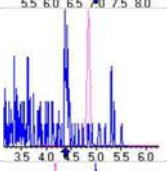 | 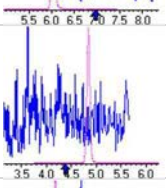 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 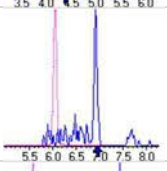 | 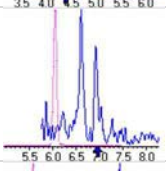 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 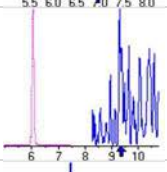 | 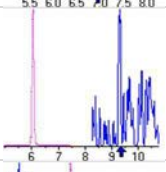 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 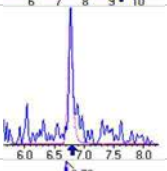 | 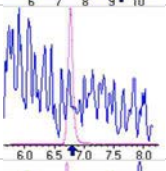 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 4814<br>( 457.2 / 343.0 ) 110 | ( 8.79 , 1.00 )<br>( -0.01 , N/A , -3.3) | 30.2<br>8.9 | 0.0228<br>58.2<br>59.9 | 0.0262 | N/A | 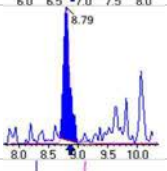 | 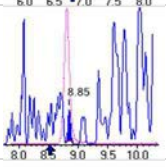 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 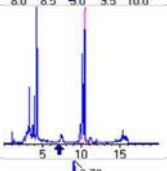 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 244894 | ( 3.78 , N/A )<br>( N/A , 0.03 , N/A ) | 1048.9 | N/A | 0.8129<br>[ 1.0000 ] | 81.3%<br>{ 72.4% } | 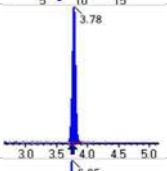 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 139751 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 56408.4 | N/A | 0.9088<br>[ 1.0000 ] | 90.9%<br>{ 82.0% } | 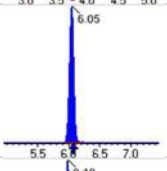 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 407213 | ( 8.18 , N/A )<br>( N/A , -0.06 , N/A ) | 3262.3 | N/A | 0.9128<br>[ 1.0000 ] | 91.3%<br>{ 83.4% } | 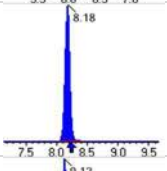 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 307830 | ( 9.12 , N/A )<br>( N/A , -0.06 , N/A ) | 891.3 | N/A | 0.9208<br>[ 1.0000 ] | 92.1%<br>{ 80.0% } | 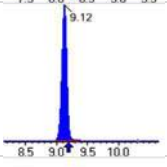 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (31)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 191247 | ( 10.02 , N/A ) ( N/A , -0.08 , N/A ) | 2222.6 | N/A | 0.5767 [ 1.0000 ] | 57.7% { 50.6% } | 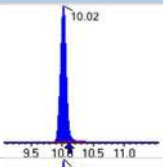 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 971213 | ( 8.62 , N/A ) ( N/A , -0.07 , N/A ) | 4091.1 | N/A | 0.8691 [ 1.0000 ] | 86.9% { 77.5% } | 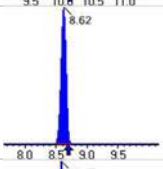 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 720364 | ( 10.47 , N/A ) ( N/A , -0.08 , N/A ) | 772.5 | N/A | 0.7379 [ 1.0000 ] | 73.8% { 68.1% } | 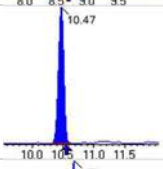 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1649763 | ( 3.78 , N/A ) ( N/A , 0.03 , N/A ) | 28850.8 | N/A | 6.1089 [ 8.0000 ] | 76.4% { 58.1% } | 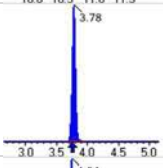 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 908416 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5006.6 | N/A | 3.6234 [ 4.0000 ] | 90.6% { 70.9% } | 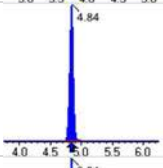 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 557773 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 5946.2 | N/A | 1.8588 [ 2.0000 ] | 92.9% { 73.5% } | 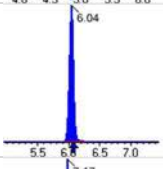 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 616451 | ( 7.17 , N/A ) ( N/A , -0.04 , N/A ) | 3816.0 | N/A | 1.9670 [ 2.0000 ] | 98.4% { 75.1% } | 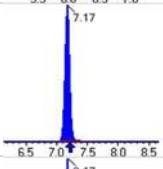 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 795514 | ( 8.17 , N/A ) ( N/A , -0.06 , N/A ) | 3065.5 | N/A | 1.8528 [ 2.0000 ] | 92.6% { 73.2% } | 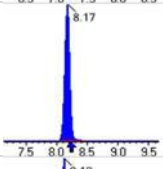 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 287874 | ( 9.12 , N/A ) ( N/A , -0.07 , N/A ) | 1283.1 | N/A | 0.9684 [ 1.0000 ] | 96.8% { 76.1% } | 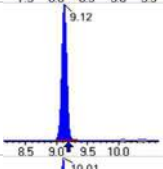 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 197008 | ( 10.01 , N/A ) ( N/A , -0.08 , N/A ) | 864.6 | N/A | 0.8927 [ 1.0000 ] | 89.3% { 41.8% } | 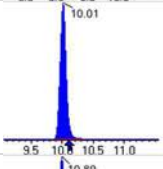 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 339168 | ( 10.89 , N/A ) ( N/A , -0.07 , N/A ) | 577.4 | N/A | 1.2641 [ 1.0000 ] | 126.4% { 66.9% } | 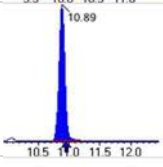 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-07 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (31)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 328873 | ( 11.72 , N/A ) ( N/A , -0.05 , N/A ) | 1174.5 | N/A | 1.2205 [ 1.0000 ] | 122.1% { 63.3% } | 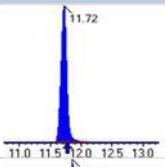 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 250834 | ( 12.85 , N/A ) ( N/A , -0.04 , N/A ) | 1303.8 | N/A | 1.0683 [ 1.0000 ] | 106.8% { 56.7% } | 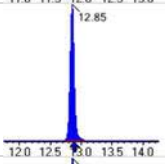 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 379930 | ( 13.66 , N/A ) ( N/A , -0.03 , N/A ) | 1838.2 | N/A | 1.9050 [ 2.0000 ] | 95.2% { 47.2% } | 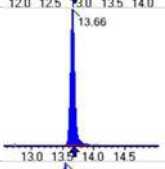 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1741360 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 950.8 | N/A | 1.8402 [ 2.0000 ] | 92.0% { 73.0% } | 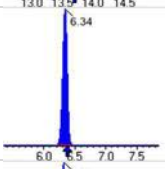 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373884 | ( 8.62 , N/A ) ( N/A , -0.07 , N/A ) | 3349.0 | N/A | 1.9332 [ 2.0000 ] | 96.7% { 77.9% } | 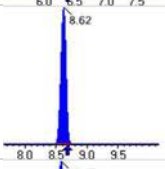 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1478600 | ( 10.47 , N/A ) ( N/A , -0.08 , N/A ) | 787.3 | N/A | 1.9281 [ 2.0000 ] | 96.4% { 66.3% } | 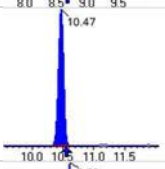 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 498133 | ( 5.52 , N/A ) ( N/A , -0.02 , N/A ) | 78.2 | N/A | 5.8899 [ 4.0000 ] | 147.2% { 90.0% } | 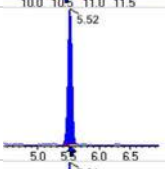 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1522138 | ( 7.61 , N/A ) ( N/A , -0.04 , N/A ) | 2020.3 | N/A | 5.7955 [ 4.0000 ] | 144.9% { 93.5% } | 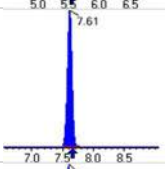 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1113959 | ( 9.39 , N/A ) ( N/A , -0.07 , N/A ) | 880.1 | N/A | 4.2572 [ 4.0000 ] | 106.4% { 65.3% } | 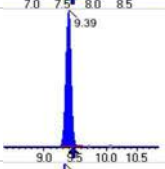 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2082302 | ( 11.02 , N/A ) ( N/A , -0.07 , N/A ) | 1198.1 | N/A | 6.9327 [ 8.0000 ] | 86.7% { 56.1% } | 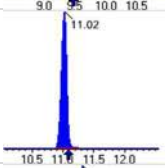 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1300477 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2430.8 | N/A | 1.5649 [ 2.0000 ] | 78.2% { 53.7% } | 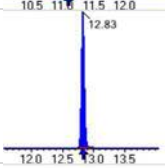 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (31)
Acquired: 2024/03/18 - 23:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 80279 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 559.0 | N/A | 0.5231 [ 2.0000 ] | 26.2% { 18.8% } | 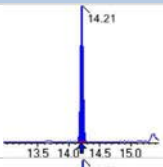  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 78305 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 359.5 | N/A | 0.4442 [ 2.0000 ] | 22.2% { 16.2% } | 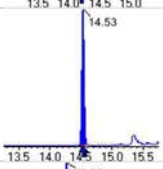  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 713722 | ( 10.26 , N/A ) ( N/A , -0.07 , N/A ) | 1957.2 | N/A | 3.6342 [ 4.0000 ] | 90.9% { 54.1% } | 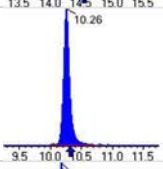  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 748448 | ( 10.78 , N/A ) ( N/A , -0.07 , N/A ) | 1380.6 | N/A | 4.0148 [ 4.0000 ] | 100.4% { 60.8% } | 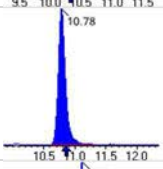  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 687233 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1678.6 | N/A | 9.5842 [ 20.0000 ] | 47.9% { 37.0% } | 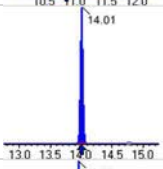  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 716642 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2731.8 | N/A | 8.2503 [ 20.0000 ] | 41.3% { 34.2% } | 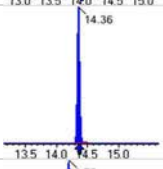  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 967666 | ( 6.50 , N/A ) ( N/A , -0.03 , N/A ) | 2343.7 | N/A | 7.5024 [ 8.0000 ] | 93.8% { 68.9% } | 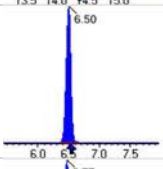  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 472303 | ( 6.77 , N/A ) ( N/A , -0.03 , N/A ) | 1507.4 | N/A | 2.7845 [ 2.0000 ] | 139.2% { 66.4% } | 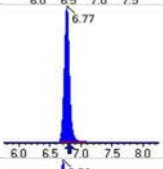  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 436413 | ( 8.81 , N/A ) ( N/A , -0.06 , N/A ) | 594.5 | N/A | 2.7559 [ 2.0000 ] | 137.8% { 65.2% } | 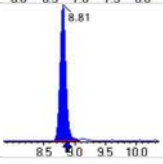  | | |

# ANALYSIS DATA SHEETL

## MW-19-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-08- | File ID:- | S2024-03-18A (32)- |
| Sampled:- | 03/13/24 12:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/19/24 00:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.611 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977- | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.75- | 0.19- | 1.5- | J- |
| PFPeA- | 0.32- | 0.060- | 0.74- | J- |
| PFHxA- | 0.17- | 0.051- | 0.37- | J- |
| PFHpA- | 0.13- | 0.038- | 0.37- | J- |
| PFOA- | 0.54- | 0.14- | 0.37- | |
| PFNA- | 0.094- | 0.076- | 0.37- | MI5, J- |
| PFDA- | ND- | 0.094- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 0.39- | 0.034- | 0.37- | |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | 0.49- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 1.4- | 0.059- | 0.37- | MI5- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-19-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0083-08- | File ID:- | S2024-03-18A (32)- |
| Sampled:- | 03/13/24 12:10- | Prepared:- | 03/14/24 12:39- | Analyzed:- | 03/19/24 00:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.611 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0208- | Sequence:- | SD00977 | Calibration:- | 2411010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 66801<br>( 163.0 / 69.0 ) 2332 | ( 2.81 , 0.75 )<br>( N/A , 0.04 , 0.5) | 359.6<br>96.7 | 0.0349<br>139.2<br>133.4 | 0.2557 | N/A | 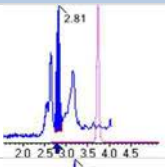 | 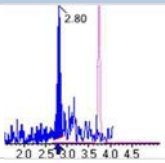 | |
| PFBA | ( 213.0 / 169.0 ) 56898 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 93.5 | N/A<br>0.0<br>0.0 | 0.2037 | N/A | 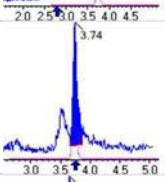 | | |
| PFPeA | ( 263.0 / 219.0 ) 20605<br>( 263.0 / 69.0 ) 514 | ( 4.81 , 1.00 )<br>( 0.01 , N/A , 0.7) | 104.0<br>20.7 | 0.0250<br>227.2<br>213.5 | 0.0874 | N/A | 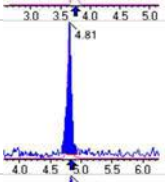 | 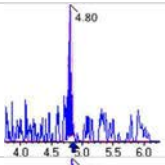 | |
| PFHxA | ( 313.0 / 269.0 ) 12410<br>( 313.0 / 119.0 ) 1275 | ( 6.03 , 1.00 )<br>( 0.00 , N/A , -0.8) | 65.8<br>36.6 | 0.1027<br>92.4<br>90.4 | 0.0458 | N/A | 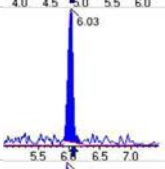 | 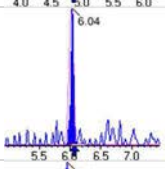 | |
| PFHpA | ( 363.0 / 319.0 ) 11182<br>( 363.0 / 169.0 ) 4762 | ( 7.17 , 1.00 )<br>( 0.01 , N/A , 0.9) | 75.0<br>71.5 | 0.4259<br>136.7<br>144.8 | 0.0365 | N/A | 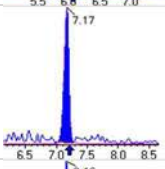 | 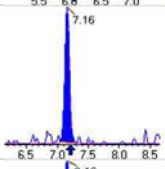 | |
| PFOA | ( 413.0 / 369.0 ) 63043<br>( 413.0 / 169.0 ) 20332 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.2) | 87.8<br>135.5 | 0.3225<br>89.2<br>90.9 | 0.1450 | N/A | 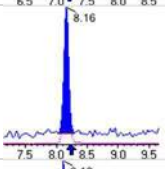 | 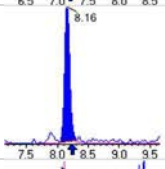 | |
| PFNA | ( 463.0 / 419.0 ) 6841<br>( 463.0 / 169.0 ) 1494 | ( 9.10 , 1.00 )<br>( -0.01 , N/A , 1.2) | 23.8<br>11.7 | 0.2184<br>83.2<br>88.8 | 0.0253 | N/A | 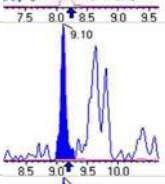 | 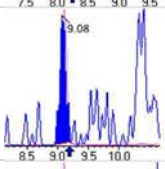 | MI5 PIT 3/19/24 |
| PFDA | ( 513.0 / 469.0 ) 6143<br>( 513.0 / 169.0 ) 749 | ( 10.01 , 1.00 )<br>( 0.00 , N/A , -1.6) | 47.0<br>22.0 | 0.1219<br>103.8<br>101.0 | 0.0195 | N/A | 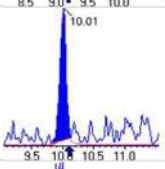 | 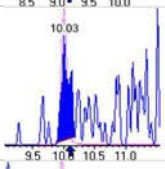 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 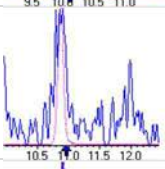 | 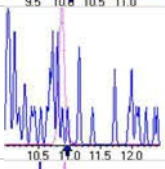 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 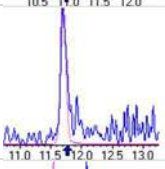 | 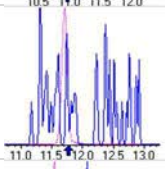 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 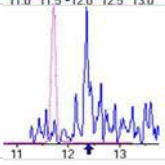 | 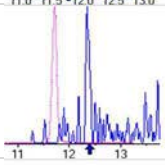 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (32)
Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 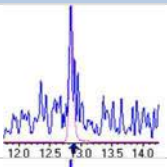 | 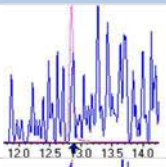 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 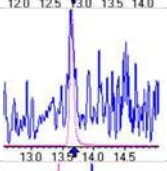 | 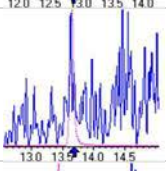 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 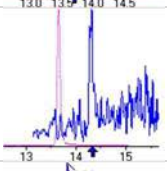 | 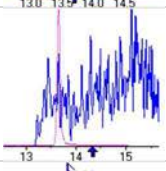 | |
| PFBS | ( 299.0 / 80.0 )<br>50643<br>( 299.0 / 99.0 )<br>40678 | ( 6.32 , 1.00 )<br>( 0.00 , N/A , -0.1) | 167.1<br>227.0 | 0.8032<br>113.0<br>111.4 | 0.1068 | N/A | 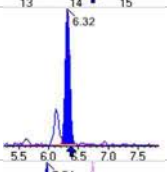 | 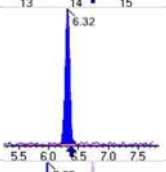 | |
| PFPeS | ( 349.0 / 80.0 )<br>12974<br>( 349.0 / 99.0 )<br>4679 | ( 7.54 , 0.88 )<br>( N/A , -0.07 , -0.3) | 49.9<br>29.2 | 0.3606<br>106.0<br>105.1 | 0.0114 | N/A | 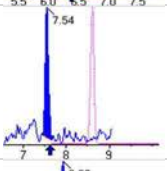 | 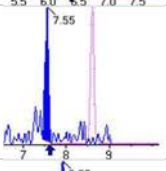 | |
| PFHxS | ( 399.0 / 80.0 )<br>166734<br>( 399.0 / 99.0 )<br>48505 | ( 8.60 , 1.00 )<br>( -0.01 , N/A , 0.0) | 571.0<br>457.9 | 0.2909<br>93.0<br>90.7 | 0.1321 | N/A | 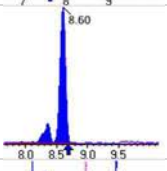 | 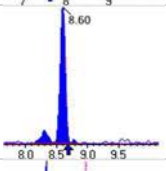 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 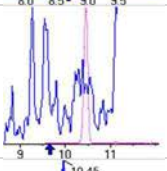 | 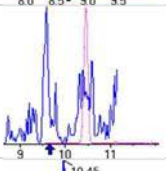 | |
| PFOS | ( 499.0 / 80.0 )<br>373438<br>( 499.0 / 99.0 )<br>84940 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , -0.2) | 300.5<br>882.6 | 0.2275<br>96.2<br>103.8 | 0.3812 | N/A | 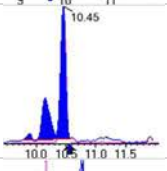 | 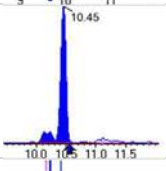 | MI5 DG<br>2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 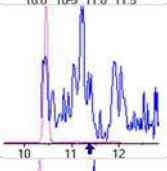 | 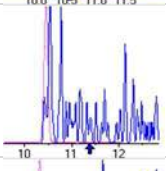 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 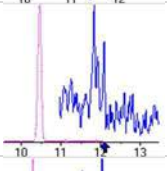 | 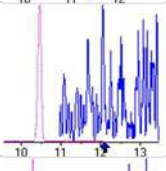 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 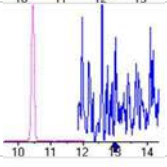 | 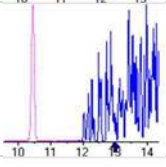 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (32)
Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 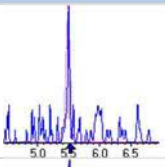 | 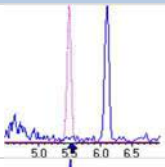 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 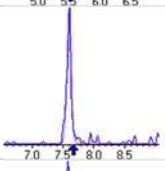 | 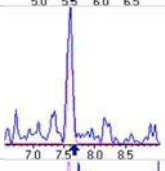 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 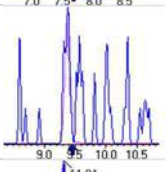 | 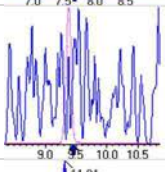 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>10537<br>( 627.0 / 81.0 )<br>19858 | ( 11.01 , 1.00 )<br>( 0.01 , N/A , 0.2) | 164.5<br>54.6 | 1.8847<br>139.4<br>137.6 | 0.0419 | N/A | 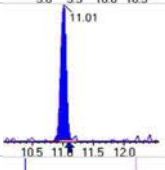 | 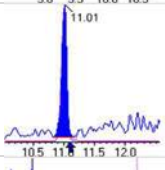 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 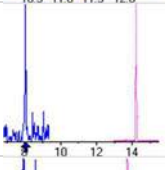 | 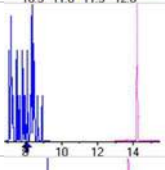 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 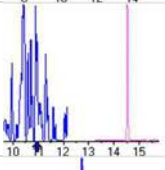 | 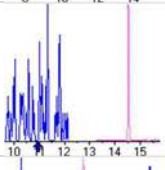 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 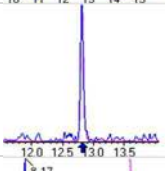 | 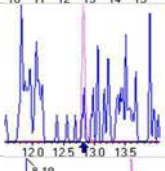 | |
| TFSI | ( 279.7 / 147.0 )<br>55647<br>( 279.7 / 211.0 )<br>4958 | ( 8.17 , 0.64 )<br>( N/A , -0.08 , -1.1) | 31.5<br>15.0 | 0.0891<br>108.0<br>104.8 | 0.0336 | N/A | 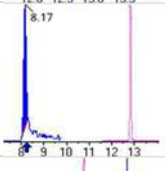 | 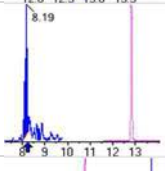 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 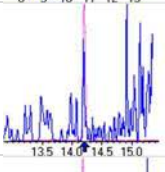 | 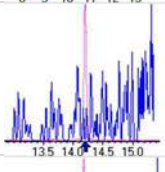 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 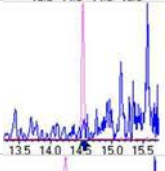 | 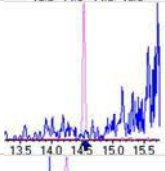 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 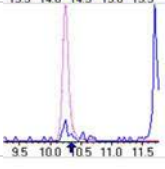 | 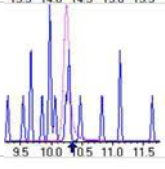 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (32)
Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 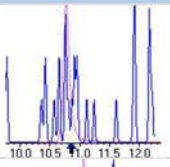 | 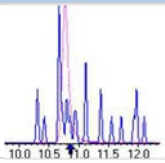 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 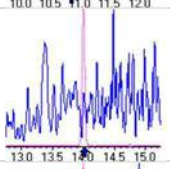 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 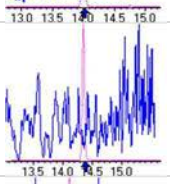 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 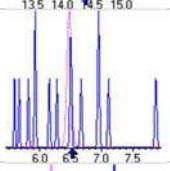 | 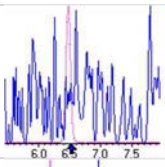 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 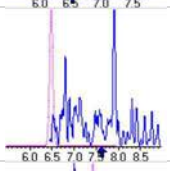 | 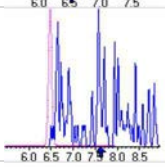 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 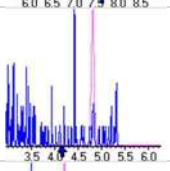 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 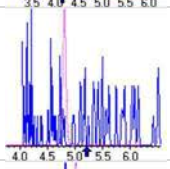 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 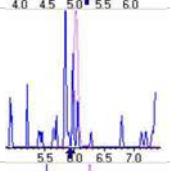 | 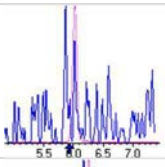 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 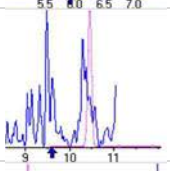 | 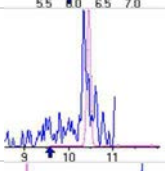 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 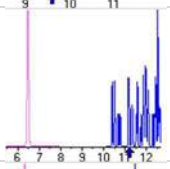 | 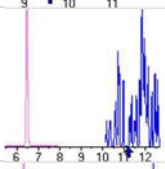 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 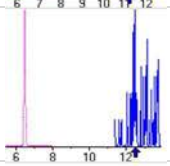 | 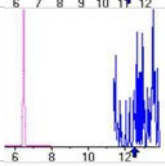 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 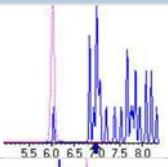 | 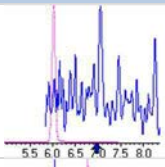 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 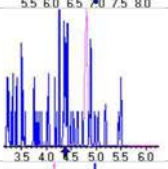 | 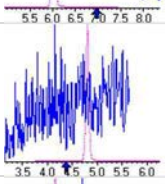 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 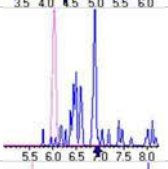 | 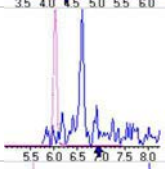 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 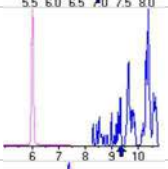 | 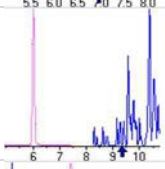 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 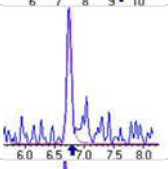 | 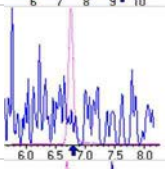 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 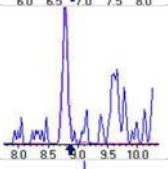 | 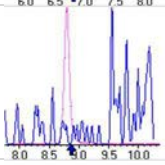 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 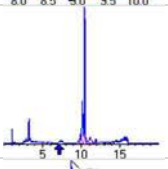 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>296255 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1446.4 | N/A | 0.9834<br>[ 1.0000 ] | 98.3%<br>{ 87.5% } | 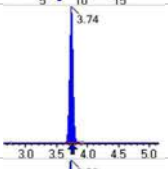 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>128603 | ( 6.02 , N/A )<br>( N/A , -0.05 , N/A ) | 14901.7 | N/A | 0.8364<br>[ 1.0000 ] | 83.6%<br>{ 75.5% } | 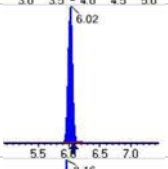 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>418949 | ( 8.16 , N/A )<br>( N/A , -0.07 , N/A ) | 3419.4 | N/A | 0.9391<br>[ 1.0000 ] | 93.9%<br>{ 85.8% } | 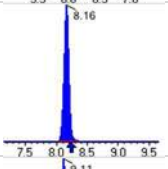 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>293963 | ( 9.11 , N/A )<br>( N/A , -0.08 , N/A ) | 839.0 | N/A | 0.8793<br>[ 1.0000 ] | 87.9%<br>{ 76.4% } | 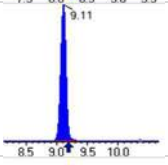 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 276294 | ( 10.01 , N/A ) ( N/A , -0.09 , N/A ) | 2286.1 | N/A | 0.8332 [ 1.0000 ] | 83.3% { 73.2% } | 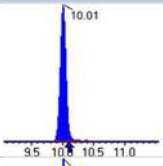 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 987242 | ( 8.61 , N/A ) ( N/A , -0.08 , N/A ) | 4677.1 | N/A | 0.8835 [ 1.0000 ] | 88.3% { 78.8% } | 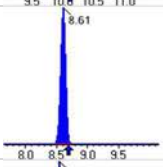 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 864481 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 1268.8 | N/A | 0.8856 [ 1.0000 ] | 88.6% { 81.7% } | 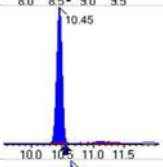 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2362457 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 37484.6 | N/A | 7.2313 [ 8.0000 ] | 90.4% { 83.2% } | 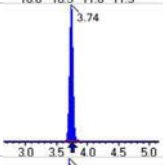 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 926580 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4493.1 | N/A | 4.0162 [ 4.0000 ] | 100.4% { 72.4% } | 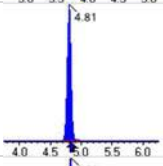 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 559488 | ( 6.02 , N/A ) ( N/A , -0.05 , N/A ) | 6893.3 | N/A | 2.0262 [ 2.0000 ] | 101.3% { 73.8% } | 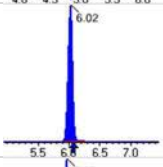 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 622692 | ( 7.16 , N/A ) ( N/A , -0.05 , N/A ) | 3806.7 | N/A | 2.1592 [ 2.0000 ] | 108.0% { 75.8% } | 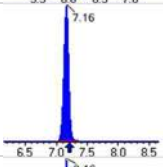 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 855201 | ( 8.16 , N/A ) ( N/A , -0.07 , N/A ) | 3863.3 | N/A | 1.9361 [ 2.0000 ] | 96.8% { 78.7% } | 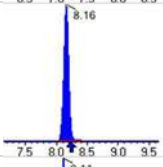 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269443 | ( 9.11 , N/A ) ( N/A , -0.08 , N/A ) | 1369.5 | N/A | 0.9492 [ 1.0000 ] | 94.9% { 71.3% } | 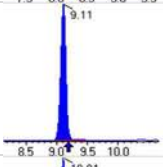 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316855 | ( 10.01 , N/A ) ( N/A , -0.08 , N/A ) | 885.2 | N/A | 0.9938 [ 1.0000 ] | 99.4% { 67.2% } | 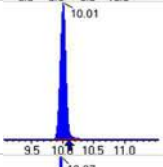 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 383994 | ( 10.87 , N/A ) ( N/A , -0.08 , N/A ) | 1134.6 | N/A | 0.9906 [ 1.0000 ] | 99.1% { 75.7% } | 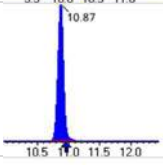 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 24C0083-08 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 371407 | ( 11.71 , N/A ) ( N/A , -0.07 , N/A ) | 1336.8 | N/A | 0.9541 [ 1.0000 ] | 95.4% { 71.5% } | 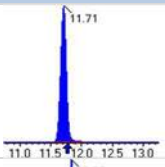 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 272500 | ( 12.85 , N/A ) ( N/A , -0.04 , N/A ) | 1215.2 | N/A | 0.8033 [ 1.0000 ] | 80.3% { 61.6% } | 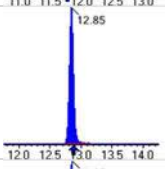 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 503766 | ( 13.65 , N/A ) ( N/A , -0.04 , N/A ) | 2391.1 | N/A | 1.7484 [ 2.0000 ] | 87.4% { 62.6% } | 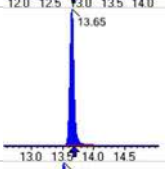 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1823258 | ( 6.32 , N/A ) ( N/A , -0.05 , N/A ) | 1030.1 | N/A | 1.8955 [ 2.0000 ] | 94.8% { 76.5% } | 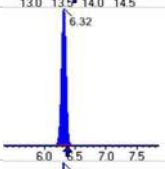 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1425506 | ( 8.61 , N/A ) ( N/A , -0.08 , N/A ) | 3382.2 | N/A | 1.9732 [ 2.0000 ] | 98.7% { 80.8% } | 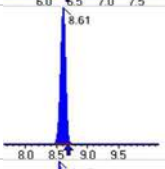 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1694977 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 1099.0 | N/A | 1.8418 [ 2.0000 ] | 92.1% { 76.0% } | 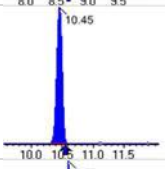 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 529364 | ( 5.49 , N/A ) ( N/A , -0.04 , N/A ) | 88.2 | N/A | 6.1575 [ 4.0000 ] | 153.9% { 95.7% } | 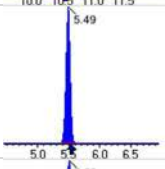 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1706105 | ( 7.60 , N/A ) ( N/A , -0.06 , N/A ) | 2922.8 | N/A | 6.3905 [ 4.0000 ] | 159.8% { 104.8% } | 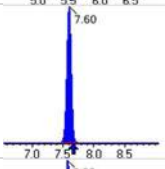 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1120834 | ( 9.38 , N/A ) ( N/A , -0.08 , N/A ) | 987.0 | N/A | 4.2139 [ 4.0000 ] | 105.3% { 65.7% } | 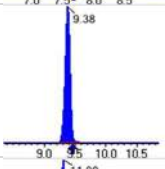 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2444441 | ( 11.00 , N/A ) ( N/A , -0.09 , N/A ) | 1350.2 | N/A | 8.0062 [ 8.0000 ] | 100.1% { 65.9% } | 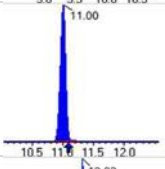 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1597528 | ( 12.82 , N/A ) ( N/A , -0.01 , N/A ) | 1737.0 | N/A | 1.6018 [ 2.0000 ] | 80.1% { 66.0% } | 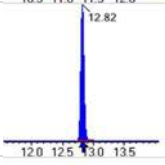 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0083-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (32)
Acquired: 2024/03/19 - 00:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 153093 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 1285.3 | N/A | 0.8313 [ 2.0000 ] | 41.6% { 35.8% } | 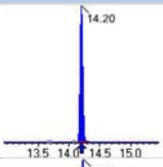  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 138001 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 1155.2 | N/A | 0.6524 [ 2.0000 ] | 32.6% { 28.5% } | 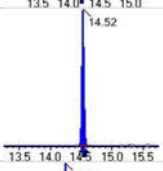  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 889036 | ( 10.24 , N/A ) ( N/A , -0.08 , N/A ) | 2035.4 | N/A | 3.7722 [ 4.0000 ] | 94.3% { 67.3% } | 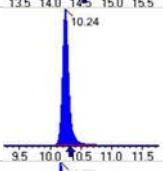  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 848042 | ( 10.77 , N/A ) ( N/A , -0.08 , N/A ) | 1699.1 | N/A | 3.7907 [ 4.0000 ] | 94.8% { 68.8% } | 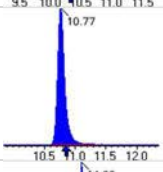  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1150748 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 2345.8 | N/A | 13.3730 [ 20.0000 ] | 66.9% { 61.9% } | 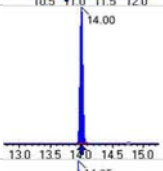  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1126495 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 3808.8 | N/A | 10.8067 [ 20.0000 ] | 54.0% { 53.8% } | 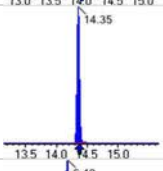  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 986473 | ( 6.48 , N/A ) ( N/A , -0.05 , N/A ) | 2226.7 | N/A | 8.3112 [ 8.0000 ] | 103.9% { 70.3% } | 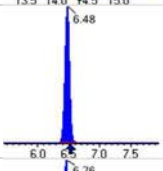  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 508976 | ( 6.76 , N/A ) ( N/A , -0.05 , N/A ) | 1053.3 | N/A | 2.0770 [ 2.0000 ] | 103.9% { 71.5% } | 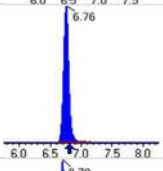  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514816 | ( 8.79 , N/A ) ( N/A , -0.07 , N/A ) | 759.4 | N/A | 2.2503 [ 2.0000 ] | 112.5% { 76.9% } | 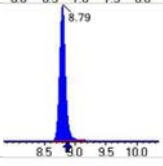  | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-21-3 (24C0083-01 ) ng/L** | Lab File ID: S2024-03-18A (25) | | | Analyzed: 03/18/24 21:43 |
| 13C4-PFBA | 29.5 | 75.2 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 91.4 | 40 - 130 | |
| 13C5-PFHXA | 7.38 | 92.3 | 40 - 130 | |
| 13C4-PFHPA | 7.38 | 94.4 | 40 - 130 | |
| 13C8-PFOA | 7.38 | 99.2 | 40 - 130 | |
| 13C9-PFNA | 3.69 | 99.4 | 40 - 130 | |
| 13C6-PFDA | 3.69 | 98.8 | 40 - 130 | |
| 13C7-PFUnA | 3.69 | 91.1 | 30 - 130 | |
| 13C2-PFDOA | 3.69 | 83.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.69 | 76.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.38 | 75.7 | 0 - 200 | |
| 13C3-PFBS | 7.38 | 92.9 | 40 - 135 | |
| 13C3-PFHXS | 7.38 | 95.0 | 40 - 130 | |
| 13C8-PFOS | 7.38 | 93.1 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 158 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 152 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 117 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.5 | 95.7 | 0 - 200 | |
| 13C8-PFOSA | 7.38 | 81.1 | 40 - 130 | |
| D3-NMEFOSA | 7.38 | 33.6 | 10 - 130 | |
| D5-NETFOSA | 7.38 | 27.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 93.9 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 98.8 | 25 - 135 | |
| D7-NMEFOSE | 73.8 | 65.7 | 10 - 130 | |
| D9-NETFOSE | 73.8 | 53.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.5 | 95.7 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-21-2 (24C0083-02 ) ng/L** | Lab File ID: S2024-03-18A (26) | | | Analyzed: 03/18/24 22:03 |
| 13C4-PFBA | 28.5 | 81.5 | 5 - 130 | |
| 13C5-PFPEA | 14.2 | 92.7 | 40 - 130 | |
| 13C5-PFHXA | 7.12 | 96.0 | 40 - 130 | |
| 13C4-PFHPA | 7.12 | 102 | 40 - 130 | |
| 13C8-PFOA | 7.12 | 100 | 40 - 130 | |
| 13C9-PFNA | 3.56 | 94.5 | 40 - 130 | |
| 13C6-PFDA | 3.56 | 92.9 | 40 - 130 | |
| 13C7-PFUnA | 3.56 | 91.2 | 30 - 130 | |
| 13C2-PFDOA | 3.56 | 88.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.56 | 74.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.12 | 74.4 | 0 - 200 | |
| 13C3-PFBS | 7.12 | 90.0 | 40 - 135 | |
| 13C3-PFHXS | 7.12 | 102 | 40 - 130 | |
| 13C8-PFOS | 7.12 | 95.7 | 40 - 130 | |
| 13C2-4:2FTS | 14.2 | 147 | 40 - 200 | |
| 13C2-6:2FTS | 14.2 | 144 | 40 - 200 | |
| 13C2-8:2FTS | 14.2 | 116 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.5 | 102 | 0 - 200 | |
| 13C8-PFOSA | 7.12 | 88.8 | 40 - 130 | |
| D3-NMEFOSA | 7.12 | 38.4 | 10 - 130 | |
| D5-NETFOSA | 7.12 | 26.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.2 | 105 | 40 - 170 | |
| D5-NETFOSAA | 14.2 | 108 | 25 - 135 | |
| D7-NMEFOSE | 71.2 | 62.8 | 10 - 130 | |
| D9-NETFOSE | 71.2 | 48.5 | 10 - 130 | |
| 13C3-HFPO-DA | 28.5 | 96.5 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-21-1 (24C0083-03 ) ng/L** | Lab File ID: S2024-03-18A (27) | | | Analyzed: 03/18/24 22:24 |
| 13C4-PFBA | 29.7 | 91.8 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 97.8 | 40 - 130 | |
| 13C5-PFHXA | 7.43 | 98.5 | 40 - 130 | |
| 13C4-PFHPA | 7.43 | 105 | 40 - 130 | |
| 13C8-PFOA | 7.43 | 99.5 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 97.0 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 96.5 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 87.0 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 90.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 80.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.43 | 83.5 | 0 - 200 | |
| 13C3-PFBS | 7.43 | 90.8 | 40 - 135 | |
| 13C3-PFHXS | 7.43 | 99.6 | 40 - 130 | |
| 13C8-PFOS | 7.43 | 97.3 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 137 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 145 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 105 | 0 - 200 | |
| 13C8-PFOSA | 7.43 | 82.4 | 40 - 130 | |
| D3-NMEFOSA | 7.43 | 31.9 | 10 - 130 | |
| D5-NETFOSA | 7.43 | 22.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 97.6 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 107 | 25 - 135 | |
| D7-NMEFOSE | 74.3 | 62.6 | 10 - 130 | |
| D9-NETFOSE | 74.3 | 52.6 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-3-031324 (24C0083-04 ) ng/L** | Lab File ID: S2024-03-18A (28) | | | Analyzed: 03/18/24 22:44 |
| 13C4-PFBA | 30.1 | 99.7 | 5 - 130 | |
| 13C5-PFPEA | 15.1 | 97.5 | 40 - 130 | |
| 13C5-PFHXA | 7.53 | 96.3 | 40 - 130 | |
| 13C4-PFHPA | 7.53 | 105 | 40 - 130 | |
| 13C8-PFOA | 7.53 | 96.3 | 40 - 130 | |
| 13C9-PFNA | 3.76 | 99.2 | 40 - 130 | |
| 13C6-PFDA | 3.76 | 96.6 | 40 - 130 | |
| 13C7-PFUnA | 3.76 | 93.3 | 30 - 130 | |
| 13C2-PFDOA | 3.76 | 88.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.76 | 81.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.53 | 81.0 | 0 - 200 | |
| 13C3-PFBS | 7.53 | 90.4 | 40 - 135 | |
| 13C3-PFHXS | 7.53 | 95.7 | 40 - 130 | |
| 13C8-PFOS | 7.53 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 15.1 | 149 | 40 - 200 | |
| 13C2-6:2FTS | 15.1 | 148 | 40 - 200 | |
| 13C2-8:2FTS | 15.1 | 132 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.1 | 119 | 0 - 200 | |
| 13C8-PFOSA | 7.53 | 60.9 | 40 - 130 | |
| D3-NMEFOSA | 7.53 | 19.7 | 10 - 130 | |
| D5-NETFOSA | 7.53 | 13.2 | 10 - 130 | |
| D3-NMEFOSAA | 15.1 | 110 | 40 - 170 | |
| D5-NETFOSAA | 15.1 | 107 | 25 - 135 | |
| D7-NMEFOSE | 75.3 | 35.6 | 10 - 130 | |
| D9-NETFOSE | 75.3 | 27.0 | 10 - 130 | |
| 13C3-HFPO-DA | 30.1 | 107 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-3-031324 (24C0083-05 ) ng/L** | Lab File ID: S2024-03-18A (29) | | | Analyzed: 03/18/24 23:05 |
| 13C4-PFBA | 30.6 | 98.0 | 5 - 130 | |
| 13C5-PFPEA | 15.3 | 99.6 | 40 - 130 | |
| 13C5-PFHXA | 7.64 | 103 | 40 - 130 | |
| 13C4-PFHPA | 7.64 | 108 | 40 - 130 | |
| 13C8-PFOA | 7.64 | 98.3 | 40 - 130 | |
| 13C9-PFNA | 3.82 | 98.3 | 40 - 130 | |
| 13C6-PFDA | 3.82 | 97.8 | 40 - 130 | |
| 13C7-PFUnA | 3.82 | 92.8 | 30 - 130 | |
| 13C2-PFDOA | 3.82 | 91.8 | 10 - 130 | |
| 13C2-PFTEDA | 3.82 | 83.8 | 10 - 130 | |
| 13C2-PFHxDA | 7.64 | 75.7 | 0 - 200 | |
| 13C3-PFBS | 7.64 | 95.8 | 40 - 135 | |
| 13C3-PFHXS | 7.64 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.64 | 99.3 | 40 - 130 | |
| 13C2-4:2FTS | 15.3 | 157 | 40 - 200 | |
| 13C2-6:2FTS | 15.3 | 150 | 40 - 200 | |
| 13C2-8:2FTS | 15.3 | 131 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.6 | 119 | 0 - 200 | |
| 13C8-PFOSA | 7.64 | 77.6 | 40 - 130 | |
| D3-NMEFOSA | 7.64 | 26.2 | 10 - 130 | |
| D5-NETFOSA | 7.64 | 19.3 | 10 - 130 | |
| D3-NMEFOSAA | 15.3 | 117 | 40 - 170 | |
| D5-NETFOSAA | 15.3 | 113 | 25 - 135 | |
| D7-NMEFOSE | 76.4 | 49.6 | 10 - 130 | |
| D9-NETFOSE | 76.4 | 35.8 | 10 - 130 | |
| 13C3-HFPO-DA | 30.6 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-19-3 (24C0083-06 ) ng/L** | Lab File ID: S2024-03-18A (30) | | | Analyzed: 03/18/24 23:25 |
| 13C4-PFBA | 30.2 | 88.4 | 5 - 130 | |
| 13C5-PFPEA | 15.1 | 97.5 | 40 - 130 | |
| 13C5-PFHXA | 7.55 | 98.3 | 40 - 130 | |
| 13C4-PFHPA | 7.55 | 109 | 40 - 130 | |
| 13C8-PFOA | 7.55 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.78 | 106 | 40 - 130 | |
| 13C6-PFDA | 3.78 | 96.7 | 40 - 130 | |
| 13C7-PFUnA | 3.78 | 93.1 | 30 - 130 | |
| 13C2-PFDOA | 3.78 | 90.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.78 | 81.3 | 10 - 130 | |
| 13C2-PFHxDA | 7.55 | 74.5 | 0 - 200 | |
| 13C3-PFBS | 7.55 | 95.0 | 40 - 135 | |
| 13C3-PFHXS | 7.55 | 99.7 | 40 - 130 | |
| 13C8-PFOS | 7.55 | 98.4 | 40 - 130 | |
| 13C2-4:2FTS | 15.1 | 181 | 40 - 200 | |
| 13C2-6:2FTS | 15.1 | 168 | 40 - 200 | |
| 13C2-8:2FTS | 15.1 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.2 | 96.4 | 0 - 200 | |
| 13C8-PFOSA | 7.55 | 77.1 | 40 - 130 | |
| D3-NMEFOSA | 7.55 | 24.2 | 10 - 130 | |
| D5-NETFOSA | 7.55 | 20.8 | 10 - 130 | |
| D3-NMEFOSAA | 15.1 | 100 | 40 - 170 | |
| D5-NETFOSAA | 15.1 | 111 | 25 - 135 | |
| D7-NMEFOSE | 75.5 | 48.3 | 10 - 130 | |
| D9-NETFOSE | 75.5 | 39.6 | 10 - 130 | |
| 13C3-HFPO-DA | 30.2 | 103 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-19-2 (24C0083-07 ) ng/L** | Lab File ID: S2024-03-18A (31) | | | Analyzed: 03/18/24 23:46 |
| 13C4-PFBA | 30.3 | 76.4 | 5 - 130 | |
| 13C5-PFPEA | 15.2 | 90.6 | 40 - 130 | |
| 13C5-PFHXA | 7.58 | 92.9 | 40 - 130 | |
| 13C4-PFHPA | 7.58 | 98.4 | 40 - 130 | |
| 13C8-PFOA | 7.58 | 92.6 | 40 - 130 | |
| 13C9-PFNA | 3.79 | 96.8 | 40 - 130 | |
| 13C6-PFDA | 3.79 | 89.3 | 40 - 130 | |
| 13C7-PFUnA | 3.79 | 126 | 30 - 130 | |
| 13C2-PFDOA | 3.79 | 122 | 10 - 130 | |
| 13C2-PFTEDA | 3.79 | 107 | 10 - 130 | |
| 13C2-PFHxDA | 7.58 | 95.2 | 0 - 200 | |
| 13C3-PFBS | 7.58 | 92.0 | 40 - 135 | |
| 13C3-PFHXS | 7.58 | 96.7 | 40 - 130 | |
| 13C8-PFOS | 7.58 | 96.4 | 40 - 130 | |
| 13C2-4:2FTS | 15.2 | 147 | 40 - 200 | |
| 13C2-6:2FTS | 15.2 | 145 | 40 - 200 | |
| 13C2-8:2FTS | 15.2 | 106 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.3 | 86.7 | 0 - 200 | |
| 13C8-PFOSA | 7.58 | 78.2 | 40 - 130 | |
| D3-NMEFOSA | 7.58 | 26.2 | 10 - 130 | |
| D5-NETFOSA | 7.58 | 22.2 | 10 - 130 | |
| D3-NMEFOSAA | 15.2 | 90.9 | 40 - 170 | |
| D5-NETFOSAA | 15.2 | 100 | 25 - 135 | |
| D7-NMEFOSE | 75.8 | 47.9 | 10 - 130 | |
| D9-NETFOSE | 75.8 | 41.3 | 10 - 130 | |
| 13C3-HFPO-DA | 30.3 | 93.8 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-19-1 (24C0083-08 ) ng/L** | Lab File ID: S2024-03-18A (32) | | | Analyzed: 03/19/24 00:06 |
| 13C4-PFBA | 29.5 | 90.4 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 100 | 40 - 130 | |
| 13C5-PFHXA | 7.39 | 101 | 40 - 130 | |
| 13C4-PFHPA | 7.39 | 108 | 40 - 130 | |
| 13C8-PFOA | 7.39 | 96.8 | 40 - 130 | |
| 13C9-PFNA | 3.69 | 94.9 | 40 - 130 | |
| 13C6-PFDA | 3.69 | 99.4 | 40 - 130 | |
| 13C7-PFUnA | 3.69 | 99.1 | 30 - 130 | |
| 13C2-PFDOA | 3.69 | 95.4 | 10 - 130 | |
| 13C2-PFTEDA | 3.69 | 80.3 | 10 - 130 | |
| 13C2-PFHxDA | 7.39 | 87.4 | 0 - 200 | |
| 13C3-PFBS | 7.39 | 94.8 | 40 - 135 | |
| 13C3-PFHXS | 7.39 | 98.7 | 40 - 130 | |
| 13C8-PFOS | 7.39 | 92.1 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 154 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 160 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 105 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.5 | 100 | 0 - 200 | |
| 13C8-PFOSA | 7.39 | 80.1 | 40 - 130 | |
| D3-NMEFOSA | 7.39 | 41.6 | 10 - 130 | |
| D5-NETFOSA | 7.39 | 32.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 94.3 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 94.8 | 25 - 135 | |
| D7-NMEFOSE | 73.9 | 66.9 | 10 - 130 | |
| D9-NETFOSE | 73.9 | 54.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.5 | 104 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0208-BLK1 ) ng/L** | Lab File ID: S2024-03-19B (7) | | | Analyzed: 03/19/24 18:32 |
| 13C4-PFBA | 32.0 | 98.3 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 95.2 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 94.1 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 90.2 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 93.5 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 83.2 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 88.1 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 85.8 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 82.9 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 75.1 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 68.2 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 92.8 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 95.2 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 86.4 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 114 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 97.9 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 98.0 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 98.3 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 66.5 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 21.8 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 17.8 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 86.6 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 85.1 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 54.9 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 51.6 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 92.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0208-BS1 ) ng/L | Lab File ID: S2024-03-18A (8) | | | Analyzed: 03/18/24 15:54 |
| 13C4-PFBA | 32.0 | 94.1 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 96.7 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 97.3 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 106 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 95.2 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 96.6 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 90.6 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 87.6 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 77.9 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 72.8 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 61.4 | 0 - 200 | |
| 13C3-PFBS | 8.00 | 90.0 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 88.5 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 89.8 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 132 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 133 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 106 | 0 - 200 | |
| 13C8-PFOSA | 8.00 | 71.0 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 22.0 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 18.8 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 96.4 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 92.4 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 51.4 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 45.7 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0208-MRL1 ) ng/L** | Lab File ID: S2024-03-18A (9) | | | Analyzed: 03/18/24 16:14 |
| 13C4-PFBA | 32.0 | 103 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 109 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 108 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 111 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 99.6 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 107 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 99.5 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 92.5 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 89.7 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 77.9 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 61.4 | 0 - 200 | |
| 13C3-PFBS | 8.00 | 93.0 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 95.7 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 102 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 149 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 158 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 152 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 108 | 0 - 200 | |
| 13C8-PFOSA | 8.00 | 77.7 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 26.4 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 22.1 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 104 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 108 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 56.0 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 50.5 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 106 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0208-MS1) ng/L** | Lab File ID: S2024-03-18A (10) | | | Analyzed: 03/18/24 16:35 |
| 13C4-PFBA | 29.3 | 87.2 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 103 | 40 - 130 | |
| 13C5-PFHXA | 7.34 | 103 | 40 - 130 | |
| 13C4-PFHPA | 7.34 | 110 | 40 - 130 | |
| 13C8-PFOA | 7.34 | 101 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 101 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 103 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 182 | 30 - 130 | *R |
| 13C2-PFDOA | 3.67 | 179 | 10 - 130 | *R |
| 13C2-PFTEDA | 3.67 | 160 | 10 - 130 | *R |
| 13C2-PFHxDA | 7.34 | 165 | 0 - 200 | |
| 13C3-PFBS | 7.34 | 96.2 | 40 - 135 | |
| 13C3-PFHXS | 7.34 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.34 | 97.4 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 152 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 153 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 130 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 101 | 0 - 200 | |
| 13C8-PFOSA | 7.34 | 89.5 | 40 - 130 | |
| D3-NMEFOSA | 7.34 | 28.4 | 10 - 130 | |
| D5-NETFOSA | 7.34 | 24.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 95.2 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 106 | 25 - 135 | |
| D7-NMEFOSE | 73.4 | 60.3 | 10 - 130 | |
| D9-NETFOSE | 73.4 | 46.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 104 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0083
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0208-MSD1 ) ng/L** | Lab File ID: S2024-03-18A (11) | | | Analyzed: 03/18/24 16:55 |
| 13C4-PFBA | 29.8 | 84.5 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 98.6 | 40 - 130 | |
| 13C5-PFHXA | 7.44 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.44 | 108 | 40 - 130 | |
| 13C8-PFOA | 7.44 | 96.4 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 99.2 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 97.3 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 107 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 101 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 96.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.44 | 91.1 | 0 - 200 | |
| 13C3-PFBS | 7.44 | 88.4 | 40 - 135 | |
| 13C3-PFHXS | 7.44 | 91.9 | 40 - 130 | |
| 13C8-PFOS | 7.44 | 92.3 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 144 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 144 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 124 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.8 | 108 | 0 - 200 | |
| 13C8-PFOSA | 7.44 | 72.6 | 40 - 130 | |
| D3-NMEFOSA | 7.44 | 26.1 | 10 - 130 | |
| D5-NETFOSA | 7.44 | 18.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 98.7 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 102 | 25 - 135 | |
| D7-NMEFOSE | 74.4 | 46.5 | 10 - 130 | |
| D9-NETFOSE | 74.4 | 40.6 | 10 - 130 | |
| 13C3-HFPO-DA | 29.8 | 102 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0083T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0208-BLK1T Batch:T BDC0208T Prepared:T 03/14/2024 12:39/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0208-BS1T | S2024-03-18A (8)T | 15:54T |
| MRL CheckT | BDC0208-MRL1T | S2024-03-18A (9)T | 16:14T |
| Matrix SpikeT | BDC0208-MS1T | S2024-03-18A (10)T | 16:35T |
| Matrix Spike DupT | BDC0208-MSD1T | S2024-03-18A (11)T | 16:55T |
| MW-21-3T | 24C0083-01T | S2024-03-18A (25)T | 21:43T |
| MW-21-2T | 24C0083-02T | S2024-03-18A (26)T | 22:03T |
| MW-21-1T | 24C0083-03T | S2024-03-18A (27)T | 22:24T |
| FB-3-031324T | 24C0083-04T | S2024-03-18A (28)T | 22:44T |
| EB-3-031324T | 24C0083-05T | S2024-03-18A (29)T | 23:05T |
| MW-19-3T | 24C0083-06T | S2024-03-18A (30)T | 23:25T |
| MW-19-2T | 24C0083-07T | S2024-03-18A (31)T | 23:46T |
| MW-19-1T | 24C0083-08T | S2024-03-18A (32)T | 00:06T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | 0.125a | 0.065a | 0.80a | Ja |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.197a | 0.15a | 0.40a | MI3, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0970a | 0.064a | 0.40a | Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0208A | Laboratory ID:A | BDC0208-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 16.8A | 105A | 70 - 140A |
| PFPeA | 8.00A | 8.37A | 105A | 65 - 135A |
| PFHxA | 4.00A | 4.17A | 104A | 70 - 145A |
| PFHpA | 4.00A | 3.87A | 96.8A | 70 - 150A |
| PFOA | 4.00A | 4.07A | 102A | 70 - 150A |
| PFNA | 4.00A | 4.06A | 102A | 70 - 150A |
| PFDA | 4.00A | 3.94A | 98.6A | 70 - 140A |
| PFUnA | 4.00A | 4.01A | 100A | 70 - 145A |
| PFDoA | 4.00A | 3.97A | 99.3A | 70 - 140A |
| PFTrDA | 4.00A | 4.04A | 101A | 65 - 140A |
| PFTeDA | 4.00A | 3.93A | 98.3A | 60 - 140A |
| PFHxDA | 4.00A | 3.95A | 98.8A | 40 - 150A |
| PFODA | 4.00A | 3.42A | 85.4A | 40 - 150A |
| PFBSA | 3.54A | 3.51A | 99.3A | 60 - 145A |
| PFPeSA | 3.76A | 3.94A | 105A | 65 - 140A |
| PFHxSA | 3.66A | 3.88A | 106A | 65 - 145A |
| PFHpSA | 3.82A | 4.19A | 110A | 70 - 150A |
| PFOSA | 3.72A | 3.89A | 104A | 55 - 150A |
| PFNSA | 3.84A | 3.87A | 101A | 65 - 145A |
| PFDSA | 3.86A | 3.70A | 95.9A | 60 - 145A |
| PFDoSA | 3.88A | 3.62A | 93.4A | 50 - 145A |
| 4:2FTSA | 15.0A | 16.1A | 107A | 70 - 145A |
| 6:2FTSA | 15.2A | 15.5A | 102A | 65 - 155A |
| 8:2FTSA | 15.4A | 16.4A | 107A | 60 - 150A |
| 10:2FTSA | 15.4A | 18.5A | 120A | 0 - 200A |
| PFOSA | 4.00A | 4.27A | 107A | 70 - 145A |
| NMeFOSA | 16.0A | 19.4A | 121A | 60 - 150A |
| NEtFOSA | 16.0A | 15.9A | 99.2A | 65 - 145A |
| NMeFOSA | 4.00A | 3.98A | 99.4A | 50 - 140A |
| NEtFOSA | 4.00A | 4.12A | 103A | 70 - 145A |
| NMeFOSEA | 16.0A | 14.7A | 91.8A | 70 - 145A |
| NEtFOSEA | 16.0A | 15.9A | 99.3A | 70 - 135A |
| HFPO-DA | 4.00A | 3.98A | 99.6 | 70 - 140A |
| DONA | 3.78A | 3.76A | 99.6A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0208A | Laboratory ID:A | BDC0208-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.06A | 99.2A | 70 - 140A |
| PFMPA | 8.00A | 8.43A | 105A | 55 - 140A |
| PFMBA | 8.00A | 8.17A | 102A | 60 - 150A |
| NFDHA | 8.00A | 8.20A | 103A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.12A | 83.3A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 3.03A | 80.2A | 55 - 160A |
| 3:3FTCA | 16.0A | 16.6A | 104A | 65 - 130A |
| 5:3FTCA | 16.0A | 16.7A | 104A | 70 - 135A |
| 7:3FTCA | 16.0A | 17.7A | 111A | 50 - 145A |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-19-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0208- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0208-MS1- |
| Column:- | | Sample Lab ID:- | 24C0083-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 14.7- | 4.08- | 17.0- | 88.3- | 70 - 140- |
| PFPeA- | 7.34- | 3.19- | 9.72- | 88.9- | 65 - 135- |
| PFHxA- | 3.67- | 2.87- | 6.06- | 86.9- | 70 - 145- |
| PFHpA- | 3.67- | 1.53- | 4.93- | 92.7- | 70 - 150- |
| PFOA- | 3.67- | 4.90- | 8.03- | 85.1- | 70 - 150- |
| PFNA- | 3.67- | 0.148- | 3.46- | 90.2- | 70 - 150- |
| PFDA- | 3.67- | 0.307- | 3.64- | 90.9- | 70 - 140- |
| PFUnA- | 3.67- | ND- | 3.55- | 96.8- | 70 - 145- |
| PFDoA- | 3.67- | ND- | 3.61- | 98.3- | 70 - 140- |
| PFTrDA- | 3.67- | ND- | 3.38- | 92.1- | 65 - 140- |
| PFTeDA- | 3.67- | ND- | 3.67- | 100- | 60 - 140- |
| PFHxDA- | 3.67- | ND- | 3.64- | 99.2- | 40 - 150- |
| PFODA- | 3.67- | 0.227- | 3.25- | 82.4- | 40 - 150- |
| PFBS- | 3.25- | 3.17- | 6.41- | 100- | 60 - 145- |
| PFPeS- | 3.45- | 1.01- | 4.40- | 98.5- | 65 - 140- |
| PFHxS- | 3.36- | 5.55- | 9.16- | 107- | 65 - 145- |
| PFHpS- | 3.50- | 0.181- | 4.26- | 116- | 70 - 150- |
| PFOS- | 3.41- | 2.15- | 5.93- | 111- | 55 - 150- |
| PFNS- | 3.52- | ND- | 3.61- | 102- | 65 - 145- |
| PFDS- | 3.54- | ND- | 3.48- | 98.2- | 60 - 145- |
| PFDoS- | 3.56- | ND- | 3.39- | 95.4- | 50 - 145- |
| 4:2FTS- | 13.8- | ND- | 13.4- | 97.2- | 70 - 145- |
| 6:2FTS- | 13.9- | ND- | 13.1- | 93.7- | 65 - 155- |
| 8:2FTS- | 14.1- | ND- | 14.1- | 100- | 60 - 150- |
| 10:2FTS- | 14.2- | ND- | 17.3- | 122- | 0 - 200- |
| PFOSA- | 3.67- | ND- | 3.63- | 98.9- | 70 - 145- |
| NMeFOSA- | 14.7- | ND- | 14.8- | 101- | 60 - 150- |
| NEtFOSA- | 14.7- | ND- | 14.1- | 96.4- | 65 - 145- |
| NMeFOSAA- | 3.67- | 0.226- | 3.40- | 86.6- | 50 - 140- |
| NEtFOSAA- | 3.67- | ND- | 3.88- | 106- | 70 - 145- |
| NMeFOSE- | 14.7- | ND- | 13.5- | 92.1- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-19-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0208- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0208-MS1- |
| Column:- | | Sample Lab ID:- | 24C0083-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 14.7- | ND- | 14.9- | 102- | 70 - 135- |
| HFPO-DA- | 3.67- | ND- | 3.69- | 101- | 70 - 140- |
| ADONA- | 3.47- | ND- | 3.23- | 93.0- | 65 - 145- |
| PFEESA- | 6.53- | ND- | 6.28- | 96.2- | 70 - 140- |
| PFMPA- | 7.34- | ND- | 6.19- | 84.3- | 55 - 140- |
| PFMBA- | 7.34- | ND- | 7.11- | 96.9- | 60 - 150- |
| NFDHA- | 7.34- | ND- | 6.62- | 90.3- | 50 - 150- |
| 9Cl-PF3ONS- | 3.43- | ND- | 2.99- | 87.1- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.47- | ND- | 2.71- | 78.1- | 55 - 160- |
| 3:3FTCA- | 14.7- | ND- | 13.0- | 88.4- | 65 - 130- |
| 5:3FTCA- | 14.7- | ND- | 15.1- | 103- | 70 - 135- |
| 7:3FTCA- | 14.7- | ND- | 15.6- | 106- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-19-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0208- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0208-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0083-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.9- | 16.8- | 85.6- | 1.32- | 30- | 70 - 140- |
| PFPeA- | 7.44- | 10.0- | 91.5- | 2.90- | 30- | 65 - 135- |
| PFHxA- | 3.72- | 6.12- | 87.3- | 0.980- | 30- | 70 - 145- |
| PFHpA- | 3.72- | 5.11- | 96.0- | 3.43- | 30- | 70 - 150- |
| PFOA- | 3.72- | 8.22- | 89.1- | 2.37- | 30- | 70 - 150- |
| PFNA- | 3.72- | 3.74- | 96.5- | 7.84- | 30- | 70 - 150- |
| PFDA- | 3.72- | 3.45- | 84.4- | 5.53- | 30- | 70 - 140- |
| PFUnA- | 3.72- | 3.62- | 97.3- | 2.03- | 30- | 70 - 145- |
| PFDoA- | 3.72- | 3.69- | 99.1- | 2.26- | 30- | 70 - 140- |
| PFTrDA- | 3.72- | 3.44- | 92.3- | 1.69- | 30- | 65 - 140- |
| PFTeDA- | 3.72- | 3.56- | 95.7- | 3.10- | 30- | 60 - 140- |
| PFHxDA- | 3.72- | 3.53- | 94.9- | 2.94- | 30- | 40 - 150- |
| PFODA- | 3.72- | 3.26- | 81.5- | 0.403- | 30- | 40 - 150- |
| PFBS- | 3.29- | 6.68- | 107- | 4.02- | 30- | 60 - 145- |
| PFPeS- | 3.50- | 4.54- | 101- | 3.05- | 30- | 65 - 140- |
| PFHxS- | 3.41- | 9.52- | 117- | 3.93- | 30- | 65 - 145- |
| PFHpS- | 3.55- | 3.87- | 104- | 9.49- | 30- | 70 - 150- |
| PFOS- | 3.46- | 5.84- | 107- | 1.56- | 30- | 55 - 150- |
| PFNS- | 3.57- | 3.41- | 95.4- | 5.69- | 30- | 65 - 145- |
| PFDS- | 3.59- | 3.55- | 98.8- | 2.09- | 30- | 60 - 145- |
| PFDoS- | 3.61- | 3.28- | 90.8- | 3.53- | 30- | 50 - 145- |
| 4:2FTS- | 14.0- | 13.0- | 93.2- | 2.74- | 30- | 70 - 145- |
| 6:2FTS- | 14.1- | 13.5- | 95.2- | 3.00- | 30- | 65 - 155- |
| 8:2FTS- | 14.3- | 14.2- | 99.6- | 0.836- | 30- | 60 - 150- |
| 10:2FTS- | 14.4- | 16.1- | 112- | 7.61- | 200- | 0 - 200- |
| PFOSA- | 3.72- | 3.91- | 105- | 7.48- | 30- | 70 - 145- |
| NMeFOSA- | 14.9- | 14.8- | 99.4- | 0.218- | 30- | 60 - 150- |
| NEtFOSA- | 14.9- | 14.4- | 96.8- | 1.90- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-19-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0083- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0208- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0208-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0083-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST RPDT | T REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.72- | 3.51- | 88.3- | 3.11- | 30- | 50 - 140- |
| NEtFOSAA- | 3.72- | 3.61- | 97.0- | 7.37- | 30- | 70 - 145- |
| NMeFOSE- | 14.9- | 14.3- | 96.0- | 5.54- | 30- | 70 - 145- |
| NEtFOSE- | 14.9- | 14.5- | 97.6- | 2.55- | 30- | 70 - 135- |
| HFPO-DA- | 3.72- | 3.73- | 100- | 0.998- | 30- | 70 - 140- |
| ADONA- | 3.52- | 3.44- | 97.9- | 6.53- | 30- | 65 - 145- |
| PFEESA- | 6.62- | 6.37- | 96.2- | 1.38- | 30- | 70 - 140- |
| PFMPA- | 7.44- | 6.67- | 89.6- | 7.51- | 30- | 55 - 140- |
| PFMBA- | 7.44- | 7.00- | 94.1- | 1.53- | 30- | 60 - 150- |
| NFDHA- | 7.44- | 6.82- | 91.6- | 2.93- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.48- | 3.02- | 86.7- | 0.940- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.52- | 2.82- | 80.1- | 3.91- | 30- | 55 - 160- |
| 3:3FTCA- | 14.9- | 13.8- | 93.0- | 6.49- | 30- | 65 - 130- |
| 5:3FTCA- | 14.9- | 15.3- | 103- | 1.34- | 30- | 70 - 135- |
| 7:3FTCA- | 14.9- | 16.2- | 108- | 3.30- | 30- | 50 - 145- |

# CALIBRATION SUMMARYL

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.22118 x (std. dev. = 0.01350) (weighting: None) | %RSE=6.1 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.47303 x (std. dev. = 0.01619) (weighting: None) | %RSE=3.4 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50900 x (std. dev. = 0.02066) (weighting: None) | %RSE=4.1 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48447 x (std. dev. = 0.02648) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49245 x (std. dev. = 0.03763) (weighting: None) | %RSE=7.6 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 0.50845 x (std. dev. = 0.04036) (weighting: None) | %RSE=7.9 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00209 x (std. dev. = 0.07967) (weighting: None) | %RSE=8.0 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 0.99591 x (std. dev. = 0.06364) (weighting: None) | %RSE=6.4 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.93380 x (std. dev. = 0.06074) (weighting: None) | %RSE=6.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.02349 x (std. dev. = 0.05498) (weighting: None) | %RSE=5.4 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98404 x (std. dev. = 0.05368) (weighting: None) | %RSE=5.5 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.94970 x (std. dev. = 0.06711) (weighting: None) | %RSE=7.1 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.48258 x (std. dev. = 0.02989) (weighting: None) | %RSE=6.2 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.32424 x (std. dev. = 0.02849) (weighting: None) | %RSE=8.8 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.23003 x (std. dev. = 0.01414) (weighting: None) | %RSE=6.1 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.74718 x (std. dev. = 0.05921) (weighting: None) | %RSE=7.9 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80665 x (std. dev. = 0.03395) (weighting: None) | %RSE=4.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.54657 x (std. dev. = 0.03511) (weighting: None) | %RSE=6.4 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53610 x (std. dev. = 0.02015) (weighting: None) | %RSE=3.8 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.54105 x (std. dev. = 0.03589) (weighting: None) | %RSE=6.6 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.64705 x (std. dev. = 0.05398) (weighting: None) | %RSE=8.3 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.55660 x (std. dev. = 0.05132) (weighting: None) | %RSE=9.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.51639 x (std. dev. = 0.10936) (weighting: None) | %RSE=4.3 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.84310 x (std. dev. = 0.04432) (weighting: None) | %RSE=5.3 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.94945 x (std. dev. = 0.08425) (weighting: None) | %RSE=8.9 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.39749 x (std. dev. = 0.01629) (weighting: None) | %RSE=4.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.29905 x (std. dev. = 0.16050) (weighting: None) | %RSE=7.0 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 2.56445 x (std. dev. = 0.08113) (weighting: None) | %RSE=3.2 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.48797 x (std. dev. = 0.02370) (weighting: None) | %RSE=4.9 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.01595 x (std. dev. = 0.07189) (weighting: None) | %RSE=7.1 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 2.01442 x (std. dev. = 0.13774) (weighting: None) | %RSE=6.8 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.19461 x (std. dev. = 0.08339) (weighting: None) | %RSE=3.8 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23544 x (std. dev. = 0.00918) (weighting: None) | %RSE=3.9 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24116 x (std. dev. = 0.01198) (weighting: None) | %RSE=5.0 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.22641 x (std. dev. = 0.00767) (weighting: None) | %RSE=3.4 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17672 x (std. dev. = 0.00729) (weighting: None) | %RSE=4.1 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07096 x (std. dev. = 0.00352) (weighting: None) | %RSE=5.0 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.85192 x (std. dev. = 0.05267) (weighting: None) | %RSE=6.2 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16115 x (std. dev. = 0.01007) (weighting: None) | %RSE=6.3 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.42654 x (std. dev. = 0.03547) (weighting: None) | %RSE=8.3 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.33683 x (std. dev. = 0.01165) (weighting: None) | %RSE=3.5 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30114 x (std. dev. = 0.01851) (weighting: None) | %RSE=6.1 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 1.04078 x (std. dev. = 0.03352) (weighting: None) | %RSE=3.2 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.82392 x (std. dev. = 0.05207) (weighting: None) | %RSE=6.3 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.65040 x (std. dev. = 0.05210) (weighting: None) | %RSE=8.0 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.04946 x (std. dev. = 0.00816) (weighting: None) | %RSE=16.5 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.46968 x (std. dev. = 0.03522) (weighting: None) | %RSE=7.5 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.69092 x (std. dev. = 0.07127) (weighting: None) | %RSE=10.3 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53744 x (std. dev. = 0.04320) (weighting: None) | %RSE=8.0 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.42170 x (std. dev. = 0.02178) (weighting: None) | %RSE=5.2 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39280 x (std. dev. = 0.01731) (weighting: None) | %RSE=4.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 301250.6434 x | %RSD=13.4 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 153767.4862 x | %RSD=7.1 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 446132.0413 x | %RSD=5.8 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 334296.6606 x | %RSD=7.2 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 331624.9386 x | %RSD=6.5 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 1117433.9888 x | %RSD=5.5 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 976196.7271 x | %RSD=7.6 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 8.8221 x | %RSD=2.4 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.1759 x | %RSD=11.1 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.2943 x | %RSD=6.4 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.4850 x | %RSD=4.6 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1087 x | %RSD=3.8 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9657 x | %RSD=6.7 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1540 x | %RSD=7.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4030 x | %RSD=7.1 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4089 x | %RSD=7.1 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.2277 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.0857 x | %RSD=6.8 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.9487 x | %RSD=6.8 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4635 x | %RSD=4.5 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1292 x | %RSD=4.0 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.3483 x | %RSD=17.5 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.0817 x | %RSD=12.3 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.0777 x | %RSD=18.1 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 2.4741 x | %RSD=9.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.3073 x | %RSD=5.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4261 x | %RSD=7.0 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4894 x | %RSD=5.3 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0905 x | %RSD=4.6 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0352 x | %RSD=5.5 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.9908 x | %RSD=6.5 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 2.4116 x | %RSD=5.2 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 7.3835 x | %RSD=5.7 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.7738 x | %RSD=6.9 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.6560 x | %RSD=5.5 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result}\left(\frac{\text{ng}}{\text{mL}}\right) = x\text{*Multiplier*Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-12A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

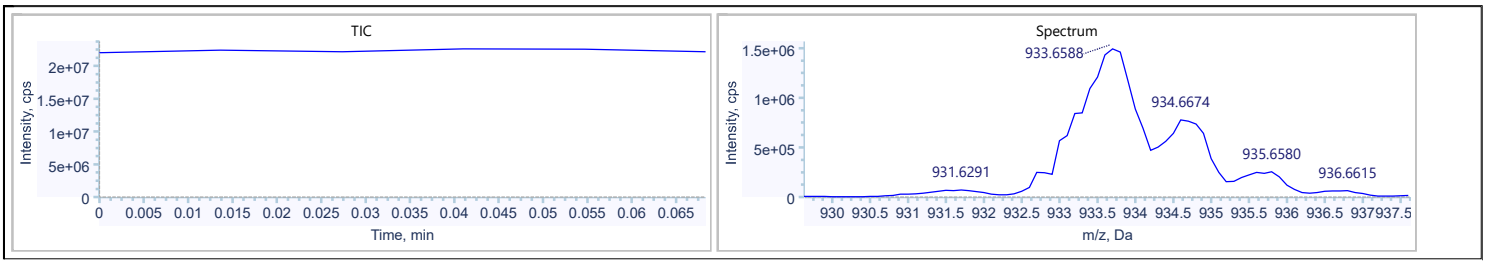


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

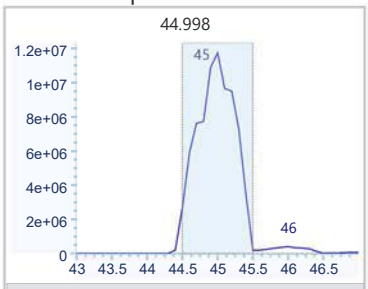


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

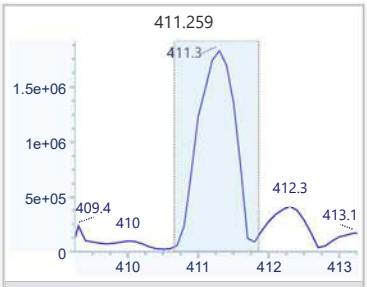


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

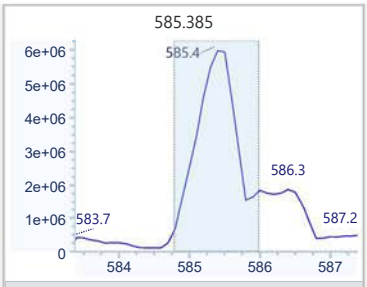


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

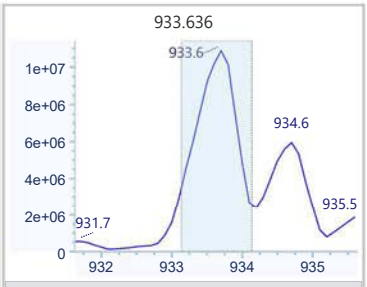


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

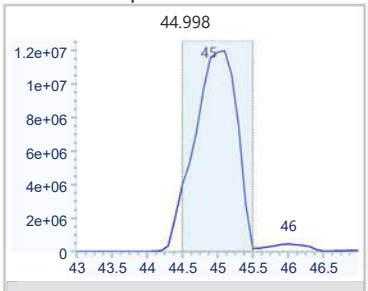


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

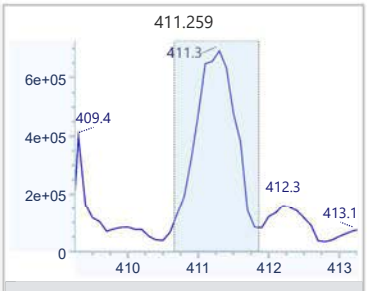


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

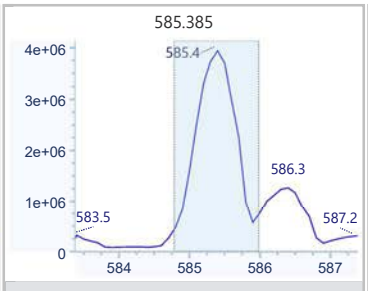


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

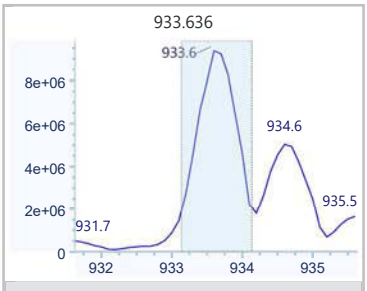


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

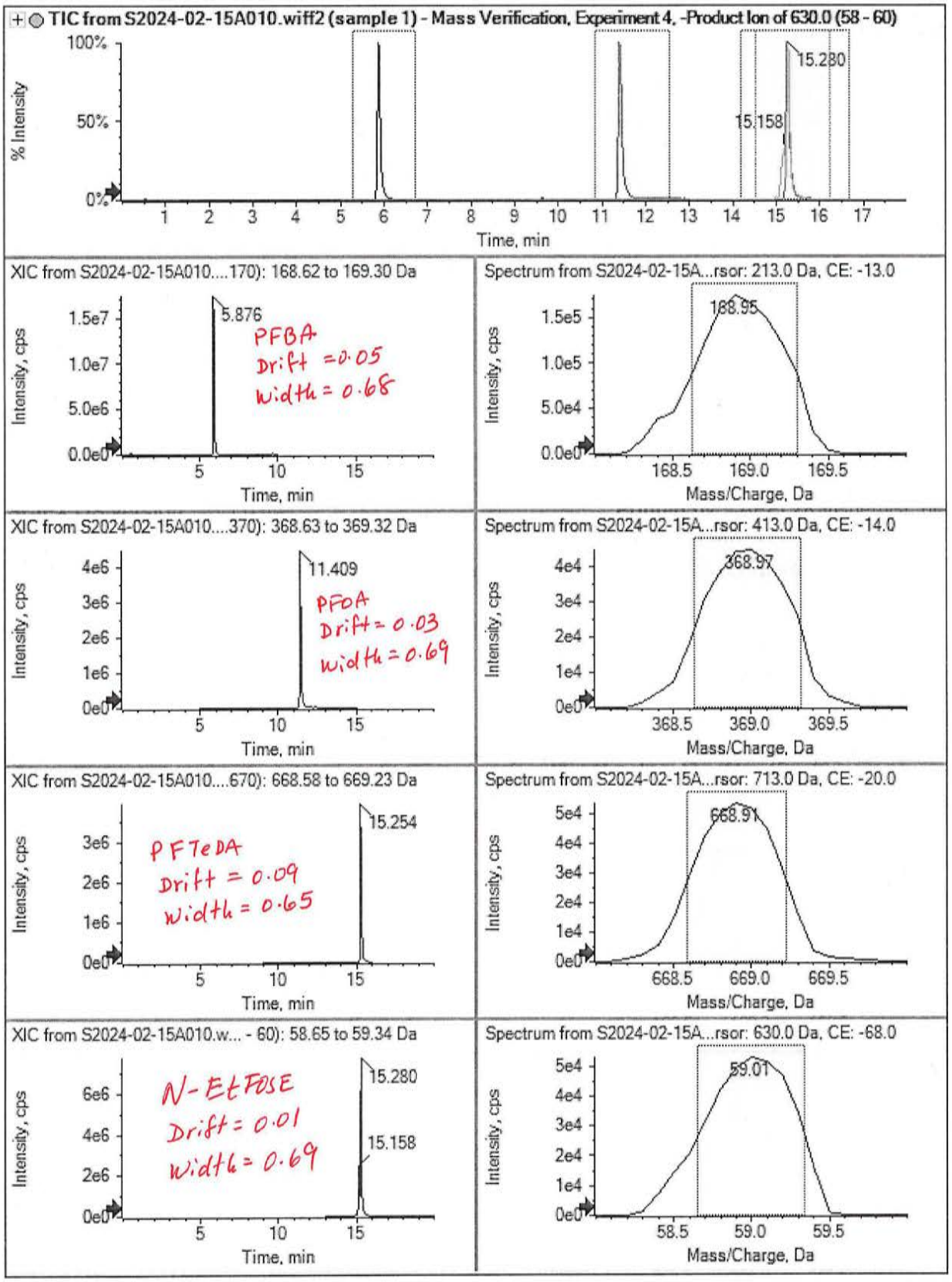

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.23574 x (std. dev. = 0.01485) (weighting: None) | %RSE=6.3 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49841 x (std. dev. = 0.03017) (weighting: None) | %RSE=6.1 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50512 x (std. dev. = 0.02794) (weighting: None) | %RSE=5.5 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48038 x (std. dev. = 0.02636) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49065 x (std. dev. = 0.03123) (weighting: None) | %RSE=6.4 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 9.99867e-4 x^2 + 0.48413 x + 0.01226 (r = 0.99905) (weighting: 1 / x) | %RSE=7.3 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00506 x (std. dev. = 0.07345) (weighting: None) | %RSE=7.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 1.02176 x (std. dev. = 0.07981) (weighting: None) | %RSE=7.8 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.92494 x (std. dev. = 0.04119) (weighting: None) | %RSE=4.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00604 x (std. dev. = 0.03628) (weighting: None) | %RSE=3.6 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98412 x (std. dev. = 0.02772) (weighting: None) | %RSE=2.8 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93655 x (std. dev. = 0.03297) (weighting: None) | %RSE=3.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.47691 x (std. dev. = 0.01946) (weighting: None) | %RSE=4.1 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29836 x (std. dev. = 0.01281) (weighting: None) | %RSE=4.3 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.22968 x (std. dev. = 0.01218) (weighting: None) | %RSE=5.3 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.71812 x (std. dev. = 0.05325) (weighting: None) | %RSE=7.4 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80977 x (std. dev. = 0.02624) (weighting: None) | %RSE=3.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.56999 x (std. dev. = 0.03426) (weighting: None) | %RSE=6.0 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53562 x (std. dev. = 0.02668) (weighting: None) | %RSE=5.0 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.51901 x (std. dev. = 0.02103) (weighting: None) | %RSE=4.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.63587 x (std. dev. = 0.04565) (weighting: None) | %RSE=7.2 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.56432 x (std. dev. = 0.04069) (weighting: None) | %RSE=7.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.45261 x (std. dev. = 0.08690) (weighting: None) | %RSE=3.5 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.78588 x (std. dev. = 0.04847) (weighting: None) | %RSE=6.2 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.91008 x (std. dev. = 0.10404) (weighting: None) | %RSE=11.4 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.37234 x (std. dev. = 0.02276) (weighting: None) | %RSE=6.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.57679 x (std. dev. = 0.13834) (weighting: None) | %RSE=5.4 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.07289 x (std. dev. = 0.21947) (weighting: None) | %RSE=7.1 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.50001 x (std. dev. = 0.02156) (weighting: None) | %RSE=4.3 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.28942 x (std. dev. = 0.09531) (weighting: None) | %RSE=7.4 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.98582 x (std. dev. = 0.09760) (weighting: None) | %RSE=4.9 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.23988 x (std. dev. = 0.08781) (weighting: None) | %RSE=3.9 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23844 x (std. dev. = 0.01045) (weighting: None) | %RSE=4.4 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24455 x (std. dev. = 0.01542) (weighting: None) | %RSE=6.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21938 x (std. dev. = 0.01283) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17769 x (std. dev. = 0.01004) (weighting: None) | %RSE=5.6 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07371 x (std. dev. = 0.00395) (weighting: None) | %RSE=5.4 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.81069 x (std. dev. = 0.04465) (weighting: None) | %RSE=5.5 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.61575 x (std. dev. = 0.03779) (weighting: None) | %RSE=6.1 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16029 x (std. dev. = 0.01308) (weighting: None) | %RSE=8.2 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.43566 x (std. dev. = 0.03766) (weighting: None) | %RSE=8.6 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.35868 x (std. dev. = 0.02163) (weighting: None) | %RSE=6.0 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 0.86685 x (std. dev. = 0.02525) (weighting: None) | %RSE=2.9 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.67374 x (std. dev. = 0.02028) (weighting: None) | %RSE=3.0 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30098 x (std. dev. = 0.02588) (weighting: None) | %RSE=8.6 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.05747 x (std. dev. = 0.00909) (weighting: None) | %RSE=15.8 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.53288 x (std. dev. = 0.02986) (weighting: None) | %RSE=5.6 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.87447 x (std. dev. = 0.07090) (weighting: None) | %RSE=8.1 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53158 x (std. dev. = 0.01736) (weighting: None) | %RSE=3.3 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.40781 x (std. dev. = 0.04430) (weighting: None) | %RSE=10.9 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39365 x (std. dev. = 0.02523) (weighting: None) | %RSE=6.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 238433.9480 x | %RSD=15.9 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 126855.7219 x | %RSD=7.8 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 395316.5081 x | %RSD=6.4 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 284407.9695 x | %RSD=7.7 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 292026.6901 x | %RSD=5.1 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 949032.5442 x | %RSD=6.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 761641.2582 x | %RSD=6.3 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 9.1391 x | %RSD=3.3 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.4634 x | %RSD=11.5 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.5633 x | %RSD=6.5 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 5.0762 x | %RSD=7.1 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1429 x | %RSD=4.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9805 x | %RSD=6.0 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1207 x | %RSD=4.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3184 x | %RSD=5.0 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3427 x | %RSD=4.5 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1434 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9523 x | %RSD=6.6 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.8070 x | %RSD=5.2 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4423 x | %RSD=5.2 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1564 x | %RSD=6.3 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.6235 x | %RSD=9.6 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.8661 x | %RSD=7.0 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.4635 x | %RSD=12.9 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.0591 x | %RSD=7.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 1.9110 x | %RSD=6.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4053 x | %RSD=5.6 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4347 x | %RSD=6.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.1097 x | %RSD=6.8 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0114 x | %RSD=8.2 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8214 x | %RSD=7.4 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8487 x | %RSD=6.5 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 8.3148 x | %RSD=5.9 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1684 x | %RSD=4.0 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9740 x | %RSD=5.2 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result} \left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

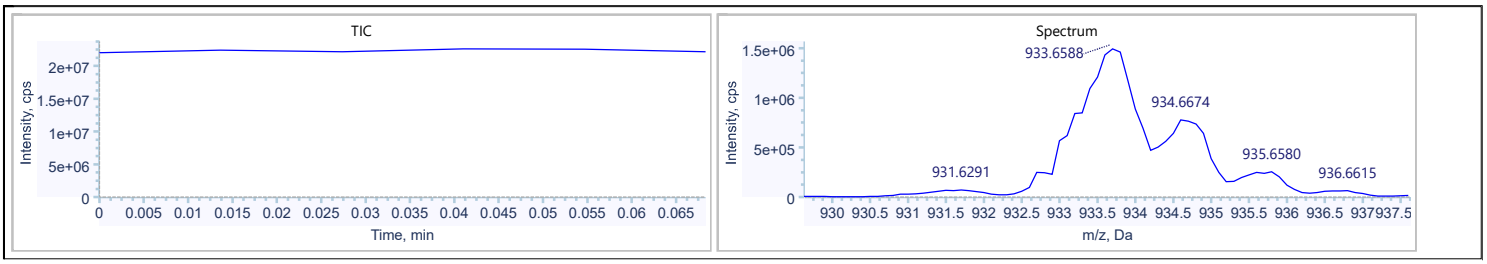


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

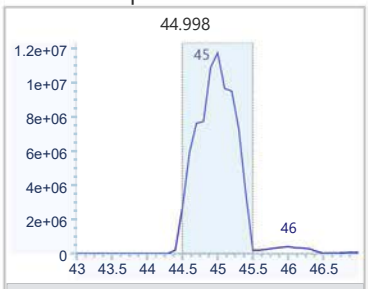


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

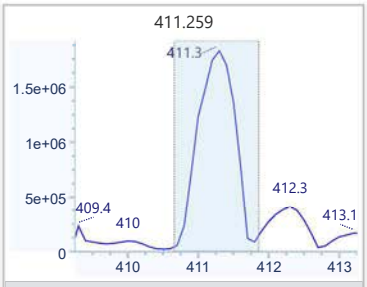


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

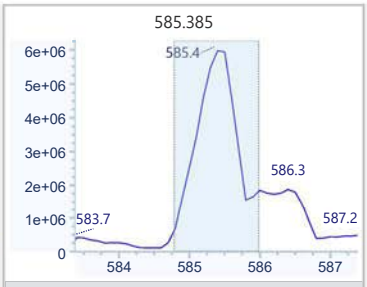


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

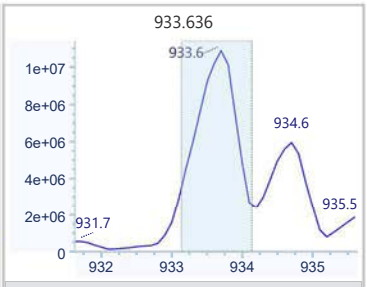


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

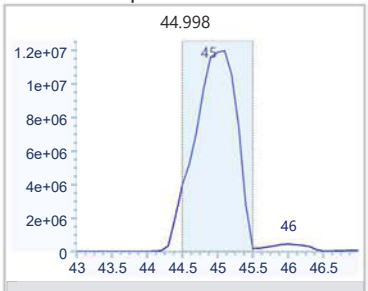


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

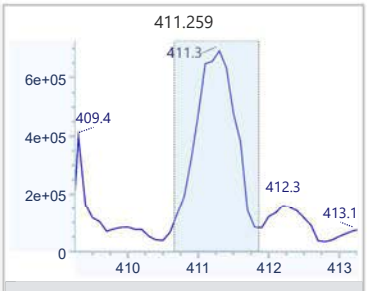


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

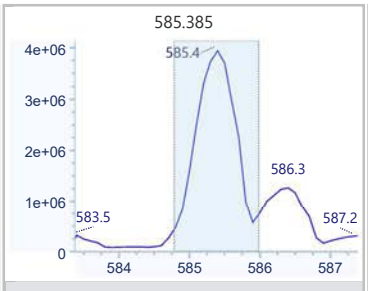


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

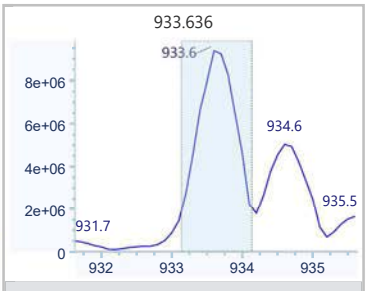


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

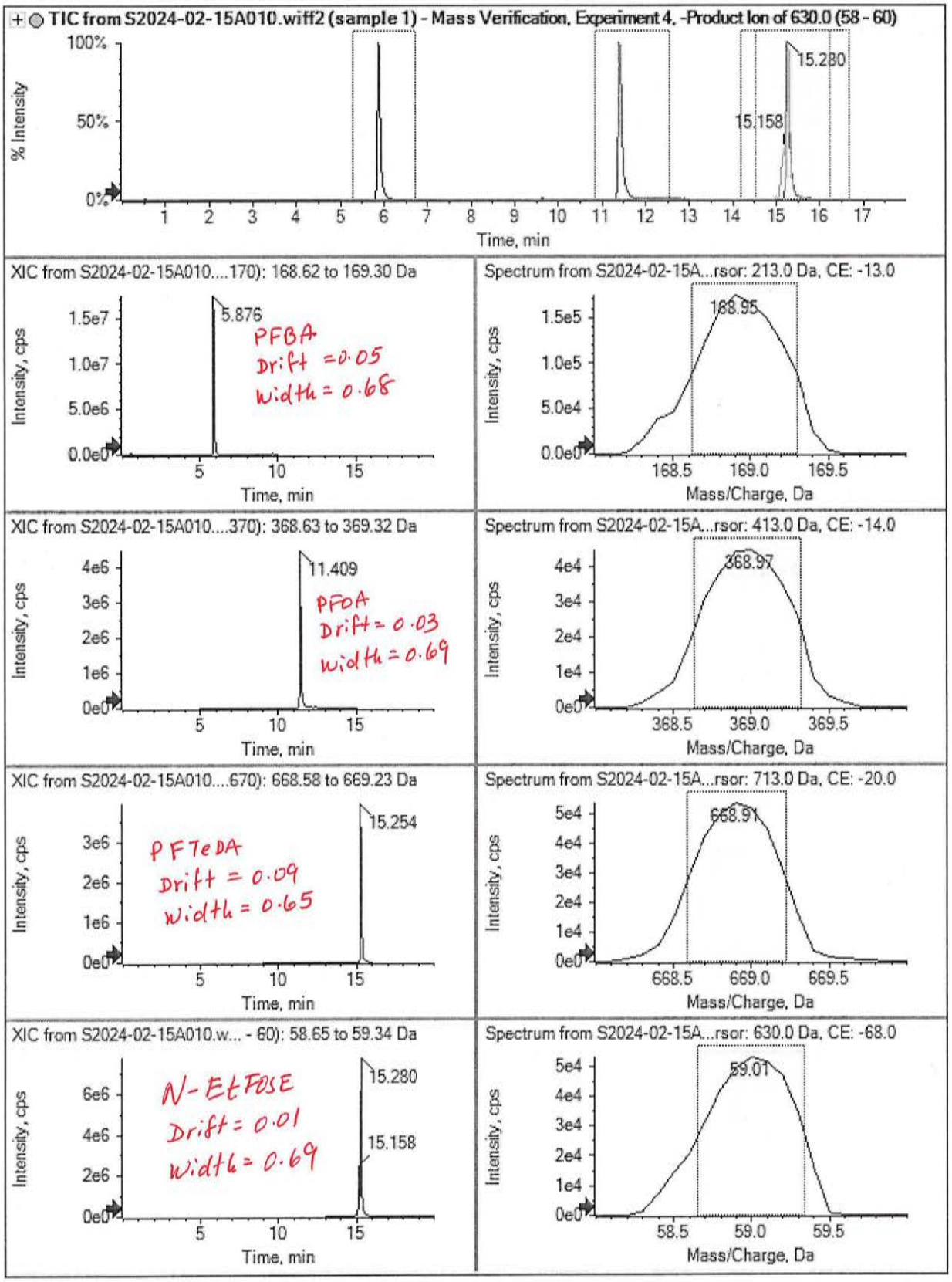

# EPA 1633A

Initial Calibration: SD00912 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 62723<br>( 163.0 / 69.0 ) 1685 | ( 2.83 , 0.74 ) ( N/A , 0.02 , -0.3) | 386.0<br>81.4 | 0.0269<br>107.2<br>107.2 | 0.1856 | N/A | 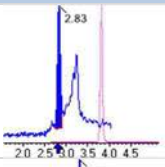 | 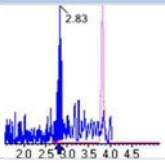 | |
| PFBA | ( 213.0 / 169.0 ) 136703 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 341.6 | N/A<br>0.0<br>0.0 | 0.3783 | N/A | 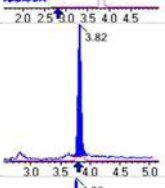 | | |
| PFPeA | ( 263.0 / 219.0 ) 67216<br>( 263.0 / 69.0 ) 860 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.2) | 289.8<br>23.6 | 0.0128<br>116.5<br>116.5 | 0.2014 | N/A | 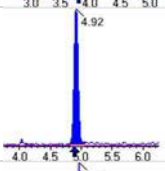 | 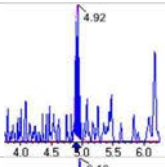 | |
| PFHxA | ( 313.0 / 269.0 ) 33325<br>( 313.0 / 119.0 ) 3267 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.2) | 235.2<br>83.4 | 0.0980<br>88.2<br>88.2 | 0.0933 | N/A | 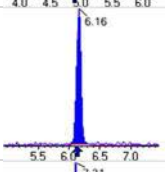 | 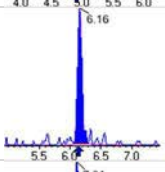 | |
| PFHpA | ( 363.0 / 319.0 ) 32624<br>( 363.0 / 169.0 ) 12319 | ( 7.31 , 1.00 ) ( 0.00 , N/A , -0.1) | 279.5<br>167.5 | 0.3776<br>121.2<br>121.2 | 0.0891 | N/A | 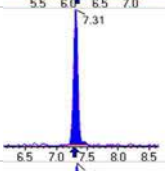 | 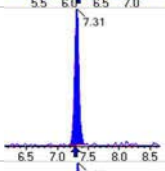 | |
| PFOA | ( 413.0 / 369.0 ) 58295<br>( 413.0 / 169.0 ) 17550 | ( 8.34 , 1.00 ) ( 0.00 , N/A , 0.4) | 109.6<br>129.3 | 0.3010<br>83.2<br>83.2 | 0.1174 | N/A | 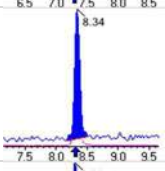 | 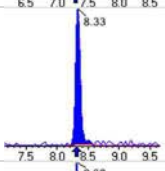 | |
| PFNA | ( 463.0 / 419.0 ) 28976<br>( 463.0 / 169.0 ) 8598 | ( 9.30 , 1.00 ) ( 0.00 , N/A , -0.4) | 213.3<br>159.9 | 0.2967<br>113.1<br>113.1 | 0.0857 | N/A | 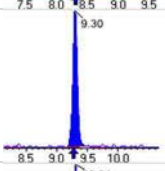 | 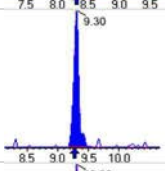 | |
| PFDA | ( 513.0 / 469.0 ) 40117<br>( 513.0 / 169.0 ) 4652 | ( 10.21 , 1.00 ) ( -0.01 , N/A , 0.2) | 316.7<br>146.9 | 0.1160<br>98.8<br>98.8 | 0.0979 | N/A | 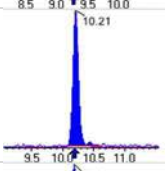 | 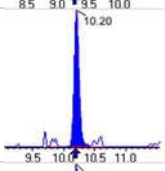 | |
| PFUnA | ( 563.0 / 519.0 ) 43625<br>( 563.0 / 169.0 ) 5480 | ( 11.09 , 1.00 ) ( 0.00 , N/A , -0.8) | 297.1<br>129.9 | 0.1256<br>84.8<br>84.8 | 0.0960 | N/A | 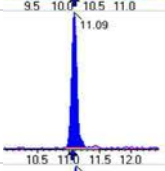 | 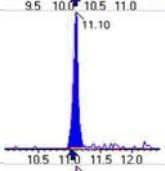 | |
| PFDoA | ( 613.0 / 569.0 ) 46521<br>( 613.0 / 169.0 ) 6369 | ( 11.90 , 1.00 ) ( 0.00 , N/A , 0.3) | 285.5<br>143.9 | 0.1369<br>86.6<br>86.6 | 0.0962 | N/A | 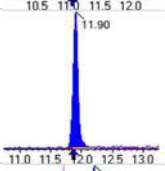 | 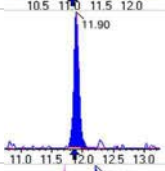 | |
| PFTrDA | ( 663.0 / 619.0 ) 41893<br>( 663.0 / 169.0 ) 13170 | ( 12.50 , 1.05 ) ( N/A , 0.02 , -0.5) | 306.5<br>186.1 | 0.3144<br>116.7<br>116.7 | 0.0901 | N/A | 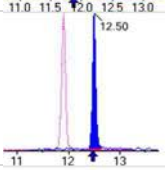 | 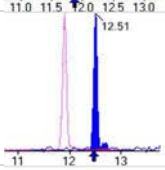 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 37262<br>( 713.0 / 169.0 ) 8926 | ( 12.99 , 1.00 )<br>( 0.00 , N/A , -0.1) | 212.5<br>105.1 | 0.2395<br>92.1<br>92.1 | 0.0963 | N/A | 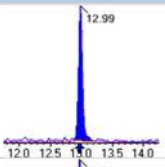 | 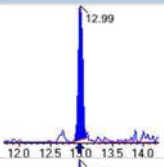 | |
| PFHxDA | ( 813.0 / 769.0 ) 33878<br>( 813.0 / 169.0 ) 9263 | ( 13.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 212.8<br>100.6 | 0.2734<br>126.0<br>126.0 | 0.0983 | N/A | 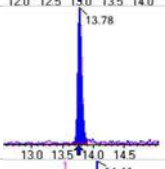 | 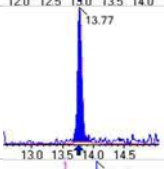 | |
| PFODA | ( 913.0 / 869.0 ) 23238<br>( 913.0 / 169.0 ) 8574 | ( 14.41 , 1.05 )<br>( N/A , 0.02 , 0.3) | 111.1<br>50.7 | 0.3690<br>96.6<br>96.6 | 0.1004 | N/A | 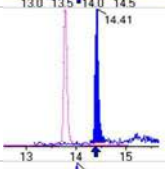 | 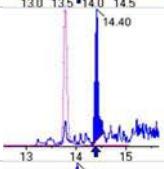 | |
| PFBS | ( 299.0 / 80.0 ) 50426<br>( 299.0 / 99.0 ) 41032 | ( 6.48 , 1.00 )<br>( 0.00 , N/A , -0.1) | 556.9<br>235.3 | 0.8137<br>114.5<br>114.5 | 0.0815 | N/A | 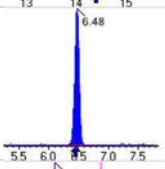 | 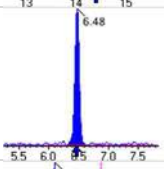 | |
| PFPeS | ( 349.0 / 80.0 ) 123999<br>( 349.0 / 99.0 ) 42294 | ( 7.73 , 0.88 )<br>( N/A , 0.03 , 0.0) | 595.5<br>374.4 | 0.3411<br>100.3<br>100.3 | 0.0913 | N/A | 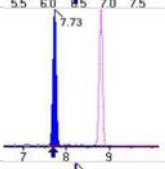 | 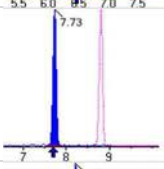 | |
| PFHxS | ( 399.0 / 80.0 ) 132475<br>( 399.0 / 99.0 ) 45070 | ( 8.81 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1203.5<br>2202.5 | 0.3402<br>108.8<br>108.8 | 0.0877 | N/A | 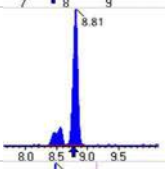 | 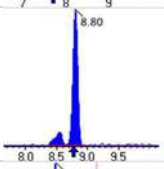 | |
| PFHpS | ( 449.0 / 80.0 ) 108095<br>( 449.0 / 99.0 ) 29112 | ( 9.78 , 0.92 )<br>( N/A , 0.04 , 0.0) | 536.0<br>464.4 | 0.2693<br>100.8<br>100.8 | 0.0870 | N/A | 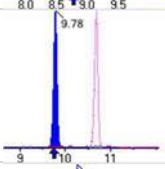 | 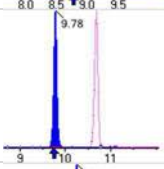 | |
| PFOS | ( 499.0 / 80.0 ) 112318<br>( 499.0 / 99.0 ) 28129 | ( 10.68 , 1.00 )<br>( 0.00 , N/A , 0.4) | 603.9<br>14525.9 | 0.2504<br>105.9<br>105.9 | 0.0899 | N/A | 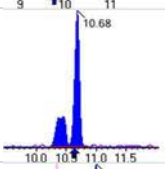 | 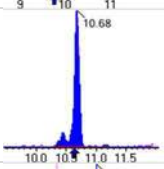 | |
| PFNS | ( 549.0 / 80.0 ) 111684<br>( 549.0 / 99.0 ) 29098 | ( 11.52 , 1.08 )<br>( N/A , 0.04 , -0.2) | 646.5<br>351.3 | 0.2605<br>98.1<br>98.1 | 0.0916 | N/A | 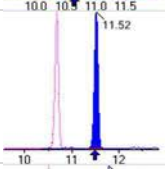 | 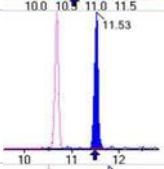 | |
| PFDS | ( 599.0 / 80.0 ) 134832<br>( 599.0 / 99.0 ) 37343 | ( 12.19 , 1.14 )<br>( N/A , 0.03 , -0.1) | 653.9<br>334.4 | 0.2770<br>110.4<br>110.4 | 0.0928 | N/A | 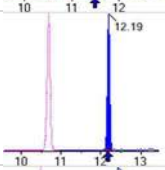 | 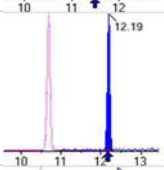 | |
| PFDoS | ( 699.0 / 80.0 ) 104822<br>( 699.0 / 99.0 ) 23043 | ( 13.08 , 1.22 )<br>( N/A , 0.02 , 0.1) | 847.9<br>268.9 | 0.2198<br>95.3<br>95.3 | 0.0844 | N/A | 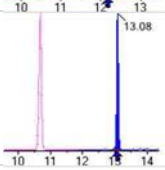 | 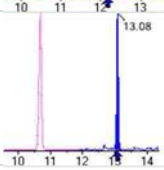 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 121312<br>( 327.0 / 81.0 ) 111526 | ( 5.61 , 1.00 ) ( 0.00 , N/A , -0.1) | 1649.4<br>615.1 | 0.9193<br>104.9<br>104.9 | 0.3547 | N/A | 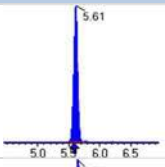 | 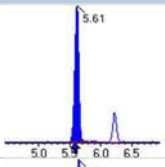 | |
| 6:2FTS | ( 427.0 / 407.0 ) 107117<br>( 427.0 / 81.0 ) 132681 | ( 7.74 , 1.00 ) ( 0.00 , N/A , 0.2) | 1262.1<br>1015.6 | 1.2387<br>97.5<br>97.5 | 0.3533 | N/A | 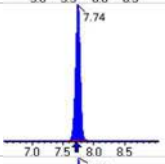 | 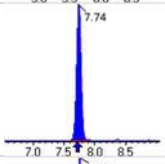 | |
| 8:2FTS | ( 527.0 / 507.0 ) 141528<br>( 527.0 / 81.0 ) 133044 | ( 9.56 , 1.00 ) ( -0.01 , N/A , -0.1) | 879.7<br>748.6 | 0.9401<br>99.1<br>99.1 | 0.3741 | N/A | 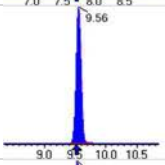 | 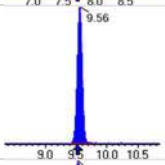 | |
| 10:2FTS | ( 627.0 / 607.0 ) 115526<br>( 627.0 / 81.0 ) 155798 | ( 11.23 , 1.00 ) ( 0.01 , N/A , 0.2) | 918.4<br>436.3 | 1.3486<br>99.8<br>99.8 | 0.3753 | N/A | 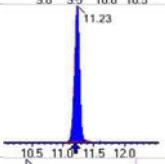 | 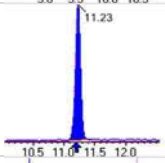 | |
| PFBSA | ( 297.9 / 78.0 ) 96966<br>( 297.9 / 278.0 ) 206 | ( 8.08 , 0.57 ) ( N/A , 0.02 , 1.3) | 396.3<br>4.2 | 0.0021<br>151.4<br>151.4 | 0.0968 | N/A | 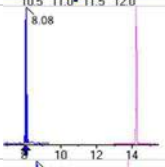 | 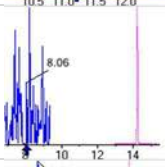 | |
| PFHxSA | ( 397.9 / 78.0 ) 122222<br>( 397.9 / 378.0 ) 429 | ( 10.95 , 0.75 ) ( N/A , 0.02 , -0.2) | 797.1<br>20.4 | 0.0035<br>92.2<br>92.2 | 0.0974 | N/A | 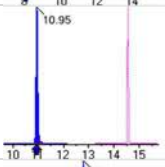 | 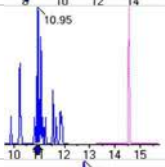 | |
| PFOSA | ( 498.0 / 78.0 ) 103305<br>( 498.0 / 478.0 ) 1207 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.2) | 872.8<br>35.7 | 0.0117<br>81.0<br>81.0 | 0.0949 | N/A | 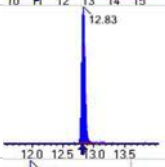 | 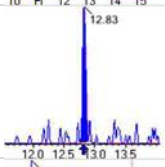 | |
| TFSI | ( 279.7 / 147.0 ) 204349<br>( 279.7 / 211.0 ) 17973 | ( 8.40 , 0.65 ) ( N/A , 0.04 , 0.0) | 53.4<br>36.1 | 0.0879<br>106.6<br>106.6 | 0.0883 | N/A | 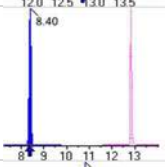 | 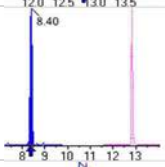 | |
| NMeFOSA | ( 512.0 / 219.0 ) 78690<br>( 512.0 / 169.0 ) 60518 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 3.4) | 743.3<br>323.4 | 0.7691<br>104.6<br>104.6 | 0.3586 | N/A | 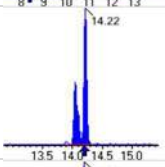 | 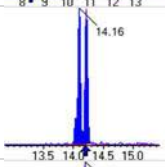 | |
| NEtFOSA | ( 526.0 / 219.0 ) 100051<br>( 526.0 / 169.0 ) 125891 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 1.8) | 820.4<br>865.9 | 1.2583<br>99.3<br>99.3 | 0.3726 | N/A | 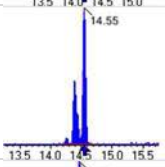 | 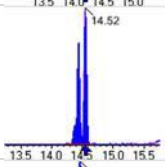 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 26083<br>( 570.0 / 483.0 ) 11125 | ( 10.47 , 1.00 ) ( 0.01 , N/A , 0.2) | 15618.7<br>155.0 | 0.4265<br>98.5<br>98.5 | 0.0999 | N/A | 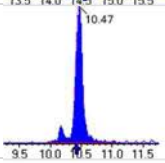 | 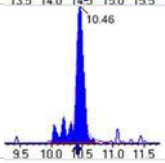 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 23924<br>( 584.0 / 526.0 ) 15004 | ( 11.00 , 1.00 )<br>( 0.02 , N/A , 0.9) | 2524.5<br>162.6 | 0.6272<br>101.3<br>101.3 | 0.0901 | N/A | 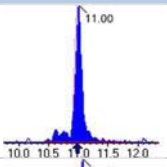 | 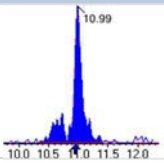 | |
| NMeFOSE | ( 616.0 / 59.0 ) 43798 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 255.9 | N/A<br>0.0<br>0.0 | 0.3846 | N/A | 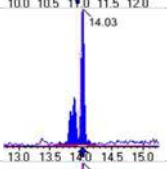 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 38625 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 397.7 | N/A<br>0.0<br>0.0 | 0.3704 | N/A | 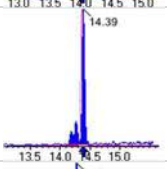 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 9456<br>( 285.0 / 185.0 ) 24600 | ( 6.63 , 1.00 )<br>( 0.00 , N/A , 0.3) | 361.2<br>257.0 | 2.6015<br>83.5<br>83.5 | 0.1083 | N/A | 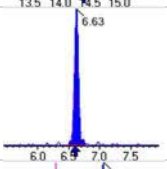 | 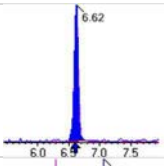 | |
| ADONA | ( 377.0 / 85.0 ) 98316<br>( 377.0 / 251.0 ) 11269 | ( 7.70 , 1.16 )<br>( N/A , 0.03 , -0.1) | 701.4<br>143.0 | 0.1146<br>107.5<br>107.5 | 0.0884 | N/A | 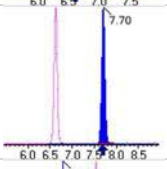 | 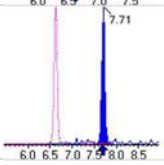 | |
| PFMPA | ( 229.0 / 85.0 ) 18639 | ( 4.21 , 0.86 )<br>( N/A , 0.02 , 0.0) | 629.9 | N/A<br>0.0<br>0.0 | 0.1764 | N/A | 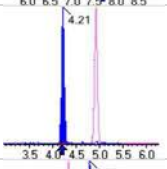 | | |
| PFMBA | ( 279.0 / 85.0 ) 50706 | ( 5.30 , 1.08 )<br>( N/A , 0.02 , 0.0) | 757.5 | N/A<br>0.0<br>0.0 | 0.1813 | N/A | 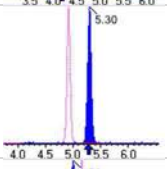 | | |
| NFDHA | ( 295.0 / 201.0 ) 24333<br>( 295.0 / 85.0 ) 24357 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , -0.1) | 935.5<br>379.9 | 1.0010<br>92.5<br>92.5 | 0.1960 | N/A | 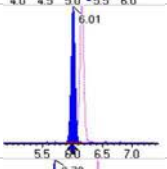 | 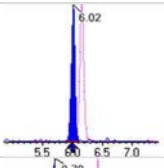 | |
| PFECHS | ( 461.0 / 98.9 ) 61546<br>( 461.0 / 381.2 ) 24546 | ( 9.70 , 0.91 )<br>( N/A , 0.03 , 0.0) | 1082.3<br>2413.0 | 0.3988<br>102.1<br>102.1 | 0.0873 | N/A | 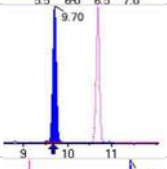 | 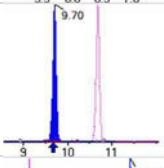 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 119480<br>( 533.0 / 353.0 ) 38220 | ( 11.34 , 1.71 )<br>( N/A , 0.04 , 0.2) | 1071.2<br>364.0 | 0.3199<br>99.5<br>99.5 | 0.0871 | N/A | 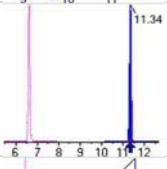 | 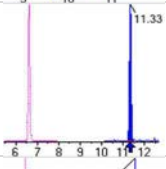 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 90010<br>( 633.0 / 453.0 ) 30548 | ( 12.59 , 1.90 )<br>( N/A , 0.02 , 0.2) | 1140.6<br>427.2 | 0.3394<br>103.9<br>103.9 | 0.0837 | N/A | 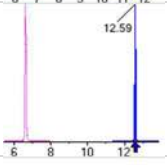 | 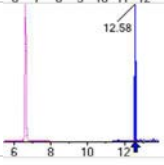 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 39824<br>( 315.0 / 83.0 ) 30264 | ( 7.08 , 1.15 )<br>( N/A , 0.02 , -0.7) | 738.9<br>150.8 | 0.7599<br>132.6<br>132.6 | 0.1483 | N/A | 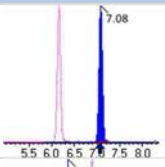 | 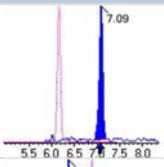 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5064<br>( 241.0 / 117.0 ) 10499 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , -0.5) | 188.3<br>51.6 | 2.0731<br>93.4<br>93.4 | 0.3124 | N/A | 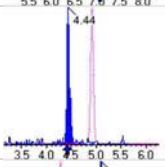 | 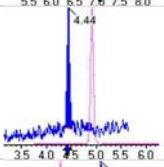 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30684<br>( 341.0 / 217.0 ) 46927 | ( 7.02 , 1.14 )<br>( N/A , 0.02 , 0.4) | 289.8<br>170.2 | 1.5294<br>102.2<br>102.2 | 0.3545 | N/A | 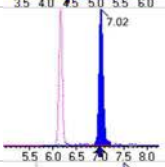 | 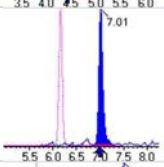 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 42697<br>( 441.0 / 337.0 ) 41711 | ( 9.44 , 1.53 )<br>( N/A , 0.03 , 0.4) | 3495.7<br>1294.5 | 0.9769<br>109.8<br>109.8 | 0.3354 | N/A | 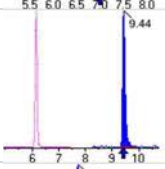 | 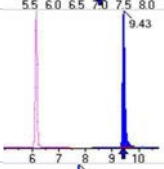 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 27612<br>( 357.2 / 243.0 ) 3484 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , -0.1) | 249.0<br>31.9 | 0.1262<br>119.5<br>119.5 | 0.0822 | N/A | 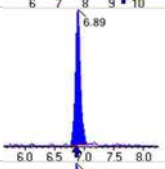 | 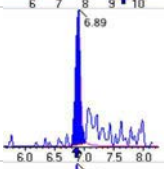 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 21799<br>( 457.2 / 343.0 ) 787 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , 0.0) | 260.4<br>35.3 | 0.0361<br>92.2<br>92.2 | 0.0927 | N/A | 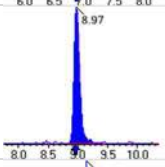 | 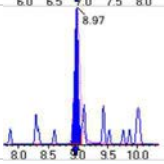 | |
| TDCA | ( 499.0 / 80.0 ) 81929 | ( 10.67 , 1.00 )<br>( N/A , 0.04 , 0.0) | 1064.2 | N/A<br>0.0<br>0.0 | 0.0964 | N/A | 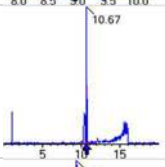 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 340327 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1372.3 | N/A | 1.1297<br>[ 1.0000 ] | 113.0%<br>{ 112.2% } | 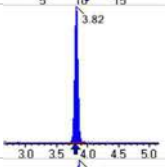 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 158640 | ( 6.16 , N/A )<br>( N/A , 0.03 , N/A ) | 7626318.1 | N/A | 1.0317<br>[ 1.0000 ] | 103.2%<br>{ 96.1% } | 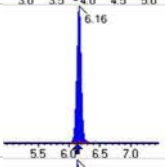 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 450854 | ( 8.34 , N/A )<br>( N/A , 0.03 , N/A ) | 3550.0 | N/A | 1.0106<br>[ 1.0000 ] | 101.1%<br>{ 99.2% } | 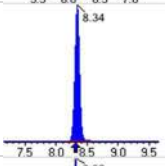 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 333991 | ( 9.30 , N/A )<br>( N/A , 0.03 , N/A ) | 945.7 | N/A | 0.9991<br>[ 1.0000 ] | 99.9%<br>{ 102.5% } | 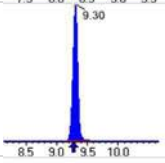 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 314067 | ( 10.22 , N/A ) ( N/A , 0.03 , N/A ) | 7620.3 | N/A | 0.9471 [ 1.0000 ] | 94.7% { 92.4% } | 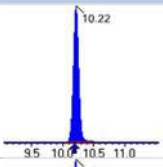 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1157344 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 4794.8 | N/A | 1.0357 [ 1.0000 ] | 103.6% { 101.6% } | 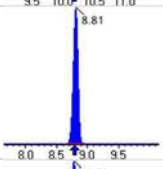 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 991669 | ( 10.69 , N/A ) ( N/A , 0.04 , N/A ) | 3275.0 | N/A | 1.0158 [ 1.0000 ] | 101.6% { 99.6% } | 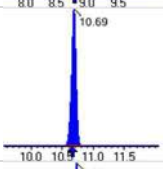 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3055452 | ( 3.82 , N/A ) ( N/A , 0.02 , N/A ) | 49731.0 | N/A | 8.1414 [ 8.0000 ] | 101.8% { 115.0% } | 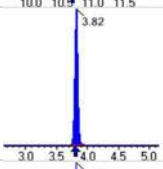 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1311252 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 6150.7 | N/A | 4.6074 [ 4.0000 ] | 115.2% { 113.2% } | 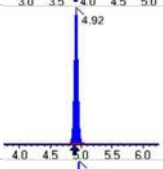 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 737112 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 18992.8 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 107.7% } | 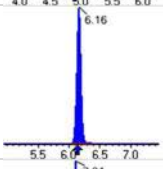 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 743928 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 5060.0 | N/A | 2.0912 [ 2.0000 ] | 104.6% { 105.6% } | 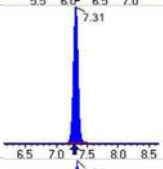 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 976702 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 2744.6 | N/A | 2.0546 [ 2.0000 ] | 102.7% { 102.4% } | 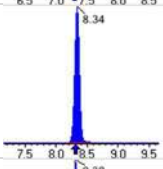 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 337221 | ( 9.30 , N/A ) ( N/A , 0.03 , N/A ) | 3446.6 | N/A | 1.0456 [ 1.0000 ] | 104.6% { 108.5% } | 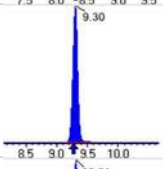 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 411273 | ( 10.21 , N/A ) ( N/A , 0.04 , N/A ) | 1512.9 | N/A | 1.1348 [ 1.0000 ] | 113.5% { 106.9% } | 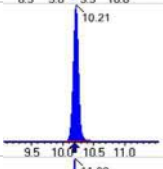 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 486595 | ( 11.09 , N/A ) ( N/A , 0.04 , N/A ) | 778.9 | N/A | 1.1043 [ 1.0000 ] | 110.4% { 97.8% } | 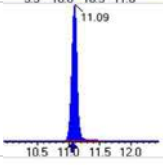 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 472249 | ( 11.90 , N/A ) ( N/A , 0.04 , N/A ) | 1056.3 | N/A | 1.0672 [ 1.0000 ] | 106.7% { 94.7% } | 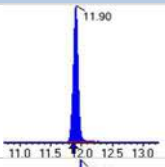 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 407605 | ( 12.99 , N/A ) ( N/A , 0.03 , N/A ) | 1351.1 | N/A | 1.0571 [ 1.0000 ] | 105.7% { 96.1% } | 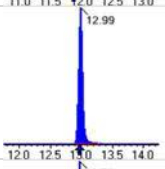 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 713892 | ( 13.78 , N/A ) ( N/A , 0.02 , N/A ) | 2875.4 | N/A | 2.1797 [ 2.0000 ] | 109.0% { 100.8% } | 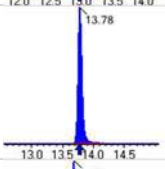 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2379010 | ( 6.48 , N/A ) ( N/A , 0.02 , N/A ) | 1504.2 | N/A | 2.1097 [ 2.0000 ] | 105.5% { 103.0% } | 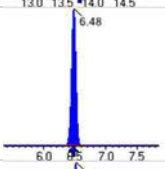 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1705833 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 5434.1 | N/A | 2.0142 [ 2.0000 ] | 100.7% { 103.7% } | 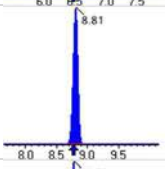 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2162723 | ( 10.68 , N/A ) ( N/A , 0.04 , N/A ) | 1971.1 | N/A | 2.0486 [ 2.0000 ] | 102.4% { 103.0% } | 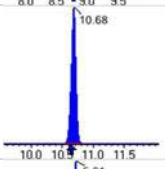 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 508045 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 85.0 | N/A | 5.0410 [ 4.0000 ] | 126.0% { 141.2% } | 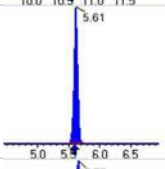 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1365290 | ( 7.75 , N/A ) ( N/A , 0.02 , N/A ) | 5720.7 | N/A | 4.3623 [ 4.0000 ] | 109.1% { 127.1% } | 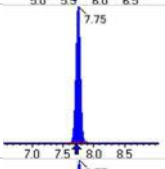 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527227 | ( 9.57 , N/A ) ( N/A , 0.03 , N/A ) | 1210.9 | N/A | 4.8979 [ 4.0000 ] | 122.4% { 131.1% } | 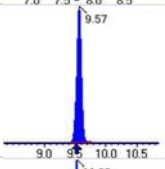 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2993081 | ( 11.22 , N/A ) ( N/A , 0.04 , N/A ) | 1518.0 | N/A | 8.3623 [ 8.0000 ] | 104.5% { 119.5% } | 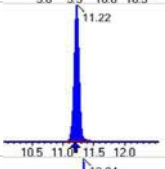 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2230755 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1617.1 | N/A | 1.9499 [ 2.0000 ] | 97.5% { 95.8% } | 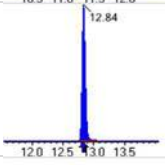 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (1)
Acquired: 2024/03/12 - 18:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 435676 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2829.0 | N/A | 2.0623 [ 2.0000 ] | 103.1% { 102.9% } | 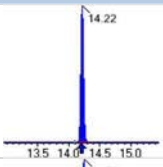 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 489431 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2668.7 | N/A | 2.0170 [ 2.0000 ] | 100.8% { 98.5% } | 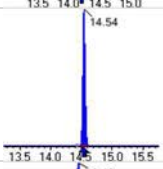 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1108890 | ( 10.46 , N/A ) ( N/A , 0.04 , N/A ) | 2729.9 | N/A | 4.1016 [ 4.0000 ] | 102.5% { 102.6% } | 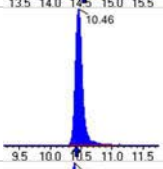 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1101168 | ( 10.99 , N/A ) ( N/A , 0.04 , N/A ) | 1686.3 | N/A | 4.2908 [ 4.0000 ] | 107.3% { 105.1% } | 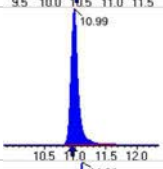 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2011783 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2565.0 | N/A | 20.3807 [ 20.0000 ] | 101.9% { 106.9% } | 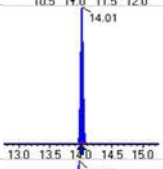 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2360344 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5759.2 | N/A | 19.7391 [ 20.0000 ] | 98.7% { 100.0% } | 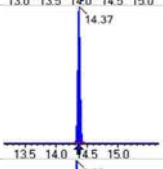 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1230457 | ( 6.63 , N/A ) ( N/A , 0.02 , N/A ) | 2090.3 | N/A | 8.4040 [ 8.0000 ] | 105.0% { 108.5% } | 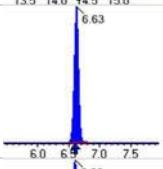 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 624710 | ( 6.90 , N/A ) ( N/A , 0.02 , N/A ) | 1187.0 | N/A | 2.2427 [ 2.0000 ] | 112.1% { 106.6% } | 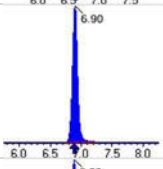 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 557510 | ( 8.99 , N/A ) ( N/A , 0.03 , N/A ) | 815.6 | N/A | 2.1438 [ 2.0000 ] | 107.2% { 98.8% } | 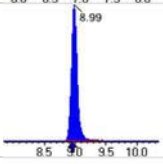 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 310943<br>( 163.0 / 69.0 ) 7678 | ( 2.83 , 0.74 )<br>( N/A , 0.02 , 0.0) | 1967.3<br>326.9 | 0.0247<br>98.5<br>98.5 | 0.9837 | N/A | 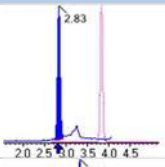 | 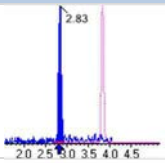 | |
| PFBA | ( 213.0 / 169.0 ) 661236 | ( 3.83 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1272.3 | N/A<br>0.0<br>0.0 | 1.9563 | N/A | 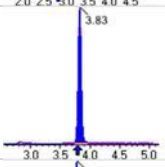 | | |
| PFPeA | ( 263.0 / 219.0 ) 289941<br>( 263.0 / 69.0 ) 3532 | ( 4.93 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1405.2<br>63.0 | 0.0122<br>110.9<br>110.9 | 0.9598 | N/A | 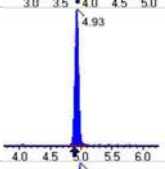 | 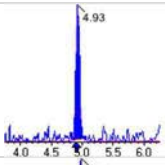 | |
| PFHxA | ( 313.0 / 269.0 ) 156981<br>( 313.0 / 119.0 ) 20723 | ( 6.18 , 1.00 )<br>( 0.00 , N/A , 0.2) | 878.4<br>407.6 | 0.1320<br>118.8<br>118.8 | 0.4806 | N/A | 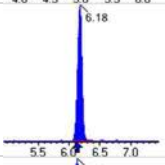 | 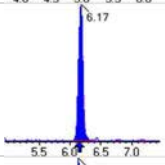 | |
| PFHpA | ( 363.0 / 319.0 ) 172554<br>( 363.0 / 169.0 ) 53621 | ( 7.33 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1075.9<br>812.3 | 0.3107<br>99.7<br>99.7 | 0.4836 | N/A | 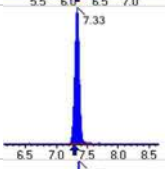 | 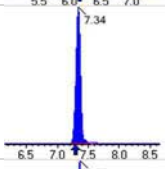 | |
| PFOA | ( 413.0 / 369.0 ) 238705<br>( 413.0 / 169.0 ) 84264 | ( 8.36 , 1.00 )<br>( 0.00 , N/A , -0.2) | 351.7<br>608.9 | 0.3530<br>97.6<br>97.6 | 0.4876 | N/A | 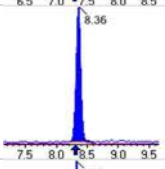 | 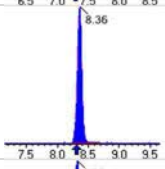 | |
| PFNA | ( 463.0 / 419.0 ) 158575<br>( 463.0 / 169.0 ) 40887 | ( 9.32 , 1.00 )<br>( 0.00 , N/A , 0.1) | 636.8<br>465.1 | 0.2578<br>98.2<br>98.2 | 0.4784 | N/A | 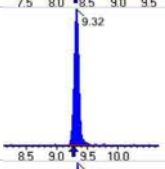 | 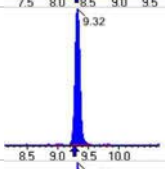 | |
| PFDA | ( 513.0 / 469.0 ) 200638<br>( 513.0 / 169.0 ) 24392 | ( 10.24 , 1.00 )<br>( 0.00 , N/A , 0.6) | 1137.9<br>1734.9 | 0.1216<br>103.6<br>103.6 | 0.5048 | N/A | 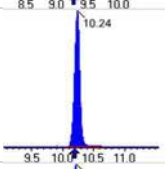 | 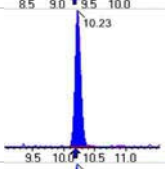 | |
| PFUnA | ( 563.0 / 519.0 ) 228676<br>( 563.0 / 169.0 ) 30079 | ( 11.11 , 1.00 )<br>( 0.00 , N/A , 0.0) | 715.4<br>476.1 | 0.1315<br>88.8<br>88.8 | 0.4938 | N/A | 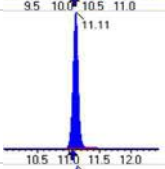 | 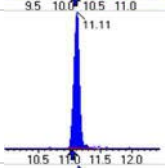 | |
| PFDoA | ( 613.0 / 569.0 ) 234860<br>( 613.0 / 169.0 ) 34508 | ( 11.93 , 1.00 )<br>( 0.00 , N/A , -0.2) | 810.5<br>413.2 | 0.1469<br>92.9<br>92.9 | 0.4915 | N/A | 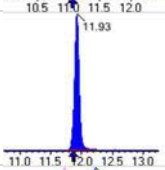 | 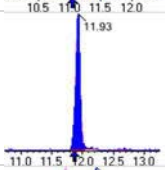 | |
| PFTrDA | ( 663.0 / 619.0 ) 227333<br>( 663.0 / 169.0 ) 60335 | ( 12.52 , 1.05 )<br>( N/A , 0.04 , -0.1) | 1013.5<br>578.2 | 0.2654<br>98.5<br>98.5 | 0.4948 | N/A | 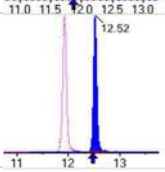 | 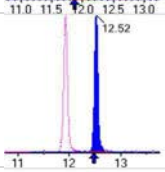 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 179647<br>( 713.0 / 169.0 ) 46122 | ( 13.01 , 1.00 )<br>( 0.00 , N/A , -0.1) | 704.5<br>458.2 | 0.2567<br>98.8<br>98.8 | 0.4555 | N/A | 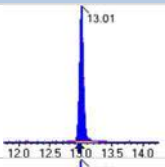 | 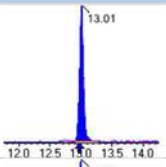 | |
| PFHxDA | ( 813.0 / 769.0 ) 165149<br>( 813.0 / 169.0 ) 38097 | ( 13.79 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1062.4<br>327.6 | 0.2307<br>106.3<br>106.3 | 0.4418 | N/A | 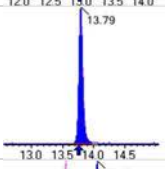 | 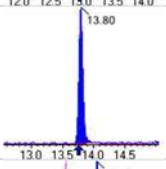 | |
| PFODA | ( 913.0 / 869.0 ) 111560<br>( 913.0 / 169.0 ) 38584 | ( 14.43 , 1.05 )<br>( N/A , 0.04 , 0.4) | 496.5<br>208.1 | 0.3459<br>90.5<br>90.5 | 0.4442 | N/A | 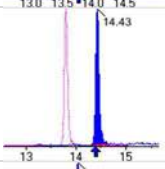 | 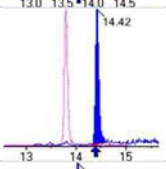 | |
| PFBS | ( 299.0 / 80.0 ) 253629<br>( 299.0 / 99.0 ) 181646 | ( 6.49 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1914.5<br>671.6 | 0.7162<br>100.7<br>100.7 | 0.4251 | N/A | 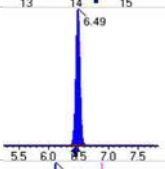 | 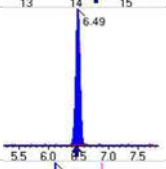 | |
| PFPeS | ( 349.0 / 80.0 ) 633829<br>( 349.0 / 99.0 ) 225776 | ( 7.75 , 0.88 )<br>( N/A , 0.05 , 0.1) | 1816.0<br>1482.7 | 0.3562<br>104.7<br>104.7 | 0.4887 | N/A | 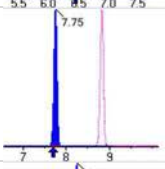 | 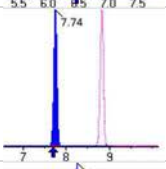 | |
| PFHxS | ( 399.0 / 80.0 ) 642355<br>( 399.0 / 99.0 ) 215749 | ( 8.83 , 1.00 )<br>( 0.00 , N/A , -0.3) | 2085.8<br>13437.8 | 0.3359<br>107.4<br>107.4 | 0.4454 | N/A | 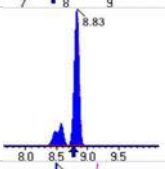 | 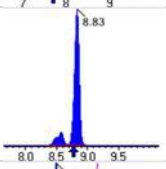 | |
| PFHpS | ( 449.0 / 80.0 ) 543830<br>( 449.0 / 99.0 ) 149492 | ( 9.80 , 0.92 )<br>( N/A , 0.06 , 0.1) | 1273.7<br>1315.7 | 0.2749<br>102.9<br>102.9 | 0.4428 | N/A | 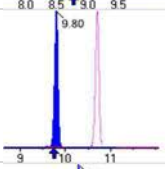 | 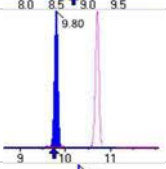 | |
| PFOS | ( 499.0 / 80.0 ) 572706<br>( 499.0 / 99.0 ) 136320 | ( 10.70 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1216.4<br>3334.6 | 0.2380<br>100.6<br>100.6 | 0.4635 | N/A | 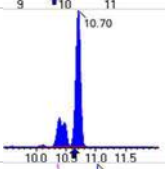 | 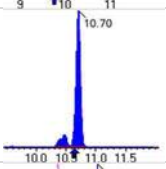 | |
| PFNS | ( 549.0 / 80.0 ) 565862<br>( 549.0 / 99.0 ) 155751 | ( 11.55 , 1.08 )<br>( N/A , 0.06 , 0.1) | 1110.5<br>1287.3 | 0.2752<br>103.6<br>103.6 | 0.4696 | N/A | 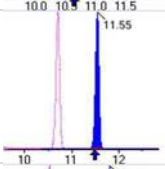 | 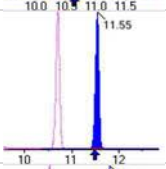 | |
| PFDS | ( 599.0 / 80.0 ) 693240<br>( 599.0 / 99.0 ) 185589 | ( 12.21 , 1.14 )<br>( N/A , 0.05 , 0.0) | 2270.0<br>1626.4 | 0.2677<br>106.8<br>106.8 | 0.4827 | N/A | 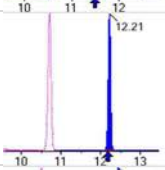 | 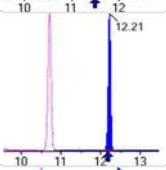 | |
| PFDoS | ( 699.0 / 80.0 ) 582541<br>( 699.0 / 99.0 ) 126432 | ( 13.10 , 1.22 )<br>( N/A , 0.04 , 0.2) | 1802.3<br>1069.7 | 0.2170<br>94.1<br>94.1 | 0.4747 | N/A | 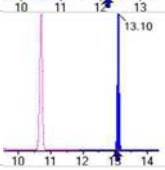 | 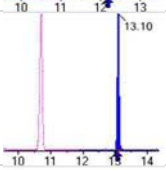 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 568863<br>( 327.0 / 81.0 ) 517089 | ( 5.63 , 1.00 ) ( 0.00 , N/A , 0.0) | 4690.0<br>2125.1 | 0.9090<br>103.7<br>103.7 | 1.9116 | N/A | 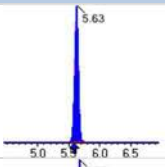 | 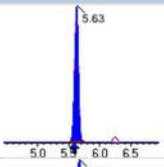 | |
| 6:2FTS | ( 427.0 / 407.0 ) 557782<br>( 427.0 / 81.0 ) 680418 | ( 7.77 , 1.00 ) ( 0.00 , N/A , 0.1) | 3238.1<br>2975.8 | 1.2199<br>96.0<br>96.0 | 1.8228 | N/A | 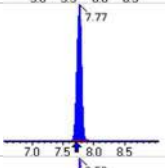 | 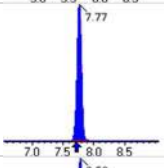 | |
| 8:2FTS | ( 527.0 / 507.0 ) 693443<br>( 527.0 / 81.0 ) 633282 | ( 9.58 , 1.00 ) ( -0.01 , N/A , -0.3) | 1358.7<br>1361.1 | 0.9132<br>96.3<br>96.3 | 1.9368 | N/A | 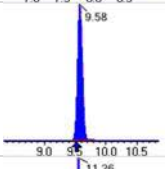 | 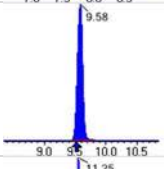 | |
| 10:2FTS | ( 627.0 / 607.0 ) 629399<br>( 627.0 / 81.0 ) 834823 | ( 11.26 , 1.00 ) ( 0.01 , N/A , 0.1) | 1152.2<br>861.4 | 1.3264<br>98.1<br>98.1 | 2.0829 | N/A | 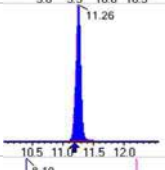 | 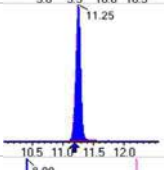 | |
| PFBSA | ( 297.9 / 78.0 ) 487321<br>( 297.9 / 278.0 ) 780 | ( 8.10 , 0.57 ) ( N/A , 0.04 , 0.4) | 1208.4<br>6.8 | 0.0016<br>114.0<br>114.0 | 0.5177 | N/A | 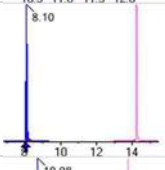 | 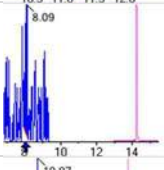 | |
| PFHxSA | ( 397.9 / 78.0 ) 606921<br>( 397.9 / 378.0 ) 2805 | ( 10.98 , 0.75 ) ( N/A , 0.05 , 0.4) | 1097.4<br>119.5 | 0.0046<br>121.4<br>121.4 | 0.4943 | N/A | 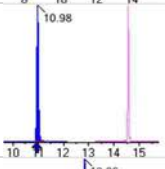 | 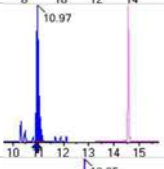 | |
| PFOSA | ( 498.0 / 78.0 ) 590052<br>( 498.0 / 478.0 ) 7112 | ( 12.86 , 1.00 ) ( -0.01 , N/A , 0.3) | 1639.6<br>208.1 | 0.0121<br>83.5<br>83.5 | 0.5259 | N/A | 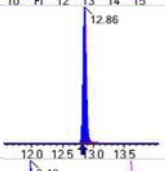 | 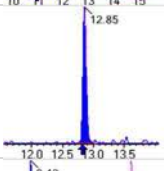 | |
| TFSI | ( 279.7 / 147.0 ) 1243476<br>( 279.7 / 211.0 ) 106931 | ( 8.42 , 0.65 ) ( N/A , 0.05 , -0.4) | 54.8<br>47.5 | 0.0860<br>104.3<br>104.3 | 0.5214 | N/A | 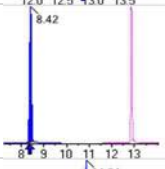 | 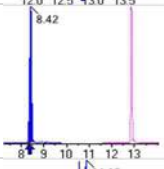 | |
| NMeFOSA | ( 512.0 / 219.0 ) 426127<br>( 512.0 / 169.0 ) 319988 | ( 14.24 , 1.00 ) ( 0.00 , N/A , 3.2) | 2163.1<br>859.2 | 0.7509<br>102.2<br>102.2 | 2.0666 | N/A | 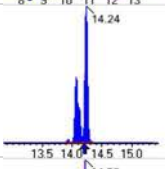 | 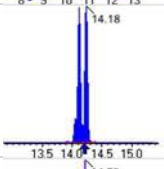 | |
| NEtFOSA | ( 526.0 / 219.0 ) 524100<br>( 526.0 / 169.0 ) 656319 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.2) | 2777.6<br>2450.8 | 1.2523<br>98.9<br>98.9 | 1.9952 | N/A | 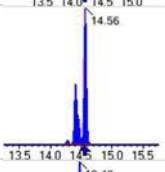 | 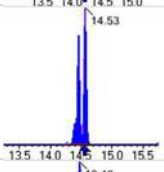 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 133021<br>( 570.0 / 483.0 ) 55215 | ( 10.48 , 1.00 ) ( 0.00 , N/A , 0.0) | 23737.5<br>349.5 | 0.4151<br>95.9<br>95.9 | 0.5229 | N/A | 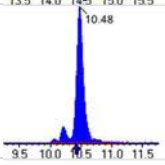 | 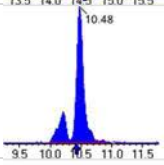 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 128438<br>( 584.0 / 526.0 ) 78717 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.1) | 2142.9<br>363.8 | 0.6129<br>99.0<br>99.0 | 0.5037 | N/A | 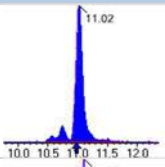 | 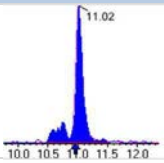 | |
| NMeFOSE | ( 616.0 / 59.0 ) 220612 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 854.8 | N/A<br>0.0<br>0.0 | 1.9957 | N/A | 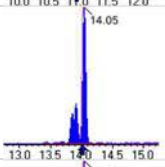 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 215942 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 1420.0 | N/A<br>0.0<br>0.0 | 1.9529 | N/A | 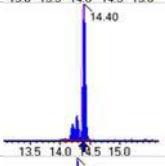 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 40032<br>( 285.0 / 185.0 ) 124909 | ( 6.64 , 1.00 ) ( 0.00 , N/A , 0.1) | 843.5<br>688.0 | 3.1203<br>100.1<br>100.1 | 0.4944 | N/A | 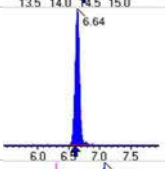 | 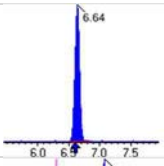 | |
| ADONA | ( 377.0 / 85.0 ) 510988<br>( 377.0 / 251.0 ) 52833 | ( 7.73 , 1.16 ) ( N/A , 0.05 , 0.0) | 1500.2<br>449.5 | 0.1034<br>97.0<br>97.0 | 0.4955 | N/A | 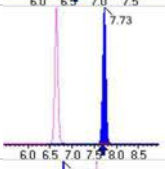 | 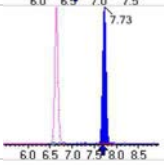 | |
| PFMPA | ( 229.0 / 85.0 ) 93591 | ( 4.22 , 0.86 ) ( N/A , 0.03 , 0.0) | 1985.4 | N/A<br>0.0<br>0.0 | 0.9785 | N/A | 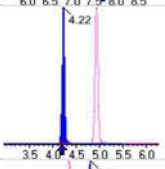 | | |
| PFMBA | ( 279.0 / 85.0 ) 234107 | ( 5.31 , 1.08 ) ( N/A , 0.04 , 0.0) | 2513.1 | N/A<br>0.0<br>0.0 | 0.9248 | N/A | 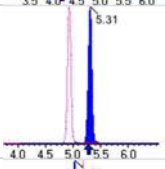 | | |
| NFDHA | ( 295.0 / 201.0 ) 110288<br>( 295.0 / 85.0 ) 112077 | ( 6.03 , 0.98 ) ( N/A , 0.04 , 0.0) | 2224.6<br>1148.6 | 1.0162<br>94.0<br>94.0 | 0.9713 | N/A | 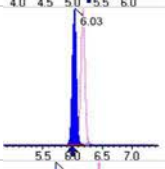 | 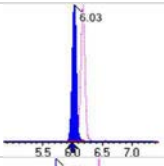 | |
| PFECHS | ( 461.0 / 98.9 ) 297735<br>( 461.0 / 381.2 ) 116128 | ( 9.73 , 0.91 ) ( N/A , 0.06 , 0.0) | 2432.6<br>2342.2 | 0.3900<br>99.9<br>99.9 | 0.4273 | N/A | 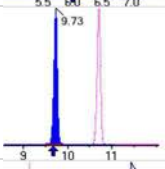 | 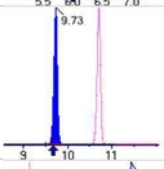 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 598633<br>( 533.0 / 353.0 ) 194205 | ( 11.36 , 1.71 ) ( N/A , 0.06 , 0.1) | 2809.7<br>1446.8 | 0.3244<br>100.9<br>100.9 | 0.4704 | N/A | 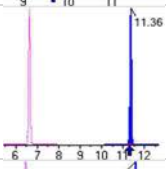 | 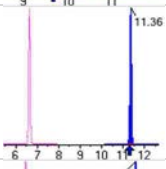 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 470152<br>( 633.0 / 453.0 ) 155946 | ( 12.61 , 1.90 ) ( N/A , 0.04 , 0.0) | 2652.7<br>1448.7 | 0.3317<br>101.6<br>101.6 | 0.4717 | N/A | 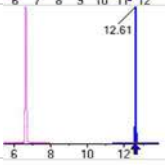 | 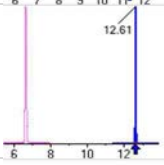 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 217343<br>( 315.0 / 83.0 ) 134472 | ( 7.10 , 1.15 )<br>( N/A , 0.05 , 0.0) | 2291.9<br>540.0 | 0.6187<br>108.0<br>108.0 | 0.8847 | N/A | 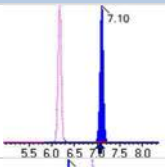 | 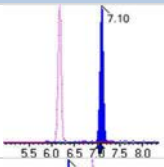 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25883<br>( 241.0 / 117.0 ) 60022 | ( 4.45 , 0.90 )<br>( N/A , 0.03 , 0.0) | 671.2<br>250.8 | 2.3189<br>104.5<br>104.5 | 1.7636 | N/A | 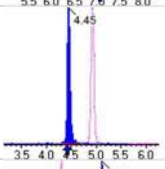 | 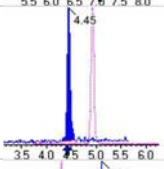 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 168888<br>( 341.0 / 217.0 ) 227443 | ( 7.04 , 1.14 )<br>( N/A , 0.04 , 0.1) | 742.2<br>609.0 | 1.3467<br>89.9<br>89.9 | 2.1334 | N/A | 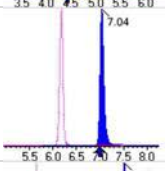 | 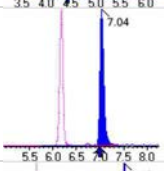 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 220429<br>( 441.0 / 337.0 ) 201280 | ( 9.46 , 1.53 )<br>( N/A , 0.05 , 0.0) | 104912.9<br>64729.3 | 0.9131<br>102.6<br>102.6 | 1.8929 | N/A | 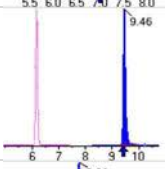 | 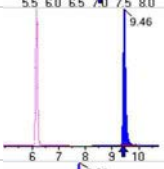 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 167714<br>( 357.2 / 243.0 ) 16619 | ( 6.91 , 1.00 )<br>( -0.01 , N/A , 0.2) | 833.4<br>153.3 | 0.0991<br>93.9<br>93.9 | 0.5154 | N/A | 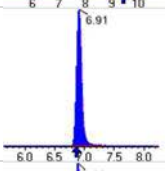 | 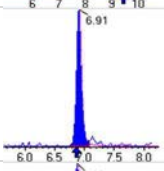 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 113188<br>( 457.2 / 343.0 ) 5020 | ( 9.00 , 1.00 )<br>( -0.01 , N/A , 0.7) | 441.4<br>125.4 | 0.0444<br>113.3<br>113.3 | 0.4888 | N/A | 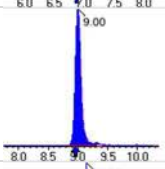 | 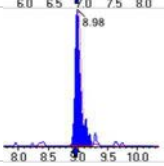 | |
| TDCA | ( 499.0 / 80.0 ) 406104 | ( 10.69 , 1.00 )<br>( N/A , 0.06 , 0.0) | 5419.9 | N/A<br>0.0<br>0.0 | 0.4836 | N/A | 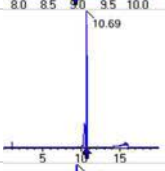 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 336642 | ( 3.83 , N/A )<br>( N/A , 0.03 , N/A ) | 1413.5 | N/A | 1.1175<br>[ 1.0000 ] | 111.7%<br>{ 111.0% } | 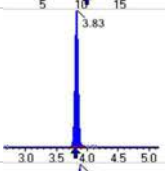 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 162950 | ( 6.18 , N/A )<br>( N/A , 0.04 , N/A ) | 25775.9 | N/A | 1.0597<br>[ 1.0000 ] | 106.0%<br>{ 98.8% } | 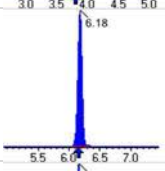 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 471625 | ( 8.36 , N/A )<br>( N/A , 0.05 , N/A ) | 3856.5 | N/A | 1.0571<br>[ 1.0000 ] | 105.7%<br>{ 103.7% } | 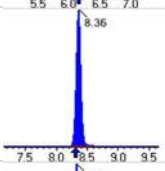 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 366298 | ( 9.32 , N/A )<br>( N/A , 0.05 , N/A ) | 1150.8 | N/A | 1.0957<br>[ 1.0000 ] | 109.6%<br>{ 112.4% } | 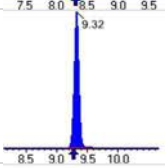 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 352892 | ( 10.24 , N/A ) ( N/A , 0.06 , N/A ) | 4145.1 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 103.8% } | 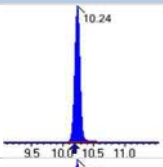 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1150496 | ( 8.83 , N/A ) ( N/A , 0.05 , N/A ) | 5167.9 | N/A | 1.0296 [ 1.0000 ] | 103.0% { 101.0% } | 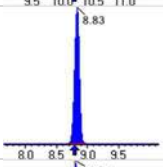 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1023027 | ( 10.71 , N/A ) ( N/A , 0.06 , N/A ) | 3434.6 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 102.8% } | 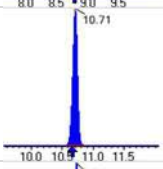 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2858238 | ( 3.83 , N/A ) ( N/A , 0.03 , N/A ) | 46367.4 | N/A | 7.6993 [ 8.0000 ] | 96.2% { 107.6% } | 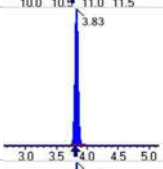 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1187020 | ( 4.93 , N/A ) ( N/A , 0.04 , N/A ) | 4924.0 | N/A | 4.0606 [ 4.0000 ] | 101.5% { 102.5% } | 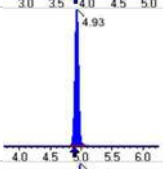 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 674193 | ( 6.17 , N/A ) ( N/A , 0.04 , N/A ) | 6432.9 | N/A | 1.9269 [ 2.0000 ] | 96.3% { 98.5% } | 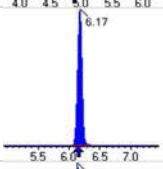 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 724563 | ( 7.34 , N/A ) ( N/A , 0.04 , N/A ) | 6899.7 | N/A | 1.9828 [ 2.0000 ] | 99.1% { 102.8% } | 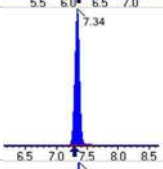 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 962855 | ( 8.36 , N/A ) ( N/A , 0.05 , N/A ) | 2546.6 | N/A | 1.9363 [ 2.0000 ] | 96.8% { 101.0% } | 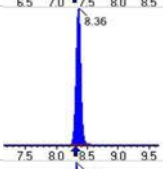 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330799 | ( 9.32 , N/A ) ( N/A , 0.05 , N/A ) | 3687.4 | N/A | 0.9352 [ 1.0000 ] | 93.5% { 106.4% } | 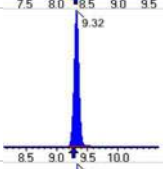 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 399081 | ( 10.24 , N/A ) ( N/A , 0.06 , N/A ) | 1103.5 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 103.7% } | 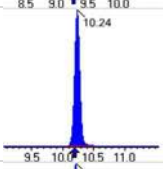 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 495888 | ( 11.11 , N/A ) ( N/A , 0.06 , N/A ) | 897.7 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 99.7% } | 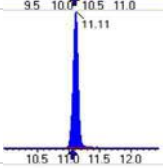 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 466902 | ( 11.93 , N/A ) ( N/A , 0.06 , N/A ) | 1334.4 | N/A | 0.9391 [ 1.0000 ] | 93.9% { 93.6% } | 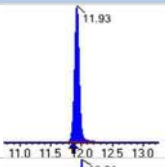  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 415288 | ( 13.01 , N/A ) ( N/A , 0.04 , N/A ) | 1605.9 | N/A | 0.9585 [ 1.0000 ] | 95.9% { 97.9% } | 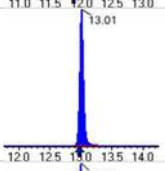  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 774592 | ( 13.80 , N/A ) ( N/A , 0.03 , N/A ) | 3175.6 | N/A | 2.1048 [ 2.0000 ] | 105.2% { 109.3% } | 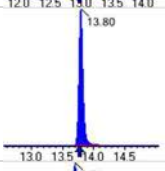  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2294919 | ( 6.50 , N/A ) ( N/A , 0.04 , N/A ) | 1384.9 | N/A | 2.0473 [ 2.0000 ] | 102.4% { 99.3% } | 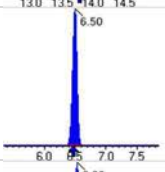  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1628854 | ( 8.83 , N/A ) ( N/A , 0.06 , N/A ) | 5208.7 | N/A | 1.9348 [ 2.0000 ] | 96.7% { 99.0% } | 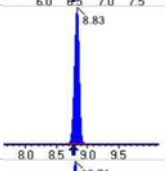  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2137804 | ( 10.71 , N/A ) ( N/A , 0.06 , N/A ) | 1781.1 | N/A | 1.9629 [ 2.0000 ] | 98.1% { 101.8% } | 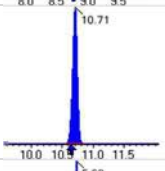  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 442074 | ( 5.62 , N/A ) ( N/A , 0.03 , N/A ) | 83.9 | N/A | 4.4125 [ 4.0000 ] | 110.3% { 122.9% } | 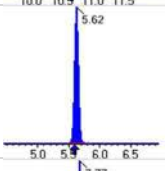  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1377793 | ( 7.77 , N/A ) ( N/A , 0.05 , N/A ) | 4009.0 | N/A | 4.4284 [ 4.0000 ] | 110.7% { 128.3% } | 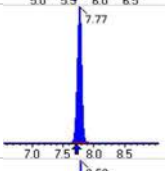  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1445457 | ( 9.59 , N/A ) ( N/A , 0.06 , N/A ) | 1277.8 | N/A | 4.6632 [ 4.0000 ] | 116.6% { 124.1% } | 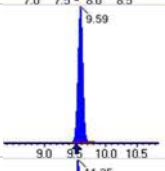  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2937999 | ( 11.25 , N/A ) ( N/A , 0.06 , N/A ) | 1355.8 | N/A | 8.2573 [ 8.0000 ] | 103.2% { 117.3% } | 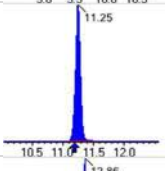  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2299133 | ( 12.86 , N/A ) ( N/A , 0.04 , N/A ) | 1788.2 | N/A | 1.9481 [ 2.0000 ] | 97.4% { 98.7% } | 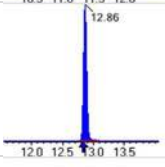  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (2)
Acquired: 2024/03/12 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 409452 | ( 14.23 , N/A ) ( N/A , 0.03 , N/A ) | 2926.6 | N/A | 1.8788 [ 2.0000 ] | 93.9% { 96.7% } | 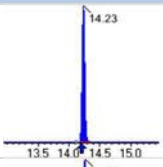  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 478765 | ( 14.56 , N/A ) ( N/A , 0.03 , N/A ) | 3083.5 | N/A | 1.9125 [ 2.0000 ] | 95.6% { 96.3% } | 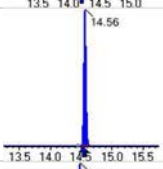  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1080521 | ( 10.48 , N/A ) ( N/A , 0.06 , N/A ) | 2696.1 | N/A | 3.8741 [ 4.0000 ] | 96.9% { 99.9% } | 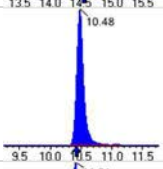  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1057392 | ( 11.01 , N/A ) ( N/A , 0.06 , N/A ) | 1787.5 | N/A | 3.9939 [ 4.0000 ] | 99.8% { 100.9% } | 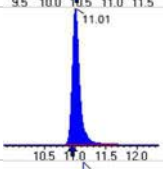  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1953011 | ( 14.03 , N/A ) ( N/A , 0.03 , N/A ) | 3118.9 | N/A | 19.1788 [ 20.0000 ] | 95.9% { 103.8% } | 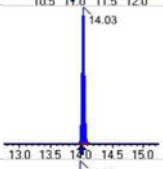  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2502947 | ( 14.38 , N/A ) ( N/A , 0.03 , N/A ) | 7328.7 | N/A | 20.2900 [ 20.0000 ] | 101.5% { 106.1% } | 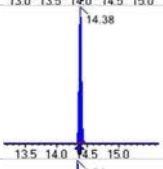  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1141036 | ( 6.64 , N/A ) ( N/A , 0.04 , N/A ) | 2430.9 | N/A | 7.5871 [ 8.0000 ] | 94.8% { 100.6% } | 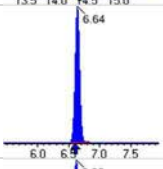  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 605471 | ( 6.92 , N/A ) ( N/A , 0.04 , N/A ) | 1140.2 | N/A | 1.9345 [ 2.0000 ] | 96.7% { 103.3% } | 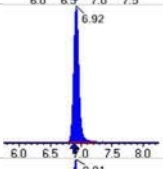  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 549106 | ( 9.01 , N/A ) ( N/A , 0.05 , N/A ) | 570.8 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 97.3% } | 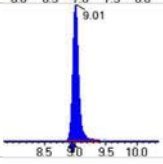  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 612990<br>( 163.0 / 69.0 ) 16536 | ( 2.83 , 0.74 ) ( N/A , 0.02 , 0.0) | 3780.7<br>781.6 | 0.0270<br>107.6<br>107.6 | 1.9057 | N/A | 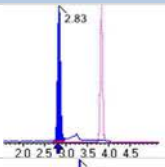 | 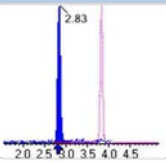 | |
| PFBA | ( 213.0 / 169.0 ) 1388429 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 2403.5 | N/A<br>0.0<br>0.0 | 4.0365 | N/A | 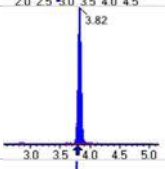 | | |
| PFPeA | ( 263.0 / 219.0 ) 565688<br>( 263.0 / 69.0 ) 6040 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.2) | 2080.7<br>99.9 | 0.0107<br>97.2<br>97.2 | 1.9476 | N/A | 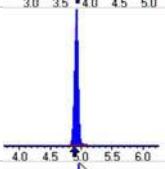 | 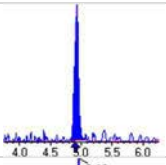 | |
| PFHxA | ( 313.0 / 269.0 ) 334351<br>( 313.0 / 119.0 ) 40474 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.2) | 1584.7<br>664.3 | 0.1211<br>108.9<br>108.9 | 1.0133 | N/A | 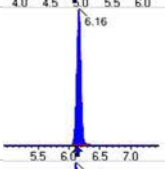 | 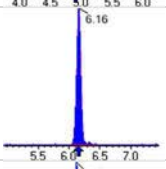 | |
| PFHpA | ( 363.0 / 319.0 ) 342568<br>( 363.0 / 169.0 ) 107781 | ( 7.32 , 1.00 ) ( 0.00 , N/A , -0.3) | 1367.4<br>931.2 | 0.3146<br>101.0<br>101.0 | 0.9382 | N/A | 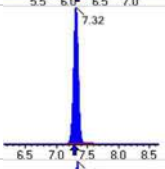 | 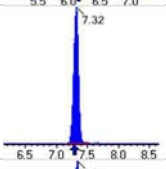 | |
| PFOA | ( 413.0 / 369.0 ) 508802<br>( 413.0 / 169.0 ) 176356 | ( 8.34 , 1.00 ) ( 0.00 , N/A , -0.1) | 567.5<br>765.7 | 0.3466<br>95.8<br>95.8 | 1.0316 | N/A | 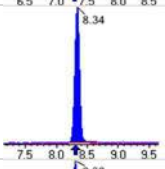 | 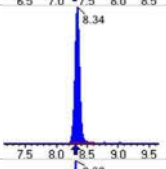 | |
| PFNA | ( 463.0 / 419.0 ) 355117<br>( 463.0 / 169.0 ) 80506 | ( 9.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 794.1<br>671.7 | 0.2267<br>86.4<br>86.4 | 1.1255 | N/A | 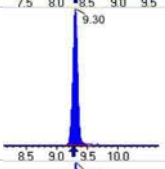 | 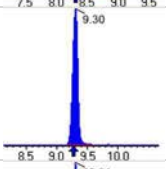 | |
| PFDA | ( 513.0 / 469.0 ) 404718<br>( 513.0 / 169.0 ) 45562 | ( 10.21 , 1.00 ) ( 0.00 , N/A , 0.3) | 1884.7<br>5987.3 | 0.1126<br>95.9<br>95.9 | 1.0112 | N/A | 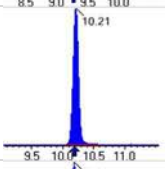 | 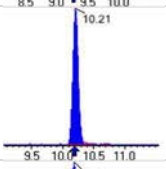 | |
| PFUnA | ( 563.0 / 519.0 ) 443955<br>( 563.0 / 169.0 ) 70225 | ( 11.09 , 1.00 ) ( 0.00 , N/A , 0.0) | 849.2<br>438.0 | 0.1582<br>106.8<br>106.8 | 0.9830 | N/A | 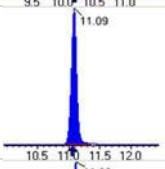 | 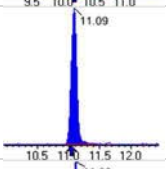 | |
| PFDoA | ( 613.0 / 569.0 ) 506969<br>( 613.0 / 169.0 ) 77211 | ( 11.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1109.9<br>593.1 | 0.1523<br>96.3<br>96.3 | 1.0702 | N/A | 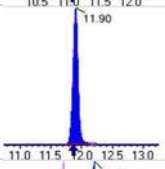 | 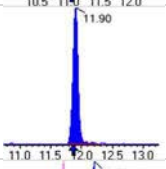 | |
| PFTrDA | ( 663.0 / 619.0 ) 480883<br>( 663.0 / 169.0 ) 128223 | ( 12.50 , 1.05 ) ( N/A , 0.03 , 0.0) | 1260.4<br>800.9 | 0.2666<br>98.9<br>98.9 | 1.0558 | N/A | 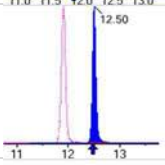 | 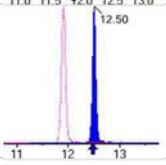 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 422129<br>( 713.0 / 169.0 ) 103015 | ( 12.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 1302.8<br>567.0 | 0.2440<br>93.9<br>93.9 | 1.0617 | N/A | 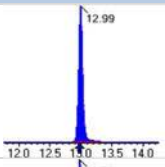 | 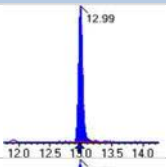 | |
| PFHxDA | ( 813.0 / 769.0 ) 371447<br>( 813.0 / 169.0 ) 79944 | ( 13.78 , 1.00 ) ( 0.00 , N/A , -0.2) | 1477.9<br>499.7 | 0.2152<br>99.2<br>99.2 | 0.9870 | N/A | 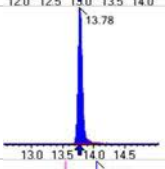 | 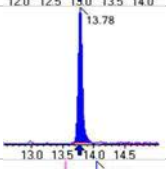 | |
| PFODA | ( 913.0 / 869.0 ) 229944<br>( 913.0 / 169.0 ) 82961 | ( 14.41 , 1.05 ) ( N/A , 0.02 , 0.0) | 931.8<br>422.0 | 0.3608<br>94.4<br>94.4 | 0.9094 | N/A | 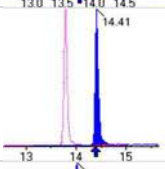 | 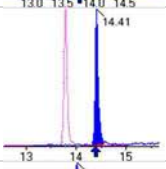 | |
| PFBS | ( 299.0 / 80.0 ) 512751<br>( 299.0 / 99.0 ) 380503 | ( 6.48 , 1.00 ) ( 0.00 , N/A , -0.1) | 2573.7<br>1359.8 | 0.7421<br>104.4<br>104.4 | 0.9019 | N/A | 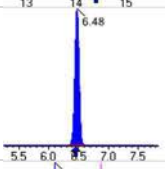 | 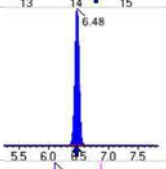 | |
| PFPeS | ( 349.0 / 80.0 ) 1340450<br>( 349.0 / 99.0 ) 474624 | ( 7.73 , 0.88 ) ( N/A , 0.03 , 0.1) | 2054.9<br>1903.1 | 0.3541<br>104.1<br>104.1 | 0.9700 | N/A | 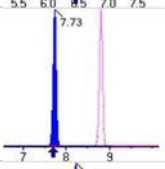 | 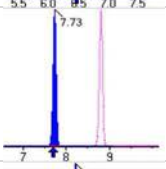 | |
| PFHxS | ( 399.0 / 80.0 ) 1377311<br>( 399.0 / 99.0 ) 455656 | ( 8.81 , 1.00 ) ( 0.00 , N/A , 0.2) | 2505.3<br>5989.5 | 0.3308<br>105.8<br>105.8 | 0.8962 | N/A | 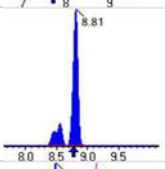 | 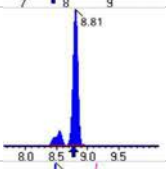 | |
| PFHpS | ( 449.0 / 80.0 ) 1223414<br>( 449.0 / 99.0 ) 317627 | ( 9.78 , 0.92 ) ( N/A , 0.04 , 0.1) | 1978.1<br>1574.7 | 0.2596<br>97.2<br>97.2 | 0.9698 | N/A | 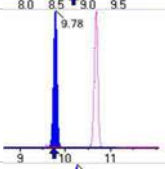 | 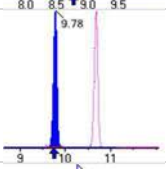 | |
| PFOS | ( 499.0 / 80.0 ) 1168809<br>( 499.0 / 99.0 ) 278995 | ( 10.68 , 1.00 ) ( 0.00 , N/A , -0.1) | 1895.0<br>4434.8 | 0.2387<br>100.9<br>100.9 | 0.9208 | N/A | 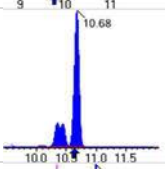 | 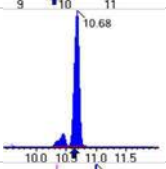 | |
| PFNS | ( 549.0 / 80.0 ) 1266067<br>( 549.0 / 99.0 ) 325636 | ( 11.52 , 1.08 ) ( N/A , 0.03 , -0.1) | 2491.0<br>2087.0 | 0.2572<br>96.8<br>96.8 | 1.0229 | N/A | 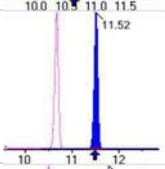 | 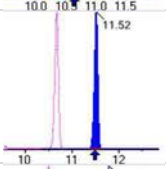 | |
| PFDS | ( 599.0 / 80.0 ) 1471573<br>( 599.0 / 99.0 ) 388343 | ( 12.19 , 1.14 ) ( N/A , 0.03 , 0.1) | 2343.1<br>1626.9 | 0.2639<br>105.2<br>105.2 | 0.9974 | N/A | 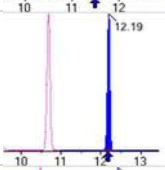 | 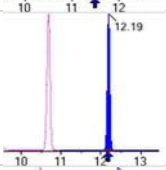 | |
| PFDoS | ( 699.0 / 80.0 ) 1270035<br>( 699.0 / 99.0 ) 292971 | ( 13.09 , 1.23 ) ( N/A , 0.03 , 0.0) | 3083.8<br>1775.3 | 0.2307<br>100.0<br>100.0 | 1.0074 | N/A | 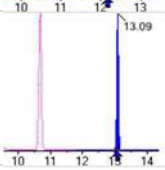 | 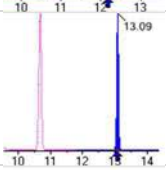 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1189216<br>( 327.0 / 81.0 ) 1045131 | ( 5.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 4319.4<br>3072.5 | 0.8788<br>100.3<br>100.3 | 3.9766 | N/A | 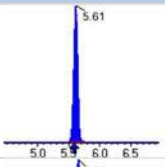 | 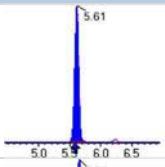 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1202168<br>( 427.0 / 81.0 ) 1500552 | ( 7.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 3476.9<br>3155.6 | 1.2482<br>98.2<br>98.2 | 3.9585 | N/A | 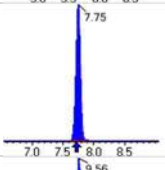 | 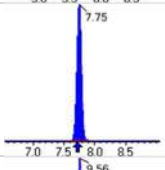 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1431110<br>( 527.0 / 81.0 ) 1398272 | ( 9.56 , 1.00 ) ( -0.01 , N/A , 0.1) | 1337.7<br>1454.3 | 0.9771<br>103.0<br>103.0 | 4.1726 | N/A | 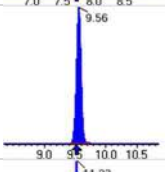 | 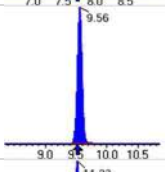 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1198194<br>( 627.0 / 81.0 ) 1672583 | ( 11.23 , 1.00 ) ( 0.01 , N/A , 0.0) | 1205.6<br>916.8 | 1.3959<br>103.3<br>103.3 | 3.7187 | N/A | 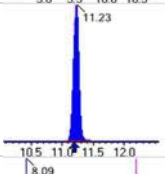 | 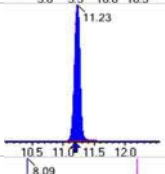 | |
| PFBSA | ( 297.9 / 78.0 ) 1015134<br>( 297.9 / 278.0 ) 1168 | ( 8.09 , 0.57 ) ( N/A , 0.03 , -0.1) | 1173.2<br>26.0 | 0.0012<br>81.9<br>81.9 | 1.0586 | N/A | 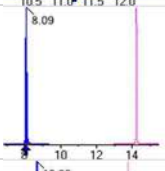 | 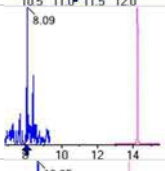 | |
| PFHxSA | ( 397.9 / 78.0 ) 1322546<br>( 397.9 / 378.0 ) 5197 | ( 10.96 , 0.75 ) ( N/A , 0.03 , 0.4) | 1583.9<br>115.0 | 0.0039<br>103.2<br>103.2 | 1.0213 | N/A | 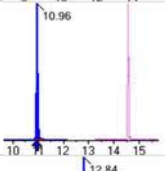 | 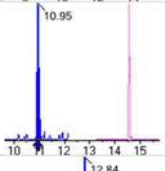 | |
| PFOSA | ( 498.0 / 78.0 ) 1198508<br>( 498.0 / 478.0 ) 17170 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.1) | 2052.8<br>451.2 | 0.0143<br>99.3<br>99.3 | 1.0190 | N/A | 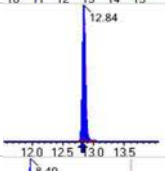 | 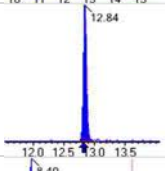 | |
| TFSI | ( 279.7 / 147.0 ) 2545387<br>( 279.7 / 211.0 ) 214730 | ( 8.40 , 0.65 ) ( N/A , 0.04 , 0.1) | 55.2<br>50.8 | 0.0844<br>102.3<br>102.3 | 1.0180 | N/A | 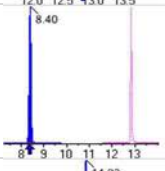 | 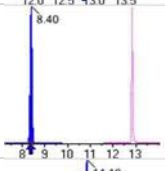 | |
| NMeFOSA | ( 512.0 / 219.0 ) 886837<br>( 512.0 / 169.0 ) 642807 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.0) | 2828.3<br>1325.1 | 0.7248<br>98.6<br>98.6 | 4.2219 | N/A | 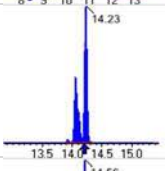 | 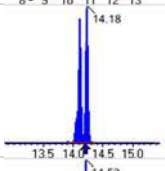 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1114931<br>( 526.0 / 169.0 ) 1406540 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 1.9) | 3659.4<br>3014.4 | 1.2615<br>99.6<br>99.6 | 4.0243 | N/A | 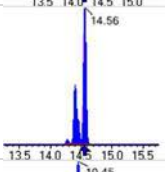 | 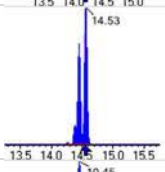 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 259677<br>( 570.0 / 483.0 ) 124103 | ( 10.45 , 1.00 ) ( 0.00 , N/A , -0.2) | 509.2<br>568.4 | 0.4779<br>110.4<br>110.4 | 0.9417 | N/A | 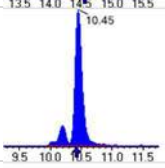 | 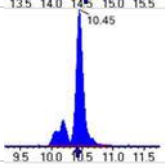 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 263370<br>( 584.0 / 526.0 ) 158943 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1352.2<br>485.9 | 0.6035<br>97.5<br>97.5 | 1.0020 | N/A | 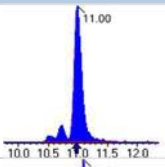 | 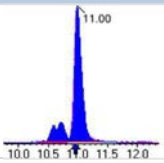 | |
| NMeFOSE | ( 616.0 / 59.0 ) 479403 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1618.1 | N/A<br>0.0<br>0.0 | 4.1809 | N/A | 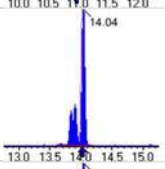 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 443936 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 2129.4 | N/A<br>0.0<br>0.0 | 4.1469 | N/A | 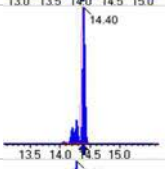 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 81256<br>( 285.0 / 185.0 ) 261962 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1184.7<br>1438.3 | 3.2239<br>103.5<br>103.5 | 0.9826 | N/A | 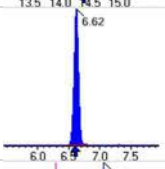 | 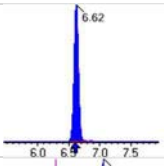 | |
| ADONA | ( 377.0 / 85.0 ) 1054309<br>( 377.0 / 251.0 ) 113162 | ( 7.71 , 1.16 )<br>( N/A , 0.03 , 0.2) | 1731.0<br>813.0 | 0.1073<br>100.7<br>100.7 | 1.0011 | N/A | 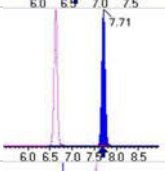 | 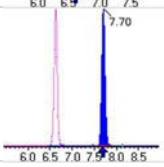 | |
| PFMPA | ( 229.0 / 85.0 ) 190593 | ( 4.22 , 0.86 )<br>( N/A , 0.03 , 0.0) | 3471.4 | N/A<br>0.0<br>0.0 | 2.0726 | N/A | 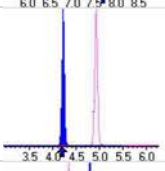 | | |
| PFMBA | ( 279.0 / 85.0 ) 509395 | ( 5.30 , 1.08 )<br>( N/A , 0.03 , 0.0) | 3490.1 | N/A<br>0.0<br>0.0 | 2.0929 | N/A | 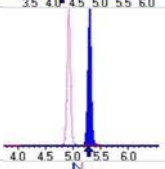 | | |
| NFDHA | ( 295.0 / 201.0 ) 242543<br>( 295.0 / 85.0 ) 246492 | ( 6.02 , 0.98 )<br>( N/A , 0.02 , 0.1) | 2487.6<br>1958.5 | 1.0163<br>94.0<br>94.0 | 2.1146 | N/A | 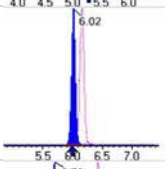 | 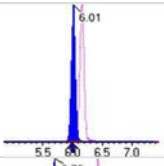 | |
| PFECHS | ( 461.0 / 98.9 ) 673717<br>( 461.0 / 381.2 ) 256956 | ( 9.70 , 0.91 )<br>( N/A , 0.03 , 0.0) | 3406.4<br>3344.4 | 0.3814<br>97.7<br>97.7 | 0.9412 | N/A | 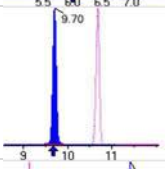 | 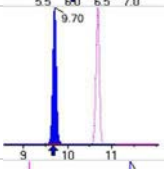 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1267391<br>( 533.0 / 353.0 ) 404449 | ( 11.33 , 1.71 )<br>( N/A , 0.03 , 0.0) | 2736.4<br>1979.9 | 0.3191<br>99.3<br>99.3 | 0.9752 | N/A | 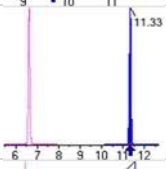 | 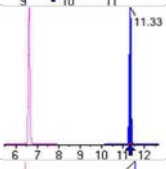 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1035128<br>( 633.0 / 453.0 ) 356304 | ( 12.59 , 1.90 )<br>( N/A , 0.03 , -0.1) | 2900.8<br>2755.5 | 0.3442<br>105.4<br>105.4 | 1.0168 | N/A | 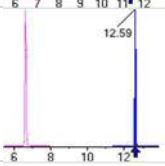 | 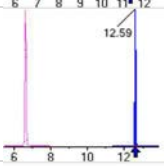 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 444787<br>( 315.0 / 83.0 ) 281789 | ( 7.08 , 1.15 )<br>( N/A , 0.03 , 0.0) | 2108.1<br>1019.0 | 0.6335<br>110.6<br>110.6 | 1.7923 | N/A | 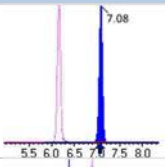 | 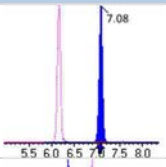 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 56590<br>( 241.0 / 117.0 ) 130386 | ( 4.45 , 0.90 )<br>( N/A , 0.03 , 0.2) | 984.1<br>493.6 | 2.3041<br>103.8<br>103.8 | 4.0105 | N/A | 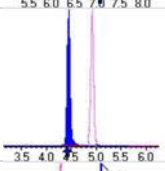 | 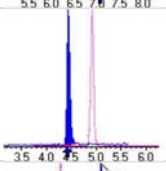 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 329958<br>( 341.0 / 217.0 ) 491130 | ( 7.02 , 1.14 )<br>( N/A , 0.03 , 0.1) | 1035.3<br>923.0 | 1.4885<br>99.4<br>99.4 | 4.1261 | N/A | 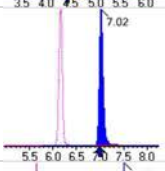 | 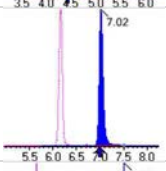 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 476429<br>( 441.0 / 337.0 ) 398092 | ( 9.44 , 1.53 )<br>( N/A , 0.03 , 0.0) | 3726.9<br>7336.1 | 0.8356<br>93.9<br>93.9 | 4.0499 | N/A | 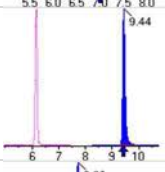 | 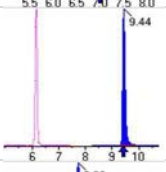 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 331465<br>( 357.2 / 243.0 ) 34187 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , -0.1) | 974.1<br>303.3 | 0.1031<br>97.7<br>97.7 | 0.9901 | N/A | 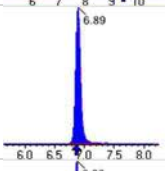 | 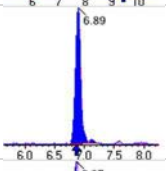 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 244506<br>( 457.2 / 343.0 ) 10166 | ( 8.98 , 1.00 )<br>( -0.01 , N/A , 0.6) | 683.8<br>240.6 | 0.0416<br>106.3<br>106.3 | 0.9893 | N/A | 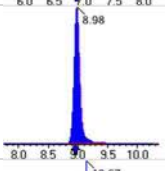 | 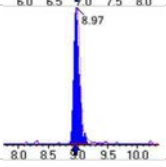 | |
| TDCA | ( 499.0 / 80.0 ) 871639 | ( 10.67 , 1.00 )<br>( N/A , 0.03 , 0.0) | 7745.0 | N/A<br>0.0<br>0.0 | 1.0105 | N/A | 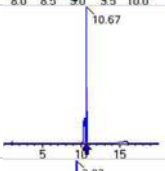 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 334919 | ( 3.83 , N/A )<br>( N/A , 0.03 , N/A ) | 1399.0 | N/A | 1.1118<br>[ 1.0000 ] | 111.2%<br>{ 110.5% } | 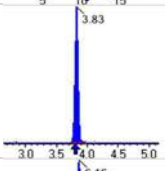 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 159043 | ( 6.16 , N/A )<br>( N/A , 0.02 , N/A ) | 24519.8 | N/A | 1.0343<br>[ 1.0000 ] | 103.4%<br>{ 96.4% } | 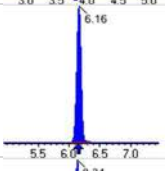 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 482772 | ( 8.34 , N/A )<br>( N/A , 0.03 , N/A ) | 3154.8 | N/A | 1.0821<br>[ 1.0000 ] | 108.2%<br>{ 106.2% } | 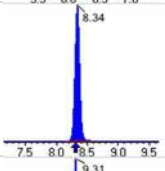 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 369101 | ( 9.31 , N/A )<br>( N/A , 0.03 , N/A ) | 1133.1 | N/A | 1.1041<br>[ 1.0000 ] | 110.4%<br>{ 113.3% } | 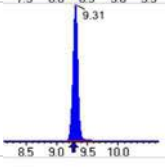 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 364723 | ( 10.22 , N/A ) ( N/A , 0.03 , N/A ) | 7515.0 | N/A | 1.0998 [ 1.0000 ] | 110.0% { 107.3% } | 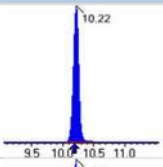  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1202697 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 4335.0 | N/A | 1.0763 [ 1.0000 ] | 107.6% { 105.5% } | 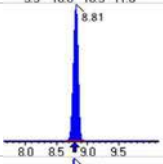  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1101241 | ( 10.68 , N/A ) ( N/A , 0.03 , N/A ) | 3170.9 | N/A | 1.1281 [ 1.0000 ] | 112.8% { 110.6% } | 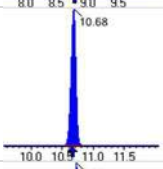  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2908654 | ( 3.82 , N/A ) ( N/A , 0.03 , N/A ) | 61466.5 | N/A | 7.8754 [ 8.0000 ] | 98.4% { 109.5% } | 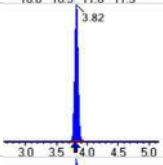  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1141238 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 5291.6 | N/A | 3.9999 [ 4.0000 ] | 100.0% { 98.5% } | 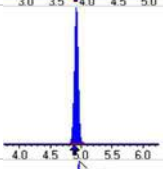  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 681059 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 7693.9 | N/A | 1.9944 [ 2.0000 ] | 99.7% { 99.5% } | 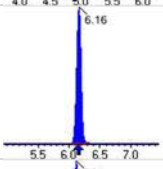  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 741498 | ( 7.32 , N/A ) ( N/A , 0.03 , N/A ) | 6936.5 | N/A | 2.0790 [ 2.0000 ] | 104.0% { 105.2% } | 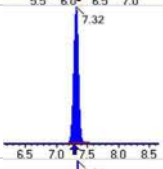  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 969992 | ( 8.34 , N/A ) ( N/A , 0.03 , N/A ) | 3350.5 | N/A | 1.9056 [ 2.0000 ] | 95.3% { 101.7% } | 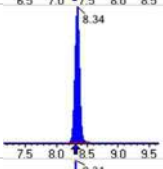  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 314850 | ( 9.31 , N/A ) ( N/A , 0.03 , N/A ) | 3265.2 | N/A | 0.8834 [ 1.0000 ] | 88.3% { 101.3% } | 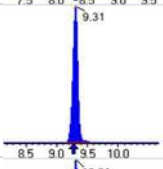  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 401889 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 1190.9 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 104.4% } | 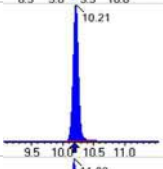  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 483647 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 940.7 | N/A | 0.9452 [ 1.0000 ] | 94.5% { 97.2% } | 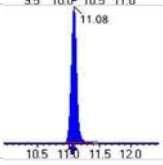  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 462842 | ( 11.90 , N/A ) ( N/A , 0.04 , N/A ) | 1233.1 | N/A | 0.9007 [ 1.0000 ] | 90.1% { 92.8% } | 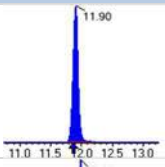  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 418674 | ( 12.99 , N/A ) ( N/A , 0.03 , N/A ) | 1347.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 98.7% } | 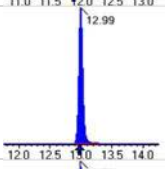  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 779866 | ( 13.79 , N/A ) ( N/A , 0.02 , N/A ) | 3224.9 | N/A | 2.0504 [ 2.0000 ] | 102.5% { 110.1% } | 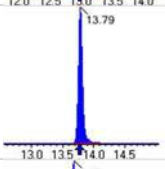  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2186633 | ( 6.48 , N/A ) ( N/A , 0.03 , N/A ) | 1297.4 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 94.7% } | 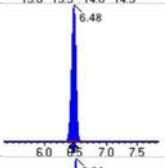  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1735528 | ( 8.81 , N/A ) ( N/A , 0.03 , N/A ) | 5114.4 | N/A | 1.9720 [ 2.0000 ] | 98.6% { 105.5% } | 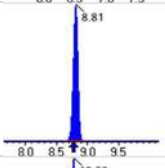  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2195983 | ( 10.68 , N/A ) ( N/A , 0.04 , N/A ) | 1375.4 | N/A | 1.8731 [ 2.0000 ] | 93.7% { 104.5% } | 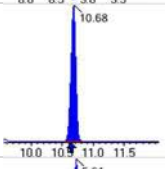  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 444248 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 88.3 | N/A | 4.2417 [ 4.0000 ] | 106.0% { 123.5% } | 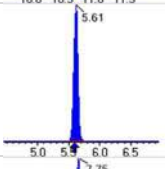  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1367408 | ( 7.75 , N/A ) ( N/A , 0.03 , N/A ) | 3658.9 | N/A | 4.2043 [ 4.0000 ] | 105.1% { 127.3% } | 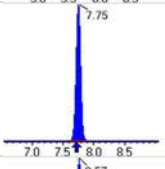  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1384682 | ( 9.57 , N/A ) ( N/A , 0.03 , N/A ) | 1244.0 | N/A | 4.2733 [ 4.0000 ] | 106.8% { 118.9% } | 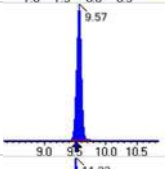  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3132754 | ( 11.22 , N/A ) ( N/A , 0.04 , N/A ) | 1243.0 | N/A | 8.4225 [ 8.0000 ] | 105.3% { 125.1% } | 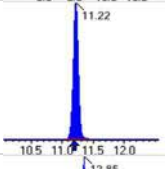  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2410276 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2087.1 | N/A | 1.8972 [ 2.0000 ] | 94.9% { 103.5% } | 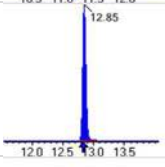  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (3)
Acquired: 2024/03/12 - 19:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 417102 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 3490.5 | N/A | 1.7780 [ 2.0000 ] | 88.9% { 98.5% } | 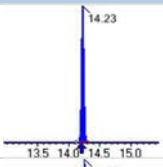  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 504968 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2723.4 | N/A | 1.8739 [ 2.0000 ] | 93.7% { 101.6% } | 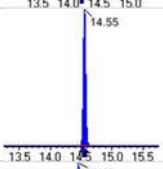  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1171210 | ( 10.45 , N/A ) ( N/A , 0.04 , N/A ) | 3279.5 | N/A | 3.9011 [ 4.0000 ] | 97.5% { 108.3% } | 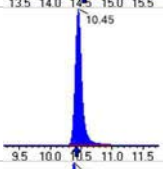  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1089970 | ( 10.99 , N/A ) ( N/A , 0.04 , N/A ) | 1553.4 | N/A | 3.8246 [ 4.0000 ] | 95.6% { 104.0% } | 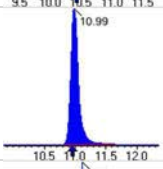  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2025755 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2600.8 | N/A | 18.4803 [ 20.0000 ] | 92.4% { 107.6% } | 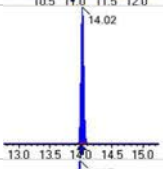  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2423173 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5098.6 | N/A | 18.2482 [ 20.0000 ] | 91.2% { 102.7% } | 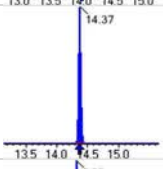  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1165366 | ( 6.63 , N/A ) ( N/A , 0.02 , N/A ) | 1867.0 | N/A | 7.9393 [ 8.0000 ] | 99.2% { 102.7% } | 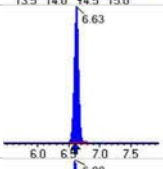  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 622901 | ( 6.90 , N/A ) ( N/A , 0.02 , N/A ) | 949.0 | N/A | 1.9256 [ 2.0000 ] | 96.3% { 106.3% } | 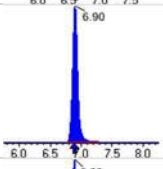  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 586096 | ( 8.99 , N/A ) ( N/A , 0.04 , N/A ) | 731.2 | N/A | 1.9407 [ 2.0000 ] | 97.0% { 103.9% } | 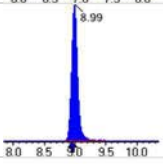  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1192766<br>( 163.0 / 69.0 ) 30696 | ( 2.82 , 0.74 )<br>( N/A , 0.01 , 0.0) | 7360.2<br>1436.6 | 0.0257<br>102.7<br>102.7 | 3.9928 | N/A | 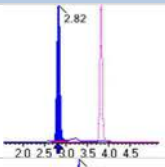 | 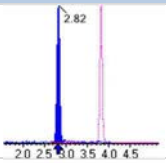 | |
| PFBA | ( 213.0 / 169.0 ) 2619162 | ( 3.81 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4598.2 | N/A<br>0.0<br>0.0 | 8.1991 | N/A | 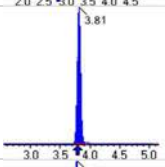 | | |
| PFPeA | ( 263.0 / 219.0 ) 1144181<br>( 263.0 / 69.0 ) 14596 | ( 4.92 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3363.5<br>252.6 | 0.0128<br>116.2<br>116.2 | 3.9714 | N/A | 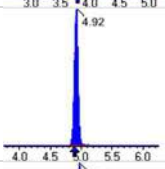 | 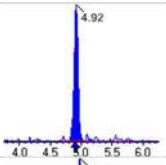 | |
| PFHxA | ( 313.0 / 269.0 ) 651995<br>( 313.0 / 119.0 ) 74725 | ( 6.17 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2066.1<br>806.7 | 0.1146<br>103.1<br>103.1 | 2.0746 | N/A | 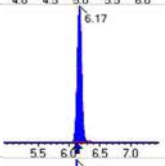 | 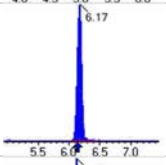 | |
| PFHpA | ( 363.0 / 319.0 ) 684849<br>( 363.0 / 169.0 ) 212071 | ( 7.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1361.8<br>1077.8 | 0.3097<br>99.4<br>99.4 | 2.1093 | N/A | 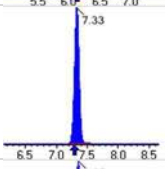 | 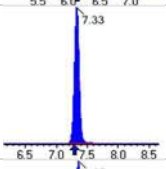 | |
| PFOA | ( 413.0 / 369.0 ) 915234<br>( 413.0 / 169.0 ) 343403 | ( 8.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 820.8<br>1166.4 | 0.3752<br>103.7<br>103.7 | 1.9107 | N/A | 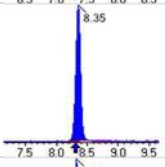 | 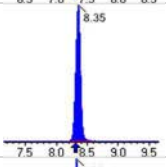 | |
| PFNA | ( 463.0 / 419.0 ) 650157<br>( 463.0 / 169.0 ) 169103 | ( 9.32 , 1.00 )<br>( 0.00 , N/A , 0.0) | 953.7<br>754.7 | 0.2601<br>99.1<br>99.1 | 1.9288 | N/A | 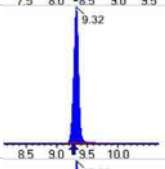 | 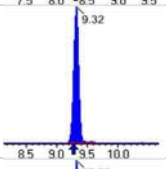 | |
| PFDA | ( 513.0 / 469.0 ) 764087<br>( 513.0 / 169.0 ) 89045 | ( 10.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2369.9<br>6644.6 | 0.1165<br>99.3<br>99.3 | 1.9479 | N/A | 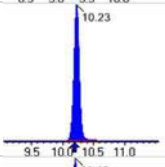 | 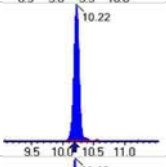 | |
| PFUnA | ( 563.0 / 519.0 ) 881450<br>( 563.0 / 169.0 ) 129776 | ( 11.10 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1124.1<br>790.8 | 0.1472<br>99.4<br>99.4 | 1.9871 | N/A | 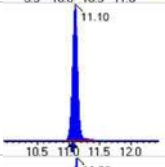 | 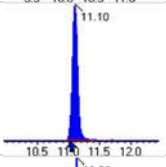 | |
| PFDoA | ( 613.0 / 569.0 ) 961447<br>( 613.0 / 169.0 ) 149773 | ( 11.92 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1394.5<br>984.7 | 0.1558<br>98.5<br>98.5 | 2.0919 | N/A | 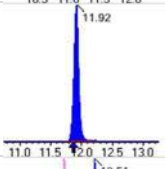 | 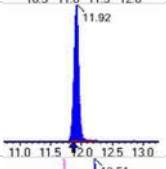 | |
| PFTrDA | ( 663.0 / 619.0 ) 925673<br>( 663.0 / 169.0 ) 238189 | ( 12.51 , 1.05 )<br>( N/A , 0.04 , 0.0) | 1175.4<br>1106.1 | 0.2573<br>95.5<br>95.5 | 2.0949 | N/A | 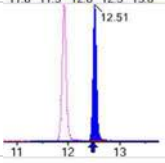 | 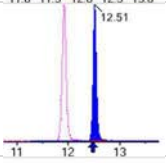 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 789614<br>( 713.0 / 169.0 ) 196961 | ( 13.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1525.6<br>728.6 | 0.2494<br>95.9<br>95.9 | 2.0854 | N/A | 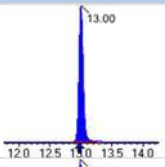 | 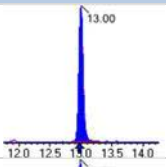 | |
| PFHxDA | ( 813.0 / 769.0 ) 686456<br>( 813.0 / 169.0 ) 163993 | ( 13.79 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1551.4<br>876.9 | 0.2389<br>110.1<br>110.1 | 1.9988 | N/A | 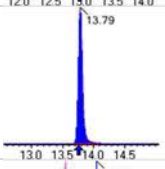 | 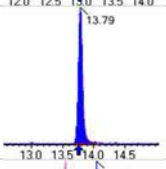 | |
| PFODA | ( 913.0 / 869.0 ) 473575<br>( 913.0 / 169.0 ) 163980 | ( 14.41 , 1.05 )<br>( N/A , 0.03 , -0.1) | 1363.7<br>708.9 | 0.3463<br>90.6<br>90.6 | 2.0523 | N/A | 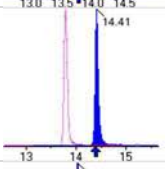 | 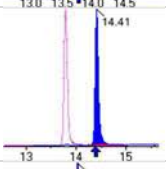 | |
| PFBS | ( 299.0 / 80.0 ) 1016211<br>( 299.0 / 99.0 ) 716732 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2704.7<br>1896.9 | 0.7053<br>99.2<br>99.2 | 1.7932 | N/A | 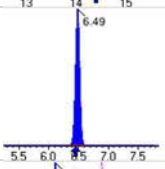 | 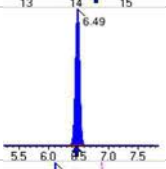 | |
| PFPeS | ( 349.0 / 80.0 ) 2622602<br>( 349.0 / 99.0 ) 894077 | ( 7.74 , 0.88 )<br>( N/A , 0.04 , -0.1) | 2816.5<br>2245.2 | 0.3409<br>100.2<br>100.2 | 2.0635 | N/A | 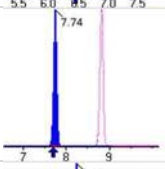 | 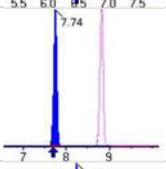 | |
| PFHxS | ( 399.0 / 80.0 ) 2694227<br>( 399.0 / 99.0 ) 874878 | ( 8.82 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3518.0<br>5529.2 | 0.3247<br>103.8<br>103.8 | 1.9063 | N/A | 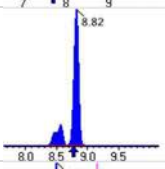 | 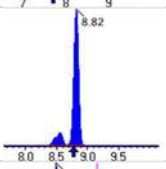 | |
| PFHpS | ( 449.0 / 80.0 ) 2314127<br>( 449.0 / 99.0 ) 623358 | ( 9.80 , 0.92 )<br>( N/A , 0.05 , 0.2) | 1890.4<br>1605.5 | 0.2694<br>100.8<br>100.8 | 2.0446 | N/A | 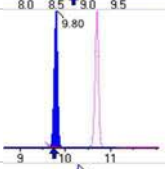 | 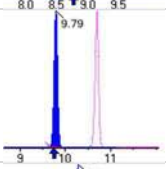 | |
| PFOS | ( 499.0 / 80.0 ) 2231365<br>( 499.0 / 99.0 ) 527855 | ( 10.69 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2239.5<br>11894.3 | 0.2366<br>100.0<br>100.0 | 1.9595 | N/A | 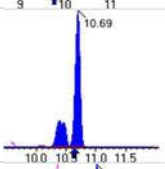 | 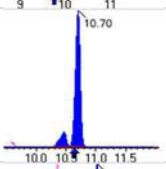 | |
| PFNS | ( 549.0 / 80.0 ) 2370352<br>( 549.0 / 99.0 ) 610267 | ( 11.54 , 1.08 )<br>( N/A , 0.05 , -0.2) | 2618.3<br>2854.3 | 0.2575<br>96.9<br>96.9 | 2.1346 | N/A | 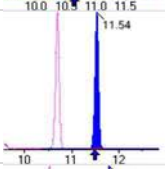 | 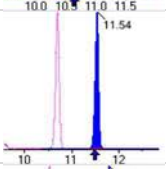 | |
| PFDS | ( 599.0 / 80.0 ) 2814247<br>( 599.0 / 99.0 ) 746124 | ( 12.21 , 1.14 )<br>( N/A , 0.04 , 0.0) | 2777.1<br>2163.0 | 0.2651<br>105.7<br>105.7 | 2.1262 | N/A | 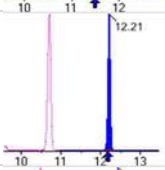 | 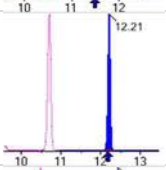 | |
| PFDoS | ( 699.0 / 80.0 ) 2408642<br>( 699.0 / 99.0 ) 553330 | ( 13.09 , 1.22 )<br>( N/A , 0.03 , 0.0) | 4354.8<br>2728.1 | 0.2297<br>99.6<br>99.6 | 2.1297 | N/A | 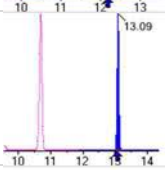 | 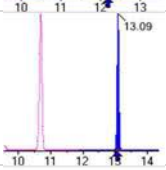 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2088900<br>( 327.0 / 81.0 ) 1849173 | ( 5.62 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5156.9<br>3365.6 | 0.8852<br>101.0<br>101.0 | 7.4640 | N/A | 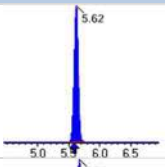 | 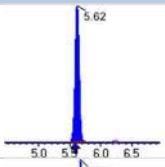 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2120725<br>( 427.0 / 81.0 ) 2578247 | ( 7.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4279.1<br>3420.2 | 1.2157<br>95.7<br>95.7 | 7.7701 | N/A | 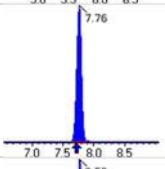 | 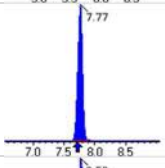 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2622268<br>( 527.0 / 81.0 ) 2640248 | ( 9.58 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1702.1<br>1794.5 | 1.0069<br>106.2<br>106.2 | 8.0740 | N/A | 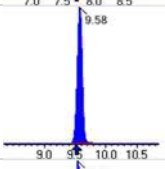 | 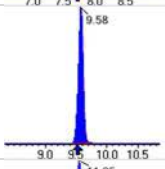 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2297999<br>( 627.0 / 81.0 ) 3060459 | ( 11.24 , 1.00 )<br>( 0.01 , N/A , -0.3) | 1321.6<br>1107.1 | 1.3318<br>98.5<br>98.5 | 7.7053 | N/A | 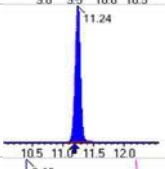 | 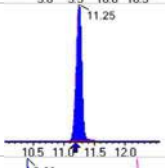 | |
| PFBSA | ( 297.9 / 78.0 ) 2012058<br>( 297.9 / 278.0 ) 2356 | ( 8.10 , 0.57 )<br>( N/A , 0.04 , -0.6) | 1618.0<br>38.8 | 0.0012<br>83.4<br>83.4 | 2.2464 | N/A | 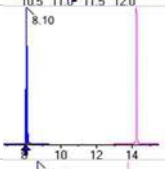 | 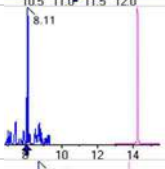 | |
| PFHxSA | ( 397.9 / 78.0 ) 2477197<br>( 397.9 / 378.0 ) 12448 | ( 10.98 , 0.75 )<br>( N/A , 0.05 , -0.1) | 1137.5<br>293.6 | 0.0050<br>132.0<br>132.0 | 2.0703 | N/A | 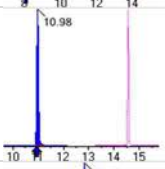 | 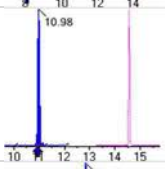 | |
| PFOSA | ( 498.0 / 78.0 ) 2382790<br>( 498.0 / 478.0 ) 33562 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2468.5<br>717.2 | 0.0141<br>97.6<br>97.6 | 2.1050 | N/A | 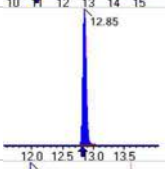 | 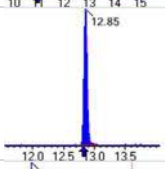 | |
| TFSI | ( 279.7 / 147.0 ) 5007205<br>( 279.7 / 211.0 ) 424277 | ( 8.41 , 0.65 )<br>( N/A , 0.05 , 0.1) | 62.8<br>60.0 | 0.0847<br>102.7<br>102.7 | 2.0807 | N/A | 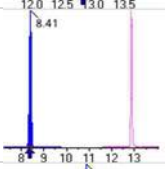 | 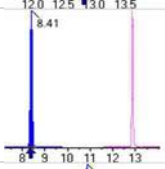 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1749980<br>( 512.0 / 169.0 ) 1299362 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.0) | 3106.0<br>1058.1 | 0.7425<br>101.0<br>101.0 | 8.9196 | N/A | 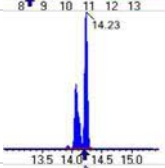 | 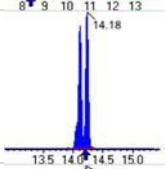 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2160938<br>( 526.0 / 169.0 ) 2761580 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3906.8<br>3197.4 | 1.2780<br>100.9<br>100.9 | 8.4413 | N/A | 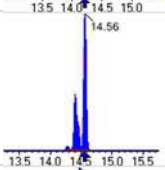 | 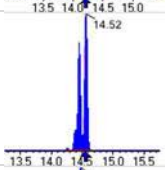 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 504995<br>( 570.0 / 483.0 ) 229734 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2294.9<br>1724.6 | 0.4549<br>105.1<br>105.1 | 2.0006 | N/A | 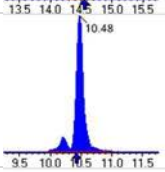 | 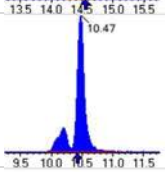 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 493083<br>( 584.0 / 526.0 ) 302551 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.1) | 2634.7<br>666.2 | 0.6136<br>99.1<br>99.1 | 2.0274 | N/A | 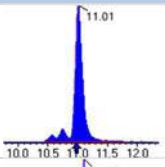 | 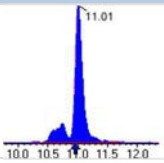 | |
| NMeFOSE | ( 616.0 / 59.0 ) 918411 | ( 14.05 , 1.00 ) ( 0.02 , N/A , 0.0) | 2116.6 | N/A<br>0.0<br>0.0 | 8.1742 | N/A | 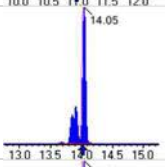 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 854995 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 2966.2 | N/A<br>0.0<br>0.0 | 7.8835 | N/A | 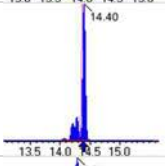 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 151391<br>( 285.0 / 185.0 ) 504958 | ( 6.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 1472.1<br>1614.7 | 3.3355<br>107.0<br>107.0 | 1.8568 | N/A | 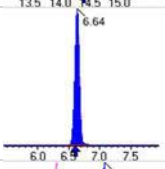 | 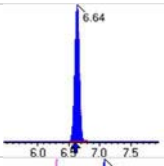 | |
| ADONA | ( 377.0 / 85.0 ) 2020002<br>( 377.0 / 251.0 ) 210829 | ( 7.72 , 1.16 ) ( N/A , 0.05 , 0.2) | 1688.7<br>1047.7 | 0.1044<br>97.9<br>97.9 | 1.9454 | N/A | 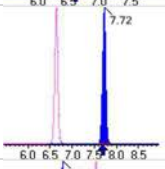 | 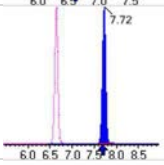 | |
| PFMPA | ( 229.0 / 85.0 ) 367437 | ( 4.21 , 0.86 ) ( N/A , 0.02 , 0.0) | 4251.4 | N/A<br>0.0<br>0.0 | 4.0283 | N/A | 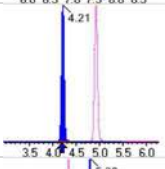 | | |
| PFMBA | ( 279.0 / 85.0 ) 949637 | ( 5.30 , 1.08 ) ( N/A , 0.03 , 0.0) | 5581.6 | N/A<br>0.0<br>0.0 | 3.9334 | N/A | 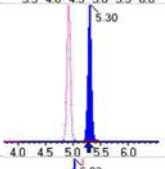 | | |
| NFDHA | ( 295.0 / 201.0 ) 454277<br>( 295.0 / 85.0 ) 518489 | ( 6.03 , 0.98 ) ( N/A , 0.03 , 0.0) | 2806.5<br>2289.3 | 1.1414<br>105.5<br>105.5 | 4.1581 | N/A | 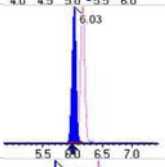 | 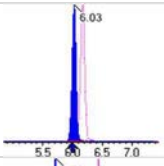 | |
| PFECHS | ( 461.0 / 98.9 ) 1208151<br>( 461.0 / 381.2 ) 513039 | ( 9.72 , 0.91 ) ( N/A , 0.05 , 0.0) | 4199.3<br>4547.3 | 0.4246<br>108.8<br>108.8 | 1.8814 | N/A | 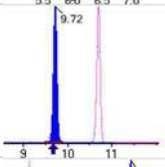 | 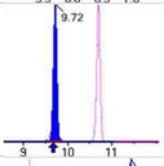 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 2411929<br>( 533.0 / 353.0 ) 810272 | ( 11.35 , 1.71 ) ( N/A , 0.05 , 0.0) | 2782.3<br>2421.8 | 0.3359<br>104.5<br>104.5 | 1.8823 | N/A | 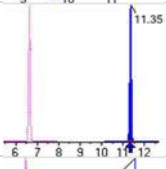 | 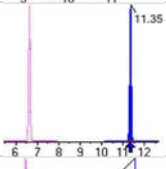 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1906502<br>( 633.0 / 453.0 ) 634584 | ( 12.60 , 1.90 ) ( N/A , 0.04 , 0.0) | 3389.8<br>2328.6 | 0.3329<br>101.9<br>101.9 | 1.8995 | N/A | 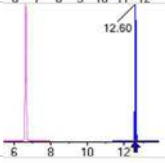 | 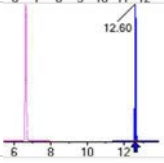 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 924297<br>( 315.0 / 83.0 ) 495246 | ( 7.09 , 1.15 )<br>( N/A , 0.04 , 0.1) | 2671.6<br>1353.1 | 0.5358<br>93.5<br>93.5 | 3.9103 | N/A | 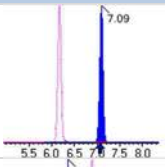 | 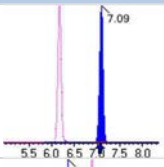 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 104621<br>( 241.0 / 117.0 ) 247496 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , -0.1) | 1617.9<br>840.6 | 2.3656<br>106.6<br>106.6 | 7.4748 | N/A | 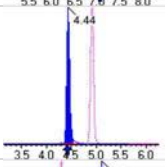 | 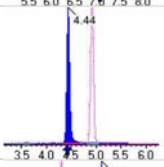 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 659083<br>( 341.0 / 217.0 ) 973555 | ( 7.03 , 1.14 )<br>( N/A , 0.04 , 0.0) | 1145.6<br>1150.2 | 1.4771<br>98.7<br>98.7 | 8.6528 | N/A | 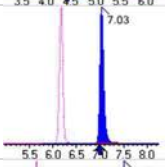 | 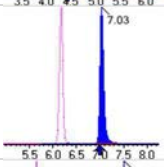 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 900697<br>( 441.0 / 337.0 ) 812428 | ( 9.46 , 1.53 )<br>( N/A , 0.05 , 0.0) | 4896.4<br>36251.7 | 0.9020<br>101.3<br>101.3 | 8.0383 | N/A | 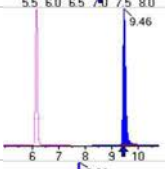 | 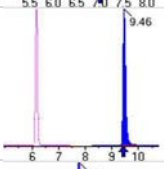 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 643408<br>( 357.2 / 243.0 ) 70965 | ( 6.91 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1339.3<br>459.1 | 0.1103<br>104.5<br>104.5 | 2.0795 | N/A | 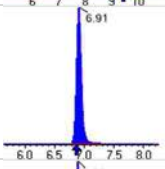 | 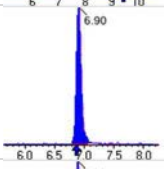 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 491480<br>( 457.2 / 343.0 ) 19210 | ( 8.99 , 1.00 )<br>( -0.01 , N/A , 0.2) | 760.7<br>219.5 | 0.0391<br>99.9<br>99.9 | 2.1727 | N/A | 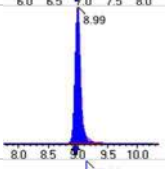 | 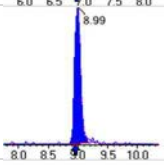 | |
| TDCA | ( 499.0 / 80.0 ) 1687279 | ( 10.69 , 1.00 )<br>( N/A , 0.05 , 0.0) | 15998.8 | N/A<br>0.0<br>0.0 | 2.1803 | N/A | 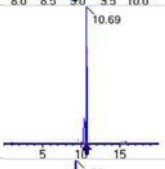 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 295986 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1248.7 | N/A | 0.9825<br>[ 1.0000 ] | 98.3%<br>{ 97.6% } | 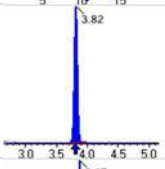 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 149378 | ( 6.17 , N/A )<br>( N/A , 0.04 , N/A ) | 119082.3 | N/A | 0.9715<br>[ 1.0000 ] | 97.1%<br>{ 90.5% } | 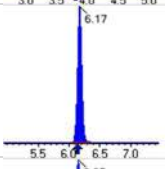 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 425892 | ( 8.35 , N/A )<br>( N/A , 0.04 , N/A ) | 3638.8 | N/A | 0.9546<br>[ 1.0000 ] | 95.5%<br>{ 93.7% } | 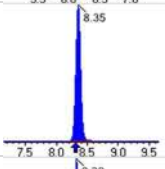 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317861 | ( 9.32 , N/A )<br>( N/A , 0.05 , N/A ) | 1164.1 | N/A | 0.9508<br>[ 1.0000 ] | 95.1%<br>{ 97.5% } | 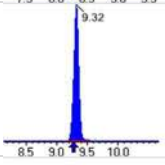 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 327849 | ( 10.23 , N/A ) ( N/A , 0.05 , N/A ) | 8291.8 | N/A | 0.9886 [ 1.0000 ] | 98.9% { 96.4% } | 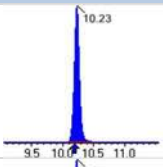 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1069801 | ( 8.82 , N/A ) ( N/A , 0.05 , N/A ) | 4716.7 | N/A | 0.9574 [ 1.0000 ] | 95.7% { 93.9% } | 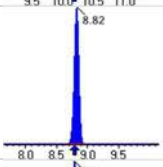 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 941416 | ( 10.70 , N/A ) ( N/A , 0.05 , N/A ) | 3293.9 | N/A | 0.9644 [ 1.0000 ] | 96.4% { 94.6% } | 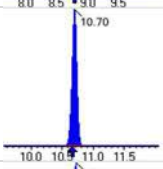 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2701285 | ( 3.81 , N/A ) ( N/A , 0.02 , N/A ) | 56552.0 | N/A | 8.2759 [ 8.0000 ] | 103.4% { 101.7% } | 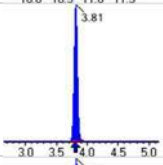 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1132032 | ( 4.92 , N/A ) ( N/A , 0.03 , N/A ) | 5141.1 | N/A | 4.2243 [ 4.0000 ] | 105.6% { 97.7% } | 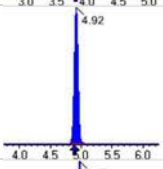 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 648702 | ( 6.17 , N/A ) ( N/A , 0.04 , N/A ) | 6211.3 | N/A | 2.0225 [ 2.0000 ] | 101.1% { 94.7% } | 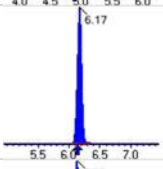 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659326 | ( 7.33 , N/A ) ( N/A , 0.04 , N/A ) | 4612.8 | N/A | 1.9682 [ 2.0000 ] | 98.4% { 93.6% } | 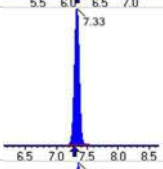 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 942089 | ( 8.35 , N/A ) ( N/A , 0.05 , N/A ) | 3344.2 | N/A | 2.0980 [ 2.0000 ] | 104.9% { 98.8% } | 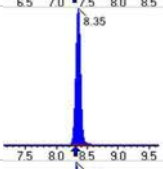 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 336383 | ( 9.32 , N/A ) ( N/A , 0.05 , N/A ) | 2517.4 | N/A | 1.0959 [ 1.0000 ] | 109.6% { 108.2% } | 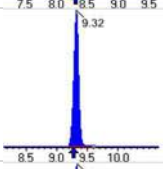 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 393878 | ( 10.23 , N/A ) ( N/A , 0.05 , N/A ) | 1236.8 | N/A | 1.0411 [ 1.0000 ] | 104.1% { 102.3% } | 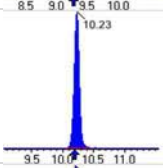 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 475029 | ( 11.11 , N/A ) ( N/A , 0.05 , N/A ) | 1009.6 | N/A | 1.0327 [ 1.0000 ] | 103.3% { 95.5% } | 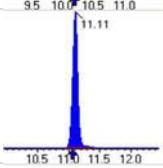 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 449047 | ( 11.92 , N/A ) ( N/A , 0.05 , N/A ) | 1328.0 | N/A | 0.9721 [ 1.0000 ] | 97.2% { 90.0% } | 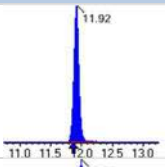 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 398686 | ( 13.00 , N/A ) ( N/A , 0.04 , N/A ) | 1829.1 | N/A | 0.9905 [ 1.0000 ] | 99.1% { 94.0% } | 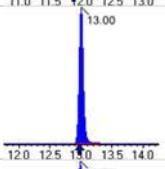 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 711674 | ( 13.79 , N/A ) ( N/A , 0.02 , N/A ) | 3142.8 | N/A | 2.0816 [ 2.0000 ] | 104.1% { 100.5% } | 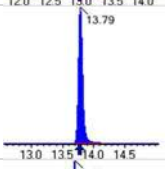 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2179603 | ( 6.49 , N/A ) ( N/A , 0.03 , N/A ) | 1290.4 | N/A | 2.0911 [ 2.0000 ] | 104.6% { 94.4% } | 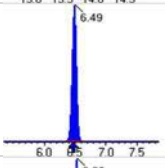 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1596157 | ( 8.82 , N/A ) ( N/A , 0.05 , N/A ) | 6148.5 | N/A | 2.0389 [ 2.0000 ] | 101.9% { 97.0% } | 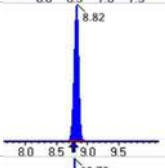 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1970109 | ( 10.70 , N/A ) ( N/A , 0.05 , N/A ) | 1259.7 | N/A | 1.9658 [ 2.0000 ] | 98.3% { 93.8% } | 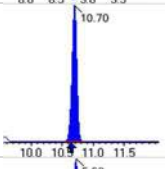 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 415740 | ( 5.62 , N/A ) ( N/A , 0.03 , N/A ) | 87.2 | N/A | 4.4626 [ 4.0000 ] | 111.6% { 115.5% } | 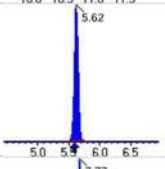 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1228923 | ( 7.77 , N/A ) ( N/A , 0.04 , N/A ) | 3779.8 | N/A | 4.2479 [ 4.0000 ] | 106.2% { 114.4% } | 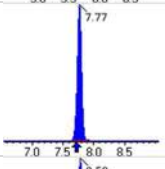 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1311211 | ( 9.58 , N/A ) ( N/A , 0.05 , N/A ) | 1343.1 | N/A | 4.5492 [ 4.0000 ] | 113.7% { 112.6% } | 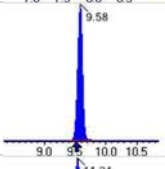 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2899664 | ( 11.24 , N/A ) ( N/A , 0.06 , N/A ) | 1891.9 | N/A | 8.7643 [ 8.0000 ] | 109.6% { 115.8% } | 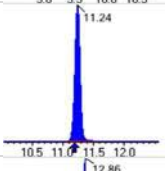 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2319798 | ( 12.86 , N/A ) ( N/A , 0.03 , N/A ) | 1830.7 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 99.6% } | 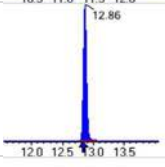 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (4)
Acquired: 2024/03/12 - 19:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 389582 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 2084.1 | N/A | 1.9426 [ 2.0000 ] | 97.1% { 92.0% } | 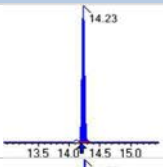 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 466589 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2902.8 | N/A | 2.0255 [ 2.0000 ] | 101.3% { 93.9% } | 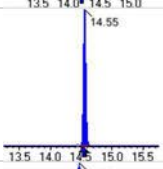 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1072122 | ( 10.47 , N/A ) ( N/A , 0.06 , N/A ) | 2757.6 | N/A | 4.1773 [ 4.0000 ] | 104.4% { 99.2% } | 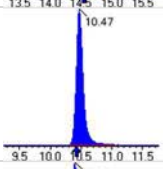 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1008512 | ( 11.00 , N/A ) ( N/A , 0.06 , N/A ) | 1763.4 | N/A | 4.1395 [ 4.0000 ] | 103.5% { 96.2% } | 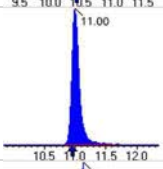 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1984960 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 2836.8 | N/A | 21.1824 [ 20.0000 ] | 105.9% { 105.5% } | 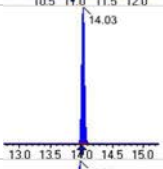 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2454876 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 5979.2 | N/A | 21.6255 [ 20.0000 ] | 108.1% { 104.0% } | 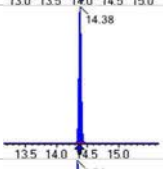 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148987 | ( 6.64 , N/A ) ( N/A , 0.04 , N/A ) | 2506.6 | N/A | 8.3341 [ 8.0000 ] | 104.2% { 101.3% } | 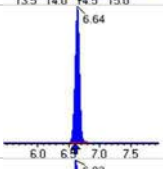 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575717 | ( 6.92 , N/A ) ( N/A , 0.04 , N/A ) | 1216.0 | N/A | 1.9800 [ 2.0000 ] | 99.0% { 98.2% } | 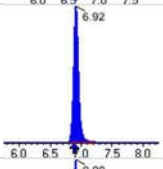 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 536414 | ( 9.00 , N/A ) ( N/A , 0.05 , N/A ) | 794.9 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 95.1% } | 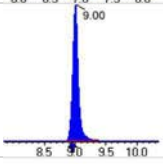 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2896659<br>( 163.0 / 69.0 ) 72613 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.2) | 15036.3<br>3067.3 | 0.0251<br>100.0<br>100.0 | 9.8578 | N/A | 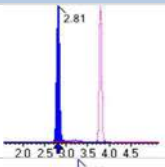 | 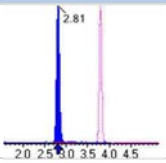 | |
| PFBA | ( 213.0 / 169.0 ) 6141279 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 7081.0 | N/A<br>0.0<br>0.0 | 19.5443 | N/A | 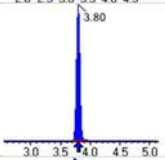 | | |
| PFPeA | ( 263.0 / 219.0 ) 2815339<br>( 263.0 / 69.0 ) 30920 | ( 4.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 5200.9<br>437.8 | 0.0110<br>100.0<br>100.0 | 9.5499 | N/A | 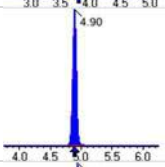 | 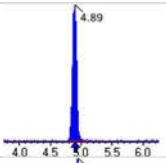 | |
| PFHxA | ( 313.0 / 269.0 ) 1537054<br>( 313.0 / 119.0 ) 170783 | ( 6.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 2942.0<br>1354.1 | 0.1111<br>100.0<br>100.0 | 4.6336 | N/A | 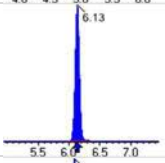 | 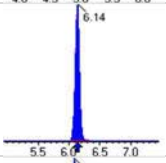 | |
| PFHpA | ( 363.0 / 319.0 ) 1626195<br>( 363.0 / 169.0 ) 506800 | ( 7.29 , 1.00 ) ( 0.00 , N/A , 0.0) | 1520.9<br>1256.4 | 0.3116<br>100.0<br>100.0 | 4.6857 | N/A | 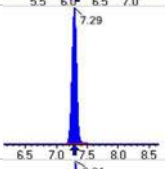 | 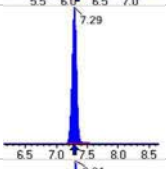 | |
| PFOA | ( 413.0 / 369.0 ) 2241902<br>( 413.0 / 169.0 ) 810969 | ( 8.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1228.2<br>1124.5 | 0.3617<br>100.0<br>100.0 | 4.6236 | N/A | 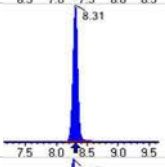 | 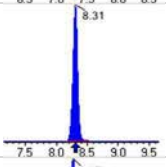 | |
| PFNA | ( 463.0 / 419.0 ) 1548787<br>( 463.0 / 169.0 ) 406513 | ( 9.27 , 1.00 ) ( -0.01 , N/A , 0.0) | 1191.6<br>1069.1 | 0.2625<br>100.0<br>100.0 | 4.9712 | N/A | 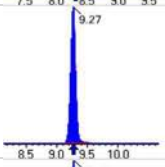 | 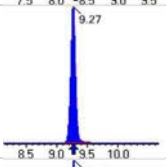 | |
| PFDA | ( 513.0 / 469.0 ) 1768941<br>( 513.0 / 169.0 ) 207647 | ( 10.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 3473.7<br>2696.0 | 0.1174<br>100.0<br>100.0 | 4.6148 | N/A | 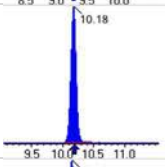 | 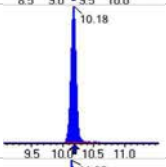 | |
| PFUnA | ( 563.0 / 519.0 ) 2132736<br>( 563.0 / 169.0 ) 315834 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 983.9<br>664.8 | 0.1481<br>100.0<br>100.0 | 4.5923 | N/A | 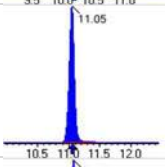 | 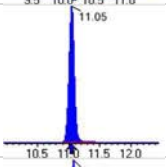 | |
| PFDoA | ( 613.0 / 569.0 ) 2329744<br>( 613.0 / 169.0 ) 368367 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1469.3<br>1190.7 | 0.1581<br>100.0<br>100.0 | 4.5629 | N/A | 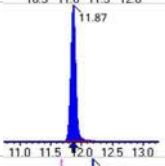 | 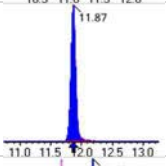 | |
| PFTrDA | ( 663.0 / 619.0 ) 2335306<br>( 663.0 / 169.0 ) 629323 | ( 12.47 , 1.05 ) ( N/A , 0.00 , 0.0) | 1617.7<br>1255.7 | 0.2695<br>100.0<br>100.0 | 4.7571 | N/A | 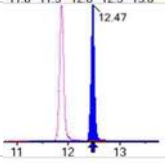 | 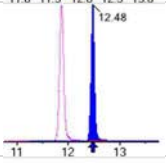 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1893340<br>( 713.0 / 169.0 ) 492228 | ( 12.96 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1540.7<br>1153.6 | 0.2600<br>100.0<br>100.0 | 4.7015 | N/A | 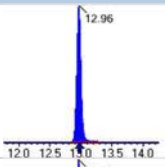 | 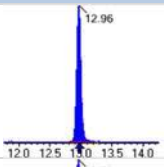 | |
| PFHxDA | ( 813.0 / 769.0 ) 1682359<br>( 813.0 / 169.0 ) 365028 | ( 13.76 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2286.0<br>1135.8 | 0.2170<br>100.0<br>100.0 | 4.9209 | N/A | 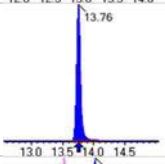 | 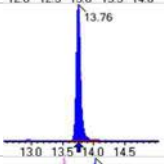 | |
| PFODA | ( 913.0 / 869.0 ) 1040102<br>( 913.0 / 169.0 ) 397315 | ( 14.38 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1613.4<br>1062.5 | 0.3820<br>100.0<br>100.0 | 4.5281 | N/A | 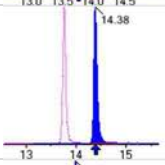 | 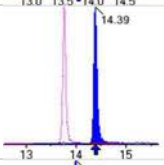 | |
| PFBS | ( 299.0 / 80.0 ) 2470833<br>( 299.0 / 99.0 ) 1756548 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4520.0<br>2789.0 | 0.7109<br>100.0<br>100.0 | 4.1141 | N/A | 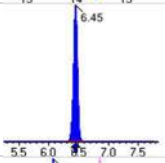 | 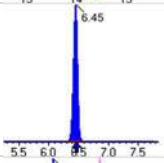 | |
| PFPeS | ( 349.0 / 80.0 ) 6245142<br>( 349.0 / 99.0 ) 2123897 | ( 7.70 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2664.4<br>3558.8 | 0.3401<br>100.0<br>100.0 | 4.7658 | N/A | 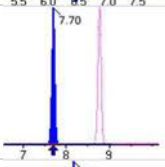 | 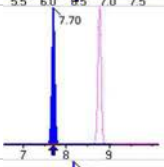 | |
| PFHxS | ( 399.0 / 80.0 ) 6662479<br>( 399.0 / 99.0 ) 2083343 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4634.6<br>7041.2 | 0.3127<br>100.0<br>100.0 | 4.5720 | N/A | 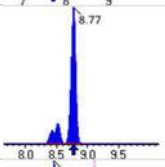 | 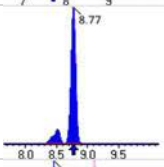 | |
| PFHpS | ( 449.0 / 80.0 ) 5583795<br>( 449.0 / 99.0 ) 1491858 | ( 9.75 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2809.4<br>2620.8 | 0.2672<br>100.0<br>100.0 | 4.6269 | N/A | 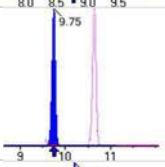 | 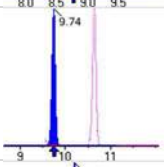 | |
| PFOS | ( 499.0 / 80.0 ) 5338415<br>( 499.0 / 99.0 ) 1262797 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3004.8<br>4975.0 | 0.2365<br>100.0<br>100.0 | 4.3966 | N/A | 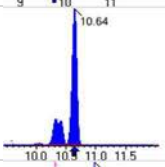 | 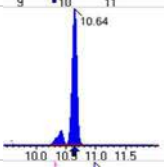 | |
| PFNS | ( 549.0 / 80.0 ) 5531273<br>( 549.0 / 99.0 ) 1469562 | ( 11.49 , 1.08 )<br>( N/A , 0.00 , 0.2) | 2749.5<br>2095.6 | 0.2657<br>100.0<br>100.0 | 4.6714 | N/A | 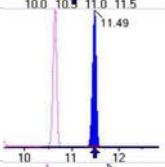 | 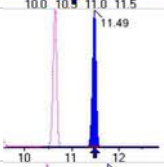 | |
| PFDS | ( 599.0 / 80.0 ) 6932369<br>( 599.0 / 99.0 ) 1738495 | ( 12.17 , 1.14 )<br>( N/A , 0.00 , 0.0) | 3750.8<br>2858.0 | 0.2508<br>100.0<br>100.0 | 4.9120 | N/A | 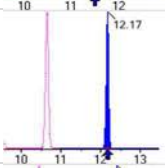 | 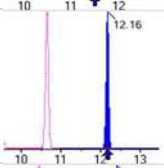 | |
| PFDoS | ( 699.0 / 80.0 ) 5850833<br>( 699.0 / 99.0 ) 1349552 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.0) | 4828.8<br>4621.0 | 0.2307<br>100.0<br>100.0 | 4.8516 | N/A | 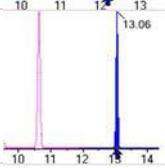 | 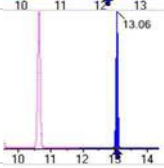 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 4567618<br>( 327.0 / 81.0 ) 4001943 | ( 5.59 , 1.00 ) ( -0.01 , N/A , 0.0) | 4763.7<br>3804.3 | 0.8762<br>100.0<br>100.0 | 18.8567 | N/A | 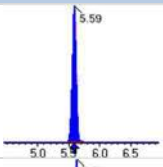 | 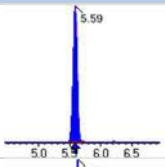 | |
| 6:2FTS | ( 427.0 / 407.0 ) 4418720<br>( 427.0 / 81.0 ) 5613773 | ( 7.72 , 1.00 ) ( -0.01 , N/A , -0.3) | 3929.7<br>3706.1 | 1.2705<br>100.0<br>100.0 | 18.5251 | N/A | 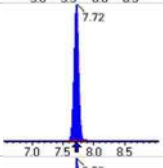 | 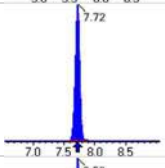 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5786740<br>( 527.0 / 81.0 ) 5487076 | ( 9.53 , 1.00 ) ( 0.00 , N/A , 0.1) | 1549.2<br>1273.7 | 0.9482<br>100.0<br>100.0 | 20.0600 | N/A | 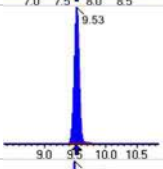 | 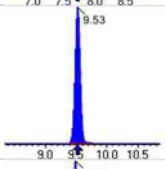 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4971050<br>( 627.0 / 81.0 ) 6719275 | ( 11.19 , 1.00 ) ( 0.01 , N/A , -0.1) | 1138.2<br>1309.4 | 1.3517<br>100.0<br>100.0 | 19.3038 | N/A | 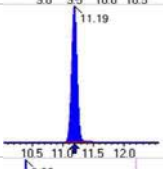 | 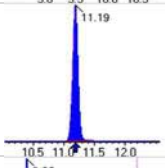 | |
| PFBSA | ( 297.9 / 78.0 ) 4660437<br>( 297.9 / 278.0 ) 6543 | ( 8.06 , 0.57 ) ( N/A , 0.00 , 0.2) | 1090.0<br>92.6 | 0.0014<br>100.0<br>100.0 | 4.7886 | N/A | 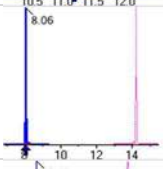 | 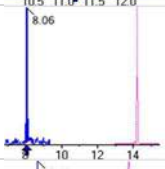 | |
| PFHxSA | ( 397.9 / 78.0 ) 6088955<br>( 397.9 / 378.0 ) 23184 | ( 10.93 , 0.75 ) ( N/A , 0.00 , 0.1) | 1453.6<br>288.7 | 0.0038<br>100.0<br>100.0 | 4.7782 | N/A | 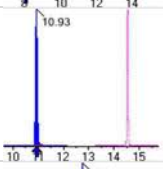 | 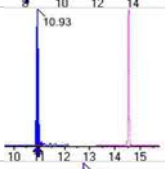 | |
| PFOSA | ( 498.0 / 78.0 ) 5581904<br>( 498.0 / 478.0 ) 80548 | ( 12.82 , 1.00 ) ( -0.01 , N/A , 0.0) | 2176.7<br>828.8 | 0.0144<br>100.0<br>100.0 | 4.9127 | N/A | 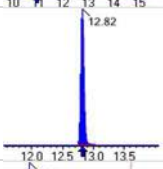 | 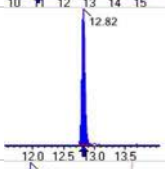 | |
| TFSI | ( 279.7 / 147.0 ) 12018072<br>( 279.7 / 211.0 ) 991097 | ( 8.36 , 0.65 ) ( N/A , 0.00 , 0.0) | 70.0<br>61.2 | 0.0825<br>100.0<br>100.0 | 4.9754 | N/A | 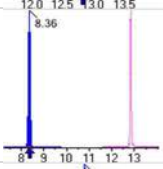 | 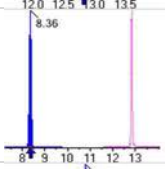 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4136100<br>( 512.0 / 169.0 ) 3040082 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.1) | 3601.6<br>1346.0 | 0.7350<br>100.0<br>100.0 | 19.4015 | N/A | 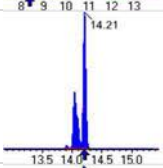 | 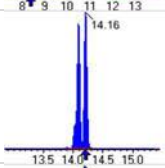 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5272521<br>( 526.0 / 169.0 ) 6678528 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.1) | 4965.7<br>4309.5 | 1.2667<br>100.0<br>100.0 | 19.3393 | N/A | 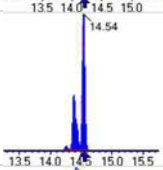 | 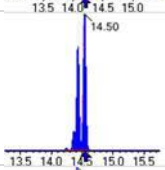 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1266534<br>( 570.0 / 483.0 ) 548402 | ( 10.42 , 1.00 ) ( 0.00 , N/A , -0.2) | 4168.6<br>1584.8 | 0.4330<br>100.0<br>100.0 | 4.9755 | N/A | 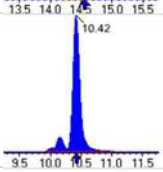 | 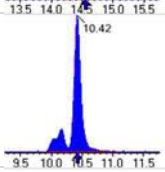 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1215456<br>( 584.0 / 526.0 ) 752561 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.1) | 2140.4<br>802.7 | 0.6192<br>100.0<br>100.0 | 4.8084 | N/A | 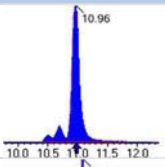 | 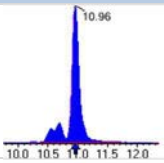 | |
| NMeFOSE | ( 616.0 / 59.0 ) 2107237 | ( 14.02 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3196.3 | N/A<br>0.0<br>0.0 | 19.7811 | N/A | 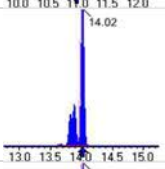 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2097072 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4259.2 | N/A<br>0.0<br>0.0 | 20.1165 | N/A | 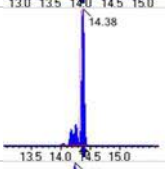 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 383740<br>( 285.0 / 185.0 ) 1195799 | ( 6.60 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1667.6<br>1885.9 | 3.1162<br>100.0<br>100.0 | 4.7678 | N/A | 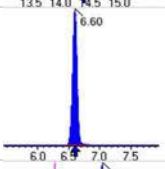 | 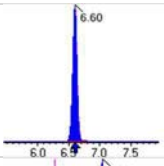 | |
| ADONA | ( 377.0 / 85.0 ) 4983578<br>( 377.0 / 251.0 ) 531307 | ( 7.68 , 1.16 )<br>( N/A , 0.00 , -0.1) | 1596.0<br>1569.5 | 0.1066<br>100.0<br>100.0 | 4.8620 | N/A | 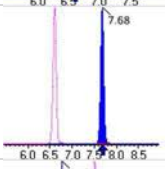 | 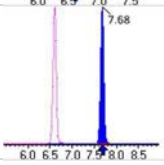 | |
| PFMPA | ( 229.0 / 85.0 ) 884560 | ( 4.19 , 0.86 )<br>( N/A , 0.00 , 0.0) | 8668.8 | N/A<br>0.0<br>0.0 | 9.4772 | N/A | 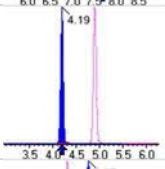 | | |
| PFMBA | ( 279.0 / 85.0 ) 2280385 | ( 5.27 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5544.9 | N/A<br>0.0<br>0.0 | 9.2307 | N/A | 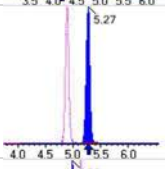 | | |
| NFDHA | ( 295.0 / 201.0 ) 1119266<br>( 295.0 / 85.0 ) 1210627 | ( 5.99 , 0.98 )<br>( N/A , 0.00 , -0.1) | 2611.1<br>2676.9 | 1.0816<br>100.0<br>100.0 | 9.7062 | N/A | 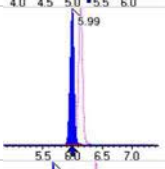 | 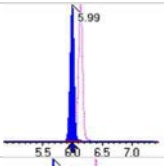 | |
| PFECHS | ( 461.0 / 98.9 ) 2922607<br>( 461.0 / 381.2 ) 1141147 | ( 9.67 , 0.91 )<br>( N/A , 0.00 , 0.0) | 3902.9<br>4329.5 | 0.3905<br>100.0<br>100.0 | 4.2682 | N/A | 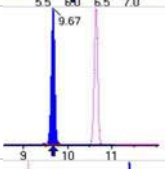 | 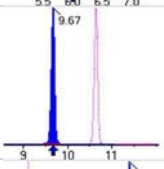 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5871891<br>( 533.0 / 353.0 ) 1887630 | ( 11.30 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2755.4<br>2594.1 | 0.3215<br>100.0<br>100.0 | 4.6421 | N/A | 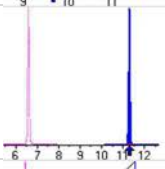 | 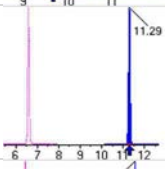 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4724946<br>( 633.0 / 453.0 ) 1543120 | ( 12.56 , 1.90 )<br>( N/A , 0.00 , 0.0) | 4004.8<br>2990.5 | 0.3266<br>100.0<br>100.0 | 4.7689 | N/A | 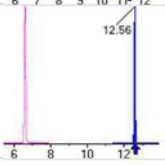 | 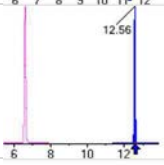 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2146025<br>( 315.0 / 83.0 ) 1229605 | ( 7.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2953.2<br>2319.6 | 0.5730<br>100.0<br>100.0 | 8.6015 | N/A | 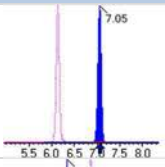 | 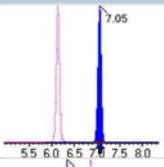 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 272272<br>( 241.0 / 117.0 ) 604079 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.0) | 2617.6<br>1994.7 | 2.2187<br>100.0<br>100.0 | 19.0109 | N/A | 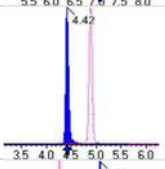 | 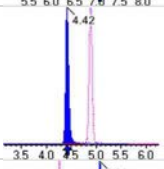 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1547604<br>( 341.0 / 217.0 ) 2317035 | ( 7.00 , 1.14 )<br>( N/A , 0.00 , 0.1) | 1143.1<br>1153.5 | 1.4972<br>100.0<br>100.0 | 19.2496 | N/A | 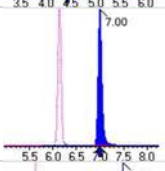 | 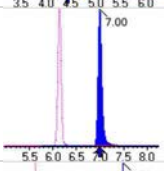 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2228212<br>( 441.0 / 337.0 ) 1983202 | ( 9.41 , 1.53 )<br>( N/A , 0.00 , -0.1) | 7555.6<br>6797.3 | 0.8900<br>100.0<br>100.0 | 18.8403 | N/A | 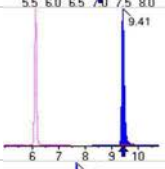 | 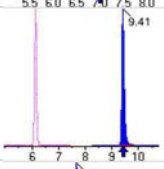 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1540114<br>( 357.2 / 243.0 ) 162569 | ( 6.87 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1398.7<br>675.5 | 0.1056<br>100.0<br>100.0 | 4.8900 | N/A | 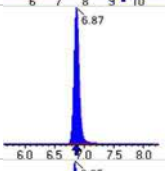 | 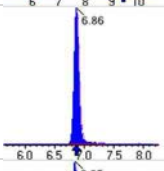 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1159358<br>( 457.2 / 343.0 ) 45367 | ( 8.95 , 1.00 )<br>( -0.01 , N/A , 0.0) | 709.0<br>447.7 | 0.0391<br>100.0<br>100.0 | 4.8723 | N/A | 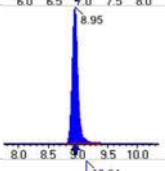 | 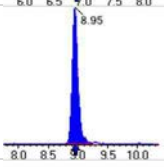 | |
| TDCA | ( 499.0 / 80.0 ) 3910401 | ( 10.64 , 1.00 )<br>( N/A , 0.00 , 0.0) | 23040.8 | N/A<br>0.0<br>0.0 | 4.7390 | N/A | 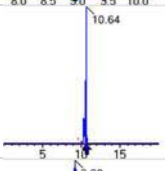 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 303221 | ( 3.80 , N/A )<br>( N/A , 0.00 , N/A ) | 1260.9 | N/A | 1.0065<br>[ 1.0000 ] | 100.7%<br>{ 100.0% } | 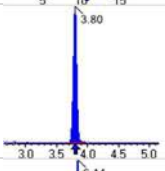 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 165003 | ( 6.14 , N/A )<br>( N/A , 0.00 , N/A ) | 136099.4 | N/A | 1.0731<br>[ 1.0000 ] | 107.3%<br>{ 100.0% } | 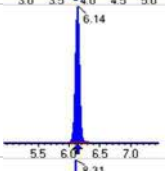 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 454682 | ( 8.31 , N/A )<br>( N/A , 0.00 , N/A ) | 3812.0 | N/A | 1.0192<br>[ 1.0000 ] | 101.9%<br>{ 100.0% } | 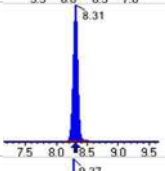 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 325896 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1082.0 | N/A | 0.9749<br>[ 1.0000 ] | 97.5%<br>{ 100.0% } | 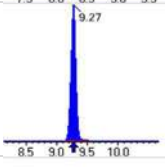 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 340046 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 17935.0 | N/A | 1.0254 [ 1.0000 ] | 102.5% { 100.0% } | 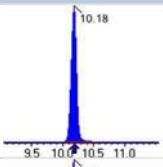  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1139651 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4282.1 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 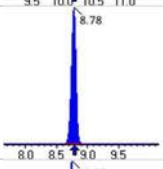  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 995584 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 4670.3 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 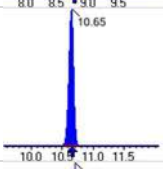  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2657124 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 43637.8 | N/A | 7.9464 [ 8.0000 ] | 99.3% { 100.0% } | 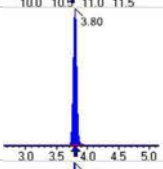  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1158355 | ( 4.89 , N/A ) ( N/A , 0.00 , N/A ) | 6074.2 | N/A | 3.9132 [ 4.0000 ] | 97.8% { 100.0% } | 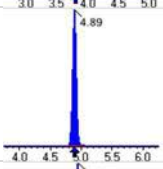  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 684701 | ( 6.13 , N/A ) ( N/A , 0.00 , N/A ) | 8902.8 | N/A | 1.9326 [ 2.0000 ] | 96.6% { 100.0% } | 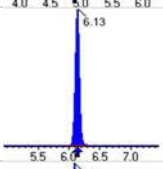  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 704754 | ( 7.29 , N/A ) ( N/A , 0.00 , N/A ) | 5580.3 | N/A | 1.9046 [ 2.0000 ] | 95.2% { 100.0% } | 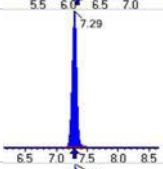  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 953656 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 3562.5 | N/A | 1.9893 [ 2.0000 ] | 99.5% { 100.0% } | 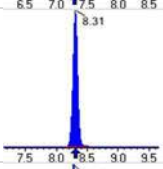  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 310906 | ( 9.27 , N/A ) ( N/A , 0.00 , N/A ) | 2463.6 | N/A | 0.9879 [ 1.0000 ] | 98.8% { 100.0% } | 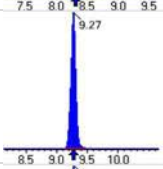  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 384895 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 1132.1 | N/A | 0.9809 [ 1.0000 ] | 98.1% { 100.0% } | 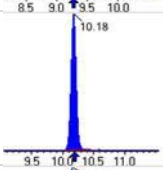  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 497340 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 832.8 | N/A | 1.0425 [ 1.0000 ] | 104.2% { 100.0% } | 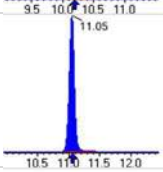  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL5 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 498870 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1510.0 | N/A | 1.0413 [ 1.0000 ] | 104.1% { 100.0% } | 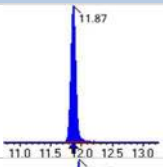 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 424042 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1339.5 | N/A | 1.0157 [ 1.0000 ] | 101.6% { 100.0% } | 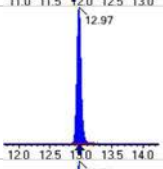 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 708437 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3403.3 | N/A | 1.9978 [ 2.0000 ] | 99.9% { 100.0% } | 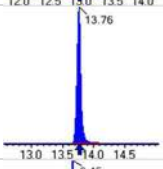 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2309943 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1219.6 | N/A | 2.0803 [ 2.0000 ] | 104.0% { 100.0% } | 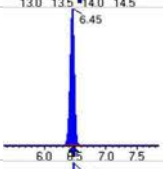 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1645728 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 5644.6 | N/A | 1.9734 [ 2.0000 ] | 98.7% { 100.0% } | 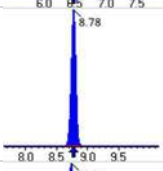 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2100694 | ( 10.64 , N/A ) ( N/A , 0.00 , N/A ) | 1507.8 | N/A | 1.9820 [ 2.0000 ] | 99.1% { 100.0% } | 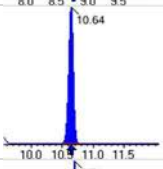 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 359830 | ( 5.59 , N/A ) ( N/A , 0.00 , N/A ) | 84.4 | N/A | 3.6258 [ 4.0000 ] | 90.6% { 100.0% } | 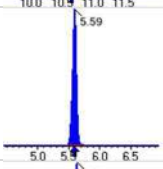 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1074003 | ( 7.73 , N/A ) ( N/A , 0.00 , N/A ) | 5008.6 | N/A | 3.4848 [ 4.0000 ] | 87.1% { 100.0% } | 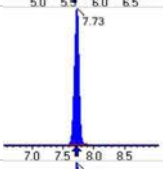 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1164627 | ( 9.53 , N/A ) ( N/A , 0.00 , N/A ) | 1043.7 | N/A | 3.7930 [ 4.0000 ] | 94.8% { 100.0% } | 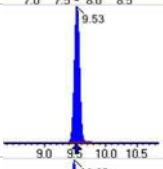 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2503774 | ( 11.18 , N/A ) ( N/A , 0.00 , N/A ) | 1638.9 | N/A | 7.1039 [ 8.0000 ] | 88.8% { 100.0% } | 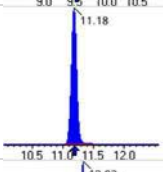 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2328466 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2616.5 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 100.0% } | 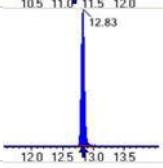 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (5)
Acquired: 2024/03/12 - 19:50

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 423319 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2725.6 | N/A | 1.9960 [ 2.0000 ] | 99.8% { 100.0% } | 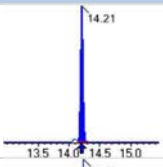  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 496914 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 3542.0 | N/A | 2.0398 [ 2.0000 ] | 102.0% { 100.0% } | 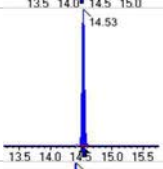  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1081175 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2605.9 | N/A | 3.9834 [ 4.0000 ] | 99.6% { 100.0% } | 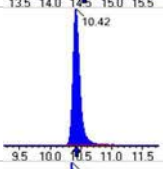  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1048167 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 1847.6 | N/A | 4.0682 [ 4.0000 ] | 101.7% { 100.0% } | 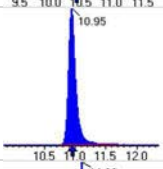  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1882014 | ( 14.00 , N/A ) ( N/A , 0.00 , N/A ) | 2694.7 | N/A | 18.9910 [ 20.0000 ] | 95.0% { 100.0% } | 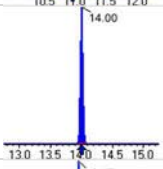  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2359639 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 4853.3 | N/A | 19.6556 [ 20.0000 ] | 98.3% { 100.0% } | 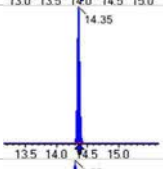  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1134242 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2358.9 | N/A | 7.4481 [ 8.0000 ] | 93.1% { 100.0% } | 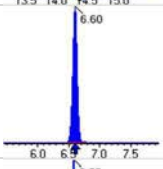  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 586030 | ( 6.88 , N/A ) ( N/A , 0.00 , N/A ) | 1615.1 | N/A | 1.9431 [ 2.0000 ] | 97.2% { 100.0% } | 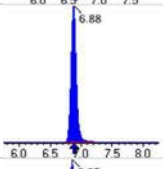  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 564269 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 604.6 | N/A | 2.0041 [ 2.0000 ] | 100.2% { 100.0% } | 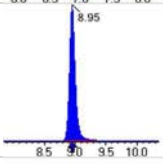  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 5378030<br>( 163.0 / 69.0 ) 135866 | ( 2.83 , 0.74 ) ( N/A , 0.02 , 0.0) | 28525.5<br>5580.8 | 0.0253<br>100.8<br>100.8 | 20.7339 | N/A | 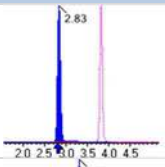 | 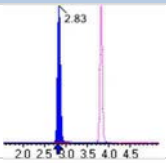 | |
| PFBA | ( 213.0 / 169.0 ) 11319821 | ( 3.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 10292.4 | N/A<br>0.0<br>0.0 | 40.8109 | N/A | 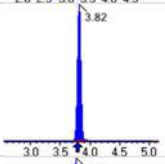 | | |
| PFPeA | ( 263.0 / 219.0 ) 5426856<br>( 263.0 / 69.0 ) 64070 | ( 4.92 , 1.00 ) ( 0.00 , N/A , -0.1) | 6484.6<br>796.2 | 0.0118<br>107.5<br>107.5 | 19.8576 | N/A | 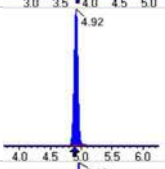 | 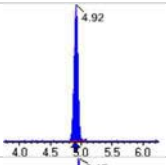 | |
| PFHxA | ( 313.0 / 269.0 ) 3132131<br>( 313.0 / 119.0 ) 352582 | ( 6.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 2919.8<br>2514.3 | 0.1126<br>101.3<br>101.3 | 10.0740 | N/A | 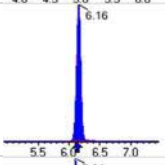 | 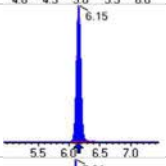 | |
| PFHpA | ( 363.0 / 319.0 ) 3316003<br>( 363.0 / 169.0 ) 973035 | ( 7.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1611.7<br>1562.3 | 0.2934<br>94.2<br>94.2 | 10.3656 | N/A | 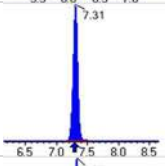 | 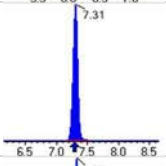 | |
| PFOA | ( 413.0 / 369.0 ) 4435417<br>( 413.0 / 169.0 ) 1605144 | ( 8.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 1451.3<br>1758.0 | 0.3619<br>100.0<br>100.0 | 9.3611 | N/A | 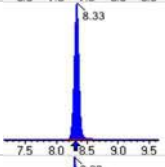 | 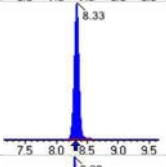 | |
| PFNA | ( 463.0 / 419.0 ) 3071368<br>( 463.0 / 169.0 ) 754950 | ( 9.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 1373.7<br>1257.6 | 0.2458<br>93.6<br>93.6 | 10.0666 | N/A | 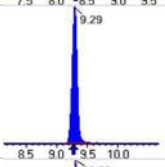 | 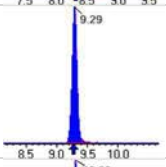 | |
| PFDA | ( 513.0 / 469.0 ) 3483470<br>( 513.0 / 169.0 ) 425656 | ( 10.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 3900.1<br>4832.9 | 0.1222<br>104.1<br>104.1 | 9.3078 | N/A | 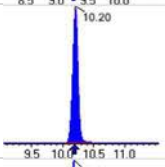 | 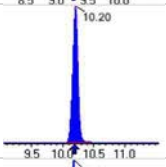 | |
| PFUnA | ( 563.0 / 519.0 ) 4012760<br>( 563.0 / 169.0 ) 611536 | ( 11.08 , 1.00 ) ( 0.00 , N/A , 0.0) | 1096.4<br>925.9 | 0.1524<br>102.9<br>102.9 | 9.6647 | N/A | 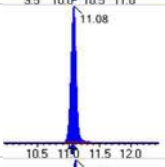 | 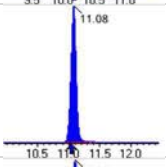 | |
| PFDoA | ( 613.0 / 569.0 ) 4687393<br>( 613.0 / 169.0 ) 681381 | ( 11.89 , 1.00 ) ( 0.00 , N/A , 0.1) | 1397.6<br>1270.3 | 0.1454<br>91.9<br>91.9 | 9.6086 | N/A | 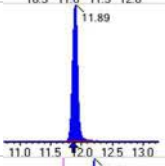 | 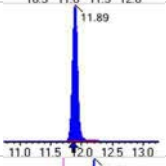 | |
| PFTrDA | ( 663.0 / 619.0 ) 4597133<br>( 663.0 / 169.0 ) 1185711 | ( 12.50 , 1.05 ) ( N/A , 0.02 , 0.1) | 1653.1<br>1316.2 | 0.2579<br>95.7<br>95.7 | 9.8014 | N/A | 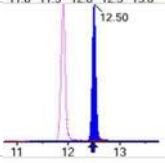 | 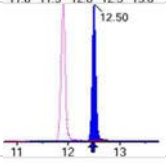 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3744996<br>( 713.0 / 169.0 ) 978784 | ( 12.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1989.0<br>1160.5 | 0.2614<br>100.5<br>100.5 | 9.6620 | N/A | 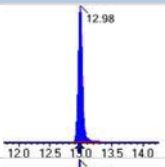 | 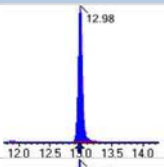 | |
| PFHxDA | ( 813.0 / 769.0 ) 3079749<br>( 813.0 / 169.0 ) 761911 | ( 13.78 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2580.8<br>1678.0 | 0.2474<br>114.0<br>114.0 | 10.2254 | N/A | 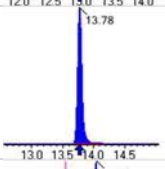 | 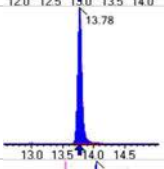 | |
| PFODA | ( 913.0 / 869.0 ) 2190436<br>( 913.0 / 169.0 ) 793319 | ( 14.40 , 1.05 )<br>( N/A , 0.02 , 0.1) | 2664.5<br>1927.3 | 0.3622<br>94.8<br>94.8 | 10.8244 | N/A | 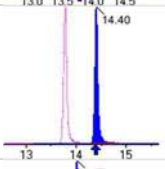 | 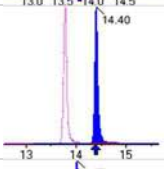 | |
| PFBS | ( 299.0 / 80.0 ) 4798533<br>( 299.0 / 99.0 ) 3500195 | ( 6.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4308.3<br>3466.7 | 0.7294<br>102.6<br>102.6 | 8.8005 | N/A | 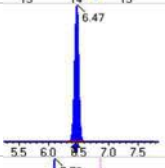 | 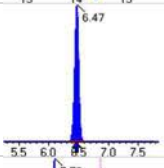 | |
| PFPeS | ( 349.0 / 80.0 ) 12278795<br>( 349.0 / 99.0 ) 4316220 | ( 7.72 , 0.88 )<br>( N/A , 0.02 , 0.1) | 3181.8<br>3225.6 | 0.3515<br>103.4<br>103.4 | 9.5481 | N/A | 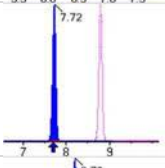 | 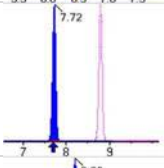 | |
| PFHxS | ( 399.0 / 80.0 ) 12534184<br>( 399.0 / 99.0 ) 4132575 | ( 8.79 , 1.00 )<br>( 0.00 , N/A , -0.2) | 4084.9<br>4986.6 | 0.3297<br>105.4<br>105.4 | 8.7645 | N/A | 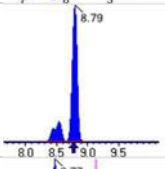 | 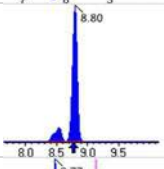 | |
| PFHpS | ( 449.0 / 80.0 ) 11262481<br>( 449.0 / 99.0 ) 2908577 | ( 9.77 , 0.92 )<br>( N/A , 0.02 , -0.1) | 2270.6<br>2305.9 | 0.2583<br>96.7<br>96.7 | 10.0195 | N/A | 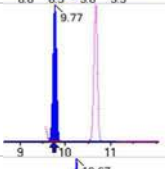 | 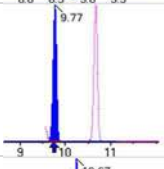 | |
| PFOS | ( 499.0 / 80.0 ) 10174885<br>( 499.0 / 99.0 ) 2343775 | ( 10.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3555.4<br>6439.0 | 0.2303<br>97.4<br>97.4 | 8.9968 | N/A | 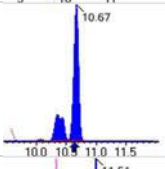 | 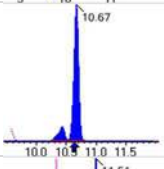 | |
| PFNS | ( 549.0 / 80.0 ) 10908192<br>( 549.0 / 99.0 ) 2799302 | ( 11.51 , 1.08 )<br>( N/A , 0.02 , 0.0) | 2448.8<br>2619.5 | 0.2566<br>96.6<br>96.6 | 9.8908 | N/A | 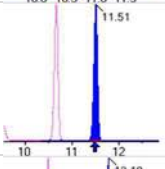 | 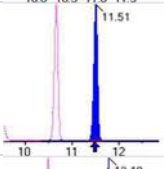 | |
| PFDS | ( 599.0 / 80.0 ) 13371200<br>( 599.0 / 99.0 ) 3616978 | ( 12.19 , 1.14 )<br>( N/A , 0.02 , -0.1) | 3474.9<br>3189.0 | 0.2705<br>107.9<br>107.9 | 10.1718 | N/A | 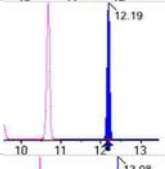 | 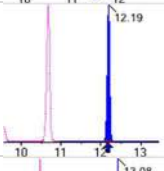 | |
| PFDoS | ( 699.0 / 80.0 ) 11771848<br>( 699.0 / 99.0 ) 2814513 | ( 13.08 , 1.23 )<br>( N/A , 0.02 , 0.0) | 5374.9<br>4638.4 | 0.2391<br>103.7<br>103.7 | 10.4802 | N/A | 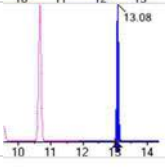 | 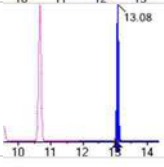 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 8592242<br>( 327.0 / 81.0 ) 7650817 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5605.3<br>4278.6 | 0.8904<br>101.6<br>101.6 | 35.7047 | N/A | 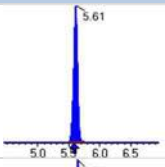 | 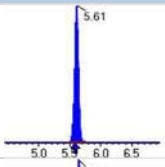 | |
| 6:2FTS | ( 427.0 / 407.0 ) 7990655<br>( 427.0 / 81.0 ) 9527692 | ( 7.74 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3864.3<br>3689.9 | 1.1924<br>93.9<br>93.9 | 40.5006 | N/A | 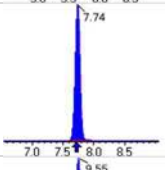 | 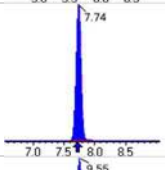 | |
| 8:2FTS | ( 527.0 / 507.0 ) 9595304<br>( 527.0 / 81.0 ) 9786215 | ( 9.55 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1355.0<br>1104.9 | 1.0199<br>107.6<br>107.6 | 37.6973 | N/A | 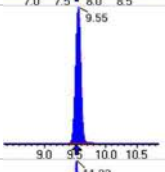 | 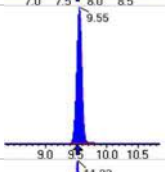 | |
| 10:2FTS | ( 627.0 / 607.0 ) 8687929<br>( 627.0 / 81.0 ) 12244324 | ( 11.22 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1659.8<br>1314.4 | 1.4093<br>104.3<br>104.3 | 38.3765 | N/A | 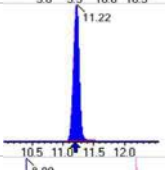 | 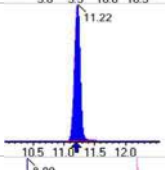 | |
| PFBSA | ( 297.9 / 78.0 ) 9133692<br>( 297.9 / 278.0 ) 13739 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , -0.1) | 1488.2<br>182.2 | 0.0015<br>107.1<br>107.1 | 9.7878 | N/A | 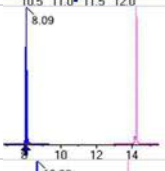 | 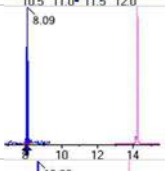 | |
| PFHxSA | ( 397.9 / 78.0 ) 12137835<br>( 397.9 / 378.0 ) 53364 | ( 10.96 , 0.75 )<br>( N/A , 0.03 , 0.1) | 1171.0<br>774.1 | 0.0044<br>115.5<br>115.5 | 10.0852 | N/A | 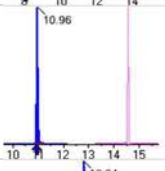 | 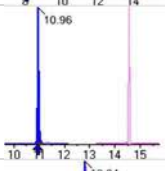 | |
| PFOSA | ( 498.0 / 78.0 ) 10671873<br>( 498.0 / 478.0 ) 160855 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2515.3<br>1421.2 | 0.0151<br>104.5<br>104.5 | 10.0617 | N/A | 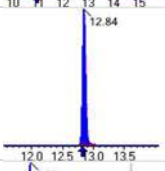 | 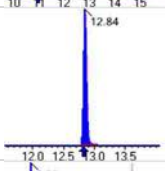 | |
| TFSI | ( 279.7 / 147.0 ) 22530344<br>( 279.7 / 211.0 ) 1911938 | ( 8.39 , 0.65 )<br>( N/A , 0.02 , 0.1) | 53.3<br>48.5 | 0.0849<br>102.9<br>102.9 | 9.9920 | N/A | 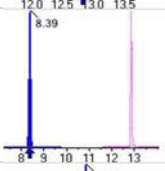 | 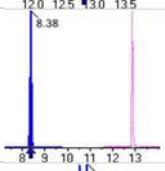 | |
| NMeFOSA | ( 512.0 / 219.0 ) 8130231<br>( 512.0 / 169.0 ) 6149169 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3599.8<br>1357.7 | 0.7563<br>102.9<br>102.9 | 39.7742 | N/A | 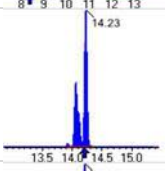 | 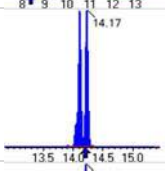 | |
| NEtFOSA | ( 526.0 / 219.0 ) 10354406<br>( 526.0 / 169.0 ) 13053493 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.2) | 5503.3<br>4335.3 | 1.2607<br>99.5<br>99.5 | 40.2129 | N/A | 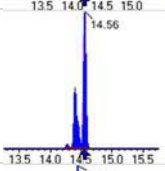 | 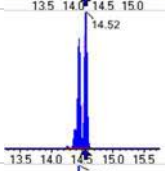 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 2308133<br>( 570.0 / 483.0 ) 1062326 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4404.5<br>2054.0 | 0.4603<br>106.3<br>106.3 | 9.6417 | N/A | 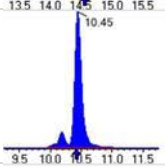 | 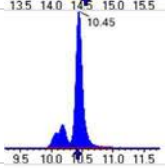 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 2363088<br>( 584.0 / 526.0 ) 1416941 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 2328.3<br>780.6 | 0.5996<br>96.8<br>96.8 | 10.3771 | N/A | 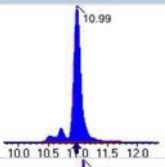 | 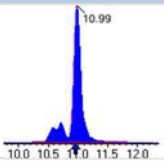 | |
| NMeFOSE | ( 616.0 / 59.0 ) 4146482 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3949.5 | N/A<br>0.0<br>0.0 | 39.2888 | N/A | 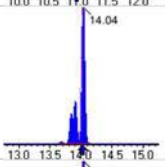 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 4024952 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 5910.1 | N/A<br>0.0<br>0.0 | 41.7380 | N/A | 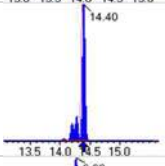 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 779811<br>( 285.0 / 185.0 ) 2434064 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1760.1<br>2684.8 | 3.1214<br>100.2<br>100.2 | 10.1190 | N/A | 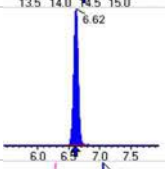 | 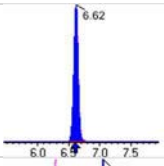 | |
| ADONA | ( 377.0 / 85.0 ) 9549476<br>( 377.0 / 251.0 ) 1011087 | ( 7.69 , 1.16 )<br>( N/A , 0.02 , -0.1) | 1502.1<br>1731.9 | 0.1059<br>99.3<br>99.3 | 9.7301 | N/A | 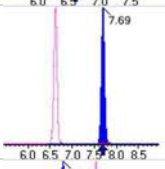 | 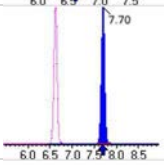 | |
| PFMPA | ( 229.0 / 85.0 ) 1760592 | ( 4.21 , 0.86 )<br>( N/A , 0.02 , 0.0) | 10301.2 | N/A<br>0.0<br>0.0 | 20.3480 | N/A | 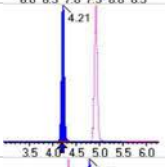 | | |
| PFMBA | ( 279.0 / 85.0 ) 4537528 | ( 5.29 , 1.08 )<br>( N/A , 0.02 , 0.0) | 6337.8 | N/A<br>0.0<br>0.0 | 19.8133 | N/A | 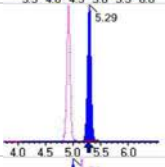 | | |
| NFDHA | ( 295.0 / 201.0 ) 2147243<br>( 295.0 / 85.0 ) 2304599 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , 0.0) | 4016.5<br>3445.4 | 1.0733<br>99.2<br>99.2 | 19.8669 | N/A | 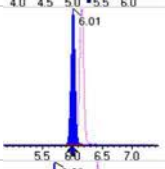 | 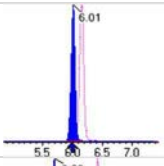 | |
| PFECHS | ( 461.0 / 98.9 ) 6036450<br>( 461.0 / 381.2 ) 2400206 | ( 9.69 , 0.91 )<br>( N/A , 0.02 , 0.0) | 4046.6<br>3700.0 | 0.3976<br>101.8<br>101.8 | 9.4649 | N/A | 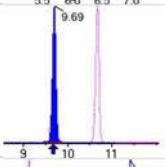 | 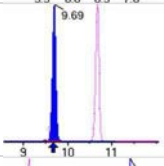 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 11351431<br>( 533.0 / 353.0 ) 3607678 | ( 11.32 , 1.71 )<br>( N/A , 0.03 , 0.1) | 2980.4<br>2942.3 | 0.3178<br>98.9<br>98.9 | 9.3725 | N/A | 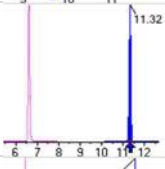 | 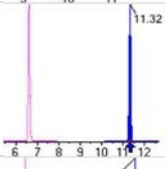 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 9357015<br>( 633.0 / 453.0 ) 3111352 | ( 12.59 , 1.90 )<br>( N/A , 0.02 , 0.0) | 4205.4<br>3482.4 | 0.3325<br>101.8<br>101.8 | 9.8634 | N/A | 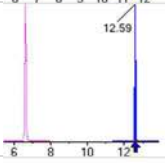 | 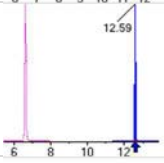 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 4279396<br>( 315.0 / 83.0 ) 2385965 | ( 7.07 , 1.15 )<br>( N/A , 0.02 , 0.0) | 3819.0<br>2750.6 | 0.5575<br>97.3<br>97.3 | 18.3000 | N/A | 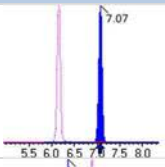 | 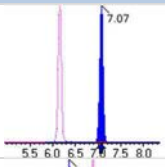 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 532284<br>( 241.0 / 117.0 ) 1172088 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , 0.0) | 2830.4<br>3075.7 | 2.2020<br>99.2<br>99.2 | 40.0916 | N/A | 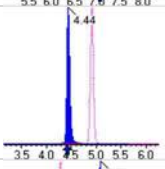 | 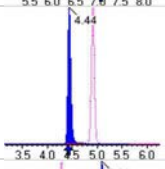 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 2711685<br>( 341.0 / 217.0 ) 4385230 | ( 7.01 , 1.14 )<br>( N/A , 0.01 , -0.1) | 1251.4<br>1238.0 | 1.6172<br>108.0<br>108.0 | 35.9858 | N/A | 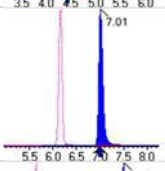 | 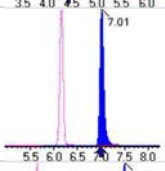 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 4368920<br>( 441.0 / 337.0 ) 3755395 | ( 9.43 , 1.53 )<br>( N/A , 0.03 , 0.0) | 9552.5<br>15824.3 | 0.8596<br>96.6<br>96.6 | 39.4127 | N/A | 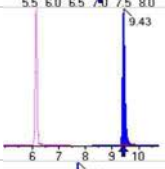 | 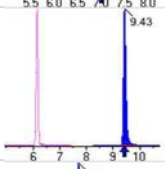 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3143361<br>( 357.2 / 243.0 ) 310708 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1159.6<br>1200.9 | 0.0988<br>93.6<br>93.6 | 10.1713 | N/A | 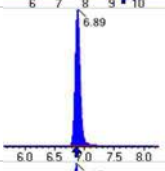 | 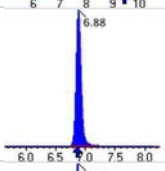 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2225595<br>( 457.2 / 343.0 ) 90091 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , -0.2) | 789.8<br>414.7 | 0.0405<br>103.4<br>103.4 | 9.7142 | N/A | 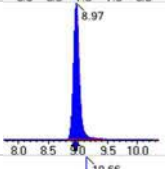 | 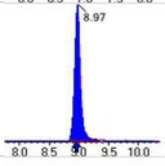 | |
| TDCA | ( 499.0 / 80.0 ) 7683017 | ( 10.66 , 1.00 )<br>( N/A , 0.03 , 0.0) | 56902.2 | N/A<br>0.0<br>0.0 | 9.9965 | N/A | 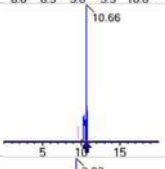 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262567 | ( 3.82 , N/A )<br>( N/A , 0.02 , N/A ) | 1160.3 | N/A | 0.8716<br>[ 1.0000 ] | 87.2%<br>{ 86.6% } | 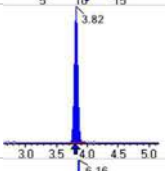 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135233 | ( 6.16 , N/A )<br>( N/A , 0.02 , N/A ) | 78054.9 | N/A | 0.8795<br>[ 1.0000 ] | 87.9%<br>{ 82.0% } | 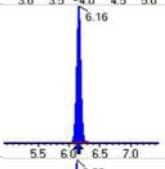 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 422380 | ( 8.33 , N/A )<br>( N/A , 0.02 , N/A ) | 5583.3 | N/A | 0.9468<br>[ 1.0000 ] | 94.7%<br>{ 92.9% } | 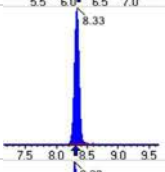 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 310194 | ( 9.29 , N/A )<br>( N/A , 0.02 , N/A ) | 1025.1 | N/A | 0.9279<br>[ 1.0000 ] | 92.8%<br>{ 95.2% } | 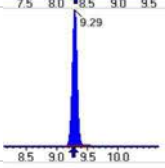 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 302748 | ( 10.21 , N/A ) ( N/A , 0.02 , N/A ) | 16568.3 | N/A | 0.9129 [ 1.0000 ] | 91.3% { 89.0% } | 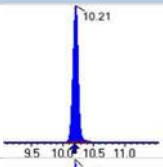 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1003889 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 5154.4 | N/A | 0.8984 [ 1.0000 ] | 89.8% { 88.1% } | 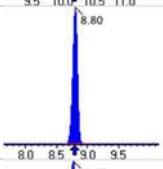 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 863468 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 3120.4 | N/A | 0.8845 [ 1.0000 ] | 88.5% { 86.7% } | 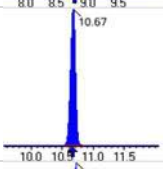 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2345500 | ( 3.82 , N/A ) ( N/A , 0.02 , N/A ) | 50599.2 | N/A | 8.1006 [ 8.0000 ] | 101.3% { 88.3% } | 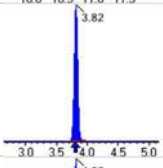 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1073819 | ( 4.92 , N/A ) ( N/A , 0.02 , N/A ) | 5717.5 | N/A | 4.4262 [ 4.0000 ] | 110.7% { 92.7% } | 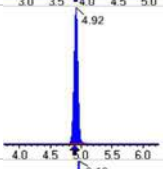 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 641756 | ( 6.16 , N/A ) ( N/A , 0.02 , N/A ) | 6787.6 | N/A | 2.2102 [ 2.0000 ] | 110.5% { 93.7% } | 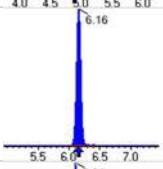 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 649624 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 4697.3 | N/A | 2.1421 [ 2.0000 ] | 107.1% { 92.2% } | 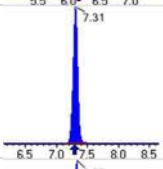 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 931882 | ( 8.33 , N/A ) ( N/A , 0.02 , N/A ) | 3437.8 | N/A | 2.0925 [ 2.0000 ] | 104.6% { 97.7% } | 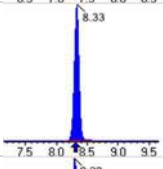 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 304469 | ( 9.29 , N/A ) ( N/A , 0.02 , N/A ) | 3269.4 | N/A | 1.0164 [ 1.0000 ] | 101.6% { 97.9% } | 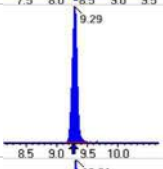 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 375790 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 933.5 | N/A | 1.0757 [ 1.0000 ] | 107.6% { 97.6% } | 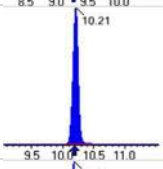 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 444632 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 940.9 | N/A | 1.0468 [ 1.0000 ] | 104.7% { 89.4% } | 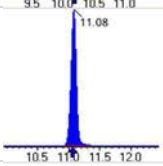 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL6 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 476638 | ( 11.90 , N/A ) ( N/A , 0.03 , N/A ) | 1326.4 | N/A | 1.1174 [ 1.0000 ] | 111.7% { 95.5% } | 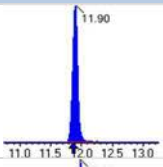  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 408133 | ( 12.99 , N/A ) ( N/A , 0.02 , N/A ) | 1337.5 | N/A | 1.0980 [ 1.0000 ] | 109.8% { 96.2% } | 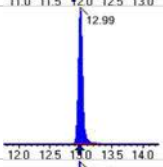  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624120 | ( 13.78 , N/A ) ( N/A , 0.01 , N/A ) | 2406.2 | N/A | 1.9768 [ 2.0000 ] | 98.8% { 88.1% } | 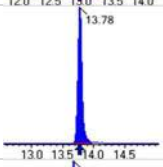  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2097152 | ( 6.47 , N/A ) ( N/A , 0.02 , N/A ) | 1371.9 | N/A | 2.1441 [ 2.0000 ] | 107.2% { 90.8% } | 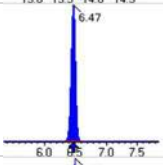  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1615084 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 4539.2 | N/A | 2.1986 [ 2.0000 ] | 109.9% { 98.1% } | 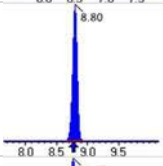  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1956628 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 1284.8 | N/A | 2.1286 [ 2.0000 ] | 106.4% { 93.1% } | 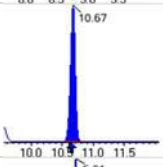  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 357483 | ( 5.61 , N/A ) ( N/A , 0.02 , N/A ) | 85.6 | N/A | 4.0892 [ 4.0000 ] | 102.2% { 99.3% } | 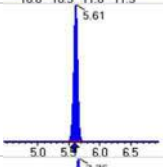  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 888360 | ( 7.75 , N/A ) ( N/A , 0.02 , N/A ) | 3787.7 | N/A | 3.2723 [ 4.0000 ] | 81.8% { 82.7% } | 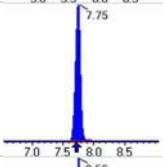  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1027619 | ( 9.56 , N/A ) ( N/A , 0.03 , N/A ) | 1368.7 | N/A | 3.7994 [ 4.0000 ] | 95.0% { 88.2% } | 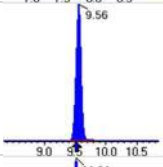  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2201104 | ( 11.21 , N/A ) ( N/A , 0.03 , N/A ) | 1146.7 | N/A | 7.0897 [ 8.0000 ] | 88.6% { 87.9% } | 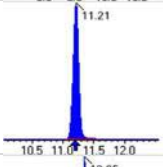  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2173596 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2055.0 | N/A | 2.1820 [ 2.0000 ] | 109.1% { 93.3% } | 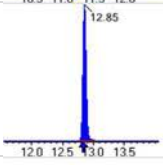  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (6)
Acquired: 2024/03/12 - 20:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 405894 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 1926.1 | N/A | 2.2066 [ 2.0000 ] | 110.3% { 95.9% } | 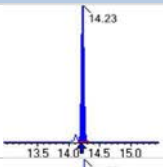  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 469313 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 3199.5 | N/A | 2.2212 [ 2.0000 ] | 111.1% { 94.4% } | 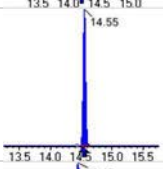  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1016769 | ( 10.45 , N/A ) ( N/A , 0.03 , N/A ) | 2312.1 | N/A | 4.3192 [ 4.0000 ] | 108.0% { 94.0% } | 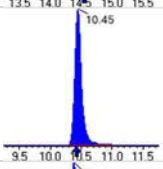  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 944281 | ( 10.98 , N/A ) ( N/A , 0.03 , N/A ) | 1708.9 | N/A | 4.2258 [ 4.0000 ] | 105.6% { 90.1% } | 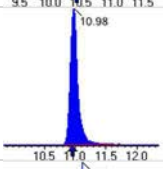  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1864536 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2580.2 | N/A | 21.6934 [ 20.0000 ] | 108.5% { 99.1% } | 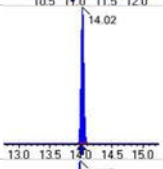  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2182801 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5363.0 | N/A | 20.9646 [ 20.0000 ] | 104.8% { 92.5% } | 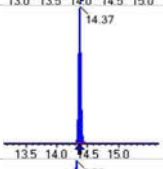  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1086016 | ( 6.62 , N/A ) ( N/A , 0.02 , N/A ) | 2282.1 | N/A | 8.7013 [ 8.0000 ] | 108.8% { 95.7% } | 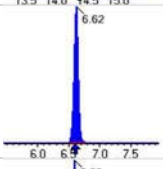  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575029 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 1035.8 | N/A | 2.1416 [ 2.0000 ] | 107.1% { 98.1% } | 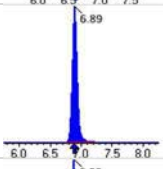  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 543301 | ( 8.98 , N/A ) ( N/A , 0.02 , N/A ) | 735.2 | N/A | 2.1673 [ 2.0000 ] | 108.4% { 96.3% } | 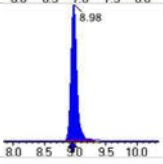  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 10176145<br>( 163.0 / 69.0 ) 255215 | ( 2.81 , 0.74 ) ( N/A , 0.00 , 0.1) | 46589.2<br>10044.5 | 0.0251<br>100.0<br>100.0 | 44.5845 | N/A | 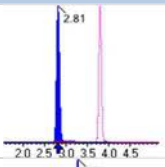 | 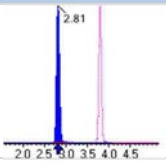 | |
| PFBA | ( 213.0 / 169.0 ) 20395510 | ( 3.79 , 1.00 ) ( 0.00 , N/A , 0.0) | 13501.8 | N/A<br>0.0<br>0.0 | 83.5631 | N/A | 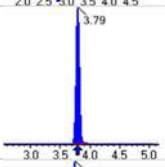 | | |
| PFPeA | ( 263.0 / 219.0 ) 10570659<br>( 263.0 / 69.0 ) 121834 | ( 4.89 , 1.00 ) ( 0.00 , N/A , -0.1) | 7156.8<br>1484.6 | 0.0115<br>104.9<br>104.9 | 42.2517 | N/A | 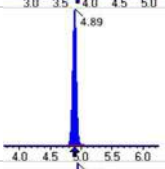 | 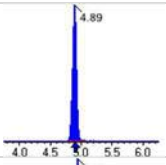 | |
| PFHxA | ( 313.0 / 269.0 ) 6402934<br>( 313.0 / 119.0 ) 705276 | ( 6.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 2751.9<br>2726.8 | 0.1101<br>99.1<br>99.1 | 20.8495 | N/A | 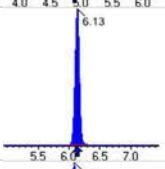 | 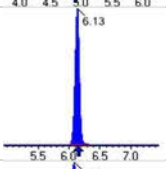 | |
| PFHpA | ( 363.0 / 319.0 ) 7156998<br>( 363.0 / 169.0 ) 2136784 | ( 7.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 2119.9<br>1751.1 | 0.2986<br>95.8<br>95.8 | 21.5222 | N/A | 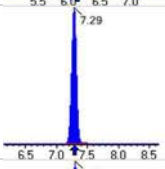 | 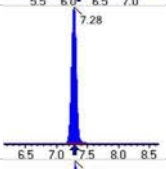 | |
| PFOA | ( 413.0 / 369.0 ) 9517339<br>( 413.0 / 169.0 ) 3410061 | ( 8.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 1524.7<br>1286.1 | 0.3583<br>99.1<br>99.1 | 20.3493 | N/A | 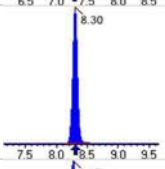 | 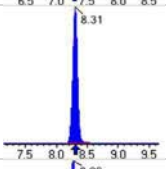 | |
| PFNA | ( 463.0 / 419.0 ) 7034413<br>( 463.0 / 169.0 ) 1640515 | ( 9.27 , 1.00 ) ( 0.00 , N/A , 0.1) | 1501.1<br>1553.0 | 0.2332<br>88.9<br>88.9 | 21.2492 | N/A | 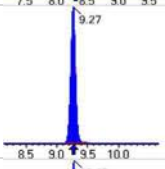 | 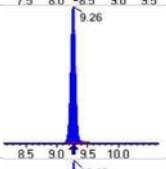 | |
| PFDA | ( 513.0 / 469.0 ) 7750833<br>( 513.0 / 169.0 ) 905812 | ( 10.18 , 1.00 ) ( 0.00 , N/A , -0.1) | 4849.1<br>4129.0 | 0.1169<br>99.6<br>99.6 | 22.3085 | N/A | 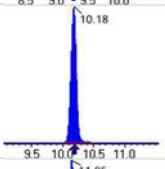 | 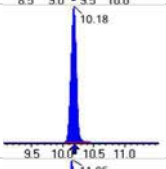 | |
| PFUnA | ( 563.0 / 519.0 ) 8863100<br>( 563.0 / 169.0 ) 1264545 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 1109.3<br>939.8 | 0.1427<br>96.3<br>96.3 | 22.4705 | N/A | 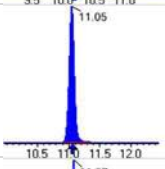 | 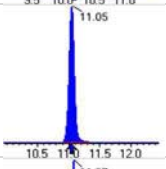 | |
| PFDoA | ( 613.0 / 569.0 ) 9923328<br>( 613.0 / 169.0 ) 1491951 | ( 11.87 , 1.00 ) ( 0.00 , N/A , -0.1) | 1665.9<br>1336.8 | 0.1503<br>95.1<br>95.1 | 20.8357 | N/A | 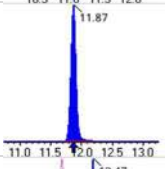 | 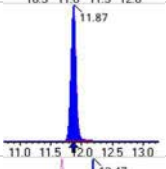 | |
| PFTrDA | ( 663.0 / 619.0 ) 9577578<br>( 663.0 / 169.0 ) 2584915 | ( 12.47 , 1.05 ) ( N/A , 0.00 , 0.0) | 1454.1<br>1603.0 | 0.2699<br>100.2<br>100.2 | 20.9161 | N/A | 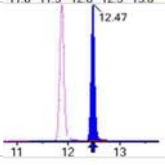 | 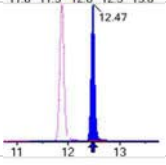 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 8442959<br>( 713.0 / 169.0 ) 2100131 | ( 12.96 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2115.6<br>1469.2 | 0.2487<br>95.7<br>95.7 | 22.4689 | N/A | 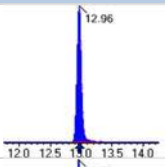 | 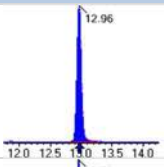 | |
| PFHxDA | ( 813.0 / 769.0 ) 6878569<br>( 813.0 / 169.0 ) 1592222 | ( 13.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2614.7<br>1755.8 | 0.2315<br>106.7<br>106.7 | 22.0788 | N/A | 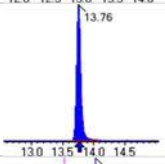 | 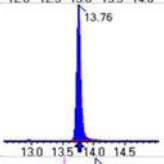 | |
| PFODA | ( 913.0 / 869.0 ) 4588493<br>( 913.0 / 169.0 ) 1518219 | ( 14.39 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2651.3<br>1740.1 | 0.3309<br>86.6<br>86.6 | 21.9208 | N/A | 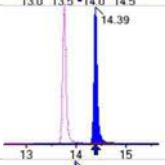 | 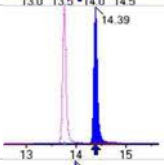 | |
| PFBS | ( 299.0 / 80.0 ) 10383809<br>( 299.0 / 99.0 ) 7131765 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5358.7<br>4536.0 | 0.6868<br>96.6<br>96.6 | 19.3808 | N/A | 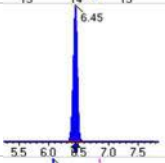 | 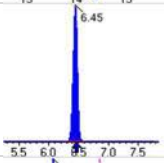 | |
| PFPeS | ( 349.0 / 80.0 ) 23552483<br>( 349.0 / 99.0 ) 8452143 | ( 7.69 , 0.88 )<br>( N/A , 0.00 , 0.1) | 3072.6<br>2543.3 | 0.3589<br>105.5<br>105.5 | 18.6129 | N/A | 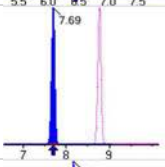 | 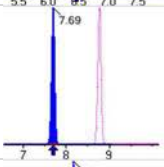 | |
| PFHxS | ( 399.0 / 80.0 ) 27689170<br>( 399.0 / 99.0 ) 9109943 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5583.7<br>6389.4 | 0.3290<br>105.2<br>105.2 | 19.6770 | N/A | 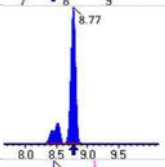 | 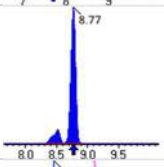 | |
| PFHpS | ( 449.0 / 80.0 ) 24478977<br>( 449.0 / 99.0 ) 6562983 | ( 9.74 , 0.92 )<br>( N/A , 0.00 , -0.1) | 2047.2<br>2514.2 | 0.2681<br>100.3<br>100.3 | 20.4607 | N/A | 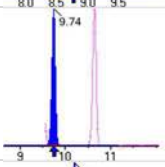 | 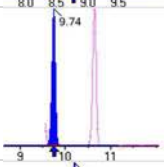 | |
| PFOS | ( 499.0 / 80.0 ) 23005511<br>( 499.0 / 99.0 ) 5286051 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3783.4<br>7622.8 | 0.2298<br>97.1<br>97.1 | 19.1119 | N/A | 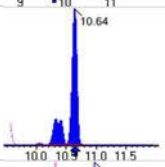 | 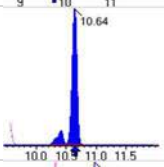 | |
| PFNS | ( 549.0 / 80.0 ) 22163737<br>( 549.0 / 99.0 ) 5972003 | ( 11.48 , 1.08 )<br>( N/A , 0.00 , -0.1) | 2978.6<br>2825.6 | 0.2694<br>101.4<br>101.4 | 18.8813 | N/A | 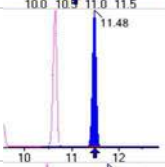 | 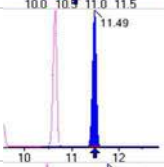 | |
| PFDS | ( 599.0 / 80.0 ) 26863005<br>( 599.0 / 99.0 ) 7218997 | ( 12.16 , 1.14 )<br>( N/A , 0.00 , 0.0) | 4167.7<br>2957.6 | 0.2687<br>107.2<br>107.2 | 19.1997 | N/A | 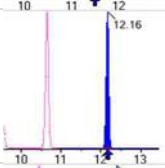 | 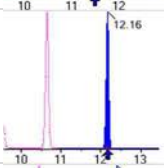 | |
| PFDoS | ( 699.0 / 80.0 ) 24829854<br>( 699.0 / 99.0 ) 5800476 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.1) | 4855.0<br>5320.2 | 0.2336<br>101.3<br>101.3 | 20.7687 | N/A | 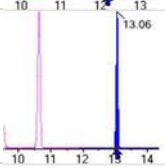 | 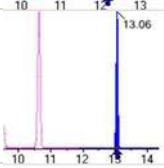 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 16197449<br>( 327.0 / 81.0 ) 13997678 | ( 5.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5148.0<br>4822.5 | 0.8642<br>98.6<br>98.6 | 78.1567 | N/A | 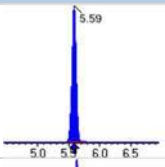 | 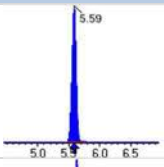 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 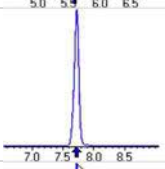 | 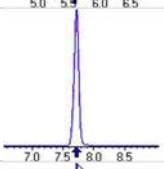 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 17863064<br>( 527.0 / 81.0 ) 17515353 | ( 9.53 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1042.8<br>1331.0 | 0.9805<br>103.4<br>103.4 | 79.7829 | N/A | 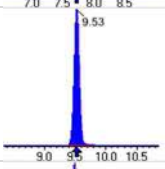 | 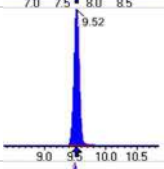 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 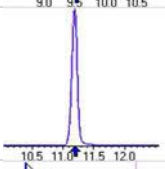 | 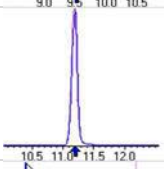 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 18953981<br>( 297.9 / 278.0 ) 25925 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , -0.1) | 1270.3<br>379.7 | 0.0014<br>97.4<br>97.4 | 19.6284 | N/A | 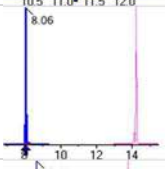 | 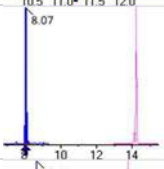 | |
| PFHxSA | ( 397.9 / 78.0 ) 25302275<br>( 397.9 / 378.0 ) 118514 | ( 10.94 , 0.75 )<br>( N/A , 0.00 , 0.0) | 950.6<br>805.4 | 0.0047<br>123.0<br>123.0 | 20.8502 | N/A | 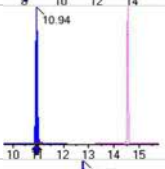 | 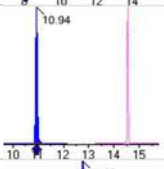 | |
| PFOSA | ( 498.0 / 78.0 ) 21767174<br>( 498.0 / 478.0 ) 326808 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2568.1<br>1223.6 | 0.0150<br>104.0<br>104.0 | 20.4745 | N/A | 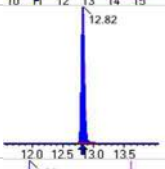 | 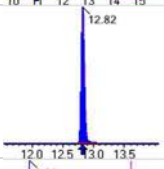 | |
| TFSI | ( 279.7 / 147.0 ) 45027999<br>( 279.7 / 211.0 ) 4193887 | ( 8.36 , 0.65 )<br>( N/A , 0.00 , 0.0) | 59.9<br>64.0 | 0.0931<br>112.9<br>112.9 | 19.9226 | N/A | 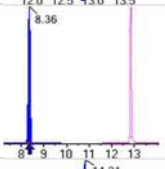 | 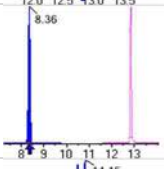 | |
| NMeFOSA | ( 512.0 / 219.0 ) 16854818<br>( 512.0 / 169.0 ) 12793598 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.2) | 3743.0<br>1315.9 | 0.7590<br>103.3<br>103.3 | 79.6837 | N/A | 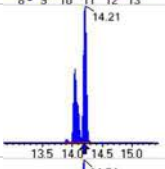 | 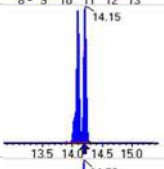 | |
| NEtFOSA | ( 526.0 / 219.0 ) 21489682<br>( 526.0 / 169.0 ) 26814196 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4844.9<br>3997.4 | 1.2478<br>98.5<br>98.5 | 82.7706 | N/A | 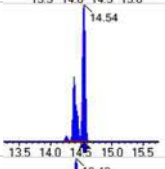 | 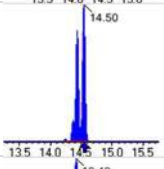 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5096367<br>( 570.0 / 483.0 ) 2366062 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , -0.1) | 5277.0<br>1602.9 | 0.4643<br>107.2<br>107.2 | 21.2312 | N/A | 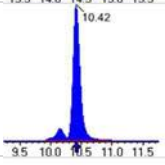 | 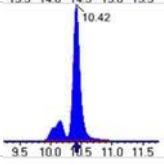 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 4739449<br>( 584.0 / 526.0 ) 2989120 | ( 10.96 , 1.00 ) ( 0.01 , N/A , -0.1) | 2282.2<br>847.2 | 0.6307<br>101.9<br>101.9 | 20.2414 | N/A | 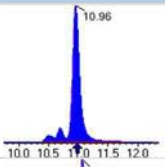 | 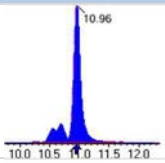 | |
| NMeFOSE | ( 616.0 / 59.0 ) 8768305 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 4477.2 | N/A<br>0.0<br>0.0 | 83.4843 | N/A | 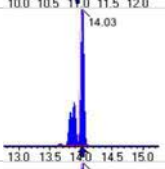 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 8513376 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 6626.1 | N/A<br>0.0<br>0.0 | 83.6180 | N/A | 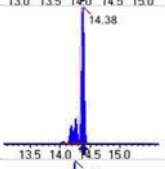 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1580033<br>( 285.0 / 185.0 ) 5012729 | ( 6.60 , 1.00 ) ( 0.00 , N/A , 0.1) | 2229.3<br>2535.1 | 3.1725<br>101.8<br>101.8 | 20.0355 | N/A | 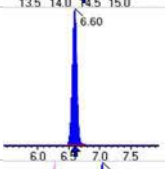 | 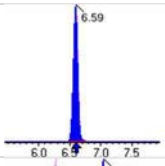 | |
| ADONA | ( 377.0 / 85.0 ) 18233087<br>( 377.0 / 251.0 ) 2030458 | ( 7.67 , 1.16 ) ( N/A , 0.00 , 0.0) | 2018.1<br>1590.1 | 0.1114<br>104.5<br>104.5 | 18.1546 | N/A | 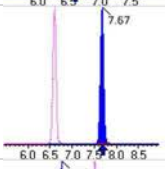 | 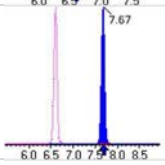 | |
| PFMPA | ( 229.0 / 85.0 ) 3381731 | ( 4.19 , 0.86 ) ( N/A , 0.00 , 0.0) | 11762.1 | N/A<br>0.0<br>0.0 | 42.6938 | N/A | 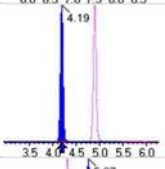 | | |
| PFMBA | ( 279.0 / 85.0 ) 9237814 | ( 5.27 , 1.08 ) ( N/A , 0.00 , 0.0) | 5748.9 | N/A<br>0.0<br>0.0 | 44.0627 | N/A | 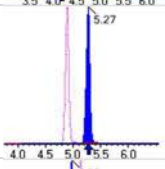 | | |
| NFDHA | ( 295.0 / 201.0 ) 4354470<br>( 295.0 / 85.0 ) 4370009 | ( 5.99 , 0.98 ) ( N/A , 0.00 , 0.0) | 3176.7<br>3052.2 | 1.0036<br>92.8<br>92.8 | 40.7884 | N/A | 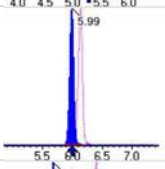 | 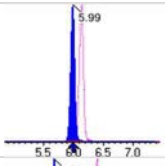 | |
| PFECHS | ( 461.0 / 98.9 ) 13296955<br>( 461.0 / 381.2 ) 5237179 | ( 9.67 , 0.91 ) ( N/A , 0.00 , -0.1) | 4939.7<br>3903.0 | 0.3939<br>100.9<br>100.9 | 19.5883 | N/A | 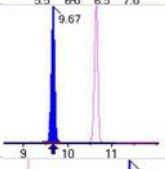 | 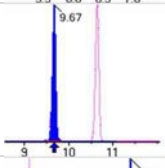 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 23589267<br>( 533.0 / 353.0 ) 7781403 | ( 11.29 , 1.71 ) ( N/A , 0.00 , 0.0) | 3258.8<br>2639.8 | 0.3299<br>102.6<br>102.6 | 19.0330 | N/A | 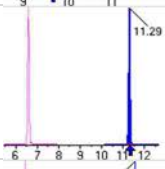 | 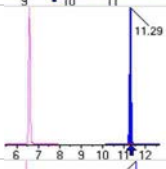 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 19087969<br>( 633.0 / 453.0 ) 6373552 | ( 12.56 , 1.90 ) ( N/A , 0.00 , 0.0) | 3508.3<br>3457.4 | 0.3339<br>102.2<br>102.2 | 19.6624 | N/A | 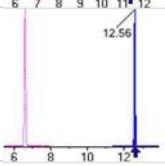 | 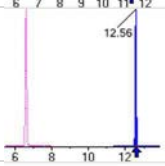 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 8808687<br>( 315.0 / 83.0 ) 4783189 | ( 7.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 3188.4<br>2987.6 | 0.5430<br>94.8<br>94.8 | 38.1359 | N/A | 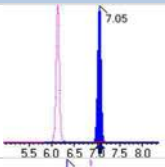 | 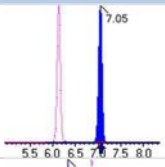 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1088429<br>( 241.0 / 117.0 ) 2486287 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.0) | 3414.7<br>4447.8 | 2.2843<br>103.0<br>103.0 | 89.5517 | N/A | 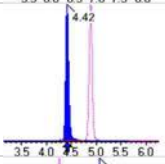 | 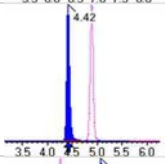 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6098749<br>( 341.0 / 217.0 ) 9093487 | ( 6.99 , 1.14 )<br>( N/A , 0.00 , -0.1) | 1229.7<br>1195.5 | 1.4910<br>99.6<br>99.6 | 81.9381 | N/A | 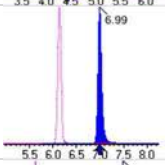 | 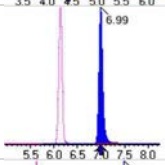 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 9501359<br>( 441.0 / 337.0 ) 8344402 | ( 9.41 , 1.53 )<br>( N/A , 0.00 , 0.2) | 7203.2<br>8254.3 | 0.8782<br>98.7<br>98.7 | 86.7763 | N/A | 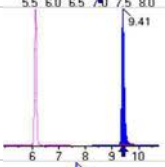 | 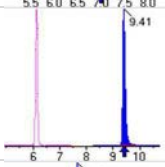 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6396862<br>( 357.2 / 243.0 ) 655276 | ( 6.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1515.1<br>1338.9 | 0.1024<br>97.0<br>97.0 | 21.9761 | N/A | 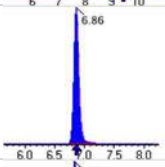 | 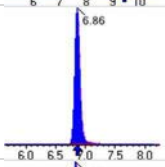 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 4680526<br>( 457.2 / 343.0 ) 185609 | ( 8.94 , 1.00 )<br>( -0.01 , N/A , 0.0) | 830.0<br>537.4 | 0.0397<br>101.3<br>101.3 | 21.2094 | N/A | 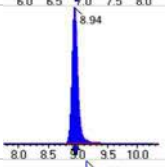 | 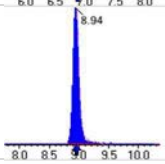 | |
| TDCA | ( 499.0 / 80.0 ) 16629936 | ( 10.63 , 1.00 )<br>( N/A , 0.00 , 0.0) | 28206.5 | N/A<br>0.0<br>0.0 | 20.3292 | N/A | 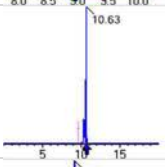 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235092 | ( 3.79 , N/A )<br>( N/A , 0.00 , N/A ) | 1016.1 | N/A | 0.7804<br>[ 1.0000 ] | 78.0%<br>{ 77.5% } | 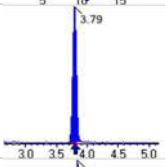 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 159182 | ( 6.13 , N/A )<br>( N/A , 0.00 , N/A ) | 67563.9 | N/A | 1.0352<br>[ 1.0000 ] | 103.5%<br>{ 96.5% } | 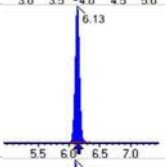 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 453426 | ( 8.31 , N/A )<br>( N/A , 0.00 , N/A ) | 4956.7 | N/A | 1.0163<br>[ 1.0000 ] | 101.6%<br>{ 99.7% } | 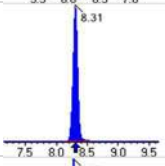 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 345349 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1196.8 | N/A | 1.0331<br>[ 1.0000 ] | 103.3%<br>{ 106.0% } | 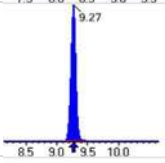 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 338705 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 4585.7 | N/A | 1.0213 [ 1.0000 ] | 102.1% { 99.6% } | 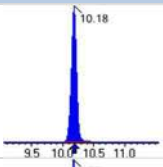 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1128464 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 3883.8 | N/A | 1.0099 [ 1.0000 ] | 101.0% { 99.0% } | 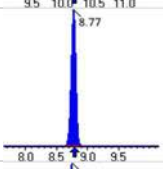 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 995635 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 3109.8 | N/A | 1.0199 [ 1.0000 ] | 102.0% { 100.0% } | 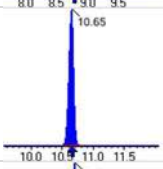 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2063917 | ( 3.79 , N/A ) ( N/A , 0.00 , N/A ) | 42093.7 | N/A | 7.9611 [ 8.0000 ] | 99.5% { 77.7% } | 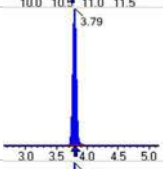 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 983031 | ( 4.89 , N/A ) ( N/A , 0.00 , N/A ) | 5658.2 | N/A | 3.4424 [ 4.0000 ] | 86.1% { 84.9% } | 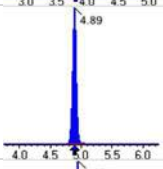 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 633894 | ( 6.13 , N/A ) ( N/A , 0.00 , N/A ) | 6704.1 | N/A | 1.8547 [ 2.0000 ] | 92.7% { 92.6% } | 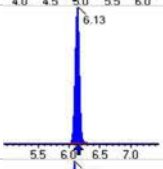 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 675286 | ( 7.29 , N/A ) ( N/A , -0.01 , N/A ) | 4480.6 | N/A | 1.8917 [ 2.0000 ] | 94.6% { 95.8% } | 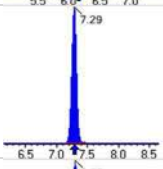 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 919850 | ( 8.30 , N/A ) ( N/A , 0.00 , N/A ) | 3529.1 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 96.5% } | 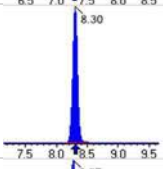 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330354 | ( 9.27 , N/A ) ( N/A , -0.01 , N/A ) | 3992.9 | N/A | 0.9906 [ 1.0000 ] | 99.1% { 106.3% } | 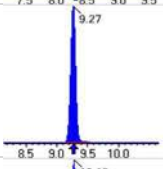 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348865 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 979.0 | N/A | 0.8926 [ 1.0000 ] | 89.3% { 90.6% } | 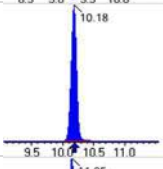 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 422397 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1068.9 | N/A | 0.8889 [ 1.0000 ] | 88.9% { 84.9% } | 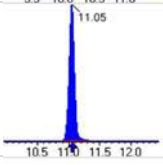 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL7 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 465333 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1351.3 | N/A | 0.9751 [ 1.0000 ] | 97.5% { 93.3% } | 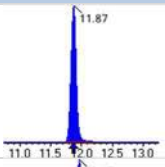  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 395666 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1572.4 | N/A | 0.9515 [ 1.0000 ] | 95.1% { 93.3% } | 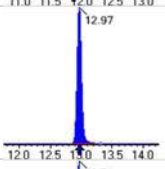  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 645585 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3103.6 | N/A | 1.8277 [ 2.0000 ] | 91.4% { 91.1% } | 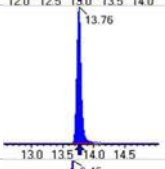  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2060709 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1117.4 | N/A | 1.8742 [ 2.0000 ] | 93.7% { 89.2% } | 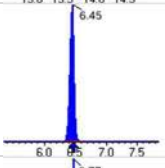  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1589199 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 6298.2 | N/A | 1.9245 [ 2.0000 ] | 96.2% { 96.6% } | 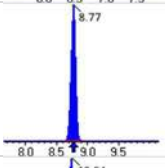  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2082551 | ( 10.64 , N/A ) ( N/A , 0.00 , N/A ) | 1186.2 | N/A | 1.9648 [ 2.0000 ] | 98.2% { 99.1% } | 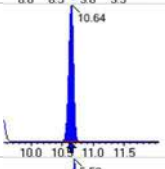  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 307861 | ( 5.59 , N/A ) ( N/A , -0.01 , N/A ) | 79.4 | N/A | 3.1329 [ 4.0000 ] | 78.3% { 85.6% } | 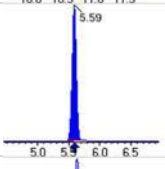  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 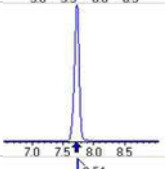 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 903919 | ( 9.54 , N/A ) ( N/A , 0.00 , N/A ) | 1042.3 | N/A | 2.9731 [ 4.0000 ] | 74.3% { 77.6% } | 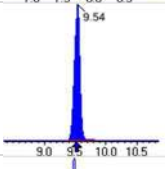  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 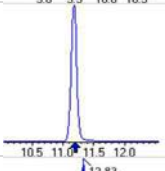 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2178712 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1847.3 | N/A | 1.8968 [ 2.0000 ] | 94.8% { 93.6% } | 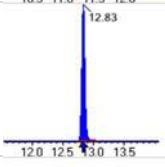  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (7)
Acquired: 2024/03/12 - 20:31

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 420016 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1539.5 | N/A | 1.9803 [ 2.0000 ] | 99.0% { 99.2% } | 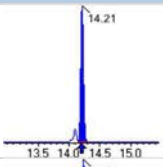  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 473213 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2428.6 | N/A | 1.9424 [ 2.0000 ] | 97.1% { 95.2% } | 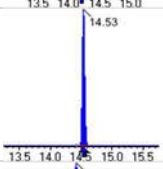  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1019536 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2558.0 | N/A | 3.7561 [ 4.0000 ] | 93.9% { 94.3% } | 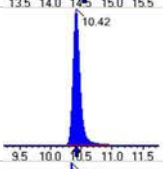  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 970920 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 2066.6 | N/A | 3.7682 [ 4.0000 ] | 94.2% { 92.6% } | 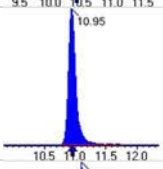  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1855542 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 3273.2 | N/A | 18.7229 [ 20.0000 ] | 93.6% { 98.6% } | 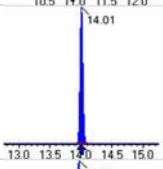  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2304558 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5380.4 | N/A | 19.1958 [ 20.0000 ] | 96.0% { 97.7% } | 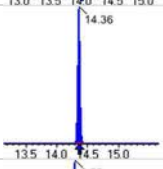  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1111343 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2562.9 | N/A | 7.5646 [ 8.0000 ] | 94.6% { 98.0% } | 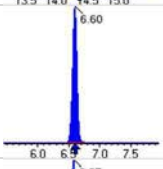  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 541611 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 1147.3 | N/A | 1.8030 [ 2.0000 ] | 90.1% { 92.4% } | 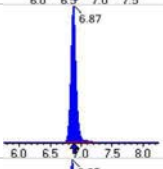  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 523319 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 621.1 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 92.7% } | 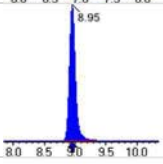  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 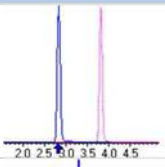 | 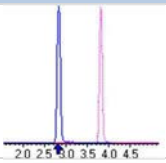 | NR, |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 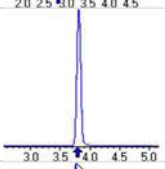 | | NR, |
| PFPeA | ( 263.0 / 219.0 )<br>22700897<br>( 263.0 / 69.0 )<br>261520 | ( 4.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 7496.5<br>2671.3 | 0.0115<br>104.9<br>104.9 | 106.2319 | N/A | 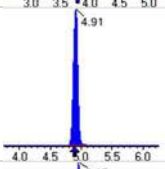 | 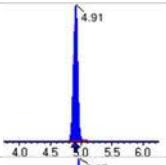 | |
| PFHxA | ( 313.0 / 269.0 )<br>14952955<br>( 313.0 / 119.0 )<br>1634831 | ( 6.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3037.2<br>3640.2 | 0.1093<br>98.4<br>98.4 | 53.9185 | N/A | 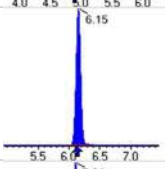 | 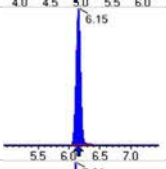 | |
| PFHpA | ( 363.0 / 319.0 )<br>16576643<br>( 363.0 / 169.0 )<br>4950298 | ( 7.31 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1818.1<br>1504.2 | 0.2986<br>95.8<br>95.8 | 54.9822 | N/A | 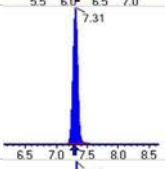 | 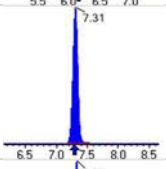 | |
| PFOA | ( 413.0 / 369.0 )<br>21523866<br>( 413.0 / 169.0 )<br>7868863 | ( 8.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1380.8<br>1423.8 | 0.3656<br>101.1<br>101.1 | 49.2835 | N/A | 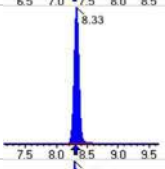 | 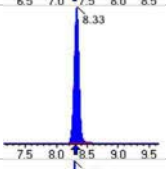 | |
| PFNA | ( 463.0 / 419.0 )<br>15957600<br>( 463.0 / 169.0 )<br>3864370 | ( 9.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1284.7<br>1228.8 | 0.2422<br>92.3<br>92.3 | 51.6247 | N/A | 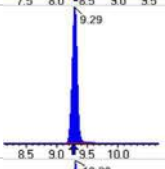 | 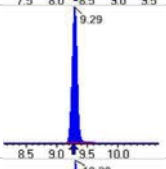 | |
| PFDA | ( 513.0 / 469.0 )<br>17806822<br>( 513.0 / 169.0 )<br>2160213 | ( 10.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4639.2<br>4232.5 | 0.1213<br>103.3<br>103.3 | 52.8327 | N/A | 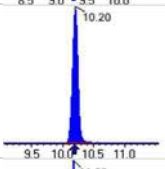 | 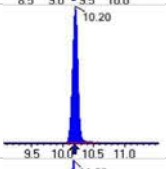 | |
| PFUnA | ( 563.0 / 519.0 )<br>20457199<br>( 563.0 / 169.0 )<br>3062448 | ( 11.08 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1110.4<br>1116.5 | 0.1497<br>101.1<br>101.1 | 53.3596 | N/A | 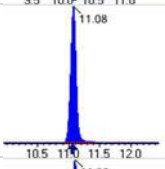 | 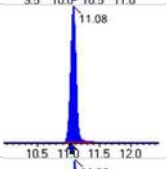 | |
| PFDoA | ( 613.0 / 569.0 )<br>22716961<br>( 613.0 / 169.0 )<br>3338606 | ( 11.89 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1723.5<br>1651.0 | 0.1470<br>92.9<br>92.9 | 51.1595 | N/A | 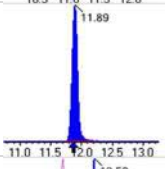 | 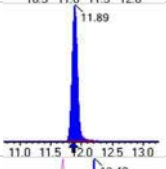 | |
| PFTrDA | ( 663.0 / 619.0 )<br>21950044<br>( 663.0 / 169.0 )<br>5851407 | ( 12.50 , 1.05 )<br>( N/A , 0.02 , 0.0) | 1439.0<br>1349.9 | 0.2666<br>98.9<br>98.9 | 51.4143 | N/A | 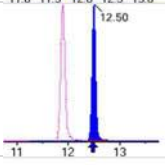 | 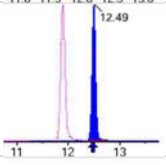 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 17928976<br>( 713.0 / 169.0 ) 4641610 | ( 12.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1836.1<br>1585.2 | 0.2589<br>99.6<br>99.6 | 49.6050 | N/A | 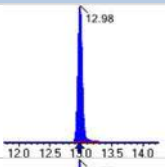 | 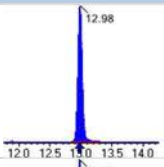 | |
| PFHxDA | ( 813.0 / 769.0 ) 14485066<br>( 813.0 / 169.0 ) 3562659 | ( 13.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2697.5<br>1867.8 | 0.2460<br>113.4<br>113.4 | 51.7987 | N/A | 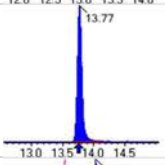 | 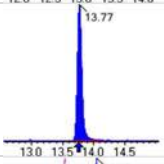 | |
| PFODA | ( 913.0 / 869.0 ) 10221420<br>( 913.0 / 169.0 ) 3533512 | ( 14.40 , 1.05 )<br>( N/A , 0.01 , -0.1) | 2291.6<br>2038.1 | 0.3457<br>90.5<br>90.5 | 54.4024 | N/A | 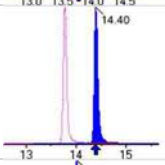 | 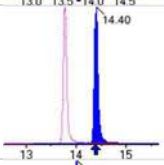 | |
| PFBS | ( 299.0 / 80.0 ) 23185289<br>( 299.0 / 99.0 ) 16750665 | ( 6.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4415.8<br>3731.3 | 0.7225<br>101.6<br>101.6 | 47.1020 | N/A | 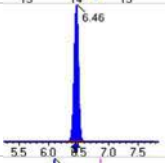 | 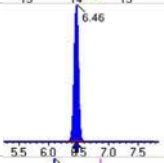 | |
| PFPeS | ( 349.0 / 80.0 ) 47785585<br>( 349.0 / 99.0 ) 17953209 | ( 7.72 , 0.88 )<br>( N/A , 0.02 , 0.1) | 2343.6<br>2424.1 | 0.3757<br>110.5<br>110.5 | 38.8162 | N/A | 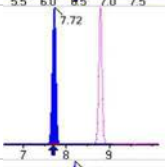 | 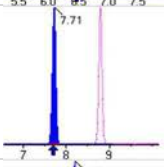 | |
| PFHxS | ( 399.0 / 80.0 ) 61332254<br>( 399.0 / 99.0 ) 21513265 | ( 8.80 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5068.9<br>8254.3 | 0.3508<br>112.2<br>112.2 | 44.7998 | N/A | 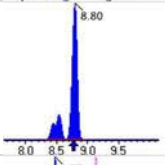 | 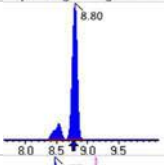 | |
| PFHpS | ( 449.0 / 80.0 ) 51985297<br>( 449.0 / 99.0 ) 15377952 | ( 9.77 , 0.92 )<br>( N/A , 0.03 , 0.0) | 1960.2<br>2069.6 | 0.2958<br>110.7<br>110.7 | 45.6583 | N/A | 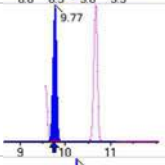 | 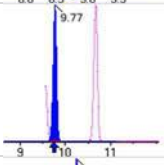 | |
| PFOS | ( 499.0 / 80.0 ) 54945052<br>( 499.0 / 99.0 ) 13114814 | ( 10.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3980.2<br>10975.4 | 0.2387<br>100.9<br>100.9 | 47.9639 | N/A | 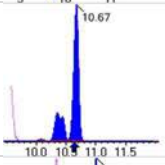 | 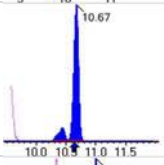 | |
| PFNS | ( 549.0 / 80.0 ) 48380518<br>( 549.0 / 99.0 ) 13891796 | ( 11.51 , 1.08 )<br>( N/A , 0.02 , 0.1) | 2683.5<br>3132.6 | 0.2871<br>108.1<br>108.1 | 43.3085 | N/A | 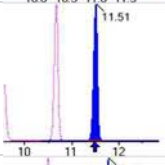 | 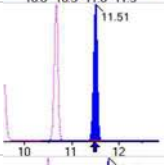 | |
| PFDS | ( 599.0 / 80.0 ) 52690985<br>( 599.0 / 99.0 ) 15132609 | ( 12.19 , 1.14 )<br>( N/A , 0.02 , 0.0) | 2895.8<br>3543.8 | 0.2872<br>114.5<br>114.5 | 39.5721 | N/A | 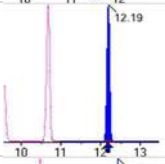 | 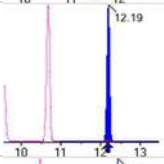 | |
| PFDoS | ( 699.0 / 80.0 ) 47435382<br>( 699.0 / 99.0 ) 12739149 | ( 13.08 , 1.23 )<br>( N/A , 0.02 , 0.0) | 5050.5<br>5543.0 | 0.2686<br>116.4<br>116.4 | 41.6919 | N/A | 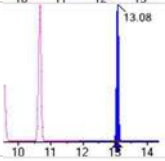 | 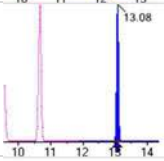 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 34123443<br>( 327.0 / 81.0 ) 29616232 | ( 5.61 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5634.8<br>5125.2 | 0.8679<br>99.1<br>99.1 | 178.8228 | N/A | 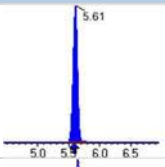 | 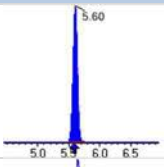 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 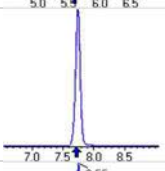 | 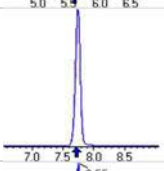 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 33973276<br>( 527.0 / 81.0 ) 35801989 | ( 9.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1084.5<br>1080.4 | 1.0538<br>111.1<br>111.1 | 153.4928 | N/A | 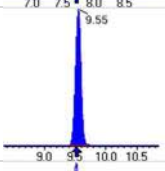 | 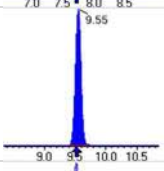 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 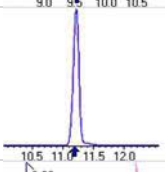 | 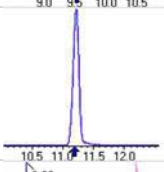 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 42485406<br>( 297.9 / 278.0 ) 69244 | ( 8.09 , 0.57 )<br>( N/A , 0.03 , 0.2) | 1345.4<br>545.1 | 0.0016<br>116.1<br>116.1 | 44.8414 | N/A | 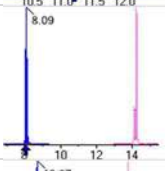 | 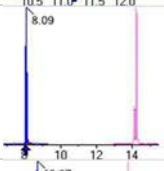 | |
| PFHxSA | ( 397.9 / 78.0 ) 53995591<br>( 397.9 / 378.0 ) 273817 | ( 10.97 , 0.75 )<br>( N/A , 0.03 , 0.0) | 1080.5<br>859.3 | 0.0051<br>133.2<br>133.2 | 48.7212 | N/A | 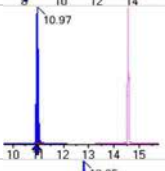 | 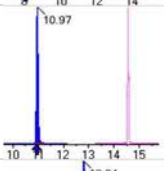 | |
| PFOSA | ( 498.0 / 78.0 ) 45375539<br>( 498.0 / 478.0 ) 788888 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1782.2<br>2134.8 | 0.0174<br>120.5<br>120.5 | 45.7564 | N/A | 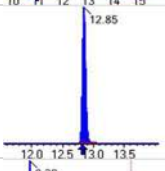 | 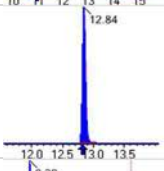 | |
| TFSI | ( 279.7 / 147.0 ) 90676570<br>( 279.7 / 211.0 ) 10184991 | ( 8.38 , 0.65 )<br>( N/A , 0.02 , 0.0) | 40.7<br>60.2 | 0.1123<br>136.2<br>136.2 | 43.0109 | N/A | 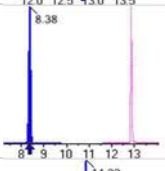 | 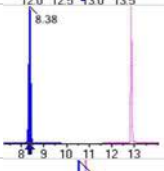 | |
| NMeFOSA | ( 512.0 / 219.0 ) 38984304<br>( 512.0 / 169.0 ) 29736833 | ( 14.22 , 1.00 )<br>( -0.01 , N/A , 3.3) | 3560.7<br>1538.2 | 0.7628<br>103.8<br>103.8 | 187.8405 | N/A | 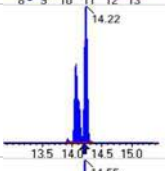 | 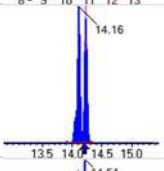 | |
| NEtFOSA | ( 526.0 / 219.0 ) 47551636<br>( 526.0 / 169.0 ) 59451862 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4466.9<br>3567.8 | 1.2503<br>98.7<br>98.7 | 200.5495 | N/A | 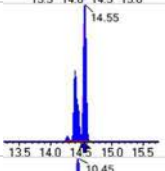 | 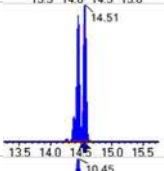 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 11111770<br>( 570.0 / 483.0 ) 5096487 | ( 10.45 , 1.00 )<br>( 0.00 , N/A , -0.2) | 6823.7<br>1415.8 | 0.4587<br>105.9<br>105.9 | 49.6174 | N/A | 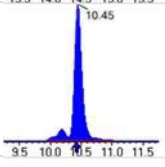 | 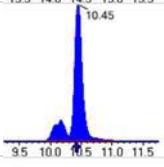 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 10999372<br>( 584.0 / 526.0 ) 6518005 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3040.2<br>779.2 | 0.5926<br>95.7<br>95.7 | 53.2321 | N/A | 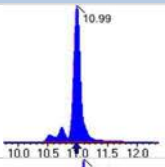 | 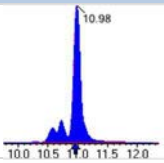 | |
| NMeFOSE | ( 616.0 / 59.0 ) 20722850 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7835.0 | N/A<br>0.0<br>0.0 | 191.7557 | N/A | 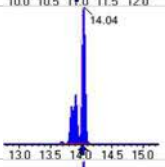 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 19023553 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 7423.3 | N/A<br>0.0<br>0.0 | 196.1770 | N/A | 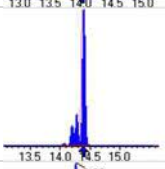 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 3880780<br>( 285.0 / 185.0 ) 12031984 | ( 6.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1950.8<br>2585.5 | 3.1004<br>99.5<br>99.5 | 52.4977 | N/A | 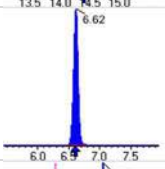 | 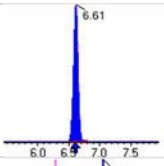 | |
| ADONA | ( 377.0 / 85.0 ) 39511304<br>( 377.0 / 251.0 ) 4415561 | ( 7.70 , 1.16 )<br>( N/A , 0.02 , 0.1) | 2027.7<br>1824.5 | 0.1118<br>104.8<br>104.8 | 41.9697 | N/A | 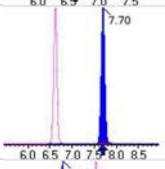 | 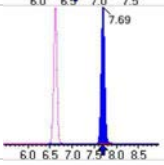 | |
| PFMPA | ( 229.0 / 85.0 ) 7195628 | ( 4.20 , 0.86 )<br>( N/A , 0.01 , 0.0) | 12023.2 | N/A<br>0.0<br>0.0 | 106.3568 | N/A | 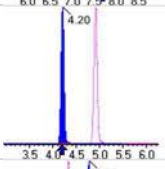 | | |
| PFMBA | ( 279.0 / 85.0 ) 20119580 | ( 5.29 , 1.08 )<br>( N/A , 0.02 , 0.0) | 6179.8 | N/A<br>0.0<br>0.0 | 112.3546 | N/A | 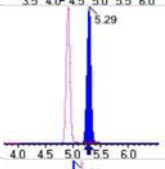 | | |
| NFDHA | ( 295.0 / 201.0 ) 9333499<br>( 295.0 / 85.0 ) 10336335 | ( 6.01 , 0.98 )<br>( N/A , 0.02 , 0.1) | 3365.3<br>3282.3 | 1.1074<br>102.4<br>102.4 | 96.8147 | N/A | 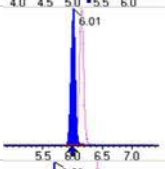 | 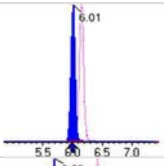 | |
| PFECHS | ( 461.0 / 98.9 ) 32358475<br>( 461.0 / 381.2 ) 13289552 | ( 9.69 , 0.91 )<br>( N/A , 0.03 , 0.1) | 4390.6<br>5012.6 | 0.4107<br>105.2<br>105.2 | 50.0894 | N/A | 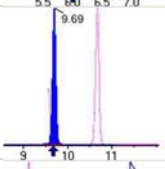 | 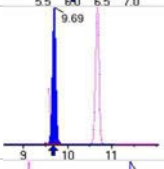 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 53486666<br>( 533.0 / 353.0 ) 18536995 | ( 11.32 , 1.71 )<br>( N/A , 0.02 , -0.1) | 2863.1<br>2611.8 | 0.3466<br>107.8<br>107.8 | 46.0390 | N/A | 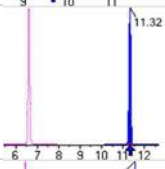 | 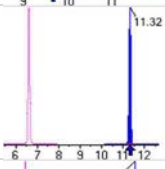 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 39812300<br>( 633.0 / 453.0 ) 13709837 | ( 12.58 , 1.90 )<br>( N/A , 0.02 , 0.0) | 3750.7<br>3839.2 | 0.3444<br>105.4<br>105.4 | 43.7502 | N/A | 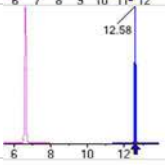 | 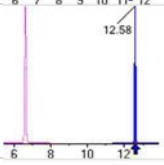 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 19009470<br>( 315.0 / 83.0 ) 10888523 | ( 7.07 , 1.15 )<br>( N/A , 0.02 , 0.0) | 3279.5<br>3491.5 | 0.5728<br>100.0<br>100.0 | 91.1356 | N/A | 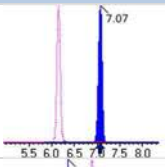 | 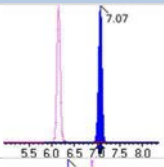 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2757370<br>( 241.0 / 117.0 ) 6072336 | ( 4.44 , 0.90 )<br>( N/A , 0.02 , 0.0) | 5358.8<br>6970.8 | 2.2022<br>99.3<br>99.3 | 265.6068 | N/A | 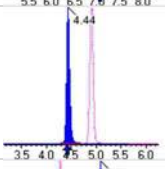 | 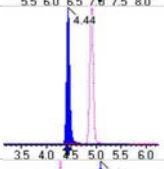 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14081726<br>( 341.0 / 217.0 ) 20939293 | ( 7.01 , 1.14 )<br>( N/A , 0.01 , 0.0) | 1178.8<br>1145.3 | 1.4870<br>99.3<br>99.3 | 209.5060 | N/A | 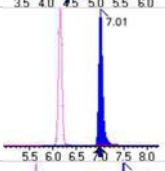 | 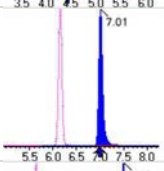 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 23451208<br>( 441.0 / 337.0 ) 20299435 | ( 9.43 , 1.53 )<br>( N/A , 0.02 , 0.0) | 6456.1<br>9898.3 | 0.8656<br>97.3<br>97.3 | 237.1788 | N/A | 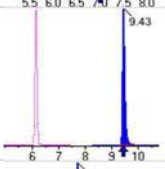 | 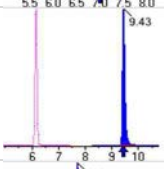 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 15436633<br>( 357.2 / 243.0 ) 1584531 | ( 6.88 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1657.1<br>1390.7 | 0.1026<br>97.2<br>97.2 | 51.1494 | N/A | 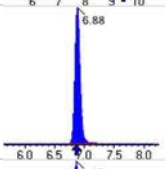 | 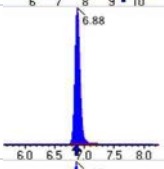 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 11162809<br>( 457.2 / 343.0 ) 463570 | ( 8.97 , 1.00 )<br>( -0.01 , N/A , 0.0) | 876.5<br>788.8 | 0.0415<br>106.1<br>106.1 | 50.6578 | N/A | 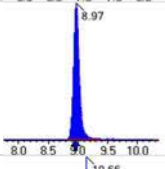 | 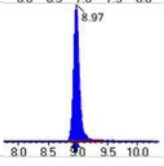 | |
| TDCA | ( 499.0 / 80.0 ) 39073100 | ( 10.66 , 1.00 )<br>( N/A , 0.03 , 0.0) | 118176.8 | N/A<br>0.0<br>0.0 | 50.1904 | N/A | 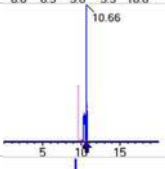 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A ) | N/A | N/A | 0.0000<br>[ 1.0000 ] | 0.0%<br>{ 0.0% } | 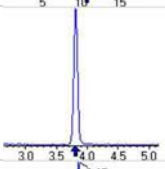 | | NR,IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 140712 | ( 6.15 , N/A )<br>( N/A , 0.02 , N/A ) | 25724.0 | N/A | 0.9151<br>[ 1.0000 ] | 91.5%<br>{ 85.3% } | 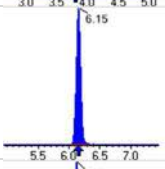 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 407424 | ( 8.33 , N/A )<br>( N/A , 0.02 , N/A ) | 3784.7 | N/A | 0.9132<br>[ 1.0000 ] | 91.3%<br>{ 89.6% } | 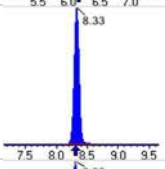 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 305683 | ( 9.30 , N/A )<br>( N/A , 0.03 , N/A ) | 999.0 | N/A | 0.9144<br>[ 1.0000 ] | 91.4%<br>{ 93.8% } | 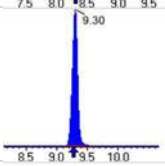 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 311971 | ( 10.21 , N/A ) ( N/A , 0.02 , N/A ) | 6527.7 | N/A | 0.9407 [ 1.0000 ] | 94.1% { 91.7% } | 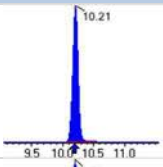 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1087130 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 3242.6 | N/A | 0.9729 [ 1.0000 ] | 97.3% { 95.4% } | 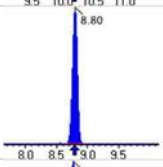 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 897533 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 3839.6 | N/A | 0.9194 [ 1.0000 ] | 91.9% { 90.2% } | 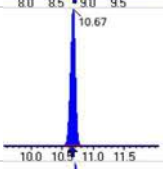 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 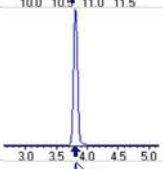 | | NR,S1, |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 839648 | ( 4.91 , N/A ) ( N/A , 0.02 , N/A ) | 4764.2 | N/A | 3.3262 [ 4.0000 ] | 83.2% { 72.5% } | 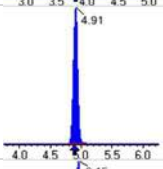 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 572429 | ( 6.15 , N/A ) ( N/A , 0.02 , N/A ) | 6808.0 | N/A | 1.8946 [ 2.0000 ] | 94.7% { 83.6% } | 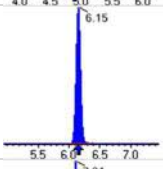 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 612233 | ( 7.31 , N/A ) ( N/A , 0.02 , N/A ) | 5440.4 | N/A | 1.9402 [ 2.0000 ] | 97.0% { 86.9% } | 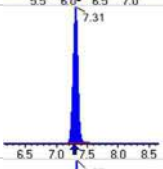 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858954 | ( 8.33 , N/A ) ( N/A , 0.02 , N/A ) | 3396.8 | N/A | 1.9996 [ 2.0000 ] | 100.0% { 90.1% } | 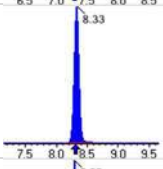 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 308464 | ( 9.29 , N/A ) ( N/A , 0.02 , N/A ) | 3598.0 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 99.2% } | 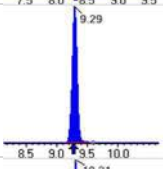 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 338425 | ( 10.21 , N/A ) ( N/A , 0.03 , N/A ) | 1131.0 | N/A | 0.9401 [ 1.0000 ] | 94.0% { 87.9% } | 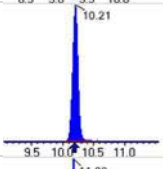 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 410565 | ( 11.08 , N/A ) ( N/A , 0.03 , N/A ) | 820.9 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 82.6% } | 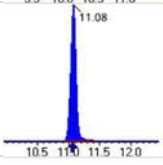 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-CAL8 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433850 | ( 11.89 , N/A ) ( N/A , 0.02 , N/A ) | 1561.5 | N/A | 0.9870 [ 1.0000 ] | 98.7% { 87.0% } | 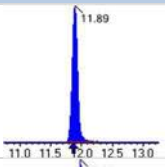 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 380580 | ( 12.99 , N/A ) ( N/A , 0.02 , N/A ) | 1366.1 | N/A | 0.9936 [ 1.0000 ] | 99.4% { 89.8% } | 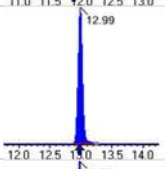 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579472 | ( 13.78 , N/A ) ( N/A , 0.01 , N/A ) | 2801.8 | N/A | 1.7812 [ 2.0000 ] | 89.1% { 81.8% } | 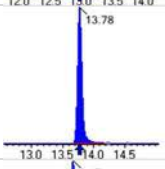 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1893233 | ( 6.47 , N/A ) ( N/A , 0.01 , N/A ) | 1395.4 | N/A | 1.7874 [ 2.0000 ] | 89.4% { 82.0% } | 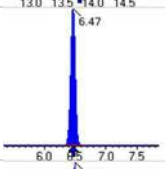 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1546106 | ( 8.80 , N/A ) ( N/A , 0.02 , N/A ) | 4379.2 | N/A | 1.9435 [ 2.0000 ] | 97.2% { 93.9% } | 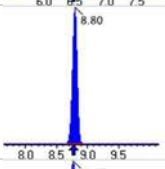 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1981905 | ( 10.67 , N/A ) ( N/A , 0.03 , N/A ) | 616.6 | N/A | 2.0742 [ 2.0000 ] | 103.7% { 94.3% } | 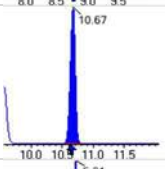 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 283468 | ( 5.61 , N/A ) ( N/A , 0.01 , N/A ) | 75.0 | N/A | 2.9943 [ 4.0000 ] | 74.9% { 78.8% } | 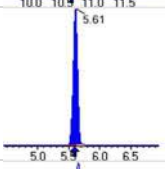 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 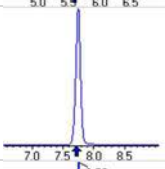 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 893578 | ( 9.56 , N/A ) ( N/A , 0.03 , N/A ) | 1072.7 | N/A | 3.0508 [ 4.0000 ] | 76.3% { 76.7% } | 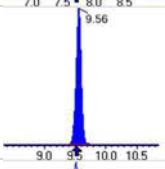 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 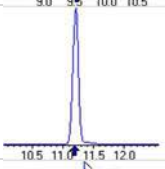 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2032266 | ( 12.85 , N/A ) ( N/A , 0.03 , N/A ) | 1776.7 | N/A | 1.9627 [ 2.0000 ] | 98.1% { 87.3% } | 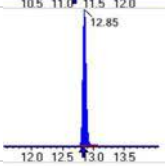 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (8)
Acquired: 2024/03/12 - 20:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 412108 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 1946.8 | N/A | 2.1554 [ 2.0000 ] | 107.8% { 97.4% } | 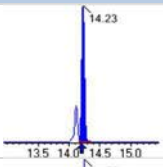  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 432162 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2675.4 | N/A | 1.9678 [ 2.0000 ] | 98.4% { 87.0% } | 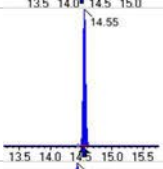  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 951188 | ( 10.44 , N/A ) ( N/A , 0.03 , N/A ) | 1462.8 | N/A | 3.8873 [ 4.0000 ] | 97.2% { 88.0% } | 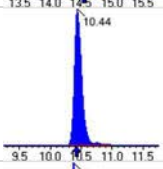  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 856821 | ( 10.98 , N/A ) ( N/A , 0.03 , N/A ) | 1852.7 | N/A | 3.6889 [ 4.0000 ] | 92.2% { 81.7% } | 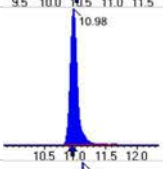  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1909243 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 3516.7 | N/A | 21.3705 [ 20.0000 ] | 106.9% { 101.4% } | 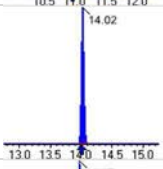  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2194972 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5592.6 | N/A | 20.2813 [ 20.0000 ] | 101.4% { 93.0% } | 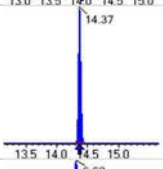  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1041744 | ( 6.62 , N/A ) ( N/A , 0.02 , N/A ) | 2598.2 | N/A | 8.0216 [ 8.0000 ] | 100.3% { 91.8% } | 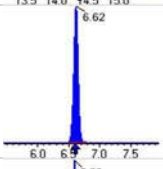  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561544 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 1277.3 | N/A | 2.0295 [ 2.0000 ] | 101.5% { 95.8% } | 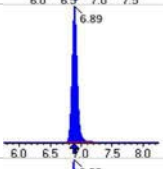  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 522549 | ( 8.98 , N/A ) ( N/A , 0.02 , N/A ) | 533.5 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 92.6% } | 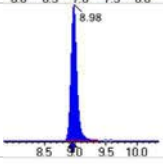  | | |

# EPA 1633A

Initial Calibration: SD00991 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 56754<br>( 163.0 / 69.0 ) 1270 | ( 2.79 , 0.74 ) ( N/A , 0.00 , -0.4) | 384.2<br>53.0 | 0.0224<br>82.4<br>82.4 | 0.1977 | N/A | 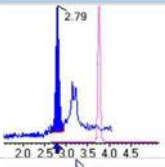 | 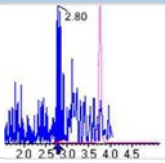 | |
| PFBA | ( 213.0 / 169.0 ) 136258 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 106.2 | N/A<br>0.0<br>0.0 | 0.4489 | N/A | 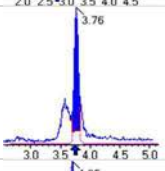 | | |
| PFPeA | ( 263.0 / 219.0 ) 51948<br>( 263.0 / 69.0 ) 452 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -1.2) | 324.2<br>10.2 | 0.0087<br>72.8<br>72.8 | 0.2066 | N/A | 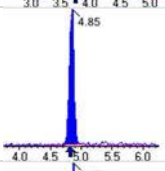 | 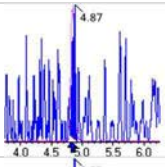 | |
| PFHxA | ( 313.0 / 269.0 ) 28303<br>( 313.0 / 119.0 ) 2598 | ( 6.07 , 1.00 ) ( 0.00 , N/A , -0.6) | 211.6<br>65.5 | 0.0918<br>79.1<br>79.1 | 0.1048 | N/A | 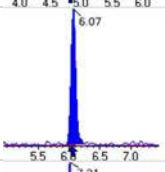 | 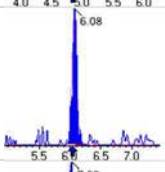 | |
| PFHpA | ( 363.0 / 319.0 ) 29431<br>( 363.0 / 169.0 ) 10099 | ( 7.21 , 1.00 ) ( 0.00 , N/A , -0.5) | 207.3<br>144.2 | 0.3431<br>113.2<br>113.2 | 0.0936 | N/A | 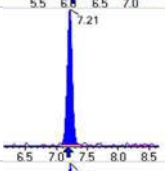 | 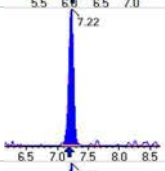 | |
| PFOA | ( 413.0 / 369.0 ) 52214<br>( 413.0 / 169.0 ) 20858 | ( 8.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 69.2<br>131.3 | 0.3995<br>109.3<br>109.3 | 0.0973 | N/A | 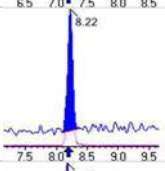 | 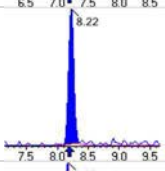 | |
| PFNA | ( 463.0 / 419.0 ) 24013<br>( 463.0 / 169.0 ) 7912 | ( 9.17 , 1.00 ) ( 0.01 , N/A , 0.5) | 245.2<br>151.2 | 0.3295<br>129.1<br>129.1 | 0.0870 | N/A | 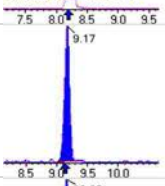 | 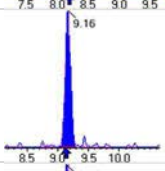 | |
| PFDA | ( 513.0 / 469.0 ) 38668<br>( 513.0 / 169.0 ) 3883 | ( 10.06 , 1.00 ) ( -0.01 , N/A , 0.0) | 462.4<br>300.3 | 0.1004<br>85.7<br>85.7 | 0.1143 | N/A | 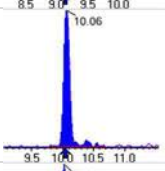 | 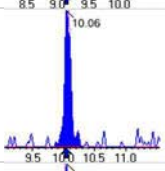 | |
| PFUnA | ( 563.0 / 519.0 ) 36147<br>( 563.0 / 169.0 ) 4589 | ( 10.93 , 1.00 ) ( 0.00 , N/A , -1.0) | 249.6<br>92.0 | 0.1270<br>89.6<br>89.6 | 0.0946 | N/A | 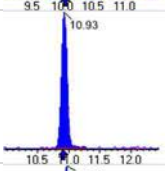 | 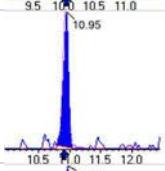 | |
| PFDoA | ( 613.0 / 569.0 ) 40420<br>( 613.0 / 169.0 ) 7186 | ( 11.76 , 1.00 ) ( 0.00 , N/A , -0.5) | 255.5<br>118.2 | 0.1778<br>112.5<br>112.5 | 0.0950 | N/A | 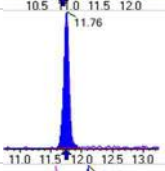 | 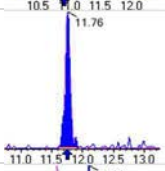 | |
| PFTrDA | ( 663.0 / 619.0 ) 40921<br>( 663.0 / 169.0 ) 9844 | ( 12.38 , 1.05 ) ( N/A , 0.01 , -0.1) | 299.5<br>147.5 | 0.2406<br>93.5<br>93.5 | 0.0984 | N/A | 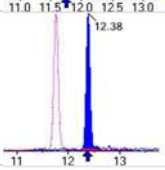 | 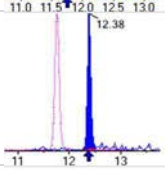 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30255<br>( 713.0 / 169.0 ) 9045 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 201.3<br>91.0 | 0.2990<br>110.8<br>110.8 | 0.0932 | N/A | 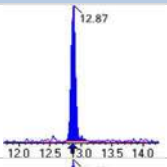 | 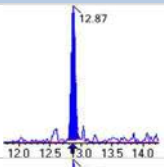 | |
| PFHxDA | ( 813.0 / 769.0 ) 27334<br>( 813.0 / 169.0 ) 7950 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.3) | 174.8<br>67.9 | 0.2908<br>118.9<br>118.9 | 0.1034 | N/A | 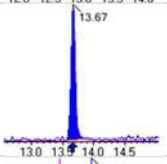 | 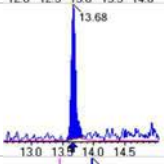 | |
| PFODA | ( 913.0 / 869.0 ) 15819<br>( 913.0 / 169.0 ) 6681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , -0.4) | 73.9<br>28.2 | 0.4223<br>117.9<br>117.9 | 0.0956 | N/A | 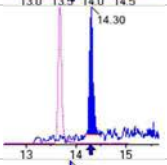 | 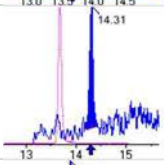 | |
| PFBS | ( 299.0 / 80.0 ) 35573<br>( 299.0 / 99.0 ) 26416 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.2) | 334.4<br>161.3 | 0.7426<br>105.0<br>105.0 | 0.0792 | N/A | 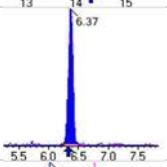 | 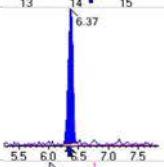 | |
| PFPeS | ( 349.0 / 80.0 ) 97489<br>( 349.0 / 99.0 ) 33196 | ( 7.61 , 0.88 )<br>( N/A , 0.02 , 0.1) | 355.9<br>243.8 | 0.3405<br>94.7<br>94.7 | 0.0909 | N/A | 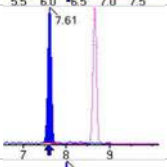 | 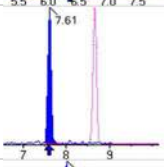 | |
| PFHxS | ( 399.0 / 80.0 ) 110405<br>( 399.0 / 99.0 ) 38767 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , -0.1) | 482.8<br>534.8 | 0.3511<br>110.3<br>110.3 | 0.0887 | N/A | 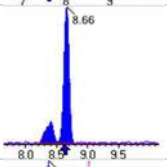 | 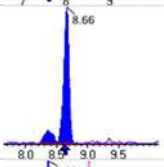 | |
| PFHpS | ( 449.0 / 80.0 ) 83548<br>( 449.0 / 99.0 ) 26287 | ( 9.63 , 0.92 )<br>( N/A , 0.02 , 0.3) | 322.3<br>244.1 | 0.3146<br>118.9<br>118.9 | 0.0858 | N/A | 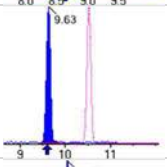 | 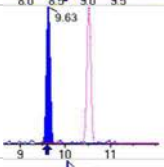 | |
| PFOS | ( 499.0 / 80.0 ) 87691<br>( 499.0 / 99.0 ) 22883 | ( 10.52 , 1.00 )<br>( 0.00 , N/A , 0.4) | 345.3<br>1768.7 | 0.2609<br>111.6<br>111.6 | 0.0934 | N/A | 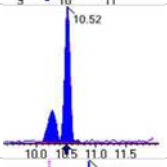 | 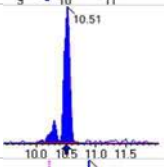 | |
| PFNS | ( 549.0 / 80.0 ) 83900<br>( 549.0 / 99.0 ) 23316 | ( 11.37 , 1.08 )<br>( N/A , 0.03 , 0.3) | 349.0<br>203.8 | 0.2779<br>102.0<br>102.0 | 0.0954 | N/A | 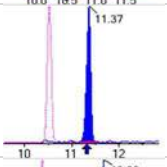 | 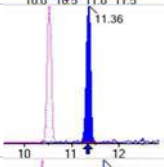 | |
| PFDS | ( 599.0 / 80.0 ) 108245<br>( 599.0 / 99.0 ) 28207 | ( 12.06 , 1.15 )<br>( N/A , 0.01 , -0.3) | 392.8<br>137.7 | 0.2606<br>95.8<br>95.8 | 0.1008 | N/A | 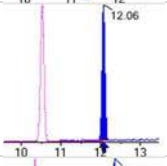 | 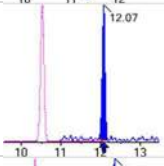 | |
| PFDoS | ( 699.0 / 80.0 ) 90182<br>( 699.0 / 99.0 ) 22019 | ( 12.98 , 1.23 )<br>( N/A , 0.01 , -0.1) | 480.9<br>258.2 | 0.2442<br>104.5<br>104.5 | 0.0953 | N/A | 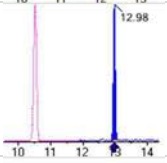 | 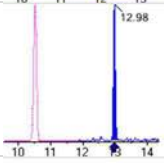 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 138266<br>( 327.0 / 81.0 ) 132939 | ( 5.53 , 1.00 ) ( 0.00 , N/A , 0.0) | 1481.0<br>723.3 | 0.9615<br>110.2<br>110.2 | 0.3493 | N/A | 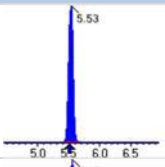 | 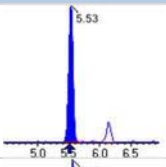 | |
| 6:2FTS | ( 427.0 / 407.0 ) 137083<br>( 427.0 / 81.0 ) 177481 | ( 7.65 , 1.00 ) ( -0.01 , N/A , -0.3) | 1795.6<br>972.6 | 1.2947<br>103.2<br>103.2 | 0.3738 | N/A | 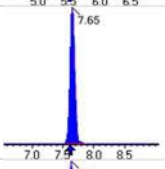 | 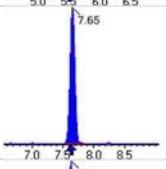 | |
| 8:2FTS | ( 527.0 / 507.0 ) 135114<br>( 527.0 / 81.0 ) 148723 | ( 9.43 , 1.00 ) ( -0.01 , N/A , 0.1) | 1178.6<br>706.0 | 1.1007<br>101.2<br>101.2 | 0.3727 | N/A | 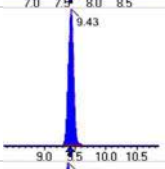 | 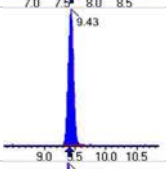 | |
| 10:2FTS | ( 627.0 / 607.0 ) 113285<br>( 627.0 / 81.0 ) 169067 | ( 11.08 , 1.00 ) ( 0.01 , N/A , 0.0) | 776.4<br>354.6 | 1.4924<br>103.7<br>103.7 | 0.3842 | N/A | 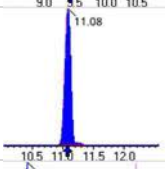 | 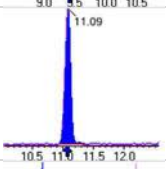 | |
| PFBSA | ( 297.9 / 78.0 ) 77257<br>( 297.9 / 278.0 ) 42 | ( 8.13 , 0.57 ) ( N/A , 0.02 , 0.5) | 590.4<br>6.4 | 0.0005<br>39.4<br>39.4 | 0.0966 | N/A | 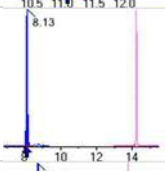 | 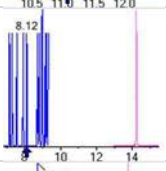 | |
| PFHxSA | ( 397.9 / 78.0 ) 102666<br>( 397.9 / 378.0 ) 421 | ( 10.99 , 0.76 ) ( N/A , 0.02 , 0.9) | 582.4<br>24.9 | 0.0041<br>100.4<br>100.4 | 0.0979 | N/A | 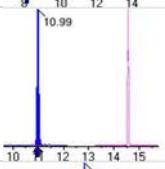 | 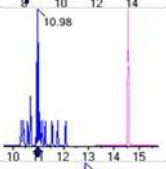 | |
| PFOSA | ( 498.0 / 78.0 ) 74467<br>( 498.0 / 478.0 ) 886 | ( 12.85 , 1.00 ) ( -0.01 , N/A , -0.5) | 606.2<br>33.7 | 0.0119<br>84.8<br>84.8 | 0.0950 | N/A | 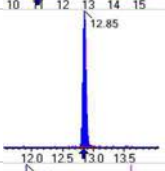 | 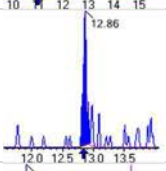 | |
| TFSI | ( 279.7 / 147.0 ) 175179<br>( 279.7 / 211.0 ) 15047 | ( 8.23 , 0.64 ) ( N/A , 0.03 , -0.2) | 46.0<br>21.9 | 0.0859<br>102.2<br>102.2 | 0.0849 | N/A | 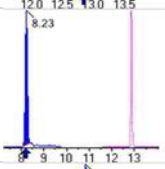 | 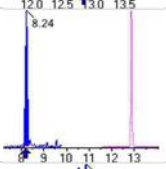 | |
| NMeFOSA | ( 512.0 / 219.0 ) 57698<br>( 512.0 / 169.0 ) 44722 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.9) | 560.7<br>223.4 | 0.7751<br>103.6<br>103.6 | 0.3745 | N/A | 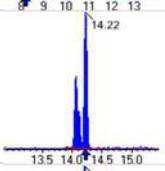 | 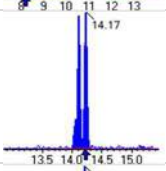 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72453<br>( 526.0 / 169.0 ) 88312 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 1.5) | 828.6<br>691.6 | 1.2189<br>98.7<br>98.7 | 0.3790 | N/A | 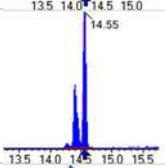 | 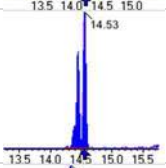 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 21494<br>( 570.0 / 483.0 ) 9989 | ( 10.33 , 1.00 ) ( 0.01 , N/A , 0.1) | 69489.4<br>2801.3 | 0.4647<br>106.0<br>106.0 | 0.1015 | N/A | 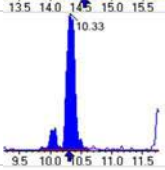 | 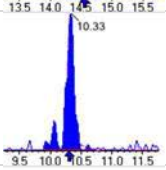 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 18396<br>( 584.0 / 526.0 ) 12082 | ( 10.86 , 1.00 ) ( 0.01 , N/A , 0.6) | 62964.4<br>389.2 | 0.6568<br>106.5<br>106.5 | 0.0917 | N/A | 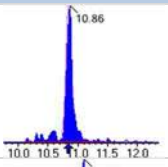 | 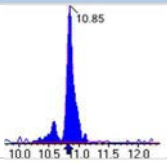 | |
| NMeFOSE | ( 616.0 / 59.0 ) 32728 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 202.5 | N/A<br>0.0<br>0.0 | 0.4046 | N/A | 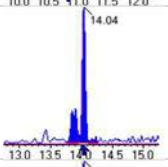 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 24283 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 263.9 | N/A<br>0.0<br>0.0 | 0.3613 | N/A | 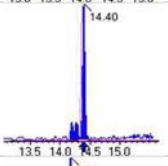 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7677<br>( 285.0 / 185.0 ) 19134 | ( 6.53 , 1.00 ) ( 0.00 , N/A , -0.1) | 309.3<br>127.0 | 2.4924<br>90.1<br>90.1 | 0.1012 | N/A | 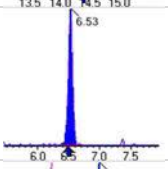 | 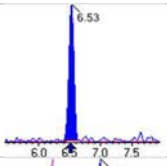 | |
| ADONA | ( 377.0 / 85.0 ) 86497<br>( 377.0 / 251.0 ) 6881 | ( 7.61 , 1.16 ) ( N/A , 0.02 , -0.1) | 669.7<br>111.4 | 0.0796<br>78.0<br>78.0 | 0.0977 | N/A | 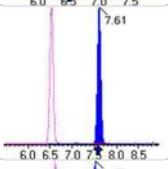 | 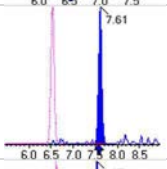 | |
| PFEESA | ( 315.0 / 135.0 ) 32797<br>( 315.0 / 83.0 ) 24495 | ( 6.97 , 1.15 ) ( N/A , 0.02 , -0.2) | 555.1<br>75.6 | 0.7469<br>134.0<br>134.0 | 0.1691 | N/A | 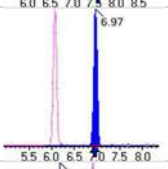 | 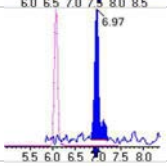 | |
| PFMPA | ( 229.0 / 85.0 ) 14437 | ( 4.15 , 0.86 ) ( N/A , 0.01 , 0.0) | 396.2 | N/A<br>0.0<br>0.0 | 0.1810 | N/A | 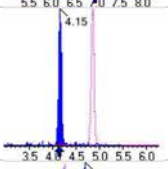 | | |
| PFMBA | ( 279.0 / 85.0 ) 38487 | ( 5.21 , 1.08 ) ( N/A , 0.00 , 0.0) | 415.6 | N/A<br>0.0<br>0.0 | 0.1775 | N/A | 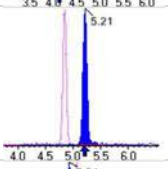 | | |
| NFDHA | ( 295.0 / 201.0 ) 19867<br>( 295.0 / 85.0 ) 19074 | ( 5.94 , 0.98 ) ( N/A , 0.02 , 0.4) | 825.6<br>224.5 | 0.9601<br>89.0<br>89.0 | 0.1970 | N/A | 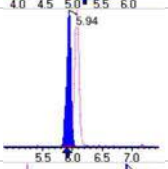 | 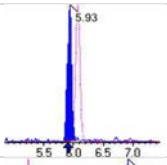 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86451<br>( 533.0 / 353.0 ) 30185 | ( 11.17 , 1.71 ) ( N/A , 0.02 , -0.2) | 1132.8<br>400.3 | 0.3492<br>111.6<br>111.6 | 0.0904 | N/A | 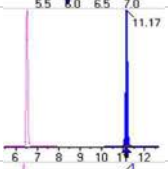 | 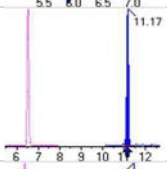 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 69462<br>( 633.0 / 453.0 ) 22673 | ( 12.48 , 1.91 ) ( N/A , 0.01 , -0.1) | 820.0<br>211.9 | 0.3264<br>98.3<br>98.3 | 0.0945 | N/A | 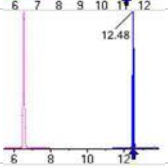 | 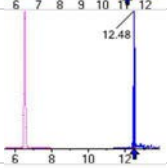 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 44635<br>( 461.0 / 381.2 ) 17189 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.6) | 466.0<br>312.6 | 0.3851<br>96.6<br>96.6 | 0.0843 | N/A | 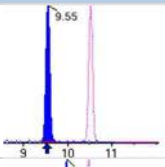 | 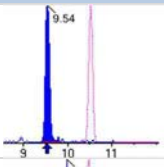 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 4575<br>( 241.0 / 117.0 ) 11441 | ( 4.41 , 0.91 ) ( N/A , 0.01 , -0.2) | 329.5<br>126.3 | 2.5007<br>118.7<br>118.7 | 0.3199 | N/A | 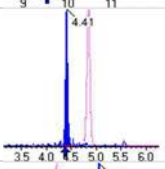 | 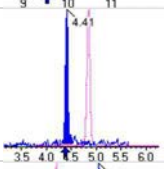 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30417<br>( 341.0 / 217.0 ) 46943 | ( 6.97 , 1.15 ) ( N/A , 0.02 , 0.2) | 303.3<br>268.0 | 1.5433<br>101.6<br>101.6 | 0.4060 | N/A | 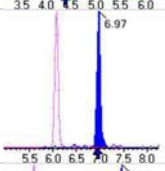 | 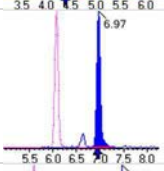 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54097<br>( 441.0 / 337.0 ) 44506 | ( 9.36 , 1.54 ) ( N/A , 0.02 , -0.2) | 24010.5<br>4188.6 | 0.8227<br>89.7<br>89.7 | 0.4401 | N/A | 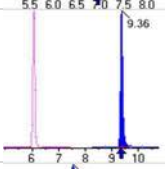 | 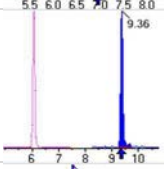 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 33721<br>( 357.2 / 243.0 ) 2710 | ( 6.81 , 1.00 ) ( 0.00 , N/A , 0.5) | 224.8<br>46.5 | 0.0804<br>72.9<br>72.9 | 0.0953 | N/A | 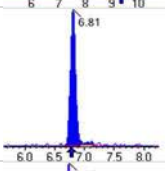 | 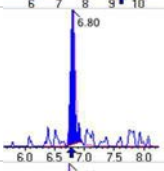 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 18228<br>( 457.2 / 343.0 ) 723 | ( 8.85 , 1.00 ) ( -0.01 , N/A , -0.3) | 328.9<br>66.3 | 0.0397<br>95.7<br>95.7 | 0.0750 | N/A | 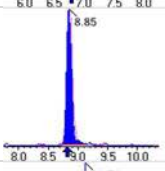 | 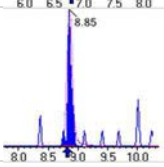 | |
| TDCA | ( 499.0 / 80.0 ) 62947 | ( 10.51 , 1.00 ) ( N/A , 0.02 , 0.0) | 745.7 | N/A<br>0.0<br>0.0 | 0.0984 | N/A | 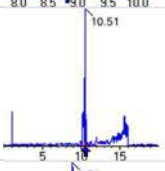 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269964 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 1513.6 | N/A | 1.1322<br>[ 1.0000 ] | 113.2%<br>{ 115.2% } | 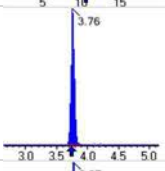 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111056 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 118187.6 | N/A | 0.8754<br>[ 1.0000 ] | 87.5%<br>{ 92.9% } | 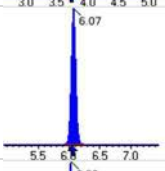 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 395428 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3733.5 | N/A | 1.0003<br>[ 1.0000 ] | 100.0%<br>{ 104.1% } | 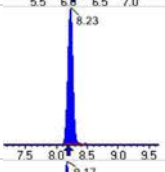 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 274681 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 866.2 | N/A | 0.9658<br>[ 1.0000 ] | 96.6%<br>{ 103.2% } | 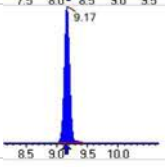 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 296205 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 4479.4 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 110.6% } | 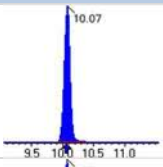 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 887857 | ( 8.67 , N/A ) ( N/A , 0.02 , N/A ) | 5438.8 | N/A | 0.9355 [ 1.0000 ] | 93.6% { 98.6% } | 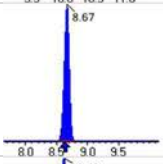 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 744274 | ( 10.53 , N/A ) ( N/A , 0.02 , N/A ) | 1977.9 | N/A | 0.9772 [ 1.0000 ] | 97.7% { 106.2% } | 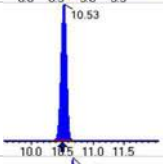 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2435804 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 41491.6 | N/A | 7.8981 [ 8.0000 ] | 98.7% { 115.2% } | 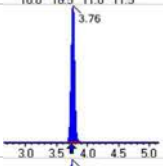 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 995379 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 6790.9 | N/A | 4.8037 [ 4.0000 ] | 120.1% { 108.0% } | 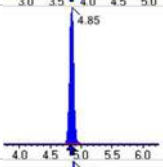 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 562315 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 10449.6 | N/A | 2.2192 [ 2.0000 ] | 111.0% { 101.6% } | 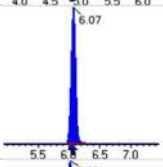 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 641086 | ( 7.22 , N/A ) ( N/A , 0.02 , N/A ) | 5851.9 | N/A | 2.2744 [ 2.0000 ] | 113.7% { 103.5% } | 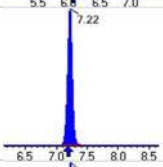 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879761 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3170.1 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 107.3% } | 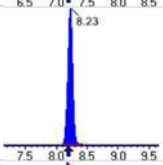 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274748 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 3274.8 | N/A | 1.0201 [ 1.0000 ] | 102.0% { 104.6% } | 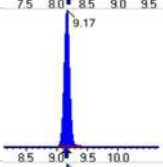 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331041 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1094.7 | N/A | 0.9973 [ 1.0000 ] | 99.7% { 104.5% } | 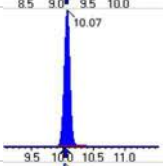 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412925 | ( 10.93 , N/A ) ( N/A , 0.02 , N/A ) | 1057.2 | N/A | 1.0573 [ 1.0000 ] | 105.7% { 114.3% } | 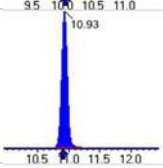 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 422727 | ( 11.76 , N/A ) ( N/A , 0.02 , N/A ) | 1235.8 | N/A | 1.0629 [ 1.0000 ] | 106.3% { 120.2% } | 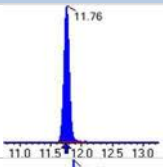  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 346712 | ( 12.88 , N/A ) ( N/A , 0.01 , N/A ) | 1297.7 | N/A | 1.0237 [ 1.0000 ] | 102.4% { 111.0% } | 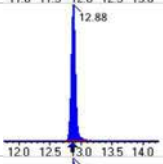  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554558 | ( 13.68 , N/A ) ( N/A , 0.01 , N/A ) | 2058.7 | N/A | 1.9179 [ 2.0000 ] | 95.9% { 107.5% } | 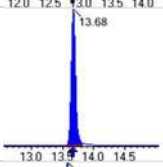  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729492 | ( 6.37 , N/A ) ( N/A , 0.02 , N/A ) | 1031.7 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 108.6% } | 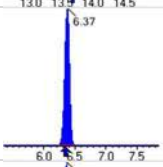  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400831 | ( 8.66 , N/A ) ( N/A , 0.03 , N/A ) | 3163.0 | N/A | 2.1878 [ 2.0000 ] | 109.4% { 109.4% } | 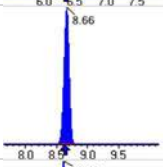  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1625759 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1645.8 | N/A | 2.0259 [ 2.0000 ] | 101.3% { 104.0% } | 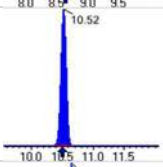  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 603279 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 91.6 | N/A | 4.3589 [ 4.0000 ] | 109.0% { 114.9% } | 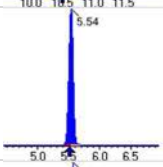  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1771435 | ( 7.66 , N/A ) ( N/A , 0.03 , N/A ) | 3327.3 | N/A | 4.2767 [ 4.0000 ] | 106.9% { 104.2% } | 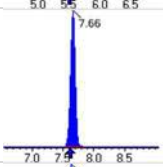  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527095 | ( 9.44 , N/A ) ( N/A , 0.02 , N/A ) | 1433.7 | N/A | 4.7009 [ 4.0000 ] | 117.5% { 115.7% } | 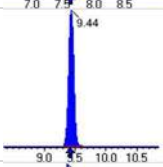  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3060105 | ( 11.07 , N/A ) ( N/A , 0.02 , N/A ) | 1576.9 | N/A | 9.0135 [ 8.0000 ] | 112.7% { 117.8% } | 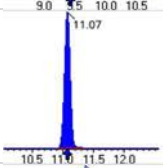  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1567982 | ( 12.86 , N/A ) ( N/A , 0.01 , N/A ) | 1673.5 | N/A | 2.2048 [ 2.0000 ] | 110.2% { 117.6% } | 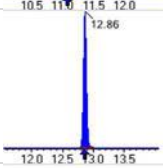  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 310360 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1785.9 | N/A | 2.0576 [ 2.0000 ] | 102.9% { 111.9% } | 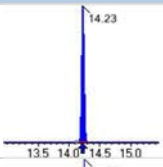  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 341394 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2508.3 | N/A | 2.1106 [ 2.0000 ] | 105.5% { 108.2% } | 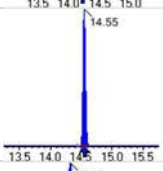  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 888303 | ( 10.32 , N/A ) ( N/A , 0.02 , N/A ) | 2741.2 | N/A | 4.3020 [ 4.0000 ] | 107.6% { 106.0% } | 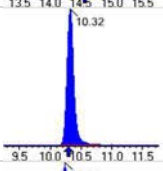  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 820340 | ( 10.84 , N/A ) ( N/A , 0.02 , N/A ) | 1993.4 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 108.5% } | 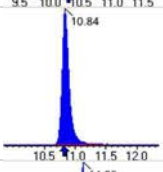  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475020 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 21.7611 [ 20.0000 ] | 108.8% { 109.6% } | 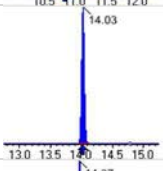  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1513000 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3678.2 | N/A | 21.9921 [ 20.0000 ] | 110.0% { 114.9% } | 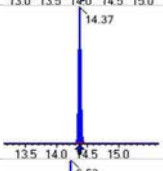  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1029123 | ( 6.53 , N/A ) ( N/A , 0.01 , N/A ) | 2714.8 | N/A | 8.9159 [ 8.0000 ] | 111.4% { 105.2% } | 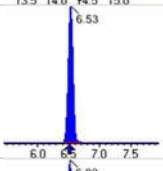  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 665466 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1425.6 | N/A | 2.0722 [ 2.0000 ] | 103.6% { 115.3% } | 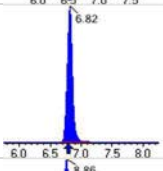  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 596324 | ( 8.86 , N/A ) ( N/A , 0.02 , N/A ) | 778.6 | N/A | 2.0397 [ 2.0000 ] | 102.0% { 111.0% } | 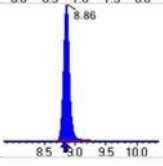  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 270243<br>( 163.0 / 69.0 ) 6407 | ( 2.78 , 0.74 ) ( N/A , 0.00 , -0.3) | 1728.8<br>290.1 | 0.0237<br>87.3<br>87.3 | 0.9507 | N/A | 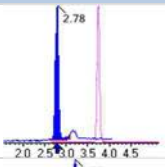 | 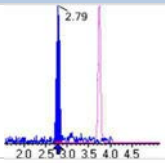 | |
| PFBA | ( 213.0 / 169.0 ) 601138 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 533.4 | N/A<br>0.0<br>0.0 | 2.0004 | N/A | 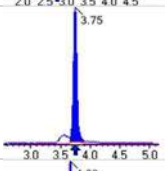 | | |
| PFPeA | ( 263.0 / 219.0 ) 236977<br>( 263.0 / 69.0 ) 2370 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.4) | 1167.2<br>40.3 | 0.0100<br>83.8<br>83.8 | 0.9417 | N/A | 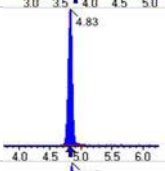 | 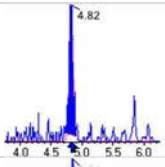 | |
| PFHxA | ( 313.0 / 269.0 ) 139970<br>( 313.0 / 119.0 ) 15702 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 805.1<br>325.5 | 0.1122<br>96.6<br>96.6 | 0.4869 | N/A | 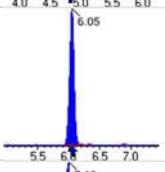 | 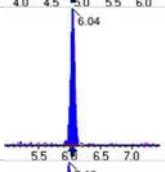 | |
| PFHpA | ( 363.0 / 319.0 ) 153182<br>( 363.0 / 169.0 ) 47571 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 795.4<br>513.0 | 0.3106<br>102.5<br>102.5 | 0.4856 | N/A | 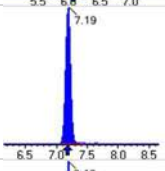 | 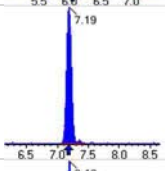 | |
| PFOA | ( 413.0 / 369.0 ) 219264<br>( 413.0 / 169.0 ) 76818 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 244.8<br>400.1 | 0.3503<br>95.8<br>95.8 | 0.5151 | N/A | 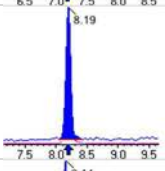 | 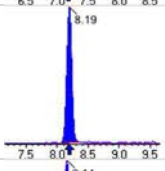 | |
| PFNA | ( 463.0 / 419.0 ) 137279<br>( 463.0 / 169.0 ) 33380 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 798.0<br>432.7 | 0.2432<br>95.2<br>95.2 | 0.5090 | N/A | 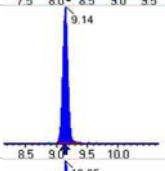 | 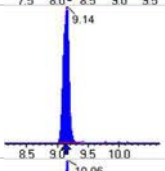 | |
| PFDA | ( 513.0 / 469.0 ) 168954<br>( 513.0 / 169.0 ) 20337 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.5) | 1427.3<br>879.5 | 0.1204<br>102.7<br>102.7 | 0.5207 | N/A | 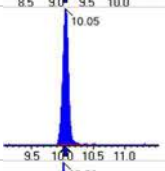 | 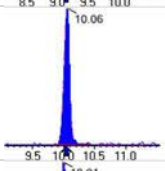 | |
| PFUnA | ( 563.0 / 519.0 ) 171379<br>( 563.0 / 169.0 ) 24402 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.3) | 762.3<br>223.0 | 0.1424<br>100.5<br>100.5 | 0.4723 | N/A | 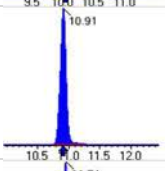 | 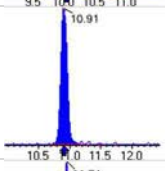 | |
| PFDoA | ( 613.0 / 569.0 ) 185419<br>( 613.0 / 169.0 ) 28647 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.1) | 650.7<br>310.6 | 0.1545<br>97.7<br>97.7 | 0.4817 | N/A | 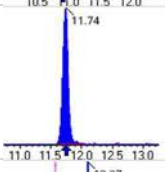 | 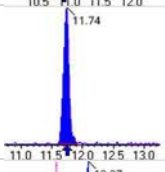 | |
| PFTrDA | ( 663.0 / 619.0 ) 187393<br>( 663.0 / 169.0 ) 51467 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.2) | 715.2<br>527.9 | 0.2746<br>106.7<br>106.7 | 0.4977 | N/A | 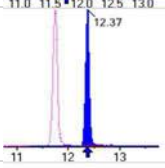 | 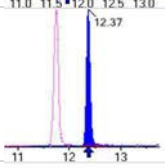 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 158224<br>( 713.0 / 169.0 ) 40722 | ( 12.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 963.7<br>336.5 | 0.2574<br>95.4<br>95.4 | 0.5074 | N/A | 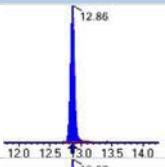 | 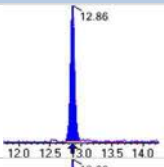 | |
| PFHxDA | ( 813.0 / 769.0 ) 137951<br>( 813.0 / 169.0 ) 33076 | ( 13.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 845.2<br>255.3 | 0.2398<br>98.0<br>98.0 | 0.5012 | N/A | 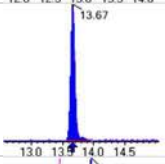 | 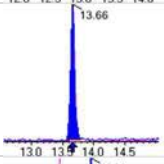 | |
| PFODA | ( 913.0 / 869.0 ) 87214<br>( 913.0 / 169.0 ) 26681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 415.1<br>133.0 | 0.3059<br>85.4<br>85.4 | 0.5065 | N/A | 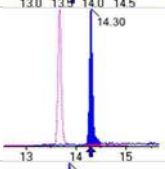 | 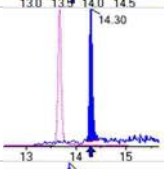 | |
| PFBS | ( 299.0 / 80.0 ) 198065<br>( 299.0 / 99.0 ) 132926 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1381.9<br>709.2 | 0.6711<br>94.9<br>94.9 | 0.4518 | N/A | 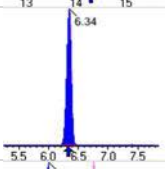 | 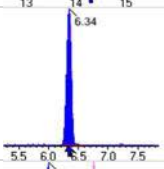 | |
| PFPeS | ( 349.0 / 80.0 ) 497722<br>( 349.0 / 99.0 ) 172204 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.0) | 1143.3<br>1025.2 | 0.3460<br>96.2<br>96.2 | 0.4717 | N/A | 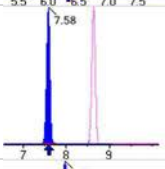 | 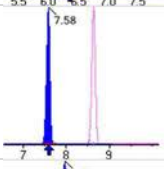 | |
| PFHxS | ( 399.0 / 80.0 ) 542542<br>( 399.0 / 99.0 ) 185937 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1189.0<br>1277.1 | 0.3427<br>107.6<br>107.6 | 0.4426 | N/A | 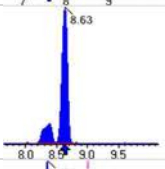 | 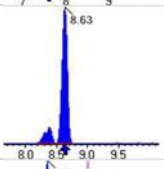 | |
| PFHpS | ( 449.0 / 80.0 ) 454824<br>( 449.0 / 99.0 ) 118403 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 980.7<br>650.1 | 0.2603<br>98.4<br>98.4 | 0.4757 | N/A | 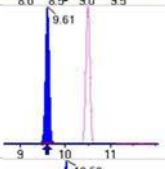 | 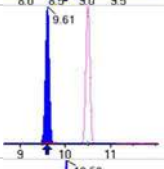 | |
| PFOS | ( 499.0 / 80.0 ) 424655<br>( 499.0 / 99.0 ) 97429 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.2) | 865.6<br>2087.7 | 0.2294<br>98.2<br>98.2 | 0.4608 | N/A | 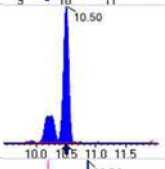 | 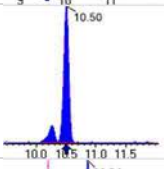 | |
| PFNS | ( 549.0 / 80.0 ) 419634<br>( 549.0 / 99.0 ) 115472 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 999.8<br>699.2 | 0.2752<br>101.0<br>101.0 | 0.4863 | N/A | 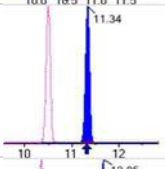 | 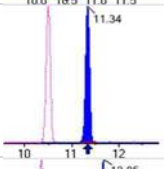 | |
| PFDS | ( 599.0 / 80.0 ) 531726<br>( 599.0 / 99.0 ) 138592 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 979.2<br>576.8 | 0.2606<br>95.9<br>95.9 | 0.5047 | N/A | 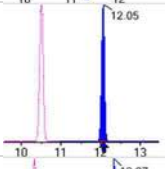 | 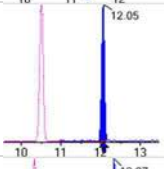 | |
| PFDoS | ( 699.0 / 80.0 ) 448366<br>( 699.0 / 99.0 ) 109465 | ( 12.97 , 1.23 )<br>( N/A , 0.00 , 0.0) | 1926.4<br>1068.2 | 0.2441<br>104.5<br>104.5 | 0.4827 | N/A | 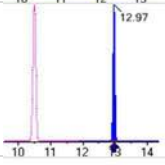 | 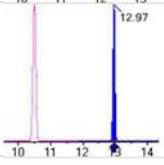 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 754240<br>( 327.0 / 81.0 ) 686574 | ( 5.51 , 1.00 )<br>( -0.01 , N/A , -0.2) | 3506.2<br>1884.3 | 0.9103<br>104.3<br>104.3 | 1.9200 | N/A | 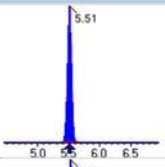 | 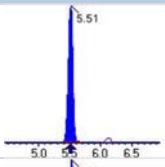 | |
| 6:2FTS | ( 427.0 / 407.0 ) 743646<br>( 427.0 / 81.0 ) 871699 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.3) | 3382.5<br>2278.6 | 1.1722<br>93.5<br>93.5 | 1.9637 | N/A | 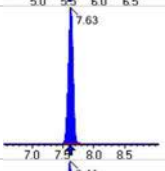 | 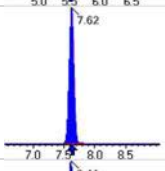 | |
| 8:2FTS | ( 527.0 / 507.0 ) 720596<br>( 527.0 / 81.0 ) 776814 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1864.9<br>1134.6 | 1.0780<br>99.1<br>99.1 | 2.0117 | N/A | 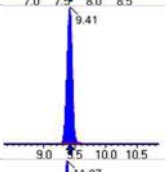 | 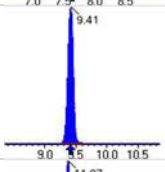 | |
| 10:2FTS | ( 627.0 / 607.0 ) 538928<br>( 627.0 / 81.0 ) 829622 | ( 11.07 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1479.4<br>1094.4 | 1.5394<br>106.9<br>106.9 | 1.8031 | N/A | 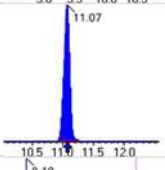 | 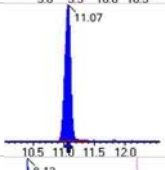 | |
| PFBSA | ( 297.9 / 78.0 ) 377825<br>( 297.9 / 278.0 ) 593 | ( 8.10 , 0.57 )<br>( N/A , -0.01 , -1.1) | 1359.0<br>35.1 | 0.0016<br>114.8<br>114.8 | 0.4989 | N/A | 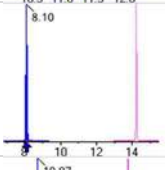 | 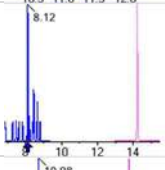 | |
| PFHxSA | ( 397.9 / 78.0 ) 506230<br>( 397.9 / 378.0 ) 2031 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , -0.3) | 1295.9<br>58.9 | 0.0040<br>98.2<br>98.2 | 0.5209 | N/A | 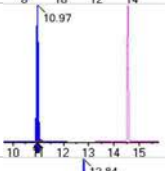 | 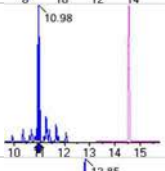 | |
| PFOSA | ( 498.0 / 78.0 ) 387069<br>( 498.0 / 478.0 ) 4980 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1381.2<br>211.1 | 0.0129<br>91.7<br>91.7 | 0.5254 | N/A | 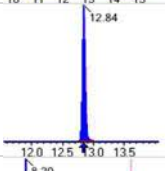 | 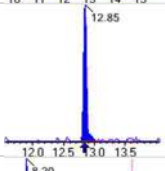 | |
| TFSI | ( 279.7 / 147.0 ) 914573<br>( 279.7 / 211.0 ) 73594 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.1) | 56.4<br>41.8 | 0.0805<br>95.8<br>95.8 | 0.4714 | N/A | 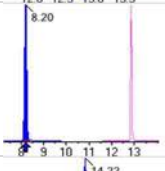 | 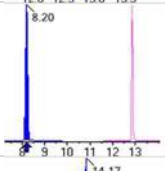 | |
| NMeFOSA | ( 512.0 / 219.0 ) 289760<br>( 512.0 / 169.0 ) 219586 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 1564.6<br>722.0 | 0.7578<br>101.3<br>101.3 | 1.9861 | N/A | 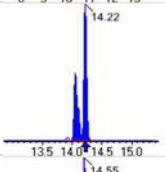 | 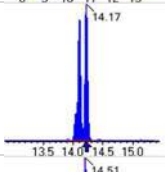 | |
| NEtFOSA | ( 526.0 / 219.0 ) 357885<br>( 526.0 / 169.0 ) 435343 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.2) | 2096.7<br>1693.7 | 1.2164<br>98.5<br>98.5 | 2.0207 | N/A | 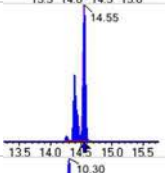 | 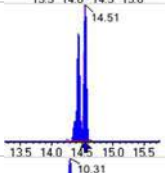 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 101165<br>( 570.0 / 483.0 ) 44729 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1433.8<br>321.8 | 0.4421<br>100.8<br>100.8 | 0.5077 | N/A | 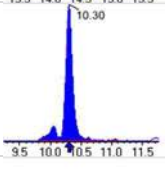 | 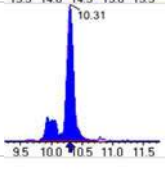 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 101975<br>( 584.0 / 526.0 ) 55503 | ( 10.84 , 1.00 )<br>( 0.01 , N/A , -0.1) | 3375617.3<br>499.1 | 0.5443<br>88.3<br>88.3 | 0.5375 | N/A | 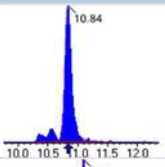 | 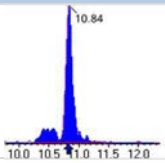 | |
| NMeFOSE | ( 616.0 / 59.0 ) 147340 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 760.5 | N/A<br>0.0<br>0.0 | 2.0427 | N/A | 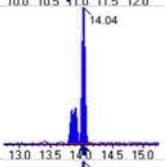 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 117168 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 956.6 | N/A<br>0.0<br>0.0 | 1.9790 | N/A | 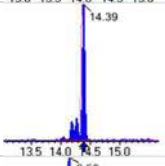 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 35584<br>( 285.0 / 185.0 ) 106028 | ( 6.50 , 1.00 )<br>( -0.01 , N/A , -0.2) | 642.7<br>688.7 | 2.9796<br>107.7<br>107.7 | 0.4650 | N/A | 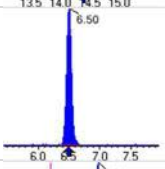 | 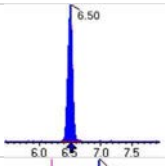 | |
| ADONA | ( 377.0 / 85.0 ) 413542<br>( 377.0 / 251.0 ) 38104 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.1) | 1102.2<br>428.3 | 0.0921<br>90.4<br>90.4 | 0.4632 | N/A | 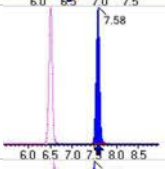 | 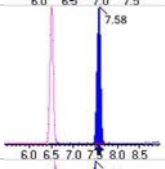 | |
| PFEESA | ( 315.0 / 135.0 ) 179792<br>( 315.0 / 83.0 ) 102089 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 1604.0<br>254.7 | 0.5678<br>101.9<br>101.9 | 0.8709 | N/A | 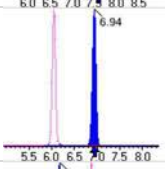 | 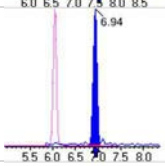 | |
| PFMPA | ( 229.0 / 85.0 ) 71647 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 1573.5 | N/A<br>0.0<br>0.0 | 0.8972 | N/A | 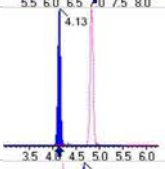 | | |
| PFMBA | ( 279.0 / 85.0 ) 202423 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 1629.0 | N/A<br>0.0<br>0.0 | 0.9326 | N/A | 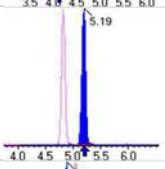 | | |
| NFDHA | ( 295.0 / 201.0 ) 108804<br>( 295.0 / 85.0 ) 115646 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 2039.9<br>957.9 | 1.0629<br>98.5<br>98.5 | 1.0138 | N/A | 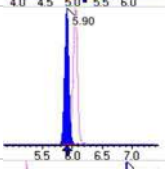 | 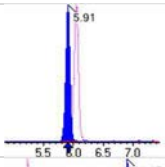 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 441071<br>( 533.0 / 353.0 ) 140189 | ( 11.15 , 1.71 )<br>( N/A , 0.01 , 0.1) | 2047.3<br>1154.6 | 0.3178<br>101.6<br>101.6 | 0.4574 | N/A | 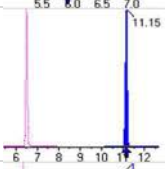 | 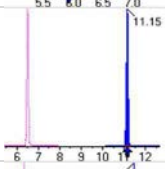 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 340892<br>( 633.0 / 453.0 ) 116659 | ( 12.46 , 1.92 )<br>( N/A , 0.00 , -0.1) | 2111.2<br>1169.2 | 0.3422<br>103.0<br>103.0 | 0.4597 | N/A | 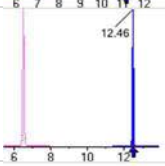 | 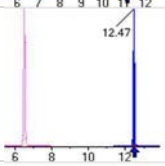 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 226835<br>( 461.0 / 381.2 ) 88383 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2081.7<br>1590.3 | 0.3896<br>97.8<br>97.8 | 0.4363 | N/A | 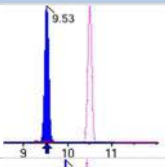 | 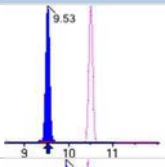 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25450<br>( 241.0 / 117.0 ) 56322 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.0) | 836.2<br>518.4 | 2.2130<br>105.0<br>105.0 | 1.7777 | N/A | 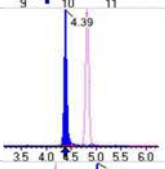 | 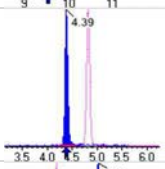 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 171905<br>( 341.0 / 217.0 ) 241610 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 759.6<br>653.2 | 1.4055<br>92.5<br>92.5 | 2.1563 | N/A | 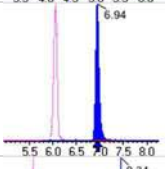 | 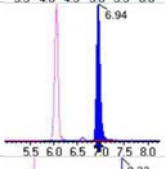 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 258113<br>( 441.0 / 337.0 ) 220700 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.1) | 3902.4<br>4652.4 | 0.8551<br>93.2<br>93.2 | 1.9730 | N/A | 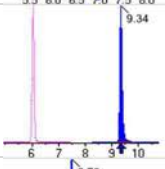 | 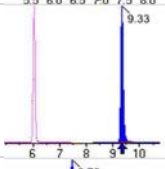 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172883<br>( 357.2 / 243.0 ) 19248 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 854.8<br>275.3 | 0.1113<br>101.0<br>101.0 | 0.4857 | N/A | 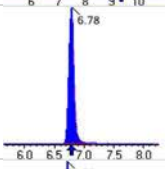 | 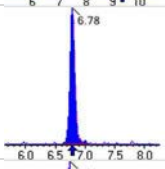 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 121222<br>( 457.2 / 343.0 ) 4083 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , -0.7) | 565.3<br>104.4 | 0.0337<br>81.2<br>81.2 | 0.5056 | N/A | 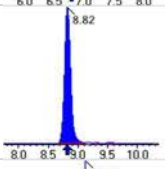 | 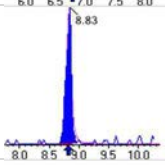 | |
| TDCA | ( 499.0 / 80.0 ) 308828 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 2696.4 | N/A<br>0.0<br>0.0 | 0.4916 | N/A | 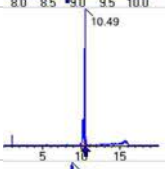 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261563 | ( 3.75 , N/A )<br>( N/A , -0.01 , N/A ) | 1100.3 | N/A | 1.0970<br>[ 1.0000 ] | 109.7%<br>{ 111.6% } | 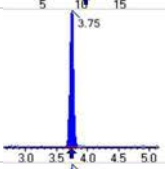 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125307 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 10148.5 | N/A | 0.9878<br>[ 1.0000 ] | 98.8%<br>{ 104.9% } | 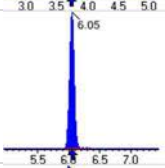 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390460 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 5378.3 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 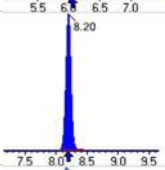 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278335 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 1109.0 | N/A | 0.9786<br>[ 1.0000 ] | 97.9%<br>{ 104.5% } | 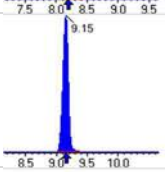 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307138 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6465.5 | N/A | 1.0517 [ 1.0000 ] | 105.2% { 114.7% } | 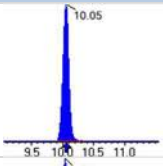 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981307 | ( 8.64 , N/A ) ( N/A , -0.01 , N/A ) | 6565.2 | N/A | 1.0340 [ 1.0000 ] | 103.4% { 109.0% } | 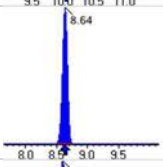 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 789235 | ( 10.51 , N/A ) ( N/A , 0.00 , N/A ) | 2423.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 112.6% } | 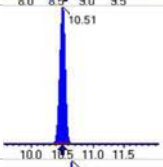 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2411767 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 38473.3 | N/A | 8.0713 [ 8.0000 ] | 100.9% { 114.0% } | 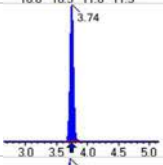 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 996419 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5316.2 | N/A | 4.2618 [ 4.0000 ] | 106.5% { 108.1% } | 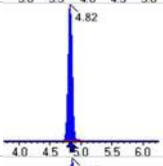 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 598415 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 7772.4 | N/A | 2.0930 [ 2.0000 ] | 104.7% { 108.1% } | 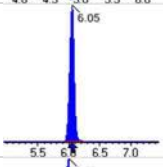 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642898 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4139.3 | N/A | 2.0214 [ 2.0000 ] | 101.1% { 103.8% } | 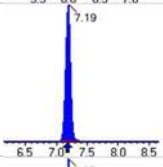 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 837262 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2865.2 | N/A | 2.0013 [ 2.0000 ] | 100.1% { 102.1% } | 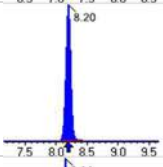 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 268319 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2813.0 | N/A | 0.9832 [ 1.0000 ] | 98.3% { 102.2% } | 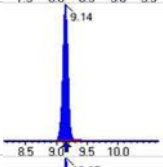 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317534 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1393.5 | N/A | 0.9225 [ 1.0000 ] | 92.3% { 100.3% } | 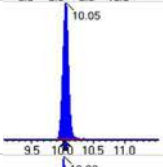 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392266 | ( 10.92 , N/A ) ( N/A , 0.00 , N/A ) | 889.3 | N/A | 0.9687 [ 1.0000 ] | 96.9% { 108.6% } | 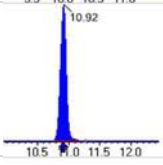 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382608 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1180.8 | N/A | 0.9278 [ 1.0000 ] | 92.8% { 108.8% } | 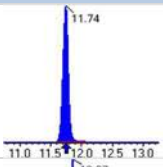  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 332937 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1583.7 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 106.5% } | 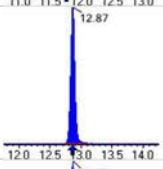  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577159 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 1.9250 [ 2.0000 ] | 96.3% { 111.8% } | 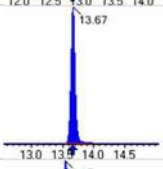  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1688757 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 883.0 | N/A | 1.9047 [ 2.0000 ] | 95.2% { 106.0% } | 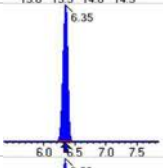  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1378939 | ( 8.63 , N/A ) ( N/A , 0.00 , N/A ) | 4407.3 | N/A | 1.9485 [ 2.0000 ] | 97.4% { 107.7% } | 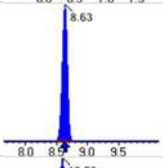  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1595802 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1706.0 | N/A | 1.8753 [ 2.0000 ] | 93.8% { 102.1% } | 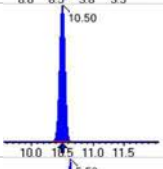  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598745 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 79.8 | N/A | 3.9141 [ 4.0000 ] | 97.9% { 114.1% } | 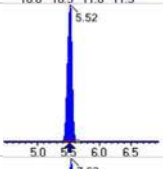  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1829265 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3435.0 | N/A | 3.9958 [ 4.0000 ] | 99.9% { 107.6% } | 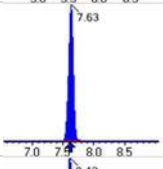  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1508713 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1476.9 | N/A | 4.2020 [ 4.0000 ] | 105.1% { 114.3% } | 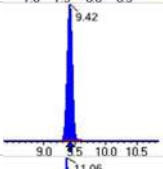  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3102262 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1234.2 | N/A | 8.2675 [ 8.0000 ] | 103.3% { 119.5% } | 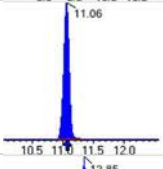  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1473534 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1630.0 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 110.5% } | 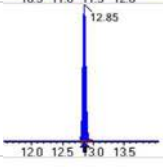  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 293876 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2091.2 | N/A | 1.8374 [ 2.0000 ] | 91.9% { 105.9% } | 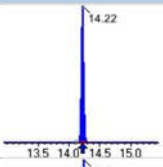  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316276 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2498.1 | N/A | 1.8439 [ 2.0000 ] | 92.2% { 100.3% } | 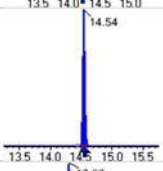  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 835724 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2699.7 | N/A | 3.8168 [ 4.0000 ] | 95.4% { 99.7% } | 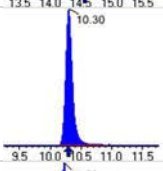  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 775814 | ( 10.83 , N/A ) ( N/A , 0.01 , N/A ) | 2136.8 | N/A | 3.8876 [ 4.0000 ] | 97.2% { 102.6% } | 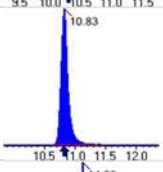  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1315136 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2600.8 | N/A | 18.2970 [ 20.0000 ] | 91.5% { 97.7% } | 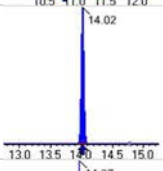  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1332738 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4801.6 | N/A | 18.2683 [ 20.0000 ] | 91.3% { 101.2% } | 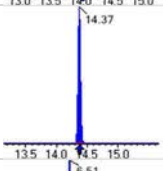  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1038084 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2605.4 | N/A | 7.9707 [ 8.0000 ] | 99.6% { 106.2% } | 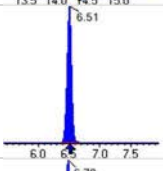  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 669550 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1235.7 | N/A | 2.0107 [ 2.0000 ] | 100.5% { 116.0% } | 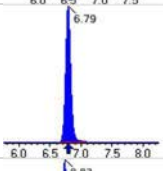  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 587942 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 696.3 | N/A | 1.9395 [ 2.0000 ] | 97.0% { 109.4% } | 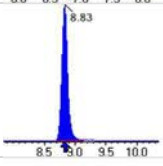  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 572081<br>( 163.0 / 69.0 ) 15453 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , -0.1) | 3331.6<br>685.8 | 0.0270<br>99.5<br>99.5 | 1.8766 | N/A | 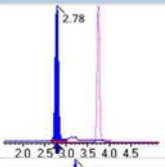 | 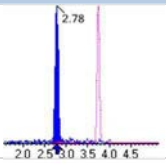 | |
| PFBA | ( 213.0 / 169.0 ) 1291256 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 977.6 | N/A<br>0.0<br>0.0 | 4.0067 | N/A | 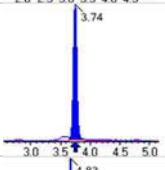 | | |
| PFPeA | ( 263.0 / 219.0 ) 515447<br>( 263.0 / 69.0 ) 5565 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , -0.6) | 2722.5<br>101.7 | 0.0108<br>90.4<br>90.4 | 1.9936 | N/A | 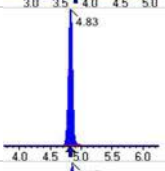 | 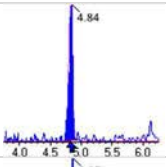 | |
| PFHxA | ( 313.0 / 269.0 ) 299582<br>( 313.0 / 119.0 ) 31742 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1493.9<br>435.1 | 0.1060<br>91.3<br>91.3 | 0.9811 | N/A | 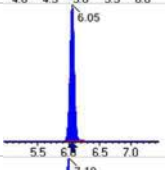 | 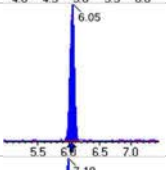 | |
| PFHpA | ( 363.0 / 319.0 ) 337151<br>( 363.0 / 169.0 ) 99321 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1122.0<br>1188.9 | 0.2946<br>97.2<br>97.2 | 1.0032 | N/A | 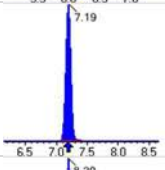 | 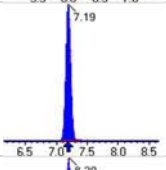 | |
| PFOA | ( 413.0 / 369.0 ) 460701<br>( 413.0 / 169.0 ) 156073 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , -0.2) | 411.7<br>644.7 | 0.3388<br>92.7<br>92.7 | 0.9980 | N/A | 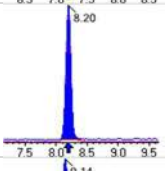 | 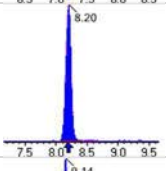 | |
| PFNA | ( 463.0 / 419.0 ) 295897<br>( 463.0 / 169.0 ) 74193 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 828.0<br>576.3 | 0.2507<br>98.2<br>98.2 | 0.9829 | N/A | 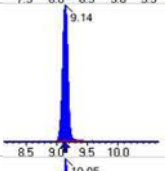 | 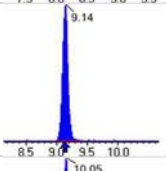 | |
| PFDA | ( 513.0 / 469.0 ) 352635<br>( 513.0 / 169.0 ) 43955 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2404.3<br>865.6 | 0.1246<br>106.4<br>106.4 | 1.0071 | N/A | 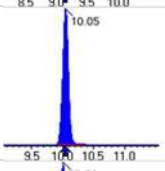 | 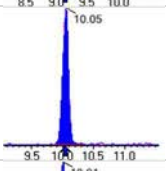 | |
| PFUnA | ( 563.0 / 519.0 ) 381432<br>( 563.0 / 169.0 ) 53955 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 999.2<br>403.6 | 0.1415<br>99.8<br>99.8 | 1.0353 | N/A | 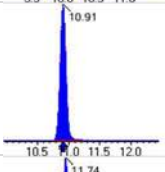 | 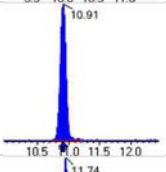 | |
| PFDoA | ( 613.0 / 569.0 ) 427017<br>( 613.0 / 169.0 ) 60201 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1103.2<br>515.1 | 0.1410<br>89.2<br>89.2 | 1.0255 | N/A | 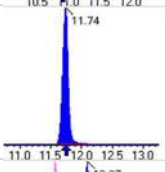 | 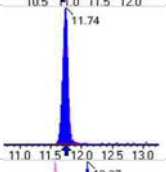 | |
| PFTrDA | ( 663.0 / 619.0 ) 399605<br>( 663.0 / 169.0 ) 106227 | ( 12.37 , 1.05 )<br>( N/A , -0.01 , 0.0) | 1077.2<br>701.1 | 0.2658<br>103.3<br>103.3 | 0.9810 | N/A | 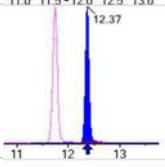 | 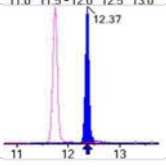 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 342493<br>( 713.0 / 169.0 ) 87584 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1309.5<br>476.1 | 0.2557<br>94.7<br>94.7 | 1.0520 | N/A | 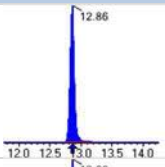 | 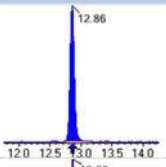 | |
| PFHxDA | ( 813.0 / 769.0 ) 295487<br>( 813.0 / 169.0 ) 71255 | ( 13.66 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1293.3<br>536.6 | 0.2411<br>98.6<br>98.6 | 0.9920 | N/A | 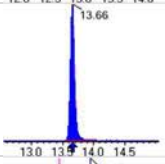 | 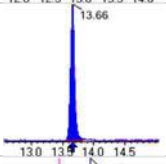 | |
| PFODA | ( 913.0 / 869.0 ) 188029<br>( 913.0 / 169.0 ) 59688 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , 0.2) | 765.7<br>286.7 | 0.3174<br>88.6<br>88.6 | 1.0090 | N/A | 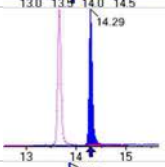 | 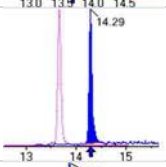 | |
| PFBS | ( 299.0 / 80.0 ) 407079<br>( 299.0 / 99.0 ) 304744 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2093.0<br>1197.3 | 0.7486<br>105.9<br>105.9 | 0.8714 | N/A | 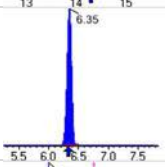 | 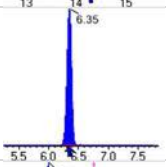 | |
| PFPeS | ( 349.0 / 80.0 ) 1109577<br>( 349.0 / 99.0 ) 395272 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.2) | 1653.8<br>1364.1 | 0.3562<br>99.1<br>99.1 | 1.0024 | N/A | 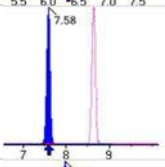 | 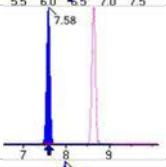 | |
| PFHxS | ( 399.0 / 80.0 ) 1171862<br>( 399.0 / 99.0 ) 378800 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1877.4<br>2472.1 | 0.3232<br>101.5<br>101.5 | 0.9114 | N/A | 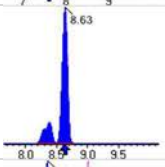 | 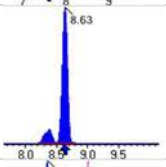 | |
| PFHpS | ( 449.0 / 80.0 ) 990486<br>( 449.0 / 99.0 ) 270859 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1237.4<br>959.9 | 0.2735<br>103.3<br>103.3 | 0.9914 | N/A | 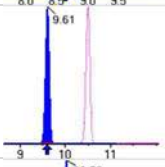 | 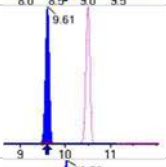 | |
| PFOS | ( 499.0 / 80.0 ) 915045<br>( 499.0 / 99.0 ) 214297 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1166.7<br>2416.7 | 0.2342<br>100.2<br>100.2 | 0.9501 | N/A | 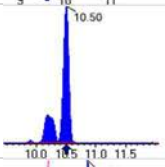 | 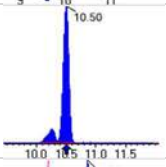 | |
| PFNS | ( 549.0 / 80.0 ) 896593<br>( 549.0 / 99.0 ) 249551 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1601.3<br>1206.4 | 0.2783<br>102.1<br>102.1 | 0.9943 | N/A | 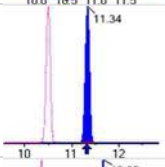 | 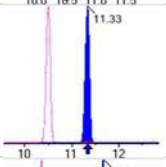 | |
| PFDS | ( 599.0 / 80.0 ) 1127572<br>( 599.0 / 99.0 ) 302383 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1436.2<br>916.8 | 0.2682<br>98.6<br>98.6 | 1.0241 | N/A | 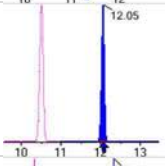 | 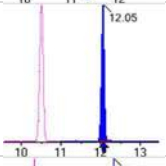 | |
| PFDoS | ( 699.0 / 80.0 ) 1018920<br>( 699.0 / 99.0 ) 244059 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.1) | 2808.2<br>1602.4 | 0.2395<br>102.5<br>102.5 | 1.0497 | N/A | 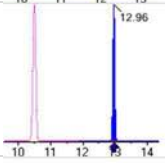 | 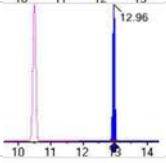 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1636735<br>( 327.0 / 81.0 ) 1473856 | ( 5.52 , 1.00 )<br>( -0.01 , N/A , -0.2) | 5204.7<br>2602.4 | 0.9005<br>103.2<br>103.2 | 3.7254 | N/A | 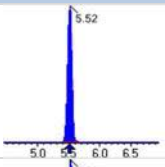 | 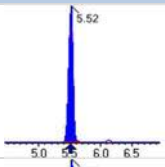 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1622158<br>( 427.0 / 81.0 ) 2083355 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4238.9<br>2696.5 | 1.2843<br>102.4<br>102.4 | 3.9122 | N/A | 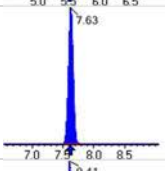 | 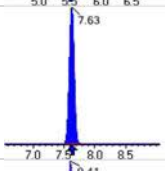 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1596229<br>( 527.0 / 81.0 ) 1699957 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1759.6<br>1660.8 | 1.0650<br>97.9<br>97.9 | 4.0286 | N/A | 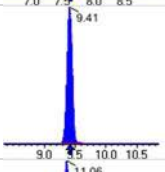 | 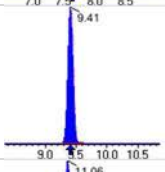 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1186863<br>( 627.0 / 81.0 ) 1648684 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1185.3<br>1102.0 | 1.3891<br>96.5<br>96.5 | 4.0027 | N/A | 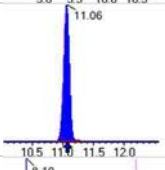 | 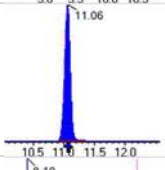 | |
| PFBSA | ( 297.9 / 78.0 ) 868869<br>( 297.9 / 278.0 ) 1723 | ( 8.10 , 0.57 )<br>( N/A , 0.00 , 0.3) | 1316.9<br>72.3 | 0.0020<br>145.1<br>145.1 | 1.0646 | N/A | 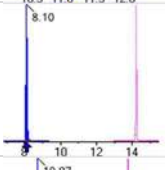 | 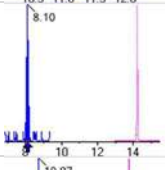 | |
| PFHxSA | ( 397.9 / 78.0 ) 1138067<br>( 397.9 / 378.0 ) 5913 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.2) | 1254.0<br>145.3 | 0.0052<br>127.2<br>127.2 | 1.0822 | N/A | 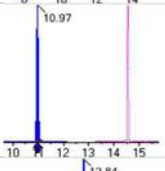 | 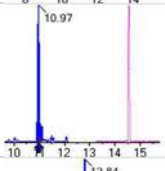 | |
| PFOSA | ( 498.0 / 78.0 ) 762063<br>( 498.0 / 478.0 ) 11669 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1669.7<br>330.8 | 0.0153<br>109.1<br>109.1 | 0.9531 | N/A | 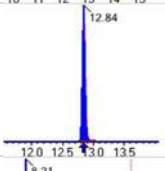 | 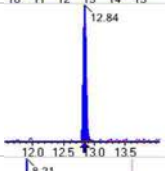 | |
| TFSI | ( 279.7 / 147.0 ) 1968069<br>( 279.7 / 211.0 ) 180774 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 64.3<br>58.0 | 0.0919<br>109.3<br>109.3 | 0.9348 | N/A | 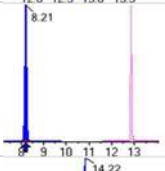 | 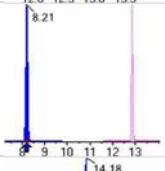 | |
| NMeFOSA | ( 512.0 / 219.0 ) 676418<br>( 512.0 / 169.0 ) 494118 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.5) | 2998.4<br>1222.2 | 0.7305<br>97.6<br>97.6 | 4.3018 | N/A | 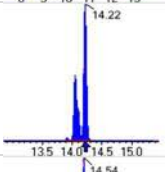 | 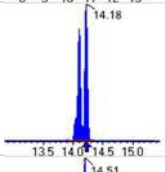 | |
| NEtFOSA | ( 526.0 / 219.0 ) 784152<br>( 526.0 / 169.0 ) 968317 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3542.8<br>2523.2 | 1.2349<br>100.0<br>100.0 | 4.0920 | N/A | 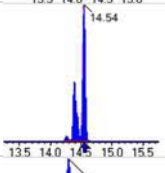 | 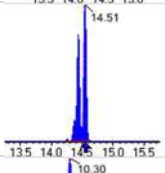 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 217987<br>( 570.0 / 483.0 ) 97828 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2749.9<br>7363.6 | 0.4488<br>102.3<br>102.3 | 1.0587 | N/A | 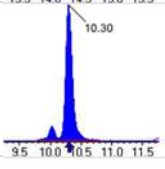 | 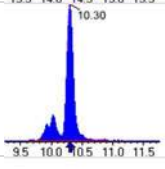 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 215279<br>( 584.0 / 526.0 ) 113495 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1923.7<br>570.6 | 0.5272<br>85.5<br>85.5 | 1.0388 | N/A | 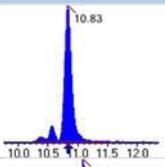 | 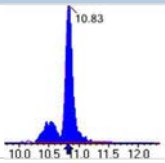 | |
| NMeFOSE | ( 616.0 / 59.0 ) 322501 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1109.7 | N/A<br>0.0<br>0.0 | 3.8876 | N/A | 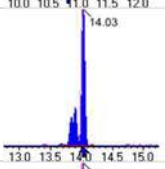 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 275023 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1504.4 | N/A<br>0.0<br>0.0 | 4.0518 | N/A | 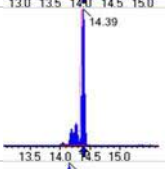 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78310<br>( 285.0 / 185.0 ) 225338 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1215.6<br>1094.8 | 2.8775<br>104.1<br>104.1 | 0.9672 | N/A | 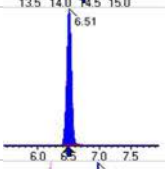 | 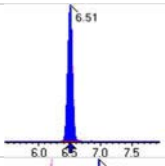 | |
| ADONA | ( 377.0 / 85.0 ) 925674<br>( 377.0 / 251.0 ) 94429 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1684.4<br>863.1 | 0.1020<br>100.1<br>100.1 | 0.9800 | N/A | 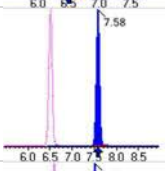 | 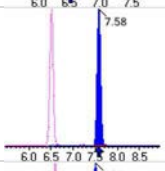 | |
| PFEESA | ( 315.0 / 135.0 ) 374674<br>( 315.0 / 83.0 ) 221014 | ( 6.94 , 1.15 )<br>( N/A , 0.00 , 0.2) | 1629.8<br>585.3 | 0.5899<br>105.8<br>105.8 | 1.7087 | N/A | 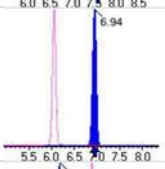 | 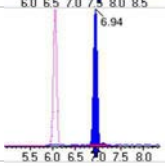 | |
| PFMPA | ( 229.0 / 85.0 ) 165620 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 2153.7 | N/A<br>0.0<br>0.0 | 2.0187 | N/A | 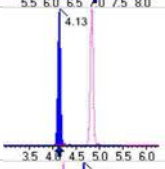 | | |
| PFMBA | ( 279.0 / 85.0 ) 459608 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 3304.8 | N/A<br>0.0<br>0.0 | 2.0611 | N/A | 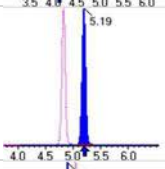 | | |
| NFDHA | ( 295.0 / 201.0 ) 233407<br>( 295.0 / 85.0 ) 232887 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.0) | 1871.1<br>1404.3 | 0.9978<br>92.5<br>92.5 | 2.0475 | N/A | 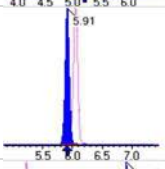 | 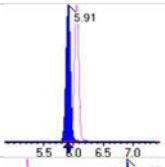 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 977169<br>( 533.0 / 353.0 ) 307774 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.0) | 2252.5<br>1904.5 | 0.3150<br>100.7<br>100.7 | 0.9578 | N/A | 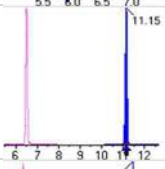 | 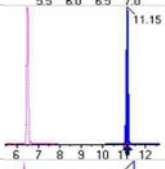 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 766742<br>( 633.0 / 453.0 ) 257032 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 3376.0<br>1473.6 | 0.3352<br>100.9<br>100.9 | 0.9772 | N/A | 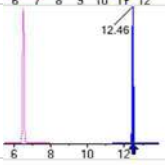 | 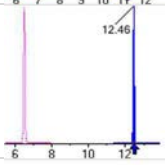 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 518904<br>( 461.0 / 381.2 ) 203061 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2559.7<br>2244.6 | 0.3913<br>98.2<br>98.2 | 0.9551 | N/A | 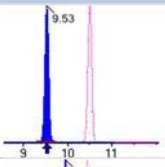 | 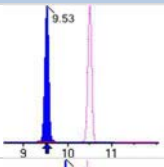 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 58421<br>( 241.0 / 117.0 ) 131714 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.1) | 1288.6<br>1011.6 | 2.2545<br>107.0<br>107.0 | 3.9721 | N/A | 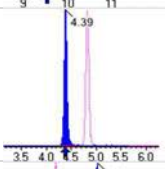 | 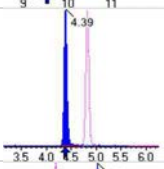 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 362070<br>( 341.0 / 217.0 ) 543142 | ( 6.95 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1018.7<br>864.9 | 1.5001<br>98.7<br>98.7 | 4.2758 | N/A | 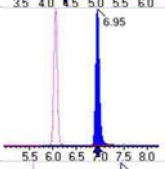 | 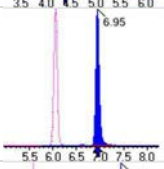 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 552565<br>( 441.0 / 337.0 ) 493299 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , -0.1) | 3905.8<br>9480.9 | 0.8927<br>97.3<br>97.3 | 3.9764 | N/A | 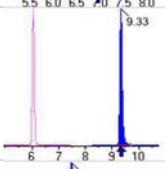 | 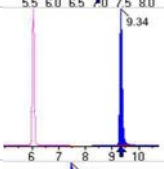 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 363940<br>( 357.2 / 243.0 ) 37601 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1173.5<br>370.6 | 0.1033<br>93.7<br>93.7 | 0.9982 | N/A | 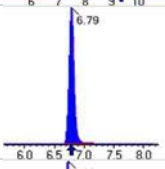 | 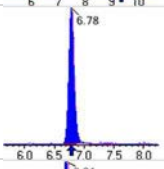 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 254977<br>( 457.2 / 343.0 ) 9972 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.6) | 714.0<br>141.1 | 0.0391<br>94.3<br>94.3 | 0.9768 | N/A | 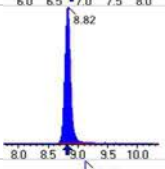 | 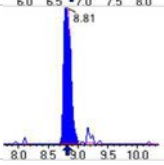 | |
| TDCA | ( 499.0 / 80.0 ) 680639 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 4167.6 | N/A<br>0.0<br>0.0 | 1.0368 | N/A | 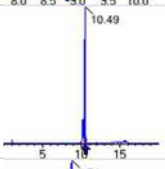 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284719 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1250.4 | N/A | 1.1941<br>[ 1.0000 ] | 119.4%<br>{ 121.5% } | 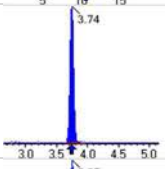 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145345 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 124720.9 | N/A | 1.1457<br>[ 1.0000 ] | 114.6%<br>{ 121.6% } | 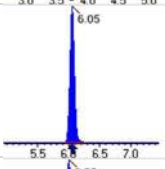 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441486 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3424.8 | N/A | 1.1168<br>[ 1.0000 ] | 111.7%<br>{ 116.2% } | 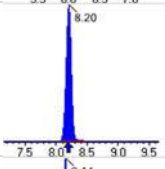 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 318843 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 964.0 | N/A | 1.1211<br>[ 1.0000 ] | 112.1%<br>{ 119.8% } | 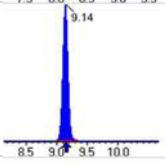 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303537 | ( 10.05 , N/A ) ( N/A , 0.01 , N/A ) | 4251.2 | N/A | 1.0394 [ 1.0000 ] | 103.9% { 113.3% } | 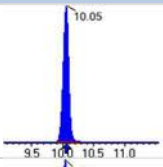 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056155 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 5014.7 | N/A | 1.1129 [ 1.0000 ] | 111.3% { 117.3% } | 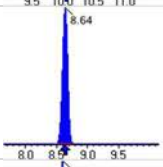 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 845268 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.3 | N/A | 1.1098 [ 1.0000 ] | 111.0% { 120.6% } | 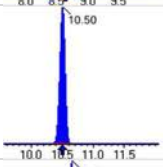 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2586413 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 42750.2 | N/A | 7.9518 [ 8.0000 ] | 99.4% { 122.3% } | 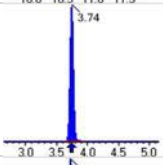 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1023700 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5286.2 | N/A | 3.7748 [ 4.0000 ] | 94.4% { 111.1% } | 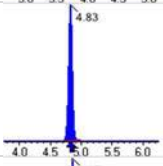 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 635630 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 14493.6 | N/A | 1.9167 [ 2.0000 ] | 95.8% { 114.9% } | 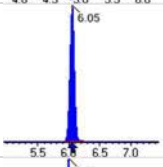 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 684966 | ( 7.19 , N/A ) ( N/A , 0.00 , N/A ) | 3794.1 | N/A | 1.8568 [ 2.0000 ] | 92.8% { 110.6% } | 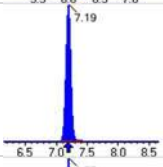 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 928103 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 3322.1 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 113.2% } | 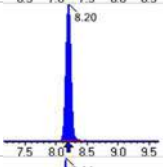 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299515 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2214.7 | N/A | 0.9581 [ 1.0000 ] | 95.8% { 114.0% } | 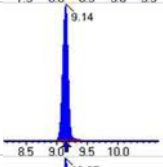 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342697 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1103.1 | N/A | 1.0075 [ 1.0000 ] | 100.7% { 108.2% } | 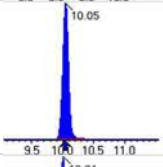 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 398315 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 933.5 | N/A | 0.9953 [ 1.0000 ] | 99.5% { 110.2% } | 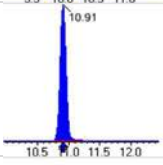 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413909 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1336.1 | N/A | 1.0156 [ 1.0000 ] | 101.6% { 117.7% } | 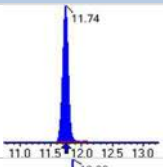  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 347613 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1409.1 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 111.2% } | 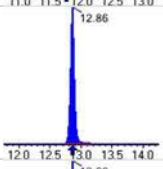  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624611 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2743.3 | N/A | 2.1080 [ 2.0000 ] | 105.4% { 121.0% } | 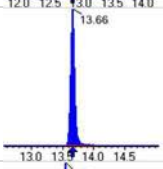  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1799397 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 935.1 | N/A | 1.8857 [ 2.0000 ] | 94.3% { 112.9% } | 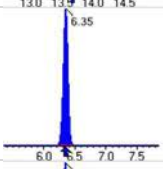  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1446436 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3951.6 | N/A | 1.8990 [ 2.0000 ] | 95.0% { 112.9% } | 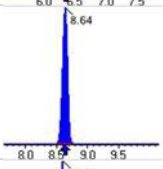  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1667685 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1621.2 | N/A | 1.8298 [ 2.0000 ] | 91.5% { 106.7% } | 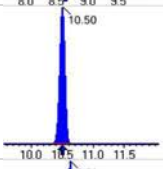  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 669628 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 86.3 | N/A | 4.0673 [ 4.0000 ] | 101.7% { 127.6% } | 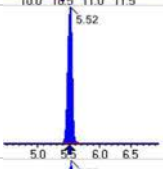  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2002935 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4006.0 | N/A | 4.0651 [ 4.0000 ] | 101.6% { 117.8% } | 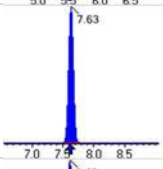  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1668856 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1752.0 | N/A | 4.3187 [ 4.0000 ] | 108.0% { 126.5% } | 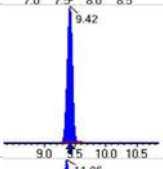  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3077655 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1620.4 | N/A | 7.6206 [ 8.0000 ] | 95.3% { 118.5% } | 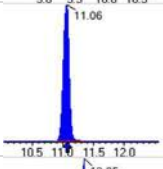  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1599050 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2792.1 | N/A | 1.9799 [ 2.0000 ] | 99.0% { 119.9% } | 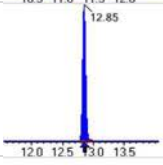  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 316727 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2067.3 | N/A | 1.8490 [ 2.0000 ] | 92.4% { 114.2% } | 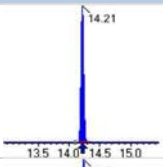 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 342216 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2475.5 | N/A | 1.8629 [ 2.0000 ] | 93.1% { 108.5% } | 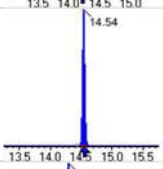 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863550 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2856.7 | N/A | 3.6825 [ 4.0000 ] | 92.1% { 103.1% } | 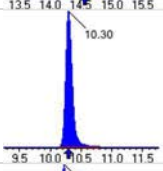 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 847460 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1855.6 | N/A | 3.9651 [ 4.0000 ] | 99.1% { 112.1% } | 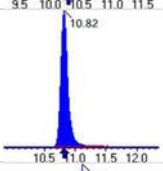 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1512548 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2500.9 | N/A | 19.6485 [ 20.0000 ] | 98.2% { 112.4% } | 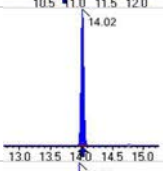 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1527927 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3992.3 | N/A | 19.5555 [ 20.0000 ] | 97.8% { 116.0% } | 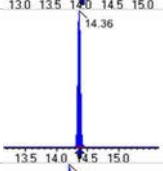 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1098397 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 1915.2 | N/A | 7.2711 [ 8.0000 ] | 90.9% { 112.3% } | 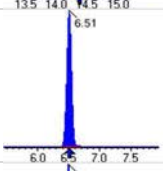 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 685864 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1284.4 | N/A | 2.0841 [ 2.0000 ] | 104.2% { 118.8% } | 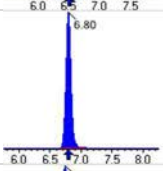 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640047 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 831.7 | N/A | 2.1364 [ 2.0000 ] | 106.8% { 119.1% } | 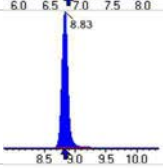 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1167070<br>( 163.0 / 69.0 ) 30804 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 6613.1<br>1428.5 | 0.0264<br>97.2<br>97.2 | 4.0742 | N/A | 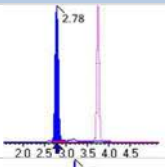 | 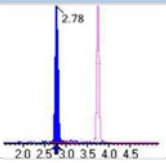 | |
| PFBA | ( 213.0 / 169.0 ) 2380850 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1790.8 | N/A<br>0.0<br>0.0 | 7.8622 | N/A | 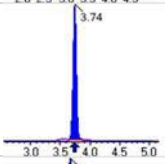 | | |
| PFPeA | ( 263.0 / 219.0 ) 982336<br>( 263.0 / 69.0 ) 11786 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.4) | 3478.0<br>129.5 | 0.0120<br>100.5<br>100.5 | 3.9724 | N/A | 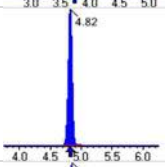 | 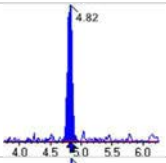 | |
| PFHxA | ( 313.0 / 269.0 ) 545073<br>( 313.0 / 119.0 ) 68593 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1809.3<br>693.8 | 0.1258<br>108.4<br>108.4 | 1.9499 | N/A | 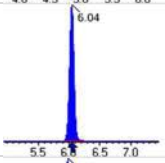 | 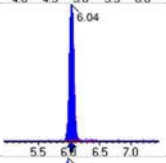 | |
| PFHpA | ( 363.0 / 319.0 ) 643126<br>( 363.0 / 169.0 ) 190819 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1661.0<br>1337.1 | 0.2967<br>97.9<br>97.9 | 2.1051 | N/A | 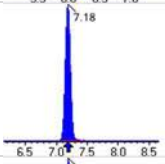 | 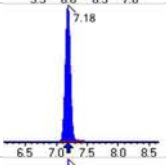 | |
| PFOA | ( 413.0 / 369.0 ) 872213<br>( 413.0 / 169.0 ) 301378 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 570.6<br>871.9 | 0.3455<br>94.5<br>94.5 | 2.1989 | N/A | 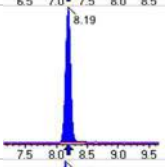 | 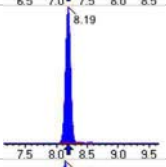 | |
| PFNA | ( 463.0 / 419.0 ) 567165<br>( 463.0 / 169.0 ) 151317 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1085.3<br>759.0 | 0.2668<br>104.5<br>104.5 | 2.0790 | N/A | 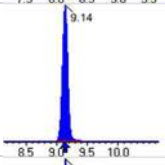 | 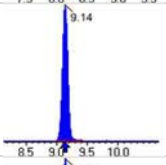 | |
| PFDA | ( 513.0 / 469.0 ) 636050<br>( 513.0 / 169.0 ) 72425 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2724.0<br>2618.5 | 0.1139<br>97.2<br>97.2 | 1.9766 | N/A | 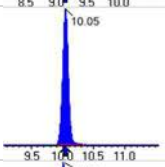 | 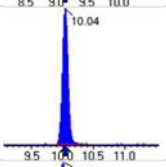 | |
| PFUnA | ( 563.0 / 519.0 ) 707227<br>( 563.0 / 169.0 ) 104233 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1094.1<br>630.7 | 0.1474<br>104.0<br>104.0 | 2.0313 | N/A | 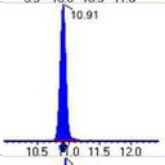 | 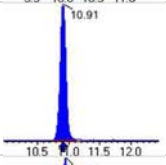 | |
| PFDoA | ( 613.0 / 569.0 ) 782512<br>( 613.0 / 169.0 ) 130444 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1319.2<br>723.5 | 0.1667<br>105.5<br>105.5 | 2.0593 | N/A | 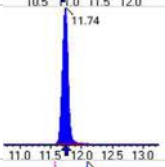 | 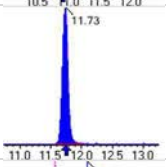 | |
| PFTrDA | ( 663.0 / 619.0 ) 789089<br>( 663.0 / 169.0 ) 212271 | ( 12.37 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1336.2<br>873.5 | 0.2690<br>104.5<br>104.5 | 2.1228 | N/A | 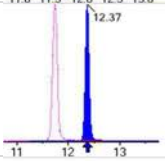 | 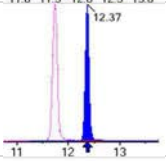 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 637286<br>( 713.0 / 169.0 ) 170472 | ( 12.86 , 1.00 ) ( 0.00 , N/A , 0.1) | 1613.6<br>792.6 | 0.2675<br>99.1<br>99.1 | 2.0366 | N/A | 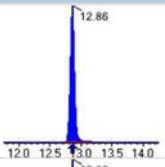 | 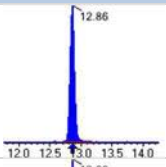 | |
| PFHxDA | ( 813.0 / 769.0 ) 562479<br>( 813.0 / 169.0 ) 139657 | ( 13.66 , 1.00 ) ( 0.00 , N/A , 0.1) | 1879.1<br>883.2 | 0.2483<br>101.5<br>101.5 | 2.0439 | N/A | 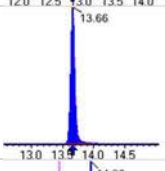 | 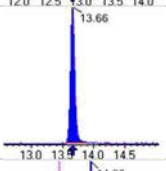 | |
| PFODA | ( 913.0 / 869.0 ) 345836<br>( 913.0 / 169.0 ) 120025 | ( 14.29 , 1.05 ) ( N/A , 0.00 , 0.1) | 1113.8<br>518.3 | 0.3471<br>96.9<br>96.9 | 2.0088 | N/A | 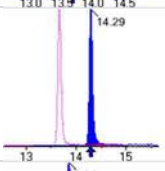 | 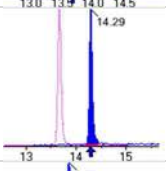 | |
| PFBS | ( 299.0 / 80.0 ) 807070<br>( 299.0 / 99.0 ) 599114 | ( 6.34 , 1.00 ) ( 0.00 , N/A , 0.1) | 2517.2<br>1691.5 | 0.7423<br>105.0<br>105.0 | 1.8154 | N/A | 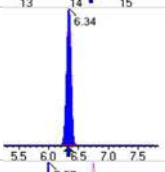 | 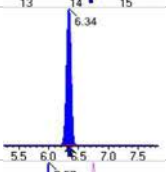 | |
| PFPeS | ( 349.0 / 80.0 ) 2047999<br>( 349.0 / 99.0 ) 717347 | ( 7.57 , 0.88 ) ( N/A , -0.01 , 0.0) | 2149.2<br>1871.5 | 0.3503<br>97.4<br>97.4 | 2.0232 | N/A | 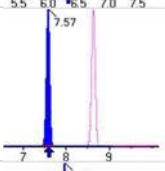 | 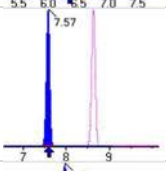 | |
| PFHxS | ( 399.0 / 80.0 ) 2275361<br>( 399.0 / 99.0 ) 716614 | ( 8.63 , 1.00 ) ( 0.00 , N/A , -0.3) | 2510.6<br>3505.7 | 0.3149<br>98.9<br>98.9 | 1.9353 | N/A | 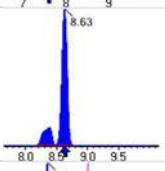 | 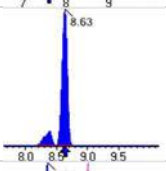 | |
| PFHpS | ( 449.0 / 80.0 ) 1804024<br>( 449.0 / 99.0 ) 504967 | ( 9.61 , 0.91 ) ( N/A , 0.00 , 0.1) | 1569.3<br>1421.3 | 0.2799<br>105.8<br>105.8 | 1.8460 | N/A | 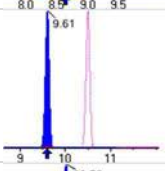 | 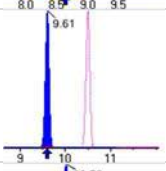 | |
| PFOS | ( 499.0 / 80.0 ) 1717687<br>( 499.0 / 99.0 ) 415698 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1681.3<br>3443.9 | 0.2420<br>103.5<br>103.5 | 1.8234 | N/A | 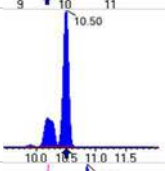 | 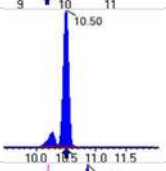 | |
| PFNS | ( 549.0 / 80.0 ) 1727422<br>( 549.0 / 99.0 ) 477926 | ( 11.33 , 1.08 ) ( N/A , 0.00 , 0.0) | 2123.3<br>1732.9 | 0.2767<br>101.5<br>101.5 | 1.9585 | N/A | 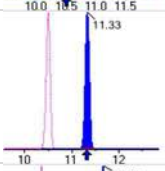 | 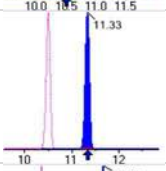 | |
| PFDS | ( 599.0 / 80.0 ) 2215571<br>( 599.0 / 99.0 ) 567898 | ( 12.05 , 1.15 ) ( N/A , 0.00 , 0.0) | 2083.6<br>1457.0 | 0.2563<br>94.3<br>94.3 | 2.0572 | N/A | 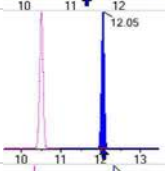 | 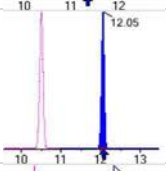 | |
| PFDoS | ( 699.0 / 80.0 ) 1929958<br>( 699.0 / 99.0 ) 452362 | ( 12.97 , 1.23 ) ( N/A , 0.00 , 0.2) | 3211.3<br>2064.4 | 0.2344<br>100.3<br>100.3 | 2.0327 | N/A | 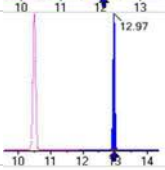 | 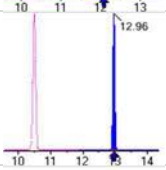 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3165018<br>( 327.0 / 81.0 ) 2801149 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.1) | 5253.6<br>3183.2 | 0.8850<br>101.4<br>101.4 | 7.7285 | N/A | 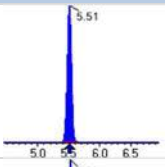 | 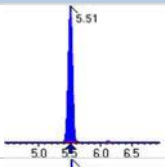 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2962118<br>( 427.0 / 81.0 ) 3791569 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 4973.3<br>4315.3 | 1.2800<br>102.1<br>102.1 | 8.2415 | N/A | 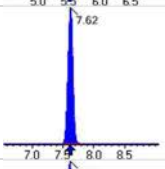 | 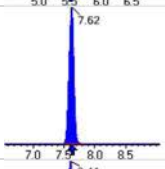 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2967875<br>( 527.0 / 81.0 ) 3049271 | ( 9.41 , 1.00 ) ( -0.01 , N/A , 0.3) | 1388.1<br>1687.5 | 1.0274<br>94.5<br>94.5 | 9.3020 | N/A | 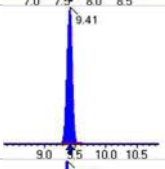 | 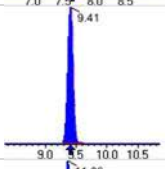 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2212496<br>( 627.0 / 81.0 ) 3256559 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1502.8<br>1201.7 | 1.4719<br>102.2<br>102.2 | 8.4769 | N/A | 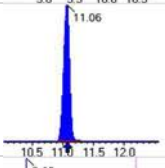 | 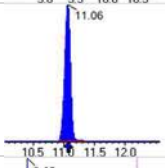 | |
| PFBSA | ( 297.9 / 78.0 ) 1506188<br>( 297.9 / 278.0 ) 2085 | ( 8.10 , 0.57 ) ( N/A , -0.01 , 0.1) | 1678.4<br>162.1 | 0.0014<br>101.3<br>101.3 | 1.8931 | N/A | 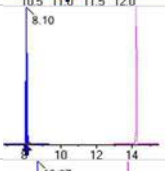 | 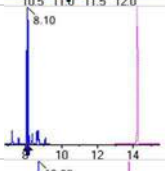 | |
| PFHxSA | ( 397.9 / 78.0 ) 2033326<br>( 397.9 / 378.0 ) 7799 | ( 10.97 , 0.75 ) ( N/A , 0.00 , -0.5) | 1288.8<br>260.0 | 0.0038<br>93.9<br>93.9 | 1.9498 | N/A | 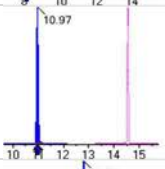 | 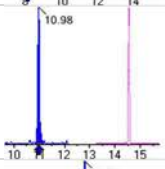 | |
| PFOSA | ( 498.0 / 78.0 ) 1456812<br>( 498.0 / 478.0 ) 21062 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.1) | 2311.6<br>609.7 | 0.0145<br>103.0<br>103.0 | 2.0599 | N/A | 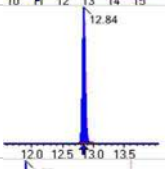 | 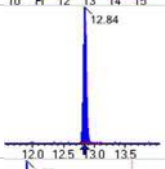 | |
| TFSI | ( 279.7 / 147.0 ) 3946578<br>( 279.7 / 211.0 ) 343736 | ( 8.20 , 0.64 ) ( N/A , -0.01 , -0.1) | 58.0<br>63.6 | 0.0871<br>103.7<br>103.7 | 2.1192 | N/A | 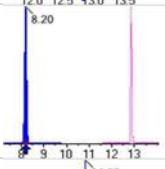 | 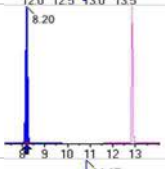 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1289595<br>( 512.0 / 169.0 ) 982667 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.8) | 2679.7<br>1218.1 | 0.7620<br>101.8<br>101.8 | 8.4131 | N/A | 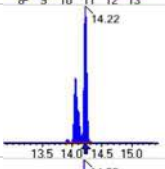 | 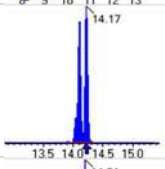 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1550489<br>( 526.0 / 169.0 ) 1954696 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.1) | 3681.3<br>2879.5 | 1.2607<br>102.1<br>102.1 | 8.1588 | N/A | 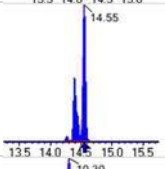 | 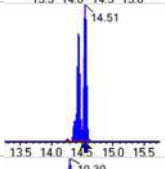 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 387312<br>( 570.0 / 483.0 ) 170497 | ( 10.30 , 1.00 ) ( 0.01 , N/A , 0.0) | 2659.6<br>1694.2 | 0.4402<br>100.4<br>100.4 | 2.0441 | N/A | 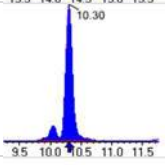 | 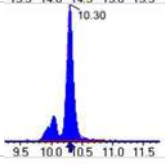 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 371840<br>( 584.0 / 526.0 ) 223765 | ( 10.83 , 1.00 ) ( 0.01 , N/A , 0.1) | 1679.5<br>567.2 | 0.6018<br>97.6<br>97.6 | 2.0307 | N/A | 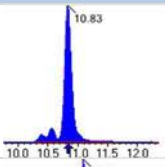 | 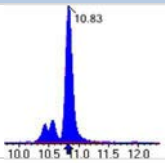 | |
| NMeFOSE | ( 616.0 / 59.0 ) 587826 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 1822.9 | N/A<br>0.0<br>0.0 | 8.0538 | N/A | 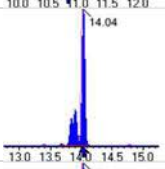 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 498830 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 2471.3 | N/A<br>0.0<br>0.0 | 8.3350 | N/A | 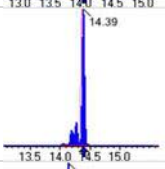 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 155250<br>( 285.0 / 185.0 ) 430625 | ( 6.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1419.6<br>1605.4 | 2.7738<br>100.3<br>100.3 | 1.9504 | N/A | 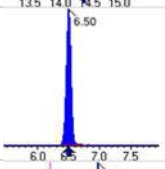 | 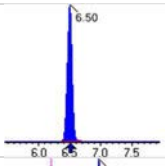 | |
| ADONA | ( 377.0 / 85.0 ) 1788880<br>( 377.0 / 251.0 ) 182995 | ( 7.57 , 1.17 ) ( N/A , -0.01 , 0.0) | 1568.4<br>1057.9 | 0.1023<br>100.4<br>100.4 | 1.9263 | N/A | 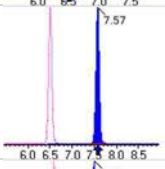 | 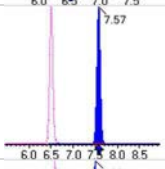 | |
| PFEESA | ( 315.0 / 135.0 ) 717362<br>( 315.0 / 83.0 ) 425934 | ( 6.93 , 1.15 ) ( N/A , -0.01 , -0.1) | 3571.8<br>934.1 | 0.5938<br>106.5<br>106.5 | 3.5735 | N/A | 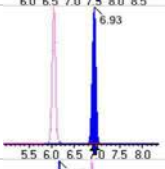 | 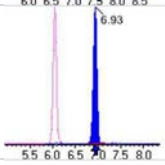 | |
| PFMPA | ( 229.0 / 85.0 ) 325814 | ( 4.13 , 0.86 ) ( N/A , -0.02 , 0.0) | 4750.1 | N/A<br>0.0<br>0.0 | 4.1520 | N/A | 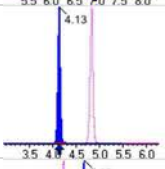 | | |
| PFMBA | ( 279.0 / 85.0 ) 859316 | ( 5.19 , 1.08 ) ( N/A , -0.02 , 0.0) | 4011.9 | N/A<br>0.0<br>0.0 | 4.0290 | N/A | 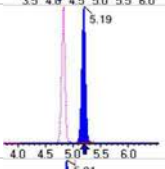 | | |
| NFDHA | ( 295.0 / 201.0 ) 433621<br>( 295.0 / 85.0 ) 453198 | ( 5.91 , 0.98 ) ( N/A , -0.02 , 0.0) | 2536.7<br>1960.5 | 1.0451<br>96.9<br>96.9 | 4.1550 | N/A | 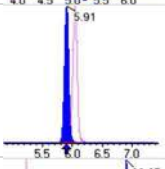 | 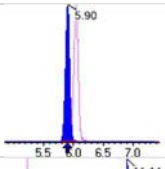 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1841173<br>( 533.0 / 353.0 ) 582312 | ( 11.15 , 1.71 ) ( N/A , 0.00 , 0.1) | 3390.1<br>2790.6 | 0.3163<br>101.1<br>101.1 | 1.8356 | N/A | 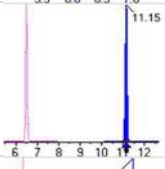 | 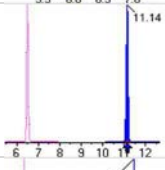 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1399623<br>( 633.0 / 453.0 ) 481280 | ( 12.46 , 1.92 ) ( N/A , 0.00 , 0.0) | 3352.1<br>2343.7 | 0.3439<br>103.5<br>103.5 | 1.8145 | N/A | 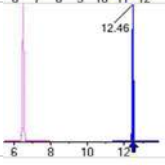 | 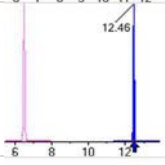 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 988702<br>( 461.0 / 381.2 ) 369799 | ( 9.52 , 0.91 ) ( N/A , 0.00 , 0.1) | 3569.1<br>2525.0 | 0.3740<br>93.9<br>93.9 | 1.8604 | N/A | 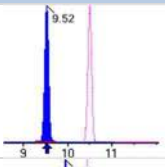 | 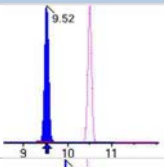 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 107582<br>( 241.0 / 117.0 ) 252826 | ( 4.38 , 0.91 ) ( N/A , -0.02 , 0.1) | 1855.3<br>1674.9 | 2.3501<br>111.5<br>111.5 | 7.6476 | N/A | 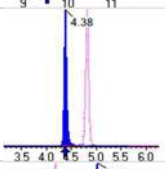 | 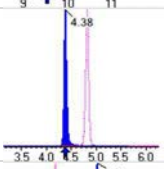 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 600676<br>( 341.0 / 217.0 ) 948229 | ( 6.94 , 1.15 ) ( N/A , -0.01 , 0.0) | 1068.2<br>1017.6 | 1.5786<br>103.9<br>103.9 | 7.7484 | N/A | 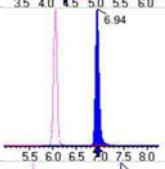 | 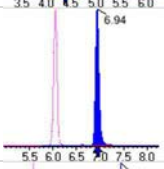 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 908795<br>( 441.0 / 337.0 ) 796144 | ( 9.33 , 1.54 ) ( N/A , 0.00 , 0.1) | 4807.8<br>10397.6 | 0.8760<br>95.5<br>95.5 | 7.1437 | N/A | 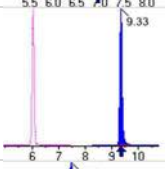 | 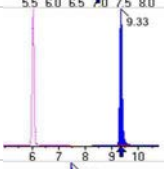 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 656805<br>( 357.2 / 243.0 ) 69587 | ( 6.78 , 1.00 ) ( -0.01 , N/A , -0.1) | 1423.9<br>609.7 | 0.1059<br>96.1<br>96.1 | 2.0942 | N/A | 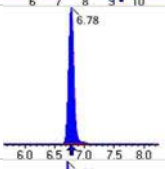 | 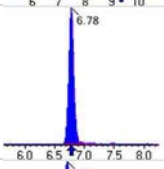 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 424616<br>( 457.2 / 343.0 ) 18607 | ( 8.82 , 1.00 ) ( -0.01 , N/A , 0.2) | 720.9<br>173.8 | 0.0438<br>105.7<br>105.7 | 2.0751 | N/A | 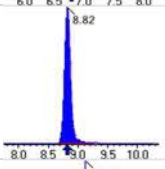 | 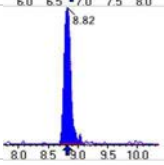 | |
| TDCA | ( 499.0 / 80.0 ) 1243423 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 9081.2 | N/A<br>0.0<br>0.0 | 1.9364 | N/A | 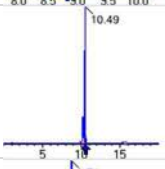 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256028 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1098.6 | N/A | 1.0738<br>[ 1.0000 ] | 107.4%<br>{ 109.3% } | 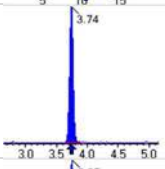 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127760 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 116465.1 | N/A | 1.0071<br>[ 1.0000 ] | 100.7%<br>{ 106.9% } | 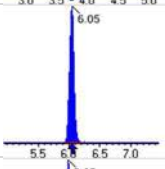 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 375777 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3449.1 | N/A | 0.9506<br>[ 1.0000 ] | 95.1%<br>{ 98.9% } | 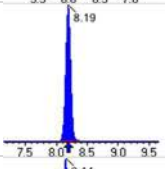 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 261656 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 1169.2 | N/A | 0.9200<br>[ 1.0000 ] | 92.0%<br>{ 98.3% } | 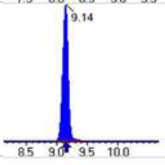 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273361 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6361.8 | N/A | 0.9361 [ 1.0000 ] | 93.6% { 102.0% } | 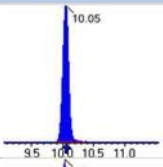 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 895978 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 6222.1 | N/A | 0.9441 [ 1.0000 ] | 94.4% { 99.5% } | 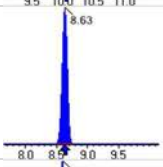 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715584 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.4 | N/A | 0.9395 [ 1.0000 ] | 94.0% { 102.1% } | 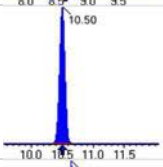 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2430274 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40566.0 | N/A | 8.3091 [ 8.0000 ] | 103.9% { 114.9% } | 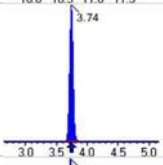 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979123 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5288.2 | N/A | 4.1074 [ 4.0000 ] | 102.7% { 106.2% } | 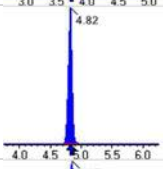 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581916 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 6715.1 | N/A | 1.9963 [ 2.0000 ] | 99.8% { 105.2% } | 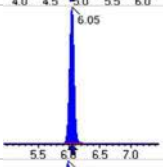 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 622669 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5519.9 | N/A | 1.9202 [ 2.0000 ] | 96.0% { 100.5% } | 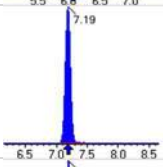 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806392 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2713.5 | N/A | 2.0028 [ 2.0000 ] | 100.1% { 98.4% } | 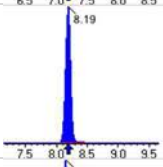 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 271437 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2533.1 | N/A | 1.0580 [ 1.0000 ] | 105.8% { 103.4% } | 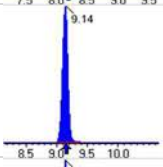 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314936 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1334.1 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 99.5% } | 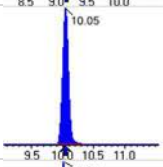 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376422 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 888.9 | N/A | 1.0444 [ 1.0000 ] | 104.4% { 104.2% } | 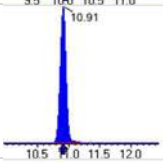 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 377714 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1130.3 | N/A | 1.0291 [ 1.0000 ] | 102.9% { 107.4% } | 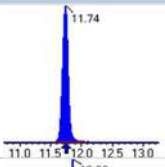 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334117 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1287.0 | N/A | 1.0689 [ 1.0000 ] | 106.9% { 106.9% } | 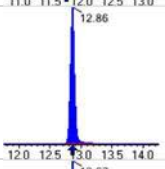 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577032 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2353.0 | N/A | 2.1624 [ 2.0000 ] | 108.1% { 111.8% } | 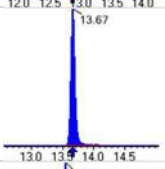 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712494 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1082.5 | N/A | 2.1155 [ 2.0000 ] | 105.8% { 107.5% } | 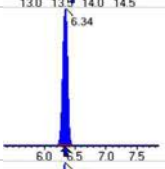 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1322704 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5231.9 | N/A | 2.0471 [ 2.0000 ] | 102.4% { 103.3% } | 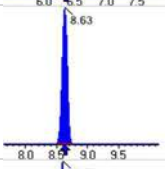 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1631255 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1422.0 | N/A | 2.1142 [ 2.0000 ] | 105.7% { 104.4% } | 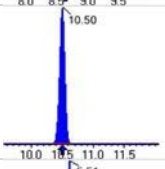 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 624175 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.1 | N/A | 4.4690 [ 4.0000 ] | 111.7% { 118.9% } | 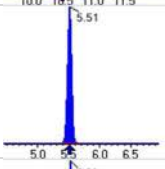 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1736153 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4394.5 | N/A | 4.1536 [ 4.0000 ] | 103.8% { 102.1% } | 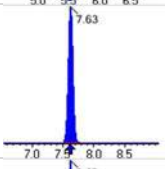 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1343832 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1566.8 | N/A | 4.0993 [ 4.0000 ] | 102.5% { 101.9% } | 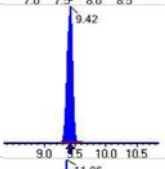 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2709064 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1402.5 | N/A | 7.9071 [ 8.0000 ] | 98.8% { 104.3% } | 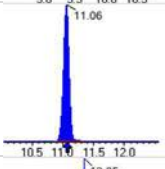 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1414425 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1760.1 | N/A | 2.0687 [ 2.0000 ] | 103.4% { 106.1% } | 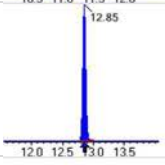 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 308758 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2279.8 | N/A | 2.1291 [ 2.0000 ] | 106.5% { 111.3% } | 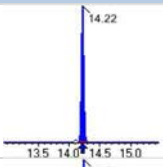  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339372 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2361.4 | N/A | 2.1822 [ 2.0000 ] | 109.1% { 107.6% } | 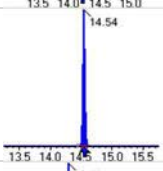  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 794659 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 1882.2 | N/A | 4.0028 [ 4.0000 ] | 100.1% { 94.8% } | 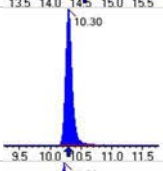  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 748744 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2202.1 | N/A | 4.1381 [ 4.0000 ] | 103.5% { 99.0% } | 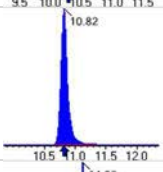  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1330777 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2545.4 | N/A | 20.4202 [ 20.0000 ] | 102.1% { 98.9% } | 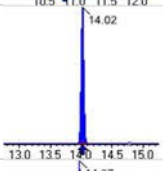  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347196 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3939.5 | N/A | 20.3672 [ 20.0000 ] | 101.8% { 102.3% } | 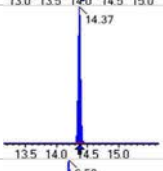  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1079864 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 1987.0 | N/A | 8.1322 [ 8.0000 ] | 101.7% { 110.4% } | 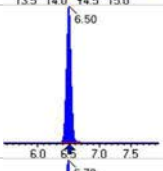  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 590008 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1397.6 | N/A | 1.9907 [ 2.0000 ] | 99.5% { 102.2% } | 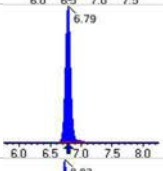  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 501757 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 686.7 | N/A | 1.8597 [ 2.0000 ] | 93.0% { 93.4% } | 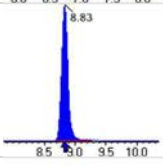  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2317898<br>( 163.0 / 69.0 ) 62952 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 13254.7<br>2982.2 | 0.0272<br>100.0<br>100.0 | 9.2970 | N/A | 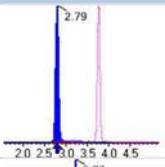 | 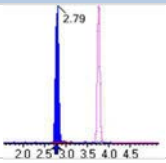 | |
| PFBA | ( 213.0 / 169.0 ) 4838830 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 3323.8 | N/A<br>0.0<br>0.0 | 18.3594 | N/A | 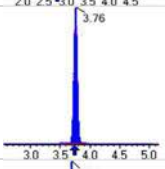 | | |
| PFPeA | ( 263.0 / 219.0 ) 2128919<br>( 263.0 / 69.0 ) 25420 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.1) | 5361.1<br>340.3 | 0.0119<br>100.0<br>100.0 | 9.1456 | N/A | 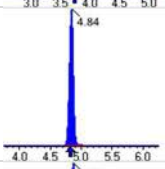 | 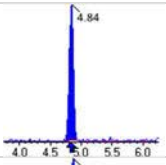 | |
| PFHxA | ( 313.0 / 269.0 ) 1219406<br>( 313.0 / 119.0 ) 141590 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2354.3<br>1418.0 | 0.1161<br>100.0<br>100.0 | 4.5868 | N/A | 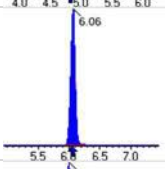 | 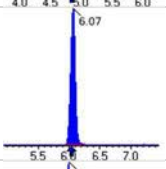 | |
| PFHpA | ( 363.0 / 319.0 ) 1387492<br>( 363.0 / 169.0 ) 420528 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 1776.8<br>1251.9 | 0.3031<br>100.0<br>100.0 | 4.5659 | N/A | 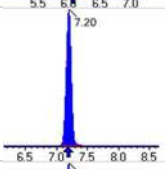 | 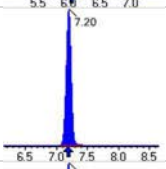 | |
| PFOA | ( 413.0 / 369.0 ) 1841616<br>( 413.0 / 169.0 ) 673207 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 773.3<br>1201.4 | 0.3656<br>100.0<br>100.0 | 4.5711 | N/A | 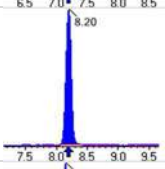 | 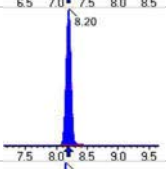 | |
| PFNA | ( 463.0 / 419.0 ) 1251905<br>( 463.0 / 169.0 ) 319604 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1250.5<br>1086.4 | 0.2553<br>100.0<br>100.0 | 4.7429 | N/A | 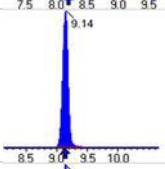 | 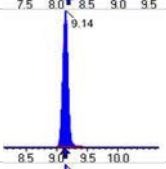 | |
| PFDA | ( 513.0 / 469.0 ) 1434654<br>( 513.0 / 169.0 ) 168105 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3306.9<br>1965.1 | 0.1172<br>100.0<br>100.0 | 4.4342 | N/A | 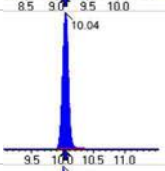 | 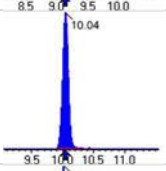 | |
| PFUnA | ( 563.0 / 519.0 ) 1605332<br>( 563.0 / 169.0 ) 227512 | ( 10.91 , 1.00 ) ( 0.00 , N/A , -0.2) | 1211.8<br>818.3 | 0.1417<br>100.0<br>100.0 | 4.8033 | N/A | 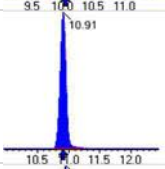 | 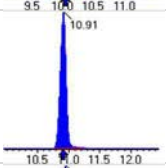 | |
| PFDoA | ( 613.0 / 569.0 ) 1716228<br>( 613.0 / 169.0 ) 271263 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1381.0<br>1036.4 | 0.1581<br>100.0<br>100.0 | 4.8505 | N/A | 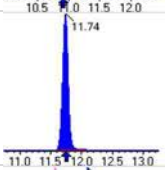 | 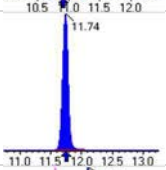 | |
| PFTrDA | ( 663.0 / 619.0 ) 1712256<br>( 663.0 / 169.0 ) 440712 | ( 12.37 , 1.05 ) ( N/A , 0.00 , -0.1) | 1318.3<br>1430.7 | 0.2574<br>100.0<br>100.0 | 4.9471 | N/A | 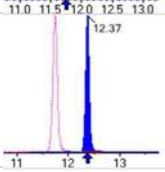 | 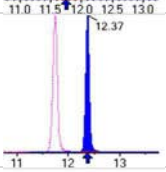 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1428181<br>( 713.0 / 169.0 ) 385493 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1791.2<br>1117.8 | 0.2699<br>100.0<br>100.0 | 4.8801 | N/A | 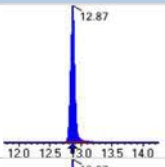 | 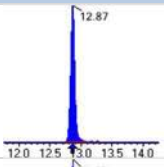 | |
| PFHxDA | ( 813.0 / 769.0 ) 1138852<br>( 813.0 / 169.0 ) 278641 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1735.3<br>1315.5 | 0.2447<br>100.0<br>100.0 | 4.6269 | N/A | 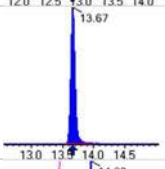 | 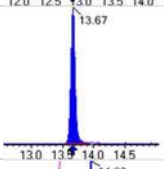 | |
| PFODA | ( 913.0 / 869.0 ) 731197<br>( 913.0 / 169.0 ) 261984 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1733.9<br>942.0 | 0.3583<br>100.0<br>100.0 | 4.7485 | N/A | 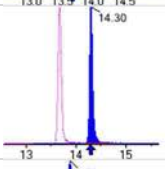 | 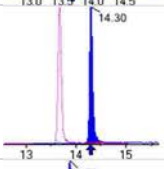 | |
| PFBS | ( 299.0 / 80.0 ) 1759688<br>( 299.0 / 99.0 ) 1244474 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4249.9<br>3308.4 | 0.7072<br>100.0<br>100.0 | 4.2546 | N/A | 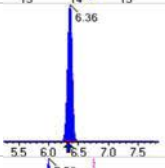 | 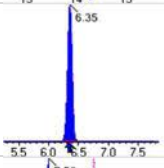 | |
| PFPeS | ( 349.0 / 80.0 ) 4474419<br>( 349.0 / 99.0 ) 1609058 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2447.9<br>2689.5 | 0.3596<br>100.0<br>100.0 | 4.5657 | N/A | 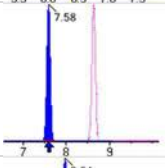 | 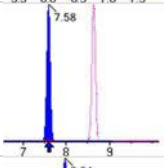 | |
| PFHxS | ( 399.0 / 80.0 ) 5007143<br>( 399.0 / 99.0 ) 1594633 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3769.6<br>5809.6 | 0.3185<br>100.0<br>100.0 | 4.3987 | N/A | 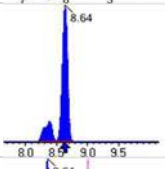 | 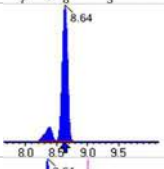 | |
| PFHpS | ( 449.0 / 80.0 ) 4180068<br>( 449.0 / 99.0 ) 1106181 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1994.9<br>1790.0 | 0.2646<br>100.0<br>100.0 | 4.4654 | N/A | 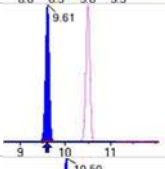 | 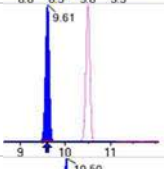 | |
| PFOS | ( 499.0 / 80.0 ) 3790499<br>( 499.0 / 99.0 ) 885961 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2368.6<br>8764.9 | 0.2337<br>100.0<br>100.0 | 4.2007 | N/A | 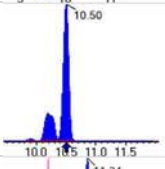 | 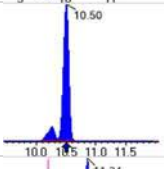 | |
| PFNS | ( 549.0 / 80.0 ) 3830828<br>( 549.0 / 99.0 ) 1044035 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2949.8<br>2999.3 | 0.2725<br>100.0<br>100.0 | 4.5343 | N/A | 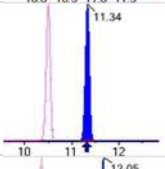 | 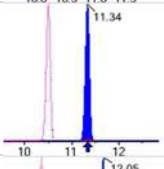 | |
| PFDS | ( 599.0 / 80.0 ) 4687891<br>( 599.0 / 99.0 ) 1274601 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2654.5<br>1953.7 | 0.2719<br>100.0<br>100.0 | 4.5442 | N/A | 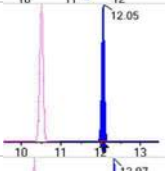 | 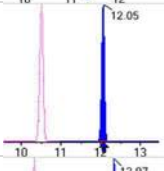 | |
| PFDoS | ( 699.0 / 80.0 ) 4217083<br>( 699.0 / 99.0 ) 985007 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3687.0<br>3177.3 | 0.2336<br>100.0<br>100.0 | 4.6370 | N/A | 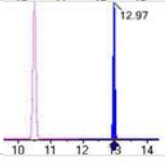 | 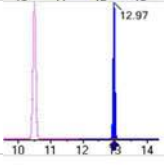 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6427716<br>( 327.0 / 81.0 ) 5608160 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4802.8<br>3822.4 | 0.8725<br>100.0<br>100.0 | 18.6621 | N/A | 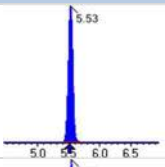 | 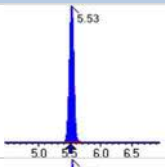 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6162619<br>( 427.0 / 81.0 ) 7728420 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4425.7<br>3867.2 | 1.2541<br>100.0<br>100.0 | 17.5116 | N/A | 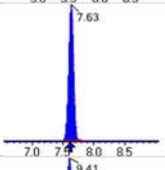 | 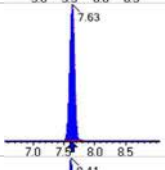 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5813599<br>( 527.0 / 81.0 ) 6323842 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1535.7<br>1692.5 | 1.0878<br>100.0<br>100.0 | 18.5585 | N/A | 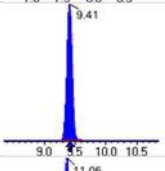 | 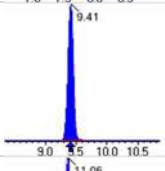 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4546994<br>( 627.0 / 81.0 ) 6545746 | ( 11.06 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1429.6<br>1779.0 | 1.4396<br>100.0<br>100.0 | 18.1733 | N/A | 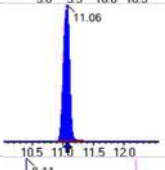 | 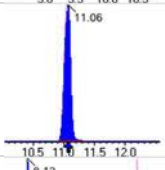 | |
| PFBSA | ( 297.9 / 78.0 ) 3784890<br>( 297.9 / 278.0 ) 5173 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , -0.7) | 2391.2<br>252.6 | 0.0014<br>100.0<br>100.0 | 5.2941 | N/A | 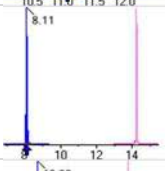 | 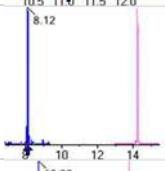 | |
| PFHxSA | ( 397.9 / 78.0 ) 4138663<br>( 397.9 / 378.0 ) 16909 | ( 10.98 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1475.0<br>328.4 | 0.0041<br>100.0<br>100.0 | 4.2697 | N/A | 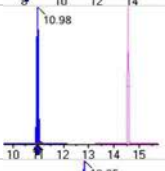 | 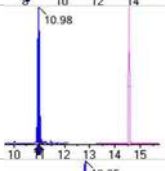 | |
| PFOSA | ( 498.0 / 78.0 ) 3268359<br>( 498.0 / 478.0 ) 45862 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2465.7<br>1324.9 | 0.0140<br>100.0<br>100.0 | 4.9031 | N/A | 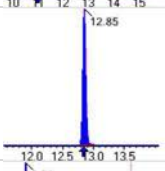 | 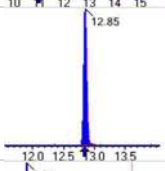 | |
| TFSI | ( 279.7 / 147.0 ) 8554250<br>( 279.7 / 211.0 ) 718623 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 65.6<br>60.6 | 0.0840<br>100.0<br>100.0 | 4.8735 | N/A | 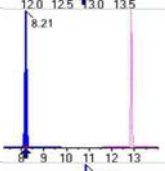 | 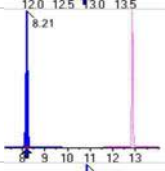 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2617190<br>( 512.0 / 169.0 ) 1958777 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 2.6) | 3160.0<br>1591.2 | 0.7484<br>100.0<br>100.0 | 19.0008 | N/A | 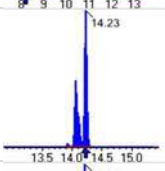 | 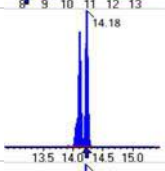 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3302859<br>( 526.0 / 169.0 ) 4077880 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4176.5<br>3268.5 | 1.2347<br>100.0<br>100.0 | 18.6986 | N/A | 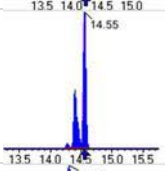 | 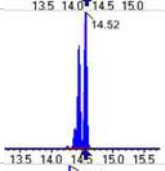 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 941372<br>( 570.0 / 483.0 ) 412806 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2558.8<br>1637.7 | 0.4385<br>100.0<br>100.0 | 4.7122 | N/A | 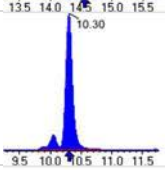 | 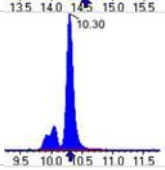 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 830082<br>( 584.0 / 526.0 ) 511873 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1802.1<br>671.1 | 0.6167<br>100.0<br>100.0 | 4.4891 | N/A | 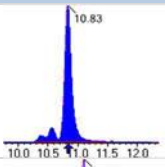 | 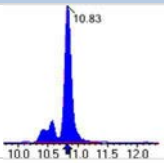 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1309209 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2267.5 | N/A<br>0.0<br>0.0 | 17.7400 | N/A | 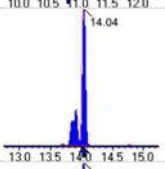 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1093975 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3642.1 | N/A<br>0.0<br>0.0 | 18.6997 | N/A | 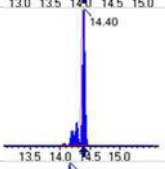 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 350291<br>( 285.0 / 185.0 ) 968672 | ( 6.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1900.4<br>2107.7 | 2.7653<br>100.0<br>100.0 | 4.8596 | N/A | 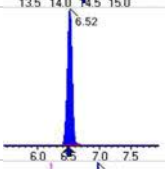 | 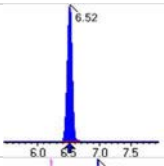 | |
| ADONA | ( 377.0 / 85.0 ) 3944718<br>( 377.0 / 251.0 ) 402093 | ( 7.59 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1901.3<br>1951.7 | 0.1019<br>100.0<br>100.0 | 4.6907 | N/A | 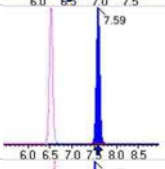 | 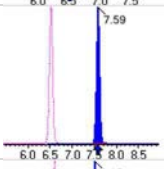 | |
| PFEESA | ( 315.0 / 135.0 ) 1573841<br>( 315.0 / 83.0 ) 877164 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 3219.1<br>1327.1 | 0.5573<br>100.0<br>100.0 | 8.2438 | N/A | 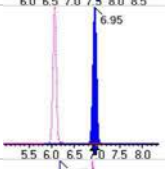 | 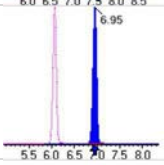 | |
| PFMPA | ( 229.0 / 85.0 ) 686112 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 5599.0 | N/A<br>0.0<br>0.0 | 9.2883 | N/A | 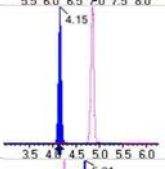 | | |
| PFMBA | ( 279.0 / 85.0 ) 1810024 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5286.0 | N/A<br>0.0<br>0.0 | 9.0155 | N/A | 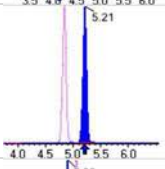 | | |
| NFDHA | ( 295.0 / 201.0 ) 855237<br>( 295.0 / 85.0 ) 922794 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3414.5<br>3145.8 | 1.0790<br>100.0<br>100.0 | 8.6171 | N/A | 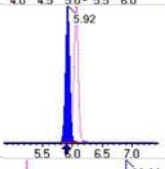 | 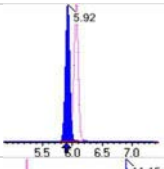 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4165488<br>( 533.0 / 353.0 ) 1303420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , -0.1) | 2574.2<br>3005.6 | 0.3129<br>100.0<br>100.0 | 4.5860 | N/A | 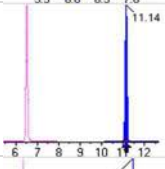 | 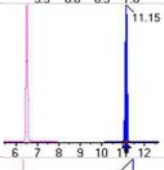 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3346515<br>( 633.0 / 453.0 ) 1111515 | ( 12.47 , 1.91 )<br>( N/A , 0.00 , -0.1) | 3618.9<br>2674.6 | 0.3321<br>100.0<br>100.0 | 4.7909 | N/A | 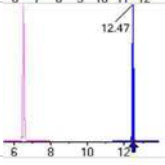 | 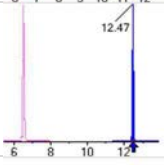 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2114337<br>( 461.0 / 381.2 ) 842629 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , -0.1) | 2784.3<br>3053.0 | 0.3985<br>100.0<br>100.0 | 4.1534 | N/A | 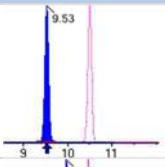 | 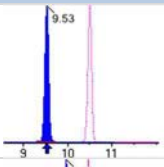 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 238302<br>( 241.0 / 117.0 ) 502064 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2642.2<br>2673.1 | 2.1068<br>100.0<br>100.0 | 17.9956 | N/A | 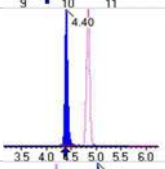 | 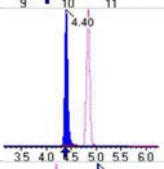 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1331676<br>( 341.0 / 217.0 ) 2023067 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1058.3<br>1362.0 | 1.5192<br>100.0<br>100.0 | 18.0626 | N/A | 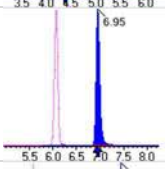 | 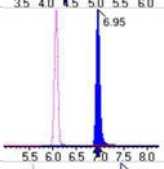 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2128903<br>( 441.0 / 337.0 ) 1952501 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4363.7<br>7659.6 | 0.9171<br>100.0<br>100.0 | 17.5963 | N/A | 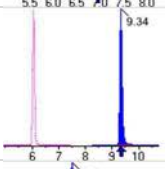 | 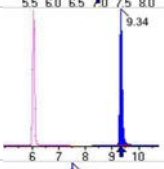 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1497038<br>( 357.2 / 243.0 ) 165062 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1712.0<br>900.3 | 0.1103<br>100.0<br>100.0 | 4.8782 | N/A | 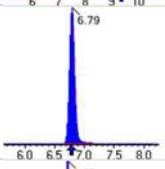 | 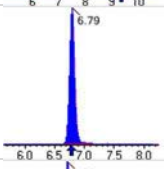 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1119562<br>( 457.2 / 343.0 ) 46429 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.1) | 781.1<br>326.6 | 0.0415<br>100.0<br>100.0 | 5.1103 | N/A | 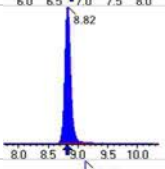 | 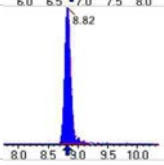 | |
| TDCA | ( 499.0 / 80.0 ) 2892255 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 15801.2 | N/A<br>0.0<br>0.0 | 4.7022 | N/A | 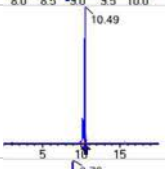 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 234275 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1105.2 | N/A | 0.9826<br>[ 1.0000 ] | 98.3%<br>{ 100.0% } | 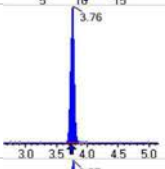 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119482 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 4024.8 | N/A | 0.9419<br>[ 1.0000 ] | 94.2%<br>{ 100.0% } | 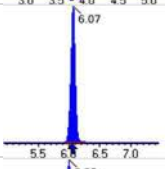 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379944 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3214.4 | N/A | 0.9611<br>[ 1.0000 ] | 96.1%<br>{ 100.0% } | 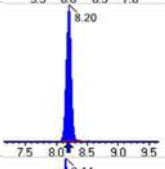 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 266244 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1068.8 | N/A | 0.9361<br>[ 1.0000 ] | 93.6%<br>{ 100.0% } | 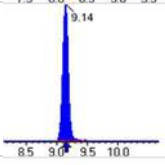 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 267877 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 4037.1 | N/A | 0.9173 [ 1.0000 ] | 91.7% { 100.0% } | 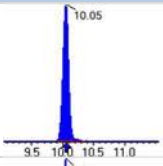 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 900173 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4526.5 | N/A | 0.9485 [ 1.0000 ] | 94.9% { 100.0% } | 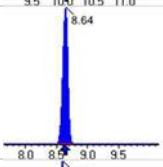 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 700749 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2461.4 | N/A | 0.9201 [ 1.0000 ] | 92.0% { 100.0% } | 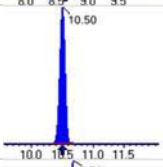 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115201 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 29283.2 | N/A | 7.9034 [ 8.0000 ] | 98.8% { 100.0% } | 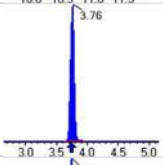 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 921682 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5969.4 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 100.0% } | 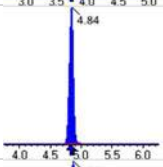 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 553414 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6046.0 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 100.0% } | 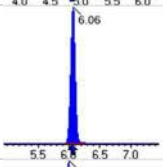 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 619345 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 4798.4 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 100.0% } | 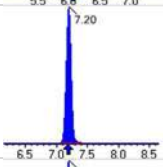 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 819908 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2642.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 100.0% } | 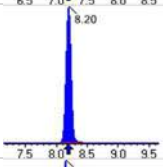 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262623 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 3992.5 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 100.0% } | 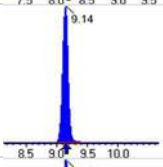 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316652 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 937.0 | N/A | 1.0548 [ 1.0000 ] | 105.5% { 100.0% } | 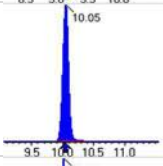 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 361334 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 805.5 | N/A | 1.0231 [ 1.0000 ] | 102.3% { 100.0% } | 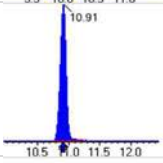 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351702 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1444.1 | N/A | 0.9778 [ 1.0000 ] | 97.8% { 100.0% } | 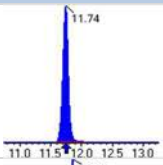 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 312483 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1264.0 | N/A | 1.0202 [ 1.0000 ] | 102.0% { 100.0% } | 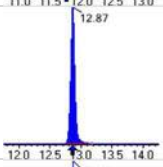 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 516108 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2242.9 | N/A | 1.9737 [ 2.0000 ] | 98.7% { 100.0% } | 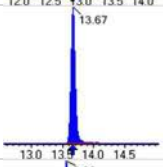 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1593184 | ( 6.36 , N/A ) ( N/A , 0.00 , N/A ) | 1038.1 | N/A | 1.9589 [ 2.0000 ] | 97.9% { 100.0% } | 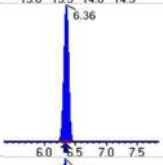 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1280605 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3673.4 | N/A | 1.9727 [ 2.0000 ] | 98.6% { 100.0% } | 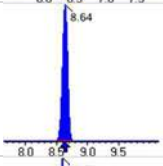 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1562530 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1579.3 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 100.0% } | 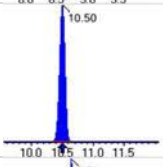 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524953 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 86.3 | N/A | 3.7410 [ 4.0000 ] | 93.5% { 100.0% } | 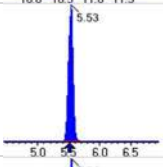 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1699930 | ( 7.64 , N/A ) ( N/A , 0.00 , N/A ) | 3997.9 | N/A | 4.0480 [ 4.0000 ] | 101.2% { 100.0% } | 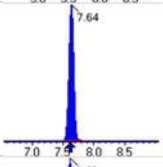 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1319404 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1220.6 | N/A | 4.0060 [ 4.0000 ] | 100.1% { 100.0% } | 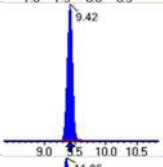 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2596951 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1243.7 | N/A | 7.5446 [ 8.0000 ] | 94.3% { 100.0% } | 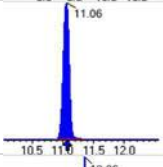 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1333164 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2944.9 | N/A | 1.9911 [ 2.0000 ] | 99.6% { 100.0% } | 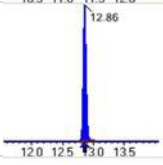 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 277449 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1901.8 | N/A | 1.9537 [ 2.0000 ] | 97.7% { 100.0% } | 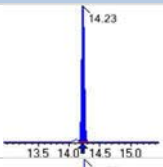  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315440 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2388.3 | N/A | 2.0713 [ 2.0000 ] | 103.6% { 100.0% } | 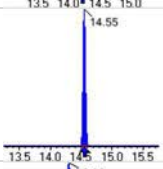  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 837819 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2395.5 | N/A | 4.3096 [ 4.0000 ] | 107.7% { 100.0% } | 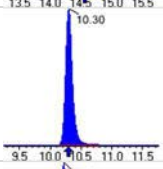  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 756123 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2001.2 | N/A | 4.2674 [ 4.0000 ] | 106.7% { 100.0% } | 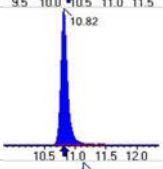  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1345588 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2202.6 | N/A | 21.0846 [ 20.0000 ] | 105.4% { 100.0% } | 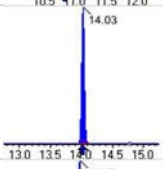  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316921 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4403.9 | N/A | 20.3309 [ 20.0000 ] | 101.7% { 100.0% } | 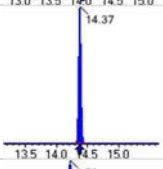  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977892 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2111.7 | N/A | 7.8745 [ 8.0000 ] | 98.4% { 100.0% } | 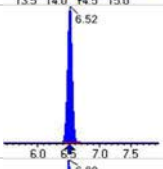  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 577314 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1093.1 | N/A | 1.9878 [ 2.0000 ] | 99.4% { 100.0% } | 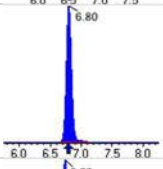  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 537205 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 658.4 | N/A | 2.0318 [ 2.0000 ] | 101.6% { 100.0% } | 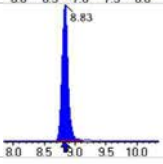  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 4976227<br>( 163.0 / 69.0 ) 132304 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 25558.3<br>5992.4 | 0.0266<br>97.9<br>97.9 | 19.9572 | N/A | 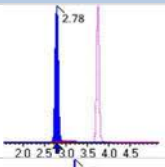 | 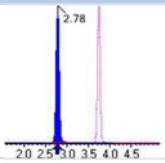 | |
| PFBA | ( 213.0 / 169.0 ) 10221233 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5237.8 | N/A<br>0.0<br>0.0 | 38.7767 | N/A | 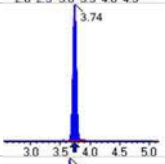 | | |
| PFPeA | ( 263.0 / 219.0 ) 4600759<br>( 263.0 / 69.0 ) 53659 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , -0.2) | 7458.7<br>673.0 | 0.0117<br>97.7<br>97.7 | 19.6841 | N/A | 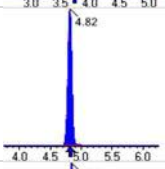 | 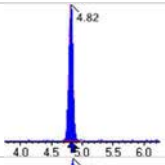 | |
| PFHxA | ( 313.0 / 269.0 ) 2674025<br>( 313.0 / 119.0 ) 304997 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , -0.2) | 3132.9<br>2330.2 | 0.1141<br>98.2<br>98.2 | 9.7037 | N/A | 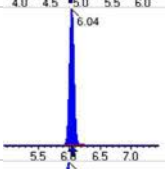 | 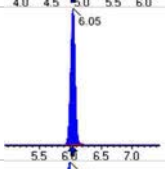 | |
| PFHpA | ( 363.0 / 319.0 ) 3133962<br>( 363.0 / 169.0 ) 979167 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1898.2<br>1646.0 | 0.3124<br>103.1<br>103.1 | 9.6945 | N/A | 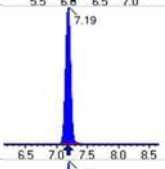 | 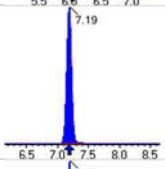 | |
| PFOA | ( 413.0 / 369.0 ) 4116055<br>( 413.0 / 169.0 ) 1484961 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1022.2<br>1403.5 | 0.3608<br>98.7<br>98.7 | 9.3377 | N/A | 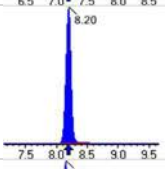 | 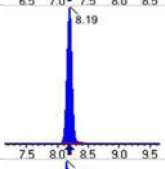 | |
| PFNA | ( 463.0 / 419.0 ) 2850976<br>( 463.0 / 169.0 ) 722819 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1530.8<br>1452.7 | 0.2535<br>99.3<br>99.3 | 9.7006 | N/A | 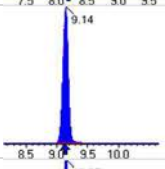 | 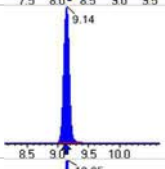 | |
| PFDA | ( 513.0 / 469.0 ) 3194205<br>( 513.0 / 169.0 ) 393804 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3654.4<br>3624.5 | 0.1233<br>105.2<br>105.2 | 9.1536 | N/A | 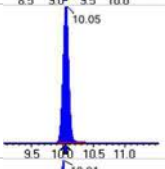 | 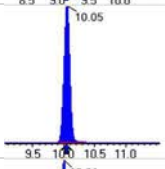 | |
| PFUnA | ( 563.0 / 519.0 ) 3630994<br>( 563.0 / 169.0 ) 527822 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1014.1<br>931.4 | 0.1454<br>102.6<br>102.6 | 9.9823 | N/A | 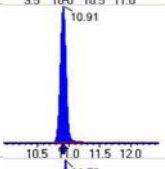 | 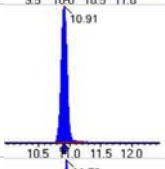 | |
| PFDoA | ( 613.0 / 569.0 ) 4033515<br>( 613.0 / 169.0 ) 625874 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1766.4<br>1315.4 | 0.1552<br>98.2<br>98.2 | 10.0099 | N/A | 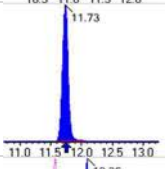 | 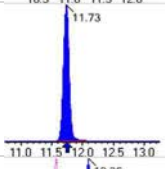 | |
| PFTrDA | ( 663.0 / 619.0 ) 3904086<br>( 663.0 / 169.0 ) 1037013 | ( 12.36 , 1.05 )<br>( N/A , -0.01 , -0.1) | 1403.0<br>1491.0 | 0.2656<br>103.2<br>103.2 | 9.9045 | N/A | 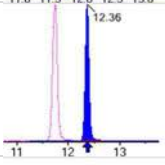 | 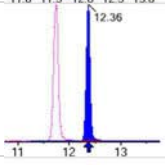 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3274865<br>( 713.0 / 169.0 ) 872542 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1863.1<br>1420.4 | 0.2664<br>98.7<br>98.7 | 10.0480 | N/A | 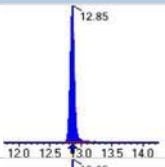 | 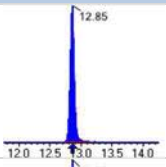 | |
| PFHxDA | ( 813.0 / 769.0 ) 2771994<br>( 813.0 / 169.0 ) 672443 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2671.6<br>1712.5 | 0.2426<br>99.1<br>99.1 | 9.5663 | N/A | 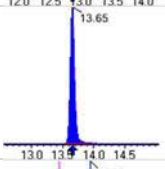 | 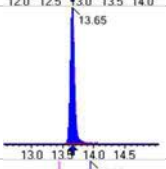 | |
| PFODA | ( 913.0 / 869.0 ) 1755825<br>( 913.0 / 169.0 ) 595303 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , -0.1) | 2292.7<br>1524.1 | 0.3390<br>94.6<br>94.6 | 9.6858 | N/A | 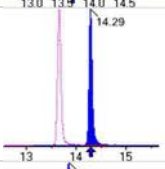 | 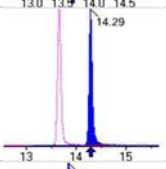 | |
| PFBS | ( 299.0 / 80.0 ) 3954355<br>( 299.0 / 99.0 ) 2802024 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3950.8<br>3555.4 | 0.7086<br>100.2<br>100.2 | 8.8614 | N/A | 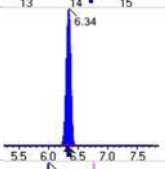 | 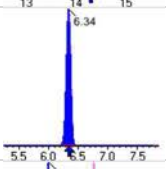 | |
| PFPeS | ( 349.0 / 80.0 ) 10113671<br>( 349.0 / 99.0 ) 3414890 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.1) | 3006.5<br>2142.2 | 0.3377<br>93.9<br>93.9 | 9.7116 | N/A | 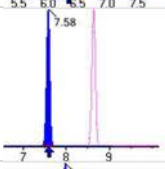 | 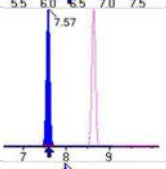 | |
| PFHxS | ( 399.0 / 80.0 ) 10933094<br>( 399.0 / 99.0 ) 3587030 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3851.3<br>3667.5 | 0.3281<br>103.0<br>103.0 | 9.0385 | N/A | 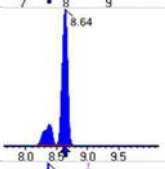 | 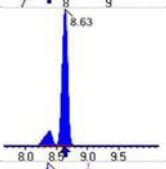 | |
| PFHpS | ( 449.0 / 80.0 ) 10182649<br>( 449.0 / 99.0 ) 2481015 | ( 9.61 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2251.9<br>2141.8 | 0.2437<br>92.1<br>92.1 | 9.8391 | N/A | 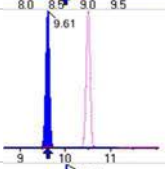 | 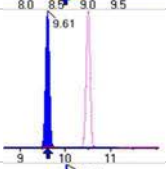 | |
| PFOS | ( 499.0 / 80.0 ) 8996676<br>( 499.0 / 99.0 ) 2052837 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3105.0<br>5613.8 | 0.2282<br>97.6<br>97.6 | 9.0184 | N/A | 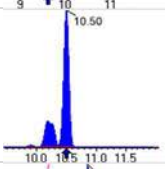 | 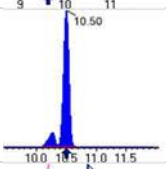 | |
| PFNS | ( 549.0 / 80.0 ) 8681127<br>( 549.0 / 99.0 ) 2337302 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2556.4<br>2538.4 | 0.2692<br>98.8<br>98.8 | 9.2942 | N/A | 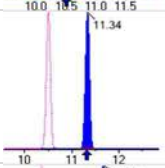 | 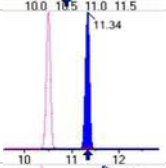 | |
| PFDS | ( 599.0 / 80.0 ) 10573938<br>( 599.0 / 99.0 ) 2638031 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3076.0<br>2562.7 | 0.2495<br>91.8<br>91.8 | 9.2712 | N/A | 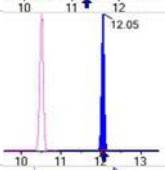 | 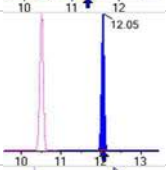 | |
| PFDoS | ( 699.0 / 80.0 ) 10115664<br>( 699.0 / 99.0 ) 2234349 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.0) | 4057.4<br>3770.2 | 0.2209<br>94.6<br>94.6 | 10.0609 | N/A | 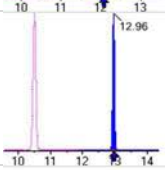 | 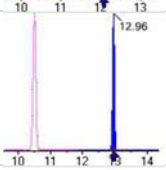 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12141384<br>( 327.0 / 81.0 ) 11228944 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 5417.9<br>3453.7 | 0.9248<br>106.0<br>106.0 | 37.7355 | N/A | 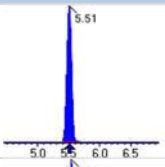 | 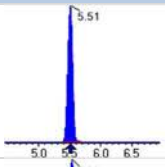 | |
| 6:2FTS | ( 427.0 / 407.0 ) 10900294<br>( 427.0 / 81.0 ) 14811616 | ( 7.63 , 1.00 ) ( 0.00 , N/A , 0.1) | 4185.7<br>4990.4 | 1.3588<br>108.4<br>108.4 | 35.7625 | N/A | 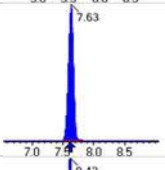 | 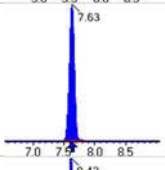 | |
| 8:2FTS | ( 527.0 / 507.0 ) 11942343<br>( 527.0 / 81.0 ) 12425264 | ( 9.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 1621.8<br>1564.2 | 1.0404<br>95.6<br>95.6 | 35.7744 | N/A | 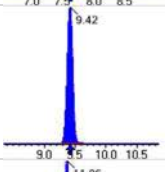 | 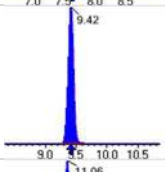 | |
| 10:2FTS | ( 627.0 / 607.0 ) 9925774<br>( 627.0 / 81.0 ) 13942585 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.4) | 1561.8<br>1571.2 | 1.4047<br>97.6<br>97.6 | 38.6373 | N/A | 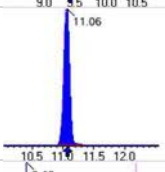 | 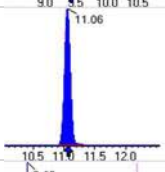 | |
| PFBSA | ( 297.9 / 78.0 ) 8323910<br>( 297.9 / 278.0 ) 11763 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.4) | 1757.1<br>273.7 | 0.0014<br>103.4<br>103.4 | 10.3645 | N/A | 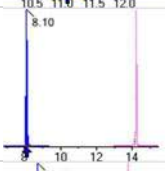 | 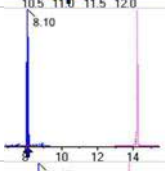 | |
| PFHxSA | ( 397.9 / 78.0 ) 10756836<br>( 397.9 / 378.0 ) 44787 | ( 10.98 , 0.76 ) ( N/A , 0.00 , 0.1) | 1403.3<br>850.1 | 0.0042<br>101.9<br>101.9 | 10.4696 | N/A | 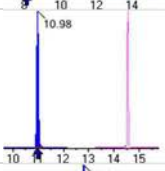 | 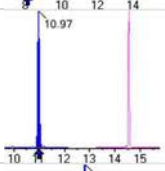 | |
| PFOSA | ( 498.0 / 78.0 ) 7435186<br>( 498.0 / 478.0 ) 96496 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 2452.2<br>1261.2 | 0.0130<br>92.5<br>92.5 | 10.0824 | N/A | 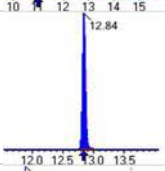 | 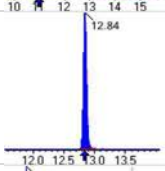 | |
| TFSI | ( 279.7 / 147.0 ) 19532191<br>( 279.7 / 211.0 ) 1661545 | ( 8.20 , 0.64 ) ( N/A , 0.00 , -0.1) | 66.5<br>62.7 | 0.0851<br>101.3<br>101.3 | 10.0587 | N/A | 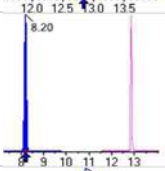 | 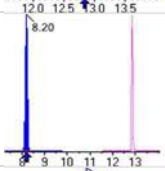 | |
| NMeFOSA | ( 512.0 / 219.0 ) 6233211<br>( 512.0 / 169.0 ) 4662319 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.9) | 3243.4<br>1391.3 | 0.7480<br>99.9<br>99.9 | 40.2840 | N/A | 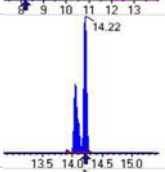 | 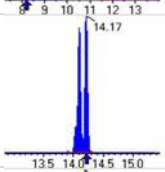 | |
| NEtFOSA | ( 526.0 / 219.0 ) 7427048<br>( 526.0 / 169.0 ) 9493854 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 4701.3<br>3802.9 | 1.2783<br>103.5<br>103.5 | 39.6683 | N/A | 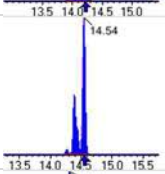 | 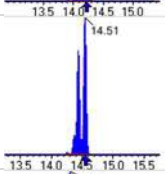 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1945852<br>( 570.0 / 483.0 ) 893329 | ( 10.31 , 1.00 ) ( 0.00 , N/A , 0.2) | 3953.1<br>1913.0 | 0.4591<br>104.7<br>104.7 | 9.3754 | N/A | 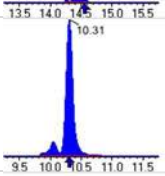 | 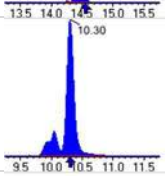 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1886130<br>( 584.0 / 526.0 ) 1111226 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1796.1<br>739.5 | 0.5892<br>95.5<br>95.5 | 9.8885 | N/A | 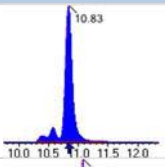 | 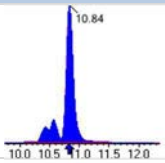 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3070058 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3573.3 | N/A<br>0.0<br>0.0 | 38.7608 | N/A | 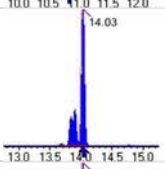 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2588455 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4718.1 | N/A<br>0.0<br>0.0 | 40.2337 | N/A | 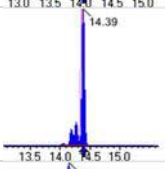 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 774472<br>( 285.0 / 185.0 ) 2152195 | ( 6.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1908.8<br>2139.2 | 2.7789<br>100.5<br>100.5 | 9.8848 | N/A | 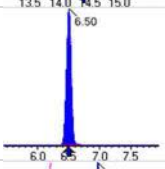 | 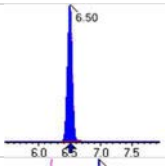 | |
| ADONA | ( 377.0 / 85.0 ) 8831827<br>( 377.0 / 251.0 ) 872179 | ( 7.58 , 1.17 )<br>( N/A , -0.01 , 0.2) | 2174.0<br>1762.1 | 0.0988<br>96.9<br>96.9 | 9.6620 | N/A | 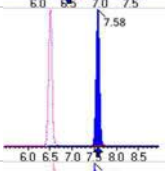 | 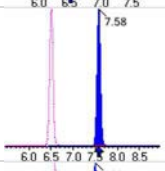 | |
| PFEESA | ( 315.0 / 135.0 ) 3656765<br>( 315.0 / 83.0 ) 1984703 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 3111.9<br>1767.9 | 0.5427<br>97.4<br>97.4 | 18.4785 | N/A | 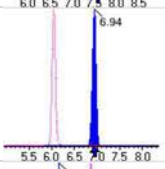 | 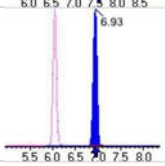 | |
| PFMPA | ( 229.0 / 85.0 ) 1521484 | ( 4.13 , 0.86 )<br>( N/A , -0.02 , 0.0) | 8416.3 | N/A<br>0.0<br>0.0 | 20.5135 | N/A | 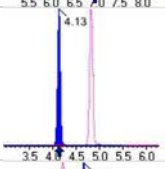 | | |
| PFMBA | ( 279.0 / 85.0 ) 4133561 | ( 5.19 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6193.2 | N/A<br>0.0<br>0.0 | 20.5050 | N/A | 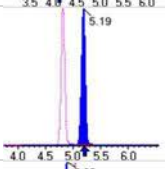 | | |
| NFDHA | ( 295.0 / 201.0 ) 2053635<br>( 295.0 / 85.0 ) 2216174 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 3475.3<br>2940.0 | 1.0791<br>100.0<br>100.0 | 19.9620 | N/A | 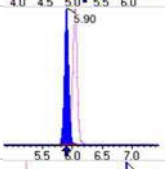 | 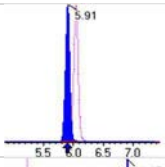 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 9136171<br>( 533.0 / 353.0 ) 2848253 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2897.4<br>2497.0 | 0.3118<br>99.6<br>99.6 | 9.2537 | N/A | 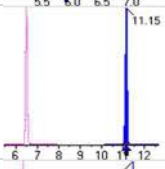 | 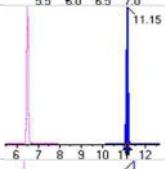 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 7304357<br>( 633.0 / 453.0 ) 2453189 | ( 12.46 , 1.92 )<br>( N/A , -0.01 , 0.1) | 3572.6<br>3729.2 | 0.3359<br>101.1<br>101.1 | 9.6204 | N/A | 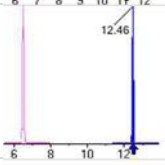 | 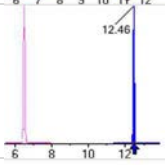 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 5039330<br>( 461.0 / 381.2 ) 1905718 | ( 9.53 , 0.91 )<br>( N/A , 0.01 , 0.3) | 3789.8<br>3403.6 | 0.3782<br>94.9<br>94.9 | 8.9542 | N/A | 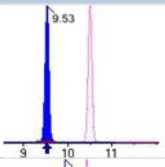 | 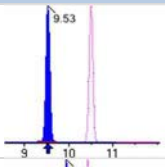 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 538629<br>( 241.0 / 117.0 ) 1253240 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 3197.1<br>4283.1 | 2.3267<br>110.4<br>110.4 | 40.5098 | N/A | 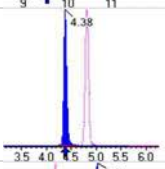 | 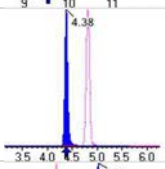 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 3029615<br>( 341.0 / 217.0 ) 4650574 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1393.7<br>1345.8 | 1.5350<br>101.0<br>101.0 | 39.6437 | N/A | 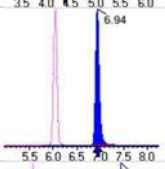 | 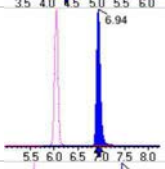 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5123403<br>( 441.0 / 337.0 ) 4460709 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , -0.1) | 5551.5<br>5955.7 | 0.8707<br>94.9<br>94.9 | 40.8535 | N/A | 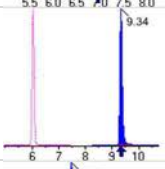 | 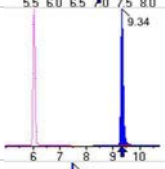 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3452949<br>( 357.2 / 243.0 ) 358650 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1773.4<br>994.0 | 0.1039<br>94.2<br>94.2 | 10.0613 | N/A | 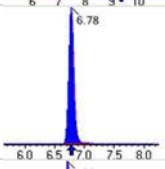 | 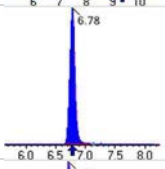 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2505275<br>( 457.2 / 343.0 ) 105248 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 860.7<br>599.2 | 0.0420<br>101.3<br>101.3 | 10.2092 | N/A | 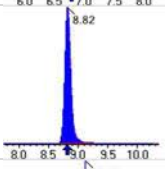 | 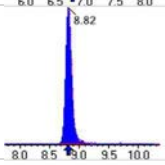 | |
| TDCA | ( 499.0 / 80.0 ) 6236770 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 25056.2 | N/A<br>0.0<br>0.0 | 9.1716 | N/A | 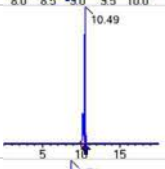 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 219824 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 996.6 | N/A | 0.9219<br>[ 1.0000 ] | 92.2%<br>{ 93.8% } | 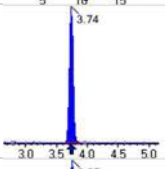 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124014 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 119243.9 | N/A | 0.9776<br>[ 1.0000 ] | 97.8%<br>{ 103.8% } | 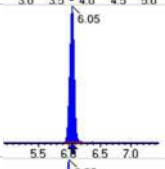 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390461 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3609.6 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 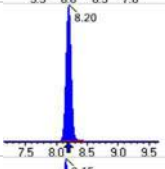 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 275253 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 905.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 103.4% } | 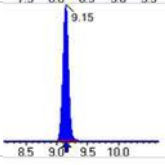 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286139 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 6661.6 | N/A | 0.9798 [ 1.0000 ] | 98.0% { 106.8% } | 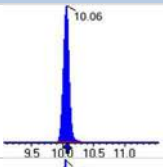 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 911912 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4728.4 | N/A | 0.9609 [ 1.0000 ] | 96.1% { 101.3% } | 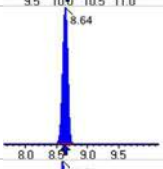 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727281 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2280.6 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 103.8% } | 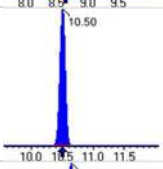 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115448 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 30999.9 | N/A | 8.4239 [ 8.0000 ] | 105.3% { 100.0% } | 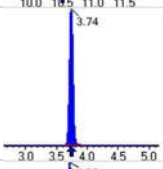 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 925445 | ( 4.82 , N/A ) ( N/A , -0.03 , N/A ) | 4720.5 | N/A | 3.9995 [ 4.0000 ] | 100.0% { 100.4% } | 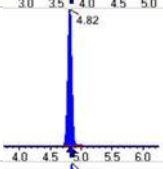 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 573646 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 8004.1 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 103.7% } | 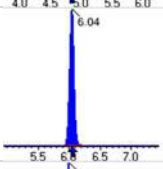 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 658863 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5435.3 | N/A | 2.0932 [ 2.0000 ] | 104.7% { 106.4% } | 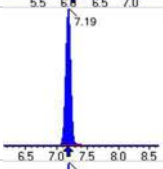 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 890902 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2701.9 | N/A | 2.1295 [ 2.0000 ] | 106.5% { 108.7% } | 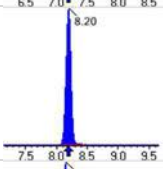 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292416 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2988.5 | N/A | 1.0835 [ 1.0000 ] | 108.3% { 111.3% } | 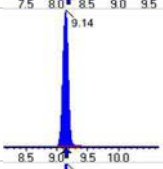 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341522 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1370.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 107.9% } | 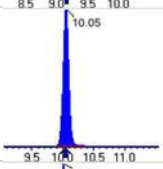 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393261 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1047.7 | N/A | 1.0424 [ 1.0000 ] | 104.2% { 108.8% } | 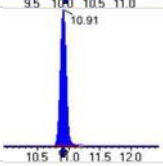 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 400532 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1477.9 | N/A | 1.0425 [ 1.0000 ] | 104.3% { 113.9% } | 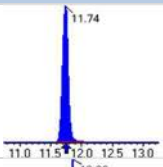  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348002 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1107.0 | N/A | 1.0636 [ 1.0000 ] | 106.4% { 111.4% } | 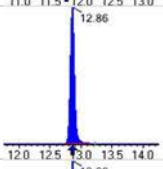  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607589 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2704.1 | N/A | 2.1752 [ 2.0000 ] | 108.8% { 117.7% } | 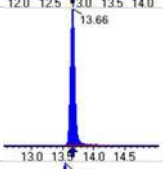  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1718936 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1168.5 | N/A | 2.0863 [ 2.0000 ] | 104.3% { 107.9% } | 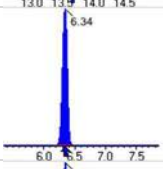  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1360815 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3521.2 | N/A | 2.0692 [ 2.0000 ] | 103.5% { 106.3% } | 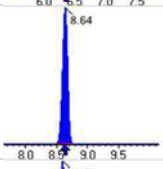  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1727455 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1864.4 | N/A | 2.2029 [ 2.0000 ] | 110.1% { 110.6% } | 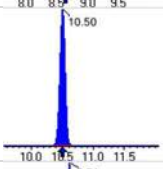  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 490391 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.9 | N/A | 3.4497 [ 4.0000 ] | 86.2% { 93.4% } | 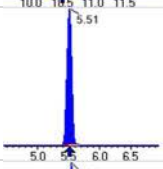  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1472319 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3472.6 | N/A | 3.4608 [ 4.0000 ] | 86.5% { 86.6% } | 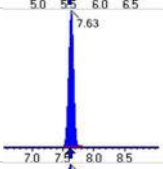  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1406025 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1127.1 | N/A | 4.2140 [ 4.0000 ] | 105.4% { 106.6% } | 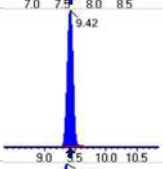  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2666437 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1321.4 | N/A | 7.6467 [ 8.0000 ] | 95.6% { 102.7% } | 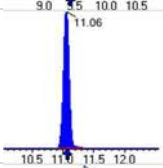  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1474856 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2149.7 | N/A | 2.1223 [ 2.0000 ] | 106.1% { 110.6% } | 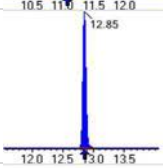  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 311674 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1807.7 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 112.3% } | 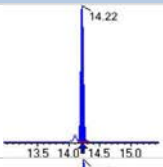  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334355 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2233.0 | N/A | 2.1154 [ 2.0000 ] | 105.8% { 106.0% } | 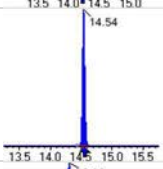  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 870435 | ( 10.30 , N/A ) ( N/A , 0.01 , N/A ) | 2098.7 | N/A | 4.3140 [ 4.0000 ] | 107.8% { 103.9% } | 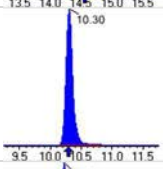  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 779965 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2137.1 | N/A | 4.2413 [ 4.0000 ] | 106.0% { 103.2% } | 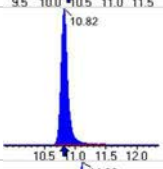  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1444142 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2682.5 | N/A | 21.8033 [ 20.0000 ] | 109.0% { 107.3% } | 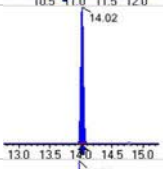  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1448227 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 4302.5 | N/A | 21.5424 [ 20.0000 ] | 107.7% { 110.0% } | 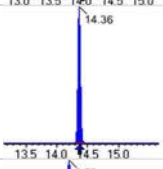  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1062925 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2462.9 | N/A | 8.2465 [ 8.0000 ] | 103.1% { 108.7% } | 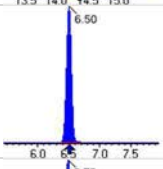  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 645613 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1154.9 | N/A | 2.0811 [ 2.0000 ] | 104.1% { 111.8% } | 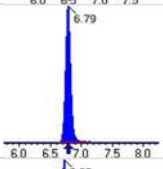  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 601731 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 832.3 | N/A | 2.1306 [ 2.0000 ] | 106.5% { 112.0% } | 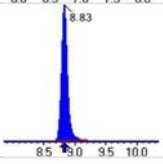  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 9647783<br>( 163.0 / 69.0 ) 248180 | ( 2.77 , 0.74 ) ( N/A , -0.02 , 0.0) | 43056.1<br>9147.9 | 0.0257<br>94.7<br>94.7 | 44.1686 | N/A | 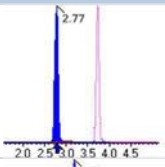 | 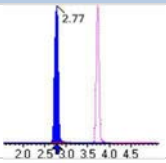 | |
| PFBA | ( 213.0 / 169.0 ) 19202801 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 7585.4 | N/A<br>0.0<br>0.0 | 83.1608 | N/A | 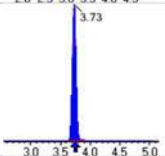 | | |
| PFPeA | ( 263.0 / 219.0 ) 9729713<br>( 263.0 / 69.0 ) 109623 | ( 4.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 6819.6<br>1166.1 | 0.0113<br>94.4<br>94.4 | 42.6830 | N/A | 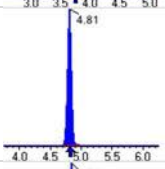 | 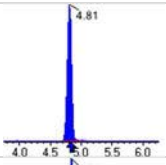 | |
| PFHxA | ( 313.0 / 269.0 ) 5855022<br>( 313.0 / 119.0 ) 657854 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3525.9<br>3080.6 | 0.1124<br>96.8<br>96.8 | 21.0786 | N/A | 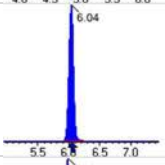 | 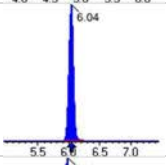 | |
| PFHpA | ( 363.0 / 319.0 ) 6773290<br>( 363.0 / 169.0 ) 1976592 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1787.9<br>1424.4 | 0.2918<br>96.3<br>96.3 | 21.3548 | N/A | 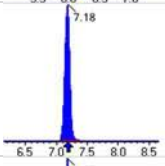 | 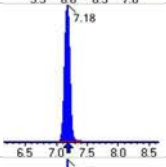 | |
| PFOA | ( 413.0 / 369.0 ) 8939778<br>( 413.0 / 169.0 ) 3151658 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1127.7<br>1395.0 | 0.3525<br>96.4<br>96.4 | 21.1396 | N/A | 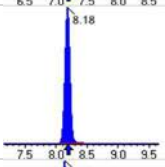 | 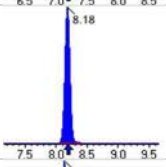 | |
| PFNA | ( 463.0 / 419.0 ) 6037894<br>( 463.0 / 169.0 ) 1493594 | ( 9.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1348.3<br>1184.5 | 0.2474<br>96.9<br>96.9 | 21.7350 | N/A | 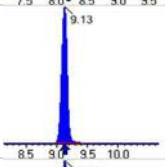 | 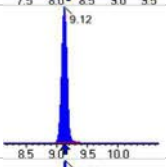 | |
| PFDA | ( 513.0 / 469.0 ) 6762404<br>( 513.0 / 169.0 ) 825163 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 4792.5<br>4492.2 | 0.1220<br>104.1<br>104.1 | 19.9979 | N/A | 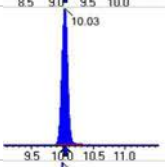 | 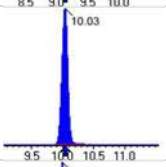 | |
| PFUnA | ( 563.0 / 519.0 ) 7387064<br>( 563.0 / 169.0 ) 1075499 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1049.6<br>1214.6 | 0.1456<br>102.7<br>102.7 | 20.9526 | N/A | 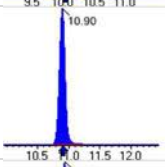 | 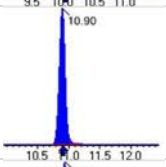 | |
| PFDoA | ( 613.0 / 569.0 ) 8414637<br>( 613.0 / 169.0 ) 1279847 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.1) | 1974.2<br>1748.5 | 0.1521<br>96.2<br>96.2 | 21.0663 | N/A | 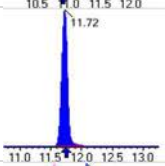 | 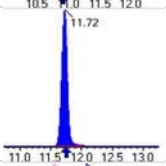 | |
| PFTrDA | ( 663.0 / 619.0 ) 7977805<br>( 663.0 / 169.0 ) 2091790 | ( 12.35 , 1.05 ) ( N/A , -0.02 , -0.1) | 1535.5<br>1229.9 | 0.2622<br>101.9<br>101.9 | 20.4176 | N/A | 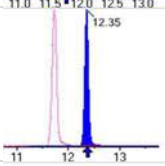 | 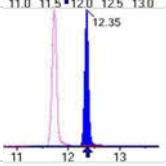 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6332836<br>( 713.0 / 169.0 ) 1709460 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1729.0<br>1376.3 | 0.2699<br>100.0<br>100.0 | 20.1993 | N/A | 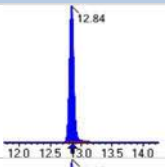 | 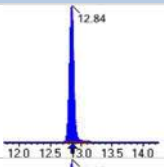 | |
| PFHxDA | ( 813.0 / 769.0 ) 5638902<br>( 813.0 / 169.0 ) 1397067 | ( 13.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2906.6<br>1972.3 | 0.2478<br>101.3<br>101.3 | 20.4809 | N/A | 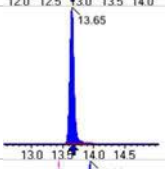 | 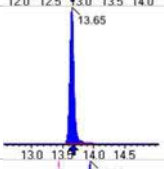 | |
| PFODA | ( 913.0 / 869.0 ) 3499803<br>( 913.0 / 169.0 ) 1172832 | ( 14.28 , 1.05 )<br>( N/A , -0.02 , 0.0) | 2345.2<br>1896.8 | 0.3351<br>93.5<br>93.5 | 20.3190 | N/A | 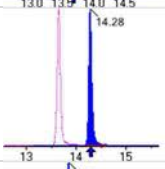 | 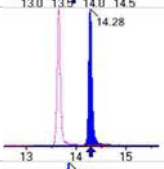 | |
| PFBS | ( 299.0 / 80.0 ) 8605541<br>( 299.0 / 99.0 ) 6210338 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3746.5<br>3688.7 | 0.7217<br>102.0<br>102.0 | 18.7196 | N/A | 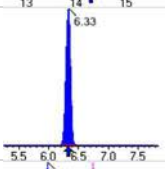 | 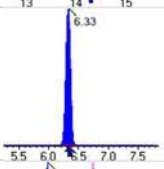 | |
| PFPeS | ( 349.0 / 80.0 ) 20173078<br>( 349.0 / 99.0 ) 6917231 | ( 7.56 , 0.88 )<br>( N/A , -0.02 , 0.0) | 3260.6<br>2666.4 | 0.3429<br>95.4<br>95.4 | 19.2674 | N/A | 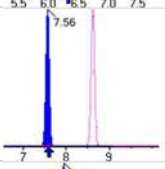 | 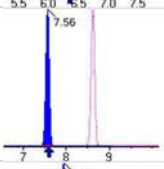 | |
| PFHxS | ( 399.0 / 80.0 ) 22725319<br>( 399.0 / 99.0 ) 7646781 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4713.5<br>6241.9 | 0.3365<br>105.7<br>105.7 | 18.6865 | N/A | 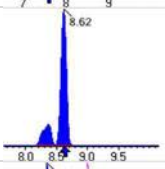 | 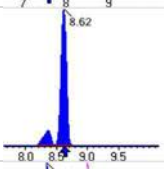 | |
| PFHpS | ( 449.0 / 80.0 ) 20274394<br>( 449.0 / 99.0 ) 5555187 | ( 9.59 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2318.9<br>2835.7 | 0.2740<br>103.5<br>103.5 | 20.6440 | N/A | 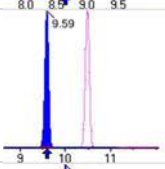 | 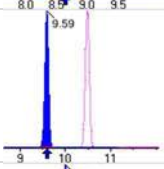 | |
| PFOS | ( 499.0 / 80.0 ) 18767964<br>( 499.0 / 99.0 ) 4295232 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3739.6<br>5295.9 | 0.2289<br>97.9<br>97.9 | 19.8251 | N/A | 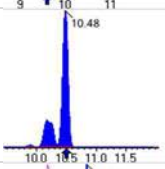 | 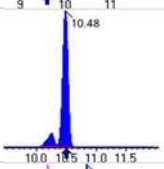 | |
| PFNS | ( 549.0 / 80.0 ) 18086906<br>( 549.0 / 99.0 ) 4780266 | ( 11.32 , 1.08 )<br>( N/A , -0.01 , 0.1) | 2954.4<br>3018.0 | 0.2643<br>97.0<br>97.0 | 20.4057 | N/A | 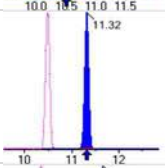 | 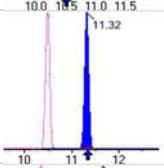 | |
| PFDS | ( 599.0 / 80.0 ) 20905375<br>( 599.0 / 99.0 ) 5646584 | ( 12.04 , 1.15 )<br>( N/A , -0.02 , 0.1) | 3970.4<br>3658.7 | 0.2701<br>99.3<br>99.3 | 19.3156 | N/A | 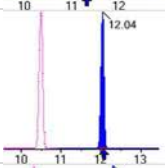 | 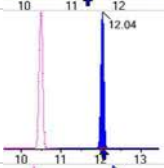 | |
| PFDoS | ( 699.0 / 80.0 ) 19306218<br>( 699.0 / 99.0 ) 4469745 | ( 12.95 , 1.23 )<br>( N/A , -0.02 , 0.0) | 4489.1<br>4098.7 | 0.2315<br>99.1<br>99.1 | 20.2345 | N/A | 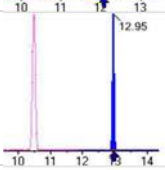 | 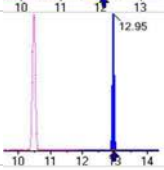 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 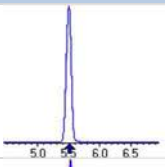 | 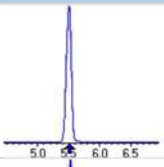 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 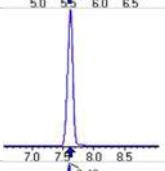 | 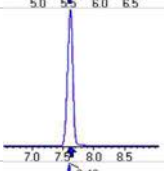 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>21815878<br>( 527.0 / 81.0 )<br>21959418 | ( 9.40 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1473.9<br>1574.1 | 1.0066<br>92.5<br>92.5 | 76.5421 | N/A | 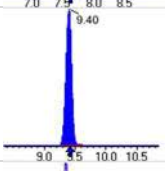 | 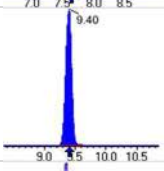 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 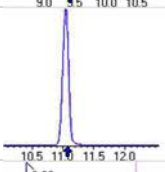 | 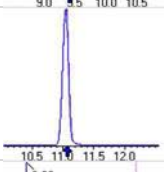 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>16725985<br>( 297.9 / 278.0 )<br>24255 | ( 8.09 , 0.57 )<br>( N/A , -0.02 , 0.2) | 1517.0<br>776.4 | 0.0015<br>106.1<br>106.1 | 20.2686 | N/A | 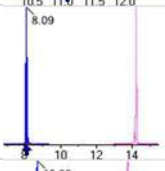 | 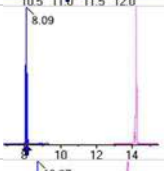 | |
| PFHxSA | ( 397.9 / 78.0 )<br>21492712<br>( 397.9 / 378.0 )<br>91450 | ( 10.96 , 0.75 )<br>( N/A , -0.01 , -0.1) | 1346.4<br>847.0 | 0.0043<br>104.1<br>104.1 | 20.9006 | N/A | 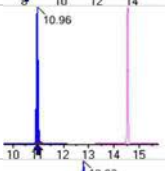 | 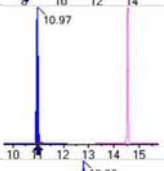 | |
| PFOSA | ( 498.0 / 78.0 )<br>14753844<br>( 498.0 / 478.0 )<br>214805 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3170.7<br>2253.7 | 0.0146<br>103.8<br>103.8 | 21.1703 | N/A | 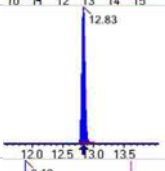 | 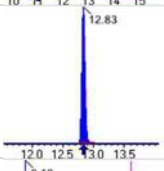 | |
| TFSI | ( 279.7 / 147.0 )<br>39395227<br>( 279.7 / 211.0 )<br>3549226 | ( 8.19 , 0.64 )<br>( N/A , -0.02 , 0.1) | 64.0<br>55.4 | 0.0901<br>107.2<br>107.2 | 21.4677 | N/A | 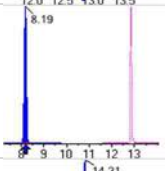 | 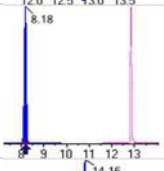 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>13014238<br>( 512.0 / 169.0 )<br>9825343 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3652.8<br>1356.9 | 0.7550<br>100.9<br>100.9 | 81.8558 | N/A | 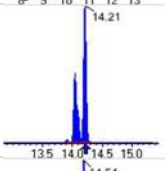 | 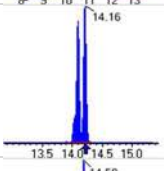 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>15594093<br>( 526.0 / 169.0 )<br>19500224 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4569.2<br>3815.8 | 1.2505<br>101.3<br>101.3 | 83.2165 | N/A | 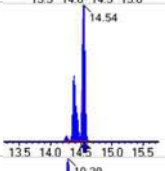 | 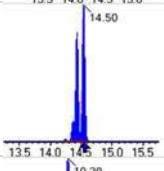 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4070736<br>( 570.0 / 483.0 )<br>1893315 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3587.1<br>1948.3 | 0.4651<br>106.1<br>106.1 | 20.6918 | N/A | 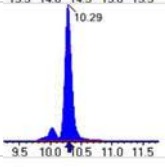 | 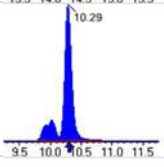 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 3731836<br>( 584.0 / 526.0 ) 2286417 | ( 10.81 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1729.9<br>773.9 | 0.6127<br>99.4<br>99.4 | 20.2888 | N/A | 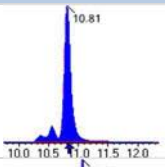 | 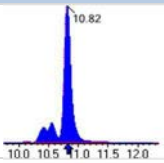 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6128623 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4554.8 | N/A<br>0.0<br>0.0 | 85.4742 | N/A | 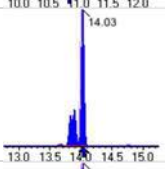 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5195417 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7894.3 | N/A<br>0.0<br>0.0 | 85.6651 | N/A | 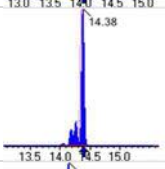 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1720793<br>( 285.0 / 185.0 ) 4583880 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2261.5<br>2416.9 | 2.6638<br>96.3<br>96.3 | 21.8580 | N/A | 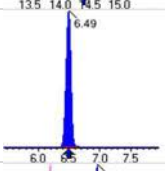 | 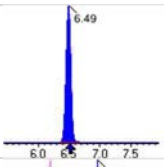 | |
| ADONA | ( 377.0 / 85.0 ) 17774690<br>( 377.0 / 251.0 ) 1760043 | ( 7.56 , 1.16 )<br>( N/A , -0.02 , -0.1) | 2163.5<br>2341.5 | 0.0990<br>97.1<br>97.1 | 19.3525 | N/A | 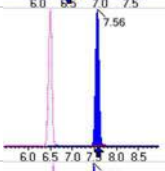 | 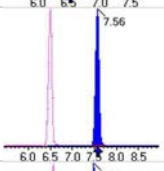 | |
| PFEESA | ( 315.0 / 135.0 ) 7875914<br>( 315.0 / 83.0 ) 4276233 | ( 6.92 , 1.15 )<br>( N/A , -0.02 , 0.0) | 3888.8<br>2934.4 | 0.5430<br>97.4<br>97.4 | 39.4834 | N/A | 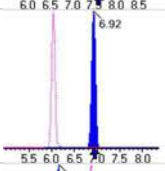 | 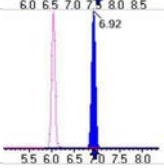 | |
| PFMPA | ( 229.0 / 85.0 ) 3131989 | ( 4.12 , 0.86 )<br>( N/A , -0.03 , 0.0) | 8390.9 | N/A<br>0.0<br>0.0 | 43.2975 | N/A | 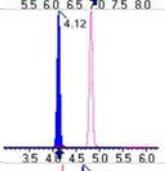 | | |
| PFMBA | ( 279.0 / 85.0 ) 8569933 | ( 5.18 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6457.3 | N/A<br>0.0<br>0.0 | 43.5896 | N/A | 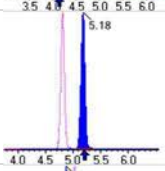 | | |
| NFDHA | ( 295.0 / 201.0 ) 4231075<br>( 295.0 / 85.0 ) 4662644 | ( 5.90 , 0.98 )<br>( N/A , -0.03 , 0.0) | 3412.8<br>4004.1 | 1.1020<br>102.1<br>102.1 | 40.8014 | N/A | 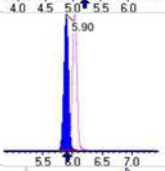 | 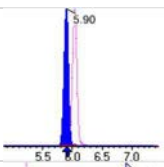 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19556832<br>( 533.0 / 353.0 ) 6135024 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.1) | 2536.0<br>3191.0 | 0.3137<br>100.3<br>100.3 | 19.7139 | N/A | 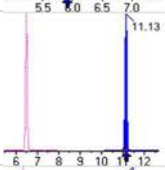 | 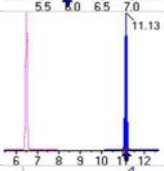 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14798782<br>( 633.0 / 453.0 ) 4988130 | ( 12.45 , 1.92 )<br>( N/A , -0.02 , 0.0) | 3882.5<br>3613.8 | 0.3371<br>101.5<br>101.5 | 19.3980 | N/A | 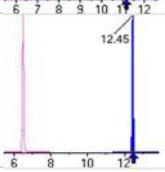 | 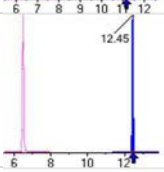 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10780581<br>( 461.0 / 381.2 ) 4171218 | ( 9.51 , 0.91 )<br>( N/A , -0.01 , 0.0) | 3973.4<br>5001.9 | 0.3869<br>97.1<br>97.1 | 20.1859 | N/A | 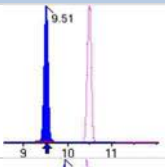 | 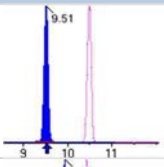 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1199816<br>( 241.0 / 117.0 ) 2599094 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 4619.1<br>5835.8 | 2.1662<br>102.8<br>102.8 | 92.5241 | N/A | 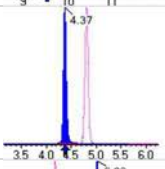 | 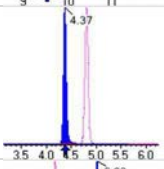 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6037188<br>( 341.0 / 217.0 ) 9245366 | ( 6.93 , 1.15 )<br>( N/A , -0.02 , 0.1) | 1108.9<br>1195.3 | 1.5314<br>100.8<br>100.8 | 78.3727 | N/A | 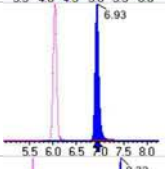 | 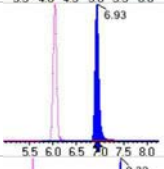 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10461798<br>( 441.0 / 337.0 ) 8986336 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 6894.1<br>7952.6 | 0.8590<br>93.7<br>93.7 | 82.7600 | N/A | 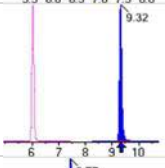 | 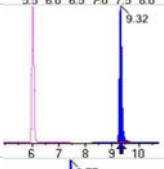 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6947700<br>( 357.2 / 243.0 ) 729149 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1649.6<br>1284.1 | 0.1049<br>95.2<br>95.2 | 20.7843 | N/A | 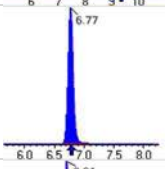 | 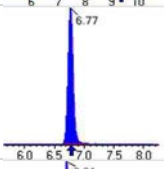 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5159787<br>( 457.2 / 343.0 ) 209477 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1021.2<br>820.8 | 0.0406<br>97.9<br>97.9 | 22.0825 | N/A | 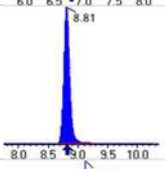 | 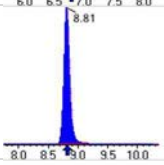 | |
| TDCA | ( 499.0 / 80.0 ) 14278125 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 61589.3 | N/A<br>0.0<br>0.0 | 22.1263 | N/A | 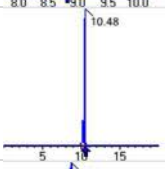 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 213815 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 908.6 | N/A | 0.8967<br>[ 1.0000 ] | 89.7%<br>{ 91.3% } | 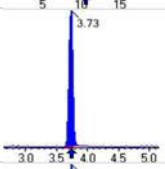 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130959 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 14399.3 | N/A | 1.0323<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 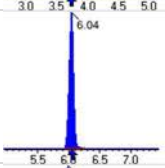 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 423217 | ( 8.18 , N/A )<br>( N/A , -0.02 , N/A ) | 3205.1 | N/A | 1.0706<br>[ 1.0000 ] | 107.1%<br>{ 111.4% } | 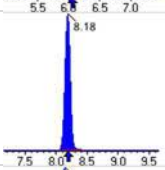 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317274 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1199.3 | N/A | 1.1156<br>[ 1.0000 ] | 111.6%<br>{ 119.2% } | 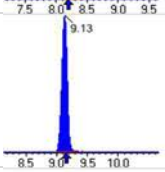 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307005 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 6206.5 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 114.6% } | 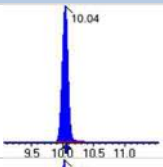 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1022285 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 4039.3 | N/A | 1.0772 [ 1.0000 ] | 107.7% { 113.6% } | 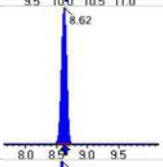 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 784809 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2679.6 | N/A | 1.0304 [ 1.0000 ] | 103.0% { 112.0% } | 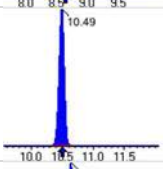 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1853173 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 31229.1 | N/A | 7.5869 [ 8.0000 ] | 94.8% { 87.6% } | 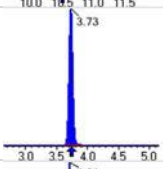 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 902569 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4796.3 | N/A | 3.6938 [ 4.0000 ] | 92.3% { 97.9% } | 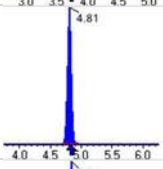 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 578230 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 6570.9 | N/A | 1.9352 [ 2.0000 ] | 96.8% { 104.5% } | 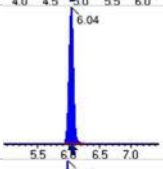 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 646447 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 5437.1 | N/A | 1.9449 [ 2.0000 ] | 97.2% { 104.4% } | 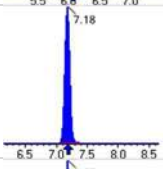 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 836012 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 2325.3 | N/A | 1.8436 [ 2.0000 ] | 92.2% { 102.0% } | 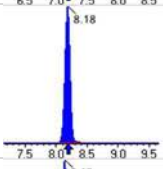 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276398 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2897.8 | N/A | 0.8885 [ 1.0000 ] | 88.8% { 105.2% } | 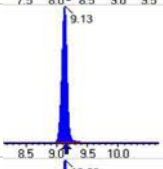 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 330952 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 920.3 | N/A | 0.9619 [ 1.0000 ] | 96.2% { 104.5% } | 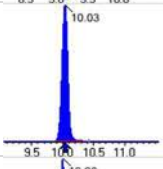 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 381172 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1015.8 | N/A | 0.9417 [ 1.0000 ] | 94.2% { 105.5% } | 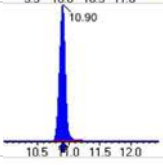 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 397037 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1215.8 | N/A | 0.9632 [ 1.0000 ] | 96.3% { 112.9% } | 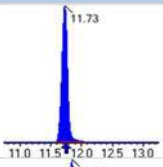 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334756 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 1243.4 | N/A | 0.9536 [ 1.0000 ] | 95.4% { 107.1% } | 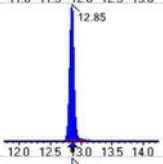 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577308 | ( 13.65 , N/A ) ( N/A , -0.02 , N/A ) | 2610.4 | N/A | 1.9264 [ 2.0000 ] | 96.3% { 111.9% } | 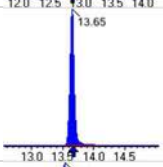 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1770797 | ( 6.33 , N/A ) ( N/A , -0.03 , N/A ) | 1012.2 | N/A | 1.9172 [ 2.0000 ] | 95.9% { 111.1% } | 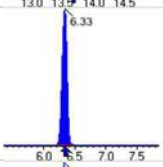 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1368143 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 5008.8 | N/A | 1.8558 [ 2.0000 ] | 92.8% { 106.8% } | 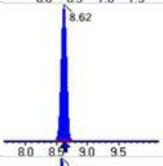 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1639289 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1716.2 | N/A | 1.9372 [ 2.0000 ] | 96.9% { 104.9% } | 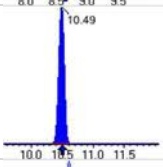 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 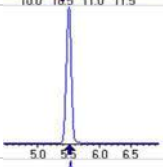 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 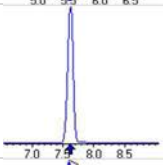 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1200464 | ( 9.40 , N/A ) ( N/A , -0.02 , N/A ) | 1165.9 | N/A | 3.2095 [ 4.0000 ] | 80.2% { 91.0% } | 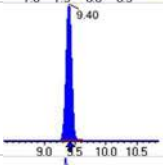 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 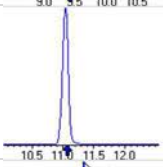 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393797 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2113.9 | N/A | 1.8587 [ 2.0000 ] | 92.9% { 104.5% } | 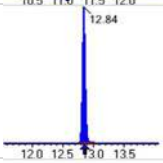 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 320251 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 1578.0 | N/A | 2.0135 [ 2.0000 ] | 100.7% { 115.4% } | 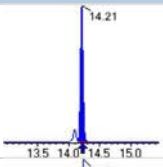  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334646 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 2115.5 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 106.1% } | 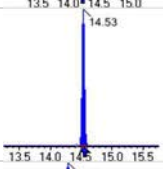  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825069 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2394.9 | N/A | 3.7894 [ 4.0000 ] | 94.7% { 98.5% } | 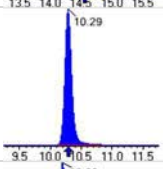  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 752141 | ( 10.80 , N/A ) ( N/A , -0.02 , N/A ) | 1637.7 | N/A | 3.7902 [ 4.0000 ] | 94.8% { 99.5% } | 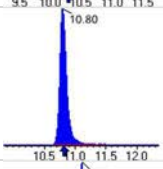  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1307327 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 2301.3 | N/A | 18.2909 [ 20.0000 ] | 91.5% { 97.2% } | 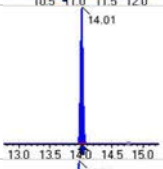  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365219 | ( 14.36 , N/A ) ( N/A , -0.02 , N/A ) | 4099.9 | N/A | 18.8191 [ 20.0000 ] | 94.1% { 103.7% } | 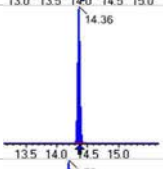  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068027 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2447.7 | N/A | 7.8467 [ 8.0000 ] | 98.1% { 109.2% } | 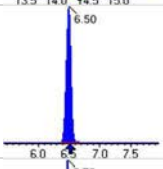  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 628842 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1472.0 | N/A | 1.8893 [ 2.0000 ] | 94.5% { 108.9% } | 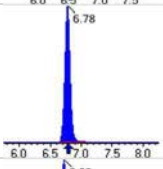  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 572954 | ( 8.82 , N/A ) ( N/A , -0.02 , N/A ) | 739.0 | N/A | 1.8909 [ 2.0000 ] | 94.5% { 106.7% } | 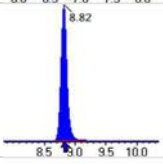  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 18974629<br>( 163.0 / 69.0 ) 488087 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 70690.9<br>13739.8 | 0.0257<br>94.7<br>94.7 | 107.2343 | N/A | 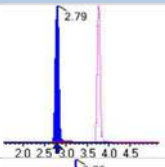 | 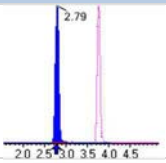 | |
| PFBA | ( 213.0 / 169.0 ) 36143718 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6528.7 | N/A<br>0.0<br>0.0 | 193.2239 | N/A | 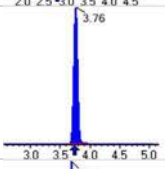 | | |
| PFPeA | ( 263.0 / 219.0 ) 21275073<br>( 263.0 / 69.0 ) 243959 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 7762.8<br>1933.6 | 0.0115<br>96.0<br>96.0 | 106.9360 | N/A | 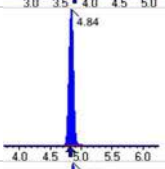 | 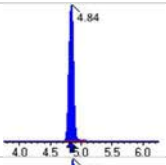 | |
| PFHxA | ( 313.0 / 269.0 ) 13819927<br>( 313.0 / 119.0 ) 1515042 | ( 6.06 , 1.00 ) ( 0.00 , N/A , -0.1) | 2643.2<br>2771.6 | 0.1096<br>94.4<br>94.4 | 54.0335 | N/A | 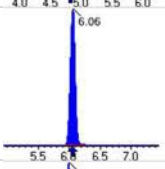 | 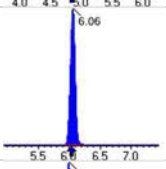 | |
| PFHpA | ( 363.0 / 319.0 ) 16363723<br>( 363.0 / 169.0 ) 4845368 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 2319.6<br>2179.9 | 0.2961<br>97.7<br>97.7 | 54.3504 | N/A | 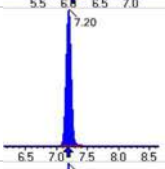 | 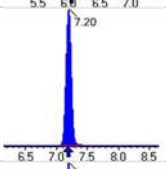 | |
| PFOA | ( 413.0 / 369.0 ) 20511400<br>( 413.0 / 169.0 ) 7143544 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 1200.9<br>1228.6 | 0.3483<br>95.3<br>95.3 | 49.7336 | N/A | 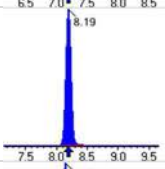 | 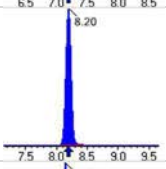 | |
| PFNA | ( 463.0 / 419.0 ) 15160237<br>( 463.0 / 169.0 ) 3759387 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1194.0<br>1234.6 | 0.2480<br>97.1<br>97.1 | 54.2235 | N/A | 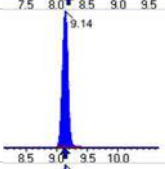 | 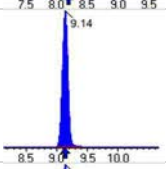 | |
| PFDA | ( 513.0 / 469.0 ) 16549921<br>( 513.0 / 169.0 ) 1960035 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 4733.0<br>3460.2 | 0.1184<br>101.1<br>101.1 | 50.8911 | N/A | 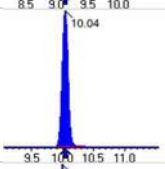 | 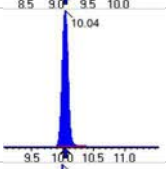 | |
| PFUnA | ( 563.0 / 519.0 ) 17529105<br>( 563.0 / 169.0 ) 2579837 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1095.8<br>945.9 | 0.1472<br>103.8<br>103.8 | 52.5694 | N/A | 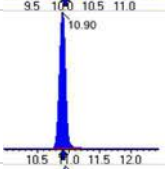 | 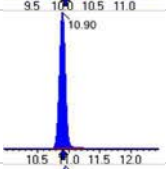 | |
| PFDoA | ( 613.0 / 569.0 ) 19672736<br>( 613.0 / 169.0 ) 2984947 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1817.3<br>1597.9 | 0.1517<br>96.0<br>96.0 | 50.3317 | N/A | 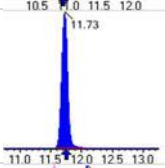 | 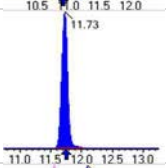 | |
| PFTrDA | ( 663.0 / 619.0 ) 18692956<br>( 663.0 / 169.0 ) 4857776 | ( 12.36 , 1.05 ) ( N/A , -0.01 , 0.0) | 1465.4<br>1395.6 | 0.2599<br>101.0<br>101.0 | 48.8903 | N/A | 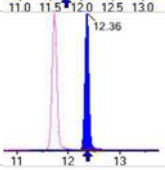 | 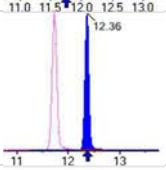 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 14422438<br>( 713.0 / 169.0 ) 3869832 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1604.9<br>1603.7 | 0.2683<br>99.4<br>99.4 | 49.6150 | N/A | 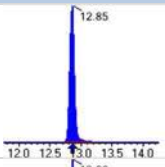 | 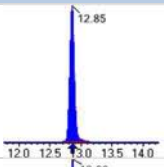 | |
| PFHxDA | ( 813.0 / 769.0 ) 12985593<br>( 813.0 / 169.0 ) 3309620 | ( 13.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3023.2<br>2100.0 | 0.2549<br>104.2<br>104.2 | 52.2078 | N/A | 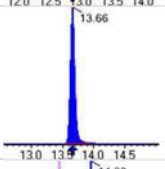 | 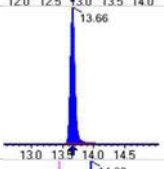 | |
| PFODA | ( 913.0 / 869.0 ) 8428626<br>( 913.0 / 169.0 ) 2699374 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2761.4<br>2328.9 | 0.3203<br>89.4<br>89.4 | 54.1669 | N/A | 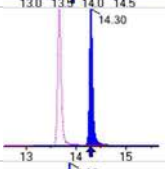 | 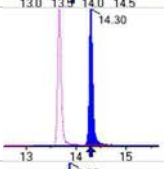 | |
| PFBS | ( 299.0 / 80.0 ) 20178278<br>( 299.0 / 99.0 ) 14705802 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4435.5<br>4419.2 | 0.7288<br>103.1<br>103.1 | 46.4917 | N/A | 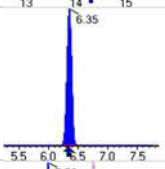 | 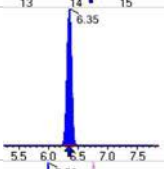 | |
| PFPeS | ( 349.0 / 80.0 ) 41380196<br>( 349.0 / 99.0 ) 14964570 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2699.2<br>2609.5 | 0.3616<br>100.6<br>100.6 | 39.6330 | N/A | 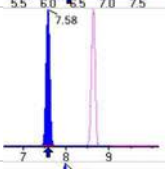 | 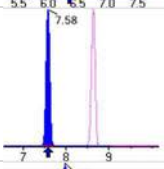 | |
| PFHxS | ( 399.0 / 80.0 ) 55723597<br>( 399.0 / 99.0 ) 18950635 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4944.5<br>6249.7 | 0.3401<br>106.8<br>106.8 | 45.9485 | N/A | 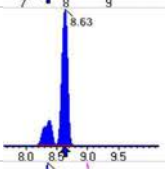 | 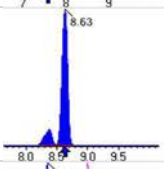 | |
| PFHpS | ( 449.0 / 80.0 ) 48346852<br>( 449.0 / 99.0 ) 13585169 | ( 9.60 , 0.92 )<br>( N/A , 0.00 , 0.0) | 2463.5<br>2621.1 | 0.2810<br>106.2<br>106.2 | 48.9228 | N/A | 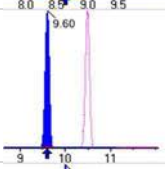 | 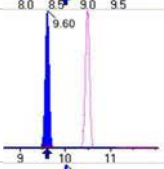 | |
| PFOS | ( 499.0 / 80.0 ) 46166280<br>( 499.0 / 99.0 ) 10682806 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , -0.3) | 3771.6<br>6407.9 | 0.2314<br>99.0<br>99.0 | 48.4641 | N/A | 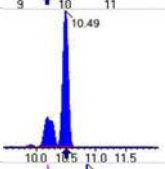 | 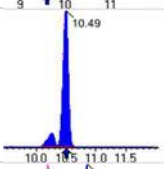 | |
| PFNS | ( 549.0 / 80.0 ) 41110649<br>( 549.0 / 99.0 ) 11520445 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , -0.1) | 2974.0<br>3168.7 | 0.2802<br>102.8<br>102.8 | 46.0934 | N/A | 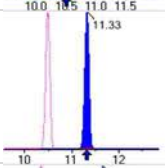 | 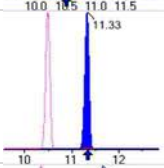 | |
| PFDS | ( 599.0 / 80.0 ) 45339968<br>( 599.0 / 99.0 ) 12673501 | ( 12.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 3051.7<br>3599.9 | 0.2795<br>102.8<br>102.8 | 41.6321 | N/A | 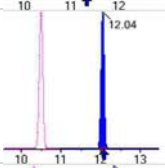 | 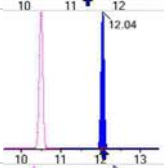 | |
| PFDoS | ( 699.0 / 80.0 ) 39685043<br>( 699.0 / 99.0 ) 9961357 | ( 12.96 , 1.24 )<br>( N/A , -0.01 , 0.0) | 3541.3<br>4746.4 | 0.2510<br>107.5<br>107.5 | 41.3351 | N/A | 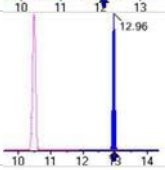 | 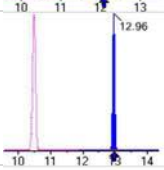 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 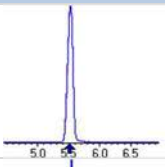 | 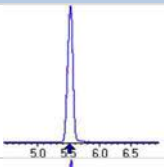 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 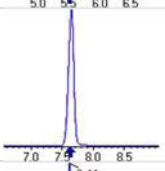 | 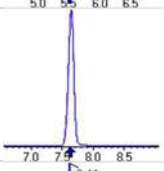 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>41238569<br>( 527.0 / 81.0 )<br>42183724 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1165.4<br>1290.5 | 1.0229<br>94.0<br>94.0 | 155.9708 | N/A | 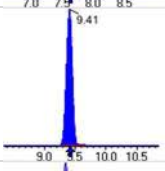 | 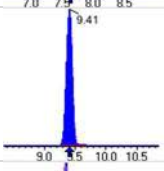 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 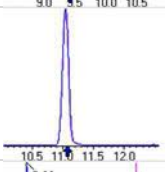 | 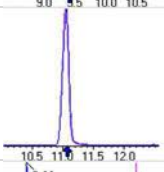 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>38451265<br>( 297.9 / 278.0 )<br>57954 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , 0.0) | 1670.7<br>874.9 | 0.0015<br>110.3<br>110.3 | 45.8105 | N/A | 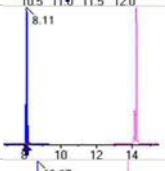 | 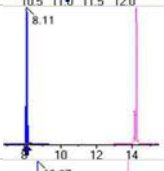 | |
| PFHxSA | ( 397.9 / 78.0 )<br>47457548<br>( 397.9 / 378.0 )<br>219987 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1106.1<br>1093.7 | 0.0046<br>113.5<br>113.5 | 48.8276 | N/A | 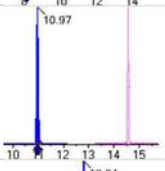 | 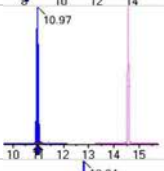 | |
| PFOSA | ( 498.0 / 78.0 )<br>33121164<br>( 498.0 / 478.0 )<br>519111 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2063.1<br>1533.3 | 0.0157<br>111.7<br>111.7 | 48.4514 | N/A | 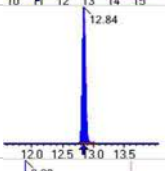 | 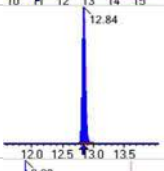 | |
| TFSI | ( 279.7 / 147.0 )<br>89551922<br>( 279.7 / 211.0 )<br>9318714 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.0) | 61.5<br>64.2 | 0.1041<br>123.9<br>123.9 | 49.7502 | N/A | 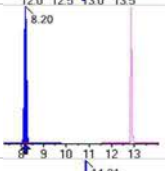 | 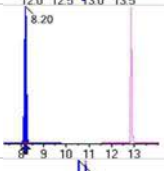 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>31158072<br>( 512.0 / 169.0 )<br>23786332 | ( 14.21 , 1.00 )<br>( -0.01 , N/A , 2.6) | 3423.3<br>1507.4 | 0.7634<br>102.0<br>102.0 | 192.6744 | N/A | 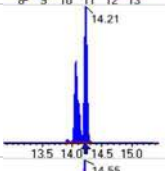 | 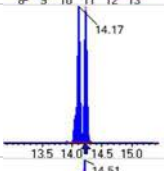 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>36572268<br>( 526.0 / 169.0 )<br>45187617 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4357.1<br>3467.4 | 1.2356<br>100.1<br>100.1 | 206.4874 | N/A | 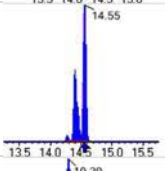 | 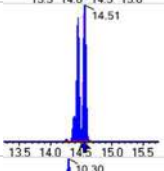 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>9584003<br>( 570.0 / 483.0 )<br>4353591 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3124.3<br>1697.0 | 0.4543<br>103.6<br>103.6 | 48.7309 | N/A | 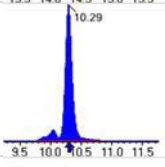 | 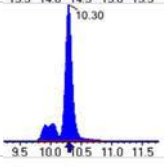 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8573256<br>( 584.0 / 526.0 ) 5089065 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1535.4<br>691.5 | 0.5936<br>96.3<br>96.3 | 52.6411 | N/A | 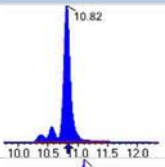 | 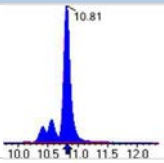 | |
| NMeFOSE | ( 616.0 / 59.0 ) 15619595 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 6843.3 | N/A<br>0.0<br>0.0 | 212.8361 | N/A | 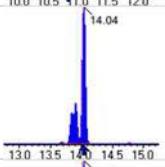 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 12847687 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 8204.0 | N/A<br>0.0<br>0.0 | 208.1601 | N/A | 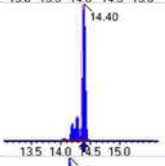 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4124497<br>( 285.0 / 185.0 ) 11215111 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2319.1<br>2629.5 | 2.7191<br>98.3<br>98.3 | 53.1094 | N/A | 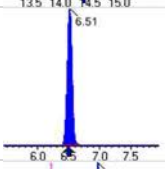 | 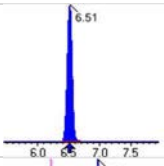 | |
| ADONA | ( 377.0 / 85.0 ) 37268440<br>( 377.0 / 251.0 ) 3924149 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1824.1<br>1716.0 | 0.1053<br>103.3<br>103.3 | 41.1334 | N/A | 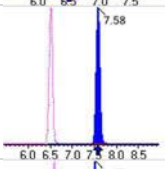 | 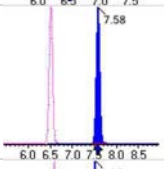 | |
| PFEESA | ( 315.0 / 135.0 ) 17270325<br>( 315.0 / 83.0 ) 9569584 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4689.4<br>2913.5 | 0.5541<br>99.4<br>99.4 | 94.0283 | N/A | 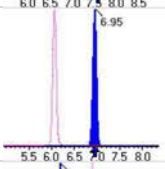 | 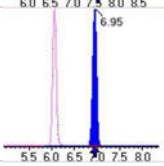 | |
| PFMPA | ( 229.0 / 85.0 ) 7031121 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 11838.0 | N/A<br>0.0<br>0.0 | 111.3690 | N/A | 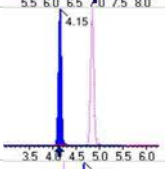 | | |
| PFMBA | ( 279.0 / 85.0 ) 19312765 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 5832.4 | N/A<br>0.0<br>0.0 | 112.5505 | N/A | 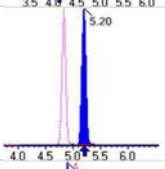 | | |
| NFDHA | ( 295.0 / 201.0 ) 10109374<br>( 295.0 / 85.0 ) 10024417 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.2) | 2773.1<br>3906.7 | 0.9916<br>91.9<br>91.9 | 105.8748 | N/A | 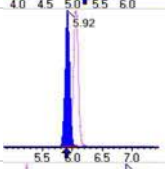 | 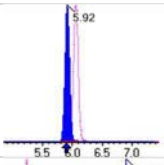 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 46137015<br>( 533.0 / 353.0 ) 15129295 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.0) | 2626.2<br>3001.4 | 0.3279<br>104.8<br>104.8 | 47.1457 | N/A | 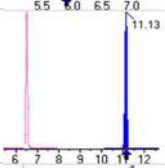 | 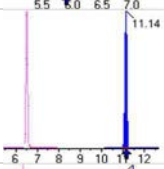 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 34117971<br>( 633.0 / 453.0 ) 11179213 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 4219.2<br>3394.1 | 0.3277<br>98.7<br>98.7 | 45.3348 | N/A | 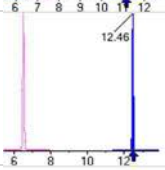 | 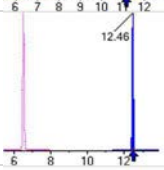 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 28343319<br>( 461.0 / 381.2 ) 10851018 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4228.4<br>5758.6 | 0.3828<br>96.1<br>96.1 | 52.7417 | N/A | 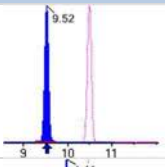 | 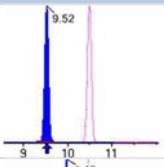 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2927372<br>( 241.0 / 117.0 ) 6626809 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4507.1<br>8408.0 | 2.2637<br>107.4<br>107.4 | 258.6519 | N/A | 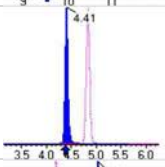 | 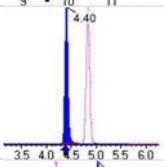 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14119793<br>( 341.0 / 217.0 ) 20897347 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1091.2<br>1008.4 | 1.4800<br>97.4<br>97.4 | 199.0686 | N/A | 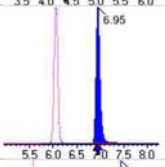 | 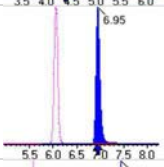 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 25389555<br>( 441.0 / 337.0 ) 22326814 | ( 9.33 , 1.54 )<br>( N/A , -0.01 , 0.1) | 7581.4<br>11370.4 | 0.8794<br>95.9<br>95.9 | 218.1292 | N/A | 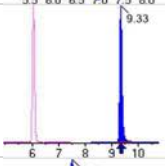 | 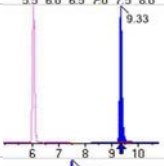 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 16158195<br>( 357.2 / 243.0 ) 1678319 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1736.3<br>1407.1 | 0.1039<br>94.2<br>94.2 | 50.4495 | N/A | 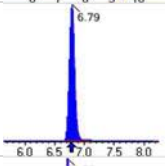 | 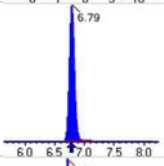 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 12612139<br>( 457.2 / 343.0 ) 508517 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 892.6<br>781.7 | 0.0403<br>97.2<br>97.2 | 53.8903 | N/A | 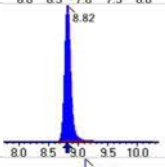 | 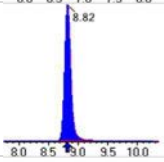 | |
| TDCA | ( 499.0 / 80.0 ) 34553361 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 58261.0 | N/A<br>0.0<br>0.0 | 53.2138 | N/A | 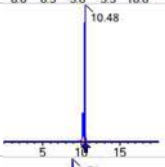 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 167285 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 708.8 | N/A | 0.7016<br>[ 1.0000 ] | 70.2%<br>{ 71.4% } | 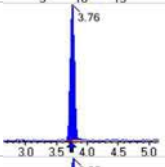 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130924 | ( 6.06 , N/A )<br>( N/A , 0.00 , N/A ) | 6147.8 | N/A | 1.0321<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 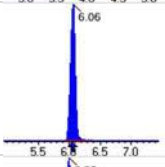 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 365760 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2442.2 | N/A | 0.9252<br>[ 1.0000 ] | 92.5%<br>{ 96.3% } | 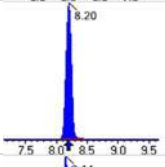 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282978 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 970.5 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 106.3% } | 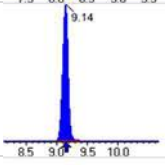 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294951 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 3067.1 | N/A | 1.0100 [ 1.0000 ] | 101.0% { 110.1% } | 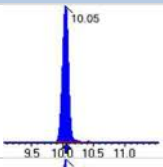 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 936593 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3290.6 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 104.0% } | 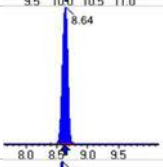 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785932 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2145.3 | N/A | 1.0319 [ 1.0000 ] | 103.2% { 112.2% } | 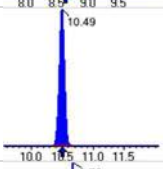 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1501211 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 26047.2 | N/A | 7.8555 [ 8.0000 ] | 98.2% { 71.0% } | 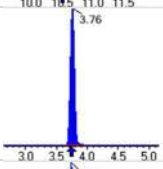 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 787740 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 4786.2 | N/A | 3.2247 [ 4.0000 ] | 80.6% { 85.5% } | 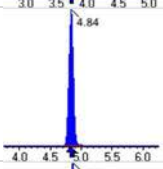 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 532422 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6348.1 | N/A | 1.7823 [ 2.0000 ] | 89.1% { 96.2% } | 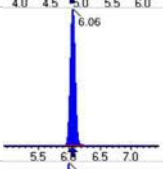 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613632 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 3886.1 | N/A | 1.8466 [ 2.0000 ] | 92.3% { 99.1% } | 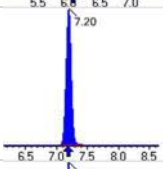 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 772186 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2358.8 | N/A | 1.9704 [ 2.0000 ] | 98.5% { 94.2% } | 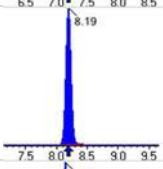 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 278181 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2465.4 | N/A | 1.0026 [ 1.0000 ] | 100.3% { 105.9% } | 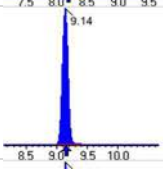 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318276 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1070.1 | N/A | 0.9629 [ 1.0000 ] | 96.3% { 100.5% } | 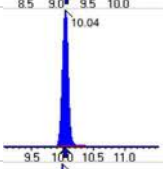 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 360507 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 905.9 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 99.8% } | 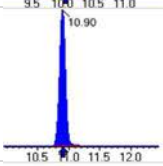 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388515 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1338.0 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 110.5% } | 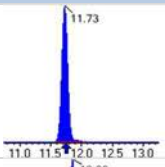 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310379 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1125.7 | N/A | 0.9203 [ 1.0000 ] | 92.0% { 99.3% } | 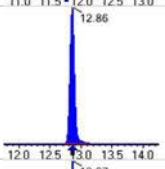 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521541 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 1978.3 | N/A | 1.8114 [ 2.0000 ] | 90.6% { 101.1% } | 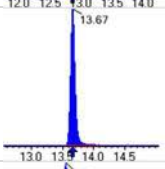 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1671847 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 1059.8 | N/A | 1.9757 [ 2.0000 ] | 98.8% { 104.9% } | 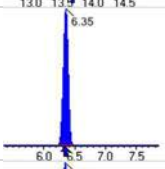 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1364325 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3793.2 | N/A | 2.0199 [ 2.0000 ] | 101.0% { 106.5% } | 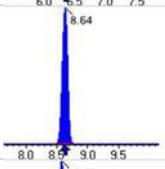 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1649524 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1301.1 | N/A | 1.9466 [ 2.0000 ] | 97.3% { 105.6% } | 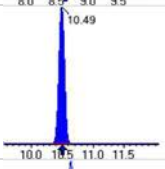 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 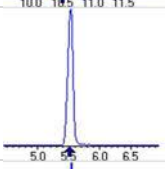 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 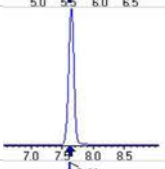 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1113619 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1147.4 | N/A | 3.2497 [ 4.0000 ] | 81.2% { 84.4% } | 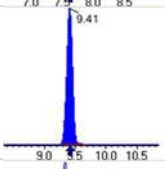 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 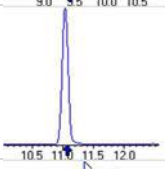 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1367165 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1785.0 | N/A | 1.8206 [ 2.0000 ] | 91.0% { 102.6% } | 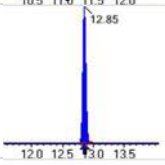 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 325737 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1453.6 | N/A | 2.0451 [ 2.0000 ] | 102.3% { 117.4% } | 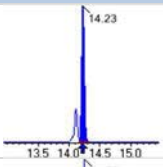  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316296 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2128.6 | N/A | 1.8518 [ 2.0000 ] | 92.6% { 100.3% } | 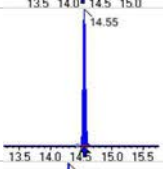  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 824817 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 1731.0 | N/A | 3.7828 [ 4.0000 ] | 94.6% { 98.4% } | 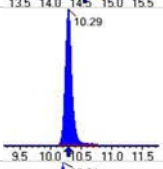  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 665968 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 1789.7 | N/A | 3.3512 [ 4.0000 ] | 83.8% { 88.1% } | 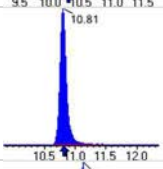  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1338076 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2515.8 | N/A | 18.6944 [ 20.0000 ] | 93.5% { 99.4% } | 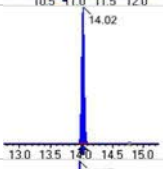  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1389356 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4052.7 | N/A | 19.1244 [ 20.0000 ] | 95.6% { 105.5% } | 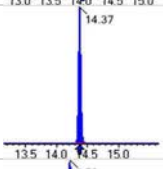  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1053570 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2170.3 | N/A | 7.7425 [ 8.0000 ] | 96.8% { 107.7% } | 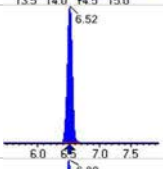  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 602520 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1431.9 | N/A | 1.8842 [ 2.0000 ] | 94.2% { 104.4% } | 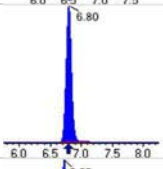  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 573873 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 871.6 | N/A | 1.9713 [ 2.0000 ] | 98.6% { 106.8% } | 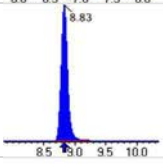  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0083L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.85L | -3.7L | 30.00L |
| PFPeAL | 4.00L | 3.72L | -6.9L | 30.00L |
| PFHxAL | 4.00L | 3.79L | -5.4L | 30.00L |
| PFHpAL | 4.00L | 3.66L | -8.6L | 30.00L |
| PFOAL | 4.00L | 3.17L | -20.8L | 30.00L |
| PFNAL | 4.00L | 3.83L | -4.3L | 30.00L |
| PFDAL | 4.00L | 3.82L | -4.6L | 30.00L |
| PFUnAL | 4.00L | 3.51L | -12.3L | 30.00L |
| PFDoAL | 4.00L | 3.25L | -18.9L | 30.00L |
| PFTrDAL | 4.00L | 3.37L | -15.8L | 30.00L |
| PFTeDAL | 4.00L | 4.07L | 1.9L | 30.00L |
| PFHxDAL | 4.00L | 3.19L | -20.4L | 30.00L |
| PFODAL | 4.00L | 3.15L | -21.2L | 30.00L |
| PFBSL | 4.00L | 3.87L | -3.1L | 30.00L |
| PFPeSL | 4.00L | 3.84L | -3.9L | 30.00L |
| PFHxSL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFHpSL | 4.00L | 3.80L | -5.0L | 30.00L |
| PFOSL | 4.00L | 3.54L | -11.5L | 30.00L |
| PFNSL | 4.00L | 3.70L | -7.5L | 30.00L |
| PFDSL | 4.00L | 4.06L | 1.5L | 30.00L |
| PFDoSL | 4.00L | 3.98L | -0.5L | 30.00L |
| 4:2FTSL | 4.00L | 3.85L | -3.9L | 30.00L |
| 6:2FTSL | 4.00L | 3.90L | -2.6L | 30.00L |
| 8:2FTSL | 4.00L | 3.75L | -6.2L | 30.00L |
| 10:2FTSL | 3.86L | 4.06L | 5.2L | 30.00L |
| PFOSAL | 4.00L | 3.98L | -0.5L | 30.00L |
| NMeFOSAL | 4.00L | 3.32L | -16.9L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0083L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.65L | -8.7L | 30.00L |
| NMeFOSAAL | 4.00L | 3.85L | -3.7L | 30.00L |
| NEtFOSAAL | 4.00L | 3.81L | -4.9L | 30.00L |
| NMeFOSEL | 4.00L | 3.94L | -1.5L | 30.00L |
| NEtFOSEL | 4.00L | 4.65L | 16.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.35L | -16.4L | 30.00L |
| ADONAL | 4.00L | 3.60L | -10.1L | 30.00L |
| PFEESAL | 4.00L | 3.38L | -15.4L | 30.00L |
| PFMPAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFMBAL | 4.00L | 3.39L | -15.2L | 30.00L |
| NFDHAL | 4.00L | 3.94L | -1.4L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.47L | -13.2L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 3.72L | -7.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.46L | -13.5L | 30.00L |
| 5:3FTCAL | 4.00L | 3.89L | -2.8L | 30.00L |
| 7:3FTCAL | 4.00L | 3.92L | -2.1L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.75L | 9.4L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.43L | 10.7L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.12L | 6.2L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.25L | 12.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.10L | 10.3L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.13L | 12.7L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.14L | 14.1L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.21L | 20.6L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.21L | 20.7L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.52L | 26.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.01L | 0.6L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.14L | 6.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0083L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2411010L

**Laboratory ID:C**SD00912-SCV1L

**Sequence:** SD00912L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.17L | 8.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.57L | 14.3L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.13L | 3.4L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.62L | 15.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 8.69L | 8.6L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.14L | 6.9L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.23L | 11.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.32L | 15.9L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.52L | 13.0L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.62L | 15.4L | 30.00L |
| D7-NMEFOSEL | 20.0L | 23.4L | 16.8L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.6L | 13.2L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 9.31L | 16.4L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 960012<br>( 163.0 / 69.0 ) 24140 | ( 2.82 , 0.74 ) ( N/A , 0.01 , 0.0) | 6179.9<br>1318.1 | 0.0251<br>100.3<br>100.3 | 3.3855 | N/A | 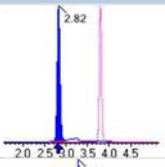 | 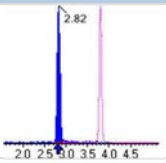 | |
| PFBA | ( 213.0 / 169.0 ) 1168041 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 2371.2 | N/A<br>0.0<br>0.0 | 3.8520 | N/A | 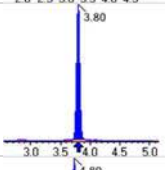 | | |
| PFPeA | ( 263.0 / 219.0 ) 980882<br>( 263.0 / 69.0 ) 12973 | ( 4.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 3446.6<br>234.0 | 0.0132<br>120.4<br>120.4 | 3.7234 | N/A | 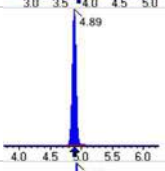 | 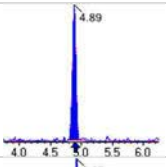 | |
| PFHxA | ( 313.0 / 269.0 ) 1090317<br>( 313.0 / 119.0 ) 126098 | ( 6.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 2560.9<br>1671.2 | 0.1157<br>104.1<br>104.1 | 3.7855 | N/A | 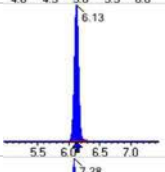 | 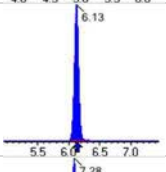 | |
| PFHpA | ( 363.0 / 319.0 ) 1184297<br>( 363.0 / 169.0 ) 360697 | ( 7.28 , 1.00 ) ( 0.00 , N/A , -0.1) | 1966.5<br>1170.9 | 0.3046<br>97.7<br>97.7 | 3.6554 | N/A | 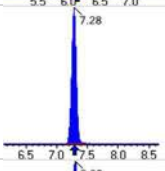 | 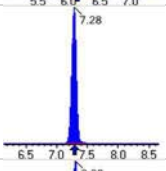 | |
| PFOA | ( 413.0 / 369.0 ) 1504917<br>( 413.0 / 169.0 ) 534568 | ( 8.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 848.3<br>779.3 | 0.3552<br>98.2<br>98.2 | 3.1674 | N/A | 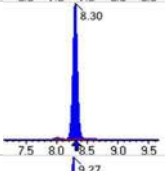 | 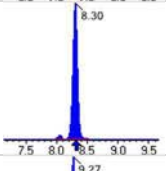 | MI5 DG 2024-03-13 |
| PFNA | ( 463.0 / 419.0 ) 1155444<br>( 463.0 / 169.0 ) 302002 | ( 9.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 1235.3<br>970.2 | 0.2614<br>99.6<br>99.6 | 3.8271 | N/A | 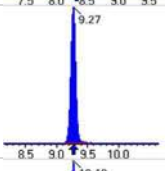 | 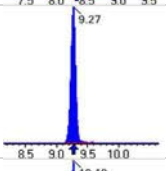 | |
| PFDA | ( 513.0 / 469.0 ) 1333493<br>( 513.0 / 169.0 ) 150349 | ( 10.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 2839.1<br>4132.0 | 0.1127<br>96.1<br>96.1 | 3.8164 | N/A | 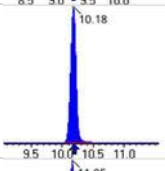 | 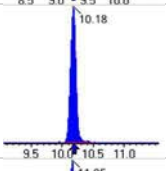 | |
| PFUnA | ( 563.0 / 519.0 ) 1415133<br>( 563.0 / 169.0 ) 203765 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.0) | 954.4<br>542.2 | 0.1440<br>97.2<br>97.2 | 3.5077 | N/A | 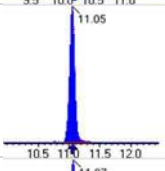 | 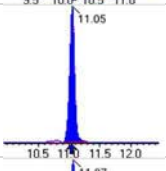 | |
| PFDoA | ( 613.0 / 569.0 ) 1522339<br>( 613.0 / 169.0 ) 223220 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 1216.3<br>726.0 | 0.1466<br>92.7<br>92.7 | 3.2452 | N/A | 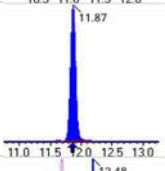 | 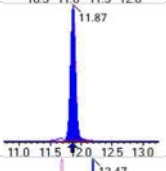 | |
| PFTrDA | ( 663.0 / 619.0 ) 1519440<br>( 663.0 / 169.0 ) 399428 | ( 12.48 , 1.05 ) ( N/A , 0.00 , 0.1) | 1082.7<br>705.9 | 0.2629<br>97.5<br>97.5 | 3.3689 | N/A | 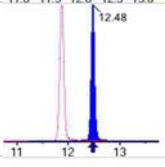 | 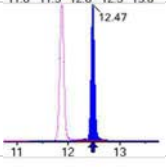 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1547325<br>( 713.0 / 169.0 ) 369471 | ( 12.96 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1598.8<br>774.0 | 0.2388<br>91.8<br>91.8 | 4.0743 | N/A | 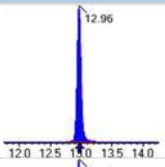 | 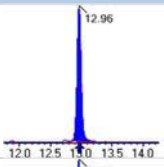 | |
| PFHxDA | ( 813.0 / 769.0 ) 1091864<br>( 813.0 / 169.0 ) 257584 | ( 13.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1694.2<br>868.3 | 0.2359<br>108.7<br>108.7 | 3.1855 | N/A | 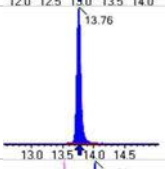 | 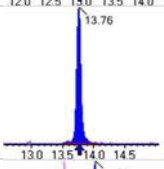 | |
| PFODA | ( 913.0 / 869.0 ) 725581<br>( 913.0 / 169.0 ) 246290 | ( 14.38 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1453.6<br>924.2 | 0.3394<br>88.9<br>88.9 | 3.1507 | N/A | 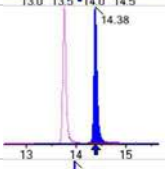 | 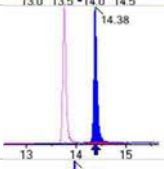 | |
| PFBS | ( 299.0 / 80.0 ) 1958171<br>( 299.0 / 99.0 ) 1431313 | ( 6.44 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4821.8<br>3013.6 | 0.7309<br>102.8<br>102.8 | 3.8746 | N/A | 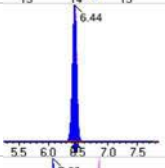 | 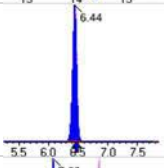 | |
| PFPeS | ( 349.0 / 80.0 ) 4744093<br>( 349.0 / 99.0 ) 1609699 | ( 7.69 , 0.88 )<br>( N/A , -0.01 , 0.0) | 3035.0<br>3228.8 | 0.3393<br>99.8<br>99.8 | 3.8426 | N/A | 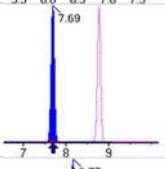 | 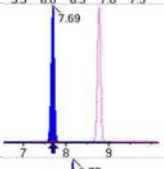 | |
| PFHxS | ( 399.0 / 80.0 ) 5120898<br>( 399.0 / 99.0 ) 1702580 | ( 8.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3958.3<br>5730.4 | 0.3325<br>106.3<br>106.3 | 3.7298 | N/A | 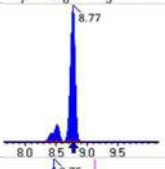 | 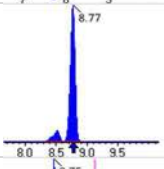 | |
| PFHpS | ( 449.0 / 80.0 ) 4144968<br>( 449.0 / 99.0 ) 1137014 | ( 9.75 , 0.92 )<br>( N/A , 0.00 , 0.0) | 1404.8<br>2127.7 | 0.2743<br>102.7<br>102.7 | 3.7999 | N/A | 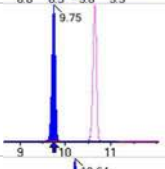 | 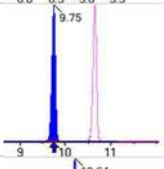 | |
| PFOS | ( 499.0 / 80.0 ) 3884446<br>( 499.0 / 99.0 ) 846912 | ( 10.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2363.0<br>19909.8 | 0.2180<br>92.2<br>92.2 | 3.5394 | N/A | 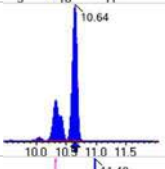 | 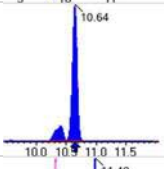 | |
| PFNS | ( 549.0 / 80.0 ) 3958884<br>( 549.0 / 99.0 ) 1101392 | ( 11.48 , 1.08 )<br>( N/A , 0.00 , -0.1) | 2811.4<br>2589.0 | 0.2782<br>104.7<br>104.7 | 3.6990 | N/A | 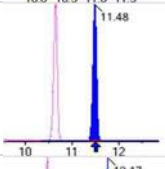 | 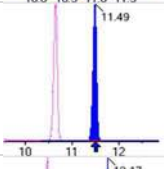 | |
| PFDS | ( 599.0 / 80.0 ) 5177392<br>( 599.0 / 99.0 ) 1344953 | ( 12.17 , 1.14 )<br>( N/A , 0.00 , 0.0) | 3992.8<br>3560.7 | 0.2598<br>103.6<br>103.6 | 4.0586 | N/A | 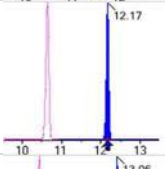 | 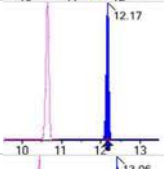 | |
| PFDoS | ( 699.0 / 80.0 ) 4338419<br>( 699.0 / 99.0 ) 1038626 | ( 13.06 , 1.23 )<br>( N/A , 0.00 , 0.0) | 4248.8<br>2853.2 | 0.2394<br>103.8<br>103.8 | 3.9801 | N/A | 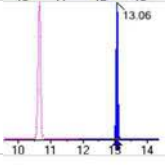 | 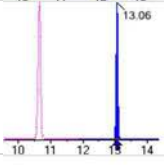 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1022473<br>( 327.0 / 81.0 ) 867299 | ( 5.58 , 1.00 ) ( 0.00 , N/A , 0.1) | 4383.6<br>2501.8 | 0.8482<br>96.8<br>96.8 | 3.8457 | N/A | 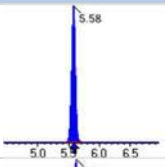 | 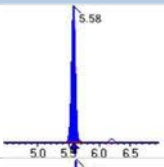 | |
| 6:2FTS | ( 427.0 / 407.0 ) 959749<br>( 427.0 / 81.0 ) 1050251 | ( 7.71 , 1.00 ) ( 0.00 , N/A , 0.2) | 3454.5<br>3314.6 | 1.0943<br>86.1<br>86.1 | 3.8974 | N/A | 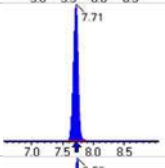 | 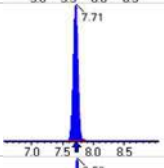 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1148897<br>( 527.0 / 81.0 ) 1137689 | ( 9.53 , 1.00 ) ( 0.00 , N/A , 0.2) | 1249.3<br>1342.3 | 0.9902<br>104.4<br>104.4 | 3.7537 | N/A | 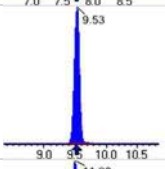 | 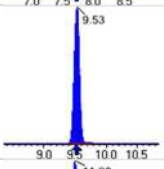 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1112399<br>( 627.0 / 81.0 ) 1536261 | ( 11.20 , 1.00 ) ( 0.01 , N/A , 0.0) | 1195.1<br>998.5 | 1.3810<br>102.2<br>102.2 | 4.0591 | N/A | 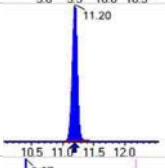 | 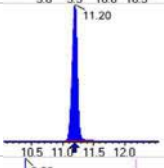 | |
| PFBSA | ( 297.9 / 78.0 ) 3794956<br>( 297.9 / 278.0 ) 6394 | ( 8.07 , 0.57 ) ( N/A , 0.01 , 0.2) | 1263.9<br>83.5 | 0.0017<br>120.0<br>120.0 | 4.2276 | N/A | 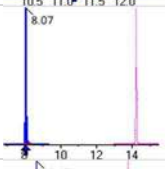 | 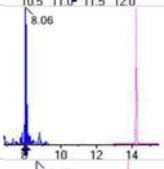 | |
| PFHxSA | ( 397.9 / 78.0 ) 4290810<br>( 397.9 / 378.0 ) 22446 | ( 10.95 , 0.75 ) ( N/A , 0.01 , -0.2) | 682.1<br>275.2 | 0.0052<br>137.4<br>137.4 | 3.5831 | N/A | 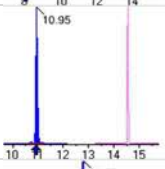 | 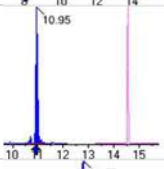 | MI4 ABK 3/13/24 |
| PFOSA | ( 498.0 / 78.0 ) 3945625<br>( 498.0 / 478.0 ) 54682 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.1) | 921.3<br>455.9 | 0.0139<br>96.0<br>96.0 | 3.9818 | N/A | 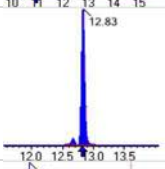 | 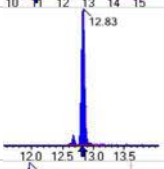 | MI4 ABK 3/13/24 |
| TFSI | ( 279.7 / 147.0 ) 7895986<br>( 279.7 / 211.0 ) 704864 | ( 8.36 , 0.65 ) ( N/A , -0.01 , 0.2) | 57.4<br>54.9 | 0.0893<br>108.2<br>108.2 | 3.7482 | N/A | 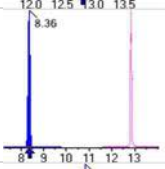 | 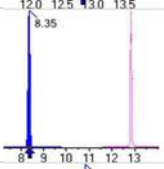 | |
| NMeFOSA | ( 512.0 / 219.0 ) 653625<br>( 512.0 / 169.0 ) 418140 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 0.1) | 5759.3<br>2386.7 | 0.6397<br>87.0<br>87.0 | 3.3241 | N/A | 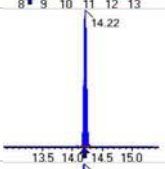 | 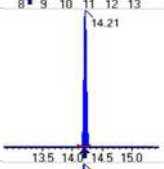 | |
| NEtFOSA | ( 526.0 / 219.0 ) 935275<br>( 526.0 / 169.0 ) 1006483 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 0.0) | 6956.6<br>5886.3 | 1.0761<br>85.0<br>85.0 | 3.6505 | N/A | 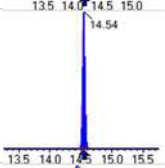 | 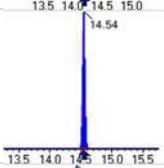 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 920311<br>( 570.0 / 483.0 ) 421673 | ( 10.42 , 1.00 ) ( 0.00 , N/A , -0.1) | 6919.9<br>1886.4 | 0.4582<br>105.8<br>105.8 | 3.8528 | N/A | 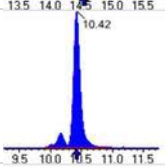 | 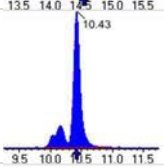 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (10)
Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 902817<br>( 584.0 / 526.0 ) 543021 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.1) | 1977.4<br>685.9 | 0.6015<br>97.1<br>97.1 | 3.8059 | N/A | 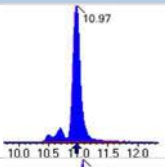 | 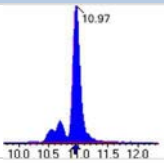 | |
| NMeFOSE | ( 616.0 / 59.0 ) 426612 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 3035.5 | N/A<br>0.0<br>0.0 | 3.9383 | N/A | 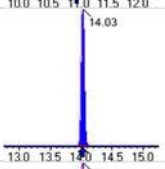 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 462041 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 5371.3 | N/A<br>0.0<br>0.0 | 4.6537 | N/A | 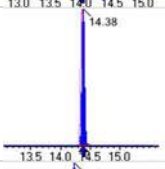 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 265795<br>( 285.0 / 185.0 ) 867547 | ( 6.59 , 1.00 ) ( 0.00 , N/A , 0.0) | 1555.4<br>1546.6 | 3.2640<br>104.7<br>104.7 | 3.3451 | N/A | 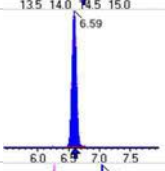 | 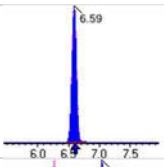 | |
| ADONA | ( 377.0 / 85.0 ) 3640673<br>( 377.0 / 251.0 ) 374734 | ( 7.67 , 1.16 ) ( N/A , 0.00 , 0.2) | 1627.1<br>1227.3 | 0.1029<br>96.5<br>96.5 | 3.5978 | N/A | 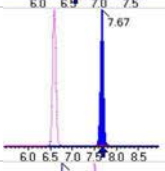 | 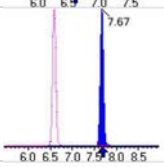 | |
| PFMPA | ( 229.0 / 85.0 ) 283218 | ( 4.19 , 0.86 ) ( N/A , -0.01 , 0.0) | 4172.7 | N/A<br>0.0<br>0.0 | 3.3957 | N/A | 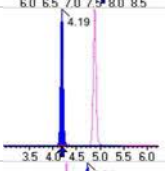 | | |
| PFMBA | ( 279.0 / 85.0 ) 748985 | ( 5.26 , 1.08 ) ( N/A , -0.01 , 0.0) | 4515.5 | N/A<br>0.0<br>0.0 | 3.3928 | N/A | 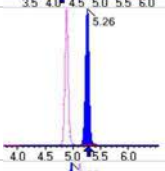 | | |
| NFDHA | ( 295.0 / 201.0 ) 394803<br>( 295.0 / 85.0 ) 413378 | ( 5.98 , 0.98 ) ( N/A , -0.01 , -0.2) | 2334.3<br>2269.5 | 1.0470<br>96.8<br>96.8 | 3.9431 | N/A | 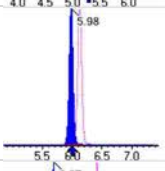 | 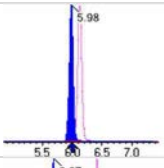 | |
| PFECHS | ( 461.0 / 98.9 ) 2241130<br>( 461.0 / 381.2 ) 851667 | ( 9.67 , 0.91 ) ( N/A , 0.00 , 0.1) | 2238.1<br>2255.1 | 0.3800<br>97.3<br>97.3 | 3.6211 | N/A | 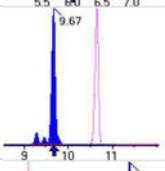 | 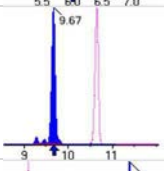 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4338051<br>( 533.0 / 353.0 ) 1382815 | ( 11.30 , 1.71 ) ( N/A , 0.00 , 0.0) | 3566.4<br>2412.4 | 0.3188<br>99.2<br>99.2 | 3.4739 | N/A | 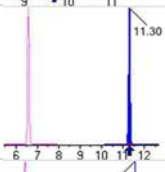 | 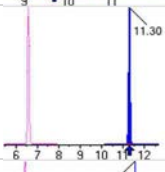 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3635672<br>( 633.0 / 453.0 ) 1218785 | ( 12.57 , 1.91 ) ( N/A , 0.00 , 0.0) | 3125.5<br>2891.4 | 0.3352<br>102.6<br>102.6 | 3.7170 | N/A | 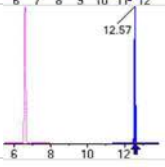 | 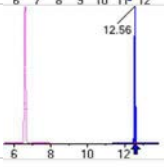 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (10)
Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 732928<br>( 315.0 / 83.0 ) 430320 | ( 7.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 2694.6<br>1447.1 | 0.5871<br>102.5<br>102.5 | 3.3833 | N/A | 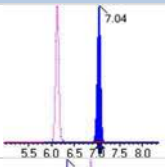 | 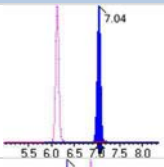 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 44296<br>( 241.0 / 117.0 ) 106197 | ( 4.42 , 0.90 )<br>( N/A , 0.00 , 0.1) | 675.9<br>443.8 | 2.3974<br>108.1<br>108.1 | 3.4612 | N/A | 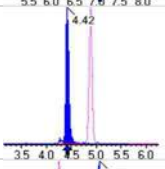 | 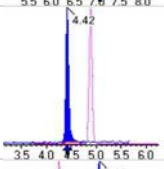 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 271454<br>( 341.0 / 217.0 ) 392115 | ( 6.99 , 1.14 )<br>( N/A , 0.00 , 0.1) | 838.6<br>769.5 | 1.4445<br>96.5<br>96.5 | 3.8886 | N/A | 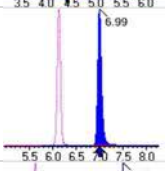 | 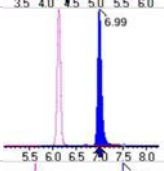 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 402129<br>( 441.0 / 337.0 ) 338035 | ( 9.42 , 1.54 )<br>( N/A , 0.01 , 0.1) | 2390.3<br>3196.5 | 0.8406<br>94.4<br>94.4 | 3.9159 | N/A | 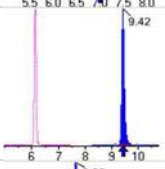 | 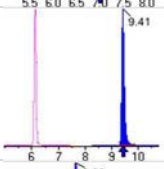 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1154034<br>( 357.2 / 243.0 ) 118377 | ( 6.86 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1241.4<br>729.6 | 0.1026<br>97.2<br>97.2 | 3.7351 | N/A | 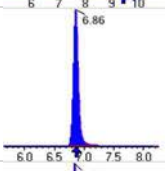 | 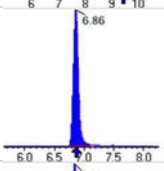 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 884567<br>( 457.2 / 343.0 ) 34980 | ( 8.94 , 1.00 )<br>( -0.01 , N/A , -0.2) | 659.7<br>430.9 | 0.0395<br>101.1<br>101.1 | 3.9899 | N/A | 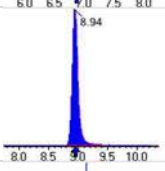 | 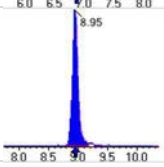 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 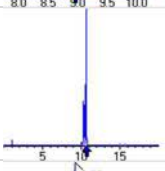 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 265638 | ( 3.80 , N/A )<br>( N/A , 0.00 , N/A ) | 1102.0 | N/A | 0.8818<br>[ 1.0000 ] | 88.2%<br>{ 87.6% } | 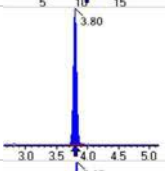 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130299 | ( 6.13 , N/A )<br>( N/A , -0.01 , N/A ) | 5646.2 | N/A | 0.8474<br>[ 1.0000 ] | 84.7%<br>{ 79.0% } | 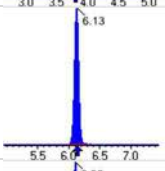 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 405261 | ( 8.30 , N/A )<br>( N/A , -0.01 , N/A ) | 8311.7 | N/A | 0.9084<br>[ 1.0000 ] | 90.8%<br>{ 89.1% } | 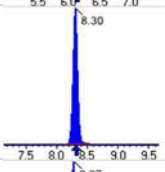 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282851 | ( 9.27 , N/A )<br>( N/A , 0.00 , N/A ) | 1074.0 | N/A | 0.8461<br>[ 1.0000 ] | 84.6%<br>{ 86.8% } | 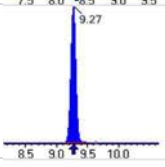 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 269853 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 7039.7 | N/A | 0.8137 [ 1.0000 ] | 81.4% { 79.4% } | 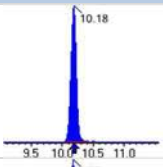 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 991747 | ( 8.77 , N/A ) ( N/A , -0.01 , N/A ) | 4735.8 | N/A | 0.8875 [ 1.0000 ] | 88.8% { 87.0% } | 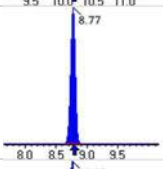 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 823232 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 2848.3 | N/A | 0.8433 [ 1.0000 ] | 84.3% { 82.7% } | 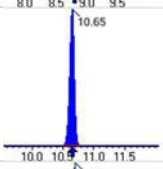 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2564182 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 52437.7 | N/A | 8.7534 [ 8.0000 ] | 109.4% { 96.5% } | 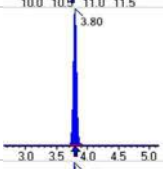 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1035099 | ( 4.89 , N/A ) ( N/A , -0.01 , N/A ) | 5490.9 | N/A | 4.4281 [ 4.0000 ] | 110.7% { 89.4% } | 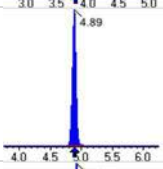 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 594514 | ( 6.13 , N/A ) ( N/A , -0.01 , N/A ) | 7927.5 | N/A | 2.1250 [ 2.0000 ] | 106.3% { 86.8% } | 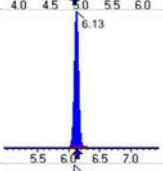 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 657917 | ( 7.28 , N/A ) ( N/A , -0.01 , N/A ) | 4103.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 93.4% } | 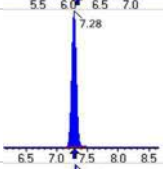 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 934465 | ( 8.30 , N/A ) ( N/A , 0.00 , N/A ) | 3809.8 | N/A | 2.1870 [ 2.0000 ] | 109.3% { 98.0% } | 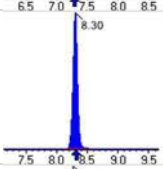 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 301279 | ( 9.27 , N/A ) ( N/A , -0.01 , N/A ) | 2676.2 | N/A | 1.1030 [ 1.0000 ] | 110.3% { 96.9% } | 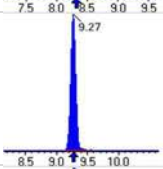 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 350842 | ( 10.18 , N/A ) ( N/A , 0.00 , N/A ) | 1337.7 | N/A | 1.1267 [ 1.0000 ] | 112.7% { 91.2% } | 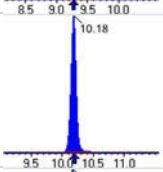 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432041 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1147.3 | N/A | 1.1412 [ 1.0000 ] | 114.1% { 86.9% } | 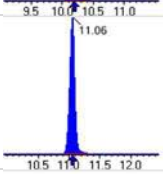 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 458339 | ( 11.87 , N/A ) ( N/A , 0.01 , N/A ) | 1453.0 | N/A | 1.2055 [ 1.0000 ] | 120.6% { 91.9% } | 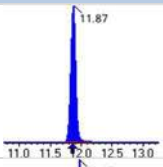 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 399892 | ( 12.97 , N/A ) ( N/A , 0.00 , N/A ) | 1437.5 | N/A | 1.2070 [ 1.0000 ] | 120.7% { 94.3% } | 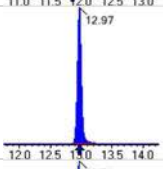 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 710258 | ( 13.76 , N/A ) ( N/A , 0.00 , N/A ) | 3142.5 | N/A | 2.5239 [ 2.0000 ] | 126.2% { 100.3% } | 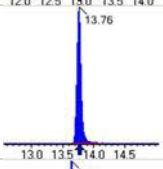 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1943804 | ( 6.44 , N/A ) ( N/A , -0.01 , N/A ) | 1332.8 | N/A | 2.0116 [ 2.0000 ] | 100.6% { 84.1% } | 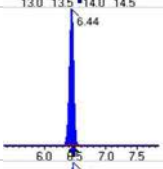 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1550553 | ( 8.77 , N/A ) ( N/A , 0.00 , N/A ) | 4650.3 | N/A | 2.1366 [ 2.0000 ] | 106.8% { 94.2% } | 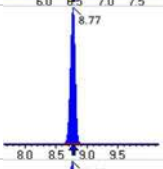 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1898767 | ( 10.65 , N/A ) ( N/A , 0.00 , N/A ) | 1632.8 | N/A | 2.1666 [ 2.0000 ] | 108.3% { 90.4% } | 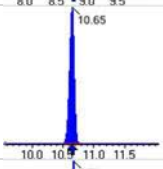 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 394958 | ( 5.58 , N/A ) ( N/A , -0.01 , N/A ) | 81.1 | N/A | 4.5732 [ 4.0000 ] | 114.3% { 109.8% } | 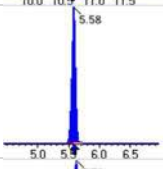 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1108790 | ( 7.72 , N/A ) ( N/A , -0.01 , N/A ) | 4344.9 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 103.2% } | 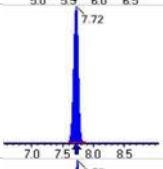 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1235693 | ( 9.53 , N/A ) ( N/A , 0.00 , N/A ) | 1481.0 | N/A | 4.6246 [ 4.0000 ] | 115.6% { 106.1% } | 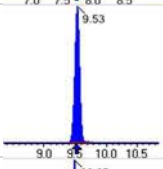 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2664551 | ( 11.19 , N/A ) ( N/A , 0.01 , N/A ) | 1653.1 | N/A | 8.6875 [ 8.0000 ] | 108.6% { 106.4% } | 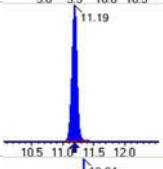 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2030706 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2445.6 | N/A | 2.1382 [ 2.0000 ] | 106.9% { 87.2% } | 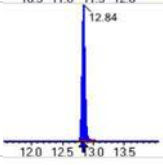 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-SCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 390446 | ( 14.21 , N/A ) ( N/A , 0.01 , N/A ) | 2867.0 | N/A | 2.2264 [ 2.0000 ] | 111.3% { 92.2% } | 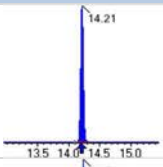  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 466969 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2783.5 | N/A | 2.3181 [ 2.0000 ] | 115.9% { 94.0% } | 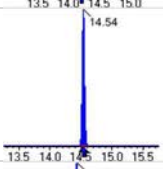  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1014564 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2082.7 | N/A | 4.5205 [ 4.0000 ] | 113.0% { 93.8% } | 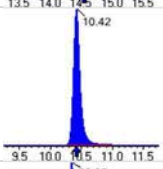  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 983632 | ( 10.95 , N/A ) ( N/A , 0.01 , N/A ) | 1957.9 | N/A | 4.6170 [ 4.0000 ] | 115.4% { 93.8% } | 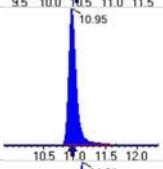  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1913754 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2608.4 | N/A | 23.3544 [ 20.0000 ] | 116.8% { 101.7% } | 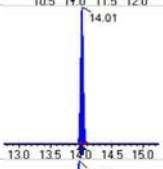  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2247315 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4304.5 | N/A | 22.6391 [ 20.0000 ] | 113.2% { 95.2% } | 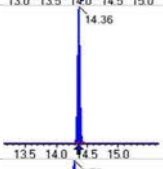  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1119738 | ( 6.59 , N/A ) ( N/A , -0.01 , N/A ) | 2851.6 | N/A | 9.3112 [ 8.0000 ] | 116.4% { 98.7% } | 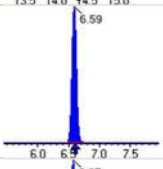  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 574894 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 1420.6 | N/A | 2.4020 [ 2.0000 ] | 120.1% { 98.1% } | 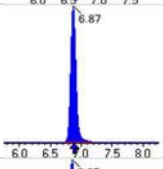  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 525740 | ( 8.95 , N/A ) ( N/A , 0.00 , N/A ) | 697.0 | N/A | 2.3529 [ 2.0000 ] | 117.6% { 93.2% } | 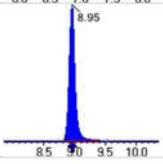  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0083L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.86L | -3.5L | 30.00L |
| PFPeAL | 4.00L | 3.91L | -2.3L | 30.00L |
| PFHxAL | 4.00L | 3.64L | -9.1L | 30.00L |
| PFHpAL | 4.00L | 3.53L | -11.6L | 30.00L |
| PFOAL | 4.00L | 3.36L | -16.0L | 30.00L |
| PFNAL | 4.00L | 3.77L | -5.7L | 30.00L |
| PFDAL | 4.00L | 3.78L | -5.6L | 30.00L |
| PFUnAL | 4.00L | 3.59L | -10.1L | 30.00L |
| PFDoAL | 4.00L | 3.31L | -17.2L | 30.00L |
| PFTrDAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFTeDAL | 4.00L | 4.12L | 2.9L | 30.00L |
| PFHxDAL | 4.00L | 3.10L | -22.5L | 30.00L |
| PFODAL | 4.00L | 3.04L | -24.1L | 30.00L |
| PFBSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFPeSL | 4.00L | 4.10L | 2.4L | 30.00L |
| PFHxSL | 4.00L | 3.93L | -1.8L | 30.00L |
| PFHpSL | 4.00L | 3.70L | -7.4L | 30.00L |
| PFOSL | 4.00L | 3.53L | -11.8L | 30.00L |
| PFNSL | 4.00L | 3.75L | -6.3L | 30.00L |
| PFDSL | 4.00L | 3.87L | -3.3L | 30.00L |
| PFDoSL | 4.00L | 3.66L | -8.4L | 30.00L |
| 4:2FTSL | 4.00L | 4.00L | -0.01L | 30.00L |
| 6:2FTSL | 4.00L | 3.91L | -2.2L | 30.00L |
| 8:2FTSL | 4.00L | 4.28L | 7.1L | 30.00L |
| 10:2FTSL | 3.86L | 3.98L | 3.1L | 30.00L |
| PFOSAL | 4.00L | 3.81L | -4.7L | 30.00L |
| NMeFOSAL | 4.00L | 3.34L | -16.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0083L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.59L | -10.4L | 30.00L |
| NMeFOSAAL | 4.00L | 3.74L | -6.4L | 30.00L |
| NEtFOSAAL | 4.00L | 3.49L | -12.8L | 30.00L |
| NMeFOSEL | 4.00L | 4.03L | 0.8L | 30.00L |
| NEtFOSEL | 4.00L | 4.57L | 14.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.93L | -1.7L | 30.00L |
| ADONAL | 4.00L | 3.63L | -9.3L | 30.00L |
| PFEESAL | 4.00L | 3.30L | -17.6L | 30.00L |
| PFMPAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFMBAL | 4.00L | 3.42L | -14.4L | 30.00L |
| NFDHAL | 4.00L | 3.55L | -11.3L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.87L | -3.4L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 4.00L | 0.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.60L | -10.0L | 30.00L |
| 5:3FTCAL | 4.00L | 3.95L | -1.3L | 30.00L |
| 7:3FTCAL | 4.00L | 3.72L | -7.0L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.63L | 7.9L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.53L | 13.3L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.23L | 11.5L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.11L | 11.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.07L | 7.4L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.08L | 8.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.09L | 9.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.28L | 14.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.44L | 21.9L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.28L | 13.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0083L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.76L | 19.1L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.88L | 22.1L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.86L | 21.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 10.3L | 29.1L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.16L | 7.8L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.17L | 8.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.19L | 9.5L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.59L | 14.9L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D7-NMEFOSEL | 20.0L | 22.7L | 13.6L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.3L | 11.7L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.74L | 9.3L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 962397<br>( 163.0 / 69.0 ) 25274 | ( 2.80 , 0.74 ) ( N/A , 0.01 , 0.1) | 6782.6<br>1223.6 | 0.0263<br>96.7<br>96.7 | 3.3415 | N/A | 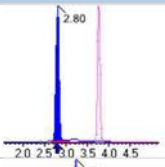 | 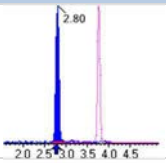 | |
| PFBA | ( 213.0 / 169.0 ) 1175661 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 937.3 | N/A<br>0.0<br>0.0 | 3.8614 | N/A | 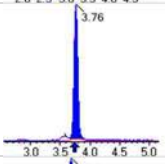 | | |
| PFPeA | ( 263.0 / 219.0 ) 978897<br>( 263.0 / 69.0 ) 10248 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 3495.1<br>136.4 | 0.0105<br>87.7<br>87.7 | 3.9064 | N/A | 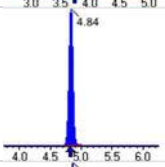 | 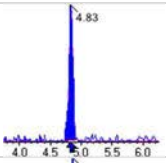 | |
| PFHxA | ( 313.0 / 269.0 ) 1080521<br>( 313.0 / 119.0 ) 119388 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.9<br>990.2 | 0.1105<br>95.2<br>95.2 | 3.6367 | N/A | 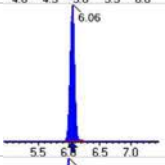 | 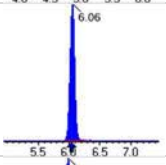 | |
| PFHpA | ( 363.0 / 319.0 ) 1143038<br>( 363.0 / 169.0 ) 356252 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1509.0<br>1329.3 | 0.3117<br>102.8<br>102.8 | 3.5350 | N/A | 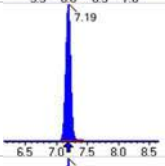 | 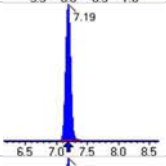 | |
| PFOA | ( 413.0 / 369.0 ) 1461316<br>( 413.0 / 169.0 ) 523450 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 588.7<br>754.1 | 0.3582<br>98.0<br>98.0 | 3.3594 | N/A | 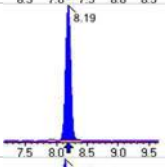 | 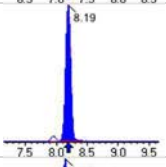 | |
| PFNA | ( 463.0 / 419.0 ) 1118591<br>( 463.0 / 169.0 ) 289643 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.2<br>983.5 | 0.2589<br>101.4<br>101.4 | 3.7732 | N/A | 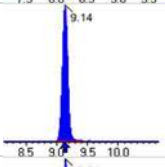 | 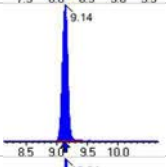 | |
| PFDA | ( 513.0 / 469.0 ) 1264134<br>( 513.0 / 169.0 ) 157234 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2953.9<br>1885.8 | 0.1244<br>106.1<br>106.1 | 3.7761 | N/A | 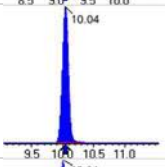 | 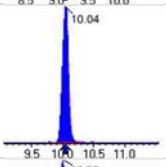 | |
| PFUnA | ( 563.0 / 519.0 ) 1294321<br>( 563.0 / 169.0 ) 184407 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 893.4<br>429.0 | 0.1425<br>100.5<br>100.5 | 3.5942 | N/A | 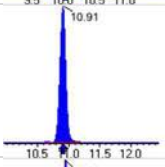 | 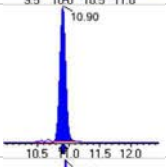 | |
| PFDoA | ( 613.0 / 569.0 ) 1365550<br>( 613.0 / 169.0 ) 224325 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1128.0<br>583.1 | 0.1643<br>103.9<br>103.9 | 3.3107 | N/A | 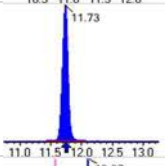 | 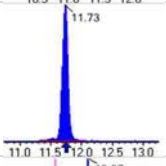 | |
| PFTrDA | ( 663.0 / 619.0 ) 1370908<br>( 663.0 / 169.0 ) 363516 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.0) | 1167.0<br>776.2 | 0.2652<br>103.0<br>103.0 | 3.3977 | N/A | 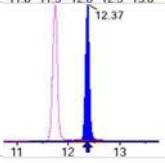 | 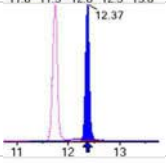 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1309098<br>( 713.0 / 169.0 ) 347062 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1509.2<br>784.5 | 0.2651<br>98.2<br>98.2 | 4.1165 | N/A | 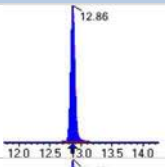 | 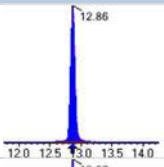 | |
| PFHxDA | ( 813.0 / 769.0 ) 897399<br>( 813.0 / 169.0 ) 229591 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1782.4<br>984.2 | 0.2558<br>104.6<br>104.6 | 3.0982 | N/A | 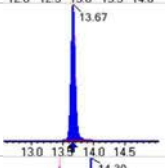 | 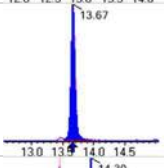 | |
| PFODA | ( 913.0 / 869.0 ) 550450<br>( 913.0 / 169.0 ) 180510 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1511.9<br>649.4 | 0.3279<br>91.5<br>91.5 | 3.0377 | N/A | 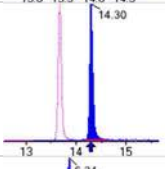 | 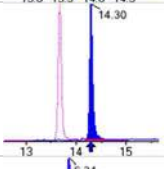 | |
| PFBS | ( 299.0 / 80.0 ) 1756089<br>( 299.0 / 99.0 ) 1281223 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3552.9<br>3591.0 | 0.7296<br>103.2<br>103.2 | 3.6666 | N/A | 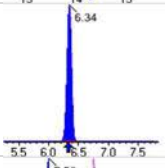 | 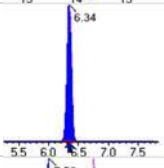 | |
| PFPeS | ( 349.0 / 80.0 ) 4305626<br>( 349.0 / 99.0 ) 1490386 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , -0.1) | 2601.1<br>2414.4 | 0.3461<br>96.3<br>96.3 | 4.0953 | N/A | 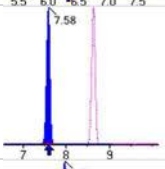 | 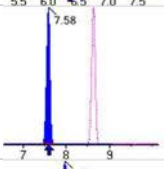 | |
| PFHxS | ( 399.0 / 80.0 ) 4796231<br>( 399.0 / 99.0 ) 1513608 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3672.2<br>5896.7 | 0.3156<br>99.1<br>99.1 | 3.9275 | N/A | 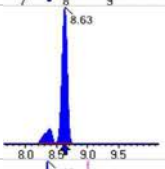 | 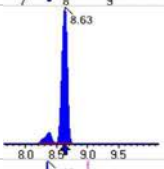 | |
| PFHpS | ( 449.0 / 80.0 ) 3732941<br>( 449.0 / 99.0 ) 1001282 | ( 9.60 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2007.8<br>1891.4 | 0.2682<br>101.4<br>101.4 | 3.7048 | N/A | 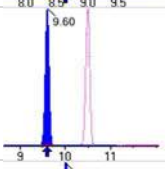 | 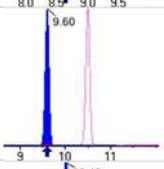 | |
| PFOS | ( 499.0 / 80.0 ) 3424865<br>( 499.0 / 99.0 ) 734477 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1720.3<br>3896.8 | 0.2145<br>91.8<br>91.8 | 3.5262 | N/A | 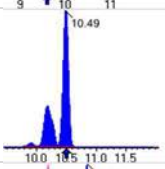 | 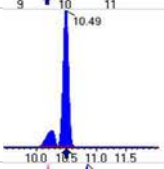 | |
| PFNS | ( 549.0 / 80.0 ) 3407348<br>( 549.0 / 99.0 ) 929910 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2946.3<br>1937.3 | 0.2729<br>100.1<br>100.1 | 3.7468 | N/A | 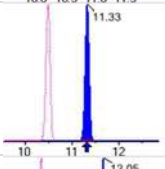 | 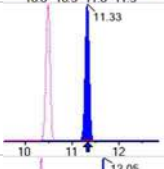 | |
| PFDS | ( 599.0 / 80.0 ) 4296316<br>( 599.0 / 99.0 ) 1123221 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3304.8<br>2395.7 | 0.2614<br>96.2<br>96.2 | 3.8691 | N/A | 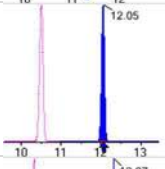 | 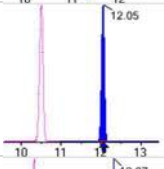 | |
| PFDoS | ( 699.0 / 80.0 ) 3586345<br>( 699.0 / 99.0 ) 846775 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3630.7<br>2702.9 | 0.2361<br>101.1<br>101.1 | 3.6636 | N/A | 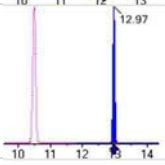 | 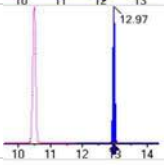 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1631620<br>( 327.0 / 81.0 ) 1506467 | ( 5.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 4752.9<br>2173.4 | 0.9233<br>105.8<br>105.8 | 3.9996 | N/A | 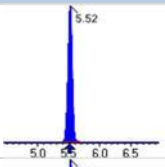 | 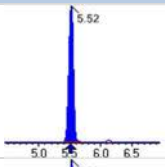 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1545553<br>( 427.0 / 81.0 ) 1968397 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 3426.6<br>2929.0 | 1.2736<br>101.6<br>101.6 | 3.9140 | N/A | 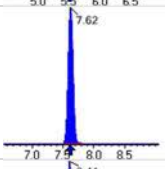 | 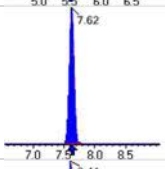 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1515669<br>( 527.0 / 81.0 ) 1596380 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 1461.7<br>1647.7 | 1.0533<br>96.8<br>96.8 | 4.2844 | N/A | 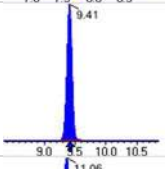 | 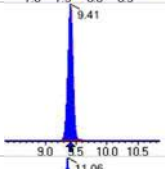 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1267274<br>( 627.0 / 81.0 ) 1749805 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1302.1<br>1148.2 | 1.3808<br>95.9<br>95.9 | 3.9787 | N/A | 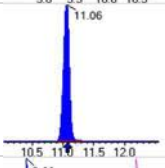 | 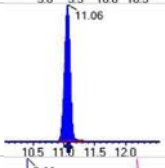 | |
| PFBSA | ( 297.9 / 78.0 ) 3621025<br>( 297.9 / 278.0 ) 4711 | ( 8.11 , 0.57 ) ( N/A , 0.00 , 0.2) | 1692.7<br>159.7 | 0.0013<br>95.2<br>95.2 | 4.4829 | N/A | 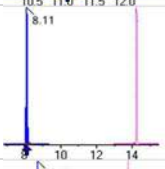 | 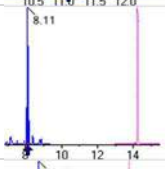 | |
| PFHxSA | ( 397.9 / 78.0 ) 4011801<br>( 397.9 / 378.0 ) 16835 | ( 10.98 , 0.75 ) ( N/A , 0.00 , 0.0) | 854.3<br>330.5 | 0.0042<br>102.7<br>102.7 | 3.8415 | N/A | 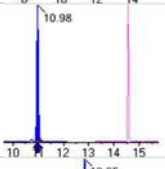 | 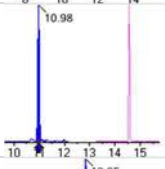 | |
| PFOSA | ( 498.0 / 78.0 ) 2805456<br>( 498.0 / 478.0 ) 40688 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.2) | 937.8<br>497.9 | 0.0145<br>103.4<br>103.4 | 3.8140 | N/A | 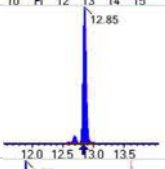 | 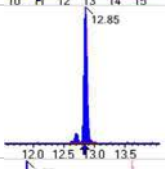 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 ) 7301953<br>( 279.7 / 211.0 ) 635631 | ( 8.20 , 0.64 ) ( N/A , -0.01 , 0.0) | 52.1<br>66.4 | 0.0870<br>103.6<br>103.6 | 3.7699 | N/A | 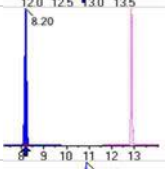 | 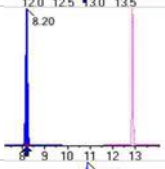 | |
| NMeFOSA | ( 512.0 / 219.0 ) 519804<br>( 512.0 / 169.0 ) 328008 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 5814.7<br>2023.3 | 0.6310<br>84.3<br>84.3 | 3.3402 | N/A | 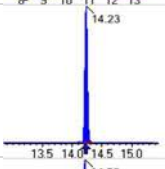 | 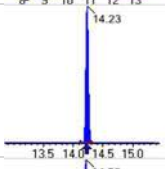 | |
| NEtFOSA | ( 526.0 / 219.0 ) 682268<br>( 526.0 / 169.0 ) 720469 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 0.0) | 6107.0<br>4732.1 | 1.0560<br>85.5<br>85.5 | 3.5850 | N/A | 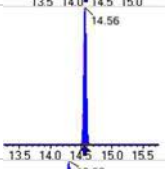 | 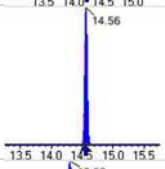 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 812540<br>( 570.0 / 483.0 ) 375737 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2801.5<br>1944.1 | 0.4624<br>105.5<br>105.5 | 3.7449 | N/A | 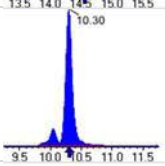 | 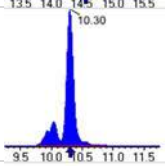 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 733069<br>( 584.0 / 526.0 ) 451026 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1461.0<br>814.2 | 0.6153<br>99.8<br>99.8 | 3.4878 | N/A | 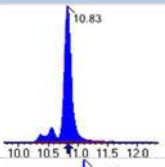 | 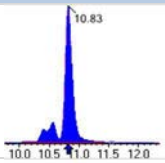 | |
| NMeFOSE | ( 616.0 / 59.0 ) 326625 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2612.6 | N/A<br>0.0<br>0.0 | 4.0313 | N/A | 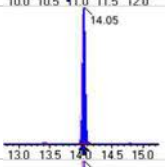 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 299443 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4202.9 | N/A<br>0.0<br>0.0 | 4.5715 | N/A | 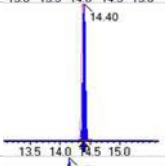 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 308973<br>( 285.0 / 185.0 ) 797962 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1326.1<br>2486.0 | 2.5826<br>93.4<br>93.4 | 3.9307 | N/A | 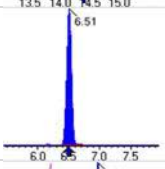 | 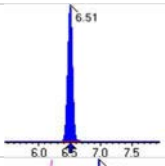 | |
| ADONA | ( 377.0 / 85.0 ) 3325389<br>( 377.0 / 251.0 ) 344342 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.0) | 1872.8<br>1723.5 | 0.1035<br>101.6<br>101.6 | 3.6262 | N/A | 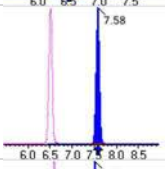 | 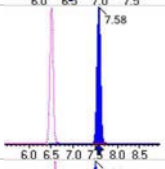 | |
| PFEESA | ( 315.0 / 135.0 ) 703088<br>( 315.0 / 83.0 ) 404699 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 2387.2<br>769.5 | 0.5756<br>103.3<br>103.3 | 3.2953 | N/A | 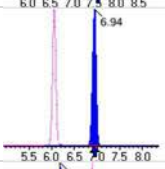 | 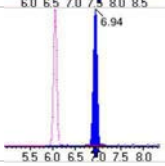 | |
| PFMPA | ( 229.0 / 85.0 ) 296369 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 3321.0 | N/A<br>0.0<br>0.0 | 3.7270 | N/A | 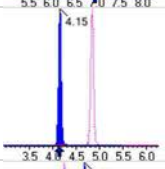 | | |
| PFMBA | ( 279.0 / 85.0 ) 739601 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3653.3 | N/A<br>0.0<br>0.0 | 3.4221 | N/A | 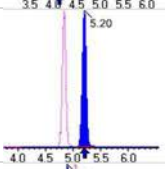 | | |
| NFDHA | ( 295.0 / 201.0 ) 393340<br>( 295.0 / 85.0 ) 422944 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2490.4<br>1874.9 | 1.0753<br>99.7<br>99.7 | 3.5461 | N/A | 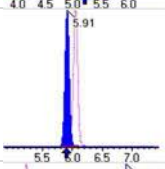 | 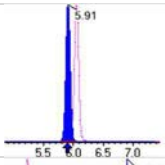 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3829034<br>( 533.0 / 353.0 ) 1211420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3048.6<br>2273.9 | 0.3164<br>101.1<br>101.1 | 3.8658 | N/A | 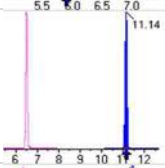 | 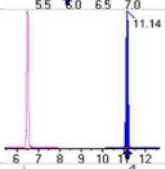 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3049840<br>( 633.0 / 453.0 ) 1009005 | ( 12.47 , 1.92 )<br>( N/A , 0.00 , 0.1) | 4050.8<br>2878.1 | 0.3308<br>99.6<br>99.6 | 4.0039 | N/A | 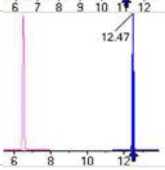 | 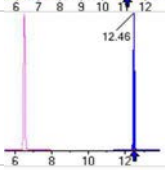 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1920262<br>( 461.0 / 381.2 ) 718117 | ( 9.52 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2117.4<br>2583.3 | 0.3740<br>93.8<br>93.8 | 3.5045 | N/A | 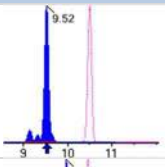 | 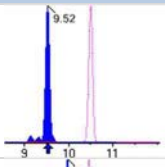 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 51311<br>( 241.0 / 117.0 ) 125661 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1068.2<br>1017.9 | 2.4490<br>116.2<br>116.2 | 3.5994 | N/A | 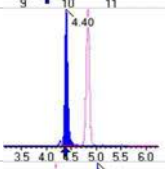 | 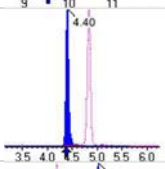 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 325323<br>( 341.0 / 217.0 ) 467661 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.2) | 983.3<br>713.5 | 1.4375<br>94.6<br>94.6 | 3.9483 | N/A | 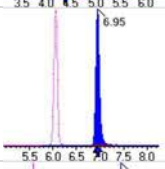 | 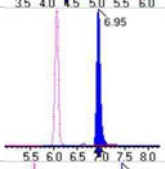 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 503088<br>( 441.0 / 337.0 ) 447992 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 2199.0<br>3436.5 | 0.8905<br>97.1<br>97.1 | 3.7207 | N/A | 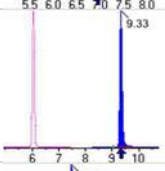 | 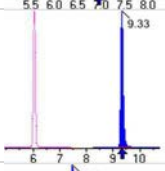 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1368915<br>( 357.2 / 243.0 ) 138696 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1462.3<br>919.1 | 0.1013<br>91.9<br>91.9 | 3.7993 | N/A | 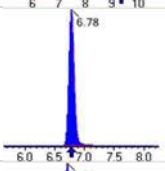 | 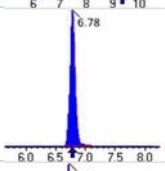 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1040258<br>( 457.2 / 343.0 ) 44906 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 751.1<br>400.9 | 0.0432<br>104.1<br>104.1 | 4.0322 | N/A | 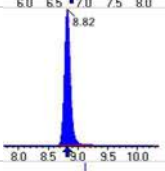 | 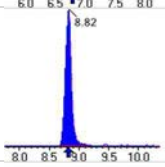 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 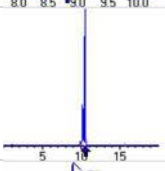 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 247846 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1075.6 | N/A | 1.0395<br>[ 1.0000 ] | 103.9%<br>{ 105.8% } | 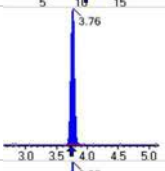 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117348 | ( 6.06 , N/A )<br>( N/A , -0.01 , N/A ) | 16220.9 | N/A | 0.9251<br>[ 1.0000 ] | 92.5%<br>{ 98.2% } | 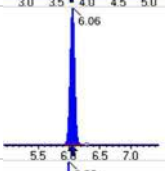 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370834 | ( 8.20 , N/A )<br>( N/A , -0.01 , N/A ) | 3643.5 | N/A | 0.9381<br>[ 1.0000 ] | 93.8%<br>{ 97.6% } | 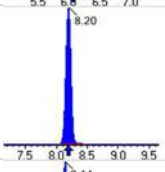 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270783 | ( 9.14 , N/A )<br>( N/A , -0.01 , N/A ) | 892.5 | N/A | 0.9521<br>[ 1.0000 ] | 95.2%<br>{ 101.7% } | 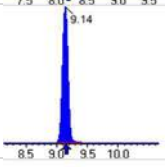 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272326 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 13544.9 | N/A | 0.9325 [ 1.0000 ] | 93.3% { 101.7% } | 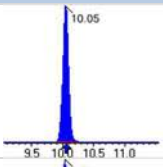 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 837221 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4279.8 | N/A | 0.8822 [ 1.0000 ] | 88.2% { 93.0% } | 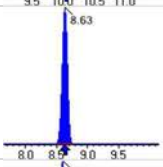 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713825 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2190.3 | N/A | 0.9372 [ 1.0000 ] | 93.7% { 101.9% } | 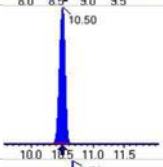 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2443491 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 41170.2 | N/A | 8.6301 [ 8.0000 ] | 107.9% { 115.5% } | 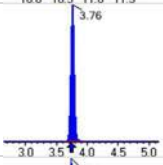 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 992188 | ( 4.84 , N/A ) ( N/A , -0.01 , N/A ) | 5611.5 | N/A | 4.5315 [ 4.0000 ] | 113.3% { 107.6% } | 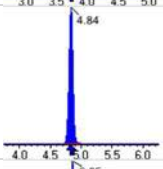 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 618494 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 6938.9 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 111.8% } | 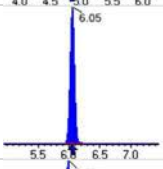 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659031 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4583.8 | N/A | 2.2127 [ 2.0000 ] | 110.6% { 106.4% } | 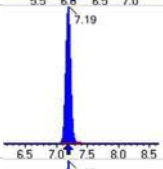 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 885699 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2803.9 | N/A | 2.2291 [ 2.0000 ] | 111.5% { 108.0% } | 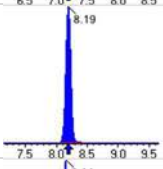 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294966 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2846.1 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 112.3% } | 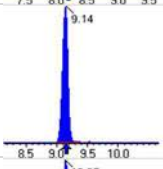 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 327639 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1335.9 | N/A | 1.0736 [ 1.0000 ] | 107.4% { 103.5% } | 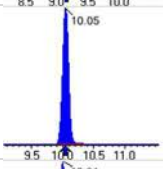 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389334 | ( 10.91 , N/A ) ( N/A , -0.01 , N/A ) | 1101.6 | N/A | 1.0844 [ 1.0000 ] | 108.4% { 107.7% } | 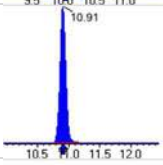 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409989 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1223.9 | N/A | 1.1213 [ 1.0000 ] | 112.1% { 116.6% } | 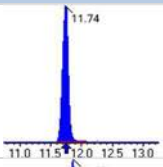  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 339554 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1486.2 | N/A | 1.0905 [ 1.0000 ] | 109.0% { 108.7% } | 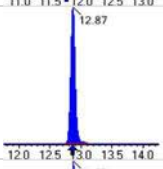  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607345 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2904.6 | N/A | 2.2847 [ 2.0000 ] | 114.2% { 117.7% } | 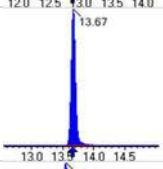  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1844891 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 1003.0 | N/A | 2.4390 [ 2.0000 ] | 121.9% { 115.8% } | 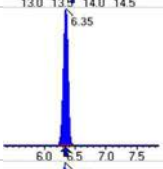  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373837 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4235.8 | N/A | 2.2754 [ 2.0000 ] | 113.8% { 107.3% } | 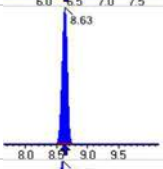  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1681874 | ( 10.50 , N/A ) ( N/A , -0.01 , N/A ) | 1417.8 | N/A | 2.1852 [ 2.0000 ] | 109.3% { 107.6% } | 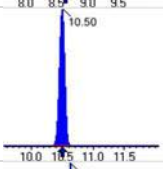  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 621764 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.3 | N/A | 4.7641 [ 4.0000 ] | 119.1% { 118.4% } | 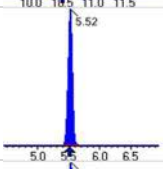  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1907472 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 3543.7 | N/A | 4.8837 [ 4.0000 ] | 122.1% { 112.2% } | 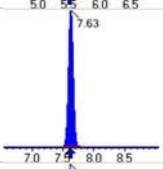  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490025 | ( 9.41 , N/A ) ( N/A , 0.00 , N/A ) | 1234.3 | N/A | 4.8642 [ 4.0000 ] | 121.6% { 112.9% } | 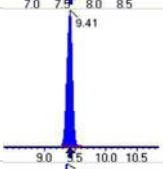  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3305966 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1721.4 | N/A | 10.3266 [ 8.0000 ] | 129.1% { 127.3% } | 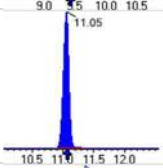  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1471109 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 1781.5 | N/A | 2.1569 [ 2.0000 ] | 107.8% { 110.3% } | 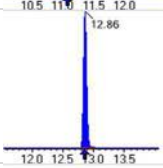  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 313468 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 2395.1 | N/A | 2.1669 [ 2.0000 ] | 108.3% { 113.0% } | 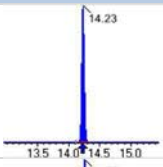  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339856 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 2214.0 | N/A | 2.1907 [ 2.0000 ] | 109.5% { 107.7% } | 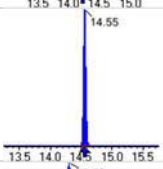  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 909945 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2882.7 | N/A | 4.5948 [ 4.0000 ] | 114.9% { 108.6% } | 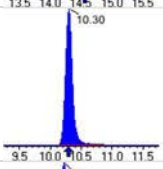  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 859454 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1808.0 | N/A | 4.7617 [ 4.0000 ] | 119.0% { 113.7% } | 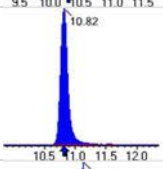  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1477259 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 2309.5 | N/A | 22.7237 [ 20.0000 ] | 113.6% { 109.8% } | 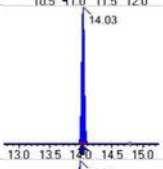  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1474480 | ( 14.38 , N/A ) ( N/A , 0.00 , N/A ) | 3886.4 | N/A | 22.3464 [ 20.0000 ] | 111.7% { 112.0% } | 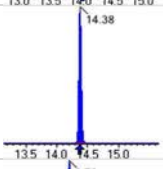  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1066376 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2035.6 | N/A | 8.7432 [ 8.0000 ] | 109.3% { 109.0% } | 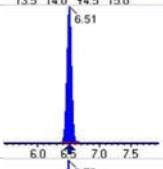  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677811 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1143.2 | N/A | 2.2957 [ 2.0000 ] | 114.8% { 117.4% } | 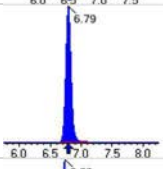  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 632603 | ( 8.83 , N/A ) ( N/A , -0.01 , N/A ) | 843.1 | N/A | 2.3536 [ 2.0000 ] | 117.7% { 117.8% } | 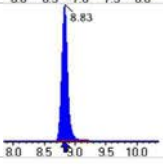  | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0083L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2411010L

**Laboratory ID:W**SD00977-LCV1L

**Sequence:W**SD00977L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.402L | 0.4L | 30.00L |
| PFPeAL | 0.200L | 0.196L | -1.9L | 30.00L |
| PFHxAL | 0.100L | 0.0996L | -0.4L | 30.00L |
| PFHpAL | 0.100L | 0.102L | 1.7L | 30.00L |
| PFOAL | 0.100L | 0.117L | 16.5L | 30.00L |
| PFNAL | 0.100L | 0.0880L | -12.0L | 30.00L |
| PFDAL | 0.100L | 0.107L | 6.7L | 30.00L |
| PFUnAL | 0.100L | 0.0864L | -13.6L | 30.00L |
| PFDoAL | 0.100L | 0.0949L | -5.1L | 30.00L |
| PFTrDAL | 0.100L | 0.0938L | -6.2L | 30.00L |
| PFTeDAL | 0.100L | 0.0886L | -11.4L | 30.00L |
| PFHxDAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFODAL | 0.100L | 0.0973L | -2.7L | 30.00L |
| PFBSL | 0.0885L | 0.0738L | -16.6L | 30.00L |
| PFPeSL | 0.0940L | 0.0882L | -6.2L | 30.00L |
| PFHxSL | 0.0915L | 0.0911L | -0.4L | 30.00L |
| PFHpSL | 0.0955L | 0.0870L | -8.9L | 30.00L |
| PFOSL | 0.0930L | 0.100L | 7.9L | 30.00L |
| PFNSL | 0.0960L | 0.0905L | -5.8L | 30.00L |
| PFDSL | 0.0965L | 0.0906L | -6.1L | 30.00L |
| PFDoSL | 0.0970L | 0.0855L | -11.9L | 30.00L |
| 4:2FTSL | 0.375L | 0.318L | -15.3L | 30.00L |
| 6:2FTSL | 0.380L | 0.367L | -3.4L | 30.00L |
| 8:2FTSL | 0.384L | 0.362L | -5.7L | 30.00L |
| 10:2FTSL | 0.386L | 0.371L | -4.0L | 30.00L |
| PFOSAL | 0.100L | 0.102L | 2.3L | 30.00L |
| NMeFOSAL | 0.400L | 0.373L | -6.8L | 30.00L |
| NEtFOSAL | 0.400L | 0.379L | -5.2L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0083L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2411010L

**Laboratory ID:W**SD00977-LCV1L

**Sequence:W**SD00977L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0860L | -14.0L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0899L | -10.1L | 30.00L |
| NMeFOSEL | 0.400L | 0.412L | 2.9L | 30.00L |
| NEtFOSEL | 0.400L | 0.392L | -1.9L | 30.00L |
| HFPO-DAL | 0.100L | 0.101L | 1.4L | 30.00L |
| ADONAL | 0.0945L | 0.0892L | -5.6L | 30.00L |
| PFEESAL | 0.178L | 0.160L | -9.8L | 30.00L |
| PFMPAL | 0.200L | 0.163L | -18.4L | 30.00L |
| PFMBAL | 0.200L | 0.177L | -11.6L | 30.00L |
| NFDHAL | 0.200L | 0.183L | -8.7L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0801L | -14.3L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0757L | -19.8L | 30.00L |
| 3:3FTCAL | 0.400L | 0.418L | 4.6L | 30.00L |
| 5:3FTCAL | 0.400L | 0.400L | -0.02L | 30.00L |
| 7:3FTCAL | 0.400L | 0.394L | -1.5L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 60266<br>( 163.0 / 69.0 ) 1344 | ( 2.80 , 0.74 ) ( N/A , 0.03 , -0.8) | 322.5<br>44.3 | 0.0223<br>89.0<br>85.3 | 0.1744<br>[ 0.2000 ] | 87.2% | 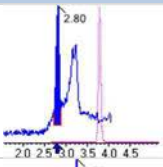 | 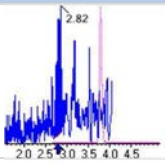 | |
| PFBA | ( 213.0 / 169.0 ) 148478 | ( 3.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 240.1 | N/A<br>0.0<br>0.0 | 0.4017<br>[ 0.4000 ] | 100.4% | 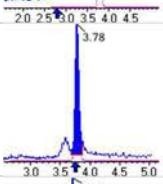 | | |
| PFPeA | ( 263.0 / 219.0 ) 65824<br>( 263.0 / 69.0 ) 572 | ( 4.86 , 1.00 ) ( 0.00 , N/A , 1.1) | 301.0<br>12.2 | 0.0087<br>79.1<br>74.4 | 0.1961<br>[ 0.2000 ] | 98.1% | 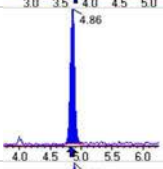 | 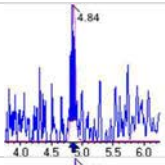 | |
| PFHxA | ( 313.0 / 269.0 ) 38261<br>( 313.0 / 119.0 ) 5163 | ( 6.08 , 1.00 ) ( 0.00 , N/A , 0.0) | 232.9<br>93.7 | 0.1350<br>121.5<br>118.8 | 0.0996<br>[ 0.1000 ] | 99.6% | 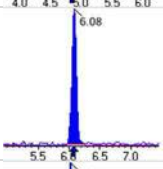 | 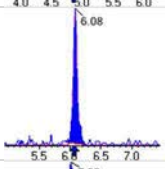 | |
| PFHpA | ( 363.0 / 319.0 ) 40690<br>( 363.0 / 169.0 ) 10806 | ( 7.23 , 1.00 ) ( 0.00 , N/A , 0.4) | 233.2<br>191.2 | 0.2656<br>85.2<br>90.3 | 0.1017<br>[ 0.1000 ] | 101.7% | 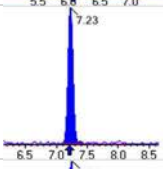 | 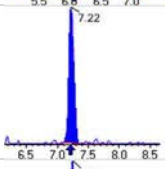 | |
| PFOA | ( 413.0 / 369.0 ) 61726<br>( 413.0 / 169.0 ) 20598 | ( 8.24 , 1.00 ) ( 0.00 , N/A , 0.0) | 98.1<br>142.9 | 0.3337<br>92.2<br>94.0 | 0.1165<br>[ 0.1000 ] | 116.5% | 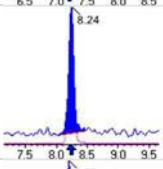 | 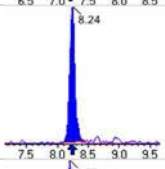 | |
| PFNA | ( 463.0 / 419.0 ) 33460<br>( 463.0 / 169.0 ) 9422 | ( 9.20 , 1.00 ) ( 0.00 , N/A , -0.1) | 219.8<br>222.7 | 0.2816<br>107.3<br>114.4 | 0.0880<br>[ 0.1000 ] | 88.0% | 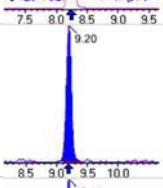 | 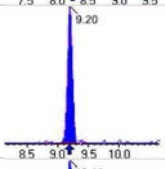 | |
| PFDA | ( 513.0 / 469.0 ) 47154<br>( 513.0 / 169.0 ) 6751 | ( 10.10 , 1.00 ) ( 0.00 , N/A , -0.2) | 349.9<br>1267.7 | 0.1432<br>122.0<br>118.6 | 0.1067<br>[ 0.1000 ] | 106.7% | 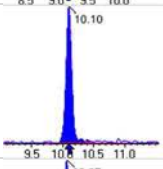 | 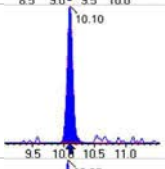 | |
| PFUnA | ( 563.0 / 519.0 ) 43045<br>( 563.0 / 169.0 ) 7242 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.3) | 225.3<br>143.0 | 0.1683<br>113.6<br>116.3 | 0.0864<br>[ 0.1000 ] | 86.4% | 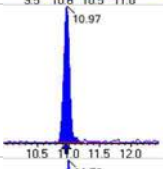 | 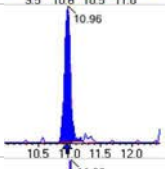 | |
| PFDoA | ( 613.0 / 569.0 ) 48564<br>( 613.0 / 169.0 ) 8261 | ( 11.79 , 1.00 ) ( 0.00 , N/A , -0.5) | 228.3<br>85.5 | 0.1701<br>107.6<br>111.2 | 0.0949<br>[ 0.1000 ] | 94.9% | 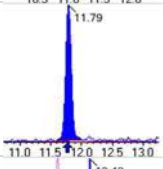 | 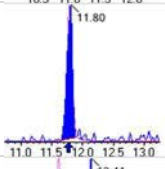 | |
| PFTrDA | ( 663.0 / 619.0 ) 46126<br>( 663.0 / 169.0 ) 13023 | ( 12.42 , 1.05 ) ( N/A , 0.02 , 0.3) | 311.2<br>125.5 | 0.2823<br>104.8<br>110.8 | 0.0938<br>[ 0.1000 ] | 93.8% | 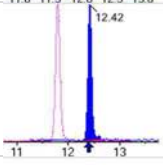 | 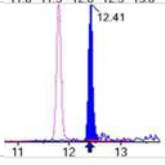 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 37942<br>( 713.0 / 169.0 ) 11025 | ( 12.91 , 1.00 )<br>( 0.00 , N/A , 0.1) | 196.5<br>110.6 | 0.2906<br>111.8<br>110.0 | 0.0886<br>[ 0.1000 ] | 88.6% | 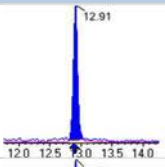 | 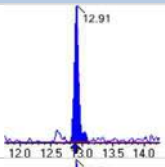 | |
| PFHxDA | ( 813.0 / 769.0 ) 34209<br>( 813.0 / 169.0 ) 7104 | ( 13.71 , 1.00 )<br>( 0.00 , N/A , 0.3) | 247.2<br>54.8 | 0.2077<br>95.7<br>81.5 | 0.0959<br>[ 0.1000 ] | 95.9% | 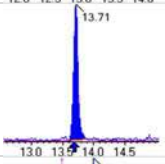 | 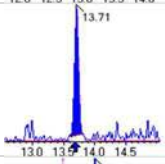 | |
| PFODA | ( 913.0 / 869.0 ) 23309<br>( 913.0 / 169.0 ) 6383 | ( 14.35 , 1.05 )<br>( N/A , 0.03 , -0.2) | 133.8<br>37.0 | 0.2739<br>71.7<br>82.6 | 0.0973<br>[ 0.1000 ] | 97.3% | 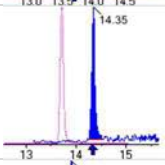 | 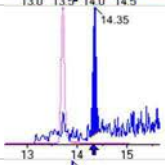 | |
| PFBS | ( 299.0 / 80.0 ) 46058<br>( 299.0 / 99.0 ) 35610 | ( 6.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 450.4<br>156.2 | 0.7732<br>108.8<br>107.3 | 0.0738<br>[ 0.0885 ] | 83.4% | 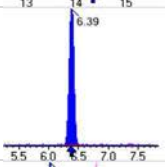 | 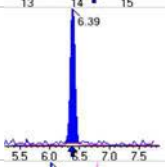 | |
| PFPeS | ( 349.0 / 80.0 ) 123312<br>( 349.0 / 99.0 ) 45154 | ( 7.63 , 0.88 )<br>( N/A , 0.01 , 0.1) | 510.8<br>369.2 | 0.3662<br>107.7<br>106.7 | 0.0882<br>[ 0.0938 ] | 94.0% | 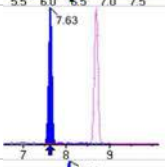 | 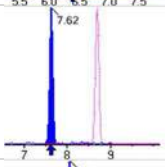 | |
| PFHxS | ( 399.0 / 80.0 ) 141687<br>( 399.0 / 99.0 ) 44985 | ( 8.70 , 1.00 )<br>( 0.00 , N/A , 0.3) | 762.8<br>871.7 | 0.3175<br>101.5<br>99.0 | 0.0911<br>[ 0.0911 ] | 100.1% | 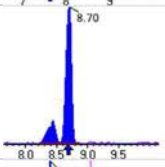 | 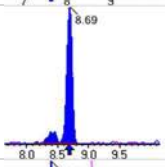 | |
| PFHpS | ( 449.0 / 80.0 ) 109645<br>( 449.0 / 99.0 ) 32376 | ( 9.67 , 0.92 )<br>( N/A , 0.01 , 0.4) | 444.4<br>296.6 | 0.2953<br>110.5<br>109.9 | 0.0870<br>[ 0.0951 ] | 91.4% | 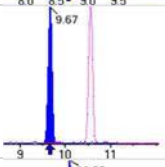 | 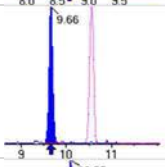 | |
| PFOS | ( 499.0 / 80.0 ) 127200<br>( 499.0 / 99.0 ) 30506 | ( 10.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 485.9<br>985.4 | 0.2398<br>101.4<br>109.5 | 0.1003<br>[ 0.0927 ] | 108.1% | 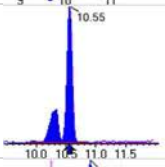 | 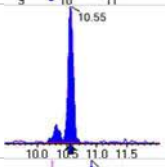 | |
| PFNS | ( 549.0 / 80.0 ) 111880<br>( 549.0 / 99.0 ) 28799 | ( 11.40 , 1.08 )<br>( N/A , 0.01 , -0.2) | 526.8<br>263.9 | 0.2574<br>96.9<br>93.9 | 0.0905<br>[ 0.0960 ] | 94.2% | 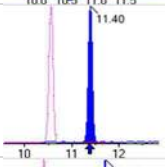 | 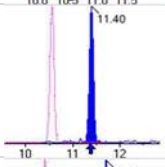 | |
| PFDS | ( 599.0 / 80.0 ) 133580<br>( 599.0 / 99.0 ) 37547 | ( 12.11 , 1.15 )<br>( N/A , 0.02 , 0.3) | 500.0<br>263.6 | 0.2811<br>112.1<br>110.8 | 0.0906<br>[ 0.0963 ] | 94.1% | 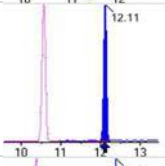 | 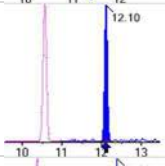 | |
| PFDoS | ( 699.0 / 80.0 ) 107648<br>( 699.0 / 99.0 ) 26647 | ( 13.02 , 1.23 )<br>( N/A , 0.03 , -0.1) | 688.9<br>258.8 | 0.2475<br>107.3<br>109.4 | 0.0855<br>[ 0.0970 ] | 88.1% | 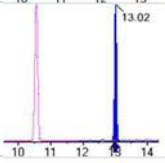 | 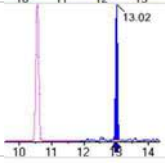 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 154447<br>( 327.0 / 81.0 ) 164849 | ( 5.55 , 1.00 ) ( -0.01 , N/A , 0.1) | 1589.8<br>619.2 | 1.0673<br>121.8<br>116.7 | 0.3176<br>[ 0.3738 ] | 85.0% | 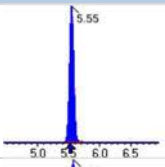 | 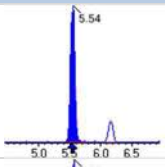 | |
| 6:2FTS | ( 427.0 / 407.0 ) 163995<br>( 427.0 / 81.0 ) 182965 | ( 7.66 , 1.00 ) ( -0.01 , N/A , 0.0) | 1751.3<br>1451.9 | 1.1157<br>87.8<br>87.9 | 0.3670<br>[ 0.3796 ] | 96.7% | 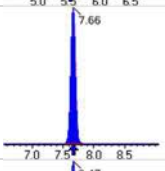 | 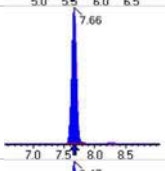 | |
| 8:2FTS | ( 527.0 / 507.0 ) 183812<br>( 527.0 / 81.0 ) 186811 | ( 9.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 1048.9<br>887.1 | 1.0163<br>107.2<br>102.0 | 0.3620<br>[ 0.3833 ] | 94.4% | 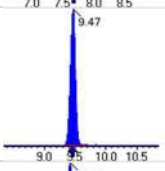 | 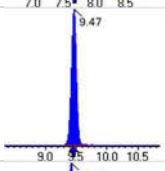 | |
| 10:2FTS | ( 627.0 / 607.0 ) 147066<br>( 627.0 / 81.0 ) 208836 | ( 11.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 684.1<br>353.6 | 1.4200<br>105.1<br>103.7 | 0.3707<br>[ 0.3865 ] | 95.9% | 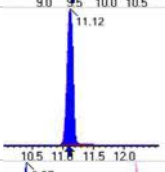 | 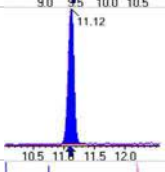 | |
| PFBSA | ( 297.9 / 78.0 ) 99379<br>( 297.9 / 278.0 ) 192 | ( 8.07 , 0.57 ) ( N/A , 0.01 , 0.3) | 509.7<br>4.4 | 0.0019<br>137.5<br>122.1 | 0.1000<br>[ 0.1000 ] | 100.0% | 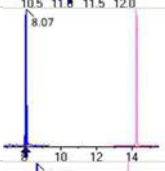 | 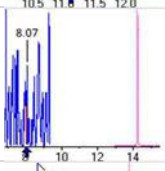 | |
| PFHxSA | ( 397.9 / 78.0 ) 122494<br>( 397.9 / 378.0 ) 574 | ( 10.95 , 0.75 ) ( N/A , 0.01 , 0.7) | 634.8<br>35.3 | 0.0047<br>123.1<br>112.0 | 0.0988<br>[ 0.1000 ] | 98.8% | 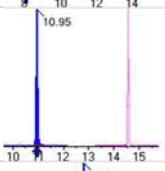 | 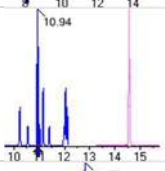 | |
| PFOSA | ( 498.0 / 78.0 ) 120368<br>( 498.0 / 478.0 ) 1847 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.5) | 739.1<br>75.9 | 0.0153<br>106.3<br>112.1 | 0.1023<br>[ 0.1000 ] | 102.3% | 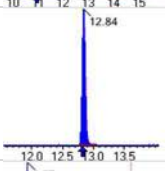 | 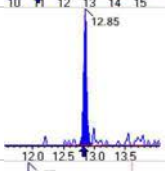 | |
| TFSI | ( 279.7 / 147.0 ) 282474<br>( 279.7 / 211.0 ) 24008 | ( 8.27 , 0.64 ) ( N/A , 0.02 , -0.1) | 59.2<br>24.4 | 0.0850<br>103.1<br>99.9 | 0.1130<br>[ 0.0979 ] | 115.3% | 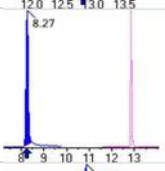 | 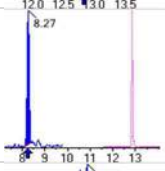 | |
| NMeFOSA | ( 512.0 / 219.0 ) 81103<br>( 512.0 / 169.0 ) 61309 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.1) | 880.2<br>804.6 | 0.7559<br>102.8<br>99.0 | 0.3726<br>[ 0.4000 ] | 93.2% | 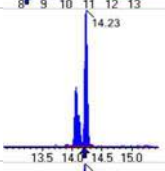 | 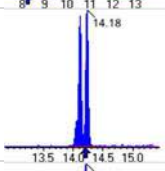 | |
| NEtFOSA | ( 526.0 / 219.0 ) 100654<br>( 526.0 / 169.0 ) 124870 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 2.2) | 884.3<br>785.7 | 1.2406<br>97.9<br>98.3 | 0.3793<br>[ 0.4000 ] | 94.8% | 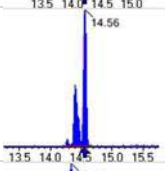 | 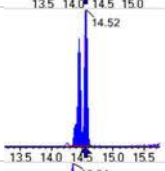 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 27139<br>( 570.0 / 483.0 ) 14926 | ( 10.34 , 1.00 ) ( 0.00 , N/A , -0.1) | 16768.9<br>242.3 | 0.5500<br>127.0<br>120.7 | 0.0860<br>[ 0.1000 ] | 86.0% | 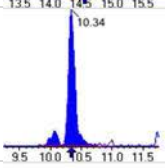 | 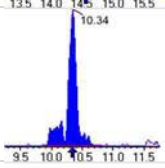 | MI4 ABK 3/18/24 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 27278<br>( 584.0 / 526.0 ) 20488 | ( 10.88 , 1.00 )<br>( 0.02 , N/A , 0.0) | 15383.3<br>556.1 | 0.7511<br>121.3<br>124.7 | 0.0899<br>[ 0.1000 ] | 89.9% | 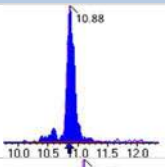 | 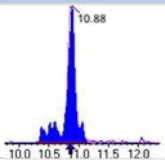 | |
| NMeFOSE | ( 616.0 / 59.0 ) 47110 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 308.0 | N/A<br>0.0<br>0.0 | 0.4117<br>[ 0.4000 ] | 102.9% | 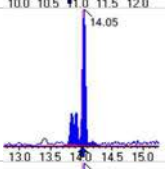 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 37279 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 362.5 | N/A<br>0.0<br>0.0 | 0.3924<br>[ 0.4000 ] | 98.1% | 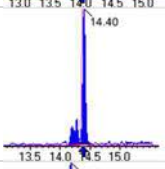 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 9630<br>( 285.0 / 185.0 ) 28989 | ( 6.54 , 1.00 )<br>( 0.00 , N/A , 0.1) | 202.1<br>193.5 | 3.0103<br>96.6<br>108.6 | 0.1014<br>[ 0.1000 ] | 101.4% | 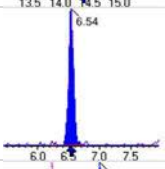 | 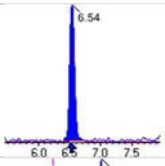 | |
| ADONA | ( 377.0 / 85.0 ) 107929<br>( 377.0 / 251.0 ) 11488 | ( 7.62 , 1.16 )<br>( N/A , 0.01 , -0.2) | 856.6<br>96.8 | 0.1064<br>99.8<br>100.6 | 0.0892<br>[ 0.0943 ] | 94.7% | 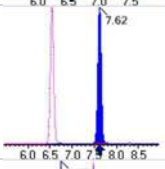 | 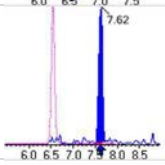 | |
| PFMPA | ( 229.0 / 85.0 ) 17335 | ( 4.17 , 0.86 )<br>( N/A , 0.03 , 0.0) | 450.7 | N/A<br>0.0<br>0.0 | 0.1632<br>[ 0.2000 ] | 81.6% | 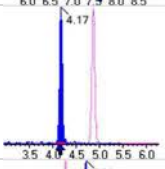 | | |
| PFMBA | ( 279.0 / 85.0 ) 49742 | ( 5.23 , 1.08 )<br>( N/A , 0.02 , 0.0) | 647.5 | N/A<br>0.0<br>0.0 | 0.1769<br>[ 0.2000 ] | 88.4% | 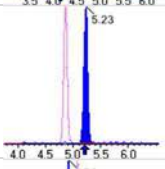 | | |
| NFDHA | ( 295.0 / 201.0 ) 24378<br>( 295.0 / 85.0 ) 24427 | ( 5.94 , 0.98 )<br>( N/A , 0.01 , -0.3) | 645.3<br>267.0 | 1.0020<br>92.6<br>93.6 | 0.1825<br>[ 0.2000 ] | 91.3% | 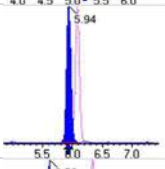 | 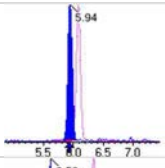 | |
| PFECHS | ( 461.0 / 98.9 ) 64083<br>( 461.0 / 381.2 ) 23316 | ( 9.59 , 0.91 )<br>( N/A , 0.01 , -0.1) | 745.5<br>4475.3 | 0.3638<br>93.2<br>93.0 | 0.0896<br>[ 0.0924 ] | 97.0% | 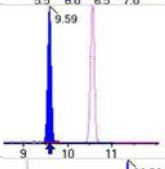 | 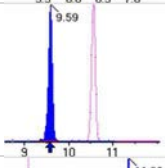 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 119606<br>( 533.0 / 353.0 ) 36493 | ( 11.21 , 1.71 )<br>( N/A , 0.01 , 0.2) | 1493.1<br>339.4 | 0.3051<br>94.9<br>98.0 | 0.0801<br>[ 0.0933 ] | 85.9% | 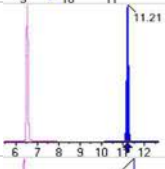 | 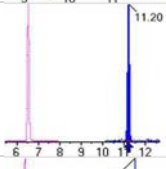 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 88564<br>( 633.0 / 453.0 ) 29491 | ( 12.51 , 1.91 )<br>( N/A , 0.02 , 0.0) | 1072.7<br>283.6 | 0.3330<br>102.0<br>100.4 | 0.0757<br>[ 0.0943 ] | 80.3% | 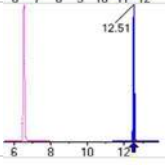 | 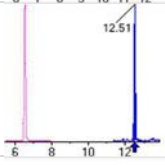 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 )<br>46383<br>( 315.0 / 83.0 )<br>34321 | ( 6.98 , 1.15 )<br>( N/A , 0.01 , -0.1) | 479.2<br>77.4 | 0.7399<br>129.1<br>125.1 | 0.1605<br>[ 0.1785 ] | 89.9% | 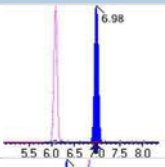 | 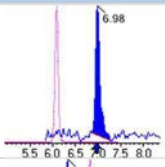 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>6820<br>( 241.0 / 117.0 )<br>11694 | ( 4.40 , 0.91 )<br>( N/A , 0.03 , -0.1) | 309.8<br>62.7 | 1.7147<br>77.3<br>77.1 | 0.4183<br>[ 0.4000 ] | 104.6% | 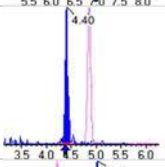 | 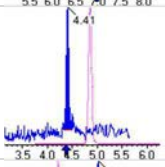 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>37246<br>( 341.0 / 217.0 )<br>54681 | ( 6.94 , 1.14 )<br>( N/A , 0.01 , 0.0) | 249.3<br>188.1 | 1.4681<br>98.1<br>95.8 | 0.3999<br>[ 0.4000 ] | 100.0% | 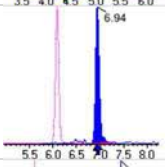 | 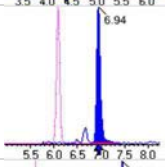 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>53953<br>( 441.0 / 337.0 )<br>42819 | ( 9.34 , 1.54 )<br>( N/A , 0.01 , 0.0) | 4256.8<br>216437.5 | 0.7936<br>89.2<br>91.6 | 0.3938<br>[ 0.4000 ] | 98.5% | 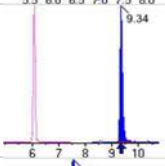 | 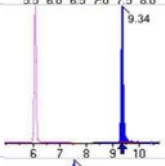 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>31197<br>( 357.2 / 243.0 )<br>3077 | ( 6.81 , 1.00 )<br>( -0.01 , N/A , -0.2) | 209.8<br>48.5 | 0.0986<br>93.5<br>92.3 | 0.0827<br>[ 0.1000 ] | 82.7% | 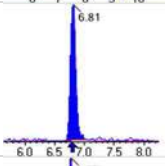 | 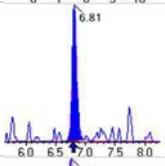 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>25379<br>( 457.2 / 343.0 )<br>1136 | ( 8.87 , 1.00 )<br>( -0.01 , N/A , 0.5) | 229.0<br>52.5 | 0.0448<br>114.4<br>117.8 | 0.0927<br>[ 0.1000 ] | 92.7% | 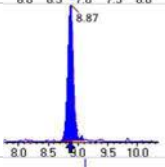 | 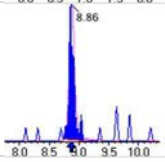 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 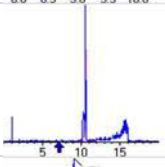 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>331763 | ( 3.78 , N/A )<br>( N/A , 0.03 , N/A ) | 1009.2 | N/A | 1.1013<br>[ 1.0000 ] | 110.1%<br>{ 98.0% } | 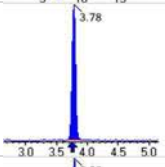 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>169221 | ( 6.09 , N/A )<br>( N/A , 0.02 , N/A ) | 16880.5 | N/A | 1.1005<br>[ 1.0000 ] | 110.0%<br>{ 99.3% } | 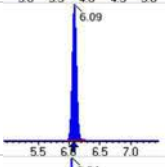 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>474496 | ( 8.24 , N/A )<br>( N/A , 0.01 , N/A ) | 8837.0 | N/A | 1.0636<br>[ 1.0000 ] | 106.4%<br>{ 97.2% } | 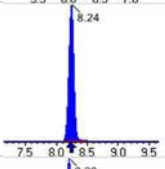 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>379001 | ( 9.20 , N/A )<br>( N/A , 0.01 , N/A ) | 1172.0 | N/A | 1.1337<br>[ 1.0000 ] | 113.4%<br>{ 98.5% } | 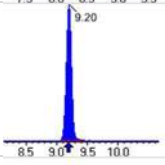 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-LCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 370420 | ( 10.10 , N/A ) ( N/A , 0.01 , N/A ) | 8141.5 | N/A | 1.1170 [ 1.0000 ] | 111.7% { 98.1% } | 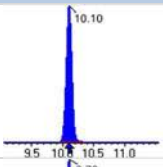 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1157910 | ( 8.70 , N/A ) ( N/A , 0.01 , N/A ) | 5524.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 92.4% } | 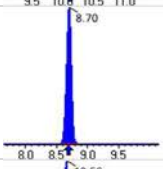 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1027891 | ( 10.56 , N/A ) ( N/A , 0.01 , N/A ) | 2385.0 | N/A | 1.0530 [ 1.0000 ] | 105.3% { 97.2% } | 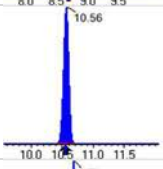 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3125268 | ( 3.78 , N/A ) ( N/A , 0.03 , N/A ) | 58898.6 | N/A | 8.5424 [ 8.0000 ] | 106.8% { 110.0% } | 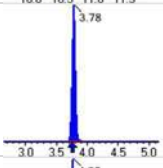 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1318650 | ( 4.86 , N/A ) ( N/A , 0.02 , N/A ) | 6185.3 | N/A | 4.3437 [ 4.0000 ] | 108.6% { 103.0% } | 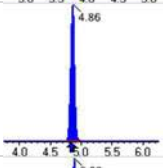 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 793127 | ( 6.09 , N/A ) ( N/A , 0.02 , N/A ) | 7882.0 | N/A | 2.1829 [ 2.0000 ] | 109.1% { 104.6% } | 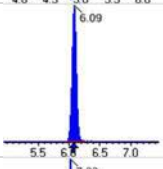 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 812572 | ( 7.23 , N/A ) ( N/A , 0.01 , N/A ) | 4975.0 | N/A | 2.1413 [ 2.0000 ] | 107.1% { 99.0% } | 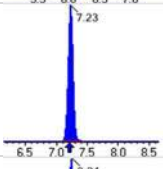 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1041932 | ( 8.24 , N/A ) ( N/A , 0.01 , N/A ) | 2945.6 | N/A | 2.0827 [ 2.0000 ] | 104.1% { 95.9% } | 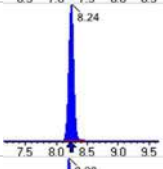 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 379377 | ( 9.20 , N/A ) ( N/A , 0.01 , N/A ) | 3310.1 | N/A | 1.0366 [ 1.0000 ] | 103.7% { 100.3% } | 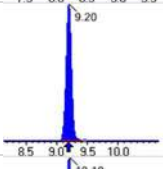 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 443708 | ( 10.10 , N/A ) ( N/A , 0.01 , N/A ) | 1361.9 | N/A | 1.0380 [ 1.0000 ] | 103.8% { 94.1% } | 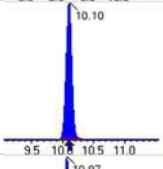 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 533461 | ( 10.97 , N/A ) ( N/A , 0.01 , N/A ) | 1010.6 | N/A | 1.0265 [ 1.0000 ] | 102.6% { 105.2% } | 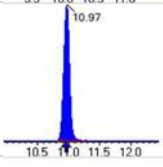 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-LCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 499843 | ( 11.79 , N/A ) ( N/A , 0.02 , N/A ) | 1398.8 | N/A | 0.9577 [ 1.0000 ] | 95.8% { 96.3% } | 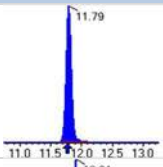  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 451057 | ( 12.91 , N/A ) ( N/A , 0.02 , N/A ) | 1611.9 | N/A | 0.9918 [ 1.0000 ] | 99.2% { 101.9% } | 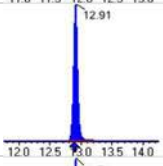  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 739065 | ( 13.71 , N/A ) ( N/A , 0.02 , N/A ) | 3147.2 | N/A | 1.9132 [ 2.0000 ] | 95.7% { 91.8% } | 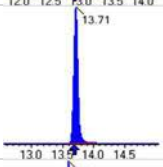  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2400656 | ( 6.39 , N/A ) ( N/A , 0.02 , N/A ) | 922.5 | N/A | 2.1279 [ 2.0000 ] | 106.4% { 100.7% } | 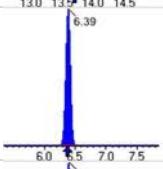  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1755588 | ( 8.70 , N/A ) ( N/A , 0.01 , N/A ) | 5071.1 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 99.6% } | 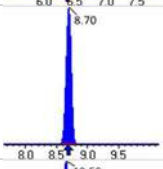  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2194024 | ( 10.56 , N/A ) ( N/A , 0.01 , N/A ) | 1915.9 | N/A | 2.0050 [ 2.0000 ] | 100.3% { 98.3% } | 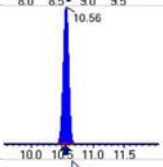  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 722361 | ( 5.55 , N/A ) ( N/A , 0.02 , N/A ) | 105.1 | N/A | 7.1640 [ 4.0000 ] | 179.1% { 130.6% } | 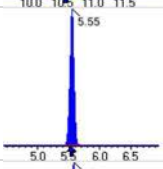  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2011872 | ( 7.67 , N/A ) ( N/A , 0.01 , N/A ) | 4911.2 | N/A | 6.4250 [ 4.0000 ] | 160.6% { 123.6% } | 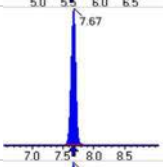  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 2049949 | ( 9.47 , N/A ) ( N/A , 0.01 , N/A ) | 1752.3 | N/A | 6.5711 [ 4.0000 ] | 164.3% { 120.1% } | 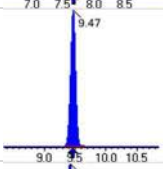  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3856771 | ( 11.11 , N/A ) ( N/A , 0.02 , N/A ) | 1807.9 | N/A | 10.7701 [ 8.0000 ] | 134.6% { 103.9% } | 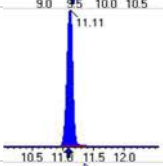  | | S2, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2410614 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2294.3 | N/A | 2.0329 [ 2.0000 ] | 101.6% { 99.5% } | 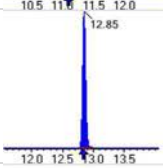  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (2)
Acquired: 2024/03/18 - 13:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 432201 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 2305.1 | N/A | 1.9738 [ 2.0000 ] | 98.7% { 101.1% } | 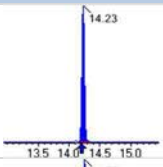 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 483638 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2653.7 | N/A | 1.9229 [ 2.0000 ] | 96.1% { 99.9% } | 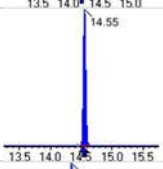 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1340984 | ( 10.34 , N/A ) ( N/A , 0.01 , N/A ) | 2814.2 | N/A | 4.7853 [ 4.0000 ] | 119.6% { 101.6% } | 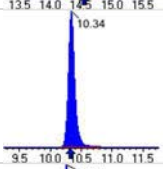 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1257983 | ( 10.86 , N/A ) ( N/A , 0.01 , N/A ) | 1676.8 | N/A | 4.7291 [ 4.0000 ] | 118.2% { 102.1% } | 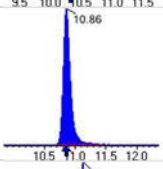 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 2021500 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 2922.3 | N/A | 19.7574 [ 20.0000 ] | 98.8% { 108.7% } | 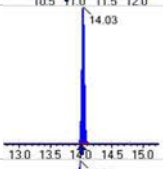 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2150207 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 4803.4 | N/A | 17.3481 [ 20.0000 ] | 86.7% { 102.7% } | 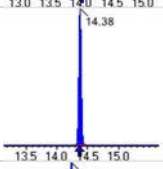 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1338453 | ( 6.54 , N/A ) ( N/A , 0.01 , N/A ) | 1962.9 | N/A | 8.5700 [ 8.0000 ] | 107.1% { 95.4% } | 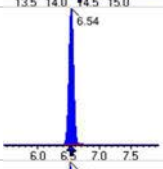 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 701656 | ( 6.82 , N/A ) ( N/A , 0.01 , N/A ) | 1296.8 | N/A | 2.1357 [ 2.0000 ] | 106.8% { 98.6% } | 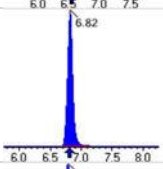 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 649166 | ( 8.88 , N/A ) ( N/A , 0.01 , N/A ) | 605.6 | N/A | 2.1165 [ 2.0000 ] | 105.8% { 96.9% } | 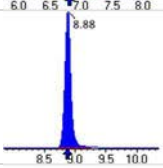 | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0083L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.412L | 2.9L | 30.00L |
| PFPeAL | 0.200L | 0.208L | 4.0L | 30.00L |
| PFHxAL | 0.100L | 0.0989L | -1.1L | 30.00L |
| PFHpAL | 0.100L | 0.0936L | -6.4L | 30.00L |
| PFOAL | 0.100L | 0.112L | 12.0L | 30.00L |
| PFNAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFDAL | 0.100L | 0.109L | 8.9L | 30.00L |
| PFUnAL | 0.100L | 0.101L | 1.3L | 30.00L |
| PFDoAL | 0.100L | 0.105L | 4.9L | 30.00L |
| PFTrDAL | 0.100L | 0.0940L | -6.0L | 30.00L |
| PFTeDAL | 0.100L | 0.0978L | -2.2L | 30.00L |
| PFHxDAL | 0.100L | 0.0965L | -3.5L | 30.00L |
| PFODAL | 0.100L | 0.0984L | -1.6L | 30.00L |
| PFBSL | 0.0885L | 0.0922L | 4.2L | 30.00L |
| PFPeSL | 0.0940L | 0.0887L | -5.6L | 30.00L |
| PFHxSL | 0.0915L | 0.0881L | -3.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0824L | -13.7L | 30.00L |
| PFOSL | 0.0930L | 0.0974L | 4.8L | 30.00L |
| PFNSL | 0.0960L | 0.0859L | -10.5L | 30.00L |
| PFDSL | 0.0965L | 0.0905L | -6.2L | 30.00L |
| PFDoSL | 0.0970L | 0.0876L | -9.7L | 30.00L |
| 4:2FTSL | 0.375L | 0.354L | -5.6L | 30.00L |
| 6:2FTSL | 0.380L | 0.399L | 5.0L | 30.00L |
| 8:2FTSL | 0.384L | 0.364L | -5.1L | 30.00L |
| 10:2FTSL | 0.386L | 0.360L | -6.7L | 30.00L |
| PFOSAL | 0.100L | 0.0896L | -10.4L | 30.00L |
| NMeFOSAL | 0.400L | 0.385L | -3.6L | 30.00L |
| NEtFOSAL | 0.400L | 0.359L | -10.3L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0083L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0869L | -13.1L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0961L | -3.9L | 30.00L |
| NMeFOSEL | 0.400L | 0.387L | -3.3L | 30.00L |
| NEtFOSEL | 0.400L | 0.386L | -3.4L | 30.00L |
| HFPO-DAL | 0.100L | 0.0941L | -5.9L | 30.00L |
| ADONAL | 0.0945L | 0.0894L | -5.3L | 30.00L |
| PFEESAL | 0.178L | 0.175L | -1.5L | 30.00L |
| PFMPAL | 0.200L | 0.174L | -12.9L | 30.00L |
| PFMBAL | 0.200L | 0.179L | -10.5L | 30.00L |
| NFDHAL | 0.200L | 0.189L | -5.3L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0865L | -7.5L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0829L | -12.3L | 30.00L |
| 3:3FTCAL | 0.400L | 0.308L | -23.0L | 30.00L |
| 5:3FTCAL | 0.400L | 0.387L | -3.1L | 30.00L |
| 7:3FTCAL | 0.400L | 0.383L | -4.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 47067<br>( 163.0 / 69.0 ) 1316 | ( 2.78 , 0.74 ) ( N/A , -0.02 , -0.4) | 355.9<br>61.6 | 0.0280<br>103.0<br>106.1 | 0.1478<br>[ 0.2000 ] | 73.9% | 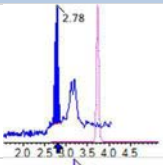 | 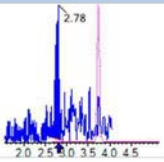 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 138592 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 108.4 | N/A<br>0.0<br>0.0 | 0.4116<br>[ 0.4000 ] | 102.9% | 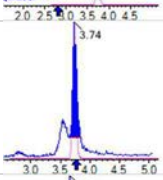 | | MI5 ABK 3/19/24 |
| PFPeA | ( 263.0 / 219.0 ) 60330<br>( 263.0 / 69.0 ) 274 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 1.0) | 334.1<br>11.7 | 0.0045<br>38.0<br>40.9 | 0.2080<br>[ 0.2000 ] | 104.0% | 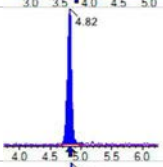 | 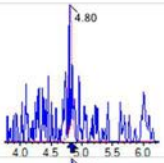 | |
| PFHxA | ( 313.0 / 269.0 ) 31048<br>( 313.0 / 119.0 ) 3804 | ( 6.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 218.1<br>76.3 | 0.1225<br>105.5<br>104.7 | 0.0989<br>[ 0.1000 ] | 98.9% | 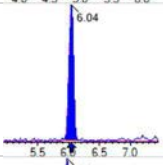 | 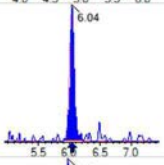 | |
| PFHpA | ( 363.0 / 319.0 ) 32104<br>( 363.0 / 169.0 ) 10165 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.1) | 282.8<br>149.1 | 0.3166<br>104.5<br>107.3 | 0.0936<br>[ 0.1000 ] | 93.6% | 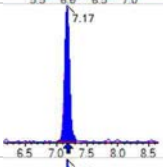 | 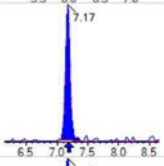 | |
| PFOA | ( 413.0 / 369.0 ) 61826<br>( 413.0 / 169.0 ) 21484 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 84.0<br>115.4 | 0.3475<br>95.1<br>101.2 | 0.1120<br>[ 0.1000 ] | 112.0% | 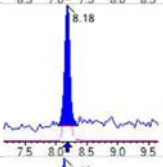 | 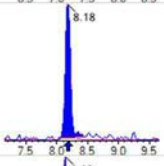 | |
| PFNA | ( 463.0 / 419.0 ) 29580<br>( 463.0 / 169.0 ) 6943 | ( 9.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 240.2<br>119.7 | 0.2347<br>91.9<br>97.6 | 0.0959<br>[ 0.1000 ] | 95.9% | 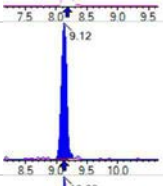 | 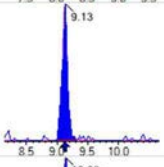 | |
| PFDA | ( 513.0 / 469.0 ) 40655<br>( 513.0 / 169.0 ) 5291 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.3) | 500.2<br>217.6 | 0.1301<br>111.1<br>108.7 | 0.1089<br>[ 0.1000 ] | 108.9% | 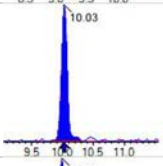 | 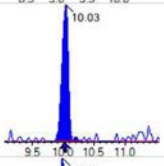 | |
| PFUnA | ( 563.0 / 519.0 ) 40509<br>( 563.0 / 169.0 ) 6769 | ( 10.89 , 1.00 ) ( 0.00 , N/A , -0.5) | 276.0<br>131.2 | 0.1671<br>117.9<br>117.6 | 0.1013<br>[ 0.1000 ] | 101.3% | 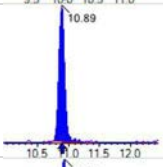 | 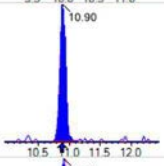 | |
| PFDoA | ( 613.0 / 569.0 ) 45754<br>( 613.0 / 169.0 ) 6839 | ( 11.71 , 1.00 ) ( -0.01 , N/A , 0.6) | 261.3<br>77.8 | 0.1495<br>94.6<br>101.1 | 0.1049<br>[ 0.1000 ] | 104.9% | 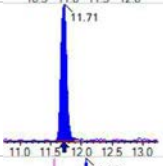 | 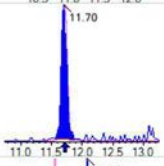 | |
| PFTrDA | ( 663.0 / 619.0 ) 40077<br>( 663.0 / 169.0 ) 12540 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 189.2<br>161.2 | 0.3129<br>121.6<br>120.8 | 0.0940<br>[ 0.1000 ] | 94.0% | 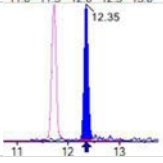 | 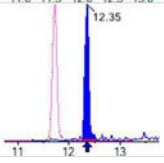 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 32062<br>( 713.0 / 169.0 ) 9163 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 280.6<br>82.3 | 0.2858<br>105.9<br>107.5 | 0.0978<br>[ 0.1000 ] | 97.8% | 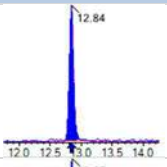 | 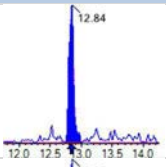 | |
| PFHxDA | ( 813.0 / 769.0 ) 26666<br>( 813.0 / 169.0 ) 5158 | ( 13.65 , 1.00 ) ( 0.00 , N/A , -0.1) | 205.7<br>48.2 | 0.1934<br>79.1<br>75.8 | 0.0965<br>[ 0.1000 ] | 96.5% | 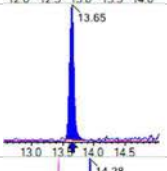 | 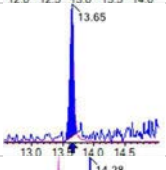 | |
| PFODA | ( 913.0 / 869.0 ) 17005<br>( 913.0 / 169.0 ) 6421 | ( 14.28 , 1.05 ) ( N/A , -0.01 , -0.5) | 92.3<br>35.7 | 0.3776<br>105.4<br>110.8 | 0.0984<br>[ 0.1000 ] | 98.4% | 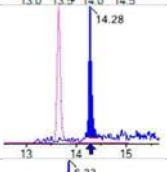 | 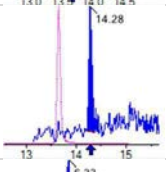 | |
| PFBS | ( 299.0 / 80.0 ) 44646<br>( 299.0 / 99.0 ) 27872 | ( 6.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 383.3<br>165.4 | 0.6243<br>88.3<br>84.9 | 0.0922<br>[ 0.0885 ] | 104.2% | 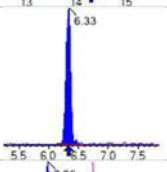 | 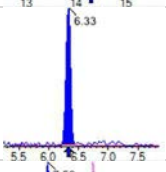 | |
| PFPeS | ( 349.0 / 80.0 ) 101159<br>( 349.0 / 99.0 ) 36023 | ( 7.56 , 0.88 ) ( N/A , 0.00 , -0.2) | 377.7<br>381.4 | 0.3561<br>99.0<br>101.1 | 0.0887<br>[ 0.0938 ] | 94.5% | 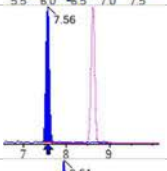 | 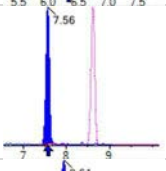 | |
| PFHxS | ( 399.0 / 80.0 ) 116709<br>( 399.0 / 99.0 ) 38098 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 575.1<br>430.6 | 0.3264<br>102.5<br>97.6 | 0.0881<br>[ 0.0911 ] | 96.7% | 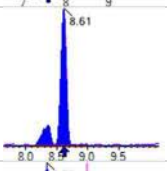 | 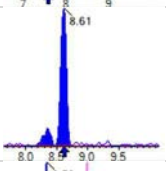 | |
| PFHpS | ( 449.0 / 80.0 ) 87202<br>( 449.0 / 99.0 ) 26573 | ( 9.59 , 0.91 ) ( N/A , 0.01 , 0.2) | 325.7<br>293.6 | 0.3047<br>115.1<br>115.1 | 0.0824<br>[ 0.0951 ] | 86.6% | 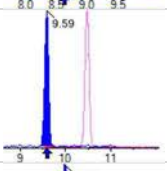 | 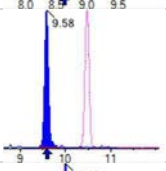 | |
| PFOS | ( 499.0 / 80.0 ) 99408<br>( 499.0 / 99.0 ) 23088 | ( 10.47 , 1.00 ) ( 0.00 , N/A , -0.6) | 316.8<br>8184.8 | 0.2323<br>99.4<br>96.7 | 0.0974<br>[ 0.0927 ] | 105.1% | 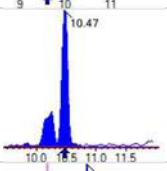 | 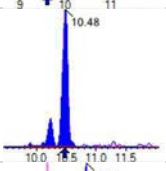 | |
| PFNS | ( 549.0 / 80.0 ) 82027<br>( 549.0 / 99.0 ) 23150 | ( 11.31 , 1.08 ) ( N/A , 0.00 , 0.1) | 271.8<br>203.4 | 0.2822<br>103.6<br>104.7 | 0.0859<br>[ 0.0960 ] | 89.5% | 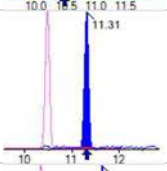 | 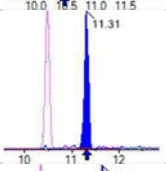 | |
| PFDS | ( 599.0 / 80.0 ) 105536<br>( 599.0 / 99.0 ) 29516 | ( 12.03 , 1.15 ) ( N/A , 0.00 , -0.2) | 384.1<br>182.1 | 0.2797<br>102.9<br>104.6 | 0.0905<br>[ 0.0963 ] | 94.0% | 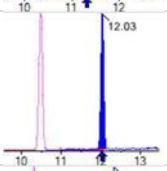 | 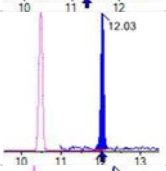 | |
| PFDoS | ( 699.0 / 80.0 ) 90038<br>( 699.0 / 99.0 ) 21141 | ( 12.95 , 1.24 ) ( N/A , 0.00 , 0.2) | 633.3<br>245.9 | 0.2348<br>100.5<br>102.5 | 0.0876<br>[ 0.0970 ] | 90.3% | 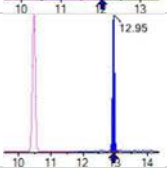 | 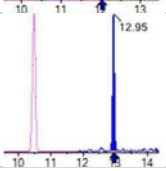 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 171899<br>( 327.0 / 81.0 ) 150442 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1717.6<br>683.9 | 0.8752<br>100.3<br>97.2 | 0.3539<br>[ 0.3738 ] | 94.7% | 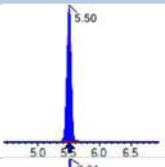 | 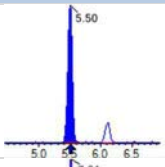 | |
| 6:2FTS | ( 427.0 / 407.0 ) 166522<br>( 427.0 / 81.0 ) 197744 | ( 7.61 , 1.00 ) ( -0.01 , N/A , 0.0) | 2378.9<br>1070.7 | 1.1875<br>94.7<br>89.7 | 0.3988<br>[ 0.3796 ] | 105.1% | 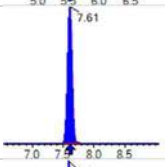 | 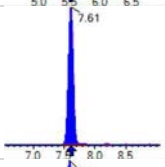 | |
| 8:2FTS | ( 527.0 / 507.0 ) 144163<br>( 527.0 / 81.0 ) 157932 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.1) | 941.2<br>658.7 | 1.0955<br>100.7<br>107.5 | 0.3643<br>[ 0.3833 ] | 95.1% | 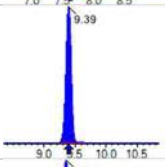 | 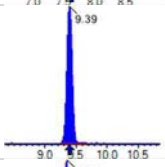 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119303<br>( 627.0 / 81.0 ) 176570 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 738.6<br>403.5 | 1.4800<br>102.8<br>101.5 | 0.3600<br>[ 0.3865 ] | 93.2% | 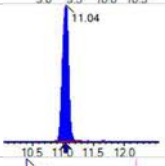 | 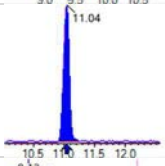 | |
| PFBSA | ( 297.9 / 78.0 ) 85442<br>( 297.9 / 278.0 ) 256 | ( 8.10 , 0.57 ) ( N/A , 0.00 , -2.0) | 513.5<br>10.9 | 0.0030<br>219.5<br>193.6 | 0.1039<br>[ 0.1000 ] | 103.9% | 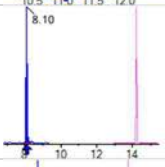 | 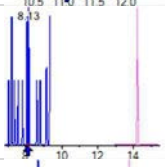 | |
| PFHxSA | ( 397.9 / 78.0 ) 109513<br>( 397.9 / 378.0 ) 757 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.1) | 794.2<br>30.1 | 0.0069<br>169.2<br>165.2 | 0.0991<br>[ 0.1000 ] | 99.1% | 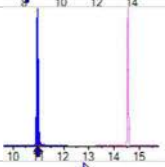 | 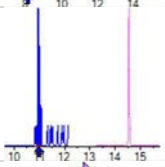 | |
| PFOSA | ( 498.0 / 78.0 ) 72856<br>( 498.0 / 478.0 ) 1203 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.8) | 695.3<br>58.1 | 0.0165<br>117.6<br>110.9 | 0.0896<br>[ 0.1000 ] | 89.6% | 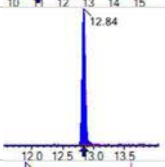 | 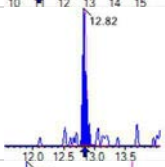 | |
| TFSI | ( 279.7 / 147.0 ) 192505<br>( 279.7 / 211.0 ) 18747 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.2) | 49.6<br>23.7 | 0.0974<br>115.9<br>113.8 | 0.0899<br>[ 0.0979 ] | 91.8% | 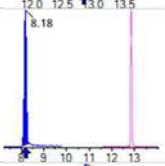 | 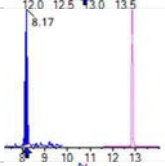 | |
| NMeFOSA | ( 512.0 / 219.0 ) 61072<br>( 512.0 / 169.0 ) 45751 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.5) | 689.5<br>323.4 | 0.7491<br>100.1<br>98.8 | 0.3855<br>[ 0.4000 ] | 96.4% | 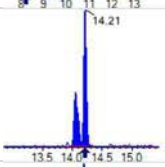 | 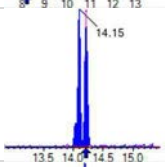 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72281<br>( 526.0 / 169.0 ) 87162 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 814.9<br>622.0 | 1.2059<br>97.7<br>97.1 | 0.3588<br>[ 0.4000 ] | 89.7% | 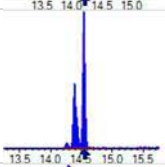 | 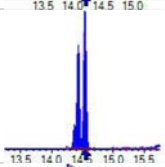 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 19339<br>( 570.0 / 483.0 ) 9536 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 1.4) | 48407.4<br>49763.3 | 0.4931<br>112.5<br>105.5 | 0.0869<br>[ 0.1000 ] | 86.9% | 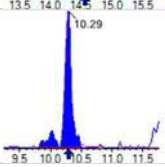 | 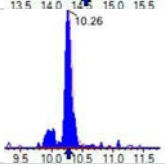 | MI4 ABK 3/19/24 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21192<br>( 584.0 / 526.0 ) 11046 | ( 10.82 , 1.00 ) ( 0.02 , N/A , 0.8) | 143962.1<br>234.0 | 0.5212<br>84.5<br>88.1 | 0.0961<br>[ 0.1000 ] | 96.1% | 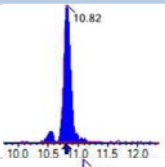 | 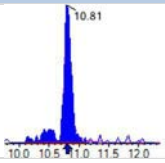 | MI4 ABK 3/19/24 |
| NMeFOSE | ( 616.0 / 59.0 ) 31285 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 199.9 | N/A<br>0.0<br>0.0 | 0.3866<br>[ 0.4000 ] | 96.7% | 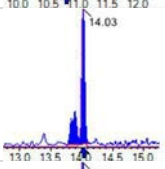 | | MI3 ABK 3/19/24 |
| NEtFOSE | ( 630.0 / 59.0 ) 25347 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 258.7 | N/A<br>0.0<br>0.0 | 0.3864<br>[ 0.4000 ] | 96.6% | 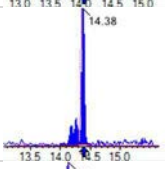 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7969<br>( 285.0 / 185.0 ) 22073 | ( 6.48 , 1.00 ) ( -0.01 , N/A , -0.3) | 172.6<br>171.4 | 2.7698<br>100.2<br>105.0 | 0.0941<br>[ 0.1000 ] | 94.1% | 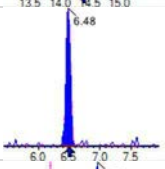 | 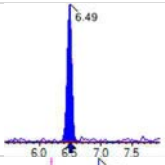 | |
| ADONA | ( 377.0 / 85.0 ) 88358<br>( 377.0 / 251.0 ) 9014 | ( 7.56 , 1.17 ) ( N/A , 0.00 , 0.2) | 604.2<br>141.8 | 0.1020<br>100.1<br>97.6 | 0.0894<br>[ 0.0943 ] | 94.9% | 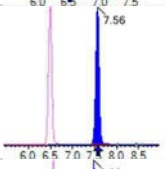 | 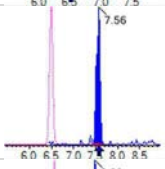 | |
| PFEESA | ( 315.0 / 135.0 ) 39560<br>( 315.0 / 83.0 ) 25099 | ( 6.92 , 1.15 ) ( N/A , -0.01 , -0.4) | 780.1<br>83.9 | 0.6345<br>113.8<br>112.0 | 0.1754<br>[ 0.1785 ] | 98.3% | 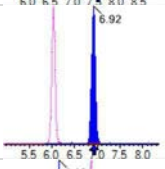 | 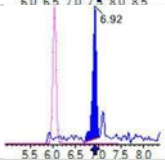 | |
| PFMPA | ( 229.0 / 85.0 ) 16031 | ( 4.12 , 0.86 ) ( N/A , -0.02 , 0.0) | 334.6 | N/A<br>0.0<br>0.0 | 0.1742<br>[ 0.2000 ] | 87.1% | 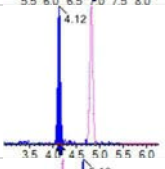 | | |
| PFMBA | ( 279.0 / 85.0 ) 44800 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 597.2 | N/A<br>0.0<br>0.0 | 0.1791<br>[ 0.2000 ] | 89.5% | 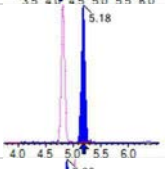 | | |
| NFDHA | ( 295.0 / 201.0 ) 22208<br>( 295.0 / 85.0 ) 22515 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.2) | 653.0<br>208.4 | 1.0138<br>94.0<br>100.8 | 0.1894<br>[ 0.2000 ] | 94.7% | 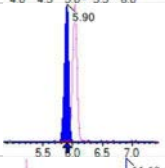 | 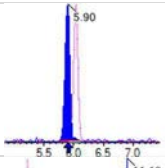 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 92247<br>( 533.0 / 353.0 ) 27025 | ( 11.13 , 1.71 ) ( N/A , 0.01 , 0.3) | 1045.0<br>479.6 | 0.2930<br>93.6<br>88.9 | 0.0865<br>[ 0.0933 ] | 92.6% | 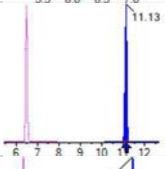 | 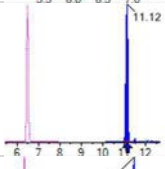 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 67993<br>( 633.0 / 453.0 ) 23083 | ( 12.44 , 1.92 ) ( N/A , 0.00 , -0.2) | 1180.5<br>305.0 | 0.3395<br>102.2<br>99.2 | 0.0829<br>[ 0.0943 ] | 87.9% | 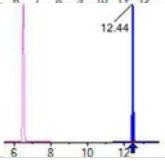 | 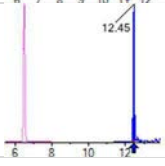 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 47255<br>( 461.0 / 381.2 ) 20429 | ( 9.51 , 0.91 )<br>( N/A , 0.00 , 0.1) | 785.8<br>377.2 | 0.4323<br>108.5<br>109.0 | 0.0821<br>[ 0.0924 ] | 88.9% | 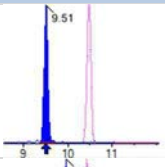 | 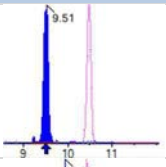 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5084<br>( 241.0 / 117.0 ) 13448 | ( 4.38 , 0.91 )<br>( N/A , -0.01 , 0.0) | 299.2<br>194.9 | 2.6448<br>125.5<br>121.9 | 0.3081<br>[ 0.4000 ] | 77.0% | 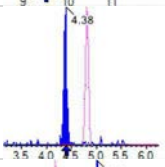 | 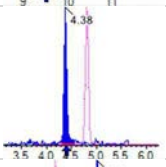 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 33751<br>( 341.0 / 217.0 ) 52605 | ( 6.93 , 1.15 )<br>( N/A , -0.01 , 0.0) | 268.0<br>252.9 | 1.5586<br>102.6<br>107.1 | 0.3875<br>[ 0.4000 ] | 96.9% | 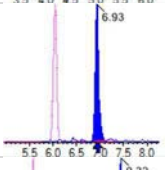 | 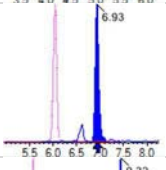 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54752<br>( 441.0 / 337.0 ) 50432 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , 0.0) | 6985.1<br>5483054.5 | 0.9211<br>100.4<br>105.3 | 0.3831<br>[ 0.4000 ] | 95.8% | 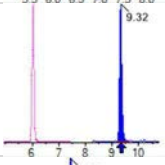 | 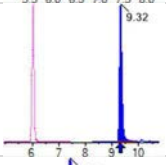 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 35681<br>( 357.2 / 243.0 ) 5762 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 296.0<br>77.3 | 0.1615<br>146.5<br>155.1 | 0.0905<br>[ 0.1000 ] | 90.5% | 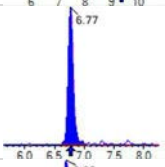 | 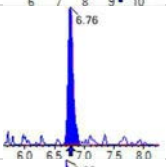 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24379<br>( 457.2 / 343.0 ) 1534 | ( 8.80 , 1.00 )<br>( -0.02 , N/A , -0.4) | 217.0<br>80.7 | 0.0629<br>151.7<br>138.8 | 0.0887<br>[ 0.1000 ] | 88.7% | 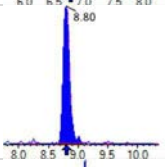 | 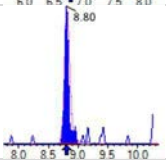 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 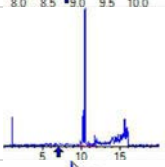 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282417 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1316.3 | N/A | 1.1845<br>[ 1.0000 ] | 118.4%<br>{ 119.4% } | 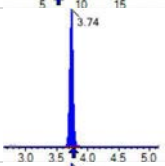 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 132714 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 6222.6 | N/A | 1.0462<br>[ 1.0000 ] | 104.6%<br>{ 104.8% } | 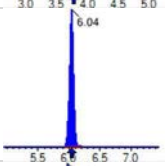 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 445408 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3769.0 | N/A | 1.1267<br>[ 1.0000 ] | 112.7%<br>{ 117.4% } | 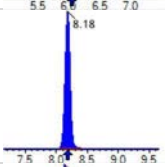 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317549 | ( 9.12 , N/A )<br>( N/A , 0.01 , N/A ) | 1127.4 | N/A | 1.1165<br>[ 1.0000 ] | 111.7%<br>{ 112.9% } | 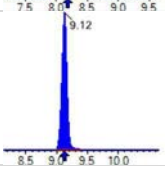 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303337 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3256.1 | N/A | 1.0387 [ 1.0000 ] | 103.9% { 104.9% } | 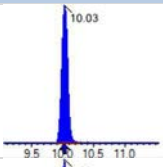 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1014053 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 5000.9 | N/A | 1.0685 [ 1.0000 ] | 106.9% { 108.6% } | 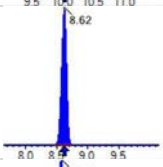 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 795109 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1897.5 | N/A | 1.0439 [ 1.0000 ] | 104.4% { 111.7% } | 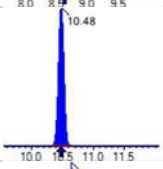 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2702588 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40570.3 | N/A | 8.3767 [ 8.0000 ] | 104.7% { 120.7% } | 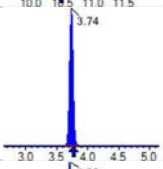 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1148479 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6049.7 | N/A | 4.6380 [ 4.0000 ] | 115.9% { 117.7% } | 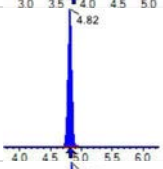 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 653814 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 9511.1 | N/A | 2.1592 [ 2.0000 ] | 108.0% { 110.8% } | 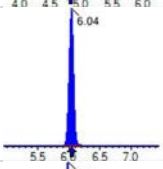 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 699408 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 7443.9 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 106.5% } | 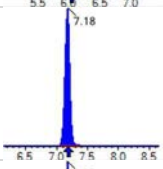 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 929590 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 4049.2 | N/A | 1.9478 [ 2.0000 ] | 97.4% { 107.8% } | 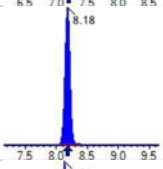 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 307041 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3378.4 | N/A | 0.9861 [ 1.0000 ] | 98.6% { 113.8% } | 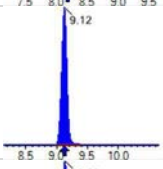 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 365279 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 996.8 | N/A | 1.0745 [ 1.0000 ] | 107.5% { 113.5% } | 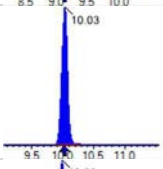 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432373 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 808.4 | N/A | 1.0811 [ 1.0000 ] | 108.1% { 116.2% } | 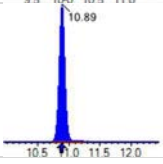 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433394 | ( 11.72 , N/A ) ( N/A , 0.00 , N/A ) | 1303.4 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 116.2% } | 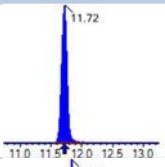  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 350124 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1144.3 | N/A | 1.0095 [ 1.0000 ] | 100.9% { 107.2% } | 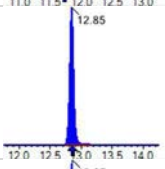  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579308 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2648.7 | N/A | 1.9564 [ 2.0000 ] | 97.8% { 114.7% } | 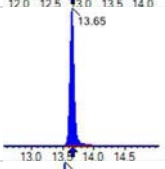  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1865423 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1146.5 | N/A | 2.0361 [ 2.0000 ] | 101.8% { 111.2% } | 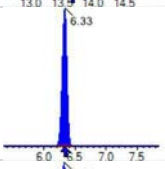  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1489931 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4743.7 | N/A | 2.0374 [ 2.0000 ] | 101.9% { 113.0% } | 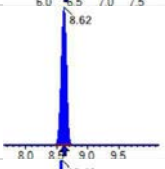  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1766562 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1601.6 | N/A | 2.0606 [ 2.0000 ] | 103.0% { 114.0% } | 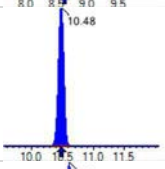  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 740312 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 90.1 | N/A | 4.6833 [ 4.0000 ] | 117.1% { 125.7% } | 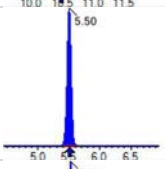  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2016832 | ( 7.62 , N/A ) ( N/A , 0.01 , N/A ) | 3498.2 | N/A | 4.2632 [ 4.0000 ] | 106.6% { 121.0% } | 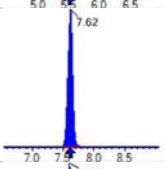  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1666535 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1318.4 | N/A | 4.4917 [ 4.0000 ] | 112.3% { 121.8% } | 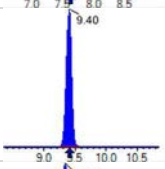  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3439402 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1774.5 | N/A | 8.8699 [ 8.0000 ] | 110.9% { 134.7% } | 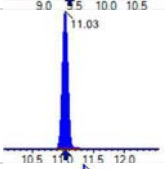  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1626298 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2527.3 | N/A | 2.1406 [ 2.0000 ] | 107.0% { 118.4% } | 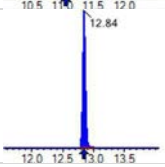  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 319120 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1934.6 | N/A | 1.9804 [ 2.0000 ] | 99.0% { 110.8% } | 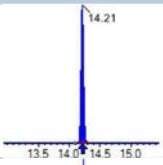  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 359797 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2191.0 | N/A | 2.0821 [ 2.0000 ] | 104.1% { 117.3% } | 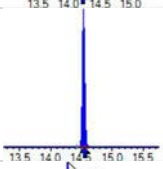 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 933377 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2330.1 | N/A | 4.2313 [ 4.0000 ] | 105.8% { 110.4% } | 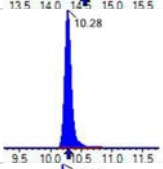  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 901988 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1892.3 | N/A | 4.4865 [ 4.0000 ] | 112.2% { 117.1% } | 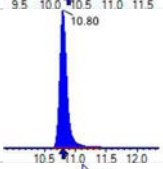  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475303 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1625.0 | N/A | 20.3737 [ 20.0000 ] | 101.9% { 107.3% } | 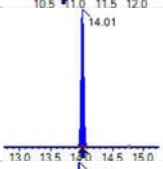  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1476802 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4748.1 | N/A | 20.0935 [ 20.0000 ] | 100.5% { 114.5% } | 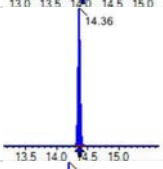  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148686 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2151.5 | N/A | 8.3276 [ 8.0000 ] | 104.1% { 112.3% } | 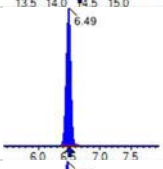  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 741493 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1122.8 | N/A | 2.2546 [ 2.0000 ] | 112.7% { 120.2% } | 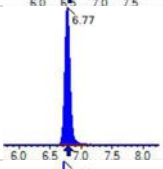  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 674096 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 797.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 121.8% } | 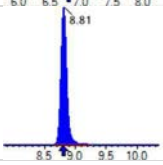  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV1A | PFBA | 20.0A | 19.8A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.58A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.59A | 91.8A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 5.04A | 101A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.50A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.36A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 5.00A | 100A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.80A | 96.1A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.85A | 97.0A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.75A | 95.1A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.44A | 88.9A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.05A | 81.0A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.27A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.75A | 101A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.55A | 99.3A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.87A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.61A | 99.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.68A | 97.5A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.96A | 103A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.86A | 100A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.8A | 94.7A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 99.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.0A | 99.1A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 18.5A | 96.0A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.90A | 98.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.4A | 96.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.97A | 99.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.96A | 99.1A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV1A | NMeFOSEA | 20.0A | 18.9A | 94.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.00A | 100A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.15A | 87.9A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.46A | 95.1A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.58A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.94A | 99.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.26A | 92.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 3.95A | 84.4A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 3.78A | 80.2A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 19.4A | 97.1A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.7A | 98.6A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 20.8A | 104A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 3174694<br>( 163.0 / 69.0 ) 83041 | ( 2.77 , 0.74 ) ( N/A , 0.00 , 0.1) | 12365.4<br>2320.0 | 0.0262<br>104.3<br>100.0 | 10.1087<br>[ 10.0000 ] | 101.1% | 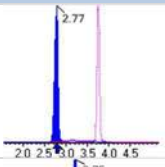 | 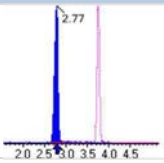 | |
| PFBA | ( 213.0 / 169.0 ) 6642382 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 6140.6 | N/A<br>0.0<br>0.0 | 19.7787<br>[ 20.0000 ] | 98.9% | 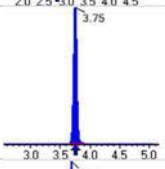 | | |
| PFPeA | ( 263.0 / 219.0 ) 3123710<br>( 263.0 / 69.0 ) 36508 | ( 4.84 , 1.00 ) ( 0.00 , N/A , -0.1) | 5371.6<br>428.5 | 0.0117<br>106.4<br>100.0 | 9.5850<br>[ 10.0000 ] | 95.8% | 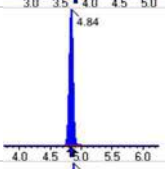 | 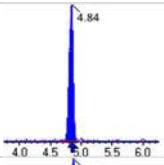 | |
| PFHxA | ( 313.0 / 269.0 ) 1686321<br>( 313.0 / 119.0 ) 191629 | ( 6.07 , 1.00 ) ( 0.00 , N/A , 0.0) | 2318.9<br>1505.5 | 0.1136<br>102.3<br>100.0 | 4.5886<br>[ 5.0000 ] | 91.8% | 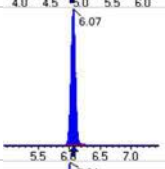 | 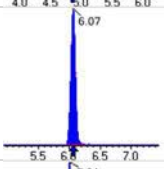 | |
| PFHpA | ( 363.0 / 319.0 ) 2037948<br>( 363.0 / 169.0 ) 599281 | ( 7.21 , 1.00 ) ( 0.00 , N/A , 0.0) | 1791.7<br>1691.7 | 0.2941<br>94.4<br>100.0 | 5.0403<br>[ 5.0000 ] | 100.8% | 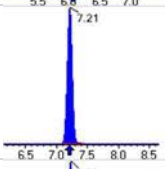 | 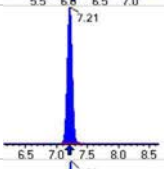 | |
| PFOA | ( 413.0 / 369.0 ) 2484828<br>( 413.0 / 169.0 ) 881936 | ( 8.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 887.1<br>1230.1 | 0.3549<br>98.1<br>100.0 | 4.4979<br>[ 5.0000 ] | 90.0% | 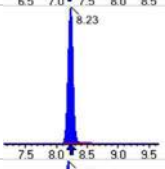 | 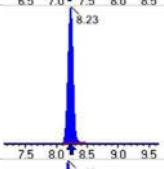 | |
| PFNA | ( 463.0 / 419.0 ) 1792898<br>( 463.0 / 169.0 ) 441254 | ( 9.19 , 1.00 ) ( 0.00 , N/A , 0.2) | 1352.2<br>998.6 | 0.2461<br>93.8<br>100.0 | 4.7318<br>[ 5.0000 ] | 94.6% | 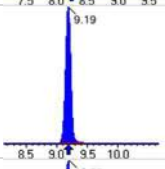 | 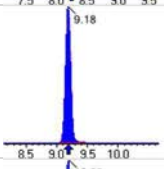 | |
| PFDA | ( 513.0 / 469.0 ) 2047543<br>( 513.0 / 169.0 ) 247203 | ( 10.09 , 1.00 ) ( 0.00 , N/A , -0.1) | 3136.7<br>2418.4 | 0.1207<br>102.9<br>100.0 | 4.3624<br>[ 5.0000 ] | 87.2% | 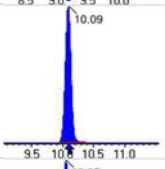 | 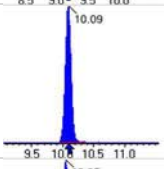 | |
| PFUnA | ( 563.0 / 519.0 ) 2367935<br>( 563.0 / 169.0 ) 342570 | ( 10.95 , 1.00 ) ( 0.00 , N/A , 0.1) | 1181.4<br>942.7 | 0.1447<br>97.7<br>100.0 | 5.0014<br>[ 5.0000 ] | 100.0% | 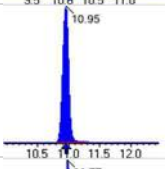 | 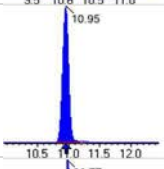 | |
| PFDoA | ( 613.0 / 569.0 ) 2553072<br>( 613.0 / 169.0 ) 390512 | ( 11.77 , 1.00 ) ( 0.00 , N/A , -0.1) | 1434.0<br>1218.1 | 0.1530<br>96.7<br>100.0 | 4.8047<br>[ 5.0000 ] | 96.1% | 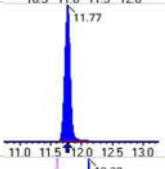 | 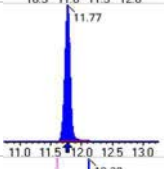 | |
| PFTrDA | ( 663.0 / 619.0 ) 2478327<br>( 663.0 / 169.0 ) 631257 | ( 12.39 , 1.05 ) ( N/A , 0.00 , 0.1) | 1520.4<br>1107.7 | 0.2547<br>94.5<br>100.0 | 4.8511<br>[ 5.0000 ] | 97.0% | 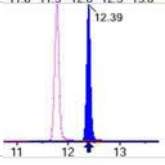 | 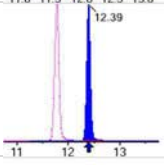 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1998540<br>( 713.0 / 169.0 ) 527816 | ( 12.88 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2006.5<br>1598.5 | 0.2641<br>101.6<br>100.0 | 4.7533<br>[ 5.0000 ] | 95.1% | 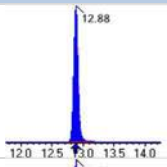 | 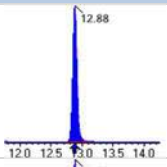 | |
| PFHxDA | ( 813.0 / 769.0 ) 1725869<br>( 813.0 / 169.0 ) 439478 | ( 13.68 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2150.8<br>1518.9 | 0.2546<br>117.4<br>100.0 | 4.4428<br>[ 5.0000 ] | 88.9% | 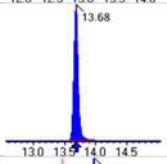 | 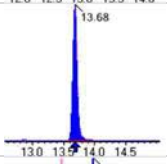 | |
| PFODA | ( 913.0 / 869.0 ) 1056626<br>( 913.0 / 169.0 ) 350452 | ( 14.32 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2291.1<br>1014.0 | 0.3317<br>86.8<br>100.0 | 4.0483<br>[ 5.0000 ] | 81.0% | 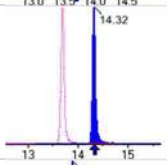 | 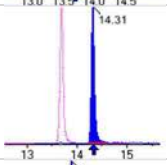 | |
| PFBS | ( 299.0 / 80.0 ) 2646515<br>( 299.0 / 99.0 ) 1907738 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4009.3<br>2894.7 | 0.7208<br>101.4<br>100.0 | 4.2699<br>[ 4.4237 ] | 96.5% | 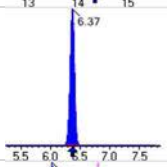 | 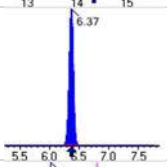 | |
| PFPeS | ( 349.0 / 80.0 ) 6665534<br>( 349.0 / 99.0 ) 2287312 | ( 7.61 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2610.3<br>2584.4 | 0.3432<br>100.9<br>100.0 | 4.7475<br>[ 4.6919 ] | 101.2% | 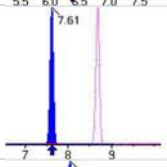 | 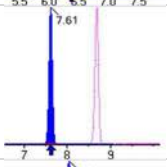 | |
| PFHxS | ( 399.0 / 80.0 ) 7097901<br>( 399.0 / 99.0 ) 2277470 | ( 8.68 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3861.5<br>5217.5 | 0.3209<br>102.6<br>100.0 | 4.5460<br>[ 4.5549 ] | 99.8% | 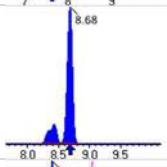 | 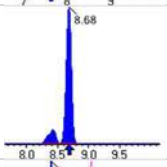 | |
| PFHpS | ( 449.0 / 80.0 ) 6242754<br>( 449.0 / 99.0 ) 1676972 | ( 9.66 , 0.92 )<br>( N/A , 0.00 , 0.0) | 1899.3<br>2344.8 | 0.2686<br>100.5<br>100.0 | 4.8696<br>[ 4.7570 ] | 102.4% | 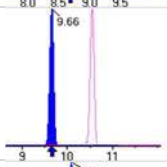 | 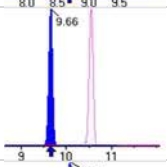 | |
| PFOS | ( 499.0 / 80.0 ) 5943699<br>( 499.0 / 99.0 ) 1302117 | ( 10.55 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2893.7<br>4064.5 | 0.2191<br>92.6<br>100.0 | 4.6081<br>[ 4.6375 ] | 99.4% | 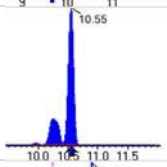 | 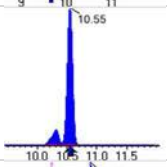 | |
| PFNS | ( 549.0 / 80.0 ) 5889152<br>( 549.0 / 99.0 ) 1614120 | ( 11.38 , 1.08 )<br>( N/A , 0.00 , 0.2) | 2555.9<br>3077.1 | 0.2741<br>103.2<br>100.0 | 4.6821<br>[ 4.7994 ] | 97.6% | 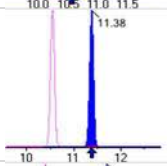 | 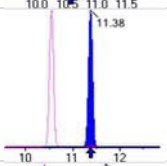 | |
| PFDS | ( 599.0 / 80.0 ) 7438396<br>( 599.0 / 99.0 ) 1886532 | ( 12.08 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3139.3<br>2931.9 | 0.2536<br>101.1<br>100.0 | 4.9615<br>[ 4.8155 ] | 103.0% | 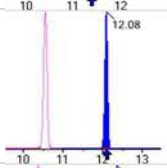 | 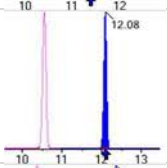 | |
| PFDoS | ( 699.0 / 80.0 ) 6232312<br>( 699.0 / 99.0 ) 1410441 | ( 12.99 , 1.23 )<br>( N/A , 0.00 , 0.1) | 4043.7<br>3711.8 | 0.2263<br>98.1<br>100.0 | 4.8650<br>[ 4.8478 ] | 100.4% | 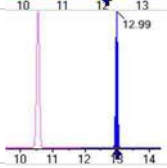 | 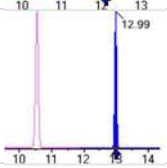 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6627853<br>( 327.0 / 81.0 ) 6059705 | ( 5.53 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4357.3<br>2914.4 | 0.9143<br>104.4<br>100.0 | 17.7964<br>[ 18.6906 ] | 95.2% | 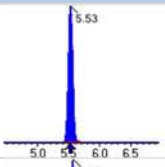 | 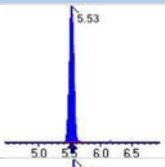 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6855467<br>( 427.0 / 81.0 ) 8698261 | ( 7.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3796.6<br>4110.7 | 1.2688<br>99.9<br>100.0 | 18.9630<br>[ 18.9808 ] | 99.9% | 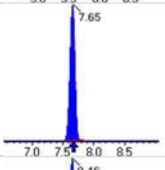 | 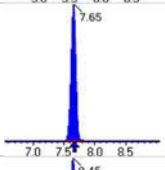 | |
| 8:2FTS | ( 527.0 / 507.0 ) 8039610<br>( 527.0 / 81.0 ) 8010457 | ( 9.46 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1506.6<br>1389.7 | 0.9964<br>105.1<br>100.0 | 19.0199<br>[ 19.1658 ] | 99.2% | 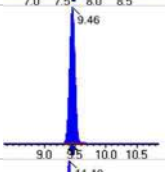 | 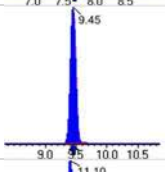 | |
| 10:2FTS | ( 627.0 / 607.0 ) 7073127<br>( 627.0 / 81.0 ) 9687609 | ( 11.10 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1429.7<br>1658.0 | 1.3696<br>101.3<br>100.0 | 18.5326<br>[ 19.3236 ] | 95.9% | 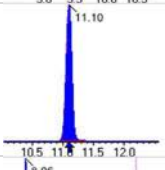 | 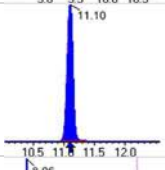 | |
| PFBSA | ( 297.9 / 78.0 ) 5469720<br>( 297.9 / 278.0 ) 8653 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , -0.2) | 1344.3<br>117.8 | 0.0016<br>112.7<br>100.0 | 5.5670<br>[ 5.0000 ] | 111.3% | 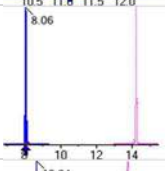 | 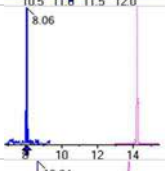 | |
| PFHxSA | ( 397.9 / 78.0 ) 6590564<br>( 397.9 / 378.0 ) 27585 | ( 10.94 , 0.75 )<br>( N/A , 0.00 , -0.1) | 1246.1<br>707.4 | 0.0042<br>109.9<br>100.0 | 5.3064<br>[ 5.0000 ] | 106.1% | 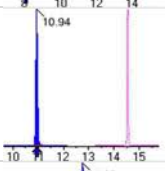 | 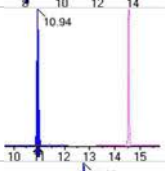 | |
| PFOSA | ( 498.0 / 78.0 ) 5790391<br>( 498.0 / 478.0 ) 79267 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2304.7<br>1185.1 | 0.0137<br>94.9<br>100.0 | 4.8999<br>[ 5.0000 ] | 98.0% | 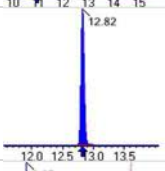 | 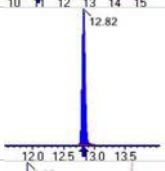 | |
| TFSI | ( 279.7 / 147.0 ) 13168969<br>( 279.7 / 211.0 ) 1119909 | ( 8.25 , 0.64 )<br>( N/A , 0.00 , -0.1) | 58.4<br>51.9 | 0.0850<br>103.1<br>100.0 | 5.2418<br>[ 4.8967 ] | 107.0% | 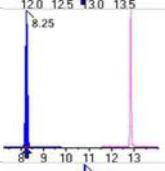 | 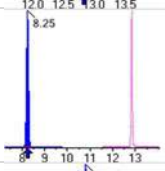 | |
| NMeFOSA | ( 512.0 / 219.0 ) 4251106<br>( 512.0 / 169.0 ) 3245330 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3463.2<br>3987.2 | 0.7634<br>103.9<br>100.0 | 19.7521<br>[ 20.0000 ] | 98.8% | 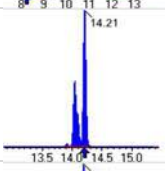 | 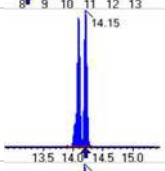 | |
| NEtFOSA | ( 526.0 / 219.0 ) 5145059<br>( 526.0 / 169.0 ) 6494130 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.1) | 4955.0<br>4293.0 | 1.2622<br>99.6<br>100.0 | 19.3627<br>[ 20.0000 ] | 96.8% | 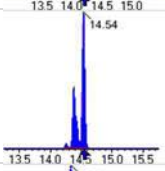 | 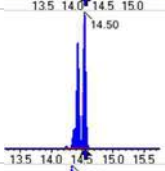 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1546207<br>( 570.0 / 483.0 ) 704515 | ( 10.33 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4118.7<br>2203.1 | 0.4556<br>105.2<br>100.0 | 4.9743<br>[ 5.0000 ] | 99.5% | 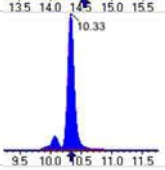 | 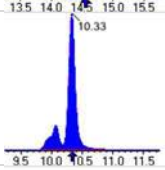 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1472487<br>( 584.0 / 526.0 ) 887260 | ( 10.86 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1963.0<br>838.6 | 0.6026<br>97.3<br>100.0 | 4.9570<br>[ 5.0000 ] | 99.1% | 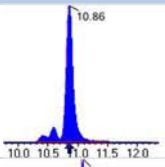 | 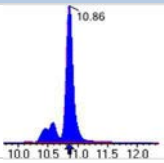 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1984558 | ( 14.02 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2656.7 | N/A<br>0.0<br>0.0 | 18.8596<br>[ 20.0000 ] | 94.3% | 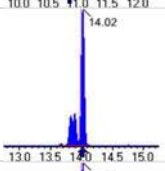 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1828397 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4092.1 | N/A<br>0.0<br>0.0 | 19.7667<br>[ 20.0000 ] | 98.8% | 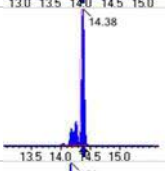 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 498372<br>( 285.0 / 185.0 ) 1381090 | ( 6.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2115.7<br>2283.5 | 2.7712<br>88.9<br>100.0 | 5.0034<br>[ 5.0000 ] | 100.1% | 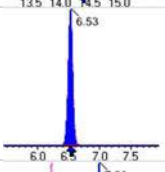 | 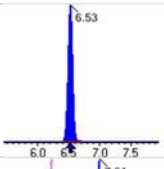 | |
| ADONA | ( 377.0 / 85.0 ) 5262744<br>( 377.0 / 251.0 ) 556853 | ( 7.61 , 1.17 )<br>( N/A , 0.00 , -0.1) | 1911.8<br>1801.9 | 0.1058<br>99.2<br>100.0 | 4.1487<br>[ 4.7135 ] | 88.0% | 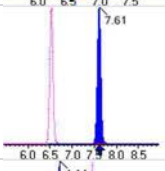 | 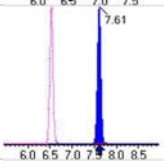 | |
| PFMPA | ( 229.0 / 85.0 ) 988437 | ( 4.14 , 0.86 )<br>( N/A , 0.00 , 0.0) | 6421.1 | N/A<br>0.0<br>0.0 | 9.5797<br>[ 10.0000 ] | 95.8% | 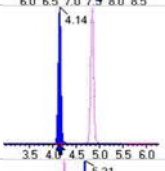 | | |
| PFMBA | ( 279.0 / 85.0 ) 2713739 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5669.6 | N/A<br>0.0<br>0.0 | 9.9368<br>[ 10.0000 ] | 99.4% | 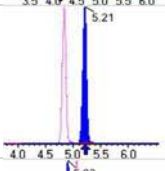 | | |
| NFDHA | ( 295.0 / 201.0 ) 1183430<br>( 295.0 / 85.0 ) 1266424 | ( 5.93 , 0.98 )<br>( N/A , 0.00 , -0.1) | 2804.5<br>2924.9 | 1.0701<br>98.9<br>100.0 | 9.2633<br>[ 10.0000 ] | 92.6% | 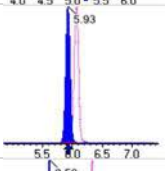 | 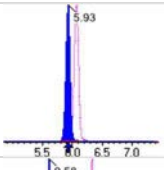 | |
| PFECHS | ( 461.0 / 98.9 ) 3132646<br>( 461.0 / 381.2 ) 1225790 | ( 9.58 , 0.91 )<br>( N/A , 0.00 , 0.0) | 3929.0<br>3985.3 | 0.3913<br>100.2<br>100.0 | 4.3068<br>[ 4.6193 ] | 93.2% | 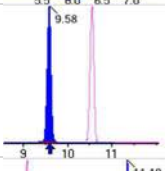 | 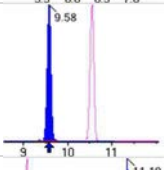 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 6183344<br>( 533.0 / 353.0 ) 1925373 | ( 11.19 , 1.72 )<br>( N/A , 0.00 , 0.1) | 1944.9<br>2412.8 | 0.3114<br>96.9<br>100.0 | 3.9500<br>[ 4.6663 ] | 84.6% | 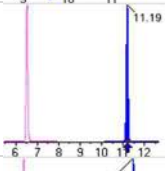 | 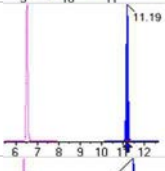 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4640356<br>( 633.0 / 453.0 ) 1538927 | ( 12.49 , 1.91 )<br>( N/A , 0.00 , 0.1) | 3572.0<br>3578.2 | 0.3316<br>101.5<br>100.0 | 3.7844<br>[ 4.7160 ] | 80.2% | 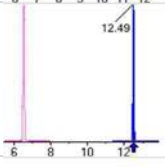 | 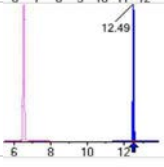 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2338345<br>( 315.0 / 83.0 ) 1382996 | ( 6.97 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3378.6<br>1359.0 | 0.5914<br>103.2<br>100.0 | 8.4597<br>[ 8.9246 ] | 94.8% | 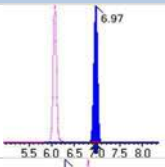 | 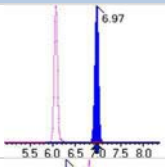 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 307328<br>( 241.0 / 117.0 ) 683877 | ( 4.38 , 0.90 )<br>( N/A , 0.00 , 0.0) | 2555.1<br>2427.0 | 2.2252<br>100.3<br>100.0 | 19.4113<br>[ 20.0000 ] | 97.1% | 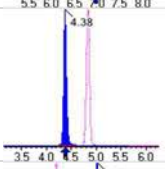 | 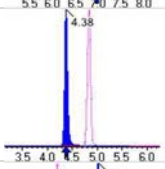 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1756540<br>( 341.0 / 217.0 ) 2692926 | ( 6.93 , 1.14 )<br>( N/A , 0.00 , 0.0) | 1295.8<br>1197.8 | 1.5331<br>102.4<br>100.0 | 19.7209<br>[ 20.0000 ] | 98.6% | 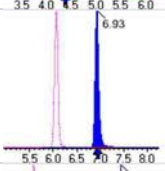 | 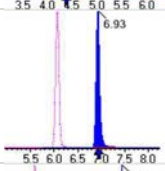 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2725727<br>( 441.0 / 337.0 ) 2362510 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4216.1<br>8862.1 | 0.8667<br>97.4<br>100.0 | 20.8028<br>[ 20.0000 ] | 104.0% | 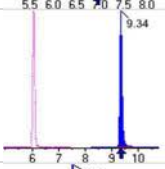 | 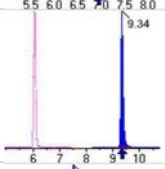 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1863736<br>( 357.2 / 243.0 ) 199134 | ( 6.80 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1388.0<br>715.5 | 0.1068<br>101.2<br>100.0 | 4.8742<br>[ 5.0000 ] | 97.5% | 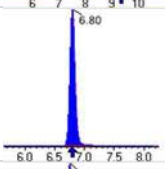 | 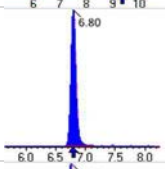 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1413019<br>( 457.2 / 343.0 ) 53711 | ( 8.86 , 1.00 )<br>( -0.01 , N/A , 0.3) | 861.7<br>350.7 | 0.0380<br>97.1<br>100.0 | 5.0035<br>[ 5.0000 ] | 100.1% | 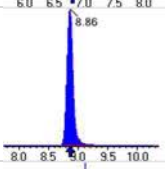 | 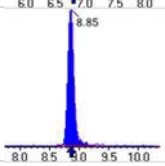 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 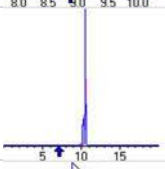 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 338470 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1130.9 | N/A | 1.1236<br>[ 1.0000 ] | 112.4%<br>{ 100.0% } | 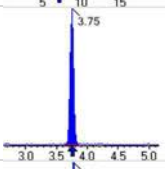 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 170419 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 6745.2 | N/A | 1.1083<br>[ 1.0000 ] | 110.8%<br>{ 100.0% } | 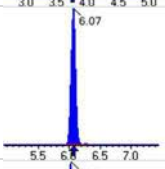 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 488098 | ( 8.23 , N/A )<br>( N/A , 0.00 , N/A ) | 4236.2 | N/A | 1.0941<br>[ 1.0000 ] | 109.4%<br>{ 100.0% } | 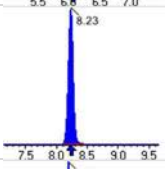 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 384657 | ( 9.19 , N/A )<br>( N/A , 0.00 , N/A ) | 1088.8 | N/A | 1.1506<br>[ 1.0000 ] | 115.1%<br>{ 100.0% } | 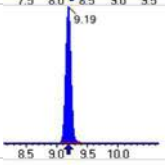 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 377626 | ( 10.09 , N/A ) ( N/A , 0.00 , N/A ) | 5511.4 | N/A | 1.1387 [ 1.0000 ] | 113.9% { 100.0% } | 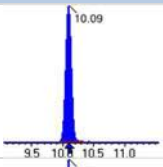 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1253433 | ( 8.69 , N/A ) ( N/A , 0.00 , N/A ) | 4563.7 | N/A | 1.1217 [ 1.0000 ] | 112.2% { 100.0% } | 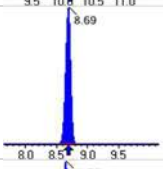 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1057854 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 2855.6 | N/A | 1.0836 [ 1.0000 ] | 108.4% { 100.0% } | 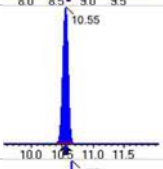 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2839873 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 39469.0 | N/A | 7.6085 [ 8.0000 ] | 95.1% { 100.0% } | 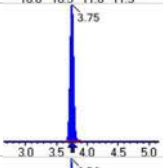 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1280529 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5016.6 | N/A | 4.1884 [ 4.0000 ] | 104.7% { 100.0% } | 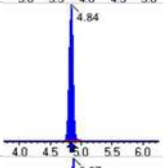 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 758566 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 10694.4 | N/A | 2.0731 [ 2.0000 ] | 103.7% { 100.0% } | 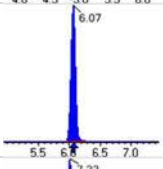 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 821068 | ( 7.22 , N/A ) ( N/A , 0.00 , N/A ) | 5879.6 | N/A | 2.1485 [ 2.0000 ] | 107.4% { 100.0% } | 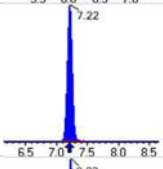 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1086518 | ( 8.23 , N/A ) ( N/A , 0.00 , N/A ) | 3276.9 | N/A | 2.1113 [ 2.0000 ] | 105.6% { 100.0% } | 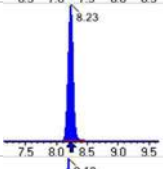 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 378118 | ( 9.19 , N/A ) ( N/A , 0.00 , N/A ) | 2733.8 | N/A | 1.0180 [ 1.0000 ] | 101.8% { 100.0% } | 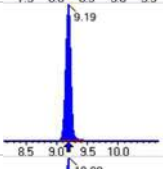 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 471292 | ( 10.09 , N/A ) ( N/A , 0.00 , N/A ) | 1201.0 | N/A | 1.0815 [ 1.0000 ] | 108.2% { 100.0% } | 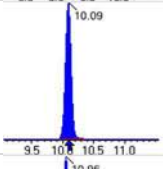 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 507019 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 921.9 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 100.0% } | 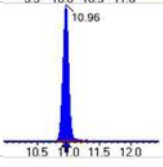 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00977-CCV1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 519171 | ( 11.78 , N/A ) ( N/A , 0.00 , N/A ) | 1544.9 | N/A | 0.9758 [ 1.0000 ] | 97.6% { 100.0% } | 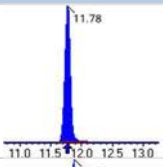  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 442720 | ( 12.89 , N/A ) ( N/A , 0.00 , N/A ) | 1503.2 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 100.0% } | 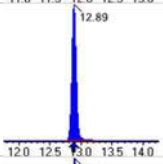  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 804983 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 3329.8 | N/A | 2.0441 [ 2.0000 ] | 102.2% { 100.0% } | 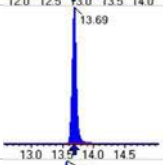  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2383917 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 936.3 | N/A | 1.9520 [ 2.0000 ] | 97.6% { 100.0% } | 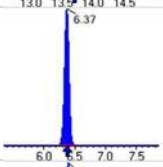  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1763300 | ( 8.68 , N/A ) ( N/A , 0.00 , N/A ) | 4818.5 | N/A | 1.9225 [ 2.0000 ] | 96.1% { 100.0% } | 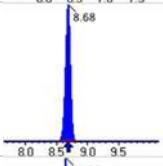  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2231526 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 1633.7 | N/A | 1.9815 [ 2.0000 ] | 99.1% { 100.0% } | 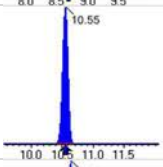  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 553240 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 93.4 | N/A | 5.0686 [ 4.0000 ] | 126.7% { 100.0% } | 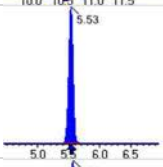  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1627788 | ( 7.66 , N/A ) ( N/A , 0.00 , N/A ) | 4229.8 | N/A | 4.8023 [ 4.0000 ] | 120.1% { 100.0% } | 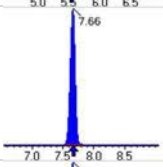  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1706512 | ( 9.46 , N/A ) ( N/A , 0.00 , N/A ) | 1400.6 | N/A | 5.0533 [ 4.0000 ] | 126.3% { 100.0% } | 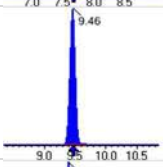  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3710769 | ( 11.09 , N/A ) ( N/A , 0.00 , N/A ) | 1393.8 | N/A | 9.5727 [ 8.0000 ] | 119.7% { 100.0% } | 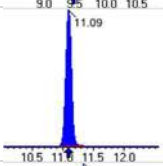  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2421762 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1732.1 | N/A | 1.9844 [ 2.0000 ] | 99.2% { 100.0% } | 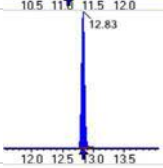  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (3)
Acquired: 2024/03/18 - 14:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 427365 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2001.3 | N/A | 1.8964 [ 2.0000 ] | 94.8% { 100.0% } | 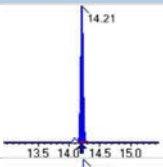  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 484313 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 3563.9 | N/A | 1.8710 [ 2.0000 ] | 93.6% { 100.0% } | 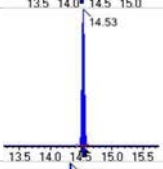  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1320240 | ( 10.33 , N/A ) ( N/A , 0.00 , N/A ) | 2451.5 | N/A | 4.5778 [ 4.0000 ] | 114.4% { 100.0% } | 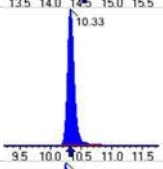  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1231764 | ( 10.85 , N/A ) ( N/A , 0.00 , N/A ) | 1863.4 | N/A | 4.4994 [ 4.0000 ] | 112.5% { 100.0% } | 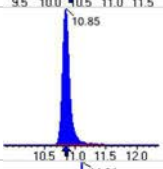  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1859054 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2629.6 | N/A | 17.6551 [ 20.0000 ] | 88.3% { 100.0% } | 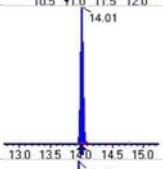  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2093731 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5303.1 | N/A | 16.4140 [ 20.0000 ] | 82.1% { 100.0% } | 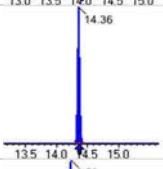  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1403696 | ( 6.53 , N/A ) ( N/A , 0.00 , N/A ) | 2367.6 | N/A | 8.9245 [ 8.0000 ] | 111.6% { 100.0% } | 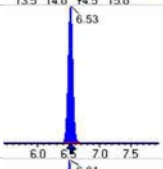  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 711465 | ( 6.81 , N/A ) ( N/A , 0.00 , N/A ) | 1241.2 | N/A | 2.1243 [ 2.0000 ] | 106.2% { 100.0% } | 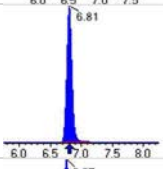  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 669684 | ( 8.87 , N/A ) ( N/A , 0.00 , N/A ) | 767.8 | N/A | 2.1417 [ 2.0000 ] | 107.1% { 100.0% } | 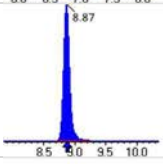  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV2A | PFBA | 20.0A | 19.4A | 97.0A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.14A | 91.4A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.51A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 5.01A | 100A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.57A | 91.4A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.58A | 91.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.57A | 91.3A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.75A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.78A | 75.5A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.23A | 95.7A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.66A | 99.2A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.53A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.76A | 99.6A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.44A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.68A | 97.4A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.00A | 104A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.80A | 99.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.7A | 94.3A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.9A | 99.3A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.0A | 93.9A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.1A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 5.03A | 101A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 20.0A | 100A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 20.1A | 100A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 5.00A | 100A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.94A | 98.8A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV2A | NMeFOSEA | 20.0A | 18.1A | 90.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 20.9A | 105A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.32A | 91.6A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.41A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.49A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.68A | 96.8A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.45A | 94.5A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 3.87A | 82.7A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 3.92A | 83.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 19.1A | 95.4A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.5A | 97.4A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 21.4A | 107A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2813739<br>( 163.0 / 69.0 ) 75599 | ( 2.79 , 0.74 ) ( N/A , 0.01 , -0.1) | 12504.1<br>2679.5 | 0.0269<br>107.2<br>102.7 | 9.8165<br>[ 10.0000 ] | 98.2% | 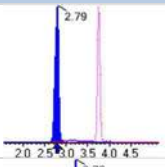 | 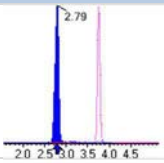 | |
| PFBA | ( 213.0 / 169.0 ) 5947230 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6769.0 | N/A<br>0.0<br>0.0 | 19.4030<br>[ 20.0000 ] | 97.0% | 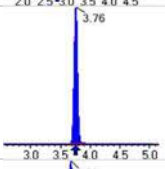 | | |
| PFPeA | ( 263.0 / 219.0 ) 2584630<br>( 263.0 / 69.0 ) 29976 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 4492.1<br>323.9 | 0.0116<br>105.6<br>99.2 | 9.1393<br>[ 10.0000 ] | 91.4% | 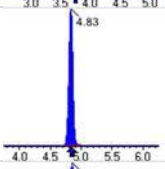 | 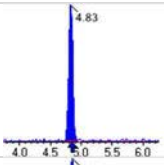 | |
| PFHxA | ( 313.0 / 269.0 ) 1429872<br>( 313.0 / 119.0 ) 166793 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.0) | 2469.2<br>1393.2 | 0.1166<br>105.0<br>102.7 | 4.5066<br>[ 5.0000 ] | 90.1% | 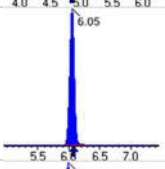 | 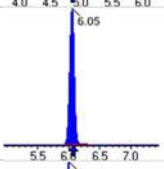 | |
| PFHpA | ( 363.0 / 319.0 ) 1705423<br>( 363.0 / 169.0 ) 514823 | ( 7.19 , 1.00 ) ( 0.00 , N/A , -0.2) | 1972.4<br>1907.6 | 0.3019<br>96.9<br>102.7 | 4.8426<br>[ 5.0000 ] | 96.9% | 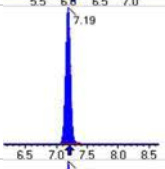 | 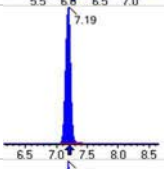 | |
| PFOA | ( 413.0 / 369.0 ) 2299992<br>( 413.0 / 169.0 ) 822846 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1112.3<br>1746.5 | 0.3578<br>98.9<br>100.8 | 4.7620<br>[ 5.0000 ] | 95.2% | 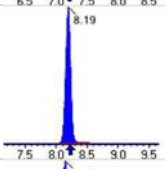 | 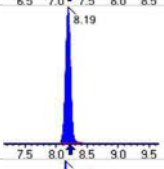 | |
| PFNA | ( 463.0 / 419.0 ) 1598005<br>( 463.0 / 169.0 ) 395340 | ( 9.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 1200.8<br>1038.7 | 0.2474<br>94.3<br>100.5 | 5.0080<br>[ 5.0000 ] | 100.2% | 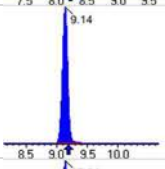 | 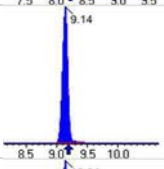 | |
| PFDA | ( 513.0 / 469.0 ) 1820529<br>( 513.0 / 169.0 ) 220880 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3652.3<br>2313.7 | 0.1213<br>103.4<br>100.5 | 4.5678<br>[ 5.0000 ] | 91.4% | 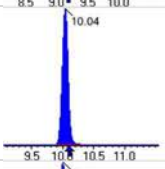 | 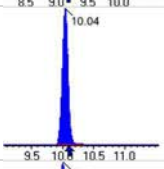 | |
| PFUnA | ( 563.0 / 519.0 ) 2006319<br>( 563.0 / 169.0 ) 300741 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.0) | 1089.1<br>966.6 | 0.1499<br>101.2<br>103.6 | 4.5773<br>[ 5.0000 ] | 91.5% | 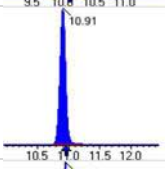 | 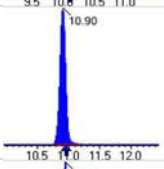 | |
| PFDoA | ( 613.0 / 569.0 ) 2228583<br>( 613.0 / 169.0 ) 353082 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.1) | 1859.8<br>1176.8 | 0.1584<br>100.2<br>103.6 | 4.5662<br>[ 5.0000 ] | 91.3% | 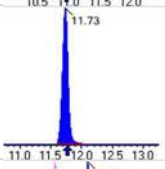 | 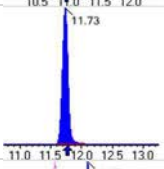 | |
| PFTrDA | ( 663.0 / 619.0 ) 2227083<br>( 663.0 / 169.0 ) 591398 | ( 12.37 , 1.05 ) ( N/A , -0.02 , 0.0) | 1643.4<br>1283.1 | 0.2655<br>98.5<br>104.3 | 4.7461<br>[ 5.0000 ] | 94.9% | 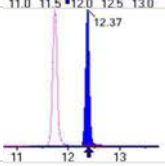 | 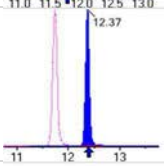 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1843760<br>( 713.0 / 169.0 ) 483408 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1392.0<br>1429.5 | 0.2622<br>100.8<br>99.3 | 4.7594<br>[ 5.0000 ] | 95.2% | 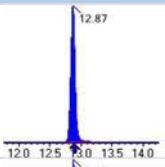 | 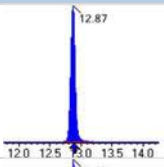 | |
| PFHxDA | ( 813.0 / 769.0 ) 1594527<br>( 813.0 / 169.0 ) 362073 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2621.4<br>1197.1 | 0.2271<br>104.7<br>89.2 | 4.7099<br>[ 5.0000 ] | 94.2% | 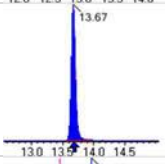 | 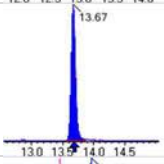 | |
| PFODA | ( 913.0 / 869.0 ) 858932<br>( 913.0 / 169.0 ) 304039 | ( 14.30 , 1.05 )<br>( N/A , -0.01 , 0.0) | 1934.0<br>979.1 | 0.3540<br>92.7<br>106.7 | 3.7762<br>[ 5.0000 ] | 75.5% | 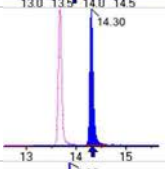 | 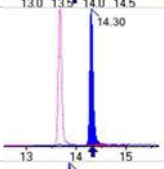 | |
| PFBS | ( 299.0 / 80.0 ) 2255884<br>( 299.0 / 99.0 ) 1614432 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3338.6<br>2977.6 | 0.7157<br>100.7<br>99.3 | 4.2311<br>[ 4.4237 ] | 95.6% | 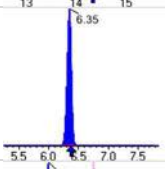 | 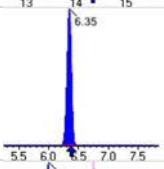 | |
| PFPeS | ( 349.0 / 80.0 ) 5761016<br>( 349.0 / 99.0 ) 1959597 | ( 7.58 , 0.88 )<br>( N/A , -0.03 , 0.0) | 3290.5<br>2661.0 | 0.3401<br>100.0<br>99.1 | 4.6618<br>[ 4.6919 ] | 99.4% | 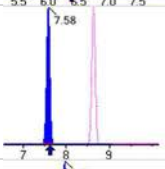 | 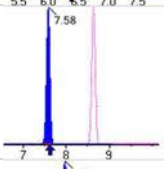 | |
| PFHxS | ( 399.0 / 80.0 ) 6227845<br>( 399.0 / 99.0 ) 1965097 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4466.2<br>5530.3 | 0.3155<br>100.9<br>98.3 | 4.5317<br>[ 4.5549 ] | 99.5% | 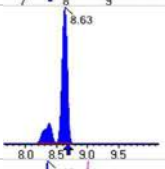 | 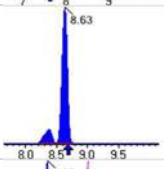 | |
| PFHpS | ( 449.0 / 80.0 ) 5356320<br>( 449.0 / 99.0 ) 1467211 | ( 9.60 , 0.91 )<br>( N/A , -0.05 , 0.1) | 2240.5<br>2901.2 | 0.2739<br>102.5<br>102.0 | 4.7618<br>[ 4.7570 ] | 100.1% | 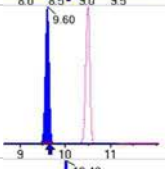 | 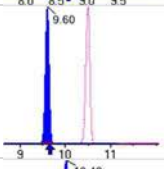 | |
| PFOS | ( 499.0 / 80.0 ) 5023335<br>( 499.0 / 99.0 ) 1179770 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 3228.5<br>4989.0 | 0.2349<br>99.3<br>107.2 | 4.4386<br>[ 4.6375 ] | 95.7% | 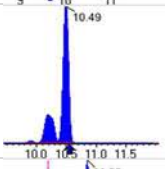 | 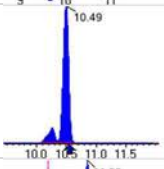 | |
| PFNS | ( 549.0 / 80.0 ) 5160249<br>( 549.0 / 99.0 ) 1310001 | ( 11.33 , 1.08 )<br>( N/A , -0.05 , -0.1) | 2790.1<br>2318.0 | 0.2539<br>95.6<br>92.6 | 4.6756<br>[ 4.7994 ] | 97.4% | 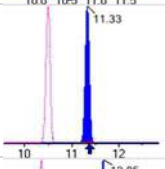 | 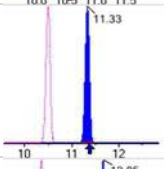 | |
| PFDS | ( 599.0 / 80.0 ) 6580286<br>( 599.0 / 99.0 ) 1679394 | ( 12.05 , 1.15 )<br>( N/A , -0.03 , 0.0) | 3584.4<br>2967.8 | 0.2552<br>101.8<br>100.6 | 5.0022<br>[ 4.8155 ] | 103.9% | 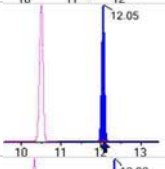 | 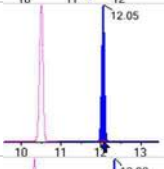 | |
| PFDoS | ( 699.0 / 80.0 ) 5398081<br>( 699.0 / 99.0 ) 1283454 | ( 12.98 , 1.24 )<br>( N/A , -0.02 , 0.0) | 4092.8<br>3529.7 | 0.2378<br>103.1<br>105.1 | 4.8024<br>[ 4.8478 ] | 99.1% | 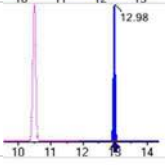 | 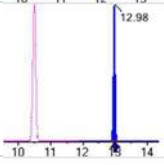 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5992292<br>( 327.0 / 81.0 ) 5370488 | ( 5.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5151.1<br>3602.6 | 0.8962<br>102.3<br>98.0 | 17.7257<br>[ 18.6906 ] | 94.8% | 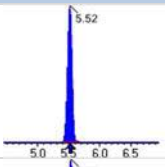 | 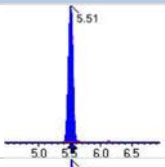 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6154975<br>( 427.0 / 81.0 ) 7437999 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4029.3<br>4036.9 | 1.2085<br>95.1<br>95.2 | 18.8641<br>[ 18.9808 ] | 99.4% | 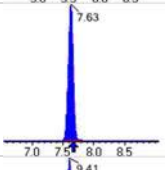 | 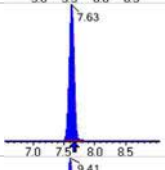 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6801356<br>( 527.0 / 81.0 ) 6832224 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1420.7<br>1358.4 | 1.0045<br>105.9<br>100.8 | 18.0358<br>[ 19.1658 ] | 94.1% | 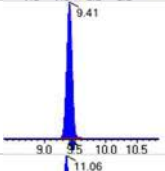 | 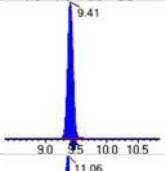 | |
| 10:2FTS | ( 627.0 / 607.0 ) 6344465<br>( 627.0 / 81.0 ) 8737112 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1430.8<br>1329.9 | 1.3771<br>101.9<br>100.5 | 19.1063<br>[ 19.3236 ] | 98.9% | 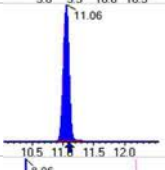 | 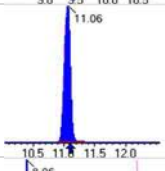 | |
| PFBSA | ( 297.9 / 78.0 ) 4574003<br>( 297.9 / 278.0 ) 7071 | ( 8.06 , 0.57 )<br>( N/A , 0.00 , 0.3) | 1300.3<br>101.0 | 0.0015<br>110.1<br>97.7 | 5.2948<br>[ 5.0000 ] | 105.9% | 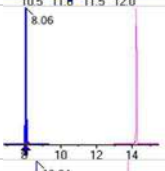 | 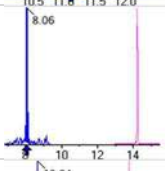 | |
| PFHxSA | ( 397.9 / 78.0 ) 6152439<br>( 397.9 / 378.0 ) 24582 | ( 10.94 , 0.75 )<br>( N/A , -0.01 , -0.3) | 1281.1<br>475.2 | 0.0040<br>104.9<br>95.5 | 5.6539<br>[ 5.0000 ] | 113.1% | 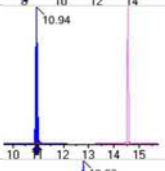 | 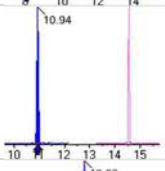 | |
| PFOSA | ( 498.0 / 78.0 ) 4968742<br>( 498.0 / 478.0 ) 67884 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2378.2<br>1078.5 | 0.0137<br>94.7<br>99.8 | 5.0321<br>[ 5.0000 ] | 100.6% | 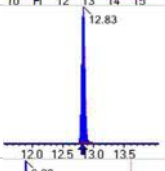 | 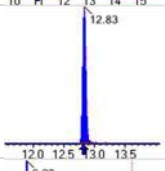 | |
| TFSI | ( 279.7 / 147.0 ) 11189508<br>( 279.7 / 211.0 ) 935384 | ( 8.20 , 0.64 )<br>( N/A , -0.05 , 0.0) | 66.1<br>53.1 | 0.0836<br>101.4<br>98.3 | 5.3305<br>[ 4.8967 ] | 108.9% | 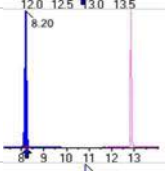 | 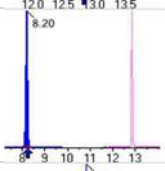 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3788887<br>( 512.0 / 169.0 ) 2894017 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3509.8<br>4212.3 | 0.7638<br>103.9<br>100.1 | 20.0227<br>[ 20.0000 ] | 100.1% | 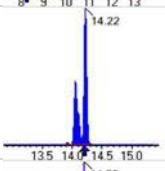 | 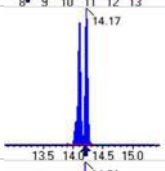 | |
| NEtFOSA | ( 526.0 / 219.0 ) 4668978<br>( 526.0 / 169.0 ) 5828963 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.1) | 5203.6<br>4200.0 | 1.2484<br>98.6<br>98.9 | 20.0548<br>[ 20.0000 ] | 100.3% | 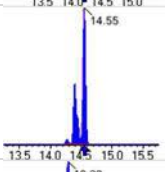 | 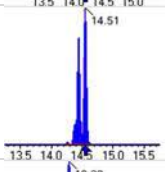 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1333208<br>( 570.0 / 483.0 ) 620732 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2091.8<br>1632.9 | 0.4656<br>107.5<br>102.2 | 4.9975<br>[ 5.0000 ] | 100.0% | 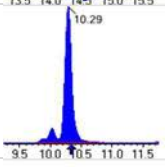 | 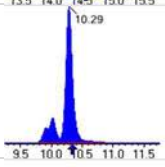 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1307338<br>( 584.0 / 526.0 ) 774362 | ( 10.82 , 1.00 ) ( 0.01 , N/A , -0.1) | 1854.2<br>771.4 | 0.5923<br>95.7<br>98.3 | 4.9413<br>[ 5.0000 ] | 98.8% | 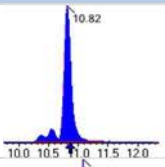 | 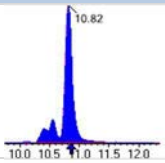 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1839084 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 3172.7 | N/A<br>0.0<br>0.0 | 18.1378<br>[ 20.0000 ] | 90.7% | 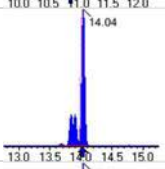 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1660301 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 4451.3 | N/A<br>0.0<br>0.0 | 20.9419<br>[ 20.0000 ] | 104.7% | 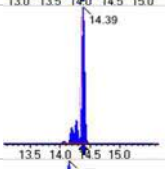 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 411172<br>( 285.0 / 185.0 ) 1168459 | ( 6.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1919.6<br>2550.9 | 2.8418<br>91.2<br>102.5 | 4.7599<br>[ 5.0000 ] | 95.2% | 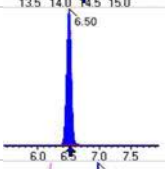 | 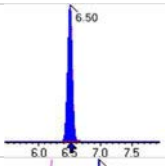 | |
| ADONA | ( 377.0 / 85.0 ) 4757619<br>( 377.0 / 251.0 ) 482400 | ( 7.58 , 1.16 ) ( N/A , -0.03 , 0.0) | 2127.2<br>1553.8 | 0.1014<br>95.1<br>95.8 | 4.3247<br>[ 4.7135 ] | 91.8% | 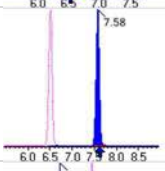 | 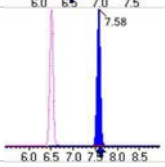 | |
| PFMPA | ( 229.0 / 85.0 ) 849271 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 6940.6 | N/A<br>0.0<br>0.0 | 9.4852<br>[ 10.0000 ] | 94.9% | 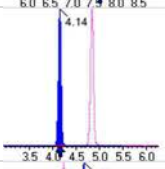 | | |
| PFMBA | ( 279.0 / 85.0 ) 2295207 | ( 5.20 , 1.08 ) ( N/A , -0.01 , 0.0) | 5857.9 | N/A<br>0.0<br>0.0 | 9.6849<br>[ 10.0000 ] | 96.8% | 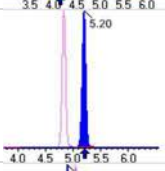 | | |
| NFDHA | ( 295.0 / 201.0 ) 1042365<br>( 295.0 / 85.0 ) 1069969 | ( 5.91 , 0.98 ) ( N/A , -0.02 , 0.3) | 3159.1<br>3331.2 | 1.0265<br>94.9<br>95.9 | 9.4506<br>[ 10.0000 ] | 94.5% | 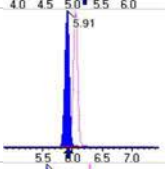 | 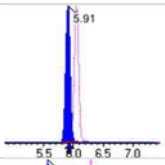 | |
| PFECHS | ( 461.0 / 98.9 ) 2759895<br>( 461.0 / 381.2 ) 1099162 | ( 9.52 , 0.91 ) ( N/A , -0.06 , 0.0) | 4654.6<br>4548.4 | 0.3983<br>102.0<br>101.8 | 4.3243<br>[ 4.6193 ] | 93.6% | 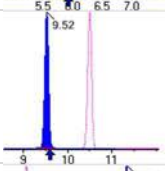 | 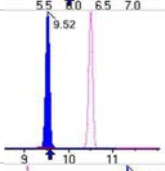 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 5254308<br>( 533.0 / 353.0 ) 1710161 | ( 11.15 , 1.71 ) ( N/A , -0.05 , 0.0) | 2603.8<br>2965.2 | 0.3255<br>101.2<br>104.5 | 3.8703<br>[ 4.6663 ] | 82.9% | 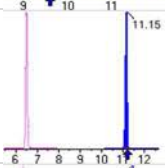 | 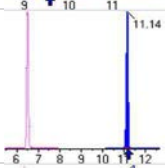 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 4166493<br>( 633.0 / 453.0 ) 1423620 | ( 12.47 , 1.92 ) ( N/A , -0.02 , 0.1) | 4258.8<br>5061.4 | 0.3417<br>104.6<br>103.0 | 3.9182<br>[ 4.7160 ] | 83.1% | 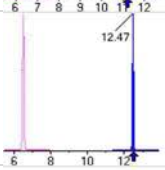 | 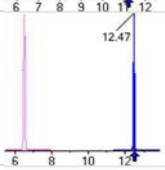 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 2006132<br>( 315.0 / 83.0 ) 1153783 | ( 6.94 , 1.15 )<br>( N/A , -0.03 , 0.0) | 2897.7<br>1582.0 | 0.5751<br>100.4<br>97.2 | 8.4066<br>[ 8.9246 ] | 94.2% | 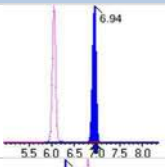 | 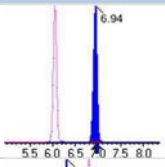 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 262096<br>( 241.0 / 117.0 ) 606687 | ( 4.39 , 0.91 )<br>( N/A , 0.01 , 0.0) | 2181.6<br>1984.7 | 2.3147<br>104.3<br>104.0 | 19.0769<br>[ 20.0000 ] | 95.4% | 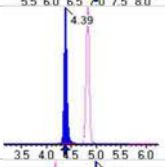 | 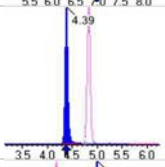 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1497513<br>( 341.0 / 217.0 ) 2267355 | ( 6.92 , 1.14 )<br>( N/A , -0.01 , 0.0) | 1120.2<br>1179.9 | 1.5141<br>101.1<br>98.8 | 19.4738<br>[ 20.0000 ] | 97.4% | 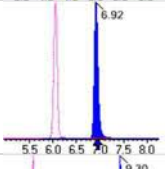 | 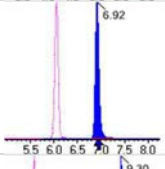 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2426420<br>( 441.0 / 337.0 ) 2204238 | ( 9.30 , 1.54 )<br>( N/A , -0.03 , 0.1) | 4861.7<br>7944.9 | 0.9084<br>102.1<br>104.8 | 21.4495<br>[ 20.0000 ] | 107.2% | 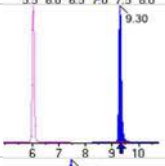 | 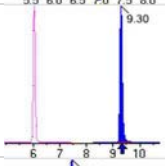 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1682997<br>( 357.2 / 243.0 ) 175378 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1582.8<br>710.5 | 0.1042<br>98.7<br>97.5 | 4.7996<br>[ 5.0000 ] | 96.0% | 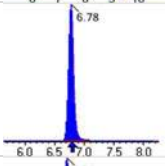 | 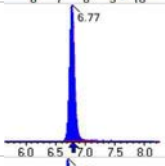 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1277601<br>( 457.2 / 343.0 ) 54029 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.3) | 793.4<br>379.1 | 0.0423<br>108.1<br>111.3 | 4.9043<br>[ 5.0000 ] | 98.1% | 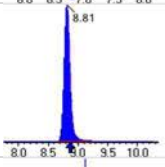 | 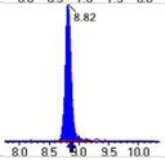 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 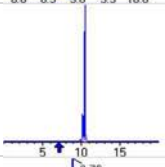 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 291753 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 1192.4 | N/A | 0.9685<br>[ 1.0000 ] | 96.8%<br>{ 86.2% } | 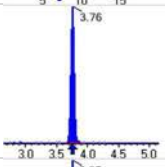 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 147623 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 21483.3 | N/A | 0.9600<br>[ 1.0000 ] | 96.0%<br>{ 86.6% } | 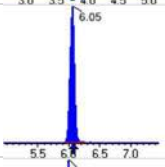 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 451692 | ( 8.20 , N/A )<br>( N/A , -0.04 , N/A ) | 4332.8 | N/A | 1.0125<br>[ 1.0000 ] | 101.2%<br>{ 92.5% } | 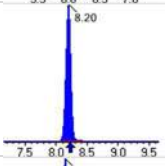 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 333006 | ( 9.14 , N/A )<br>( N/A , -0.05 , N/A ) | 1054.5 | N/A | 0.9961<br>[ 1.0000 ] | 99.6%<br>{ 86.6% } | 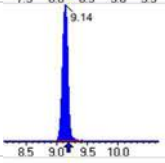 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 348109 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 7207.2 | N/A | 1.0497 [ 1.0000 ] | 105.0% { 92.2% } | 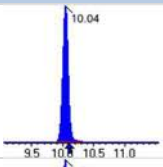 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1088550 | ( 8.64 , N/A ) ( N/A , -0.05 , N/A ) | 4908.2 | N/A | 0.9742 [ 1.0000 ] | 97.4% { 86.8% } | 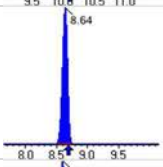 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 935430 | ( 10.50 , N/A ) ( N/A , -0.05 , N/A ) | 2799.3 | N/A | 0.9582 [ 1.0000 ] | 95.8% { 88.4% } | 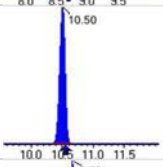 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2591906 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 43296.7 | N/A | 8.0561 [ 8.0000 ] | 100.7% { 91.3% } | 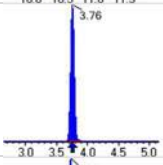 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1111205 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 4775.6 | N/A | 4.1959 [ 4.0000 ] | 104.9% { 86.8% } | 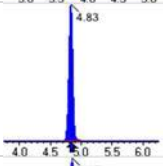 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 654909 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 12533.6 | N/A | 2.0662 [ 2.0000 ] | 103.3% { 86.3% } | 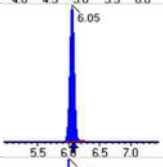 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 715144 | ( 7.19 , N/A ) ( N/A , -0.02 , N/A ) | 6205.0 | N/A | 2.1603 [ 2.0000 ] | 108.0% { 87.1% } | 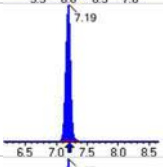 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 949932 | ( 8.19 , N/A ) ( N/A , -0.04 , N/A ) | 2949.2 | N/A | 1.9946 [ 2.0000 ] | 99.7% { 87.4% } | 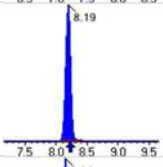 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 318427 | ( 9.14 , N/A ) ( N/A , -0.05 , N/A ) | 2854.3 | N/A | 0.9902 [ 1.0000 ] | 99.0% { 84.2% } | 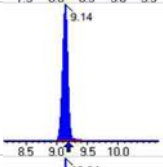 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 400197 | ( 10.04 , N/A ) ( N/A , -0.05 , N/A ) | 882.6 | N/A | 0.9963 [ 1.0000 ] | 99.6% { 84.9% } | 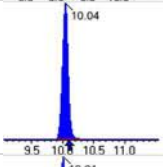 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 469397 | ( 10.91 , N/A ) ( N/A , -0.05 , N/A ) | 1195.8 | N/A | 0.9611 [ 1.0000 ] | 96.1% { 92.6% } | 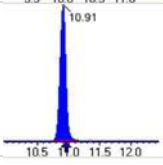 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 476854 | ( 11.73 , N/A ) ( N/A , -0.04 , N/A ) | 1354.7 | N/A | 0.9723 [ 1.0000 ] | 97.2% { 91.8% } | 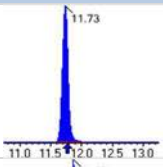 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 407913 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1297.7 | N/A | 0.9544 [ 1.0000 ] | 95.4% { 92.1% } | 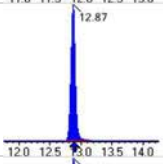 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 701532 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 2837.0 | N/A | 1.9325 [ 2.0000 ] | 96.6% { 87.1% } | 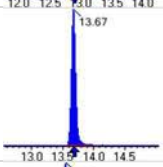 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2050648 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 1203.4 | N/A | 1.9335 [ 2.0000 ] | 96.7% { 86.0% } | 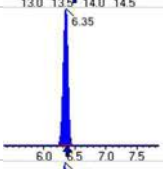 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1552031 | ( 8.63 , N/A ) ( N/A , -0.05 , N/A ) | 5465.5 | N/A | 1.9484 [ 2.0000 ] | 97.4% { 88.0% } | 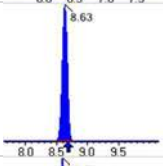 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1958016 | ( 10.50 , N/A ) ( N/A , -0.05 , N/A ) | 1761.2 | N/A | 1.9662 [ 2.0000 ] | 98.3% { 87.7% } | 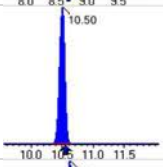 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 502185 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 84.0 | N/A | 5.2977 [ 4.0000 ] | 132.4% { 90.8% } | 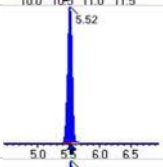 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1469125 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 4194.4 | N/A | 4.9907 [ 4.0000 ] | 124.8% { 90.3% } | 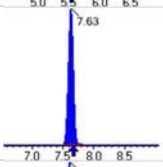 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1522451 | ( 9.41 , N/A ) ( N/A , -0.05 , N/A ) | 1272.5 | N/A | 5.1911 [ 4.0000 ] | 129.8% { 89.2% } | 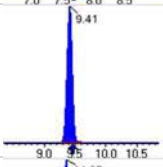 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3228556 | ( 11.05 , N/A ) ( N/A , -0.05 , N/A ) | 1350.1 | N/A | 9.5903 [ 8.0000 ] | 119.9% { 87.0% } | 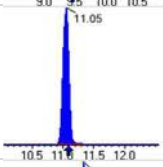 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2023523 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1801.6 | N/A | 1.8751 [ 2.0000 ] | 93.8% { 83.6% } | 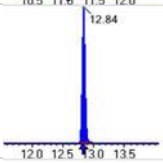 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (22)
Acquired: 2024/03/18 - 20:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 375750 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2003.0 | N/A | 1.8856 [ 2.0000 ] | 94.3% { 87.9% } | 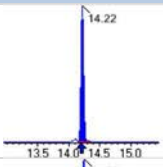 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 424333 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2743.7 | N/A | 1.8538 [ 2.0000 ] | 92.7% { 87.6% } | 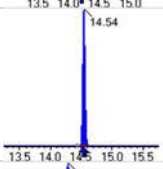 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1133082 | ( 10.29 , N/A ) ( N/A , -0.04 , N/A ) | 2664.2 | N/A | 4.4430 [ 4.0000 ] | 111.1% { 85.8% } | 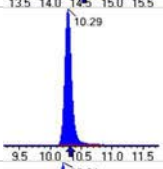 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1097091 | ( 10.81 , N/A ) ( N/A , -0.05 , N/A ) | 1982.0 | N/A | 4.5319 [ 4.0000 ] | 113.3% { 89.1% } | 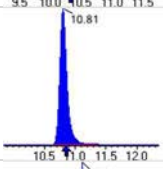 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1791336 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2928.5 | N/A | 19.2384 [ 20.0000 ] | 96.2% { 96.4% } | 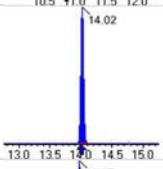 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1794552 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5650.2 | N/A | 15.9097 [ 20.0000 ] | 79.5% { 85.7% } | 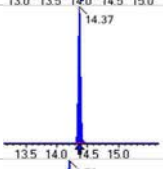 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1217332 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 2175.5 | N/A | 8.9348 [ 8.0000 ] | 111.7% { 86.7% } | 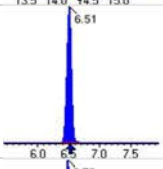 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 652450 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1081.0 | N/A | 2.1133 [ 2.0000 ] | 105.7% { 91.7% } | 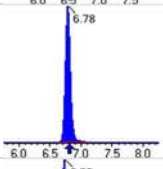 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 617752 | ( 8.82 , N/A ) ( N/A , -0.04 , N/A ) | 715.1 | N/A | 2.1432 [ 2.0000 ] | 107.2% { 92.2% } | 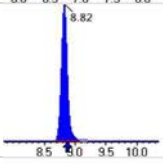 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV3A | PFBA | 20.0A | 20.6A | 103A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.43A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.66A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.93A | 98.7A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.68A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.82A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.80A | 96.0A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.91A | 98.2A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.84A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.21A | 84.2A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.32A | 97.8A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.50A | 95.7A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.42A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.73A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.47A | 96.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.76A | 99.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.04A | 105A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.20A | 107A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.2A | 97.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.8A | 93.6A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.0A | 93.7A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 18.2A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.96A | 99.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.8A | 94.0A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.5A | 97.7A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.97A | 99.3A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2411010A |
| Standard ID:A | 24B0470B | Sequence:A | SD00977A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD00977-CCV3A | NMeFOSEA | 20.0A | 17.6A | 88.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.6A | 97.8A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.65A | 93.1A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.34A | 92.0A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.58A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.87A | 98.7A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 10.0A | 100A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 10.2A | 102A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.07A | 86.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.05A | 85.8A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.7A | 104A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 22.1A | 110A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2659078<br>( 163.0 / 69.0 ) 71391 | ( 2.76 , 0.74 ) ( N/A , -0.02 , -0.1) | 11983.6<br>2487.4 | 0.0268<br>107.1<br>102.6 | 10.3902<br>[ 10.0000 ] | 103.9% | 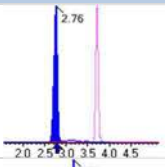 | 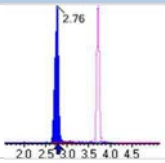 | |
| PFBA | ( 213.0 / 169.0 ) 5628250 | ( 3.72 , 1.00 ) ( 0.00 , N/A , 0.0) | 7388.8 | N/A<br>0.0<br>0.0 | 20.5658<br>[ 20.0000 ] | 102.8% | 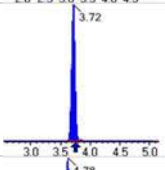 | | |
| PFPeA | ( 263.0 / 219.0 ) 2218642<br>( 263.0 / 69.0 ) 28569 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 4734.5<br>381.0 | 0.0129<br>117.2<br>110.2 | 9.4344<br>[ 10.0000 ] | 94.3% | 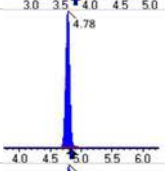 | 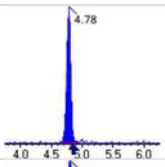 | |
| PFHxA | ( 313.0 / 269.0 ) 1313750<br>( 313.0 / 119.0 ) 159580 | ( 6.00 , 1.00 ) ( 0.00 , N/A , 0.1) | 2738.5<br>1797.4 | 0.1215<br>109.3<br>106.9 | 4.6617<br>[ 5.0000 ] | 93.2% | 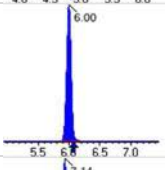 | 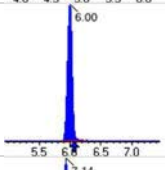 | |
| PFHpA | ( 363.0 / 319.0 ) 1510333<br>( 363.0 / 169.0 ) 466389 | ( 7.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1370.6<br>1084.9 | 0.3088<br>99.1<br>105.0 | 4.9328<br>[ 5.0000 ] | 98.7% | 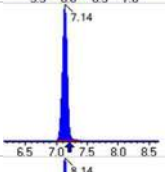 | 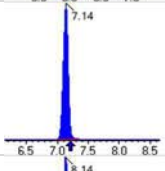 | |
| PFOA | ( 413.0 / 369.0 ) 2047457<br>( 413.0 / 169.0 ) 743749 | ( 8.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 872.2<br>1339.6 | 0.3633<br>100.4<br>102.3 | 4.6777<br>[ 5.0000 ] | 93.6% | 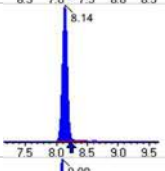 | 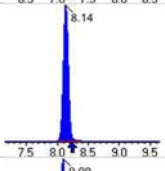 | |
| PFNA | ( 463.0 / 419.0 ) 1324281<br>( 463.0 / 169.0 ) 346760 | ( 9.09 , 1.00 ) ( 0.00 , N/A , 0.1) | 1152.3<br>1154.7 | 0.2618<br>99.8<br>106.4 | 4.8196<br>[ 5.0000 ] | 96.4% | 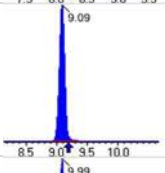 | 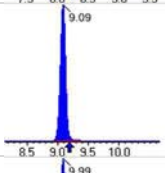 | |
| PFDA | ( 513.0 / 469.0 ) 1582193<br>( 513.0 / 169.0 ) 198333 | ( 9.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 3218.5<br>9340.9 | 0.1254<br>106.8<br>103.8 | 4.7609<br>[ 5.0000 ] | 95.2% | 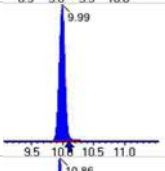 | 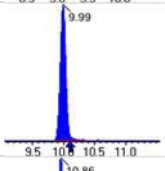 | |
| PFUnA | ( 563.0 / 519.0 ) 1835882<br>( 563.0 / 169.0 ) 282743 | ( 10.86 , 1.00 ) ( 0.00 , N/A , -0.1) | 1000.4<br>892.9 | 0.1540<br>104.0<br>106.5 | 4.7624<br>[ 5.0000 ] | 95.2% | 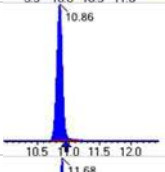 | 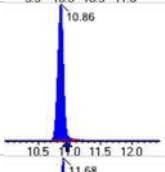 | |
| PFDoA | ( 613.0 / 569.0 ) 2132843<br>( 613.0 / 169.0 ) 316335 | ( 11.68 , 1.00 ) ( 0.00 , N/A , 0.0) | 1585.4<br>1032.3 | 0.1483<br>93.8<br>97.0 | 4.7981<br>[ 5.0000 ] | 96.0% | 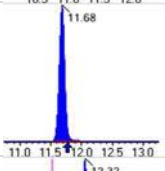 | 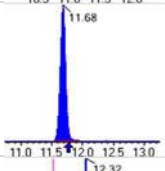 | |
| PFTrDA | ( 663.0 / 619.0 ) 2098605<br>( 663.0 / 169.0 ) 567704 | ( 12.32 , 1.05 ) ( N/A , -0.07 , 0.1) | 1433.4<br>1207.9 | 0.2705<br>100.4<br>106.2 | 4.9104<br>[ 5.0000 ] | 98.2% | 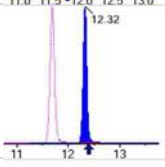 | 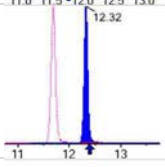 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1728439<br>( 713.0 / 169.0 ) 448629 | ( 12.82 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1736.0<br>1472.3 | 0.2596<br>99.8<br>98.3 | 4.7754<br>[ 5.0000 ] | 95.5% | 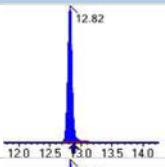 | 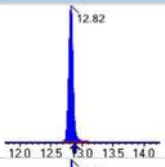 | |
| PFHxDA | ( 813.0 / 769.0 ) 1473173<br>( 813.0 / 169.0 ) 361143 | ( 13.63 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2014.1<br>1252.8 | 0.2451<br>113.0<br>96.3 | 4.8385<br>[ 5.0000 ] | 96.8% | 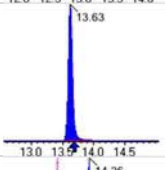 | 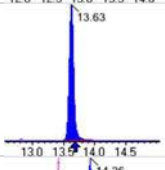 | |
| PFODA | ( 913.0 / 869.0 ) 860959<br>( 913.0 / 169.0 ) 295664 | ( 14.26 , 1.05 )<br>( N/A , -0.05 , -0.1) | 1953.4<br>948.6 | 0.3434<br>89.9<br>103.5 | 4.2087<br>[ 5.0000 ] | 84.2% | 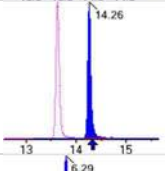 | 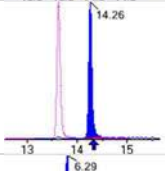 | |
| PFBS | ( 299.0 / 80.0 ) 2019206<br>( 299.0 / 99.0 ) 1478303 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4463.3<br>3203.8 | 0.7321<br>103.0<br>101.6 | 4.3249<br>[ 4.4237 ] | 97.8% | 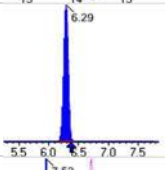 | 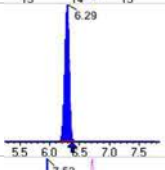 | |
| PFPeS | ( 349.0 / 80.0 ) 5155049<br>( 349.0 / 99.0 ) 1865519 | ( 7.52 , 0.88 )<br>( N/A , -0.09 , -0.1) | 3020.5<br>2515.4 | 0.3619<br>106.4<br>105.5 | 4.4991<br>[ 4.6919 ] | 95.9% | 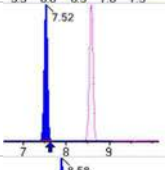 | 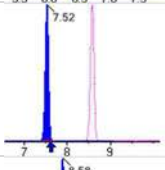 | |
| PFHxS | ( 399.0 / 80.0 ) 5627474<br>( 399.0 / 99.0 ) 1806876 | ( 8.58 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4253.5<br>4284.6 | 0.3211<br>102.7<br>100.1 | 4.4165<br>[ 4.5549 ] | 97.0% | 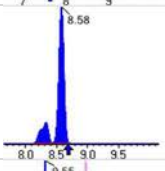 | 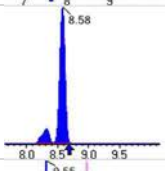 | |
| PFHpS | ( 449.0 / 80.0 ) 4873316<br>( 449.0 / 99.0 ) 1313871 | ( 9.55 , 0.91 )<br>( N/A , -0.10 , 0.0) | 1786.0<br>1637.2 | 0.2696<br>100.9<br>100.4 | 4.7262<br>[ 4.7570 ] | 99.4% | 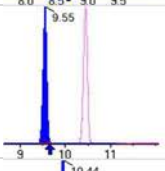 | 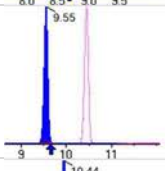 | |
| PFOS | ( 499.0 / 80.0 ) 4637730<br>( 499.0 / 99.0 ) 1048528 | ( 10.44 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2652.8<br>4787.3 | 0.2261<br>95.6<br>103.2 | 4.4703<br>[ 4.6375 ] | 96.4% | 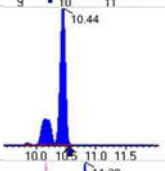 | 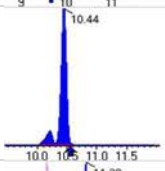 | |
| PFNS | ( 549.0 / 80.0 ) 4815835<br>( 549.0 / 99.0 ) 1291876 | ( 11.28 , 1.08 )<br>( N/A , -0.10 , 0.1) | 2997.6<br>3387.4 | 0.2683<br>101.0<br>97.9 | 4.7602<br>[ 4.7994 ] | 99.2% | 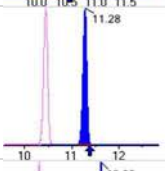 | 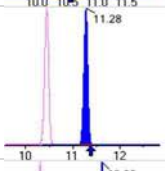 | |
| PFDS | ( 599.0 / 80.0 ) 6078596<br>( 599.0 / 99.0 ) 1553978 | ( 12.00 , 1.15 )<br>( N/A , -0.08 , 0.0) | 3622.6<br>2642.1 | 0.2556<br>101.9<br>100.8 | 5.0408<br>[ 4.8155 ] | 104.7% | 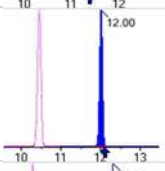 | 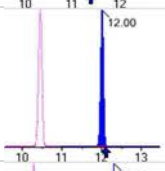 | |
| PFDoS | ( 699.0 / 80.0 ) 5355733<br>( 699.0 / 99.0 ) 1261487 | ( 12.93 , 1.24 )<br>( N/A , -0.06 , 0.0) | 4035.4<br>4043.5 | 0.2355<br>102.1<br>104.1 | 5.1977<br>[ 4.8478 ] | 107.2% | 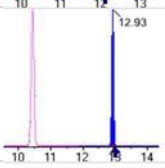 | 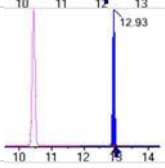 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5471720<br>( 327.0 / 81.0 ) 5019632 | ( 5.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4008.9<br>3781.6 | 0.9174<br>104.7<br>100.3 | 18.2413<br>[ 18.6906 ] | 97.6% | 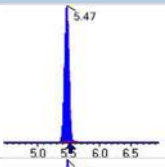 | 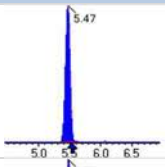 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5567971<br>( 427.0 / 81.0 ) 7094179 | ( 7.57 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4976.9<br>4175.7 | 1.2741<br>100.3<br>100.4 | 17.7879<br>[ 18.9808 ] | 93.7% | 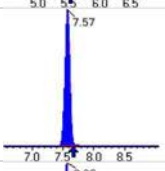 | 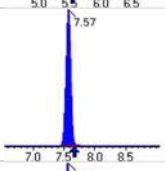 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6191454<br>( 527.0 / 81.0 ) 6268775 | ( 9.36 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1803.6<br>1591.9 | 1.0125<br>106.8<br>101.6 | 17.9843<br>[ 19.1658 ] | 93.8% | 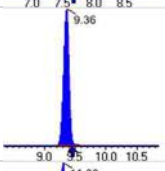 | 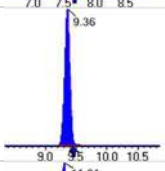 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5709007<br>( 627.0 / 81.0 ) 8297298 | ( 11.00 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1409.8<br>1469.2 | 1.4534<br>107.5<br>106.1 | 18.1990<br>[ 19.3236 ] | 94.2% | 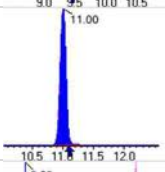 | 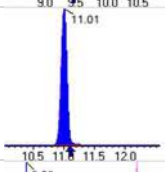 | |
| PFBSA | ( 297.9 / 78.0 ) 4119488<br>( 297.9 / 278.0 ) 6487 | ( 8.03 , 0.57 )<br>( N/A , -0.04 , 0.2) | 1782.2<br>145.7 | 0.0016<br>112.1<br>99.5 | 4.8341<br>[ 5.0000 ] | 96.7% | 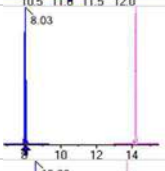 | 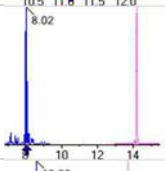 | |
| PFHxSA | ( 397.9 / 78.0 ) 5746659<br>( 397.9 / 378.0 ) 23238 | ( 10.90 , 0.75 )<br>( N/A , -0.04 , -0.1) | 1781.4<br>562.2 | 0.0040<br>106.2<br>96.6 | 5.5705<br>[ 5.0000 ] | 111.4% | 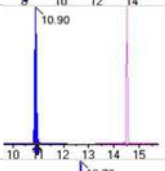 | 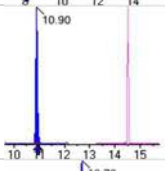 | |
| PFOSA | ( 498.0 / 78.0 ) 4394143<br>( 498.0 / 478.0 ) 61794 | ( 12.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2309.2<br>1088.7 | 0.0141<br>97.5<br>102.7 | 4.9590<br>[ 5.0000 ] | 99.2% | 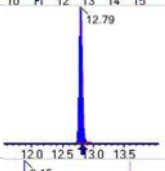 | 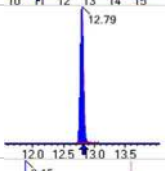 | |
| TFSI | ( 279.7 / 147.0 ) 9805472<br>( 279.7 / 211.0 ) 857511 | ( 8.15 , 0.64 )<br>( N/A , -0.10 , 0.0) | 61.4<br>58.3 | 0.0875<br>106.0<br>102.8 | 5.2052<br>[ 4.8967 ] | 106.3% | 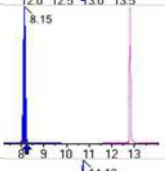 | 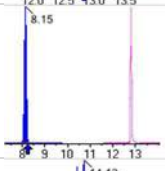 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3507891<br>( 512.0 / 169.0 ) 2593001 | ( 14.18 , 1.00 )<br>( 0.00 , N/A , 3.0) | 3192.4<br>3583.5 | 0.7392<br>100.6<br>96.8 | 18.7923<br>[ 20.0000 ] | 94.0% | 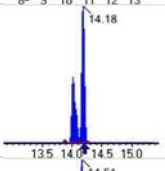 | 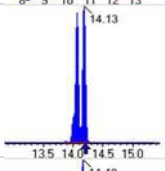 | |
| NEtFOSA | ( 526.0 / 219.0 ) 4311434<br>( 526.0 / 169.0 ) 5461866 | ( 14.51 , 1.00 )<br>( 0.01 , N/A , 2.1) | 5000.8<br>4048.6 | 1.2668<br>100.0<br>100.4 | 19.5343<br>[ 20.0000 ] | 97.7% | 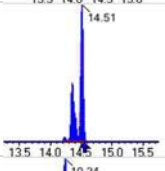 | 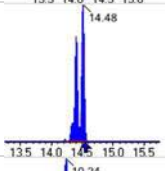 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1196279<br>( 570.0 / 483.0 ) 565234 | ( 10.24 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2590.1<br>2199.9 | 0.4725<br>109.1<br>103.7 | 4.7216<br>[ 5.0000 ] | 94.4% | 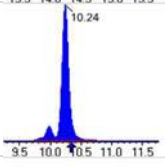 | 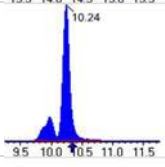 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1208643<br>( 584.0 / 526.0 ) 720149 | ( 10.77 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1450.7<br>855.6 | 0.5958<br>96.2<br>98.9 | 4.9659<br>[ 5.0000 ] | 99.3% | 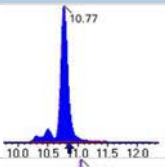 | 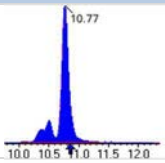 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1744688 | ( 14.00 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3039.7 | N/A<br>0.0<br>0.0 | 17.6133<br>[ 20.0000 ] | 88.1% | 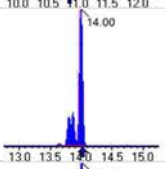 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1534356 | ( 14.35 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3506.1 | N/A<br>0.0<br>0.0 | 19.5584<br>[ 20.0000 ] | 97.8% | 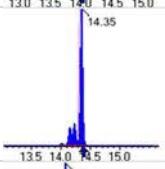 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 358228<br>( 285.0 / 185.0 ) 1045227 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2015.5<br>2359.1 | 2.9178<br>93.6<br>105.3 | 4.6546<br>[ 5.0000 ] | 93.1% | 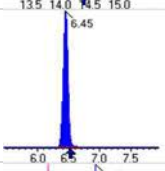 | 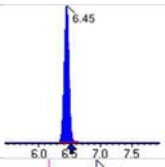 | |
| ADONA | ( 377.0 / 85.0 ) 4256800<br>( 377.0 / 251.0 ) 455332 | ( 7.52 , 1.17 )<br>( N/A , -0.08 , 0.0) | 2084.5<br>1460.0 | 0.1070<br>100.3<br>101.1 | 4.3431<br>[ 4.7135 ] | 92.1% | 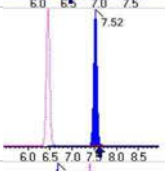 | 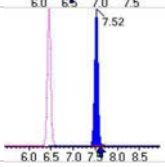 | |
| PFMPA | ( 229.0 / 85.0 ) 735192 | ( 4.10 , 0.86 )<br>( N/A , -0.04 , 0.0) | 7136.9 | N/A<br>0.0<br>0.0 | 9.8744<br>[ 10.0000 ] | 98.7% | 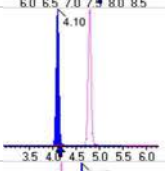 | | |
| PFMBA | ( 279.0 / 85.0 ) 1971742 | ( 5.15 , 1.08 )<br>( N/A , -0.06 , 0.0) | 4875.4 | N/A<br>0.0<br>0.0 | 10.0054<br>[ 10.0000 ] | 100.1% | 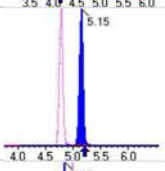 | | |
| NFDHA | ( 295.0 / 201.0 ) 997614<br>( 295.0 / 85.0 ) 1035348 | ( 5.86 , 0.98 )<br>( N/A , -0.07 , 0.0) | 3934.0<br>2756.1 | 1.0378<br>96.0<br>97.0 | 10.1830<br>[ 10.0000 ] | 101.8% | 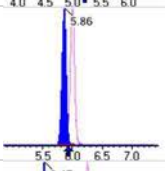 | 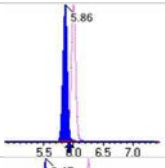 | |
| PFECHS | ( 461.0 / 98.9 ) 2497329<br>( 461.0 / 381.2 ) 959826 | ( 9.47 , 0.91 )<br>( N/A , -0.11 , -0.1) | 3294.8<br>3300.8 | 0.3843<br>98.4<br>98.2 | 4.2686<br>[ 4.6193 ] | 92.4% | 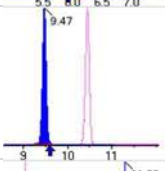 | 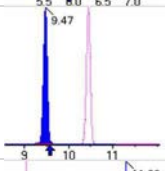 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4920756<br>( 533.0 / 353.0 ) 1602297 | ( 11.09 , 1.72 )<br>( N/A , -0.10 , -0.1) | 2716.7<br>2417.4 | 0.3256<br>101.3<br>104.6 | 4.0683<br>[ 4.6663 ] | 87.2% | 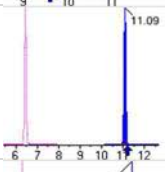 | 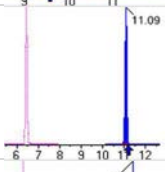 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3836714<br>( 633.0 / 453.0 ) 1332353 | ( 12.42 , 1.93 )<br>( N/A , -0.07 , 0.1) | 2898.5<br>3132.2 | 0.3473<br>106.3<br>104.7 | 4.0497<br>[ 4.7160 ] | 85.9% | 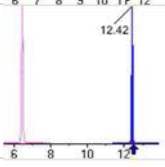 | 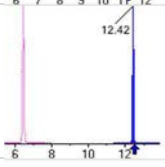 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 1819515<br>( 315.0 / 83.0 ) 1024876 | ( 6.88 , 1.15 )<br>( N/A , -0.08 , 0.0) | 2861.5<br>1179.2 | 0.5633<br>98.3<br>95.2 | 8.5840<br>[ 8.9246 ] | 96.2% | 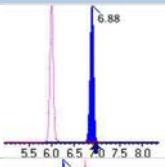 | 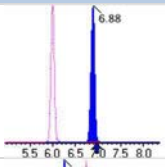 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 236669<br>( 241.0 / 117.0 ) 544596 | ( 4.34 , 0.91 )<br>( N/A , -0.03 , 0.0) | 2623.0<br>1927.0 | 2.3011<br>103.7<br>103.4 | 20.7157<br>[ 20.0000 ] | 103.6% | 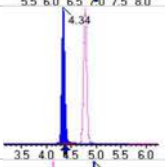 | 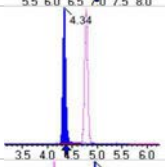 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1396480<br>( 341.0 / 217.0 ) 2114322 | ( 6.87 , 1.15 )<br>( N/A , -0.06 , 0.1) | 1484.3<br>1161.6 | 1.5140<br>101.1<br>98.8 | 20.4453<br>[ 20.0000 ] | 102.2% | 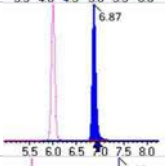 | 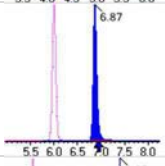 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2219255<br>( 441.0 / 337.0 ) 1917064 | ( 9.26 , 1.54 )<br>( N/A , -0.08 , 0.2) | 4985.4<br>7618.6 | 0.8638<br>97.1<br>99.7 | 22.0870<br>[ 20.0000 ] | 110.4% | 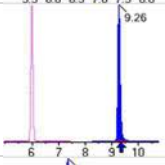 | 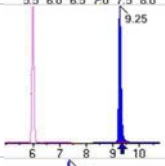 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1529490<br>( 357.2 / 243.0 ) 164299 | ( 6.72 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1401.1<br>1046.8 | 0.1074<br>101.8<br>100.5 | 4.8746<br>[ 5.0000 ] | 97.5% | 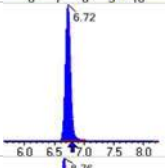 | 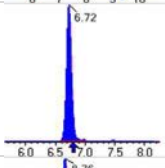 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1190775<br>( 457.2 / 343.0 ) 50208 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , 0.2) | 812.0<br>373.2 | 0.0422<br>107.7<br>110.9 | 4.9806<br>[ 5.0000 ] | 99.6% | 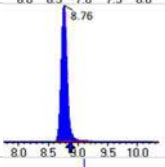 | 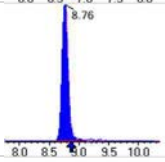 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 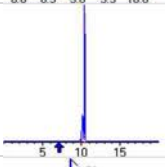 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269556 | ( 3.72 , N/A )<br>( N/A , -0.03 , N/A ) | 1246.3 | N/A | 0.8948<br>[ 1.0000 ] | 89.5%<br>{ 79.6% } | 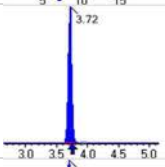 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135868 | ( 6.00 , N/A )<br>( N/A , -0.07 , N/A ) | 129852.0 | N/A | 0.8836<br>[ 1.0000 ] | 88.4%<br>{ 79.7% } | 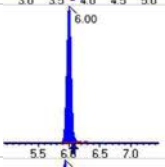 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 410104 | ( 8.14 , N/A )<br>( N/A , -0.09 , N/A ) | 4603.5 | N/A | 0.9192<br>[ 1.0000 ] | 91.9%<br>{ 84.0% } | 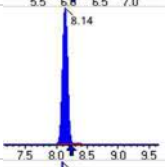 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 297879 | ( 9.09 , N/A )<br>( N/A , -0.10 , N/A ) | 1207.6 | N/A | 0.8911<br>[ 1.0000 ] | 89.1%<br>{ 77.4% } | 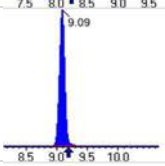 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (34)
Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 298211 | ( 9.99 , N/A ) ( N/A , -0.10 , N/A ) | 3359.0 | N/A | 0.8992 [ 1.0000 ] | 89.9% { 79.0% } | 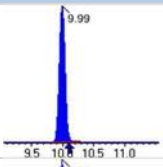 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1020416 | ( 8.59 , N/A ) ( N/A , -0.10 , N/A ) | 3795.5 | N/A | 0.9132 [ 1.0000 ] | 91.3% { 81.4% } | 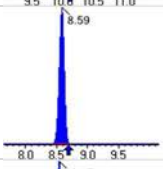 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 826123 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 2767.6 | N/A | 0.8463 [ 1.0000 ] | 84.6% { 78.1% } | 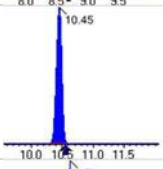 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2314201 | ( 3.71 , N/A ) ( N/A , -0.03 , N/A ) | 35555.6 | N/A | 7.7852 [ 8.0000 ] | 97.3% { 81.5% } | 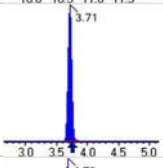 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 924025 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5928.7 | N/A | 3.7909 [ 4.0000 ] | 94.8% { 72.2% } | 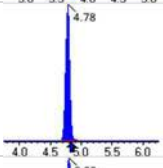 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581706 | ( 6.00 , N/A ) ( N/A , -0.07 , N/A ) | 7357.1 | N/A | 1.9940 [ 2.0000 ] | 99.7% { 76.7% } | 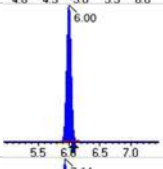 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 621756 | ( 7.14 , N/A ) ( N/A , -0.08 , N/A ) | 4005.9 | N/A | 2.0407 [ 2.0000 ] | 102.0% { 75.7% } | 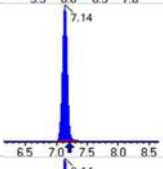 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 860866 | ( 8.14 , N/A ) ( N/A , -0.09 , N/A ) | 2802.8 | N/A | 1.9909 [ 2.0000 ] | 99.5% { 79.2% } | 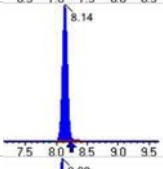 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274201 | ( 9.09 , N/A ) ( N/A , -0.10 , N/A ) | 3350.4 | N/A | 0.9532 [ 1.0000 ] | 95.3% { 72.5% } | 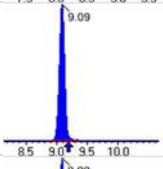 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 333694 | ( 9.99 , N/A ) ( N/A , -0.10 , N/A ) | 1107.4 | N/A | 0.9697 [ 1.0000 ] | 97.0% { 70.8% } | 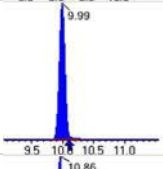 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412823 | ( 10.86 , N/A ) ( N/A , -0.10 , N/A ) | 806.7 | N/A | 0.9867 [ 1.0000 ] | 98.7% { 81.4% } | 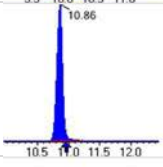 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 434312 | ( 11.69 , N/A ) ( N/A , -0.09 , N/A ) | 1447.5 | N/A | 1.0337 [ 1.0000 ] | 103.4% { 83.7% } | 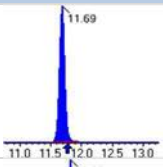 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 381121 | ( 12.82 , N/A ) ( N/A , -0.06 , N/A ) | 1386.8 | N/A | 1.0410 [ 1.0000 ] | 104.1% { 86.1% } | 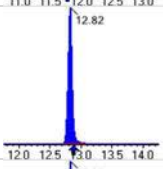 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 630920 | ( 13.63 , N/A ) ( N/A , -0.06 , N/A ) | 2306.6 | N/A | 2.0288 [ 2.0000 ] | 101.4% { 78.4% } | 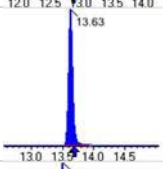 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1795723 | ( 6.29 , N/A ) ( N/A , -0.07 , N/A ) | 1152.6 | N/A | 1.8062 [ 2.0000 ] | 90.3% { 75.3% } | 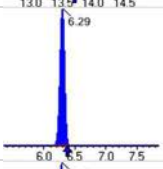 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1438991 | ( 8.58 , N/A ) ( N/A , -0.10 , N/A ) | 4808.4 | N/A | 1.9271 [ 2.0000 ] | 96.4% { 81.6% } | 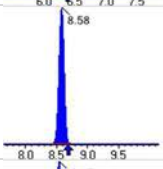 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1794882 | ( 10.45 , N/A ) ( N/A , -0.10 , N/A ) | 1580.8 | N/A | 2.0409 [ 2.0000 ] | 102.0% { 80.4% } | 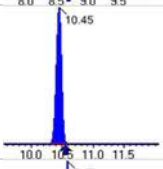 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 445596 | ( 5.47 , N/A ) ( N/A , -0.06 , N/A ) | 88.7 | N/A | 5.0146 [ 4.0000 ] | 125.4% { 80.5% } | 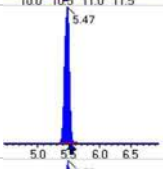 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1409420 | ( 7.58 , N/A ) ( N/A , -0.08 , N/A ) | 4297.1 | N/A | 5.1076 [ 4.0000 ] | 127.7% { 86.6% } | 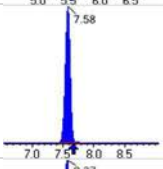 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1389896 | ( 9.37 , N/A ) ( N/A , -0.09 , N/A ) | 1567.1 | N/A | 5.0556 [ 4.0000 ] | 126.4% { 81.4% } | 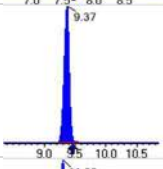 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3050028 | ( 11.00 , N/A ) ( N/A , -0.09 , N/A ) | 1066.3 | N/A | 9.6649 [ 8.0000 ] | 120.8% { 82.2% } | 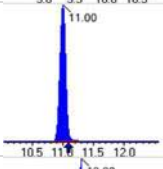 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1815896 | ( 12.80 , N/A ) ( N/A , -0.03 , N/A ) | 1980.0 | N/A | 1.9053 [ 2.0000 ] | 95.3% { 75.0% } | 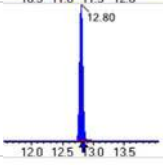 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCV3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 00:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 370661 | ( 14.18 , N/A ) ( N/A , -0.03 , N/A ) | 2345.5 | N/A | 2.1062 [ 2.0000 ] | 105.3% { 86.7% } | 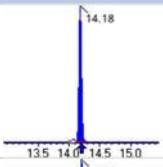 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 402279 | ( 14.50 , N/A ) ( N/A , -0.03 , N/A ) | 2587.7 | N/A | 1.9900 [ 2.0000 ] | 99.5% { 83.1% } | 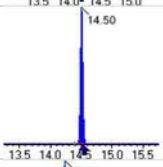 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1076130 | ( 10.24 , N/A ) ( N/A , -0.09 , N/A ) | 2495.9 | N/A | 4.7780 [ 4.0000 ] | 119.5% { 81.5% } | 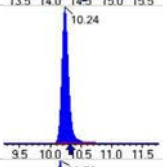 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1009240 | ( 10.76 , N/A ) ( N/A , -0.09 , N/A ) | 1898.3 | N/A | 4.7207 [ 4.0000 ] | 118.0% { 81.9% } | 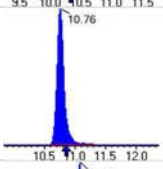 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1749997 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 3075.9 | N/A | 21.2812 [ 20.0000 ] | 106.4% { 94.1% } | 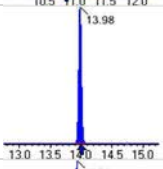 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1775739 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 3726.4 | N/A | 17.8259 [ 20.0000 ] | 89.1% { 84.8% } | 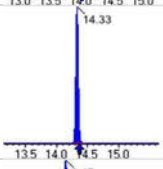 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1084568 | ( 6.45 , N/A ) ( N/A , -0.07 , N/A ) | 1943.4 | N/A | 8.6491 [ 8.0000 ] | 108.1% { 77.3% } | 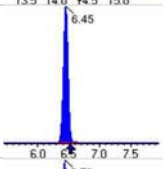 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 583817 | ( 6.73 , N/A ) ( N/A , -0.07 , N/A ) | 1224.0 | N/A | 2.2074 [ 2.0000 ] | 110.4% { 82.1% } | 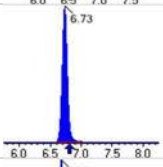 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 566949 | ( 8.77 , N/A ) ( N/A , -0.09 , N/A ) | 803.4 | N/A | 2.2960 [ 2.0000 ] | 114.8% { 84.7% } | 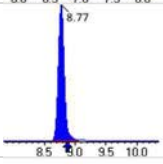 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | PFBA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.10A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.47A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.50A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.43A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.78A | 95.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.44A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.54A | 90.8A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.08A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.53A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.58A | 95.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.24A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.54A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.39A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.67A | 96.3A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.4A | 92.5A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 99.9A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.4A | 101A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.5A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.52A | 90.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.3A | 91.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.8A | 94.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | NMeFOSEA | 20.0A | 17.8A | 88.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 95.9A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.05A | 101A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.40A | 93.2A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.95A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.02A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.04A | 90.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.17A | 91.7A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.30A | 91.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.53A | 96.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 17.8A | 89.1A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 17.9A | 89.5A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2372019<br>( 163.0 / 69.0 ) 62514 | ( 2.80 , 0.74 ) ( N/A , 0.00 , 0.1) | 13913.0<br>2584.8 | 0.0264<br>97.0<br>100.0 | 8.9879<br>[ 10.0000 ] | 89.9% | 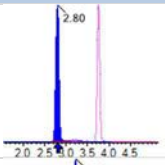 | 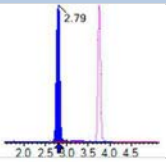 | |
| PFBA | ( 213.0 / 169.0 ) 4986352 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.8 | N/A<br>0.0<br>0.0 | 17.8727<br>[ 20.0000 ] | 89.4% | 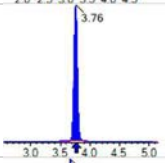 | | |
| PFPeA | ( 263.0 / 219.0 ) 2243443<br>( 263.0 / 69.0 ) 24889 | ( 4.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 5617.4<br>382.6 | 0.0111<br>92.9<br>100.0 | 9.1014<br>[ 10.0000 ] | 91.0% | 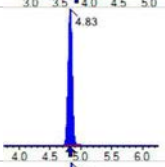 | 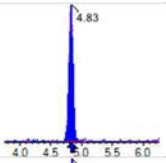 | |
| PFHxA | ( 313.0 / 269.0 ) 1266538<br>( 313.0 / 119.0 ) 148224 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.1) | 2320.7<br>1439.8 | 0.1170<br>100.8<br>100.0 | 4.4684<br>[ 5.0000 ] | 89.4% | 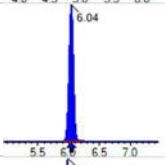 | 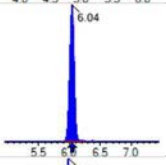 | |
| PFHpA | ( 363.0 / 319.0 ) 1450446<br>( 363.0 / 169.0 ) 428196 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 1901.5<br>1629.8 | 0.2952<br>97.4<br>100.0 | 4.5031<br>[ 5.0000 ] | 90.1% | 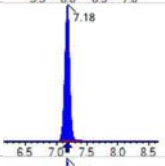 | 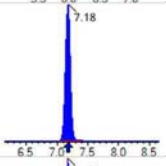 | |
| PFOA | ( 413.0 / 369.0 ) 2002153<br>( 413.0 / 169.0 ) 687361 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 897.9<br>1153.0 | 0.3433<br>93.9<br>100.0 | 4.7249<br>[ 5.0000 ] | 94.5% | 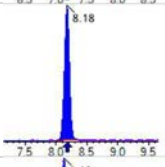 | 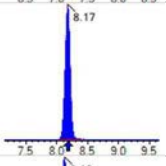 | |
| PFNA | ( 463.0 / 419.0 ) 1283413<br>( 463.0 / 169.0 ) 308707 | ( 9.12 , 1.00 ) ( 0.00 , N/A , 0.1) | 1323.8<br>992.2 | 0.2405<br>94.2<br>100.0 | 4.7313<br>[ 5.0000 ] | 94.6% | 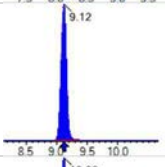 | 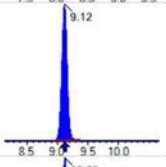 | |
| PFDA | ( 513.0 / 469.0 ) 1457239<br>( 513.0 / 169.0 ) 174432 | ( 10.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 3628.8<br>1931.7 | 0.1197<br>102.2<br>100.0 | 4.4330<br>[ 5.0000 ] | 88.7% | 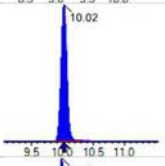 | 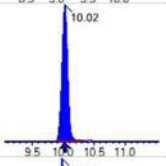 | |
| PFUnA | ( 563.0 / 519.0 ) 1643541<br>( 563.0 / 169.0 ) 233570 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 959.0<br>907.0 | 0.1421<br>100.3<br>100.0 | 4.7773<br>[ 5.0000 ] | 95.5% | 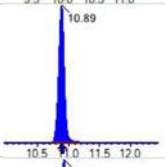 | 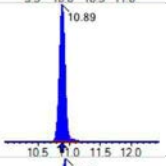 | |
| PFDoA | ( 613.0 / 569.0 ) 1793459<br>( 613.0 / 169.0 ) 265167 | ( 11.71 , 1.00 ) ( 0.00 , N/A , 0.0) | 1158.4<br>870.7 | 0.1479<br>93.5<br>100.0 | 4.7806<br>[ 5.0000 ] | 95.6% | 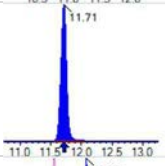 | 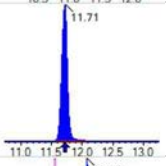 | |
| PFTrDA | ( 663.0 / 619.0 ) 1689975<br>( 663.0 / 169.0 ) 437674 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 1578.2<br>1081.4 | 0.2590<br>100.6<br>100.0 | 4.6051<br>[ 5.0000 ] | 92.1% | 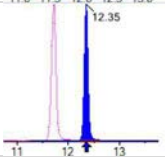 | 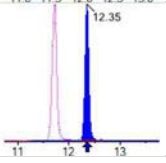 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1356735<br>( 713.0 / 169.0 ) 360534 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1740.6<br>1078.6 | 0.2657<br>98.5<br>100.0 | 4.4375<br>[ 5.0000 ] | 88.7% | 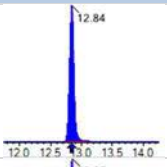 | 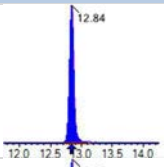 | |
| PFHxDA | ( 813.0 / 769.0 ) 1109449<br>( 813.0 / 169.0 ) 283268 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1965.8<br>1206.1 | 0.2553<br>104.4<br>100.0 | 4.6054<br>[ 5.0000 ] | 92.1% | 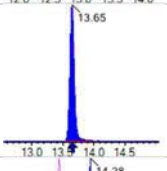 | 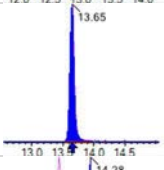 | |
| PFODA | ( 913.0 / 869.0 ) 683892<br>( 913.0 / 169.0 ) 233111 | ( 14.28 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2010.8<br>850.7 | 0.3409<br>95.1<br>100.0 | 4.5379<br>[ 5.0000 ] | 90.8% | 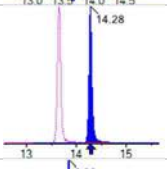 | 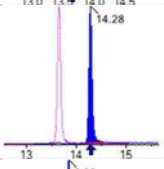 | |
| PFBS | ( 299.0 / 80.0 ) 1776776<br>( 299.0 / 99.0 ) 1306667 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3528.0<br>2910.9 | 0.7354<br>104.0<br>100.0 | 4.0783<br>[ 4.4237 ] | 92.2% | 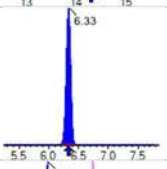 | 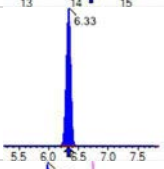 | |
| PFPeS | ( 349.0 / 80.0 ) 4572433<br>( 349.0 / 99.0 ) 1610319 | ( 7.56 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2516.4<br>2164.2 | 0.3522<br>97.9<br>100.0 | 4.5312<br>[ 4.6919 ] | 96.6% | 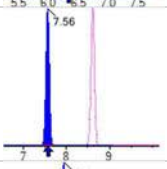 | 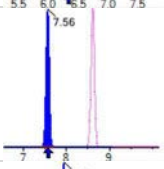 | |
| PFHxS | ( 399.0 / 80.0 ) 4833210<br>( 399.0 / 99.0 ) 1616028 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3301.5<br>4483.9 | 0.3344<br>105.0<br>100.0 | 4.1236<br>[ 4.5549 ] | 90.5% | 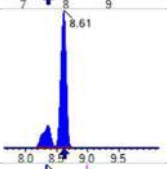 | 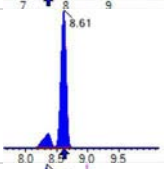 | |
| PFHpS | ( 449.0 / 80.0 ) 4254224<br>( 449.0 / 99.0 ) 1126368 | ( 9.58 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2066.6<br>2304.9 | 0.2648<br>100.0<br>100.0 | 4.5831<br>[ 4.7570 ] | 96.3% | 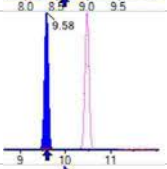 | 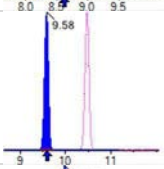 | |
| PFOS | ( 499.0 / 80.0 ) 3789953<br>( 499.0 / 99.0 ) 909936 | ( 10.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2527.5<br>9767.3 | 0.2401<br>102.7<br>100.0 | 4.2357<br>[ 4.6375 ] | 91.3% | 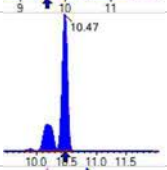 | 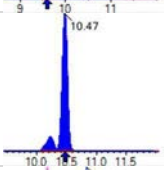 | |
| PFNS | ( 549.0 / 80.0 ) 3806892<br>( 549.0 / 99.0 ) 1025720 | ( 11.31 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2649.7<br>2424.8 | 0.2694<br>98.9<br>100.0 | 4.5441<br>[ 4.7994 ] | 94.7% | 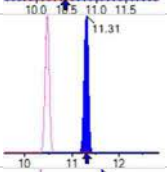 | 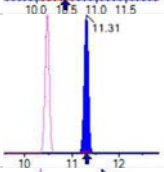 | |
| PFDS | ( 599.0 / 80.0 ) 4494028<br>( 599.0 / 99.0 ) 1201321 | ( 12.03 , 1.15 )<br>( N/A , 0.00 , 0.0) | 2480.1<br>2375.2 | 0.2673<br>98.3<br>100.0 | 4.3932<br>[ 4.8155 ] | 91.2% | 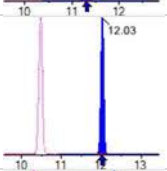 | 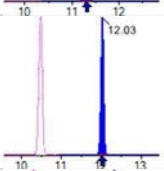 | |
| PFDoS | ( 699.0 / 80.0 ) 4211625<br>( 699.0 / 99.0 ) 964350 | ( 12.95 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3894.8<br>3231.8 | 0.2290<br>98.0<br>100.0 | 4.6702<br>[ 4.8478 ] | 96.3% | 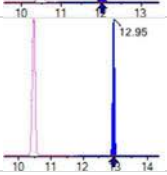 | 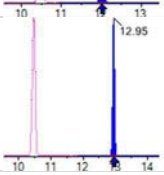 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6723472<br>( 327.0 / 81.0 ) 6052601 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.1) | 5893.7<br>4257.3 | 0.9002<br>103.2<br>100.0 | 17.3957<br>[ 18.6906 ] | 93.1% | 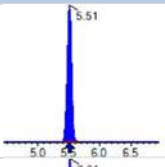 | 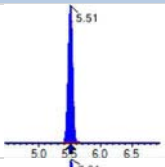 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6550499<br>( 427.0 / 81.0 ) 8675827 | ( 7.61 , 1.00 ) ( 0.00 , N/A , -0.1) | 4655.5<br>4712.5 | 1.3245<br>105.6<br>100.0 | 18.9841<br>[ 18.9808 ] | 100.0% | 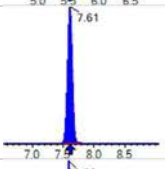 | 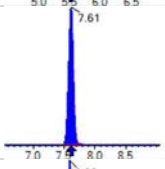 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6285503<br>( 527.0 / 81.0 ) 6405924 | ( 9.39 , 1.00 ) ( 0.00 , N/A , 0.1) | 1836.8<br>1754.0 | 1.0192<br>93.7<br>100.0 | 19.3547<br>[ 19.1658 ] | 101.0% | 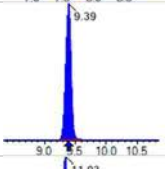 | 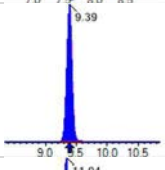 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4792812<br>( 627.0 / 81.0 ) 6991963 | ( 11.03 , 1.00 ) ( 0.01 , N/A , -0.1) | 1314.8<br>1502.6 | 1.4588<br>101.3<br>100.0 | 19.4893<br>[ 19.3236 ] | 100.9% | 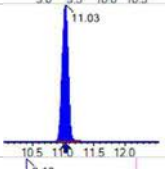 | 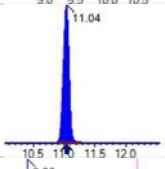 | |
| PFBSA | ( 297.9 / 78.0 ) 3525714<br>( 297.9 / 278.0 ) 5463 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.5) | 1695.3<br>251.5 | 0.0015<br>113.4<br>100.0 | 4.7511<br>[ 5.0000 ] | 95.0% | 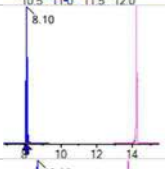 | 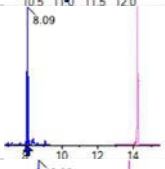 | |
| PFHxSA | ( 397.9 / 78.0 ) 4197148<br>( 397.9 / 378.0 ) 17568 | ( 10.96 , 0.75 ) ( N/A , 0.00 , 0.0) | 1478.3<br>418.3 | 0.0042<br>102.4<br>100.0 | 4.4538<br>[ 5.0000 ] | 89.1% | 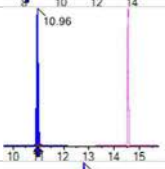 | 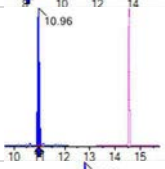 | |
| PFOSA | ( 498.0 / 78.0 ) 3104104<br>( 498.0 / 478.0 ) 46212 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 2218.1<br>1112.6 | 0.0149<br>106.1<br>100.0 | 4.5183<br>[ 5.0000 ] | 90.4% | 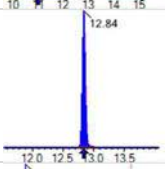 | 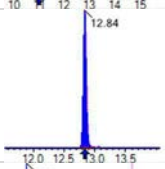 | |
| TFSI | ( 279.7 / 147.0 ) 8803222<br>( 279.7 / 211.0 ) 753322 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.0) | 60.2<br>54.6 | 0.0856<br>101.9<br>100.0 | 4.8663<br>[ 4.8967 ] | 99.4% | 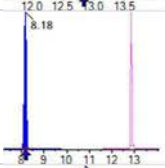 | 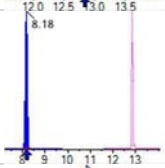 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2614289<br>( 512.0 / 169.0 ) 1982385 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.5) | 3210.8<br>1364.9 | 0.7583<br>101.3<br>100.0 | 18.2851<br>[ 20.0000 ] | 91.4% | 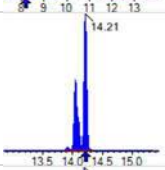 | 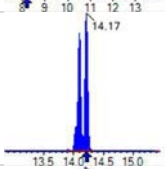 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3236003<br>( 526.0 / 169.0 ) 4018548 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.2) | 4263.0<br>4095.8 | 1.2418<br>100.6<br>100.0 | 18.8439<br>[ 20.0000 ] | 94.2% | 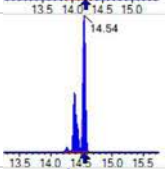 | 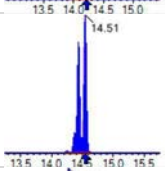 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 913337<br>( 570.0 / 483.0 ) 426919 | ( 10.28 , 1.00 ) ( 0.01 , N/A , 0.2) | 2705.3<br>1697.2 | 0.4674<br>106.6<br>100.0 | 4.5300<br>[ 5.0000 ] | 90.6% | 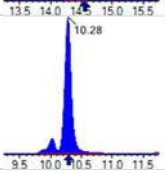 | 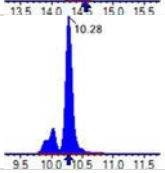 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 887553<br>( 584.0 / 526.0 ) 524891 | ( 10.81 , 1.00 ) ( 0.01 , N/A , 0.0) | 1604.5<br>743.0 | 0.5914<br>95.9<br>100.0 | 4.7124<br>[ 5.0000 ] | 94.2% | 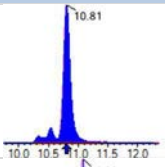 | 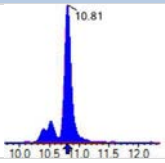 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1339066 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 2300.7 | N/A<br>0.0<br>0.0 | 17.7635<br>[ 20.0000 ] | 88.8% | 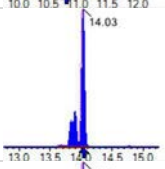 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1098743 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 3411.8 | N/A<br>0.0<br>0.0 | 19.1717<br>[ 20.0000 ] | 95.9% | 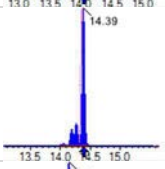 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 380390<br>( 285.0 / 185.0 ) 1003592 | ( 6.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 1880.8<br>2181.2 | 2.6383<br>95.4<br>100.0 | 5.0462<br>[ 5.0000 ] | 100.9% | 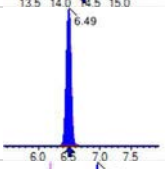 | 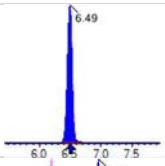 | |
| ADONA | ( 377.0 / 85.0 ) 3869589<br>( 377.0 / 251.0 ) 404618 | ( 7.56 , 1.16 ) ( N/A , 0.00 , 0.0) | 1810.2<br>1474.1 | 0.1046<br>102.6<br>100.0 | 4.4000<br>[ 4.7135 ] | 93.3% | 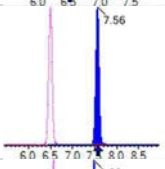 | 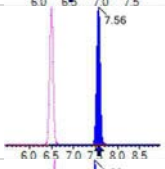 | |
| PFEESA | ( 315.0 / 135.0 ) 1617314<br>( 315.0 / 83.0 ) 915772 | ( 6.92 , 1.15 ) ( N/A , 0.00 , 0.1) | 3997.6<br>1231.2 | 0.5662<br>101.6<br>100.0 | 7.9456<br>[ 8.9246 ] | 89.0% | 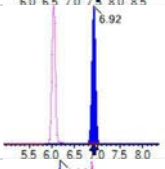 | 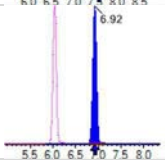 | |
| PFMPA | ( 229.0 / 85.0 ) 705416 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 6992.0 | N/A<br>0.0<br>0.0 | 9.0183<br>[ 10.0000 ] | 90.2% | 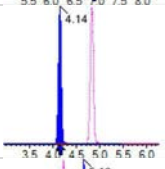 | | |
| PFMBA | ( 279.0 / 85.0 ) 1921542 | ( 5.19 , 1.08 ) ( N/A , 0.00 , 0.0) | 5369.8 | N/A<br>0.0<br>0.0 | 9.0384<br>[ 10.0000 ] | 90.4% | 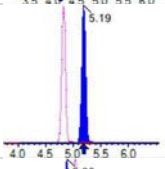 | | |
| NFDHA | ( 295.0 / 201.0 ) 969933<br>( 295.0 / 85.0 ) 975334 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.2) | 2782.9<br>3168.6 | 1.0056<br>93.2<br>100.0 | 9.1661<br>[ 10.0000 ] | 91.7% | 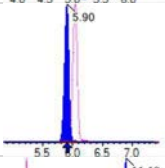 | 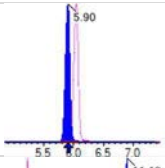 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4087296<br>( 533.0 / 353.0 ) 1347063 | ( 11.12 , 1.71 ) ( N/A , 0.00 , 0.0) | 2680.8<br>2619.2 | 0.3296<br>105.3<br>100.0 | 4.3029<br>[ 4.6663 ] | 92.2% | 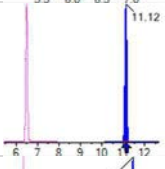 | 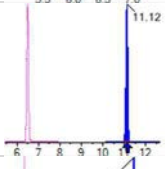 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3311751<br>( 633.0 / 453.0 ) 1133851 | ( 12.44 , 1.92 ) ( N/A , 0.00 , 0.2) | 4100.5<br>2989.7 | 0.3424<br>103.1<br>100.0 | 4.5336<br>[ 4.7160 ] | 96.1% | 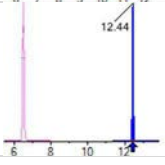 | 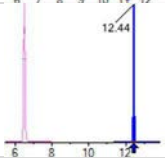 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2140660<br>( 461.0 / 381.2 ) 848710 | ( 9.50 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3568.0<br>3221.6 | 0.3965<br>99.5<br>100.0 | 4.2408<br>[ 4.6193 ] | 91.8% | 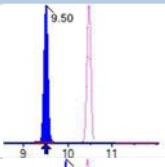 | 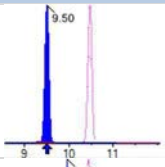 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 250641<br>( 241.0 / 117.0 ) 543725 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2462.4<br>2395.7 | 2.1693<br>103.0<br>100.0 | 17.8744<br>[ 20.0000 ] | 89.4% | 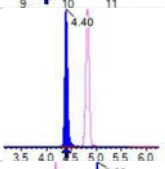 | 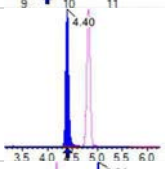 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1400179<br>( 341.0 / 217.0 ) 2037968 | ( 6.93 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1226.3<br>1321.6 | 1.4555<br>95.8<br>100.0 | 17.8129<br>[ 20.0000 ] | 89.1% | 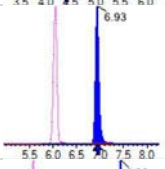 | 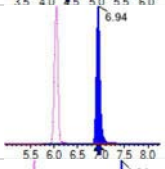 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2309905<br>( 441.0 / 337.0 ) 2020407 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , 0.1) | 4835.4<br>5971.4 | 0.8747<br>95.4<br>100.0 | 17.9072<br>[ 20.0000 ] | 89.5% | 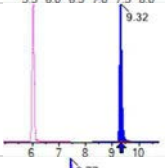 | 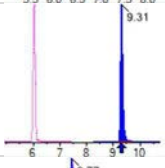 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1550464<br>( 357.2 / 243.0 ) 161386 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1205.4<br>827.6 | 0.1041<br>94.4<br>100.0 | 4.7278<br>[ 5.0000 ] | 94.6% | 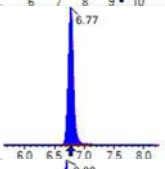 | 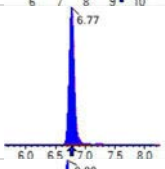 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1154425<br>( 457.2 / 343.0 ) 52338 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -0.2) | 931.8<br>340.3 | 0.0453<br>109.3<br>100.0 | 5.1167<br>[ 5.0000 ] | 102.3% | 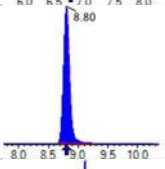 | 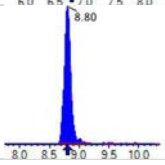 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 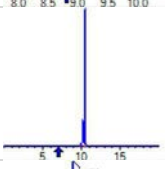 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 236533 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1101.8 | N/A | 0.9920<br>[ 1.0000 ] | 99.2%<br>{ 100.0% } | 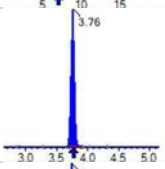 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126603 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 69331.2 | N/A | 0.9980<br>[ 1.0000 ] | 99.8%<br>{ 100.0% } | 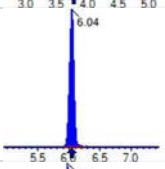 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379350 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3677.7 | N/A | 0.9596<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 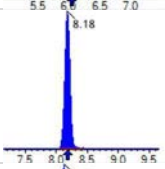 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281253 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 841.7 | N/A | 0.9889<br>[ 1.0000 ] | 98.9%<br>{ 100.0% } | 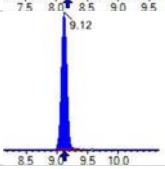 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 289297 | ( 10.03 , N/A ) ( N/A , 0.00 , N/A ) | 3430.1 | N/A | 0.9907 [ 1.0000 ] | 99.1% { 100.0% } | 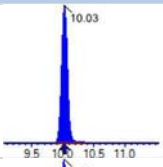 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 933370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4734.1 | N/A | 0.9835 [ 1.0000 ] | 98.3% { 100.0% } | 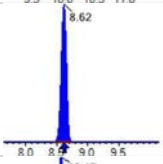 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 711998 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2262.1 | N/A | 0.9348 [ 1.0000 ] | 93.5% { 100.0% } | 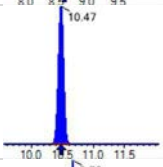 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2239045 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 37591.9 | N/A | 8.2862 [ 8.0000 ] | 103.6% { 100.0% } | 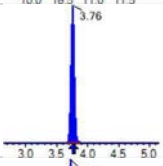 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 975984 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 6092.8 | N/A | 4.1317 [ 4.0000 ] | 103.3% { 100.0% } | 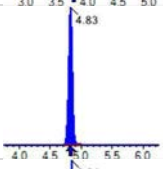 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 590039 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 15322.1 | N/A | 2.0426 [ 2.0000 ] | 102.1% { 100.0% } | 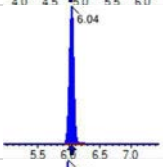 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 656479 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 4259.1 | N/A | 2.0430 [ 2.0000 ] | 102.2% { 100.0% } | 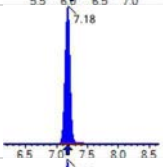 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862246 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3033.4 | N/A | 2.1213 [ 2.0000 ] | 106.1% { 100.0% } | 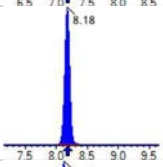 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269897 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3269.5 | N/A | 0.9787 [ 1.0000 ] | 97.9% { 100.0% } | 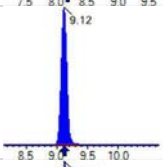 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321721 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 932.0 | N/A | 0.9923 [ 1.0000 ] | 99.2% { 100.0% } | 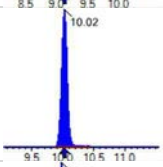 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 371951 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 1176.3 | N/A | 0.9752 [ 1.0000 ] | 97.5% { 100.0% } | 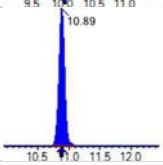 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 372900 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 1140.4 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 100.0% } | 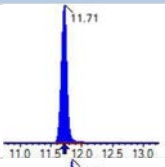 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 326459 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1457.1 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 100.0% } | 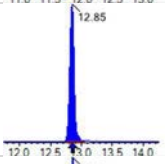 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 505124 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2276.2 | N/A | 1.7887 [ 2.0000 ] | 89.4% { 100.0% } | 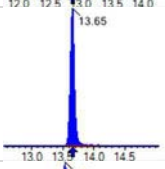 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1678205 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1604.5 | N/A | 1.9901 [ 2.0000 ] | 99.5% { 100.0% } | 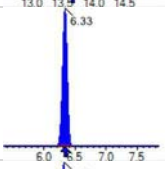 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1318602 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 4229.8 | N/A | 1.9590 [ 2.0000 ] | 97.9% { 100.0% } | 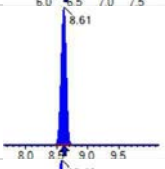 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1549392 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1607.9 | N/A | 2.0183 [ 2.0000 ] | 100.9% { 100.0% } | 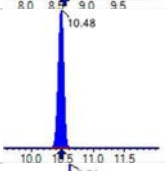 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 589081 | ( 5.51 , N/A ) ( N/A , 0.00 , N/A ) | 92.9 | N/A | 4.0487 [ 4.0000 ] | 101.2% { 100.0% } | 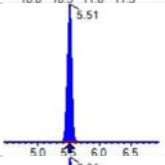 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1666770 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 4013.9 | N/A | 3.8278 [ 4.0000 ] | 95.7% { 100.0% } | 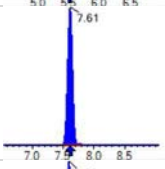 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1367825 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1522.8 | N/A | 4.0053 [ 4.0000 ] | 100.1% { 100.0% } | 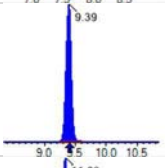 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2552514 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1280.0 | N/A | 7.1518 [ 8.0000 ] | 89.4% { 100.0% } | 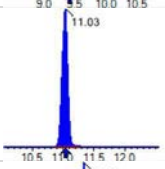 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1373982 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 3023.7 | N/A | 2.0196 [ 2.0000 ] | 101.0% { 100.0% } | 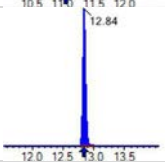 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 287989 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1960.3 | N/A | 1.9959 [ 2.0000 ] | 99.8% { 100.0% } | 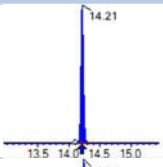  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 306672 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2411.5 | N/A | 1.9819 [ 2.0000 ] | 99.1% { 100.0% } | 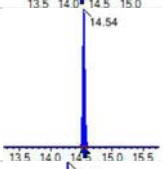  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 845576 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2402.7 | N/A | 4.2807 [ 4.0000 ] | 107.0% { 100.0% } | 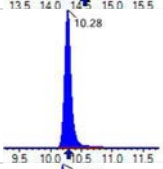  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 770166 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1846.4 | N/A | 4.2779 [ 4.0000 ] | 106.9% { 100.0% } | 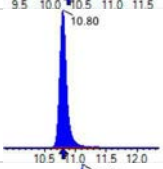  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1374456 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2535.5 | N/A | 21.1966 [ 20.0000 ] | 106.0% { 100.0% } | 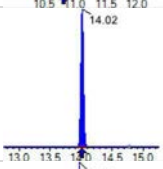  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1290095 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3979.5 | N/A | 19.6021 [ 20.0000 ] | 98.0% { 100.0% } | 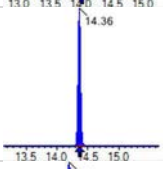  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022651 | ( 6.50 , N/A ) ( N/A , 0.00 , N/A ) | 2065.9 | N/A | 7.7718 [ 8.0000 ] | 97.1% { 100.0% } | 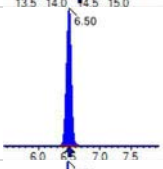  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 616938 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1272.7 | N/A | 1.9669 [ 2.0000 ] | 98.3% { 100.0% } | 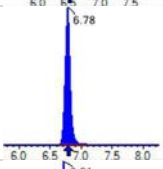  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 553242 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 748.1 | N/A | 1.9376 [ 2.0000 ] | 96.9% { 100.0% } | 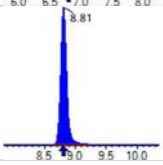  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | PFBA | 20.0A | 18.4A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 8.81A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.49A | 89.8A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.74A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.66A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.29A | 85.8A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.51A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.45A | 88.9A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.64A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.86A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.36A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.61A | 96.5A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.35A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.46A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.51A | 93.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.9A | 95.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 100A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.7A | 97.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.7A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.45A | 89.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.2A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.6A | 93.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.32A | 86.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.5A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | NMeFOSEA | 20.0A | 17.7A | 88.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 18.5A | 92.3A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.66A | 93.3A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.73A | 100A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.57A | 85.1A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.30A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.97A | 89.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.19A | 91.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 96.0A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.39A | 93.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.2A | 85.8A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.3A | 91.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2378964<br>( 163.0 / 69.0 ) 64297 | ( 2.77 , 0.74 )<br>( N/A , -0.03 , 0.0) | 14801.2<br>2730.5 | 0.0270<br>99.5<br>102.6 | 9.3340<br>[ 10.0000 ] | 93.3% | 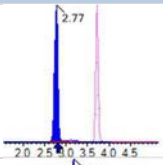 | 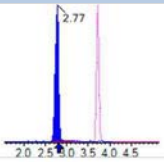 | |
| PFBA | ( 213.0 / 169.0 ) 4962164 | ( 3.72 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1056.7 | N/A<br>0.0<br>0.0 | 18.4170<br>[ 20.0000 ] | 92.1% | 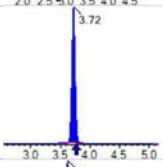 | | |
| PFPeA | ( 263.0 / 219.0 ) 1964295<br>( 263.0 / 69.0 ) 23803 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5001.8<br>313.7 | 0.0121<br>101.5<br>109.2 | 8.8051<br>[ 10.0000 ] | 88.1% | 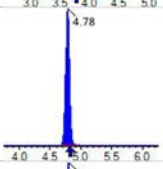 | 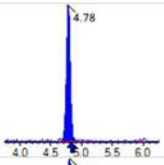 | |
| PFHxA | ( 313.0 / 269.0 ) 1139298<br>( 313.0 / 119.0 ) 135752 | ( 6.00 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2222.6<br>989.0 | 0.1192<br>102.6<br>101.8 | 4.4896<br>[ 5.0000 ] | 89.8% | 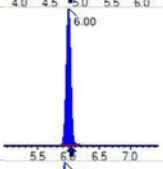 | 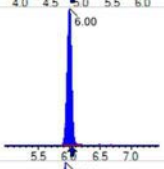 | |
| PFHpA | ( 363.0 / 319.0 ) 1368859<br>( 363.0 / 169.0 ) 405628 | ( 7.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1710.5<br>1989.9 | 0.2963<br>97.8<br>100.4 | 4.7419<br>[ 5.0000 ] | 94.8% | 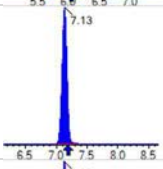 | 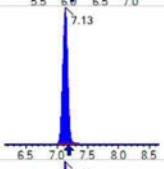 | |
| PFOA | ( 413.0 / 369.0 ) 1786147<br>( 413.0 / 169.0 ) 651972 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , -0.1) | 798.7<br>1080.4 | 0.3650<br>99.9<br>106.3 | 4.8440<br>[ 5.0000 ] | 96.9% | 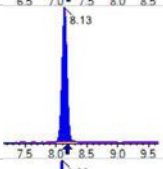 | 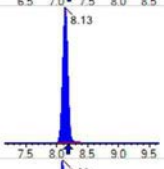 | |
| PFNA | ( 463.0 / 419.0 ) 1103867<br>( 463.0 / 169.0 ) 297773 | ( 9.08 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1157.8<br>1207.6 | 0.2698<br>105.7<br>112.1 | 4.6624<br>[ 5.0000 ] | 93.2% | 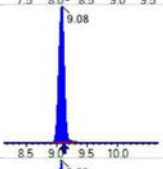 | 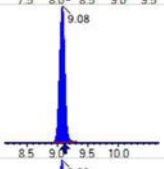 | |
| PFDA | ( 513.0 / 469.0 ) 1303129<br>( 513.0 / 169.0 ) 162758 | ( 9.98 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2898.2<br>7014.5 | 0.1249<br>106.6<br>104.3 | 4.2894<br>[ 5.0000 ] | 85.8% | 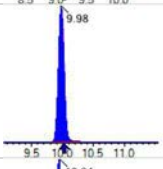 | 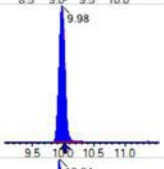 | |
| PFUnA | ( 563.0 / 519.0 ) 1504447<br>( 563.0 / 169.0 ) 214421 | ( 10.84 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1010.8<br>921.6 | 0.1425<br>100.6<br>100.3 | 4.7775<br>[ 5.0000 ] | 95.5% | 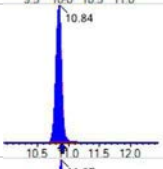 | 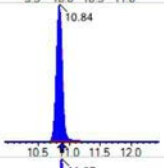 | |
| PFDoA | ( 613.0 / 569.0 ) 1613864<br>( 613.0 / 169.0 ) 252110 | ( 11.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1840.5<br>968.7 | 0.1562<br>98.8<br>105.7 | 4.5106<br>[ 5.0000 ] | 90.2% | 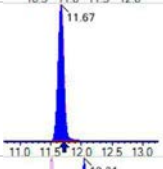 | 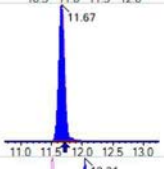 | |
| PFTrDA | ( 663.0 / 619.0 ) 1556368<br>( 663.0 / 169.0 ) 404634 | ( 12.31 , 1.05 )<br>( N/A , -0.04 , 0.0) | 1518.3<br>1018.4 | 0.2600<br>101.0<br>100.4 | 4.4468<br>[ 5.0000 ] | 88.9% | 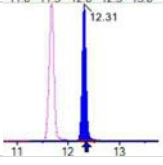 | 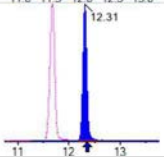 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1336619<br>( 713.0 / 169.0 ) 352276 | ( 12.81 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1673.3<br>1445.2 | 0.2636<br>97.6<br>99.2 | 4.7175<br>[ 5.0000 ] | 94.4% | 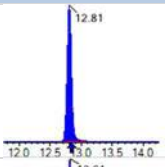 | 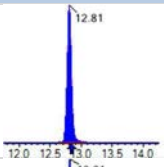 | |
| PFHxDA | ( 813.0 / 769.0 ) 1045243<br>( 813.0 / 169.0 ) 247123 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2235.2<br>1365.9 | 0.2364<br>96.6<br>92.6 | 4.6391<br>[ 5.0000 ] | 92.8% | 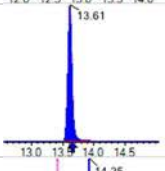 | 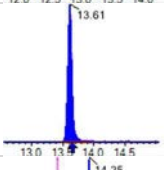 | |
| PFODA | ( 913.0 / 869.0 ) 638713<br>( 913.0 / 169.0 ) 212994 | ( 14.25 , 1.05 )<br>( N/A , -0.03 , 0.0) | 1665.4<br>773.2 | 0.3335<br>93.1<br>97.8 | 4.5313<br>[ 5.0000 ] | 90.6% | 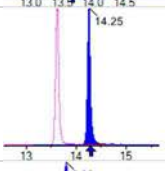 | 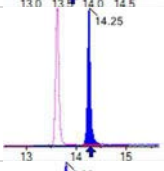 | |
| PFBS | ( 299.0 / 80.0 ) 1627685<br>( 299.0 / 99.0 ) 1224818 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3238.3<br>3086.7 | 0.7525<br>106.4<br>102.3 | 3.8554<br>[ 4.4237 ] | 87.2% | 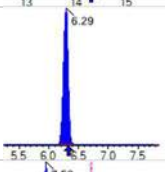 | 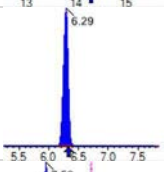 | |
| PFPeS | ( 349.0 / 80.0 ) 4267064<br>( 349.0 / 99.0 ) 1508835 | ( 7.52 , 0.88 )<br>( N/A , -0.04 , 0.0) | 2601.9<br>2729.5 | 0.3536<br>98.3<br>100.4 | 4.3633<br>[ 4.6919 ] | 93.0% | 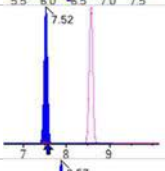 | 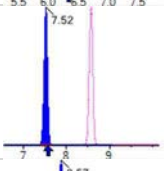 | |
| PFHxS | ( 399.0 / 80.0 ) 4682444<br>( 399.0 / 99.0 ) 1568239 | ( 8.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3191.0<br>5120.3 | 0.3349<br>105.2<br>100.2 | 4.1222<br>[ 4.5549 ] | 90.5% | 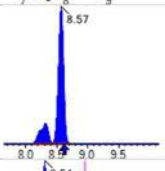 | 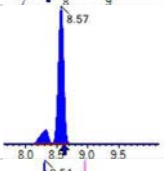 | |
| PFHpS | ( 449.0 / 80.0 ) 3963620<br>( 449.0 / 99.0 ) 1056950 | ( 9.54 , 0.91 )<br>( N/A , -0.04 , 0.2) | 1866.9<br>1788.5 | 0.2667<br>100.8<br>100.7 | 4.6124<br>[ 4.7570 ] | 97.0% | 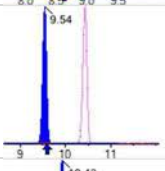 | 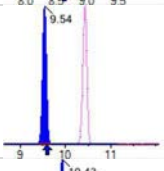 | |
| PFOS | ( 499.0 / 80.0 ) 3603689<br>( 499.0 / 99.0 ) 817942 | ( 10.43 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2425.1<br>5017.0 | 0.2270<br>97.1<br>94.5 | 4.3504<br>[ 4.6375 ] | 93.8% | 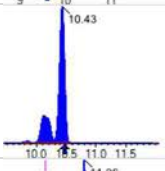 | 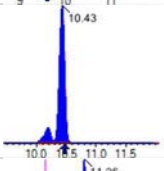 | |
| PFNS | ( 549.0 / 80.0 ) 3468340<br>( 549.0 / 99.0 ) 965249 | ( 11.26 , 1.08 )<br>( N/A , -0.05 , 0.0) | 2102.5<br>2163.0 | 0.2783<br>102.1<br>103.3 | 4.4719<br>[ 4.7994 ] | 93.2% | 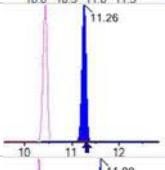 | 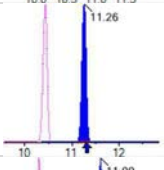 | |
| PFDS | ( 599.0 / 80.0 ) 4222164<br>( 599.0 / 99.0 ) 1106568 | ( 11.99 , 1.15 )<br>( N/A , -0.04 , 0.0) | 2905.0<br>2256.8 | 0.2621<br>96.4<br>98.0 | 4.4583<br>[ 4.8155 ] | 92.6% | 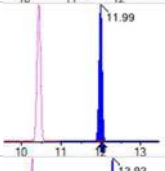 | 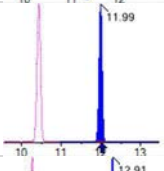 | |
| PFDoS | ( 699.0 / 80.0 ) 3767492<br>( 699.0 / 99.0 ) 863898 | ( 12.92 , 1.24 )<br>( N/A , -0.03 , 0.1) | 3602.5<br>2723.8 | 0.2293<br>98.2<br>100.1 | 4.5126<br>[ 4.8478 ] | 93.1% | 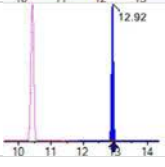 | 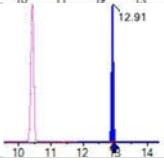 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6590145<br>( 327.0 / 81.0 ) 6177428 | ( 5.47 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5348.5<br>3700.4 | 0.9374<br>107.4<br>104.1 | 17.8690<br>[ 18.6906 ] | 95.6% | 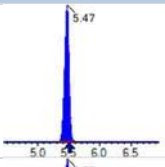 | 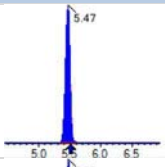 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5994527<br>( 427.0 / 81.0 ) 7759723 | ( 7.57 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4461.7<br>4269.3 | 1.2945<br>103.2<br>97.7 | 18.9906<br>[ 18.9808 ] | 100.1% | 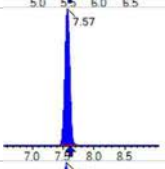 | 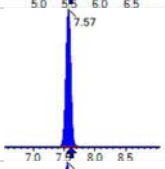 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5876343<br>( 527.0 / 81.0 ) 5982935 | ( 9.35 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1353.8<br>1577.4 | 1.0181<br>93.6<br>99.9 | 18.7255<br>[ 19.1658 ] | 97.7% | 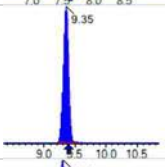 | 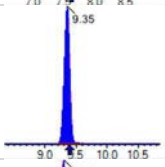 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4526371<br>( 627.0 / 81.0 ) 6382279 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1513.8<br>1069.6 | 1.4100<br>97.9<br>96.7 | 19.7053<br>[ 19.3236 ] | 102.0% | 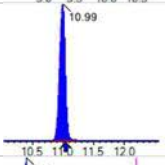 | 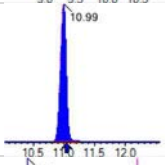 | |
| PFBSA | ( 297.9 / 78.0 ) 3334810<br>( 297.9 / 278.0 ) 4485 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , -0.3) | 1741.3<br>202.5 | 0.0013<br>98.4<br>86.8 | 4.7654<br>[ 5.0000 ] | 95.3% | 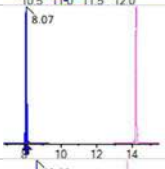 | 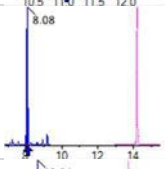 | |
| PFHxSA | ( 397.9 / 78.0 ) 3958312<br>( 397.9 / 378.0 ) 17623 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1103.5<br>335.6 | 0.0045<br>109.0<br>106.4 | 4.4831<br>[ 5.0000 ] | 89.7% | 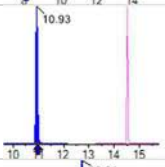 | 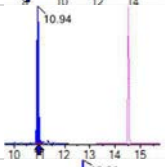 | |
| PFOSA | ( 498.0 / 78.0 ) 2879733<br>( 498.0 / 478.0 ) 42636 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2046.3<br>862.4 | 0.0148<br>105.5<br>99.5 | 4.4547<br>[ 5.0000 ] | 89.1% | 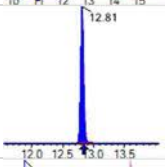 | 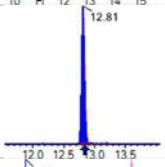 | |
| TFSI | ( 279.7 / 147.0 ) 7825439<br>( 279.7 / 211.0 ) 668795 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , -0.1) | 58.3<br>53.6 | 0.0855<br>101.7<br>99.9 | 4.5972<br>[ 4.8967 ] | 93.9% | 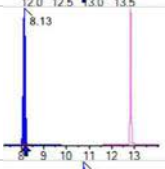 | 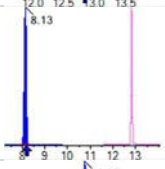 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2456061<br>( 512.0 / 169.0 ) 1821625 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.4) | 3631.2<br>1412.5 | 0.7417<br>99.1<br>97.8 | 18.2166<br>[ 20.0000 ] | 91.1% | 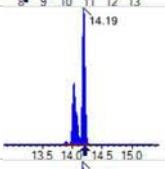 | 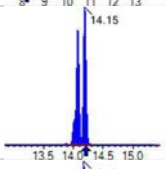 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2997658<br>( 526.0 / 169.0 ) 3780141 | ( 14.52 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4360.4<br>3570.2 | 1.2610<br>102.1<br>101.5 | 18.6306<br>[ 20.0000 ] | 93.2% | 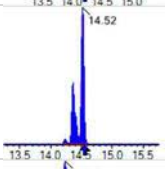 | 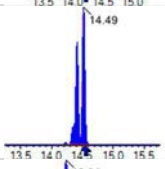 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 850093<br>( 570.0 / 483.0 ) 406893 | ( 10.24 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3275.4<br>1659.4 | 0.4786<br>109.2<br>102.4 | 4.3212<br>[ 5.0000 ] | 86.4% | 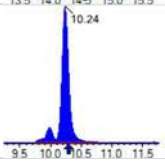 | 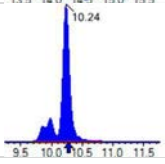 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 838599<br>( 584.0 / 526.0 ) 474799 | ( 10.77 , 1.00 ) ( 0.01 , N/A , 0.0) | 1574.6<br>700.1 | 0.5662<br>91.8<br>95.7 | 4.6763<br>[ 5.0000 ] | 93.5% | 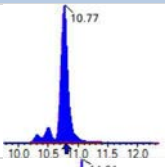 | 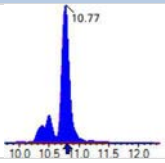 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1240906 | ( 14.01 , 1.00 ) ( 0.02 , N/A , 0.0) | 2612.3 | N/A<br>0.0<br>0.0 | 17.7211<br>[ 20.0000 ] | 88.6% | 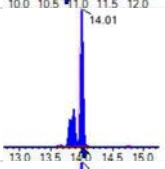 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1028639 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 3543.8 | N/A<br>0.0<br>0.0 | 18.4632<br>[ 20.0000 ] | 92.3% | 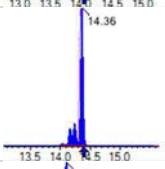 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 320064<br>( 285.0 / 185.0 ) 938906 | ( 6.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1645.8<br>1827.1 | 2.9335<br>106.1<br>111.2 | 4.6629<br>[ 5.0000 ] | 93.3% | 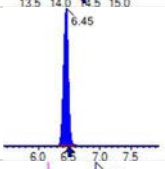 | 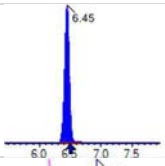 | |
| ADONA | ( 377.0 / 85.0 ) 3785743<br>( 377.0 / 251.0 ) 388915 | ( 7.52 , 1.17 ) ( N/A , -0.04 , 0.0) | 1953.2<br>1653.5 | 0.1027<br>100.8<br>98.2 | 4.7274<br>[ 4.7135 ] | 100.3% | 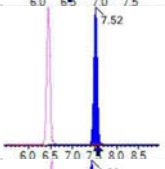 | 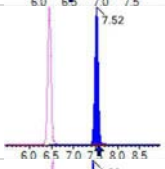 | |
| PFEESA | ( 315.0 / 135.0 ) 1379581<br>( 315.0 / 83.0 ) 835352 | ( 6.88 , 1.15 ) ( N/A , -0.05 , -0.1) | 2846.8<br>1383.0 | 0.6055<br>108.6<br>106.9 | 7.5704<br>[ 8.9246 ] | 84.8% | 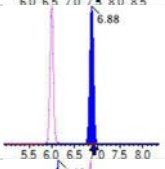 | 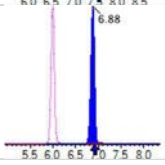 | |
| PFMPA | ( 229.0 / 85.0 ) 658152 | ( 4.10 , 0.86 ) ( N/A , -0.04 , 0.0) | 5900.9 | N/A<br>0.0<br>0.0 | 9.2969<br>[ 10.0000 ] | 93.0% | 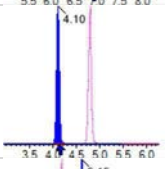 | | |
| PFMBA | ( 279.0 / 85.0 ) 1725265 | ( 5.15 , 1.08 ) ( N/A , -0.04 , 0.0) | 5457.6 | N/A<br>0.0<br>0.0 | 8.9667<br>[ 10.0000 ] | 89.7% | 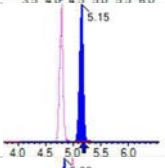 | | |
| NFDHA | ( 295.0 / 201.0 ) 870715<br>( 295.0 / 85.0 ) 937888 | ( 5.86 , 0.98 ) ( N/A , -0.04 , 0.0) | 3410.7<br>3099.7 | 1.0771<br>99.8<br>107.1 | 9.1909<br>[ 10.0000 ] | 91.9% | 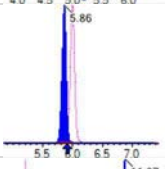 | 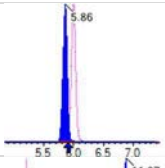 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3886723<br>( 533.0 / 353.0 ) 1262079 | ( 11.07 , 1.72 ) ( N/A , -0.05 , -0.1) | 3185.7<br>2377.6 | 0.3247<br>103.8<br>98.5 | 4.4936<br>[ 4.6663 ] | 96.3% | 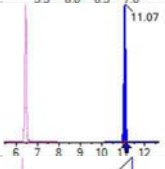 | 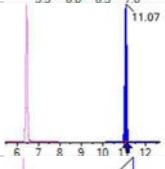 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2918297<br>( 633.0 / 453.0 ) 1027198 | ( 12.41 , 1.92 ) ( N/A , -0.04 , 0.1) | 3388.9<br>2348.3 | 0.3520<br>106.0<br>102.8 | 4.3873<br>[ 4.7160 ] | 93.0% | 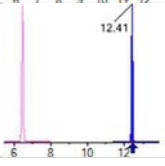 | 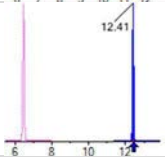 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1973970<br>( 461.0 / 381.2 ) 810159 | ( 9.46 , 0.91 )<br>( N/A , -0.04 , -0.1) | 3144.8<br>3066.2 | 0.4104<br>103.0<br>103.5 | 4.2241<br>[ 4.6193 ] | 91.4% | 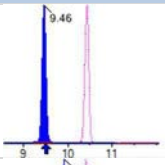 | 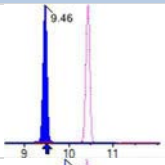 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 217843<br>( 241.0 / 117.0 ) 492517 | ( 4.36 , 0.91 )<br>( N/A , -0.04 , 0.0) | 2089.0<br>2396.0 | 2.2609<br>107.3<br>104.2 | 17.1654<br>[ 20.0000 ] | 85.8% | 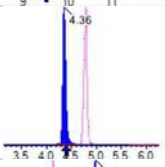 | 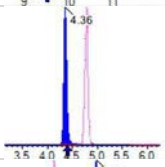 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1290079<br>( 341.0 / 217.0 ) 1923890 | ( 6.90 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1222.8<br>1122.5 | 1.4913<br>98.2<br>102.5 | 18.3319<br>[ 20.0000 ] | 91.7% | 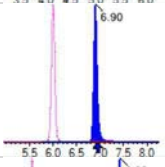 | 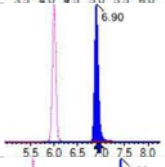 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2244279<br>( 441.0 / 337.0 ) 1995764 | ( 9.28 , 1.55 )<br>( N/A , -0.03 , 0.0) | 4730.2<br>12438.0 | 0.8893<br>97.0<br>101.7 | 19.4335<br>[ 20.0000 ] | 97.2% | 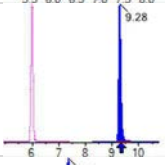 | 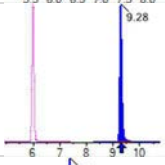 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1575139<br>( 357.2 / 243.0 ) 159747 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1389.7<br>885.7 | 0.1014<br>92.0<br>97.4 | 5.2833<br>[ 5.0000 ] | 105.7% | 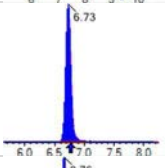 | 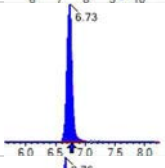 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1101155<br>( 457.2 / 343.0 ) 46469 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 784.0<br>415.8 | 0.0422<br>101.8<br>93.1 | 5.2508<br>[ 5.0000 ] | 105.0% | 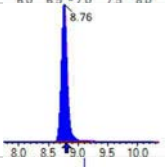 | 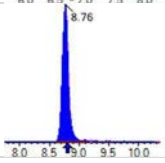 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 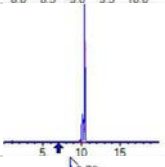 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238528 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1223.5 | N/A | 1.0004<br>[ 1.0000 ] | 100.0%<br>{ 100.8% } | 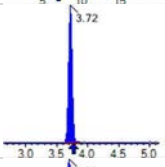 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117813 | ( 6.00 , N/A )<br>( N/A , -0.04 , N/A ) | 19470.1 | N/A | 0.9287<br>[ 1.0000 ] | 92.9%<br>{ 93.1% } | 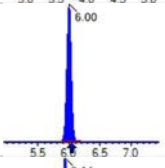 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353797 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 2717.8 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 93.3% } | 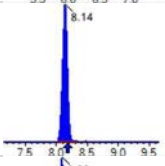 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 246426 | ( 9.08 , N/A )<br>( N/A , -0.04 , N/A ) | 1158.6 | N/A | 0.8665<br>[ 1.0000 ] | 86.6%<br>{ 87.6% } | 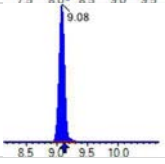 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 239242 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 4215.1 | N/A | 0.8192 [ 1.0000 ] | 81.9% { 82.7% } | 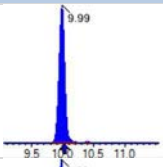 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 854562 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3664.1 | N/A | 0.9005 [ 1.0000 ] | 90.0% { 91.6% } | 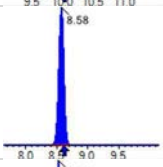 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 650661 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1902.2 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 91.4% } | 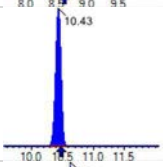 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2162335 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 39646.7 | N/A | 7.9354 [ 8.0000 ] | 99.2% { 96.6% } | 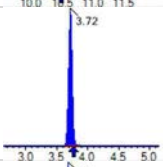 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 883302 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 4911.8 | N/A | 4.0183 [ 4.0000 ] | 100.5% { 90.5% } | 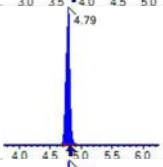 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 528251 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6662.7 | N/A | 1.9652 [ 2.0000 ] | 98.3% { 89.5% } | 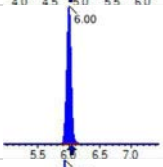 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588344 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5166.4 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 89.6% } | 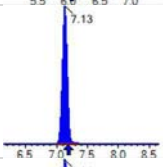 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 750222 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 2782.3 | N/A | 1.9790 [ 2.0000 ] | 99.0% { 87.0% } | 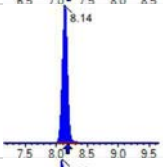 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235567 | ( 9.08 , N/A ) ( N/A , -0.04 , N/A ) | 4040.1 | N/A | 0.9749 [ 1.0000 ] | 97.5% { 87.3% } | 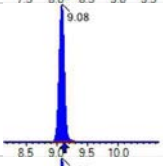 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 297330 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1218.8 | N/A | 1.1090 [ 1.0000 ] | 110.9% { 92.4% } | 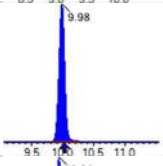 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 340461 | ( 10.84 , N/A ) ( N/A , -0.04 , N/A ) | 887.2 | N/A | 1.0794 [ 1.0000 ] | 107.9% { 91.5% } | 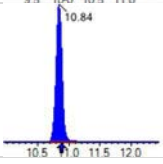 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 355643 | ( 11.67 , N/A ) ( N/A , -0.04 , N/A ) | 1210.1 | N/A | 1.1071 [ 1.0000 ] | 110.7% { 95.4% } | 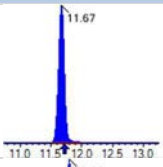 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 302523 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1505.7 | N/A | 1.1059 [ 1.0000 ] | 110.6% { 92.7% } | 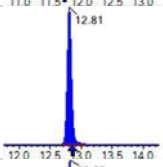 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472442 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 2123.3 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 93.5% } | 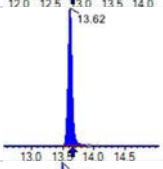 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1626264 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1235.1 | N/A | 2.1063 [ 2.0000 ] | 105.3% { 96.9% } | 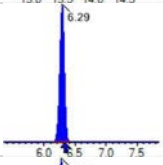 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1277887 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 3706.7 | N/A | 2.0735 [ 2.0000 ] | 103.7% { 96.9% } | 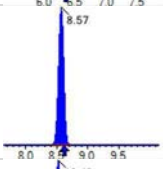 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1434404 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1519.4 | N/A | 2.0446 [ 2.0000 ] | 102.2% { 92.6% } | 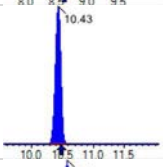 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 562105 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 93.4 | N/A | 4.2196 [ 4.0000 ] | 105.5% { 95.4% } | 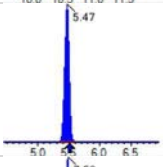 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1524781 | ( 7.58 , N/A ) ( N/A , -0.04 , N/A ) | 3290.4 | N/A | 3.8247 [ 4.0000 ] | 95.6% { 91.5% } | 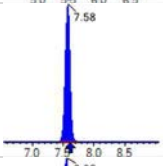 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1321750 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1361.5 | N/A | 4.2273 [ 4.0000 ] | 105.7% { 96.6% } | 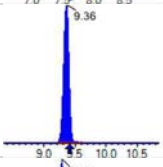 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2384194 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1345.3 | N/A | 7.2962 [ 8.0000 ] | 91.2% { 93.4% } | 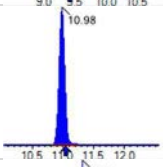 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1292885 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1723.3 | N/A | 2.0796 [ 2.0000 ] | 104.0% { 94.1% } | 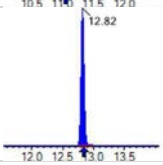 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 271577 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1986.4 | N/A | 2.0596 [ 2.0000 ] | 103.0% { 94.3% } | 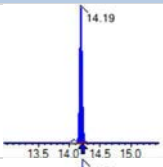  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 287336 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2556.1 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 93.7% } | 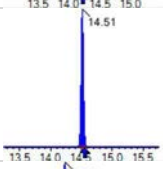  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825052 | ( 10.23 , N/A ) ( N/A , -0.04 , N/A ) | 2783.2 | N/A | 4.5706 [ 4.0000 ] | 114.3% { 97.6% } | 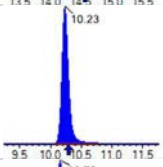  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 733311 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1886.2 | N/A | 4.4572 [ 4.0000 ] | 111.4% { 95.2% } | 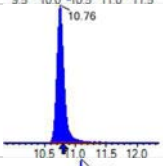  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1276745 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 2423.0 | N/A | 21.5459 [ 20.0000 ] | 107.7% { 92.9% } | 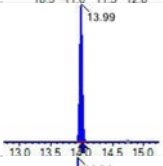  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1254125 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 3850.5 | N/A | 20.8519 [ 20.0000 ] | 104.3% { 97.2% } | 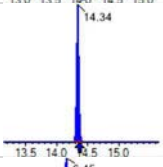  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 931197 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2356.5 | N/A | 7.6047 [ 8.0000 ] | 95.1% { 91.1% } | 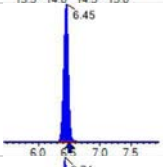  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 560849 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1169.2 | N/A | 2.1622 [ 2.0000 ] | 108.1% { 90.9% } | 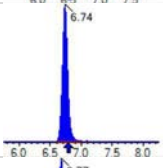  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514238 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 662.4 | N/A | 2.1778 [ 2.0000 ] | 108.9% { 92.9% } | 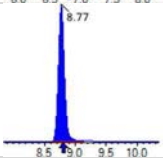  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | PFBA | 20.0A | 18.2A | 91.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.32A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.62A | 92.4A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.59A | 91.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.58A | 91.7A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.84A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.54A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.44A | 88.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.11A | 82.2A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.97A | 89.9A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.46A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.04A | 88.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.50A | 94.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.22A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.43A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.71A | 97.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.8A | 100A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.8A | 92.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.5A | 106A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.59A | 91.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.6A | 93.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 95.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.56A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | NMeFOSEA | 20.0A | 17.6A | 87.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.79A | 95.8A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.80A | 102A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.82A | 87.8A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.1A | 101A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.36A | 93.6A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.09A | 90.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 95.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.44A | 94.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.7A | 93.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.7A | 98.6A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2367399<br>( 163.0 / 69.0 ) 64584 | ( 2.76 , 0.74 )<br>( N/A , -0.04 , -0.1) | 15329.5<br>3014.2 | 0.0273<br>100.4<br>103.5 | 9.2456<br>[ 10.0000 ] | 92.5% | 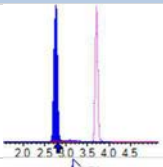 | 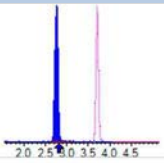 | |
| PFBA | ( 213.0 / 169.0 ) 4938197 | ( 3.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1010.4 | N/A<br>0.0<br>0.0 | 18.2431<br>[ 20.0000 ] | 91.2% | 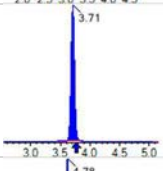 | | |
| PFPeA | ( 263.0 / 219.0 ) 1952041<br>( 263.0 / 69.0 ) 22313 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , -0.2) | 6296.0<br>311.0 | 0.0114<br>95.7<br>103.0 | 9.3156<br>[ 10.0000 ] | 93.2% | 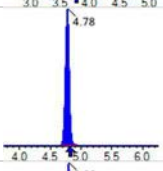 | 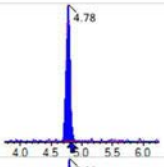 | |
| PFHxA | ( 313.0 / 269.0 ) 1143503<br>( 313.0 / 119.0 ) 136657 | ( 6.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2490.5<br>1220.4 | 0.1195<br>102.9<br>102.1 | 4.4029<br>[ 5.0000 ] | 88.1% | 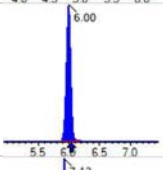 | 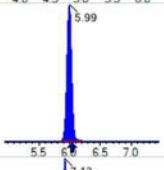 | |
| PFHpA | ( 363.0 / 319.0 ) 1327067<br>( 363.0 / 169.0 ) 392839 | ( 7.13 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1685.8<br>1722.7 | 0.2960<br>97.7<br>100.3 | 4.6211<br>[ 5.0000 ] | 92.4% | 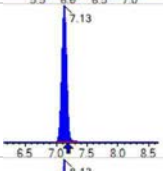 | 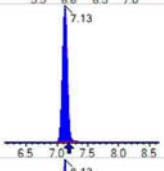 | |
| PFOA | ( 413.0 / 369.0 ) 1774774<br>( 413.0 / 169.0 ) 664651 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 671.5<br>1155.4 | 0.3745<br>102.4<br>109.1 | 4.5926<br>[ 5.0000 ] | 91.9% | 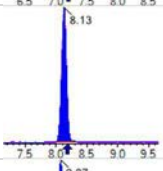 | 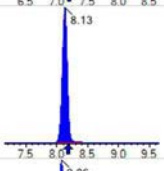 | |
| PFNA | ( 463.0 / 419.0 ) 1093482<br>( 463.0 / 169.0 ) 288536 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1019.0<br>1085.4 | 0.2639<br>103.4<br>109.7 | 4.5828<br>[ 5.0000 ] | 91.7% | 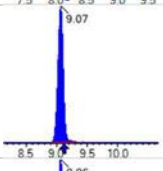 | 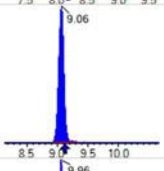 | |
| PFDA | ( 513.0 / 469.0 ) 1344408<br>( 513.0 / 169.0 ) 158845 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , 0.3) | 3615.1<br>3512.0 | 0.1182<br>100.8<br>98.7 | 4.7227<br>[ 5.0000 ] | 94.5% | 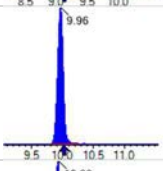 | 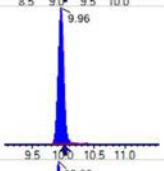 | |
| PFUnA | ( 563.0 / 519.0 ) 1452979<br>( 563.0 / 169.0 ) 216965 | ( 10.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1064.1<br>802.3 | 0.1493<br>105.4<br>105.1 | 4.8313<br>[ 5.0000 ] | 96.6% | 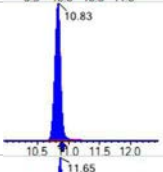 | 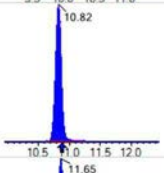 | |
| PFDoA | ( 613.0 / 569.0 ) 1678445<br>( 613.0 / 169.0 ) 250811 | ( 11.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1502.8<br>1014.6 | 0.1494<br>94.5<br>101.1 | 4.8405<br>[ 5.0000 ] | 96.8% | 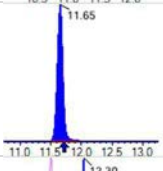 | 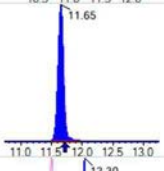 | |
| PFTrDA | ( 663.0 / 619.0 ) 1588969<br>( 663.0 / 169.0 ) 395314 | ( 12.30 , 1.06 )<br>( N/A , -0.05 , 0.0) | 1670.0<br>1085.0 | 0.2488<br>96.7<br>96.1 | 4.6846<br>[ 5.0000 ] | 93.7% | 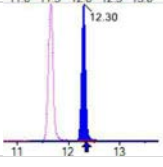 | 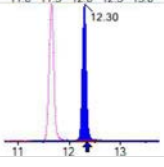 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1292021<br>( 713.0 / 169.0 ) 331808 | ( 12.80 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1599.4<br>1158.0 | 0.2568<br>95.1<br>96.6 | 4.5354<br>[ 5.0000 ] | 90.7% | 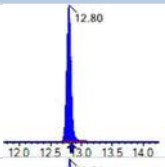 | 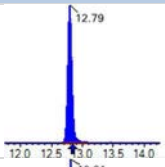 | |
| PFHxDA | ( 813.0 / 769.0 ) 959448<br>( 813.0 / 169.0 ) 244513 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2115.3<br>1085.7 | 0.2548<br>104.2<br>99.8 | 4.4410<br>[ 5.0000 ] | 88.8% | 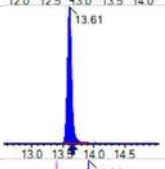 | 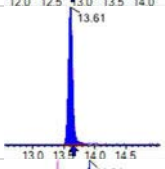 | |
| PFODA | ( 913.0 / 869.0 ) 555525<br>( 913.0 / 169.0 ) 176212 | ( 14.24 , 1.05 )<br>( N/A , -0.04 , 0.1) | 1533.3<br>666.2 | 0.3172<br>88.5<br>93.1 | 4.1103<br>[ 5.0000 ] | 82.2% | 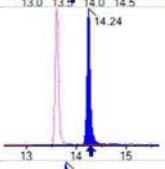 | 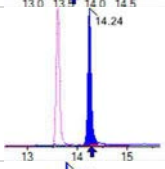 | |
| PFBS | ( 299.0 / 80.0 ) 1656522<br>( 299.0 / 99.0 ) 1193997 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3188.4<br>2361.7 | 0.7208<br>101.9<br>98.0 | 3.9717<br>[ 4.4237 ] | 89.8% | 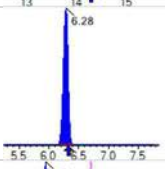 | 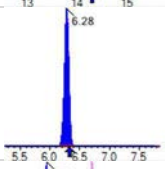 | |
| PFPeS | ( 349.0 / 80.0 ) 4364826<br>( 349.0 / 99.0 ) 1539819 | ( 7.51 , 0.88 )<br>( N/A , -0.05 , 0.0) | 2505.8<br>2399.7 | 0.3528<br>98.1<br>100.2 | 4.4621<br>[ 4.6919 ] | 95.1% | 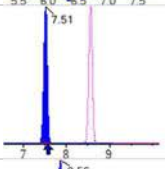 | 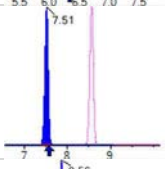 | |
| PFHxS | ( 399.0 / 80.0 ) 4588863<br>( 399.0 / 99.0 ) 1488980 | ( 8.56 , 1.00 )<br>( -0.01 , N/A , -0.1) | 3633.0<br>3900.2 | 0.3245<br>101.9<br>97.0 | 4.0388<br>[ 4.5549 ] | 88.7% | 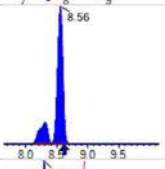 | 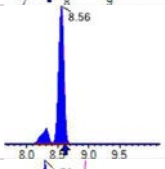 | |
| PFHpS | ( 449.0 / 80.0 ) 3918478<br>( 449.0 / 99.0 ) 1063335 | ( 9.53 , 0.91 )<br>( N/A , -0.06 , 0.2) | 2329.7<br>2231.5 | 0.2714<br>102.5<br>102.5 | 4.4966<br>[ 4.7570 ] | 94.5% | 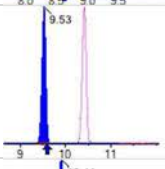 | 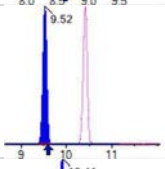 | |
| PFOS | ( 499.0 / 80.0 ) 3542371<br>( 499.0 / 99.0 ) 835566 | ( 10.41 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2549.2<br>5061.5 | 0.2359<br>100.9<br>98.2 | 4.2171<br>[ 4.6375 ] | 90.9% | 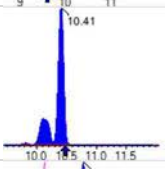 | 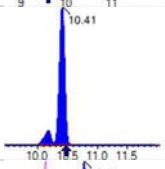 | |
| PFNS | ( 549.0 / 80.0 ) 3512432<br>( 549.0 / 99.0 ) 956650 | ( 11.24 , 1.08 )<br>( N/A , -0.06 , 0.1) | 2489.8<br>2059.6 | 0.2724<br>99.9<br>101.1 | 4.4660<br>[ 4.7994 ] | 93.1% | 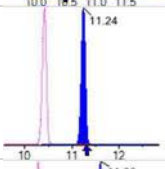 | 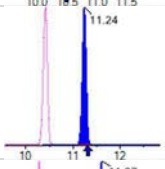 | |
| PFDS | ( 599.0 / 80.0 ) 4256592<br>( 599.0 / 99.0 ) 1131746 | ( 11.98 , 1.15 )<br>( N/A , -0.05 , 0.1) | 2251.2<br>1959.5 | 0.2659<br>97.8<br>99.5 | 4.4324<br>[ 4.8155 ] | 92.0% | 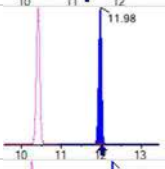 | 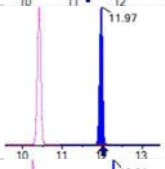 | |
| PFDoS | ( 699.0 / 80.0 ) 3983483<br>( 699.0 / 99.0 ) 924754 | ( 12.91 , 1.24 )<br>( N/A , -0.04 , 0.0) | 4923.6<br>3458.4 | 0.2321<br>99.4<br>101.4 | 4.7052<br>[ 4.8478 ] | 97.1% | 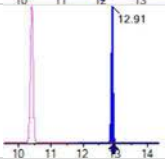 | 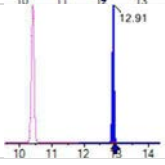 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6925673<br>( 327.0 / 81.0 ) 6151043 | ( 5.46 , 1.00 ) ( 0.00 , N/A , 0.1) | 5410.5<br>3125.5 | 0.8882<br>101.8<br>98.7 | 18.8218<br>[ 18.6906 ] | 100.7% | 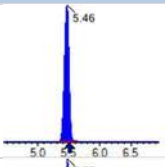 | 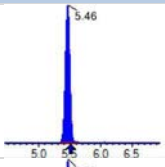 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6149806<br>( 427.0 / 81.0 ) 7739720 | ( 7.57 , 1.00 ) ( 0.00 , N/A , 0.2) | 4376.2<br>4638.3 | 1.2585<br>100.4<br>95.0 | 18.7627<br>[ 18.9808 ] | 98.9% | 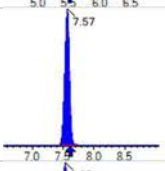 | 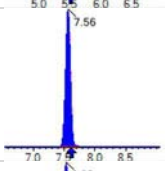 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5762780<br>( 527.0 / 81.0 ) 6401646 | ( 9.33 , 1.00 ) ( -0.01 , N/A , 0.0) | 1453.4<br>1746.1 | 1.1109<br>102.1<br>109.0 | 17.7583<br>[ 19.1658 ] | 92.7% | 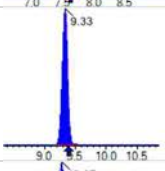 | 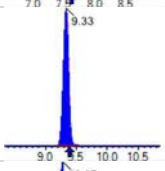 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4974834<br>( 627.0 / 81.0 ) 6986472 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.2) | 1627.2<br>1202.9 | 1.4044<br>97.6<br>96.3 | 20.4850<br>[ 19.3236 ] | 106.0% | 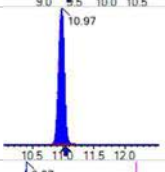 | 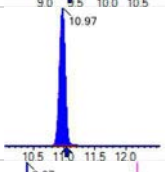 | |
| PFBSA | ( 297.9 / 78.0 ) 3152738<br>( 297.9 / 278.0 ) 4804 | ( 8.07 , 0.57 ) ( N/A , -0.03 , 0.4) | 1679.8<br>110.1 | 0.0015<br>111.5<br>98.3 | 4.6672<br>[ 5.0000 ] | 93.3% | 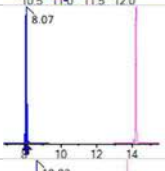 | 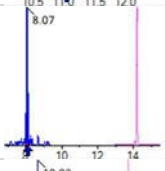 | |
| PFHxSA | ( 397.9 / 78.0 ) 4125480<br>( 397.9 / 378.0 ) 18513 | ( 10.93 , 0.75 ) ( N/A , -0.03 , -0.1) | 1667.8<br>440.1 | 0.0045<br>109.8<br>107.2 | 4.8956<br>[ 5.0000 ] | 97.9% | 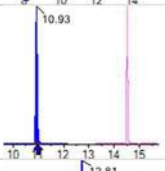 | 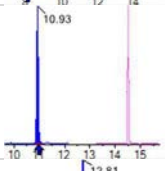 | |
| PFOSA | ( 498.0 / 78.0 ) 2839233<br>( 498.0 / 478.0 ) 42245 | ( 12.81 , 1.00 ) ( -0.01 , N/A , 0.0) | 2289.2<br>995.4 | 0.0149<br>106.0<br>99.9 | 4.5918<br>[ 5.0000 ] | 91.8% | 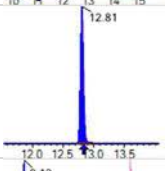 | 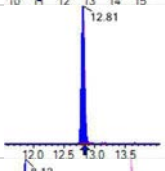 | |
| TFSI | ( 279.7 / 147.0 ) 7714508<br>( 279.7 / 211.0 ) 650024 | ( 8.13 , 0.63 ) ( N/A , -0.06 , 0.1) | 61.5<br>54.1 | 0.0843<br>100.3<br>98.5 | 4.7382<br>[ 4.8967 ] | 96.8% | 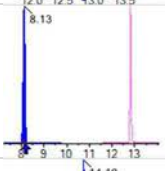 | 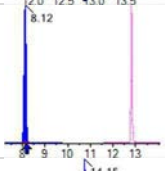 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2422123<br>( 512.0 / 169.0 ) 1722291 | ( 14.19 , 1.00 ) ( 0.00 , N/A , 2.2) | 3506.2<br>1475.4 | 0.7111<br>95.0<br>93.8 | 18.6108<br>[ 20.0000 ] | 93.1% | 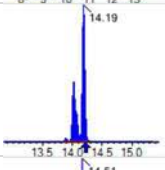 | 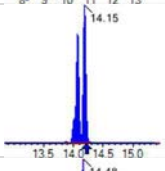 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2919094<br>( 526.0 / 169.0 ) 3586942 | ( 14.51 , 1.00 ) ( 0.01 , N/A , 2.1) | 4109.1<br>3423.3 | 1.2288<br>99.5<br>99.0 | 19.0089<br>[ 20.0000 ] | 95.0% | 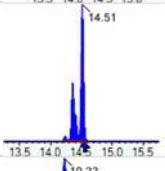 | 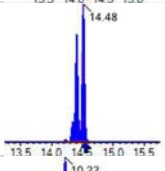 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 883998<br>( 570.0 / 483.0 ) 425739 | ( 10.22 , 1.00 ) ( 0.00 , N/A , 0.2) | 2187.1<br>2061.2 | 0.4816<br>109.8<br>103.0 | 4.5556<br>[ 5.0000 ] | 91.1% | 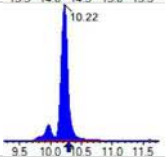 | 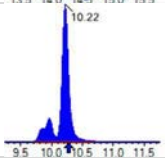 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 846492<br>( 584.0 / 526.0 ) 505649 | ( 10.75 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1320.3<br>728.3 | 0.5973<br>96.9<br>101.0 | 4.6690<br>[ 5.0000 ] | 93.4% | 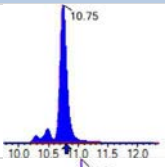 | 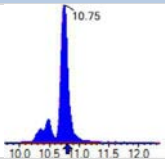 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1174210 | ( 14.00 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2175.0 | N/A<br>0.0<br>0.0 | 17.5573<br>[ 20.0000 ] | 87.8% | 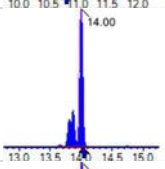 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 952667 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3367.8 | N/A<br>0.0<br>0.0 | 19.1064<br>[ 20.0000 ] | 95.5% | 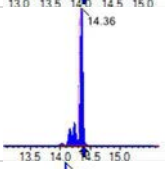 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 335333<br>( 285.0 / 185.0 ) 921530 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1679.9<br>2119.9 | 2.7481<br>99.4<br>104.2 | 4.7893<br>[ 5.0000 ] | 95.8% | 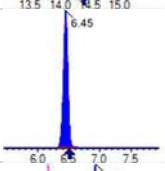 | 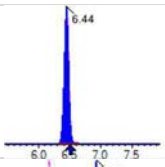 | |
| ADONA | ( 377.0 / 85.0 ) 3917027<br>( 377.0 / 251.0 ) 395090 | ( 7.52 , 1.17 )<br>( N/A , -0.05 , 0.1) | 1912.2<br>1698.7 | 0.1009<br>99.0<br>96.5 | 4.7951<br>[ 4.7135 ] | 101.7% | 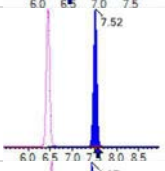 | 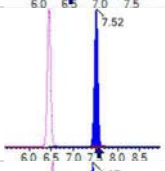 | |
| PFEESA | ( 315.0 / 135.0 ) 1457699<br>( 315.0 / 83.0 ) 880051 | ( 6.87 , 1.15 )<br>( N/A , -0.05 , 0.1) | 3024.4<br>1480.6 | 0.6037<br>108.3<br>106.6 | 7.8158<br>[ 8.9246 ] | 87.6% | 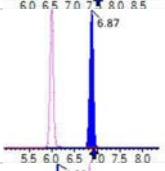 | 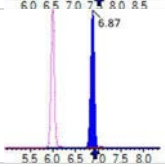 | |
| PFMPA | ( 229.0 / 85.0 ) 670808 | ( 4.09 , 0.86 )<br>( N/A , -0.05 , 0.0) | 7073.3 | N/A<br>0.0<br>0.0 | 10.0880<br>[ 10.0000 ] | 100.9% | 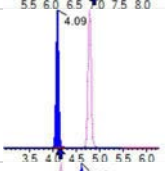 | | |
| PFMBA | ( 279.0 / 85.0 ) 1691235 | ( 5.15 , 1.08 )<br>( N/A , -0.04 , 0.0) | 5263.2 | N/A<br>0.0<br>0.0 | 9.3578<br>[ 10.0000 ] | 93.6% | 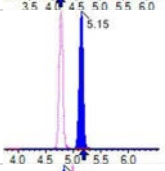 | | |
| NFDHA | ( 295.0 / 201.0 ) 881152<br>( 295.0 / 85.0 ) 924860 | ( 5.85 , 0.98 )<br>( N/A , -0.05 , 0.1) | 3525.4<br>3071.2 | 1.0496<br>97.3<br>104.4 | 9.0879<br>[ 10.0000 ] | 90.9% | 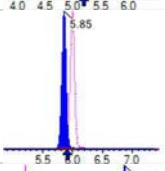 | 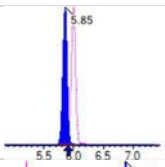 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3959168<br>( 533.0 / 353.0 ) 1253384 | ( 11.05 , 1.71 )<br>( N/A , -0.06 , -0.1) | 2476.5<br>1972.7 | 0.3166<br>101.2<br>96.1 | 4.4873<br>[ 4.6663 ] | 96.2% | 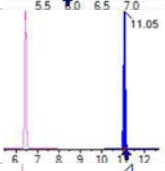 | 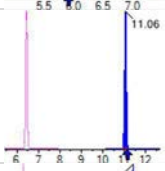 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3014684<br>( 633.0 / 453.0 ) 1022326 | ( 12.40 , 1.92 )<br>( N/A , -0.05 , 0.0) | 3608.7<br>2766.0 | 0.3391<br>102.1<br>99.0 | 4.4431<br>[ 4.7160 ] | 94.2% | 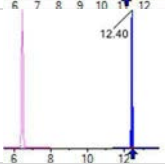 | 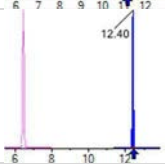 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2020350<br>( 461.0 / 381.2 ) 812351 | ( 9.44 , 0.91 )<br>( N/A , -0.06 , 0.1) | 3414.9<br>2997.1 | 0.4021<br>100.9<br>101.4 | 4.2634<br>[ 4.6193 ] | 92.3% | 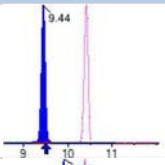 | 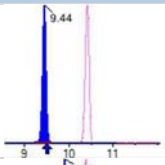 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 243703<br>( 241.0 / 117.0 ) 527396 | ( 4.35 , 0.91 )<br>( N/A , -0.05 , 0.0) | 2235.1<br>3091.4 | 2.1641<br>102.7<br>99.8 | 20.4440<br>[ 20.0000 ] | 102.2% | 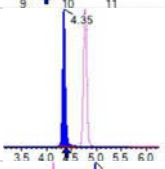 | 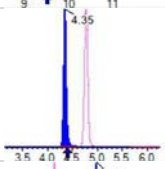 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1349798<br>( 341.0 / 217.0 ) 2078273 | ( 6.89 , 1.15 )<br>( N/A , -0.04 , -0.1) | 1371.5<br>1269.5 | 1.5397<br>101.3<br>105.8 | 18.7409<br>[ 20.0000 ] | 93.7% | 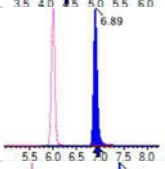 | 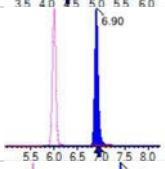 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2330546<br>( 441.0 / 337.0 ) 2001106 | ( 9.27 , 1.55 )<br>( N/A , -0.05 , 0.0) | 5147.2<br>7268.1 | 0.8586<br>93.6<br>98.2 | 19.7180<br>[ 20.0000 ] | 98.6% | 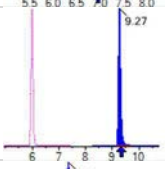 | 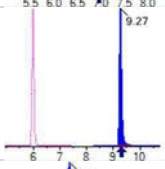 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1617558<br>( 357.2 / 243.0 ) 167412 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1281.5<br>830.5 | 0.1035<br>93.9<br>99.4 | 4.9832<br>[ 5.0000 ] | 99.7% | 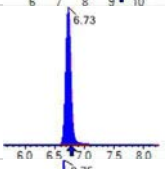 | 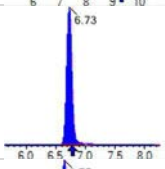 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1115931<br>( 457.2 / 343.0 ) 49442 | ( 8.75 , 1.00 )<br>( -0.01 , N/A , 0.2) | 803.9<br>345.3 | 0.0443<br>106.8<br>97.7 | 5.1052<br>[ 5.0000 ] | 102.1% | 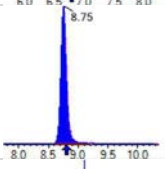 | 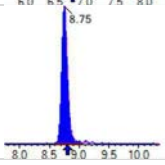 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 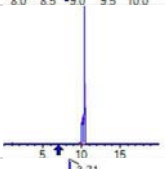 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235544 | ( 3.71 , N/A )<br>( N/A , -0.05 , N/A ) | 1044.9 | N/A | 0.9879<br>[ 1.0000 ] | 98.8%<br>{ 99.6% } | 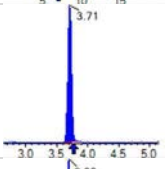 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116031 | ( 6.00 , N/A )<br>( N/A , -0.05 , N/A ) | 17659879.2 | N/A | 0.9147<br>[ 1.0000 ] | 91.5%<br>{ 91.6% } | 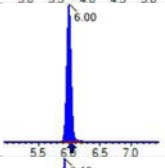 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 357603 | ( 8.13 , N/A )<br>( N/A , -0.05 , N/A ) | 6031.4 | N/A | 0.9046<br>[ 1.0000 ] | 90.5%<br>{ 94.3% } | 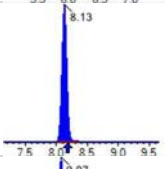 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 244998 | ( 9.07 , N/A )<br>( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8614<br>[ 1.0000 ] | 86.1%<br>{ 87.1% } | 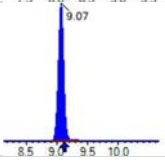 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246940 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6188.6 | N/A | 0.8456 [ 1.0000 ] | 84.6% { 85.4% } | 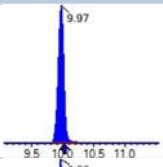 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 851608 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 4143.3 | N/A | 0.8973 [ 1.0000 ] | 89.7% { 91.2% } | 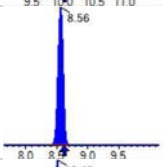 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 651713 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 1691.7 | N/A | 0.8557 [ 1.0000 ] | 85.6% { 91.5% } | 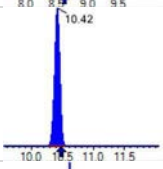 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2172396 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 33235.4 | N/A | 8.0733 [ 8.0000 ] | 100.9% { 97.0% } | 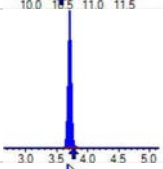 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 829688 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 4857.0 | N/A | 3.8324 [ 4.0000 ] | 95.8% { 85.0% } | 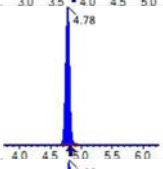 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 540642 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6844.7 | N/A | 2.0422 [ 2.0000 ] | 102.1% { 91.6% } | 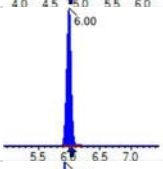 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 585294 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 4036.3 | N/A | 1.9875 [ 2.0000 ] | 99.4% { 89.2% } | 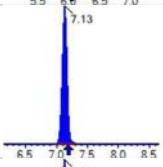 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 786424 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 2817.1 | N/A | 2.0525 [ 2.0000 ] | 102.6% { 91.2% } | 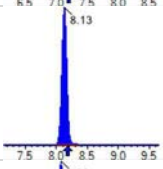 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 237405 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 2978.9 | N/A | 0.9883 [ 1.0000 ] | 98.8% { 88.0% } | 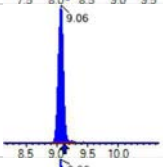 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 278603 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 929.4 | N/A | 1.0067 [ 1.0000 ] | 100.7% { 86.6% } | 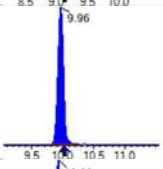 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 325150 | ( 10.83 , N/A ) ( N/A , -0.06 , N/A ) | 729.4 | N/A | 0.9987 [ 1.0000 ] | 99.9% { 87.4% } | 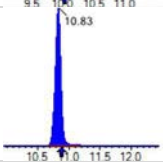 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 344666 | ( 11.66 , N/A ) ( N/A , -0.06 , N/A ) | 1474.6 | N/A | 1.0395 [ 1.0000 ] | 104.0% { 92.4% } | 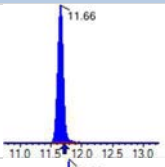 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 304176 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1304.7 | N/A | 1.0773 [ 1.0000 ] | 107.7% { 93.2% } | 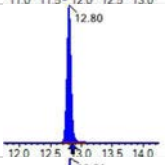 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 453000 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2095.0 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 89.7% } | 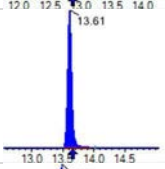 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1606611 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1072.8 | N/A | 2.0881 [ 2.0000 ] | 104.4% { 95.7% } | 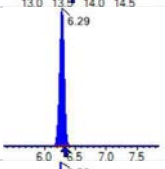 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1278226 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3790.9 | N/A | 2.0813 [ 2.0000 ] | 104.1% { 96.9% } | 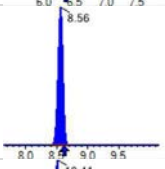 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1454557 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 1435.6 | N/A | 2.0700 [ 2.0000 ] | 103.5% { 93.9% } | 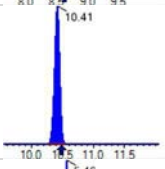 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 560822 | ( 5.46 , N/A ) ( N/A , -0.05 , N/A ) | 91.4 | N/A | 4.2246 [ 4.0000 ] | 105.6% { 95.2% } | 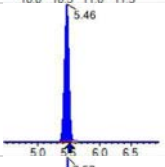 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1583281 | ( 7.57 , N/A ) ( N/A , -0.04 , N/A ) | 3703.7 | N/A | 3.9852 [ 4.0000 ] | 99.6% { 95.0% } | 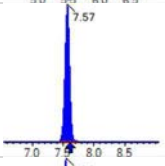 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1366805 | ( 9.34 , N/A ) ( N/A , -0.05 , N/A ) | 1239.8 | N/A | 4.3866 [ 4.0000 ] | 109.7% { 99.9% } | 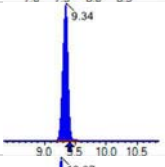 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2520675 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1178.2 | N/A | 7.7406 [ 8.0000 ] | 96.8% { 98.8% } | 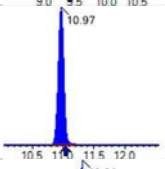 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1236625 | ( 12.81 , N/A ) ( N/A , -0.03 , N/A ) | 2642.7 | N/A | 1.9859 [ 2.0000 ] | 99.3% { 90.0% } | 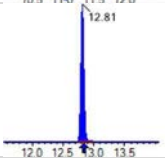 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 262151 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 1726.6 | N/A | 1.9849 [ 2.0000 ] | 99.2% { 91.0% } | 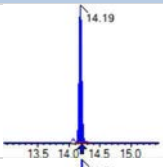  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 274237 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2488.6 | N/A | 1.9362 [ 2.0000 ] | 96.8% { 89.4% } | 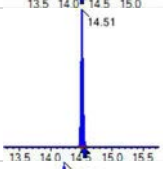  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 813803 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 1927.7 | N/A | 4.5010 [ 4.0000 ] | 112.5% { 96.2% } | 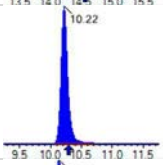  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 741370 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1704.4 | N/A | 4.4989 [ 4.0000 ] | 112.5% { 96.3% } | 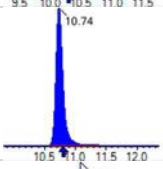  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1219399 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2240.0 | N/A | 20.5449 [ 20.0000 ] | 102.7% { 88.7% } | 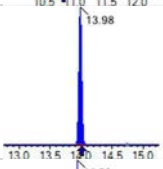  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1122403 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 3817.3 | N/A | 18.6317 [ 20.0000 ] | 93.2% { 87.0% } | 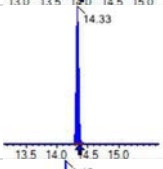  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 949887 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2293.1 | N/A | 7.8766 [ 8.0000 ] | 98.5% { 92.9% } | 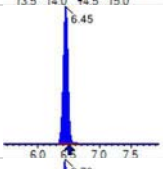  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 610638 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 978.4 | N/A | 2.2808 [ 2.0000 ] | 114.0% { 99.0% } | 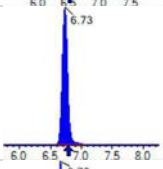  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 535993 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 806.6 | N/A | 2.1991 [ 2.0000 ] | 110.0% { 96.9% } | 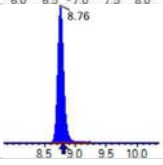  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00912L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01830 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .01770 | ng/mL0 | .10 | U |
| | PFHxDA0 | .040 | ng/mL0 | .10 | U |
| | PFODA0 | .08910 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06860 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02530 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .02610 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKS

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00912L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 912-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .07760 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.440 | ng/mL0 | | |
| | 13C5-PFPEA0 | 3.960 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.020 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.090 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.080 | ng/mL0 | | |
| | 13C6-PFDA | 0.980 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9890 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.910 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.960 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.080 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.430 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.530 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.210 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.50 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.060 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.040 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.220 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.390 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00912L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | C |
|---|---|---|---|---|---|
| SD0 912-ICB10 | D7-NMEFOSE0 | 23.60 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.40 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.540 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 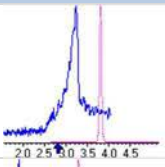 | 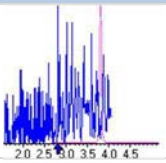 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 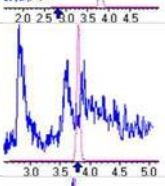 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 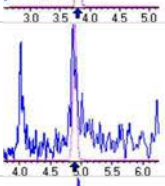 | 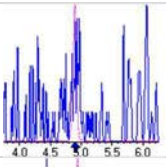 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 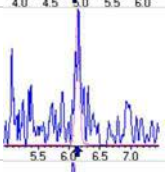 | 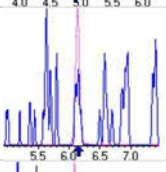 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 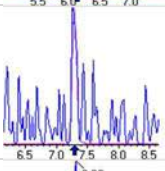 | 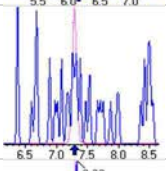 | |
| PFOA | ( 413.0 / 369.0 )<br>8051<br>( 413.0 / 169.0 )<br>3686 | ( 8.32 , 1.00 )<br>( 0.01 , N/A , 0.2) | 17.5<br>27.6 | 0.4578<br>126.6<br>126.6 | 0.0183 | N/A | 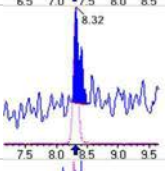 | 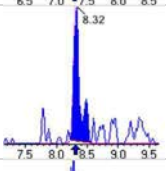 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 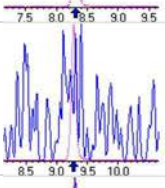 | 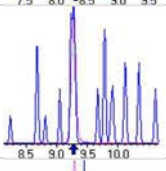 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 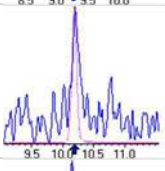 | 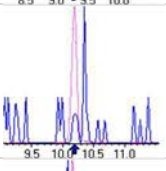 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 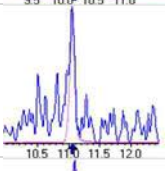 | 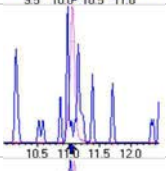 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 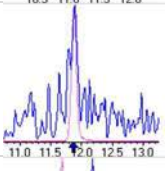 | 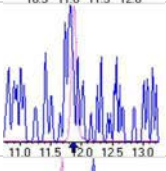 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 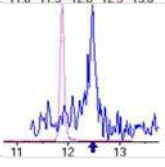 | 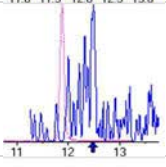 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6095<br>( 713.0 / 169.0 ) 1955 | ( 12.95 , 1.00 )<br>( -0.03 , N/A , -1.9) | 24.0<br>18.1 | 0.3208<br>123.4<br>123.4 | 0.0177 | N/A | 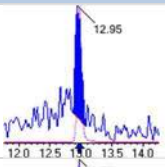 | 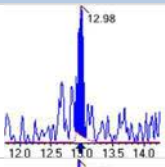 | |
| PFHxDA | ( 813.0 / 769.0 ) 11232<br>( 813.0 / 169.0 ) 2907 | ( 13.77 , 1.00 )<br>( 0.00 , N/A , 0.7) | 48.7<br>23.1 | 0.2588<br>119.3<br>119.3 | 0.0400 | N/A | 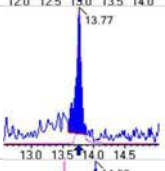 | 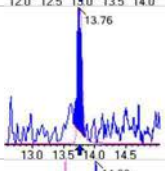 | |
| PFODA | ( 913.0 / 869.0 ) 16821<br>( 913.0 / 169.0 ) 4625 | ( 14.39 , 1.05 )<br>( N/A , 0.00 , 0.4) | 56.9<br>29.4 | 0.2750<br>72.0<br>72.0 | 0.0891 | N/A | 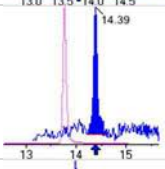 | 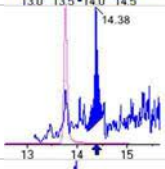 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 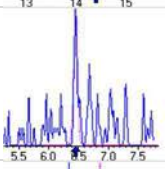 | 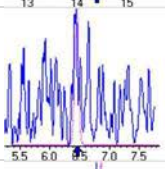 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 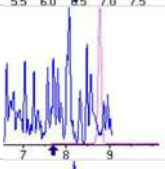 | 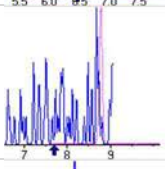 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 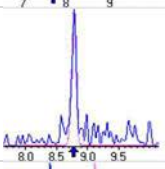 | 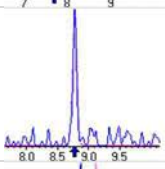 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 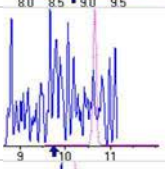 | 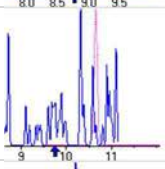 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 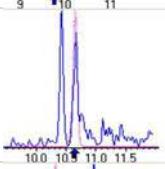 | 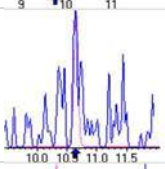 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 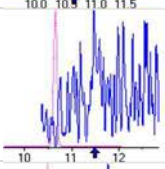 | 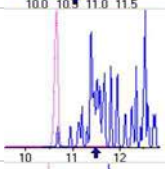 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 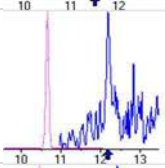 | 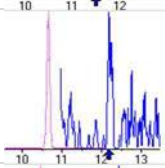 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 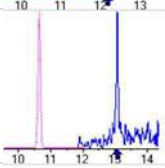 | 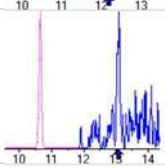 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 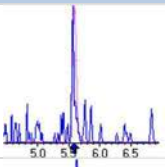 | 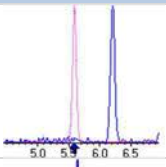 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 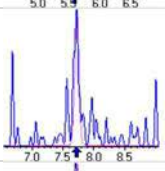 | 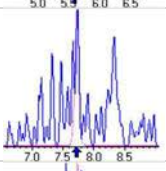 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 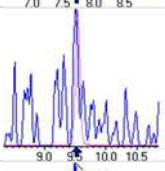 | 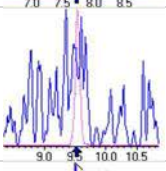 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17567<br>( 627.0 / 81.0 ) 23554 | ( 11.20 , 1.00 ) ( 0.01 , N/A , -0.2) | 96.5<br>58.1 | 1.3408<br>99.2<br>99.2 | 0.0686 | N/A | 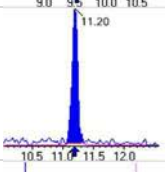 | 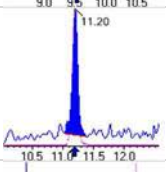 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 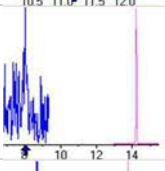 | 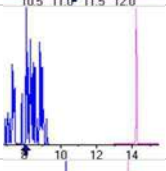 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 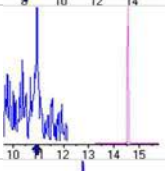 | 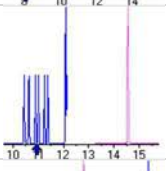 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 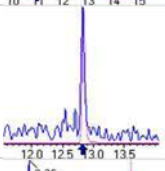 | 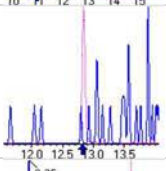 | |
| TFSI | ( 279.7 / 147.0 ) 58193<br>( 279.7 / 211.0 ) 5712 | ( 8.36 , 0.65 ) ( N/A , -0.01 , 0.6) | 33.3<br>13.4 | 0.0982<br>119.0<br>119.0 | 0.0288 | N/A | 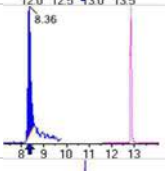 | 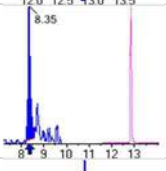 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 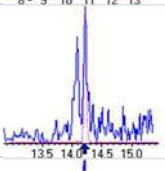 | 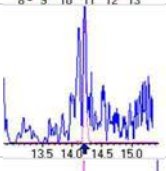 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 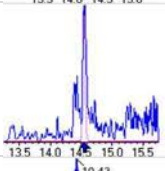 | 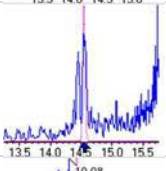 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5625<br>( 570.0 / 483.0 ) 2369 | ( 10.43 , 1.00 ) ( 0.00 , N/A , 20.5) | 109.0<br>614.2 | 0.4211<br>97.3<br>97.3 | 0.0253 | N/A | 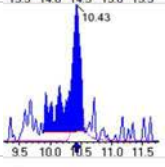 | 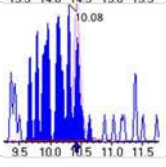 | MI2 DG 2024-03-13 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00912-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-12A (9)
Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 5863<br>( 584.0 / 526.0 ) 3543 | ( 10.87 , 0.99 )<br>( -0.09 , N/A , 1.9) | 35.3<br>17.3 | 0.6042<br>97.6<br>97.6 | 0.0261 | N/A | 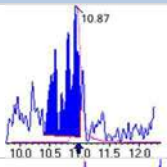 | 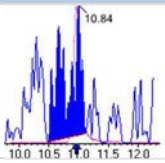 | MI2 DG 2024-03-13 |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 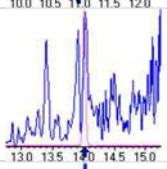 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 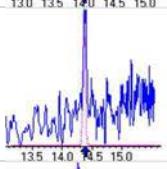 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 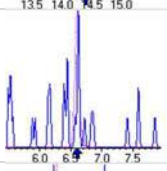 | 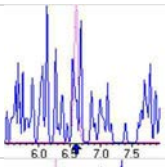 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 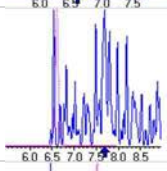 | 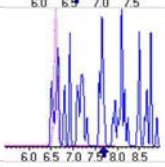 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 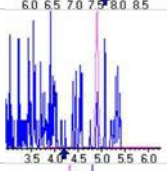 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 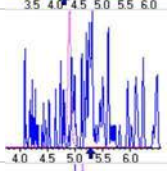 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 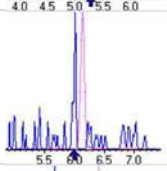 | 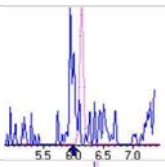 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 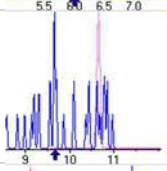 | 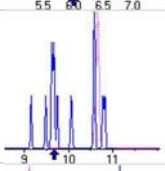 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 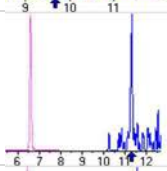 | 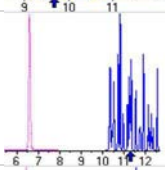 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 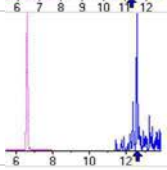 | 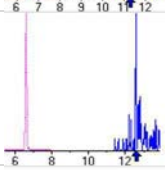 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 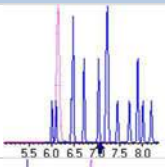 | 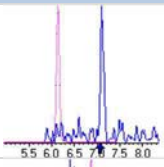 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 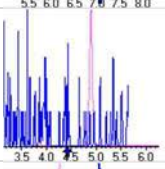 | 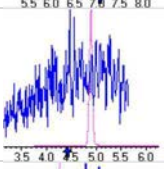 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 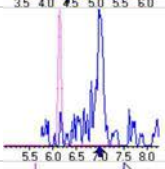 | 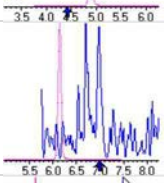 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 7778<br>( 441.0 / 337.0 ) 5397 | ( 9.43 , 1.54 ) ( N/A , 0.02 , 0.4) | 97.1<br>58.9 | 0.6939<br>78.0<br>78.0 | 0.0776 | N/A | 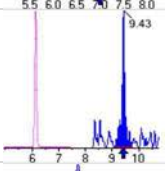 | 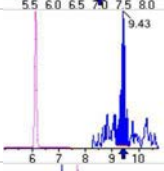 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 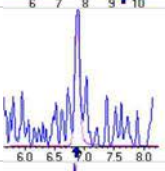 | 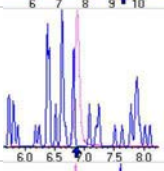 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 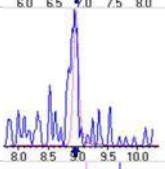 | 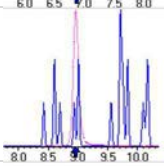 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 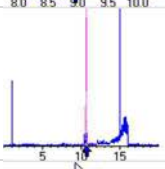 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 260995 | ( 3.80 , N/A ) ( N/A , 0.01 , N/A ) | 1112.0 | N/A | 0.8664 [ 1.0000 ] | 86.6% { 86.1% } | 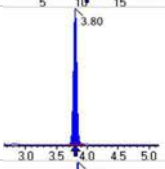 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 133399 | ( 6.14 , N/A ) ( N/A , 0.00 , N/A ) | 1191075.8 | N/A | 0.8675 [ 1.0000 ] | 86.8% { 80.8% } | 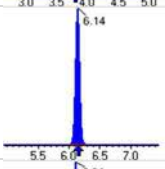 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 391680 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 4086.5 | N/A | 0.8779 [ 1.0000 ] | 87.8% { 86.1% } | 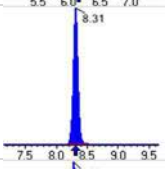 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 285591 | ( 9.28 , N/A ) ( N/A , 0.00 , N/A ) | 1057.3 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 87.6% } | 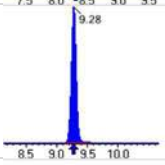 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 293203 | ( 10.19 , N/A ) ( N/A , 0.01 , N/A ) | 5654.1 | N/A | 0.8841 [ 1.0000 ] | 88.4% { 86.2% } | 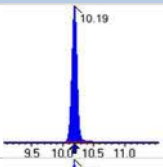 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 947581 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4753.1 | N/A | 0.8480 [ 1.0000 ] | 84.8% { 83.1% } | 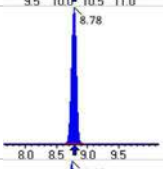 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 819814 | ( 10.66 , N/A ) ( N/A , 0.01 , N/A ) | 2978.4 | N/A | 0.8398 [ 1.0000 ] | 84.0% { 82.3% } | 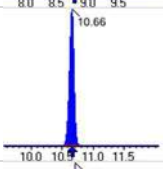 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2427954 | ( 3.80 , N/A ) ( N/A , 0.00 , N/A ) | 46047.2 | N/A | 8.4358 [ 8.0000 ] | 105.4% { 91.4% } | 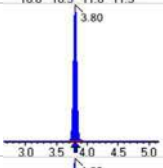 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 946891 | ( 4.90 , N/A ) ( N/A , 0.00 , N/A ) | 5582.9 | N/A | 3.9566 [ 4.0000 ] | 98.9% { 81.7% } | 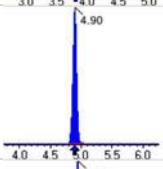 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 579960 | ( 6.14 , N/A ) ( N/A , 0.00 , N/A ) | 8466.9 | N/A | 2.0248 [ 2.0000 ] | 101.2% { 84.7% } | 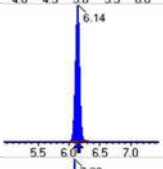 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 615403 | ( 7.29 , N/A ) ( N/A , 0.00 , N/A ) | 3732.9 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 87.3% } | 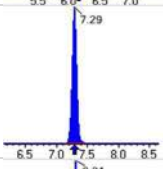 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 864634 | ( 8.31 , N/A ) ( N/A , 0.00 , N/A ) | 4278.2 | N/A | 2.0937 [ 2.0000 ] | 104.7% { 90.7% } | 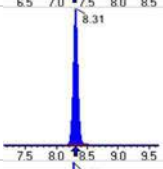 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 297361 | ( 9.28 , N/A ) ( N/A , 0.00 , N/A ) | 3188.0 | N/A | 1.0782 [ 1.0000 ] | 107.8% { 95.6% } | 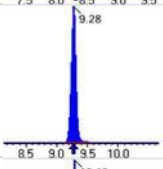 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331668 | ( 10.19 , N/A ) ( N/A , 0.01 , N/A ) | 1106.6 | N/A | 0.9803 [ 1.0000 ] | 98.0% { 86.2% } | 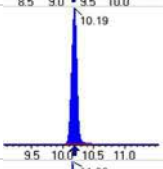 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 406678 | ( 11.06 , N/A ) ( N/A , 0.01 , N/A ) | 998.5 | N/A | 0.9886 [ 1.0000 ] | 98.9% { 81.8% } | 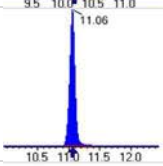 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 419013 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1322.8 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 84.0% } | 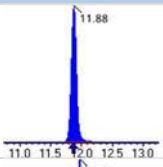 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362156 | ( 12.97 , N/A ) ( N/A , 0.01 , N/A ) | 1626.7 | N/A | 1.0061 [ 1.0000 ] | 100.6% { 85.4% } | 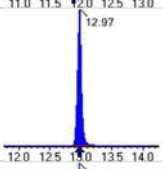 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 582518 | ( 13.77 , N/A ) ( N/A , 0.00 , N/A ) | 2735.5 | N/A | 1.9051 [ 2.0000 ] | 95.3% { 82.2% } | 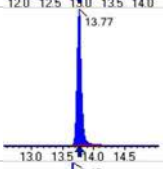 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1811355 | ( 6.45 , N/A ) ( N/A , 0.00 , N/A ) | 1138.1 | N/A | 1.9619 [ 2.0000 ] | 98.1% { 78.4% } | 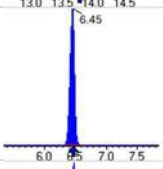 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440683 | ( 8.78 , N/A ) ( N/A , 0.00 , N/A ) | 4930.4 | N/A | 2.0777 [ 2.0000 ] | 103.9% { 87.5% } | 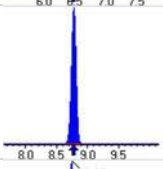 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1717212 | ( 10.65 , N/A ) ( N/A , 0.01 , N/A ) | 2191.5 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 81.7% } | 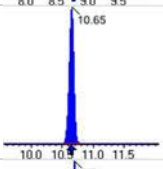 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 365723 | ( 5.59 , N/A ) ( N/A , 0.00 , N/A ) | 81.5 | N/A | 4.4321 [ 4.0000 ] | 110.8% { 101.6% } | 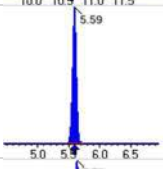 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1161421 | ( 7.73 , N/A ) ( N/A , 0.00 , N/A ) | 3440.9 | N/A | 4.5323 [ 4.0000 ] | 113.3% { 108.1% } | 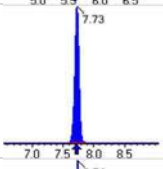 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1075546 | ( 9.54 , N/A ) ( N/A , 0.01 , N/A ) | 1550.9 | N/A | 4.2129 [ 4.0000 ] | 105.3% { 92.4% } | 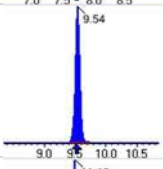 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2491297 | ( 11.19 , N/A ) ( N/A , 0.01 , N/A ) | 1870.1 | N/A | 8.5012 [ 8.0000 ] | 106.3% { 99.5% } | 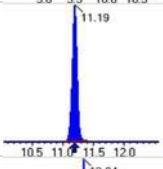 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1945955 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 1547.5 | N/A | 2.0575 [ 2.0000 ] | 102.9% { 83.6% } | 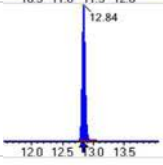 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00912-ICB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-12A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/12 - 21:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 355520 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2647.3 | N/A | 2.0357 [ 2.0000 ] | 101.8% { 84.0% } | 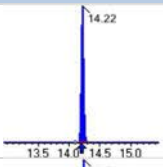 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 419000 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2792.3 | N/A | 2.0887 [ 2.0000 ] | 104.4% { 84.3% } | 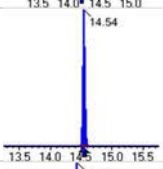 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 943187 | ( 10.43 , N/A ) ( N/A , 0.01 , N/A ) | 2295.4 | N/A | 4.2200 [ 4.0000 ] | 105.5% { 87.2% } | 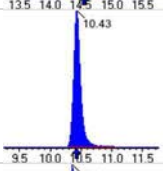 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 930349 | ( 10.96 , N/A ) ( N/A , 0.01 , N/A ) | 1550.3 | N/A | 4.3851 [ 4.0000 ] | 109.6% { 88.8% } | 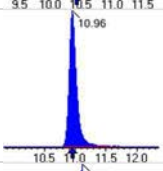 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1925084 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 3121.2 | N/A | 23.5906 [ 20.0000 ] | 118.0% { 102.3% } | 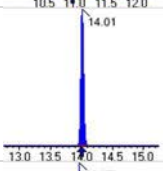 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 2016954 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4547.0 | N/A | 20.4032 [ 20.0000 ] | 102.0% { 85.5% } | 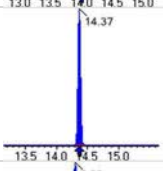 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 928272 | ( 6.60 , N/A ) ( N/A , 0.00 , N/A ) | 2592.2 | N/A | 7.5397 [ 8.0000 ] | 94.2% { 81.8% } | 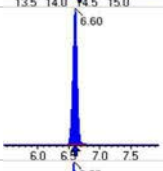 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 455043 | ( 6.88 , N/A ) ( N/A , 0.00 , N/A ) | 1157.8 | N/A | 1.7499 [ 2.0000 ] | 87.5% { 77.6% } | 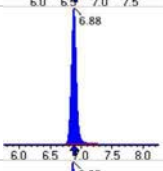 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 435679 | ( 8.96 , N/A ) ( N/A , 0.01 , N/A ) | 649.4 | N/A | 1.7946 [ 2.0000 ] | 89.7% { 77.2% } | 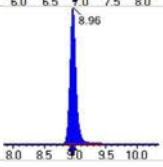 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .02840 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01320 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .0550 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.770 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.260 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.180 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.160 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.040 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.010 | ng/mL0 | | |
| | 13C6-PFDA | 0.9470 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9440 | ng/mL0 | | |
| | 13C2-PFDOA | 0.8990 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9050 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.680 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.190 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.010 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 7.390 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.550 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 6.590 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.70 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.060 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.870 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.830 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.550 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.740 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 977-CCB10 | D7-NMEFOSE0 | 19.80 | ng/mL0 | | |
| | D9-NETFOSE0 | 17.0 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.610 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 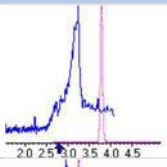 | 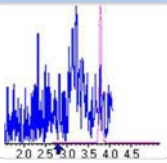 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 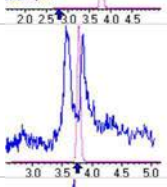 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 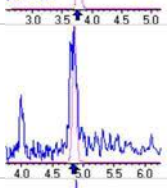 | 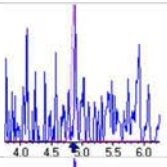 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 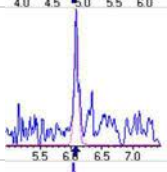 | 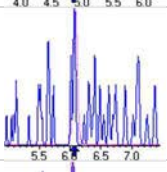 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 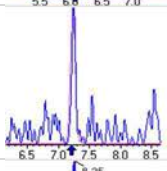 | 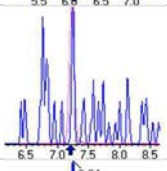 | |
| PFOA | ( 413.0 / 369.0 )<br>14144<br>( 413.0 / 169.0 )<br>4473 | ( 8.25 , 1.00 )<br>( 0.01 , N/A , 0.7) | 24.2<br>39.7 | 0.3162<br>87.4<br>89.1 | 0.0284 | N/A | 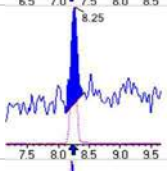 | 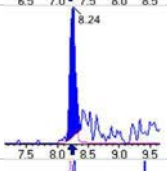 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 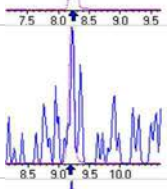 | 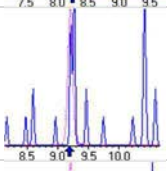 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 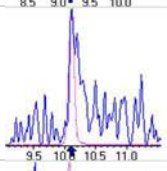 | 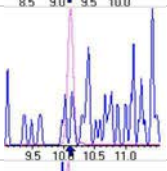 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 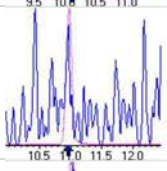 | 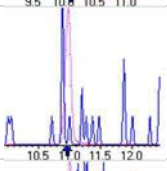 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 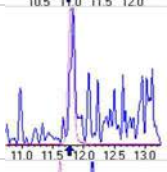 | 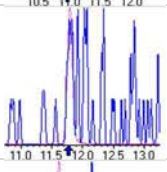 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 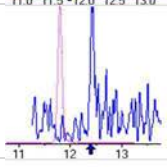 | 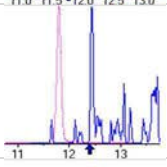 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 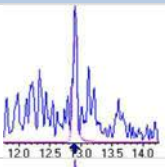 | 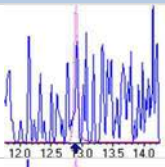 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 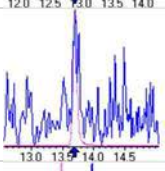 | 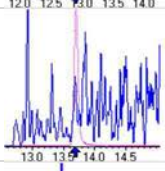 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 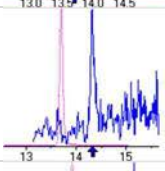 | 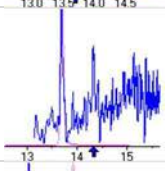 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 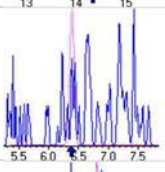 | 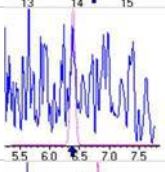 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 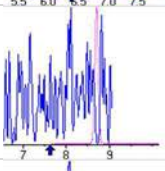 | 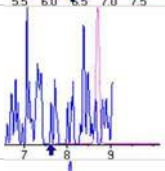 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 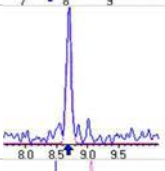 | 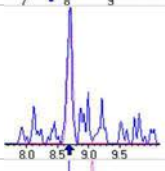 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 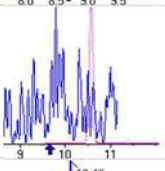 | 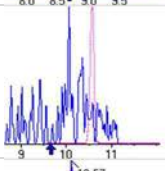 | |
| PFOS | ( 499.0 / 80.0 )<br>15835<br>( 499.0 / 99.0 )<br>3754 | ( 10.46 , 0.99 )<br>( -0.11 , N/A , -6.3) | 50.0<br>185.8 | 0.2371<br>100.2<br>108.2 | 0.0132 | N/A | 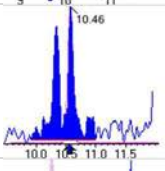 | 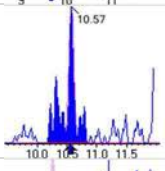 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 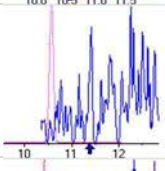 | 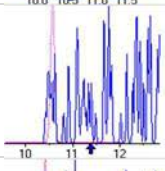 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 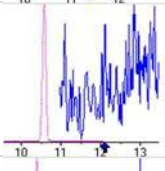 | 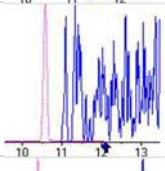 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 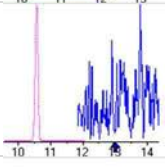 | 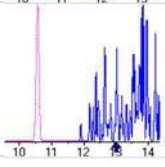 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 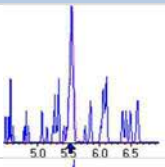 | 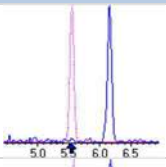 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 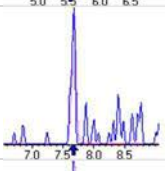 | 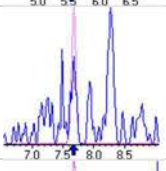 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 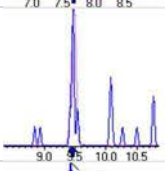 | 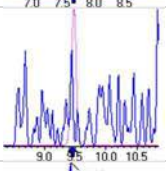 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19808<br>( 627.0 / 81.0 )<br>29848 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.1) | 261.4<br>94.1 | 1.5069<br>111.5<br>110.0 | 0.0550 | N/A | 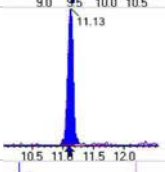 | 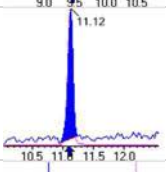 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 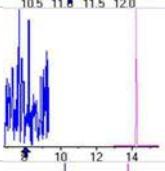 | 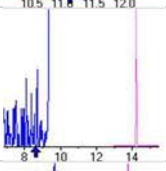 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 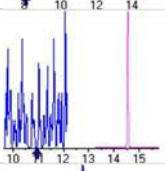 | 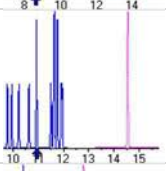 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 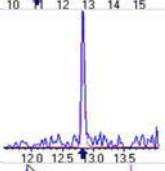 | 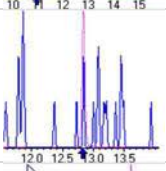 | |
| TFSI | ( 279.7 / 147.0 )<br>72738<br>( 279.7 / 211.0 )<br>6401 | ( 8.26 , 0.64 )<br>( N/A , 0.01 , -0.5) | 30.7<br>15.3 | 0.0880<br>106.7<br>103.5 | 0.0305 | N/A | 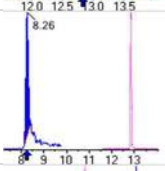 | 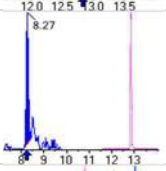 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 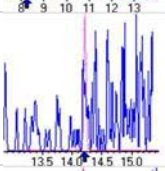 | 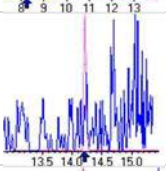 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 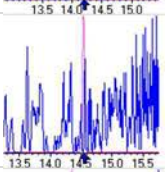 | 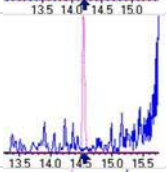 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 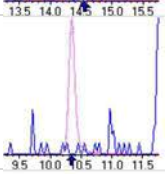 | 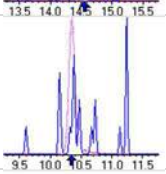 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 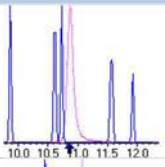 | 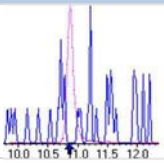 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 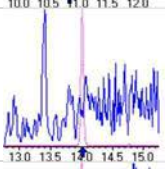 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 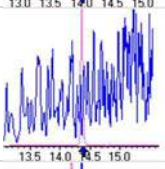 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 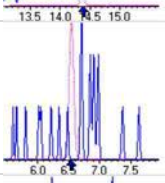 | 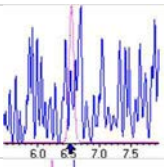 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 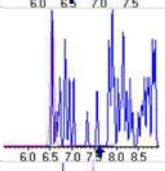 | 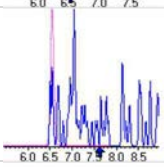 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 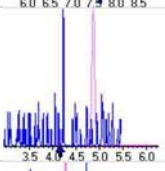 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 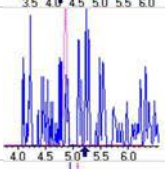 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 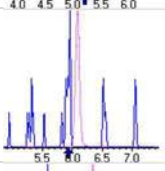 | 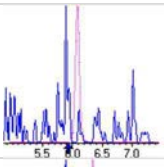 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 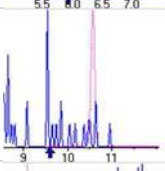 | 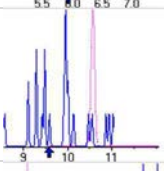 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 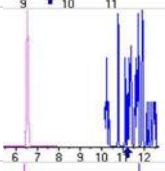 | 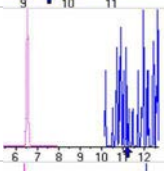 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 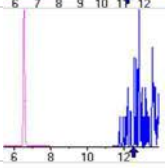 | 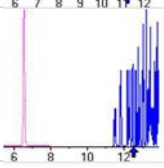 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 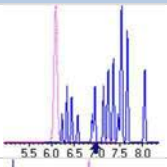 | 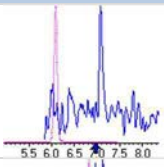 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 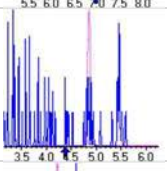 | 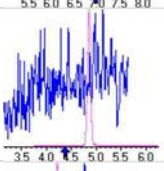 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 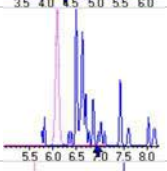 | 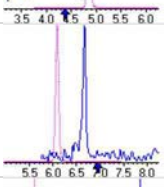 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 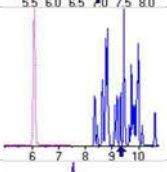 | 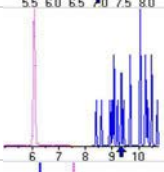 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 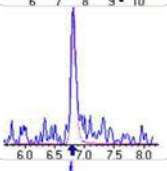 | 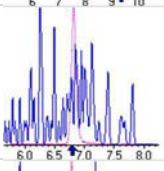 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 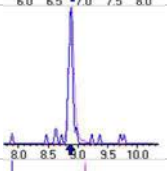 | 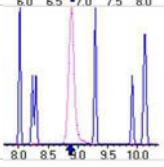 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 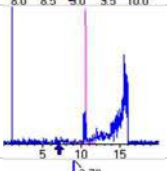 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 345870 | ( 3.78 , N/A )<br>( N/A , 0.03 , N/A ) | 1005.6 | N/A | 1.1481<br>[ 1.0000 ] | 114.8%<br>{ 102.2% } | 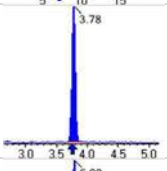 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 160083 | ( 6.09 , N/A )<br>( N/A , 0.02 , N/A ) | 6747.5 | N/A | 1.0411<br>[ 1.0000 ] | 104.1%<br>{ 93.9% } | 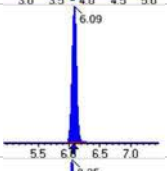 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 455152 | ( 8.25 , N/A )<br>( N/A , 0.02 , N/A ) | 4980.5 | N/A | 1.0202<br>[ 1.0000 ] | 102.0%<br>{ 93.3% } | 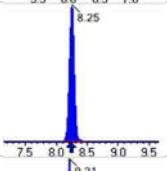 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 365439 | ( 9.21 , N/A )<br>( N/A , 0.02 , N/A ) | 912.6 | N/A | 1.0932<br>[ 1.0000 ] | 109.3%<br>{ 95.0% } | 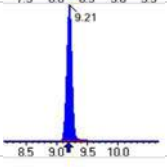 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 371989 | ( 10.12 , N/A ) ( N/A , 0.02 , N/A ) | 7805.9 | N/A | 1.1217 [ 1.0000 ] | 112.2% { 98.5% } | 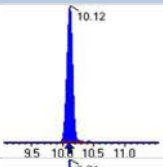 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1061485 | ( 8.71 , N/A ) ( N/A , 0.02 , N/A ) | 5428.0 | N/A | 0.9499 [ 1.0000 ] | 95.0% { 84.7% } | 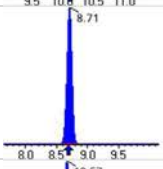 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 969392 | ( 10.57 , N/A ) ( N/A , 0.02 , N/A ) | 3010.9 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 91.6% } | 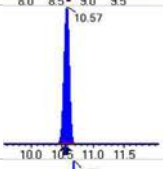 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2964097 | ( 3.78 , N/A ) ( N/A , 0.03 , N/A ) | 51192.4 | N/A | 7.7714 [ 8.0000 ] | 97.1% { 104.4% } | 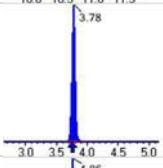 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1222627 | ( 4.86 , N/A ) ( N/A , 0.02 , N/A ) | 6918.7 | N/A | 4.2573 [ 4.0000 ] | 106.4% { 95.5% } | 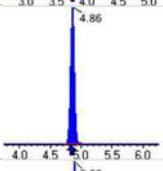 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 750951 | ( 6.09 , N/A ) ( N/A , 0.02 , N/A ) | 7223.4 | N/A | 2.1848 [ 2.0000 ] | 109.2% { 99.0% } | 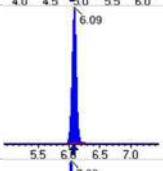 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 774131 | ( 7.23 , N/A ) ( N/A , 0.02 , N/A ) | 5846.6 | N/A | 2.1564 [ 2.0000 ] | 107.8% { 94.3% } | 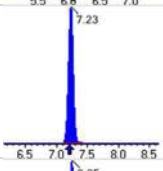 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 980074 | ( 8.25 , N/A ) ( N/A , 0.02 , N/A ) | 3687.2 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 90.2% } | 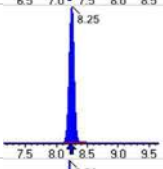 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 357915 | ( 9.21 , N/A ) ( N/A , 0.02 , N/A ) | 3023.1 | N/A | 1.0142 [ 1.0000 ] | 101.4% { 94.7% } | 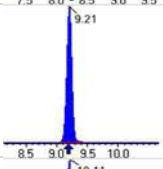 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 406466 | ( 10.11 , N/A ) ( N/A , 0.02 , N/A ) | 1281.7 | N/A | 0.9469 [ 1.0000 ] | 94.7% { 86.2% } | 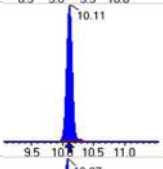 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 492558 | ( 10.97 , N/A ) ( N/A , 0.02 , N/A ) | 1093.8 | N/A | 0.9438 [ 1.0000 ] | 94.4% { 97.1% } | 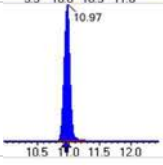 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 471134 | ( 11.80 , N/A ) ( N/A , 0.02 , N/A ) | 1690.9 | N/A | 0.8989 [ 1.0000 ] | 89.9% { 90.7% } | 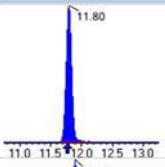 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 413166 | ( 12.90 , N/A ) ( N/A , 0.02 , N/A ) | 1636.1 | N/A | 0.9047 [ 1.0000 ] | 90.5% { 93.3% } | 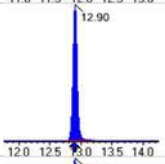 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 651590 | ( 13.70 , N/A ) ( N/A , 0.01 , N/A ) | 3123.2 | N/A | 1.6797 [ 2.0000 ] | 84.0% { 80.9% } | 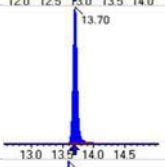 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2262653 | ( 6.39 , N/A ) ( N/A , 0.02 , N/A ) | 1098.0 | N/A | 2.1877 [ 2.0000 ] | 109.4% { 94.9% } | 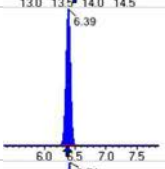 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1604208 | ( 8.71 , N/A ) ( N/A , 0.02 , N/A ) | 5081.5 | N/A | 2.0653 [ 2.0000 ] | 103.3% { 91.0% } | 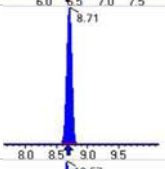 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2069628 | ( 10.57 , N/A ) ( N/A , 0.02 , N/A ) | 2252.5 | N/A | 2.0055 [ 2.0000 ] | 100.3% { 92.7% } | 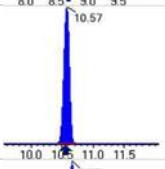 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 682964 | ( 5.55 , N/A ) ( N/A , 0.02 , N/A ) | 94.6 | N/A | 7.3885 [ 4.0000 ] | 184.7% { 123.4% } | 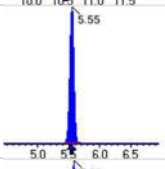 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1879831 | ( 7.68 , N/A ) ( N/A , 0.02 , N/A ) | 3496.6 | N/A | 6.5487 [ 4.0000 ] | 163.7% { 115.5% } | 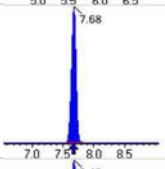 | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1883547 | ( 9.48 , N/A ) ( N/A , 0.02 , N/A ) | 1910.1 | N/A | 6.5861 [ 4.0000 ] | 164.7% { 110.4% } | 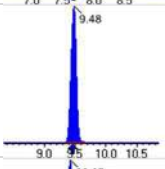 | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3504089 | ( 11.12 , N/A ) ( N/A , 0.03 , N/A ) | 1157.7 | N/A | 10.6741 [ 8.0000 ] | 133.4% { 94.4% } | 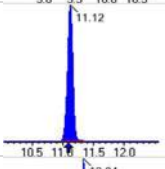 | | S2, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2298300 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2755.3 | N/A | 2.0551 [ 2.0000 ] | 102.8% { 94.9% } | 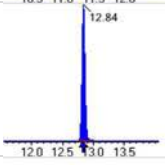 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (1)
Acquired: 2024/03/18 - 13:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 386187 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1937.4 | N/A | 1.8701 [ 2.0000 ] | 93.5% { 90.4% } | 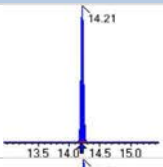 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 435152 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 3734.6 | N/A | 1.8345 [ 2.0000 ] | 91.7% { 89.8% } | 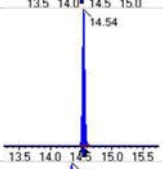 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1201633 | ( 10.35 , N/A ) ( N/A , 0.02 , N/A ) | 3046.5 | N/A | 4.5468 [ 4.0000 ] | 113.7% { 91.0% } | 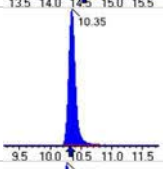 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1189723 | ( 10.87 , N/A ) ( N/A , 0.02 , N/A ) | 1687.2 | N/A | 4.7424 [ 4.0000 ] | 118.6% { 96.6% } | 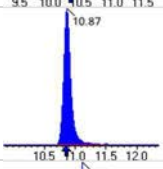 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1914898 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2465.5 | N/A | 19.8450 [ 20.0000 ] | 99.2% { 103.0% } | 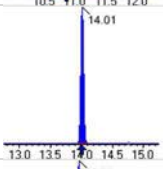 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1992354 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4286.9 | N/A | 17.0445 [ 20.0000 ] | 85.2% { 95.2% } | 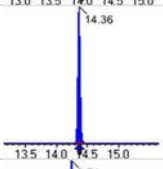 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1271716 | ( 6.54 , N/A ) ( N/A , 0.02 , N/A ) | 2543.2 | N/A | 8.6075 [ 8.0000 ] | 107.6% { 90.6% } | 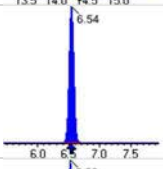 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 613797 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1141.1 | N/A | 1.8604 [ 2.0000 ] | 93.0% { 86.3% } | 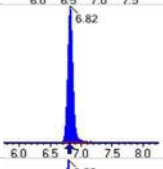 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 578178 | ( 8.89 , N/A ) ( N/A , 0.02 , N/A ) | 949.0 | N/A | 1.8771 [ 2.0000 ] | 93.9% { 86.3% } | 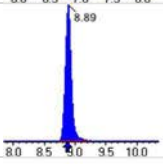 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB20 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .02160 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05910 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB20 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.190 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.450 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.180 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.20 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.040 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.0 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9450 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9480 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9280 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.720 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.990 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.020 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.080 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 6.620 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.930 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 6.210 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.30 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.140 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.0 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.90 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.950 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.920 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 977-CCB20 | D7-NMEFOSE0 | 20.90 | ng/mL0 | | |
| | D9-NETFOSE0 | 18.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 9.010 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 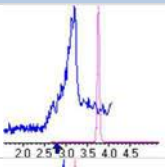 | 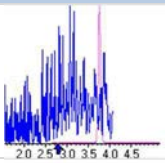 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 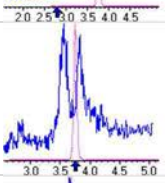 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 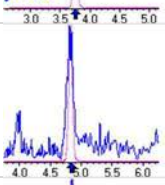 | 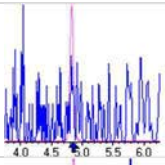 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 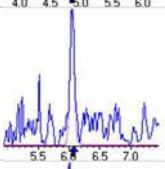 | 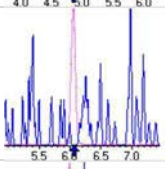 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 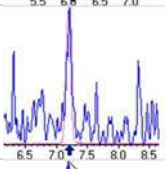 | 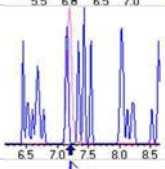 | |
| PFOA | ( 413.0 / 369.0 )<br>10459<br>( 413.0 / 169.0 )<br>3204 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , -0.1) | 18.2<br>24.1 | 0.3063<br>84.7<br>86.3 | 0.0216 | N/A | 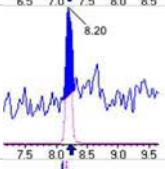 | 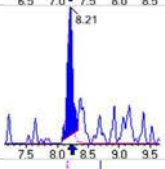 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 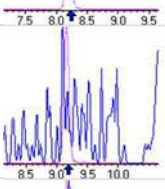 | 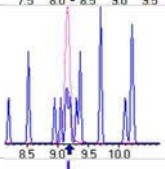 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 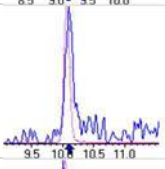 | 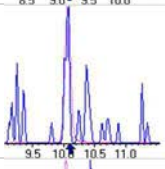 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 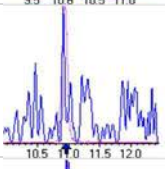 | 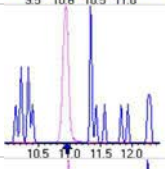 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 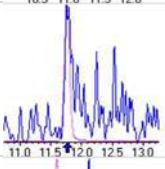 | 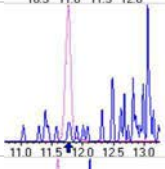 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 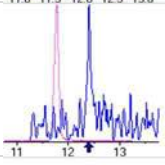 | 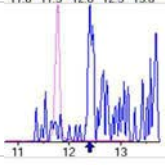 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 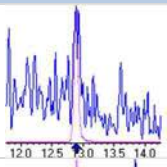 | 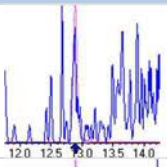 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 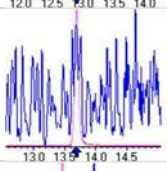 | 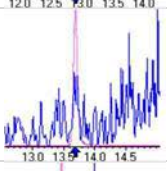 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 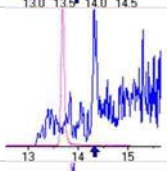 | 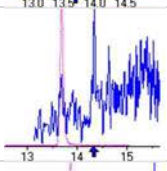 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 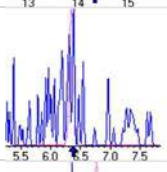 | 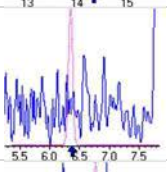 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 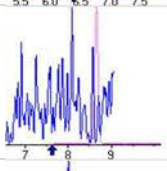 | 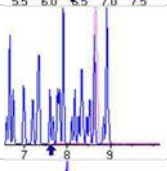 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 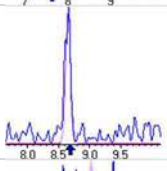 | 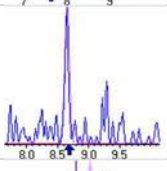 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 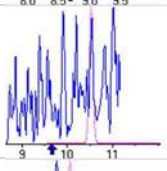 | 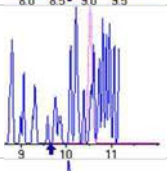 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 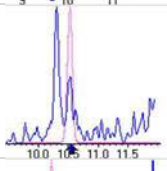 | 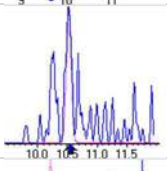 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 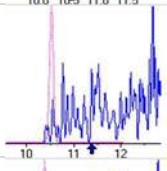 | 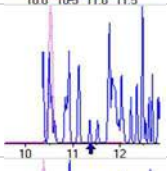 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 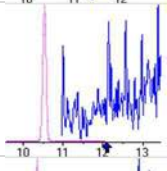 | 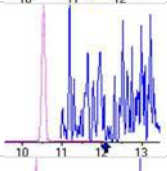 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 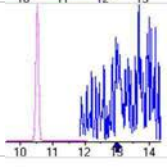 | 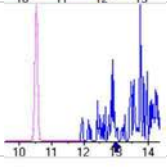 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 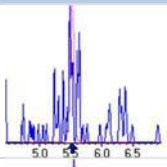 | 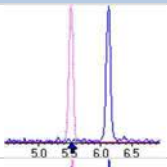 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 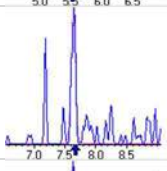 | 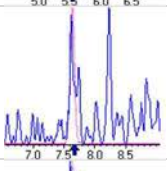 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 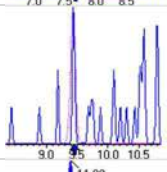 | 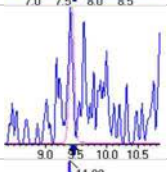 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20043<br>( 627.0 / 81.0 )<br>26592 | ( 11.09 , 1.00 )<br>( 0.01 , N/A , -0.1) | 183.1<br>81.8 | 1.3268<br>98.2<br>96.9 | 0.0591 | N/A | 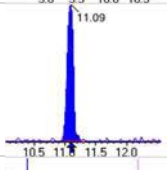 | 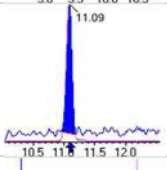 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 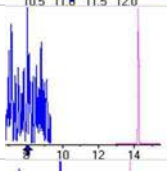 | 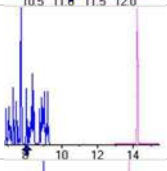 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 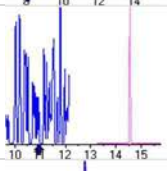 | 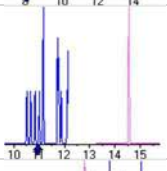 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 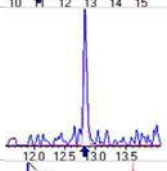 | 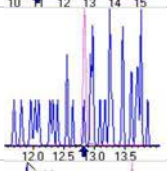 | |
| TFSI | ( 279.7 / 147.0 )<br>72770<br>( 279.7 / 211.0 )<br>6761 | ( 8.21 , 0.64 )<br>( N/A , -0.04 , -1.1) | 31.7<br>13.9 | 0.0929<br>112.7<br>109.2 | 0.0324 | N/A | 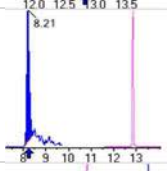 | 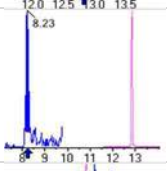 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 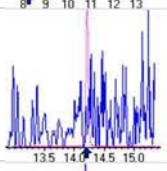 | 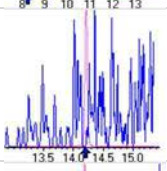 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 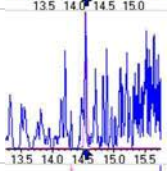 | 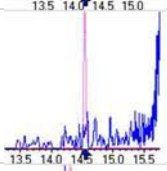 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 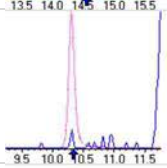 | 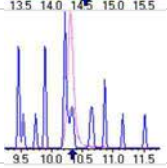 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 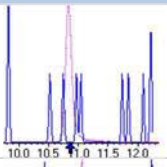 | 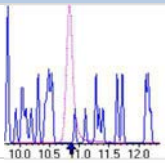 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 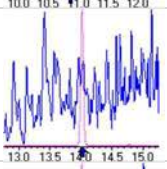 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 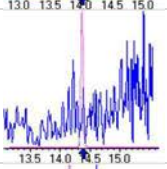 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 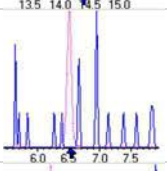 | 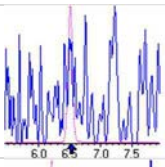 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 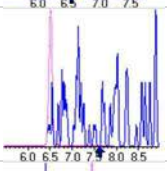 | 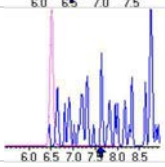 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 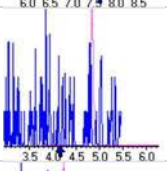 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 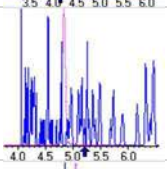 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 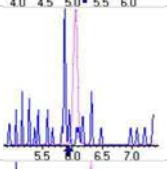 | 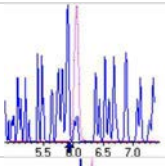 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 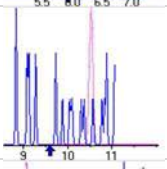 | 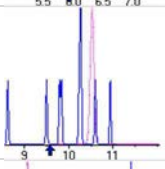 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 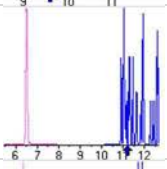 | 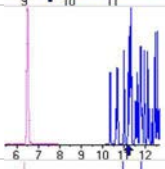 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 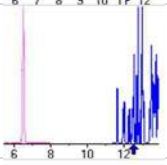 | 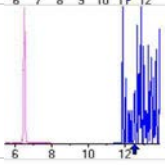 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (6)
Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 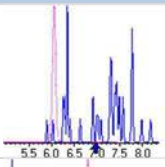 | 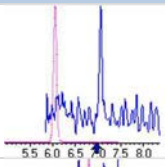 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 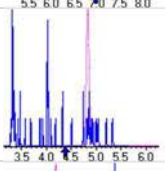 | 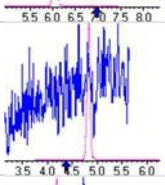 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 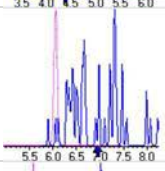 | 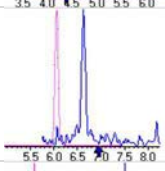 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 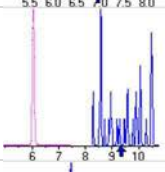 | 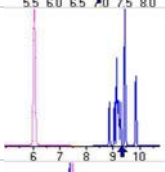 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 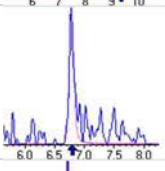 | 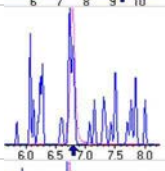 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 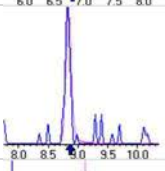 | 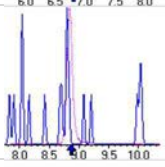 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 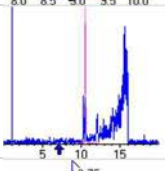 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 293565 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1077.2 | N/A | 0.9745<br>[ 1.0000 ] | 97.4%<br>{ 86.7% } | 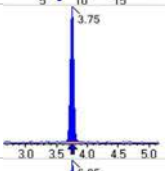 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 140051 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 15347.4 | N/A | 0.9108<br>[ 1.0000 ] | 91.1%<br>{ 82.2% } | 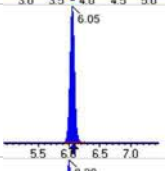 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441882 | ( 8.20 , N/A )<br>( N/A , -0.03 , N/A ) | 3273.1 | N/A | 0.9905<br>[ 1.0000 ] | 99.0%<br>{ 90.5% } | 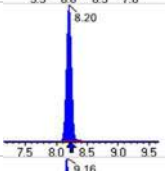 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 331524 | ( 9.16 , N/A )<br>( N/A , -0.03 , N/A ) | 1396.4 | N/A | 0.9917<br>[ 1.0000 ] | 99.2%<br>{ 86.2% } | 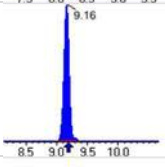 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 335708 | ( 10.07 , N/A ) ( N/A , -0.03 , N/A ) | 13049.7 | N/A | 1.0123 [ 1.0000 ] | 101.2% { 88.9% } | 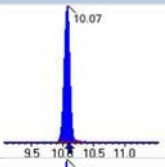  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1038796 | ( 8.66 , N/A ) ( N/A , -0.03 , N/A ) | 4832.8 | N/A | 0.9296 [ 1.0000 ] | 93.0% { 82.9% } | 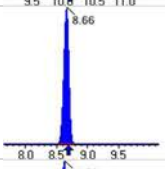  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 879040 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 2540.4 | N/A | 0.9005 [ 1.0000 ] | 90.0% { 83.1% } | 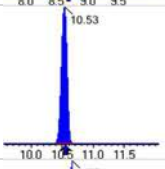  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2650457 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 44037.5 | N/A | 8.1872 [ 8.0000 ] | 102.3% { 93.3% } | 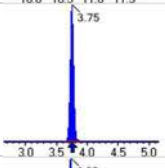  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1117635 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5028.0 | N/A | 4.4483 [ 4.0000 ] | 111.2% { 87.3% } | 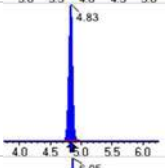  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 656524 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 40784.4 | N/A | 2.1832 [ 2.0000 ] | 109.2% { 86.5% } | 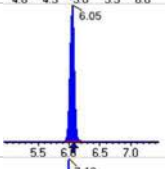  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 689422 | ( 7.19 , N/A ) ( N/A , -0.02 , N/A ) | 4375.8 | N/A | 2.1952 [ 2.0000 ] | 109.8% { 84.0% } | 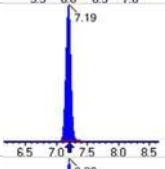  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 950385 | ( 8.20 , N/A ) ( N/A , -0.03 , N/A ) | 3382.8 | N/A | 2.0399 [ 2.0000 ] | 102.0% { 87.5% } | 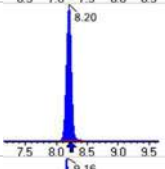  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 320206 | ( 9.16 , N/A ) ( N/A , -0.03 , N/A ) | 8014.2 | N/A | 1.0002 [ 1.0000 ] | 100.0% { 84.7% } | 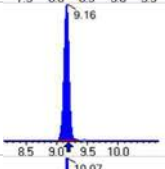  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 388754 | ( 10.07 , N/A ) ( N/A , -0.03 , N/A ) | 934.5 | N/A | 1.0035 [ 1.0000 ] | 100.4% { 82.5% } | 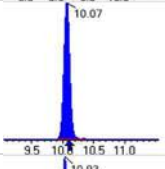  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 444984 | ( 10.93 , N/A ) ( N/A , -0.02 , N/A ) | 1141.4 | N/A | 0.9448 [ 1.0000 ] | 94.5% { 87.8% } | 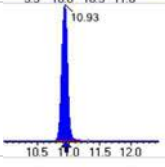  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 448585 | ( 11.77 , N/A ) ( N/A , -0.01 , N/A ) | 1674.3 | N/A | 0.9484 [ 1.0000 ] | 94.8% { 86.4% } | 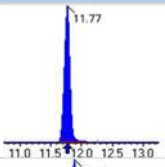  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 382676 | ( 12.89 , N/A ) ( N/A , 0.00 , N/A ) | 1330.9 | N/A | 0.9285 [ 1.0000 ] | 92.8% { 86.4% } | 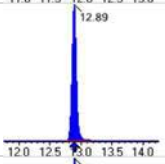  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 602217 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2663.3 | N/A | 1.7202 [ 2.0000 ] | 86.0% { 74.8% } | 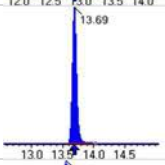  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2018408 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 1027.4 | N/A | 1.9942 [ 2.0000 ] | 99.7% { 84.7% } | 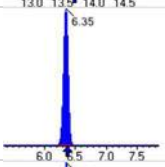  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1539095 | ( 8.66 , N/A ) ( N/A , -0.03 , N/A ) | 4754.3 | N/A | 2.0247 [ 2.0000 ] | 101.2% { 87.3% } | 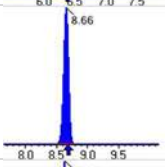  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1950811 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 1668.8 | N/A | 2.0846 [ 2.0000 ] | 104.2% { 87.4% } | 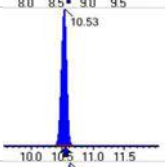  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598629 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.2 | N/A | 6.6176 [ 4.0000 ] | 165.4% { 108.2% } | 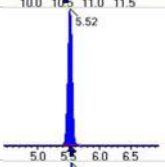  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1947113 | ( 7.64 , N/A ) ( N/A , -0.02 , N/A ) | 5115.4 | N/A | 6.9312 [ 4.0000 ] | 173.3% { 119.6% } | 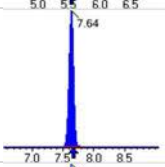  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1738354 | ( 9.44 , N/A ) ( N/A , -0.02 , N/A ) | 1432.3 | N/A | 6.2112 [ 4.0000 ] | 155.3% { 101.9% } | 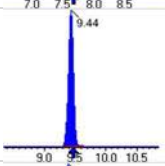  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3295703 | ( 11.08 , N/A ) ( N/A , -0.01 , N/A ) | 1506.4 | N/A | 10.2586 [ 8.0000 ] | 128.2% { 88.8% } | 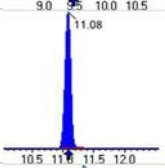  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2165905 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2839.5 | N/A | 2.1358 [ 2.0000 ] | 106.8% { 89.4% } | 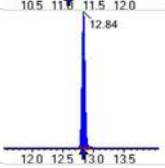  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB2 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 374054 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 2061.3 | N/A | 1.9975 [ 2.0000 ] | 99.9% { 87.5% } | 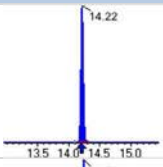 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 408084 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2636.7 | N/A | 1.8972 [ 2.0000 ] | 94.9% { 84.3% } | 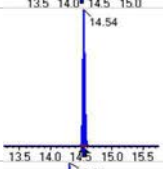 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1185252 | ( 10.31 , N/A ) ( N/A , -0.02 , N/A ) | 2349.0 | N/A | 4.9458 [ 4.0000 ] | 123.6% { 89.8% } | 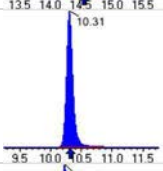 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1119438 | ( 10.83 , N/A ) ( N/A , -0.02 , N/A ) | 2056.2 | N/A | 4.9209 [ 4.0000 ] | 123.0% { 90.9% } | 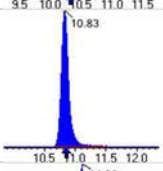 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1828426 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2859.8 | N/A | 20.8964 [ 20.0000 ] | 104.5% { 98.4% } | 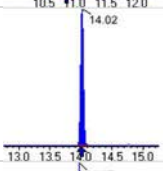 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1922460 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 5075.3 | N/A | 18.1370 [ 20.0000 ] | 90.7% { 91.8% } | 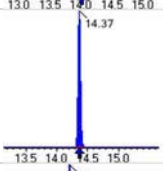 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1164850 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 2327.7 | N/A | 9.0119 [ 8.0000 ] | 112.6% { 83.0% } | 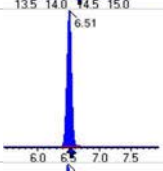 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 575589 | ( 6.79 , N/A ) ( N/A , -0.02 , N/A ) | 1078.5 | N/A | 1.9332 [ 2.0000 ] | 96.7% { 80.9% } | 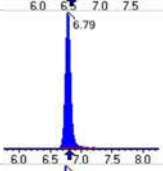 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 558612 | ( 8.84 , N/A ) ( N/A , -0.03 , N/A ) | 830.8 | N/A | 2.0096 [ 2.0000 ] | 100.5% { 83.4% } | 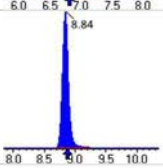 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB30 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .03340 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05730 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00977L | Instrument:N | SaphiraL |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB30 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.120 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.370 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.160 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.320 | ng/mL0 | | |
| | 13C8-PFOA0 | 1.970 | ng/mL0 | | |
| | 13C9-PFNA | 0.9610 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.010 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.970 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9920 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.820 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.890 | ng/mL0 | | |
| | 13C3-PFHXS0 | 1.990 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.930 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 6.390 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.070 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 5.650 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.20 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.880 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.890 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.840 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.540 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 977-CCB30 | D7-NMEFOSE0 | 19.90 | ng/mL0 | | |
| | D9-NETFOSE0 | 16.80 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 9.150 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 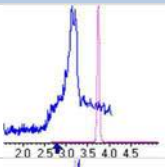 | 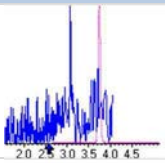 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 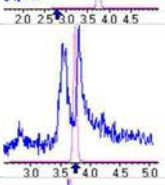 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 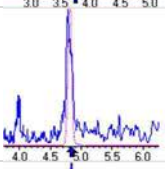 | 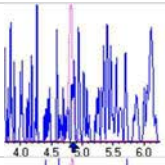 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 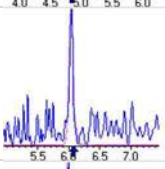 | 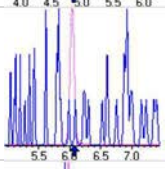 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 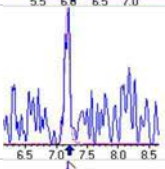 | 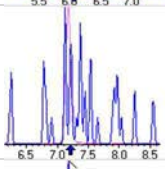 | |
| PFOA | ( 413.0 / 369.0 )<br>14518<br>( 413.0 / 169.0 )<br>4774 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.3) | 27.4<br>37.1 | 0.3288<br>90.9<br>92.6 | 0.0334 | N/A | 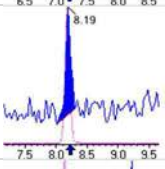 | 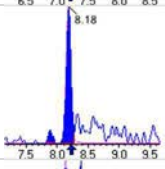 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 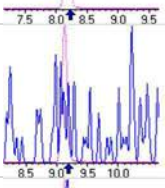 | 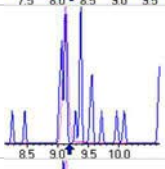 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 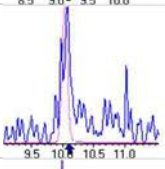 | 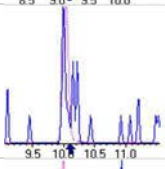 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 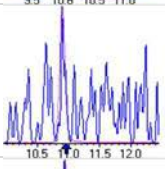 | 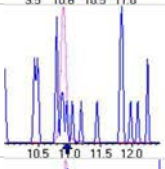 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 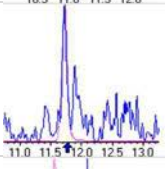 | 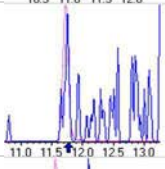 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 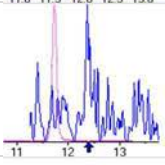 | 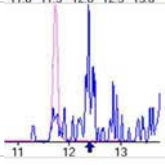 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 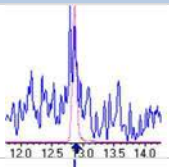 | 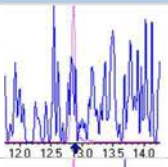 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 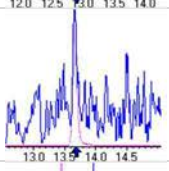 | 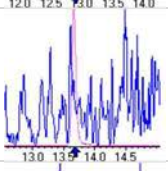 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 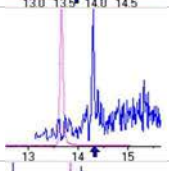 | 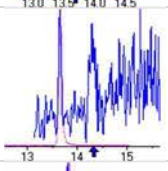 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 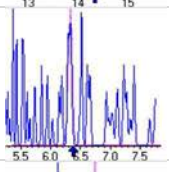 | 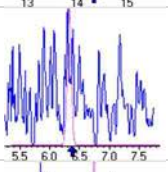 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 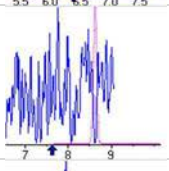 | 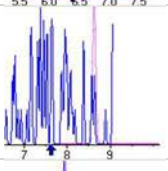 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 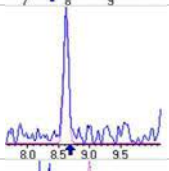 | 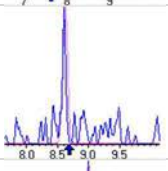 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 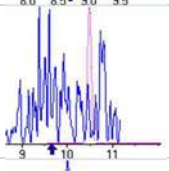 | 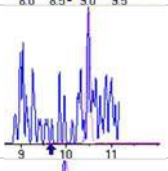 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 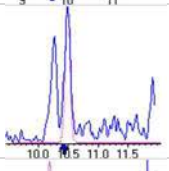 | 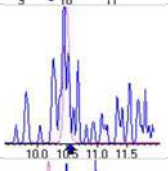 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 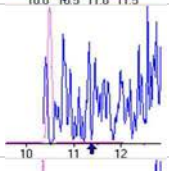 | 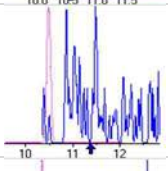 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 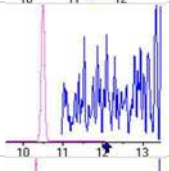 | 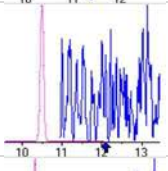 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 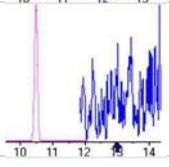 | 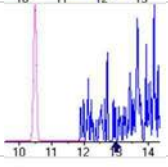 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 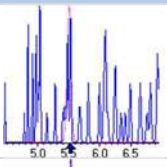 | 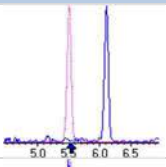 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 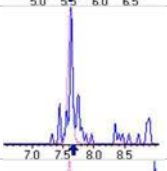 | 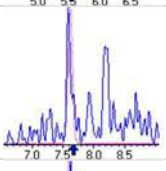 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 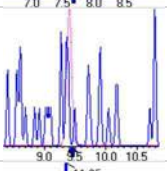 | 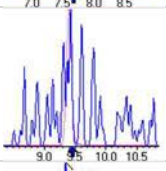 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>18251<br>( 627.0 / 81.0 )<br>23092 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.4) | 184.2<br>64.7 | 1.2653<br>93.6<br>92.4 | 0.0573 | N/A | 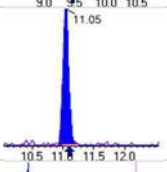 | 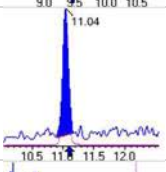 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 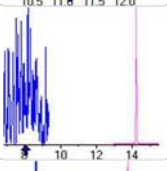 | 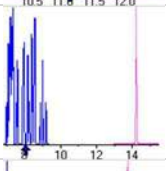 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 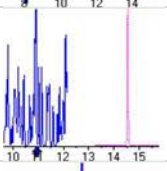 | 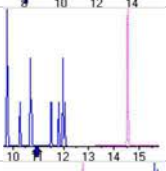 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 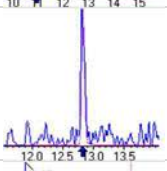 | 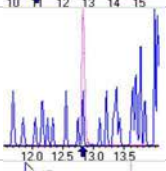 | |
| TFSI | ( 279.7 / 147.0 )<br>71866<br>( 279.7 / 211.0 )<br>5907 | ( 8.18 , 0.64 )<br>( N/A , -0.07 , 1.1) | 36.0<br>15.2 | 0.0822<br>99.7<br>96.6 | 0.0379 | N/A | 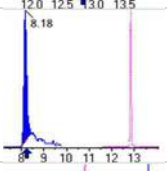 | 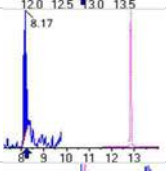 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 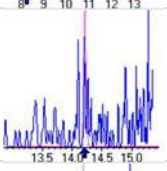 | 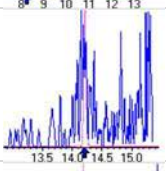 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 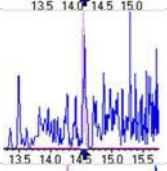 | 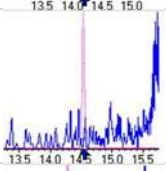 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 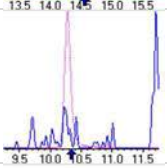 | 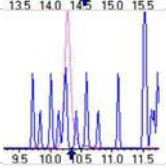 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 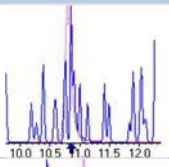 | 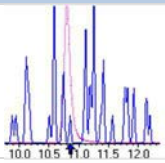 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 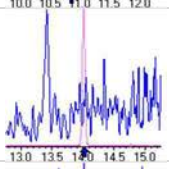 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 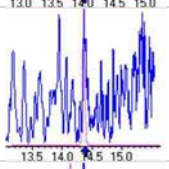 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 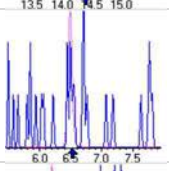 | 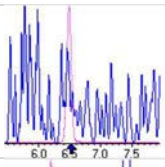 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 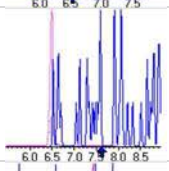 | 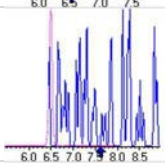 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 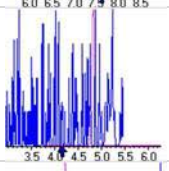 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 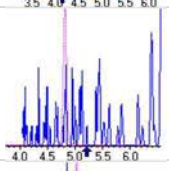 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 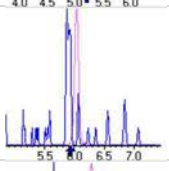 | 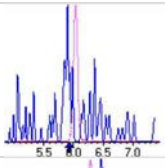 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 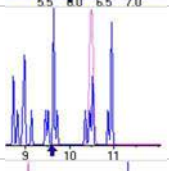 | 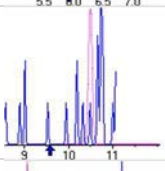 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 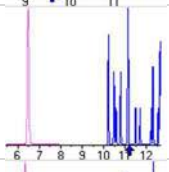 | 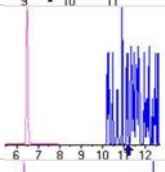 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 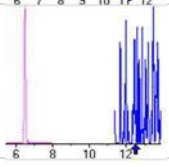 | 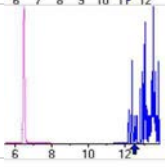 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 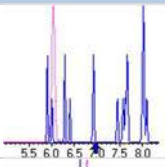 | 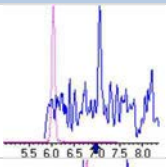 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 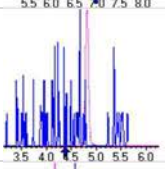 | 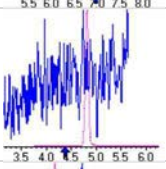 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 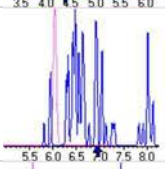 | 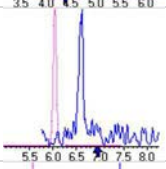 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 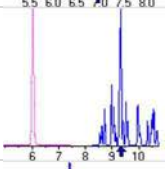 | 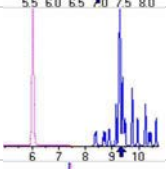 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 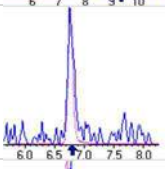 | 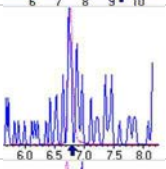 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 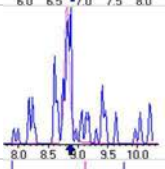 | 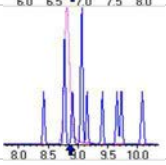 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 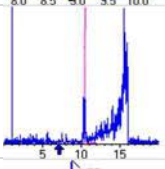 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277327 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1113.5 | N/A | 0.9206<br>[ 1.0000 ] | 92.1%<br>{ 81.9% } | 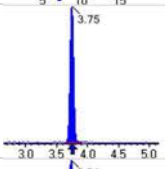 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 123996 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 5907.0 | N/A | 0.8064<br>[ 1.0000 ] | 80.6%<br>{ 72.8% } | 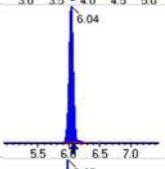 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 411116 | ( 8.18 , N/A )<br>( N/A , -0.05 , N/A ) | 3672.0 | N/A | 0.9215<br>[ 1.0000 ] | 92.2%<br>{ 84.2% } | 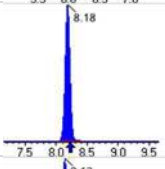 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 301639 | ( 9.13 , N/A )<br>( N/A , -0.06 , N/A ) | 1200.2 | N/A | 0.9023<br>[ 1.0000 ] | 90.2%<br>{ 78.4% } | 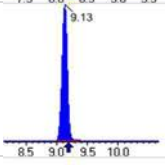 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (23)
Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299924 | ( 10.04 , N/A ) ( N/A , -0.06 , N/A ) | 22617.3 | N/A | 0.9044 [ 1.0000 ] | 90.4% { 79.4% } | 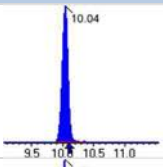  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981850 | ( 8.63 , N/A ) ( N/A , -0.06 , N/A ) | 4216.5 | N/A | 0.8787 [ 1.0000 ] | 87.9% { 78.3% } | 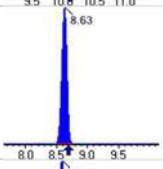  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 842856 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 2466.2 | N/A | 0.8634 [ 1.0000 ] | 86.3% { 79.7% } | 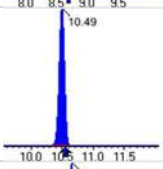  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2484783 | ( 3.74 , N/A ) ( N/A , 0.00 , N/A ) | 43882.2 | N/A | 8.1249 [ 8.0000 ] | 101.6% { 87.5% } | 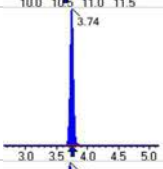  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 971599 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 6010.9 | N/A | 4.3678 [ 4.0000 ] | 109.2% { 75.9% } | 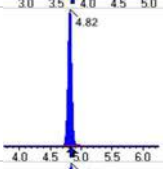  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 574957 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 12440.4 | N/A | 2.1596 [ 2.0000 ] | 108.0% { 75.8% } | 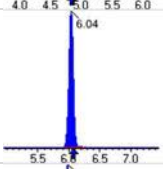  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 643920 | ( 7.18 , N/A ) ( N/A , -0.04 , N/A ) | 4180.1 | N/A | 2.3157 [ 2.0000 ] | 115.8% { 78.4% } | 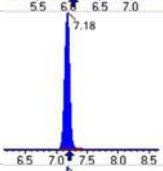  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 854273 | ( 8.18 , N/A ) ( N/A , -0.05 , N/A ) | 3087.4 | N/A | 1.9708 [ 2.0000 ] | 98.5% { 78.6% } | 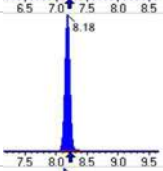  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 280021 | ( 9.13 , N/A ) ( N/A , -0.06 , N/A ) | 2673.8 | N/A | 0.9613 [ 1.0000 ] | 96.1% { 74.1% } | 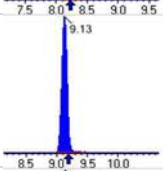  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 351267 | ( 10.03 , N/A ) ( N/A , -0.06 , N/A ) | 1202.2 | N/A | 1.0149 [ 1.0000 ] | 101.5% { 74.5% } | 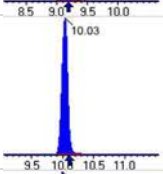  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 423192 | ( 10.90 , N/A ) ( N/A , -0.06 , N/A ) | 1013.4 | N/A | 1.0057 [ 1.0000 ] | 100.6% { 83.5% } | 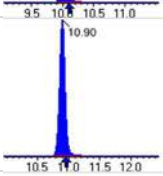  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00977-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409819 | ( 11.73 , N/A ) ( N/A , -0.05 , N/A ) | 1551.8 | N/A | 0.9698 [ 1.0000 ] | 97.0% { 78.9% } | 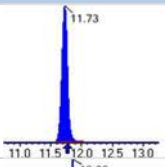  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 365414 | ( 12.86 , N/A ) ( N/A , -0.03 , N/A ) | 1326.0 | N/A | 0.9924 [ 1.0000 ] | 99.2% { 82.5% } | 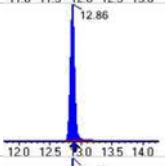  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 568914 | ( 13.67 , N/A ) ( N/A , -0.02 , N/A ) | 2402.0 | N/A | 1.8189 [ 2.0000 ] | 90.9% { 70.7% } | 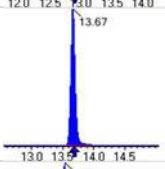  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1803407 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 1135.7 | N/A | 1.8851 [ 2.0000 ] | 94.3% { 75.6% } | 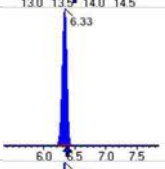  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1429796 | ( 8.63 , N/A ) ( N/A , -0.06 , N/A ) | 5941.9 | N/A | 1.9900 [ 2.0000 ] | 99.5% { 81.1% } | 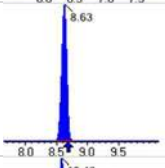  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1734433 | ( 10.49 , N/A ) ( N/A , -0.06 , N/A ) | 1662.2 | N/A | 1.9330 [ 2.0000 ] | 96.6% { 77.7% } | 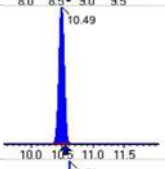  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 546239 | ( 5.51 , N/A ) ( N/A , -0.03 , N/A ) | 84.4 | N/A | 6.3887 [ 4.0000 ] | 159.7% { 98.7% } | 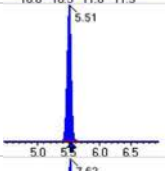  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1612529 | ( 7.62 , N/A ) ( N/A , -0.04 , N/A ) | 4789.3 | N/A | 6.0731 [ 4.0000 ] | 151.8% { 99.1% } | 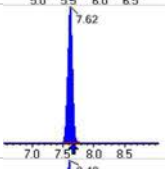  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1495650 | ( 9.40 , N/A ) ( N/A , -0.05 , N/A ) | 2240.4 | N/A | 5.6540 [ 4.0000 ] | 141.3% { 87.6% } | 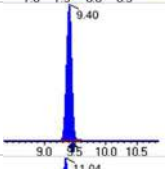  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3099468 | ( 11.04 , N/A ) ( N/A , -0.05 , N/A ) | 1334.7 | N/A | 10.2074 [ 8.0000 ] | 127.6% { 83.5% } | 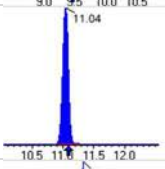  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1830279 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 1952.5 | N/A | 1.8823 [ 2.0000 ] | 94.1% { 75.6% } | 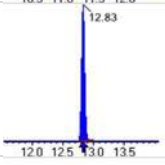  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00977-CCB3 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 21:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 340167 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2304.5 | N/A | 1.8945 [ 2.0000 ] | 94.7% { 79.6% } | 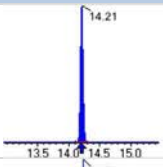 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 379077 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2386.0 | N/A | 1.8380 [ 2.0000 ] | 91.9% { 78.3% } | 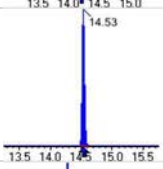 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1042588 | ( 10.28 , N/A ) ( N/A , -0.05 , N/A ) | 2217.4 | N/A | 4.5372 [ 4.0000 ] | 113.4% { 79.0% } | 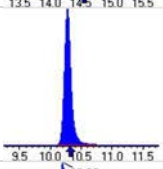 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 990088 | ( 10.80 , N/A ) ( N/A , -0.05 , N/A ) | 1940.8 | N/A | 4.5391 [ 4.0000 ] | 113.5% { 80.4% } | 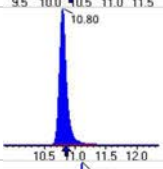 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1665616 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2694.4 | N/A | 19.8530 [ 20.0000 ] | 99.3% { 89.6% } | 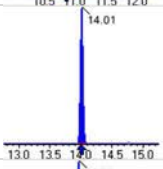 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1706737 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 5171.8 | N/A | 16.7931 [ 20.0000 ] | 84.0% { 81.5% } | 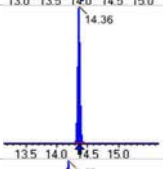 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1047501 | ( 6.49 , N/A ) ( N/A , -0.04 , N/A ) | 2205.1 | N/A | 9.1533 [ 8.0000 ] | 114.4% { 74.6% } | 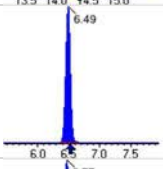 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 532068 | ( 6.77 , N/A ) ( N/A , -0.04 , N/A ) | 1337.5 | N/A | 2.0002 [ 2.0000 ] | 100.0% { 74.8% } | 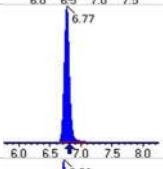 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514021 | ( 8.81 , N/A ) ( N/A , -0.05 , N/A ) | 711.7 | N/A | 2.0698 [ 2.0000 ] | 103.5% { 76.8% } | 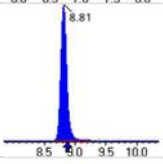 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00977L
Calibration:N 2411010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB40 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .01820 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | 0.01130 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .04820 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00977L | Instrument:N | SaphiraL |
| Calibration:N | 2411010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 977-CCB40 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.970 | ng/mL0 | | |
| | 13C5-PFPEA0 | 3.950 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.090 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.010 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.040 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.050 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.850 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.80 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.030 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 6.070 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 6.160 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 5.850 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.20 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.910 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.030 | ng/mL0 | | |
| | D5-NETFOSA0 | 1.930 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.820 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.840 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00977L | Instrument: | SaphiraL |
| Calibration: | 2411010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 977-CCB40 | D7-NMEFOSE0 | 21.40 | ng/mL0 | | |
| | D9-NETFOSE0 | 17.60 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.460 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 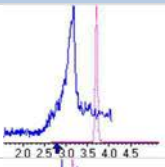 | 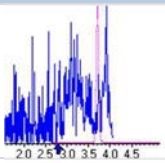 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 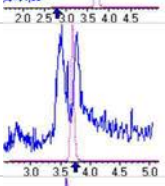 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 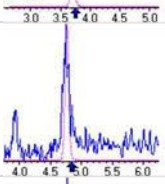 | 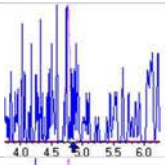 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 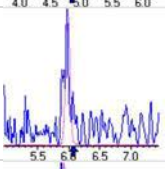 | 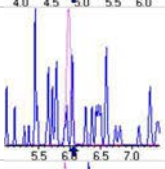 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 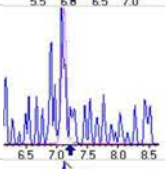 | 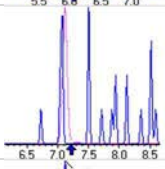 | |
| PFOA | ( 413.0 / 369.0 )<br>7839<br>( 413.0 / 169.0 )<br>3400 | ( 8.13 , 1.00 )<br>( 0.01 , N/A , 0.0) | 13.1<br>36.8 | 0.4337<br>119.9<br>122.2 | 0.0182 | N/A | 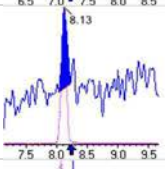 | 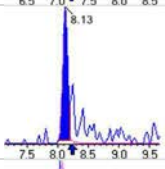 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 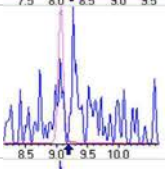 | 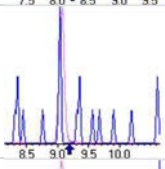 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 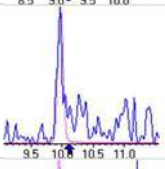 | 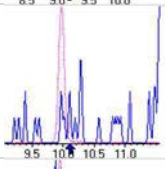 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 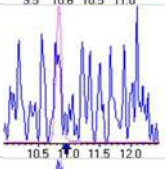 | 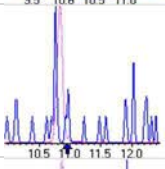 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 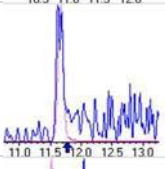 | 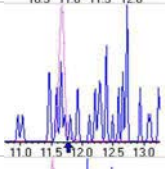 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 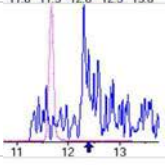 | 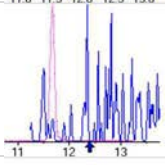 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 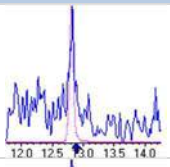 | 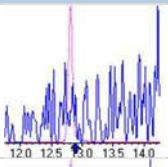 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 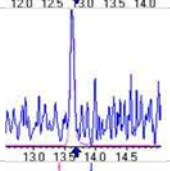 | 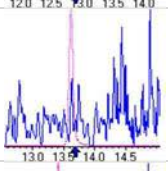 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 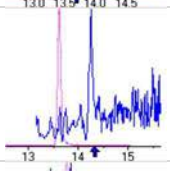 | 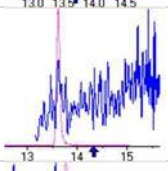 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 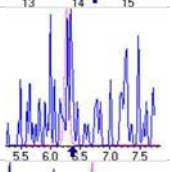 | 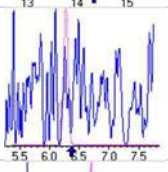 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 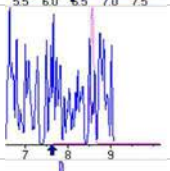 | 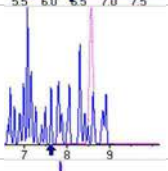 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 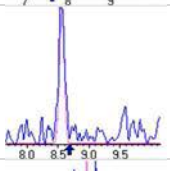 | 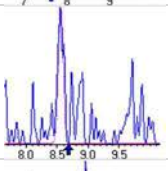 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 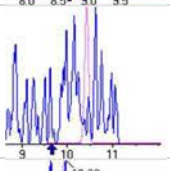 | 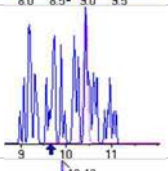 | |
| PFOS | ( 499.0 / 80.0 )<br>10752<br>( 499.0 / 99.0 )<br>2261 | ( 10.32 , 0.99 )<br>( -0.11 , N/A , -6.0) | 59.3<br>1486.1 | 0.2103<br>88.9<br>96.0 | 0.0113 | N/A | 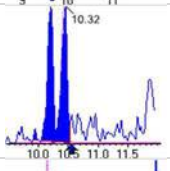 | 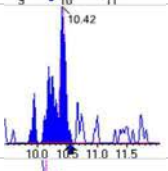 | MI2 DG<br>2024-03-19 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 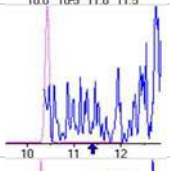 | 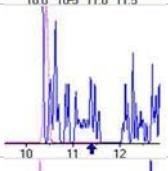 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 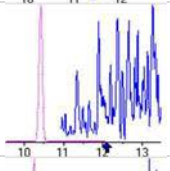 | 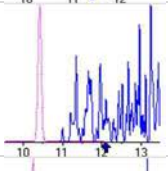 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 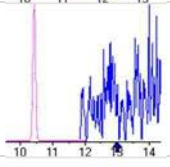 | 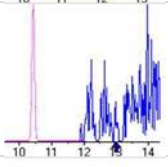 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 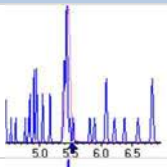 | 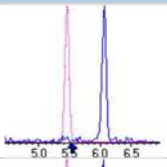 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 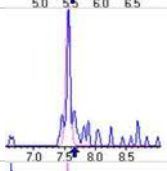 | 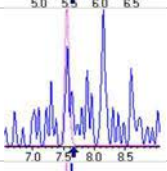 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 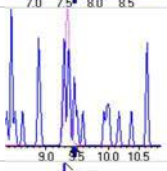 | 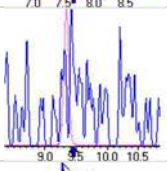 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14933<br>( 627.0 / 81.0 )<br>22242 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.6) | 166.1<br>56.7 | 1.4894<br>110.2<br>108.7 | 0.0482 | N/A | 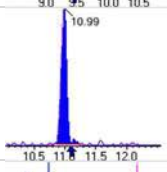 | 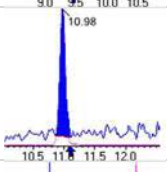 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 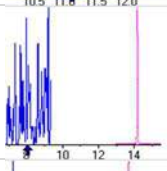 | 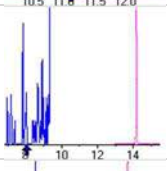 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 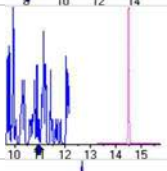 | 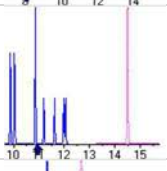 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 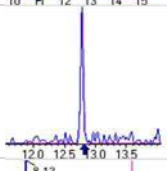 | 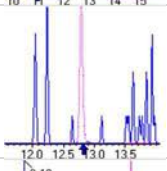 | |
| TFSI | ( 279.7 / 147.0 )<br>56821<br>( 279.7 / 211.0 )<br>2378 | ( 8.12 , 0.64 )<br>( N/A , -0.13 , 1.5) | 29.6<br>10.4 | 0.0419<br>50.8<br>49.2 | 0.0326 | N/A | 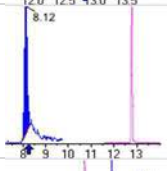 | 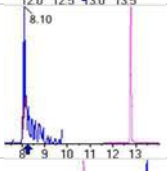 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 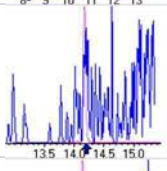 | 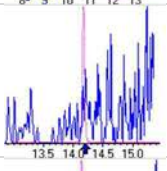 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 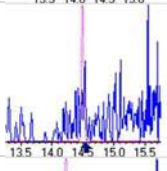 | 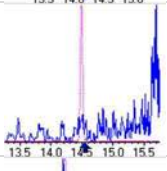 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 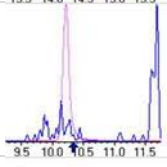 | 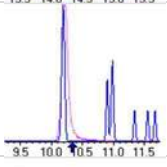 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 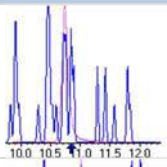 | 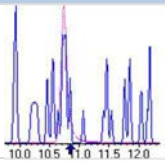 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 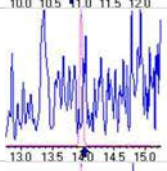 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 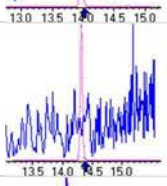 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 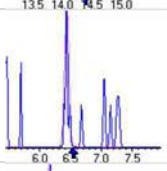 | 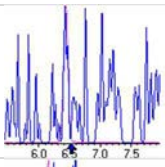 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 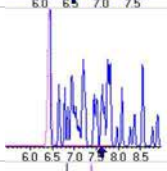 | 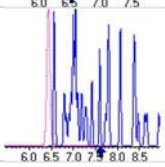 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 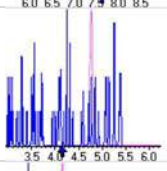 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 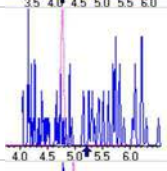 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 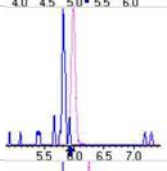 | 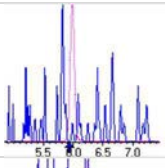 | |
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 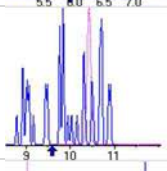 | 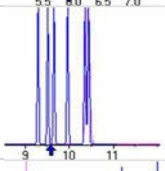 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 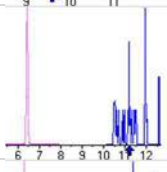 | 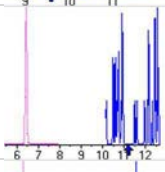 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 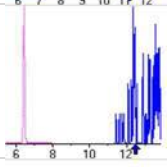 | 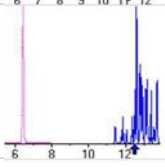 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 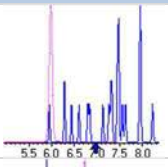 | 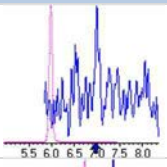 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 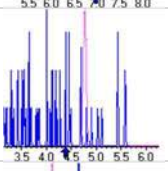 | 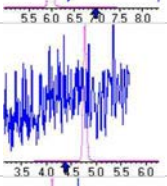 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 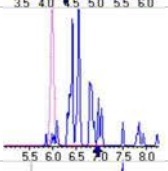 | 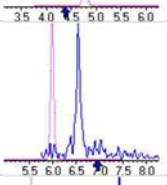 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 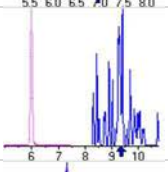 | 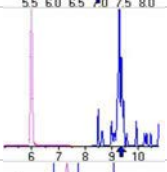 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 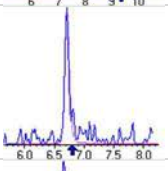 | 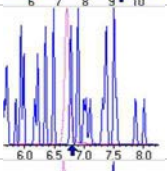 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 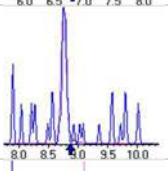 | 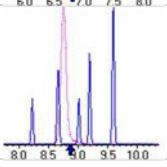 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 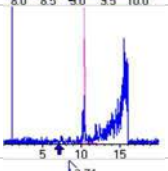 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 260456 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 1214.4 | N/A | 0.8646 [ 1.0000 ] | 86.5% { 77.0% } | 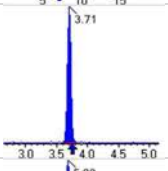 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126389 | ( 5.98 , N/A ) ( N/A , -0.08 , N/A ) | 18057.3 | N/A | 0.8219 [ 1.0000 ] | 82.2% { 74.2% } | 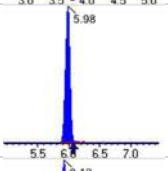 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 384909 | ( 8.12 , N/A ) ( N/A , -0.11 , N/A ) | 4238.3 | N/A | 0.8628 [ 1.0000 ] | 86.3% { 78.9% } | 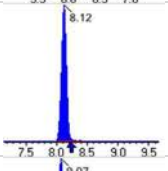 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 267435 | ( 9.07 , N/A ) ( N/A , -0.12 , N/A ) | 964.3 | N/A | 0.8000 [ 1.0000 ] | 80.0% { 69.5% } | 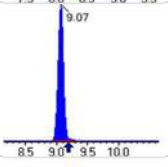 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272198 | ( 9.97 , N/A ) ( N/A , -0.12 , N/A ) | 6430.9 | N/A | 0.8208 [ 1.0000 ] | 82.1% { 72.1% } | 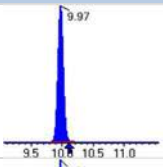 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 952644 | ( 8.56 , N/A ) ( N/A , -0.12 , N/A ) | 4466.1 | N/A | 0.8525 [ 1.0000 ] | 85.3% { 76.0% } | 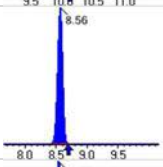 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 761892 | ( 10.43 , N/A ) ( N/A , -0.12 , N/A ) | 2996.8 | N/A | 0.7805 [ 1.0000 ] | 78.0% { 72.0% } | 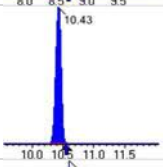 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2288430 | ( 3.70 , N/A ) ( N/A , -0.04 , N/A ) | 36782.3 | N/A | 7.9675 [ 8.0000 ] | 99.6% { 80.6% } | 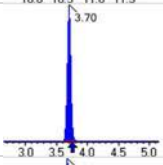 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 895136 | ( 4.77 , N/A ) ( N/A , -0.07 , N/A ) | 4617.2 | N/A | 3.9479 [ 4.0000 ] | 98.7% { 69.9% } | 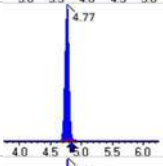 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 561835 | ( 5.98 , N/A ) ( N/A , -0.08 , N/A ) | 8630.7 | N/A | 2.0703 [ 2.0000 ] | 103.5% { 74.1% } | 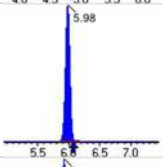 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 586375 | ( 7.12 , N/A ) ( N/A , -0.10 , N/A ) | 6081.6 | N/A | 2.0689 [ 2.0000 ] | 103.4% { 71.4% } | 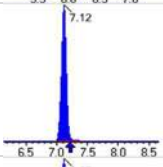 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 846255 | ( 8.12 , N/A ) ( N/A , -0.11 , N/A ) | 3621.6 | N/A | 2.0852 [ 2.0000 ] | 104.3% { 77.9% } | 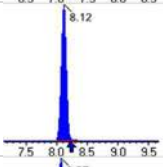 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262117 | ( 9.07 , N/A ) ( N/A , -0.12 , N/A ) | 3156.8 | N/A | 1.0150 [ 1.0000 ] | 101.5% { 69.3% } | 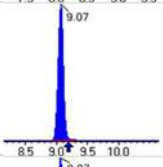 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 326302 | ( 9.97 , N/A ) ( N/A , -0.12 , N/A ) | 1066.1 | N/A | 1.0388 [ 1.0000 ] | 103.9% { 69.2% } | 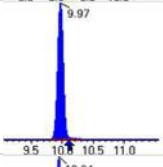 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 397750 | ( 10.84 , N/A ) ( N/A , -0.12 , N/A ) | 682.4 | N/A | 1.0415 [ 1.0000 ] | 104.2% { 78.4% } | 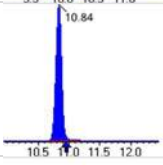 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-CCB4 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 393119 | ( 11.67 , N/A ) ( N/A , -0.11 , N/A ) | 1472.7 | N/A | 1.0251 [ 1.0000 ] | 102.5% { 75.7% } | 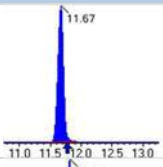  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 349655 | ( 12.81 , N/A ) ( N/A , -0.08 , N/A ) | 1299.8 | N/A | 1.0463 [ 1.0000 ] | 104.6% { 79.0% } | 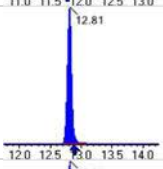  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 524227 | ( 13.62 , N/A ) ( N/A , -0.07 , N/A ) | 2649.8 | N/A | 1.8468 [ 2.0000 ] | 92.3% { 65.1% } | 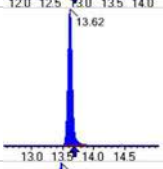  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1675356 | ( 6.28 , N/A ) ( N/A , -0.09 , N/A ) | 1079.3 | N/A | 1.8050 [ 2.0000 ] | 90.2% { 70.3% } | 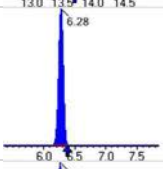  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1416650 | ( 8.56 , N/A ) ( N/A , -0.13 , N/A ) | 4626.9 | N/A | 2.0322 [ 2.0000 ] | 101.6% { 80.3% } | 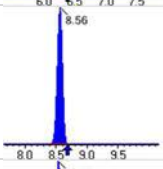  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1647583 | ( 10.43 , N/A ) ( N/A , -0.12 , N/A ) | 1919.8 | N/A | 2.0313 [ 2.0000 ] | 101.6% { 73.8% } | 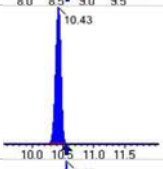  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 503715 | ( 5.46 , N/A ) ( N/A , -0.08 , N/A ) | 79.9 | N/A | 6.0719 [ 4.0000 ] | 151.8% { 91.0% } | 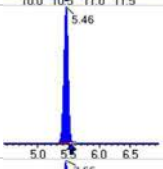  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1586499 | ( 7.55 , N/A ) ( N/A , -0.11 , N/A ) | 4070.2 | N/A | 6.1583 [ 4.0000 ] | 154.0% { 97.5% } | 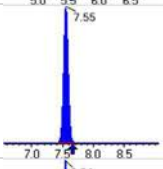  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1501509 | ( 9.34 , N/A ) ( N/A , -0.12 , N/A ) | 1445.3 | N/A | 5.8501 [ 4.0000 ] | 146.3% { 88.0% } | 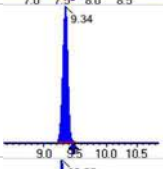  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3014309 | ( 10.98 , N/A ) ( N/A , -0.11 , N/A ) | 1619.6 | N/A | 10.2313 [ 8.0000 ] | 127.9% { 81.2% } | 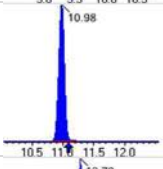  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1677837 | ( 12.79 , N/A ) ( N/A , -0.04 , N/A ) | 2719.0 | N/A | 1.9089 [ 2.0000 ] | 95.4% { 69.3% } | 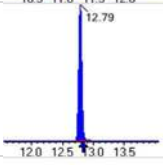  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (35)
Acquired: 2024/03/19 - 01:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 329008 | ( 14.17 , N/A ) ( N/A , -0.04 , N/A ) | 2610.8 | N/A | 2.0271 [ 2.0000 ] | 101.4% { 77.0% } | 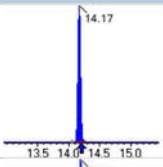 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 360667 | ( 14.49 , N/A ) ( N/A , -0.04 , N/A ) | 2666.8 | N/A | 1.9346 [ 2.0000 ] | 96.7% { 74.5% } | 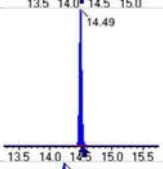 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1000188 | ( 10.22 , N/A ) ( N/A , -0.11 , N/A ) | 2372.5 | N/A | 4.8153 [ 4.0000 ] | 120.4% { 75.8% } | 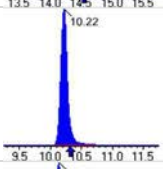 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 955267 | ( 10.74 , N/A ) ( N/A , -0.11 , N/A ) | 1763.7 | N/A | 4.8449 [ 4.0000 ] | 121.1% { 77.6% } | 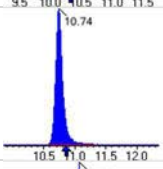 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1622343 | ( 13.97 , N/A ) ( N/A , -0.04 , N/A ) | 2848.8 | N/A | 21.3921 [ 20.0000 ] | 107.0% { 87.3% } | 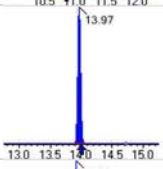 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1616439 | ( 14.32 , N/A ) ( N/A , -0.04 , N/A ) | 3503.3 | N/A | 17.5948 [ 20.0000 ] | 88.0% { 77.2% } | 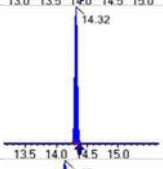 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 986977 | ( 6.43 , N/A ) ( N/A , -0.09 , N/A ) | 2310.2 | N/A | 8.4611 [ 8.0000 ] | 105.8% { 70.3% } | 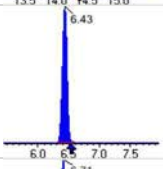 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 510495 | ( 6.71 , N/A ) ( N/A , -0.09 , N/A ) | 1216.6 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 71.8% } | 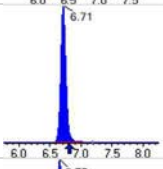 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 505506 | ( 8.75 , N/A ) ( N/A , -0.12 , N/A ) | 937.8 | N/A | 2.2429 [ 2.0000 ] | 112.1% { 75.5% } | 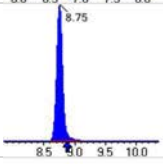 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00991L
Calibration:N 2412010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0180 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .01650 | ng/mL0 | .10 | U |
| | PFTrDA0 | .01630 | ng/mL0 | .10 | U |
| | PFTeDA0 | .02330 | ng/mL0 | .10 | U |
| | PFHxDA0 | .03360 | ng/mL0 | .10 | U |
| | PFODA0 | .03890 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .08510 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02580 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .04090 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .08930 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.990 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.030 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.010 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.050 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA | 0.9990 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9920 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.940 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.020 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.730 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.450 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.110 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.880 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.050 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.360 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00991L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | D7-NMEFOSE0 | 21.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.740 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 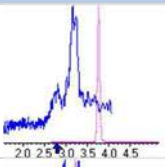 | 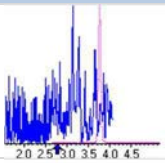 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 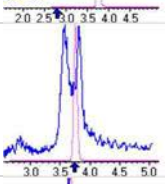 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 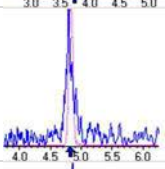 | 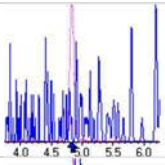 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 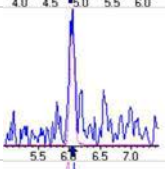 | 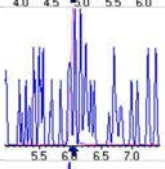 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 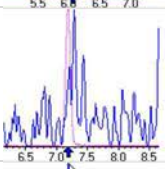 | 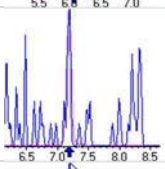 | |
| PFOA | ( 413.0 / 369.0 )<br>16821<br>( 413.0 / 169.0 )<br>7137 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.0) | 26.9<br>42.2 | 0.4243<br>116.1<br>116.1 | 0.0180 | N/A | 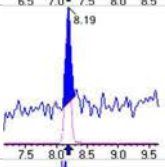 | 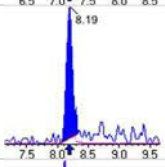 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 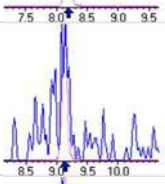 | 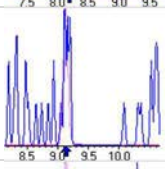 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 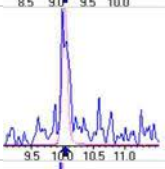 | 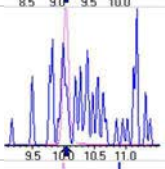 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 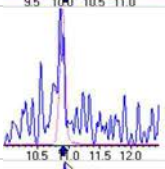 | 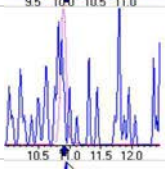 | |
| PFDoA | ( 613.0 / 569.0 )<br>6139<br>( 613.0 / 169.0 )<br>1421 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , -0.2) | 31.7<br>19.2 | 0.2314<br>146.4<br>146.4 | 0.0165 | N/A | 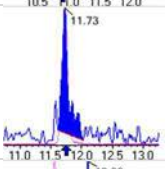 | 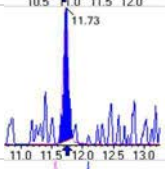 | |
| PFTrDA | ( 663.0 / 619.0 )<br>5903<br>( 663.0 / 169.0 )<br>N/A | ( 12.38 , 1.06 )<br>( N/A , 0.01 , #Value!) | 35.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0163 | N/A | 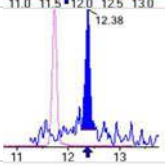 | 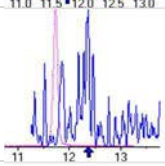 | IR1, |

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Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6942<br>( 713.0 / 169.0 ) N/A | ( 12.85 , 1.00 )<br>( -0.01 , N/A , #Value!) | 33.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0233 | N/A | 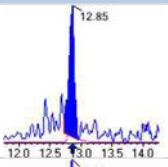 | 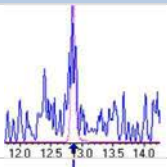 | IR1, |
| PFHxDA | ( 813.0 / 769.0 ) 8386<br>( 813.0 / 169.0 ) N/A | ( 13.65 , 1.00 )<br>( -0.01 , N/A , #Value!) | 40.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0336 | N/A | 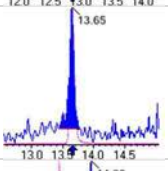 | 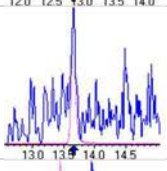 | IR1, |
| PFODA | ( 913.0 / 869.0 ) 6084<br>( 913.0 / 169.0 ) N/A | ( 14.29 , 1.05 )<br>( N/A , -0.01 , #Value!) | 34.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0389 | N/A | 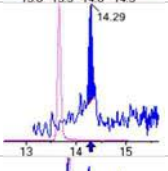 | 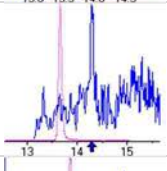 | IR1,MI1 DG 2024-03-19 |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 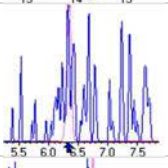 | 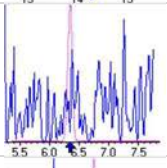 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 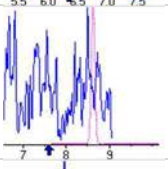 | 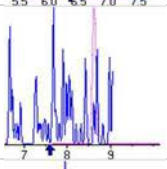 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 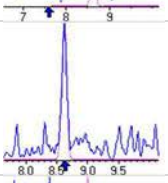 | 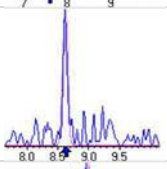 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 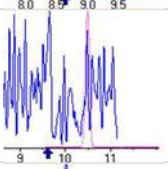 | 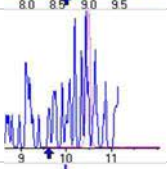 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 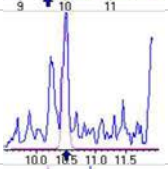 | 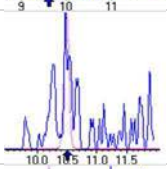 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 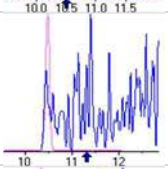 | 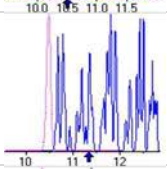 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 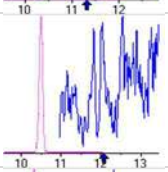 | 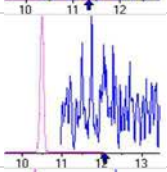 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 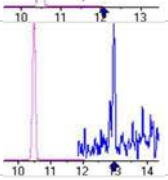 | 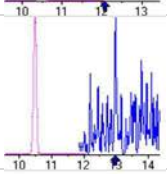 | |

APPL
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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 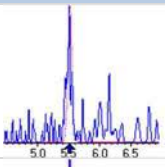 | 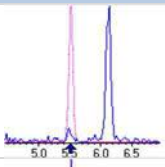 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 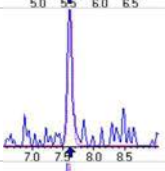 | 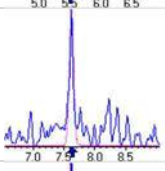 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 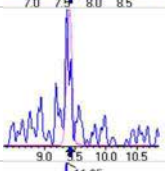 | 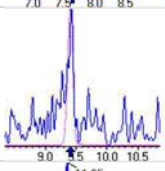 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>22276<br>( 627.0 / 81.0 )<br>24748 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 88.3<br>58.0 | 1.1110<br>77.2<br>77.2 | 0.0851 | N/A | 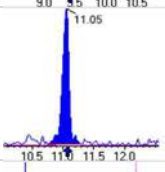 | 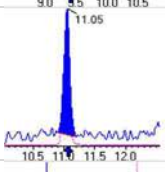 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 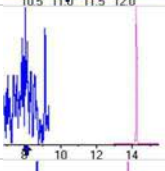 | 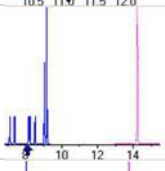 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 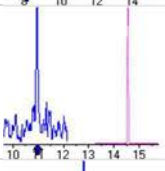 | 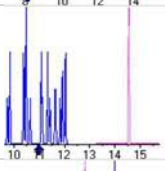 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 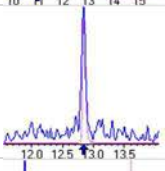 | 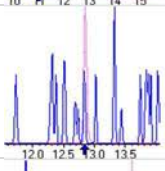 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 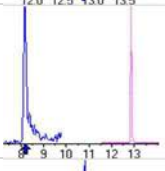 | 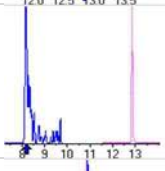 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 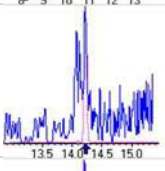 | 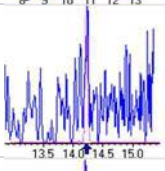 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 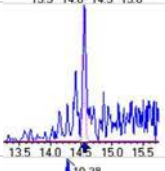 | 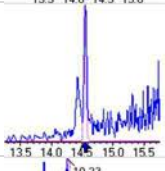 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>5287<br>( 570.0 / 483.0 )<br>1419 | ( 10.28 , 1.00 )<br>( -0.01 , N/A , 2.9) | 55.9<br>17.5 | 0.2684<br>61.2<br>61.2 | 0.0258 | N/A | 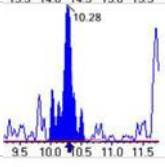 | 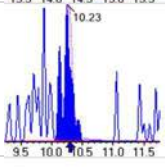 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8150<br>( 584.0 / 526.0 ) 2179 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 2.1) | 98.9<br>33.1 | 0.2674<br>43.4<br>43.4 | 0.0409 | N/A | 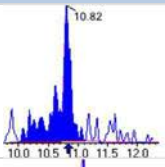 | 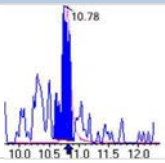 | IR1, |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 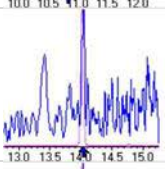 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 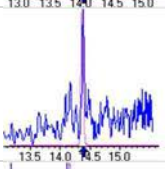 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 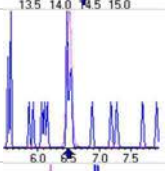 | 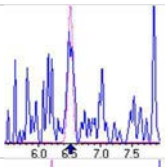 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 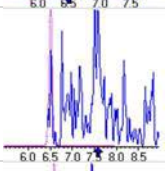 | 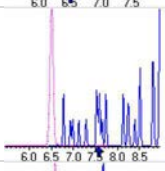 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 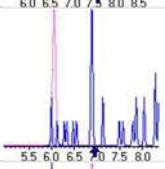 | 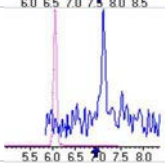 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 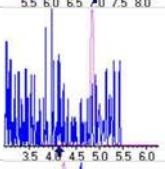 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 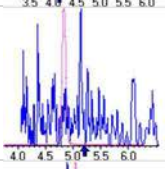 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 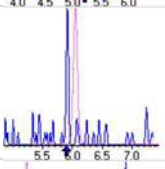 | 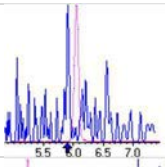 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 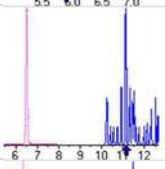 | 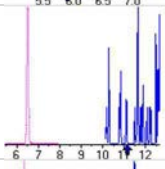 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 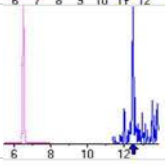 | 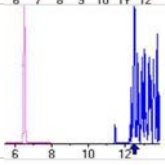 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 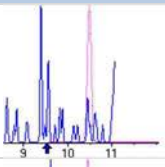 | 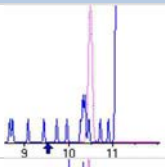 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 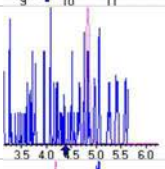 | 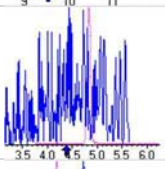 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 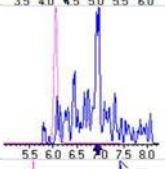 | 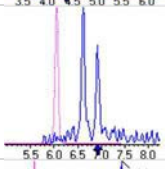 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>10942<br>( 441.0 / 337.0 )<br>9168 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 114.3<br>118.7 | 0.8378<br>91.3<br>91.3 | 0.0893 | N/A | 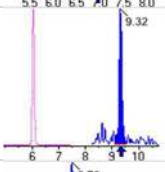 | 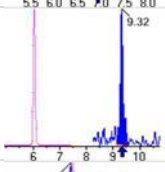 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4865<br>( 357.2 / 243.0 )<br>388 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 1.4) | 25.0<br>10.8 | 0.0797<br>72.3<br>72.3 | 0.0164 | N/A | 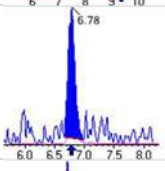 | 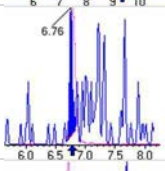 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 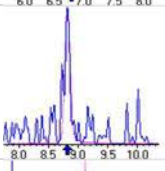 | 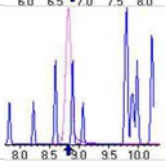 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 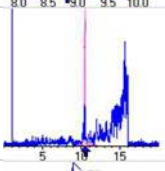 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>247666 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1205.7 | N/A | 1.0387<br>[ 1.0000 ] | 103.9%<br>{ 105.7% } | 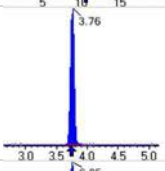 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>118801 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 67668.7 | N/A | 0.9365<br>[ 1.0000 ] | 93.7%<br>{ 99.4% } | 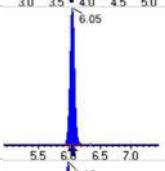 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>364915 | ( 8.19 , N/A )<br>( N/A , -0.02 , N/A ) | 6572.7 | N/A | 0.9231<br>[ 1.0000 ] | 92.3%<br>{ 96.0% } | 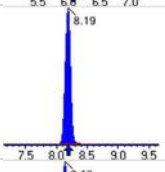 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>273094 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 870.1 | N/A | 0.9602<br>[ 1.0000 ] | 96.0%<br>{ 102.6% } | 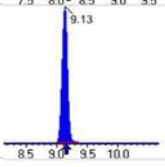 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277135 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 10730.3 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 103.5% } | 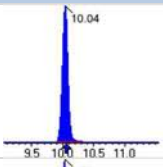  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 876072 | ( 8.63 , N/A ) ( N/A , -0.02 , N/A ) | 3965.9 | N/A | 0.9231 [ 1.0000 ] | 92.3% { 97.3% } | 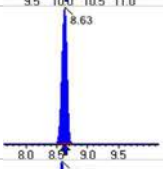  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 709520 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2022.8 | N/A | 0.9316 [ 1.0000 ] | 93.2% { 101.3% } | 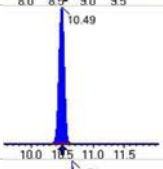  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2260276 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 35338.6 | N/A | 7.9888 [ 8.0000 ] | 99.9% { 106.9% } | 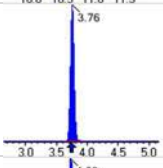  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 892559 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 4410.8 | N/A | 4.0266 [ 4.0000 ] | 100.7% { 96.8% } | 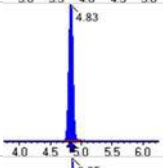  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560711 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 8995.9 | N/A | 2.0686 [ 2.0000 ] | 103.4% { 101.3% } | 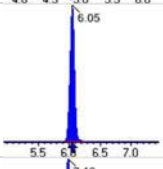  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 605194 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4503.5 | N/A | 2.0071 [ 2.0000 ] | 100.4% { 97.7% } | 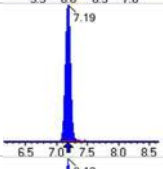  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 802821 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3104.8 | N/A | 2.0533 [ 2.0000 ] | 102.7% { 97.9% } | 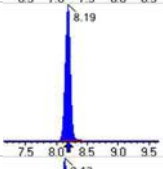  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 267971 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2951.0 | N/A | 1.0008 [ 1.0000 ] | 100.1% { 102.0% } | 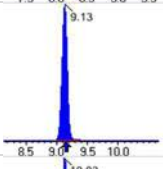  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 310319 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 918.4 | N/A | 0.9992 [ 1.0000 ] | 99.9% { 98.0% } | 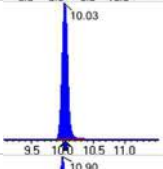  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 370129 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1009.3 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 102.4% } | 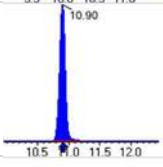  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368993 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1246.5 | N/A | 0.9916 [ 1.0000 ] | 99.2% { 104.9% } | 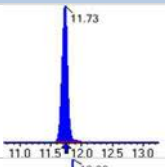  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318629 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1132.2 | N/A | 1.0055 [ 1.0000 ] | 100.6% { 102.0% } | 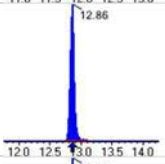  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 523684 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2356.1 | N/A | 1.9358 [ 2.0000 ] | 96.8% { 101.5% } | 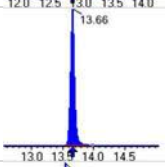  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570777 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 921.3 | N/A | 1.9845 [ 2.0000 ] | 99.2% { 98.6% } | 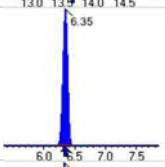  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1291658 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 4087.7 | N/A | 2.0444 [ 2.0000 ] | 102.2% { 100.9% } | 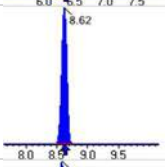  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1543909 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1768.0 | N/A | 2.0181 [ 2.0000 ] | 100.9% { 98.8% } | 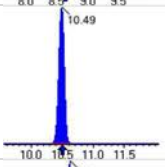  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 645670 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 92.6 | N/A | 4.7279 [ 4.0000 ] | 118.2% { 123.0% } | 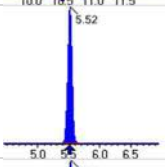  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1820502 | ( 7.62 , N/A ) ( N/A , -0.01 , N/A ) | 4674.4 | N/A | 4.4543 [ 4.0000 ] | 111.4% { 107.1% } | 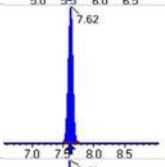  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1444855 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1529.9 | N/A | 4.5076 [ 4.0000 ] | 112.7% { 109.5% } | 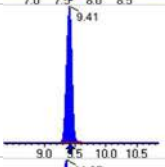  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2718422 | ( 11.05 , N/A ) ( N/A , -0.01 , N/A ) | 1222.5 | N/A | 8.1147 [ 8.0000 ] | 101.4% { 104.7% } | 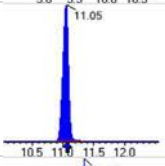  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1357608 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2272.1 | N/A | 2.0025 [ 2.0000 ] | 100.1% { 101.8% } | 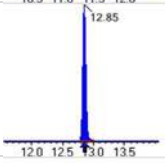  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 270641 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1748.6 | N/A | 1.8822 [ 2.0000 ] | 94.1% { 97.5% } | 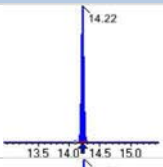  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315933 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2465.7 | N/A | 2.0489 [ 2.0000 ] | 102.4% { 100.2% } | 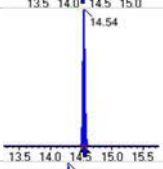  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 858949 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2747.6 | N/A | 4.3636 [ 4.0000 ] | 109.1% { 102.5% } | 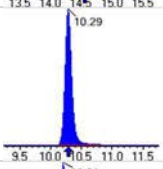  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 815282 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 2006.1 | N/A | 4.5444 [ 4.0000 ] | 113.6% { 107.8% } | 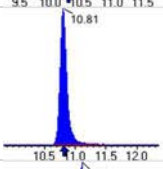  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1364206 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2290.3 | N/A | 21.1120 [ 20.0000 ] | 105.6% { 101.4% } | 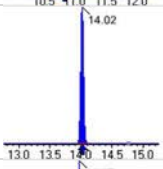  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316295 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4403.7 | N/A | 20.0701 [ 20.0000 ] | 100.4% { 100.0% } | 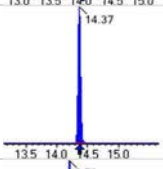  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 955791 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2026.1 | N/A | 7.7407 [ 8.0000 ] | 96.8% { 97.7% } | 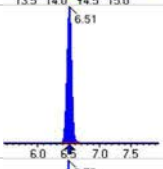  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559796 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1426.0 | N/A | 1.8631 [ 2.0000 ] | 93.2% { 97.0% } | 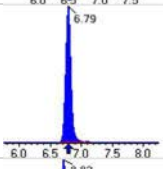  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 528642 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 671.7 | N/A | 1.9327 [ 2.0000 ] | 96.6% { 98.4% } | 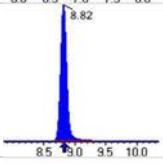  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06640 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 4.190 | ng/mL0 | | |
| | 13C5-PFHXA | 2.040 | ng/mL0 | | |
| | 13C4-PFHPA | 2.020 | ng/mL0 | | |
| | 13C8-PFOA | 1.990 | ng/mL0 | | |
| | 13C9-PFNA | .9910 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | 1.040 | ng/mL0 | | |
| | 13C2-PFDOA | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.920 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.090 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.0 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.020 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.170 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.940 | ng/mL0 | | |
| | 13C8-PFOSA | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA | 1.910 | ng/mL0 | | |
| | D5-NETFOSA | 1.980 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.320 | ng/mL0 | | |
| | D5-NETFOSAA | 4.410 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | D7-NMEFOSE0 | 20.0 | ng/mL | 0 | |
| | D9-NETFOSE0 | 19.80 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.040 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 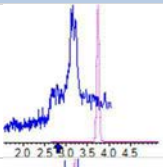 | 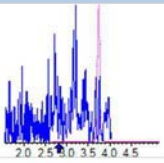 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 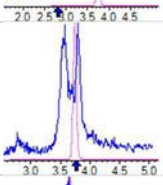 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 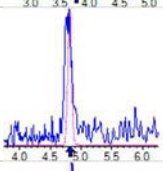 | 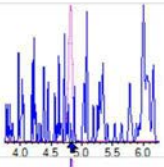 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 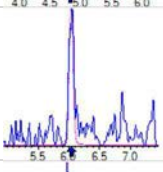 | 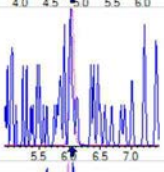 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 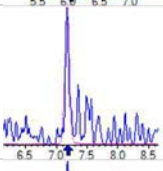 | 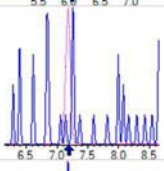 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 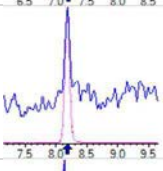 | 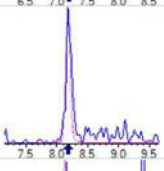 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 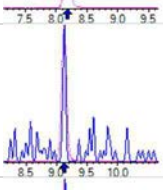 | 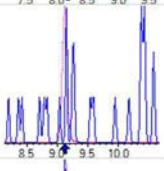 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 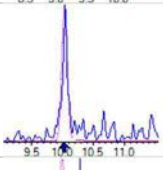 | 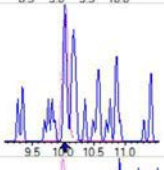 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 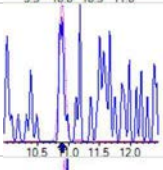 | 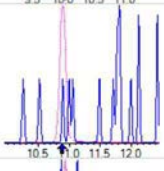 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 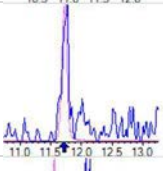 | 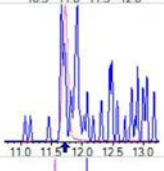 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 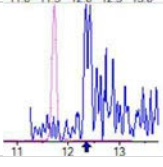 | 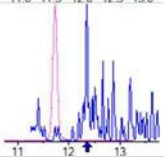 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 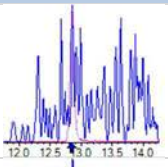 | 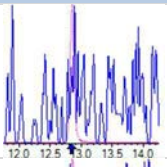 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 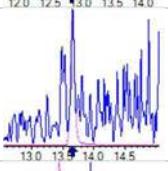 | 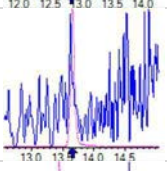 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 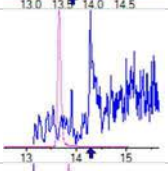 | 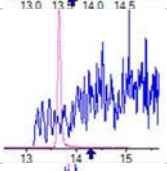 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 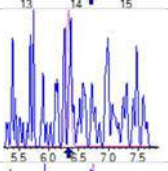 | 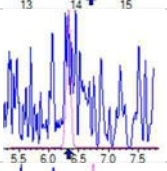 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 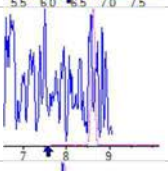 | 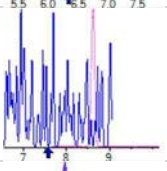 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 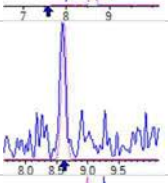 | 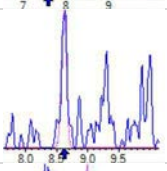 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 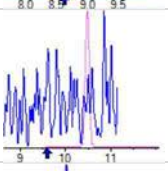 | 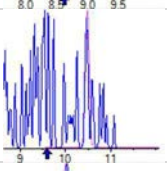 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 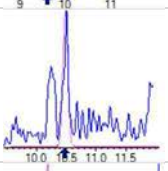 | 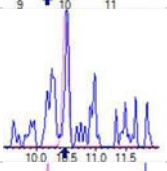 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 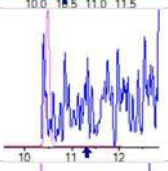 | 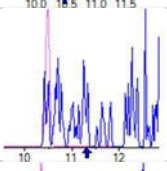 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 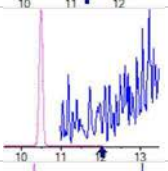 | 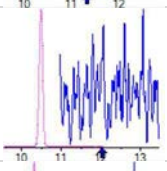 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 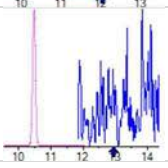 | 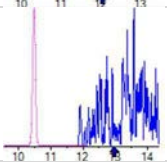 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 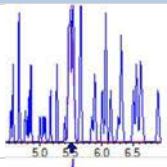 | 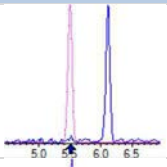 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 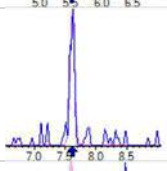 | 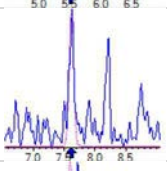 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 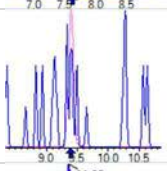 | 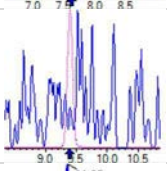 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17573<br>( 627.0 / 81.0 )<br>22471 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.2) | 194.8<br>62.5 | 1.2787<br>88.8<br>87.7 | 0.0664 | N/A | 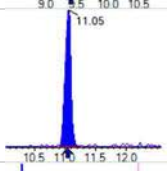 | 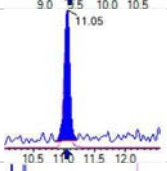 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 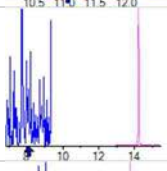 | 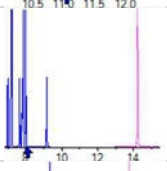 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 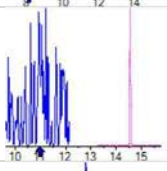 | 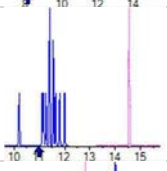 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 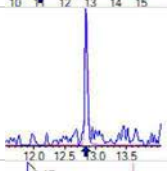 | 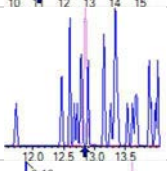 | |
| TFSI | ( 279.7 / 147.0 )<br>33493<br>( 279.7 / 211.0 )<br>2373 | ( 8.17 , 0.64 )<br>( N/A , -0.01 , 0.6) | 28.1<br>10.4 | 0.0709<br>84.3<br>82.8 | 0.0183 | N/A | 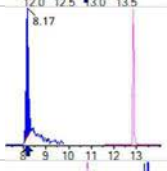 | 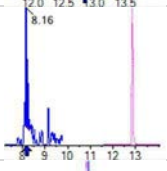 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 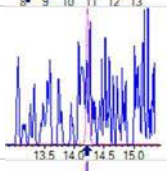 | 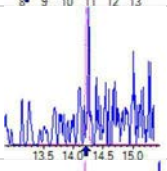 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 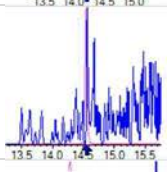 | 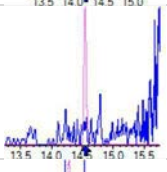 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 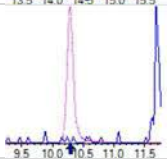 | 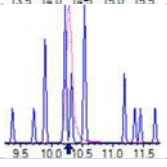 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 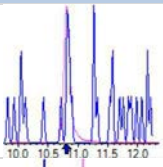 | 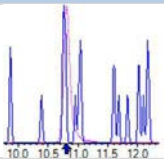 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 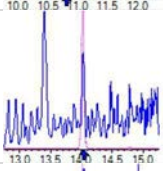 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 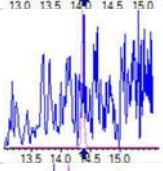 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 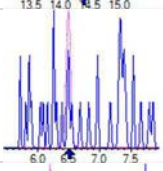 | 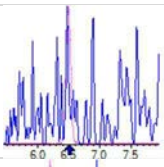 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 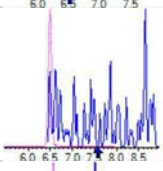 | 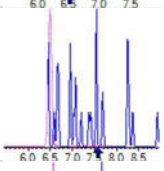 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 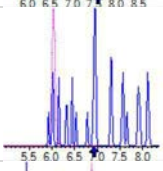 | 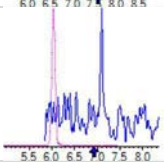 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 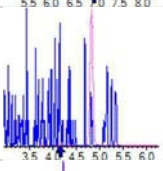 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 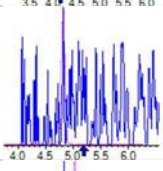 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 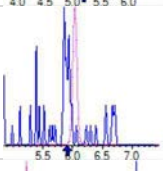 | 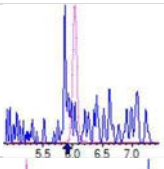 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 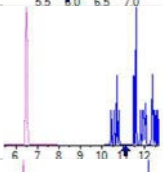 | 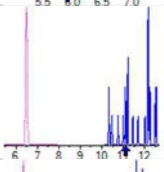 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 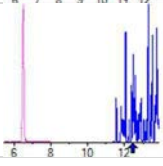 | 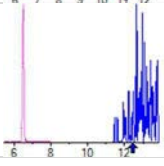 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 )<br>Area Counts*min | R.T.<br>( R.T [min] , R.R.T. )<br>( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio<br>IR Vs MP%<br>IR Vs CV% | Concentration<br>True ng/mL | Q.C. Rec.<br>{Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 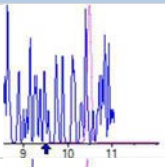 | 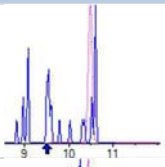 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 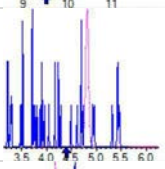 | 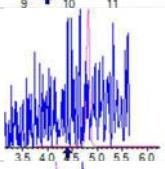 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 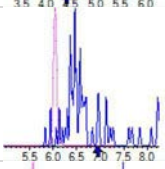 | 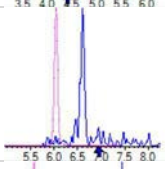 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 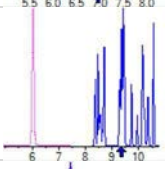 | 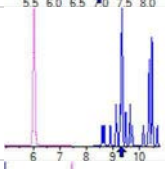 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 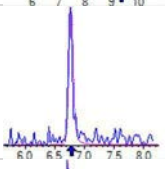 | 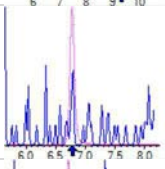 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 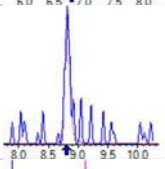 | 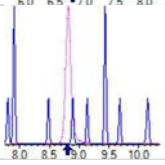 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 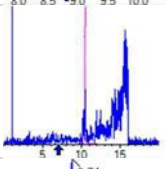 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>252590 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1169.3 | N/A | 1.0594<br>[ 1.0000 ] | 105.9%<br>{ 106.8% } | 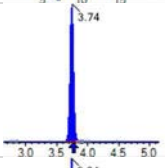 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>122266 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 114320.5 | N/A | 0.9638<br>[ 1.0000 ] | 96.4%<br>{ 96.6% } | 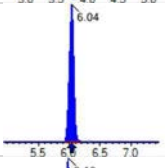 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>402138 | ( 8.18 , N/A )<br>( N/A , 0.01 , N/A ) | 4161.9 | N/A | 1.0173<br>[ 1.0000 ] | 101.7%<br>{ 106.0% } | 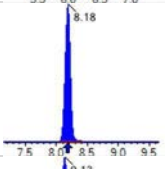 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>291558 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 684.5 | N/A | 1.0251<br>[ 1.0000 ] | 102.5%<br>{ 103.7% } | 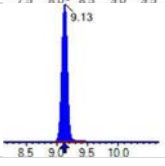 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274577 | ( 10.04 , N/A ) ( N/A , 0.01 , N/A ) | 14456.6 | N/A | 0.9402 [ 1.0000 ] | 94.0% { 94.9% } | 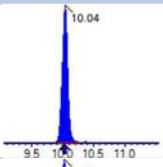 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 905428 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6077.8 | N/A | 0.9541 [ 1.0000 ] | 95.4% { 97.0% } | 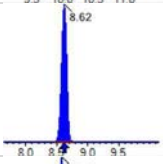 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 729908 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1900.4 | N/A | 0.9583 [ 1.0000 ] | 95.8% { 102.5% } | 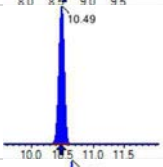 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2389209 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 43004.3 | N/A | 8.2799 [ 8.0000 ] | 103.5% { 106.7% } | 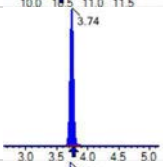 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 955725 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 4880.4 | N/A | 4.1894 [ 4.0000 ] | 104.7% { 97.9% } | 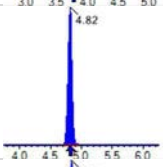 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 570234 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 7465.5 | N/A | 2.0441 [ 2.0000 ] | 102.2% { 96.6% } | 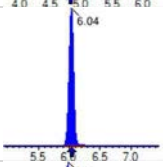 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626841 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 8203.0 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 95.5% } | 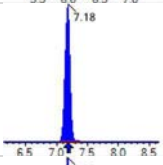 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858291 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3713.4 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 99.5% } | 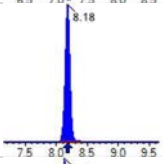 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283296 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3188.1 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 105.0% } | 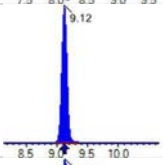 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318936 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 1166.8 | N/A | 1.0365 [ 1.0000 ] | 103.6% { 99.1% } | 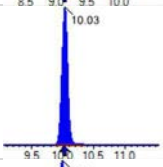 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377227 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 709.9 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 101.4% } | 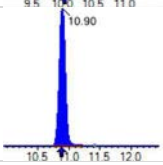 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389990 | ( 11.72 , N/A ) ( N/A , 0.01 , N/A ) | 1430.8 | N/A | 1.0578 [ 1.0000 ] | 105.8% { 104.6% } | 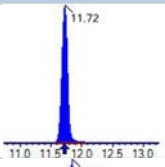 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 313526 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1142.9 | N/A | 0.9986 [ 1.0000 ] | 99.9% { 96.0% } | 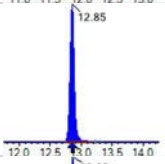 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 514127 | ( 13.66 , N/A ) ( N/A , 0.01 , N/A ) | 2227.5 | N/A | 1.9181 [ 2.0000 ] | 95.9% { 101.8% } | 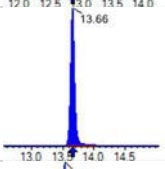 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712691 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1107.7 | N/A | 2.0936 [ 2.0000 ] | 104.7% { 102.1% } | 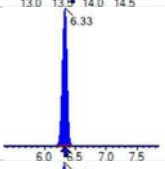 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1329370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 3457.9 | N/A | 2.0359 [ 2.0000 ] | 101.8% { 100.8% } | 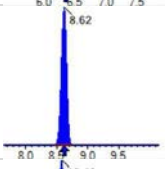 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1575798 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1773.4 | N/A | 2.0023 [ 2.0000 ] | 100.1% { 101.7% } | 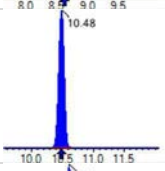 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 707959 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 95.5 | N/A | 5.0159 [ 4.0000 ] | 125.4% { 120.2% } | 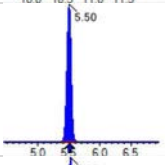 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1763439 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 4459.2 | N/A | 4.1748 [ 4.0000 ] | 104.4% { 105.8% } | 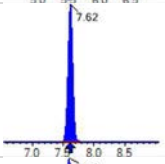 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1531812 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1414.8 | N/A | 4.6239 [ 4.0000 ] | 115.6% { 112.0% } | 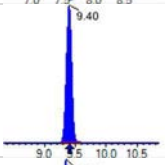 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2748065 | ( 11.04 , N/A ) ( N/A , 0.01 , N/A ) | 1470.7 | N/A | 7.9373 [ 8.0000 ] | 99.2% { 107.7% } | 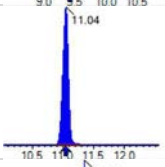 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393050 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1858.7 | N/A | 1.9974 [ 2.0000 ] | 99.9% { 101.4% } | 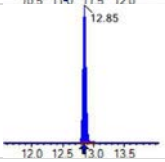 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 282412 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 1812.0 | N/A | 1.9092 [ 2.0000 ] | 95.5% { 98.1% } | 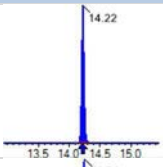 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 314683 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2067.0 | N/A | 1.9837 [ 2.0000 ] | 99.2% { 102.6% } | 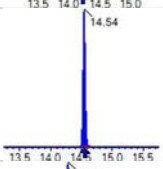 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 875018 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2373.2 | N/A | 4.3211 [ 4.0000 ] | 108.0% { 103.5% } | 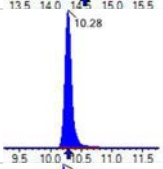 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 813569 | ( 10.81 , N/A ) ( N/A , 0.01 , N/A ) | 2416.9 | N/A | 4.4082 [ 4.0000 ] | 110.2% { 105.6% } | 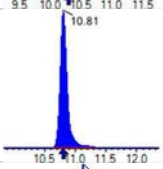 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1326325 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2458.9 | N/A | 19.9525 [ 20.0000 ] | 99.8% { 96.5% } | 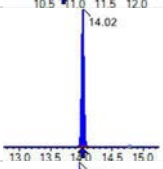 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1334342 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4307.1 | N/A | 19.7770 [ 20.0000 ] | 98.9% { 103.4% } | 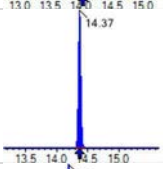 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022222 | ( 6.49 , N/A ) ( N/A , 0.00 , N/A ) | 2755.3 | N/A | 8.0441 [ 8.0000 ] | 100.6% { 100.0% } | 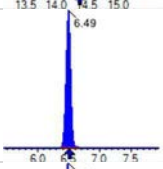 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 613673 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1140.8 | N/A | 2.0614 [ 2.0000 ] | 103.1% { 99.5% } | 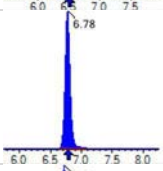 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 558218 | ( 8.82 , N/A ) ( N/A , 0.01 , N/A ) | 840.8 | N/A | 2.0598 [ 2.0000 ] | 103.0% { 100.9% } | 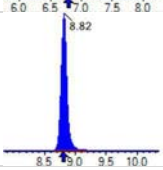 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06510 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 3.820 | ng/mL0 | | |
| | 13C5-PFHXA | 1.860 | ng/mL0 | | |
| | 13C4-PFHPA | 1.860 | ng/mL0 | | |
| | 13C8-PFOA | 2.080 | ng/mL0 | | |
| | 13C9-PFNA | 1.060 | ng/mL0 | | |
| | 13C6-PFDA | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA | .9920 | ng/mL0 | | |
| | 13C2-PFDOA | .9850 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.880 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.020 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.0 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.580 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.010 | ng/mL0 | | |
| | 13C8-PFOSA | 2.10 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.20 | ng/mL0 | | |
| | D5-NETFOSAA | 4.430 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | D7-NMEFOSE0 | 21.30 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.70 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.20 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 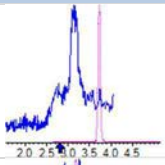 | 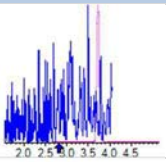 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 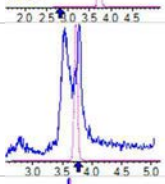 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 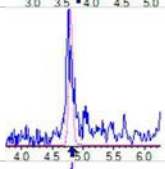 | 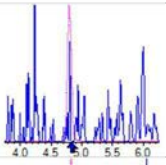 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 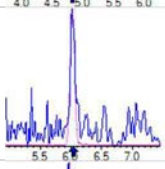 | 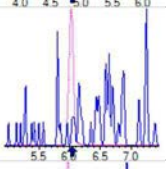 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 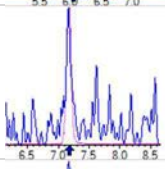 | 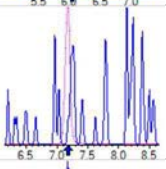 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 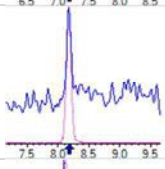 | 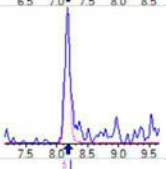 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 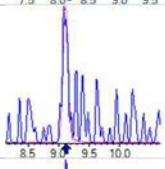 | 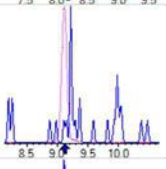 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 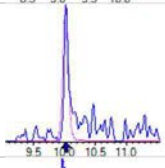 | 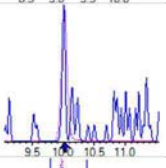 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 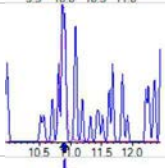 | 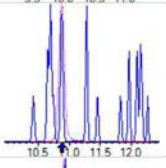 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 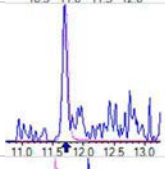 | 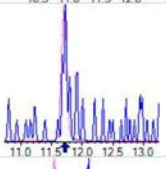 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 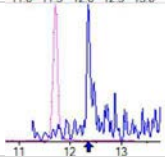 | 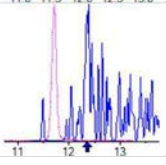 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 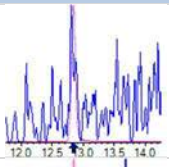 | 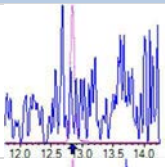 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 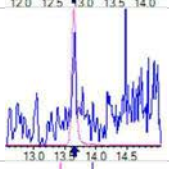 | 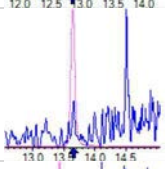 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 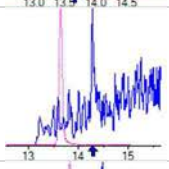 | 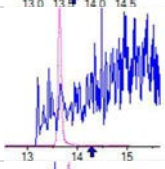 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 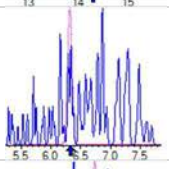 | 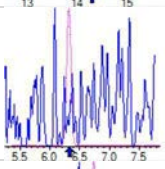 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 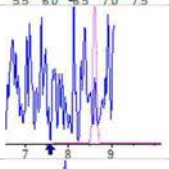 | 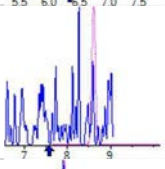 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 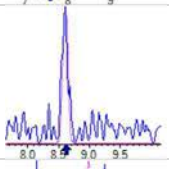 | 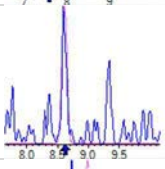 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 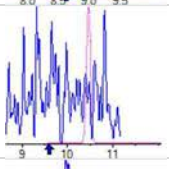 | 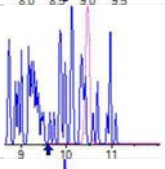 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 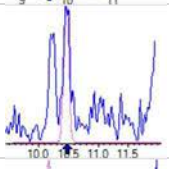 | 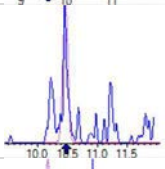 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 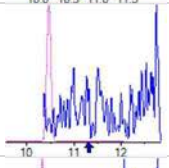 | 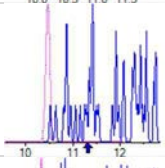 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 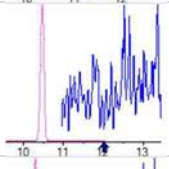 | 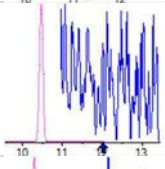 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 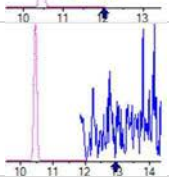 | 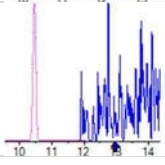 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 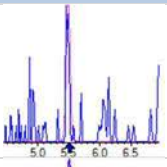 | 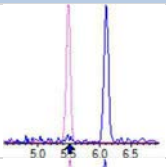 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 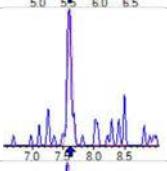 | 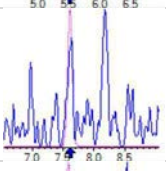 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 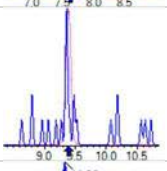 | 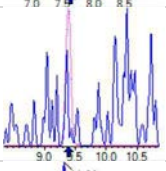 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17813<br>( 627.0 / 81.0 )<br>22348 | ( 11.02 , 1.00 )<br>( 0.00 , N/A , 0.2) | 178.8<br>70.7 | 1.2546<br>87.2<br>86.0 | 0.0651 | N/A | 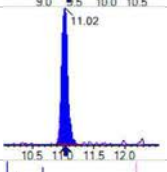 | 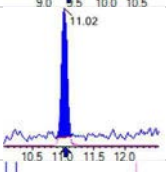 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 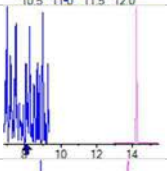 | 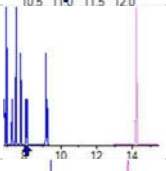 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 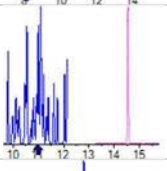 | 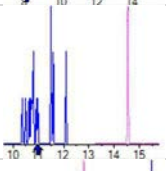 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 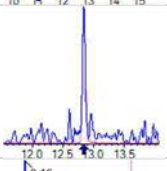 | 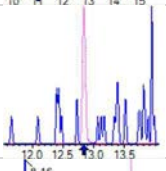 | |
| TFSI | ( 279.7 / 147.0 )<br>27003<br>( 279.7 / 211.0 )<br>3131 | ( 8.16 , 0.64 )<br>( N/A , -0.02 , 0.4) | 20.5<br>9.3 | 0.1159<br>138.0<br>135.5 | 0.0136 | N/A | 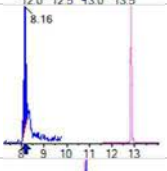 | 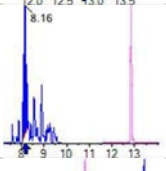 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 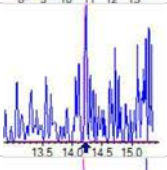 | 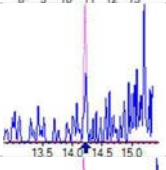 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 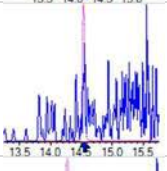 | 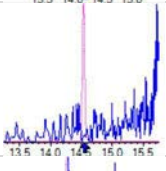 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 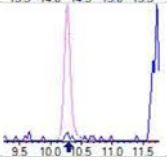 | 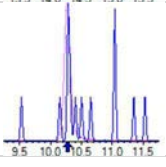 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 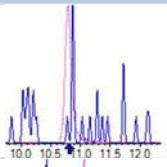 | 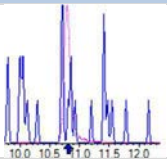 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 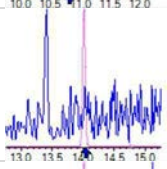 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 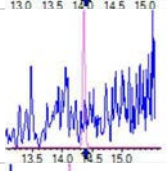 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 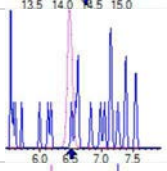 | 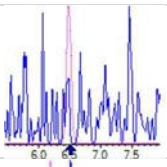 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 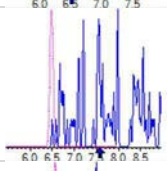 | 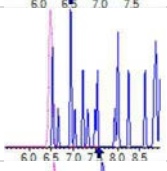 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 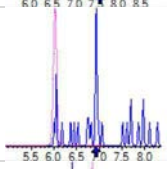 | 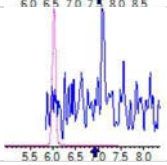 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 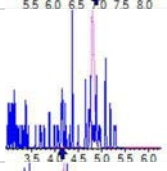 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 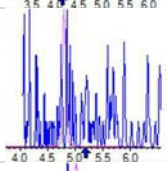 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 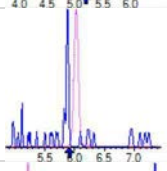 | 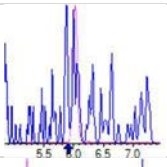 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 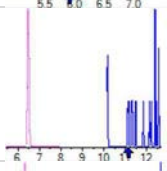 | 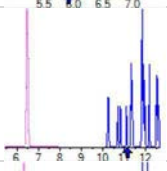 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 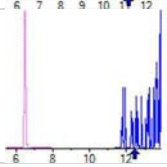 | 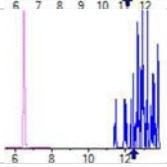 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 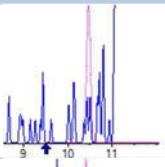 | 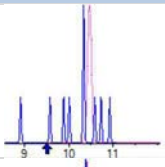 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 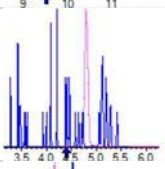 | 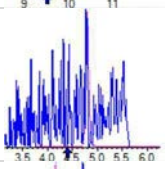 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 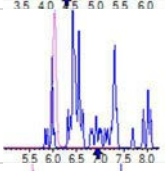 | 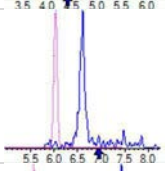 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 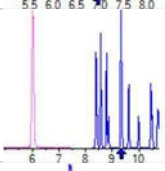 | 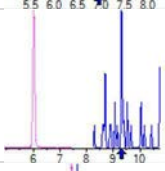 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 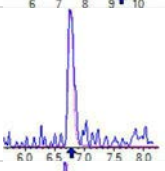 | 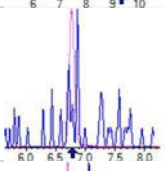 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 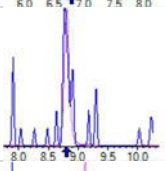 | 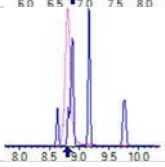 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 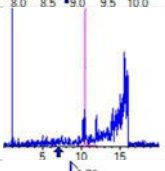 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262976 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1264.8 | N/A | 1.1029 [ 1.0000 ] | 110.3% { 111.2% } | 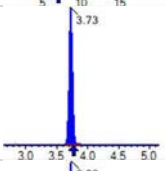 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 137190 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 19929.4 | N/A | 1.0815 [ 1.0000 ] | 108.1% { 108.4% } | 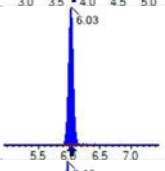 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 389167 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3796.0 | N/A | 0.9844 [ 1.0000 ] | 98.4% { 102.6% } | 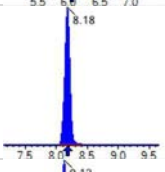 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281293 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 1262.5 | N/A | 0.9890 [ 1.0000 ] | 98.9% { 100.0% } | 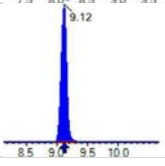 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288262 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 4306.6 | N/A | 0.9871 [ 1.0000 ] | 98.7% { 99.6% } | 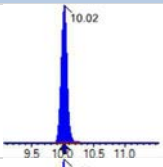 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 926810 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 5981.5 | N/A | 0.9766 [ 1.0000 ] | 97.7% { 99.3% } | 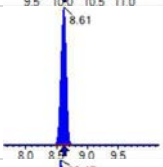 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 753068 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 2288.2 | N/A | 0.9887 [ 1.0000 ] | 98.9% { 105.8% } | 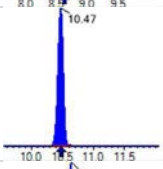 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2487333 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 38314.3 | N/A | 8.2795 [ 8.0000 ] | 103.5% { 111.1% } | 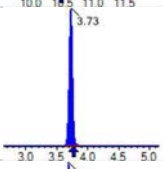 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 977534 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5291.4 | N/A | 3.8189 [ 4.0000 ] | 95.5% { 100.2% } | 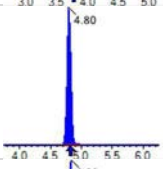 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581828 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 7266.8 | N/A | 1.8588 [ 2.0000 ] | 92.9% { 98.6% } | 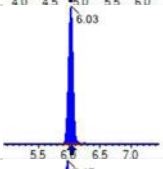 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 647498 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5005.1 | N/A | 1.8596 [ 2.0000 ] | 93.0% { 98.6% } | 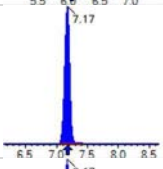 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 869174 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 2744.5 | N/A | 2.0844 [ 2.0000 ] | 104.2% { 100.8% } | 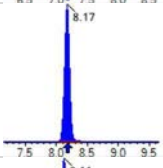 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291733 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 2397.4 | N/A | 1.0577 [ 1.0000 ] | 105.8% { 108.1% } | 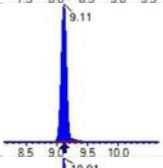 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331768 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 969.7 | N/A | 1.0270 [ 1.0000 ] | 102.7% { 103.1% } | 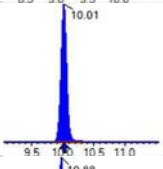 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377077 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 991.8 | N/A | 0.9922 [ 1.0000 ] | 99.2% { 101.4% } | 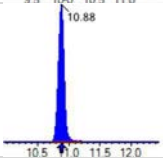 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 381053 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1267.8 | N/A | 0.9845 [ 1.0000 ] | 98.5% { 102.2% } | 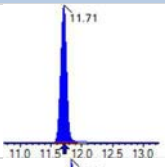 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 329264 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1433.7 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 100.9% } | 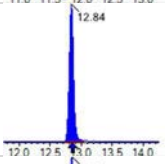 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 527627 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2239.7 | N/A | 1.8751 [ 2.0000 ] | 93.8% { 104.5% } | 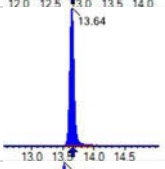 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1695256 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1354.8 | N/A | 2.0245 [ 2.0000 ] | 101.2% { 101.0% } | 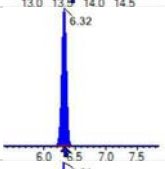 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1339799 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 3617.9 | N/A | 2.0045 [ 2.0000 ] | 100.2% { 101.6% } | 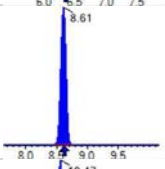 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1599091 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 1759.5 | N/A | 1.9694 [ 2.0000 ] | 98.5% { 103.2% } | 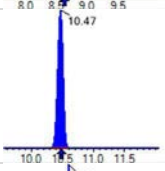 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 712444 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 90.6 | N/A | 4.9313 [ 4.0000 ] | 123.3% { 120.9% } | 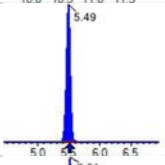 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2019774 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3521.8 | N/A | 4.6714 [ 4.0000 ] | 116.8% { 121.2% } | 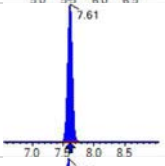 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1553917 | ( 9.39 , N/A ) ( N/A , -0.01 , N/A ) | 1827.4 | N/A | 4.5824 [ 4.0000 ] | 114.6% { 113.6% } | 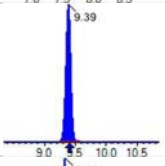 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2837927 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1437.4 | N/A | 8.0077 [ 8.0000 ] | 100.1% { 111.2% } | 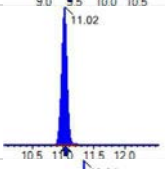 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1512693 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2531.1 | N/A | 2.1023 [ 2.0000 ] | 105.1% { 110.1% } | 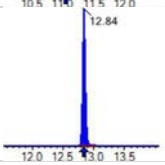 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 289802 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1757.3 | N/A | 1.8989 [ 2.0000 ] | 94.9% { 100.6% } | 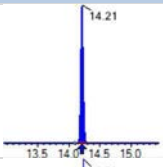 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 320055 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2531.6 | N/A | 1.9556 [ 2.0000 ] | 97.8% { 104.4% } | 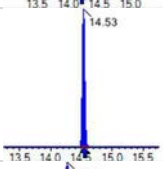 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877073 | ( 10.27 , N/A ) ( N/A , -0.01 , N/A ) | 2449.7 | N/A | 4.1981 [ 4.0000 ] | 105.0% { 103.7% } | 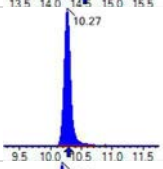 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 844352 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1833.1 | N/A | 4.4342 [ 4.0000 ] | 110.9% { 109.6% } | 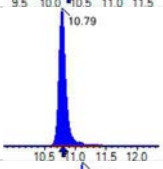 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1459612 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2263.5 | N/A | 21.2823 [ 20.0000 ] | 106.4% { 106.2% } | 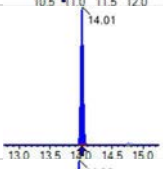 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1442578 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4066.8 | N/A | 20.7236 [ 20.0000 ] | 103.6% { 111.8% } | 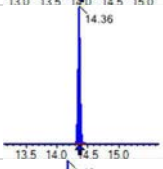 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1026816 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 2225.9 | N/A | 7.2012 [ 8.0000 ] | 90.0% { 100.4% } | 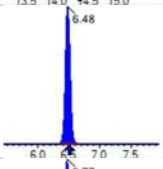 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603581 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1163.2 | N/A | 1.9313 [ 2.0000 ] | 96.6% { 97.8% } | 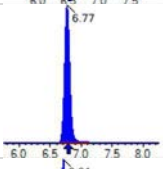 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 592829 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 726.4 | N/A | 2.0837 [ 2.0000 ] | 104.2% { 107.2% } | 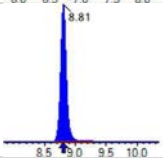 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .02240 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0120 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05620 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.980 | ng/mL0 | | |
| | 13C5-PFPEA | 4.0 | ng/mL0 | | |
| | 13C5-PFHXA | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA | 1.990 | ng/mL0 | | |
| | 13C8-PFOA | 1.980 | ng/mL0 | | |
| | 13C9-PFNA | .9090 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | .9980 | ng/mL0 | | |
| | 13C2-PFDOA | .9780 | ng/mL0 | | |
| | 13C2-PFTEDA | .9790 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.80 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.910 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.980 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.40 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.50 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.050 | ng/mL0 | | |
| | 13C8-PFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSA | 1.920 | ng/mL0 | | |
| | D5-NETFOSA | 1.880 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.170 | ng/mL0 | | |
| | D5-NETFOSAA | 4.270 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | D7-NMEFOSE0 | 20.20 | ng/mL | 0 | |
| | D9-NETFOSE0 | 19.30 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.970 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 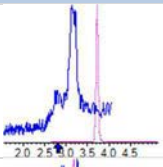 | 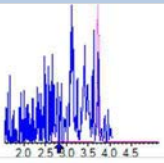 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 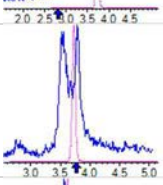 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 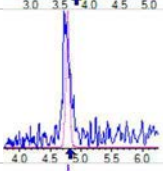 | 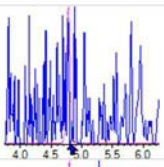 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 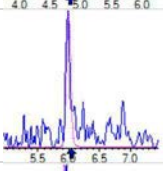 | 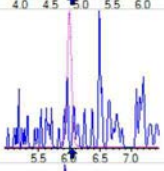 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 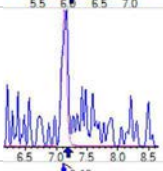 | 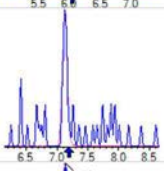 | |
| PFOA | ( 413.0 / 369.0 )<br>18323<br>( 413.0 / 169.0 )<br>6829 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , -0.2) | 17.8<br>41.7 | 0.3727<br>101.9<br>108.6 | 0.0224 | N/A | 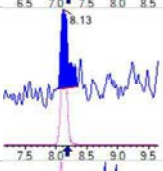 | 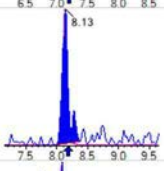 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 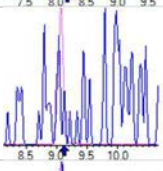 | 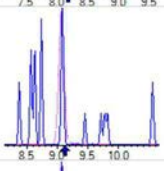 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 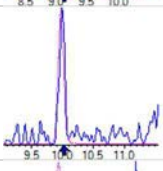 | 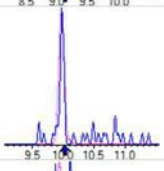 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 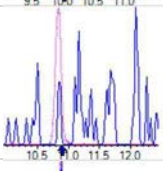 | 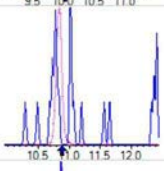 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 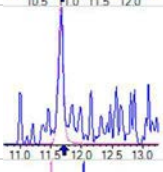 | 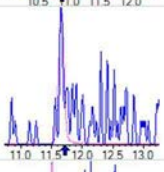 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 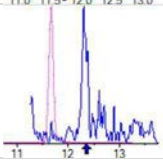 | 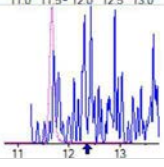 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 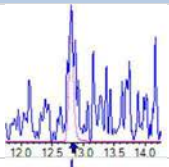 | 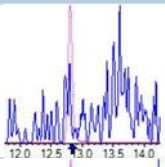 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 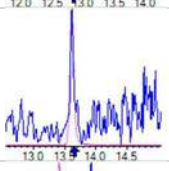 | 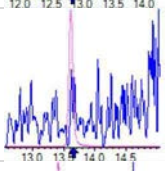 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 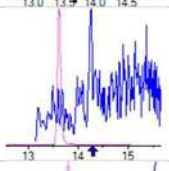 | 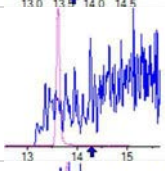 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 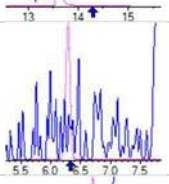 | 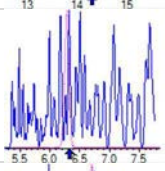 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 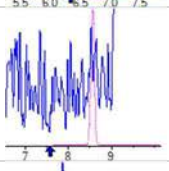 | 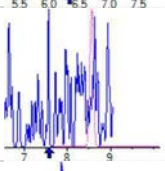 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 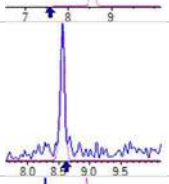 | 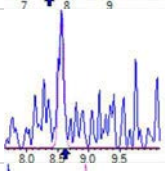 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 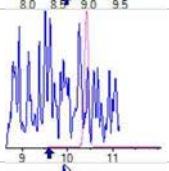 | 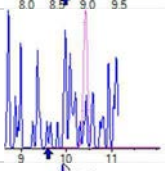 | |
| PFOS | ( 499.0 / 80.0 )<br>10478<br>( 499.0 / 99.0 )<br>2581 | ( 10.41 , 1.00 )<br>( -0.02 , N/A , -0.9) | 49.9<br>308.2 | 0.2463<br>105.4<br>102.6 | 0.0120 | N/A | 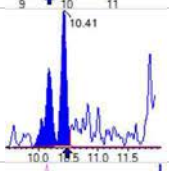 | 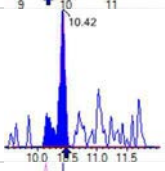 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 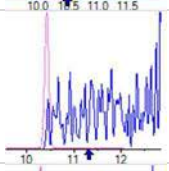 | 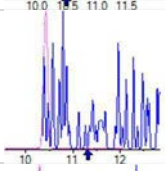 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 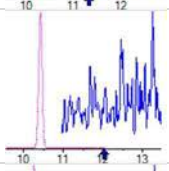 | 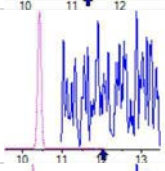 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 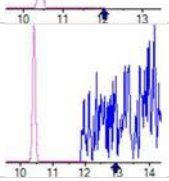 | 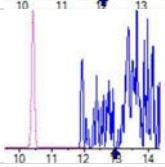 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 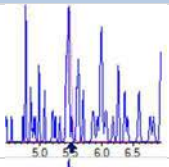 | 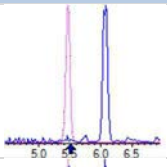 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 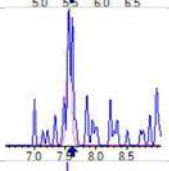 | 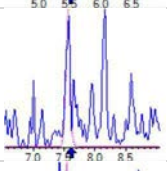 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 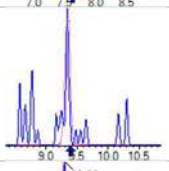 | 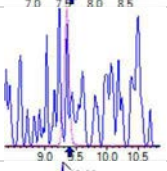 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14755<br>( 627.0 / 81.0 ) 25191 | ( 10.99 , 1.00 ) ( 0.01 , N/A , 0.4) | 151.5<br>73.6 | 1.7073<br>118.6<br>117.0 | 0.0562 | N/A | 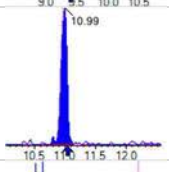 | 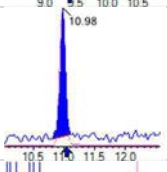 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 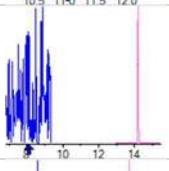 | 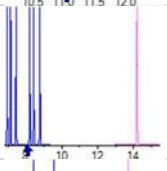 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 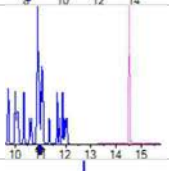 | 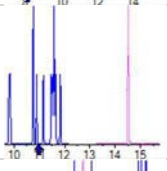 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 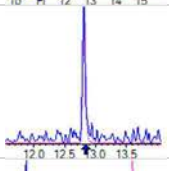 | 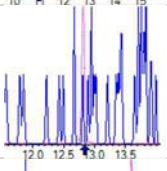 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 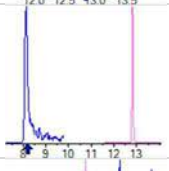 | 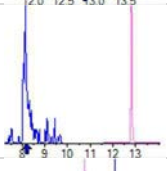 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 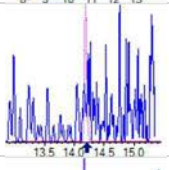 | 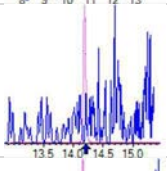 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 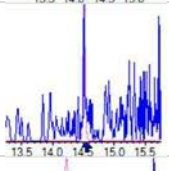 | 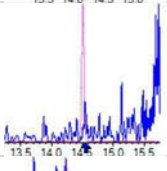 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 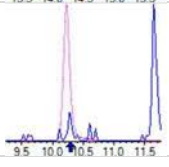 | 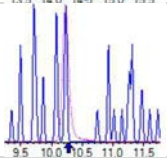 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 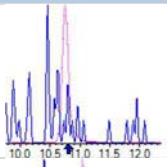 | 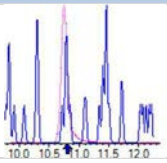 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 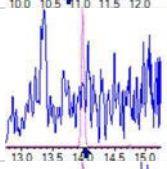 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 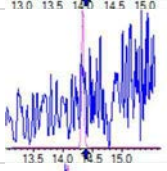 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 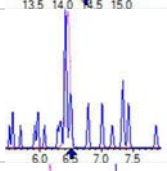 | 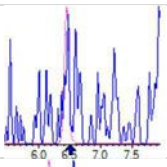 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 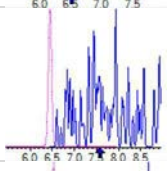 | 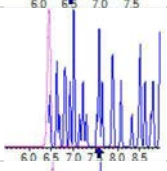 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 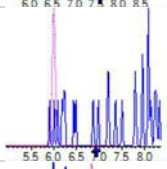 | 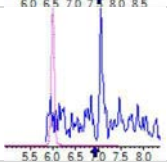 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 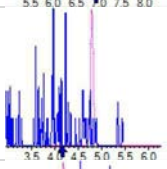 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 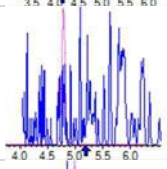 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 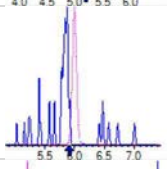 | 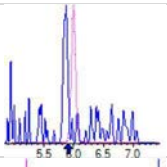 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 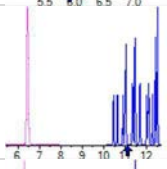 | 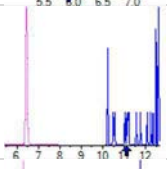 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 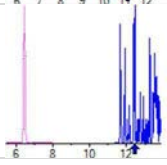 | 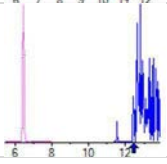 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 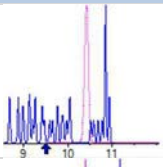 | 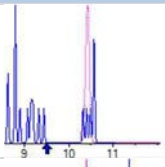 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 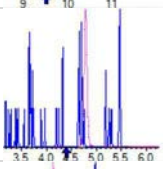 | 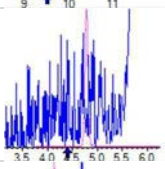 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 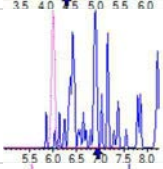 | 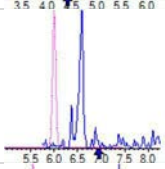 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 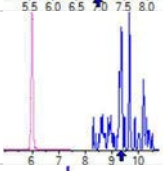 | 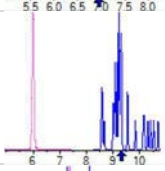 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 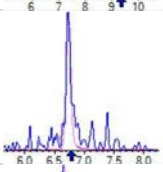 | 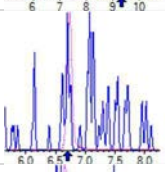 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 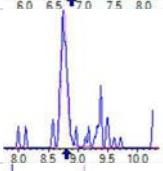 | 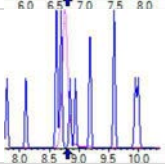 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 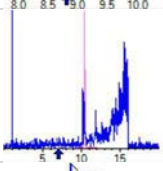 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256296 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 1342.9 | N/A | 1.0749 [ 1.0000 ] | 107.5% { 108.4% } | 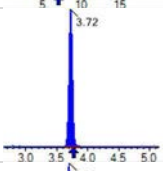 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117918 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 20197.0 | N/A | 0.9295 [ 1.0000 ] | 93.0% { 93.1% } | 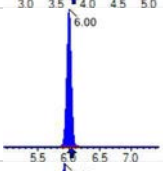 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 372812 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 6218.0 | N/A | 0.9431 [ 1.0000 ] | 94.3% { 98.3% } | 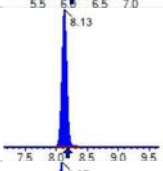 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277069 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 1006.7 | N/A | 0.9742 [ 1.0000 ] | 97.4% { 98.5% } | 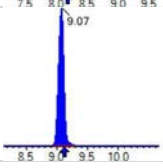 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273034 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1301.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 94.4% } | 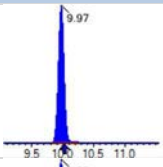 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 886188 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 4958.5 | N/A | 0.9338 [ 1.0000 ] | 93.4% { 94.9% } | 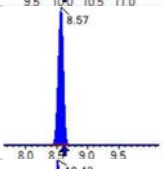 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 733959 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1895.2 | N/A | 0.9637 [ 1.0000 ] | 96.4% { 103.1% } | 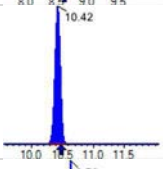 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2335173 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 40991.8 | N/A | 7.9756 [ 8.0000 ] | 99.7% { 104.3% } | 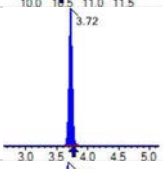 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 880098 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 5161.0 | N/A | 4.0001 [ 4.0000 ] | 100.0% { 90.2% } | 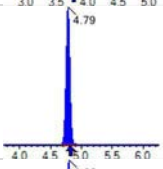 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 555973 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 11242.8 | N/A | 2.0664 [ 2.0000 ] | 103.3% { 94.2% } | 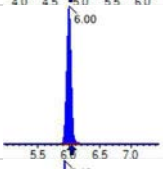 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 596480 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5847.9 | N/A | 1.9930 [ 2.0000 ] | 99.7% { 90.9% } | 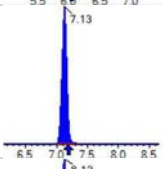 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 792769 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2469.3 | N/A | 1.9846 [ 2.0000 ] | 99.2% { 91.9% } | 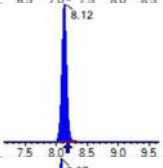 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 246839 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 3156.7 | N/A | 0.9086 [ 1.0000 ] | 90.9% { 91.5% } | 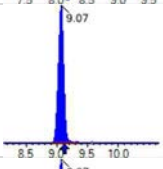 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317562 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 988.0 | N/A | 1.0379 [ 1.0000 ] | 103.8% { 98.7% } | 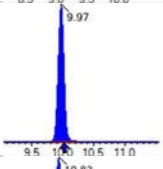 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 359228 | ( 10.83 , N/A ) ( N/A , -0.05 , N/A ) | 994.3 | N/A | 0.9979 [ 1.0000 ] | 99.8% { 96.6% } | 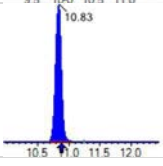 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 358593 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1376.9 | N/A | 0.9782 [ 1.0000 ] | 97.8% { 96.2% } | 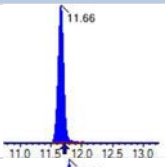 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305570 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1339.8 | N/A | 0.9788 [ 1.0000 ] | 97.9% { 93.6% } | 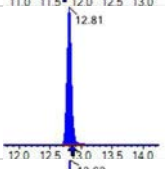 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 479691 | ( 13.62 , N/A ) ( N/A , -0.04 , N/A ) | 2261.1 | N/A | 1.7998 [ 2.0000 ] | 90.0% { 95.0% } | 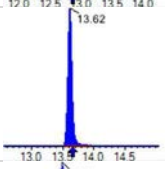 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1646009 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 932.0 | N/A | 2.0558 [ 2.0000 ] | 102.8% { 98.1% } | 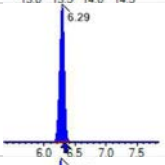 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1314731 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3337.1 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 99.7% } | 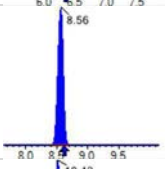 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1507737 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1958.6 | N/A | 1.9052 [ 2.0000 ] | 95.3% { 97.3% } | 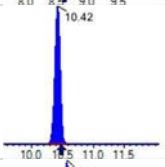 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 688420 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 92.2 | N/A | 4.9834 [ 4.0000 ] | 124.6% { 116.9% } | 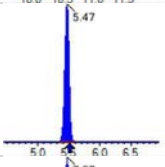 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1818303 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 3961.1 | N/A | 4.3982 [ 4.0000 ] | 110.0% { 109.1% } | 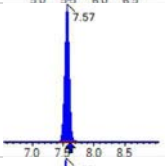 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1459191 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1728.0 | N/A | 4.5003 [ 4.0000 ] | 112.5% { 106.7% } | 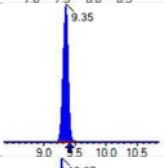 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2726916 | ( 10.97 , N/A ) ( N/A , -0.05 , N/A ) | 1591.3 | N/A | 8.0472 [ 8.0000 ] | 100.6% { 106.8% } | 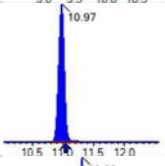 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1346002 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 3079.1 | N/A | 1.9193 [ 2.0000 ] | 96.0% { 98.0% } | 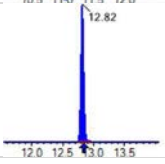 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 286199 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 2013.6 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 99.4% } | 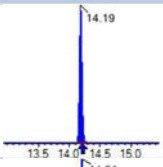 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 299849 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2282.7 | N/A | 1.8798 [ 2.0000 ] | 94.0% { 97.8% } | 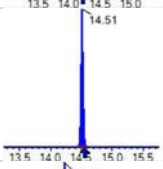 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 849550 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 2448.5 | N/A | 4.1722 [ 4.0000 ] | 104.3% { 100.5% } | 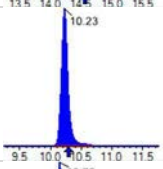 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792134 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 2202.4 | N/A | 4.2683 [ 4.0000 ] | 106.7% { 102.9% } | 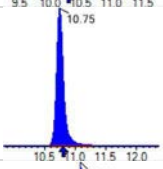 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1353135 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 1956.5 | N/A | 20.2435 [ 20.0000 ] | 101.2% { 98.4% } | 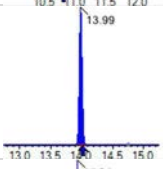 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1307174 | ( 14.34 , N/A ) ( N/A , -0.03 , N/A ) | 3568.0 | N/A | 19.2674 [ 20.0000 ] | 96.3% { 101.3% } | 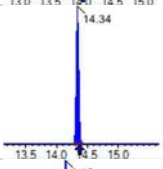 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977389 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2164.6 | N/A | 7.9749 [ 8.0000 ] | 99.7% { 95.6% } | 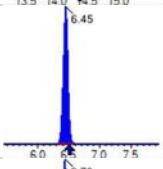 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603450 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1377.5 | N/A | 2.0385 [ 2.0000 ] | 101.9% { 97.8% } | 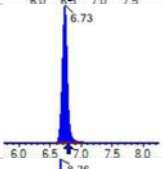 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 547420 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 720.5 | N/A | 2.0314 [ 2.0000 ] | 101.6% { 98.9% } | 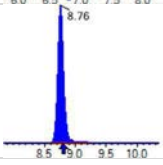 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0083L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | 0.01130 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .01660 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01040 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06450 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0083L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.890 | ng/mL0 | | |
| | 13C5-PFPEA | 3.730 | ng/mL0 | | |
| | 13C5-PFHXA | 1.910 | ng/mL0 | | |
| | 13C4-PFHPA | 1.880 | ng/mL0 | | |
| | 13C8-PFOA | 1.90 | ng/mL0 | | |
| | 13C9-PFNA | 1.010 | ng/mL0 | | |
| | 13C6-PFDA | .9790 | ng/mL0 | | |
| | 13C7-PFUnA | 1.050 | ng/mL0 | | |
| | 13C2-PFDOA | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.040 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.770 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.10 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.960 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.440 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.30 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.70 | ng/mL0 | | |
| | 13C8-PFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.570 | ng/mL0 | | |
| | D5-NETFOSAA | 4.630 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0083L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | D7-NMEFOSE0 | 19.50 | ng/mL0 | | |
| | D9-NETFOSE0 | 18.60 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.620 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 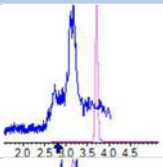 | 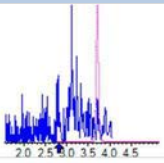 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 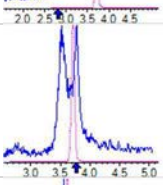 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 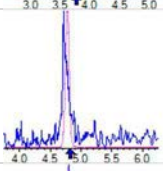 | 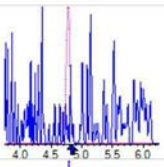 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 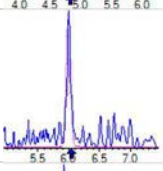 | 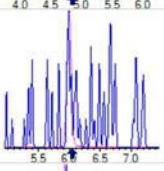 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 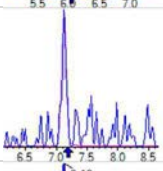 | 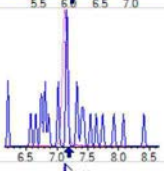 | |
| PFOA | ( 413.0 / 369.0 )<br>13637<br>( 413.0 / 169.0 )<br>6334 | ( 8.12 , 1.00 )<br>( 0.00 , N/A , -0.8) | 18.3<br>46.8 | 0.4644<br>127.1<br>135.3 | 0.0113 | N/A | 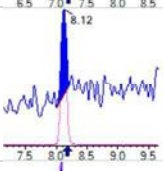 | 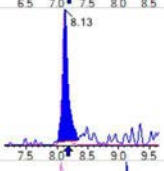 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 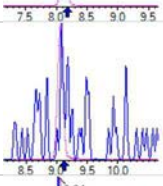 | 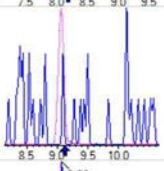 | |
| PFDA | ( 513.0 / 469.0 )<br>4646<br>( 513.0 / 169.0 )<br>996 | ( 9.94 , 1.00 )<br>( -0.02 , N/A , -2.0) | 61.2<br>164.4 | 0.2145<br>183.0<br>179.2 | 0.0166 | N/A | 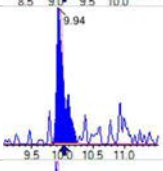 | 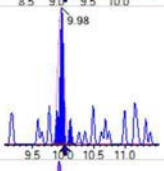 | IR2, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 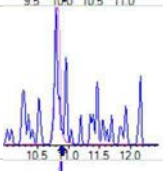 | 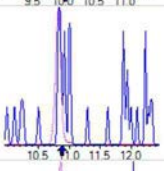 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 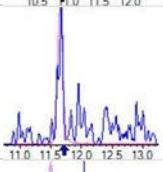 | 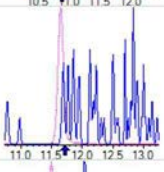 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 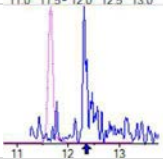 | 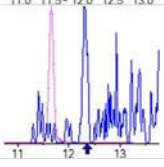 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 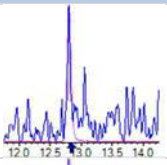 | 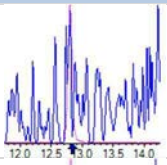 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 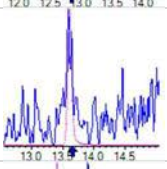 | 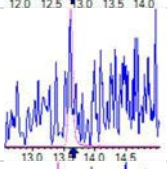 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 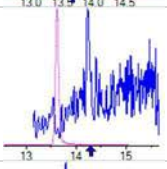 | 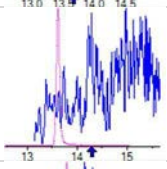 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 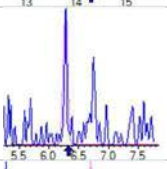 | 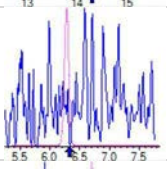 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 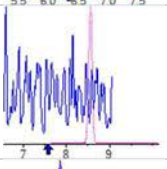 | 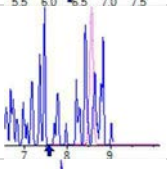 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 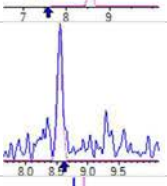 | 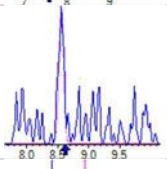 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 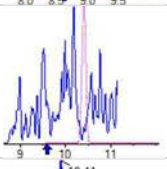 | 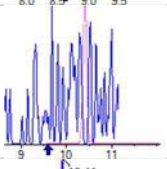 | |
| PFOS | ( 499.0 / 80.0 )<br>8916<br>( 499.0 / 99.0 )<br>2079 | ( 10.41 , 1.00 )<br>( 0.00 , N/A , -0.5) | 41.4<br>168.0 | 0.2331<br>99.7<br>97.1 | 0.0104 | N/A | 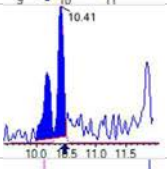 | 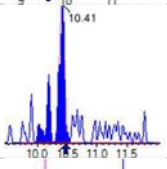 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 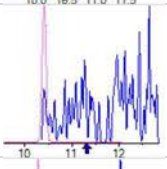 | 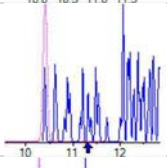 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 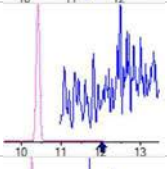 | 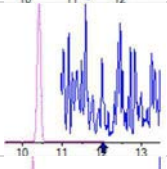 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 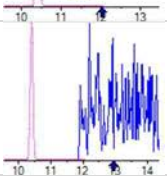 | 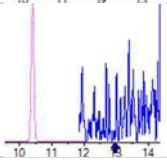 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 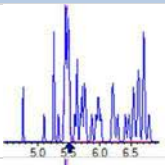 | 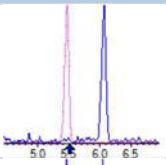 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 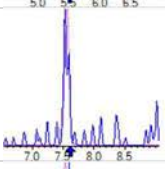 | 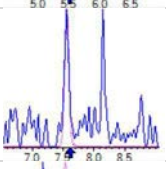 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 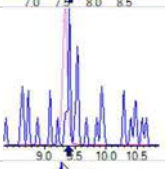 | 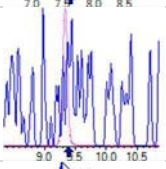 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15745<br>( 627.0 / 81.0 )<br>18532 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.3) | 164.1<br>43.8 | 1.1770<br>81.8<br>80.7 | 0.0645 | N/A | 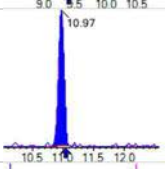 | 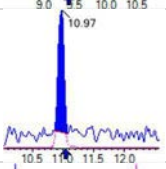 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 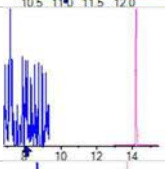 | 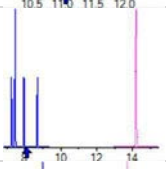 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 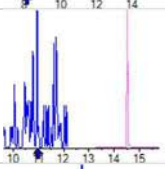 | 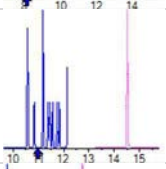 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 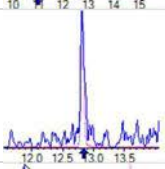 | 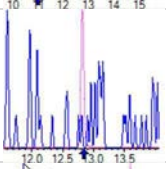 | |
| TFSI | ( 279.7 / 147.0 )<br>27475<br>( 279.7 / 211.0 )<br>1556 | ( 8.12 , 0.63 )<br>( N/A , -0.06 , 0.8) | 22.0<br>11.1 | 0.0567<br>67.4<br>66.2 | 0.0165 | N/A | 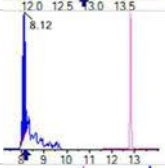 | 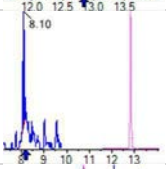 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 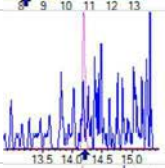 | 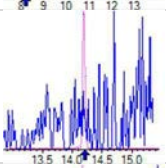 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 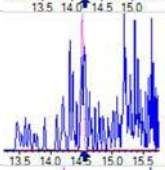 | 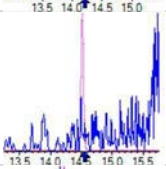 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 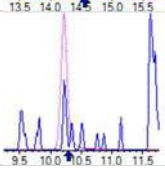 | 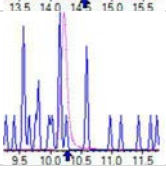 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 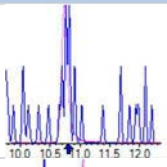 | 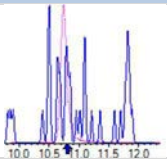 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 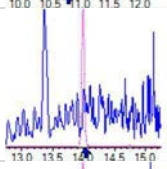 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 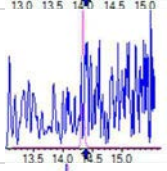 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 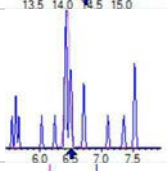 | 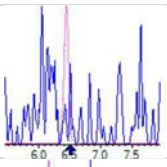 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 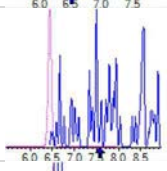 | 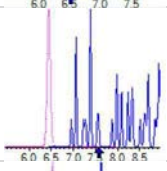 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 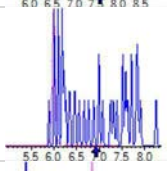 | 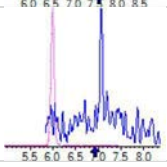 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 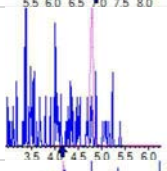 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 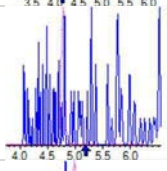 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 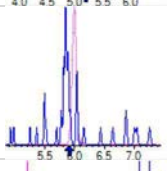 | 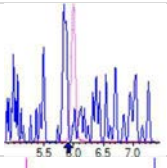 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 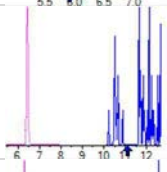 | 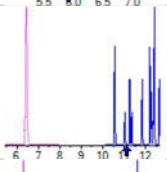 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 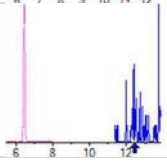 | 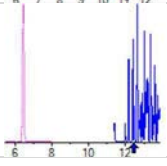 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 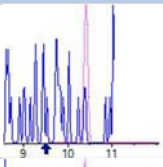 | 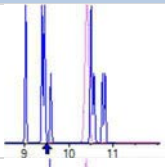 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 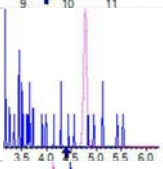 | 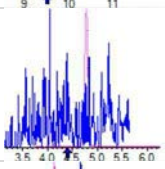 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 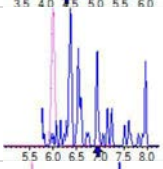 | 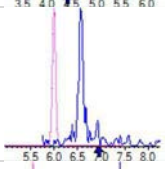 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 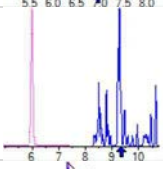 | 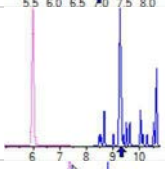 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4079<br>( 357.2 / 243.0 ) 585 | ( 6.72 , 1.00 ) ( -0.01 , N/A , -1.6) | 36.5<br>9.1 | 0.1433<br>130.0<br>137.7 | 0.0127 | N/A | 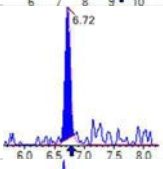 | 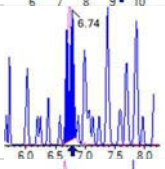 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 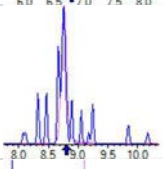 | 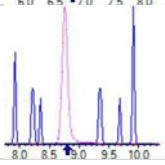 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 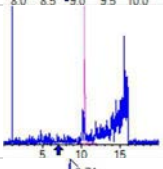 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261851 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 1337.6 | N/A | 1.0982<br>[ 1.0000 ] | 109.8%<br>{ 110.7% } | 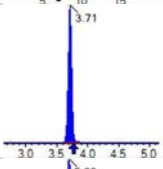 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122225 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 1949.5 | N/A | 0.9635<br>[ 1.0000 ] | 96.3%<br>{ 96.5% } | 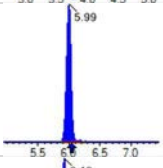 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378012 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 4414.7 | N/A | 0.9562<br>[ 1.0000 ] | 95.6%<br>{ 99.6% } | 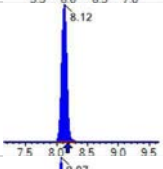 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 243570 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8564<br>[ 1.0000 ] | 85.6%<br>{ 86.6% } | 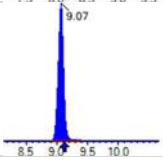 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 249043 | ( 9.97 , N/A ) ( N/A , -0.06 , N/A ) | 13496.6 | N/A | 0.8528 [ 1.0000 ] | 85.3% { 86.1% } | 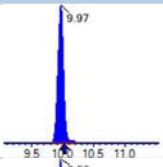 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 860348 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4025.5 | N/A | 0.9066 [ 1.0000 ] | 90.7% { 92.2% } | 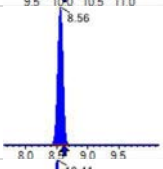 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 676863 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2296.0 | N/A | 0.8887 [ 1.0000 ] | 88.9% { 95.1% } | 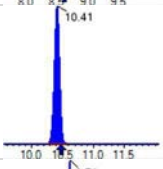 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2361568 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 42554.0 | N/A | 7.8946 [ 8.0000 ] | 98.7% { 105.5% } | 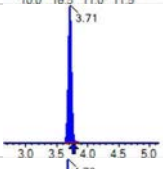 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 850898 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5022.0 | N/A | 3.7311 [ 4.0000 ] | 93.3% { 87.2% } | 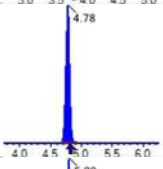 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 533907 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 10215.7 | N/A | 1.9145 [ 2.0000 ] | 95.7% { 90.5% } | 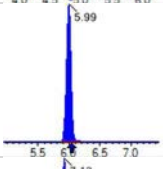 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 584136 | ( 7.12 , N/A ) ( N/A , -0.05 , N/A ) | 6396.9 | N/A | 1.8830 [ 2.0000 ] | 94.1% { 89.0% } | 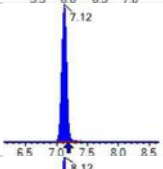 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 770117 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2454.9 | N/A | 1.9014 [ 2.0000 ] | 95.1% { 89.3% } | 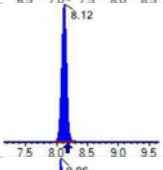 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 240789 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 3328.3 | N/A | 1.0082 [ 1.0000 ] | 100.8% { 89.2% } | 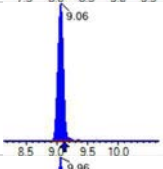 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 273272 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1159.4 | N/A | 0.9791 [ 1.0000 ] | 97.9% { 84.9% } | 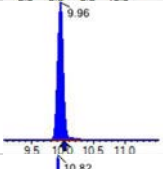 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 344337 | ( 10.82 , N/A ) ( N/A , -0.06 , N/A ) | 928.5 | N/A | 1.0487 [ 1.0000 ] | 104.9% { 92.6% } | 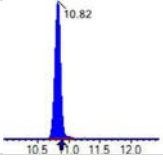 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 343936 | ( 11.65 , N/A ) ( N/A , -0.06 , N/A ) | 1056.5 | N/A | 1.0286 [ 1.0000 ] | 102.9% { 92.2% } | 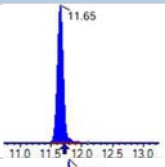  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295022 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1239.8 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 90.4% } | 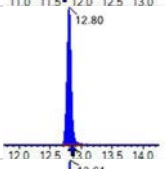  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 429520 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2258.1 | N/A | 1.7668 [ 2.0000 ] | 88.3% { 85.0% } | 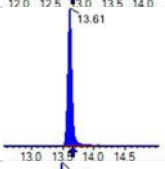  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1603797 | ( 6.28 , N/A ) ( N/A , -0.05 , N/A ) | 990.1 | N/A | 2.0632 [ 2.0000 ] | 103.2% { 95.6% } | 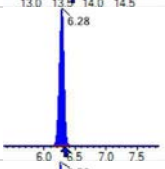  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1303820 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4967.6 | N/A | 2.1014 [ 2.0000 ] | 105.1% { 98.9% } | 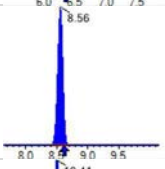  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1479061 | ( 10.41 , N/A ) ( N/A , -0.07 , N/A ) | 1616.5 | N/A | 2.0266 [ 2.0000 ] | 101.3% { 95.5% } | 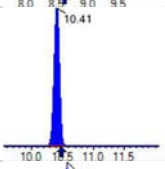  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 665228 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 97.6 | N/A | 4.9601 [ 4.0000 ] | 124.0% { 112.9% } | 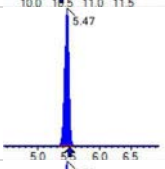  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1780844 | ( 7.56 , N/A ) ( N/A , -0.05 , N/A ) | 4514.1 | N/A | 4.4369 [ 4.0000 ] | 110.9% { 106.8% } | 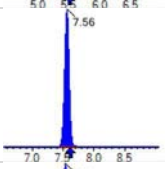  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1354290 | ( 9.34 , N/A ) ( N/A , -0.06 , N/A ) | 1695.0 | N/A | 4.3022 [ 4.0000 ] | 107.6% { 99.0% } | 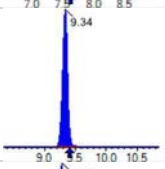  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2534783 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1126.8 | N/A | 7.7049 [ 8.0000 ] | 96.3% { 99.3% } | 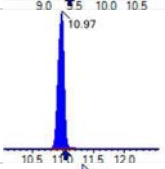  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1264522 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 2176.7 | N/A | 1.9552 [ 2.0000 ] | 97.8% { 92.0% } | 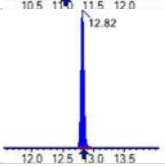  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 260773 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1698.6 | N/A | 1.9011 [ 2.0000 ] | 95.1% { 90.5% } | 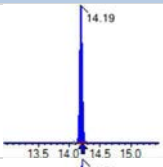  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 281981 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2400.9 | N/A | 1.9169 [ 2.0000 ] | 95.8% { 91.9% } | 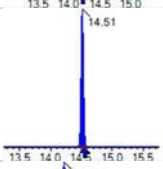  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 857289 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 2460.4 | N/A | 4.5653 [ 4.0000 ] | 114.1% { 101.4% } | 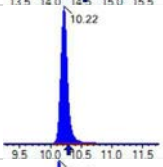  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792921 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1959.0 | N/A | 4.6330 [ 4.0000 ] | 115.8% { 103.0% } | 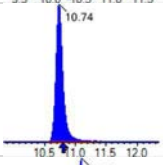  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1199404 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 2280.1 | N/A | 19.4572 [ 20.0000 ] | 97.3% { 87.3% } | 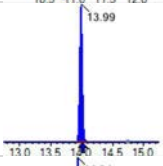  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1160864 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 4100.8 | N/A | 18.5541 [ 20.0000 ] | 92.8% { 90.0% } | 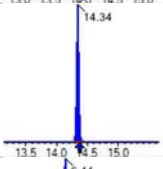  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 967466 | ( 6.44 , N/A ) ( N/A , -0.05 , N/A ) | 2453.2 | N/A | 7.6157 [ 8.0000 ] | 95.2% { 94.6% } | 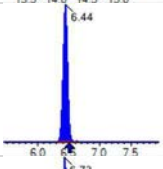  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603151 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1238.1 | N/A | 2.2338 [ 2.0000 ] | 111.7% { 97.8% } | 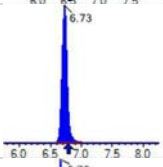  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 530105 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 742.7 | N/A | 2.1566 [ 2.0000 ] | 107.8% { 95.8% } | 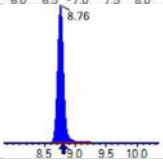  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 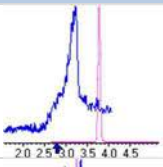 | 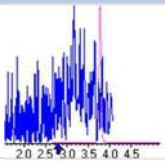 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 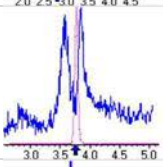 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 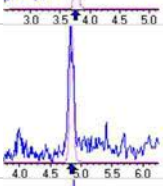 | 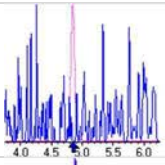 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 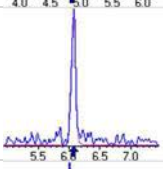 | 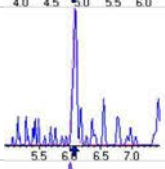 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 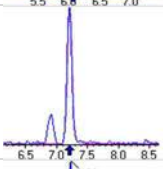 | 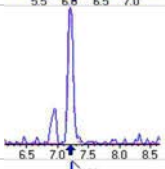 | |
| PFOA | ( 413.0 / 369.0 )<br>3553688<br>( 413.0 / 169.0 )<br>1356979 | ( 8.23 , 1.00 )<br>( 0.00 , N/A , 0.0) | 465.7<br>343.8 | 0.3819<br>105.6<br>107.6 | 7.4995 | N/A | 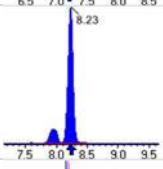 | 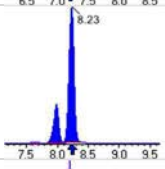 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 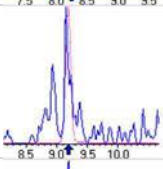 | 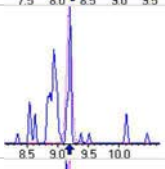 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 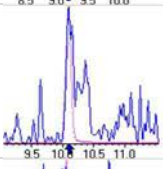 | 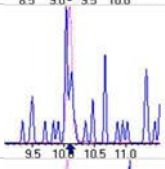 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 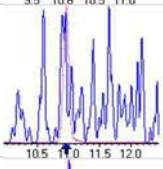 | 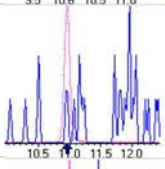 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 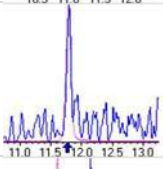 | 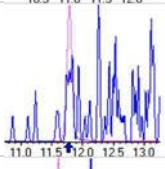 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 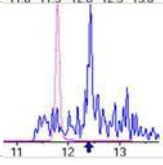 | 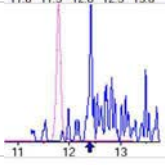 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 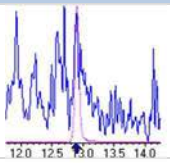 | 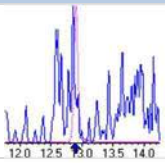 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 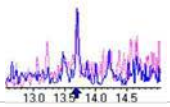 | 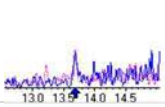 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 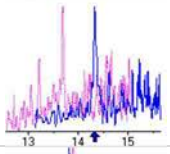 | 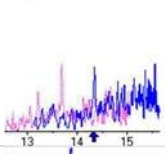 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 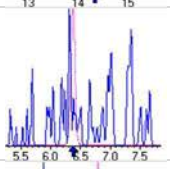 | 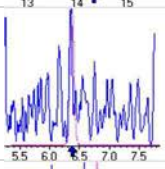 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 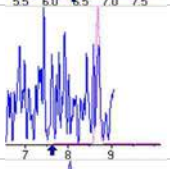 | 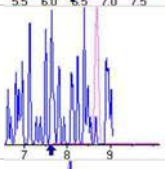 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 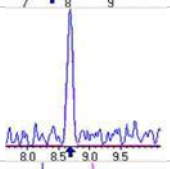 | 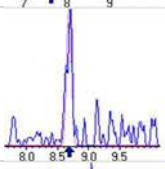 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 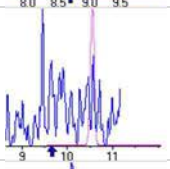 | 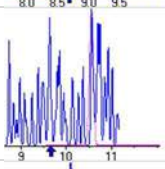 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 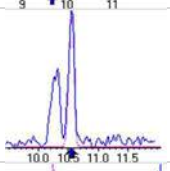 | 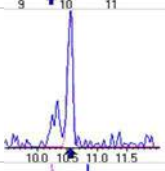 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 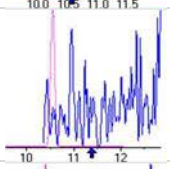 | 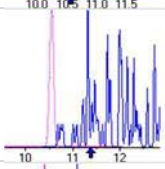 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 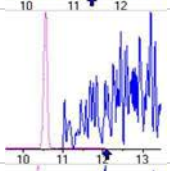 | 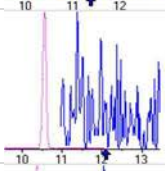 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 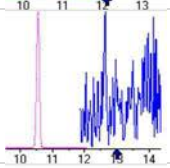 | 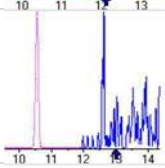 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 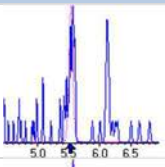 | 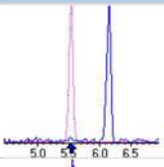 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 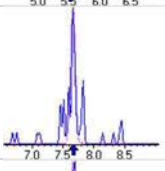 | 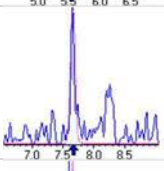 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 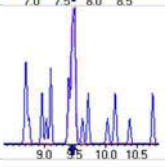 | 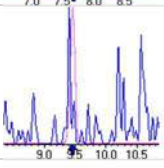 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 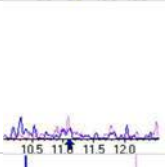 | 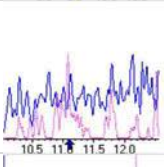 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 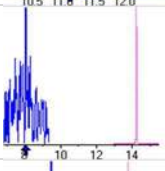 | 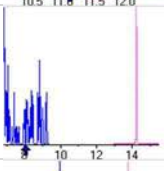 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 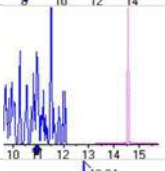 | 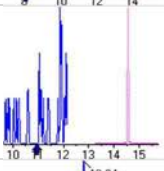 | |
| PFOSA | ( 498.0 / 78.0 )<br>9810888<br>( 498.0 / 478.0 )<br>144265 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 422.8<br>513.8 | 0.0147<br>101.9<br>107.4 | 9.2394 | N/A | 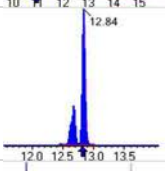 | 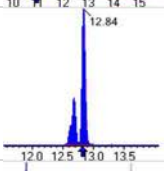 | MI4 ABK 3/18/24 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 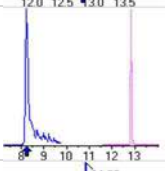 | 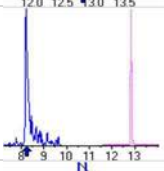 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1638004<br>( 512.0 / 169.0 )<br>1267456 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 3.3) | 3056.4<br>3474.8 | 0.7738<br>105.3<br>101.4 | 8.2168 | N/A | 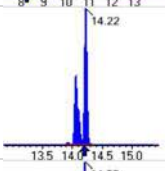 | 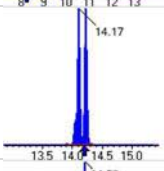 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>2047565<br>( 526.0 / 169.0 )<br>2577314 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3916.0<br>2904.6 | 1.2587<br>99.4<br>99.7 | 8.3543 | N/A | 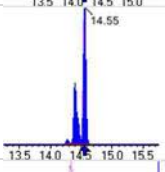 | 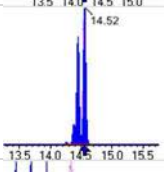 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 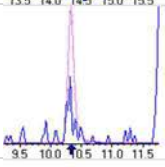 | 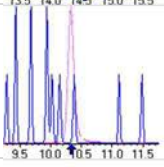 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 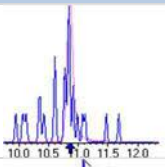 | 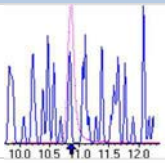 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>890678 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1909.3 | N/A<br>0.0<br>0.0 | 8.7351 | N/A | 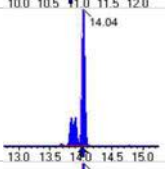 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>807579 | ( 14.40 , 1.00 )<br>( 0.03 , N/A , 0.0) | 2662.8 | N/A<br>0.0<br>0.0 | 9.2417 | N/A | 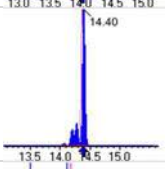 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 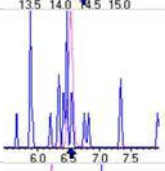 | 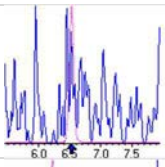 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 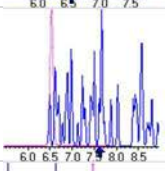 | 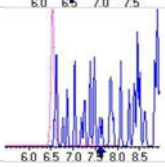 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 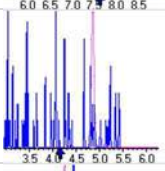 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 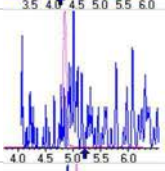 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 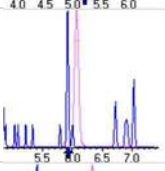 | 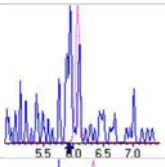 | |
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 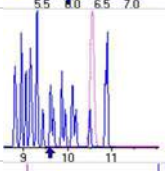 | 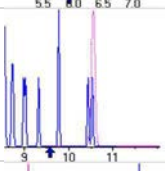 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 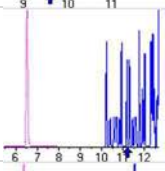 | 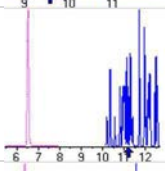 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 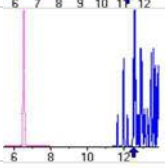 | 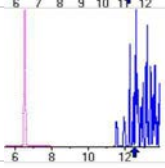 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 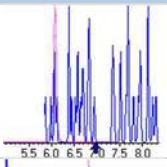 | 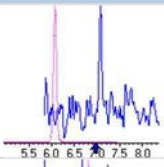 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 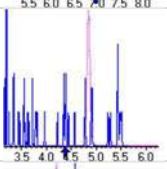 | 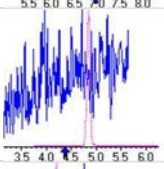 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 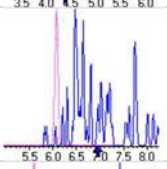 | 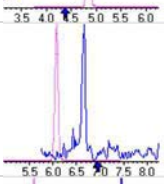 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 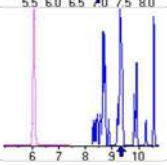 | 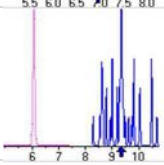 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 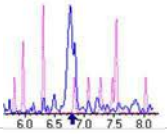 | 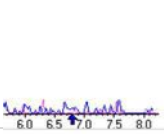 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 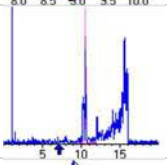 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 283891 | ( 3.77 , N/A )<br>( N/A , 0.02 , N/A ) | 959.6 | N/A | 0.9424<br>[ 1.0000 ] | 94.2%<br>{ 83.9% } | 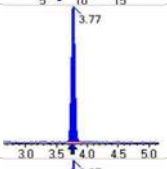 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 139255 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 86297.2 | N/A | 0.9056<br>[ 1.0000 ] | 90.6%<br>{ 81.7% } | 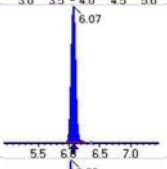 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 400810 | ( 8.23 , N/A )<br>( N/A , 0.00 , N/A ) | 3928.5 | N/A | 0.8984<br>[ 1.0000 ] | 89.8%<br>{ 82.1% } | 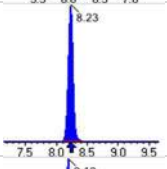 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 306589 | ( 9.19 , N/A )<br>( N/A , 0.00 , N/A ) | 1059.9 | N/A | 0.9171<br>[ 1.0000 ] | 91.7%<br>{ 79.7% } | 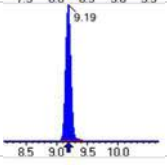 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 319345 | ( 10.10 , N/A ) ( N/A , 0.00 , N/A ) | 6101.1 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 84.6% } | 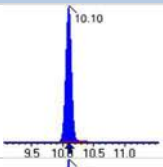 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 975602 | ( 8.69 , N/A ) ( N/A , 0.00 , N/A ) | 6566.7 | N/A | 0.8731 [ 1.0000 ] | 87.3% { 77.8% } | 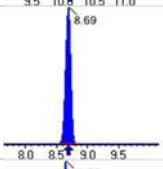 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 867764 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 2795.6 | N/A | 0.8889 [ 1.0000 ] | 88.9% { 82.0% } | 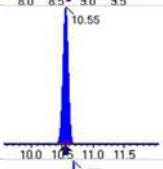 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2696743 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 46968.8 | N/A | 8.6140 [ 8.0000 ] | 107.7% { 95.0% } | 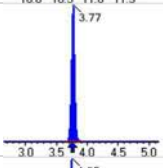 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1193598 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 5760.6 | N/A | 4.7778 [ 4.0000 ] | 119.4% { 93.2% } | 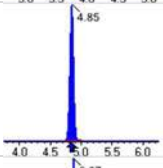 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 705656 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 8496.0 | N/A | 2.3600 [ 2.0000 ] | 118.0% { 93.0% } | 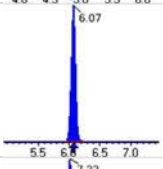 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 714073 | ( 7.22 , N/A ) ( N/A , 0.00 , N/A ) | 6537.9 | N/A | 2.2866 [ 2.0000 ] | 114.3% { 87.0% } | 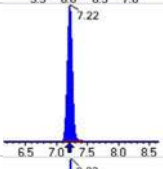 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 931964 | ( 8.23 , N/A ) ( N/A , 0.00 , N/A ) | 2671.7 | N/A | 2.2053 [ 2.0000 ] | 110.3% { 85.8% } | 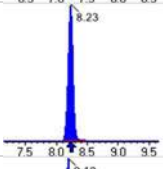 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330694 | ( 9.19 , N/A ) ( N/A , 0.00 , N/A ) | 2951.7 | N/A | 1.1170 [ 1.0000 ] | 111.7% { 87.5% } | 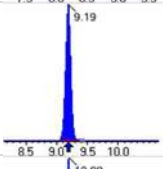 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 406615 | ( 10.09 , N/A ) ( N/A , 0.00 , N/A ) | 807.0 | N/A | 1.1034 [ 1.0000 ] | 110.3% { 86.3% } | 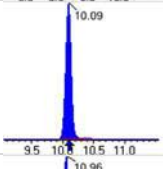 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 478979 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 1145.3 | N/A | 1.0691 [ 1.0000 ] | 106.9% { 94.5% } | 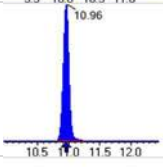 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00977-PEM1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 441982 | ( 11.79 , N/A ) ( N/A , 0.01 , N/A ) | 1480.5 | N/A | 0.9823 [ 1.0000 ] | 98.2% { 85.1% } | 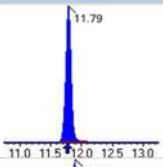 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 379220 | ( 12.90 , N/A ) ( N/A , 0.01 , N/A ) | 1357.0 | N/A | 0.9672 [ 1.0000 ] | 96.7% { 85.7% } | 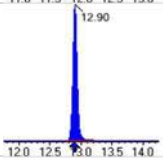 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 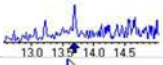 | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2093476 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 1032.9 | N/A | 2.2024 [ 2.0000 ] | 110.1% { 87.8% } | 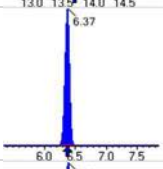 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1580913 | ( 8.69 , N/A ) ( N/A , 0.00 , N/A ) | 4189.6 | N/A | 2.2145 [ 2.0000 ] | 110.7% { 89.7% } | 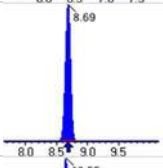 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1990751 | ( 10.55 , N/A ) ( N/A , 0.00 , N/A ) | 2030.0 | N/A | 2.1550 [ 2.0000 ] | 107.7% { 89.2% } | 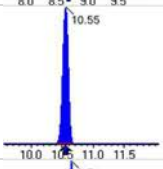 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 620394 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 102.9 | N/A | 7.3025 [ 4.0000 ] | 182.6% { 112.1% } | 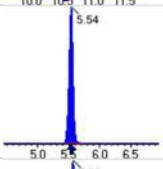 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1809660 | ( 7.66 , N/A ) ( N/A , 0.00 , N/A ) | 4557.8 | N/A | 6.8592 [ 4.0000 ] | 171.5% { 111.2% } | 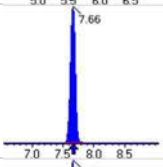 | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1811799 | ( 9.46 , N/A ) ( N/A , 0.00 , N/A ) | 1606.6 | N/A | 6.8930 [ 4.0000 ] | 172.3% { 106.2% } | 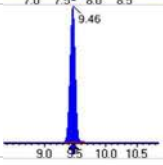 | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 2176072 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 3039.9 | N/A | 2.1737 [ 2.0000 ] | 108.7% { 89.9% } | 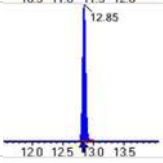 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (4)
Acquired: 2024/03/18 - 14:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 395841 | ( 14.22 , N/A ) ( N/A , 0.02 , N/A ) | 2465.3 | N/A | 2.1413 [ 2.0000 ] | 107.1% { 92.6% } | 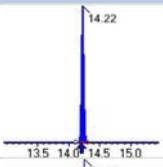  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 446713 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 2943.4 | N/A | 2.1038 [ 2.0000 ] | 105.2% { 92.2% } | 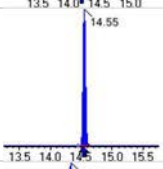  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1185914 | ( 10.33 , N/A ) ( N/A , 0.00 , N/A ) | 2025.8 | N/A | 5.0128 [ 4.0000 ] | 125.3% { 89.8% } | 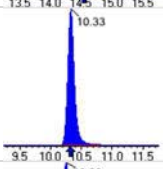  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1166049 | ( 10.86 , N/A ) ( N/A , 0.01 , N/A ) | 1996.1 | N/A | 5.1924 [ 4.0000 ] | 129.8% { 94.7% } | 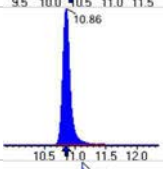  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1801413 | ( 14.02 , N/A ) ( N/A , 0.02 , N/A ) | 2283.9 | N/A | 20.8553 [ 20.0000 ] | 104.3% { 96.9% } | 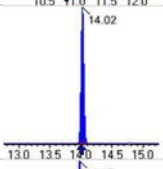  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1977975 | ( 14.37 , N/A ) ( N/A , 0.02 , N/A ) | 5417.2 | N/A | 18.9033 [ 20.0000 ] | 94.5% { 94.5% } | 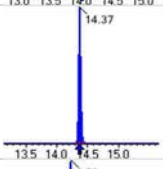  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1227195 | ( 6.53 , N/A ) ( N/A , 0.00 , N/A ) | 2300.2 | N/A | 9.5485 [ 8.0000 ] | 119.4% { 87.4% } | 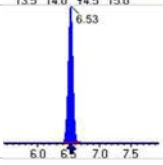  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 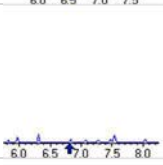  | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 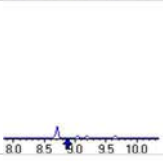  | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00977-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (5)
Acquired: 2024/03/18 - 14:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 34322<br>( 499.0 / 99.0 ) N/A | ( 9.95 , 0.94 ) ( -0.60 , N/A , #Value!) | 12.6 | N/A<br>0.0<br>0.0 | 0.0296 | N/A | 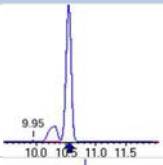 | 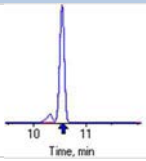 | |
| TDCA | ( 499.0 / 80.0 ) 6208057 | ( 7.04 , 0.67 ) ( N/A , #Value! , 0.0) | 24040.6 | N/A<br>0.0<br>0.0 | 7.8866 | N/A | 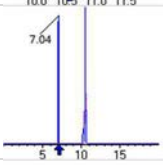 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.95 - 7.04 = 2.90 Pass $T$

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 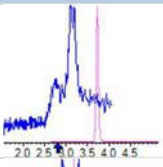 | 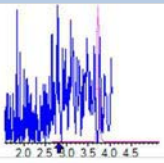 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 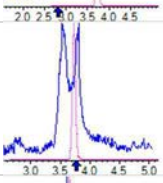 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 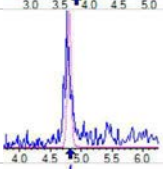 | 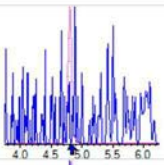 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 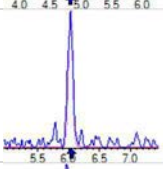 | 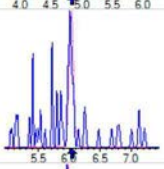 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 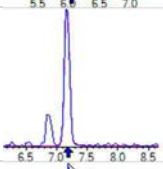 | 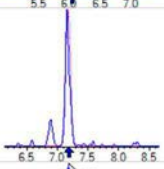 | |
| PFOA | ( 413.0 / 369.0 )<br>3210508<br>( 413.0 / 169.0 )<br>1253633 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.1) | 390.5<br>334.5 | 0.3905<br>106.8<br>113.7 | 7.3269 | N/A | 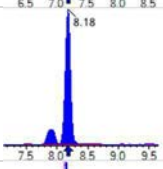 | 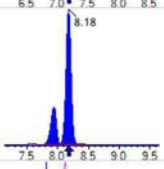 | MI4 ABK<br>3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 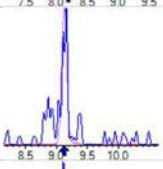 | 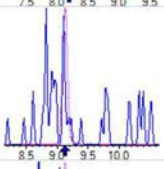 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 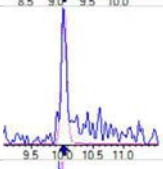 | 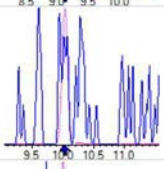 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 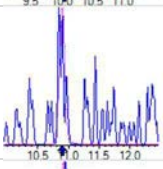 | 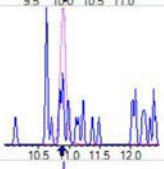 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 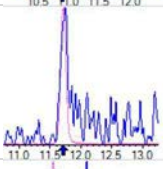 | 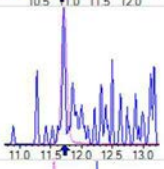 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 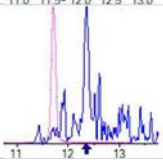 | 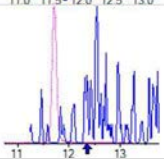 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 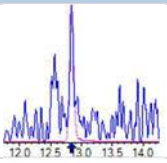 | 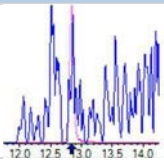 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 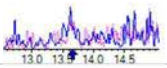 | 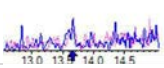 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 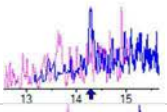 | 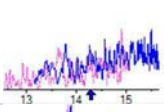 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 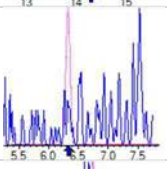 | 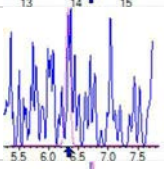 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 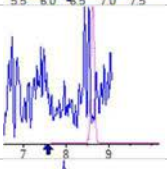 | 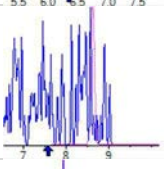 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 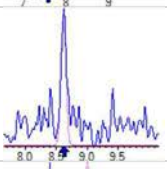 | 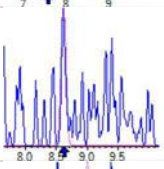 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 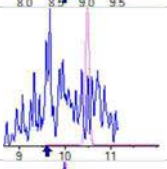 | 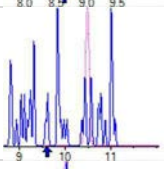 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 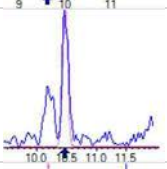 | 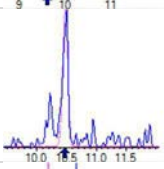 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 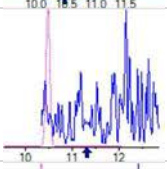 | 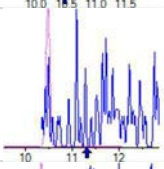 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 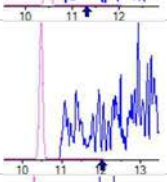 | 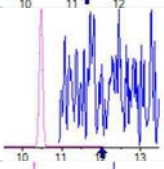 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 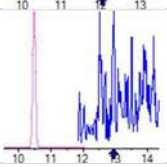 | 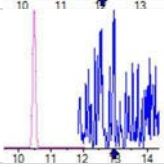 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 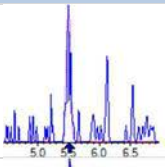 | 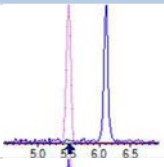 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 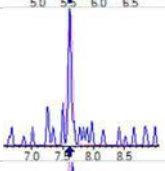 | 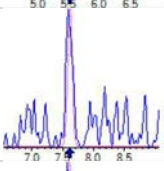 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 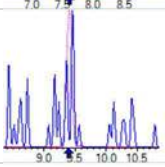 | 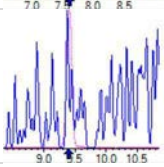 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 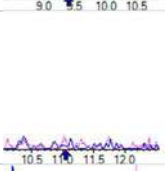 | 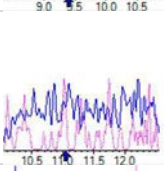 | NR, |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 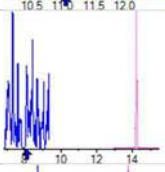 | 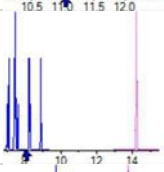 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 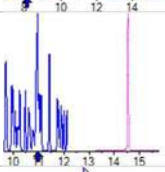 | 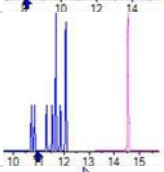 | |
| PFOSA | ( 498.0 / 78.0 ) 6877109<br>( 498.0 / 478.0 ) 99030 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 429.6<br>334.5 | 0.0144<br>102.6<br>96.7 | 9.4296 | N/A | 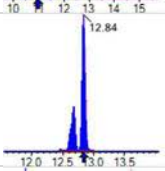 | 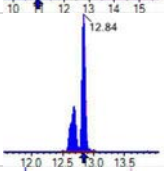 | MI4 ABK 3/19/24 |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 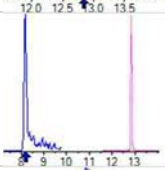 | 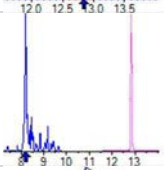 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1285923<br>( 512.0 / 169.0 ) 940847 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.8) | 3496.8<br>1493.3 | 0.7317<br>97.8<br>96.5 | 8.5401 | N/A | 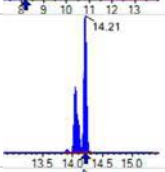 | 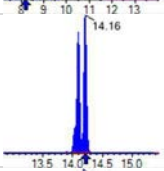 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1506523<br>( 526.0 / 169.0 ) 1906366 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 3724.9<br>3295.0 | 1.2654<br>102.5<br>101.9 | 8.4436 | N/A | 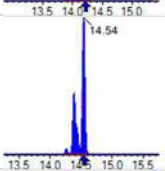 | 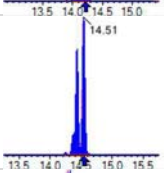 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 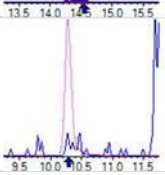 | 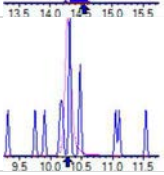 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 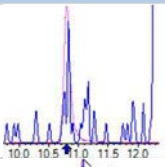 | 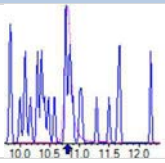 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>747241 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1656.5 | N/A<br>0.0<br>0.0 | 9.5158 | N/A | 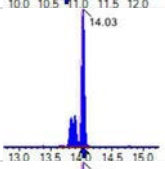 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>614232 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2466.7 | N/A<br>0.0<br>0.0 | 9.4444 | N/A | 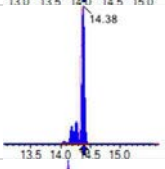 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 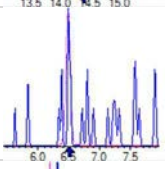 | 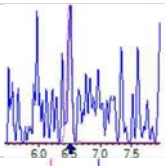 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 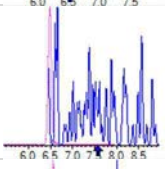 | 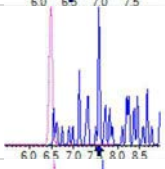 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 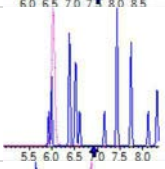 | 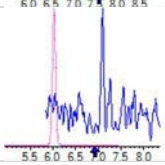 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 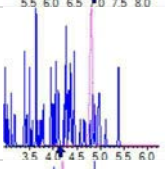 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 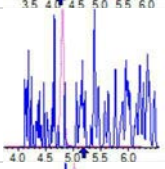 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 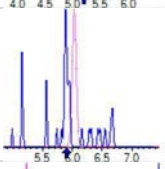 | 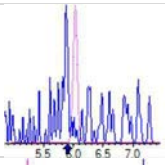 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 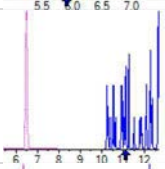 | 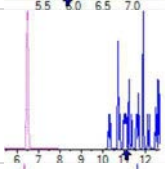 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 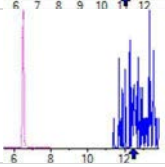 | 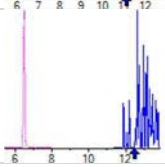 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 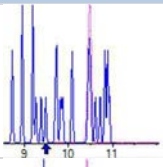 | 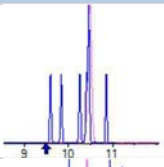 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 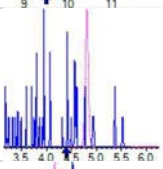 | 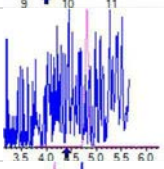 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 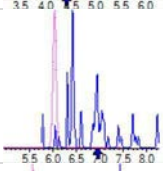 | 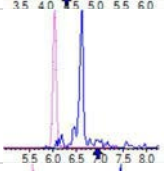 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 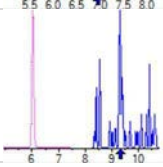 | 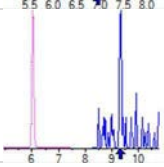 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 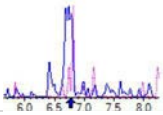 | 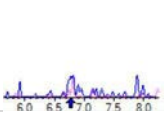 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 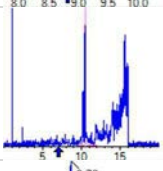 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261979 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1320.1 | N/A | 1.0987<br>[ 1.0000 ] | 109.9%<br>{ 110.8% } | 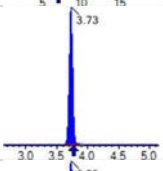 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122507 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 105609.8 | N/A | 0.9657<br>[ 1.0000 ] | 96.6%<br>{ 96.8% } | 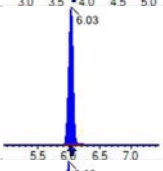 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379384 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 4686.4 | N/A | 0.9597<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 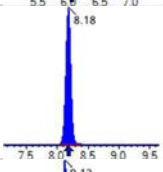 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 269870 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 731.1 | N/A | 0.9489<br>[ 1.0000 ] | 94.9%<br>{ 96.0% } | 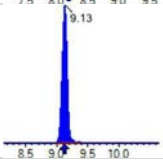 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281459 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3561.4 | N/A | 0.9638 [ 1.0000 ] | 96.4% { 97.3% } | 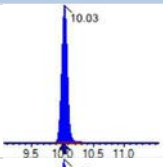 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 857437 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6887.8 | N/A | 0.9035 [ 1.0000 ] | 90.3% { 91.9% } | 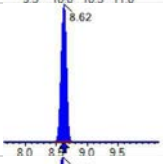 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 685748 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1960.7 | N/A | 0.9004 [ 1.0000 ] | 90.0% { 96.3% } | 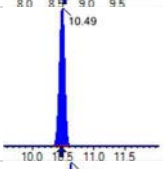 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2587544 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 42428.4 | N/A | 8.6458 [ 8.0000 ] | 108.1% { 115.6% } | 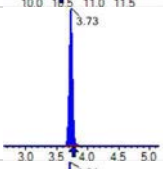 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1010634 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 6226.7 | N/A | 4.4214 [ 4.0000 ] | 110.5% { 103.6% } | 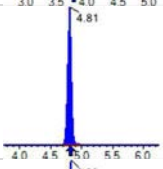 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 607029 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 8072.2 | N/A | 2.1717 [ 2.0000 ] | 108.6% { 102.9% } | 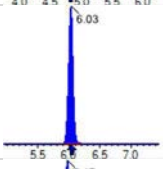 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 655104 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5211.4 | N/A | 2.1069 [ 2.0000 ] | 105.3% { 99.8% } | 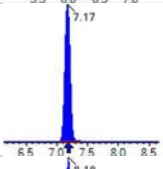 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 888575 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 3594.6 | N/A | 2.1859 [ 2.0000 ] | 109.3% { 103.1% } | 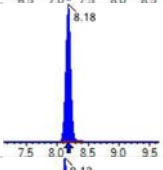 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 277647 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 2559.1 | N/A | 1.0493 [ 1.0000 ] | 104.9% { 102.9% } | 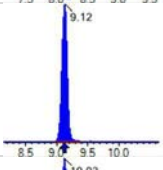 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331598 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 999.2 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 103.1% } | 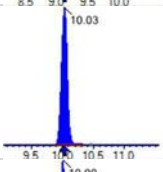 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393599 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 1043.4 | N/A | 1.0607 [ 1.0000 ] | 106.1% { 105.8% } | 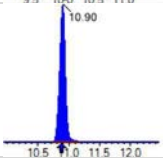 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392681 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 960.1 | N/A | 1.0391 [ 1.0000 ] | 103.9% { 105.3% } | 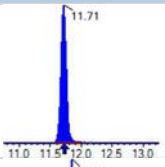 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327075 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1060.3 | N/A | 1.0163 [ 1.0000 ] | 101.6% { 100.2% } | 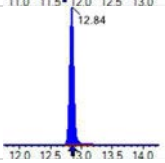 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729415 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1189.6 | N/A | 2.2324 [ 2.0000 ] | 111.6% { 103.1% } | 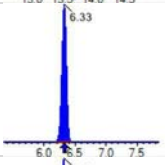 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1348867 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4105.7 | N/A | 2.1814 [ 2.0000 ] | 109.1% { 102.3% } | 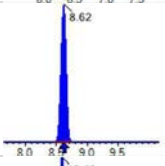 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1602565 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1826.7 | N/A | 2.1674 [ 2.0000 ] | 108.4% { 103.4% } | 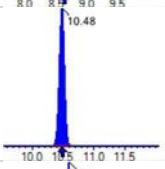 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 709206 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 97.6 | N/A | 5.3060 [ 4.0000 ] | 132.7% { 120.4% } | 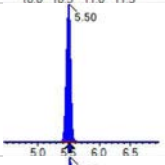 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1825907 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 3054.8 | N/A | 4.5647 [ 4.0000 ] | 114.1% { 109.5% } | 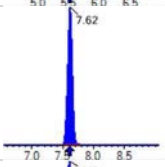 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1614348 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1240.5 | N/A | 5.1458 [ 4.0000 ] | 128.6% { 118.0% } | 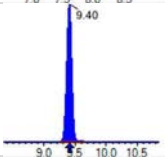 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1458588 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2083.8 | N/A | 2.2261 [ 2.0000 ] | 111.3% { 106.2% } | 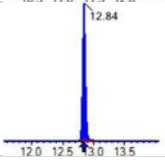 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 303300 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2184.5 | N/A | 2.1824 [ 2.0000 ] | 109.1% { 105.3% } | 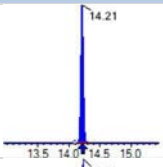  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 318629 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2334.3 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 103.9% } | 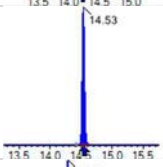  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 884165 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2410.3 | N/A | 4.6474 [ 4.0000 ] | 116.2% { 104.6% } | 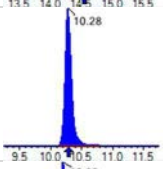  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 837390 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1815.5 | N/A | 4.8294 [ 4.0000 ] | 120.7% { 108.7% } | 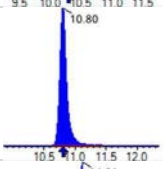  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1431759 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1901.3 | N/A | 22.9256 [ 20.0000 ] | 114.6% { 104.2% } | 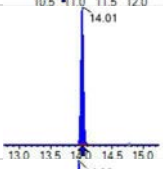  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1464004 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4722.6 | N/A | 23.0960 [ 20.0000 ] | 115.5% { 113.5% } | 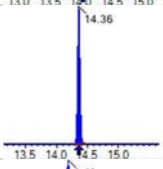  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068447 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2382.1 | N/A | 8.3913 [ 8.0000 ] | 104.9% { 104.5% } | 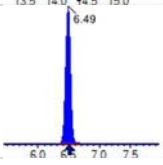  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 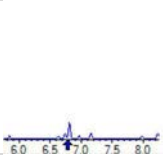 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 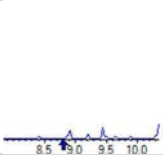 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (5)
Acquired: 2024/03/19 - 17:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26550<br>( 499.0 / 99.0 ) N/A | ( 9.89 , 0.94 ) ( -0.60 , N/A , #Value!) | 7.8 | N/A<br>0.0<br>0.0 | 0.0297 | N/A | 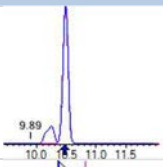 | 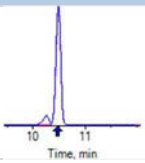 | |
| TDCA | ( 499.0 / 80.0 ) 7504397 | ( 7.03 , 0.67 ) ( N/A , #Value! , 0.0) | 33165.9 | N/A<br>0.0<br>0.0 | 12.3258 | N/A | 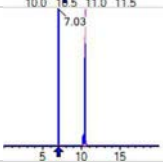 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.89 - 7.03 = 2.87 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | 0.125a | 0.065a | 0.80a | Ja |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.197a | 0.15a | 0.40a | MI3, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0970a | 0.064a | 0.40a | Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BLK1a | File ID:a | S2024-03-19B (7)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/19/24 18:32a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>18869<br>( 163.0 / 69.0 )<br>830 | ( 2.83 , 0.76 )<br>( N/A , 0.04 , -1.2) | 51.3<br>73.6 | 0.0440<br>162.0<br>167.0 | 0.0591 | N/A | 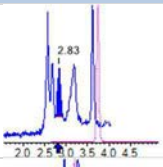 | 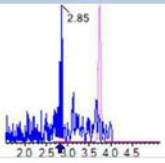 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 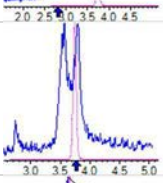 | | |
| PFPeA | ( 263.0 / 219.0 )<br>8344<br>( 263.0 / 69.0 )<br>141 | ( 4.78 , 0.99 )<br>( -0.03 , N/A , -2.7) | 39.4<br>6.3 | 0.0170<br>142.0<br>152.8 | 0.0313 | N/A | 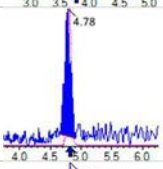 | 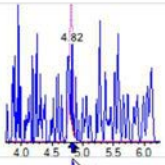 | |
| PFHxA | ( 313.0 / 269.0 )<br>4080<br>( 313.0 / 119.0 )<br>482 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , -0.8) | 26.4<br>11.8 | 0.1181<br>101.7<br>100.9 | 0.0133 | N/A | 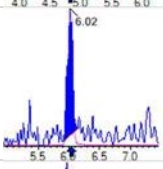 | 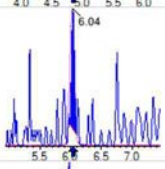 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 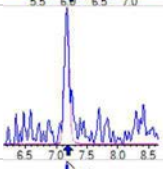 | 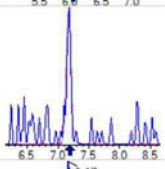 | |
| PFOA | ( 413.0 / 369.0 )<br>32923<br>( 413.0 / 169.0 )<br>11691 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.0) | 23.7<br>84.1 | 0.3551<br>97.1<br>103.4 | 0.0492 | N/A | 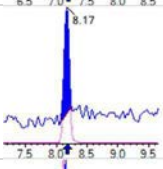 | 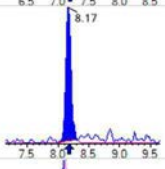 | MI3 ABK 3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 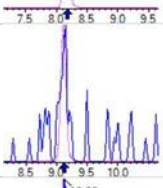 | 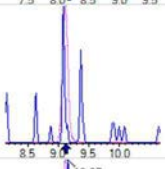 | |
| PFDA | ( 513.0 / 469.0 )<br>4474<br>( 513.0 / 169.0 )<br>582 | ( 10.03 , 1.00 )<br>( 0.01 , N/A , -2.8) | 67.5<br>83.6 | 0.1300<br>110.9<br>108.6 | 0.0132 | N/A | 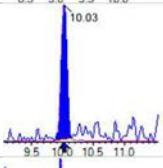 | 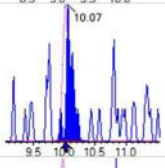 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 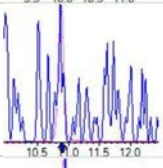 | 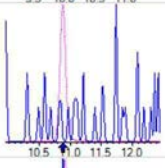 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 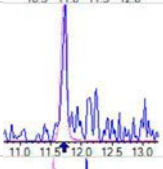 | 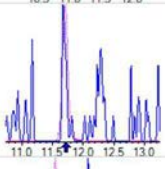 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 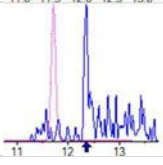 | 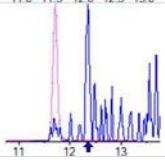 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 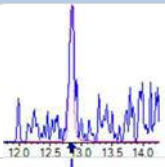 | 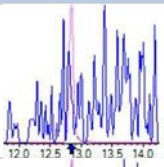 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 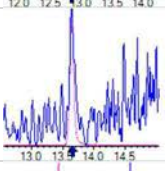 | 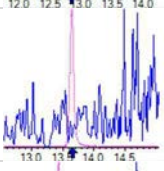 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 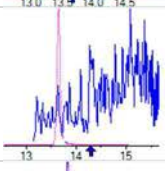 | 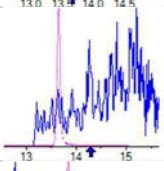 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 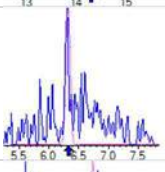 | 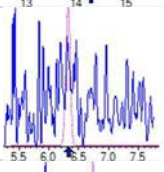 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 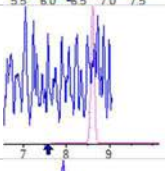 | 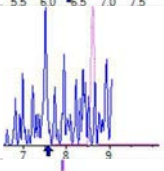 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 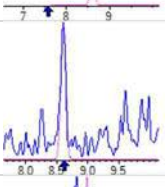 | 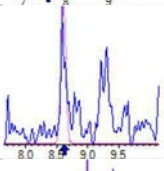 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 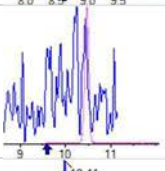 | 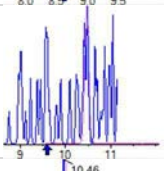 | |
| PFOS | ( 499.0 / 80.0 )<br>23264<br>( 499.0 / 99.0 )<br>4894 | ( 10.41 , 0.99 )<br>( -0.06 , N/A , -2.9) | 56.5<br>178.4 | 0.2104<br>90.0<br>87.6 | 0.0243 | N/A | 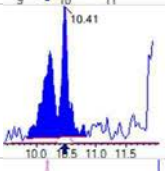 | 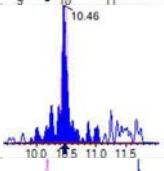 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 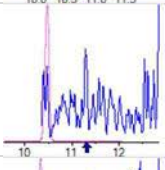 | 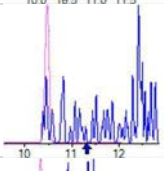 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 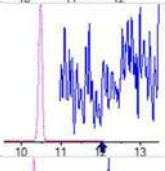 | 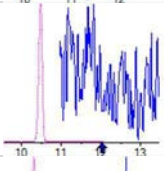 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 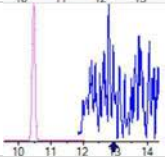 | 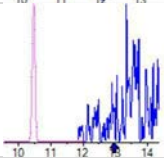 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 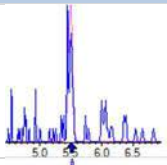 | 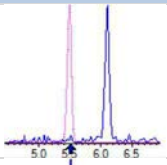 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 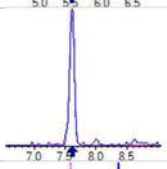 | 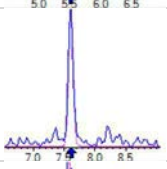 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 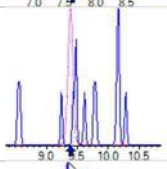 | 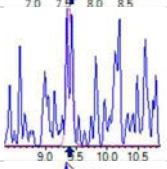 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18339<br>( 627.0 / 81.0 ) 23897 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.2) | 199.5<br>68.8 | 1.3031<br>90.5<br>89.3 | 0.0579 | N/A | 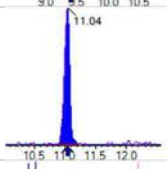 | 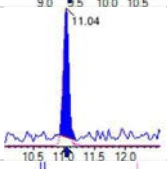 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 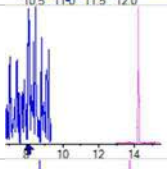 | 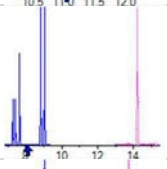 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 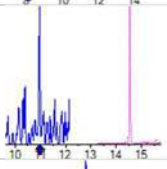 | 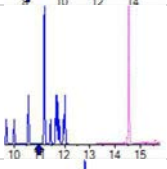 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 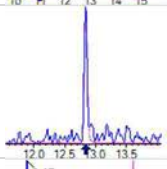 | 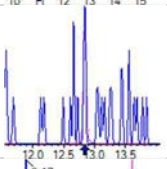 | |
| TFSI | ( 279.7 / 147.0 ) 37266<br>( 279.7 / 211.0 ) 3288 | ( 8.17 , 0.64 ) ( N/A , -0.01 , -0.1) | 22.6<br>10.6 | 0.0882<br>105.0<br>103.1 | 0.0250 | N/A | 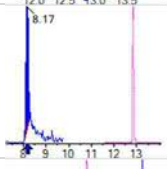 | 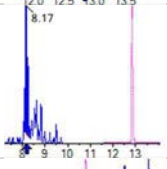 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 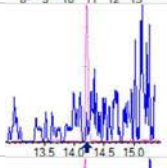 | 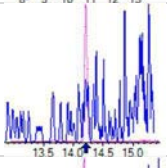 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 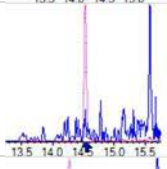 | 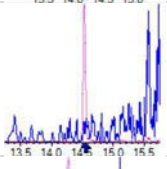 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 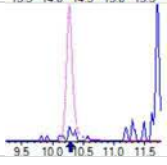 | 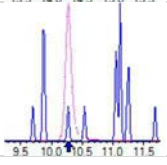 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 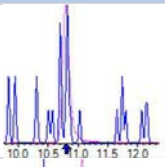 | 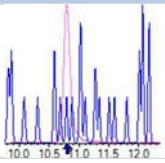 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 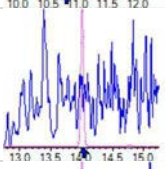 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 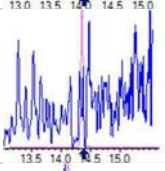 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 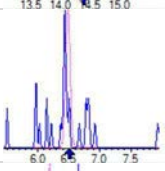 | 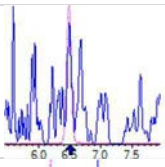 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 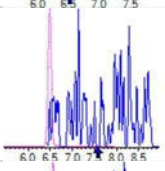 | 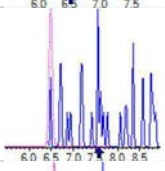 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 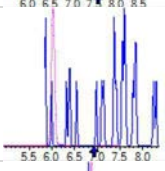 | 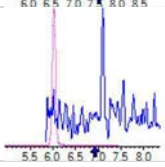 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 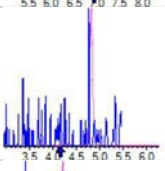 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 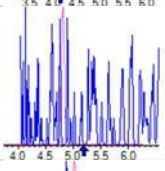 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 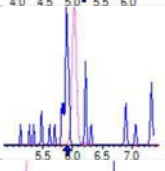 | 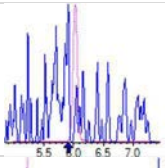 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 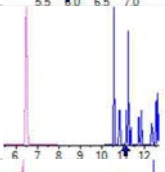 | 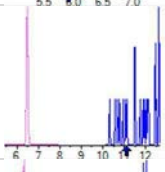 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 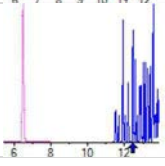 | 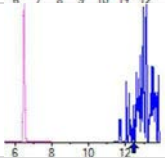 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 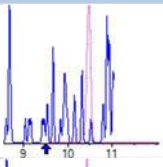 | 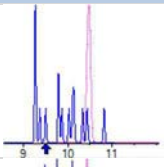 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 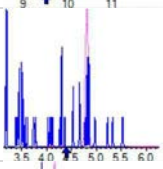 | 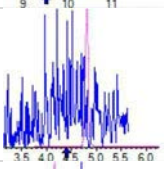 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 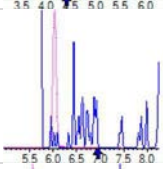 | 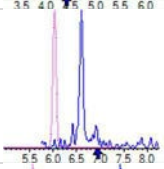 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 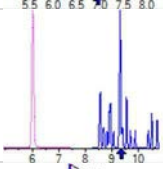 | 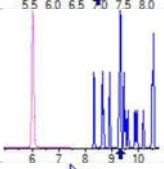 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 7894<br>( 357.2 / 243.0 ) 687 | ( 6.76 , 1.00 ) ( -0.01 , N/A , 0.0) | 73.0<br>14.7 | 0.0870<br>78.9<br>83.6 | 0.0241 | N/A | 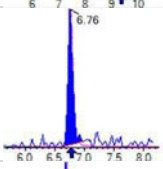 | 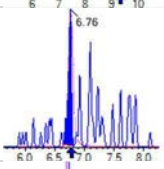 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 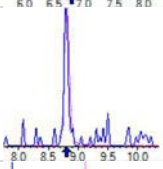 | 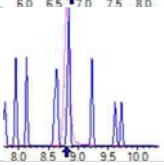 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 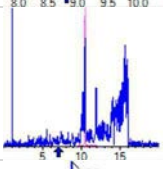 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 301695 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1263.5 | N/A | 1.2653 [ 1.0000 ] | 126.5% { 127.5% } | 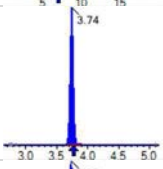 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 148385 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 132704.9 | N/A | 1.1697 [ 1.0000 ] | 117.0% { 117.2% } | 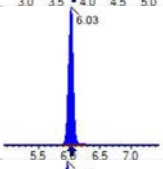 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 455871 | ( 8.17 , N/A ) ( N/A , -0.01 , N/A ) | 4804.6 | N/A | 1.1532 [ 1.0000 ] | 115.3% { 120.2% } | 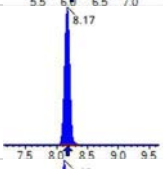 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 346446 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 932.8 | N/A | 1.2181 [ 1.0000 ] | 121.8% { 123.2% } | 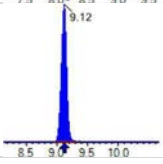 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 336363 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 3373.5 | N/A | 1.1518 [ 1.0000 ] | 115.2% { 116.3% } | 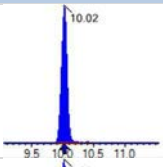 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1092779 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 5452.7 | N/A | 1.1515 [ 1.0000 ] | 115.1% { 117.1% } | 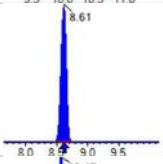 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 891333 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2064.7 | N/A | 1.1703 [ 1.0000 ] | 117.0% { 125.2% } | 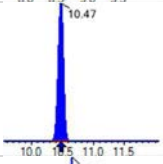 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2709380 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 41655.5 | N/A | 7.8612 [ 8.0000 ] | 98.3% { 121.0% } | 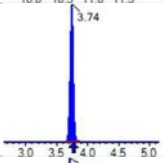 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1054301 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 5300.1 | N/A | 3.8080 [ 4.0000 ] | 95.2% { 108.0% } | 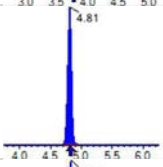 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 636903 | ( 6.03 , N/A ) ( N/A , -0.02 , N/A ) | 8114.4 | N/A | 1.8812 [ 2.0000 ] | 94.1% { 107.9% } | 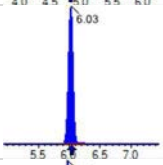 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 679691 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 6025.3 | N/A | 1.8048 [ 2.0000 ] | 90.2% { 103.5% } | 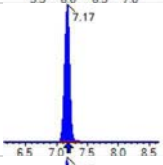 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 913079 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 3257.1 | N/A | 1.8693 [ 2.0000 ] | 93.5% { 105.9% } | 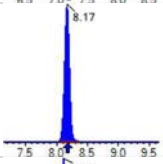 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 282753 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 2868.2 | N/A | 0.8324 [ 1.0000 ] | 83.2% { 104.8% } | 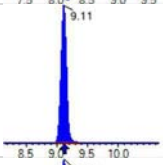 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 332274 | ( 10.02 , N/A ) ( N/A , -0.01 , N/A ) | 1265.6 | N/A | 0.8815 [ 1.0000 ] | 88.1% { 103.3% } | 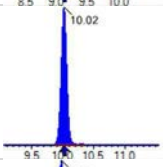 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 380512 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 883.1 | N/A | 0.8580 [ 1.0000 ] | 85.8% { 102.3% } | 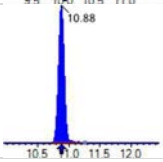 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 374351 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1501.2 | N/A | 0.8289 [ 1.0000 ] | 82.9% { 100.4% } | 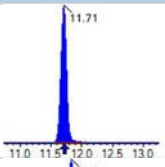  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 288773 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1224.7 | N/A | 0.7508 [ 1.0000 ] | 75.1% { 88.5% } | 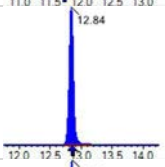  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 447847 | ( 13.65 , N/A ) ( N/A , -0.01 , N/A ) | 2668.3 | N/A | 1.3639 [ 2.0000 ] | 68.2% { 88.7% } | 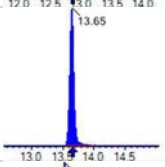  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1832360 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1101.5 | N/A | 1.8559 [ 2.0000 ] | 92.8% { 109.2% } | 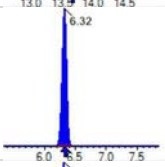  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1499935 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 3652.9 | N/A | 1.9033 [ 2.0000 ] | 95.2% { 113.8% } | 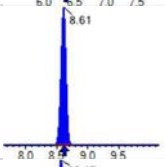  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1661220 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1734.7 | N/A | 1.7285 [ 2.0000 ] | 86.4% { 107.2% } | 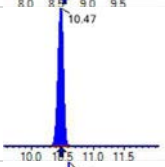  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 773701 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 91.9 | N/A | 4.5419 [ 4.0000 ] | 113.5% { 131.3% } | 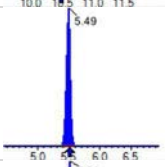  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1996233 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3869.3 | N/A | 3.9157 [ 4.0000 ] | 97.9% { 119.8% } | 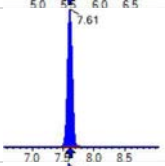  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1567213 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1509.1 | N/A | 3.9197 [ 4.0000 ] | 98.0% { 114.6% } | 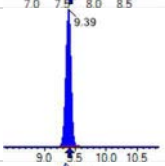  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3285759 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1452.1 | N/A | 7.8632 [ 8.0000 ] | 98.3% { 128.7% } | 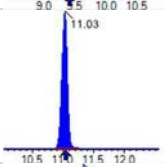  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1132908 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1684.7 | N/A | 1.3302 [ 2.0000 ] | 66.5% { 82.5% } | 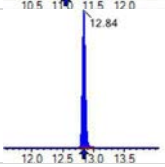  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (7)
Acquired: 2024/03/19 - 18:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 78591 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 781.3 | N/A | 0.4351 [ 2.0000 ] | 21.8% { 27.3% } | 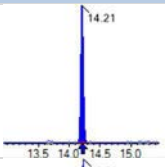  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 69020 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 646.0 | N/A | 0.3563 [ 2.0000 ] | 17.8% { 22.5% } | 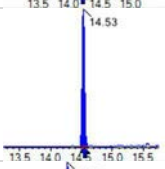  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 857040 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2549.7 | N/A | 3.4658 [ 4.0000 ] | 86.6% { 101.4% } | 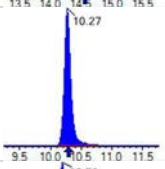  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 766900 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1816.0 | N/A | 3.4027 [ 4.0000 ] | 85.1% { 99.6% } | 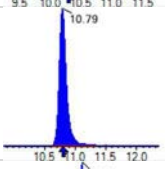  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 891958 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1921.6 | N/A | 10.9880 [ 20.0000 ] | 54.9% { 64.9% } | 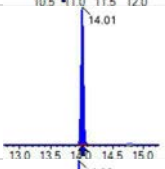  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 850189 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3449.8 | N/A | 10.3190 [ 20.0000 ] | 51.6% { 65.9% } | 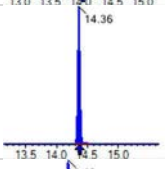  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1135121 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2081.2 | N/A | 7.3602 [ 8.0000 ] | 92.0% { 111.0% } | 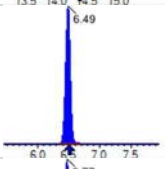  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 615006 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1124.4 | N/A | 1.6864 [ 2.0000 ] | 84.3% { 99.7% } | 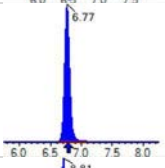  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 704029 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 831.6 | N/A | 2.1206 [ 2.0000 ] | 106.0% { 127.3% } | 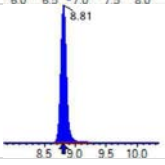  | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BS1a | File ID:a | S2024-03-18A (8)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 15:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.8a | 0.21a | 1.6a | |
| PFPeAa | 8.37a | 0.065a | 0.80a | |
| PFHxAa | 4.17a | 0.055a | 0.40a | |
| PFHpAa | 3.87a | 0.041a | 0.40a | |
| PFOAa | 4.07a | 0.15a | 0.40a | |
| PFNAa | 4.06a | 0.082a | 0.40a | |
| PFDAa | 3.94a | 0.10a | 0.40a | |
| PFUnAa | 4.01a | 0.16a | 0.40a | |
| PFDoAa | 3.97a | 0.11a | 0.40a | |
| PFTrDAa | 4.04a | 0.20a | 0.40a | |
| PFTeDAa | 3.93a | 0.20a | 0.40a | |
| PFHxDAa | 3.95a | 0.20a | 0.40a | |
| PFODAa | 3.42a | 0.20a | 0.40a | |
| PFBSa | 3.51a | 0.037a | 0.40a | |
| PFPeSa | 3.94a | 0.063a | 0.40a | |
| PFHxSa | 3.88a | 0.032a | 0.40a | |
| PFHpSa | 4.19a | 0.051a | 0.40a | |
| PFOSa | 3.89a | 0.064a | 0.40a | |
| PFNSa | 3.87a | 0.12a | 0.40a | |
| PFDSa | 3.70a | 0.15a | 0.40a | |
| PFDoSa | 3.62a | 0.12a | 0.40a | |
| 4:2FTSa | 16.1a | 0.29a | 1.6a | |
| 6:2FTSa | 15.5a | 0.31a | 1.6a | |
| 8:2FTSa | 16.4a | 0.082a | 1.6a | |
| 10:2FTSa | 18.5a | 0.40a | 1.6a | |
| PFOSAa | 4.27a | 0.10a | 0.40a | |
| NMeFOSAa | 19.4a | 0.47a | 1.6a | |
| NEtFOSAa | 15.9a | 0.41a | 1.6a | |
| NMeFOSAAa | 3.98a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-BS1a | File ID:a | S2024-03-18A (8)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 15:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 14.7a | 1.0a | 1.6a | |
| NEtFOSEa | 15.9a | 1.0a | 1.6a | |
| HFPO-DAa | 3.98a | 0.17a | 0.80a | |
| ADONAa | 3.76a | 0.12a | 0.80a | |
| PFEESAa | 7.06a | 0.11a | 0.80a | |
| PFMPAa | 8.43a | 0.054a | 0.80a | |
| PFMBAa | 8.17a | 0.091a | 0.80a | |
| NFDHAa | 8.20a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.12a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 3.03a | 0.21a | 0.80a | |
| 3:3FTCAa | 16.6a | 0.57a | 1.6a | |
| 5:3FTCAa | 16.7a | 0.44a | 1.6a | |
| 7:3FTCAa | 17.7a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 734330<br>( 163.0 / 69.0 ) 18995 | ( 2.83 , 0.75 ) ( N/A , 0.06 , 0.0) | 2620.1<br>930.1 | 0.0259<br>103.2<br>98.9 | 2.2714<br>[ 2.0000 ] | 113.6% | 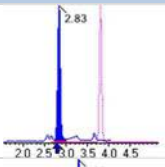 | 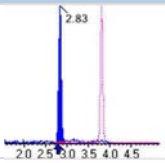 | |
| PFBA | ( 213.0 / 169.0 ) 1454068 | ( 3.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 2843.7 | N/A<br>0.0<br>0.0 | 4.2059<br>[ 4.0000 ] | 105.1% | 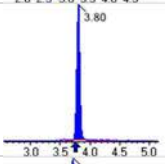 | | |
| PFPeA | ( 263.0 / 219.0 ) 636640<br>( 263.0 / 69.0 ) 7201 | ( 4.87 , 1.00 ) ( 0.00 , N/A , -0.1) | 1904.1<br>98.6 | 0.0113<br>103.0<br>96.8 | 2.0930<br>[ 2.0000 ] | 104.6% | 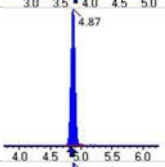 | 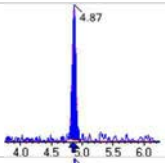 | |
| PFHxA | ( 313.0 / 269.0 ) 363770<br>( 313.0 / 119.0 ) 40313 | ( 6.07 , 1.00 ) ( 0.00 , N/A , -0.1) | 1280.6<br>485.6 | 0.1108<br>99.7<br>97.5 | 1.0425<br>[ 1.0000 ] | 104.2% | 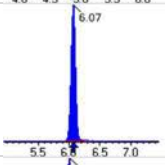 | 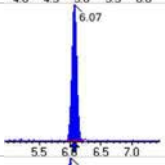 | |
| PFHpA | ( 363.0 / 319.0 ) 388981<br>( 363.0 / 169.0 ) 120752 | ( 7.21 , 1.00 ) ( 0.00 , N/A , 0.1) | 1228.5<br>939.2 | 0.3104<br>99.6<br>105.6 | 0.9680<br>[ 1.0000 ] | 96.8% | 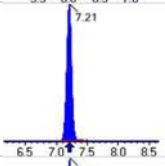 | 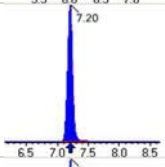 | |
| PFOA | ( 413.0 / 369.0 ) 557609<br>( 413.0 / 169.0 ) 196666 | ( 8.21 , 1.00 ) ( 0.00 , N/A , 0.0) | 447.2<br>857.4 | 0.3527<br>97.5<br>99.4 | 1.0184<br>[ 1.0000 ] | 101.8% | 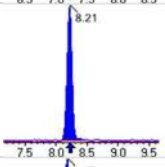 | 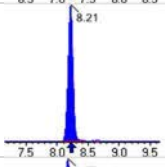 | |
| PFNA | ( 463.0 / 419.0 ) 371718<br>( 463.0 / 169.0 ) 91440 | ( 9.17 , 1.00 ) ( 0.00 , N/A , 0.2) | 1083.4<br>821.9 | 0.2460<br>93.7<br>100.0 | 1.0157<br>[ 1.0000 ] | 101.6% | 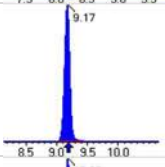 | 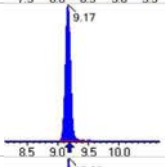 | |
| PFDA | ( 513.0 / 469.0 ) 410376<br>( 513.0 / 169.0 ) 48564 | ( 10.08 , 1.00 ) ( 0.00 , N/A , 0.3) | 1492.3<br>1662.9 | 0.1183<br>100.8<br>98.0 | 0.9861<br>[ 1.0000 ] | 98.6% | 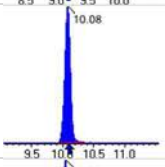 | 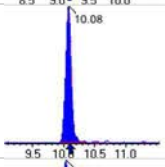 | |
| PFUnA | ( 563.0 / 519.0 ) 460132<br>( 563.0 / 169.0 ) 64562 | ( 10.94 , 1.00 ) ( 0.00 , N/A , 0.2) | 718.8<br>772.6 | 0.1403<br>94.7<br>97.0 | 1.0025<br>[ 1.0000 ] | 100.3% | 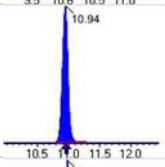 | 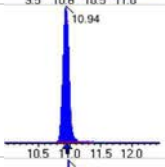 | |
| PFDoA | ( 613.0 / 569.0 ) 446280<br>( 613.0 / 169.0 ) 71605 | ( 11.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 1102.7<br>599.3 | 0.1604<br>101.5<br>104.9 | 0.9933<br>[ 1.0000 ] | 99.3% | 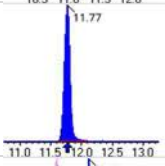 | 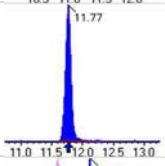 | |
| PFTrDA | ( 663.0 / 619.0 ) 436577<br>( 663.0 / 169.0 ) 114982 | ( 12.39 , 1.05 ) ( N/A , 0.00 , 0.0) | 982.0<br>690.4 | 0.2634<br>97.7<br>103.4 | 1.0107<br>[ 1.0000 ] | 101.1% | 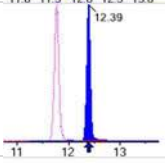 | 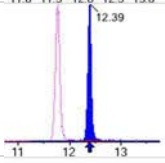 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 333756<br>( 713.0 / 169.0 ) 86539 | ( 12.88 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1181.6<br>548.7 | 0.2593<br>99.7<br>98.2 | 0.9832<br>[ 1.0000 ] | 98.3% | 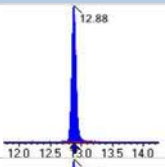 | 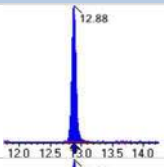 | |
| PFHxDA | ( 813.0 / 769.0 ) 244134<br>( 813.0 / 169.0 ) 64989 | ( 13.68 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1250.7<br>403.8 | 0.2662<br>122.7<br>104.5 | 0.9885<br>[ 1.0000 ] | 98.8% | 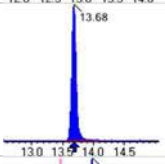 | 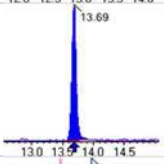 | |
| PFODA | ( 913.0 / 869.0 ) 141696<br>( 913.0 / 169.0 ) 50722 | ( 14.32 , 1.05 )<br>( N/A , 0.00 , 0.4) | 647.3<br>215.8 | 0.3580<br>93.7<br>107.9 | 0.8539<br>[ 1.0000 ] | 85.4% | 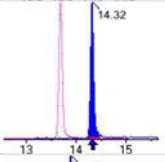 | 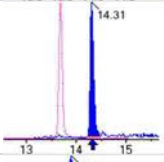 | |
| PFBS | ( 299.0 / 80.0 ) 518265<br>( 299.0 / 99.0 ) 388078 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1946.3<br>1563.9 | 0.7488<br>105.3<br>103.9 | 0.8785<br>[ 0.8847 ] | 99.3% | 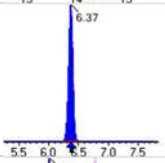 | 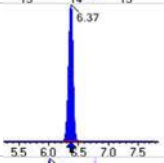 | |
| PFPeS | ( 349.0 / 80.0 ) 1314463<br>( 349.0 / 99.0 ) 442372 | ( 7.60 , 0.88 )<br>( N/A , -0.01 , 0.0) | 2211.1<br>1664.5 | 0.3365<br>99.0<br>98.1 | 0.9849<br>[ 0.9384 ] | 105.0% | 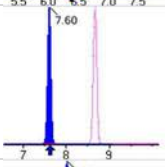 | 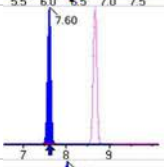 | |
| PFHxS | ( 399.0 / 80.0 ) 1440821<br>( 399.0 / 99.0 ) 465023 | ( 8.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2292.9<br>3365.5 | 0.3227<br>103.2<br>100.6 | 0.9707<br>[ 0.9110 ] | 106.6% | 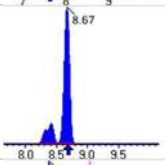 | 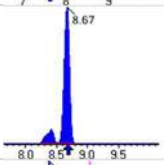 | |
| PFHpS | ( 449.0 / 80.0 ) 1277740<br>( 449.0 / 99.0 ) 334815 | ( 9.64 , 0.91 )<br>( N/A , -0.02 , 0.0) | 1536.6<br>1099.5 | 0.2620<br>98.1<br>97.5 | 1.0474<br>[ 0.9514 ] | 110.1% | 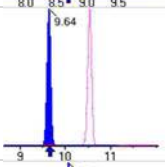 | 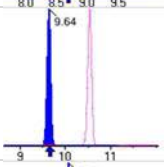 | |
| PFOS | ( 499.0 / 80.0 ) 1192429<br>( 499.0 / 99.0 ) 275896 | ( 10.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1567.2<br>3090.7 | 0.2314<br>97.8<br>105.6 | 0.9715<br>[ 0.9275 ] | 104.7% | 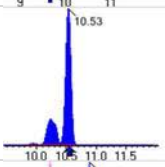 | 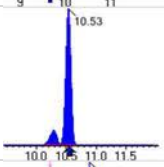 | |
| PFNS | ( 549.0 / 80.0 ) 1156662<br>( 549.0 / 99.0 ) 322559 | ( 11.37 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2025.5<br>1554.4 | 0.2789<br>105.0<br>101.7 | 0.9664<br>[ 0.9599 ] | 100.7% | 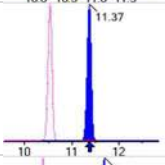 | 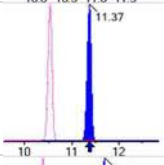 | |
| PFDS | ( 599.0 / 80.0 ) 1320853<br>( 599.0 / 99.0 ) 343707 | ( 12.08 , 1.15 )<br>( N/A , 0.00 , 0.0) | 2081.8<br>1467.0 | 0.2602<br>103.8<br>102.6 | 0.9259<br>[ 0.9631 ] | 96.1% | 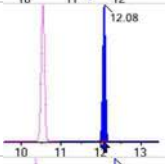 | 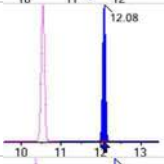 | |
| PFDoS | ( 699.0 / 80.0 ) 1104541<br>( 699.0 / 99.0 ) 269462 | ( 12.99 , 1.23 )<br>( N/A , 0.00 , 0.0) | 2787.8<br>2064.3 | 0.2440<br>105.8<br>107.8 | 0.9061<br>[ 0.9696 ] | 93.5% | 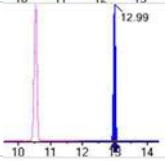 | 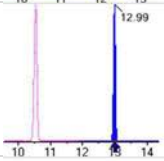 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1616072<br>( 327.0 / 81.0 ) 1472415 | ( 5.54 , 1.00 ) ( 0.00 , N/A , 0.1) | 4985.0<br>2611.6 | 0.9111<br>104.0<br>99.7 | 4.0295<br>[ 3.7381 ] | 107.8% | 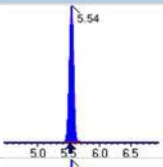 | 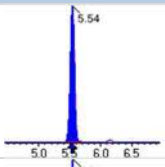 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1604354<br>( 427.0 / 81.0 ) 2023733 | ( 7.64 , 1.00 ) ( -0.01 , N/A , 0.0) | 3602.9<br>3047.8 | 1.2614<br>99.3<br>99.4 | 3.8676<br>[ 3.7962 ] | 101.9% | 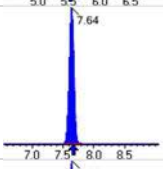 | 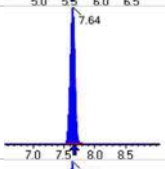 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1737160<br>( 527.0 / 81.0 ) 1896762 | ( 9.44 , 1.00 ) ( 0.00 , N/A , 0.4) | 1470.2<br>1729.7 | 1.0919<br>115.2<br>109.6 | 4.0907<br>[ 3.8332 ] | 106.7% | 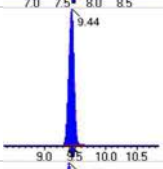 | 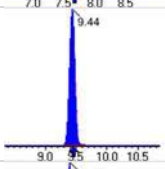 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1607645<br>( 627.0 / 81.0 ) 2056530 | ( 11.09 , 1.00 ) ( 0.01 , N/A , 0.1) | 1169.0<br>1125.4 | 1.2792<br>94.6<br>93.4 | 4.6238<br>[ 3.8647 ] | 119.6% | 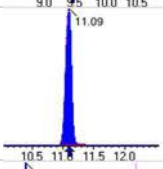 | 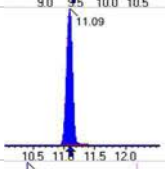 | |
| PFBSA | ( 297.9 / 78.0 ) 627573<br>( 297.9 / 278.0 ) 1064 | ( 8.06 , 0.57 ) ( N/A , 0.00 , -0.9) | 1084.6<br>12.6 | 0.0017<br>120.7<br>107.2 | 2.6201<br>[ 1.0000 ] | 262.0% | 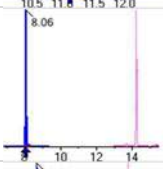 | 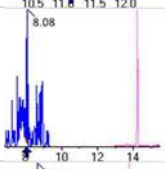 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 1041171<br>( 397.9 / 378.0 ) 4142 | ( 10.95 , 0.75 ) ( N/A , 0.00 , 0.4) | 1360.0<br>155.8 | 0.0040<br>104.5<br>95.0 | 3.9724<br>[ 1.0000 ] | 397.2% | 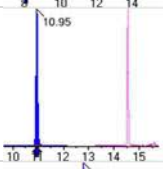 | 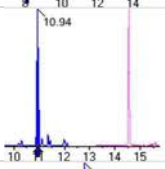 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 948122<br>( 498.0 / 478.0 ) 15463 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.0) | 1573.4<br>484.1 | 0.0163<br>113.0<br>119.1 | 1.0672<br>[ 1.0000 ] | 106.7% | 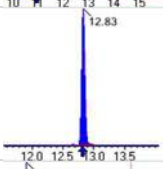 | 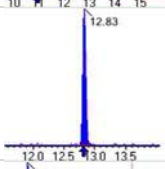 | |
| TFSI | ( 279.7 / 147.0 ) 2587033<br>( 279.7 / 211.0 ) 225514 | ( 8.24 , 0.64 ) ( N/A , -0.01 , 0.2) | 58.3<br>42.9 | 0.0872<br>105.7<br>102.5 | 1.3697<br>[ 0.9793 ] | 139.9% | 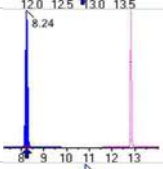 | 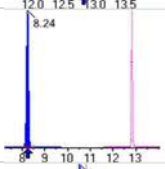 | |
| NMeFOSA | ( 512.0 / 219.0 ) 254806<br>( 512.0 / 169.0 ) 184466 | ( 14.20 , 1.00 ) ( -0.02 , N/A , 2.7) | 1309.3<br>1952.3 | 0.7239<br>98.5<br>94.8 | 4.8564<br>[ 4.0000 ] | 121.4% | 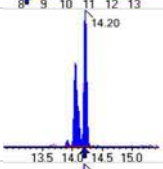 | 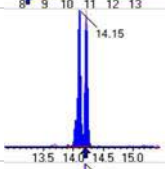 | |
| NEtFOSA | ( 526.0 / 219.0 ) 222463<br>( 526.0 / 169.0 ) 285853 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.5) | 1381.2<br>1194.9 | 1.2849<br>101.4<br>101.8 | 3.9672<br>[ 4.0000 ] | 99.2% | 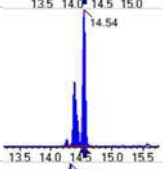 | 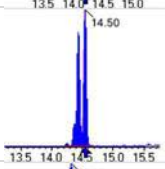 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 273292<br>( 570.0 / 483.0 ) 133704 | ( 10.33 , 1.00 ) ( 0.01 , N/A , 0.2) | 477.0<br>9263.3 | 0.4892<br>113.0<br>107.4 | 0.9942<br>[ 1.0000 ] | 99.4% | 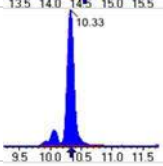 | 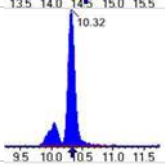 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 264203<br>( 584.0 / 526.0 ) 165344 | ( 10.85 , 1.00 ) ( 0.01 , N/A , 0.4) | 1385.8<br>661.5 | 0.6258<br>101.1<br>103.9 | 1.0307<br>[ 1.0000 ] | 103.1% | 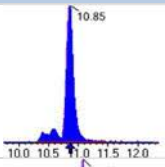 | 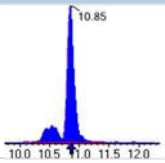 | |
| NMeFOSE | ( 616.0 / 59.0 ) 236095 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 895.9 | N/A<br>0.0<br>0.0 | 3.6716<br>[ 4.0000 ] | 91.8% | 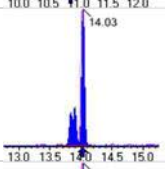 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 215172 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 1259.2 | N/A<br>0.0<br>0.0 | 3.9733<br>[ 4.0000 ] | 99.3% | 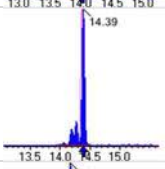 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 92007<br>( 285.0 / 185.0 ) 270517 | ( 6.52 , 1.00 ) ( 0.00 , N/A , -0.1) | 1333.5<br>1238.9 | 2.9402<br>94.4<br>106.1 | 0.9960<br>[ 1.0000 ] | 99.6% | 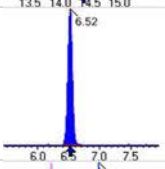 | 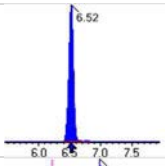 | |
| ADONA | ( 377.0 / 85.0 ) 1107358<br>( 377.0 / 251.0 ) 111506 | ( 7.60 , 1.16 ) ( N/A , -0.01 , 0.0) | 1996.5<br>613.6 | 0.1007<br>94.5<br>95.2 | 0.9412<br>[ 0.9427 ] | 99.8% | 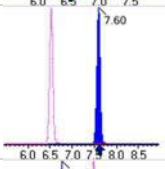 | 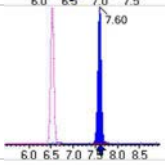 | |
| PFMPA | ( 229.0 / 85.0 ) 203039 | ( 4.19 , 0.86 ) ( N/A , 0.05 , 0.0) | 3215.9 | N/A<br>0.0<br>0.0 | 2.1083<br>[ 2.0000 ] | 105.4% | 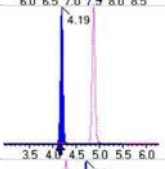 | | |
| PFMBA | ( 279.0 / 85.0 ) 520781 | ( 5.23 , 1.07 ) ( N/A , 0.02 , 0.0) | 3276.7 | N/A<br>0.0<br>0.0 | 2.0431<br>[ 2.0000 ] | 102.2% | 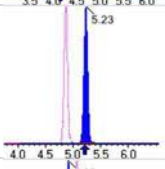 | | |
| NFDHA | ( 295.0 / 201.0 ) 248698<br>( 295.0 / 85.0 ) 263249 | ( 5.93 , 0.98 ) ( N/A , 0.01 , 0.1) | 2333.6<br>1551.5 | 1.0585<br>97.9<br>98.9 | 2.0502<br>[ 2.0000 ] | 102.5% | 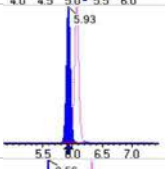 | 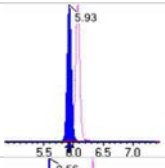 | |
| PFECHS | ( 461.0 / 98.9 ) 639468<br>( 461.0 / 381.2 ) 244098 | ( 9.56 , 0.91 ) ( N/A , -0.02 , 0.2) | 2682.0<br>2266.8 | 0.3817<br>97.8<br>97.6 | 0.9239<br>[ 0.9239 ] | 100.0% | 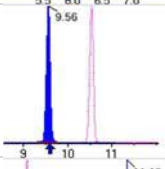 | 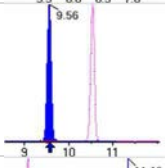 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1131020<br>( 533.0 / 353.0 ) 366128 | ( 11.18 , 1.71 ) ( N/A , -0.01 , 0.1) | 2601.2<br>1864.1 | 0.3237<br>100.7<br>104.0 | 0.7790<br>[ 0.9333 ] | 83.5% | 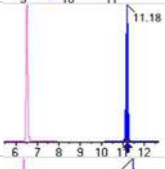 | 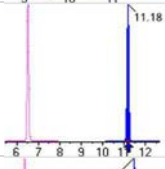 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 862256<br>( 633.0 / 453.0 ) 297692 | ( 12.49 , 1.91 ) ( N/A , -0.01 , 0.0) | 2825.2<br>1780.3 | 0.3452<br>105.7<br>104.1 | 0.7582<br>[ 0.9432 ] | 80.4% | 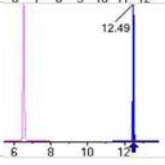 | 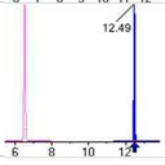 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 463254<br>( 315.0 / 83.0 ) 255769 | ( 6.96 , 1.15 )<br>( N/A , -0.01 , -0.1) | 2711.9<br>483.1 | 0.5521<br>96.4<br>93.4 | 1.7651<br>[ 1.7849 ] | 98.9% | 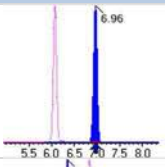 | 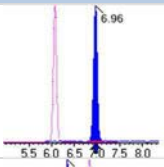 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 61479<br>( 241.0 / 117.0 ) 136160 | ( 4.42 , 0.91 )<br>( N/A , 0.05 , 0.1) | 1260.5<br>505.4 | 2.2147<br>99.8<br>99.5 | 4.1604<br>[ 4.0000 ] | 104.0% | 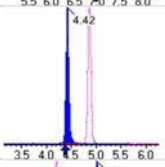 | 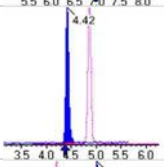 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 352311<br>( 341.0 / 217.0 ) 525542 | ( 6.93 , 1.14 )<br>( N/A , 0.00 , 0.0) | 1213.2<br>750.5 | 1.4917<br>99.6<br>97.3 | 4.1657<br>[ 4.0000 ] | 104.1% | 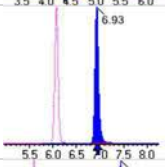 | 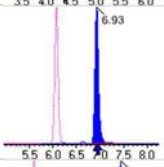 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 550545<br>( 441.0 / 337.0 ) 482699 | ( 9.32 , 1.54 )<br>( N/A , -0.01 , 0.0) | 4322.9<br>28587.3 | 0.8768<br>98.5<br>101.2 | 4.4252<br>[ 4.0000 ] | 110.6% | 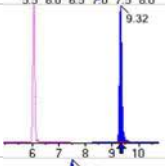 | 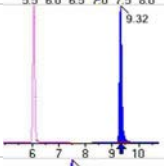 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 354922<br>( 357.2 / 243.0 ) 34389 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1142.8<br>270.3 | 0.0969<br>91.8<br>90.7 | 1.1689<br>[ 1.0000 ] | 116.9% | 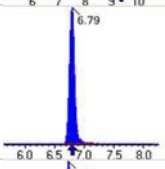 | 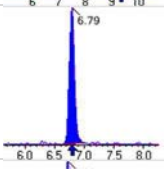 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 285993<br>( 457.2 / 343.0 ) 12618 | ( 8.84 , 1.00 )<br>( -0.01 , N/A , 0.8) | 701.8<br>182.8 | 0.0441<br>112.8<br>116.1 | 1.1593<br>[ 1.0000 ] | 115.9% | 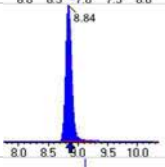 | 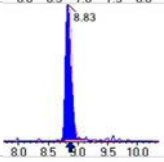 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 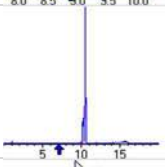 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 351985 | ( 3.80 , N/A )<br>( N/A , 0.05 , N/A ) | 1308.7 | N/A | 1.1684<br>[ 1.0000 ] | 116.8%<br>{ 104.0% } | 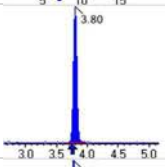 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 172324 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 18413.6 | N/A | 1.1207<br>[ 1.0000 ] | 112.1%<br>{ 101.1% } | 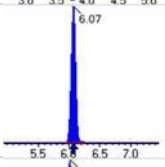 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 536571 | ( 8.22 , N/A )<br>( N/A , -0.01 , N/A ) | 3406.7 | N/A | 1.2027<br>[ 1.0000 ] | 120.3%<br>{ 109.9% } | 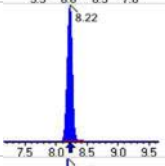 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 391650 | ( 9.17 , N/A )<br>( N/A , -0.02 , N/A ) | 1016.6 | N/A | 1.1716<br>[ 1.0000 ] | 117.2%<br>{ 101.8% } | 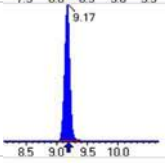 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 399787 | ( 10.08 , N/A ) ( N/A , -0.01 , N/A ) | 6137.3 | N/A | 1.2055 [ 1.0000 ] | 120.6% { 105.9% } | 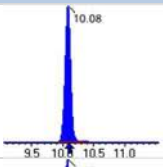 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1294241 | ( 8.67 , N/A ) ( N/A , -0.02 , N/A ) | 5332.3 | N/A | 1.1582 [ 1.0000 ] | 115.8% { 103.3% } | 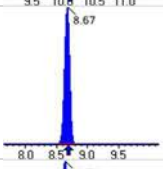 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1111159 | ( 10.54 , N/A ) ( N/A , -0.01 , N/A ) | 2954.8 | N/A | 1.1383 [ 1.0000 ] | 113.8% { 105.0% } | 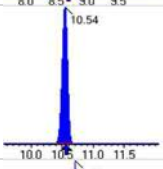 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2923468 | ( 3.80 , N/A ) ( N/A , 0.06 , N/A ) | 57699.2 | N/A | 7.5317 [ 8.0000 ] | 94.1% { 102.9% } | 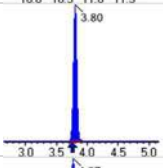 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1195186 | ( 4.87 , N/A ) ( N/A , 0.03 , N/A ) | 5992.3 | N/A | 3.8661 [ 4.0000 ] | 96.7% { 93.3% } | 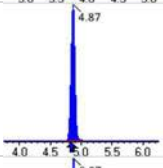 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 720273 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 9995.6 | N/A | 1.9467 [ 2.0000 ] | 97.3% { 95.0% } | 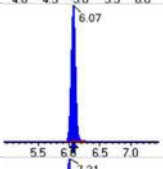 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 816048 | ( 7.21 , N/A ) ( N/A , -0.01 , N/A ) | 4462.3 | N/A | 2.1117 [ 2.0000 ] | 105.6% { 99.4% } | 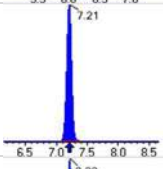 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1076825 | ( 8.22 , N/A ) ( N/A , -0.01 , N/A ) | 3205.1 | N/A | 1.9034 [ 2.0000 ] | 95.2% { 99.1% } | 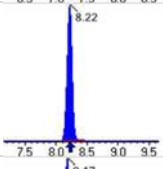 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 365210 | ( 9.17 , N/A ) ( N/A , -0.02 , N/A ) | 3336.5 | N/A | 0.9657 [ 1.0000 ] | 96.6% { 96.6% } | 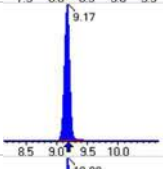 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 417850 | ( 10.08 , N/A ) ( N/A , -0.01 , N/A ) | 1102.3 | N/A | 0.9057 [ 1.0000 ] | 90.6% { 88.7% } | 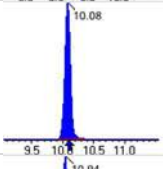 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 491508 | ( 10.94 , N/A ) ( N/A , -0.01 , N/A ) | 904.6 | N/A | 0.8763 [ 1.0000 ] | 87.6% { 96.9% } | 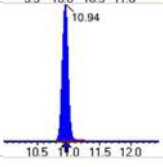 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-BS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 438963 | ( 11.77 , N/A ) ( N/A , -0.01 , N/A ) | 1368.8 | N/A | 0.7793 [ 1.0000 ] | 77.9% { 84.6% } | 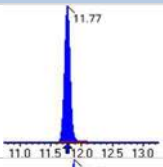 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 357457 | ( 12.88 , N/A ) ( N/A , 0.00 , N/A ) | 1374.5 | N/A | 0.7283 [ 1.0000 ] | 72.8% { 80.7% } | 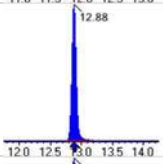 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 511800 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2004.4 | N/A | 1.2276 [ 2.0000 ] | 61.4% { 63.6% } | 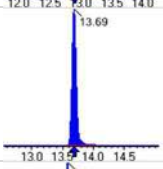 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2268986 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 1097.1 | N/A | 1.7993 [ 2.0000 ] | 90.0% { 95.2% } | 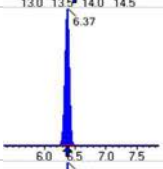 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1676229 | ( 8.67 , N/A ) ( N/A , -0.01 , N/A ) | 4098.2 | N/A | 1.7699 [ 2.0000 ] | 88.5% { 95.1% } | 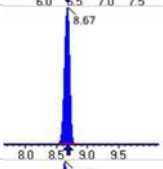 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2123456 | ( 10.54 , N/A ) ( N/A , -0.01 , N/A ) | 2097.5 | N/A | 1.7951 [ 2.0000 ] | 89.8% { 95.2% } | 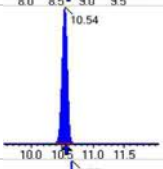 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 595779 | ( 5.55 , N/A ) ( N/A , 0.01 , N/A ) | 92.4 | N/A | 5.2862 [ 4.0000 ] | 132.2% { 107.7% } | 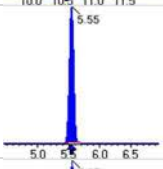 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1867804 | ( 7.65 , N/A ) ( N/A , -0.01 , N/A ) | 3458.9 | N/A | 5.3366 [ 4.0000 ] | 133.4% { 114.7% } | 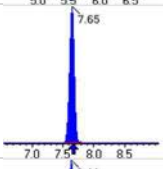 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1714451 | ( 9.44 , N/A ) ( N/A , -0.02 , N/A ) | 2111.3 | N/A | 4.9168 [ 4.0000 ] | 122.9% { 100.5% } | 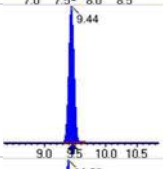 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3380485 | ( 11.08 , N/A ) ( N/A , -0.01 , N/A ) | 1455.8 | N/A | 8.4457 [ 8.0000 ] | 105.6% { 91.1% } | 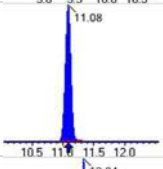 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1820685 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2093.7 | N/A | 1.4203 [ 2.0000 ] | 71.0% { 75.2% } | 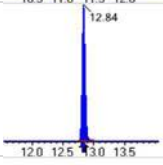 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (8)
Acquired: 2024/03/18 - 15:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 104185 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 903.3 | N/A | 0.4401 [ 2.0000 ] | 22.0% { 24.4% } | 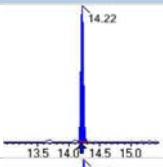  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 102206 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 829.4 | N/A | 0.3759 [ 2.0000 ] | 18.8% { 21.1% } | 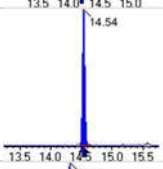  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1167535 | ( 10.32 , N/A ) ( N/A , -0.01 , N/A ) | 3034.7 | N/A | 3.8541 [ 4.0000 ] | 96.4% { 88.4% } | 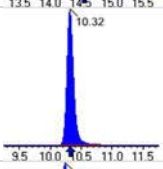  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1062912 | ( 10.84 , N/A ) ( N/A , -0.01 , N/A ) | 1936.8 | N/A | 3.6964 [ 4.0000 ] | 92.4% { 86.3% } | 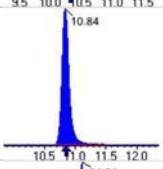  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1136042 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 2323.6 | N/A | 10.2712 [ 20.0000 ] | 51.4% { 61.1% } | 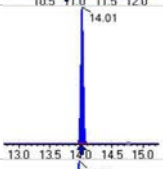  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1225807 | ( 14.36 , N/A ) ( N/A , 0.01 , N/A ) | 4029.2 | N/A | 9.1488 [ 20.0000 ] | 45.7% { 58.5% } | 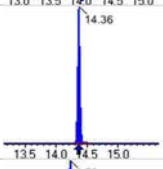  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1301850 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2537.1 | N/A | 8.1855 [ 8.0000 ] | 102.3% { 92.7% } | 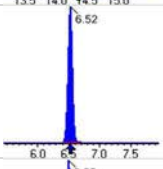  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 564986 | ( 6.80 , N/A ) ( N/A , -0.01 , N/A ) | 1023.8 | N/A | 1.5934 [ 2.0000 ] | 79.7% { 79.4% } | 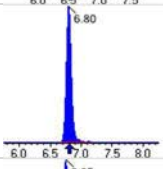  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 585027 | ( 8.85 , N/A ) ( N/A , -0.02 , N/A ) | 846.2 | N/A | 1.7673 [ 2.0000 ] | 88.4% { 87.4% } | 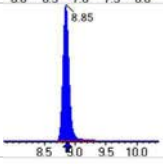  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MRL1a | File ID:a | S2024-03-18A (9)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:14a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 3.29a | 0.21a | 1.6a | |
| PFPeAa | 1.54a | 0.065a | 0.80a | |
| PFHxAa | 0.724a | 0.055a | 0.40a | |
| PFHpAa | 0.780a | 0.041a | 0.40a | |
| PFOAa | 0.959a | 0.15a | 0.40a | MI4a |
| PFNAa | 0.780a | 0.082a | 0.40a | |
| PFDAa | 0.827a | 0.10a | 0.40a | |
| PFUnAa | 0.774a | 0.16a | 0.40a | |
| PFDoAa | 0.755a | 0.11a | 0.40a | |
| PFTrDAa | 0.754a | 0.20a | 0.40a | |
| PFTeDAa | 0.791a | 0.20a | 0.40a | |
| PFHxDAa | 0.973a | 0.20a | 0.40a | |
| PFODAa | 0.829a | 0.20a | 0.40a | |
| PFBSa | 0.691a | 0.037a | 0.40a | |
| PFPeSa | 0.779a | 0.063a | 0.40a | |
| PFHxSa | 0.752a | 0.032a | 0.40a | |
| PFHpSa | 0.774a | 0.051a | 0.40a | |
| PFOSa | 0.776a | 0.064a | 0.40a | |
| PFNSa | 0.707a | 0.12a | 0.40a | |
| PFDSa | 0.716a | 0.15a | 0.40a | |
| PFDoSa | 0.662a | 0.12a | 0.40a | |
| 4:2FTSa | 3.05a | 0.29a | 1.6a | |
| 6:2FTSa | 3.03a | 0.31a | 1.6a | |
| 8:2FTSa | 2.97a | 0.082a | 1.6a | |
| 10:2FTSa | 4.19a | 0.40a | 1.6a | |
| PFOSAa | 0.781a | 0.10a | 0.40a | |
| NMeFOSAa | 3.56a | 0.47a | 1.6a | |
| NEtFOSAa | 3.01a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.774a | 0.11a | 0.40a | |
| NEtFOSAAa | 0.738a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MRL1a | File ID:a | S2024-03-18A (9)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:14a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 3.09a | 1.0a | 1.6a | |
| NEtFOSEa | 3.18a | 1.0a | 1.6a | |
| HFPO-DAa | 0.816a | 0.17a | 0.80a | |
| ADONAa | 0.749a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.36a | 0.11a | 0.80a | |
| PFMPAa | 1.52a | 0.054a | 0.80a | |
| PFMBAa | 1.48a | 0.091a | 0.80a | |
| NFDHAa | 1.51a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.648a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.636a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 3.07a | 0.57a | 1.6a | |
| 5:3FTCAa | 3.11a | 0.44a | 1.6a | |
| 7:3FTCAa | 3.27a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 173585<br>( 163.0 / 69.0 ) 4542 | ( 2.82 , 0.75 )<br>( N/A , 0.05 , -0.1) | 816.2<br>220.4 | 0.0262<br>104.4<br>100.0 | 0.5387<br>[ 0.4000 ] | 134.7% | 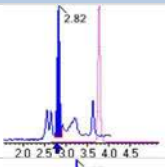 | 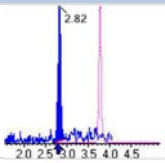 | |
| PFBA | ( 213.0 / 169.0 ) 283001 | ( 3.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 490.7 | N/A<br>0.0<br>0.0 | 0.8213<br>[ 0.8000 ] | 102.7% | 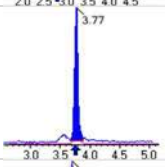 | | |
| PFPeA | ( 263.0 / 219.0 ) 122854<br>( 263.0 / 69.0 ) 1382 | ( 4.85 , 1.00 )<br>( 0.00 , N/A , 0.4) | 541.7<br>21.2 | 0.0112<br>102.4<br>96.2 | 0.3846<br>[ 0.4000 ] | 96.2% | 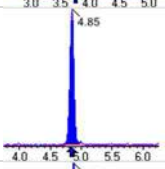 | 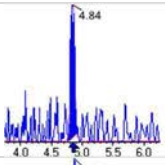 | |
| PFHxA | ( 313.0 / 269.0 ) 65828<br>( 313.0 / 119.0 ) 7903 | ( 6.07 , 1.00 )<br>( 0.00 , N/A , -0.2) | 349.0<br>218.4 | 0.1201<br>108.1<br>105.7 | 0.1811<br>[ 0.2000 ] | 90.5% | 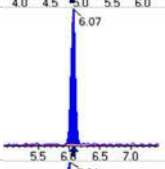 | 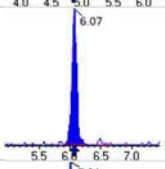 | |
| PFHpA | ( 363.0 / 319.0 ) 76910<br>( 363.0 / 169.0 ) 24450 | ( 7.21 , 1.00 )<br>( 0.00 , N/A , -0.1) | 431.7<br>301.1 | 0.3179<br>102.0<br>108.1 | 0.1949<br>[ 0.2000 ] | 97.5% | 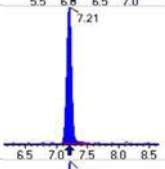 | 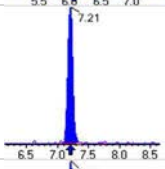 | |
| PFOA | ( 413.0 / 369.0 ) 129039<br>( 413.0 / 169.0 ) 50602 | ( 8.21 , 1.00 )<br>( 0.00 , N/A , 0.0) | 193.7<br>299.3 | 0.3921<br>108.4<br>110.5 | 0.2398<br>[ 0.2000 ] | 119.9% | 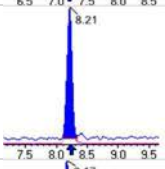 | 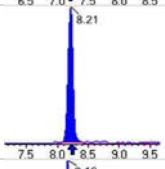 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 ) 71719<br>( 463.0 / 169.0 ) 18414 | ( 9.17 , 1.00 )<br>( 0.00 , N/A , 0.4) | 446.8<br>307.8 | 0.2568<br>97.8<br>104.3 | 0.1950<br>[ 0.2000 ] | 97.5% | 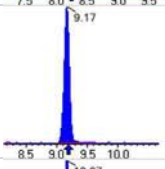 | 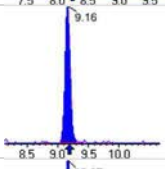 | |
| PFDA | ( 513.0 / 469.0 ) 88038<br>( 513.0 / 169.0 ) 10103 | ( 10.07 , 1.00 )<br>( 0.00 , N/A , -0.2) | 579.0<br>1959.4 | 0.1148<br>97.8<br>95.0 | 0.2067<br>[ 0.2000 ] | 103.4% | 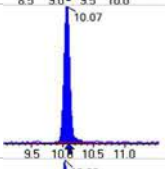 | 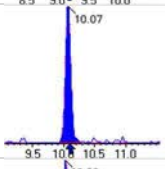 | |
| PFUnA | ( 563.0 / 519.0 ) 87337<br>( 563.0 / 169.0 ) 12157 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 362.7<br>149.4 | 0.1392<br>94.0<br>96.2 | 0.1935<br>[ 0.2000 ] | 96.7% | 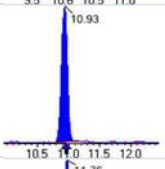 | 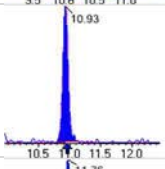 | |
| PFDoA | ( 613.0 / 569.0 ) 90922<br>( 613.0 / 169.0 ) 14972 | ( 11.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 455.5<br>172.2 | 0.1647<br>104.1<br>107.7 | 0.1888<br>[ 0.2000 ] | 94.4% | 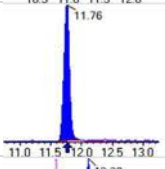 | 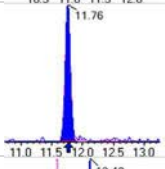 | |
| PFTrDA | ( 663.0 / 619.0 ) 87282<br>( 663.0 / 169.0 ) 22134 | ( 12.39 , 1.05 )<br>( N/A , 0.00 , -0.6) | 464.1<br>255.6 | 0.2536<br>94.1<br>99.6 | 0.1885<br>[ 0.2000 ] | 94.3% | 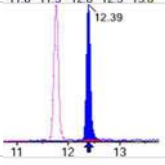 | 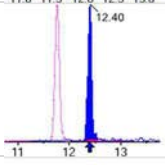 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 66925<br>( 713.0 / 169.0 ) 18367 | ( 12.89 , 1.00 )<br>( 0.00 , N/A , 0.1) | 359.2<br>199.1 | 0.2744<br>105.6<br>103.9 | 0.1978<br>[ 0.2000 ] | 98.9% | 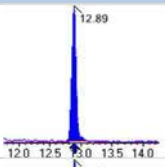 | 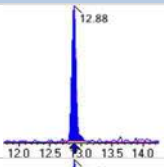 | |
| PFHxDA | ( 813.0 / 769.0 ) 56030<br>( 813.0 / 169.0 ) 13457 | ( 13.69 , 1.00 )<br>( -0.01 , N/A , 0.1) | 376.4<br>122.6 | 0.2402<br>110.7<br>94.3 | 0.2433<br>[ 0.2000 ] | 121.7% | 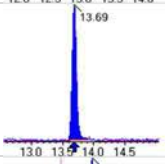 | 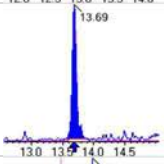 | |
| PFODA | ( 913.0 / 869.0 ) 32061<br>( 913.0 / 169.0 ) 11213 | ( 14.32 , 1.05 )<br>( N/A , 0.00 , -0.3) | 179.1<br>61.5 | 0.3497<br>91.6<br>105.4 | 0.2072<br>[ 0.2000 ] | 103.6% | 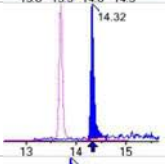 | 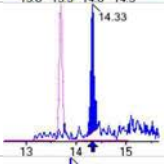 | |
| PFBS | ( 299.0 / 80.0 ) 98466<br>( 299.0 / 99.0 ) 73185 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.1) | 512.0<br>358.4 | 0.7433<br>104.5<br>103.1 | 0.1728<br>[ 0.1769 ] | 97.6% | 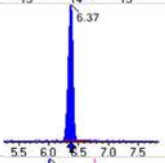 | 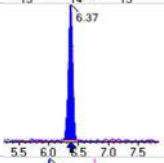 | |
| PFPeS | ( 349.0 / 80.0 ) 262829<br>( 349.0 / 99.0 ) 88678 | ( 7.60 , 0.88 )<br>( N/A , -0.01 , 0.0) | 823.5<br>610.8 | 0.3374<br>99.2<br>98.3 | 0.1948<br>[ 0.1877 ] | 103.8% | 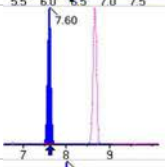 | 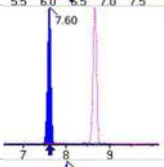 | |
| PFHxS | ( 399.0 / 80.0 ) 282283<br>( 399.0 / 99.0 ) 86978 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1027.1<br>1997.7 | 0.3081<br>98.5<br>96.0 | 0.1881<br>[ 0.1822 ] | 103.3% | 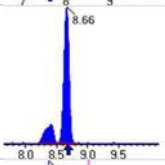 | 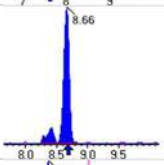 | |
| PFHpS | ( 449.0 / 80.0 ) 245944<br>( 449.0 / 99.0 ) 61438 | ( 9.63 , 0.91 )<br>( N/A , -0.03 , 0.2) | 728.3<br>433.1 | 0.2498<br>93.5<br>93.0 | 0.1935<br>[ 0.1903 ] | 101.7% | 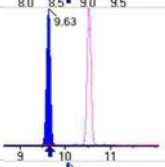 | 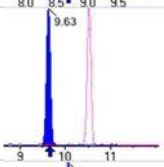 | |
| PFOS | ( 499.0 / 80.0 ) 248020<br>( 499.0 / 99.0 ) 55419 | ( 10.53 , 1.00 )<br>( 0.00 , N/A , -0.2) | 709.6<br>5405.6 | 0.2234<br>94.5<br>102.0 | 0.1940<br>[ 0.1855 ] | 104.6% | 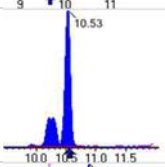 | 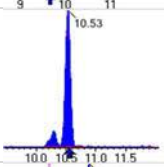 | |
| PFNS | ( 549.0 / 80.0 ) 220441<br>( 549.0 / 99.0 ) 58614 | ( 11.36 , 1.08 )<br>( N/A , -0.02 , 0.0) | 844.7<br>462.1 | 0.2659<br>100.1<br>97.0 | 0.1768<br>[ 0.1920 ] | 92.1% | 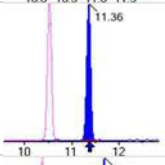 | 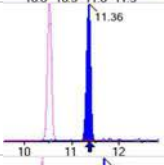 | |
| PFDS | ( 599.0 / 80.0 ) 266115<br>( 599.0 / 99.0 ) 71015 | ( 12.08 , 1.15 )<br>( N/A , 0.00 , 0.2) | 802.8<br>573.3 | 0.2669<br>106.4<br>105.2 | 0.1791<br>[ 0.1926 ] | 93.0% | 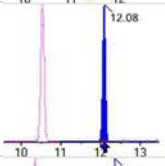 | 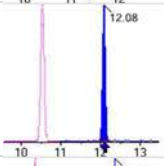 | |
| PFDoS | ( 699.0 / 80.0 ) 210059<br>( 699.0 / 99.0 ) 48239 | ( 12.99 , 1.23 )<br>( N/A , 0.00 , -0.3) | 1155.7<br>528.2 | 0.2296<br>99.6<br>101.5 | 0.1654<br>[ 0.1939 ] | 85.3% | 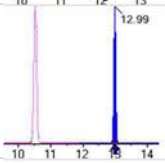 | 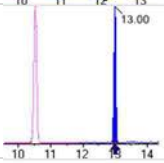 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 322015<br>( 327.0 / 81.0 ) 298078 | ( 5.53 , 1.00 ) ( 0.00 , N/A , 0.0) | 2778.8<br>1079.5 | 0.9257<br>105.7<br>101.2 | 0.7613<br>[ 0.7476 ] | 101.8% | 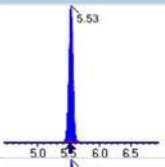 | 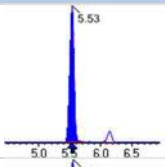 | |
| 6:2FTS | ( 427.0 / 407.0 ) 347337<br>( 427.0 / 81.0 ) 441339 | ( 7.64 , 1.00 ) ( -0.01 , N/A , -0.3) | 2720.9<br>1954.1 | 1.2706<br>100.0<br>100.1 | 0.7568<br>[ 0.7592 ] | 99.7% | 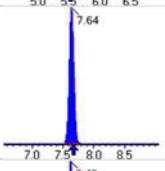 | 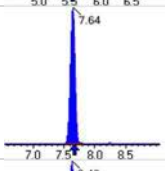 | |
| 8:2FTS | ( 527.0 / 507.0 ) 363025<br>( 527.0 / 81.0 ) 360062 | ( 9.43 , 1.00 ) ( -0.01 , N/A , 0.0) | 1506.2<br>1216.0 | 0.9918<br>104.6<br>99.5 | 0.7418<br>[ 0.7666 ] | 96.8% | 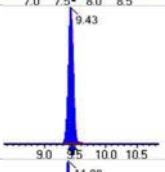 | 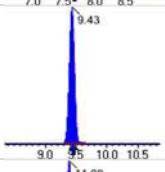 | |
| 10:2FTS | ( 627.0 / 607.0 ) 348053<br>( 627.0 / 81.0 ) 465665 | ( 11.08 , 1.00 ) ( 0.00 , N/A , -0.1) | 1124.9<br>759.3 | 1.3379<br>99.0<br>97.7 | 1.0481<br>[ 0.7729 ] | 135.6% | 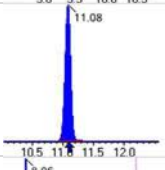 | 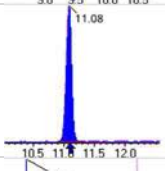 | |
| PFBSA | ( 297.9 / 78.0 ) 115851<br>( 297.9 / 278.0 ) 415 | ( 8.06 , 0.57 ) ( N/A , 0.00 , 1.0) | 511.0<br>12.0 | 0.0036<br>255.0<br>226.3 | 0.4403<br>[ 0.2000 ] | 220.1% | 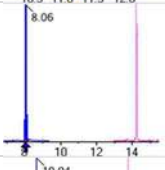 | 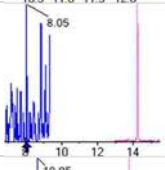 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 186308<br>( 397.9 / 378.0 ) 618 | ( 10.94 , 0.75 ) ( N/A , 0.00 , -0.5) | 703.2<br>22.2 | 0.0033<br>87.1<br>79.2 | 0.6601<br>[ 0.2000 ] | 330.1% | 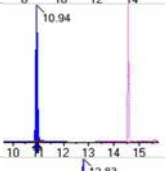 | 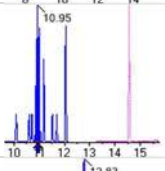 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 173836<br>( 498.0 / 478.0 ) 2638 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.3) | 1107.7<br>117.8 | 0.0152<br>105.2<br>110.8 | 0.1953<br>[ 0.2000 ] | 97.7% | 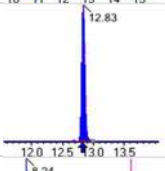 | 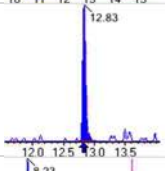 | |
| TFSI | ( 279.7 / 147.0 ) 557104<br>( 279.7 / 211.0 ) 46380 | ( 8.24 , 0.64 ) ( N/A , -0.01 , 0.1) | 52.6<br>27.5 | 0.0833<br>101.0<br>97.9 | 0.2945<br>[ 0.1959 ] | 150.3% | 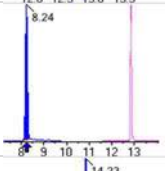 | 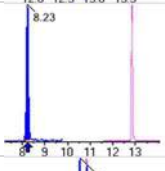 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 51354<br>( 512.0 / 169.0 ) 37652 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 3.5) | 508.0<br>507.4 | 0.7332<br>99.8<br>96.0 | 0.8910<br>[ 0.8000 ] | 111.4% | 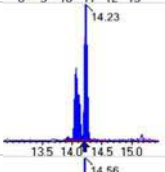 | 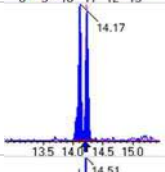 | |
| NEtFOSA | ( 526.0 / 219.0 ) 45401<br>( 526.0 / 169.0 ) 55920 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 2.6) | 456.7<br>365.2 | 1.2317<br>97.2<br>97.6 | 0.7519<br>[ 0.8000 ] | 94.0% | 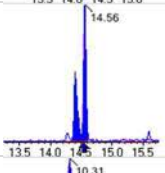 | 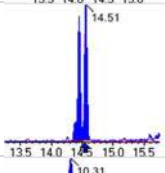 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 52574<br>( 570.0 / 483.0 ) 26319 | ( 10.31 , 1.00 ) ( 0.01 , N/A , 0.2) | 30723.5<br>254.1 | 0.5006<br>115.6<br>109.9 | 0.1936<br>[ 0.2000 ] | 96.8% | 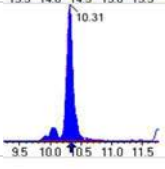 | 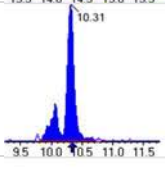 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 53748<br>( 584.0 / 526.0 ) 33376 | ( 10.84 , 1.00 )<br>( 0.01 , N/A , 0.1) | 228637.3<br>292.9 | 0.6210<br>100.3<br>103.1 | 0.1965<br>[ 0.2000 ] | 98.3% | 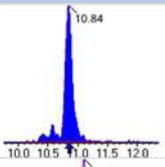 | 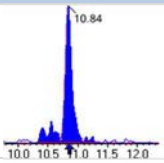 | |
| NMeFOSE | ( 616.0 / 59.0 ) 49569 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 251.6 | N/A<br>0.0<br>0.0 | 0.7720<br>[ 0.8000 ] | 96.5% | 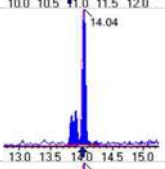 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 43451 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 425.2 | N/A<br>0.0<br>0.0 | 0.7942<br>[ 0.8000 ] | 99.3% | 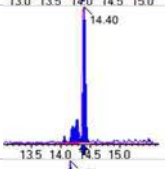 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 18260<br>( 285.0 / 185.0 ) 48198 | ( 6.52 , 1.00 )<br>( 0.00 , N/A , 0.0) | 481.8<br>322.1 | 2.6395<br>84.7<br>95.2 | 0.2040<br>[ 0.2000 ] | 102.0% | 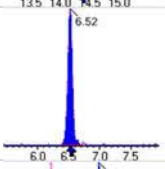 | 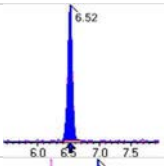 | |
| ADONA | ( 377.0 / 85.0 ) 213339<br>( 377.0 / 251.0 ) 20645 | ( 7.59 , 1.16 )<br>( N/A , -0.01 , 0.3) | 936.4<br>181.7 | 0.0968<br>90.8<br>91.5 | 0.1872<br>[ 0.1885 ] | 99.3% | 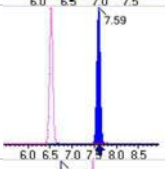 | 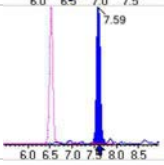 | |
| PFMPA | ( 229.0 / 85.0 ) 38382 | ( 4.16 , 0.86 )<br>( N/A , 0.02 , 0.0) | 1135.1 | N/A<br>0.0<br>0.0 | 0.3795<br>[ 0.4000 ] | 94.9% | 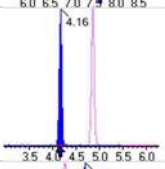 | | |
| PFMBA | ( 279.0 / 85.0 ) 99048 | ( 5.22 , 1.08 )<br>( N/A , 0.01 , 0.0) | 1072.0 | N/A<br>0.0<br>0.0 | 0.3700<br>[ 0.4000 ] | 92.5% | 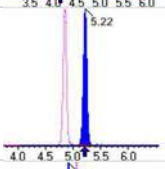 | | |
| NFDHA | ( 295.0 / 201.0 ) 47706<br>( 295.0 / 85.0 ) 45614 | ( 5.93 , 0.98 )<br>( N/A , 0.00 , 0.1) | 885.0<br>457.0 | 0.9562<br>88.4<br>89.4 | 0.3775<br>[ 0.4000 ] | 94.4% | 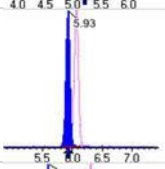 | 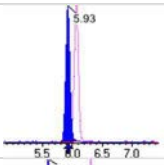 | |
| PFECHS | ( 461.0 / 98.9 ) 125562<br>( 461.0 / 381.2 ) 47738 | ( 9.55 , 0.91 )<br>( N/A , -0.03 , 0.1) | 1341.3<br>6133.2 | 0.3802<br>97.4<br>97.2 | 0.1741<br>[ 0.1848 ] | 94.2% | 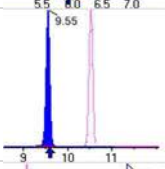 | 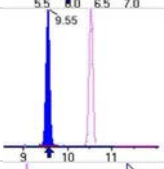 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 228023<br>( 533.0 / 353.0 ) 75308 | ( 11.17 , 1.71 )<br>( N/A , -0.02 , 0.0) | 1363.3<br>781.4 | 0.3303<br>102.7<br>106.1 | 0.1621<br>[ 0.1867 ] | 86.8% | 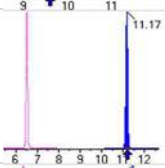 | 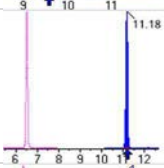 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 175138<br>( 633.0 / 453.0 ) 60471 | ( 12.49 , 1.91 )<br>( N/A , 0.00 , 0.0) | 1502.7<br>598.0 | 0.3453<br>105.7<br>104.1 | 0.1589<br>[ 0.1886 ] | 84.3% | 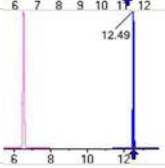 | 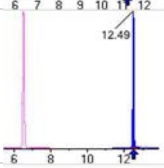 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 92689<br>( 315.0 / 83.0 ) 51044 | ( 6.96 , 1.15 )<br>( N/A , -0.01 , -0.1) | 854.3<br>137.9 | 0.5507<br>96.1<br>93.1 | 0.3390<br>[ 0.3570 ] | 95.0% | 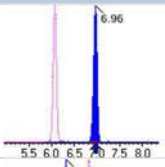 | 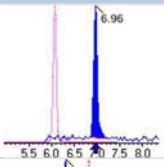 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 11891<br>( 241.0 / 117.0 ) 26692 | ( 4.40 , 0.91 )<br>( N/A , 0.02 , 0.2) | 436.0<br>127.6 | 2.2447<br>101.2<br>100.9 | 0.7663<br>[ 0.8000 ] | 95.8% | 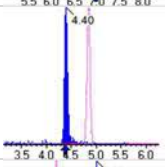 | 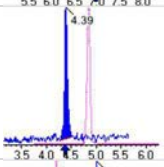 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 68445<br>( 341.0 / 217.0 ) 100881 | ( 6.93 , 1.14 )<br>( N/A , 0.00 , 0.1) | 489.4<br>333.4 | 1.4739<br>98.4<br>96.1 | 0.7769<br>[ 0.8000 ] | 97.1% | 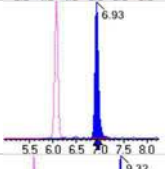 | 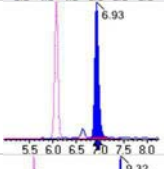 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 106039<br>( 441.0 / 337.0 ) 97040 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , -0.1) | 2305.3<br>43089.2 | 0.9151<br>102.8<br>105.6 | 0.8182<br>[ 0.8000 ] | 102.3% | 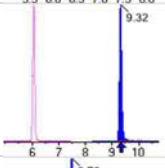 | 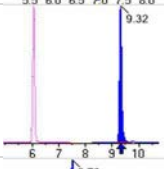 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 68767<br>( 357.2 / 243.0 ) 7023 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.2) | 368.7<br>73.9 | 0.1021<br>96.8<br>95.6 | 0.2444<br>[ 0.2000 ] | 122.2% | 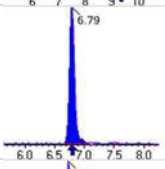 | 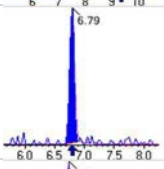 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 54236<br>( 457.2 / 343.0 ) 1890 | ( 8.84 , 1.00 )<br>( -0.01 , N/A , -0.1) | 424.1<br>70.4 | 0.0348<br>89.0<br>91.7 | 0.2438<br>[ 0.2000 ] | 121.9% | 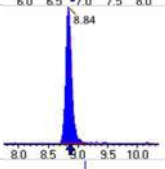 | 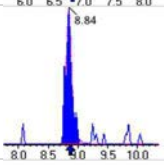 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 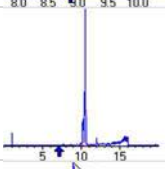 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 319277 | ( 3.77 , N/A )<br>( N/A , 0.02 , N/A ) | 1214.6 | N/A | 1.0598<br>[ 1.0000 ] | 106.0%<br>{ 94.3% } | 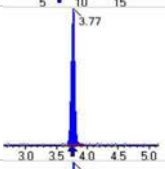 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 161192 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 21642.0 | N/A | 1.0483<br>[ 1.0000 ] | 104.8%<br>{ 94.6% } | 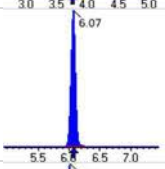 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 503857 | ( 8.21 , N/A )<br>( N/A , -0.02 , N/A ) | 4519.7 | N/A | 1.1294<br>[ 1.0000 ] | 112.9%<br>{ 103.2% } | 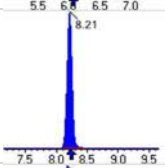 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 356708 | ( 9.17 , N/A )<br>( N/A , -0.02 , N/A ) | 1507.6 | N/A | 1.0670<br>[ 1.0000 ] | 106.7%<br>{ 92.7% } | 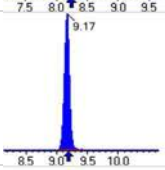 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MRL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 372359 | ( 10.07 , N/A ) ( N/A , -0.02 , N/A ) | 26295.7 | N/A | 1.1228 [ 1.0000 ] | 112.3% { 98.6% } | 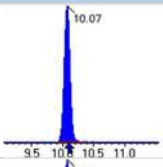 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1209505 | ( 8.67 , N/A ) ( N/A , -0.02 , N/A ) | 5604.4 | N/A | 1.0824 [ 1.0000 ] | 108.2% { 96.5% } | 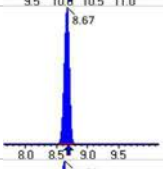 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 1017479 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 2422.0 | N/A | 1.0423 [ 1.0000 ] | 104.2% { 96.2% } | 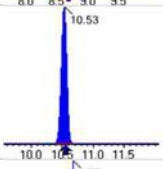 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2913941 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 51029.1 | N/A | 8.2762 [ 8.0000 ] | 103.5% { 102.6% } | 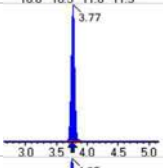 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1255052 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 5960.4 | N/A | 4.3401 [ 4.0000 ] | 108.5% { 98.0% } | 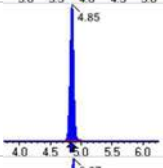 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 750315 | ( 6.07 , N/A ) ( N/A , 0.00 , N/A ) | 8862.4 | N/A | 2.1679 [ 2.0000 ] | 108.4% { 98.9% } | 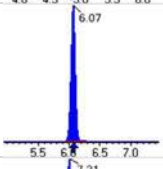 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 801156 | ( 7.21 , N/A ) ( N/A , -0.01 , N/A ) | 4779.9 | N/A | 2.2164 [ 2.0000 ] | 110.8% { 97.6% } | 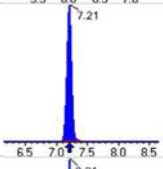 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1058262 | ( 8.21 , N/A ) ( N/A , -0.02 , N/A ) | 3498.1 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 97.4% } | 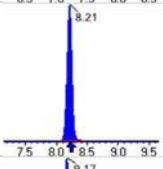 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 367078 | ( 9.17 , N/A ) ( N/A , -0.02 , N/A ) | 3363.5 | N/A | 1.0657 [ 1.0000 ] | 106.6% { 97.1% } | 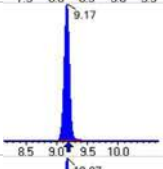 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 427585 | ( 10.07 , N/A ) ( N/A , -0.02 , N/A ) | 1297.9 | N/A | 0.9951 [ 1.0000 ] | 99.5% { 90.7% } | 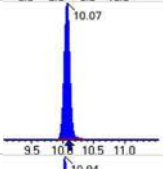 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 483391 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1001.3 | N/A | 0.9253 [ 1.0000 ] | 92.5% { 95.3% } | 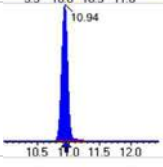 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MRL1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 470519 | ( 11.76 , N/A ) ( N/A , -0.01 , N/A ) | 1383.1 | N/A | 0.8969 [ 1.0000 ] | 89.7% { 90.6% } | 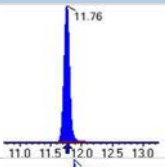 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 356222 | ( 12.89 , N/A ) ( N/A , 0.00 , N/A ) | 1474.3 | N/A | 0.7792 [ 1.0000 ] | 77.9% { 80.5% } | 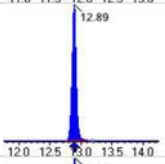 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 477166 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2747.5 | N/A | 1.2288 [ 2.0000 ] | 61.4% { 59.3% } | 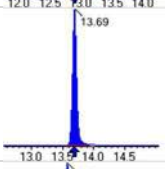 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2192179 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 891.3 | N/A | 1.8602 [ 2.0000 ] | 93.0% { 92.0% } | 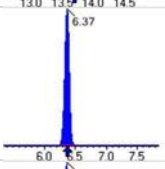 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1694635 | ( 8.66 , N/A ) ( N/A , -0.02 , N/A ) | 4843.1 | N/A | 1.9147 [ 2.0000 ] | 95.7% { 96.1% } | 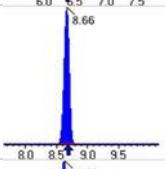 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2212141 | ( 10.53 , N/A ) ( N/A , -0.02 , N/A ) | 1720.5 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 99.1% } | 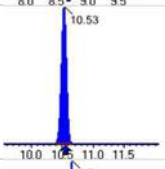 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 628304 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 89.8 | N/A | 5.9653 [ 4.0000 ] | 149.1% { 113.6% } | 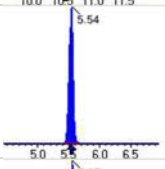 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2066537 | ( 7.65 , N/A ) ( N/A , -0.01 , N/A ) | 4507.8 | N/A | 6.3181 [ 4.0000 ] | 158.0% { 127.0% } | 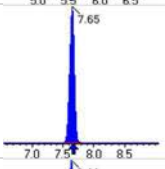 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1975850 | ( 9.44 , N/A ) ( N/A , -0.02 , N/A ) | 1633.2 | N/A | 6.0634 [ 4.0000 ] | 151.6% { 115.8% } | 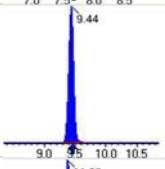 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3228781 | ( 11.08 , N/A ) ( N/A , -0.01 , N/A ) | 1376.1 | N/A | 8.6318 [ 8.0000 ] | 107.9% { 87.0% } | 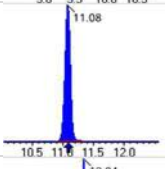 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1823728 | ( 12.84 , N/A ) ( N/A , 0.01 , N/A ) | 2054.9 | N/A | 1.5537 [ 2.0000 ] | 77.7% { 75.3% } | 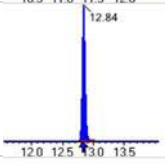 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (9)
Acquired: 2024/03/18 - 16:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 114452 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 876.7 | N/A | 0.5280 [ 2.0000 ] | 26.4% { 26.8% } | 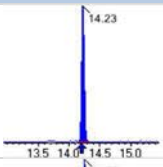  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 110054 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 1086.4 | N/A | 0.4420 [ 2.0000 ] | 22.1% { 22.7% } | 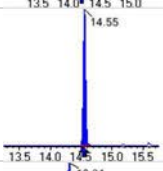  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1153518 | ( 10.31 , N/A ) ( N/A , -0.02 , N/A ) | 2439.3 | N/A | 4.1584 [ 4.0000 ] | 104.0% { 87.4% } | 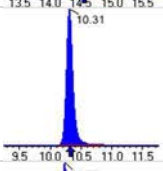  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1134106 | ( 10.83 , N/A ) ( N/A , -0.02 , N/A ) | 2090.0 | N/A | 4.3071 [ 4.0000 ] | 107.7% { 92.1% } | 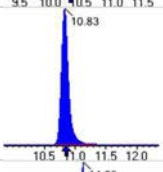  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1134308 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 1817.0 | N/A | 11.1998 [ 20.0000 ] | 56.0% { 61.0% } | 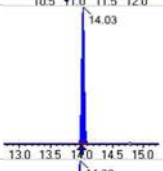  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1238441 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 4204.9 | N/A | 10.0941 [ 20.0000 ] | 50.5% { 59.1% } | 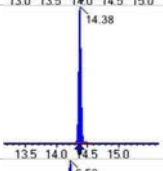  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1261400 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2185.3 | N/A | 8.4789 [ 8.0000 ] | 106.0% { 89.9% } | 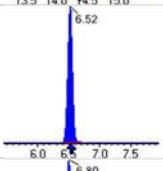  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 523587 | ( 6.80 , N/A ) ( N/A , -0.01 , N/A ) | 1383.6 | N/A | 1.5854 [ 2.0000 ] | 79.3% { 73.6% } | 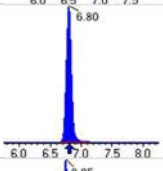  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 527606 | ( 8.85 , N/A ) ( N/A , -0.02 , N/A ) | 948.3 | N/A | 1.7112 [ 2.0000 ] | 85.6% { 78.8% } | 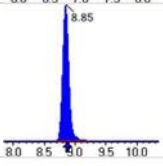  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MS1a | File ID:a | S2024-03-18A (10)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 17.0a | 0.19a | 1.5a | |
| PFPeAa | 9.72a | 0.060a | 0.73a | |
| PFHxAa | 6.06a | 0.050a | 0.37a | |
| PFHpAa | 4.93a | 0.038a | 0.37a | |
| PFOAa | 8.03a | 0.14a | 0.37a | MI4a |
| PFNAa | 3.46a | 0.075a | 0.37a | |
| PFDAa | 3.64a | 0.093a | 0.37a | |
| PFUnAa | 3.55a | 0.15a | 0.37a | |
| PFDoAa | 3.61a | 0.10a | 0.37a | |
| PFTrDAa | 3.38a | 0.19a | 0.37a | |
| PFTeDAa | 3.67a | 0.18a | 0.37a | |
| PFHxDAa | 3.64a | 0.18a | 0.37a | |
| PFODAa | 3.25a | 0.18a | 0.37a | |
| PFBSa | 6.41a | 0.034a | 0.37a | |
| PFPeSa | 4.40a | 0.058a | 0.37a | |
| PFHxSa | 9.16a | 0.029a | 0.37a | |
| PFHpSa | 4.26a | 0.047a | 0.37a | |
| PFOSa | 5.93a | 0.058a | 0.37a | |
| PFNSa | 3.61a | 0.11a | 0.37a | |
| PFDSa | 3.48a | 0.14a | 0.37a | |
| PFDoSa | 3.39a | 0.11a | 0.37a | |
| 4:2FTSa | 13.4a | 0.27a | 1.5a | |
| 6:2FTSa | 13.1a | 0.29a | 1.5a | |
| 8:2FTSa | 14.1a | 0.075a | 1.5a | |
| 10:2FTSa | 17.3a | 0.37a | 1.5a | |
| PFOSAa | 3.63a | 0.095a | 0.37a | |
| NMeFOSAa | 14.8a | 0.43a | 1.5a | |
| NEtFOSAa | 14.1a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.40a | 0.097a | 0.37a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MS1a | File ID:a | S2024-03-18A (10)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 13.5a | 0.93a | 1.5a | |
| NEtFOSEa | 14.9a | 0.96a | 1.5a | |
| HFPO-DAa | 3.69a | 0.16a | 0.73a | |
| ADONAa | 3.23a | 0.11a | 0.73a | |
| PFEESAa | 6.28a | 0.10a | 0.73a | |
| PFMPAa | 6.19a | 0.049a | 0.73a | |
| PFMBAa | 7.11a | 0.083a | 0.73a | |
| NFDHAa | 6.62a | 0.28a | 0.73a | |
| 9Cl-PF3ONSa | 2.99a | 0.19a | 0.73a | |
| 11Cl-PF3OUDSa | 2.71a | 0.19a | 0.73a | |
| 3:3FTCAa | 13.0a | 0.53a | 1.5a | |
| 5:3FTCAa | 15.1a | 0.41a | 1.5a | |
| 7:3FTCAa | 15.6a | 0.51a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (10)
Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 240537<br>( 163.0 / 69.0 ) 5881 | ( 2.81 , 0.74 )<br>( N/A , 0.04 , 0.1) | 1425.8<br>304.3 | 0.0244<br>97.5<br>93.5 | 1.1455 | N/A | 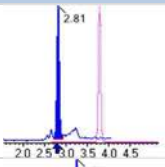 | 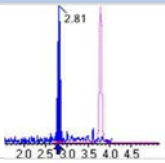 | |
| PFBA | ( 213.0 / 169.0 ) 1043398 | ( 3.78 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2033.5 | N/A<br>0.0<br>0.0 | 4.6467 | N/A | 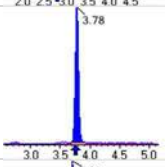 | | |
| PFPeA | ( 263.0 / 219.0 ) 741900<br>( 263.0 / 69.0 ) 7507 | ( 4.86 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1486.1<br>68.5 | 0.0101<br>92.1<br>86.6 | 2.6488 | N/A | 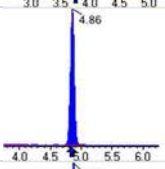 | 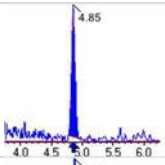 | |
| PFHxA | ( 313.0 / 269.0 ) 529142<br>( 313.0 / 119.0 ) 56313 | ( 6.08 , 1.00 )<br>( 0.00 , N/A , 0.0) | 980.2<br>759.8 | 0.1064<br>95.8<br>93.7 | 1.6523 | N/A | 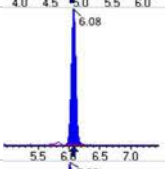 | 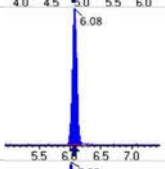 | |
| PFHpA | ( 363.0 / 319.0 ) 485334<br>( 363.0 / 169.0 ) 140008 | ( 7.22 , 1.00 )<br>( 0.00 , N/A , 0.0) | 687.1<br>682.3 | 0.2885<br>92.6<br>98.1 | 1.3449 | N/A | 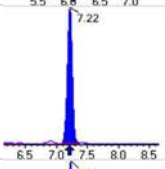 | 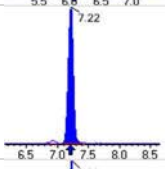 | |
| PFOA | ( 413.0 / 369.0 ) 1109096<br>( 413.0 / 169.0 ) 432732 | ( 8.23 , 1.00 )<br>( 0.00 , N/A , 0.0) | 507.5<br>359.2 | 0.3902<br>107.9<br>109.9 | 2.1876 | N/A | 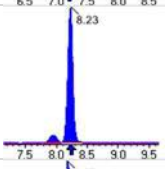 | 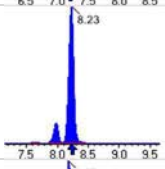 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 ) 360614<br>( 463.0 / 169.0 ) 92848 | ( 9.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 665.2<br>472.9 | 0.2575<br>98.1<br>104.6 | 0.9427 | N/A | 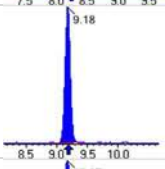 | 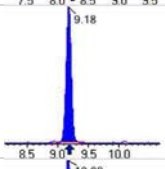 | |
| PFDA | ( 513.0 / 469.0 ) 190847<br>( 513.0 / 169.0 ) 27235 | ( 10.07 , 1.00 )<br>( -0.01 , N/A , 0.0) | 653.7<br>386.5 | 0.1427<br>121.6<br>118.2 | 0.9929 | N/A | 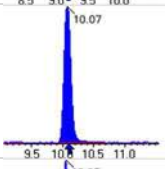 | 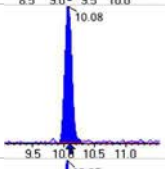 | |
| PFUnA | ( 563.0 / 519.0 ) 375561<br>( 563.0 / 169.0 ) 55466 | ( 10.95 , 1.00 )<br>( 0.00 , N/A , -0.2) | 538.7<br>197.7 | 0.1477<br>99.7<br>102.1 | 0.9677 | N/A | 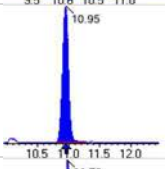 | 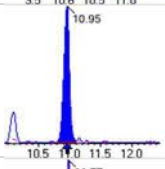 | |
| PFDoA | ( 613.0 / 569.0 ) 412884<br>( 613.0 / 169.0 ) 61992 | ( 11.78 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1007.0<br>490.6 | 0.1501<br>95.0<br>98.2 | 0.9828 | N/A | 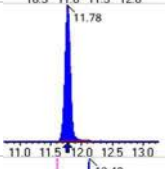 | 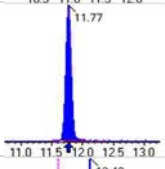 | |
| PFTrDA | ( 663.0 / 619.0 ) 372021<br>( 663.0 / 169.0 ) 100820 | ( 12.40 , 1.05 )<br>( N/A , 0.01 , 0.2) | 1038.7<br>553.1 | 0.2710<br>100.6<br>106.4 | 0.9210 | N/A | 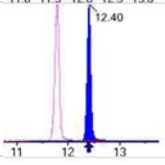 | 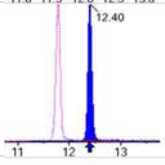 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 304800<br>( 713.0 / 169.0 ) 82321 | ( 12.89 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1065.8<br>574.1 | 0.2701<br>103.9<br>102.3 | 1.0014 | N/A | 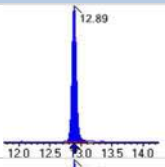 | 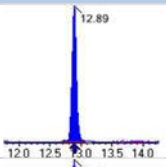 | |
| PFHxDA | ( 813.0 / 769.0 ) 268503<br>( 813.0 / 169.0 ) 65684 | ( 13.69 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1099.0<br>331.2 | 0.2446<br>112.7<br>96.1 | 0.9917 | N/A | 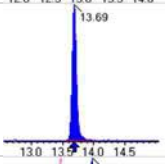 | 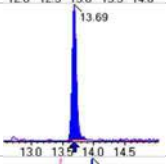 | |
| PFODA | ( 913.0 / 869.0 ) 161086<br>( 913.0 / 169.0 ) 54441 | ( 14.32 , 1.05 )<br>( N/A , 0.01 , 0.0) | 635.9<br>197.6 | 0.3380<br>88.5<br>101.9 | 0.8855 | N/A | 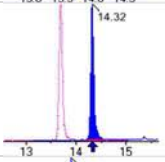 | 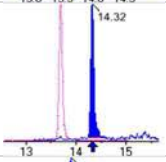 | |
| PFBS | ( 299.0 / 80.0 ) 940409<br>( 299.0 / 99.0 ) 678962 | ( 6.38 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1377.9<br>1441.6 | 0.7220<br>101.6<br>100.2 | 1.7487 | N/A | 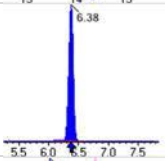 | 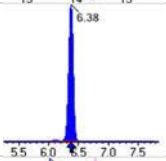 | |
| PFPeS | ( 349.0 / 80.0 ) 1554244<br>( 349.0 / 99.0 ) 542103 | ( 7.61 , 0.88 )<br>( N/A , 0.00 , 0.1) | 696.7<br>775.4 | 0.3488<br>102.6<br>101.6 | 1.2001 | N/A | 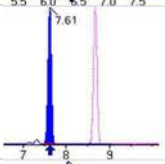 | 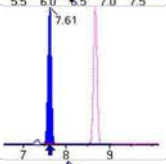 | |
| PFHxS | ( 399.0 / 80.0 ) 3594428<br>( 399.0 / 99.0 ) 1124356 | ( 8.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1923.4<br>2475.7 | 0.3128<br>100.0<br>97.5 | 2.4958 | N/A | 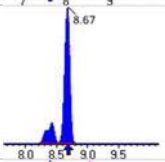 | 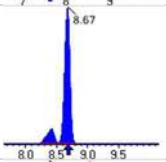 | |
| PFHpS | ( 449.0 / 80.0 ) 1201720<br>( 449.0 / 99.0 ) 305978 | ( 9.65 , 0.92 )<br>( N/A , -0.01 , 0.0) | 706.1<br>619.1 | 0.2546<br>95.3<br>94.8 | 1.1612 | N/A | 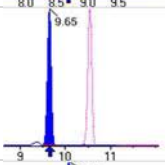 | 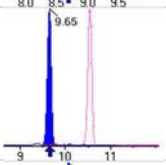 | |
| PFOS | ( 499.0 / 80.0 ) 1684298<br>( 499.0 / 99.0 ) 339530 | ( 10.54 , 1.00 )<br>( 0.00 , N/A , 0.0) | 741.8<br>1616.2 | 0.2016<br>85.2<br>92.0 | 1.6176 | N/A | 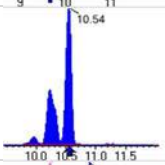 | 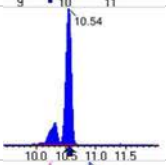 | |
| PFNS | ( 549.0 / 80.0 ) 998632<br>( 549.0 / 99.0 ) 253169 | ( 11.38 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1494.4<br>1219.8 | 0.2535<br>95.4<br>92.5 | 0.9835 | N/A | 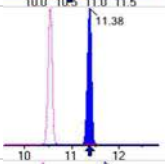 | 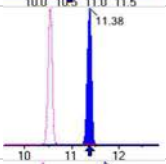 | |
| PFDS | ( 599.0 / 80.0 ) 1146714<br>( 599.0 / 99.0 ) 291530 | ( 12.09 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2022.2<br>1244.0 | 0.2542<br>101.4<br>100.2 | 0.9475 | N/A | 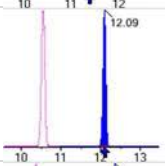 | 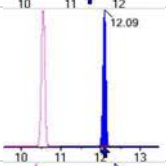 | |
| PFDoS | ( 699.0 / 80.0 ) 956777<br>( 699.0 / 99.0 ) 221491 | ( 13.00 , 1.23 )<br>( N/A , 0.01 , 0.1) | 2163.4<br>1251.5 | 0.2315<br>100.4<br>102.3 | 0.9252 | N/A | 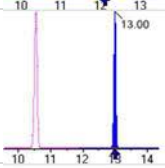 | 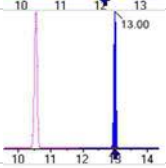 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (10)
Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1435366<br>( 327.0 / 81.0 ) 1281067 | ( 5.54 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4103.0<br>1202.3 | 0.8925<br>101.9<br>97.6 | 3.6441 | N/A | 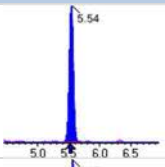 | 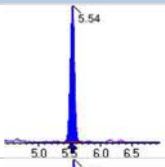 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1445653<br>( 427.0 / 81.0 ) 1733654 | ( 7.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3694.6<br>2047.4 | 1.1992<br>94.4<br>94.5 | 3.5620 | N/A | 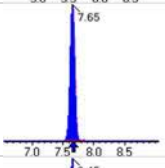 | 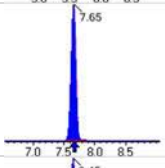 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1467561<br>( 527.0 / 81.0 ) 1491713 | ( 9.45 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1125.1<br>1143.3 | 1.0165<br>107.2<br>102.0 | 3.8459 | N/A | 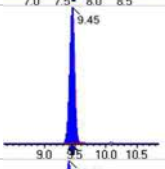 | 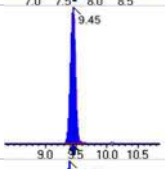 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1340418<br>( 627.0 / 81.0 ) 1883529 | ( 11.10 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1255.9<br>1042.8 | 1.4052<br>104.0<br>102.6 | 4.7257 | N/A | 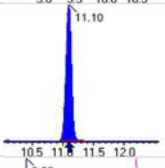 | 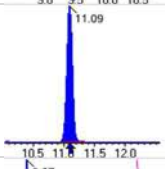 | |
| PFBSA | ( 297.9 / 78.0 ) 727247<br>( 297.9 / 278.0 ) 897 | ( 8.08 , 0.57 )<br>( N/A , 0.02 , 0.6) | 1179.7<br>16.3 | 0.0012<br>87.9<br>78.0 | 3.0097 | N/A | 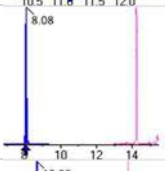 | 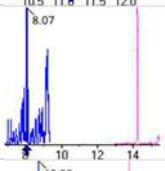 | |
| PFHxSA | ( 397.9 / 78.0 ) 1028727<br>( 397.9 / 378.0 ) 4217 | ( 10.96 , 0.75 )<br>( N/A , 0.02 , -0.2) | 1147.8<br>137.0 | 0.0041<br>107.7<br>97.9 | 3.7910 | N/A | 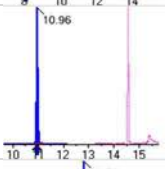 | 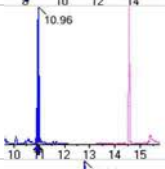 | |
| PFOSA | ( 498.0 / 78.0 ) 865043<br>( 498.0 / 478.0 ) 11682 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1394.1<br>257.4 | 0.0135<br>93.6<br>98.7 | 0.9886 | N/A | 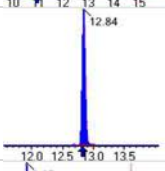 | 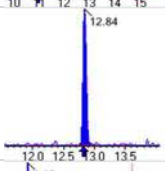 | |
| TFSI | ( 279.7 / 147.0 ) 2339854<br>( 279.7 / 211.0 ) 207113 | ( 8.25 , 0.64 )<br>( N/A , -0.01 , -0.1) | 52.1<br>48.4 | 0.0885<br>107.3<br>104.1 | 1.2578 | N/A | 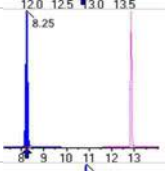 | 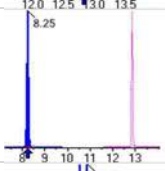 | |
| NMeFOSA | ( 512.0 / 219.0 ) 213084<br>( 512.0 / 169.0 ) 166704 | ( 14.21 , 1.00 )<br>( -0.02 , N/A , 2.5) | 1318.4<br>1435.4 | 0.7823<br>106.4<br>102.5 | 4.0258 | N/A | 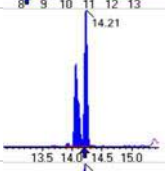 | 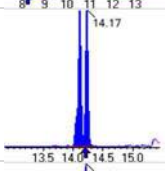 | |
| NEtFOSA | ( 526.0 / 219.0 ) 223803<br>( 526.0 / 169.0 ) 267926 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 1.9) | 792.4<br>787.1 | 1.1972<br>94.5<br>94.8 | 3.8549 | N/A | 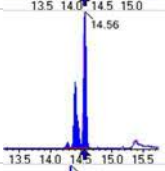 | 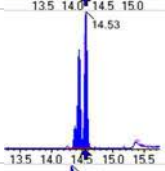 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 196965<br>( 570.0 / 483.0 ) 100080 | ( 10.33 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2048.5<br>2009.1 | 0.5081<br>117.3<br>111.5 | 0.9281 | N/A | 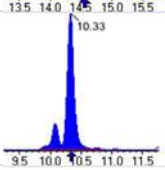 | 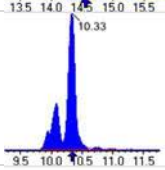 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (10)
Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 242653<br>( 584.0 / 526.0 ) 143364 | ( 10.86 , 1.00 ) ( 0.01 , N/A , 0.0) | 1339.5<br>396.4 | 0.5908<br>95.4<br>98.1 | 1.0589 | N/A | 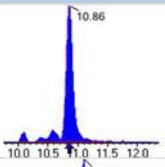 | 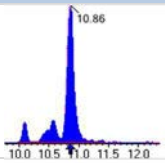 | |
| NMeFOSE | ( 616.0 / 59.0 ) 217487 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 868.3 | N/A<br>0.0<br>0.0 | 3.6856 | N/A | 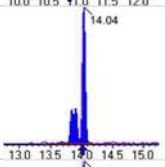 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 176400 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 1092.7 | N/A<br>0.0<br>0.0 | 4.0637 | N/A | 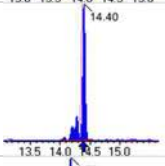 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 81372<br>( 285.0 / 185.0 ) 219616 | ( 6.53 , 1.00 ) ( 0.00 , N/A , -0.1) | 1210.6<br>938.6 | 2.6989<br>86.6<br>97.4 | 1.0066 | N/A | 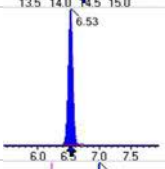 | 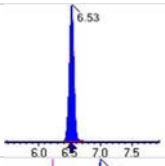 | |
| ADONA | ( 377.0 / 85.0 ) 905135<br>( 377.0 / 251.0 ) 95332 | ( 7.60 , 1.16 ) ( N/A , 0.00 , -0.2) | 1072.1<br>391.7 | 0.1053<br>98.8<br>99.5 | 0.8792 | N/A | 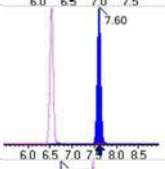 | 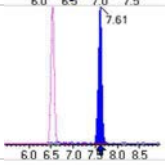 | |
| PFMPA | ( 229.0 / 85.0 ) 149548 | ( 4.17 , 0.86 ) ( N/A , 0.03 , 0.0) | 2612.4 | N/A<br>0.0<br>0.0 | 1.6864 | N/A | 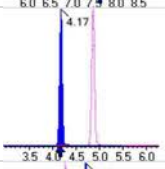 | | |
| PFMBA | ( 279.0 / 85.0 ) 454990 | ( 5.22 , 1.08 ) ( N/A , 0.01 , 0.0) | 2965.1 | N/A<br>0.0<br>0.0 | 1.9385 | N/A | 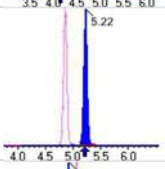 | | |
| NFDHA | ( 295.0 / 201.0 ) 201002<br>( 295.0 / 85.0 ) 204293 | ( 5.94 , 0.98 ) ( N/A , 0.01 , -0.1) | 2073.1<br>716.5 | 1.0164<br>94.0<br>95.0 | 1.8056 | N/A | 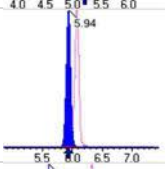 | 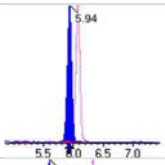 | |
| PFECHS | ( 461.0 / 98.9 ) 598004<br>( 461.0 / 381.2 ) 225449 | ( 9.57 , 0.91 ) ( N/A , -0.01 , 0.0) | 1491.6<br>1055.7 | 0.3770<br>96.6<br>96.3 | 1.0184 | N/A | 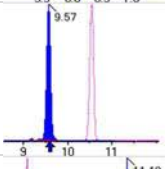 | 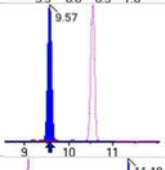 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1034555<br>( 533.0 / 353.0 ) 332422 | ( 11.19 , 1.71 ) ( N/A , -0.01 , -0.1) | 2227.9<br>1525.1 | 0.3213<br>100.0<br>103.2 | 0.8143 | N/A | 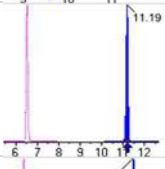 | 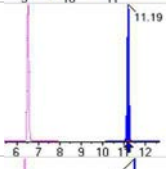 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 734810<br>( 633.0 / 453.0 ) 251564 | ( 12.49 , 1.91 ) ( N/A , 0.00 , -0.1) | 2972.5<br>1388.4 | 0.3424<br>104.8<br>103.2 | 0.7384 | N/A | 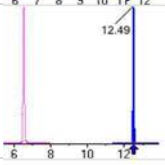 | 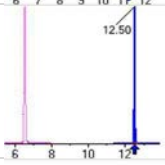 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 412514<br>( 315.0 / 83.0 ) 241459 | ( 6.97 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1953.1<br>505.6 | 0.5853<br>102.2<br>99.0 | 1.7127 | N/A | 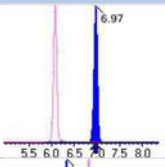 | 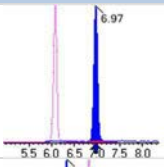 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 48103<br>( 241.0 / 117.0 ) 109719 | ( 4.41 , 0.91 )<br>( N/A , 0.03 , 0.0) | 1065.0<br>374.3 | 2.2809<br>102.8<br>102.5 | 3.5351 | N/A | 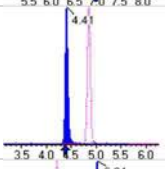 | 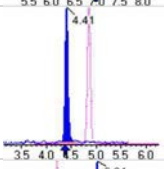 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 319002<br>( 341.0 / 217.0 ) 486266 | ( 6.94 , 1.14 )<br>( N/A , 0.01 , 0.1) | 1357.3<br>776.0 | 1.5243<br>101.8<br>99.4 | 4.1101 | N/A | 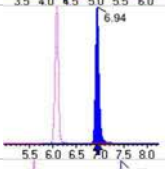 | 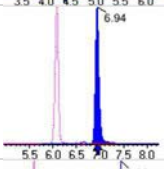 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 486387<br>( 441.0 / 337.0 ) 444181 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 2541.5<br>4460.8 | 0.9132<br>102.6<br>105.4 | 4.2600 | N/A | 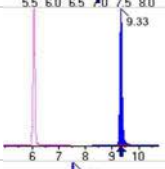 | 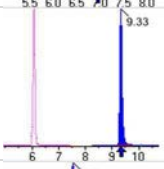 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 346554<br>( 357.2 / 243.0 ) 37562 | ( 6.80 , 1.00 )<br>( -0.01 , N/A , 0.0) | 888.6<br>156.1 | 0.1084<br>102.7<br>101.4 | 1.1523 | N/A | 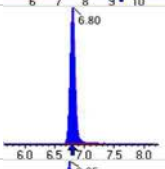 | 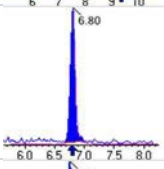 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 266705<br>( 457.2 / 343.0 ) 11072 | ( 8.85 , 1.00 )<br>( -0.01 , N/A , -0.3) | 526.3<br>65.8 | 0.0415<br>106.1<br>109.2 | 1.2116 | N/A | 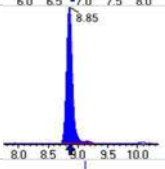 | 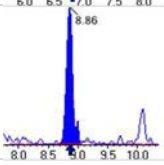 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 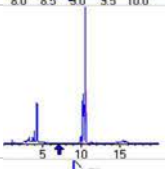 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 246823 | ( 3.78 , N/A )<br>( N/A , 0.03 , N/A ) | 1012.3 | N/A | 0.8193<br>[ 1.0000 ] | 81.9%<br>{ 72.9% } | 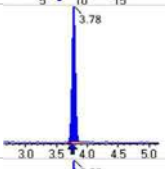 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 148729 | ( 6.08 , N/A )<br>( N/A , 0.01 , N/A ) | 4399.9 | N/A | 0.9672<br>[ 1.0000 ] | 96.7%<br>{ 87.3% } | 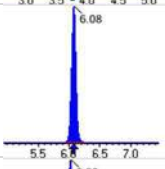 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 468650 | ( 8.23 , N/A )<br>( N/A , -0.01 , N/A ) | 3038.6 | N/A | 1.0505<br>[ 1.0000 ] | 105.0%<br>{ 96.0% } | 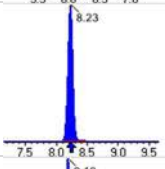 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 390160 | ( 9.18 , N/A )<br>( N/A , -0.01 , N/A ) | 1138.0 | N/A | 1.1671<br>[ 1.0000 ] | 116.7%<br>{ 101.4% } | 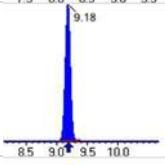 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 163174 | ( 10.08 , N/A ) ( N/A , -0.01 , N/A ) | 1839.8 | N/A | 0.4920 [ 1.0000 ] | 49.2% { 43.2% } | 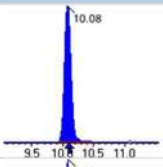 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1103743 | ( 8.68 , N/A ) ( N/A , -0.01 , N/A ) | 4699.7 | N/A | 0.9877 [ 1.0000 ] | 98.8% { 88.1% } | 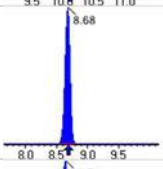 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 868544 | ( 10.54 , N/A ) ( N/A , -0.01 , N/A ) | 1144.1 | N/A | 0.8897 [ 1.0000 ] | 89.0% { 82.1% } | 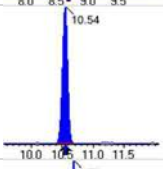 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1898778 | ( 3.78 , N/A ) ( N/A , 0.03 , N/A ) | 30971.0 | N/A | 6.9760 [ 8.0000 ] | 87.2% { 66.9% } | 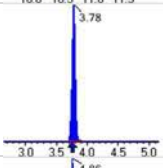 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1100557 | ( 4.86 , N/A ) ( N/A , 0.02 , N/A ) | 4564.4 | N/A | 4.1247 [ 4.0000 ] | 103.1% { 85.9% } | 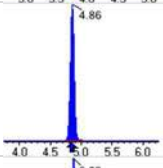 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 661007 | ( 6.08 , N/A ) ( N/A , 0.01 , N/A ) | 8522.5 | N/A | 2.0699 [ 2.0000 ] | 103.5% { 87.1% } | 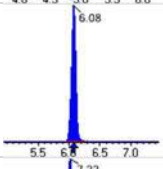 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 732794 | ( 7.22 , N/A ) ( N/A , 0.00 , N/A ) | 4356.4 | N/A | 2.1971 [ 2.0000 ] | 109.9% { 89.2% } | 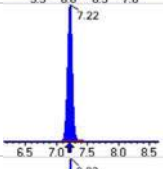 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 997110 | ( 8.23 , N/A ) ( N/A , 0.00 , N/A ) | 3358.1 | N/A | 2.0179 [ 2.0000 ] | 100.9% { 91.8% } | 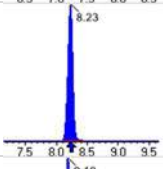 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 381734 | ( 9.18 , N/A ) ( N/A , -0.01 , N/A ) | 2389.9 | N/A | 1.0132 [ 1.0000 ] | 101.3% { 101.0% } | 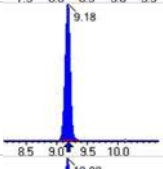 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 193004 | ( 10.08 , N/A ) ( N/A , -0.01 , N/A ) | 719.6 | N/A | 1.0250 [ 1.0000 ] | 102.5% { 41.0% } | 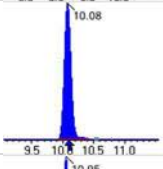 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 415614 | ( 10.95 , N/A ) ( N/A , 0.00 , N/A ) | 612.9 | N/A | 1.8155 [ 1.0000 ] | 181.5% { 82.0% } | 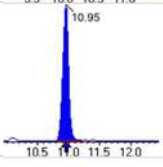 | | S2, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MS1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 410488 | ( 11.78 , N/A ) ( N/A , 0.00 , N/A ) | 1212.5 | N/A | 1.7855 [ 1.0000 ] | 178.6% { 79.1% } | 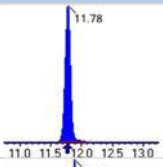  | | S2, |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 320491 | ( 12.89 , N/A ) ( N/A , 0.01 , N/A ) | 1341.6 | N/A | 1.5998 [ 1.0000 ] | 160.0% { 72.4% } | 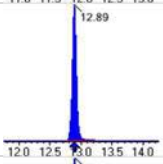  | | S2, |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 561055 | ( 13.69 , N/A ) ( N/A , 0.00 , N/A ) | 2366.2 | N/A | 3.2972 [ 2.0000 ] | 164.9% { 69.7% } | 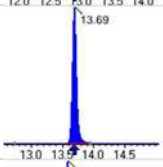  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2068437 | ( 6.38 , N/A ) ( N/A , 0.01 , N/A ) | 1065.7 | N/A | 1.9234 [ 2.0000 ] | 96.2% { 86.8% } | 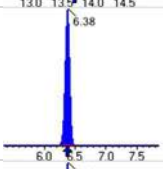  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1626448 | ( 8.68 , N/A ) ( N/A , -0.01 , N/A ) | 3253.6 | N/A | 2.0137 [ 2.0000 ] | 100.7% { 92.2% } | 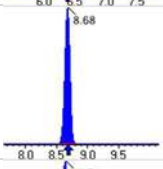  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1801452 | ( 10.54 , N/A ) ( N/A , -0.01 , N/A ) | 1340.1 | N/A | 1.9483 [ 2.0000 ] | 97.4% { 80.7% } | 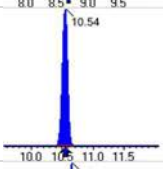  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 585120 | ( 5.55 , N/A ) ( N/A , 0.01 , N/A ) | 77.1 | N/A | 6.0877 [ 4.0000 ] | 152.2% { 105.8% } | 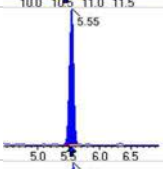  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1827407 | ( 7.66 , N/A ) ( N/A , 0.01 , N/A ) | 1483.1 | N/A | 6.1223 [ 4.0000 ] | 153.1% { 112.3% } | 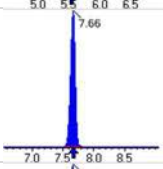  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1540576 | ( 9.46 , N/A ) ( N/A , 0.00 , N/A ) | 899.4 | N/A | 5.1806 [ 4.0000 ] | 129.5% { 90.3% } | 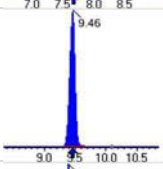  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2757816 | ( 11.09 , N/A ) ( N/A , 0.00 , N/A ) | 1296.0 | N/A | 8.0792 [ 8.0000 ] | 101.0% { 74.3% } | 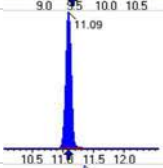  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1793259 | ( 12.85 , N/A ) ( N/A , 0.02 , N/A ) | 2665.6 | N/A | 1.7897 [ 2.0000 ] | 89.5% { 74.0% } | 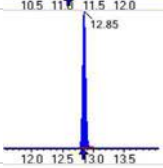  | | |

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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (10)
Acquired: 2024/03/18 - 16:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 105101 | ( 14.23 , N/A ) ( N/A , 0.02 , N/A ) | 720.2 | N/A | 0.5680 [ 2.0000 ] | 28.4% { 24.6% } | 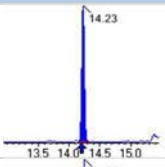  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 105817 | ( 14.55 , N/A ) ( N/A , 0.02 , N/A ) | 439.2 | N/A | 0.4979 [ 2.0000 ] | 24.9% { 21.8% } | 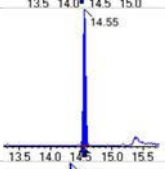  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 901367 | ( 10.33 , N/A ) ( N/A , 0.00 , N/A ) | 2418.1 | N/A | 3.8066 [ 4.0000 ] | 95.2% { 68.3% } | 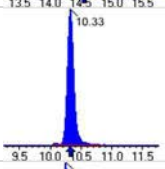  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 950261 | ( 10.85 , N/A ) ( N/A , 0.00 , N/A ) | 1432.9 | N/A | 4.2277 [ 4.0000 ] | 105.7% { 77.1% } | 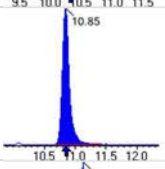  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1042517 | ( 14.03 , N/A ) ( N/A , 0.02 , N/A ) | 1540.5 | N/A | 12.0586 [ 20.0000 ] | 60.3% { 56.1% } | 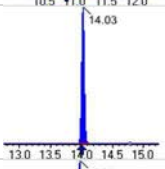  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 982565 | ( 14.38 , N/A ) ( N/A , 0.02 , N/A ) | 3202.0 | N/A | 9.3818 [ 20.0000 ] | 46.9% { 46.9% } | 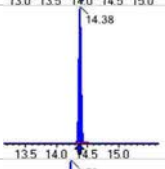  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1139261 | ( 6.53 , N/A ) ( N/A , 0.00 , N/A ) | 2333.4 | N/A | 8.2996 [ 8.0000 ] | 103.7% { 81.2% } | 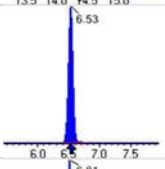  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559600 | ( 6.81 , N/A ) ( N/A , 0.00 , N/A ) | 1183.7 | N/A | 3.8668 [ 2.0000 ] | 193.3% { 78.7% } | 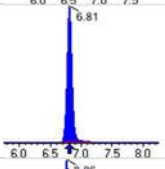  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 522000 | ( 8.86 , N/A ) ( N/A , -0.01 , N/A ) | 521.6 | N/A | 3.8635 [ 2.0000 ] | 193.2% { 77.9% } | 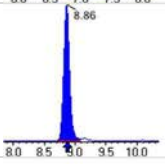  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MSD1a | File ID:a | S2024-03-18A (11)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:55a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.8a | 0.19a | 1.5a | |
| PFPeAa | 10.0a | 0.060a | 0.74a | |
| PFHxAa | 6.12a | 0.051a | 0.37a | |
| PFHpAa | 5.11a | 0.038a | 0.37a | |
| PFOAa | 8.22a | 0.14a | 0.37a | MI4a |
| PFNAa | 3.74a | 0.076a | 0.37a | |
| PFDAa | 3.45a | 0.094a | 0.37a | |
| PFUnAa | 3.62a | 0.15a | 0.37a | |
| PFDoAa | 3.69a | 0.10a | 0.37a | |
| PFTrDAa | 3.44a | 0.19a | 0.37a | |
| PFTeDAa | 3.56a | 0.18a | 0.37a | |
| PFHxDAa | 3.53a | 0.19a | 0.37a | |
| PFODAa | 3.26a | 0.19a | 0.37a | |
| PFBSa | 6.68a | 0.034a | 0.37a | |
| PFPeSa | 4.54a | 0.058a | 0.37a | |
| PFHxSa | 9.52a | 0.029a | 0.37a | |
| PFHpSa | 3.87a | 0.048a | 0.37a | |
| PFOSa | 5.84a | 0.059a | 0.37a | |
| PFNSa | 3.41a | 0.11a | 0.37a | |
| PFDSa | 3.55a | 0.14a | 0.37a | |
| PFDoSa | 3.28a | 0.11a | 0.37a | |
| 4:2FTSa | 13.0a | 0.27a | 1.5a | |
| 6:2FTSa | 13.5a | 0.29a | 1.5a | |
| 8:2FTSa | 14.2a | 0.076a | 1.5a | |
| 10:2FTSa | 16.1a | 0.37a | 1.5a | |
| PFOSAa | 3.91a | 0.097a | 0.37a | |
| NMeFOSAa | 14.8a | 0.44a | 1.5a | |
| NEtFOSAa | 14.4a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.51a | 0.098a | 0.37a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0083a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0208-MSD1a | File ID:a | S2024-03-18A (11)a |
| Sampled:a | | Prepared:a | 03/14/24 12:39a | Analyzed:a | 03/18/24 16:55a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0208a | Sequence:a | SD00977a | Calibration:a | 2411010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 14.3a | 0.94a | 1.5a | |
| NEtFOSEa | 14.5a | 0.97a | 1.5a | |
| HFPO-DAa | 3.73a | 0.16a | 0.74a | |
| ADONAa | 3.44a | 0.11a | 0.74a | |
| PFEESAa | 6.37a | 0.10a | 0.74a | |
| PFMPAa | 6.67a | 0.050a | 0.74a | |
| PFMBAa | 7.00a | 0.084a | 0.74a | |
| NFDHAa | 6.82a | 0.28a | 0.74a | |
| 9Cl-PF3ONSa | 3.02a | 0.19a | 0.74a | |
| 11Cl-PF3OUDSa | 2.82a | 0.19a | 0.74a | |
| 3:3FTCAa | 13.8a | 0.53a | 1.5a | |
| 5:3FTCAa | 15.3a | 0.41a | 1.5a | |
| 7:3FTCAa | 16.2a | 0.51a | 1.5a | |

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Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (11)
Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 421152<br>( 163.0 / 69.0 ) 9282 | ( 2.80 , 0.75 )<br>( N/A , 0.03 , -0.1) | 1692.5<br>314.0 | 0.0220<br>87.9<br>84.3 | 2.1783 | N/A | 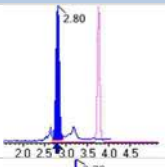 | 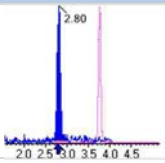 | |
| PFBA | ( 213.0 / 169.0 ) 934528 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1615.3 | N/A<br>0.0<br>0.0 | 4.5201 | N/A | 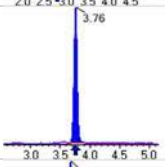 | | |
| PFPeA | ( 263.0 / 219.0 ) 668368<br>( 263.0 / 69.0 ) 7465 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1456.1<br>71.3 | 0.0112<br>101.7<br>95.6 | 2.6879 | N/A | 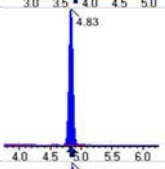 | 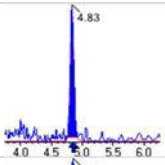 | |
| PFHxA | ( 313.0 / 269.0 ) 480385<br>( 313.0 / 119.0 ) 51315 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1075.0<br>393.7 | 0.1068<br>96.1<br>94.0 | 1.6448 | N/A | 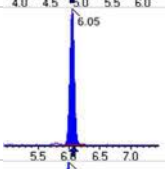 | 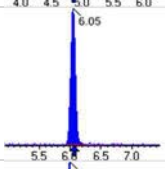 | |
| PFHpA | ( 363.0 / 319.0 ) 452690<br>( 363.0 / 169.0 ) 135656 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 724.7<br>681.2 | 0.2997<br>96.2<br>101.9 | 1.3720 | N/A | 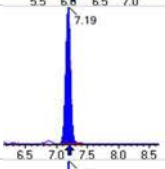 | 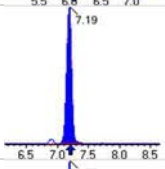 | |
| PFOA | ( 413.0 / 369.0 ) 983890<br>( 413.0 / 169.0 ) 384931 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 480.4<br>395.1 | 0.3912<br>108.2<br>110.2 | 2.2081 | N/A | 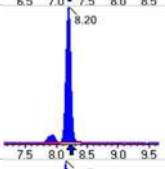 | 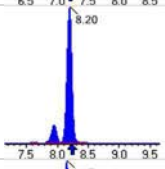 | MI4 ABK 3/1/8/24 |
| PFNA | ( 463.0 / 419.0 ) 297121<br>( 463.0 / 169.0 ) 73662 | ( 9.15 , 1.00 )<br>( 0.00 , N/A , 0.1) | 728.1<br>600.0 | 0.2479<br>94.5<br>100.7 | 1.0051 | N/A | 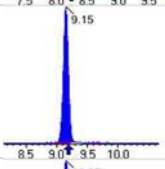 | 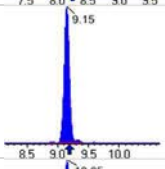 | |
| PFDA | ( 513.0 / 469.0 ) 270651<br>( 513.0 / 169.0 ) 33920 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1114.3<br>458.2 | 0.1253<br>106.8<br>103.8 | 0.9261 | N/A | 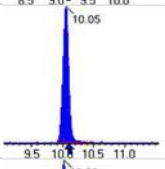 | 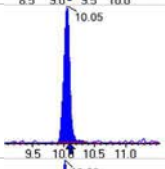 | |
| PFUnA | ( 563.0 / 519.0 ) 357866<br>( 563.0 / 169.0 ) 51434 | ( 10.92 , 1.00 )<br>( 0.00 , N/A , -0.1) | 681.9<br>394.6 | 0.1437<br>97.1<br>99.3 | 0.9734 | N/A | 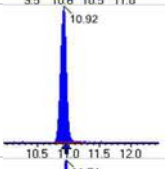 | 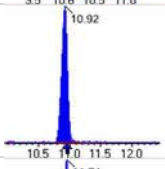 | |
| PFDoA | ( 613.0 / 569.0 ) 376063<br>( 613.0 / 169.0 ) 59293 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.1) | 916.2<br>599.4 | 0.1577<br>99.7<br>103.1 | 0.9909 | N/A | 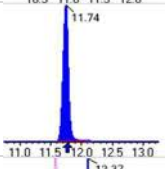 | 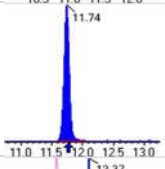 | |
| PFTrDA | ( 663.0 / 619.0 ) 336938<br>( 663.0 / 169.0 ) 86057 | ( 12.37 , 1.05 )<br>( N/A , -0.02 , 0.0) | 1005.9<br>604.7 | 0.2554<br>94.8<br>100.3 | 0.9234 | N/A | 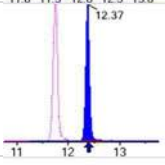 | 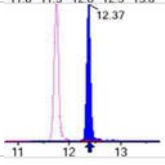 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MSD1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 281475<br>( 713.0 / 169.0 ) 70723 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1087.3<br>525.7 | 0.2513<br>96.6<br>95.1 | 0.9570 | N/A | 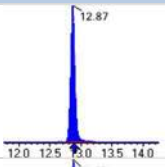 | 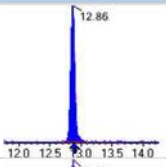 | |
| PFHxDA | ( 813.0 / 769.0 ) 227536<br>( 813.0 / 169.0 ) 56788 | ( 13.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 888.6<br>363.2 | 0.2496<br>115.0<br>98.0 | 0.9492 | N/A | 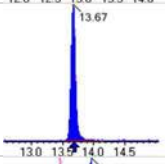 | 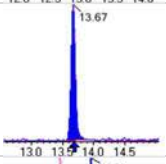 | |
| PFODA | ( 913.0 / 869.0 ) 141144<br>( 913.0 / 169.0 ) 47308 | ( 14.30 , 1.05 )<br>( N/A , -0.01 , 0.0) | 639.5<br>233.1 | 0.3352<br>87.7<br>101.1 | 0.8764 | N/A | 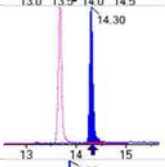 | 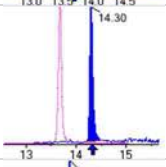 | |
| PFBS | ( 299.0 / 80.0 ) 840417<br>( 299.0 / 99.0 ) 587437 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1103.9<br>1300.3 | 0.6990<br>98.3<br>97.0 | 1.7944 | N/A | 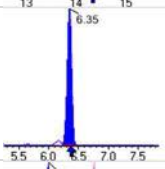 | 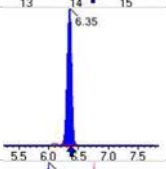 | |
| PFPeS | ( 349.0 / 80.0 ) 1364768<br>( 349.0 / 99.0 ) 471780 | ( 7.58 , 0.88 )<br>( N/A , -0.03 , -0.1) | 674.4<br>795.1 | 0.3457<br>101.6<br>100.7 | 1.2197 | N/A | 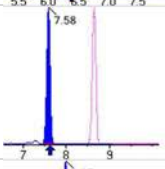 | 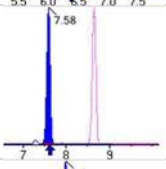 | |
| PFHxS | ( 399.0 / 80.0 ) 3184156<br>( 399.0 / 99.0 ) 960141 | ( 8.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1707.9<br>2263.2 | 0.3015<br>96.4<br>94.0 | 2.5589 | N/A | 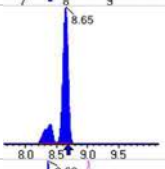 | 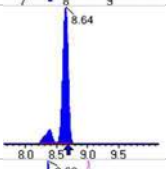 | |
| PFHpS | ( 449.0 / 80.0 ) 1032055<br>( 449.0 / 99.0 ) 272662 | ( 9.62 , 0.92 )<br>( N/A , -0.04 , -0.1) | 863.2<br>725.7 | 0.2642<br>98.9<br>98.3 | 1.0409 | N/A | 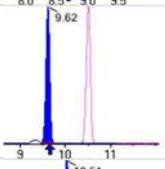 | 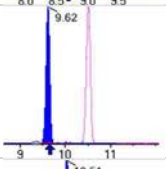 | |
| PFOS | ( 499.0 / 80.0 ) 1565973<br>( 499.0 / 99.0 ) 332702 | ( 10.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 743.5<br>2092.9 | 0.2125<br>89.8<br>97.0 | 1.5698 | N/A | 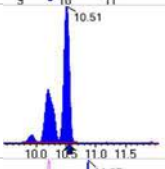 | 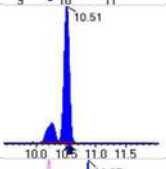 | |
| PFNS | ( 549.0 / 80.0 ) 890950<br>( 549.0 / 99.0 ) 248732 | ( 11.35 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1362.8<br>1169.3 | 0.2792<br>105.1<br>101.9 | 0.9158 | N/A | 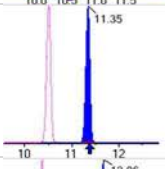 | 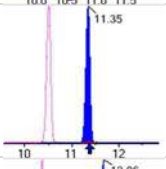 | |
| PFDS | ( 599.0 / 80.0 ) 1105818<br>( 599.0 / 99.0 ) 292713 | ( 12.06 , 1.15 )<br>( N/A , -0.02 , 0.0) | 2071.6<br>1467.2 | 0.2647<br>105.6<br>104.4 | 0.9537 | N/A | 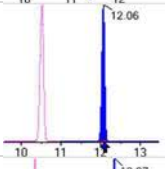 | 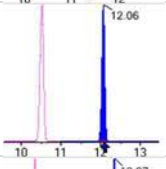 | |
| PFDoS | ( 699.0 / 80.0 ) 872206<br>( 699.0 / 99.0 ) 211693 | ( 12.97 , 1.23 )<br>( N/A , -0.02 , 0.0) | 2628.4<br>1568.7 | 0.2427<br>105.2<br>107.2 | 0.8803 | N/A | 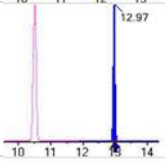 | 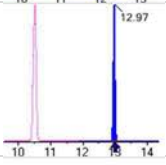 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MSD1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1234624<br>( 327.0 / 81.0 ) 1166535 | ( 5.52 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3942.0<br>1060.4 | 0.9449<br>107.8<br>103.3 | 3.4949 | N/A | 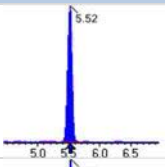 | 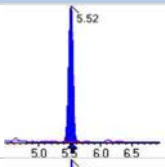 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1312875<br>( 427.0 / 81.0 ) 1637508 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3664.2<br>1930.3 | 1.2473<br>98.2<br>98.3 | 3.6181 | N/A | 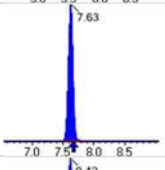 | 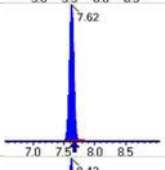 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1322334<br>( 527.0 / 81.0 ) 1407300 | ( 9.42 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2124.1<br>1469.3 | 1.0643<br>112.2<br>106.8 | 3.8228 | N/A | 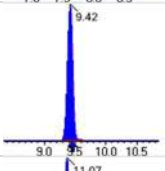 | 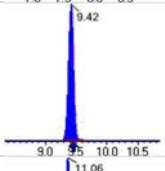 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1240934<br>( 627.0 / 81.0 ) 1792881 | ( 11.07 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1458.6<br>1305.4 | 1.4448<br>106.9<br>105.5 | 4.3169 | N/A | 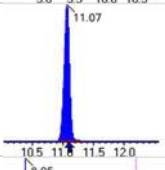 | 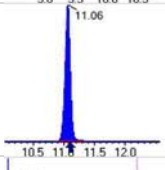 | |
| PFBSA | ( 297.9 / 78.0 ) 600226<br>( 297.9 / 278.0 ) 951 | ( 8.05 , 0.57 )<br>( N/A , -0.01 , 1.1) | 1244.8<br>8.4 | 0.0016<br>112.8<br>100.1 | 2.6754 | N/A | 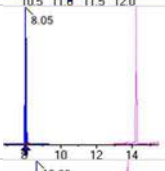 | 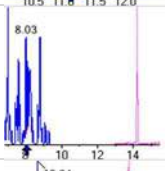 | |
| PFHxSA | ( 397.9 / 78.0 ) 836913<br>( 397.9 / 378.0 ) 3683 | ( 10.93 , 0.75 )<br>( N/A , -0.01 , -0.3) | 1166.2<br>136.6 | 0.0044<br>115.6<br>105.1 | 4.0887 | N/A | 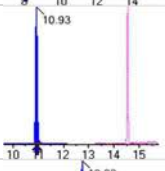 | 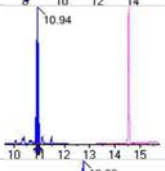 | |
| PFOSA | ( 498.0 / 78.0 ) 753953<br>( 498.0 / 478.0 ) 10302 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1382.3<br>238.4 | 0.0137<br>94.7<br>99.8 | 1.0502 | N/A | 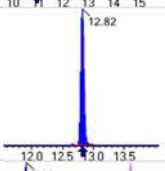 | 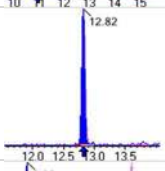 | |
| TFSI | ( 279.7 / 147.0 ) 2165420<br>( 279.7 / 211.0 ) 194252 | ( 8.22 , 0.64 )<br>( N/A , -0.03 , 0.0) | 64.0<br>50.4 | 0.0897<br>108.8<br>105.5 | 1.4188 | N/A | 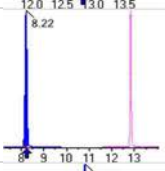 | 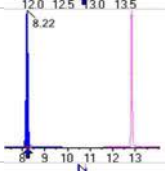 | |
| NMeFOSA | ( 512.0 / 219.0 ) 195444<br>( 512.0 / 169.0 ) 148610 | ( 14.19 , 1.00 )<br>( -0.01 , N/A , 2.7) | 1067.4<br>1316.3 | 0.7604<br>103.4<br>99.6 | 3.9770 | N/A | 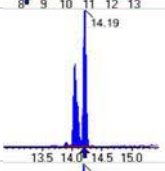 | 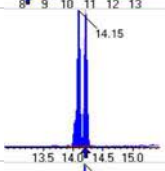 | |
| NEtFOSA | ( 526.0 / 219.0 ) 169605<br>( 526.0 / 169.0 ) 209712 | ( 14.53 , 1.00 )<br>( 0.00 , N/A , 2.1) | 1110.6<br>925.0 | 1.2365<br>97.6<br>98.0 | 3.8730 | N/A | 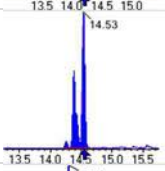 | 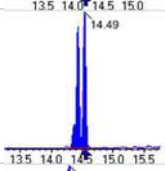 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 210198<br>( 570.0 / 483.0 ) 99782 | ( 10.30 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1733.7<br>4782.4 | 0.4747<br>109.6<br>104.2 | 0.9438 | N/A | 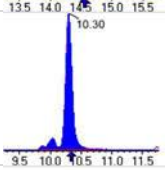 | 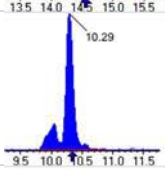 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (11)
Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 217526<br>( 584.0 / 526.0 ) 133931 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.4) | 1050.6<br>525.7 | 0.6157<br>99.4<br>102.2 | 0.9695 | N/A | 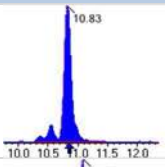 | 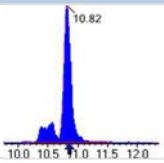 | |
| NMeFOSE | ( 616.0 / 59.0 ) 176862 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 654.5 | N/A<br>0.0<br>0.0 | 3.8401 | N/A | 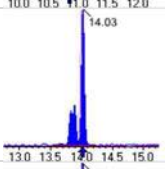 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 148554 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 948.1 | N/A<br>0.0<br>0.0 | 3.9050 | N/A | 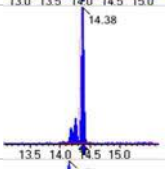 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 73857<br>( 285.0 / 185.0 ) 205481 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1261.2<br>919.1 | 2.7821<br>89.3<br>100.4 | 1.0021 | N/A | 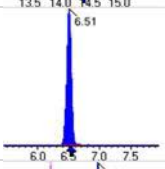 | 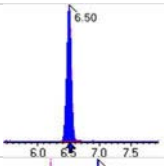 | |
| ADONA | ( 377.0 / 85.0 ) 868319<br>( 377.0 / 251.0 ) 90630 | ( 7.58 , 1.16 )<br>( N/A , -0.03 , -0.1) | 1253.4<br>367.9 | 0.1044<br>97.9<br>98.6 | 0.9251 | N/A | 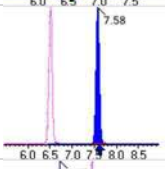 | 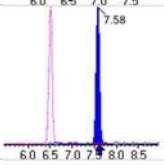 | |
| PFMPA | ( 229.0 / 85.0 ) 141079 | ( 4.15 , 0.86 )<br>( N/A , 0.01 , 0.0) | 2534.5 | N/A<br>0.0<br>0.0 | 1.7920 | N/A | 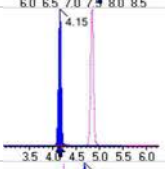 | | |
| PFMBA | ( 279.0 / 85.0 ) 392117 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3086.0 | N/A<br>0.0<br>0.0 | 1.8818 | N/A | 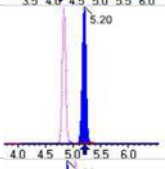 | | |
| NFDHA | ( 295.0 / 201.0 ) 186078<br>( 295.0 / 85.0 ) 197577 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2173.8<br>653.6 | 1.0618<br>98.2<br>99.2 | 1.8328 | N/A | 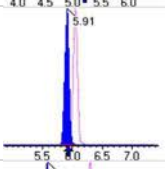 | 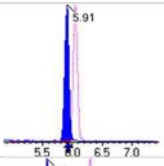 | |
| PFECHS | ( 461.0 / 98.9 ) 504727<br>( 461.0 / 381.2 ) 178897 | ( 9.54 , 0.91 )<br>( N/A , -0.04 , 0.3) | 2235.0<br>901.5 | 0.3544<br>90.8<br>90.6 | 0.8972 | N/A | 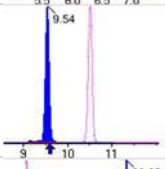 | 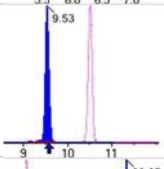 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 938466<br>( 533.0 / 353.0 ) 305299 | ( 11.16 , 1.71 )<br>( N/A , -0.04 , 0.0) | 2620.1<br>1473.7 | 0.3253<br>101.2<br>104.5 | 0.8102 | N/A | 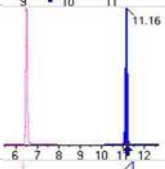 | 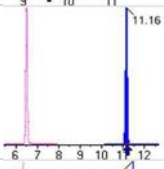 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 686634<br>( 633.0 / 453.0 ) 234798 | ( 12.47 , 1.92 )<br>( N/A , -0.02 , -0.1) | 2926.6<br>1547.1 | 0.3420<br>104.7<br>103.1 | 0.7568 | N/A | 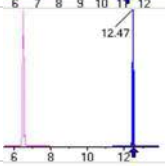 | 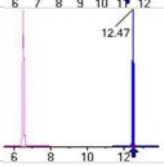 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (11)
Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFEESA | ( 315.0 / 135.0 ) 376005<br>( 315.0 / 83.0 ) 211775 | ( 6.94 , 1.15 )<br>( N/A , -0.03 , 0.0) | 1760.6<br>502.2 | 0.5632<br>98.3<br>95.2 | 1.7117 | N/A | 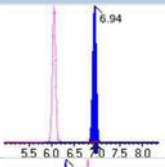 | 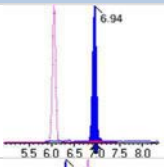 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 44916<br>( 241.0 / 117.0 ) 98454 | ( 4.39 , 0.91 )<br>( N/A , 0.01 , 0.1) | 835.2<br>458.6 | 2.1920<br>98.8<br>98.5 | 3.7182 | N/A | 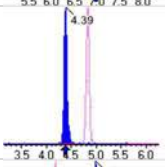 | 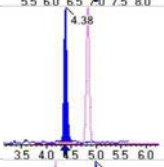 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 290640<br>( 341.0 / 217.0 ) 416619 | ( 6.91 , 1.14 )<br>( N/A , -0.02 , 0.0) | 1079.5<br>620.2 | 1.4335<br>95.7<br>93.5 | 4.1059 | N/A | 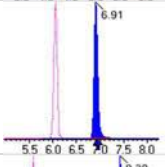 | 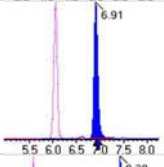 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 451923<br>( 441.0 / 337.0 ) 397193 | ( 9.30 , 1.54 )<br>( N/A , -0.03 , 0.0) | 3172.1<br>4816.5 | 0.8789<br>98.7<br>101.4 | 4.3400 | N/A | 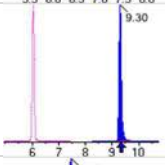 | 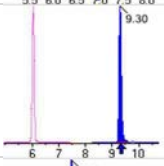 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 335318<br>( 357.2 / 243.0 ) 32130 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , -0.2) | 982.9<br>105.9 | 0.0958<br>90.8<br>89.7 | 1.2043 | N/A | 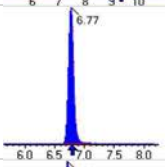 | 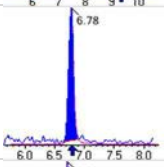 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 250191<br>( 457.2 / 343.0 ) 9588 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.3) | 473.3<br>69.9 | 0.0383<br>97.9<br>100.8 | 1.1564 | N/A | 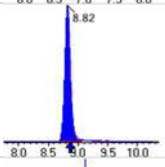 | 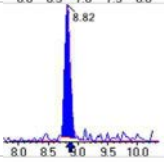 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 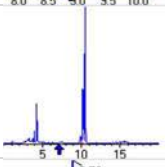 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 234398 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 920.3 | N/A | 0.7781<br>[ 1.0000 ] | 77.8%<br>{ 69.3% } | 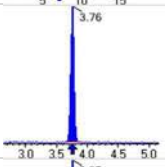 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 138067 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 21945.0 | N/A | 0.8979<br>[ 1.0000 ] | 89.8%<br>{ 81.0% } | 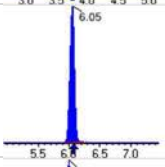 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 431071 | ( 8.20 , N/A )<br>( N/A , -0.03 , N/A ) | 4848.1 | N/A | 0.9662<br>[ 1.0000 ] | 96.6%<br>{ 88.3% } | 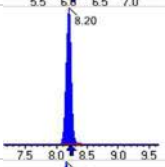 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 308036 | ( 9.15 , N/A )<br>( N/A , -0.04 , N/A ) | 1124.8 | N/A | 0.9214<br>[ 1.0000 ] | 92.1%<br>{ 80.1% } | 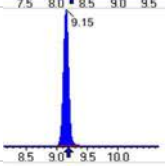 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MSD1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 261306 | ( 10.05 , N/A ) ( N/A , -0.04 , N/A ) | 3123.7 | N/A | 0.7880 [ 1.0000 ] | 78.8% { 69.2% } | 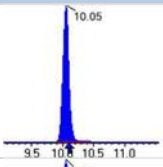  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1045315 | ( 8.65 , N/A ) ( N/A , -0.04 , N/A ) | 5147.8 | N/A | 0.9355 [ 1.0000 ] | 93.5% { 83.4% } | 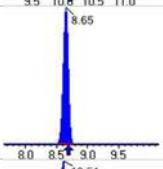  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 878413 | ( 10.51 , N/A ) ( N/A , -0.04 , N/A ) | 1251.1 | N/A | 0.8998 [ 1.0000 ] | 90.0% { 83.0% } | 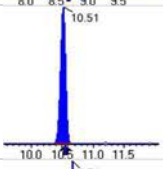  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1748295 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 31950.3 | N/A | 6.7636 [ 8.0000 ] | 84.5% { 61.6% } | 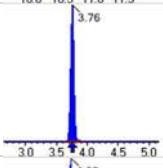  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 977036 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 5929.1 | N/A | 3.9446 [ 4.0000 ] | 98.6% { 76.3% } | 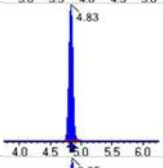  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 602849 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 5525.6 | N/A | 2.0336 [ 2.0000 ] | 101.7% { 79.5% } | 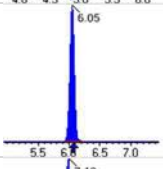  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 670018 | ( 7.19 , N/A ) ( N/A , -0.02 , N/A ) | 5528.7 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 81.6% } | 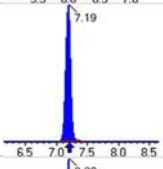  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 876341 | ( 8.20 , N/A ) ( N/A , -0.03 , N/A ) | 3004.3 | N/A | 1.9281 [ 2.0000 ] | 96.4% { 80.7% } | 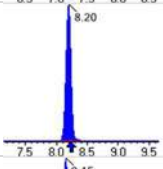  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 295004 | ( 9.15 , N/A ) ( N/A , -0.04 , N/A ) | 2273.4 | N/A | 0.9918 [ 1.0000 ] | 99.2% { 78.0% } | 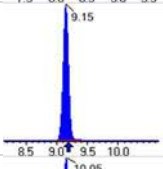  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 293457 | ( 10.05 , N/A ) ( N/A , -0.04 , N/A ) | 1057.1 | N/A | 0.9732 [ 1.0000 ] | 97.3% { 62.3% } | 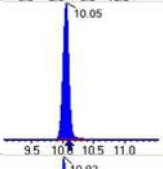  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393690 | ( 10.92 , N/A ) ( N/A , -0.04 , N/A ) | 1153.0 | N/A | 1.0739 [ 1.0000 ] | 107.4% { 77.6% } | 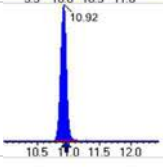  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: BDC0208-MSD1 | Quant Method: 1633 - S2024-03-12A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-18A (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 370822 | ( 11.75 , N/A ) ( N/A , -0.03 , N/A ) | 1479.4 | N/A | 1.0072 [ 1.0000 ] | 100.7% { 71.4% } | 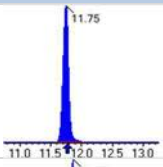 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 309704 | ( 12.87 , N/A ) ( N/A , -0.02 , N/A ) | 1401.9 | N/A | 0.9654 [ 1.0000 ] | 96.5% { 70.0% } | 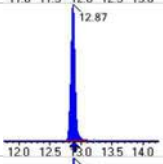 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 496710 | ( 13.68 , N/A ) ( N/A , -0.01 , N/A ) | 2495.8 | N/A | 1.8228 [ 2.0000 ] | 91.1% { 61.7% } | 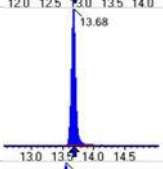 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1801417 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 845.6 | N/A | 1.7687 [ 2.0000 ] | 88.4% { 75.6% } | 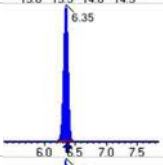 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1405311 | ( 8.65 , N/A ) ( N/A , -0.04 , N/A ) | 3273.3 | N/A | 1.8372 [ 2.0000 ] | 91.9% { 79.7% } | 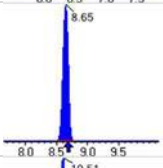 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1725924 | ( 10.51 , N/A ) ( N/A , -0.04 , N/A ) | 1454.3 | N/A | 1.8456 [ 2.0000 ] | 92.3% { 77.3% } | 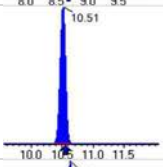 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524781 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 80.5 | N/A | 5.7651 [ 4.0000 ] | 144.1% { 94.9% } | 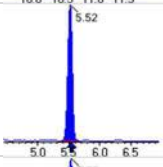 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1633850 | ( 7.63 , N/A ) ( N/A , -0.03 , N/A ) | 1804.6 | N/A | 5.7798 [ 4.0000 ] | 144.5% { 100.4% } | 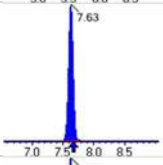 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1396507 | ( 9.43 , N/A ) ( N/A , -0.03 , N/A ) | 1385.4 | N/A | 4.9587 [ 4.0000 ] | 124.0% { 81.8% } | 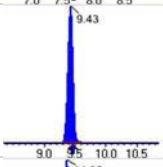 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2794880 | ( 11.06 , N/A ) ( N/A , -0.03 , N/A ) | 1706.9 | N/A | 8.6455 [ 8.0000 ] | 108.1% { 75.3% } | 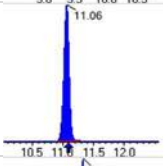 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1471239 | ( 12.83 , N/A ) ( N/A , 0.00 , N/A ) | 2626.7 | N/A | 1.4518 [ 2.0000 ] | 72.6% { 60.8% } | 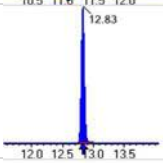 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0208-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-12A
Path: S2024-03-18A (11)
Acquired: 2024/03/18 - 16:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 97583 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 659.8 | N/A | 0.5215 [ 2.0000 ] | 26.1% { 22.8% } | 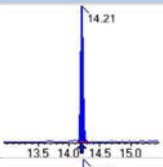 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 79817 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 631.1 | N/A | 0.3713 [ 2.0000 ] | 18.6% { 16.5% } | 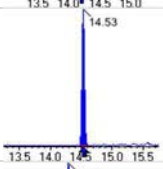 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 945940 | ( 10.29 , N/A ) ( N/A , -0.04 , N/A ) | 2351.1 | N/A | 3.9500 [ 4.0000 ] | 98.7% { 71.6% } | 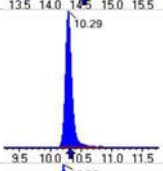 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 930335 | ( 10.82 , N/A ) ( N/A , -0.03 , N/A ) | 2039.8 | N/A | 4.0925 [ 4.0000 ] | 102.3% { 75.5% } | 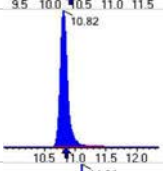 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 813680 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1961.2 | N/A | 9.3059 [ 20.0000 ] | 46.5% { 43.8% } | 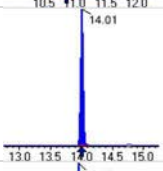 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 861083 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2804.8 | N/A | 8.1295 [ 20.0000 ] | 40.6% { 41.1% } | 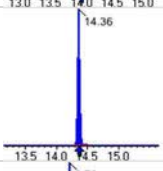 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1038603 | ( 6.51 , N/A ) ( N/A , -0.02 , N/A ) | 2659.0 | N/A | 8.1506 [ 8.0000 ] | 101.9% { 74.0% } | 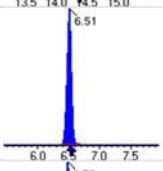 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 518083 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1213.9 | N/A | 2.2355 [ 2.0000 ] | 111.8% { 72.8% } | 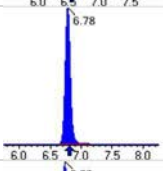 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 513042 | ( 8.83 , N/A ) ( N/A , -0.03 , N/A ) | 648.4 | N/A | 2.3712 [ 2.0000 ] | 118.6% { 76.6% } | 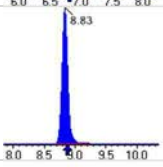 | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | PPL, LLC | Work Order: | 24C0083A |
| Client: | Tidewater, Inc. | Project: | JPL-GW Monitoring |
| Batch: | BDC0208A Batch Matrix: Water | Preparation: | EPA 1633A |

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-21-3- | 24C0083-01- | 03/14/24 12:39- | 542.18- | 2.00- |
| MW-21-2- | 24C0083-02- | 03/14/24 12:39- | 561.83- | 2.00- |
| MW-21-1- | 24C0083-03- | 03/14/24 12:39- | 538.14- | 2.00- |
| FB-3-031324- | 24C0083-04- | 03/14/24 12:39- | 531.53- | 2.00- |
| EB-3-031324- | 24C0083-05- | 03/14/24 12:39- | 523.73- | 2.00- |
| MW-19-3- | 24C0083-06- | 03/14/24 12:39- | 529.78- | 2.00- |
| MW-19-2- | 24C0083-07- | 03/14/24 12:39- | 527.44- | 2.00- |
| MW-19-1- | 24C0083-08- | 03/14/24 12:39- | 541.61- | 2.00- |
| Blank- | BDC0208-BLK1- | 03/14/24 12:39- | 500.00- | 2.00- |
| LCS- | BDC0208-BS1- | 03/14/24 12:39- | 500.00- | 2.00- |
| MRL Check- | BDC0208-MRL1- | 03/14/24 12:39- | 500.00- | 2.00- |
| MW-19-2- | BDC0208-MS1- | 03/14/24 12:39- | 545.18- | 2.00- |
| MW-19-2- | BDC0208-MSD1- | 03/14/24 12:39- | 537.40- | 2.00- |

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/18/2024 2:24 pm

BDC0208

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0076-01 A | MW-4-4 A | 576.476 | 45.379 | 7 | 3/14/2024 12:39:00PM | 531.097 | 2 | | 200 , 200 | |
| 24C0076-02 A | MW-4-3 A | 580.271 | 45.624 | 7 | 3/14/2024 12:39:00PM | 534.647 | 2 | | 200 , 200 | |
| 24C0076-03 A | MW-4-2 A | 583.444 | 45.507 | 7 | 3/14/2024 12:39:00PM | 537.937 | 2 | | 200 , 200 | |
| 24C0076-04 A | DUP-2-031224 A | 566.26 | 45.479 | 7 | 3/14/2024 12:39:00PM | 520.781 | 2 | | 200 , 200 | |
| 24C0076-05 A | MW-4-1 A | 590.52 | 45.782 | 7 | 3/14/2024 12:39:00PM | 544.738 | 2 | | 200 , 200 | |
| 24C0076-06 A | MW-14-4 A | 580.098 | 45.469 | 7 | 3/14/2024 12:39:00PM | 534.629 | 2 | | 200 , 200 | |
| 24C0076-07 A | MW-14-3 A | 590.993 | 45.864 | 7 | 3/14/2024 12:39:00PM | 545.129 | 2 | | 200 , 200 | |
| 24C0076-08 A | MW-14-2 A | 584.184 | 45.342 | 7 | 3/14/2024 12:39:00PM | 538.842 | 2 | | 200 , 200 | |
| 24C0076-09 A | MW-14-1 A | 580.781 | 45.936 | 7 | 3/14/2024 12:39:00PM | 534.845 | 2 | | 200 , 200 | |
| 24C0076-10 A | EB-2-031224 A | 561.394 | 45.332 | 6 | 3/14/2024 12:39:00PM | 516.062 | 2 | | 200 , 200 | |
| 24C0076-11 A | FB-2-031224 A | 573.663 | 45.303 | 6 | 3/14/2024 12:39:00PM | 528.36 | 2 | | 200 , 200 | |
| 24C0083-01 A | MW-21-3 C | 587.788 | 45.611 | 7 | 3/14/2024 12:39:00PM | 542.177 | 2 | | 200 , 200 | |
| 24C0083-02 A | MW-21-2 C | 607.659 | 45.829 | 7 | 3/14/2024 12:39:00PM | 561.83 | 2 | | 200 , 200 | |
| 24C0083-03 A | MW-21-1 C | 583.352 | 45.215 | 7 | 3/14/2024 12:39:00PM | 538.137 | 2 | | 200 , 200 | |
| 24C0083-04 A | FB-3-031324 C | 576.893 | 45.359 | 7 | 3/14/2024 12:39:00PM | 531.534 | 2 | | 200 , 200 | |
| 24C0083-05 A | EB-3-031324 C | 569.399 | 45.67 | 6 | 3/14/2024 12:39:00PM | 523.729 | 2 | | 200 , 200 | |
| 24C0083-06 A | MW-19-3 C | 575.785 | 46.002 | 7 | 3/14/2024 12:39:00PM | 529.783 | 2 | | 200 , 200 | |
| 24C0083-07 A | MW-19-2 C | 572.807 | 45.37 | 7 | 3/14/2024 12:39:00PM | 527.437 | 2 | | 200 , 200 | |
| 24C0083-08 A | MW-19-1 C | 587.639 | 46.028 | 7 | 3/14/2024 12:39:00PM | 541.611 | 2 | | 200 , 200 | |
| 0208-BLK1 | Blank | | | | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 0208-BS1 | LCS | | | | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| 0208-MRL1 | MRL Check | | | | 3/14/2024 12:39:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |
| 0208-MS1 | Matrix Spike [24C0083-07 | 591.013 | 45.83 | | 3/14/2024 12:39:00PM | 545.183 | 2 | 200 , 200 | 200 , 200 | |
| 0208-MSD1 | Matrix Spike Dup [24C008 | 583.514 | 46.113 | | 3/14/2024 12:39:00PM | 537.401 | 2 | 200 , 200 | 200 , 200 | |

**alyses**
33

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0552 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0280 | 1633 EIS MIXB 20-80ng/mL |

g Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





Table of Contents

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/18/2024 2:24 pm

BDC0208

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**
**Balances:**
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:**
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0482 | Am. Ac. preservative | R021040 |
| 24C0044 | Reagent - 0.05MFA wash | x |
| 24C0045 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |
| 24C0046 | Reagent -0.3M Formic Acid | 50009265 |

Batch Comments:

Spiked By: MNM2
Witness By: ABK1 @13:40 3/14/24
pH Lot: 10BDH3431
Biotage Cartridge Lot:24003101PB
Concentration: 11:45, 12:14 03/18/24
IIS: 24B0645
arbon Lot: 148517

ng Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/14/2024 12:41 pm

BDC0208

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID (ID's Confirmed By: mnm²) | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0076-01 A | MW-4-4 A | 576.476 | 45.379 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-02 A | MW-4-3 A | 580.271 | 46.624 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-03 A | MW-4-2 A | 583.444 | 45.507 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-04 A | DUP-2-031224 A | 566.260 | 45.439 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-05 A | MW-4-1 A | 590.520 | 45.782 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-06 A | MW-14-4 A | 580.098 | 45.469 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-07 A | MW-14-3 A | 590.993 | 45.864 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-08 A | MW-14-2 A | 584.184 | 45.342 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-09 A | MW-14-1 A | 580.781 | 45.936 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-10 A | EB-2-031224 A | 561.314 | 45.332 | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0076-11 A | FB-2-031224 A | 573.163 | 45.303 | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-01 A | MW-21-3 C | 587.788 | 45.161 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-02 A | MW-21-2 C | 607.659 | 45.829 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-03 A | MW-21-1 C | 583.352 | 45.215 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-04 A | FB-3-031324 C | 576.893 | 45.359 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-05 A | EB-3-031324 C | 569.329 | 45.620 | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-06 A | MW-19-3 C | 575.785 | 46.002 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-07 A | MW-19-2 C | 572.807 | 45.370 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| 24C0083-08 A | MW-19-1 C | 587.639 | 46.078 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| BDC0208-BLK1 | Blank | | | 6 | 3/14/2024 12:39:00PM | 500 | 2 | | 200 , 200 | |
| BDC0208-BS1 | LCS | | | 6 | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0208-MRL1 | MRL Check | | | 6 | 3/14/2024 12:39:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0208-MS1 | Matrix Spike [24C0083-07] B | 591.013 | 45.830 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0208-MSD1 | Matrix Spike Dup [24C0083-07] C | 583.514 | 46.113 | 7 | 3/14/2024 12:39:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**
1633

**Spiking Solution(s)**
~~24B0011~~ / ~~24B0398~~ ✓ PFAS - MIX 1633 10ng/mL rev1
1633 MIX B 5C 10ng/mL

24B0012
24B0397

**Surrogate Solution(s)**
24B0555 ✓ MPFAC-HIF-ES 20.0ng/mL
[redacted] 1633 EIS MIXB 20-80ng/mL ✓

AmAc 24C0280

mnm²/abk1 13:40 03/14/24 — Spiking Witnessed By / Date

PIT 3/18/2024 — Preparation Reviewed By / Date

PIT 3/18/2024 — Extracts Received By / Date

mnm²/abk1 11:00 03/15/24 - FORGOT TO ADD 2ND SPIKE & SURROGATE



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Table of Contents

# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/14/2024 12:41 pm

BDC0208

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**
**Balances:**
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:**
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|

AmAc – 24A0482
AmOH 1% – 24C0045
FA 0.3 – 24C0046
FA 0.05 – 24C0044

Batch Comments:

Spiked By:
Witness By:
pH Lot: 0BDH3431
Biotage Cartridge Lot: 24003101PB
Concentration: 11:45, 12:14 03/18/24
IIS: 24B0645
Carbon Lot: 148517

_____ _____ MNM2 _____ _____ _____ _____

Spiking Witnessed By | Date | Preparation Reviewed By | Date | Extracts Received By | Date

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00912A | Instrument:A | SaphiraA |
| Calibration: | 2411010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00912-CAL1A | S2024-03-12A (1)A | 03/12/24 18:28A |
| Cal Standardl | SD00912-CAL2A | S2024-03-12A (2)A | 03/12/24 18:49A |
| Cal Standardl | SD00912-CAL3A | S2024-03-12A (3)A | 03/12/24 19:09A |
| Cal Standardl | SD00912-CAL4A | S2024-03-12A (4)A | 03/12/24 19:30A |
| Cal Standardl | SD00912-CAL5A | S2024-03-12A (5)A | 03/12/24 19:50A |
| Cal Standardl | SD00912-CAL6A | S2024-03-12A (6)A | 03/12/24 20:11A |
| Cal Standardl | SD00912-CAL7A | S2024-03-12A (7)A | 03/12/24 20:31A |
| Cal Standardl | SD00912-CAL8A | S2024-03-12A (8)A | 03/12/24 20:52A |
| Initial Cal Blankl | SD00912-ICB1A | S2024-03-12A (9)A | 03/12/24 21:12A |
| Secondary Cal Checkl | SD00912-SCV1A | S2024-03-12A (10)A | 03/12/24 21:33A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00977A | Instrument:A | SaphiraA |
| Calibration: | 2411010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD00977-CCB1A | S2024-03-18A (1)A | 03/18/24 13:30A |
| Low Cal Checkl | SD00977-LCV1A | S2024-03-18A (2)A | 03/18/24 13:51A |
| Calibration Checkl | SD00977-CCV1A | S2024-03-18A (3)A | 03/18/24 14:11A |
| Performance Mixl | SD00977-PEM1A | S2024-03-18A (4)A | 03/18/24 14:32A |
| Performance Mixl | SD00977-PEM2A | S2024-03-18A (5)A | 03/18/24 14:52A |
| Calibration Blankl | SD00977-CCB2A | S2024-03-18A (6)A | 03/18/24 15:13A |
| LCSl | BDC0208-BS1A | S2024-03-18A (8)A | 03/18/24 15:54A |
| MRL Checkl | BDC0208-MRL1A | S2024-03-18A (9)A | 03/18/24 16:14A |
| MW-19-2l | BDC0208-MS1A | S2024-03-18A (10)A | 03/18/24 16:35A |
| MW-19-2l | BDC0208-MSD1A | S2024-03-18A (11)A | 03/18/24 16:55A |
| Calibration Checkl | SD00977-CCV2A | S2024-03-18A (22)A | 03/18/24 20:41A |
| Calibration Blankl | SD00977-CCB3A | S2024-03-18A (23)A | 03/18/24 21:02A |
| MW-21-3l | 24C0083-01A | S2024-03-18A (25)A | 03/18/24 21:43A |
| MW-21-2l | 24C0083-02A | S2024-03-18A (26)A | 03/18/24 22:03A |
| MW-21-1l | 24C0083-03A | S2024-03-18A (27)A | 03/18/24 22:24A |
| FB-3-031324l | 24C0083-04A | S2024-03-18A (28)A | 03/18/24 22:44A |
| EB-3-031324l | 24C0083-05A | S2024-03-18A (29)A | 03/18/24 23:05A |
| MW-19-3l | 24C0083-06A | S2024-03-18A (30)A | 03/18/24 23:25A |
| MW-19-2l | 24C0083-07A | S2024-03-18A (31)A | 03/18/24 23:46A |
| MW-19-1l | 24C0083-08A | S2024-03-18A (32)A | 03/19/24 00:06A |
| Calibration Checkl | SD00977-CCV3A | S2024-03-18A (34)A | 03/19/24 00:47A |
| Calibration Blankl | SD00977-CCB4A | S2024-03-18A (35)A | 03/19/24 01:08A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00991A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00991-CAL1A | S2024-03-19A (1)A | 03/19/24 12:02A |
| Cal Standardl | SD00991-CAL2A | S2024-03-19A (2)A | 03/19/24 12:22A |
| Cal Standardl | SD00991-CAL3A | S2024-03-19A (3)A | 03/19/24 12:43A |
| Cal Standardl | SD00991-CAL4A | S2024-03-19A (4)A | 03/19/24 13:03A |
| Cal Standardl | SD00991-CAL5A | S2024-03-19A (5)A | 03/19/24 13:24A |
| Cal Standardl | SD00991-CAL6A | S2024-03-19A (6)A | 03/19/24 13:44A |
| Cal Standardl | SD00991-CAL7A | S2024-03-19A (7)A | 03/19/24 14:05A |
| Cal Standardl | SD00991-CAL8A | S2024-03-19A (8)A | 03/19/24 14:25A |
| Initial Cal Blankl | SD00991-ICB1A | S2024-03-19A (9)A | 03/19/24 14:46A |
| Secondary Cal Checkl | SD00991-SCV1A | S2024-03-19A (10)A | 03/19/24 15:06A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0083A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01003A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD01003-CCB1A | S2024-03-19B (1)A | 03/19/24 16:28A |
| Low Cal Checkl | SD01003-LCV1A | S2024-03-19B (2)A | 03/19/24 16:49A |
| Calibration Checkl | SD01003-CCV1A | S2024-03-19B (3)A | 03/19/24 17:09A |
| Performance Mixl | SD01003-PEM1A | S2024-03-19B (4)A | 03/19/24 17:30A |
| Performance Mixl | SD01003-PEM2A | S2024-03-19B (5)A | 03/19/24 17:51A |
| Calibration Blankl | SD01003-CCB2A | S2024-03-19B (6)A | 03/19/24 18:11A |
| Blankl | BDC0208-BLK1A | S2024-03-19B (7)A | 03/19/24 18:32A |
| Calibration Checkl | SD01003-CCV2A | S2024-03-19B (24)A | 03/20/24 00:20A |
| Calibration Blankl | SD01003-CCB3A | S2024-03-19B (25)A | 03/20/24 00:41A |
| Calibration Checkl | SD01003-CCV3A | S2024-03-19B (36)A | 03/20/24 04:27A |
| Calibration Blankl | SD01003-CCB4A | S2024-03-19B (37)A | 03/20/24 04:47A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**

**CAS #:** 356-02-5

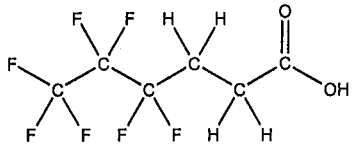


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020
(mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

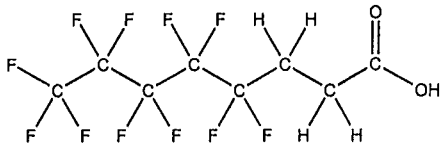

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FHpPA | **LOT NUMBER:** | FHpPA1020 |
| **COMPOUND:** | 3-Perfluoroheptyl propanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 812-70-4 |

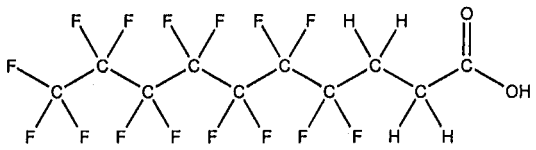

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_5F_{15}O_2$ | **MOLECULAR WEIGHT:** | 442.12 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

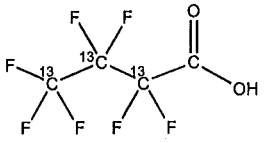

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

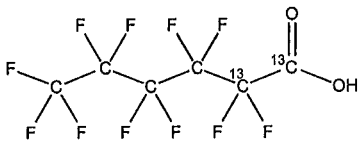

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_{11}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 10/04/2021
**EXPIRY DATE:** (mm/dd/yyyy) 10/04/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

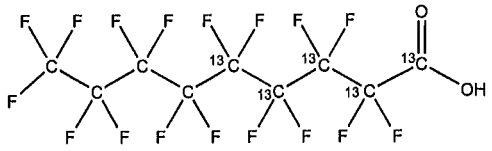

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFOA | **LOT NUMBER:** | MPFOA1121 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-48-4 |

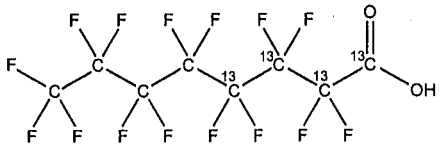

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4HF_{15}O_2$ | **MOLECULAR WEIGHT:** | 418.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/07/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/07/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

## 22A0120

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

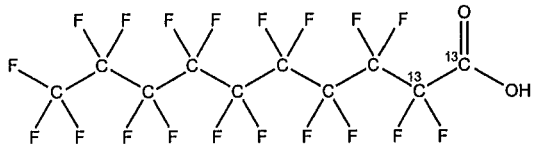

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFOS | **LOT NUMBER:** | MPFOS0821 |
| **COMPOUND:** | Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | 960315-53-1 |

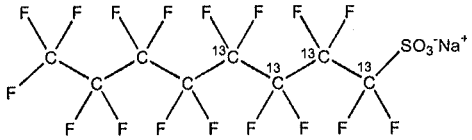

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 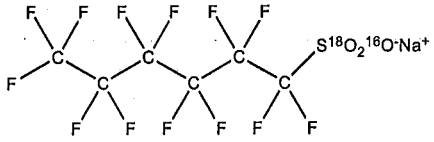 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |



**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Calbiochem®

Certificate of Analysis

## Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

### Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas
This document has been electronically produced and is valid without a signature
Quality Control/ Assurance Signature

05 OCT 2021
Date

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**Technical Support NA +1-800-221-1975 | email: www.millipore.com/techservices | www.calbiochem.com**

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

## 23A0 220

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

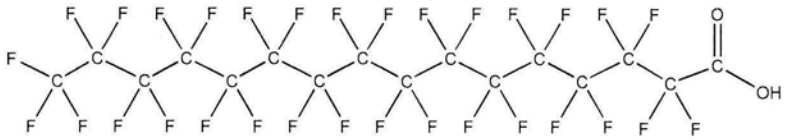

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

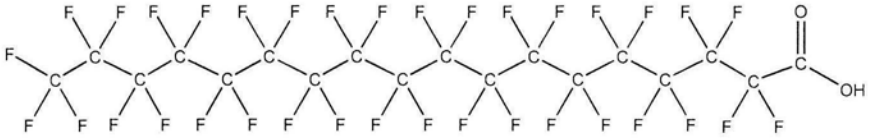

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

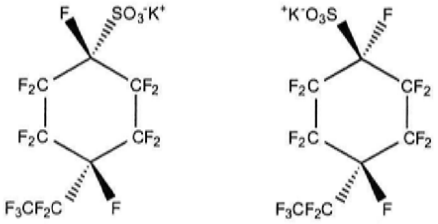


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

**MOLECULAR FORMULA:** $C_8F_{15}SO_3K$ **MOLECULAR WEIGHT:** 500.22

**CONCENTRATION:** 50.0 ± 2.5 µg/mL (K salt)
46.2 ± 2.3 µg/mL (PFECHS acid)
46.1 ± 2.3 µg/mL (PFECHS anion)

**SOLVENT(S):** Methanol

**CHEMICAL PURITY:** >98%

**LAST TESTED:** (mm/dd/yyyy) 03/28/2022

**EXPIRY DATE:** (mm/dd/yyyy) 03/28/2027

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

**23C0155C**

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FBSA-I
**COMPOUND:** Perfluoro-1-butanesulfonamide

**LOT NUMBER:** FBSA0123I

**STRUCTURE:**

**CAS #:** 30334-69-1

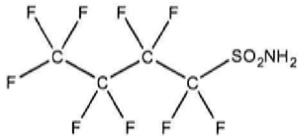

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**
**CAS #:** 41997-13-1

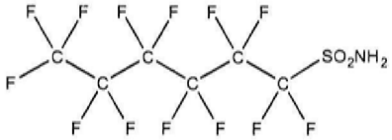

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctane-sulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| | | |
|---|---|---|
| Formulated By: | Prashant Chauhan | 051723 DATE |
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4448& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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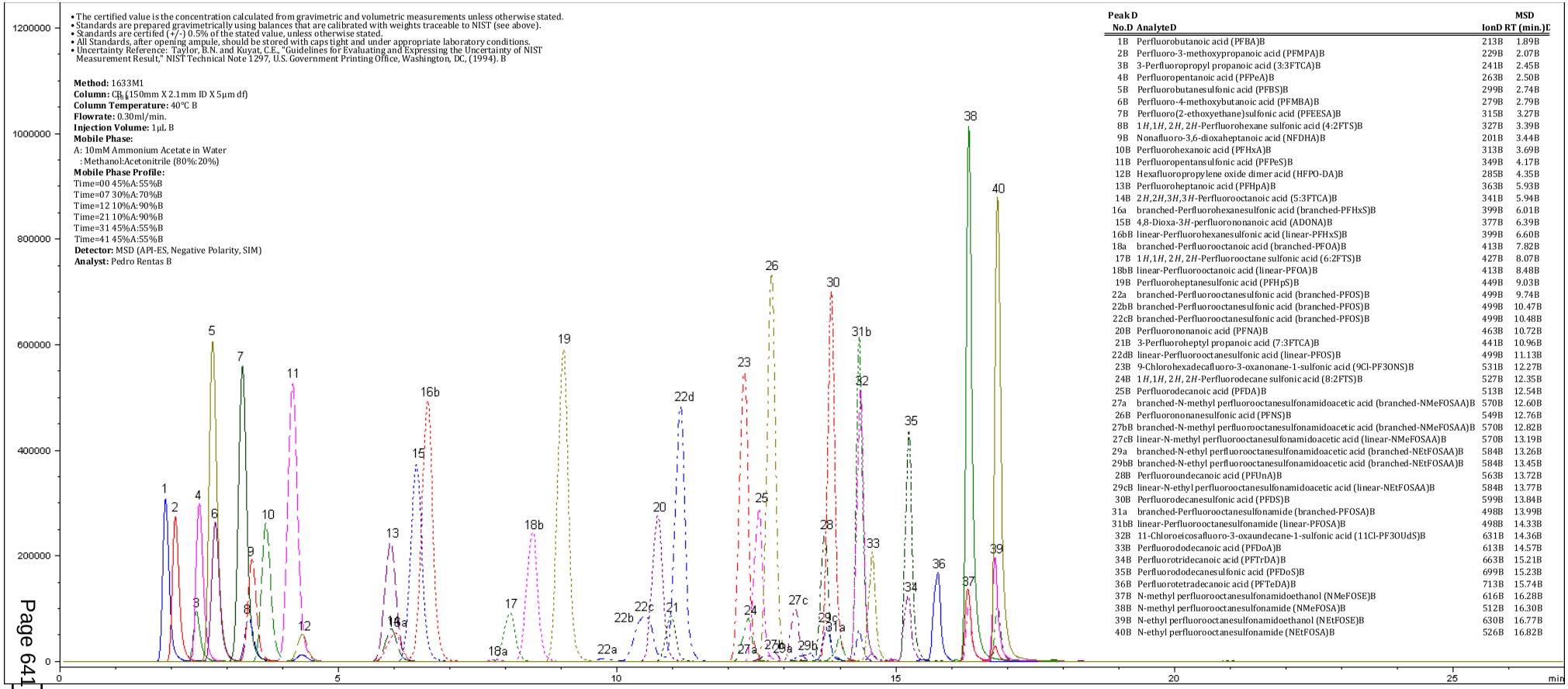


| Peak No. | D Analyte | D Ion | MSD RT (min.) | D |
|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B 1.89 B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B 2.07 B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B 2.45 B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B 2.50 B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B 2.74 B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B 2.79 B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B 3.27 B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B 3.39 B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B 3.44 B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B 3.69 B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B 4.17 B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B 4.35 B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B 5.93 B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B 5.94 B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B 6.01 B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B 6.39 B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B 6.60 B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B 7.82 B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B 8.07 B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B 8.48 B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B 9.03 B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B 9.74 B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B 10.47 B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B 10.48 B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B 10.72 B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B 10.96 B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B 11.13 B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B 12.27 B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B 12.35 B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B 12.54 B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B 12.60 B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B 12.76 B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B 12.82 B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B 13.19 B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B 13.26 B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B 13.45 B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B 13.72 B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B 13.77 B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B 13.84 B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B 13.99 B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B 14.33 B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B 14.36 B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B 14.57 B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B 15.21 B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B 15.23 B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B 15.74 B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B 16.28 B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B 16.30 B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B 16.77 B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B 16.82 B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

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New Haven, CT 06513
USA

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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***Certified Reference Material CRM***

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

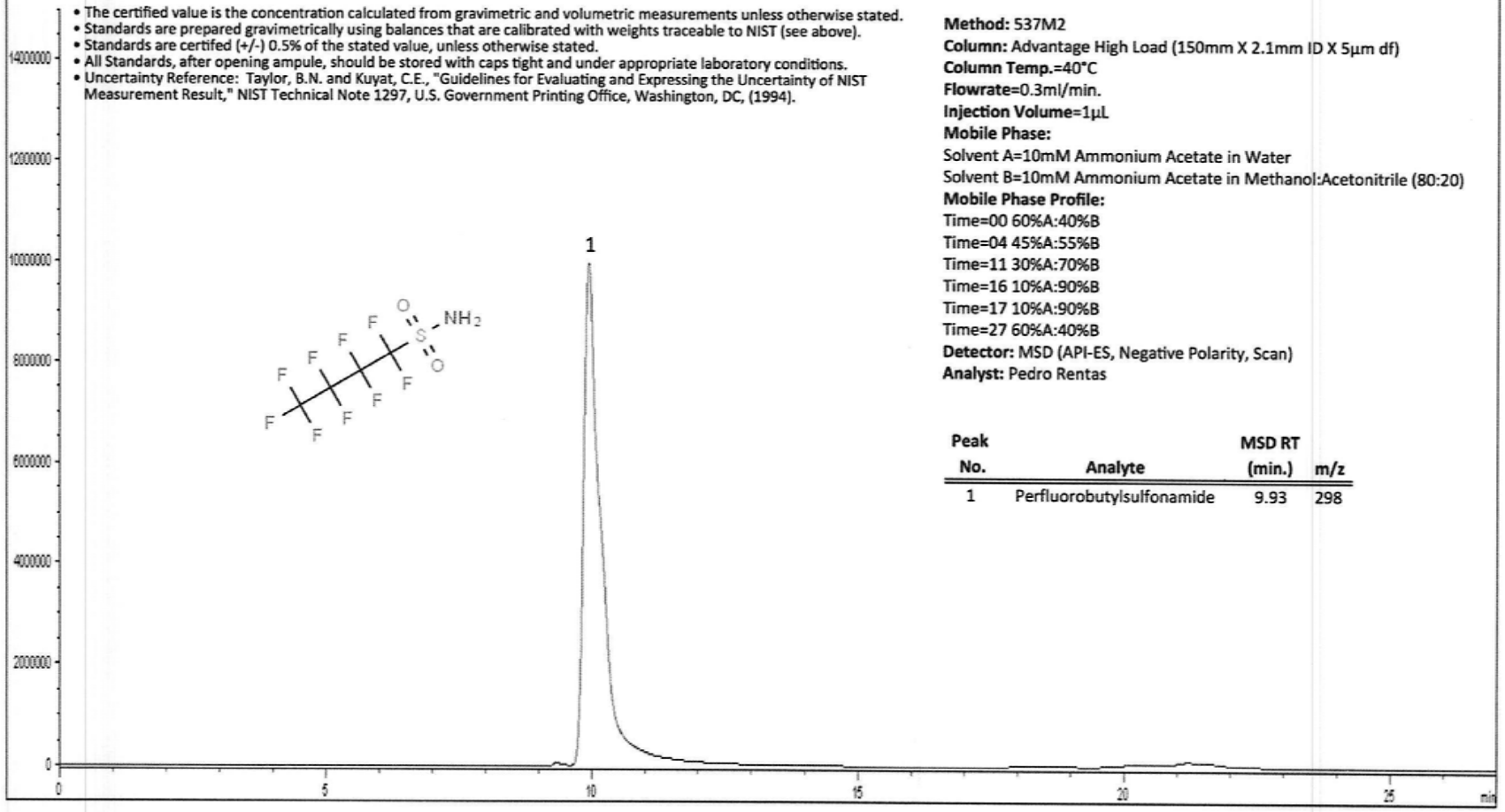


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | | Solvent: | Lot# |
|---|---|---|---|---|
| Expiration Date: | 091125 | | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | | |
| Nominal Concentration (µg/mL): | 1000 | | | |
| NIST Test ID#: | 23060 | 5E-05 | Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 | Flask Uncertainty | |

| | | |
|---|---|---|
| | | 091120 |
| Formulated By: | Benson Chan | DATE |
| | | 091120 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Formulated By: | Benson Chan | 101520 DATE |
| Reviewed By: | Pedro L. Rentas | 101520 DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

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# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

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# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

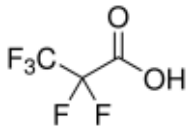


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0011B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0011** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 7/20

# Analytical Standard RecordB

**24B0185B**

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

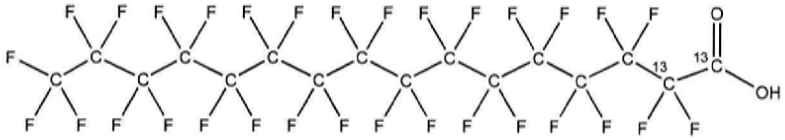

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

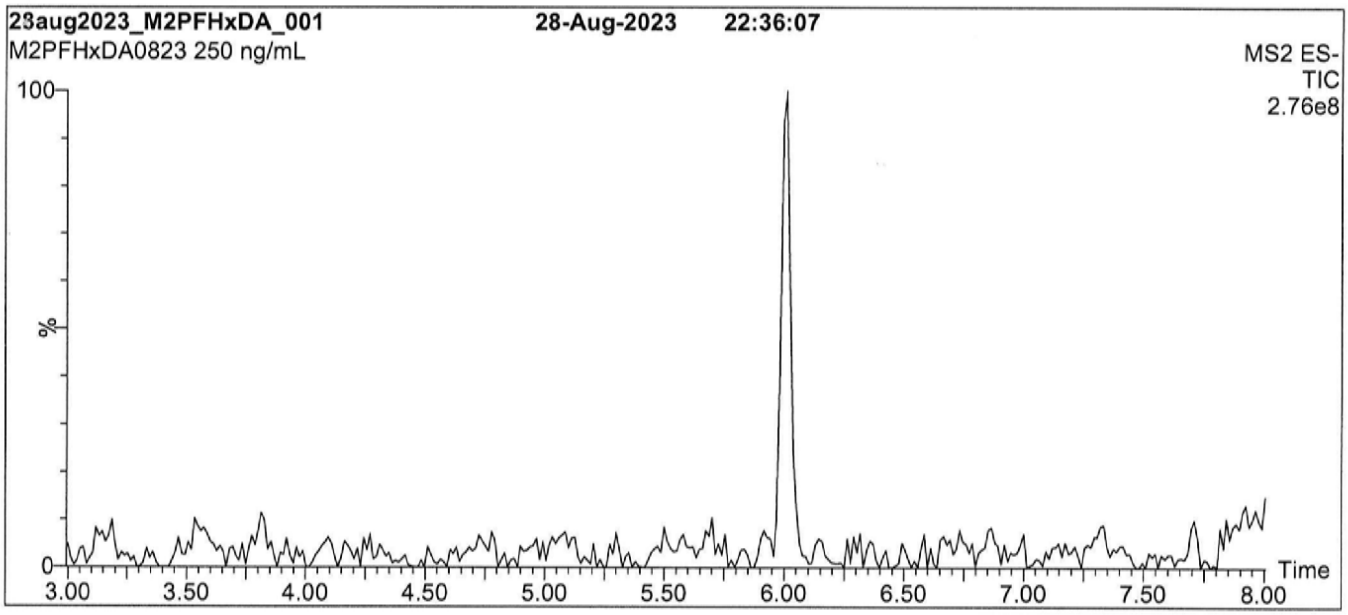


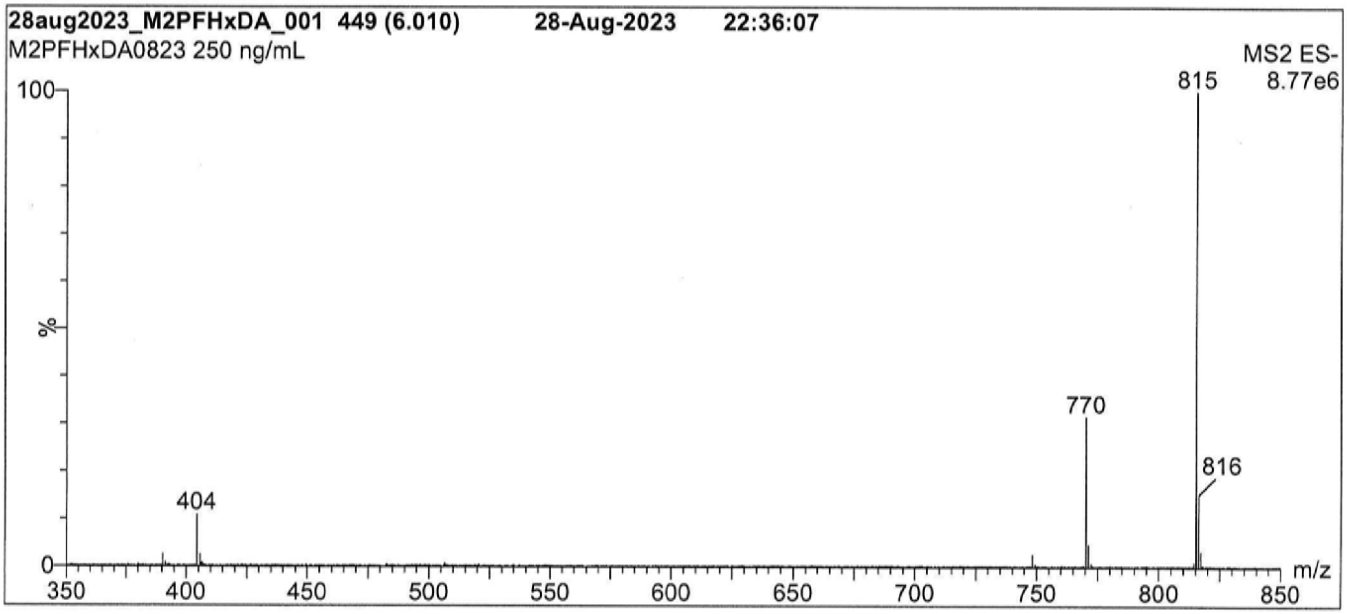


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

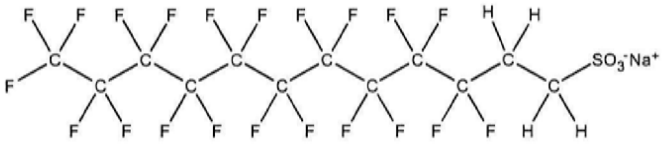


**MOLECULAR FORMULA:** $C_{12}H_4F_{21}SO_3Na$ **MOLECULAR WEIGHT:** 650.18

**CONCENTRATION:** 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
48.3 ± 2.4 µg/mL (10:2FTS acid)
48.2 ± 2.4 µg/mL (10:2FTS anion)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** (mm/dd/yyyy) 09/13/2023

**EXPIRY DATE:** (mm/dd/yyyy) 09/13/2028

**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

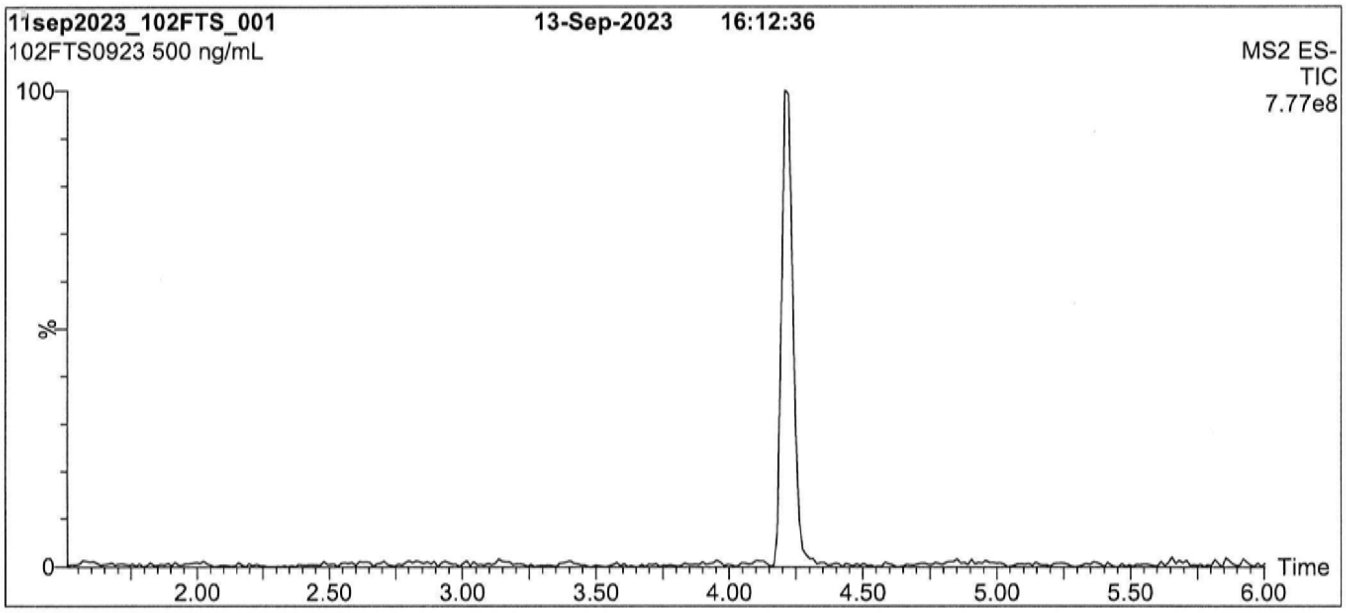


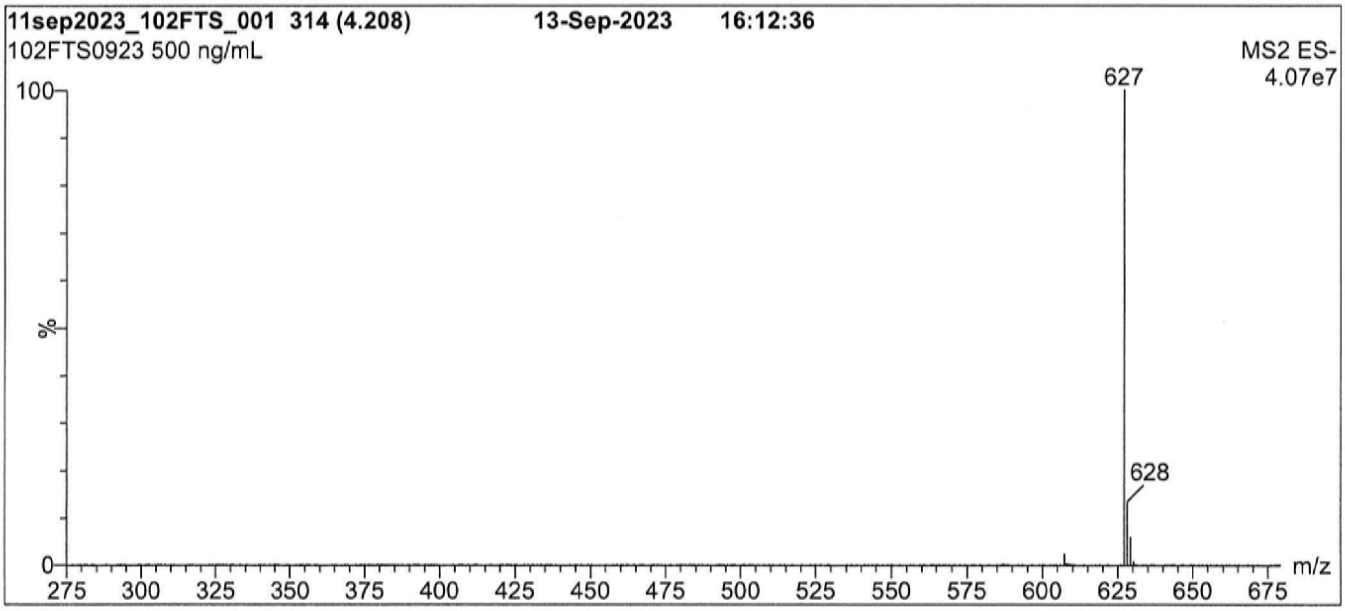


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

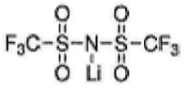

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification) 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

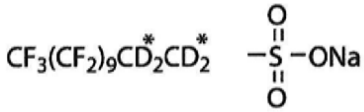

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

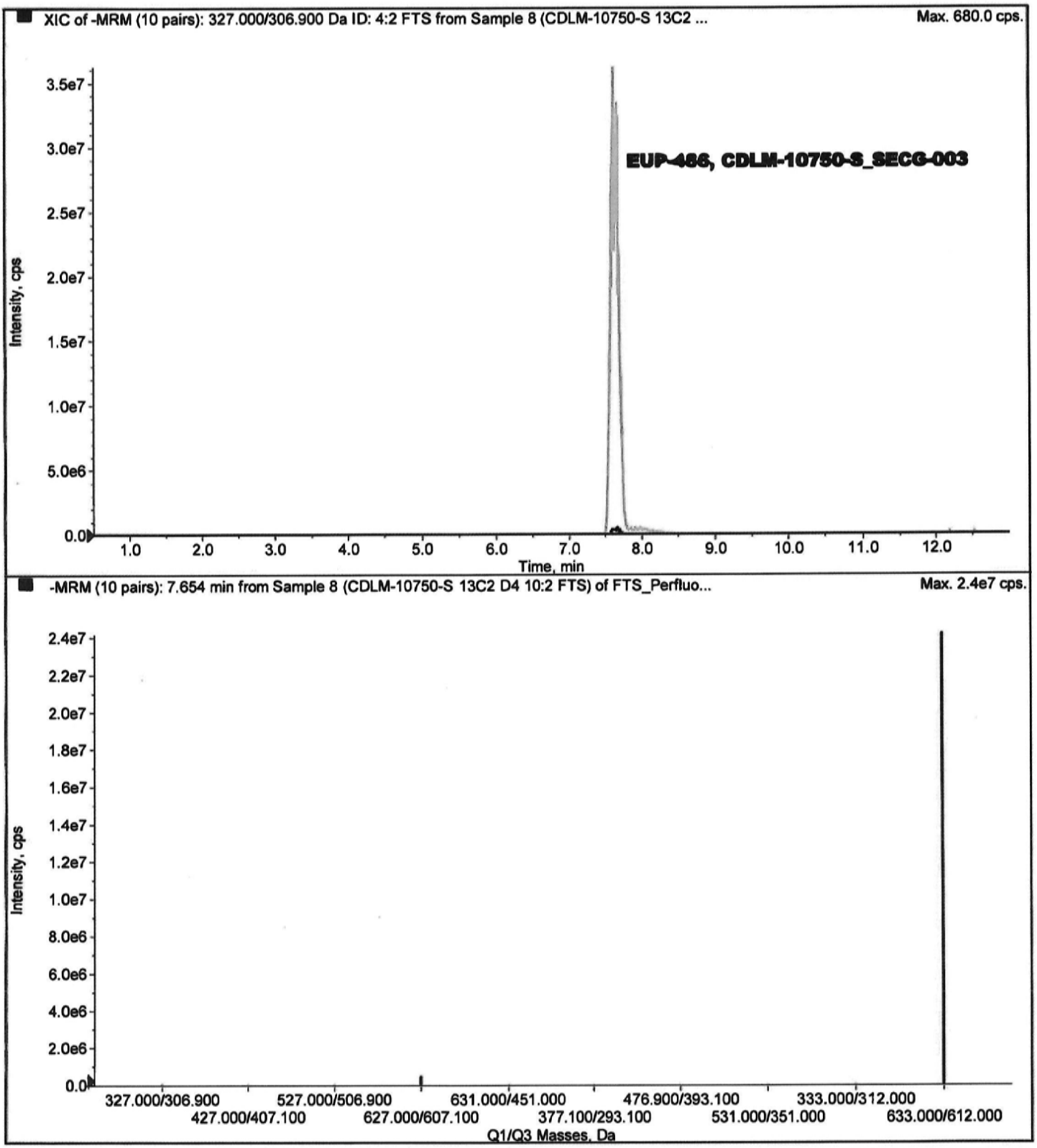

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

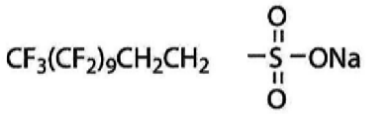

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FOUEA
**COMPOUND:** 2H-Perfluoro-2-decenoic acid
**LOT NUMBER:** FOUEA1123

**STRUCTURE:**
**CAS #:** 70887-84-2

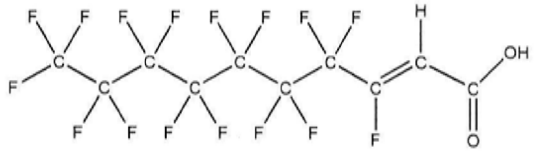

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

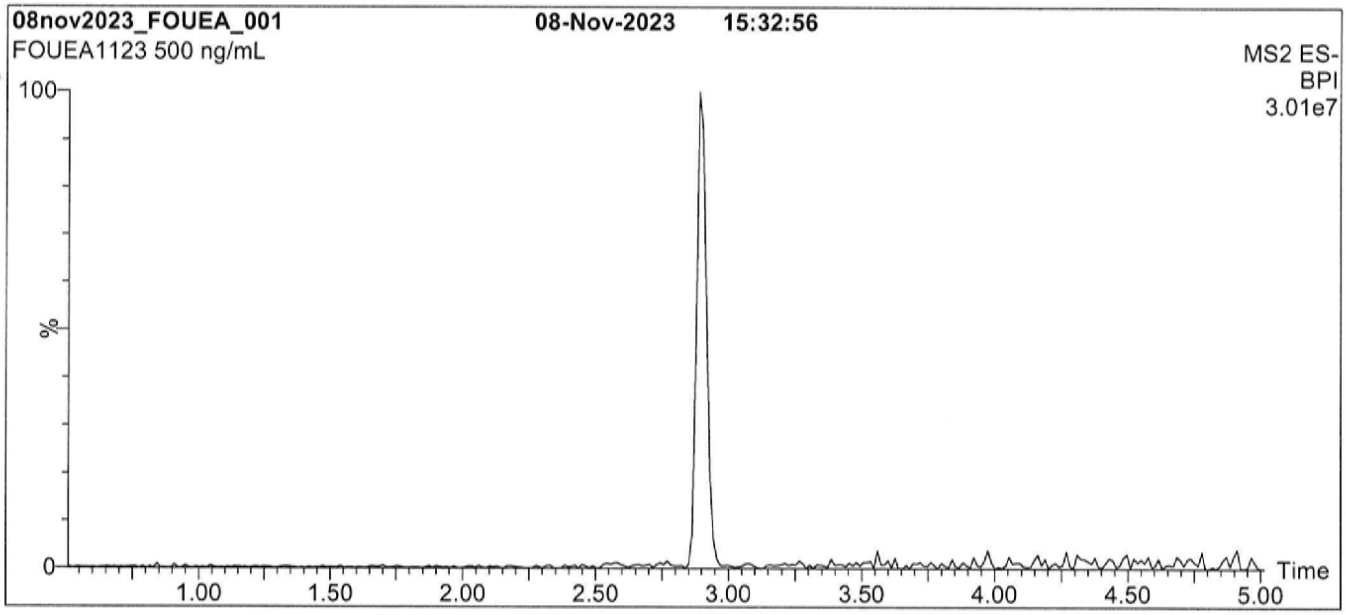


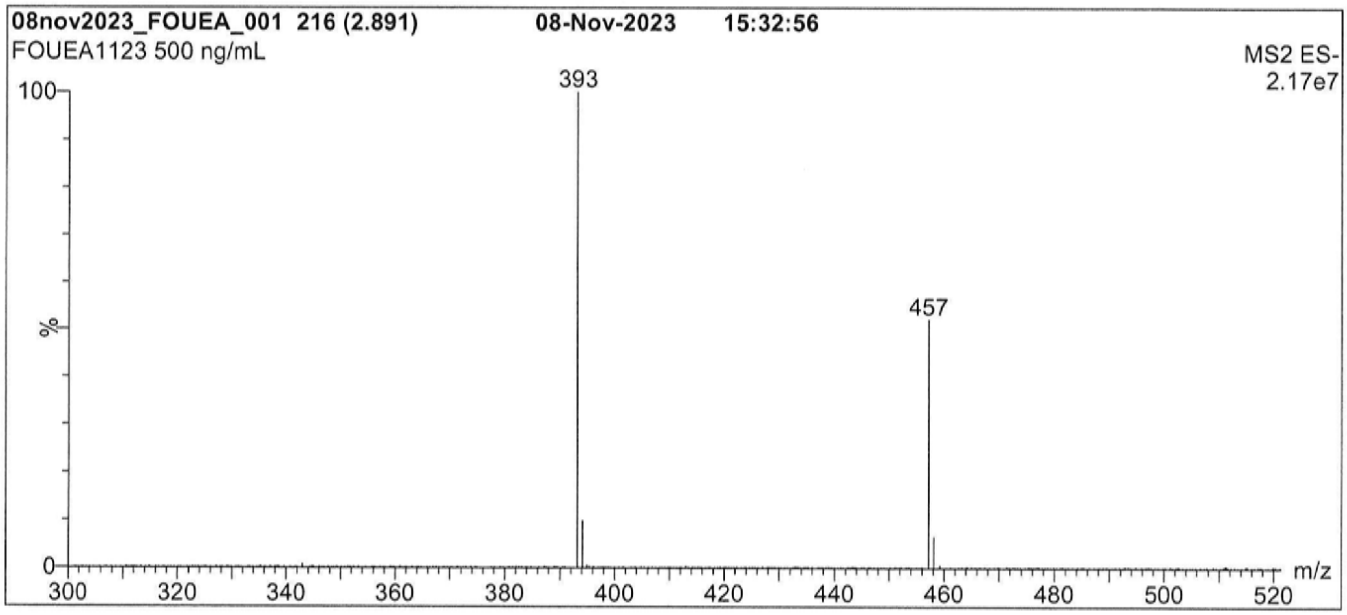


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

**24B0292**

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

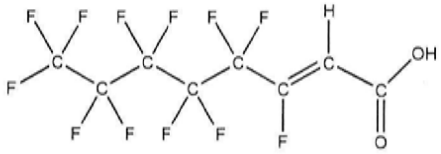

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

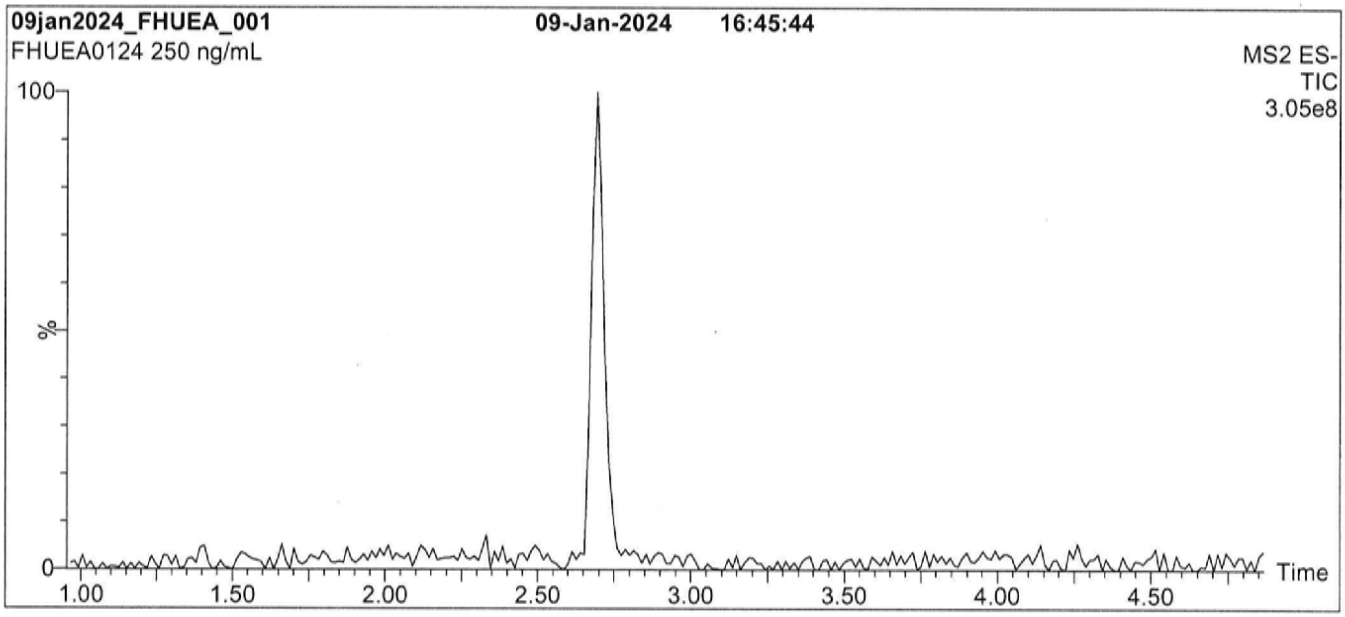


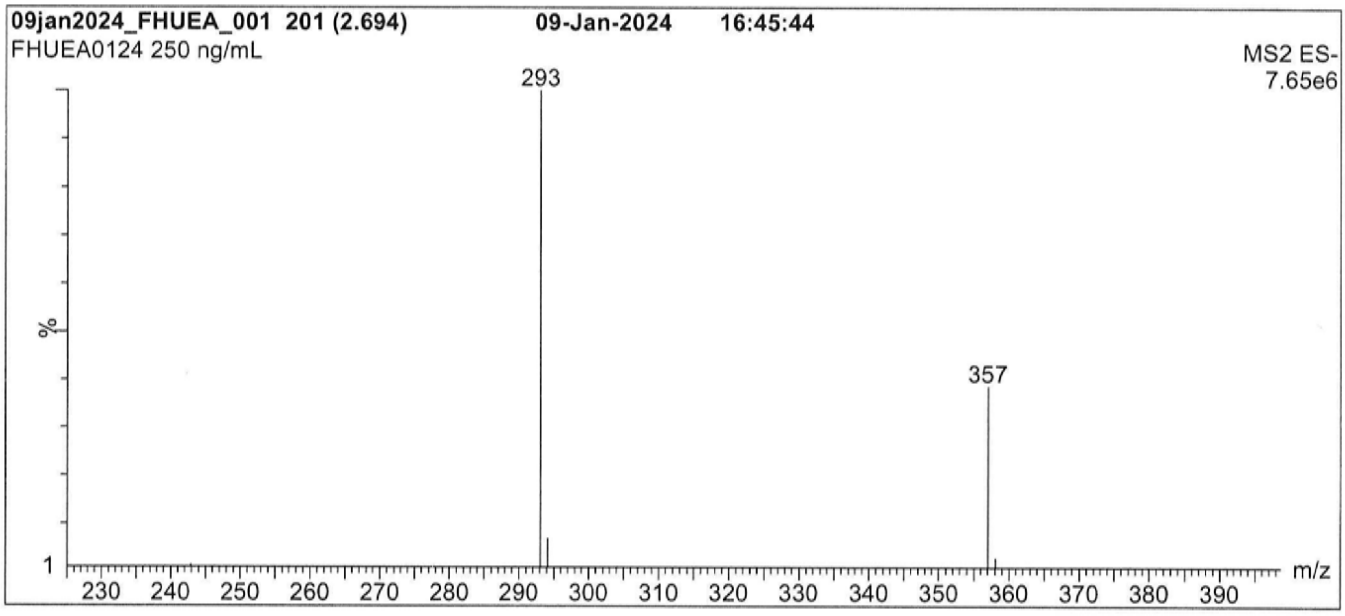


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

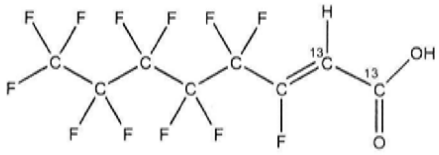

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

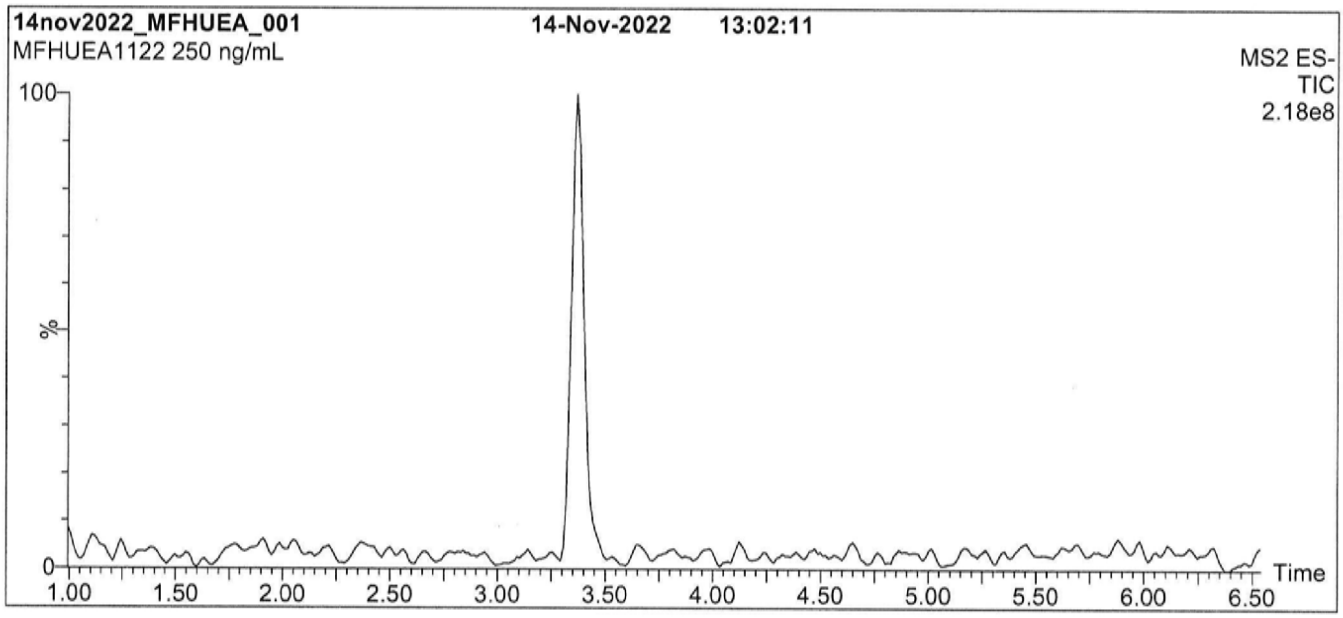


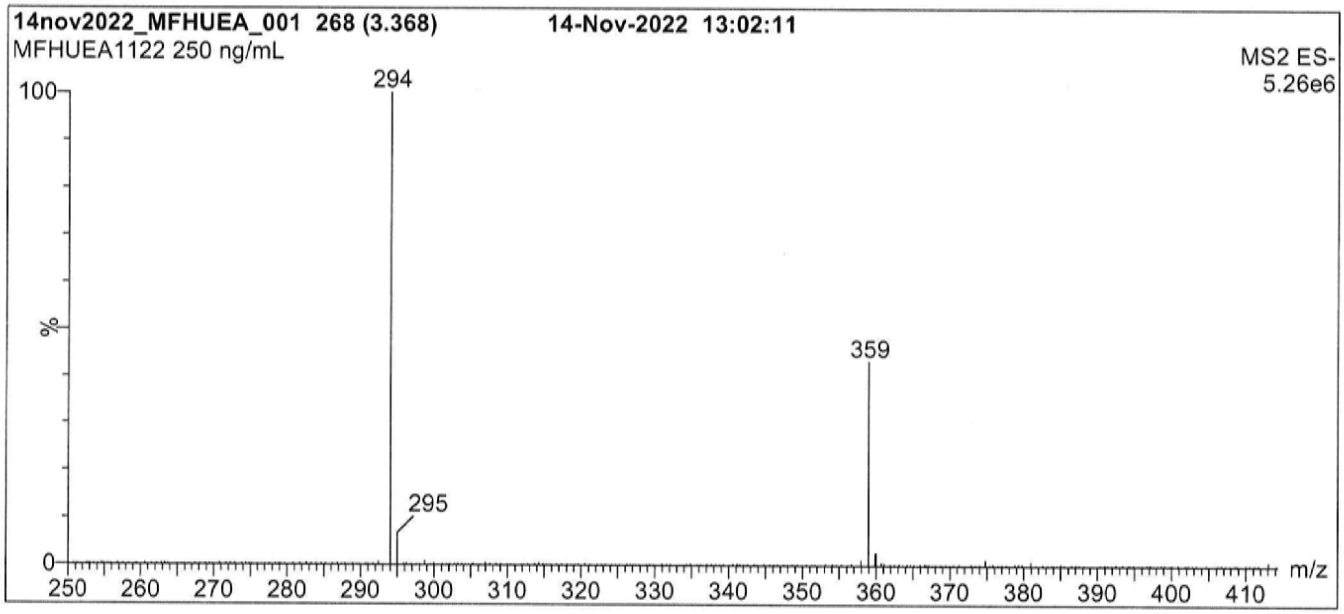


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

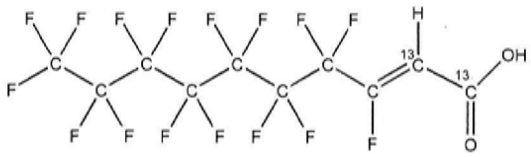

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

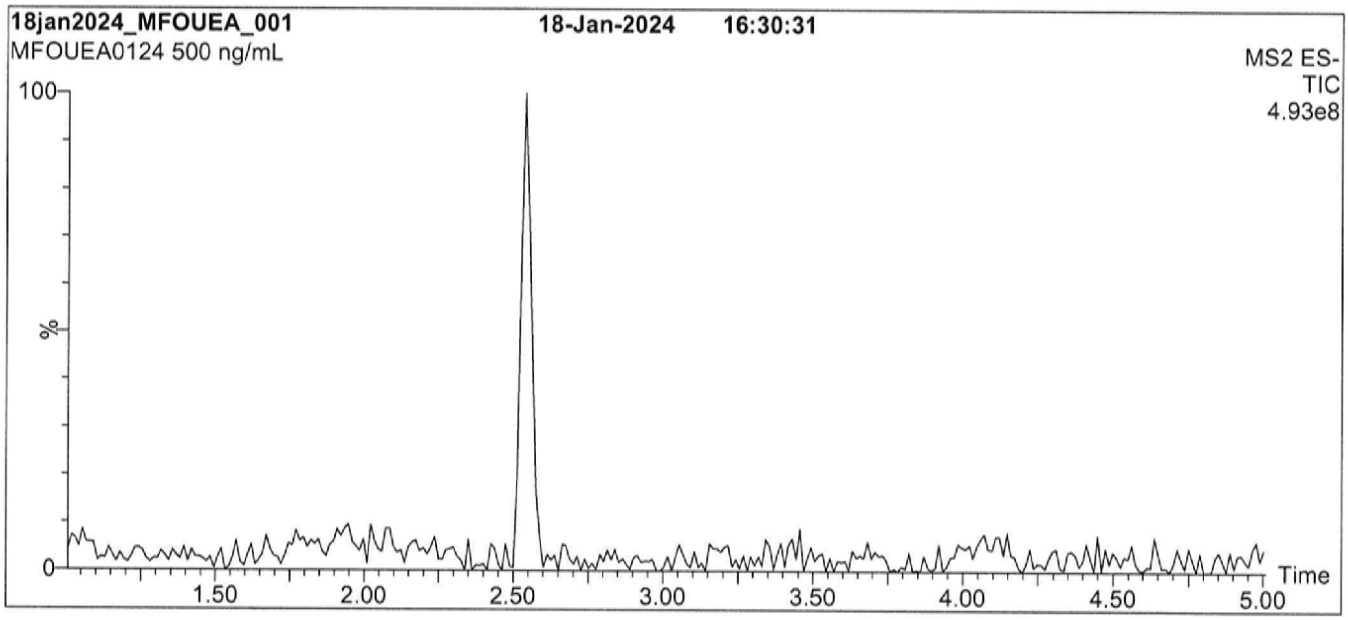


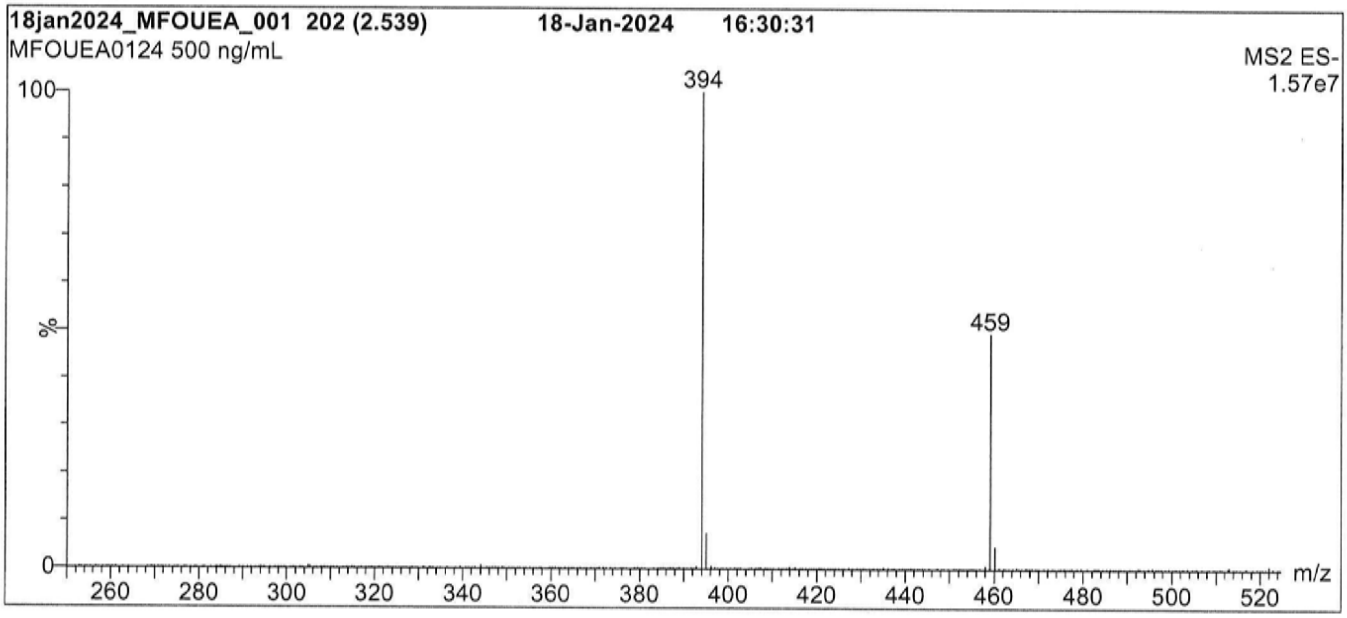


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0470B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0470B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |

# Analytical Standard RecordB

**24B0470** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.025s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.025s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0474B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

3050 Spruce Street, Saint Louis, MO 63103, USA
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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

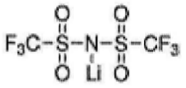

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# Analytical Standard RecordB

## 24C0281B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/12/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 16:39 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.comL

NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

March 28, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0094L

Enclosed are the results of analyses for samples received by our laboratory on 3/15/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

# Data Validatable Report

## Analysis Case Narrativen

n

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical t justification are provided as data qualifiers. t

The extracted internal standard 13C8-PFOSA recovered below the lower control limit in the BDC0200-BLK1.t

## Samples in this Reportn

| Lab IDn | Sample n | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0094-01o | MW-22-3o | Watero | 03/14/2024 08:30o | 03/15/2024o |
| 24C0094-02o | MW-22-2o | Watero | 03/14/2024 08:45o | 03/15/2024o |
| 24C0094-03o | MW-22-1o | Watero | 03/14/2024 09:15o | 03/15/2024o |
| 24C0094-04o | MW-3-4o | Watero | 03/14/2024 10:20o | 03/15/2024o |
| 24C0094-05o | MW-3-3o | Watero | 03/14/2024 10:50o | 03/15/2024o |
| 24C0094-06o | MW-3-2o | Watero | 03/14/2024 11:25o | 03/15/2024o |
| 24C0094-07o | MW-3-1o | Watero | 03/14/2024 13:35o | 03/15/2024o |
| 24C0094-08o | EB-4-031424o | Watero | 03/14/2024 13:40o | 03/15/2024o |
| 24C0094-09o | FB-4-031424o | Watero | 03/14/2024 13:50o | 03/15/2024o |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0094-01t | | | |
| | 500mL Pt | 1t | |
| 24C0094-02t | | | |
| | 500mL Pt | 1t | |
| 24C0094-03t | | | |
| | 500mL Pt | 1t | |
| 24C0094-04t | | | |
| | 500mL Pt | 1t | |
| 24C0094-05t | | | |
| | 500mL Pt | 1t | |
| 24C0094-06t | | | |
| | 500mL Pt | 3t | |
| 24C0094-07t | | | |
| | 500mL Pt | 1t | |
| 24C0094-08t | | | |
| | 500mL Pt | 1t | |
| 24C0094-09t | | | |
| | 500mL Pt | 1t | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

a

**Sample: aMW-22-3 a**

**24C0094-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.6o | 0.20o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.24o | Jo | 0.78o | 0.063o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.19o | Jo | 0.39o | 0.054o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.092o | Jo | 0.39o | 0.040o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.41o | | 0.39o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | IR1, o | 0.39o | 0.080o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.29o | Jo | 0.39o | 0.099o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.39o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | 0.14o | Jo | 0.39o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.39o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.23o | MI6, Jo | 0.39o | 0.036o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.13o | Jo | 0.39o | 0.061o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.63o | IR1o | 0.39o | 0.031o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.39o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.13o | MI3, Jo | 0.39o | 0.062o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.39o | 0.12o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.39o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.39o | 0.12o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.6o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.6o | 0.31o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.6o | 0.080o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.6o | 0.39o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | 0.15o | Jo | 0.39o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.6o | 0.46o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.6o | 0.40o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.39o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.39o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.6o | 0.99o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.6o | 1.0o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.78o | 0.17o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.78o | 0.12o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.78o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.78o | 0.053o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.78o | 0.089o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.78o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.78o | 0.20o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.78o | 0.20o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.6o | 0.56o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.6o | 0.43o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.6o | 0.54o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *95.9%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *100%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-22-3 (Continued)a

**24C0094-01 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *101%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *100%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *108%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *113%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *107%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *109%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *103%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *103%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *89.7%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *109%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *108%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *109%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *134%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *122%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *113%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *110%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *85.9%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *48.6%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *46.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *103%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *105%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *63.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *61.2%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *100%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-22-2 a**

**24C0094-02 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.60o | Jo | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.41o | Jo | 0.73o | 0.059o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.30o | Jo | 0.37o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.11o | Jo | 0.37o | 0.037o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.22o | IR2, Jo | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.094o | MI2, Jo | 0.37o | 0.093o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.41o | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.27o | Jo | 0.37o | 0.057o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.96o | IR1o | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.16o | MI2, Jo | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | 0.12o | MI5, Jo | 0.37o | 0.095o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *89.6%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *106%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 03/28/2024 11:29 |

## Sample Results

**(Continued)**

### Sample: MW-22-2 (Continued)

**24C0094-02 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *106%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *99.0%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.2%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *109%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *104%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *108%* | | *30-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *105%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *98.7%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *95.4%* | | *20-150* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *113%* | | *40-135* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *111%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *106%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *127%* | | *40-200* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *122%* | | *40-200* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *128%* | | *40-300* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *113%* | | *20-150* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *67.9%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *43.4%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *42.4%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *102%* | | *40-170* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *105%* | | *25-135* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *52.8%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *51.5%* | | *10-130* | | | *03/19/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *97.3%* | | *40-130* | | | *03/19/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-22-1 a**

**24C0094-03 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 5.5o | | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 8.6o | | 0.74o | 0.060o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 5.0o | | 0.37o | 0.051o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 1.2o | | 0.37o | 0.038o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.54o | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.099o | Jo | 0.37o | 0.093o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | IR2, o | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 3.3o | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.37o | | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.1o | | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.16o | Jo | 0.37o | 0.059o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | 0.11o | Jo | 0.37o | 0.096o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *86.0%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *98.2%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-22-1 (Continued)a

**24C0094-03 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *96.8%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *93.5%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *105%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *93.9%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *112%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *105%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *102%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *102%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *89.4%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *109%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *106%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *99.1%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *115%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *105%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *117%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *101%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *82.7%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *46.1%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *45.6%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *91.6%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *101%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *59.3%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *59.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *92.3%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-3-4 a**

**24C0094-04 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 3.0o | | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 1.4o | | 0.74o | 0.060o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.99o | | 0.37o | 0.051o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.45o | | 0.37o | 0.038o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.80o | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.13o | Jo | 0.37o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.10o | Jo | 0.37o | 0.094o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 3.3o | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.26o | Jo | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.4o | | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | 0.061o | Jo | 0.37o | 0.048o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 2.9o | | 0.37o | 0.059o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *92.8%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *102%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-3-4 (Continued)a

**24C0094-04 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *102%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *96.7%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *115%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *108%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *116%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *110%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *104%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *112%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *58.5%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *110%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *109%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *107%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *118%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *109%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *104%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *109%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *105%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *61.4%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *59.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *97.5%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *100%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *88.2%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *81.7%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *96.8%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-3-3 a**

**24C0094-05 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 2.8o | | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 1.3o | | 0.73o | 0.060o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.90o | | 0.37o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.41o | | 0.37o | 0.038o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.66o | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.12o | Jo | 0.37o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | | 0.37o | 0.093o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 3.3o | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.27o | Jo | 0.37o | 0.057o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.3o | | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | 0.053o | MI6, Jo | 0.37o | 0.047o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 2.8o | | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | MI5, o | 0.37o | 0.095o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *95.8%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *104%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-3-3 (Continued)a

**24C0094-05 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *103%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *101%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *106%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *107%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *106%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *105%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *101%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *105%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *86.3%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *102%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *102%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *103%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *111%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *103%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *109%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *107%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *92.7%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *53.9%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *55.5%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *99.3%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *107%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *81.3%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *78.7%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *97.2%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-3-2 a**

**24C0094-06 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 3.0o | | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.97o | | 0.74o | 0.060o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.80o | | 0.37o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.28o | Jo | 0.37o | 0.038o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.56o | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.10o | Jo | 0.37o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | MI2, o | 0.37o | 0.093o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 3.3o | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.24o | Jo | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.4o | | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | 0.072o | Jo | 0.37o | 0.047o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 3.4o | IR1o | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | MI5, o | 0.37o | 0.096o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.083o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *90.9%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *102%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-3-2 (Continued)a

**24C0094-06 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *98.6%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *97.0%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *105%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *103%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *109%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *110%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *111%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *110%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *70.6%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *109%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *109%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *101%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *116%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *113%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *108%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *107%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *95.7%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *58.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *53.7%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *101%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *106%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *79.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *76.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *89.1%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-3-1 a**

**24C0094-07 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.53o | Jo | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | NDo | | 0.73o | 0.059o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | NDo | | 0.36o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.043o | Jo | 0.36o | 0.037o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.27o | Jo | 0.36o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | MI1, o | 0.36o | 0.092o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.36o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | IR2, o | 0.36o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.34o | Jo | 0.36o | 0.033o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | IR2, o | 0.36o | 0.057o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.25o | Jo | 0.36o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.36o | 0.047o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.79o | | 0.36o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.26o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.36o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.73o | 0.099o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.73o | 0.082o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.50o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *95.0%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-3-1 (Continued)a

**24C0094-07 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *100%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *101%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *112%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *109%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *117%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *115%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *114%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *104%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *95.4%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *109%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *106%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *104%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *117%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *115%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *117%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *112%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *75.5%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *42.0%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *40.9%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *104%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *104%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *55.6%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *51.9%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *98.2%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-4-031424 a**

**24C0094-08 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | NDo | | 0.74o | 0.060o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | NDo | | 0.37o | 0.051o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | NDo | | 0.37o | 0.038o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | MI2, o | 0.37o | 0.094o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | NDo | | 0.37o | 0.029o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.065o | Jo | 0.37o | 0.059o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/19/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *108%o* | | *5-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *104%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aEB-4-031424 (Continued)a

**24C0094-08 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *104%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *103%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *105%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *110%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *107%o* | | *30-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *103%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *101%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *94.3%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *107%o* | | *40-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *106%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *103%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *126%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *114%o* | | *40-200o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *115%o* | | *40-300o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *112%o* | | *20-150o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *54.2%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *30.5%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *31.5%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *112%o* | | *40-170o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *112%o* | | *25-135o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *37.4%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *35.8%o* | | *10-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *100%o* | | *40-130o* | | | *03/19/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-4-031424 a**

**24C0094-09 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | NDo | 1.5o | 0.20o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | NDo | 0.76o | 0.062o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | NDo | 0.38o | 0.052o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | NDo | 0.38o | 0.039o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | NDo | 0.38o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | 0.38o | 0.078o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | 0.38o | 0.097o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | 0.38o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | 0.38o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | 0.38o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | NDo | 0.38o | 0.035o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | 0.38o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | NDo | 0.38o | 0.030o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | 0.38o | 0.049o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | NDo MI2, o | 0.38o | 0.061o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | 0.38o | 0.12o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | 0.38o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | 0.38o | 0.12o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | 1.5o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | 1.5o | 0.30o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | 1.5o | 0.078o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | 0.38o | 0.099o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | 1.5o | 0.45o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | 0.38o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | 0.38o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | 1.5o | 1.0o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | 0.76o | 0.17o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | 0.76o | 0.12o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | 0.76o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | 0.76o | 0.052o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | 0.76o | 0.087o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | 0.76o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | 0.76o | 0.20o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | 0.76o | 0.20o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | 1.5o | 0.55o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | 1.5o | 0.42o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *110%o* | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *108%o* | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o03/28/2024 11:29o |

## Sample Resultsa

**(Continued) a**

### Sample: aFB-4-031424 (Continued)a

**24C0094-09 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *109%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *107%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *109%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *115%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *103%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *103%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *102%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *96.2%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *111%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *109%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *123%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *113%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *113%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *113%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *59.2%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *31.7%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *30.0%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *119%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *122%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *39.9%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *40.0%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *109%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29 |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0200 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0200-BLK1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 18:52 | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/L | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/L | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/L | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/L | | | | | | |
| PFOAo | NDo | 0.40o | 0.15o | ng/L | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/L | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/L | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/L | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/L | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/L | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/L | | | | | | |
| PFOSo | 0.0642oMI3, Jo | 0.40o | 0.064 | ng/L | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/L | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/L | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/L | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/L | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/L | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/L | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/L | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/L | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/L | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/L | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/L | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/L | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/L | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/L | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/L | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/L | | | | | | |
| *Surrogate: 13C4-PFBAo* | *36.0o* | | | *ng/Lo* | *32.0o* | | *112o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *111o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.80o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.41o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-130o* | | |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0200-BLK1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 18:52o | | | | | |
| *Surrogate: 13C8-PFOAo* | *8.22o* | | | *ng/Lo* | *8.00o* | | *103o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *4.18o* | | | *ng/Lo* | *4.00o* | | *105o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *4.52o* | | | *ng/Lo* | *4.00o* | | *113o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *4.47o* | | | *ng/Lo* | *4.00o* | | *112o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *4.24o* | | | *ng/Lo* | *4.00o* | | *106o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.19o* | | | *ng/Lo* | *4.00o* | | *105o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.12o* | | | *ng/Lo* | *8.00o* | | *76.5o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *9.11o* | | | *ng/Lo* | *8.00o* | | *114o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.88o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *8.04o* | | | *ng/Lo* | *8.00o* | | *101o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.2o* | | | *ng/Lo* | *16.0o* | | *126o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.3o* | | | *ng/Lo* | *16.0o* | | *121o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *34.3o* | | | *ng/Lo* | *32.0o* | | *107o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *3.16 S1o* | | | *ng/Lo* | *8.00o* | | *39.5o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.06o* | | | *ng/Lo* | *8.00o* | | *25.7o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.23o* | | | *ng/Lo* | *8.00o* | | *27.9o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.1o* | | | *ng/Lo* | *16.0o* | | *107o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *17.6o* | | | *ng/Lo* | *16.0o* | | *110o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *24.1o* | | | *ng/Lo* | *80.0o* | | *30.1o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *24.3o* | | | *ng/Lo* | *80.0o* | | *30.4o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.1o* | | | *ng/Lo* | *32.0o* | | *100o* | *40-130o* | | |
| **LCS (BDC0200-BS1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 19:13o | | | | | |
| PFBAo | 15.5o | | 0.21o | ng/Lo | 16.0o | | 97.0o | 70-140o | | |
| PFPeAo | 8.54o | | 0.065o | ng/Lo | 8.00o | | 107o | 65-135o | | |
| PFHxAo | 3.96o | | 0.055o | ng/Lo | 4.00o | | 99.0o | 70-145o | | |
| PFHpAo | 4.20o | | 0.041o | ng/Lo | 4.00o | | 105o | 70-150o | | |
| PFOAo | 4.39o | | 0.15o | ng/Lo | 4.00o | | 110o | 70-150o | | |
| PFNAo | 4.27o | | 0.082o | ng/Lo | 4.00o | | 107o | 70-150o | | |
| PFDAo | 3.96o | | 0.10o | ng/Lo | 4.00o | | 98.9o | 70-140o | | |
| PFUnAo | 4.34o | | 0.16o | ng/Lo | 4.00o | | 109o | 70-145o | | |
| PFDoAo | 4.22o | | 0.11o | ng/Lo | 4.00o | | 106o | 70-140o | | |
| PFTrDAo | 4.20o | | 0.20o | ng/Lo | 4.00o | | 105o | 65-140o | | |
| PFTeDAo | 4.43o | | 0.20o | ng/Lo | 4.00o | | 111o | 60-140o | | |
| PFHxDAo | 4.38o | | 0.20o | ng/Lo | 4.00o | | 110o | 40-150o | | |
| PFODAo | 3.97o | | 0.20o | ng/Lo | 4.00o | | 99.3o | 40-150o | | |
| PFBSo | 3.60o | | 0.037o | ng/Lo | 3.54o | | 102o | 60-145o | | |
| PFPeSo | 4.01o | | 0.063o | ng/Lo | 3.76o | | 107o | 65-140o | | |
| PFHxSo | 3.72o | | 0.032o | ng/Lo | 3.66o | | 102o | 65-145o | | |
| PFHpSo | 4.17o | | 0.051o | ng/Lo | 3.82o | | 109o | 70-150o | | |
| PFOSo | 3.78o | | 0.064o | ng/Lo | 3.72o | | 102o | 55-150o | | |
| PFNSo | 4.00o | | 0.12o | ng/Lo | 3.84o | | 104o | 65-145o | | |
| PFDSo | 4.08o | | 0.15o | ng/Lo | 3.86o | | 106o | 60-145o | | |
| PFDoSo | 3.73o | | 0.12o | ng/Lo | 3.88o | | 96.2o | 50-145o | | |
| 4:2FTSo | 15.9o | | 0.29o | ng/Lo | 15.0o | | 106o | 70-145o | | |
| 6:2FTSo | 16.5o | | 0.31o | ng/Lo | 15.2o | | 108o | 65-155o | | |
| 8:2FTSo | 16.8o | | 0.082o | ng/Lo | 15.4o | | 109o | 60-150o | | |
| 10:2FTSo | 16.9o | | 0.40o | ng/Lo | 15.4o | | 110o | 40-150o | | |
| PFOSAo | 4.55o | | 0.10o | ng/Lo | 4.00o | | 114o | 70-145o | | |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0200-BS1)u** | | | | | Prepared: 03/18/24 11:40 | | Analyzed: 03/19/24 19:13o | | | |
| NMeFOSAo | 17.5o | | 0.47o | ng/L | 16.0o | | 109 | 60-150 | | |
| NEtFOSAo | 16.7o | | 0.41o | ng/L | 16.0o | | 105 | 65-145 | | |
| NMeFOSAAo | 4.28o | | 0.11o | ng/L | 4.00o | | 107 | 50-140 | | |
| NEtFOSAAo | 4.16o | | 0.11o | ng/L | 4.00o | | 104 | 70-145 | | |
| NMeFOSEo | 16.8o | | 1.0o | ng/L | 16.0o | | 105 | 70-145 | | |
| NEtFOSEo | 17.6o | | 1.0o | ng/L | 16.0o | | 110 | 70-135 | | |
| HFPO-DAo | 4.20o | | 0.17o | ng/L | 4.00o | | 105 | 70-140 | | |
| ADONAo | 4.05o | | 0.12o | ng/L | 3.78o | | 107 | 65-145 | | |
| PFEESAo | 7.47o | | 0.11o | ng/L | 7.12o | | 105 | 70-140 | | |
| PFMPAo | 9.00o | | 0.054o | ng/L | 8.00o | | 112 | 55-140 | | |
| PFMBAo | 8.26o | | 0.091o | ng/L | 8.00o | | 103 | 60-150 | | |
| NFDHAo | 8.02o | | 0.30o | ng/L | 8.00o | | 100 | 50-150 | | |
| 9Cl-PF3ONSo | 3.95o | | 0.21o | ng/L | 3.74o | | 106 | 70-155 | | |
| 11Cl-PF3OUDSo | 4.05o | | 0.21o | ng/L | 3.78o | | 107 | 55-160 | | |
| 3:3FTCAo | 14.6o | | 0.57o | ng/L | 16.0o | | 91.4 | 65-130 | | |
| 5:3FTCAo | 15.3o | | 0.44o | ng/L | 16.0o | | 95.7 | 70-135 | | |
| 7:3FTCAo | 14.0o | | 0.55o | ng/L | 16.0o | | 87.6 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.8o* | | | *ng/Lo* | *32.0o* | | *106* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *18.4o* | | | *ng/Lo* | *16.0o* | | *115* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *9.14o* | | | *ng/Lo* | *8.00o* | | *114* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.56o* | | | *ng/Lo* | *8.00o* | | *107* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.95o* | | | *ng/Lo* | *8.00o* | | *112* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.23o* | | | *ng/Lo* | *4.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.44o* | | | *ng/Lo* | *4.00o* | | *111* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.08o* | | | *ng/Lo* | *4.00o* | | *102* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.15o* | | | *ng/Lo* | *4.00o* | | *104* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.69o* | | | *ng/Lo* | *4.00o* | | *92.1* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.74o* | | | *ng/Lo* | *8.00o* | | *71.8* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *9.31o* | | | *ng/Lo* | *8.00o* | | *116* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.82o* | | | *ng/Lo* | *8.00o* | | *110* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.97o* | | | *ng/Lo* | *8.00o* | | *112* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.9o* | | | *ng/Lo* | *16.0o* | | *130* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.2o* | | | *ng/Lo* | *16.0o* | | *120* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.4o* | | | *ng/Lo* | *16.0o* | | *121* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *37.3o* | | | *ng/Lo* | *32.0o* | | *117* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.24o* | | | *ng/Lo* | *8.00o* | | *40.5* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.98o* | | | *ng/Lo* | *8.00o* | | *24.8* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *2.21o* | | | *ng/Lo* | *8.00o* | | *27.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.9o* | | | *ng/Lo* | *16.0o* | | *112* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *18.0o* | | | *ng/Lo* | *16.0o* | | *113* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *28.5o* | | | *ng/Lo* | *80.0o* | | *35.7* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *27.2o* | | | *ng/Lo* | *80.0o* | | *34.0* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *35.1o* | | | *ng/Lo* | *32.0o* | | *110* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0200-MRL1)u** | | | | | Prepared: 03/18/24 11:40 | | Analyzed: 03/19/24 19:33o | | | |
| PFBAo | 3.46o | | 0.21o | ng/Lo | 3.20o | | 108o | 70-140 | | |
| PFPeAo | 1.59o | | 0.065o | ng/Lo | 1.60o | | 99.4o | 65-135 | | |
| PFHxAo | 0.809o | | 0.055o | ng/Lo | 0.800o | | 101o | 70-145 | | |
| PFHpAo | 0.841o | | 0.041o | ng/Lo | 0.800o | | 105o | 70-150 | | |
| PFOAo | 0.922o | | 0.15o | ng/Lo | 0.800o | | 115o | 70-150 | | |
| PFNAo | 0.740o | | 0.082o | ng/Lo | 0.800o | | 92.5o | 70-150 | | |
| PFDAo | 0.788o | | 0.10o | ng/Lo | 0.800o | | 98.5o | 70-140 | | |
| PFUnAo | 0.777o | | 0.16o | ng/Lo | 0.800o | | 97.1o | 70-145 | | |
| PFDoAo | 0.812o | | 0.11o | ng/Lo | 0.800o | | 101o | 70-140 | | |
| PFTrDAo | 0.766o | | 0.20o | ng/Lo | 0.800o | | 95.8o | 65-140 | | |
| PFTeDAo | 0.891o | | 0.20o | ng/Lo | 0.800o | | 111o | 60-140 | | |
| PFHxDAo | 0.774o | | 0.20o | ng/Lo | 0.800o | | 96.7o | 40-150 | | |
| PFODAo | 0.668o | | 0.20o | ng/Lo | 0.800o | | 83.5o | 40-150 | | |
| PFBSo | 0.627o | | 0.037o | ng/Lo | 0.708o | | 88.6o | 60-145 | | |
| PFPeSo | 0.755o | | 0.063o | ng/Lo | 0.752o | | 100o | 65-140 | | |
| PFHxSo | 0.754o | | 0.032o | ng/Lo | 0.732o | | 103o | 65-145 | | |
| PFHpSo | 0.734o | | 0.051o | ng/Lo | 0.764o | | 96.1o | 70-150 | | |
| PFOSo | 0.801o | | 0.064o | ng/Lo | 0.744o | | 108o | 55-150 | | |
| PFNSo | 0.743o | | 0.12o | ng/Lo | 0.768o | | 96.7o | 65-145 | | |
| PFDSo | 0.767o | | 0.15o | ng/Lo | 0.772o | | 99.3o | 60-145 | | |
| PFDoSo | 0.703o | | 0.12o | ng/Lo | 0.776o | | 90.6o | 50-145 | | |
| 4:2FTSo | 2.92o | | 0.29o | ng/Lo | 3.00o | | 97.4o | 70-145 | | |
| 6:2FTSo | 3.14o | | 0.31o | ng/Lo | 3.04o | | 103o | 65-155 | | |
| 8:2FTSo | 3.31o | | 0.082o | ng/Lo | 3.07o | | 108o | 60-150 | | |
| 10:2FTSo | 3.26o | | 0.40o | ng/Lo | 3.09o | | 105o | 40-150 | | |
| PFOSAo | 0.837o | | 0.10o | ng/Lo | 0.800o | | 105o | 70-145 | | |
| NMeFOSAo | 3.05o | | 0.47o | ng/Lo | 3.20o | | 95.3o | 60-150 | | |
| NEtFOSAo | 2.99o | | 0.41o | ng/Lo | 3.20o | | 93.3o | 65-145 | | |
| NMeFOSAAo | 0.808o | | 0.11o | ng/Lo | 0.800o | | 101o | 50-140 | | |
| NEtFOSAAo | 0.806o | | 0.11o | ng/Lo | 0.800o | | 101o | 70-145 | | |
| NMeFOSEo | 3.31oMI4o | | 1.0o | ng/Lo | 3.20o | | 103o | 70-145 | | |
| NEtFOSEo | 3.40o | | 1.0o | ng/Lo | 3.20o | | 106o | 70-135 | | |
| HFPO-DAo | 0.833o | | 0.17o | ng/Lo | 0.800o | | 104o | 70-140 | | |
| ADONAo | 0.763oJo | | 0.12o | ng/Lo | 0.756o | | 101o | 65-145 | | |
| PFEESAo | 1.30o | | 0.11o | ng/Lo | 1.42o | | 90.9o | 70-140 | | |
| PFMPAo | 1.53o | | 0.054o | ng/Lo | 1.60o | | 95.7o | 55-140 | | |
| PFMBAo | 1.61o | | 0.091o | ng/Lo | 1.60o | | 101o | 60-150 | | |
| NFDHAo | 1.49o | | 0.30o | ng/Lo | 1.60o | | 93.4o | 50-150 | | |
| 9Cl-PF3ONSo | 0.712oJo | | 0.21o | ng/Lo | 0.748o | | 95.2o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.709oJo | | 0.21o | ng/Lo | 0.756o | | 93.8o | 55-160 | | |
| 3:3FTCAo | 2.50o | | 0.57o | ng/Lo | 3.20o | | 78.0o | 65-130 | | |
| 5:3FTCAo | 2.77o | | 0.44o | ng/Lo | 3.20o | | 86.5o | 70-135 | | |
| 7:3FTCAo | 2.97o | | 0.55o | ng/Lo | 3.20o | | 92.8o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *36.1o* | | | *ng/Lo* | *32.0o* | | *113o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.86o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.40o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *9.03o* | | | *ng/Lo* | *8.00o* | | *113o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.72o* | | | *ng/Lo* | *4.00o* | | *118o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.53o* | | | *ng/Lo* | *4.00o* | | *113o* | *40-130 o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0200-MRL1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 19:33o | | | | | |
| *Surrogate: 13C7-PFUnAo* | *4.18o* | | | *ng/Lo* | *4.00o* | | *105o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *4.24o* | | | *ng/Lo* | *4.00o* | | *106o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.87o* | | | *ng/Lo* | *4.00o* | | *96.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.83o* | | | *ng/Lo* | *8.00o* | | *72.9o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.94o* | | | *ng/Lo* | *8.00o* | | *112o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.54o* | | | *ng/Lo* | *8.00o* | | *107o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *9.10o* | | | *ng/Lo* | *8.00o* | | *114o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.5o* | | | *ng/Lo* | *16.0o* | | *128o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.7o* | | | *ng/Lo* | *16.0o* | | *123o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *20.0o* | | | *ng/Lo* | *16.0o* | | *125o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *38.4o* | | | *ng/Lo* | *32.0o* | | *120o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *3.47o* | | | *ng/Lo* | *8.00o* | | *43.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.11o* | | | *ng/Lo* | *8.00o* | | *26.3o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.34o* | | | *ng/Lo* | *8.00o* | | *29.2o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *18.2o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *19.0o* | | | *ng/Lo* | *16.0o* | | *119o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *26.6o* | | | *ng/Lo* | *80.0o* | | *33.3o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *27.2o* | | | *ng/Lo* | *80.0o* | | *33.9o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *35.1o* | | | *ng/Lo* | *32.0o* | | *110o* | *40-130o* | | |
| **Matrix Spike (BDC0200-MS1)u** | **Source: 24C0094-06u** | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 19:54o | | | | | |
| PFBAo | 17.5o | | 0.19o | ng/Lo | 14.9o | 3.00o | 97.3o | 70-140o | | |
| PFPeAo | 8.71o | | 0.061o | ng/Lo | 7.46o | 0.966o | 104o | 65-135o | | |
| PFHxAo | 4.50o | | 0.051o | ng/Lo | 3.73o | 0.799o | 99.1o | 70-145o | | |
| PFHpAo | 4.31o | | 0.038o | ng/Lo | 3.73o | 0.278o | 108o | 70-150o | | |
| PFOAo | 4.52o | | 0.14o | ng/Lo | 3.73o | 0.559o | 106o | 70-150o | | |
| PFNAo | 4.17o | | 0.076o | ng/Lo | 3.73o | 0.101o | 109o | 70-150o | | |
| PFDAo | 3.74o | | 0.094o | ng/Lo | 3.73o | NDo | 100o | 70-140o | | |
| PFUnAo | 3.80o | | 0.15o | ng/Lo | 3.73o | NDo | 102o | 70-145o | | |
| PFDoAo | 4.03o | | 0.10o | ng/Lo | 3.73o | NDo | 108o | 70-140o | | |
| PFTrDAo | 3.78o | | 0.19o | ng/Lo | 3.73o | NDo | 101o | 65-140o | | |
| PFTeDAo | 3.85o | | 0.18o | ng/Lo | 3.73o | NDo | 103o | 60-140o | | |
| PFHxDAo | 4.25o | | 0.19o | ng/Lo | 3.73o | NDo | 114o | 40-150o | | |
| PFODAo | 4.79o | | 0.19o | ng/Lo | 3.73o | NDo | 128o | 40-150o | | |
| PFBSo | 6.98o | | 0.034o | ng/Lo | 3.30o | 3.33o | 111o | 60-145o | | |
| PFPeSo | 4.12o | | 0.058o | ng/Lo | 3.51o | 0.237o | 111o | 65-140o | | |
| PFHxSo | 5.09o | | 0.030o | ng/Lo | 3.41o | 1.39o | 108o | 65-145o | | |
| PFHpSo | 4.14o | | 0.048o | ng/Lo | 3.56o | 0.0721o | 114o | 70-150o | | |
| PFOSo | 6.39o | | 0.059o | ng/Lo | 3.47o | 3.35o | 87.7o | 55-150o | | |
| PFNSo | 3.90o | | 0.11o | ng/Lo | 3.58o | NDo | 109o | 65-145o | | |
| PFDSo | 3.61o | | 0.14o | ng/Lo | 3.60o | NDo | 100o | 60-145o | | |
| PFDoSo | 3.49o | | 0.11o | ng/Lo | 3.62o | NDo | 96.5o | 50-145o | | |
| 4:2FTSo | 14.2o | | 0.27o | ng/Lo | 14.0o | NDo | 101o | 70-145o | | |
| 6:2FTSo | 15.0o | | 0.29o | ng/Lo | 14.2o | NDo | 106o | 65-155o | | |
| 8:2FTSo | 16.8o | | 0.077o | ng/Lo | 14.3o | NDo | 118o | 60-150o | | |
| 10:2FTSo | 16.1o | | 0.37o | ng/Lo | 14.4o | NDo | 112o | 40-150o | | |
| PFOSAo | 4.13o | | 0.097o | ng/Lo | 3.73o | NDo | 111o | 70-145o | | |
| NMeFOSAo | 16.4o | | 0.44o | ng/Lo | 14.9o | NDo | 110o | 60-150o | | |
| NEtFOSAo | 15.9o | | 0.38o | ng/Lo | 14.9o | NDo | 107o | 65-145o | | |
| NMeFOSAAo | 3.82o | | 0.099o | ng/Lo | 3.73o | NDo | 103o | 50-140o | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0200-MS1)u** | **Source: 24C0094-06** | | | | Prepared: 03/18/24 11:40 | | Analyzed: 03/19/24 19:54 | | | |
| NEtFOSAAo | 3.82o | | 0.11o | ng/L | 3.73o | NDo | 102 | 70-145 | | |
| NMeFOSEo | 15.2o | | 0.94o | ng/L | 14.9o | NDo | 102 | 70-145 | | |
| NEtFOSEo | 16.3o | | 0.98o | ng/L | 14.9o | NDo | 109 | 70-135 | | |
| HFPO-DAo | 4.07o | | 0.16o | ng/L | 3.73o | NDo | 109 | 70-140 | | |
| ADONAo | 4.11o | | 0.11o | ng/L | 3.53o | NDo | 117 | 65-145 | | |
| PFEESAo | 6.85o | | 0.10o | ng/L | 6.64o | NDo | 103 | 70-140 | | |
| PFMPAo | 8.48o | | 0.050o | ng/L | 7.46o | NDo | 114 | 55-140 | | |
| PFMBAo | 7.86o | | 0.085o | ng/L | 7.46o | NDo | 105 | 60-150 | | |
| NFDHAo | 6.92o | | 0.28o | ng/L | 7.46o | NDo | 92.8 | 50-150 | | |
| 9Cl-PF3ONSo | 3.68o | | 0.20o | ng/L | 3.49o | NDo | 106 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.77o | | 0.19o | ng/L | 3.53o | NDo | 107 | 55-160 | | |
| 3:3FTCAo | 12.9o | | 0.54o | ng/L | 14.9o | NDo | 86.3 | 65-130 | | |
| 5:3FTCAo | 13.1o | | 0.41o | ng/L | 14.9o | NDo | 88.0 | 70-135 | | |
| 7:3FTCAo | 12.8o | | 0.52o | ng/L | 14.9o | NDo | 85.6 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *28.5o* | | | *ng/Lo* | *29.8o* | | *95.6* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *16.3o* | | | *ng/Lo* | *14.9o* | | *109* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *8.19o* | | | *ng/Lo* | *7.46o* | | *110* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *7.58o* | | | *ng/Lo* | *7.46o* | | *102* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.31o* | | | *ng/Lo* | *7.46o* | | *111* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.90o* | | | *ng/Lo* | *3.73o* | | *104* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.27o* | | | *ng/Lo* | *3.73o* | | *114* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.22o* | | | *ng/Lo* | *3.73o* | | *113* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.13o* | | | *ng/Lo* | *3.73o* | | *111* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.01o* | | | *ng/Lo* | *3.73o* | | *108* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.85o* | | | *ng/Lo* | *7.46o* | | *78.4* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *8.40o* | | | *ng/Lo* | *7.46o* | | *113* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.22o* | | | *ng/Lo* | *7.46o* | | *110* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *7.91o* | | | *ng/Lo* | *7.46o* | | *106* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.1o* | | | *ng/Lo* | *14.9o* | | *121* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *18.4o* | | | *ng/Lo* | *14.9o* | | *124* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.0o* | | | *ng/Lo* | *14.9o* | | *120* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *32.2o* | | | *ng/Lo* | *29.8o* | | *108* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.63o* | | | *ng/Lo* | *7.46o* | | *48.7* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.06o* | | | *ng/Lo* | *7.46o* | | *27.6* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.93o* | | | *ng/Lo* | *7.46o* | | *25.9* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *14.4o* | | | *ng/Lo* | *14.9o* | | *96.4* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *15.4o* | | | *ng/Lo* | *14.9o* | | *103* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *24.7o* | | | *ng/Lo* | *74.6o* | | *33.1* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *22.9o* | | | *ng/Lo* | *74.6o* | | *30.8* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *29.5o* | | | *ng/Lo* | *29.8o* | | *98.9* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0200-MSD1)u** | **Source: 24C0094-06u** | | | Prepared: 03/18/24 11:40 | Analyzed: 03/19/24 20:14o | | | | | |
| PFBAo | 17.9o | | 0.19o | ng/Lo | 14.9o | 3.00o | 100o | 70-140o | 2.28o | 30o |
| PFPeAo | 8.83o | | 0.061o | ng/Lo | 7.46o | 0.966o | 105o | 65-135o | 1.42o | 30o |
| PFHxAo | 4.78o | | 0.051o | ng/Lo | 3.73o | 0.799o | 107o | 70-145o | 6.09o | 30o |
| PFHpAo | 4.15o | | 0.038o | ng/Lo | 3.73o | 0.278o | 104o | 70-150o | 3.93o | 30o |
| PFOAo | 4.58o | | 0.14o | ng/Lo | 3.73o | 0.559o | 108o | 70-150o | 1.24o | 30o |
| PFNAo | 3.96o | | 0.076o | ng/Lo | 3.73o | 0.101o | 104o | 70-150o | 5.02o | 30o |
| PFDAo | 3.70o | | 0.094o | ng/Lo | 3.73o | NDo | 99.2o | 70-140o | 1.18o | 30o |
| PFUnAo | 4.08o | | 0.15o | ng/Lo | 3.73o | NDo | 109o | 70-145o | 7.00o | 30o |
| PFDoAo | 4.12o | | 0.10o | ng/Lo | 3.73o | NDo | 110o | 70-140o | 2.27o | 30o |
| PFTrDAo | 3.74o | | 0.19o | ng/Lo | 3.73o | NDo | 100o | 65-140o | 1.03o | 30o |
| PFTeDAo | 4.00o | | 0.18o | ng/Lo | 3.73o | NDo | 107o | 60-140o | 3.86o | 30o |
| PFHxDAo | 4.03o | | 0.19o | ng/Lo | 3.73o | NDo | 108o | 40-150o | 5.38o | 30o |
| PFODAo | 4.42o | | 0.19o | ng/Lo | 3.73o | NDo | 118o | 40-150o | 8.07o | 30o |
| PFBSo | 6.84o | | 0.034o | ng/Lo | 3.30o | 3.33o | 106o | 60-145o | 2.01o | 30o |
| PFPeSo | 3.94o | | 0.058o | ng/Lo | 3.50o | 0.237o | 106o | 65-140o | 4.47o | 30o |
| PFHxSo | 4.91o | | 0.030o | ng/Lo | 3.41o | 1.39o | 103o | 65-145o | 3.43o | 30o |
| PFHpSo | 4.04o | | 0.048o | ng/Lo | 3.56o | 0.0721o | 112o | 70-150o | 2.41o | 30o |
| PFOSo | 6.98o | | 0.059o | ng/Lo | 3.47o | 3.35o | 105o | 55-150o | 8.70o | 30o |
| PFNSo | 3.95o | | 0.11o | ng/Lo | 3.58o | NDo | 110o | 65-145o | 1.26o | 30o |
| PFDSo | 3.82o | | 0.14o | ng/Lo | 3.60o | NDo | 106o | 60-145o | 5.79o | 30o |
| PFDoSo | 3.80o | | 0.11o | ng/Lo | 3.62o | NDo | 105o | 50-145o | 8.55o | 30o |
| 4:2FTSo | 15.4o | | 0.27o | ng/Lo | 14.0o | NDo | 110o | 70-145o | 8.35o | 30o |
| 6:2FTSo | 16.0o | | 0.29o | ng/Lo | 14.2o | NDo | 113o | 65-155o | 6.56o | 30o |
| 8:2FTSo | 16.1o | | 0.077o | ng/Lo | 14.3o | NDo | 112o | 60-150o | 4.56o | 30o |
| 10:2FTSo | 14.9o | | 0.37o | ng/Lo | 14.4o | NDo | 103o | 40-150o | 8.21o | 30o |
| PFOSAo | 3.89o | | 0.097o | ng/Lo | 3.73o | NDo | 104o | 70-145o | 5.98o | 30o |
| NMeFOSAo | 17.6o | | 0.44o | ng/Lo | 14.9o | NDo | 118o | 60-150o | 7.24o | 30o |
| NEtFOSAo | 16.9o | | 0.38o | ng/Lo | 14.9o | NDo | 113o | 65-145o | 5.79o | 30o |
| NMeFOSAAo | 3.88o | | 0.099o | ng/Lo | 3.73o | NDo | 104o | 50-140o | 1.40o | 30o |
| NEtFOSAAo | 4.12o | | 0.11o | ng/Lo | 3.73o | NDo | 111o | 70-145o | 7.59o | 30o |
| NMeFOSEo | 16.6o | | 0.94o | ng/Lo | 14.9o | NDo | 111o | 70-145o | 9.01o | 30o |
| NEtFOSEo | 16.6o | | 0.98o | ng/Lo | 14.9o | NDo | 112o | 70-135o | 2.21o | 30o |
| HFPO-DAo | 3.84o | | 0.16o | ng/Lo | 3.73o | NDo | 103o | 70-140o | 5.61o | 30o |
| ADONAo | 3.97o | | 0.11o | ng/Lo | 3.52o | NDo | 113o | 65-145o | 3.50o | 30o |
| PFEESAo | 6.81o | | 0.10o | ng/Lo | 6.64o | NDo | 103o | 70-140o | 0.626o | 30o |
| PFMPAo | 8.12o | | 0.050o | ng/Lo | 7.46o | NDo | 109o | 55-140o | 4.27o | 30o |
| PFMBAo | 7.98o | | 0.085o | ng/Lo | 7.46o | NDo | 107o | 60-150o | 1.48o | 30o |
| NFDHAo | 7.33o | | 0.28o | ng/Lo | 7.46o | NDo | 98.3o | 50-150o | 5.71o | 30o |
| 9Cl-PF3ONSo | 3.98o | | 0.19o | ng/Lo | 3.49o | NDo | 114o | 70-155o | 7.73o | 30o |
| 11Cl-PF3OUDSo | 4.07o | | 0.19o | ng/Lo | 3.52o | NDo | 116o | 55-160o | 7.68o | 30o |
| 3:3FTCAo | 13.1o | | 0.54o | ng/Lo | 14.9o | NDo | 87.9o | 65-130o | 1.76o | 30o |
| 5:3FTCAo | 14.7o | | 0.41o | ng/Lo | 14.9o | NDo | 98.4o | 70-135o | 11.0o | 30o |
| 7:3FTCAo | 14.0o | | 0.52o | ng/Lo | 14.9o | NDo | 94.1o | 50-145o | 9.35o | 30o |
| *Surrogate: 13C4-PFBAo* | *27.5o* | | | *ng/Lo* | *29.8o* | | *92.3o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *15.7o* | | | *ng/Lo* | *14.9o* | | *105o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.75o* | | | *ng/Lo* | *7.46o* | | *104o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.98o* | | | *ng/Lo* | *7.46o* | | *107o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *8.38o* | | | *ng/Lo* | *7.46o* | | *112o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.23o* | | | *ng/Lo* | *3.73o* | | *113o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.18o* | | | *ng/Lo* | *3.73o* | | *112o* | *40-130 o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o03/28/2024 11:29o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0200-MSD1)u** | **Source: 24C0094-06u** | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 20:14o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *3.90o* | | | *ng/Lo* | *3.73o* | | *105o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.90o* | | | *ng/Lo* | *3.73o* | | *105o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.63o* | | | *ng/Lo* | *3.73o* | | *97.5o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.71o* | | | *ng/Lo* | *7.46o* | | *76.5o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.30o* | | | *ng/Lo* | *7.46o* | | *111o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.37o* | | | *ng/Lo* | *7.46o* | | *112o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *7.86o* | | | *ng/Lo* | *7.46o* | | *105o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *16.6o* | | | *ng/Lo* | *14.9o* | | *111o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *17.3o* | | | *ng/Lo* | *14.9o* | | *116o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.0o* | | | *ng/Lo* | *14.9o* | | *120o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *36.6o* | | | *ng/Lo* | *29.8o* | | *123o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *3.82o* | | | *ng/Lo* | *7.46o* | | *51.3o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.23o* | | | *ng/Lo* | *7.46o* | | *30.0o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.11o* | | | *ng/Lo* | *7.46o* | | *28.3o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *15.5o* | | | *ng/Lo* | *14.9o* | | *104o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *15.7o* | | | *ng/Lo* | *14.9o* | | *105o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *23.6o* | | | *ng/Lo* | *74.6o* | | *31.7o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *22.0o* | | | *ng/Lo* | *74.6o* | | *29.5o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *29.9o* | | | *ng/Lo* | *29.8o* | | *100o* | *40-130o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 03/28/2024 11:29o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI3o | Manual integration, peaks split o |
| MI4o | Manual integration, peak unsplit o |
| MI5o | Manual integration, whole peak was not integrated o |
| MI6o | Manual integration, wrong peak integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0094** R

Printed: 03/28/2024 11:29 ami

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/15/2024 09:40 AMi
Date Due:i 03/29/2024 (10.00 day TAT)i

Logged In By:i Christina Aguilari
Received By:i Jake Henigei

| Analysisa | Commentsa |
|---|---|

**24C0094-01 MW-22-3 [Water] Sampled 3/14/2024 8:30:00AMR**
1633i NASA Listi

**24C0094-02 MW-22-2 [Water] Sampled 3/14/2024 8:45:00AMR**
1633i NASA Listi

**24C0094-03 MW-22-1 [Water] Sampled 3/14/2024 9:15:00AMR**
1633i NASA Listi

**24C0094-04 MW-3-4 [Water] Sampled 3/14/2024 10:20:00AMR**
1633i NASA Listi

**24C0094-05 MW-3-3 [Water] Sampled 3/14/2024 10:50:00AMR**
1633i NASA Listi

**24C0094-06 MW-3-2 [Water] Sampled 3/14/2024 11:25:00AMR**
***Sample Comments: MS.MSDR***
1633i NASA Listi

**24C0094-07 MW-3-1 [Water] Sampled 3/14/2024 1:35:00PMR**
1633i NASA Listi

**24C0094-08 EB-4-031424 [Water] Sampled 3/14/2024 1:40:00PMR**
1633i NASA Listi

**24C0094-09 FB-4-031424 [Water] Sampled 3/14/2024 1:50:00PMR**
1633i NASA Listi

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0094** R

Printed: 03/28/2024 11:29 ami

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0094C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **1.0°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yesi |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yesi |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yesi |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yesi |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yesi |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | Noi |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | Noi |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | Noi |

24C0094

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

C.O.C. 62606

**Report to:** PLEASE PRINT

Company Name: Tidewater Inc Phone: 626-298-5715
Address: 3761 A Hucks Dr OH 43065 Fax: 614-792-2897
Attn: David Conner
Email: david.conner@tidh20.net

**Invoice to:** PLEASE PRINT

Company Name: Tidewater Phone: 626-298-5715
Address: 3761 A Hucks Dr OH 43065 Fax: 614-792-2897
Attn: David Conner
Email: david.conner@tideh20.net

Project Name/Number: JPL-GW Monitoring
Purchase Order Number:
Sampler (Print): Think Hoang
Sampler (Signature):

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | | Analysis Requested/Method Number: PFAS 1633 | | | | | | | | | | | | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-22-3 | | 03/14/24 | 0830 | | 1 | X | | | | X | | | | | | | | | | | | Laboratory, please |
| MW-22-2 | | | 0845 | | 1 | X | | | | X | | | | | | | | | | | | select 25D6S |
| MW-22-1 | | | 0915 | | 1 | X | | | | X | | | | | | | | | | | | for level IV |
| MW-3-4 | | | 1020 | | 1 | X | | | | X | | | | | | | | | | | | Validation |
| MW-3-3 | | | 1050 | | 1 | X | | | | X | | | | | | | | | | | | |
| MW-3-2 | | | 1125 | | 3 | X | | | | X | | | | | | | | | | | | MS/MSD |
| MW-3-1 | | | 1335 | | 1 | X | | | | X | | | | | | | | | | | | |
| MW-4-031424 | | | 1340 | | 1 | X | | | | X | | | | | | | | | | | | |
| MW-4-031424 | | | 1350 | | 1 | X | | | | X | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

Shuttle Temperature: IRB: 1°C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/14/24 | 1405 | Nicole | | 3/14/24 | 1600 | FEDEX |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/15/24 | 940 | |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information



Table of Contents

bürkle
seal-it
2636637
31
seal-it 2636637
NP
3/14/24

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

## MW-22-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-01- | File ID:- | S2024-03-19B (15)- |
| Sampled:- | 03/14/24 08:30- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 21:16- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 512.603 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.6- | U- |
| PFPeA- | 0.24- | 0.063- | 0.78- | J- |
| PFHxA- | 0.19- | 0.054- | 0.39- | J- |
| PFHpA- | 0.092- | 0.040- | 0.39- | J- |
| PFOA- | 0.41- | 0.15- | 0.39- | |
| PFNA- | ND- | 0.080- | 0.39- | IR1, U- |
| PFDA- | 0.29- | 0.099- | 0.39- | J- |
| PFUnA- | ND- | 0.16- | 0.39- | U- |
| PFDoA- | 0.14- | 0.11- | 0.39- | J- |
| PFTrDA- | ND- | 0.20- | 0.39- | U- |
| PFTeDA- | ND- | 0.19- | 0.39- | U- |
| PFHxDA- | ND- | 0.20- | 0.39- | U- |
| PFODA- | ND- | 0.20- | 0.39- | U- |
| PFBS- | 0.23- | 0.036- | 0.39- | MI6, J- |
| PFPeS- | 0.13- | 0.061- | 0.39- | J- |
| PFHxS- | 0.63- | 0.031- | 0.39- | IR1- |
| PFHpS- | ND- | 0.050- | 0.39- | U- |
| PFOS- | 0.13- | 0.062- | 0.39- | MI3, J- |
| PFNS- | ND- | 0.12- | 0.39- | U- |
| PFDS- | ND- | 0.15- | 0.39- | U- |
| PFDoS- | ND- | 0.12- | 0.39- | U- |
| 4:2FTS- | ND- | 0.28- | 1.6- | U- |
| 6:2FTS- | ND- | 0.31- | 1.6- | U- |
| 8:2FTS- | ND- | 0.080- | 1.6- | U- |
| 10:2FTS- | ND- | 0.39- | 1.6- | U- |
| PFOSA- | 0.15- | 0.10- | 0.39- | J- |
| NMeFOSA- | ND- | 0.46- | 1.6- | U- |
| NEtFOSA- | ND- | 0.40- | 1.6- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.39- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.39- | U- |

# ANALYSIS DATA SHEETL

MW-22-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-01- | File ID:- | S2024-03-19B (15)- |
| Sampled:- | 03/14/24 08:30- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 21:16- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 512.603 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.99- | 1.6- | U- |
| NEtFOSE- | ND- | 1.0- | 1.6- | U- |
| HFPO-DA- | ND- | 0.17- | 0.78- | U- |
| ADONA- | ND- | 0.12- | 0.78- | U- |
| PFEESA- | ND- | 0.11- | 0.78- | U- |
| PFMPA- | ND- | 0.053- | 0.78- | U- |
| PFMBA- | ND- | 0.089- | 0.78- | U- |
| NFDHA- | ND- | 0.29- | 0.78- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.78- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.78- | U- |
| 3:3FTCA- | ND- | 0.56- | 1.6- | U- |
| 5:3FTCA- | ND- | 0.43- | 1.6- | U- |
| 7:3FTCA- | ND- | 0.54- | 1.6- | U- |

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Chemist: DAG | Sample I.D.: 24C0094-01 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>35730<br>( 163.0 / 69.0 )<br>1176 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , 0.1) | 170.1<br>62.6 | 0.0329<br>121.2<br>124.9 | 0.1239 | N/A | 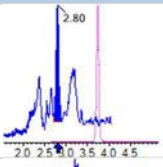 | 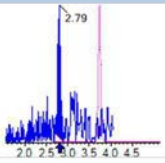 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 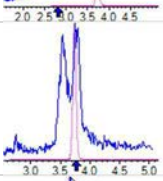 | | |
| PFPeA | ( 263.0 / 219.0 )<br>15286<br>( 263.0 / 69.0 )<br>222 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , -2.0) | 80.3<br>6.3 | 0.0145<br>121.7<br>131.0 | 0.0617 | N/A | 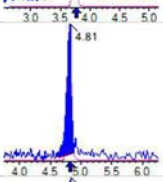 | 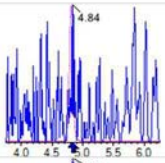 | |
| PFHxA | ( 313.0 / 269.0 )<br>14079<br>( 313.0 / 119.0 )<br>1473 | ( 6.03 , 1.00 )<br>( 0.00 , N/A , -0.4) | 82.2<br>15.6 | 0.1046<br>90.1<br>89.4 | 0.0486 | N/A | 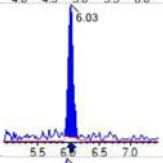 | 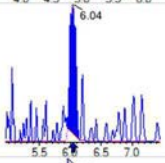 | |
| PFHpA | ( 363.0 / 319.0 )<br>7731<br>( 363.0 / 169.0 )<br>2715 | ( 7.17 , 1.00 )<br>( 0.01 , N/A , 1.1) | 60.9<br>50.2 | 0.3512<br>115.9<br>119.0 | 0.0236 | N/A | 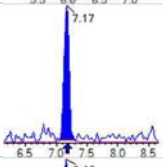 | 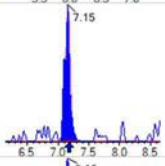 | |
| PFOA | ( 413.0 / 369.0 )<br>54128<br>( 413.0 / 169.0 )<br>19617 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 89.2<br>101.8 | 0.3624<br>99.1<br>105.6 | 0.1045 | N/A | 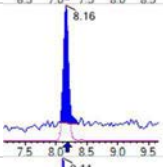 | 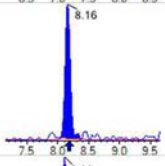 | |
| PFNA | ( 463.0 / 419.0 )<br>4769<br>( 463.0 / 169.0 )<br>569 | ( 9.11 , 1.00 )<br>( 0.00 , N/A , -0.1) | 35.4<br>7.2 | 0.1192<br>46.7<br>49.6 | 0.0165 | N/A | 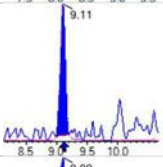 | 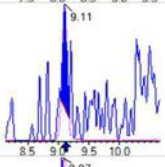 | IR1, |
| PFDA | ( 513.0 / 469.0 )<br>24553<br>( 513.0 / 169.0 )<br>3046 | ( 9.99 , 1.00 )<br>( -0.01 , N/A , 1.2) | 135.2<br>66.0 | 0.1241<br>105.9<br>103.7 | 0.0756 | N/A | 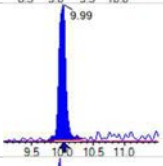 | 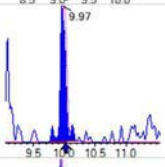 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 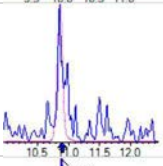 | 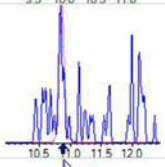 | |
| PFDoA | ( 613.0 / 569.0 )<br>13087<br>( 613.0 / 169.0 )<br>1650 | ( 11.68 , 1.00 )<br>( 0.00 , N/A , -0.1) | 76.0<br>26.6 | 0.1261<br>79.8<br>85.3 | 0.0356 | N/A | 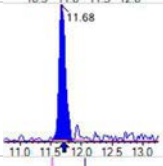 | 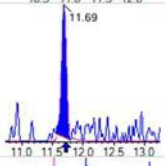 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 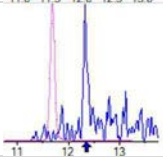 | 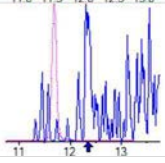 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (15)
Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 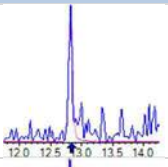 | 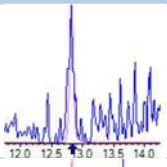 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 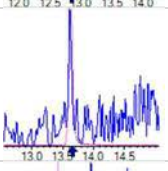 | 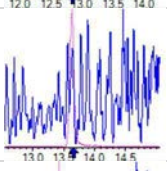 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 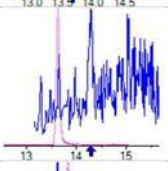 | 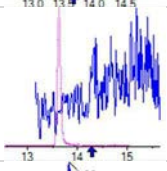 | |
| PFBS | ( 299.0 / 80.0 ) 27109<br>( 299.0 / 99.0 ) 19698 | ( 6.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 66.5<br>126.9 | 0.7266<br>102.7<br>98.8 | 0.0584 | N/A | 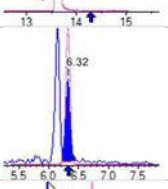 | 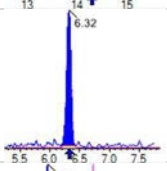 | MI6 ABK 3/19/24 |
| PFPeS | ( 349.0 / 80.0 ) 36894<br>( 349.0 / 99.0 ) 11802 | ( 7.55 , 0.88 ) ( N/A , -0.01 , 0.5) | 53.2<br>59.7 | 0.3199<br>89.0<br>90.8 | 0.0342 | N/A | 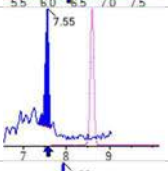 | 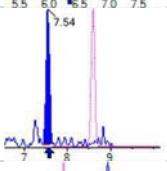 | |
| PFHxS | ( 399.0 / 80.0 ) 203236<br>( 399.0 / 99.0 ) 11417 | ( 8.60 , 1.00 ) ( 0.00 , N/A , 0.2) | 319.3<br>31.3 | 0.0562<br>17.6<br>16.8 | 0.1624 | N/A | 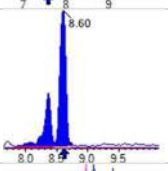 | 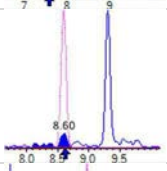 | IR1, |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 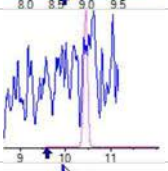 | 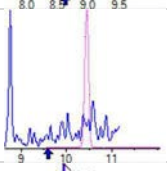 | |
| PFOS | ( 499.0 / 80.0 ) 32215<br>( 499.0 / 99.0 ) 8022 | ( 10.41 , 1.00 ) ( -0.03 , N/A , -1.1) | 46.1<br>58.1 | 0.2490<br>106.5<br>103.7 | 0.0329 | N/A | 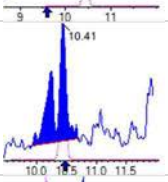 | 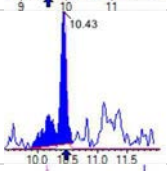 | MI3 ABK 3/19/24 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 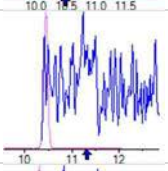 | 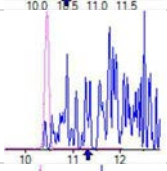 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 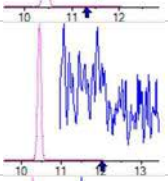 | 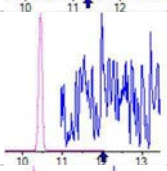 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 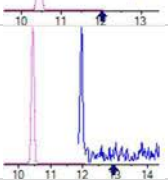 | 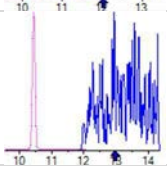 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (15)
Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 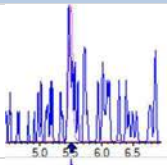 | 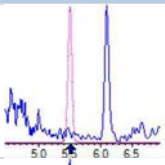 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 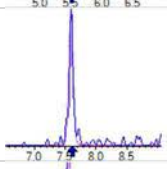 | 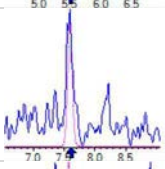 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 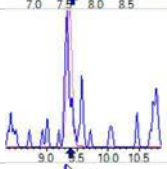 | 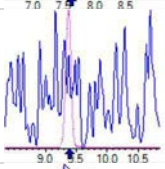 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17834<br>( 627.0 / 81.0 ) 23865 | ( 11.00 , 1.00 ) ( 0.01 , N/A , 0.0) | 199.6<br>59.0 | 1.3382<br>93.0<br>91.7 | 0.0606 | N/A | 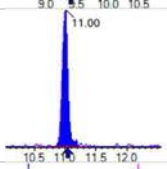 | 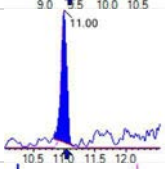 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 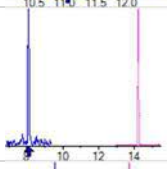 | 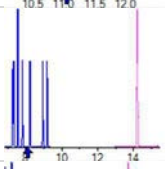 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 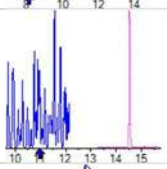 | 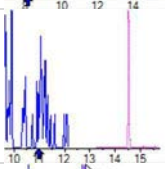 | |
| PFOSA | ( 498.0 / 78.0 ) 22782<br>( 498.0 / 478.0 ) 476 | ( 12.82 , 1.00 ) ( -0.01 , N/A , 0.0) | 207.6<br>8.6 | 0.0209<br>148.8<br>140.3 | 0.0385 | N/A | 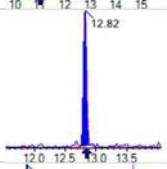 | 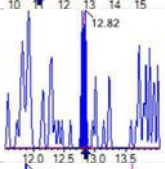 | |
| TFSI | ( 279.7 / 147.0 ) 31006<br>( 279.7 / 211.0 ) 2271 | ( 8.15 , 0.64 ) ( N/A , -0.03 , -0.7) | 21.4<br>10.3 | 0.0732<br>87.2<br>85.6 | 0.0199 | N/A | 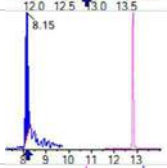 | 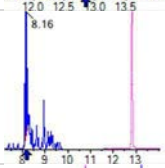 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 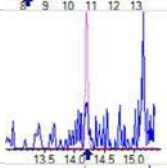 | 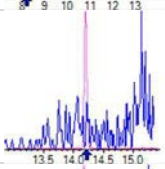 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 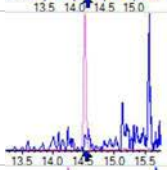 | 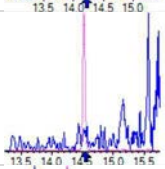 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 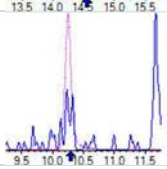 | 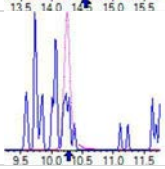 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (15)
Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 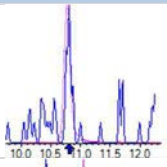 | 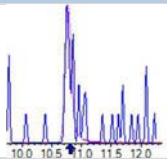 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 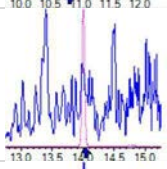 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 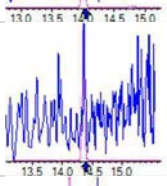 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 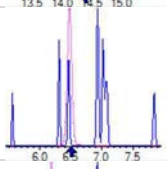 | 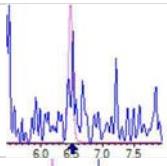 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 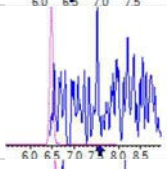 | 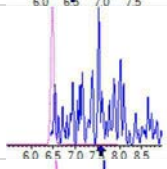 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 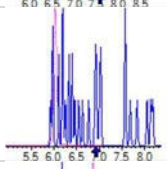 | 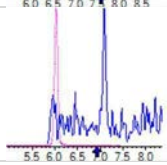 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 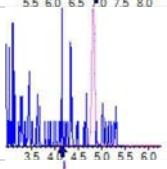 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 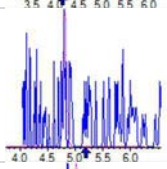 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 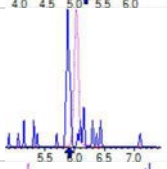 | 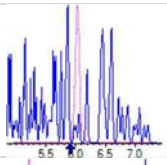 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 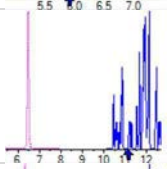 | 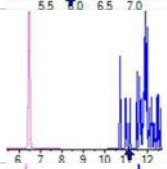 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 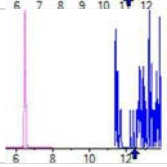 | 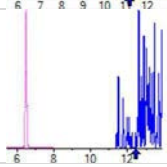 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-01 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 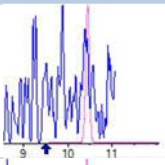 | 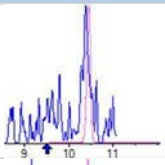 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 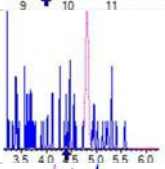 | 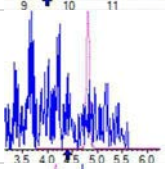 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 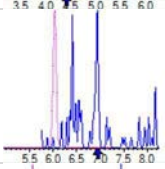 | 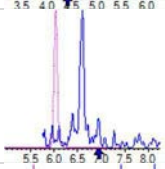 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 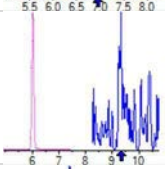 | 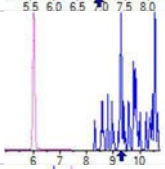 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 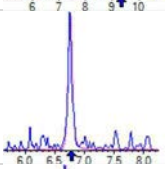 | 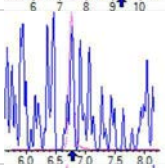 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 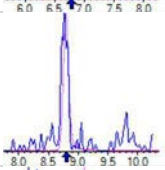 | 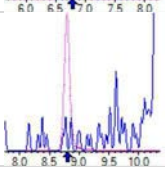 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 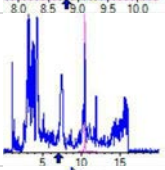 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 279152 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1217.1 | N/A | 1.1708<br>[ 1.0000 ] | 117.1%<br>{ 118.0% } | 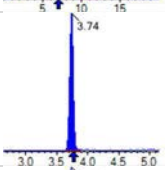 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 131280 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 13698.0 | N/A | 1.0349<br>[ 1.0000 ] | 103.5%<br>{ 103.7% } | 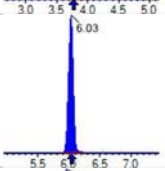 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 373710 | ( 8.16 , N/A )<br>( N/A , -0.02 , N/A ) | 3809.3 | N/A | 0.9453<br>[ 1.0000 ] | 94.5%<br>{ 98.5% } | 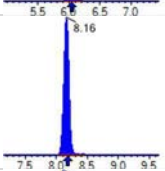 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 259835 | ( 9.10 , N/A )<br>( N/A , -0.01 , N/A ) | 1124.4 | N/A | 0.9136<br>[ 1.0000 ] | 91.4%<br>{ 92.4% } | 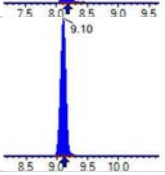 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (15)
Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 264561 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 2581.7 | N/A | 0.9059 [ 1.0000 ] | 90.6% { 91.4% } | 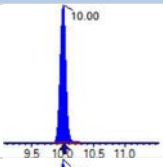 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 904780 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 4781.6 | N/A | 0.9534 [ 1.0000 ] | 95.3% { 96.9% } | 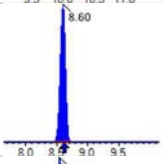 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 721073 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 975.6 | N/A | 0.9467 [ 1.0000 ] | 94.7% { 101.3% } | 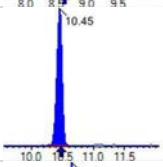 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2446173 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 35971.9 | N/A | 7.6707 [ 8.0000 ] | 95.9% { 109.3% } | 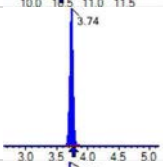 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 981005 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 4751.7 | N/A | 4.0050 [ 4.0000 ] | 100.1% { 100.5% } | 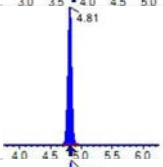 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 603675 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 7982.3 | N/A | 2.0154 [ 2.0000 ] | 100.8% { 102.3% } | 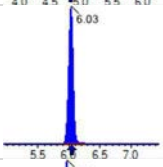 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 667475 | ( 7.16 , N/A ) ( N/A , -0.02 , N/A ) | 5867.7 | N/A | 2.0032 [ 2.0000 ] | 100.2% { 101.7% } | 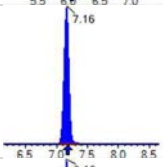 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 861280 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 2821.7 | N/A | 2.1510 [ 2.0000 ] | 107.5% { 99.9% } | 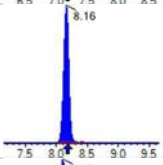 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 287486 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 1865.9 | N/A | 1.1284 [ 1.0000 ] | 112.8% { 106.5% } | 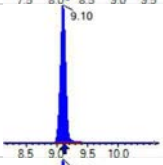 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317970 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1154.8 | N/A | 1.0725 [ 1.0000 ] | 107.2% { 98.8% } | 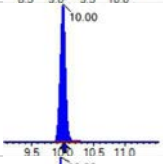 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 379152 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 1019.4 | N/A | 1.0870 [ 1.0000 ] | 108.7% { 101.9% } | 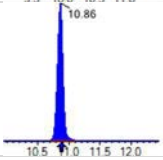 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-01 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 364995 | ( 11.69 , N/A ) ( N/A , -0.03 , N/A ) | 1096.1 | N/A | 1.0275 [ 1.0000 ] | 102.8% { 97.9% } | 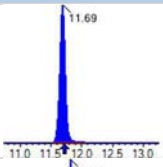  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 312418 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1254.9 | N/A | 1.0328 [ 1.0000 ] | 103.3% { 95.7% } | 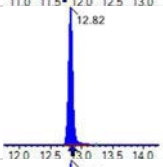  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 463345 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2179.7 | N/A | 1.7941 [ 2.0000 ] | 89.7% { 91.7% } | 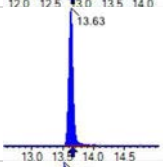  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1789255 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 956.4 | N/A | 2.1888 [ 2.0000 ] | 109.4% { 106.6% } | 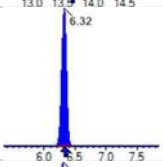  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1407613 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 2597.9 | N/A | 2.1573 [ 2.0000 ] | 107.9% { 106.8% } | 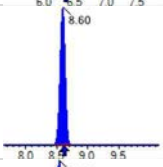  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1697039 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1150.5 | N/A | 2.1828 [ 2.0000 ] | 109.1% { 109.5% } | 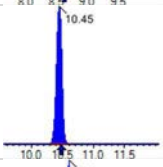  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 754779 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 91.1 | N/A | 5.3515 [ 4.0000 ] | 133.8% { 128.1% } | 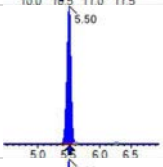  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2053936 | ( 7.60 , N/A ) ( N/A , -0.02 , N/A ) | 2877.2 | N/A | 4.8660 [ 4.0000 ] | 121.7% { 123.2% } | 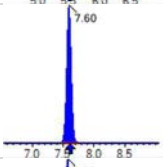  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1496765 | ( 9.37 , N/A ) ( N/A , -0.02 , N/A ) | 1468.3 | N/A | 4.5213 [ 4.0000 ] | 113.0% { 109.4% } | 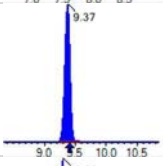  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3054931 | ( 10.99 , N/A ) ( N/A , -0.04 , N/A ) | 1750.8 | N/A | 8.8299 [ 8.0000 ] | 110.4% { 119.7% } | 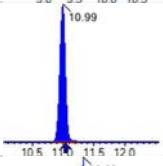  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1183568 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2261.1 | N/A | 1.7178 [ 2.0000 ] | 85.9% { 86.1% } | 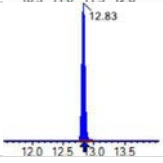  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-01 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 141937 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 1148.4 | N/A | 0.9713 [ 2.0000 ] | 48.6% { 49.3% } | 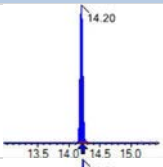 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 144324 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 1163.3 | N/A | 0.9210 [ 2.0000 ] | 46.0% { 47.1% } | 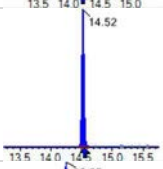 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 827376 | ( 10.25 , N/A ) ( N/A , -0.03 , N/A ) | 2667.8 | N/A | 4.1359 [ 4.0000 ] | 103.4% { 97.8% } | 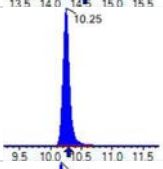 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 763407 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 1829.1 | N/A | 4.1870 [ 4.0000 ] | 104.7% { 99.1% } | 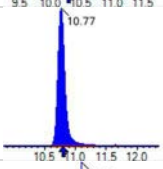 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 827903 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1428.9 | N/A | 12.6071 [ 20.0000 ] | 63.0% { 60.2% } | 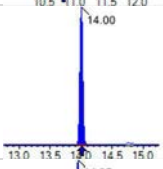 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 816452 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 3173.9 | N/A | 12.2493 [ 20.0000 ] | 61.2% { 63.3% } | 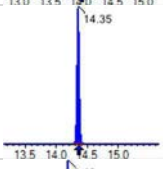 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1094952 | ( 6.48 , N/A ) ( N/A , -0.02 , N/A ) | 1841.0 | N/A | 8.0248 [ 8.0000 ] | 100.3% { 107.1% } | 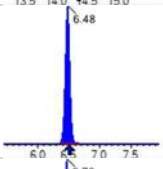 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 772913 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1226.6 | N/A | 2.6946 [ 2.0000 ] | 134.7% { 125.3% } | 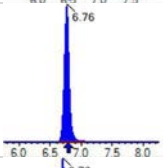 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 614345 | ( 8.79 , N/A ) ( N/A , -0.01 , N/A ) | 797.0 | N/A | 2.3527 [ 2.0000 ] | 117.6% { 111.0% } | 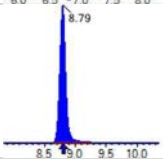 | | |

# ANALYSIS DATA SHEETL

## MW-22-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-02- | File ID:- | S2024-03-19B (16)- |
| Sampled:- | 03/14/24 08:45- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 21:36- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 547.119 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.60- | 0.19- | 1.5- | J- |
| PFPeA- | 0.41- | 0.059- | 0.73- | J- |
| PFHxA- | 0.30- | 0.050- | 0.37- | J- |
| PFHpA- | 0.11- | 0.037- | 0.37- | J- |
| PFOA- | 0.22- | 0.14- | 0.37- | IR2, J- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | 0.094- | 0.093- | 0.37- | MI2, J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 0.41- | 0.034- | 0.37- | |
| PFPeS- | 0.27- | 0.057- | 0.37- | J- |
| PFHxS- | 0.96- | 0.029- | 0.37- | IR1- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.16- | 0.058- | 0.37- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | 0.12- | 0.095- | 0.37- | MI5, J- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.37- | U- |

# ANALYSIS DATA SHEETL

## MW-22-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-02- | File ID:- | S2024-03-19B (16)- |
| Sampled:- | 03/14/24 08:45- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 21:36- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 547.119 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (16)
Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>44213<br>( 163.0 / 69.0 )<br>1279 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , 0.1) | 258.9<br>111.0 | 0.0289<br>106.5<br>109.7 | 0.1642 | N/A | 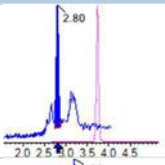 | 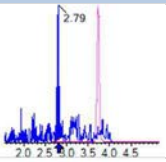 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 )<br>46926 | ( 3.76 , 1.01 )<br>( 0.03 , N/A , 0.0) | 29.8 | N/A<br>0.0<br>0.0 | 0.1649 | N/A | 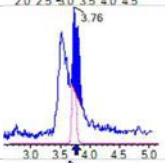 | | |
| PFPeA | ( 263.0 / 219.0 )<br>28834<br>( 263.0 / 69.0 )<br>245 | ( 4.80 , 1.00 )<br>( -0.01 , N/A , 0.4) | 134.3<br>8.0 | 0.0085<br>71.3<br>76.7 | 0.1133 | N/A | 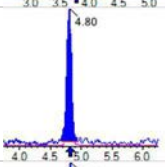 | 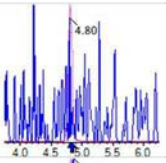 | |
| PFHxA | ( 313.0 / 269.0 )<br>24495<br>( 313.0 / 119.0 )<br>2450 | ( 6.03 , 1.00 )<br>( 0.00 , N/A , -0.3) | 135.3<br>31.8 | 0.1000<br>86.1<br>85.5 | 0.0823 | N/A | 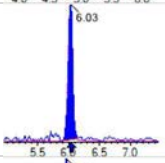 | 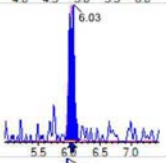 | |
| PFHpA | ( 363.0 / 319.0 )<br>9598<br>( 363.0 / 169.0 )<br>2074 | ( 7.16 , 1.00 )<br>( -0.01 , N/A , -0.2) | 61.0<br>46.1 | 0.2160<br>71.3<br>73.2 | 0.0304 | N/A | 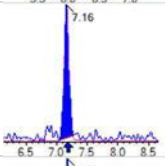 | 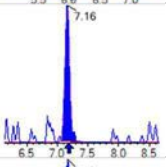 | |
| PFOA | ( 413.0 / 369.0 )<br>34862<br>( 413.0 / 169.0 )<br>17976 | ( 8.17 , 1.00 )<br>( 0.01 , N/A , 0.5) | 40.4<br>60.8 | 0.5156<br>141.1<br>150.2 | 0.0605 | N/A | 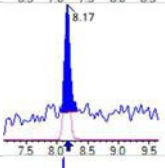 | 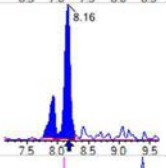 | IR2, |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 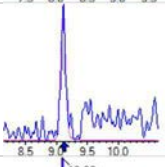 | 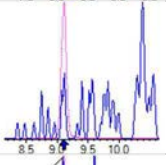 | |
| PFDA | ( 513.0 / 469.0 )<br>8145<br>( 513.0 / 169.0 )<br>758 | ( 10.00 , 1.00 )<br>( -0.01 , N/A , 0.0) | 72.5<br>32.8 | 0.0931<br>79.5<br>77.8 | 0.0258 | N/A | 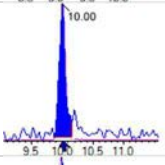 | 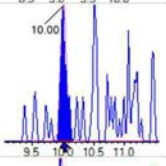 | MI2 DG 2024-03-20 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 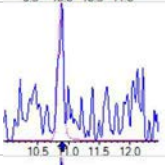 | 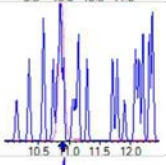 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 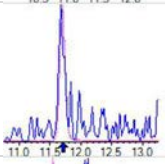 | 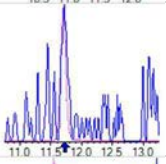 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 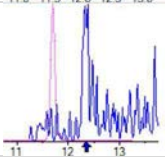 | 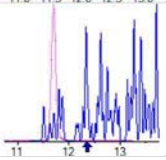 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (16)
Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 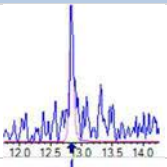 | 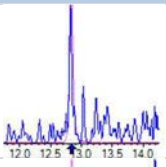 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 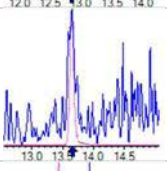 | 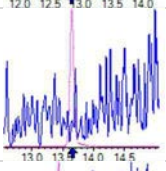 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 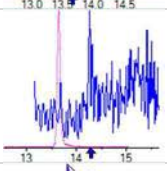 | 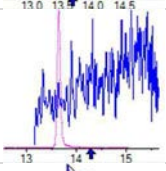 | |
| PFBS | ( 299.0 / 80.0 )<br>51738<br>( 299.0 / 99.0 )<br>35455 | ( 6.32 , 1.00 )<br>( 0.00 , N/A , -0.3) | 190.0<br>189.4 | 0.6853<br>96.9<br>93.2 | 0.1112 | N/A | 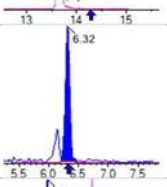 | 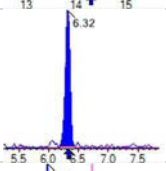 | |
| PFPeS | ( 349.0 / 80.0 )<br>78990<br>( 349.0 / 99.0 )<br>26813 | ( 7.55 , 0.88 )<br>( N/A , -0.01 , 0.1) | 127.6<br>145.0 | 0.3394<br>94.4<br>96.4 | 0.0735 | N/A | 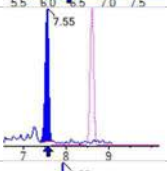 | 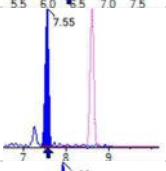 | |
| PFHxS | ( 399.0 / 80.0 )<br>326537<br>( 399.0 / 99.0 )<br>41997 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , 0.1) | 410.6<br>219.3 | 0.1286<br>40.4<br>38.5 | 0.2614 | N/A | 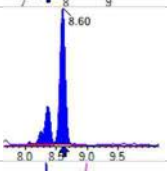 | 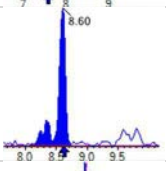 | IR1, |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 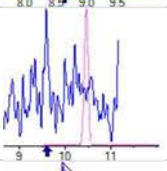 | 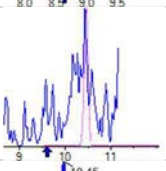 | |
| PFOS | ( 499.0 / 80.0 )<br>40995<br>( 499.0 / 99.0 )<br>8495 | ( 10.35 , 0.99 )<br>( -0.11 , N/A , -6.2) | 45.1<br>54.0 | 0.2072<br>88.7<br>86.3 | 0.0436 | N/A | 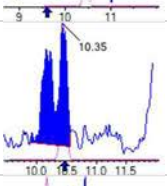 | 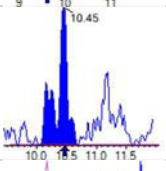 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 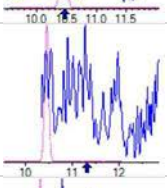 | 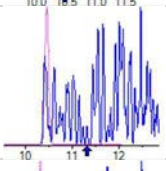 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 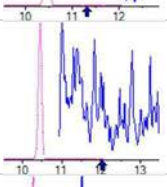 | 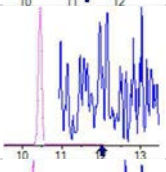 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 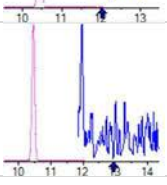 | 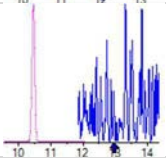 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (16)
Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 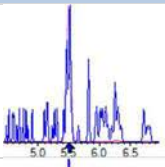 | 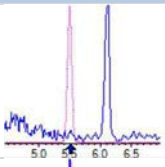 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 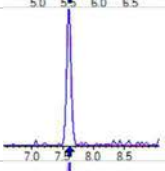 | 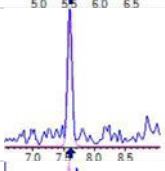 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 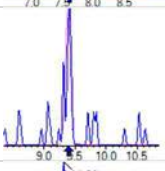 | 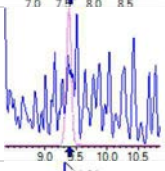 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>18357<br>( 627.0 / 81.0 )<br>29521 | ( 11.02 , 1.00 )<br>( 0.00 , N/A , 0.3) | 212.4<br>78.5 | 1.6082<br>111.7<br>110.2 | 0.0628 | N/A | 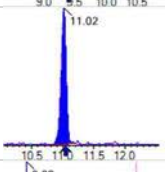 | 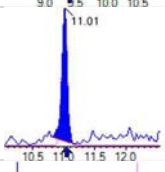 | |
| PFBSA | ( 297.9 / 78.0 )<br>14666<br>( 297.9 / 278.0 )<br>N/A | ( 8.09 , 0.57 )<br>( N/A , -0.01 , #Value!) | 142.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0454 | N/A | 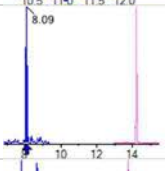 | 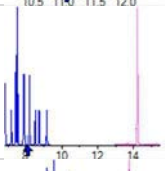 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 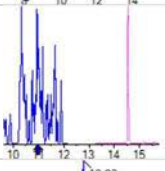 | 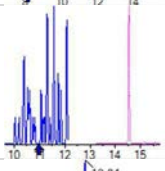 | |
| PFOSA | ( 498.0 / 78.0 )<br>15326<br>( 498.0 / 478.0 )<br>570 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , -0.5) | 137.5<br>18.3 | 0.0372<br>264.8<br>249.6 | 0.0331 | N/A | 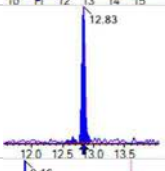 | 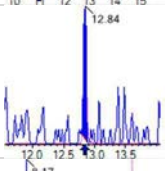 | MI5 DG<br>2024-03-20 |
| TFSI | ( 279.7 / 147.0 )<br>34198<br>( 279.7 / 211.0 )<br>3829 | ( 8.16 , 0.64 )<br>( N/A , -0.02 , -0.4) | 23.3<br>12.9 | 0.1120<br>133.3<br>130.9 | 0.0280 | N/A | 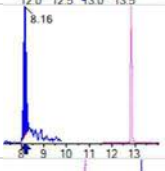 | 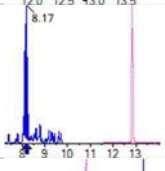 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 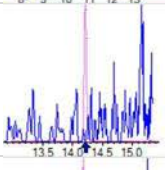 | 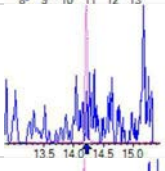 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 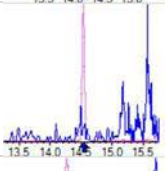 | 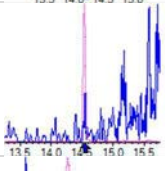 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 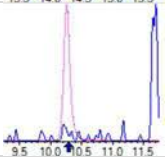 | 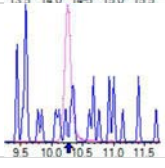 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-02 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 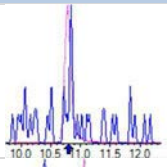 | 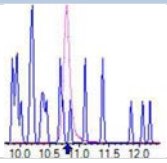 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 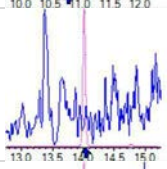 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 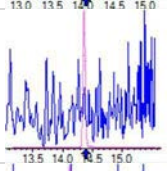 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 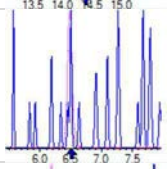 | 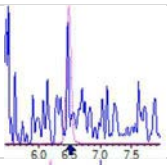 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 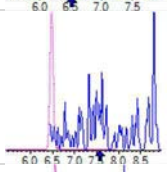 | 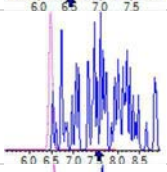 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 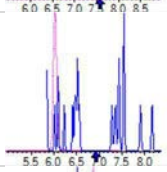 | 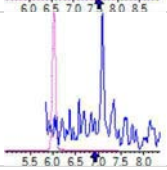 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 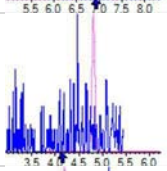 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 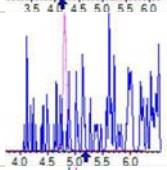 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 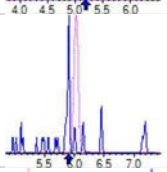 | 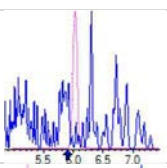 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 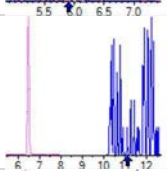 | 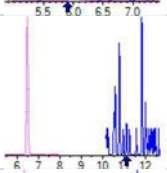 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 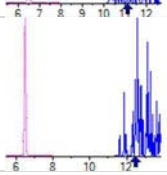 | 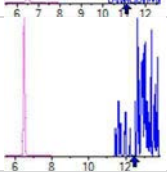 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-02 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 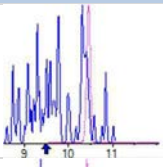 | 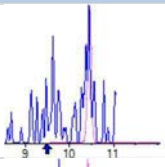 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 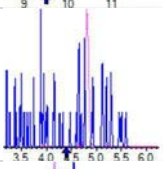 | 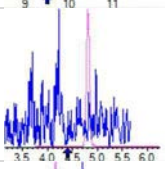 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 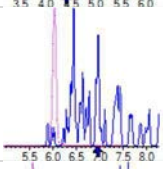 | 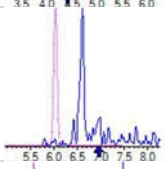 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 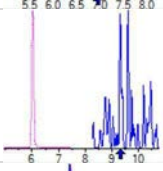 | 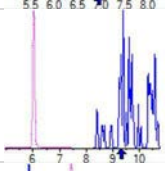 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 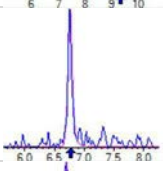 | 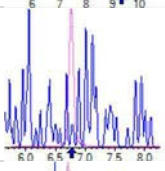 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 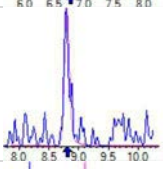 | 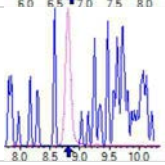 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 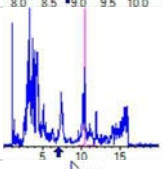 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 279053 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1386.4 | N/A | 1.1704<br>[ 1.0000 ] | 117.0%<br>{ 118.0% } | 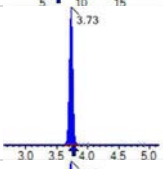 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127864 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 6159.9 | N/A | 1.0079<br>[ 1.0000 ] | 100.8%<br>{ 101.0% } | 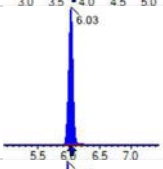 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 394805 | ( 8.17 , N/A )<br>( N/A , -0.01 , N/A ) | 7484.1 | N/A | 0.9987<br>[ 1.0000 ] | 99.9%<br>{ 104.1% } | 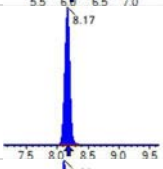 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 273997 | ( 9.11 , N/A )<br>( N/A , -0.01 , N/A ) | 1233.5 | N/A | 0.9634<br>[ 1.0000 ] | 96.3%<br>{ 97.4% } | 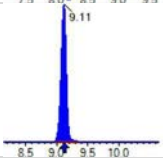 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (16)
Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 265417 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 2729.0 | N/A | 0.9089 [ 1.0000 ] | 90.9% { 91.7% } | 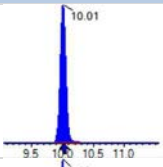 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 881361 | ( 8.60 , N/A ) ( N/A , -0.01 , N/A ) | 4581.5 | N/A | 0.9287 [ 1.0000 ] | 92.9% { 94.4% } | 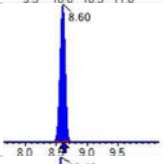 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713652 | ( 10.46 , N/A ) ( N/A , -0.02 , N/A ) | 1135.6 | N/A | 0.9370 [ 1.0000 ] | 93.7% { 100.2% } | 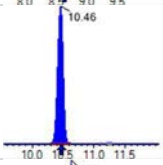 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2283818 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 40529.3 | N/A | 7.1641 [ 8.0000 ] | 89.6% { 102.0% } | 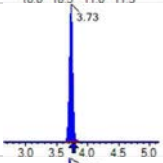 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1007507 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 4507.6 | N/A | 4.2230 [ 4.0000 ] | 105.6% { 103.2% } | 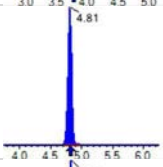 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 619439 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 5605.8 | N/A | 2.1232 [ 2.0000 ] | 106.2% { 105.0% } | 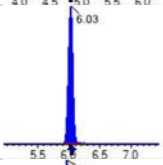 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642609 | ( 7.16 , N/A ) ( N/A , -0.01 , N/A ) | 5190.5 | N/A | 1.9801 [ 2.0000 ] | 99.0% { 97.9% } | 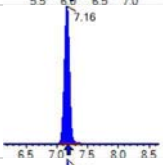 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 839173 | ( 8.16 , N/A ) ( N/A , -0.01 , N/A ) | 5067.3 | N/A | 1.9838 [ 2.0000 ] | 99.2% { 97.3% } | 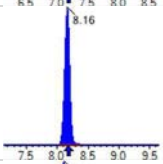 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291492 | ( 9.11 , N/A ) ( N/A , -0.01 , N/A ) | 2063.0 | N/A | 1.0850 [ 1.0000 ] | 108.5% { 108.0% } | 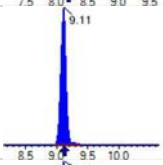 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 309372 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 1108.5 | N/A | 1.0401 [ 1.0000 ] | 104.0% { 96.2% } | 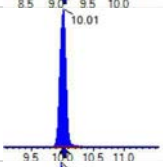 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377095 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 1057.0 | N/A | 1.0776 [ 1.0000 ] | 107.8% { 101.4% } | 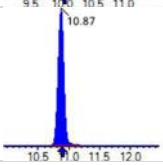 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-02 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 374034 | ( 11.70 , N/A ) ( N/A , -0.01 , N/A ) | 1348.0 | N/A | 1.0496 [ 1.0000 ] | 105.0% { 100.3% } | 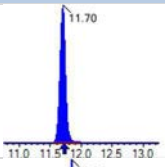  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 299587 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1196.3 | N/A | 0.9872 [ 1.0000 ] | 98.7% { 91.8% } | 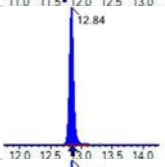  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 494576 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2293.0 | N/A | 1.9089 [ 2.0000 ] | 95.4% { 97.9% } | 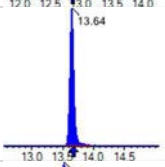  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1792557 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1111.7 | N/A | 2.2511 [ 2.0000 ] | 112.6% { 106.8% } | 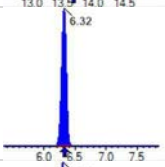  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1405221 | ( 8.60 , N/A ) ( N/A , -0.01 , N/A ) | 3290.7 | N/A | 2.2108 [ 2.0000 ] | 110.5% { 106.6% } | 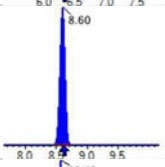  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1628382 | ( 10.46 , N/A ) ( N/A , -0.02 , N/A ) | 1138.5 | N/A | 2.1162 [ 2.0000 ] | 105.8% { 105.1% } | 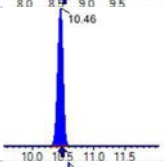  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 695413 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 97.5 | N/A | 5.0616 [ 4.0000 ] | 126.5% { 118.1% } | 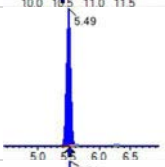  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2010463 | ( 7.61 , N/A ) ( N/A , -0.01 , N/A ) | 2167.5 | N/A | 4.8896 [ 4.0000 ] | 122.2% { 120.6% } | 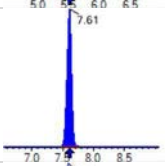  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1653801 | ( 9.38 , N/A ) ( N/A , -0.01 , N/A ) | 1428.1 | N/A | 5.1285 [ 4.0000 ] | 128.2% { 120.9% } | 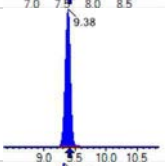  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3034939 | ( 11.01 , N/A ) ( N/A , -0.02 , N/A ) | 1052.8 | N/A | 9.0052 [ 8.0000 ] | 112.6% { 118.9% } | 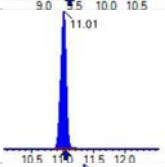  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 926361 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2741.1 | N/A | 1.3585 [ 2.0000 ] | 67.9% { 67.4% } | 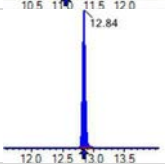  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (16)
Acquired: 2024/03/19 - 21:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 125466 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1069.8 | N/A | 0.8675 [ 2.0000 ] | 43.4% { 43.6% } | 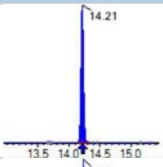 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 131576 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 1207.2 | N/A | 0.8483 [ 2.0000 ] | 42.4% { 42.9% } | 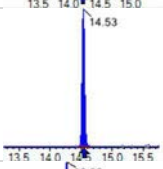 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 805723 | ( 10.26 , N/A ) ( N/A , -0.01 , N/A ) | 2314.1 | N/A | 4.0695 [ 4.0000 ] | 101.7% { 95.3% } | 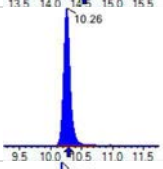 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 761369 | ( 10.78 , N/A ) ( N/A , -0.02 , N/A ) | 1698.3 | N/A | 4.2193 [ 4.0000 ] | 105.5% { 98.9% } | 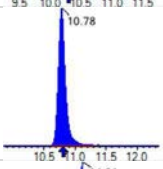 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 686975 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1376.0 | N/A | 10.5699 [ 20.0000 ] | 52.8% { 50.0% } | 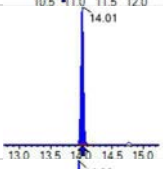 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 679221 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 1731.6 | N/A | 10.2964 [ 20.0000 ] | 51.5% { 52.6% } | 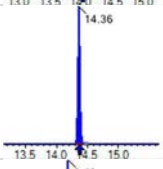 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1034756 | ( 6.48 , N/A ) ( N/A , -0.02 , N/A ) | 2374.7 | N/A | 7.7862 [ 8.0000 ] | 97.3% { 101.2% } | 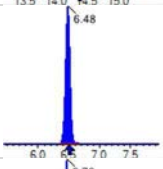 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 727631 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1206.9 | N/A | 2.5286 [ 2.0000 ] | 126.4% { 117.9% } | 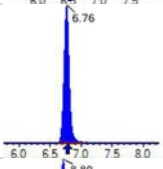 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 622806 | ( 8.80 , N/A ) ( N/A , -0.01 , N/A ) | 703.2 | N/A | 2.3774 [ 2.0000 ] | 118.9% { 112.6% } | 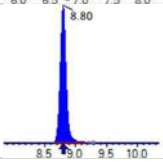 | | |

# ANALYSIS DATA SHEETL

## MW-22-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-03- | File ID:- | S2024-03-19B (17)- |
| Sampled:- | 03/14/24 09:15- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 21:57- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 542.719 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 5.5- | 0.19- | 1.5- | |
| PFPeA- | 8.6- | 0.060- | 0.74- | |
| PFHxA- | 5.0- | 0.051- | 0.37- | |
| PFHpA- | 1.2- | 0.038- | 0.37- | |
| PFOA- | 0.54- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | 0.099- | 0.093- | 0.37- | J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | IR2, U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 3.3- | 0.034- | 0.37- | |
| PFPeS- | 0.37- | 0.058- | 0.37- | |
| PFHxS- | 1.1- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.16- | 0.059- | 0.37- | J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | 0.11- | 0.096- | 0.37- | J- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-22-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-03- | File ID:- | S2024-03-19B (17)- |
| Sampled:- | 03/14/24 09:15- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 21:57- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 542.719 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-03 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>155028<br>( 163.0 / 69.0 )<br>3777 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , 0.1) | 1026.8<br>226.4 | 0.0244<br>89.7<br>92.4 | 0.5770 | N/A | 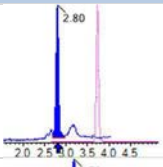 | 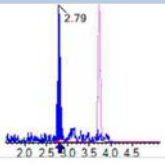 | |
| PFBA | ( 213.0 / 169.0 )<br>427507 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 300.9 | N/A<br>0.0<br>0.0 | 1.5051 | N/A | 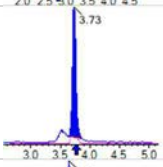 | | |
| PFPeA | ( 263.0 / 219.0 )<br>587244<br>( 263.0 / 69.0 )<br>6292 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1977.5<br>85.7 | 0.0107<br>89.7<br>96.6 | 2.3212 | N/A | 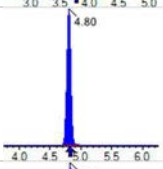 | 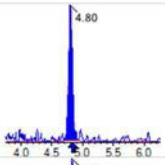 | |
| PFHxA | ( 313.0 / 269.0 )<br>393300<br>( 313.0 / 119.0 )<br>43342 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , 0.1) | 889.0<br>553.8 | 0.1102<br>94.9<br>94.2 | 1.3567 | N/A | 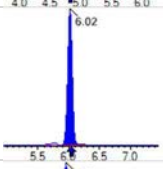 | 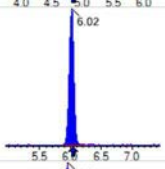 | |
| PFHpA | ( 363.0 / 319.0 )<br>104510<br>( 363.0 / 169.0 )<br>30669 | ( 7.15 , 1.00 )<br>( 0.00 , N/A , 0.2) | 433.6<br>239.5 | 0.2935<br>96.8<br>99.4 | 0.3284 | N/A | 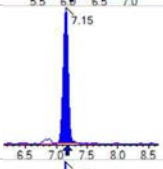 | 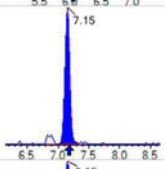 | |
| PFOA | ( 413.0 / 369.0 )<br>74217<br>( 413.0 / 169.0 )<br>33688 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , -0.1) | 84.4<br>112.9 | 0.4539<br>124.2<br>132.2 | 0.1471 | N/A | 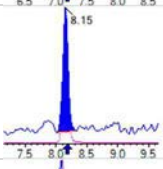 | 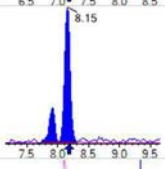 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 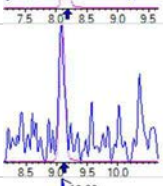 | 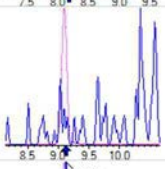 | |
| PFDA | ( 513.0 / 469.0 )<br>9161<br>( 513.0 / 169.0 )<br>1066 | ( 10.00 , 1.00 )<br>( 0.01 , N/A , -1.1) | 63.7<br>64.9 | 0.1164<br>99.3<br>97.2 | 0.0269 | N/A | 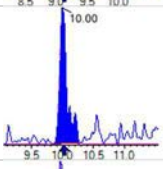 | 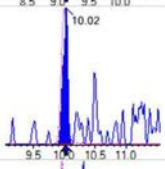 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 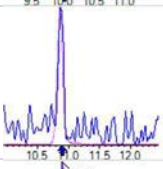 | 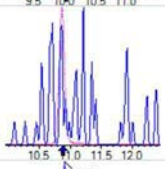 | |
| PFDoA | ( 613.0 / 569.0 )<br>5067<br>( 613.0 / 169.0 )<br>1324 | ( 11.69 , 1.00 )<br>( 0.00 , N/A , -0.5) | 35.2<br>19.4 | 0.2613<br>165.3<br>176.7 | 0.0138 | N/A | 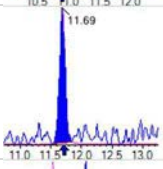 | 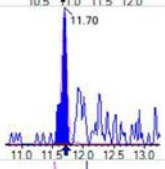 | IR2, |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 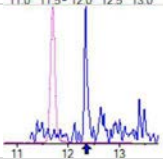 | 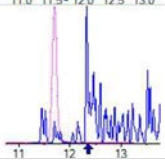 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (17)
Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 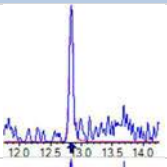 | 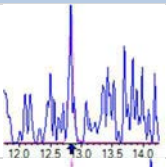 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 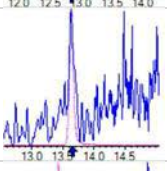 | 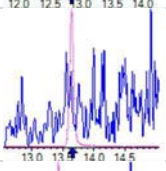 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 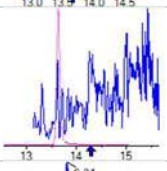 | 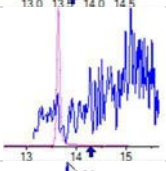 | |
| PFBS | ( 299.0 / 80.0 )<br>411326<br>( 299.0 / 99.0 )<br>285331 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , -0.1) | 963.8<br>952.5 | 0.6937<br>98.1<br>94.3 | 0.8854 | N/A | 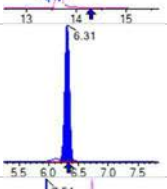 | 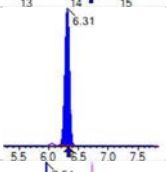 | |
| PFPeS | ( 349.0 / 80.0 )<br>107023<br>( 349.0 / 99.0 )<br>40309 | ( 7.54 , 0.88 )<br>( N/A , -0.03 , 0.0) | 185.8<br>212.6 | 0.3766<br>104.7<br>106.9 | 0.1001 | N/A | 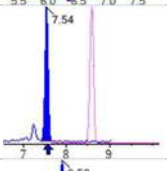 | 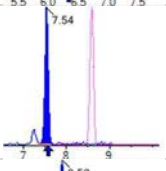 | |
| PFHxS | ( 399.0 / 80.0 )<br>367559<br>( 399.0 / 99.0 )<br>108143 | ( 8.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 666.0<br>709.5 | 0.2942<br>92.4<br>88.0 | 0.2959 | N/A | 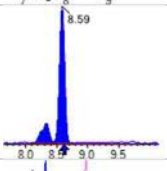 | 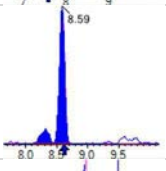 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 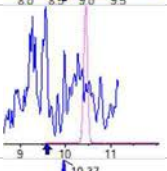 | 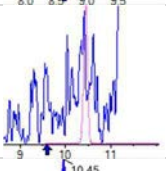 | |
| PFOS | ( 499.0 / 80.0 )<br>38762<br>( 499.0 / 99.0 )<br>6908 | ( 10.37 , 0.99 )<br>( -0.07 , N/A , -4.6) | 39.4<br>35.8 | 0.1782<br>76.2<br>74.2 | 0.0424 | N/A | 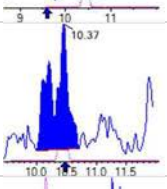 | 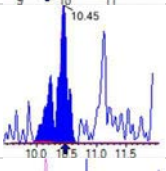 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 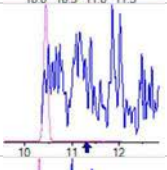 | 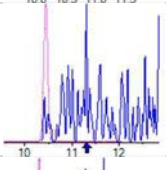 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 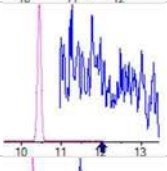 | 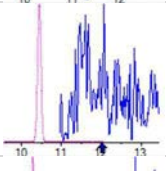 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 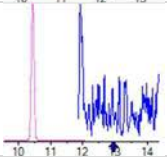 | 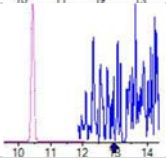 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (17)
Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 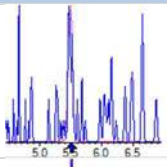 | 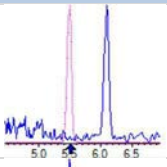 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 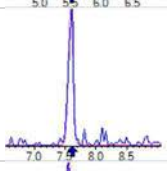 | 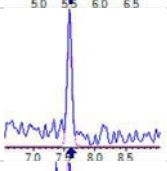 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 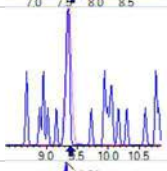 | 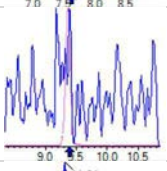 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14997<br>( 627.0 / 81.0 )<br>21022 | ( 11.01 , 1.00 )<br>( 0.01 , N/A , 0.1) | 211.0<br>58.3 | 1.4017<br>97.4<br>96.1 | 0.0553 | N/A | 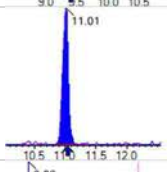 | 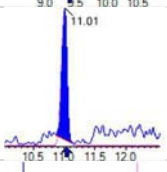 | |
| PFBSA | ( 297.9 / 78.0 )<br>26614<br>( 297.9 / 278.0 )<br>N/A | ( 8.08 , 0.57 )<br>( N/A , -0.01 , #Value!) | 224.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0746 | N/A | 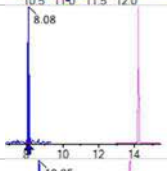 | 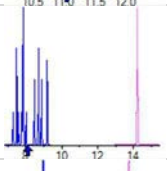 | |
| PFHxSA | ( 397.9 / 78.0 )<br>8394<br>( 397.9 / 378.0 )<br>N/A | ( 10.95 , 0.75 )<br>( N/A , -0.01 , #Value!) | 81.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0186 | N/A | 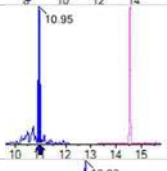 | 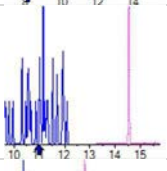 | |
| PFOSA | ( 498.0 / 78.0 )<br>16949<br>( 498.0 / 478.0 )<br>191 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.4) | 163.5<br>7.0 | 0.0113<br>80.4<br>75.8 | 0.0289 | N/A | 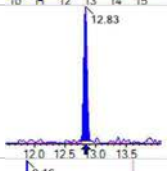 | 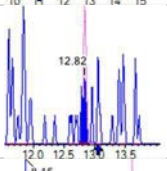 | |
| TFSI | ( 279.7 / 147.0 )<br>352681<br>( 279.7 / 211.0 )<br>34835 | ( 8.16 , 0.64 )<br>( N/A , -0.02 , 0.4) | 49.1<br>27.2 | 0.0988<br>117.6<br>115.4 | 0.2287 | N/A | 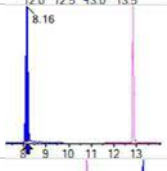 | 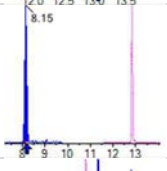 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 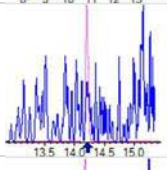 | 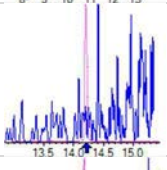 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 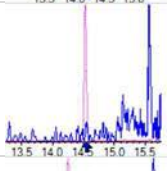 | 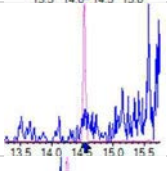 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 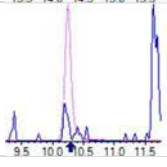 | 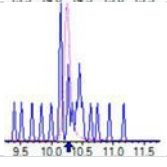 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (17)
Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 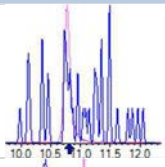 | 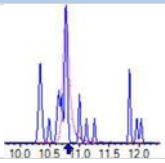 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 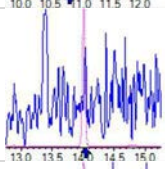 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 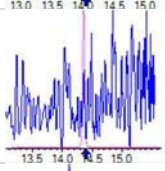 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 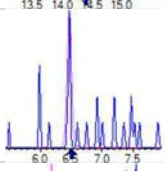 | 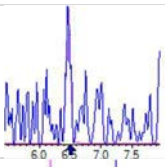 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 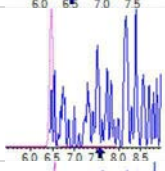 | 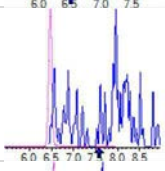 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 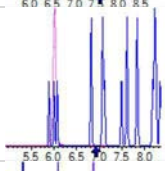 | 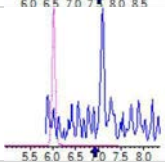 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 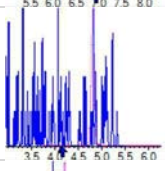 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 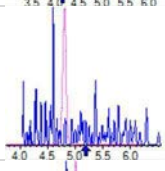 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 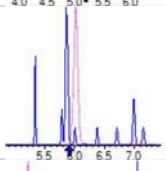 | 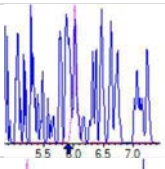 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 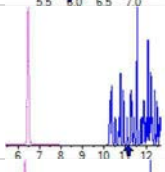 | 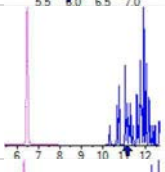 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 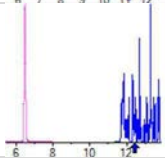 | 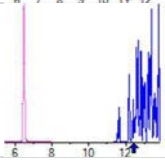 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-03 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 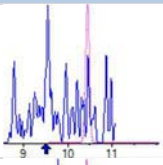 | 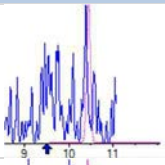 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 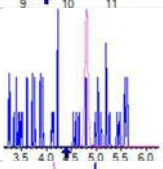 | 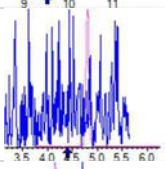 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 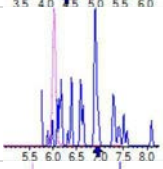 | 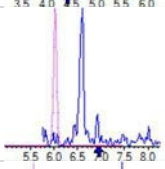 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 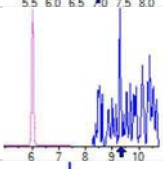 | 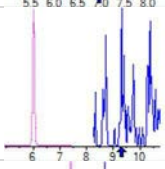 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 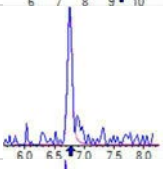 | 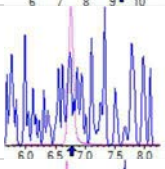 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 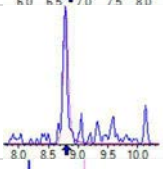 | 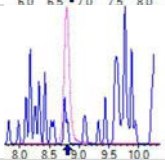 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 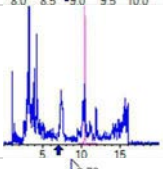 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 290101 | ( 3.73 , N/A )<br>( N/A , -0.02 , N/A ) | 1188.5 | N/A | 1.2167<br>[ 1.0000 ] | 121.7%<br>{ 122.6% } | 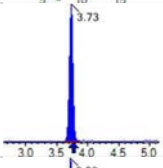 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 136673 | ( 6.02 , N/A )<br>( N/A , -0.02 , N/A ) | 6780.3 | N/A | 1.0774<br>[ 1.0000 ] | 107.7%<br>{ 108.0% } | 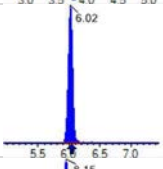 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 395521 | ( 8.15 , N/A )<br>( N/A , -0.02 , N/A ) | 3683.7 | N/A | 1.0005<br>[ 1.0000 ] | 100.1%<br>{ 104.3% } | 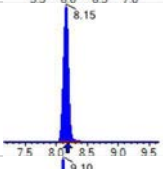 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281144 | ( 9.10 , N/A )<br>( N/A , -0.02 , N/A ) | 858.2 | N/A | 0.9885<br>[ 1.0000 ] | 98.9%<br>{ 100.0% } | 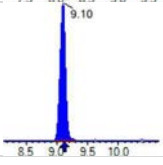 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (17)
Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 264709 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 3055.3 | N/A | 0.9065 [ 1.0000 ] | 90.6% { 91.5% } | 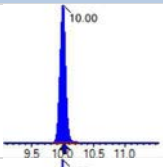 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 911367 | ( 8.59 , N/A ) ( N/A , -0.02 , N/A ) | 3785.4 | N/A | 0.9603 [ 1.0000 ] | 96.0% { 97.6% } | 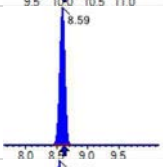 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 741261 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 993.8 | N/A | 0.9732 [ 1.0000 ] | 97.3% { 104.1% } | 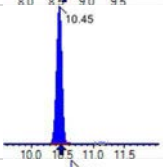 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2279615 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 35678.7 | N/A | 6.8786 [ 8.0000 ] | 86.0% { 101.8% } | 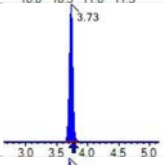 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1001708 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 4735.3 | N/A | 3.9281 [ 4.0000 ] | 98.2% { 102.6% } | 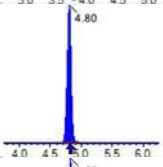 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 603476 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 7243.3 | N/A | 1.9352 [ 2.0000 ] | 96.8% { 102.3% } | 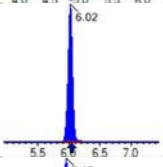 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 648520 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 5138.2 | N/A | 1.8695 [ 2.0000 ] | 93.5% { 98.8% } | 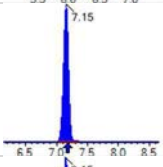 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 888666 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 2979.4 | N/A | 2.0970 [ 2.0000 ] | 104.8% { 103.1% } | 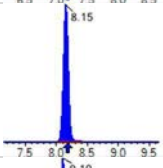 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 258971 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 1761.9 | N/A | 0.9395 [ 1.0000 ] | 93.9% { 96.0% } | 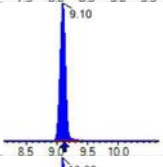 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 333582 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 1340.8 | N/A | 1.1245 [ 1.0000 ] | 112.5% { 103.7% } | 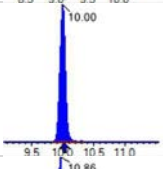 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 366225 | ( 10.86 , N/A ) ( N/A , -0.02 , N/A ) | 934.9 | N/A | 1.0493 [ 1.0000 ] | 104.9% { 98.5% } | 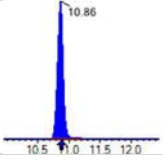 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-03 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 363883 | ( 11.69 , N/A ) ( N/A , -0.02 , N/A ) | 1446.2 | N/A | 1.0238 [ 1.0000 ] | 102.4% { 97.6% } | 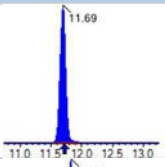 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 307725 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1186.2 | N/A | 1.0167 [ 1.0000 ] | 101.7% { 94.3% } | 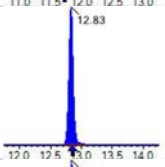 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 461930 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2357.0 | N/A | 1.7876 [ 2.0000 ] | 89.4% { 91.4% } | 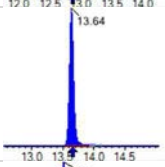 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1789613 | ( 6.31 , N/A ) ( N/A , -0.02 , N/A ) | 889.5 | N/A | 2.1734 [ 2.0000 ] | 108.7% { 106.6% } | 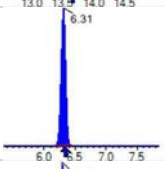 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1397278 | ( 8.59 , N/A ) ( N/A , -0.02 , N/A ) | 2453.4 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 106.0% } | 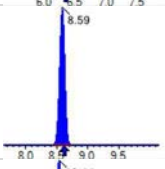 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1583433 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 1172.7 | N/A | 1.9812 [ 2.0000 ] | 99.1% { 102.2% } | 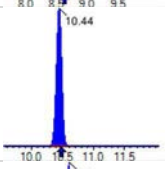 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 653767 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 91.6 | N/A | 4.6018 [ 4.0000 ] | 115.0% { 111.0% } | 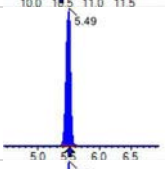 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1790535 | ( 7.59 , N/A ) ( N/A , -0.02 , N/A ) | 2426.7 | N/A | 4.2113 [ 4.0000 ] | 105.3% { 107.4% } | 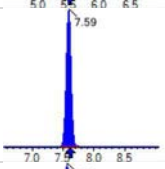 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1559482 | ( 9.37 , N/A ) ( N/A , -0.02 , N/A ) | 1416.0 | N/A | 4.6767 [ 4.0000 ] | 116.9% { 114.0% } | 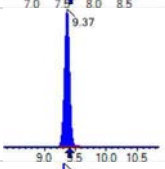 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2813191 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1165.1 | N/A | 8.0724 [ 8.0000 ] | 100.9% { 110.2% } | 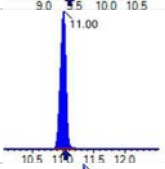 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1171099 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 2226.9 | N/A | 1.6534 [ 2.0000 ] | 82.7% { 85.2% } | 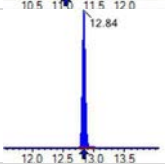 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-03 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 21:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 138383 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1250.2 | N/A | 0.9212 [ 2.0000 ] | 46.1% { 48.1% } | 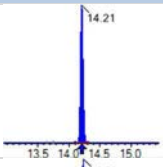 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 147071 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1295.3 | N/A | 0.9129 [ 2.0000 ] | 45.6% { 48.0% } | 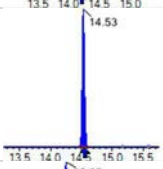 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 753669 | ( 10.25 , N/A ) ( N/A , -0.03 , N/A ) | 2550.5 | N/A | 3.6648 [ 4.0000 ] | 91.6% { 89.1% } | 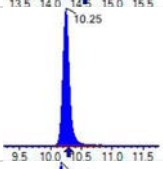 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 760381 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 1842.8 | N/A | 4.0569 [ 4.0000 ] | 101.4% { 98.7% } | 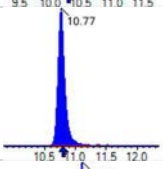 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 800073 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1699.8 | N/A | 11.8515 [ 20.0000 ] | 59.3% { 58.2% } | 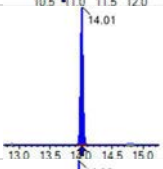 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 807926 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3575.7 | N/A | 11.7913 [ 20.0000 ] | 59.0% { 62.6% } | 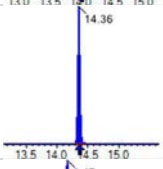 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1049105 | ( 6.47 , N/A ) ( N/A , -0.03 , N/A ) | 2286.1 | N/A | 7.3854 [ 8.0000 ] | 92.3% { 102.6% } | 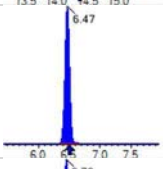 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 726589 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1245.2 | N/A | 2.5317 [ 2.0000 ] | 126.6% { 117.8% } | 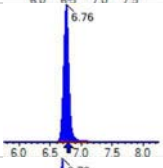 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 680370 | ( 8.79 , N/A ) ( N/A , -0.02 , N/A ) | 756.7 | N/A | 2.6041 [ 2.0000 ] | 130.2% { 123.0% } | 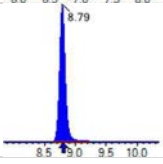 | | |

# ANALYSIS DATA SHEETL

MW-3-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-04- | File ID:- | S2024-03-19B (18)- |
| Sampled:- | 03/14/24 10:20- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 22:17- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 539.91 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 3.0- | 0.19- | 1.5- | |
| PFPeA- | 1.4- | 0.060- | 0.74- | |
| PFHxA- | 0.99- | 0.051- | 0.37- | |
| PFHpA- | 0.45- | 0.038- | 0.37- | |
| PFOA- | 0.80- | 0.14- | 0.37- | |
| PFNA- | 0.13- | 0.076- | 0.37- | J- |
| PFDA- | 0.10- | 0.094- | 0.37- | J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 3.3- | 0.034- | 0.37- | |
| PFPeS- | 0.26- | 0.058- | 0.37- | J- |
| PFHxS- | 1.4- | 0.029- | 0.37- | |
| PFHpS- | 0.061- | 0.048- | 0.37- | J- |
| PFOS- | 2.9- | 0.059- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-3-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-04- | File ID:- | S2024-03-19B (18)- |
| Sampled:- | 03/14/24 10:20- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 22:17- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 539.91 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (18)
Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 151154<br>( 163.0 / 69.0 ) 4479 | ( 2.79 , 0.75 )<br>( N/A , -0.01 , 0.1) | 874.3<br>216.1 | 0.0296<br>109.1<br>112.4 | 0.5352 | N/A | 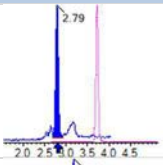 | 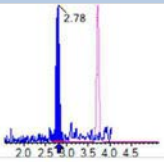 | |
| PFBA | ( 213.0 / 169.0 ) 245344 | ( 3.72 , 1.00 )<br>( 0.00 , N/A , 0.0) | 183.1 | N/A<br>0.0<br>0.0 | 0.8217 | N/A | 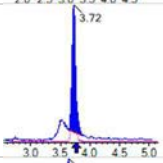 | | |
| PFPeA | ( 263.0 / 219.0 ) 96513<br>( 263.0 / 69.0 ) 1112 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , 0.7) | 481.0<br>19.6 | 0.0115<br>96.5<br>103.8 | 0.3823 | N/A | 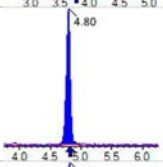 | 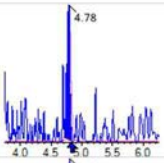 | |
| PFHxA | ( 313.0 / 269.0 ) 78383<br>( 313.0 / 119.0 ) 10154 | ( 6.01 , 1.00 )<br>( 0.00 , N/A , 0.6) | 384.8<br>139.2 | 0.1295<br>111.6<br>110.7 | 0.2665 | N/A | 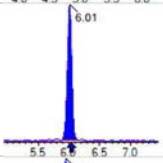 | 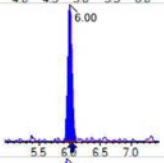 | |
| PFHpA | ( 363.0 / 319.0 ) 38249<br>( 363.0 / 169.0 ) 12255 | ( 7.15 , 1.00 )<br>( 0.00 , N/A , 0.2) | 150.9<br>163.8 | 0.3204<br>105.7<br>108.5 | 0.1211 | N/A | 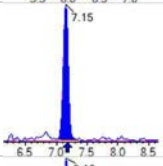 | 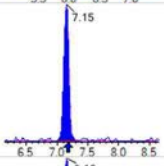 | |
| PFOA | ( 413.0 / 369.0 ) 107574<br>( 413.0 / 169.0 ) 42708 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , -0.1) | 126.9<br>196.9 | 0.3970<br>108.6<br>115.6 | 0.2170 | N/A | 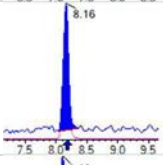 | 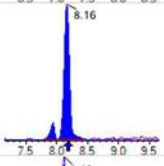 | |
| PFNA | ( 463.0 / 419.0 ) 9987<br>( 463.0 / 169.0 ) 3136 | ( 9.10 , 1.00 )<br>( 0.00 , N/A , -0.3) | 62.4<br>45.6 | 0.3140<br>123.0<br>130.5 | 0.0340 | N/A | 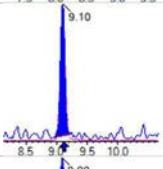 | 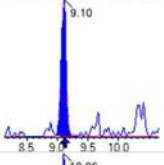 | |
| PFDA | ( 513.0 / 469.0 ) 9410<br>( 513.0 / 169.0 ) 1528 | ( 9.99 , 1.00 )<br>( 0.00 , N/A , -3.9) | 69.5<br>21.9 | 0.1624<br>138.6<br>135.6 | 0.0277 | N/A | 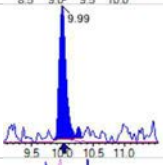 | 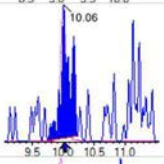 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 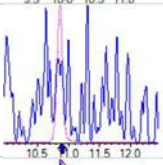 | 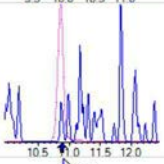 | |
| PFDoA | ( 613.0 / 569.0 ) 4161<br>( 613.0 / 169.0 ) 672 | ( 11.68 , 1.00 )<br>( 0.00 , N/A , -0.5) | 26.7<br>8.3 | 0.1614<br>102.1<br>109.2 | 0.0115 | N/A | 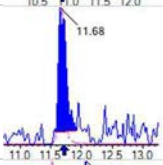 | 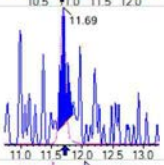 | |
| PFTrDA | ( 663.0 / 619.0 ) 4331<br>( 663.0 / 169.0 ) 1407 | ( 12.33 , 1.06 )<br>( N/A , -0.01 , 1.3) | 26.3<br>13.3 | 0.3248<br>126.2<br>125.4 | 0.0122 | N/A | 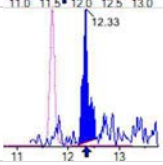 | 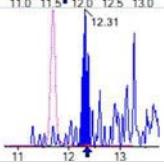 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (18)
Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 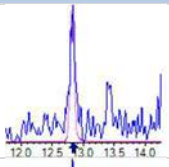 | 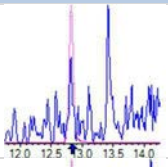 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 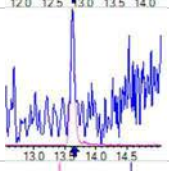 | 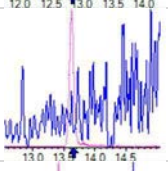 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 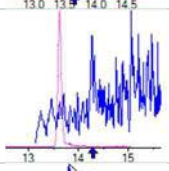 | 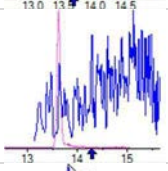 | |
| PFBS | ( 299.0 / 80.0 )<br>414946<br>( 299.0 / 99.0 )<br>314128 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.0) | 803.2<br>968.6 | 0.7570<br>107.0<br>102.9 | 0.8956 | N/A | 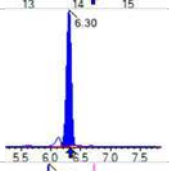 | 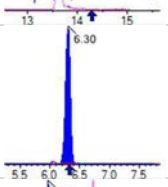 | |
| PFPeS | ( 349.0 / 80.0 )<br>75261<br>( 349.0 / 99.0 )<br>27454 | ( 7.54 , 0.88 )<br>( N/A , -0.02 , -0.1) | 161.1<br>123.1 | 0.3648<br>101.4<br>103.6 | 0.0695 | N/A | 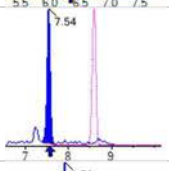 | 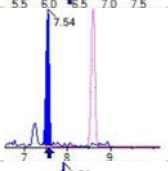 | |
| PFHxS | ( 399.0 / 80.0 )<br>475240<br>( 399.0 / 99.0 )<br>143014 | ( 8.59 , 1.00 )<br>( 0.00 , N/A , 0.1) | 584.8<br>584.1 | 0.3009<br>94.5<br>90.0 | 0.3778 | N/A | 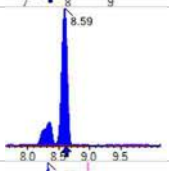 | 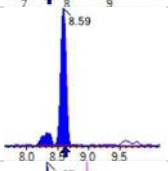 | |
| PFHpS | ( 449.0 / 80.0 )<br>16399<br>( 449.0 / 99.0 )<br>5110 | ( 9.56 , 0.92 )<br>( N/A , -0.02 , -0.6) | 37.6<br>22.3 | 0.3116<br>117.7<br>117.7 | 0.0163 | N/A | 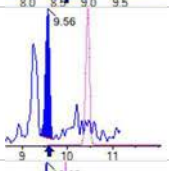 | 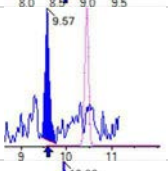 | |
| PFOS | ( 499.0 / 80.0 )<br>746888<br>( 499.0 / 99.0 )<br>102026 | ( 10.13 , 0.97 )<br>( -0.32 , N/A , -15.7) | 453.8<br>318.6 | 0.1366<br>58.4<br>56.9 | 0.7721 | N/A | 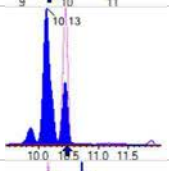 | 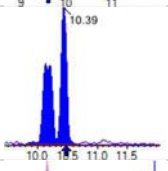 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 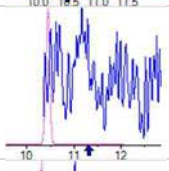 | 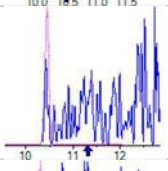 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 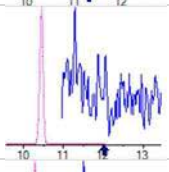 | 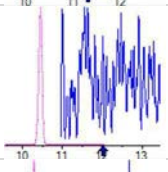 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 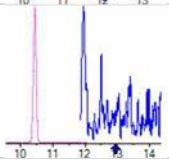 | 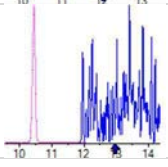 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (18)
Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 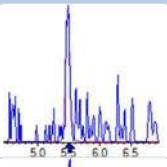 | 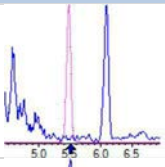 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 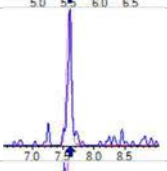 | 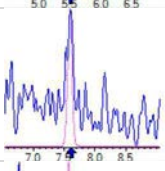 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 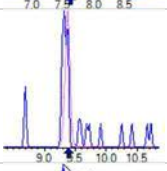 | 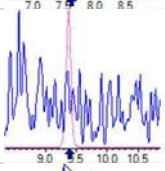 | |
| 10:2FTS | ( 627.0 / 607.0 ) 16005<br>( 627.0 / 81.0 ) 25311 | ( 11.00 , 1.00 ) ( 0.01 , N/A , 0.1) | 197.3<br>64.6 | 1.5815<br>109.9<br>108.4 | 0.0555 | N/A | 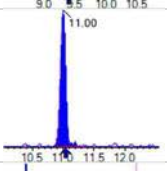 | 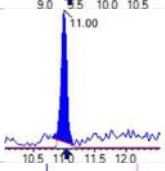 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 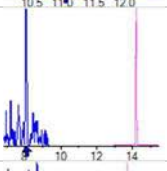 | 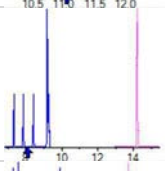 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 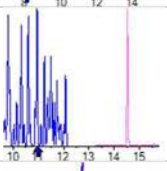 | 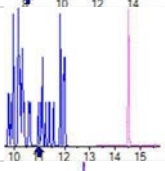 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 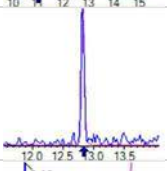 | 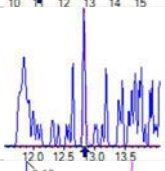 | |
| TFSI | ( 279.7 / 147.0 ) 39583<br>( 279.7 / 211.0 ) 4979 | ( 8.16 , 0.64 ) ( N/A , -0.02 , -0.2) | 27.9<br>12.0 | 0.1258<br>149.7<br>147.0 | 0.0206 | N/A | 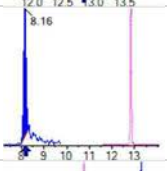 | 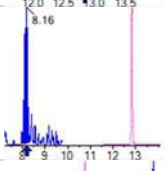 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 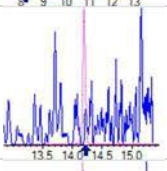 | 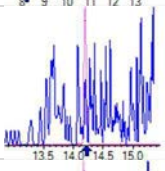 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 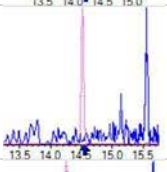 | 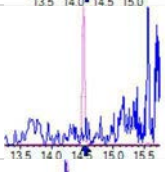 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 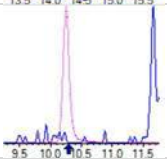 | 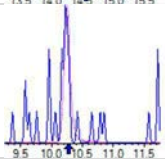 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (18)
Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 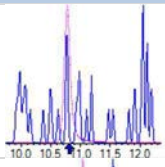 | 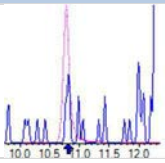 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 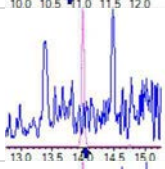 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 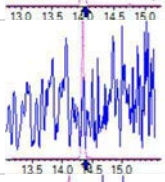 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 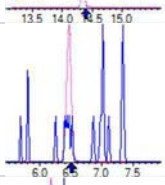 | 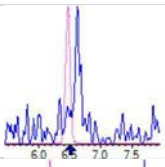 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 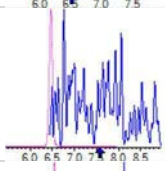 | 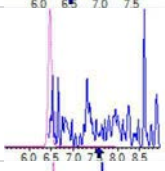 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 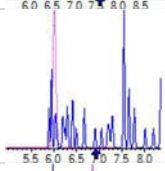 | 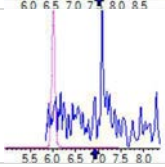 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 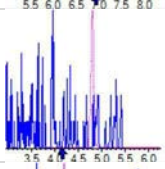 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 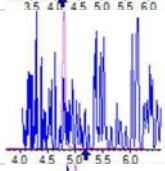 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 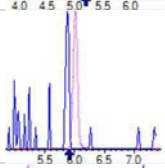 | 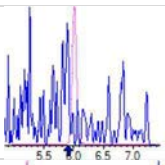 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 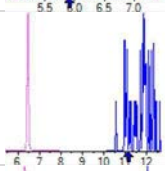 | 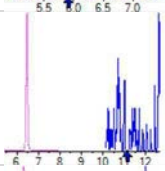 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 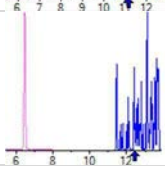 | 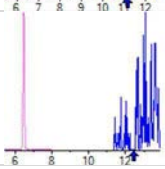 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (18)
Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 20225<br>( 461.0 / 381.2 ) 6046 | ( 9.46 , 0.91 )<br>( N/A , -0.04 , -0.3) | 62.9<br>38.8 | 0.2989<br>75.0<br>75.4 | 0.0371 | N/A | 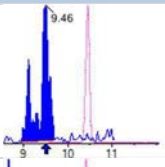 | 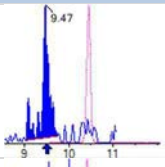 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 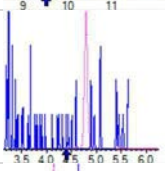 | 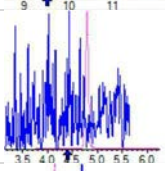 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 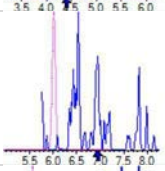 | 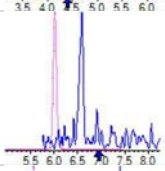 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 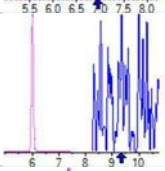 | 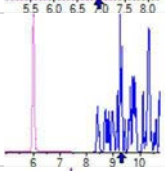 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 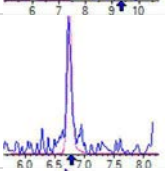 | 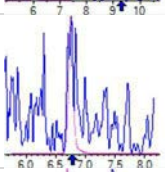 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5382<br>( 457.2 / 343.0 ) 171 | ( 8.78 , 1.00 )<br>( -0.01 , N/A , -2.3) | 50.6<br>5.7 | 0.0318<br>76.7<br>70.2 | 0.0196 | N/A | 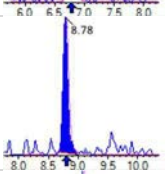 | 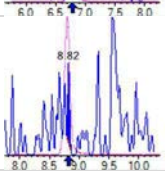 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 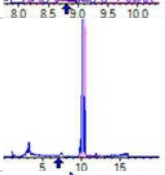 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282420 | ( 3.72 , N/A )<br>( N/A , -0.03 , N/A ) | 1180.6 | N/A | 1.1845<br>[ 1.0000 ] | 118.4%<br>{ 119.4% } | 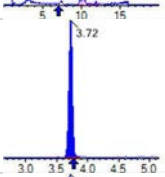 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 131206 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 124855.3 | N/A | 1.0343<br>[ 1.0000 ] | 103.4%<br>{ 103.6% } | 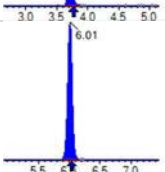 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 372339 | ( 8.16 , N/A )<br>( N/A , -0.02 , N/A ) | 2709.8 | N/A | 0.9419<br>[ 1.0000 ] | 94.2%<br>{ 98.2% } | 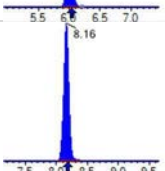 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 276667 | ( 9.10 , N/A )<br>( N/A , -0.02 , N/A ) | 1206.5 | N/A | 0.9728<br>[ 1.0000 ] | 97.3%<br>{ 98.4% } | 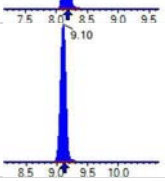 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (18)
Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 256142 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 2684.8 | N/A | 0.8771 [ 1.0000 ] | 87.7% { 88.5% } | 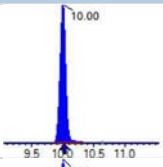 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 900891 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 4810.0 | N/A | 0.9493 [ 1.0000 ] | 94.9% { 96.5% } | 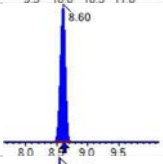 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727918 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1050.3 | N/A | 0.9557 [ 1.0000 ] | 95.6% { 102.2% } | 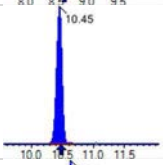 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2396325 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 38881.1 | N/A | 7.4274 [ 8.0000 ] | 92.8% { 107.0% } | 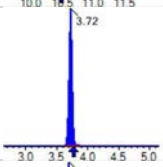 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 999558 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 5179.1 | N/A | 4.0830 [ 4.0000 ] | 102.1% { 102.4% } | 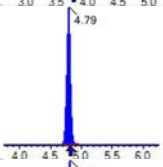 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 612333 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 6701.1 | N/A | 2.0454 [ 2.0000 ] | 102.3% { 103.8% } | 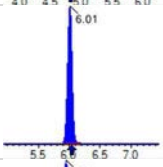 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 643912 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 6874.0 | N/A | 1.9336 [ 2.0000 ] | 96.7% { 98.1% } | 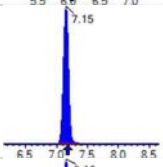 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 916583 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 2476.6 | N/A | 2.2975 [ 2.0000 ] | 114.9% { 106.3% } | 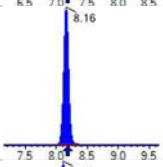 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292507 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 1840.8 | N/A | 1.0783 [ 1.0000 ] | 107.8% { 108.4% } | 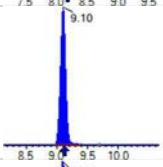 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 332106 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 915.2 | N/A | 1.1570 [ 1.0000 ] | 115.7% { 103.2% } | 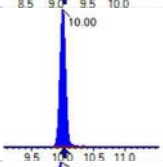 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 372043 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 824.9 | N/A | 1.1017 [ 1.0000 ] | 110.2% { 100.0% } | 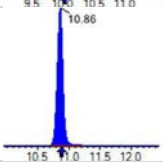 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 359298 | ( 11.68 , N/A ) ( N/A , -0.03 , N/A ) | 1174.7 | N/A | 1.0447 [ 1.0000 ] | 104.5% { 96.4% } | 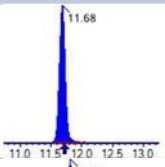  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327241 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1332.0 | N/A | 1.1173 [ 1.0000 ] | 111.7% { 100.2% } | 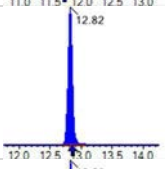  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 292471 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 1596.7 | N/A | 1.1697 [ 2.0000 ] | 58.5% { 57.9% } | 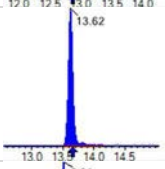  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1784718 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 981.3 | N/A | 2.1927 [ 2.0000 ] | 109.6% { 106.3% } | 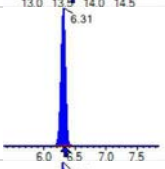  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1414973 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 3147.7 | N/A | 2.1779 [ 2.0000 ] | 108.9% { 107.3% } | 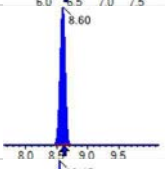  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1675122 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1136.4 | N/A | 2.1343 [ 2.0000 ] | 106.7% { 108.1% } | 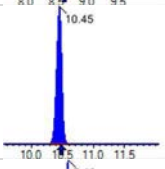  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 663629 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 85.0 | N/A | 4.7255 [ 4.0000 ] | 118.1% { 112.7% } | 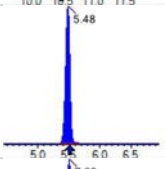  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1840528 | ( 7.60 , N/A ) ( N/A , -0.02 , N/A ) | 2721.2 | N/A | 4.3793 [ 4.0000 ] | 109.5% { 110.4% } | 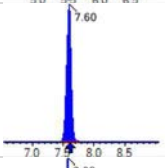  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1365385 | ( 9.38 , N/A ) ( N/A , -0.02 , N/A ) | 1684.1 | N/A | 4.1423 [ 4.0000 ] | 103.6% { 99.8% } | 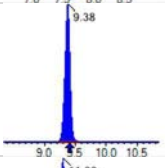  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2992360 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1194.6 | N/A | 8.6864 [ 8.0000 ] | 108.6% { 117.2% } | 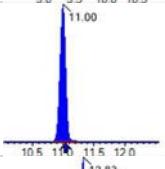  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1459536 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 2260.3 | N/A | 2.0985 [ 2.0000 ] | 104.9% { 106.2% } | 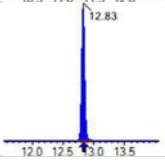  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 22:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 181189 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1136.0 | N/A | 1.2282 [ 2.0000 ] | 61.4% { 62.9% } | 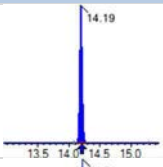 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 186564 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 1749.3 | N/A | 1.1793 [ 2.0000 ] | 59.0% { 60.8% } | 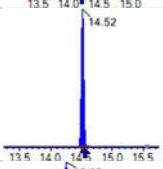 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 787700 | ( 10.25 , N/A ) ( N/A , -0.03 , N/A ) | 2300.5 | N/A | 3.9005 [ 4.0000 ] | 97.5% { 93.2% } | 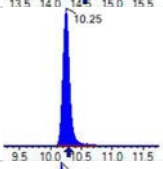 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 736225 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 1914.3 | N/A | 4.0000 [ 4.0000 ] | 100.0% { 95.6% } | 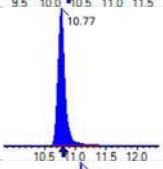 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1169364 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 2188.8 | N/A | 17.6393 [ 20.0000 ] | 88.2% { 85.1% } | 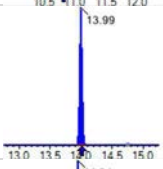 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1098823 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 3386.5 | N/A | 16.3307 [ 20.0000 ] | 81.7% { 85.2% } | 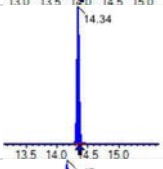 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1056299 | ( 6.47 , N/A ) ( N/A , -0.03 , N/A ) | 2316.3 | N/A | 7.7459 [ 8.0000 ] | 96.8% { 103.3% } | 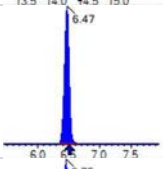 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 767212 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1705.6 | N/A | 2.7627 [ 2.0000 ] | 138.1% { 124.4% } | 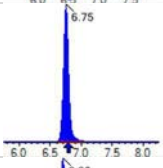 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 674880 | ( 8.80 , N/A ) ( N/A , -0.01 , N/A ) | 814.5 | N/A | 2.6695 [ 2.0000 ] | 133.5% { 122.0% } | 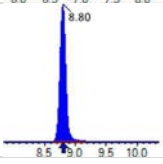 | | |

# ANALYSIS DATA SHEETL

MW-3-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-05- | File ID:- | S2024-03-19B (19)- |
| Sampled:- | 03/14/24 10:50- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 22:38- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.604 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 2.8- | 0.19- | 1.5- | |
| PFPeA- | 1.3- | 0.060- | 0.73- | |
| PFHxA- | 0.90- | 0.050- | 0.37- | |
| PFHpA- | 0.41- | 0.038- | 0.37- | |
| PFOA- | 0.66- | 0.14- | 0.37- | |
| PFNA- | 0.12- | 0.075- | 0.37- | J- |
| PFDA- | ND- | 0.093- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 3.3- | 0.034- | 0.37- | |
| PFPeS- | 0.27- | 0.057- | 0.37- | J- |
| PFHxS- | 1.3- | 0.029- | 0.37- | |
| PFHpS- | 0.053- | 0.047- | 0.37- | MI6, J- |
| PFOS- | 2.8- | 0.058- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | MI5, U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-3-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-05- | File ID:- | S2024-03-19B (19)- |
| Sampled:- | 03/14/24 10:50- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 22:38- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.604 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-05 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 130931<br>( 163.0 / 69.0 ) 3853 | ( 2.79 , 0.75 )<br>( N/A , 0.00 , 0.2) | 932.0<br>202.8 | 0.0294<br>108.4<br>111.7 | 0.4821 | N/A | 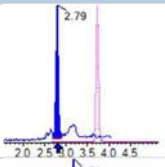 | 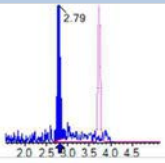 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 221950 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 163.5 | N/A<br>0.0<br>0.0 | 0.7731 | N/A | 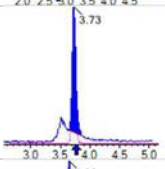 | | |
| PFPeA | ( 263.0 / 219.0 ) 82105<br>( 263.0 / 69.0 ) 930 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , -0.8) | 379.8<br>11.9 | 0.0113<br>94.8<br>102.0 | 0.3430 | N/A | 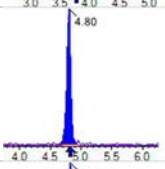 | 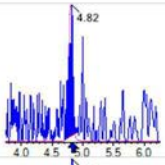 | |
| PFHxA | ( 313.0 / 269.0 ) 67171<br>( 313.0 / 119.0 ) 7366 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , -0.2) | 356.0<br>118.7 | 0.1097<br>94.4<br>93.7 | 0.2445 | N/A | 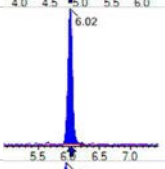 | 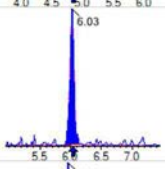 | |
| PFHpA | ( 363.0 / 319.0 ) 34823<br>( 363.0 / 169.0 ) 10155 | ( 7.16 , 1.00 )<br>( 0.00 , N/A , -0.2) | 135.6<br>168.2 | 0.2916<br>96.2<br>98.8 | 0.1132 | N/A | 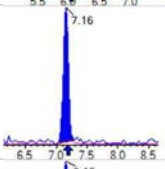 | 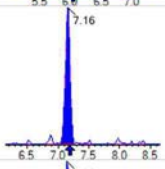 | |
| PFOA | ( 413.0 / 369.0 ) 82600<br>( 413.0 / 169.0 ) 31192 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , 0.4) | 93.1<br>131.1 | 0.3776<br>103.3<br>110.0 | 0.1803 | N/A | 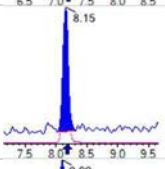 | 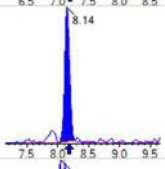 | |
| PFNA | ( 463.0 / 419.0 ) 8468<br>( 463.0 / 169.0 ) 2052 | ( 9.09 , 1.00 )<br>( 0.00 , N/A , 1.0) | 48.9<br>19.0 | 0.2424<br>94.9<br>100.8 | 0.0318 | N/A | 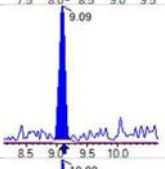 | 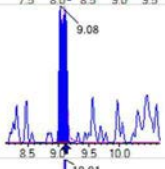 | |
| PFDA | ( 513.0 / 469.0 ) 6455<br>( 513.0 / 169.0 ) 786 | ( 10.00 , 1.00 )<br>( 0.01 , N/A , -0.3) | 34.6<br>30.8 | 0.1218<br>103.9<br>101.7 | 0.0199 | N/A | 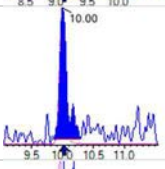 | 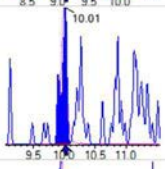 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 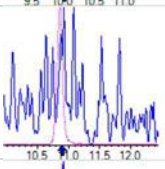 | 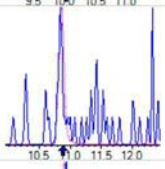 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 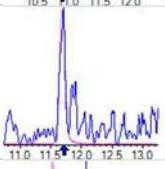 | 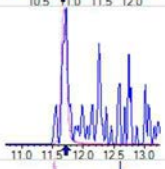 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 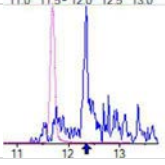 | 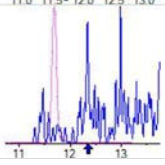 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (19)
Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 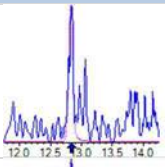 | 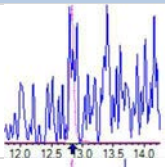 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 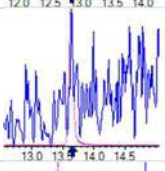 | 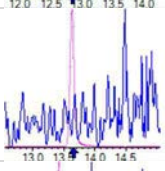 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 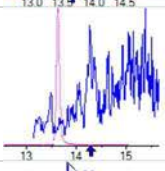 | 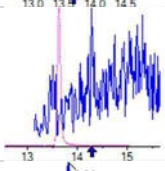 | |
| PFBS | ( 299.0 / 80.0 )<br>400293<br>( 299.0 / 99.0 )<br>287024 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , -0.1) | 980.7<br>995.7 | 0.7170<br>101.4<br>97.5 | 0.9110 | N/A | 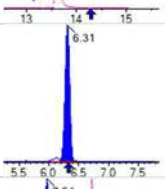 | 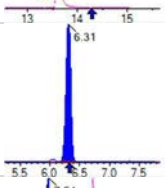 | |
| PFPeS | ( 349.0 / 80.0 )<br>75001<br>( 349.0 / 99.0 )<br>24202 | ( 7.54 , 0.88 )<br>( N/A , -0.02 , 0.0) | 149.9<br>118.7 | 0.3227<br>89.7<br>91.6 | 0.0724 | N/A | 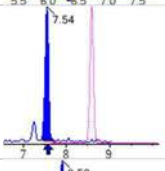 | 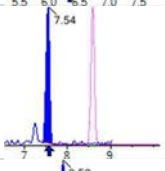 | |
| PFHxS | ( 399.0 / 80.0 )<br>440088<br>( 399.0 / 99.0 )<br>147380 | ( 8.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 727.0<br>604.0 | 0.3349<br>105.2<br>100.2 | 0.3657 | N/A | 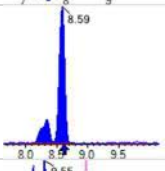 | 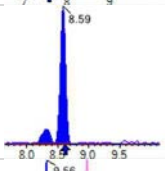 | |
| PFHpS | ( 449.0 / 80.0 )<br>13810<br>( 449.0 / 99.0 )<br>3222 | ( 9.55 , 0.91 )<br>( N/A , -0.03 , -0.5) | 27.2<br>18.4 | 0.2333<br>88.2<br>88.1 | 0.0145 | N/A | 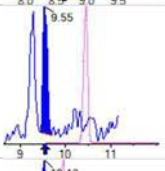 | 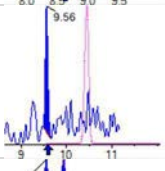 | MI6 DG 2024-03-20 |
| PFOS | ( 499.0 / 80.0 )<br>704108<br>( 499.0 / 99.0 )<br>85184 | ( 10.13 , 0.97 )<br>( -0.32 , N/A , -9.1) | 461.9<br>197.2 | 0.1210<br>51.8<br>50.4 | 0.7678 | N/A | 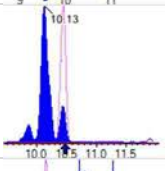 | 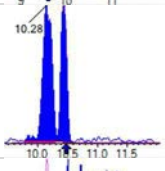 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 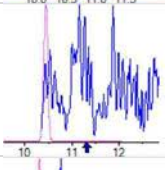 | 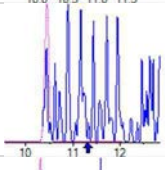 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 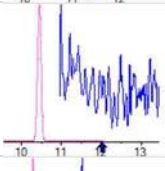 | 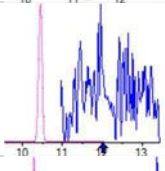 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 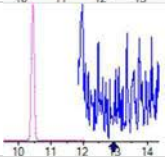 | 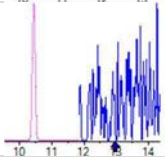 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (19)
Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 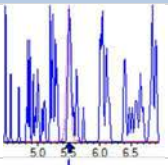 | 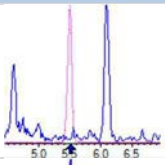 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 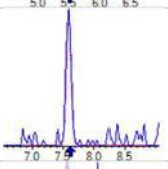 | 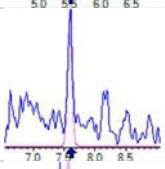 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 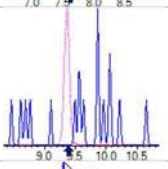 | 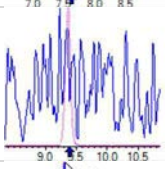 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16173<br>( 627.0 / 81.0 )<br>21589 | ( 11.01 , 1.00 )<br>( 0.01 , N/A , 0.1) | 196.0<br>53.3 | 1.3349<br>92.7<br>91.5 | 0.0557 | N/A | 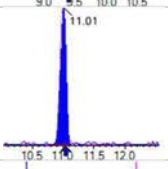 | 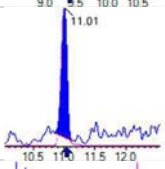 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 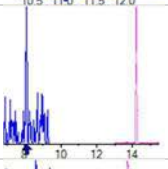 | 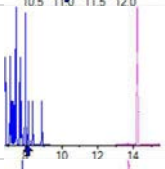 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 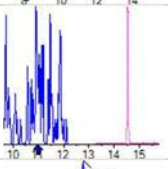 | 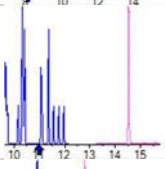 | |
| PFOSA | ( 498.0 / 78.0 )<br>8494<br>( 498.0 / 478.0 )<br>N/A | ( 12.82 , 1.00 )<br>( -0.01 , N/A , #Value!) | 104.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0135 | N/A | 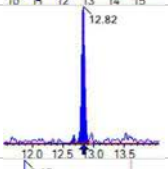 | 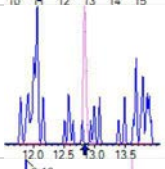 | MI5 DG<br>2024-03-20 |
| TFSI | ( 279.7 / 147.0 )<br>37117<br>( 279.7 / 211.0 )<br>1602 | ( 8.15 , 0.63 )<br>( N/A , -0.03 , -1.0) | 27.3<br>9.2 | 0.0432<br>51.4<br>50.4 | 0.0223 | N/A | 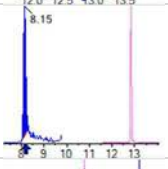 | 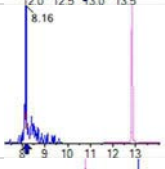 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 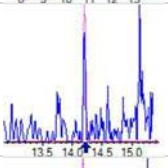 | 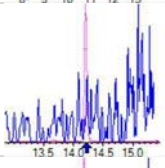 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 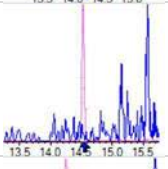 | 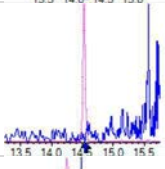 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 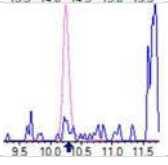 | 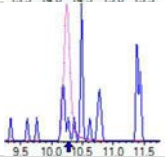 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (19)
Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 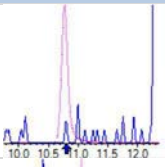 | 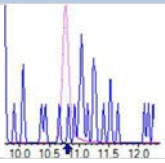 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 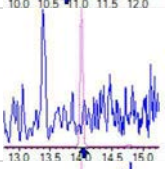 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 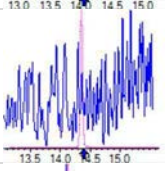 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 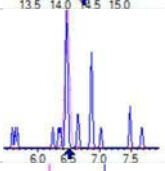 | 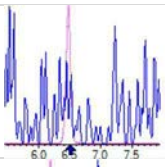 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 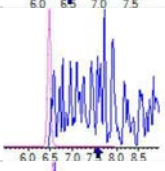 | 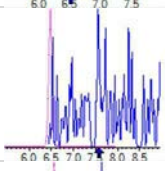 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 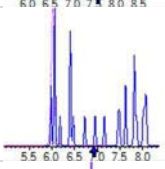 | 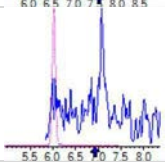 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 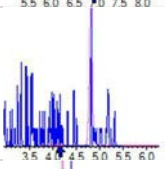 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 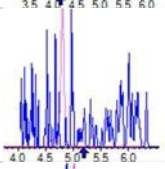 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 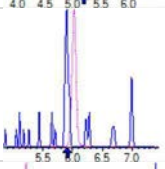 | 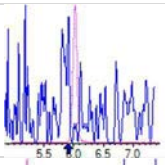 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 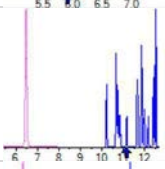 | 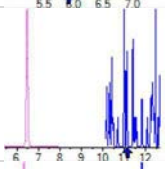 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 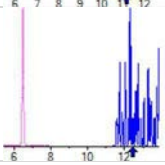 | 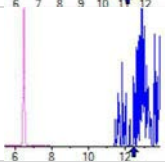 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (19)
Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 18710<br>( 461.0 / 381.2 ) 8020 | ( 9.48 , 0.91 )<br>( N/A , -0.02 , 1.0) | 103.0<br>51.2 | 0.4286<br>107.6<br>108.1 | 0.0362 | N/A | 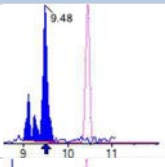 | 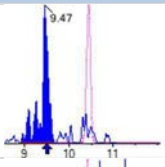 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 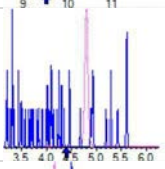 | 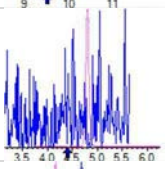 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 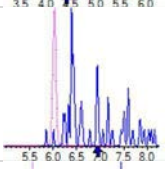 | 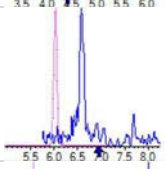 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 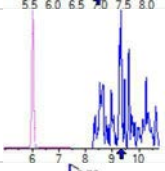 | 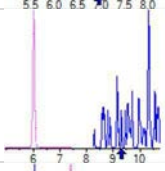 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4606<br>( 357.2 / 243.0 ) 523 | ( 6.76 , 1.00 )<br>( 0.00 , N/A , 2.0) | 34.1<br>7.0 | 0.1135<br>103.0<br>109.1 | 0.0120 | N/A | 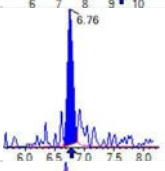 | 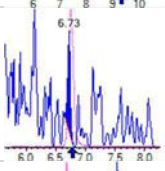 | MI2 DG 2024-03-20 |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 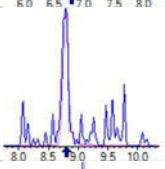 | 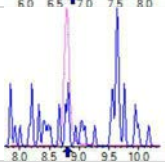 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 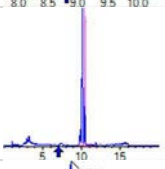 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 263245 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1215.4 | N/A | 1.1041<br>[ 1.0000 ] | 110.4%<br>{ 111.3% } | 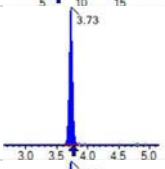 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 121719 | ( 6.02 , N/A )<br>( N/A , -0.02 , N/A ) | 10667.9 | N/A | 0.9595<br>[ 1.0000 ] | 96.0%<br>{ 96.1% } | 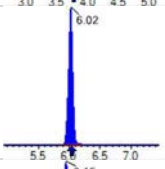 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 363629 | ( 8.15 , N/A )<br>( N/A , -0.02 , N/A ) | 3460.1 | N/A | 0.9198<br>[ 1.0000 ] | 92.0%<br>{ 95.9% } | 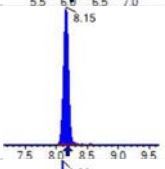 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 253381 | ( 9.09 , N/A )<br>( N/A , -0.03 , N/A ) | 720.7 | N/A | 0.8909<br>[ 1.0000 ] | 89.1%<br>{ 90.1% } | 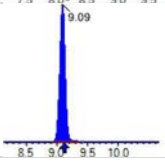 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (19)
Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266616 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 8961.6 | N/A | 0.9130 [ 1.0000 ] | 91.3% { 92.2% } | 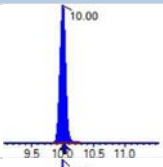 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 918934 | ( 8.59 , N/A ) ( N/A , -0.02 , N/A ) | 4090.1 | N/A | 0.9683 [ 1.0000 ] | 96.8% { 98.5% } | 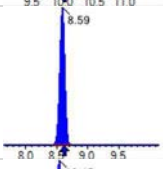 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 712289 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1079.9 | N/A | 0.9352 [ 1.0000 ] | 93.5% { 100.0% } | 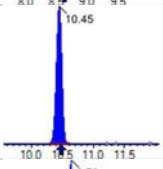 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2303908 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 33083.3 | N/A | 7.6611 [ 8.0000 ] | 95.8% { 102.9% } | 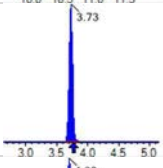 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 947723 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 5074.7 | N/A | 4.1730 [ 4.0000 ] | 104.3% { 97.1% } | 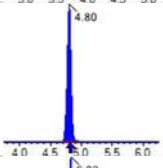 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 571847 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 7625.5 | N/A | 2.0591 [ 2.0000 ] | 103.0% { 96.9% } | 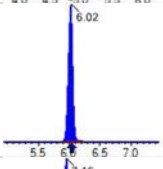 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626947 | ( 7.16 , N/A ) ( N/A , -0.02 , N/A ) | 6129.0 | N/A | 2.0294 [ 2.0000 ] | 101.5% { 95.5% } | 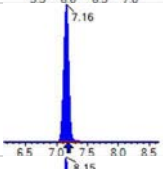 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 829656 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 2659.2 | N/A | 2.1294 [ 2.0000 ] | 106.5% { 96.2% } | 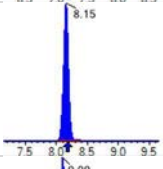 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 264898 | ( 9.09 , N/A ) ( N/A , -0.02 , N/A ) | 2312.2 | N/A | 1.0662 [ 1.0000 ] | 106.6% { 98.1% } | 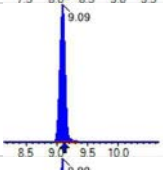 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317095 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1022.2 | N/A | 1.0613 [ 1.0000 ] | 106.1% { 98.6% } | 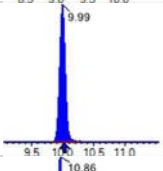 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 368919 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 974.4 | N/A | 1.0495 [ 1.0000 ] | 104.9% { 99.2% } | 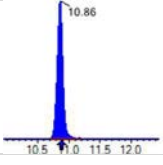 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (19)
Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 360835 | ( 11.69 , N/A ) ( N/A , -0.02 , N/A ) | 1232.8 | N/A | 1.0080 [ 1.0000 ] | 100.8% { 96.8% } | 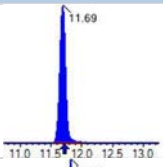  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 319420 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1411.5 | N/A | 1.0478 [ 1.0000 ] | 104.8% { 97.8% } | 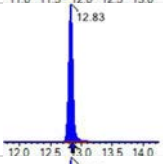  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 449067 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2262.9 | N/A | 1.7254 [ 2.0000 ] | 86.3% { 88.9% } | 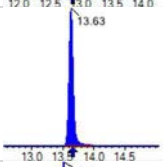  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1692661 | ( 6.31 , N/A ) ( N/A , -0.02 , N/A ) | 1104.7 | N/A | 2.0387 [ 2.0000 ] | 101.9% { 100.9% } | 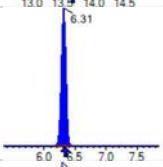  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1353830 | ( 8.59 , N/A ) ( N/A , -0.03 , N/A ) | 3313.3 | N/A | 2.0429 [ 2.0000 ] | 102.1% { 102.7% } | 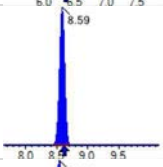  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1587982 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 1327.3 | N/A | 2.0677 [ 2.0000 ] | 103.4% { 102.5% } | 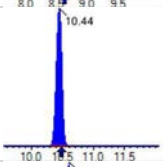  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 635355 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 81.0 | N/A | 4.4354 [ 4.0000 ] | 110.9% { 107.9% } | 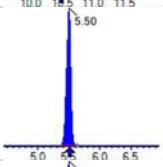  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1768396 | ( 7.59 , N/A ) ( N/A , -0.02 , N/A ) | 2327.4 | N/A | 4.1250 [ 4.0000 ] | 103.1% { 106.1% } | 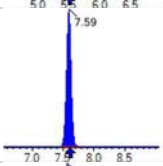  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1467054 | ( 9.37 , N/A ) ( N/A , -0.03 , N/A ) | 1267.8 | N/A | 4.3633 [ 4.0000 ] | 109.1% { 107.3% } | 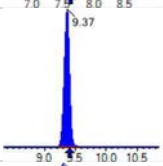  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3015141 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1539.7 | N/A | 8.5807 [ 8.0000 ] | 107.3% { 118.1% } | 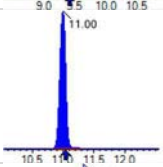  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1261725 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 3182.6 | N/A | 1.8539 [ 2.0000 ] | 92.7% { 91.8% } | 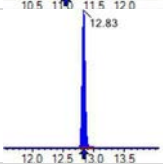  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-05 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 22:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 155682 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 1035.4 | N/A | 1.0785 [ 2.0000 ] | 53.9% { 54.1% } | 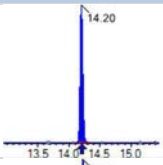 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 171928 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 1298.9 | N/A | 1.1106 [ 2.0000 ] | 55.5% { 56.1% } | 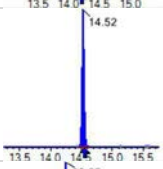 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 785186 | ( 10.25 , N/A ) ( N/A , -0.03 , N/A ) | 2567.7 | N/A | 3.9734 [ 4.0000 ] | 99.3% { 92.9% } | 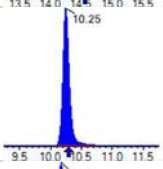 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 773103 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 2503.0 | N/A | 4.2925 [ 4.0000 ] | 107.3% { 100.4% } | 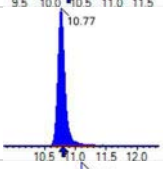 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1054837 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1859.2 | N/A | 16.2609 [ 20.0000 ] | 81.3% { 76.7% } | 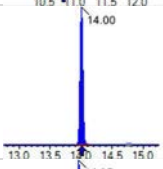 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1036244 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 3186.7 | N/A | 15.7386 [ 20.0000 ] | 78.7% { 80.3% } | 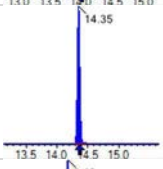 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 983451 | ( 6.48 , N/A ) ( N/A , -0.02 , N/A ) | 2226.9 | N/A | 7.7738 [ 8.0000 ] | 97.2% { 96.2% } | 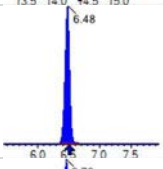 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 720221 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1100.1 | N/A | 2.4916 [ 2.0000 ] | 124.6% { 116.7% } | 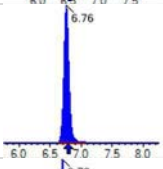 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 589596 | ( 8.79 , N/A ) ( N/A , -0.02 , N/A ) | 699.6 | N/A | 2.2405 [ 2.0000 ] | 112.0% { 106.6% } | 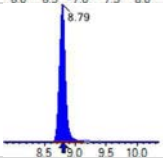 | | |

# ANALYSIS DATA SHEETL

MW-3-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-06- | File ID:- | S2024-03-19B (20)- |
| Sampled:- | 03/14/24 11:25- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 22:58- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 543.843 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 3.0- | 0.19- | 1.5- | |
| PFPeA- | 0.97- | 0.060- | 0.74- | |
| PFHxA- | 0.80- | 0.050- | 0.37- | |
| PFHpA- | 0.28- | 0.038- | 0.37- | J- |
| PFOA- | 0.56- | 0.14- | 0.37- | |
| PFNA- | 0.10- | 0.075- | 0.37- | J- |
| PFDA- | ND- | 0.093- | 0.37- | MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 3.3- | 0.034- | 0.37- | |
| PFPeS- | 0.24- | 0.058- | 0.37- | J- |
| PFHxS- | 1.4- | 0.029- | 0.37- | |
| PFHpS- | 0.072- | 0.047- | 0.37- | J- |
| PFOS- | 3.4- | 0.058- | 0.37- | IR1- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | MI5, U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-3-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-06- | File ID:- | S2024-03-19B (20)- |
| Sampled:- | 03/14/24 11:25- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 22:58- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 543.843 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.083- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (20)
Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>129968<br>( 163.0 / 69.0 )<br>3432 | ( 2.80 , 0.75 )<br>( N/A , 0.01 , -0.1) | 929.8<br>171.0 | 0.0264<br>97.2<br>100.2 | 0.4857 | N/A | 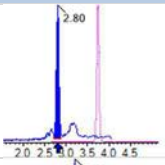 | 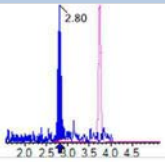 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 )<br>230865 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 181.8 | N/A<br>0.0<br>0.0 | 0.8161 | N/A | 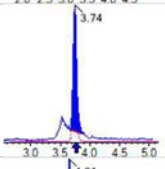 | | |
| PFPeA | ( 263.0 / 219.0 )<br>64931<br>( 263.0 / 69.0 )<br>890 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , 0.5) | 322.0<br>13.5 | 0.0137<br>114.8<br>123.5 | 0.2626 | N/A | 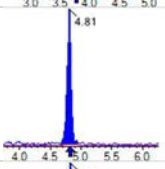 | 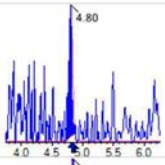 | |
| PFHxA | ( 313.0 / 269.0 )<br>60170<br>( 313.0 / 119.0 )<br>6366 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , 0.1) | 348.0<br>73.3 | 0.1058<br>91.1<br>90.4 | 0.2173 | N/A | 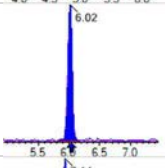 | 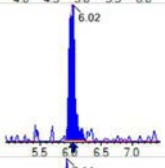 | |
| PFHpA | ( 363.0 / 319.0 )<br>23415<br>( 363.0 / 169.0 )<br>8239 | ( 7.14 , 1.00 )<br>( 0.00 , N/A , 0.2) | 107.9<br>126.1 | 0.3519<br>116.1<br>119.2 | 0.0756 | N/A | 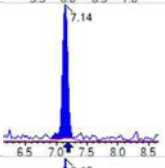 | 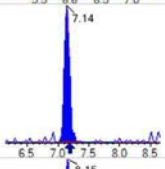 | |
| PFOA | ( 413.0 / 369.0 )<br>72745<br>( 413.0 / 169.0 )<br>27530 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , -0.3) | 97.8<br>138.0 | 0.3784<br>103.5<br>110.2 | 0.1520 | N/A | 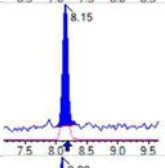 | 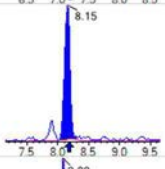 | |
| PFNA | ( 463.0 / 419.0 )<br>7267<br>( 463.0 / 169.0 )<br>1372 | ( 9.09 , 1.00 )<br>( 0.00 , N/A , 0.1) | 32.9<br>20.3 | 0.1888<br>74.0<br>78.5 | 0.0275 | N/A | 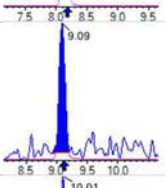 | 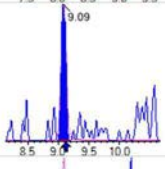 | |
| PFDA | ( 513.0 / 469.0 )<br>4452<br>( 513.0 / 169.0 )<br>587 | ( 10.01 , 1.00 )<br>( 0.02 , N/A , 2.1) | 45.9<br>25.1 | 0.1319<br>112.6<br>110.2 | 0.0141 | N/A | 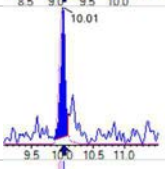 | 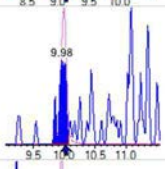 | MI2 DG 2024-03-20 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 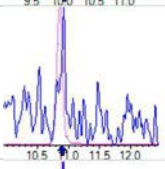 | 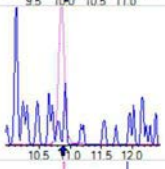 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 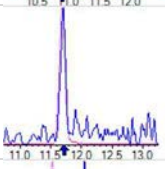 | 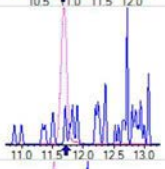 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 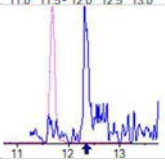 | 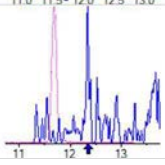 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (20)
Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 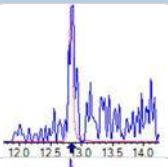 | 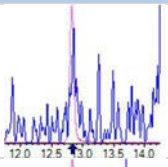 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 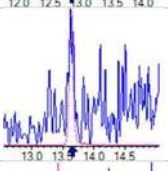 | 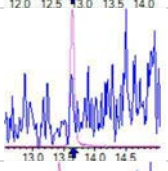 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 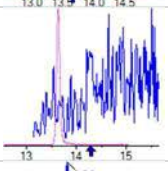 | 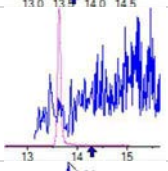 | |
| PFBS | ( 299.0 / 80.0 )<br>401242<br>( 299.0 / 99.0 )<br>286558 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1025.9<br>1060.5 | 0.7142<br>101.0<br>97.1 | 0.9059 | N/A | 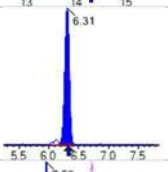 | 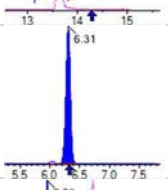 | |
| PFPeS | ( 349.0 / 80.0 )<br>66920<br>( 349.0 / 99.0 )<br>24745 | ( 7.53 , 0.88 )<br>( N/A , -0.03 , 0.3) | 171.1<br>106.7 | 0.3698<br>102.8<br>105.0 | 0.0643 | N/A | 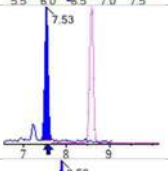 | 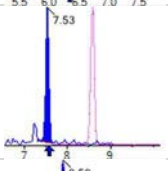 | |
| PFHxS | ( 399.0 / 80.0 )<br>458086<br>( 399.0 / 99.0 )<br>141653 | ( 8.58 , 1.00 )<br>( -0.01 , N/A , -0.1) | 636.9<br>489.9 | 0.3092<br>97.1<br>92.5 | 0.3790 | N/A | 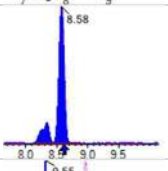 | 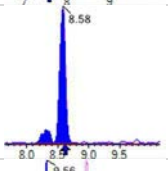 | |
| PFHpS | ( 449.0 / 80.0 )<br>17907<br>( 449.0 / 99.0 )<br>3839 | ( 9.55 , 0.91 )<br>( N/A , -0.03 , -0.6) | 36.9<br>18.4 | 0.2144<br>81.0<br>81.0 | 0.0196 | N/A | 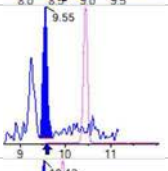 | 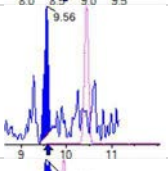 | |
| PFOS | ( 499.0 / 80.0 )<br>802100<br>( 499.0 / 99.0 )<br>86315 | ( 10.13 , 0.97 )<br>( -0.31 , N/A , -4.5) | 595.0<br>248.1 | 0.1076<br>46.0<br>44.8 | 0.9113 | N/A | 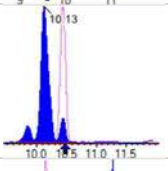 | 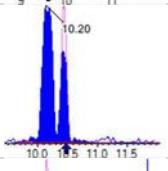 | IR1, |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 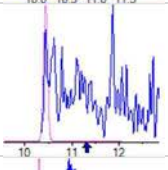 | 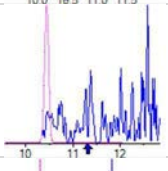 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 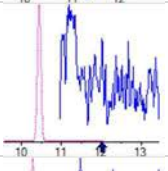 | 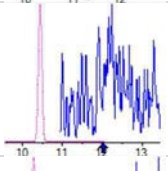 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 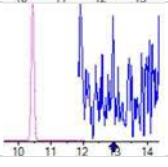 | 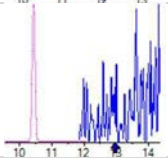 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (20)
Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 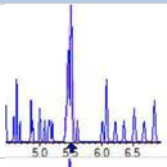 | 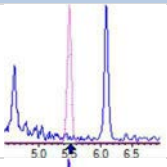 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 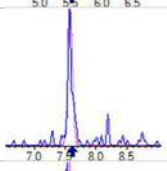 | 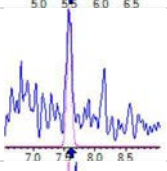 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 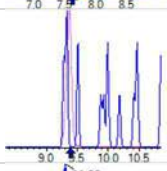 | 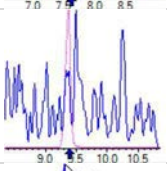 | |
| 10:2FTS | ( 627.0 / 607.0 ) 15322<br>( 627.0 / 81.0 ) 23409 | ( 11.00 , 1.00 ) ( 0.01 , N/A , 0.0) | 197.1<br>62.9 | 1.5278<br>106.1<br>104.7 | 0.0562 | N/A | 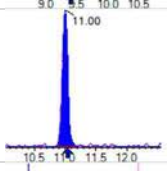 | 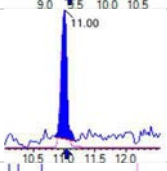 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 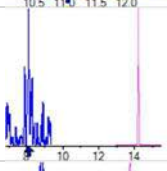 | 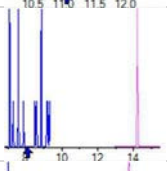 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 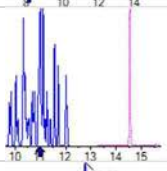 | 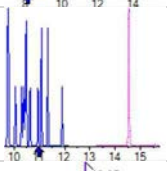 | |
| PFOSA | ( 498.0 / 78.0 ) 11004<br>( 498.0 / 478.0 ) 152 | ( 12.83 , 1.00 ) ( -0.01 , N/A , -1.2) | 92.4<br>12.1 | 0.0139<br>98.7<br>93.1 | 0.0173 | N/A | 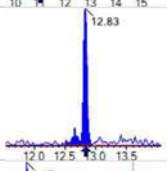 | 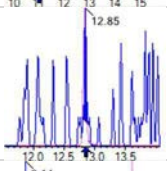 | MI5 DG 2024-03-20 |
| TFSI | ( 279.7 / 147.0 ) 40594<br>( 279.7 / 211.0 ) 1660 | ( 8.15 , 0.63 ) ( N/A , -0.03 , 0.3) | 22.0<br>10.1 | 0.0409<br>48.7<br>47.8 | 0.0242 | N/A | 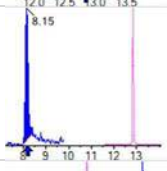 | 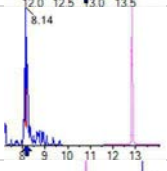 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 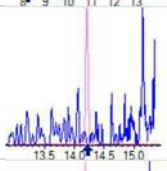 | 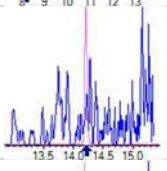 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 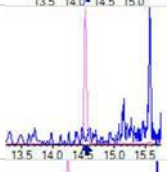 | 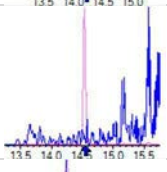 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 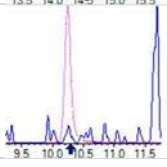 | 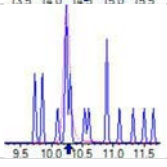 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (20)
Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 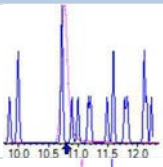 | 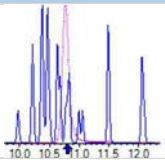 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 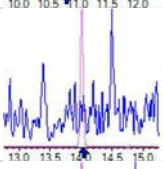 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 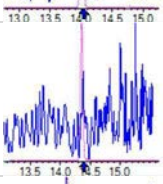 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 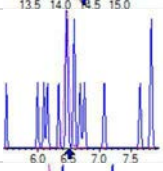 | 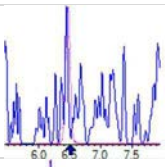 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 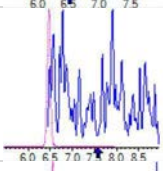 | 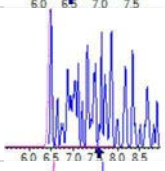 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 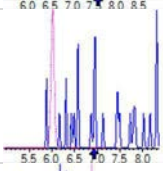 | 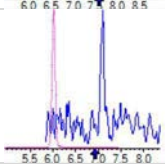 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 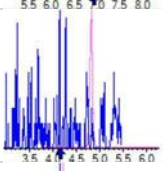 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 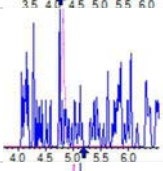 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 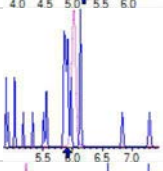 | 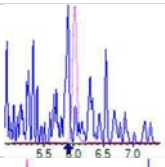 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 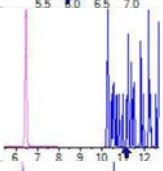 | 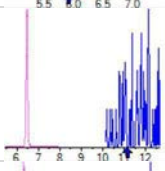 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 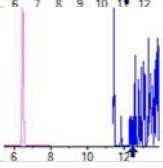 | 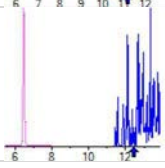 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (20)
Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 19550<br>( 461.0 / 381.2 ) 8274 | ( 9.46 , 0.91 )<br>( N/A , -0.04 , -1.2) | 57.7<br>77.0 | 0.4232<br>106.2<br>106.7 | 0.0394 | N/A | 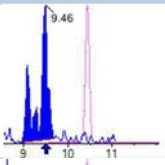 | 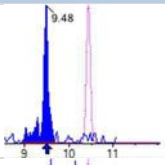 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 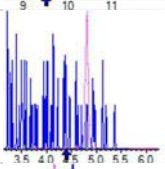 | 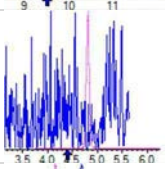 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 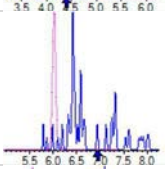 | 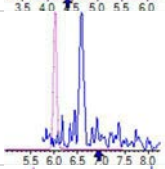 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 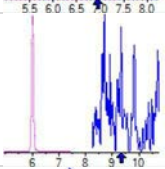 | 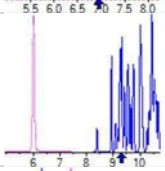 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 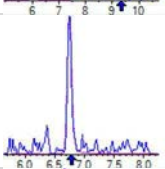 | 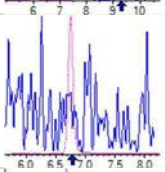 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 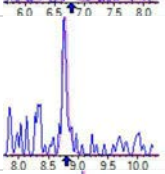 | 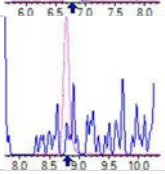 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 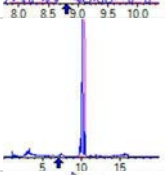 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 273358 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1190.9 | N/A | 1.1465<br>[ 1.0000 ] | 114.6%<br>{ 115.6% } | 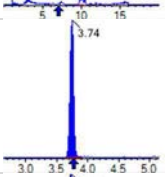 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 128139 | ( 6.02 , N/A )<br>( N/A , -0.02 , N/A ) | 77469.2 | N/A | 1.0101<br>[ 1.0000 ] | 101.0%<br>{ 101.2% } | 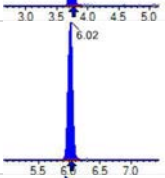 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 375870 | ( 8.14 , N/A )<br>( N/A , -0.03 , N/A ) | 3594.8 | N/A | 0.9508<br>[ 1.0000 ] | 95.1%<br>{ 99.1% } | 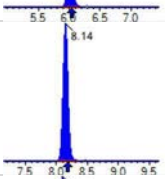 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 258840 | ( 9.09 , N/A )<br>( N/A , -0.02 , N/A ) | 994.3 | N/A | 0.9101<br>[ 1.0000 ] | 91.0%<br>{ 92.0% } | 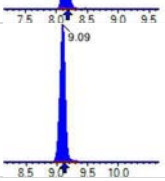 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (20)
Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 251794 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 9549.2 | N/A | 0.8622 [ 1.0000 ] | 86.2% { 87.0% } | 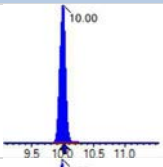 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 868087 | ( 8.59 , N/A ) ( N/A , -0.03 , N/A ) | 3714.9 | N/A | 0.9147 [ 1.0000 ] | 91.5% { 93.0% } | 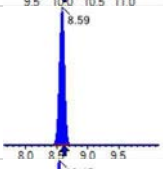 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 697023 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1185.0 | N/A | 0.9152 [ 1.0000 ] | 91.5% { 97.9% } | 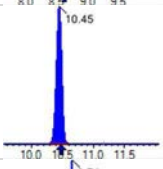 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2270187 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 30520.8 | N/A | 7.2697 [ 8.0000 ] | 90.9% { 101.4% } | 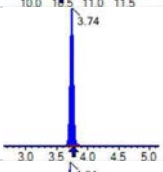 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979175 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 5790.7 | N/A | 4.0955 [ 4.0000 ] | 102.4% { 100.3% } | 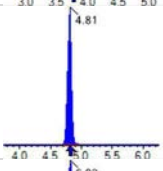 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 576355 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 7941.1 | N/A | 1.9713 [ 2.0000 ] | 98.6% { 97.7% } | 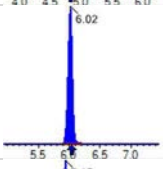 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 630906 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 3429.3 | N/A | 1.9399 [ 2.0000 ] | 97.0% { 96.1% } | 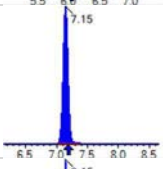 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 847063 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 3327.6 | N/A | 2.1033 [ 2.0000 ] | 105.2% { 98.2% } | 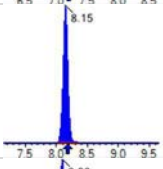 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262587 | ( 9.09 , N/A ) ( N/A , -0.03 , N/A ) | 2350.3 | N/A | 1.0347 [ 1.0000 ] | 103.5% { 97.3% } | 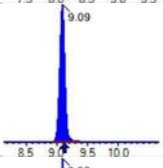 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 308262 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1087.7 | N/A | 1.0924 [ 1.0000 ] | 109.2% { 95.8% } | 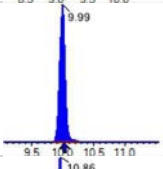 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 365594 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 808.9 | N/A | 1.1013 [ 1.0000 ] | 110.1% { 98.3% } | 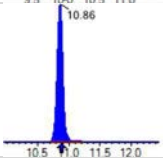 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-06 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 374373 | ( 11.69 , N/A ) ( N/A , -0.03 , N/A ) | 1391.8 | N/A | 1.1074 [ 1.0000 ] | 110.7% { 100.4% } | 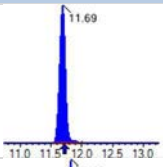 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 315457 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1388.0 | N/A | 1.0957 [ 1.0000 ] | 109.6% { 96.6% } | 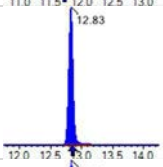 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 347218 | ( 13.64 , N/A ) ( N/A , -0.02 , N/A ) | 1705.0 | N/A | 1.4126 [ 2.0000 ] | 70.6% { 68.7% } | 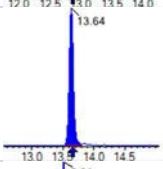 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1706165 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 916.1 | N/A | 2.1754 [ 2.0000 ] | 108.8% { 101.7% } | 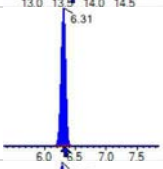 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1359731 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 3761.5 | N/A | 2.1720 [ 2.0000 ] | 108.6% { 103.1% } | 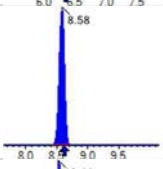 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1524049 | ( 10.44 , N/A ) ( N/A , -0.04 , N/A ) | 1327.0 | N/A | 2.0279 [ 2.0000 ] | 101.4% { 98.4% } | 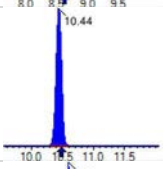 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 628896 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 88.2 | N/A | 4.6474 [ 4.0000 ] | 116.2% { 106.8% } | 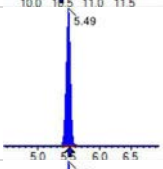 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1825639 | ( 7.59 , N/A ) ( N/A , -0.03 , N/A ) | 2366.4 | N/A | 4.5080 [ 4.0000 ] | 112.7% { 109.5% } | 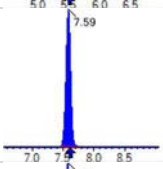 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1373000 | ( 9.37 , N/A ) ( N/A , -0.02 , N/A ) | 1311.8 | N/A | 4.3228 [ 4.0000 ] | 108.1% { 100.4% } | 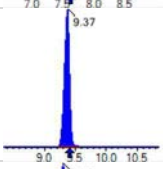 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2828918 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1292.6 | N/A | 8.5223 [ 8.0000 ] | 106.5% { 110.8% } | 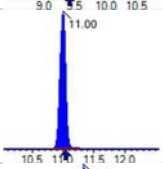 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1274267 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 2532.8 | N/A | 1.9133 [ 2.0000 ] | 95.7% { 92.7% } | 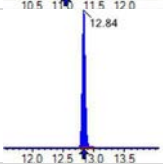 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-06 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 22:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 163922 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1489.1 | N/A | 1.1605 [ 2.0000 ] | 58.0% { 56.9% } | 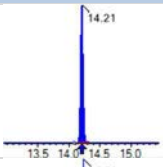  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 162843 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1497.4 | N/A | 1.0750 [ 2.0000 ] | 53.7% { 53.1% } | 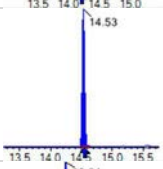  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 781695 | ( 10.24 , N/A ) ( N/A , -0.03 , N/A ) | 2443.7 | N/A | 4.0424 [ 4.0000 ] | 101.1% { 92.4% } | 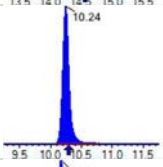  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 743758 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 2137.7 | N/A | 4.2200 [ 4.0000 ] | 105.5% { 96.6% } | 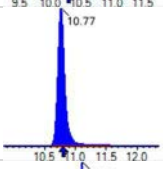  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1002553 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 2011.1 | N/A | 15.7934 [ 20.0000 ] | 79.0% { 72.9% } | 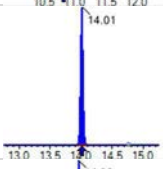  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 979849 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3768.8 | N/A | 15.2080 [ 20.0000 ] | 76.0% { 76.0% } | 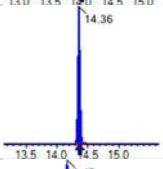  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 948911 | ( 6.47 , N/A ) ( N/A , -0.03 , N/A ) | 2186.6 | N/A | 7.1249 [ 8.0000 ] | 89.1% { 92.8% } | 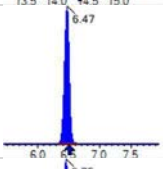  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 754405 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1243.1 | N/A | 2.7635 [ 2.0000 ] | 138.2% { 122.3% } | 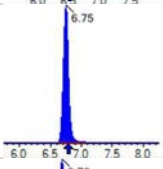  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 646920 | ( 8.78 , N/A ) ( N/A , -0.03 , N/A ) | 716.0 | N/A | 2.6031 [ 2.0000 ] | 130.2% { 116.9% } | 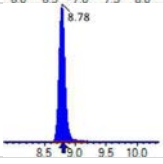  | | |

# ANALYSIS DATA SHEETL

MW-3-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-07- | File ID:- | S2024-03-19B (21)- |
| Sampled:- | 03/14/24 13:35- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 23:19- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 550.79 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.53- | 0.19- | 1.5- | J- |
| PFPeA- | ND- | 0.059- | 0.73- | U- |
| PFHxA- | ND- | 0.050- | 0.36- | U- |
| PFHpA- | 0.043- | 0.037- | 0.36- | J- |
| PFOA- | 0.27- | 0.14- | 0.36- | J- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | ND- | 0.092- | 0.36- | MI1, U- |
| PFUnA- | ND- | 0.15- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | IR2, U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 0.34- | 0.033- | 0.36- | J- |
| PFPeS- | ND- | 0.057- | 0.36- | IR2, U- |
| PFHxS- | 0.25- | 0.029- | 0.36- | J- |
| PFHpS- | ND- | 0.047- | 0.36- | U- |
| PFOS- | 0.79- | 0.058- | 0.36- | |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.36- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.36- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.37- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.096- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-3-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0094-07- | File ID:- | S2024-03-19B (21)- |
| Sampled:- | 03/14/24 13:35- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/19/24 23:19- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 550.79 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.95- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.099- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.082- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (21)
Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>90676<br>( 163.0 / 69.0 )<br>2022 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , 0.4) | 695.5<br>113.2 | 0.0223<br>82.1<br>84.6 | 0.3479 | N/A | 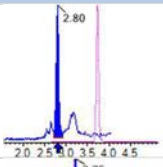 | 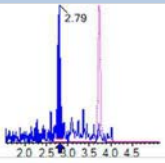 | |
| PFBA | ( 213.0 / 169.0 )<br>40160 | ( 3.75 , 1.01 )<br>( 0.02 , N/A , 0.0) | 28.0 | N/A<br>0.0<br>0.0 | 0.1458 | N/A | 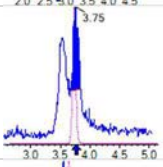 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 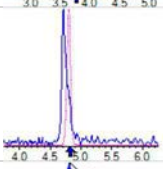 | 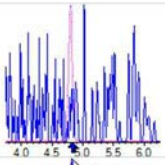 | |
| PFHxA | ( 313.0 / 269.0 )<br>3775<br>( 313.0 / 119.0 )<br>475 | ( 6.01 , 1.00 )<br>( -0.01 , N/A , -0.8) | 23.4<br>12.3 | 0.1259<br>108.4<br>107.5 | 0.0134 | N/A | 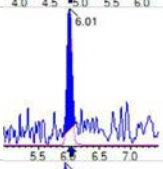 | 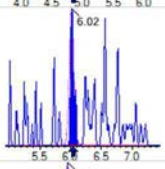 | |
| PFHpA | ( 363.0 / 319.0 )<br>3828<br>( 363.0 / 169.0 )<br>1397 | ( 7.15 , 1.00 )<br>( 0.00 , N/A , -0.4) | 18.6<br>27.4 | 0.3649<br>120.4<br>123.6 | 0.0119 | N/A | 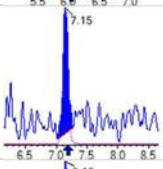 | 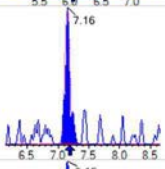 | |
| PFOA | ( 413.0 / 369.0 )<br>41839<br>( 413.0 / 169.0 )<br>21432 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , -0.1) | 59.6<br>99.6 | 0.5123<br>140.1<br>149.2 | 0.0732 | N/A | 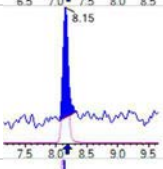 | 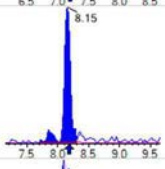 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 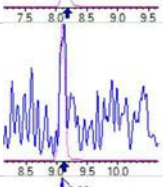 | 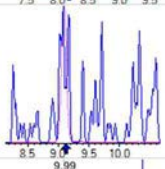 | |
| PFDA | ( 513.0 / 469.0 )<br>8079<br>( 513.0 / 169.0 )<br>752 | ( 9.99 , 1.00 )<br>( -0.01 , N/A , 0.1) | 52.8<br>30.7 | 0.0930<br>79.4<br>77.7 | 0.0242 | N/A | 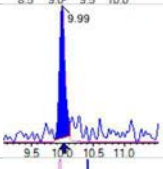 | 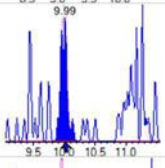 | MI1 DG<br>2024-03-20 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 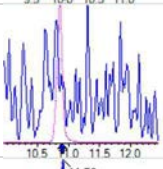 | 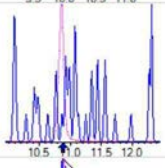 | |
| PFDoA | ( 613.0 / 569.0 )<br>3897<br>( 613.0 / 169.0 )<br>882 | ( 11.70 , 1.00 )<br>( 0.01 , N/A , 1.2) | 30.1<br>12.0 | 0.2263<br>143.2<br>153.1 | 0.0101 | N/A | 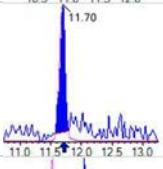 | 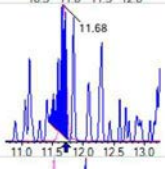 | IR2, |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 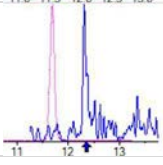 | 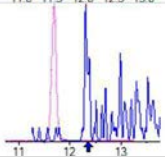 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (21)
Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 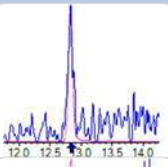 | 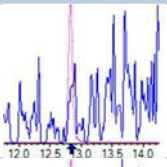 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 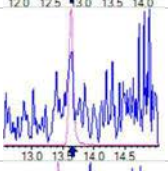 | 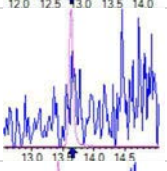 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 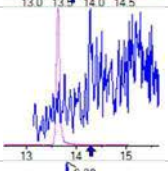 | 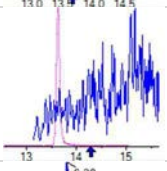 | |
| PFBS | ( 299.0 / 80.0 )<br>43541<br>( 299.0 / 99.0 )<br>30384 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.1) | 187.8<br>164.4 | 0.6978<br>98.7<br>94.9 | 0.0944 | N/A | 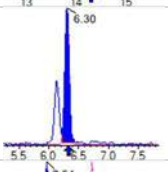 | 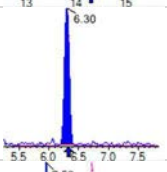 | |
| PFPeS | ( 349.0 / 80.0 )<br>12231<br>( 349.0 / 99.0 )<br>6483 | ( 7.54 , 0.88 )<br>( N/A , -0.02 , 0.7) | 43.0<br>51.5 | 0.5300<br>147.4<br>150.5 | 0.0117 | N/A | 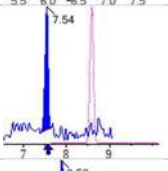 | 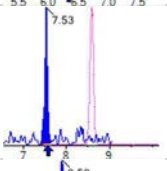 | IR2, |
| PFHxS | ( 399.0 / 80.0 )<br>83670<br>( 399.0 / 99.0 )<br>27888 | ( 8.58 , 1.00 )<br>( -0.01 , N/A , -0.1) | 235.4<br>150.6 | 0.3333<br>104.7<br>99.7 | 0.0688 | N/A | 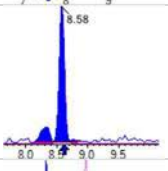 | 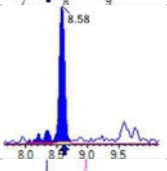 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 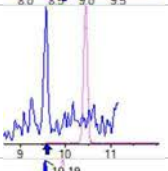 | 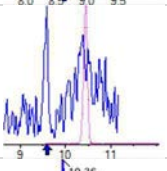 | |
| PFOS | ( 499.0 / 80.0 )<br>198275<br>( 499.0 / 99.0 )<br>27925 | ( 10.19 , 0.98 )<br>( -0.25 , N/A , -10.1) | 178.3<br>124.4 | 0.1408<br>60.3<br>58.7 | 0.2173 | N/A | 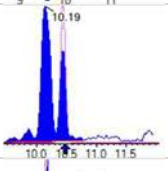 | 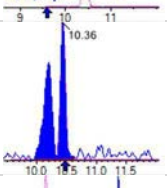 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 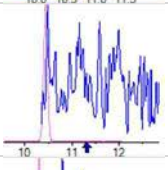 | 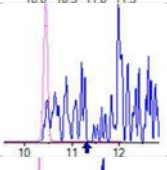 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 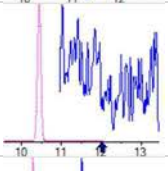 | 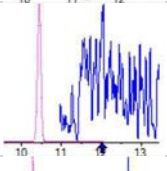 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 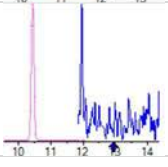 | 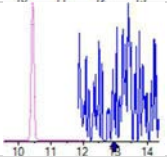 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (21)
Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 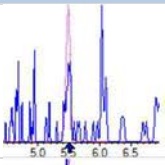 | 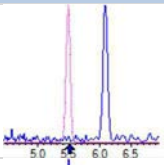 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 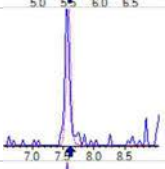 | 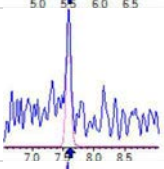 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 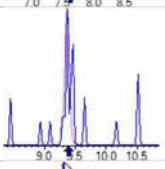 | 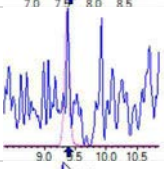 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>18072<br>( 627.0 / 81.0 )<br>30263 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , 0.4) | 196.2<br>64.4 | 1.6746<br>116.3<br>114.8 | 0.0608 | N/A | 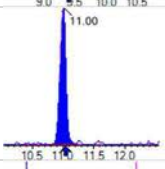 | 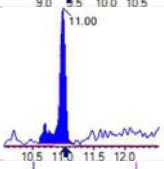 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 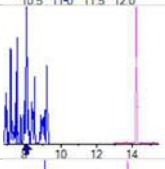 | 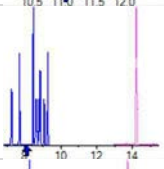 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 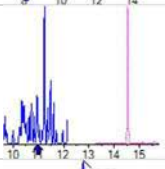 | 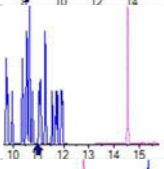 | |
| PFOSA | ( 498.0 / 78.0 )<br>7746<br>( 498.0 / 478.0 )<br>110 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , 0.3) | 94.9<br>6.1 | 0.0142<br>101.4<br>95.5 | 0.0152 | N/A | 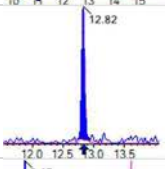 | 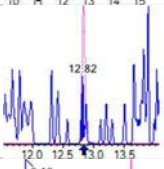 | |
| TFSI | ( 279.7 / 147.0 )<br>27764<br>( 279.7 / 211.0 )<br>2656 | ( 8.15 , 0.64 )<br>( N/A , -0.03 , -1.5) | 25.2<br>9.9 | 0.0957<br>113.9<br>111.8 | 0.0207 | N/A | 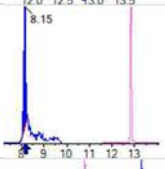 | 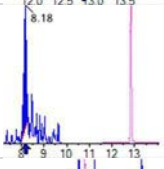 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 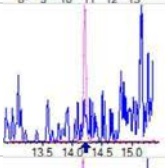 | 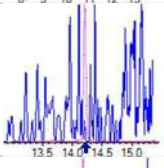 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 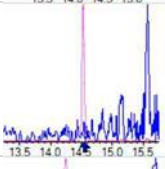 | 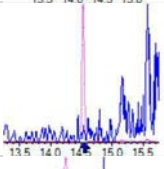 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 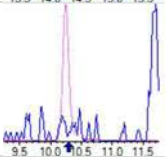 | 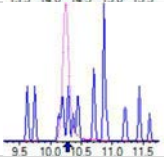 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (21)
Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 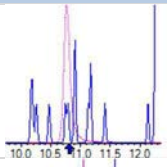 | 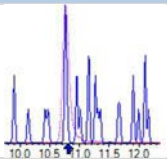 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 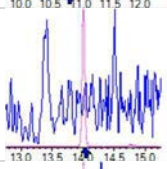 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 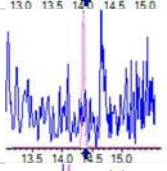 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 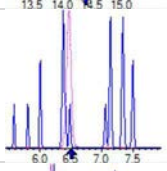 | 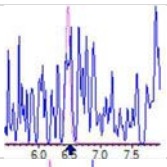 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 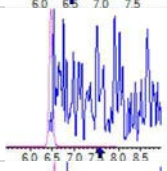 | 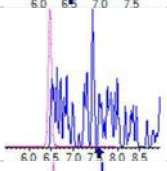 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 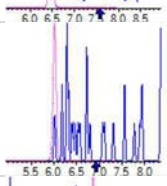 | 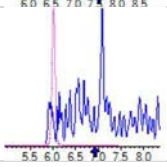 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 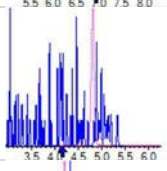 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 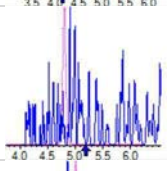 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 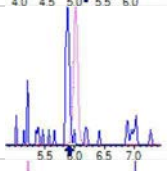 | 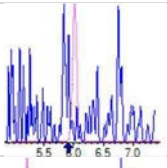 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 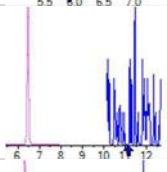 | 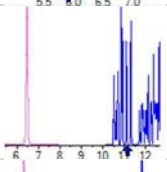 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 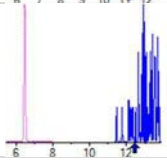 | 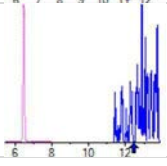 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (21)
Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 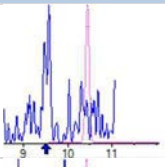 | 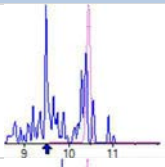 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 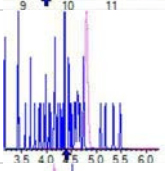 | 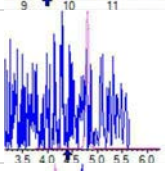 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 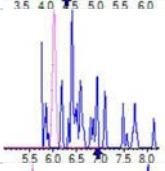 | 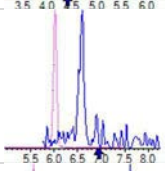 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 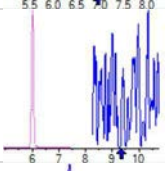 | 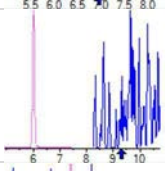 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 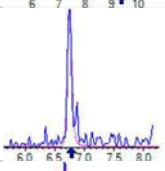 | 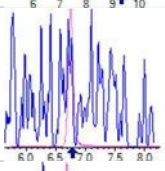 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 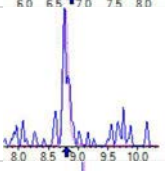 | 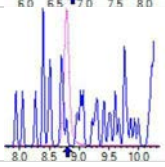 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 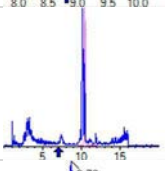 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 254714 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1142.9 | N/A | 1.0683 [ 1.0000 ] | 106.8% { 107.7% } | 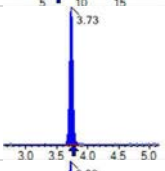 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 128208 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 15289.7 | N/A | 1.0107 [ 1.0000 ] | 101.1% { 101.3% } | 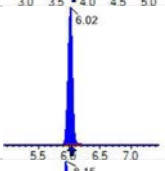 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 364340 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 2796.1 | N/A | 0.9216 [ 1.0000 ] | 92.2% { 96.0% } | 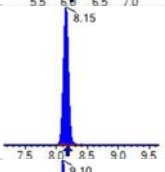 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 259914 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 813.2 | N/A | 0.9139 [ 1.0000 ] | 91.4% { 92.4% } | 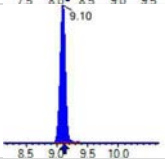 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-07 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 249736 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 2600.4 | N/A | 0.8552 [ 1.0000 ] | 85.5% { 86.3% } | 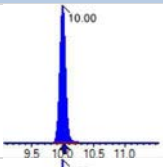 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 898300 | ( 8.59 , N/A ) ( N/A , -0.02 , N/A ) | 5224.4 | N/A | 0.9465 [ 1.0000 ] | 94.7% { 96.2% } | 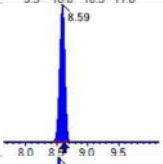 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 704930 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 967.8 | N/A | 0.9255 [ 1.0000 ] | 92.6% { 99.0% } | 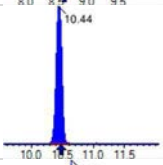 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2211258 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 37097.0 | N/A | 7.5993 [ 8.0000 ] | 95.0% { 98.8% } | 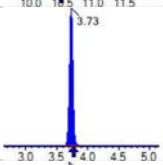 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 964471 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 4951.4 | N/A | 4.0318 [ 4.0000 ] | 100.8% { 98.8% } | 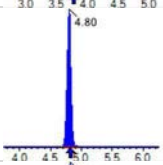 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 585055 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 6859.1 | N/A | 2.0000 [ 2.0000 ] | 100.0% { 99.2% } | 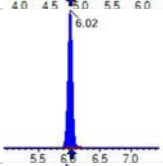 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 656011 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 4180.9 | N/A | 2.0160 [ 2.0000 ] | 100.8% { 99.9% } | 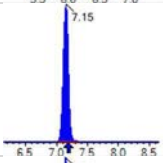 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 877116 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 2561.0 | N/A | 2.2468 [ 2.0000 ] | 112.3% { 101.7% } | 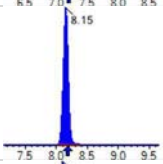 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276513 | ( 9.09 , N/A ) ( N/A , -0.02 , N/A ) | 2242.4 | N/A | 1.0850 [ 1.0000 ] | 108.5% { 102.5% } | 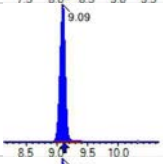 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 327078 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 1172.6 | N/A | 1.1687 [ 1.0000 ] | 116.9% { 101.7% } | 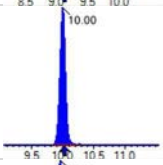 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377167 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 1071.8 | N/A | 1.1455 [ 1.0000 ] | 114.5% { 101.4% } | 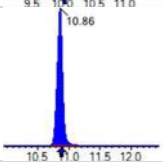 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-07 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382752 | ( 11.68 , N/A ) ( N/A , -0.03 , N/A ) | 1337.4 | N/A | 1.1415 [ 1.0000 ] | 114.1% { 102.6% } | 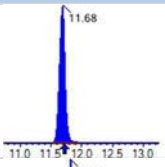 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 297799 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1125.7 | N/A | 1.0429 [ 1.0000 ] | 104.3% { 91.2% } | 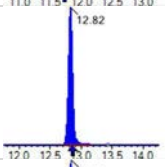 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 464999 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2256.7 | N/A | 1.9074 [ 2.0000 ] | 95.4% { 92.1% } | 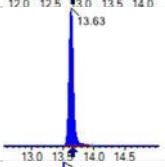 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1777243 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 1071.9 | N/A | 2.1898 [ 2.0000 ] | 109.5% { 105.9% } | 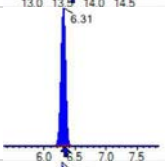 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1367797 | ( 8.59 , N/A ) ( N/A , -0.03 , N/A ) | 2958.8 | N/A | 2.1114 [ 2.0000 ] | 105.6% { 103.7% } | 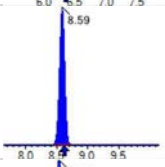 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1579928 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 1318.6 | N/A | 2.0787 [ 2.0000 ] | 103.9% { 102.0% } | 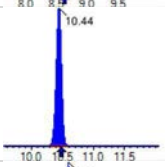 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 653718 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 88.8 | N/A | 4.6684 [ 4.0000 ] | 116.7% { 111.0% } | 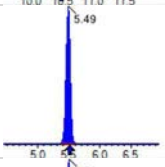 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1923915 | ( 7.59 , N/A ) ( N/A , -0.02 , N/A ) | 2257.3 | N/A | 4.5909 [ 4.0000 ] | 114.8% { 115.4% } | 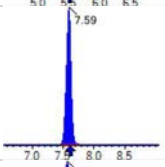 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1532727 | ( 9.37 , N/A ) ( N/A , -0.02 , N/A ) | 1467.4 | N/A | 4.6634 [ 4.0000 ] | 116.6% { 112.1% } | 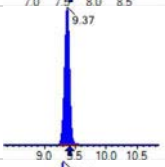 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3083398 | ( 10.99 , N/A ) ( N/A , -0.04 , N/A ) | 1806.5 | N/A | 8.9765 [ 8.0000 ] | 112.2% { 120.8% } | 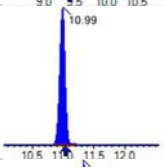 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1016561 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2905.3 | N/A | 1.5092 [ 2.0000 ] | 75.5% { 74.0% } | 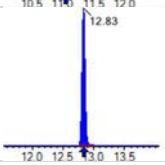 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (21)
Acquired: 2024/03/19 - 23:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 120073 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 1055.4 | N/A | 0.8405 [ 2.0000 ] | 42.0% { 41.7% } | 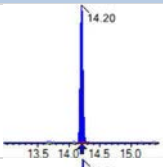 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 125469 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 1010.2 | N/A | 0.8190 [ 2.0000 ] | 40.9% { 40.9% } | 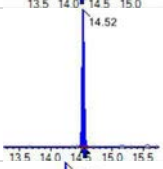 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 812093 | ( 10.24 , N/A ) ( N/A , -0.03 , N/A ) | 2564.6 | N/A | 4.1525 [ 4.0000 ] | 103.8% { 96.0% } | 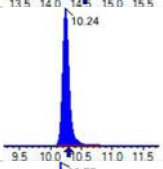 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 739578 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 2419.4 | N/A | 4.1492 [ 4.0000 ] | 103.7% { 96.0% } | 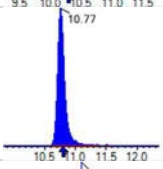 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 713577 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1226.9 | N/A | 11.1150 [ 20.0000 ] | 55.6% { 51.9% } | 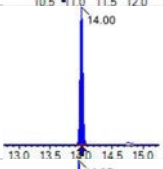 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 675722 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 2625.4 | N/A | 10.3701 [ 20.0000 ] | 51.9% { 52.4% } | 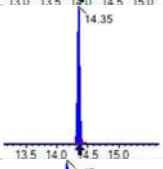 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1046416 | ( 6.47 , N/A ) ( N/A , -0.03 , N/A ) | 2309.1 | N/A | 7.8528 [ 8.0000 ] | 98.2% { 102.3% } | 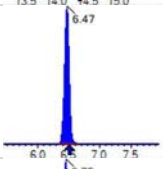 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 771204 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 993.8 | N/A | 2.8483 [ 2.0000 ] | 142.4% { 125.0% } | 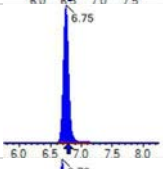 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 660826 | ( 8.79 , N/A ) ( N/A , -0.02 , N/A ) | 886.6 | N/A | 2.6810 [ 2.0000 ] | 134.0% { 119.4% } | 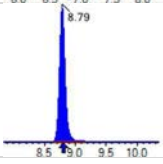 | | |

# ANALYSIS DATA SHEETL

EB-4-031424-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0094- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0094-08- | File ID: | S2024-03-19B (22)- |
| Sampled: | 03/14/24 13:40- | Prepared: | 03/18/24 11:40- | Analyzed: | 03/19/24 23:39- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 539.222 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0200- | Sequence: | SD01003- | Calibration: | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | ND- | 0.060- | 0.74- | U- |
| PFHxA- | ND- | 0.051- | 0.37- | U- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | ND- | 0.14- | 0.37- | U- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | ND- | 0.029- | 0.37- | U- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.065- | 0.059- | 0.37- | J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

EB-4-031424-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0094- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0094-08- | File ID: | S2024-03-19B (22)- |
| Sampled: | 03/14/24 13:40- | Prepared: | 03/18/24 11:40- | Analyzed: | 03/19/24 23:39- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 539.222 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0200- | Sequence: | SD01003 | Calibration: | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (22)
Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>39883<br>( 163.0 / 69.0 )<br>1086 | ( 2.82 , 0.75 )<br>( N/A , 0.02 , -0.1) | 212.8<br>54.2 | 0.0272<br>100.2<br>103.3 | 0.1229 | N/A | 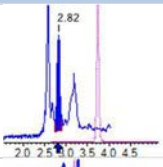 | 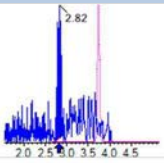 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 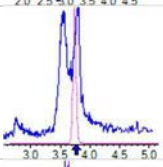 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 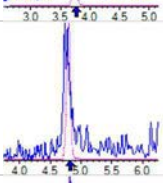 | 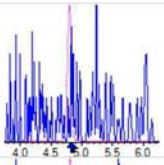 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 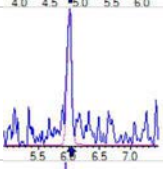 | 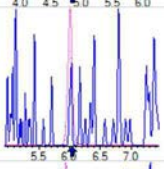 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 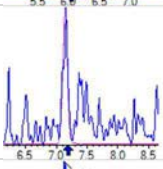 | 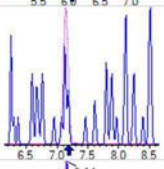 | |
| PFOA | ( 413.0 / 369.0 )<br>18186<br>( 413.0 / 169.0 )<br>5459 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 29.2<br>31.6 | 0.3002<br>82.1<br>87.4 | 0.0174 | N/A | 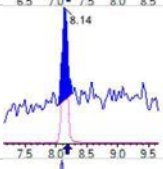 | 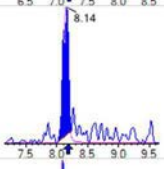 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 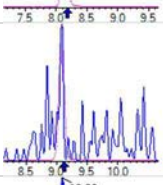 | 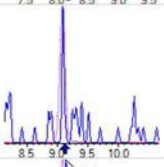 | |
| PFDA | ( 513.0 / 469.0 )<br>4905<br>( 513.0 / 169.0 )<br>610 | ( 10.00 , 1.00 )<br>( 0.01 , N/A , -0.9) | 44.7<br>28.4 | 0.1243<br>106.1<br>103.8 | 0.0138 | N/A | 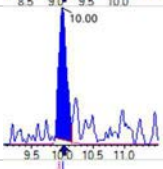 | 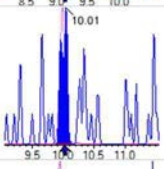 | MI2 DG 2024-03-20 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 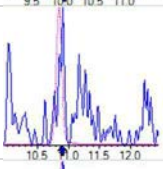 | 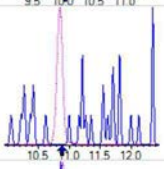 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 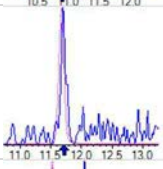 | 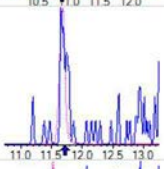 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 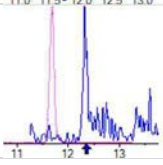 | 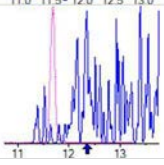 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 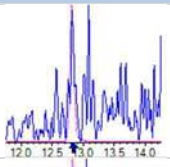 | 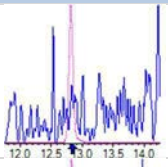 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 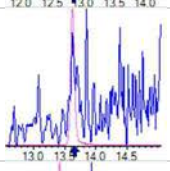 | 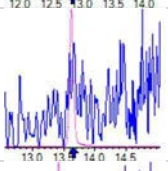 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 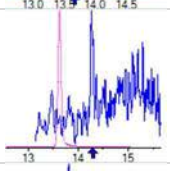 | 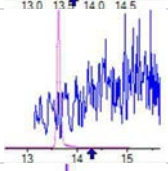 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 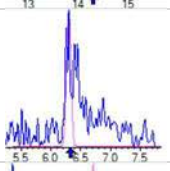 | 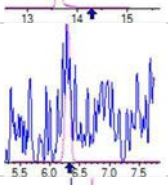 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 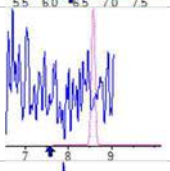 | 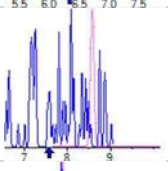 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 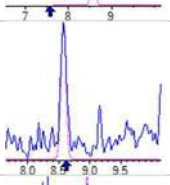 | 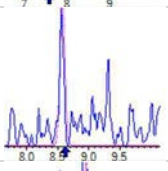 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 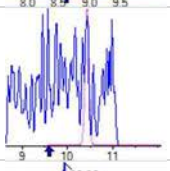 | 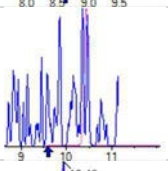 | |
| PFOS | ( 499.0 / 80.0 )<br>16289<br>( 499.0 / 99.0 )<br>3036 | ( 10.36 , 0.99 )<br>( -0.07 , N/A , -3.3) | 32.1<br>68.2 | 0.1864<br>79.8<br>77.6 | 0.0176 | N/A | 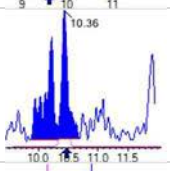 | 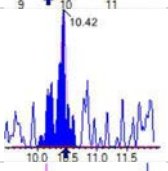 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 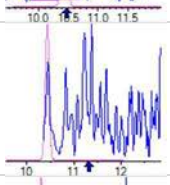 | 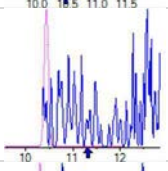 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 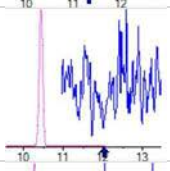 | 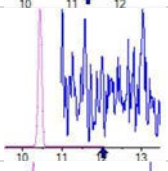 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 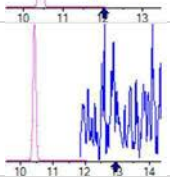 | 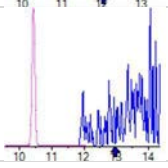 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (22)
Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 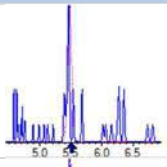 | 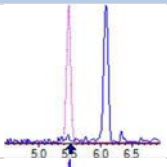 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 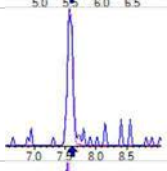 | 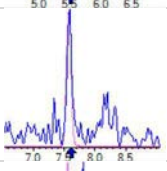 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 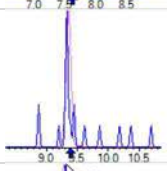 | 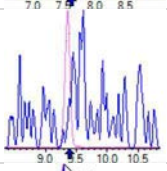 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17800<br>( 627.0 / 81.0 )<br>23130 | ( 11.01 , 1.00 )<br>( 0.02 , N/A , 0.5) | 215.5<br>67.1 | 1.2994<br>90.3<br>89.1 | 0.0581 | N/A | 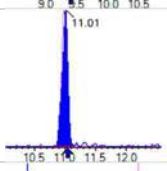 | 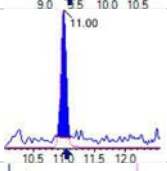 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 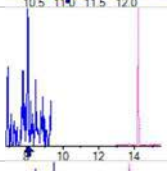 | 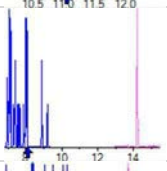 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 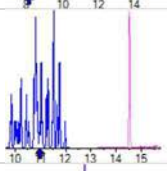 | 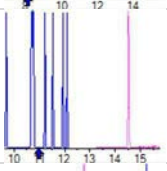 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 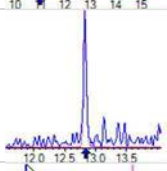 | 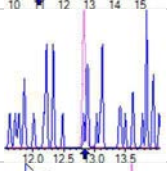 | |
| TFSI | ( 279.7 / 147.0 )<br>30350<br>( 279.7 / 211.0 )<br>2079 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , 0.1) | 22.8<br>9.7 | 0.0685<br>81.5<br>80.1 | 0.0309 | N/A | 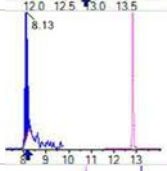 | 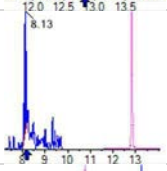 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 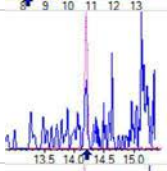 | 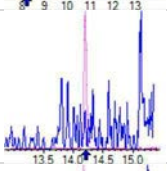 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 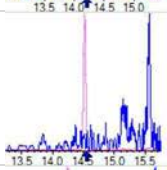 | 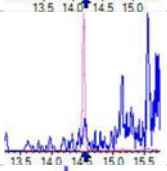 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 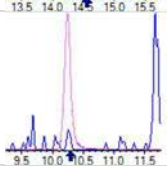 | 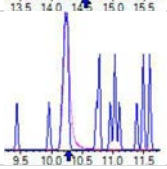 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 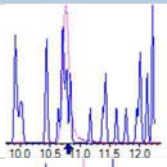 | 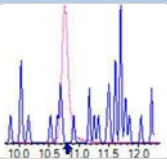 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 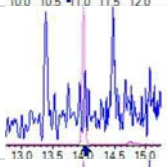 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 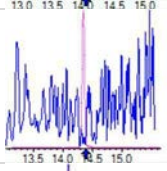 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 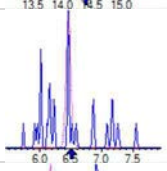 | 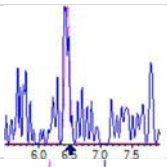 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 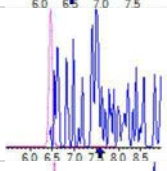 | 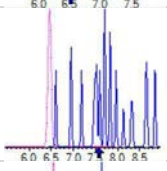 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 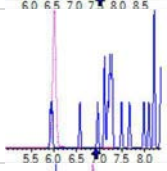 | 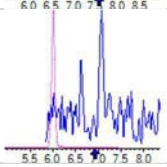 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 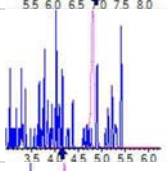 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 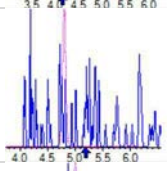 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 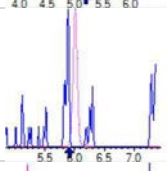 | 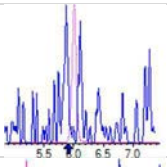 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 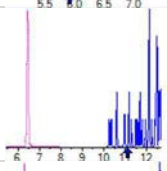 | 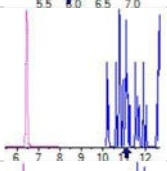 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 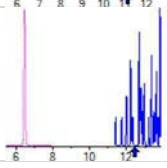 | 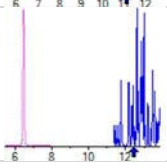 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (22)
Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 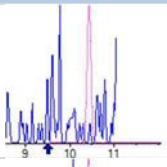 | 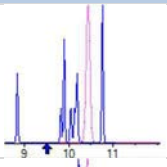 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 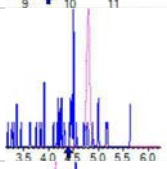 | 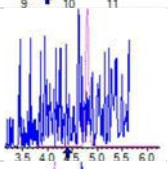 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 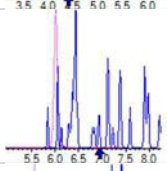 | 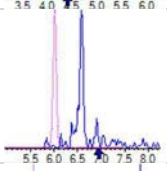 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 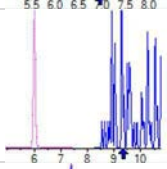 | 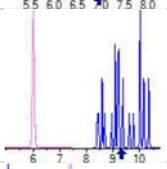 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 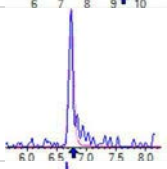 | 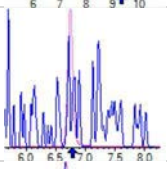 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 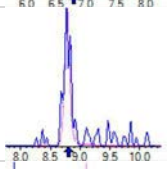 | 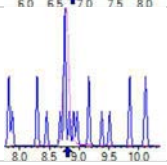 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 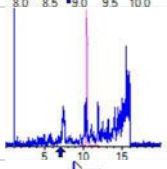 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 278621 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1239.1 | N/A | 1.1685 [ 1.0000 ] | 116.9% { 117.8% } | 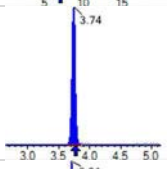 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127921 | ( 6.01 , N/A ) ( N/A , -0.04 , N/A ) | 102396.2 | N/A | 1.0084 [ 1.0000 ] | 100.8% { 101.0% } | 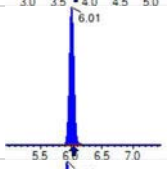 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 388558 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 3161.2 | N/A | 0.9829 [ 1.0000 ] | 98.3% { 102.4% } | 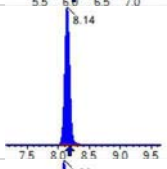 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270132 | ( 9.09 , N/A ) ( N/A , -0.03 , N/A ) | 1272.5 | N/A | 0.9498 [ 1.0000 ] | 95.0% { 96.0% } | 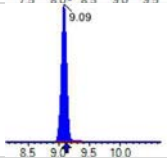 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 280823 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 3021.5 | N/A | 0.9616 [ 1.0000 ] | 96.2% { 97.1% } | 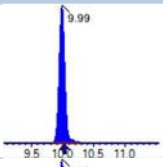 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 928794 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 4890.1 | N/A | 0.9787 [ 1.0000 ] | 97.9% { 99.5% } | 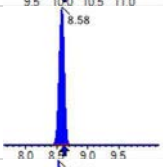 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 719820 | ( 10.44 , N/A ) ( N/A , -0.04 , N/A ) | 2153.6 | N/A | 0.9451 [ 1.0000 ] | 94.5% { 101.1% } | 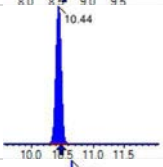 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2752693 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 45163.8 | N/A | 8.6483 [ 8.0000 ] | 108.1% { 122.9% } | 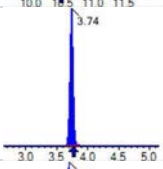 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 993782 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5106.6 | N/A | 4.1636 [ 4.0000 ] | 104.1% { 101.8% } | 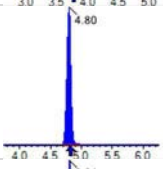 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 608043 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 8151.4 | N/A | 2.0833 [ 2.0000 ] | 104.2% { 103.1% } | 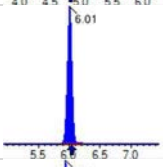 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 667679 | ( 7.14 , N/A ) ( N/A , -0.04 , N/A ) | 4819.8 | N/A | 2.0565 [ 2.0000 ] | 102.8% { 101.7% } | 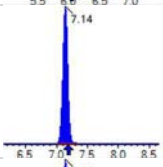 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 878388 | ( 8.14 , N/A ) ( N/A , -0.03 , N/A ) | 2808.3 | N/A | 2.1099 [ 2.0000 ] | 105.5% { 101.9% } | 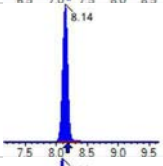 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276146 | ( 9.08 , N/A ) ( N/A , -0.03 , N/A ) | 4380.1 | N/A | 1.0426 [ 1.0000 ] | 104.3% { 102.3% } | 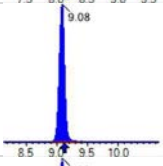 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 347633 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 1084.1 | N/A | 1.1046 [ 1.0000 ] | 110.5% { 108.1% } | 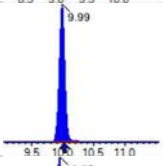 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 394888 | ( 10.85 , N/A ) ( N/A , -0.04 , N/A ) | 1337.8 | N/A | 1.0665 [ 1.0000 ] | 106.7% { 106.2% } | 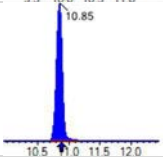 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389604 | ( 11.68 , N/A ) ( N/A , -0.03 , N/A ) | 1528.3 | N/A | 1.0333 [ 1.0000 ] | 103.3% { 104.5% } | 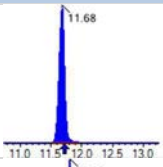  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 323964 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1234.4 | N/A | 1.0089 [ 1.0000 ] | 100.9% { 99.2% } | 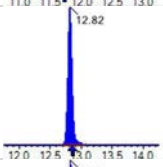  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 517105 | ( 13.63 , N/A ) ( N/A , -0.03 , N/A ) | 2406.8 | N/A | 1.8863 [ 2.0000 ] | 94.3% { 102.4% } | 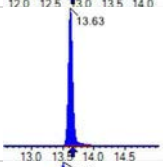  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1801783 | ( 6.30 , N/A ) ( N/A , -0.03 , N/A ) | 1304.7 | N/A | 2.1471 [ 2.0000 ] | 107.4% { 107.4% } | 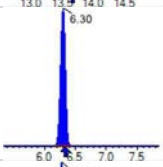  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1417927 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3085.7 | N/A | 2.1169 [ 2.0000 ] | 105.8% { 107.5% } | 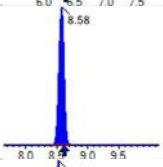  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1606418 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1975.1 | N/A | 2.0698 [ 2.0000 ] | 103.5% { 103.7% } | 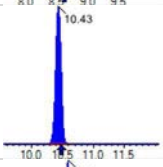  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 727671 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 81.7 | N/A | 5.0259 [ 4.0000 ] | 125.6% { 123.5% } | 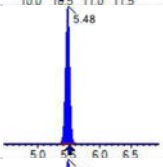  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1977585 | ( 7.58 , N/A ) ( N/A , -0.03 , N/A ) | 4464.6 | N/A | 4.5640 [ 4.0000 ] | 114.1% { 118.6% } | 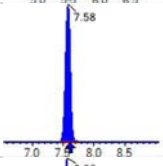  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1564272 | ( 9.36 , N/A ) ( N/A , -0.03 , N/A ) | 1622.2 | N/A | 4.6031 [ 4.0000 ] | 115.1% { 114.4% } | 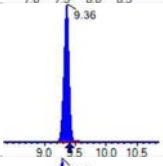  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3181314 | ( 10.99 , N/A ) ( N/A , -0.04 , N/A ) | 1601.4 | N/A | 8.9575 [ 8.0000 ] | 112.0% { 124.6% } | 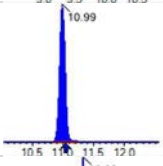  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 745802 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 2539.6 | N/A | 1.0843 [ 2.0000 ] | 54.2% { 54.3% } | 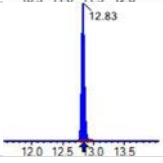  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 23:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 89042 | ( 14.20 , N/A ) ( N/A , -0.02 , N/A ) | 789.9 | N/A | 0.6104 [ 2.0000 ] | 30.5% { 30.9% } | 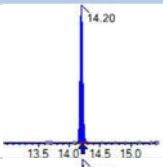 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 98526 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 872.6 | N/A | 0.6298 [ 2.0000 ] | 31.5% { 32.1% } | 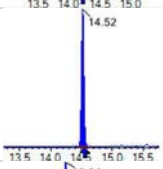 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 891422 | ( 10.24 , N/A ) ( N/A , -0.03 , N/A ) | 2354.0 | N/A | 4.4638 [ 4.0000 ] | 111.6% { 105.4% } | 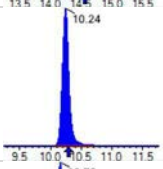 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 813983 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1966.0 | N/A | 4.4722 [ 4.0000 ] | 111.8% { 105.7% } | 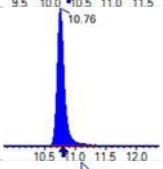 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 489704 | ( 14.00 , N/A ) ( N/A , -0.02 , N/A ) | 1473.7 | N/A | 7.4701 [ 20.0000 ] | 37.4% { 35.6% } | 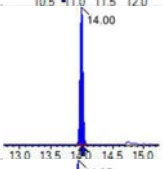 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 476195 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 1971.4 | N/A | 7.1568 [ 20.0000 ] | 35.8% { 36.9% } | 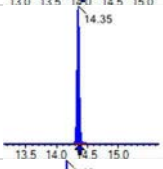 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1066538 | ( 6.46 , N/A ) ( N/A , -0.04 , N/A ) | 2024.1 | N/A | 8.0218 [ 8.0000 ] | 100.3% { 104.3% } | 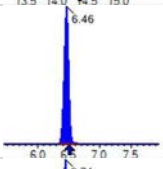 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 771508 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1131.6 | N/A | 2.5340 [ 2.0000 ] | 126.7% { 125.1% } | 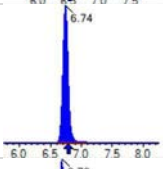 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 648226 | ( 8.78 , N/A ) ( N/A , -0.03 , N/A ) | 800.7 | N/A | 2.3387 [ 2.0000 ] | 116.9% { 117.2% } | 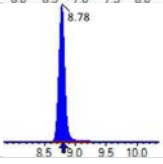 | | |

# ANALYSIS DATA SHEETL

FB-4-031424-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0094- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0094-09- | File ID: | S2024-03-19B (23)- |
| Sampled: | 03/14/24 13:50- | Prepared: | 03/18/24 11:40- | Analyzed: | 03/20/24 00:00- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 523.304 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0200- | Sequence: | SD01003- | Calibration: | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.5- | U- |
| PFPeA- | ND- | 0.062- | 0.76- | U- |
| PFHxA- | ND- | 0.052- | 0.38- | U- |
| PFHpA- | ND- | 0.039- | 0.38- | U- |
| PFOA- | ND- | 0.15- | 0.38- | U- |
| PFNA- | ND- | 0.078- | 0.38- | U- |
| PFDA- | ND- | 0.097- | 0.38- | U- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | U- |
| PFBS- | ND- | 0.035- | 0.38- | U- |
| PFPeS- | ND- | 0.060- | 0.38- | U- |
| PFHxS- | ND- | 0.030- | 0.38- | U- |
| PFHpS- | ND- | 0.049- | 0.38- | U- |
| PFOS- | ND- | 0.061- | 0.38- | MI2, U- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.28- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.099- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

FB-4-031424-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0094- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0094-09- | File ID: | S2024-03-19B (23)- |
| Sampled: | 03/14/24 13:50- | Prepared: | 03/18/24 11:40- | Analyzed: | 03/20/24 00:00- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 523.304 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0200- | Sequence: | SD01003 | Calibration: | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.97- | 1.5- | U- |
| NEtFOSE- | ND- | 1.0- | 1.5- | U- |
| HFPO-DA- | ND- | 0.17- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.052- | 0.76- | U- |
| PFMBA- | ND- | 0.087- | 0.76- | U- |
| NFDHA- | ND- | 0.29- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.55- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.53- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (23)
Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>30342<br>( 163.0 / 69.0 )<br>751 | ( 2.83 , 0.75 )<br>( N/A , 0.03 , 0.6) | 209.5<br>45.6 | 0.0248<br>91.1<br>93.9 | 0.0945 | N/A | 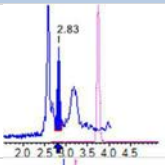 | 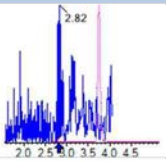 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 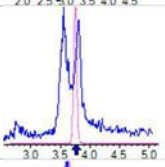 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 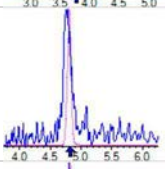 | 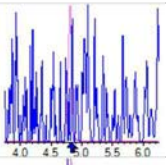 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 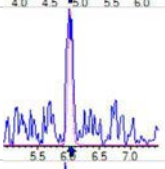 | 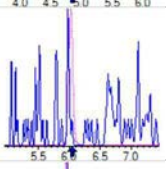 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 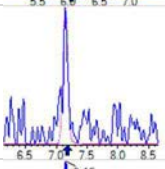 | 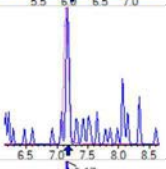 | |
| PFOA | ( 413.0 / 369.0 )<br>23958<br>( 413.0 / 169.0 )<br>8179 | ( 8.15 , 1.00 )<br>( 0.01 , N/A , -0.9) | 23.3<br>43.0 | 0.3414<br>93.4<br>99.4 | 0.0293 | N/A | 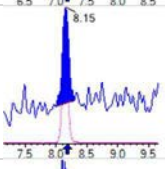 | 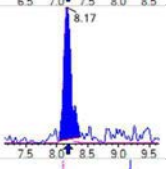 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 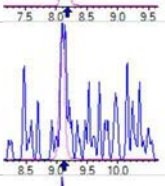 | 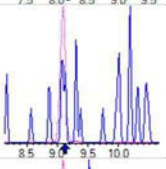 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 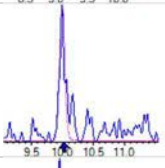 | 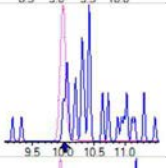 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 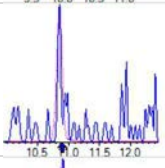 | 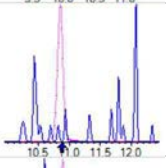 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 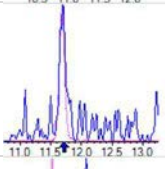 | 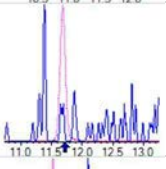 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 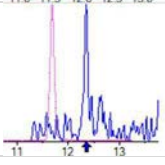 | 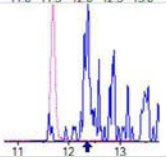 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 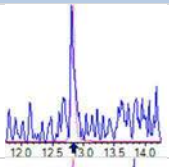 | 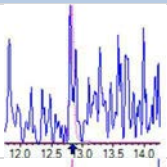 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 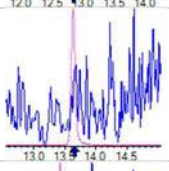 | 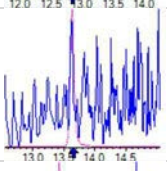 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 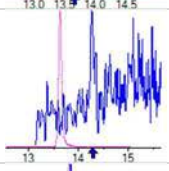 | 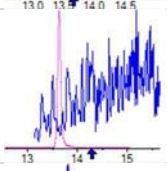 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 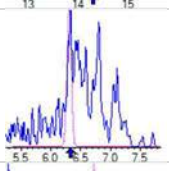 | 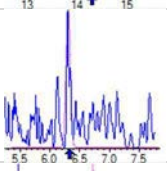 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 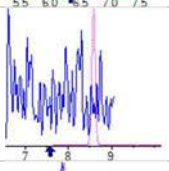 | 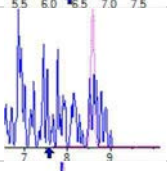 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 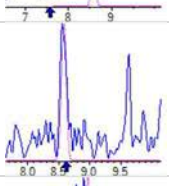 | 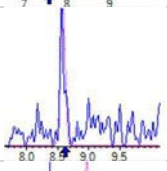 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 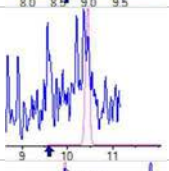 | 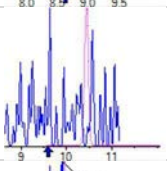 | |
| PFOS | ( 499.0 / 80.0 )<br>11430<br>( 499.0 / 99.0 )<br>2155 | ( 10.39 , 0.99 )<br>( -0.05 , N/A , 0.7) | 28.9<br>66.5 | 0.1885<br>80.7<br>78.5 | 0.0123 | N/A | 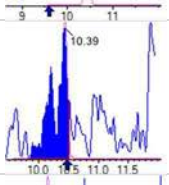 | 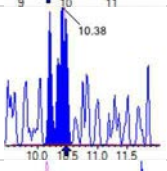 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 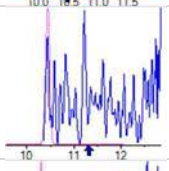 | 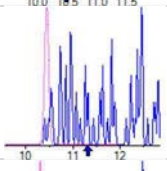 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 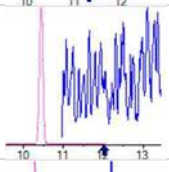 | 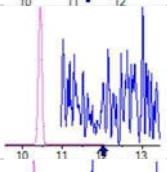 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 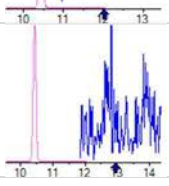 | 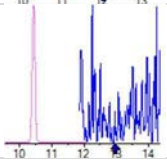 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 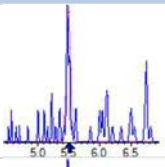 | 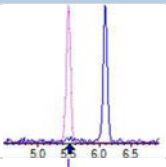 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 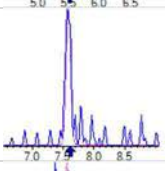 | 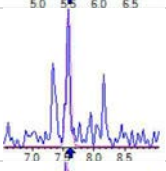 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 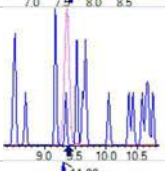 | 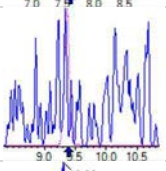 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19286<br>( 627.0 / 81.0 )<br>25311 | ( 11.00 , 1.00 )<br>( 0.00 , N/A , 0.0) | 215.3<br>66.2 | 1.3124<br>91.2<br>90.0 | 0.0619 | N/A | 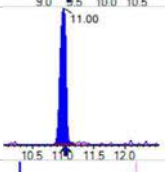 | 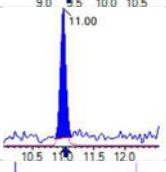 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 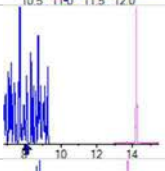 | 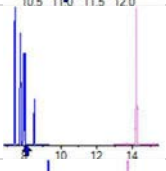 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 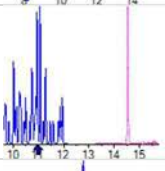 | 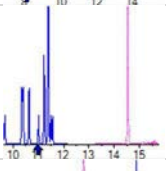 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 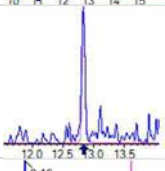 | 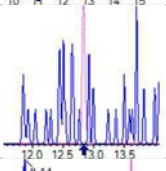 | |
| TFSI | ( 279.7 / 147.0 )<br>25392<br>( 279.7 / 211.0 )<br>3303 | ( 8.16 , 0.64 )<br>( N/A , -0.02 , 1.0) | 21.6<br>10.2 | 0.1301<br>154.9<br>152.0 | 0.0250 | N/A | 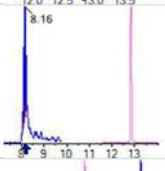 | 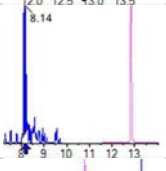 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 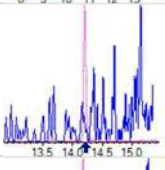 | 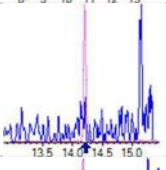 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 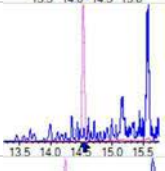 | 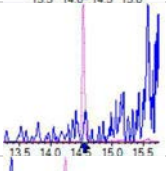 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 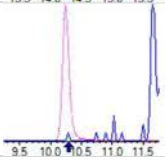 | 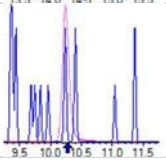 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (23)
Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 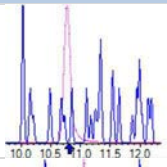 | 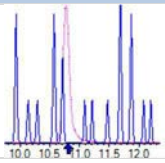 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 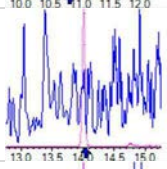 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 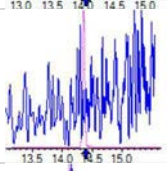 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 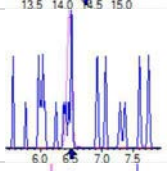 | 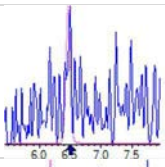 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 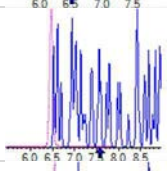 | 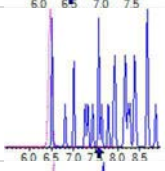 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 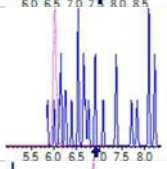 | 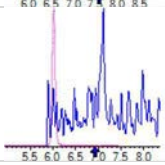 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 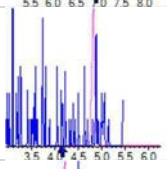 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 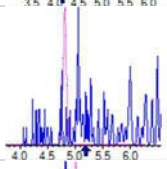 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 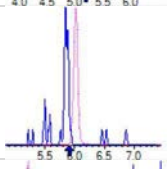 | 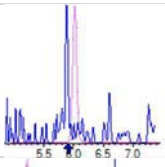 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 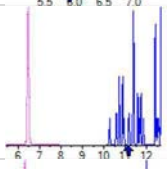 | 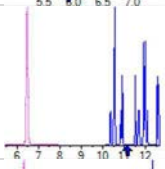 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 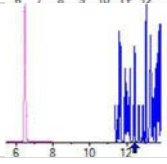 | 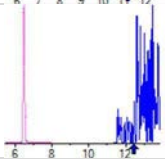 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0094-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (23)
Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 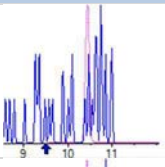 | 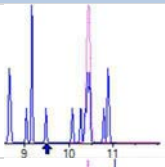 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 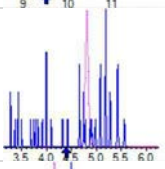 | 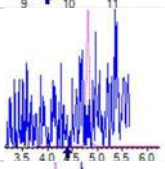 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 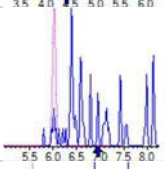 | 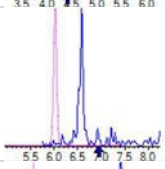 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 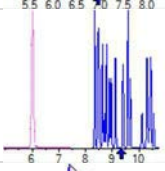 | 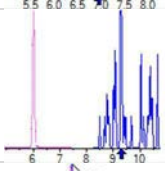 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>5073<br>( 357.2 / 243.0 )<br>1081 | ( 6.74 , 1.00 )<br>( -0.01 , N/A , -0.5) | 43.3<br>14.2 | 0.2131<br>193.3<br>204.7 | 0.0120 | N/A | 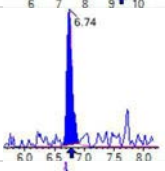 | 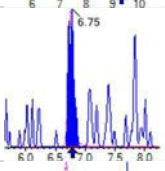 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 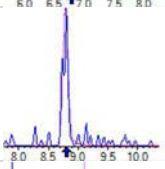 | 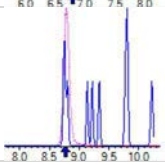 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 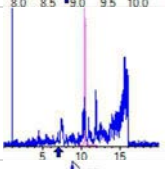 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>271857 | ( 3.75 , N/A )<br>( N/A , -0.01 , N/A ) | 1168.7 | N/A | 1.1402<br>[ 1.0000 ] | 114.0%<br>{ 114.9% } | 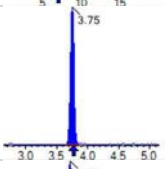 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>122425 | ( 6.02 , N/A )<br>( N/A , -0.03 , N/A ) | 131453.4 | N/A | 0.9651<br>[ 1.0000 ] | 96.5%<br>{ 96.7% } | 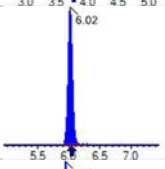 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>388280 | ( 8.15 , N/A )<br>( N/A , -0.03 , N/A ) | 3570.3 | N/A | 0.9822<br>[ 1.0000 ] | 98.2%<br>{ 102.4% } | 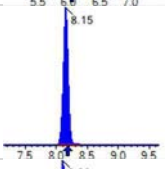 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>255739 | ( 9.09 , N/A )<br>( N/A , -0.03 , N/A ) | 793.2 | N/A | 0.8992<br>[ 1.0000 ] | 89.9%<br>{ 90.9% } | 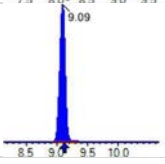 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 278054 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 4222.3 | N/A | 0.9522 [ 1.0000 ] | 95.2% { 96.1% } | 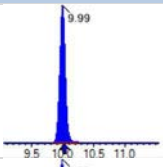 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 933367 | ( 8.59 , N/A ) ( N/A , -0.03 , N/A ) | 5221.7 | N/A | 0.9835 [ 1.0000 ] | 98.3% { 100.0% } | 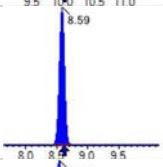 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 683366 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 1595.2 | N/A | 0.8972 [ 1.0000 ] | 89.7% { 96.0% } | 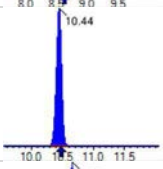 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2722961 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 51923.0 | N/A | 8.7677 [ 8.0000 ] | 109.6% { 121.6% } | 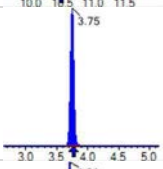 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 984985 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 5435.6 | N/A | 4.3121 [ 4.0000 ] | 107.8% { 100.9% } | 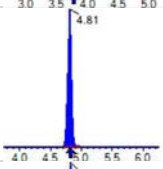 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 611070 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 7576.6 | N/A | 2.1876 [ 2.0000 ] | 109.4% { 103.6% } | 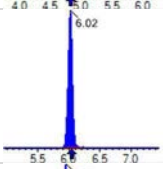 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 661854 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 5329.6 | N/A | 2.1300 [ 2.0000 ] | 106.5% { 100.8% } | 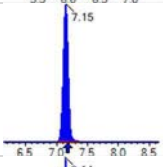 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 906245 | ( 8.14 , N/A ) ( N/A , -0.03 , N/A ) | 2879.8 | N/A | 2.1783 [ 2.0000 ] | 108.9% { 105.1% } | 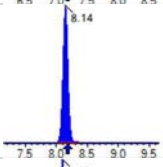 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 287398 | ( 9.09 , N/A ) ( N/A , -0.03 , N/A ) | 2970.7 | N/A | 1.1461 [ 1.0000 ] | 114.6% { 106.5% } | 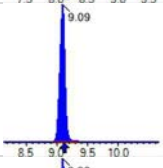 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 329886 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1079.5 | N/A | 1.0587 [ 1.0000 ] | 105.9% { 102.5% } | 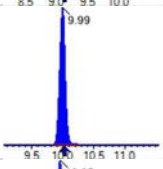 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 379110 | ( 10.85 , N/A ) ( N/A , -0.03 , N/A ) | 904.4 | N/A | 1.0341 [ 1.0000 ] | 103.4% { 101.9% } | 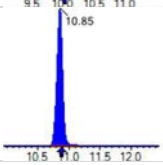 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 385665 | ( 11.68 , N/A ) ( N/A , -0.03 , N/A ) | 1248.3 | N/A | 1.0330 [ 1.0000 ] | 103.3% { 103.4% } | 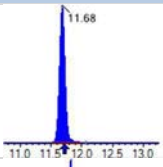 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 323790 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1341.8 | N/A | 1.0184 [ 1.0000 ] | 101.8% { 99.2% } | 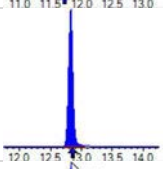 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521999 | ( 13.64 , N/A ) ( N/A , -0.02 , N/A ) | 2535.0 | N/A | 1.9232 [ 2.0000 ] | 96.2% { 103.3% } | 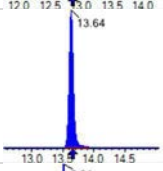 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1876878 | ( 6.31 , N/A ) ( N/A , -0.02 , N/A ) | 1137.9 | N/A | 2.2256 [ 2.0000 ] | 111.3% { 111.8% } | 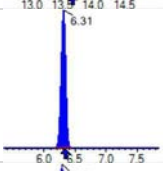 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1419360 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 4118.0 | N/A | 2.1087 [ 2.0000 ] | 105.4% { 107.6% } | 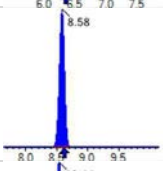 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1605651 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 1308.0 | N/A | 2.1792 [ 2.0000 ] | 109.0% { 103.6% } | 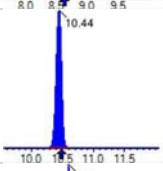 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 718676 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 90.8 | N/A | 4.9395 [ 4.0000 ] | 123.5% { 122.0% } | 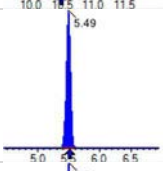 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1964368 | ( 7.59 , N/A ) ( N/A , -0.03 , N/A ) | 3816.8 | N/A | 4.5113 [ 4.0000 ] | 112.8% { 117.9% } | 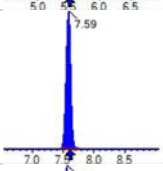 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1537927 | ( 9.37 , N/A ) ( N/A , -0.03 , N/A ) | 1479.9 | N/A | 4.5034 [ 4.0000 ] | 112.6% { 112.4% } | 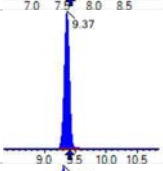 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3232198 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1706.4 | N/A | 9.0561 [ 8.0000 ] | 113.2% { 126.6% } | 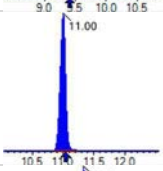 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 772977 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2346.6 | N/A | 1.1838 [ 2.0000 ] | 59.2% { 56.3% } | 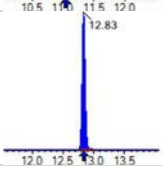 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0094-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 87927 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 846.8 | N/A | 0.6349 [ 2.0000 ] | 31.7% { 30.5% } | 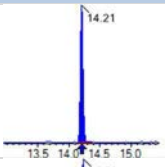 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 88967 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 886.0 | N/A | 0.5990 [ 2.0000 ] | 30.0% { 29.0% } | 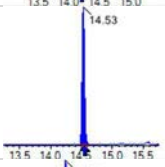 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 902295 | ( 10.24 , N/A ) ( N/A , -0.03 , N/A ) | 2485.8 | N/A | 4.7593 [ 4.0000 ] | 119.0% { 106.7% } | 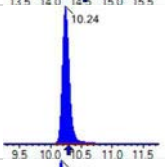 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 843781 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 2219.4 | N/A | 4.8832 [ 4.0000 ] | 122.1% { 109.6% } | 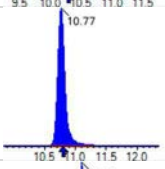 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 496655 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1200.1 | N/A | 7.9803 [ 20.0000 ] | 39.9% { 36.1% } | 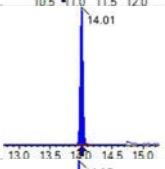 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 505944 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 2330.4 | N/A | 8.0096 [ 20.0000 ] | 40.0% { 39.2% } | 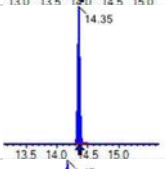 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1109675 | ( 6.47 , N/A ) ( N/A , -0.03 , N/A ) | 2469.7 | N/A | 8.7209 [ 8.0000 ] | 109.0% { 108.5% } | 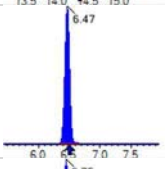 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 793367 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1181.0 | N/A | 2.6317 [ 2.0000 ] | 131.6% { 128.6% } | 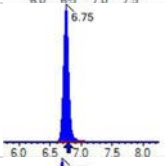 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 676176 | ( 8.79 , N/A ) ( N/A , -0.02 , N/A ) | 846.2 | N/A | 2.4639 [ 2.0000 ] | 123.2% { 122.2% } | 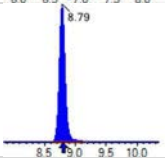 | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-22-3 (24C0094-01 ) ng/L** | Lab File ID: S2024-03-19B (15) | | | Analyzed: 03/19/24 21:16 |
| 13C4-PFBA | 31.2 | 95.9 | 5 - 130 | |
| 13C5-PFPEA | 15.6 | 100 | 40 - 130 | |
| 13C5-PFHXA | 7.80 | 101 | 40 - 130 | |
| 13C4-PFHPA | 7.80 | 100 | 40 - 130 | |
| 13C8-PFOA | 7.80 | 108 | 40 - 130 | |
| 13C9-PFNA | 3.90 | 113 | 40 - 130 | |
| 13C6-PFDA | 3.90 | 107 | 40 - 130 | |
| 13C7-PFUnA | 3.90 | 109 | 30 - 130 | |
| 13C2-PFDOA | 3.90 | 103 | 10 - 130 | |
| 13C2-PFTEDA | 3.90 | 103 | 10 - 130 | |
| 13C2-PFHxDA | 7.80 | 89.7 | 20 - 150 | |
| 13C3-PFBS | 7.80 | 109 | 40 - 135 | |
| 13C3-PFHXS | 7.80 | 108 | 40 - 130 | |
| 13C8-PFOS | 7.80 | 109 | 40 - 130 | |
| 13C2-4:2FTS | 15.6 | 134 | 40 - 200 | |
| 13C2-6:2FTS | 15.6 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 15.6 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 31.2 | 110 | 20 - 150 | |
| 13C8-PFOSA | 7.80 | 85.9 | 40 - 130 | |
| D3-NMEFOSA | 7.80 | 48.6 | 10 - 130 | |
| D5-NETFOSA | 7.80 | 46.0 | 10 - 130 | |
| D3-NMEFOSAA | 15.6 | 103 | 40 - 170 | |
| D5-NETFOSAA | 15.6 | 105 | 25 - 135 | |
| D7-NMEFOSE | 78.0 | 63.0 | 10 - 130 | |
| D9-NETFOSE | 78.0 | 61.2 | 10 - 130 | |
| 13C3-HFPO-DA | 31.2 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-22-2 (24C0094-02 ) ng/L** | Lab File ID: S2024-03-19B (16) | | | Analyzed: 03/19/24 21:36 |
| 13C4-PFBA | 29.2 | 89.6 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 106 | 40 - 130 | |
| 13C5-PFHXA | 7.31 | 106 | 40 - 130 | |
| 13C4-PFHPA | 7.31 | 99.0 | 40 - 130 | |
| 13C8-PFOA | 7.31 | 99.2 | 40 - 130 | |
| 13C9-PFNA | 3.66 | 109 | 40 - 130 | |
| 13C6-PFDA | 3.66 | 104 | 40 - 130 | |
| 13C7-PFUnA | 3.66 | 108 | 30 - 130 | |
| 13C2-PFDOA | 3.66 | 105 | 10 - 130 | |
| 13C2-PFTEDA | 3.66 | 98.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.31 | 95.4 | 20 - 150 | |
| 13C3-PFBS | 7.31 | 113 | 40 - 135 | |
| 13C3-PFHXS | 7.31 | 111 | 40 - 130 | |
| 13C8-PFOS | 7.31 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 127 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 128 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.2 | 113 | 20 - 150 | |
| 13C8-PFOSA | 7.31 | 67.9 | 40 - 130 | |
| D3-NMEFOSA | 7.31 | 43.4 | 10 - 130 | |
| D5-NETFOSA | 7.31 | 42.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 102 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 105 | 25 - 135 | |
| D7-NMEFOSE | 73.1 | 52.8 | 10 - 130 | |
| D9-NETFOSE | 73.1 | 51.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.2 | 97.3 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-22-1 (24C0094-03 ) ng/L** | Lab File ID: S2024-03-19B (17) | | | Analyzed: 03/19/24 21:57 |
| 13C4-PFBA | 29.5 | 86.0 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 98.2 | 40 - 130 | |
| 13C5-PFHXA | 7.37 | 96.8 | 40 - 130 | |
| 13C4-PFHPA | 7.37 | 93.5 | 40 - 130 | |
| 13C8-PFOA | 7.37 | 105 | 40 - 130 | |
| 13C9-PFNA | 3.69 | 93.9 | 40 - 130 | |
| 13C6-PFDA | 3.69 | 112 | 40 - 130 | |
| 13C7-PFUnA | 3.69 | 105 | 30 - 130 | |
| 13C2-PFDOA | 3.69 | 102 | 10 - 130 | |
| 13C2-PFTEDA | 3.69 | 102 | 10 - 130 | |
| 13C2-PFHxDA | 7.37 | 89.4 | 20 - 150 | |
| 13C3-PFBS | 7.37 | 109 | 40 - 135 | |
| 13C3-PFHXS | 7.37 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.37 | 99.1 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 115 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 105 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 117 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.5 | 101 | 20 - 150 | |
| 13C8-PFOSA | 7.37 | 82.7 | 40 - 130 | |
| D3-NMEFOSA | 7.37 | 46.1 | 10 - 130 | |
| D5-NETFOSA | 7.37 | 45.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 91.6 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 101 | 25 - 135 | |
| D7-NMEFOSE | 73.7 | 59.3 | 10 - 130 | |
| D9-NETFOSE | 73.7 | 59.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.5 | 92.3 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-3-4 (24C0094-04 ) ng/L** | Lab File ID: S2024-03-19B (18) | | | Analyzed: 03/19/24 22:17 |
| 13C4-PFBA | 29.6 | 92.8 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 102 | 40 - 130 | |
| 13C5-PFHXA | 7.41 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.41 | 96.7 | 40 - 130 | |
| 13C8-PFOA | 7.41 | 115 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 108 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 116 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 110 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 112 | 10 - 130 | |
| 13C2-PFHxDA | 7.41 | 58.5 | 20 - 150 | |
| 13C3-PFBS | 7.41 | 110 | 40 - 135 | |
| 13C3-PFHXS | 7.41 | 109 | 40 - 130 | |
| 13C8-PFOS | 7.41 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 118 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 109 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 104 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 109 | 20 - 150 | |
| 13C8-PFOSA | 7.41 | 105 | 40 - 130 | |
| D3-NMEFOSA | 7.41 | 61.4 | 10 - 130 | |
| D5-NETFOSA | 7.41 | 59.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 97.5 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 100 | 25 - 135 | |
| D7-NMEFOSE | 74.1 | 88.2 | 10 - 130 | |
| D9-NETFOSE | 74.1 | 81.7 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 96.8 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-3-3 (24C0094-05 ) ng/L** | Lab File ID: S2024-03-19B (19) | | | Analyzed: 03/19/24 22:38 |
| 13C4-PFBA | 29.3 | 95.8 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 104 | 40 - 130 | |
| 13C5-PFHXA | 7.33 | 103 | 40 - 130 | |
| 13C4-PFHPA | 7.33 | 101 | 40 - 130 | |
| 13C8-PFOA | 7.33 | 106 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 107 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 106 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 105 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 101 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 105 | 10 - 130 | |
| 13C2-PFHxDA | 7.33 | 86.3 | 20 - 150 | |
| 13C3-PFBS | 7.33 | 102 | 40 - 135 | |
| 13C3-PFHXS | 7.33 | 102 | 40 - 130 | |
| 13C8-PFOS | 7.33 | 103 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 111 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 103 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 109 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 107 | 20 - 150 | |
| 13C8-PFOSA | 7.33 | 92.7 | 40 - 130 | |
| D3-NMEFOSA | 7.33 | 53.9 | 10 - 130 | |
| D5-NETFOSA | 7.33 | 55.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 99.3 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 107 | 25 - 135 | |
| D7-NMEFOSE | 73.3 | 81.3 | 10 - 130 | |
| D9-NETFOSE | 73.3 | 78.7 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 97.2 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-3-2 (24C0094-06 ) ng/L** | Lab File ID: S2024-03-19B (20) | | | Analyzed: 03/19/24 22:58 |
| 13C4-PFBA | 29.4 | 90.9 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 102 | 40 - 130 | |
| 13C5-PFHXA | 7.36 | 98.6 | 40 - 130 | |
| 13C4-PFHPA | 7.36 | 97.0 | 40 - 130 | |
| 13C8-PFOA | 7.36 | 105 | 40 - 130 | |
| 13C9-PFNA | 3.68 | 103 | 40 - 130 | |
| 13C6-PFDA | 3.68 | 109 | 40 - 130 | |
| 13C7-PFUnA | 3.68 | 110 | 30 - 130 | |
| 13C2-PFDOA | 3.68 | 111 | 10 - 130 | |
| 13C2-PFTEDA | 3.68 | 110 | 10 - 130 | |
| 13C2-PFHxDA | 7.36 | 70.6 | 20 - 150 | |
| 13C3-PFBS | 7.36 | 109 | 40 - 135 | |
| 13C3-PFHXS | 7.36 | 109 | 40 - 130 | |
| 13C8-PFOS | 7.36 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 116 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 113 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 108 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.4 | 107 | 20 - 150 | |
| 13C8-PFOSA | 7.36 | 95.7 | 40 - 130 | |
| D3-NMEFOSA | 7.36 | 58.0 | 10 - 130 | |
| D5-NETFOSA | 7.36 | 53.7 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 101 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 106 | 25 - 135 | |
| D7-NMEFOSE | 73.6 | 79.0 | 10 - 130 | |
| D9-NETFOSE | 73.6 | 76.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.4 | 89.1 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-3-1 (24C0094-07 ) ng/L** | Lab File ID: S2024-03-19B (21) | | | Analyzed: 03/19/24 23:19 |
| 13C4-PFBA | 29.0 | 95.0 | 5 - 130 | |
| 13C5-PFPEA | 14.5 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.26 | 100 | 40 - 130 | |
| 13C4-PFHPA | 7.26 | 101 | 40 - 130 | |
| 13C8-PFOA | 7.26 | 112 | 40 - 130 | |
| 13C9-PFNA | 3.63 | 109 | 40 - 130 | |
| 13C6-PFDA | 3.63 | 117 | 40 - 130 | |
| 13C7-PFUnA | 3.63 | 115 | 30 - 130 | |
| 13C2-PFDOA | 3.63 | 114 | 10 - 130 | |
| 13C2-PFTEDA | 3.63 | 104 | 10 - 130 | |
| 13C2-PFHxDA | 7.26 | 95.4 | 20 - 150 | |
| 13C3-PFBS | 7.26 | 109 | 40 - 135 | |
| 13C3-PFHXS | 7.26 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.26 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 14.5 | 117 | 40 - 200 | |
| 13C2-6:2FTS | 14.5 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.5 | 117 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.0 | 112 | 20 - 150 | |
| 13C8-PFOSA | 7.26 | 75.5 | 40 - 130 | |
| D3-NMEFOSA | 7.26 | 42.0 | 10 - 130 | |
| D5-NETFOSA | 7.26 | 40.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.5 | 104 | 40 - 170 | |
| D5-NETFOSAA | 14.5 | 104 | 25 - 135 | |
| D7-NMEFOSE | 72.6 | 55.6 | 10 - 130 | |
| D9-NETFOSE | 72.6 | 51.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.0 | 98.2 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-4-031424 (24C0094-08 ) ng/L** | Lab File ID: S2024-03-19B (22) | | | Analyzed: 03/19/24 23:39 |
| 13C4-PFBA | 29.7 | 108 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 104 | 40 - 130 | |
| 13C5-PFHXA | 7.42 | 104 | 40 - 130 | |
| 13C4-PFHPA | 7.42 | 103 | 40 - 130 | |
| 13C8-PFOA | 7.42 | 105 | 40 - 130 | |
| 13C9-PFNA | 3.71 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.71 | 110 | 40 - 130 | |
| 13C7-PFUnA | 3.71 | 107 | 30 - 130 | |
| 13C2-PFDOA | 3.71 | 103 | 10 - 130 | |
| 13C2-PFTEDA | 3.71 | 101 | 10 - 130 | |
| 13C2-PFHxDA | 7.42 | 94.3 | 20 - 150 | |
| 13C3-PFBS | 7.42 | 107 | 40 - 135 | |
| 13C3-PFHXS | 7.42 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.42 | 103 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 126 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 114 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 112 | 20 - 150 | |
| 13C8-PFOSA | 7.42 | 54.2 | 40 - 130 | |
| D3-NMEFOSA | 7.42 | 30.5 | 10 - 130 | |
| D5-NETFOSA | 7.42 | 31.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 112 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 112 | 25 - 135 | |
| D7-NMEFOSE | 74.2 | 37.4 | 10 - 130 | |
| D9-NETFOSE | 74.2 | 35.8 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-4-031424 (24C0094-09 ) ng/L** | Lab File ID: S2024-03-19B (23) | | | Analyzed: 03/20/24 00:00 |
| 13C4-PFBA | 30.6 | 110 | 5 - 130 | |
| 13C5-PFPEA | 15.3 | 108 | 40 - 130 | |
| 13C5-PFHXA | 7.64 | 109 | 40 - 130 | |
| 13C4-PFHPA | 7.64 | 107 | 40 - 130 | |
| 13C8-PFOA | 7.64 | 109 | 40 - 130 | |
| 13C9-PFNA | 3.82 | 115 | 40 - 130 | |
| 13C6-PFDA | 3.82 | 106 | 40 - 130 | |
| 13C7-PFUnA | 3.82 | 103 | 30 - 130 | |
| 13C2-PFDOA | 3.82 | 103 | 10 - 130 | |
| 13C2-PFTEDA | 3.82 | 102 | 10 - 130 | |
| 13C2-PFHxDA | 7.64 | 96.2 | 20 - 150 | |
| 13C3-PFBS | 7.64 | 111 | 40 - 135 | |
| 13C3-PFHXS | 7.64 | 105 | 40 - 130 | |
| 13C8-PFOS | 7.64 | 109 | 40 - 130 | |
| 13C2-4:2FTS | 15.3 | 123 | 40 - 200 | |
| 13C2-6:2FTS | 15.3 | 113 | 40 - 200 | |
| 13C2-8:2FTS | 15.3 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.6 | 113 | 20 - 150 | |
| 13C8-PFOSA | 7.64 | 59.2 | 40 - 130 | |
| D3-NMEFOSA | 7.64 | 31.7 | 10 - 130 | |
| D5-NETFOSA | 7.64 | 30.0 | 10 - 130 | |
| D3-NMEFOSAA | 15.3 | 119 | 40 - 170 | |
| D5-NETFOSAA | 15.3 | 122 | 25 - 135 | |
| D7-NMEFOSE | 76.4 | 39.9 | 10 - 130 | |
| D9-NETFOSE | 76.4 | 40.0 | 10 - 130 | |
| 13C3-HFPO-DA | 30.6 | 109 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0200-BLK1 ) ng/L** | Lab File ID: S2024-03-19B (8) | | | Analyzed: 03/19/24 18:52 |
| 13C4-PFBA | 32.0 | 112 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 111 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 110 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 103 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 105 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 113 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 112 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 105 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 76.5 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 114 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 111 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 126 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 121 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 107 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 39.5 | 40 - 130 | *R |
| D3-NMEFOSA | 8.00 | 25.7 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 27.9 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 107 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 110 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 30.1 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 30.4 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0200-BS1 ) ng/L | Lab File ID: S2024-03-19B (9) | | | Analyzed: 03/19/24 19:13 |
| 13C4-PFBA | 32.0 | 106 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 115 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 114 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 112 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 106 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 111 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 102 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 92.1 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 71.8 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 116 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 110 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 112 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 130 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 120 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 121 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 117 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 40.5 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 24.8 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 27.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 112 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 113 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 35.7 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 34.0 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0200-MRL1 ) ng/L** | Lab File ID: S2024-03-19B (10) | | | Analyzed: 03/19/24 19:33 |
| 13C4-PFBA | 32.0 | 113 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 113 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 111 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 113 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 118 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 113 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 105 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 96.9 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 72.9 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 112 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 114 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 128 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 123 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 125 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 120 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 43.4 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 26.3 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 29.2 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 113 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 119 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 33.3 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 33.9 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0200-MS1) ng/L** | Lab File ID: S2024-03-19B (11) | | | Analyzed: 03/19/24 19:54 |
| 13C4-PFBA | 29.8 | 95.6 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 109 | 40 - 130 | |
| 13C5-PFHXA | 7.46 | 110 | 40 - 130 | |
| 13C4-PFHPA | 7.46 | 102 | 40 - 130 | |
| 13C8-PFOA | 7.46 | 111 | 40 - 130 | |
| 13C9-PFNA | 3.73 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.73 | 114 | 40 - 130 | |
| 13C7-PFUnA | 3.73 | 113 | 30 - 130 | |
| 13C2-PFDOA | 3.73 | 111 | 10 - 130 | |
| 13C2-PFTEDA | 3.73 | 108 | 10 - 130 | |
| 13C2-PFHxDA | 7.46 | 78.4 | 20 - 150 | |
| 13C3-PFBS | 7.46 | 113 | 40 - 135 | |
| 13C3-PFHXS | 7.46 | 110 | 40 - 130 | |
| 13C8-PFOS | 7.46 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 121 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 124 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.8 | 108 | 20 - 150 | |
| 13C8-PFOSA | 7.46 | 48.7 | 40 - 130 | |
| D3-NMEFOSA | 7.46 | 27.6 | 10 - 130 | |
| D5-NETFOSA | 7.46 | 25.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 96.4 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 103 | 25 - 135 | |
| D7-NMEFOSE | 74.6 | 33.1 | 10 - 130 | |
| D9-NETFOSE | 74.6 | 30.8 | 10 - 130 | |
| 13C3-HFPO-DA | 29.8 | 98.9 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0094
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0200-MSD1 ) ng/L** | Lab File ID: S2024-03-19B (12) | | | Analyzed: 03/19/24 20:14 |
| 13C4-PFBA | 29.8 | 92.3 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.46 | 104 | 40 - 130 | |
| 13C4-PFHPA | 7.46 | 107 | 40 - 130 | |
| 13C8-PFOA | 7.46 | 112 | 40 - 130 | |
| 13C9-PFNA | 3.73 | 113 | 40 - 130 | |
| 13C6-PFDA | 3.73 | 112 | 40 - 130 | |
| 13C7-PFUnA | 3.73 | 105 | 30 - 130 | |
| 13C2-PFDOA | 3.73 | 105 | 10 - 130 | |
| 13C2-PFTEDA | 3.73 | 97.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.46 | 76.5 | 20 - 150 | |
| 13C3-PFBS | 7.46 | 111 | 40 - 135 | |
| 13C3-PFHXS | 7.46 | 112 | 40 - 130 | |
| 13C8-PFOS | 7.46 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 111 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 116 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.8 | 123 | 20 - 150 | |
| 13C8-PFOSA | 7.46 | 51.3 | 40 - 130 | |
| D3-NMEFOSA | 7.46 | 30.0 | 10 - 130 | |
| D5-NETFOSA | 7.46 | 28.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 104 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 105 | 25 - 135 | |
| D7-NMEFOSE | 74.6 | 31.7 | 10 - 130 | |
| D9-NETFOSE | 74.6 | 29.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.8 | 100 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0094T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0200-BLK1T Batch:T BDC0200T Prepared:T 03/18/2024 11:40/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0200-BS1T | S2024-03-19B (9)T | 19:13T |
| MRL CheckT | BDC0200-MRL1T | S2024-03-19B (10)T | 19:33T |
| Matrix SpikeT | BDC0200-MS1T | S2024-03-19B (11)T | 19:54T |
| Matrix Spike DupT | BDC0200-MSD1T | S2024-03-19B (12)T | 20:14T |
| MW-22-3T | 24C0094-01T | S2024-03-19B (15)T | 21:16T |
| MW-22-2T | 24C0094-02T | S2024-03-19B (16)T | 21:36T |
| MW-22-1T | 24C0094-03T | S2024-03-19B (17)T | 21:57T |
| MW-3-4T | 24C0094-04T | S2024-03-19B (18)T | 22:17T |
| MW-3-3T | 24C0094-05T | S2024-03-19B (19)T | 22:38T |
| MW-3-2T | 24C0094-06T | S2024-03-19B (20)T | 22:58T |
| MW-3-1T | 24C0094-07T | S2024-03-19B (21)T | 23:19T |
| EB-4-031424T | 24C0094-08T | S2024-03-19B (22)T | 23:39T |
| FB-4-031424T | 24C0094-09T | S2024-03-19B (23)T | 00:00T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | NDa | 0.15a | 0.40a | Ua |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0642a | 0.064a | 0.40a | MI3, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0200A | Laboratory ID:A | BDC0200-BS1A |
| Column:A | | | |

| ANALYTE | PIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 15.5A | 97.0A | 70 - 140A |
| PFPeA | 8.00A | 8.54A | 107A | 65 - 135A |
| PFHxA | 4.00A | 3.96A | 99.0A | 70 - 145A |
| PFHpA | 4.00A | 4.20A | 105A | 70 - 150A |
| PFOA | 4.00A | 4.39A | 110A | 70 - 150A |
| PFNA | 4.00A | 4.27A | 107A | 70 - 150A |
| PFDA | 4.00A | 3.96A | 98.9A | 70 - 140A |
| PFUnA | 4.00A | 4.34A | 109A | 70 - 145A |
| PFDoA | 4.00A | 4.22A | 106A | 70 - 140A |
| PFTrDA | 4.00A | 4.20A | 105A | 65 - 140A |
| PFTeDA | 4.00A | 4.43A | 111A | 60 - 140A |
| PFHxDA | 4.00A | 4.38A | 110A | 40 - 150A |
| PFODA | 4.00A | 3.97A | 99.3A | 40 - 150A |
| PFBSA | 3.54A | 3.60A | 102A | 60 - 145A |
| PFPeSA | 3.76A | 4.01A | 107A | 65 - 140A |
| PFHxSA | 3.66A | 3.72A | 102A | 65 - 145A |
| PFHpSA | 3.82A | 4.17A | 109A | 70 - 150A |
| PFOSA | 3.72A | 3.78A | 102A | 55 - 150A |
| PFNSA | 3.84A | 4.00A | 104A | 65 - 145A |
| PFDSA | 3.86A | 4.08A | 106A | 60 - 145A |
| PFDoSA | 3.88A | 3.73A | 96.2A | 50 - 145A |
| 4:2FTSA | 15.0A | 15.9A | 106A | 70 - 145A |
| 6:2FTSA | 15.2A | 16.5A | 108A | 65 - 155A |
| 8:2FTSA | 15.4A | 16.8A | 109A | 60 - 150A |
| 10:2FTSA | 15.4A | 16.9A | 110A | 40 - 150A |
| PFOSA | 4.00A | 4.55A | 114A | 70 - 145A |
| NMeFOSA | 16.0A | 17.5A | 109A | 60 - 150A |
| NEtFOSA | 16.0A | 16.7A | 105A | 65 - 145A |
| NMeFOSA | 4.00A | 4.28A | 107A | 50 - 140A |
| NEtFOSA | 4.00A | 4.16A | 104A | 70 - 145A |
| NMeFOSEA | 16.0A | 16.8A | 105A | 70 - 145A |
| NEtFOSEA | 16.0A | 17.6A | 110A | 70 - 135A |
| HFPO-DA | 4.00A | 4.20A | 105 | 70 - 140A |
| DONA | 3.78A | 4.05A | 107A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0200A | Laboratory ID:A | BDC0200-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.47A | 105A | 70 - 140A |
| PFMPA | 8.00A | 9.00A | 112A | 55 - 140A |
| PFMBA | 8.00A | 8.26A | 103A | 60 - 150A |
| NFDHA | 8.00A | 8.02A | 100A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.95A | 106A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 4.05A | 107A | 55 - 160A |
| 3:3FTCA | 16.0A | 14.6A | 91.4A | 65 - 130A |
| 5:3FTCA | 16.0A | 15.3A | 95.7A | 70 - 135A |
| 7:3FTCA | 16.0A | 14.0A | 87.6A | 50 - 145A |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-3-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MS1- |
| Column:- | | Sample Lab ID:- | 24C0094-06- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 14.9- | 3.00- | 17.5- | 97.3- | 70 - 140- |
| PFPeA- | 7.46- | 0.966- | 8.71- | 104- | 65 - 135- |
| PFHxA- | 3.73- | 0.799- | 4.50- | 99.1- | 70 - 145- |
| PFHpA- | 3.73- | 0.278- | 4.31- | 108- | 70 - 150- |
| PFOA- | 3.73- | 0.559- | 4.52- | 106- | 70 - 150- |
| PFNA- | 3.73- | 0.101- | 4.17- | 109- | 70 - 150- |
| PFDA- | 3.73- | ND- | 3.74- | 100- | 70 - 140- |
| PFUnA- | 3.73- | ND- | 3.80- | 102- | 70 - 145- |
| PFDoA- | 3.73- | ND- | 4.03- | 108- | 70 - 140- |
| PFTrDA- | 3.73- | ND- | 3.78- | 101- | 65 - 140- |
| PFTeDA- | 3.73- | ND- | 3.85- | 103- | 60 - 140- |
| PFHxDA- | 3.73- | ND- | 4.25- | 114- | 40 - 150- |
| PFODA- | 3.73- | ND- | 4.79- | 128- | 40 - 150- |
| PFBS- | 3.30- | 3.33- | 6.98- | 111- | 60 - 145- |
| PFPeS- | 3.51- | 0.237- | 4.12- | 111- | 65 - 140- |
| PFHxS- | 3.41- | 1.39- | 5.09- | 108- | 65 - 145- |
| PFHpS- | 3.56- | 0.0721- | 4.14- | 114- | 70 - 150- |
| PFOS- | 3.47- | 3.35- | 6.39- | 87.7- | 55 - 150- |
| PFNS- | 3.58- | ND- | 3.90- | 109- | 65 - 145- |
| PFDS- | 3.60- | ND- | 3.61- | 100- | 60 - 145- |
| PFDoS- | 3.62- | ND- | 3.49- | 96.5- | 50 - 145- |
| 4:2FTS- | 14.0- | ND- | 14.2- | 101- | 70 - 145- |
| 6:2FTS- | 14.2- | ND- | 15.0- | 106- | 65 - 155- |
| 8:2FTS- | 14.3- | ND- | 16.8- | 118- | 60 - 150- |
| 10:2FTS- | 14.4- | ND- | 16.1- | 112- | 40 - 150- |
| PFOSA- | 3.73- | ND- | 4.13- | 111- | 70 - 145- |
| NMeFOSA- | 14.9- | ND- | 16.4- | 110- | 60 - 150- |
| NEtFOSA- | 14.9- | ND- | 15.9- | 107- | 65 - 145- |
| NMeFOSAA- | 3.73- | ND- | 3.82- | 103- | 50 - 140- |
| NEtFOSAA- | 3.73- | ND- | 3.82- | 102- | 70 - 145- |
| NMeFOSE- | 14.9- | ND- | 15.2- | 102- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-3-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MS1- |
| Column:- | | Sample Lab ID:- | 24C0094-06- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 14.9- | ND- | 16.3- | 109- | 70 - 135- |
| HFPO-DA- | 3.73- | ND- | 4.07- | 109- | 70 - 140- |
| ADONA- | 3.53- | ND- | 4.11- | 117- | 65 - 145- |
| PFEESA- | 6.64- | ND- | 6.85- | 103- | 70 - 140- |
| PFMPA- | 7.46- | ND- | 8.48- | 114- | 55 - 140- |
| PFMBA- | 7.46- | ND- | 7.86- | 105- | 60 - 150- |
| NFDHA- | 7.46- | ND- | 6.92- | 92.8- | 50 - 150- |
| 9Cl-PF3ONS- | 3.49- | ND- | 3.68- | 106- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.53- | ND- | 3.77- | 107- | 55 - 160- |
| 3:3FTCA- | 14.9- | ND- | 12.9- | 86.3- | 65 - 130- |
| 5:3FTCA- | 14.9- | ND- | 13.1- | 88.0- | 70 - 135- |
| 7:3FTCA- | 14.9- | ND- | 12.8- | 85.6- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-3-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0094-06- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.9- | 17.9- | 100- | 2.28- | 30- | 70 - 140- |
| PFPeA- | 7.46- | 8.83- | 105- | 1.42- | 30- | 65 - 135- |
| PFHxA- | 3.73- | 4.78- | 107- | 6.09- | 30- | 70 - 145- |
| PFHpA- | 3.73- | 4.15- | 104- | 3.93- | 30- | 70 - 150- |
| PFOA- | 3.73- | 4.58- | 108- | 1.24- | 30- | 70 - 150- |
| PFNA- | 3.73- | 3.96- | 104- | 5.02- | 30- | 70 - 150- |
| PFDA- | 3.73- | 3.70- | 99.2- | 1.18- | 30- | 70 - 140- |
| PFUnA- | 3.73- | 4.08- | 109- | 7.00- | 30- | 70 - 145- |
| PFDoA- | 3.73- | 4.12- | 110- | 2.27- | 30- | 70 - 140- |
| PFTrDA- | 3.73- | 3.74- | 100- | 1.03- | 30- | 65 - 140- |
| PFTeDA- | 3.73- | 4.00- | 107- | 3.86- | 30- | 60 - 140- |
| PFHxDA- | 3.73- | 4.03- | 108- | 5.38- | 30- | 40 - 150- |
| PFODA- | 3.73- | 4.42- | 118- | 8.07- | 30- | 40 - 150- |
| PFBS- | 3.30- | 6.84- | 106- | 2.01- | 30- | 60 - 145- |
| PFPeS- | 3.50- | 3.94- | 106- | 4.47- | 30- | 65 - 140- |
| PFHxS- | 3.41- | 4.91- | 103- | 3.43- | 30- | 65 - 145- |
| PFHpS- | 3.56- | 4.04- | 112- | 2.41- | 30- | 70 - 150- |
| PFOS- | 3.47- | 6.98- | 105- | 8.70- | 30- | 55 - 150- |
| PFNS- | 3.58- | 3.95- | 110- | 1.26- | 30- | 65 - 145- |
| PFDS- | 3.60- | 3.82- | 106- | 5.79- | 30- | 60 - 145- |
| PFDoS- | 3.62- | 3.80- | 105- | 8.55- | 30- | 50 - 145- |
| 4:2FTS- | 14.0- | 15.4- | 110- | 8.35- | 30- | 70 - 145- |
| 6:2FTS- | 14.2- | 16.0- | 113- | 6.56- | 30- | 65 - 155- |
| 8:2FTS- | 14.3- | 16.1- | 112- | 4.56- | 30- | 60 - 150- |
| 10:2FTS- | 14.4- | 14.9- | 103- | 8.21- | 30- | 40 - 150- |
| PFOSA- | 3.73- | 3.89- | 104- | 5.98- | 30- | 70 - 145- |
| NMeFOSA- | 14.9- | 17.6- | 118- | 7.24- | 30- | 60 - 150- |
| NEtFOSA- | 14.9- | 16.9- | 113- | 5.79- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-3-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0094- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0094-06- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.73- | 3.88- | 104- | 1.40- | 30- | 50 - 140- |
| NEtFOSAA- | 3.73- | 4.12- | 111- | 7.59- | 30- | 70 - 145- |
| NMeFOSE- | 14.9- | 16.6- | 111- | 9.01- | 30- | 70 - 145- |
| NEtFOSE- | 14.9- | 16.6- | 112- | 2.21- | 30- | 70 - 135- |
| HFPO-DA- | 3.73- | 3.84- | 103- | 5.61- | 30- | 70 - 140- |
| ADONA- | 3.52- | 3.97- | 113- | 3.50- | 30- | 65 - 145- |
| PFEESA- | 6.64- | 6.81- | 103- | 0.626- | 30- | 70 - 140- |
| PFMPA- | 7.46- | 8.12- | 109- | 4.27- | 30- | 55 - 140- |
| PFMBA- | 7.46- | 7.98- | 107- | 1.48- | 30- | 60 - 150- |
| NFDHA- | 7.46- | 7.33- | 98.3- | 5.71- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.49- | 3.98- | 114- | 7.73- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.52- | 4.07- | 116- | 7.68- | 30- | 55 - 160- |
| 3:3FTCA- | 14.9- | 13.1- | 87.9- | 1.76- | 30- | 65 - 130- |
| 5:3FTCA- | 14.9- | 14.7- | 98.4- | 11.0- | 30- | 70 - 135- |
| 7:3FTCA- | 14.9- | 14.0- | 94.1- | 9.35- | 30- | 50 - 145- |

# CALIBRATION SUMMARYL

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.23574 x (std. dev. = 0.01485) (weighting: None) | %RSE=6.3 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49841 x (std. dev. = 0.03017) (weighting: None) | %RSE=6.1 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50512 x (std. dev. = 0.02794) (weighting: None) | %RSE=5.5 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48038 x (std. dev. = 0.02636) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49065 x (std. dev. = 0.03123) (weighting: None) | %RSE=6.4 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 9.99867e-4 x^2 + 0.48413 x + 0.01226 (r = 0.99905) (weighting: 1 / x) | %RSE=7.3 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00506 x (std. dev. = 0.07345) (weighting: None) | %RSE=7.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 1.02176 x (std. dev. = 0.07981) (weighting: None) | %RSE=7.8 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.92494 x (std. dev. = 0.04119) (weighting: None) | %RSE=4.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00604 x (std. dev. = 0.03628) (weighting: None) | %RSE=3.6 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98412 x (std. dev. = 0.02772) (weighting: None) | %RSE=2.8 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93655 x (std. dev. = 0.03297) (weighting: None) | %RSE=3.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.47691 x (std. dev. = 0.01946) (weighting: None) | %RSE=4.1 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29836 x (std. dev. = 0.01281) (weighting: None) | %RSE=4.3 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.22968 x (std. dev. = 0.01218) (weighting: None) | %RSE=5.3 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.71812 x (std. dev. = 0.05325) (weighting: None) | %RSE=7.4 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80977 x (std. dev. = 0.02624) (weighting: None) | %RSE=3.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.56999 x (std. dev. = 0.03426) (weighting: None) | %RSE=6.0 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53562 x (std. dev. = 0.02668) (weighting: None) | %RSE=5.0 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.51901 x (std. dev. = 0.02103) (weighting: None) | %RSE=4.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.63587 x (std. dev. = 0.04565) (weighting: None) | %RSE=7.2 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.56432 x (std. dev. = 0.04069) (weighting: None) | %RSE=7.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.45261 x (std. dev. = 0.08690) (weighting: None) | %RSE=3.5 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.78588 x (std. dev. = 0.04847) (weighting: None) | %RSE=6.2 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.91008 x (std. dev. = 0.10404) (weighting: None) | %RSE=11.4 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.37234 x (std. dev. = 0.02276) (weighting: None) | %RSE=6.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.57679 x (std. dev. = 0.13834) (weighting: None) | %RSE=5.4 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.07289 x (std. dev. = 0.21947) (weighting: None) | %RSE=7.1 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.50001 x (std. dev. = 0.02156) (weighting: None) | %RSE=4.3 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.28942 x (std. dev. = 0.09531) (weighting: None) | %RSE=7.4 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.98582 x (std. dev. = 0.09760) (weighting: None) | %RSE=4.9 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.23988 x (std. dev. = 0.08781) (weighting: None) | %RSE=3.9 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23844 x (std. dev. = 0.01045) (weighting: None) | %RSE=4.4 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24455 x (std. dev. = 0.01542) (weighting: None) | %RSE=6.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21938 x (std. dev. = 0.01283) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17769 x (std. dev. = 0.01004) (weighting: None) | %RSE=5.6 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07371 x (std. dev. = 0.00395) (weighting: None) | %RSE=5.4 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.81069 x (std. dev. = 0.04465) (weighting: None) | %RSE=5.5 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.61575 x (std. dev. = 0.03779) (weighting: None) | %RSE=6.1 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16029 x (std. dev. = 0.01308) (weighting: None) | %RSE=8.2 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.43566 x (std. dev. = 0.03766) (weighting: None) | %RSE=8.6 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.35868 x (std. dev. = 0.02163) (weighting: None) | %RSE=6.0 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 0.86685 x (std. dev. = 0.02525) (weighting: None) | %RSE=2.9 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.67374 x (std. dev. = 0.02028) (weighting: None) | %RSE=3.0 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30098 x (std. dev. = 0.02588) (weighting: None) | %RSE=8.6 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.05747 x (std. dev. = 0.00909) (weighting: None) | %RSE=15.8 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.53288 x (std. dev. = 0.02986) (weighting: None) | %RSE=5.6 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.87447 x (std. dev. = 0.07090) (weighting: None) | %RSE=8.1 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53158 x (std. dev. = 0.01736) (weighting: None) | %RSE=3.3 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.40781 x (std. dev. = 0.04430) (weighting: None) | %RSE=10.9 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39365 x (std. dev. = 0.02523) (weighting: None) | %RSE=6.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 238433.9480 x | %RSD=15.9 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 126855.7219 x | %RSD=7.8 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 395316.5081 x | %RSD=6.4 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 284407.9695 x | %RSD=7.7 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 292026.6901 x | %RSD=5.1 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 949032.5442 x | %RSD=6.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 761641.2582 x | %RSD=6.3 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 9.1391 x | %RSD=3.3 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.4634 x | %RSD=11.5 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.5633 x | %RSD=6.5 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 5.0762 x | %RSD=7.1 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1429 x | %RSD=4.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9805 x | %RSD=6.0 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1207 x | %RSD=4.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3184 x | %RSD=5.0 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3427 x | %RSD=4.5 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1434 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9523 x | %RSD=6.6 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.8070 x | %RSD=5.2 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4423 x | %RSD=5.2 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1564 x | %RSD=6.3 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.6235 x | %RSD=9.6 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.8661 x | %RSD=7.0 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.4635 x | %RSD=12.9 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.0591 x | %RSD=7.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 1.9110 x | %RSD=6.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4053 x | %RSD=5.6 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4347 x | %RSD=6.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.1097 x | %RSD=6.8 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0114 x | %RSD=8.2 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8214 x | %RSD=7.4 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8487 x | %RSD=6.5 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 8.3148 x | %RSD=5.9 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1684 x | %RSD=4.0 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9740 x | %RSD=5.2 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result}\left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

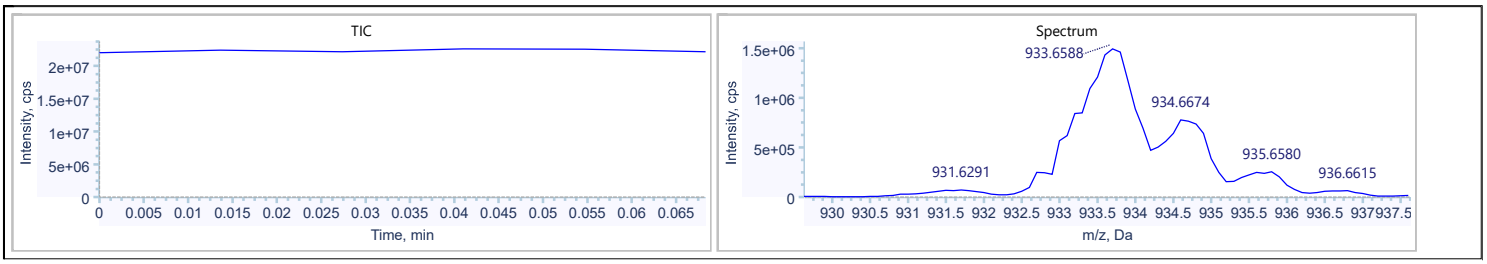


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

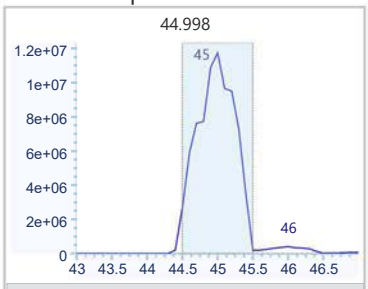


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

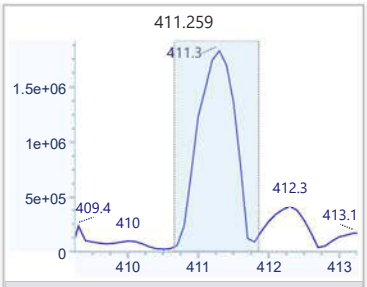


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

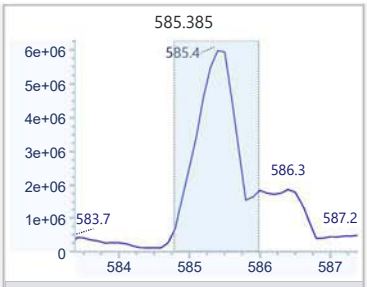


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

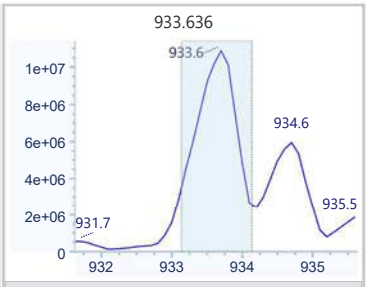


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

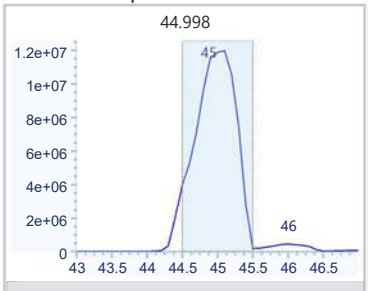


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

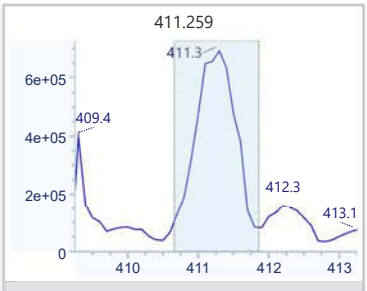


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

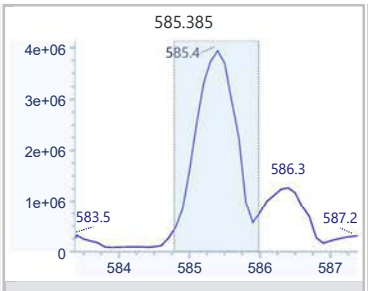


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

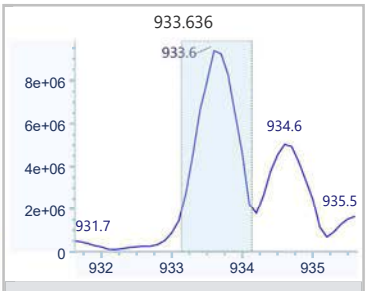


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

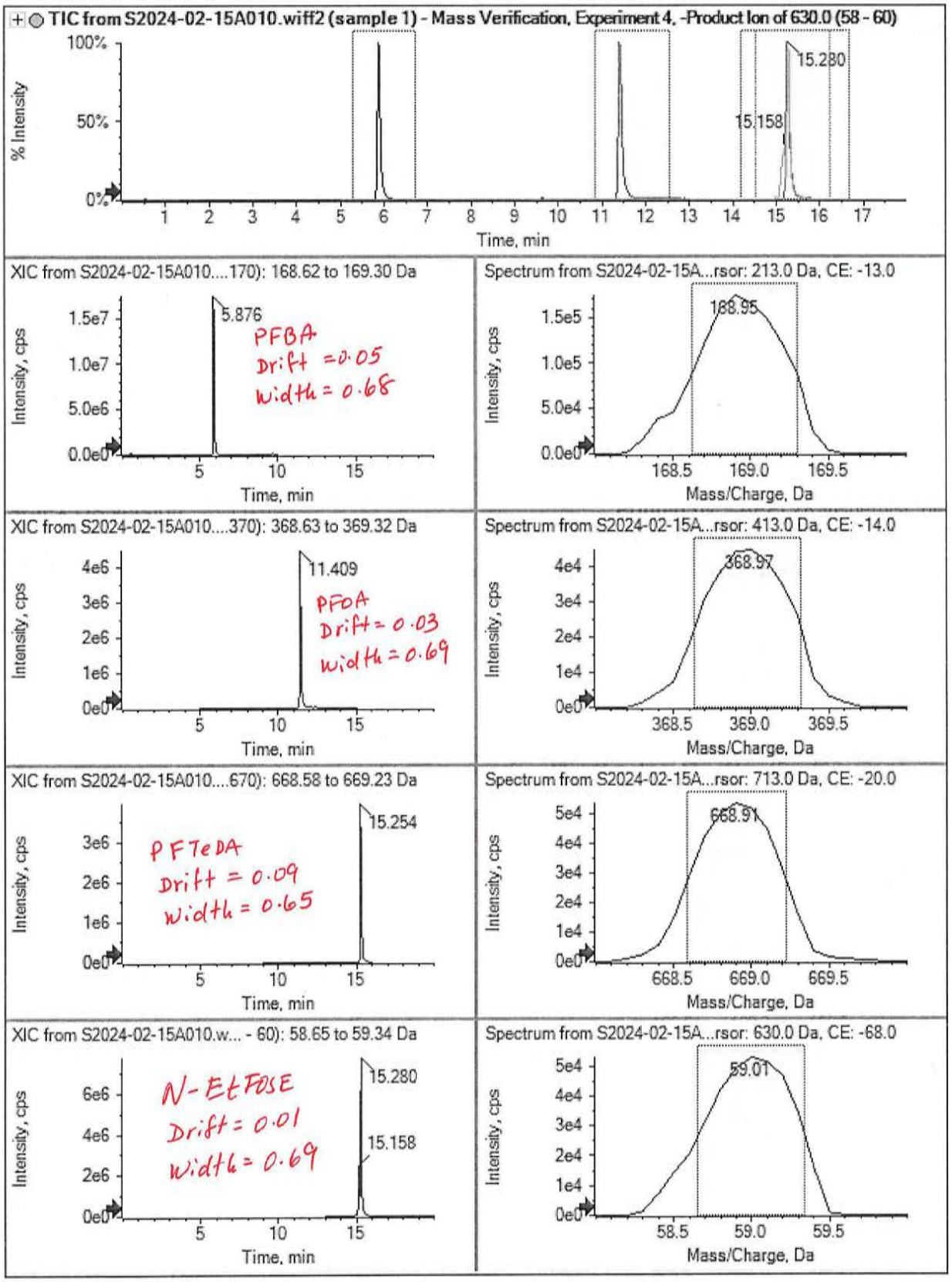

# EPA 1633A

Initial Calibration: SD00991 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 56754<br>( 163.0 / 69.0 ) 1270 | ( 2.79 , 0.74 )<br>( N/A , 0.00 , -0.4) | 384.2<br>53.0 | 0.0224<br>82.4<br>82.4 | 0.1977 | N/A | 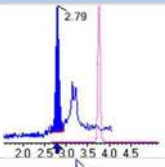 | 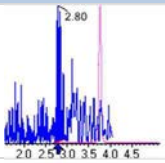 | |
| PFBA | ( 213.0 / 169.0 ) 136258 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 106.2 | N/A<br>0.0<br>0.0 | 0.4489 | N/A | 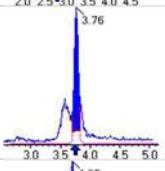 | | |
| PFPeA | ( 263.0 / 219.0 ) 51948<br>( 263.0 / 69.0 ) 452 | ( 4.85 , 1.00 )<br>( 0.00 , N/A , -1.2) | 324.2<br>10.2 | 0.0087<br>72.8<br>72.8 | 0.2066 | N/A | 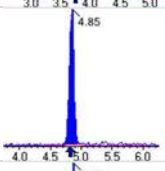 | 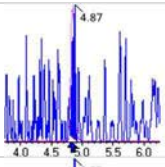 | |
| PFHxA | ( 313.0 / 269.0 ) 28303<br>( 313.0 / 119.0 ) 2598 | ( 6.07 , 1.00 )<br>( 0.00 , N/A , -0.6) | 211.6<br>65.5 | 0.0918<br>79.1<br>79.1 | 0.1048 | N/A | 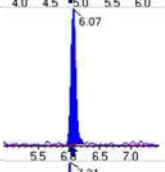 | 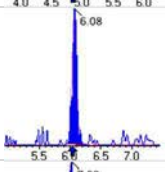 | |
| PFHpA | ( 363.0 / 319.0 ) 29431<br>( 363.0 / 169.0 ) 10099 | ( 7.21 , 1.00 )<br>( 0.00 , N/A , -0.5) | 207.3<br>144.2 | 0.3431<br>113.2<br>113.2 | 0.0936 | N/A | 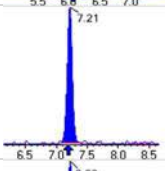 | 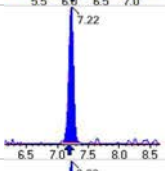 | |
| PFOA | ( 413.0 / 369.0 ) 52214<br>( 413.0 / 169.0 ) 20858 | ( 8.22 , 1.00 )<br>( 0.00 , N/A , 0.0) | 69.2<br>131.3 | 0.3995<br>109.3<br>109.3 | 0.0973 | N/A | 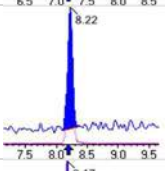 | 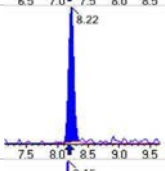 | |
| PFNA | ( 463.0 / 419.0 ) 24013<br>( 463.0 / 169.0 ) 7912 | ( 9.17 , 1.00 )<br>( 0.01 , N/A , 0.5) | 245.2<br>151.2 | 0.3295<br>129.1<br>129.1 | 0.0870 | N/A | 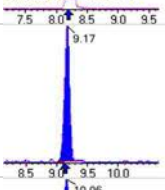 | 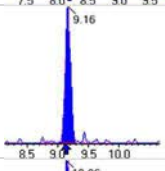 | |
| PFDA | ( 513.0 / 469.0 ) 38668<br>( 513.0 / 169.0 ) 3883 | ( 10.06 , 1.00 )<br>( -0.01 , N/A , 0.0) | 462.4<br>300.3 | 0.1004<br>85.7<br>85.7 | 0.1143 | N/A | 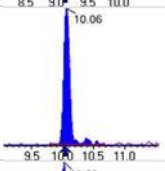 | 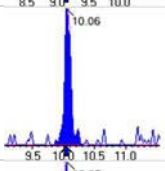 | |
| PFUnA | ( 563.0 / 519.0 ) 36147<br>( 563.0 / 169.0 ) 4589 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , -1.0) | 249.6<br>92.0 | 0.1270<br>89.6<br>89.6 | 0.0946 | N/A | 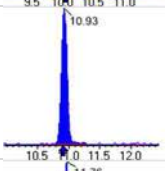 | 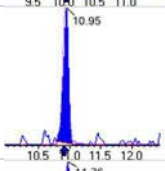 | |
| PFDoA | ( 613.0 / 569.0 ) 40420<br>( 613.0 / 169.0 ) 7186 | ( 11.76 , 1.00 )<br>( 0.00 , N/A , -0.5) | 255.5<br>118.2 | 0.1778<br>112.5<br>112.5 | 0.0950 | N/A | 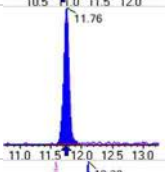 | 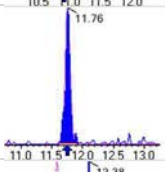 | |
| PFTrDA | ( 663.0 / 619.0 ) 40921<br>( 663.0 / 169.0 ) 9844 | ( 12.38 , 1.05 )<br>( N/A , 0.01 , -0.1) | 299.5<br>147.5 | 0.2406<br>93.5<br>93.5 | 0.0984 | N/A | 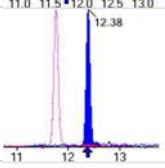 | 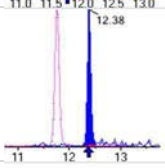 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30255<br>( 713.0 / 169.0 ) 9045 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 201.3<br>91.0 | 0.2990<br>110.8<br>110.8 | 0.0932 | N/A | 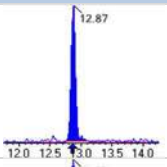 | 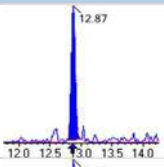 | |
| PFHxDA | ( 813.0 / 769.0 ) 27334<br>( 813.0 / 169.0 ) 7950 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.3) | 174.8<br>67.9 | 0.2908<br>118.9<br>118.9 | 0.1034 | N/A | 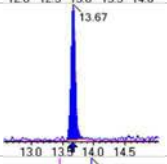 | 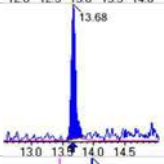 | |
| PFODA | ( 913.0 / 869.0 ) 15819<br>( 913.0 / 169.0 ) 6681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , -0.4) | 73.9<br>28.2 | 0.4223<br>117.9<br>117.9 | 0.0956 | N/A | 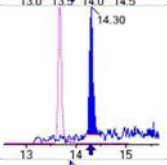 | 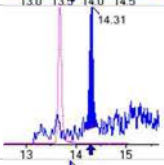 | |
| PFBS | ( 299.0 / 80.0 ) 35573<br>( 299.0 / 99.0 ) 26416 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.2) | 334.4<br>161.3 | 0.7426<br>105.0<br>105.0 | 0.0792 | N/A | 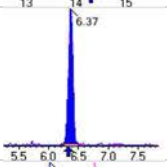 | 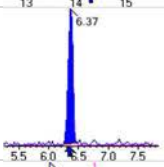 | |
| PFPeS | ( 349.0 / 80.0 ) 97489<br>( 349.0 / 99.0 ) 33196 | ( 7.61 , 0.88 )<br>( N/A , 0.02 , 0.1) | 355.9<br>243.8 | 0.3405<br>94.7<br>94.7 | 0.0909 | N/A | 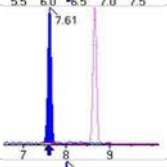 | 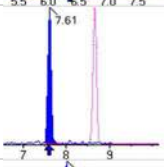 | |
| PFHxS | ( 399.0 / 80.0 ) 110405<br>( 399.0 / 99.0 ) 38767 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , -0.1) | 482.8<br>534.8 | 0.3511<br>110.3<br>110.3 | 0.0887 | N/A | 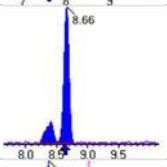 | 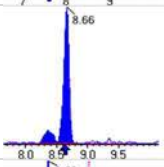 | |
| PFHpS | ( 449.0 / 80.0 ) 83548<br>( 449.0 / 99.0 ) 26287 | ( 9.63 , 0.92 )<br>( N/A , 0.02 , 0.3) | 322.3<br>244.1 | 0.3146<br>118.9<br>118.9 | 0.0858 | N/A | 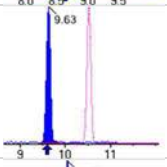 | 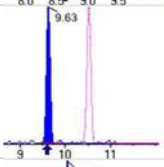 | |
| PFOS | ( 499.0 / 80.0 ) 87691<br>( 499.0 / 99.0 ) 22883 | ( 10.52 , 1.00 )<br>( 0.00 , N/A , 0.4) | 345.3<br>1768.7 | 0.2609<br>111.6<br>111.6 | 0.0934 | N/A | 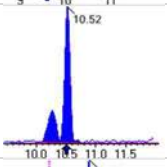 | 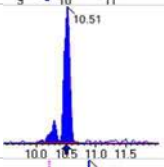 | |
| PFNS | ( 549.0 / 80.0 ) 83900<br>( 549.0 / 99.0 ) 23316 | ( 11.37 , 1.08 )<br>( N/A , 0.03 , 0.3) | 349.0<br>203.8 | 0.2779<br>102.0<br>102.0 | 0.0954 | N/A | 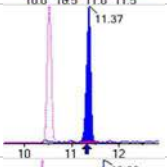 | 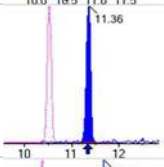 | |
| PFDS | ( 599.0 / 80.0 ) 108245<br>( 599.0 / 99.0 ) 28207 | ( 12.06 , 1.15 )<br>( N/A , 0.01 , -0.3) | 392.8<br>137.7 | 0.2606<br>95.8<br>95.8 | 0.1008 | N/A | 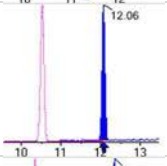 | 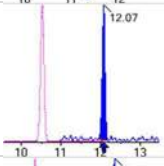 | |
| PFDoS | ( 699.0 / 80.0 ) 90182<br>( 699.0 / 99.0 ) 22019 | ( 12.98 , 1.23 )<br>( N/A , 0.01 , -0.1) | 480.9<br>258.2 | 0.2442<br>104.5<br>104.5 | 0.0953 | N/A | 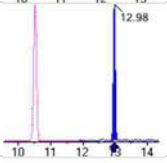 | 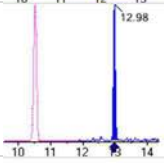 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 138266<br>( 327.0 / 81.0 ) 132939 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1481.0<br>723.3 | 0.9615<br>110.2<br>110.2 | 0.3493 | N/A | 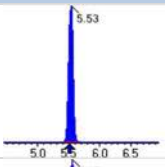 | 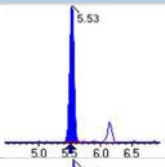 | |
| 6:2FTS | ( 427.0 / 407.0 ) 137083<br>( 427.0 / 81.0 ) 177481 | ( 7.65 , 1.00 )<br>( -0.01 , N/A , -0.3) | 1795.6<br>972.6 | 1.2947<br>103.2<br>103.2 | 0.3738 | N/A | 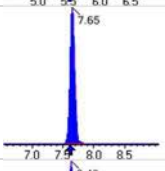 | 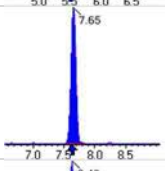 | |
| 8:2FTS | ( 527.0 / 507.0 ) 135114<br>( 527.0 / 81.0 ) 148723 | ( 9.43 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1178.6<br>706.0 | 1.1007<br>101.2<br>101.2 | 0.3727 | N/A | 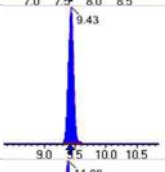 | 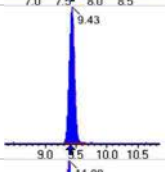 | |
| 10:2FTS | ( 627.0 / 607.0 ) 113285<br>( 627.0 / 81.0 ) 169067 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.0) | 776.4<br>354.6 | 1.4924<br>103.7<br>103.7 | 0.3842 | N/A | 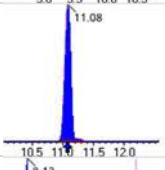 | 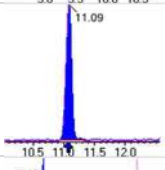 | |
| PFBSA | ( 297.9 / 78.0 ) 77257<br>( 297.9 / 278.0 ) 42 | ( 8.13 , 0.57 )<br>( N/A , 0.02 , 0.5) | 590.4<br>6.4 | 0.0005<br>39.4<br>39.4 | 0.0966 | N/A | 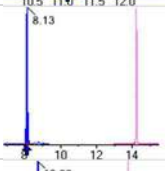 | 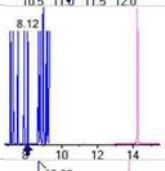 | |
| PFHxSA | ( 397.9 / 78.0 ) 102666<br>( 397.9 / 378.0 ) 421 | ( 10.99 , 0.76 )<br>( N/A , 0.02 , 0.9) | 582.4<br>24.9 | 0.0041<br>100.4<br>100.4 | 0.0979 | N/A | 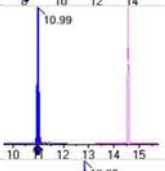 | 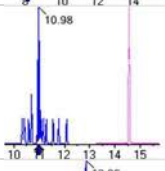 | |
| PFOSA | ( 498.0 / 78.0 ) 74467<br>( 498.0 / 478.0 ) 886 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.5) | 606.2<br>33.7 | 0.0119<br>84.8<br>84.8 | 0.0950 | N/A | 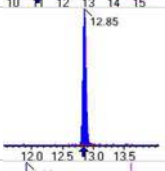 | 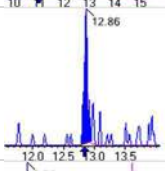 | |
| TFSI | ( 279.7 / 147.0 ) 175179<br>( 279.7 / 211.0 ) 15047 | ( 8.23 , 0.64 )<br>( N/A , 0.03 , -0.2) | 46.0<br>21.9 | 0.0859<br>102.2<br>102.2 | 0.0849 | N/A | 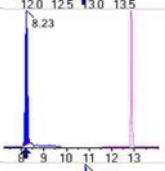 | 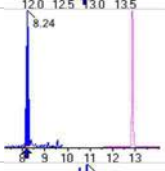 | |
| NMeFOSA | ( 512.0 / 219.0 ) 57698<br>( 512.0 / 169.0 ) 44722 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 560.7<br>223.4 | 0.7751<br>103.6<br>103.6 | 0.3745 | N/A | 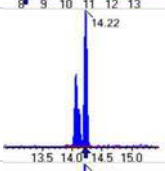 | 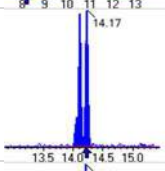 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72453<br>( 526.0 / 169.0 ) 88312 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.5) | 828.6<br>691.6 | 1.2189<br>98.7<br>98.7 | 0.3790 | N/A | 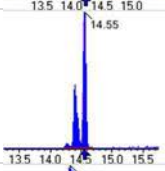 | 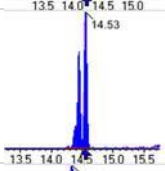 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 21494<br>( 570.0 / 483.0 ) 9989 | ( 10.33 , 1.00 )<br>( 0.01 , N/A , 0.1) | 69489.4<br>2801.3 | 0.4647<br>106.0<br>106.0 | 0.1015 | N/A | 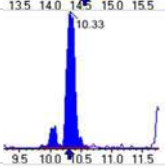 | 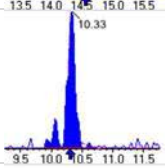 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 18396<br>( 584.0 / 526.0 ) 12082 | ( 10.86 , 1.00 ) ( 0.01 , N/A , 0.6) | 62964.4<br>389.2 | 0.6568<br>106.5<br>106.5 | 0.0917 | N/A | 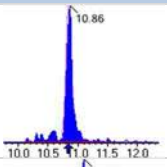 | 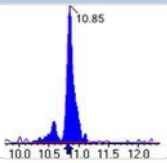 | |
| NMeFOSE | ( 616.0 / 59.0 ) 32728 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 202.5 | N/A<br>0.0<br>0.0 | 0.4046 | N/A | 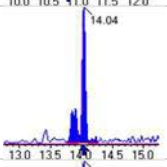 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 24283 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 263.9 | N/A<br>0.0<br>0.0 | 0.3613 | N/A | 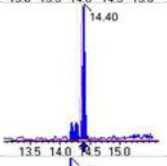 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7677<br>( 285.0 / 185.0 ) 19134 | ( 6.53 , 1.00 ) ( 0.00 , N/A , -0.1) | 309.3<br>127.0 | 2.4924<br>90.1<br>90.1 | 0.1012 | N/A | 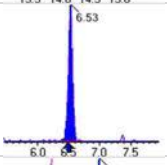 | 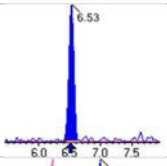 | |
| ADONA | ( 377.0 / 85.0 ) 86497<br>( 377.0 / 251.0 ) 6881 | ( 7.61 , 1.16 ) ( N/A , 0.02 , -0.1) | 669.7<br>111.4 | 0.0796<br>78.0<br>78.0 | 0.0977 | N/A | 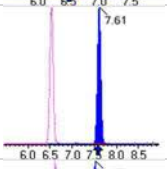 | 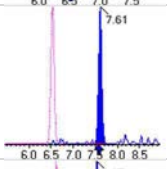 | |
| PFEESA | ( 315.0 / 135.0 ) 32797<br>( 315.0 / 83.0 ) 24495 | ( 6.97 , 1.15 ) ( N/A , 0.02 , -0.2) | 555.1<br>75.6 | 0.7469<br>134.0<br>134.0 | 0.1691 | N/A | 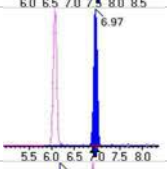 | 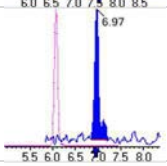 | |
| PFMPA | ( 229.0 / 85.0 ) 14437 | ( 4.15 , 0.86 ) ( N/A , 0.01 , 0.0) | 396.2 | N/A<br>0.0<br>0.0 | 0.1810 | N/A | 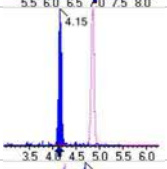 | | |
| PFMBA | ( 279.0 / 85.0 ) 38487 | ( 5.21 , 1.08 ) ( N/A , 0.00 , 0.0) | 415.6 | N/A<br>0.0<br>0.0 | 0.1775 | N/A | 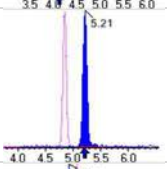 | | |
| NFDHA | ( 295.0 / 201.0 ) 19867<br>( 295.0 / 85.0 ) 19074 | ( 5.94 , 0.98 ) ( N/A , 0.02 , 0.4) | 825.6<br>224.5 | 0.9601<br>89.0<br>89.0 | 0.1970 | N/A | 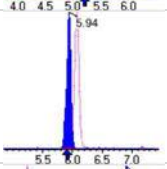 | 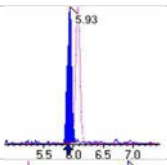 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86451<br>( 533.0 / 353.0 ) 30185 | ( 11.17 , 1.71 ) ( N/A , 0.02 , -0.2) | 1132.8<br>400.3 | 0.3492<br>111.6<br>111.6 | 0.0904 | N/A | 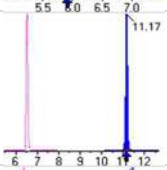 | 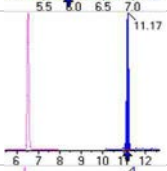 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 69462<br>( 633.0 / 453.0 ) 22673 | ( 12.48 , 1.91 ) ( N/A , 0.01 , -0.1) | 820.0<br>211.9 | 0.3264<br>98.3<br>98.3 | 0.0945 | N/A | 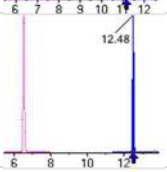 | 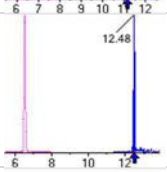 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 44635<br>( 461.0 / 381.2 ) 17189 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.6) | 466.0<br>312.6 | 0.3851<br>96.6<br>96.6 | 0.0843 | N/A | 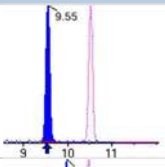 | 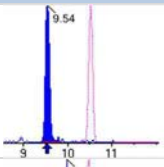 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 4575<br>( 241.0 / 117.0 ) 11441 | ( 4.41 , 0.91 ) ( N/A , 0.01 , -0.2) | 329.5<br>126.3 | 2.5007<br>118.7<br>118.7 | 0.3199 | N/A | 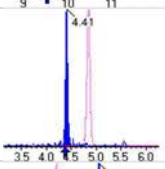 | 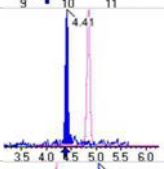 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30417<br>( 341.0 / 217.0 ) 46943 | ( 6.97 , 1.15 ) ( N/A , 0.02 , 0.2) | 303.3<br>268.0 | 1.5433<br>101.6<br>101.6 | 0.4060 | N/A | 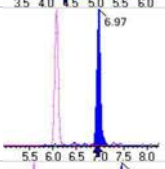 | 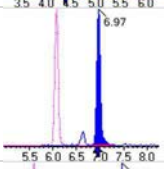 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54097<br>( 441.0 / 337.0 ) 44506 | ( 9.36 , 1.54 ) ( N/A , 0.02 , -0.2) | 24010.5<br>4188.6 | 0.8227<br>89.7<br>89.7 | 0.4401 | N/A | 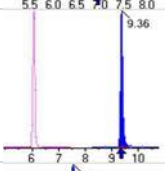 | 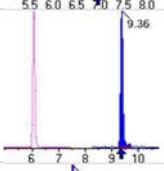 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 33721<br>( 357.2 / 243.0 ) 2710 | ( 6.81 , 1.00 ) ( 0.00 , N/A , 0.5) | 224.8<br>46.5 | 0.0804<br>72.9<br>72.9 | 0.0953 | N/A | 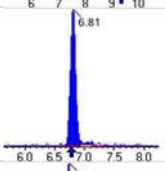 | 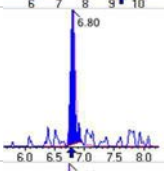 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 18228<br>( 457.2 / 343.0 ) 723 | ( 8.85 , 1.00 ) ( -0.01 , N/A , -0.3) | 328.9<br>66.3 | 0.0397<br>95.7<br>95.7 | 0.0750 | N/A | 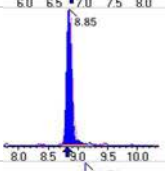 | 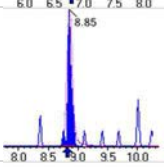 | |
| TDCA | ( 499.0 / 80.0 ) 62947 | ( 10.51 , 1.00 ) ( N/A , 0.02 , 0.0) | 745.7 | N/A<br>0.0<br>0.0 | 0.0984 | N/A | 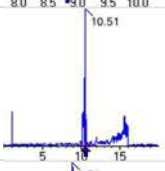 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269964 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 1513.6 | N/A | 1.1322<br>[ 1.0000 ] | 113.2%<br>{ 115.2% } | 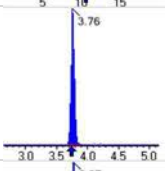 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111056 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 118187.6 | N/A | 0.8754<br>[ 1.0000 ] | 87.5%<br>{ 92.9% } | 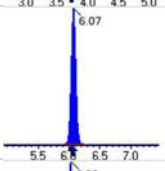 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 395428 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3733.5 | N/A | 1.0003<br>[ 1.0000 ] | 100.0%<br>{ 104.1% } | 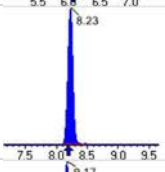 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 274681 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 866.2 | N/A | 0.9658<br>[ 1.0000 ] | 96.6%<br>{ 103.2% } | 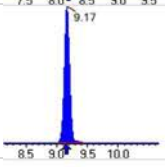 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 296205 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 4479.4 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 110.6% } | 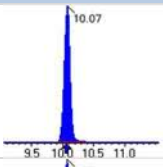 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 887857 | ( 8.67 , N/A ) ( N/A , 0.02 , N/A ) | 5438.8 | N/A | 0.9355 [ 1.0000 ] | 93.6% { 98.6% } | 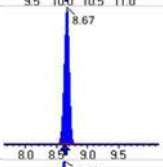 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 744274 | ( 10.53 , N/A ) ( N/A , 0.02 , N/A ) | 1977.9 | N/A | 0.9772 [ 1.0000 ] | 97.7% { 106.2% } | 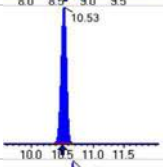 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2435804 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 41491.6 | N/A | 7.8981 [ 8.0000 ] | 98.7% { 115.2% } | 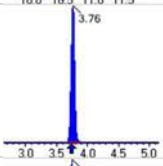 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 995379 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 6790.9 | N/A | 4.8037 [ 4.0000 ] | 120.1% { 108.0% } | 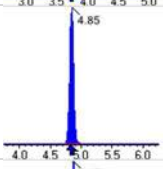 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 562315 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 10449.6 | N/A | 2.2192 [ 2.0000 ] | 111.0% { 101.6% } | 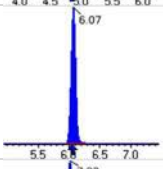 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 641086 | ( 7.22 , N/A ) ( N/A , 0.02 , N/A ) | 5851.9 | N/A | 2.2744 [ 2.0000 ] | 113.7% { 103.5% } | 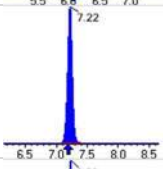 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879761 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3170.1 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 107.3% } | 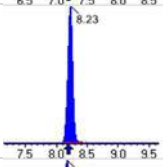 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274748 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 3274.8 | N/A | 1.0201 [ 1.0000 ] | 102.0% { 104.6% } | 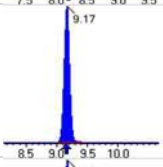 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331041 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1094.7 | N/A | 0.9973 [ 1.0000 ] | 99.7% { 104.5% } | 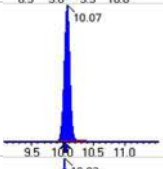 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412925 | ( 10.93 , N/A ) ( N/A , 0.02 , N/A ) | 1057.2 | N/A | 1.0573 [ 1.0000 ] | 105.7% { 114.3% } | 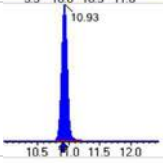 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 422727 | ( 11.76 , N/A ) ( N/A , 0.02 , N/A ) | 1235.8 | N/A | 1.0629 [ 1.0000 ] | 106.3% { 120.2% } | 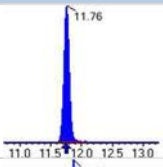  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 346712 | ( 12.88 , N/A ) ( N/A , 0.01 , N/A ) | 1297.7 | N/A | 1.0237 [ 1.0000 ] | 102.4% { 111.0% } | 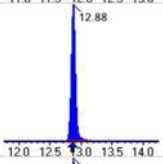  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554558 | ( 13.68 , N/A ) ( N/A , 0.01 , N/A ) | 2058.7 | N/A | 1.9179 [ 2.0000 ] | 95.9% { 107.5% } | 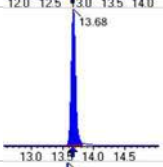  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729492 | ( 6.37 , N/A ) ( N/A , 0.02 , N/A ) | 1031.7 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 108.6% } | 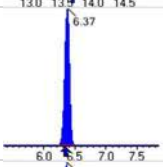  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400831 | ( 8.66 , N/A ) ( N/A , 0.03 , N/A ) | 3163.0 | N/A | 2.1878 [ 2.0000 ] | 109.4% { 109.4% } | 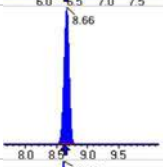  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1625759 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1645.8 | N/A | 2.0259 [ 2.0000 ] | 101.3% { 104.0% } | 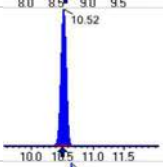  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 603279 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 91.6 | N/A | 4.3589 [ 4.0000 ] | 109.0% { 114.9% } | 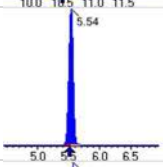  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1771435 | ( 7.66 , N/A ) ( N/A , 0.03 , N/A ) | 3327.3 | N/A | 4.2767 [ 4.0000 ] | 106.9% { 104.2% } | 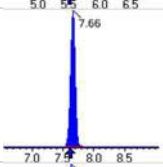  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527095 | ( 9.44 , N/A ) ( N/A , 0.02 , N/A ) | 1433.7 | N/A | 4.7009 [ 4.0000 ] | 117.5% { 115.7% } | 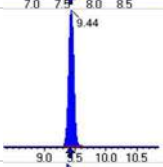  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3060105 | ( 11.07 , N/A ) ( N/A , 0.02 , N/A ) | 1576.9 | N/A | 9.0135 [ 8.0000 ] | 112.7% { 117.8% } | 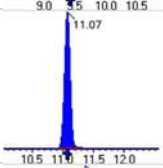  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1567982 | ( 12.86 , N/A ) ( N/A , 0.01 , N/A ) | 1673.5 | N/A | 2.2048 [ 2.0000 ] | 110.2% { 117.6% } | 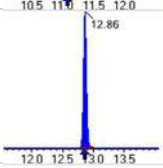  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 310360 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1785.9 | N/A | 2.0576 [ 2.0000 ] | 102.9% { 111.9% } | 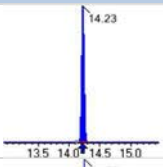  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 341394 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2508.3 | N/A | 2.1106 [ 2.0000 ] | 105.5% { 108.2% } | 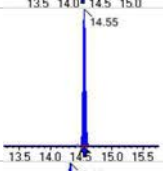  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 888303 | ( 10.32 , N/A ) ( N/A , 0.02 , N/A ) | 2741.2 | N/A | 4.3020 [ 4.0000 ] | 107.6% { 106.0% } | 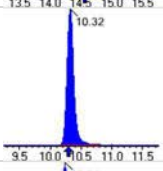  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 820340 | ( 10.84 , N/A ) ( N/A , 0.02 , N/A ) | 1993.4 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 108.5% } | 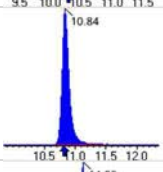  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475020 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 21.7611 [ 20.0000 ] | 108.8% { 109.6% } | 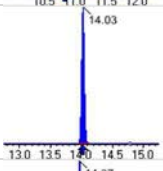  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1513000 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3678.2 | N/A | 21.9921 [ 20.0000 ] | 110.0% { 114.9% } | 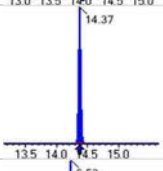  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1029123 | ( 6.53 , N/A ) ( N/A , 0.01 , N/A ) | 2714.8 | N/A | 8.9159 [ 8.0000 ] | 111.4% { 105.2% } | 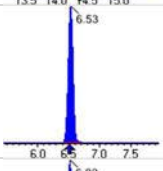  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 665466 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1425.6 | N/A | 2.0722 [ 2.0000 ] | 103.6% { 115.3% } | 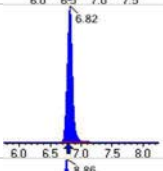  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 596324 | ( 8.86 , N/A ) ( N/A , 0.02 , N/A ) | 778.6 | N/A | 2.0397 [ 2.0000 ] | 102.0% { 111.0% } | 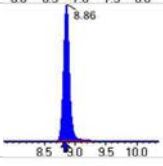  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 270243<br>( 163.0 / 69.0 ) 6407 | ( 2.78 , 0.74 ) ( N/A , 0.00 , -0.3) | 1728.8<br>290.1 | 0.0237<br>87.3<br>87.3 | 0.9507 | N/A | 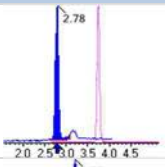 | 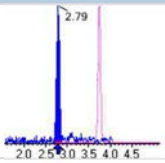 | |
| PFBA | ( 213.0 / 169.0 ) 601138 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 533.4 | N/A<br>0.0<br>0.0 | 2.0004 | N/A | 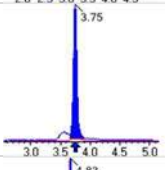 | | |
| PFPeA | ( 263.0 / 219.0 ) 236977<br>( 263.0 / 69.0 ) 2370 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.4) | 1167.2<br>40.3 | 0.0100<br>83.8<br>83.8 | 0.9417 | N/A | 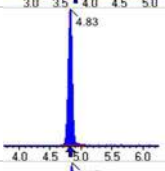 | 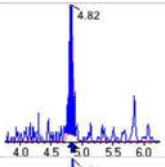 | |
| PFHxA | ( 313.0 / 269.0 ) 139970<br>( 313.0 / 119.0 ) 15702 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 805.1<br>325.5 | 0.1122<br>96.6<br>96.6 | 0.4869 | N/A | 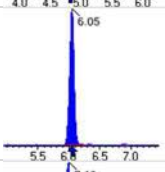 | 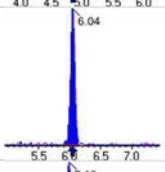 | |
| PFHpA | ( 363.0 / 319.0 ) 153182<br>( 363.0 / 169.0 ) 47571 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 795.4<br>513.0 | 0.3106<br>102.5<br>102.5 | 0.4856 | N/A | 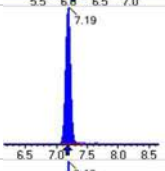 | 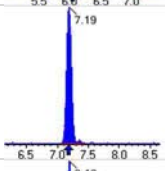 | |
| PFOA | ( 413.0 / 369.0 ) 219264<br>( 413.0 / 169.0 ) 76818 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 244.8<br>400.1 | 0.3503<br>95.8<br>95.8 | 0.5151 | N/A | 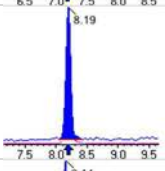 | 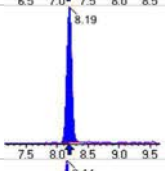 | |
| PFNA | ( 463.0 / 419.0 ) 137279<br>( 463.0 / 169.0 ) 33380 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 798.0<br>432.7 | 0.2432<br>95.2<br>95.2 | 0.5090 | N/A | 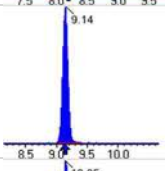 | 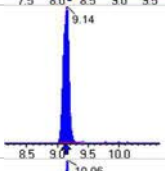 | |
| PFDA | ( 513.0 / 469.0 ) 168954<br>( 513.0 / 169.0 ) 20337 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.5) | 1427.3<br>879.5 | 0.1204<br>102.7<br>102.7 | 0.5207 | N/A | 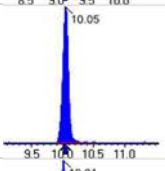 | 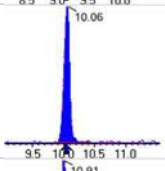 | |
| PFUnA | ( 563.0 / 519.0 ) 171379<br>( 563.0 / 169.0 ) 24402 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.3) | 762.3<br>223.0 | 0.1424<br>100.5<br>100.5 | 0.4723 | N/A | 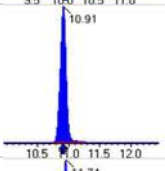 | 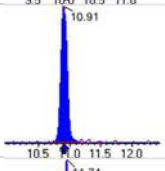 | |
| PFDoA | ( 613.0 / 569.0 ) 185419<br>( 613.0 / 169.0 ) 28647 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.1) | 650.7<br>310.6 | 0.1545<br>97.7<br>97.7 | 0.4817 | N/A | 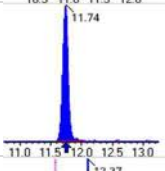 | 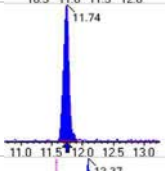 | |
| PFTrDA | ( 663.0 / 619.0 ) 187393<br>( 663.0 / 169.0 ) 51467 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.2) | 715.2<br>527.9 | 0.2746<br>106.7<br>106.7 | 0.4977 | N/A | 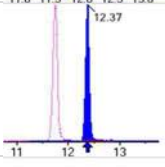 | 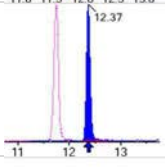 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 158224<br>( 713.0 / 169.0 ) 40722 | ( 12.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 963.7<br>336.5 | 0.2574<br>95.4<br>95.4 | 0.5074 | N/A | 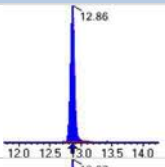 | 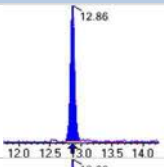 | |
| PFHxDA | ( 813.0 / 769.0 ) 137951<br>( 813.0 / 169.0 ) 33076 | ( 13.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 845.2<br>255.3 | 0.2398<br>98.0<br>98.0 | 0.5012 | N/A | 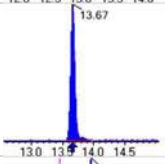 | 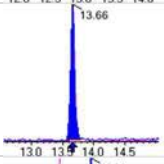 | |
| PFODA | ( 913.0 / 869.0 ) 87214<br>( 913.0 / 169.0 ) 26681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 415.1<br>133.0 | 0.3059<br>85.4<br>85.4 | 0.5065 | N/A | 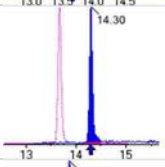 | 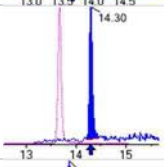 | |
| PFBS | ( 299.0 / 80.0 ) 198065<br>( 299.0 / 99.0 ) 132926 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1381.9<br>709.2 | 0.6711<br>94.9<br>94.9 | 0.4518 | N/A | 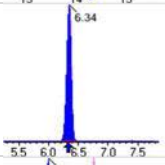 | 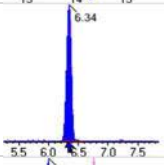 | |
| PFPeS | ( 349.0 / 80.0 ) 497722<br>( 349.0 / 99.0 ) 172204 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.0) | 1143.3<br>1025.2 | 0.3460<br>96.2<br>96.2 | 0.4717 | N/A | 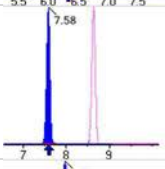 | 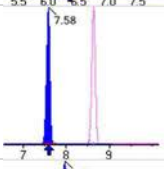 | |
| PFHxS | ( 399.0 / 80.0 ) 542542<br>( 399.0 / 99.0 ) 185937 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1189.0<br>1277.1 | 0.3427<br>107.6<br>107.6 | 0.4426 | N/A | 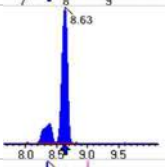 | 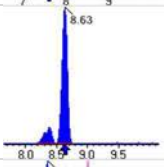 | |
| PFHpS | ( 449.0 / 80.0 ) 454824<br>( 449.0 / 99.0 ) 118403 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 980.7<br>650.1 | 0.2603<br>98.4<br>98.4 | 0.4757 | N/A | 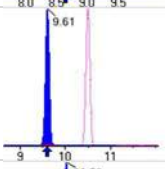 | 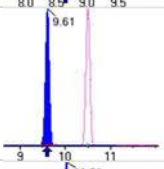 | |
| PFOS | ( 499.0 / 80.0 ) 424655<br>( 499.0 / 99.0 ) 97429 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.2) | 865.6<br>2087.7 | 0.2294<br>98.2<br>98.2 | 0.4608 | N/A | 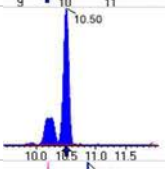 | 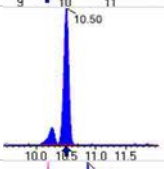 | |
| PFNS | ( 549.0 / 80.0 ) 419634<br>( 549.0 / 99.0 ) 115472 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 999.8<br>699.2 | 0.2752<br>101.0<br>101.0 | 0.4863 | N/A | 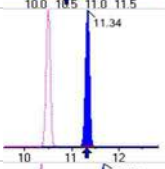 | 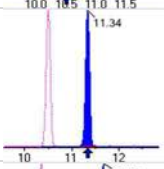 | |
| PFDS | ( 599.0 / 80.0 ) 531726<br>( 599.0 / 99.0 ) 138592 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 979.2<br>576.8 | 0.2606<br>95.9<br>95.9 | 0.5047 | N/A | 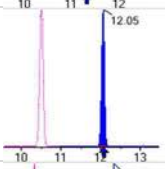 | 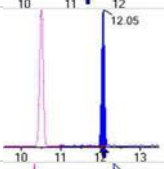 | |
| PFDoS | ( 699.0 / 80.0 ) 448366<br>( 699.0 / 99.0 ) 109465 | ( 12.97 , 1.23 )<br>( N/A , 0.00 , 0.0) | 1926.4<br>1068.2 | 0.2441<br>104.5<br>104.5 | 0.4827 | N/A | 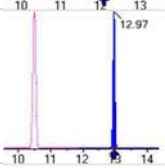 | 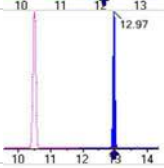 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 754240<br>( 327.0 / 81.0 ) 686574 | ( 5.51 , 1.00 )<br>( -0.01 , N/A , -0.2) | 3506.2<br>1884.3 | 0.9103<br>104.3<br>104.3 | 1.9200 | N/A | 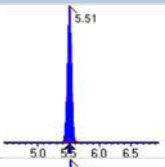 | 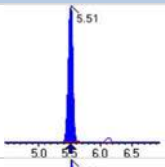 | |
| 6:2FTS | ( 427.0 / 407.0 ) 743646<br>( 427.0 / 81.0 ) 871699 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.3) | 3382.5<br>2278.6 | 1.1722<br>93.5<br>93.5 | 1.9637 | N/A | 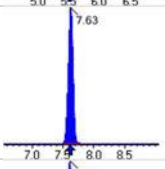 | 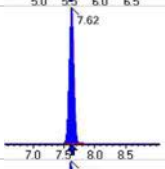 | |
| 8:2FTS | ( 527.0 / 507.0 ) 720596<br>( 527.0 / 81.0 ) 776814 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1864.9<br>1134.6 | 1.0780<br>99.1<br>99.1 | 2.0117 | N/A | 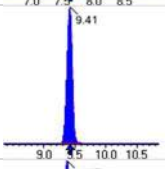 | 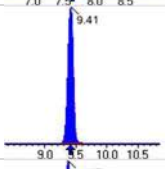 | |
| 10:2FTS | ( 627.0 / 607.0 ) 538928<br>( 627.0 / 81.0 ) 829622 | ( 11.07 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1479.4<br>1094.4 | 1.5394<br>106.9<br>106.9 | 1.8031 | N/A | 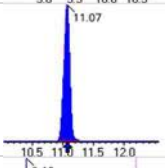 | 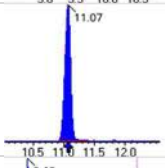 | |
| PFBSA | ( 297.9 / 78.0 ) 377825<br>( 297.9 / 278.0 ) 593 | ( 8.10 , 0.57 )<br>( N/A , -0.01 , -1.1) | 1359.0<br>35.1 | 0.0016<br>114.8<br>114.8 | 0.4989 | N/A | 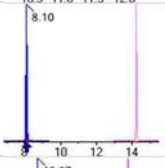 | 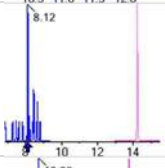 | |
| PFHxSA | ( 397.9 / 78.0 ) 506230<br>( 397.9 / 378.0 ) 2031 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , -0.3) | 1295.9<br>58.9 | 0.0040<br>98.2<br>98.2 | 0.5209 | N/A | 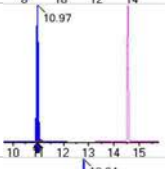 | 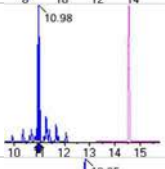 | |
| PFOSA | ( 498.0 / 78.0 ) 387069<br>( 498.0 / 478.0 ) 4980 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1381.2<br>211.1 | 0.0129<br>91.7<br>91.7 | 0.5254 | N/A | 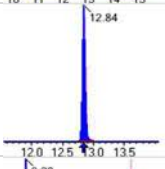 | 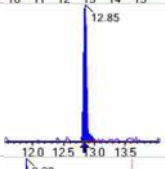 | |
| TFSI | ( 279.7 / 147.0 ) 914573<br>( 279.7 / 211.0 ) 73594 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.1) | 56.4<br>41.8 | 0.0805<br>95.8<br>95.8 | 0.4714 | N/A | 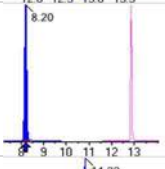 | 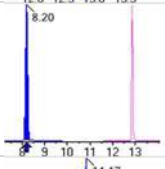 | |
| NMeFOSA | ( 512.0 / 219.0 ) 289760<br>( 512.0 / 169.0 ) 219586 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 1564.6<br>722.0 | 0.7578<br>101.3<br>101.3 | 1.9861 | N/A | 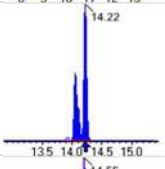 | 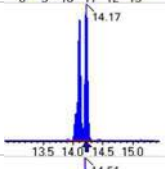 | |
| NEtFOSA | ( 526.0 / 219.0 ) 357885<br>( 526.0 / 169.0 ) 435343 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.2) | 2096.7<br>1693.7 | 1.2164<br>98.5<br>98.5 | 2.0207 | N/A | 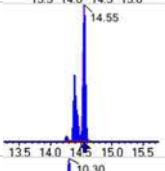 | 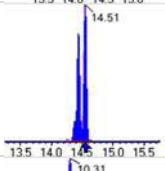 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 101165<br>( 570.0 / 483.0 ) 44729 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1433.8<br>321.8 | 0.4421<br>100.8<br>100.8 | 0.5077 | N/A | 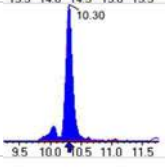 | 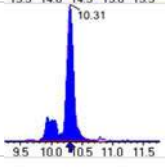 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 101975<br>( 584.0 / 526.0 ) 55503 | ( 10.84 , 1.00 )<br>( 0.01 , N/A , -0.1) | 3375617.3<br>499.1 | 0.5443<br>88.3<br>88.3 | 0.5375 | N/A | 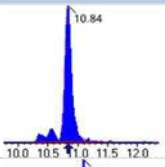 | 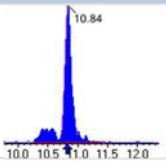 | |
| NMeFOSE | ( 616.0 / 59.0 ) 147340 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 760.5 | N/A<br>0.0<br>0.0 | 2.0427 | N/A | 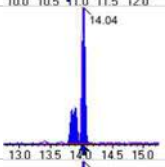 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 117168 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 956.6 | N/A<br>0.0<br>0.0 | 1.9790 | N/A | 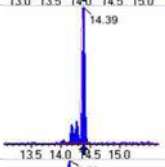 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 35584<br>( 285.0 / 185.0 ) 106028 | ( 6.50 , 1.00 )<br>( -0.01 , N/A , -0.2) | 642.7<br>688.7 | 2.9796<br>107.7<br>107.7 | 0.4650 | N/A | 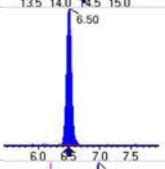 | 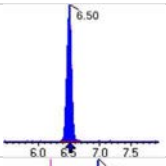 | |
| ADONA | ( 377.0 / 85.0 ) 413542<br>( 377.0 / 251.0 ) 38104 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.1) | 1102.2<br>428.3 | 0.0921<br>90.4<br>90.4 | 0.4632 | N/A | 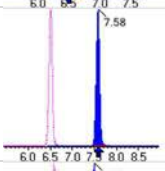 | 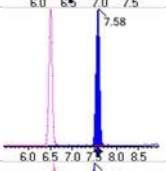 | |
| PFEESA | ( 315.0 / 135.0 ) 179792<br>( 315.0 / 83.0 ) 102089 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 1604.0<br>254.7 | 0.5678<br>101.9<br>101.9 | 0.8709 | N/A | 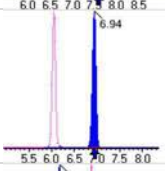 | 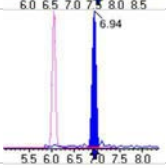 | |
| PFMPA | ( 229.0 / 85.0 ) 71647 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 1573.5 | N/A<br>0.0<br>0.0 | 0.8972 | N/A | 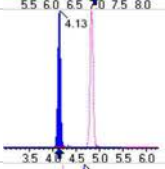 | | |
| PFMBA | ( 279.0 / 85.0 ) 202423 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 1629.0 | N/A<br>0.0<br>0.0 | 0.9326 | N/A | 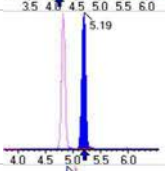 | | |
| NFDHA | ( 295.0 / 201.0 ) 108804<br>( 295.0 / 85.0 ) 115646 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 2039.9<br>957.9 | 1.0629<br>98.5<br>98.5 | 1.0138 | N/A | 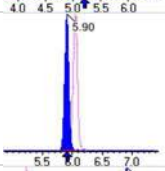 | 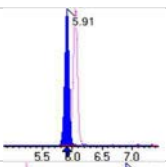 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 441071<br>( 533.0 / 353.0 ) 140189 | ( 11.15 , 1.71 )<br>( N/A , 0.01 , 0.1) | 2047.3<br>1154.6 | 0.3178<br>101.6<br>101.6 | 0.4574 | N/A | 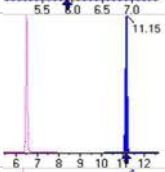 | 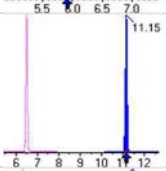 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 340892<br>( 633.0 / 453.0 ) 116659 | ( 12.46 , 1.92 )<br>( N/A , 0.00 , -0.1) | 2111.2<br>1169.2 | 0.3422<br>103.0<br>103.0 | 0.4597 | N/A | 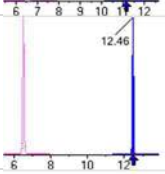 | 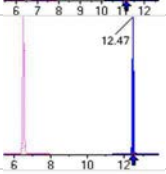 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 226835<br>( 461.0 / 381.2 ) 88383 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2081.7<br>1590.3 | 0.3896<br>97.8<br>97.8 | 0.4363 | N/A | 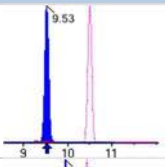 | 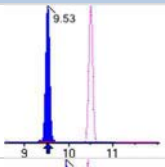 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25450<br>( 241.0 / 117.0 ) 56322 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.0) | 836.2<br>518.4 | 2.2130<br>105.0<br>105.0 | 1.7777 | N/A | 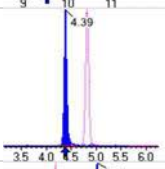 | 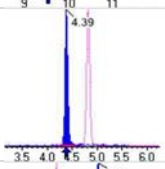 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 171905<br>( 341.0 / 217.0 ) 241610 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 759.6<br>653.2 | 1.4055<br>92.5<br>92.5 | 2.1563 | N/A | 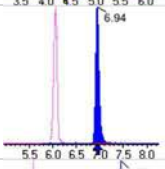 | 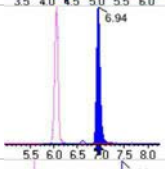 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 258113<br>( 441.0 / 337.0 ) 220700 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.1) | 3902.4<br>4652.4 | 0.8551<br>93.2<br>93.2 | 1.9730 | N/A | 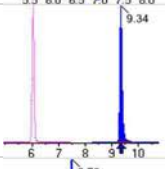 | 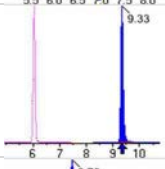 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172883<br>( 357.2 / 243.0 ) 19248 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 854.8<br>275.3 | 0.1113<br>101.0<br>101.0 | 0.4857 | N/A | 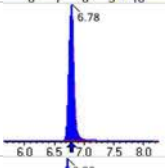 | 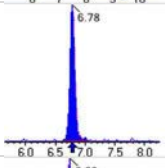 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 121222<br>( 457.2 / 343.0 ) 4083 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , -0.7) | 565.3<br>104.4 | 0.0337<br>81.2<br>81.2 | 0.5056 | N/A | 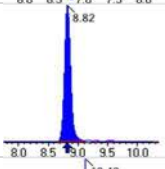 | 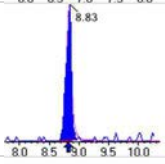 | |
| TDCA | ( 499.0 / 80.0 ) 308828 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 2696.4 | N/A<br>0.0<br>0.0 | 0.4916 | N/A | 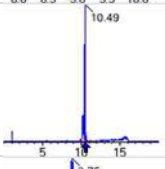 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261563 | ( 3.75 , N/A )<br>( N/A , -0.01 , N/A ) | 1100.3 | N/A | 1.0970<br>[ 1.0000 ] | 109.7%<br>{ 111.6% } | 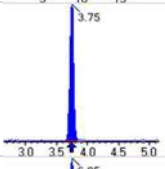 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125307 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 10148.5 | N/A | 0.9878<br>[ 1.0000 ] | 98.8%<br>{ 104.9% } | 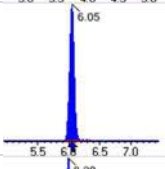 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390460 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 5378.3 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 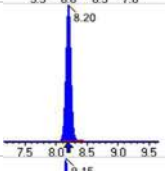 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278335 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 1109.0 | N/A | 0.9786<br>[ 1.0000 ] | 97.9%<br>{ 104.5% } | 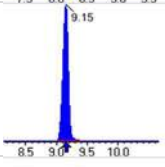 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307138 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6465.5 | N/A | 1.0517 [ 1.0000 ] | 105.2% { 114.7% } | 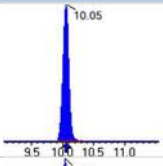 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981307 | ( 8.64 , N/A ) ( N/A , -0.01 , N/A ) | 6565.2 | N/A | 1.0340 [ 1.0000 ] | 103.4% { 109.0% } | 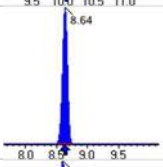 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 789235 | ( 10.51 , N/A ) ( N/A , 0.00 , N/A ) | 2423.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 112.6% } | 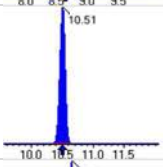 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2411767 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 38473.3 | N/A | 8.0713 [ 8.0000 ] | 100.9% { 114.0% } | 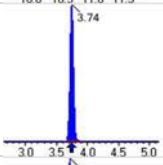 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 996419 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5316.2 | N/A | 4.2618 [ 4.0000 ] | 106.5% { 108.1% } | 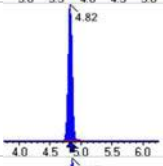 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 598415 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 7772.4 | N/A | 2.0930 [ 2.0000 ] | 104.7% { 108.1% } | 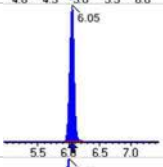 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642898 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4139.3 | N/A | 2.0214 [ 2.0000 ] | 101.1% { 103.8% } | 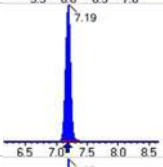 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 837262 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2865.2 | N/A | 2.0013 [ 2.0000 ] | 100.1% { 102.1% } | 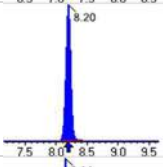 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 268319 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2813.0 | N/A | 0.9832 [ 1.0000 ] | 98.3% { 102.2% } | 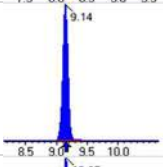 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317534 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1393.5 | N/A | 0.9225 [ 1.0000 ] | 92.3% { 100.3% } | 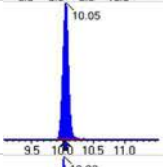 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392266 | ( 10.92 , N/A ) ( N/A , 0.00 , N/A ) | 889.3 | N/A | 0.9687 [ 1.0000 ] | 96.9% { 108.6% } | 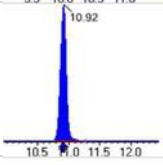 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382608 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1180.8 | N/A | 0.9278 [ 1.0000 ] | 92.8% { 108.8% } | 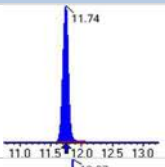  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 332937 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1583.7 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 106.5% } | 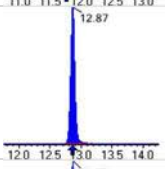  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577159 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 1.9250 [ 2.0000 ] | 96.3% { 111.8% } | 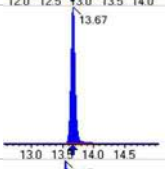  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1688757 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 883.0 | N/A | 1.9047 [ 2.0000 ] | 95.2% { 106.0% } | 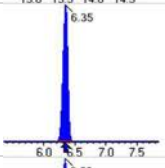  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1378939 | ( 8.63 , N/A ) ( N/A , 0.00 , N/A ) | 4407.3 | N/A | 1.9485 [ 2.0000 ] | 97.4% { 107.7% } | 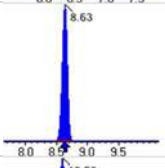  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1595802 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1706.0 | N/A | 1.8753 [ 2.0000 ] | 93.8% { 102.1% } | 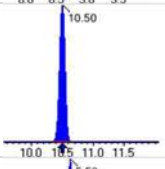  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598745 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 79.8 | N/A | 3.9141 [ 4.0000 ] | 97.9% { 114.1% } | 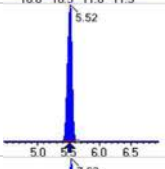  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1829265 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3435.0 | N/A | 3.9958 [ 4.0000 ] | 99.9% { 107.6% } | 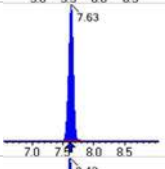  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1508713 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1476.9 | N/A | 4.2020 [ 4.0000 ] | 105.1% { 114.3% } | 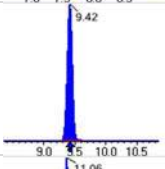  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3102262 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1234.2 | N/A | 8.2675 [ 8.0000 ] | 103.3% { 119.5% } | 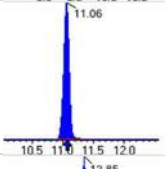  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1473534 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1630.0 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 110.5% } | 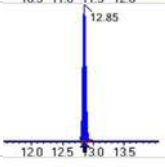  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 293876 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2091.2 | N/A | 1.8374 [ 2.0000 ] | 91.9% { 105.9% } | 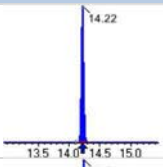 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316276 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2498.1 | N/A | 1.8439 [ 2.0000 ] | 92.2% { 100.3% } | 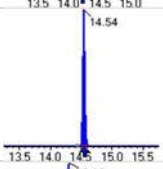 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 835724 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2699.7 | N/A | 3.8168 [ 4.0000 ] | 95.4% { 99.7% } | 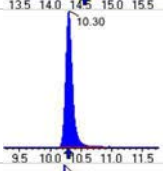 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 775814 | ( 10.83 , N/A ) ( N/A , 0.01 , N/A ) | 2136.8 | N/A | 3.8876 [ 4.0000 ] | 97.2% { 102.6% } | 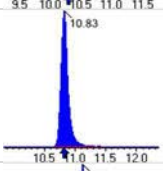 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1315136 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2600.8 | N/A | 18.2970 [ 20.0000 ] | 91.5% { 97.7% } | 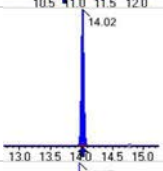 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1332738 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4801.6 | N/A | 18.2683 [ 20.0000 ] | 91.3% { 101.2% } | 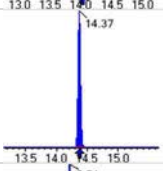 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1038084 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2605.4 | N/A | 7.9707 [ 8.0000 ] | 99.6% { 106.2% } | 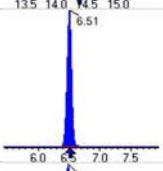 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 669550 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1235.7 | N/A | 2.0107 [ 2.0000 ] | 100.5% { 116.0% } | 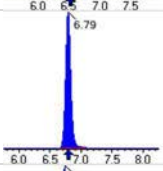 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 587942 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 696.3 | N/A | 1.9395 [ 2.0000 ] | 97.0% { 109.4% } | 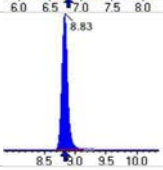 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 572081<br>( 163.0 / 69.0 ) 15453 | ( 2.78 , 0.74 ) ( N/A , -0.01 , -0.1) | 3331.6<br>685.8 | 0.0270<br>99.5<br>99.5 | 1.8766 | N/A | 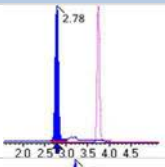 | 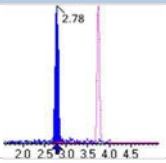 | |
| PFBA | ( 213.0 / 169.0 ) 1291256 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 977.6 | N/A<br>0.0<br>0.0 | 4.0067 | N/A | 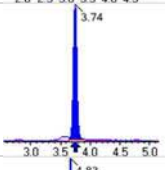 | | |
| PFPeA | ( 263.0 / 219.0 ) 515447<br>( 263.0 / 69.0 ) 5565 | ( 4.83 , 1.00 ) ( 0.00 , N/A , -0.6) | 2722.5<br>101.7 | 0.0108<br>90.4<br>90.4 | 1.9936 | N/A | 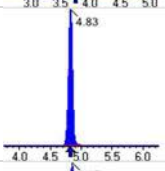 | 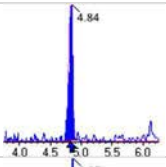 | |
| PFHxA | ( 313.0 / 269.0 ) 299582<br>( 313.0 / 119.0 ) 31742 | ( 6.05 , 1.00 ) ( 0.00 , N/A , -0.2) | 1493.9<br>435.1 | 0.1060<br>91.3<br>91.3 | 0.9811 | N/A | 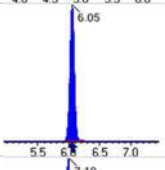 | 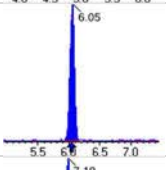 | |
| PFHpA | ( 363.0 / 319.0 ) 337151<br>( 363.0 / 169.0 ) 99321 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1122.0<br>1188.9 | 0.2946<br>97.2<br>97.2 | 1.0032 | N/A | 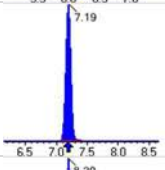 | 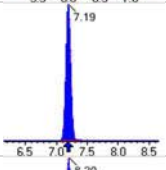 | |
| PFOA | ( 413.0 / 369.0 ) 460701<br>( 413.0 / 169.0 ) 156073 | ( 8.20 , 1.00 ) ( 0.00 , N/A , -0.2) | 411.7<br>644.7 | 0.3388<br>92.7<br>92.7 | 0.9980 | N/A | 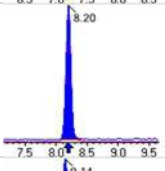 | 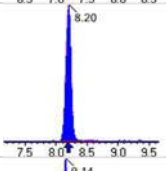 | |
| PFNA | ( 463.0 / 419.0 ) 295897<br>( 463.0 / 169.0 ) 74193 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 828.0<br>576.3 | 0.2507<br>98.2<br>98.2 | 0.9829 | N/A | 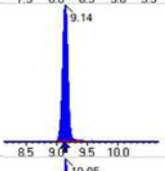 | 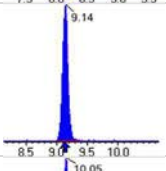 | |
| PFDA | ( 513.0 / 469.0 ) 352635<br>( 513.0 / 169.0 ) 43955 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.2) | 2404.3<br>865.6 | 0.1246<br>106.4<br>106.4 | 1.0071 | N/A | 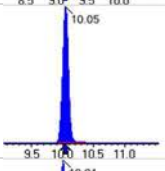 | 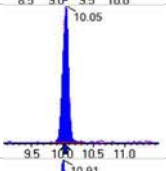 | |
| PFUnA | ( 563.0 / 519.0 ) 381432<br>( 563.0 / 169.0 ) 53955 | ( 10.91 , 1.00 ) ( 0.00 , N/A , -0.1) | 999.2<br>403.6 | 0.1415<br>99.8<br>99.8 | 1.0353 | N/A | 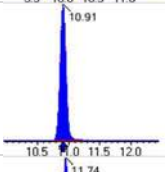 | 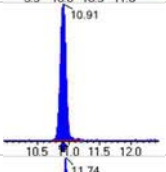 | |
| PFDoA | ( 613.0 / 569.0 ) 427017<br>( 613.0 / 169.0 ) 60201 | ( 11.74 , 1.00 ) ( 0.00 , N/A , -0.1) | 1103.2<br>515.1 | 0.1410<br>89.2<br>89.2 | 1.0255 | N/A | 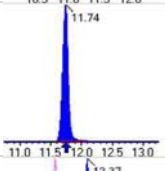 | 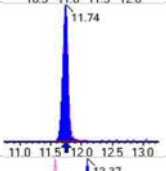 | |
| PFTrDA | ( 663.0 / 619.0 ) 399605<br>( 663.0 / 169.0 ) 106227 | ( 12.37 , 1.05 ) ( N/A , -0.01 , 0.0) | 1077.2<br>701.1 | 0.2658<br>103.3<br>103.3 | 0.9810 | N/A | 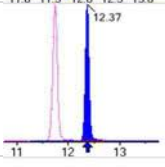 | 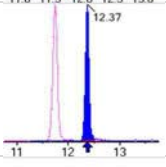 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 342493<br>( 713.0 / 169.0 ) 87584 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1309.5<br>476.1 | 0.2557<br>94.7<br>94.7 | 1.0520 | N/A | 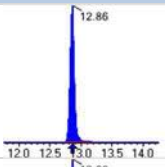 | 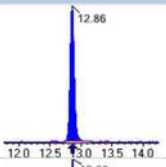 | |
| PFHxDA | ( 813.0 / 769.0 ) 295487<br>( 813.0 / 169.0 ) 71255 | ( 13.66 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1293.3<br>536.6 | 0.2411<br>98.6<br>98.6 | 0.9920 | N/A | 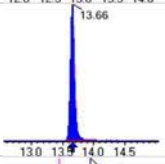 | 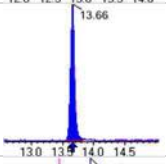 | |
| PFODA | ( 913.0 / 869.0 ) 188029<br>( 913.0 / 169.0 ) 59688 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , 0.2) | 765.7<br>286.7 | 0.3174<br>88.6<br>88.6 | 1.0090 | N/A | 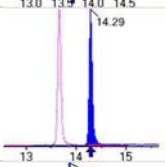 | 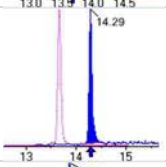 | |
| PFBS | ( 299.0 / 80.0 ) 407079<br>( 299.0 / 99.0 ) 304744 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2093.0<br>1197.3 | 0.7486<br>105.9<br>105.9 | 0.8714 | N/A | 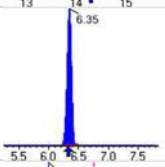 | 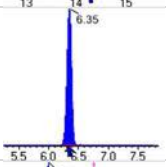 | |
| PFPeS | ( 349.0 / 80.0 ) 1109577<br>( 349.0 / 99.0 ) 395272 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.2) | 1653.8<br>1364.1 | 0.3562<br>99.1<br>99.1 | 1.0024 | N/A | 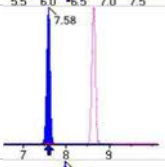 | 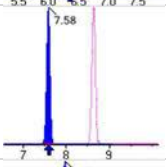 | |
| PFHxS | ( 399.0 / 80.0 ) 1171862<br>( 399.0 / 99.0 ) 378800 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1877.4<br>2472.1 | 0.3232<br>101.5<br>101.5 | 0.9114 | N/A | 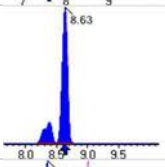 | 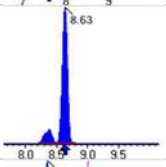 | |
| PFHpS | ( 449.0 / 80.0 ) 990486<br>( 449.0 / 99.0 ) 270859 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1237.4<br>959.9 | 0.2735<br>103.3<br>103.3 | 0.9914 | N/A | 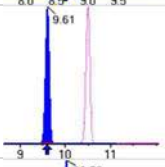 | 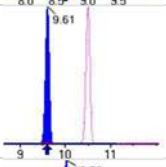 | |
| PFOS | ( 499.0 / 80.0 ) 915045<br>( 499.0 / 99.0 ) 214297 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1166.7<br>2416.7 | 0.2342<br>100.2<br>100.2 | 0.9501 | N/A | 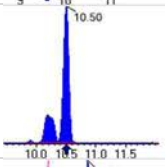 | 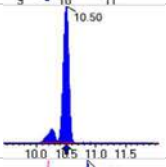 | |
| PFNS | ( 549.0 / 80.0 ) 896593<br>( 549.0 / 99.0 ) 249551 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1601.3<br>1206.4 | 0.2783<br>102.1<br>102.1 | 0.9943 | N/A | 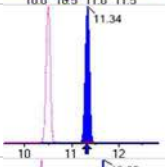 | 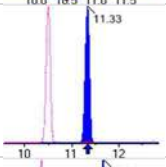 | |
| PFDS | ( 599.0 / 80.0 ) 1127572<br>( 599.0 / 99.0 ) 302383 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1436.2<br>916.8 | 0.2682<br>98.6<br>98.6 | 1.0241 | N/A | 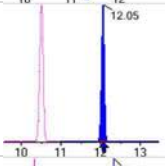 | 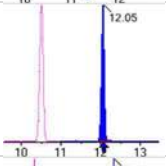 | |
| PFDoS | ( 699.0 / 80.0 ) 1018920<br>( 699.0 / 99.0 ) 244059 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.1) | 2808.2<br>1602.4 | 0.2395<br>102.5<br>102.5 | 1.0497 | N/A | 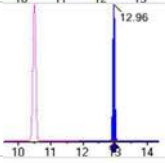 | 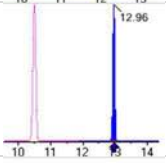 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1636735<br>( 327.0 / 81.0 ) 1473856 | ( 5.52 , 1.00 ) ( -0.01 , N/A , -0.2) | 5204.7<br>2602.4 | 0.9005<br>103.2<br>103.2 | 3.7254 | N/A | 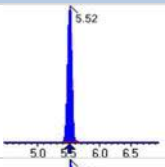 | 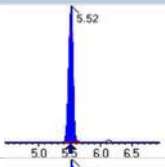 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1622158<br>( 427.0 / 81.0 ) 2083355 | ( 7.63 , 1.00 ) ( 0.00 , N/A , 0.1) | 4238.9<br>2696.5 | 1.2843<br>102.4<br>102.4 | 3.9122 | N/A | 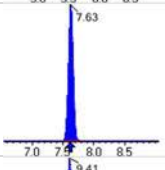 | 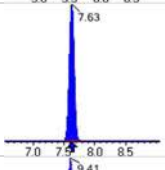 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1596229<br>( 527.0 / 81.0 ) 1699957 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.2) | 1759.6<br>1660.8 | 1.0650<br>97.9<br>97.9 | 4.0286 | N/A | 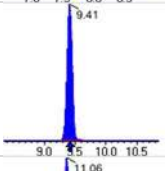 | 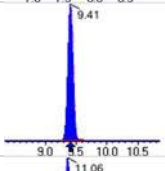 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1186863<br>( 627.0 / 81.0 ) 1648684 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.2) | 1185.3<br>1102.0 | 1.3891<br>96.5<br>96.5 | 4.0027 | N/A | 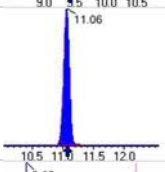 | 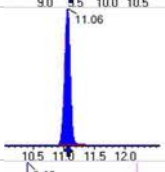 | |
| PFBSA | ( 297.9 / 78.0 ) 868869<br>( 297.9 / 278.0 ) 1723 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.3) | 1316.9<br>72.3 | 0.0020<br>145.1<br>145.1 | 1.0646 | N/A | 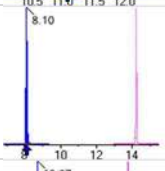 | 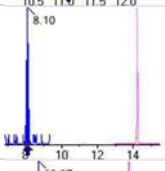 | |
| PFHxSA | ( 397.9 / 78.0 ) 1138067<br>( 397.9 / 378.0 ) 5913 | ( 10.97 , 0.75 ) ( N/A , 0.00 , 0.2) | 1254.0<br>145.3 | 0.0052<br>127.2<br>127.2 | 1.0822 | N/A | 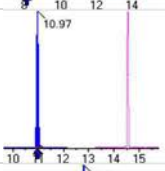 | 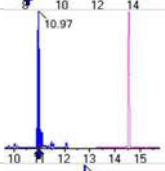 | |
| PFOSA | ( 498.0 / 78.0 ) 762063<br>( 498.0 / 478.0 ) 11669 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 1669.7<br>330.8 | 0.0153<br>109.1<br>109.1 | 0.9531 | N/A | 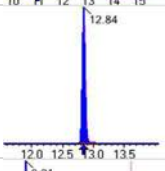 | 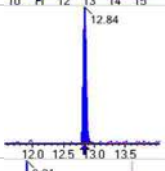 | |
| TFSI | ( 279.7 / 147.0 ) 1968069<br>( 279.7 / 211.0 ) 180774 | ( 8.21 , 0.64 ) ( N/A , 0.00 , 0.0) | 64.3<br>58.0 | 0.0919<br>109.3<br>109.3 | 0.9348 | N/A | 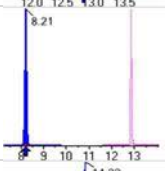 | 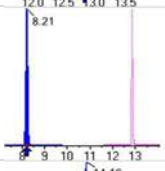 | |
| NMeFOSA | ( 512.0 / 219.0 ) 676418<br>( 512.0 / 169.0 ) 494118 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.5) | 2998.4<br>1222.2 | 0.7305<br>97.6<br>97.6 | 4.3018 | N/A | 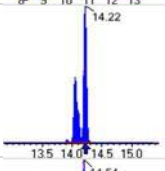 | 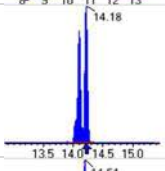 | |
| NEtFOSA | ( 526.0 / 219.0 ) 784152<br>( 526.0 / 169.0 ) 968317 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.1) | 3542.8<br>2523.2 | 1.2349<br>100.0<br>100.0 | 4.0920 | N/A | 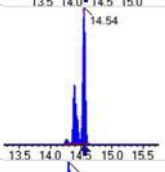 | 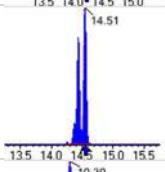 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 217987<br>( 570.0 / 483.0 ) 97828 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2749.9<br>7363.6 | 0.4488<br>102.3<br>102.3 | 1.0587 | N/A | 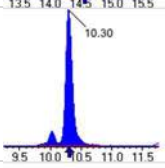 | 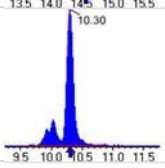 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 215279<br>( 584.0 / 526.0 ) 113495 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1923.7<br>570.6 | 0.5272<br>85.5<br>85.5 | 1.0388 | N/A | 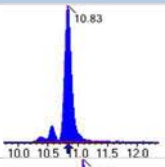 | 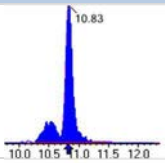 | |
| NMeFOSE | ( 616.0 / 59.0 ) 322501 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1109.7 | N/A<br>0.0<br>0.0 | 3.8876 | N/A | 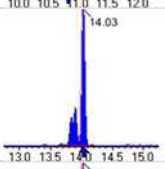 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 275023 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1504.4 | N/A<br>0.0<br>0.0 | 4.0518 | N/A | 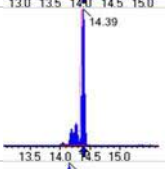 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78310<br>( 285.0 / 185.0 ) 225338 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1215.6<br>1094.8 | 2.8775<br>104.1<br>104.1 | 0.9672 | N/A | 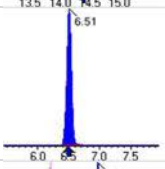 | 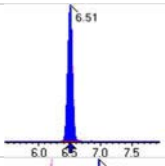 | |
| ADONA | ( 377.0 / 85.0 ) 925674<br>( 377.0 / 251.0 ) 94429 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1684.4<br>863.1 | 0.1020<br>100.1<br>100.1 | 0.9800 | N/A | 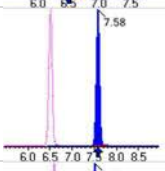 | 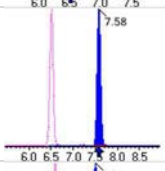 | |
| PFEESA | ( 315.0 / 135.0 ) 374674<br>( 315.0 / 83.0 ) 221014 | ( 6.94 , 1.15 )<br>( N/A , 0.00 , 0.2) | 1629.8<br>585.3 | 0.5899<br>105.8<br>105.8 | 1.7087 | N/A | 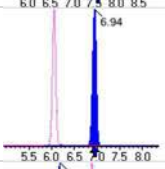 | 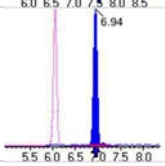 | |
| PFMPA | ( 229.0 / 85.0 ) 165620 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 2153.7 | N/A<br>0.0<br>0.0 | 2.0187 | N/A | 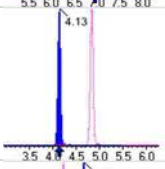 | | |
| PFMBA | ( 279.0 / 85.0 ) 459608 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 3304.8 | N/A<br>0.0<br>0.0 | 2.0611 | N/A | 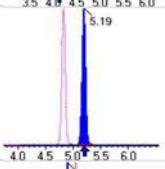 | | |
| NFDHA | ( 295.0 / 201.0 ) 233407<br>( 295.0 / 85.0 ) 232887 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.0) | 1871.1<br>1404.3 | 0.9978<br>92.5<br>92.5 | 2.0475 | N/A | 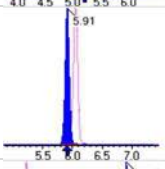 | 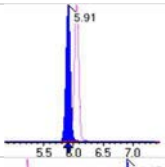 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 977169<br>( 533.0 / 353.0 ) 307774 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.0) | 2252.5<br>1904.5 | 0.3150<br>100.7<br>100.7 | 0.9578 | N/A | 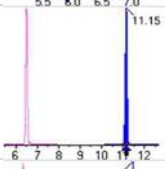 | 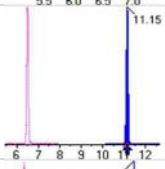 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 766742<br>( 633.0 / 453.0 ) 257032 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 3376.0<br>1473.6 | 0.3352<br>100.9<br>100.9 | 0.9772 | N/A | 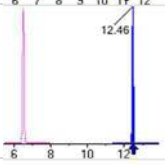 | 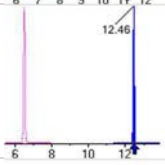 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 518904<br>( 461.0 / 381.2 ) 203061 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2559.7<br>2244.6 | 0.3913<br>98.2<br>98.2 | 0.9551 | N/A | 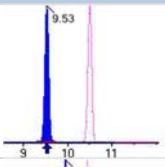 | 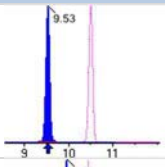 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 58421<br>( 241.0 / 117.0 ) 131714 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.1) | 1288.6<br>1011.6 | 2.2545<br>107.0<br>107.0 | 3.9721 | N/A | 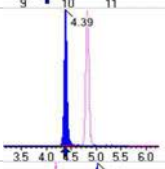 | 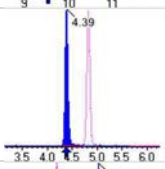 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 362070<br>( 341.0 / 217.0 ) 543142 | ( 6.95 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1018.7<br>864.9 | 1.5001<br>98.7<br>98.7 | 4.2758 | N/A | 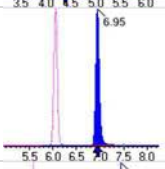 | 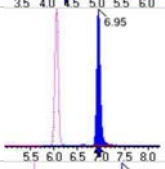 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 552565<br>( 441.0 / 337.0 ) 493299 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , -0.1) | 3905.8<br>9480.9 | 0.8927<br>97.3<br>97.3 | 3.9764 | N/A | 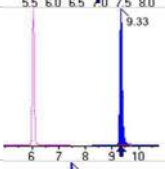 | 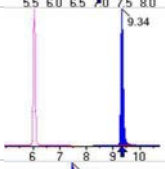 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 363940<br>( 357.2 / 243.0 ) 37601 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1173.5<br>370.6 | 0.1033<br>93.7<br>93.7 | 0.9982 | N/A | 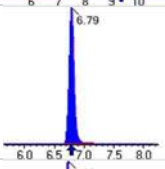 | 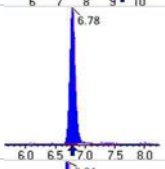 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 254977<br>( 457.2 / 343.0 ) 9972 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.6) | 714.0<br>141.1 | 0.0391<br>94.3<br>94.3 | 0.9768 | N/A | 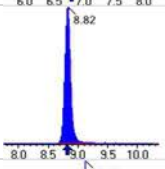 | 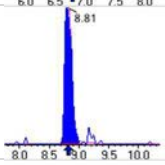 | |
| TDCA | ( 499.0 / 80.0 ) 680639 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 4167.6 | N/A<br>0.0<br>0.0 | 1.0368 | N/A | 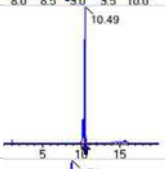 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284719 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1250.4 | N/A | 1.1941<br>[ 1.0000 ] | 119.4%<br>{ 121.5% } | 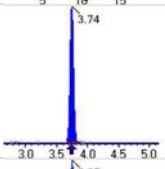 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145345 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 124720.9 | N/A | 1.1457<br>[ 1.0000 ] | 114.6%<br>{ 121.6% } | 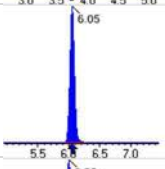 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441486 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3424.8 | N/A | 1.1168<br>[ 1.0000 ] | 111.7%<br>{ 116.2% } | 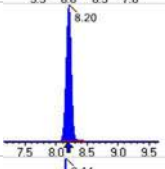 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 318843 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 964.0 | N/A | 1.1211<br>[ 1.0000 ] | 112.1%<br>{ 119.8% } | 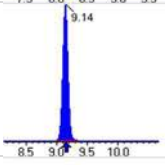 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303537 | ( 10.05 , N/A ) ( N/A , 0.01 , N/A ) | 4251.2 | N/A | 1.0394 [ 1.0000 ] | 103.9% { 113.3% } | 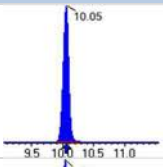 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056155 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 5014.7 | N/A | 1.1129 [ 1.0000 ] | 111.3% { 117.3% } | 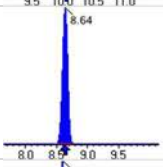 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 845268 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.3 | N/A | 1.1098 [ 1.0000 ] | 111.0% { 120.6% } | 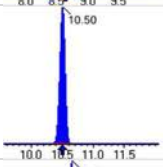 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2586413 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 42750.2 | N/A | 7.9518 [ 8.0000 ] | 99.4% { 122.3% } | 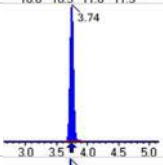 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1023700 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5286.2 | N/A | 3.7748 [ 4.0000 ] | 94.4% { 111.1% } | 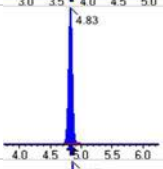 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 635630 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 14493.6 | N/A | 1.9167 [ 2.0000 ] | 95.8% { 114.9% } | 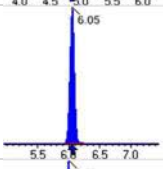 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 684966 | ( 7.19 , N/A ) ( N/A , 0.00 , N/A ) | 3794.1 | N/A | 1.8568 [ 2.0000 ] | 92.8% { 110.6% } | 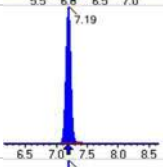 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 928103 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 3322.1 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 113.2% } | 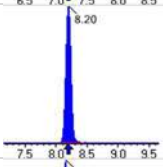 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299515 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2214.7 | N/A | 0.9581 [ 1.0000 ] | 95.8% { 114.0% } | 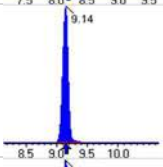 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342697 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1103.1 | N/A | 1.0075 [ 1.0000 ] | 100.7% { 108.2% } | 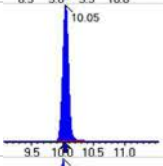 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 398315 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 933.5 | N/A | 0.9953 [ 1.0000 ] | 99.5% { 110.2% } | 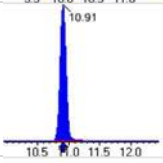 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413909 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1336.1 | N/A | 1.0156 [ 1.0000 ] | 101.6% { 117.7% } | 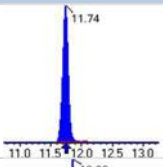  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 347613 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1409.1 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 111.2% } | 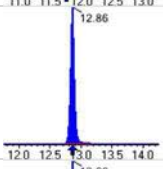  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624611 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2743.3 | N/A | 2.1080 [ 2.0000 ] | 105.4% { 121.0% } | 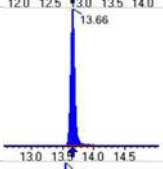  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1799397 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 935.1 | N/A | 1.8857 [ 2.0000 ] | 94.3% { 112.9% } | 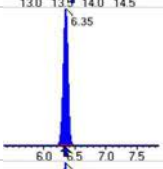  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1446436 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3951.6 | N/A | 1.8990 [ 2.0000 ] | 95.0% { 112.9% } | 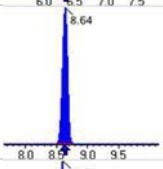  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1667685 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1621.2 | N/A | 1.8298 [ 2.0000 ] | 91.5% { 106.7% } | 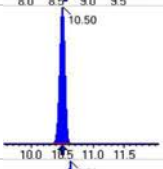  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 669628 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 86.3 | N/A | 4.0673 [ 4.0000 ] | 101.7% { 127.6% } | 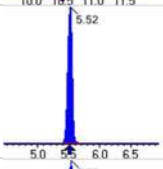  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2002935 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4006.0 | N/A | 4.0651 [ 4.0000 ] | 101.6% { 117.8% } | 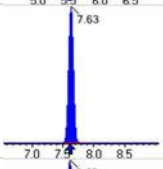  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1668856 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1752.0 | N/A | 4.3187 [ 4.0000 ] | 108.0% { 126.5% } | 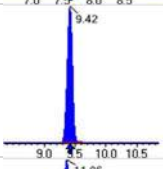  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3077655 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1620.4 | N/A | 7.6206 [ 8.0000 ] | 95.3% { 118.5% } | 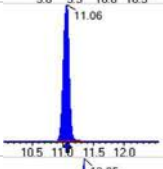  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1599050 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2792.1 | N/A | 1.9799 [ 2.0000 ] | 99.0% { 119.9% } | 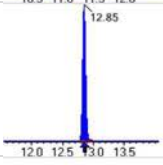  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 316727 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2067.3 | N/A | 1.8490 [ 2.0000 ] | 92.4% { 114.2% } | 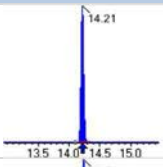 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 342216 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2475.5 | N/A | 1.8629 [ 2.0000 ] | 93.1% { 108.5% } | 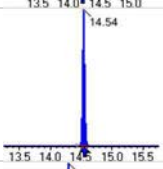 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863550 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2856.7 | N/A | 3.6825 [ 4.0000 ] | 92.1% { 103.1% } | 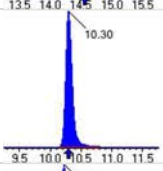 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 847460 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1855.6 | N/A | 3.9651 [ 4.0000 ] | 99.1% { 112.1% } | 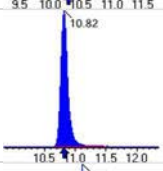 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1512548 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2500.9 | N/A | 19.6485 [ 20.0000 ] | 98.2% { 112.4% } | 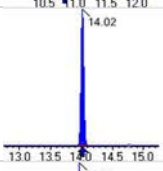 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1527927 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3992.3 | N/A | 19.5555 [ 20.0000 ] | 97.8% { 116.0% } | 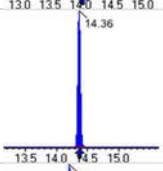 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1098397 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 1915.2 | N/A | 7.2711 [ 8.0000 ] | 90.9% { 112.3% } | 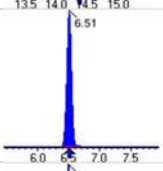 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 685864 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1284.4 | N/A | 2.0841 [ 2.0000 ] | 104.2% { 118.8% } | 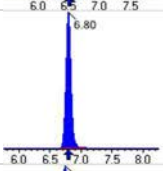 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640047 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 831.7 | N/A | 2.1364 [ 2.0000 ] | 106.8% { 119.1% } | 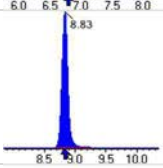 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1167070<br>( 163.0 / 69.0 ) 30804 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 6613.1<br>1428.5 | 0.0264<br>97.2<br>97.2 | 4.0742 | N/A | 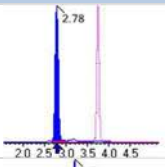 | 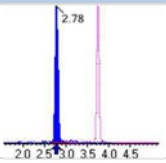 | |
| PFBA | ( 213.0 / 169.0 ) 2380850 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1790.8 | N/A<br>0.0<br>0.0 | 7.8622 | N/A | 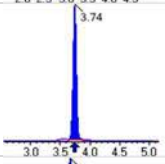 | | |
| PFPeA | ( 263.0 / 219.0 ) 982336<br>( 263.0 / 69.0 ) 11786 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.4) | 3478.0<br>129.5 | 0.0120<br>100.5<br>100.5 | 3.9724 | N/A | 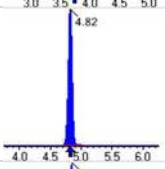 | 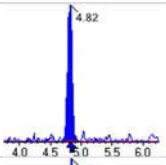 | |
| PFHxA | ( 313.0 / 269.0 ) 545073<br>( 313.0 / 119.0 ) 68593 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1809.3<br>693.8 | 0.1258<br>108.4<br>108.4 | 1.9499 | N/A | 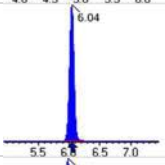 | 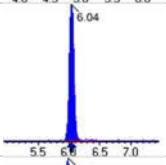 | |
| PFHpA | ( 363.0 / 319.0 ) 643126<br>( 363.0 / 169.0 ) 190819 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1661.0<br>1337.1 | 0.2967<br>97.9<br>97.9 | 2.1051 | N/A | 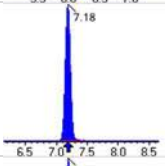 | 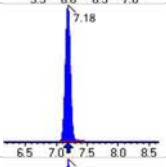 | |
| PFOA | ( 413.0 / 369.0 ) 872213<br>( 413.0 / 169.0 ) 301378 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 570.6<br>871.9 | 0.3455<br>94.5<br>94.5 | 2.1989 | N/A | 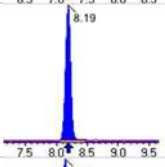 | 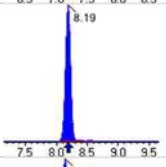 | |
| PFNA | ( 463.0 / 419.0 ) 567165<br>( 463.0 / 169.0 ) 151317 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1085.3<br>759.0 | 0.2668<br>104.5<br>104.5 | 2.0790 | N/A | 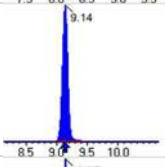 | 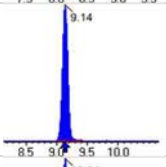 | |
| PFDA | ( 513.0 / 469.0 ) 636050<br>( 513.0 / 169.0 ) 72425 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2724.0<br>2618.5 | 0.1139<br>97.2<br>97.2 | 1.9766 | N/A | 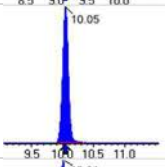 | 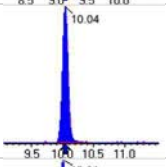 | |
| PFUnA | ( 563.0 / 519.0 ) 707227<br>( 563.0 / 169.0 ) 104233 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1094.1<br>630.7 | 0.1474<br>104.0<br>104.0 | 2.0313 | N/A | 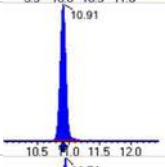 | 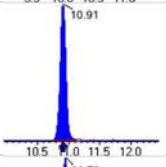 | |
| PFDoA | ( 613.0 / 569.0 ) 782512<br>( 613.0 / 169.0 ) 130444 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1319.2<br>723.5 | 0.1667<br>105.5<br>105.5 | 2.0593 | N/A | 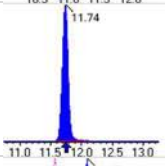 | 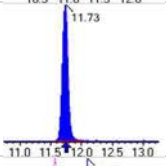 | |
| PFTrDA | ( 663.0 / 619.0 ) 789089<br>( 663.0 / 169.0 ) 212271 | ( 12.37 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1336.2<br>873.5 | 0.2690<br>104.5<br>104.5 | 2.1228 | N/A | 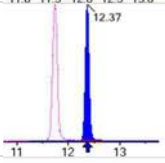 | 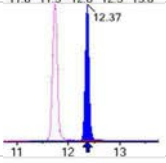 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 637286<br>( 713.0 / 169.0 ) 170472 | ( 12.86 , 1.00 ) ( 0.00 , N/A , 0.1) | 1613.6<br>792.6 | 0.2675<br>99.1<br>99.1 | 2.0366 | N/A | 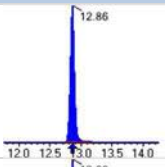 | 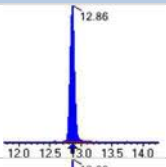 | |
| PFHxDA | ( 813.0 / 769.0 ) 562479<br>( 813.0 / 169.0 ) 139657 | ( 13.66 , 1.00 ) ( 0.00 , N/A , 0.1) | 1879.1<br>883.2 | 0.2483<br>101.5<br>101.5 | 2.0439 | N/A | 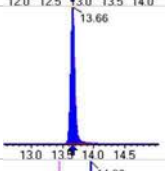 | 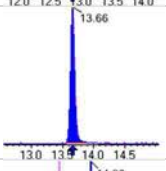 | |
| PFODA | ( 913.0 / 869.0 ) 345836<br>( 913.0 / 169.0 ) 120025 | ( 14.29 , 1.05 ) ( N/A , 0.00 , 0.1) | 1113.8<br>518.3 | 0.3471<br>96.9<br>96.9 | 2.0088 | N/A | 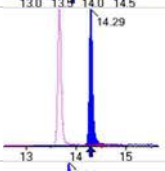 | 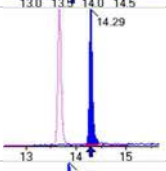 | |
| PFBS | ( 299.0 / 80.0 ) 807070<br>( 299.0 / 99.0 ) 599114 | ( 6.34 , 1.00 ) ( 0.00 , N/A , 0.1) | 2517.2<br>1691.5 | 0.7423<br>105.0<br>105.0 | 1.8154 | N/A | 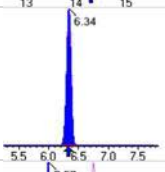 | 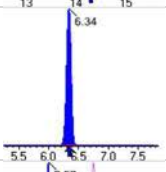 | |
| PFPeS | ( 349.0 / 80.0 ) 2047999<br>( 349.0 / 99.0 ) 717347 | ( 7.57 , 0.88 ) ( N/A , -0.01 , 0.0) | 2149.2<br>1871.5 | 0.3503<br>97.4<br>97.4 | 2.0232 | N/A | 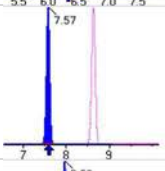 | 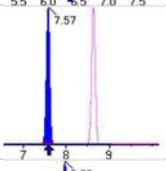 | |
| PFHxS | ( 399.0 / 80.0 ) 2275361<br>( 399.0 / 99.0 ) 716614 | ( 8.63 , 1.00 ) ( 0.00 , N/A , -0.3) | 2510.6<br>3505.7 | 0.3149<br>98.9<br>98.9 | 1.9353 | N/A | 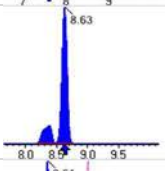 | 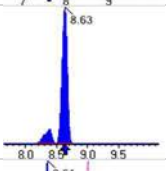 | |
| PFHpS | ( 449.0 / 80.0 ) 1804024<br>( 449.0 / 99.0 ) 504967 | ( 9.61 , 0.91 ) ( N/A , 0.00 , 0.1) | 1569.3<br>1421.3 | 0.2799<br>105.8<br>105.8 | 1.8460 | N/A | 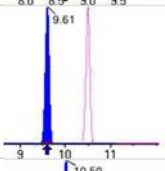 | 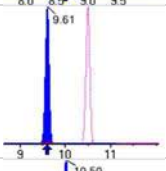 | |
| PFOS | ( 499.0 / 80.0 ) 1717687<br>( 499.0 / 99.0 ) 415698 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1681.3<br>3443.9 | 0.2420<br>103.5<br>103.5 | 1.8234 | N/A | 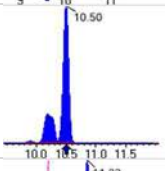 | 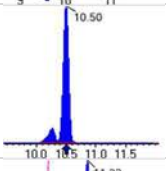 | |
| PFNS | ( 549.0 / 80.0 ) 1727422<br>( 549.0 / 99.0 ) 477926 | ( 11.33 , 1.08 ) ( N/A , 0.00 , 0.0) | 2123.3<br>1732.9 | 0.2767<br>101.5<br>101.5 | 1.9585 | N/A | 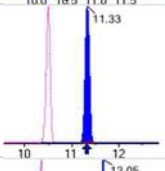 | 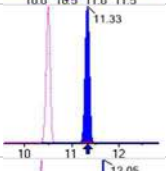 | |
| PFDS | ( 599.0 / 80.0 ) 2215571<br>( 599.0 / 99.0 ) 567898 | ( 12.05 , 1.15 ) ( N/A , 0.00 , 0.0) | 2083.6<br>1457.0 | 0.2563<br>94.3<br>94.3 | 2.0572 | N/A | 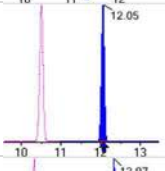 | 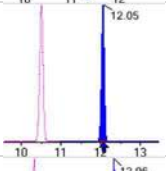 | |
| PFDoS | ( 699.0 / 80.0 ) 1929958<br>( 699.0 / 99.0 ) 452362 | ( 12.97 , 1.23 ) ( N/A , 0.00 , 0.2) | 3211.3<br>2064.4 | 0.2344<br>100.3<br>100.3 | 2.0327 | N/A | 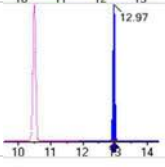 | 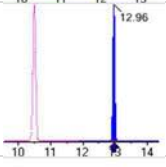 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3165018<br>( 327.0 / 81.0 ) 2801149 | ( 5.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5253.6<br>3183.2 | 0.8850<br>101.4<br>101.4 | 7.7285 | N/A | 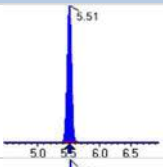 | 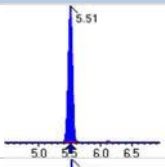 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2962118<br>( 427.0 / 81.0 ) 3791569 | ( 7.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4973.3<br>4315.3 | 1.2800<br>102.1<br>102.1 | 8.2415 | N/A | 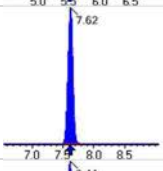 | 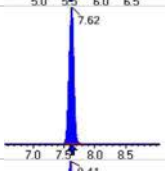 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2967875<br>( 527.0 / 81.0 ) 3049271 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , 0.3) | 1388.1<br>1687.5 | 1.0274<br>94.5<br>94.5 | 9.3020 | N/A | 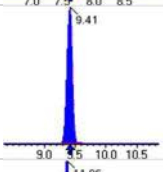 | 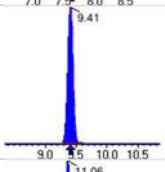 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2212496<br>( 627.0 / 81.0 ) 3256559 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1502.8<br>1201.7 | 1.4719<br>102.2<br>102.2 | 8.4769 | N/A | 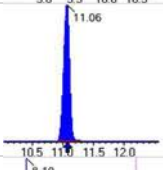 | 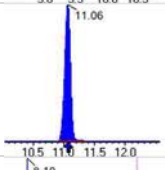 | |
| PFBSA | ( 297.9 / 78.0 ) 1506188<br>( 297.9 / 278.0 ) 2085 | ( 8.10 , 0.57 )<br>( N/A , -0.01 , 0.1) | 1678.4<br>162.1 | 0.0014<br>101.3<br>101.3 | 1.8931 | N/A | 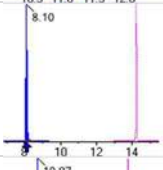 | 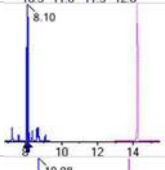 | |
| PFHxSA | ( 397.9 / 78.0 ) 2033326<br>( 397.9 / 378.0 ) 7799 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , -0.5) | 1288.8<br>260.0 | 0.0038<br>93.9<br>93.9 | 1.9498 | N/A | 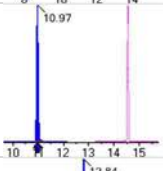 | 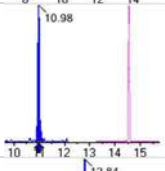 | |
| PFOSA | ( 498.0 / 78.0 ) 1456812<br>( 498.0 / 478.0 ) 21062 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2311.6<br>609.7 | 0.0145<br>103.0<br>103.0 | 2.0599 | N/A | 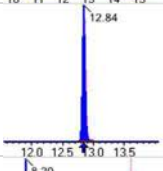 | 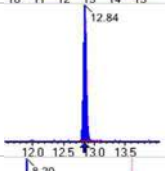 | |
| TFSI | ( 279.7 / 147.0 ) 3946578<br>( 279.7 / 211.0 ) 343736 | ( 8.20 , 0.64 )<br>( N/A , -0.01 , -0.1) | 58.0<br>63.6 | 0.0871<br>103.7<br>103.7 | 2.1192 | N/A | 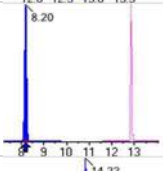 | 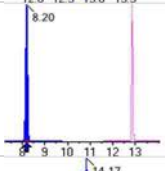 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1289595<br>( 512.0 / 169.0 ) 982667 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.8) | 2679.7<br>1218.1 | 0.7620<br>101.8<br>101.8 | 8.4131 | N/A | 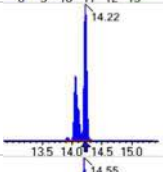 | 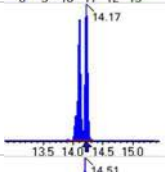 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1550489<br>( 526.0 / 169.0 ) 1954696 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3681.3<br>2879.5 | 1.2607<br>102.1<br>102.1 | 8.1588 | N/A | 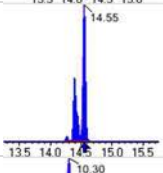 | 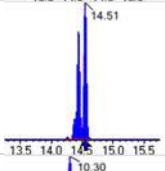 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 387312<br>( 570.0 / 483.0 ) 170497 | ( 10.30 , 1.00 )<br>( 0.01 , N/A , 0.0) | 2659.6<br>1694.2 | 0.4402<br>100.4<br>100.4 | 2.0441 | N/A | 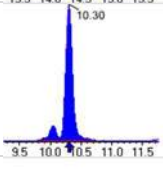 | 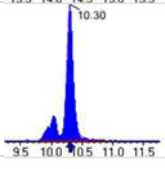 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 371840<br>( 584.0 / 526.0 ) 223765 | ( 10.83 , 1.00 ) ( 0.01 , N/A , 0.1) | 1679.5<br>567.2 | 0.6018<br>97.6<br>97.6 | 2.0307 | N/A | 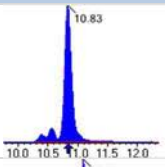 | 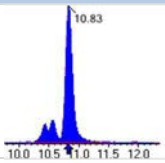 | |
| NMeFOSE | ( 616.0 / 59.0 ) 587826 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 1822.9 | N/A<br>0.0<br>0.0 | 8.0538 | N/A | 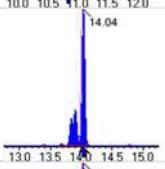 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 498830 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 2471.3 | N/A<br>0.0<br>0.0 | 8.3350 | N/A | 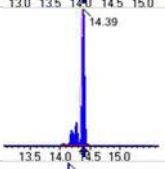 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 155250<br>( 285.0 / 185.0 ) 430625 | ( 6.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1419.6<br>1605.4 | 2.7738<br>100.3<br>100.3 | 1.9504 | N/A | 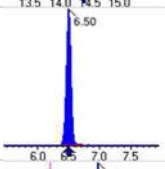 | 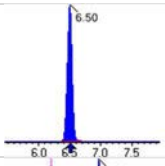 | |
| ADONA | ( 377.0 / 85.0 ) 1788880<br>( 377.0 / 251.0 ) 182995 | ( 7.57 , 1.17 ) ( N/A , -0.01 , 0.0) | 1568.4<br>1057.9 | 0.1023<br>100.4<br>100.4 | 1.9263 | N/A | 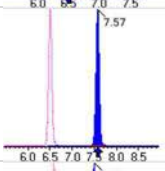 | 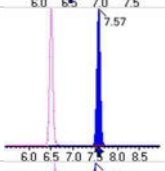 | |
| PFEESA | ( 315.0 / 135.0 ) 717362<br>( 315.0 / 83.0 ) 425934 | ( 6.93 , 1.15 ) ( N/A , -0.01 , -0.1) | 3571.8<br>934.1 | 0.5938<br>106.5<br>106.5 | 3.5735 | N/A | 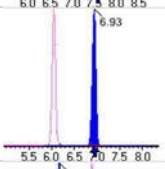 | 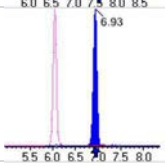 | |
| PFMPA | ( 229.0 / 85.0 ) 325814 | ( 4.13 , 0.86 ) ( N/A , -0.02 , 0.0) | 4750.1 | N/A<br>0.0<br>0.0 | 4.1520 | N/A | 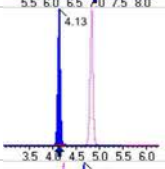 | | |
| PFMBA | ( 279.0 / 85.0 ) 859316 | ( 5.19 , 1.08 ) ( N/A , -0.02 , 0.0) | 4011.9 | N/A<br>0.0<br>0.0 | 4.0290 | N/A | 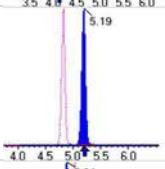 | | |
| NFDHA | ( 295.0 / 201.0 ) 433621<br>( 295.0 / 85.0 ) 453198 | ( 5.91 , 0.98 ) ( N/A , -0.02 , 0.0) | 2536.7<br>1960.5 | 1.0451<br>96.9<br>96.9 | 4.1550 | N/A | 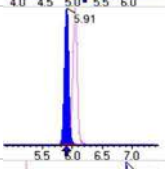 | 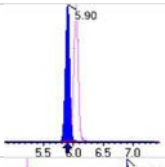 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1841173<br>( 533.0 / 353.0 ) 582312 | ( 11.15 , 1.71 ) ( N/A , 0.00 , 0.1) | 3390.1<br>2790.6 | 0.3163<br>101.1<br>101.1 | 1.8356 | N/A | 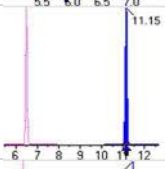 | 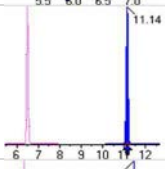 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1399623<br>( 633.0 / 453.0 ) 481280 | ( 12.46 , 1.92 ) ( N/A , 0.00 , 0.0) | 3352.1<br>2343.7 | 0.3439<br>103.5<br>103.5 | 1.8145 | N/A | 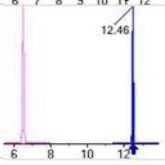 | 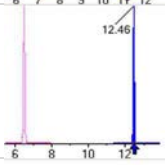 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 988702<br>( 461.0 / 381.2 ) 369799 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3569.1<br>2525.0 | 0.3740<br>93.9<br>93.9 | 1.8604 | N/A | 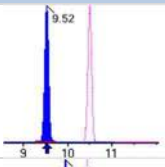 | 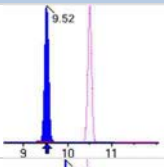 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 107582<br>( 241.0 / 117.0 ) 252826 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , 0.1) | 1855.3<br>1674.9 | 2.3501<br>111.5<br>111.5 | 7.6476 | N/A | 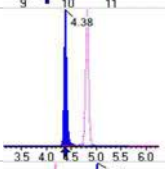 | 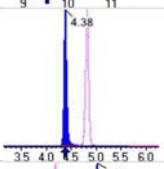 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 600676<br>( 341.0 / 217.0 ) 948229 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1068.2<br>1017.6 | 1.5786<br>103.9<br>103.9 | 7.7484 | N/A | 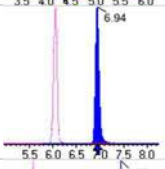 | 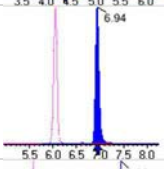 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 908795<br>( 441.0 / 337.0 ) 796144 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 4807.8<br>10397.6 | 0.8760<br>95.5<br>95.5 | 7.1437 | N/A | 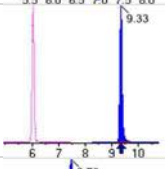 | 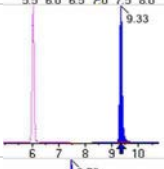 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 656805<br>( 357.2 / 243.0 ) 69587 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1423.9<br>609.7 | 0.1059<br>96.1<br>96.1 | 2.0942 | N/A | 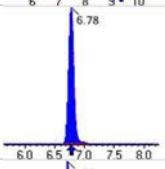 | 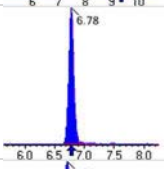 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 424616<br>( 457.2 / 343.0 ) 18607 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 720.9<br>173.8 | 0.0438<br>105.7<br>105.7 | 2.0751 | N/A | 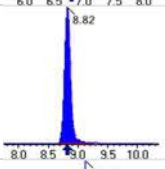 | 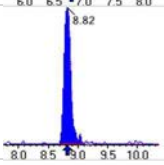 | |
| TDCA | ( 499.0 / 80.0 ) 1243423 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 9081.2 | N/A<br>0.0<br>0.0 | 1.9364 | N/A | 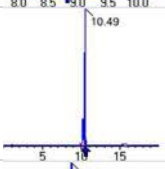 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256028 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1098.6 | N/A | 1.0738<br>[ 1.0000 ] | 107.4%<br>{ 109.3% } | 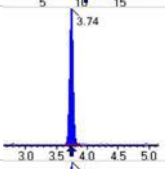 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127760 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 116465.1 | N/A | 1.0071<br>[ 1.0000 ] | 100.7%<br>{ 106.9% } | 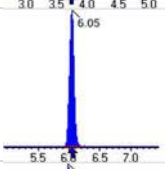 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 375777 | ( 8.19 , N/A )<br>( N/A , -0.01 , N/A ) | 3449.1 | N/A | 0.9506<br>[ 1.0000 ] | 95.1%<br>{ 98.9% } | 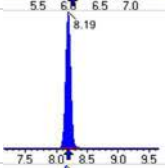 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 261656 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1169.2 | N/A | 0.9200<br>[ 1.0000 ] | 92.0%<br>{ 98.3% } | 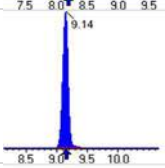 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273361 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6361.8 | N/A | 0.9361 [ 1.0000 ] | 93.6% { 102.0% } | 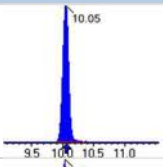  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 895978 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 6222.1 | N/A | 0.9441 [ 1.0000 ] | 94.4% { 99.5% } | 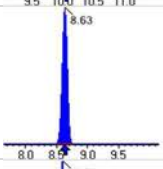  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715584 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.4 | N/A | 0.9395 [ 1.0000 ] | 94.0% { 102.1% } | 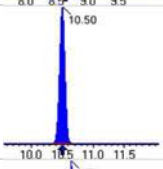  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2430274 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40566.0 | N/A | 8.3091 [ 8.0000 ] | 103.9% { 114.9% } | 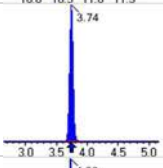  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979123 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5288.2 | N/A | 4.1074 [ 4.0000 ] | 102.7% { 106.2% } | 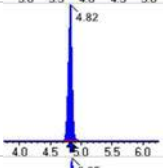  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581916 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 6715.1 | N/A | 1.9963 [ 2.0000 ] | 99.8% { 105.2% } | 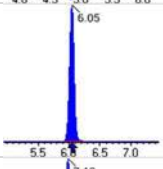  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 622669 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5519.9 | N/A | 1.9202 [ 2.0000 ] | 96.0% { 100.5% } | 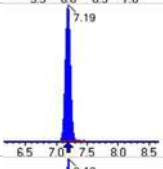  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806392 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2713.5 | N/A | 2.0028 [ 2.0000 ] | 100.1% { 98.4% } | 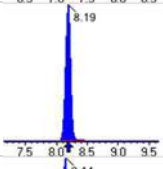  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 271437 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2533.1 | N/A | 1.0580 [ 1.0000 ] | 105.8% { 103.4% } | 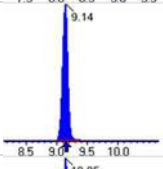  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314936 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1334.1 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 99.5% } | 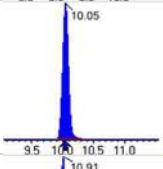  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376422 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 888.9 | N/A | 1.0444 [ 1.0000 ] | 104.4% { 104.2% } | 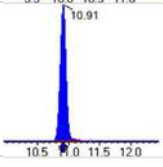  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 377714 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1130.3 | N/A | 1.0291 [ 1.0000 ] | 102.9% { 107.4% } | 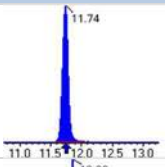 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334117 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1287.0 | N/A | 1.0689 [ 1.0000 ] | 106.9% { 106.9% } | 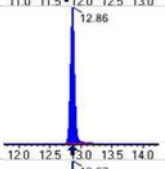 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577032 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2353.0 | N/A | 2.1624 [ 2.0000 ] | 108.1% { 111.8% } | 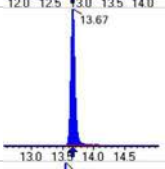 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712494 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1082.5 | N/A | 2.1155 [ 2.0000 ] | 105.8% { 107.5% } | 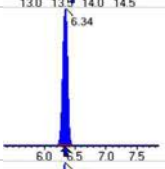 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1322704 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5231.9 | N/A | 2.0471 [ 2.0000 ] | 102.4% { 103.3% } | 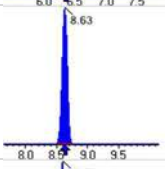 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1631255 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1422.0 | N/A | 2.1142 [ 2.0000 ] | 105.7% { 104.4% } | 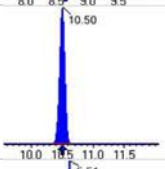 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 624175 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.1 | N/A | 4.4690 [ 4.0000 ] | 111.7% { 118.9% } | 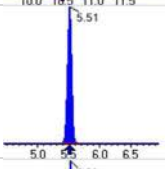 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1736153 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4394.5 | N/A | 4.1536 [ 4.0000 ] | 103.8% { 102.1% } | 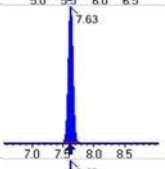 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1343832 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1566.8 | N/A | 4.0993 [ 4.0000 ] | 102.5% { 101.9% } | 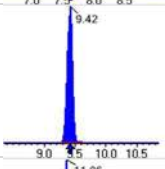 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2709064 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1402.5 | N/A | 7.9071 [ 8.0000 ] | 98.8% { 104.3% } | 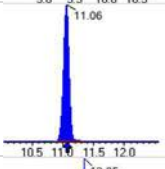 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1414425 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1760.1 | N/A | 2.0687 [ 2.0000 ] | 103.4% { 106.1% } | 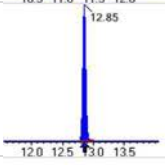 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 308758 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2279.8 | N/A | 2.1291 [ 2.0000 ] | 106.5% { 111.3% } | 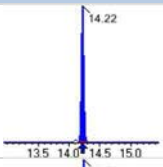  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339372 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2361.4 | N/A | 2.1822 [ 2.0000 ] | 109.1% { 107.6% } | 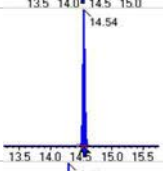  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 794659 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 1882.2 | N/A | 4.0028 [ 4.0000 ] | 100.1% { 94.8% } | 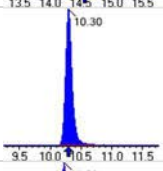  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 748744 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2202.1 | N/A | 4.1381 [ 4.0000 ] | 103.5% { 99.0% } | 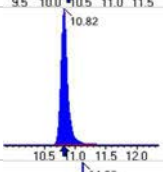  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1330777 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2545.4 | N/A | 20.4202 [ 20.0000 ] | 102.1% { 98.9% } | 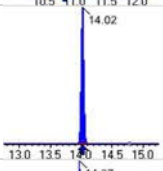  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347196 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3939.5 | N/A | 20.3672 [ 20.0000 ] | 101.8% { 102.3% } | 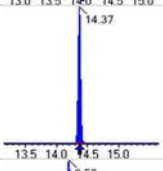  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1079864 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 1987.0 | N/A | 8.1322 [ 8.0000 ] | 101.7% { 110.4% } | 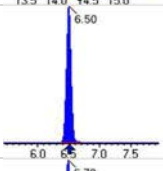  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 590008 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1397.6 | N/A | 1.9907 [ 2.0000 ] | 99.5% { 102.2% } | 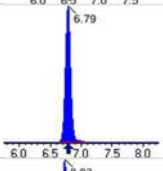  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 501757 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 686.7 | N/A | 1.8597 [ 2.0000 ] | 93.0% { 93.4% } | 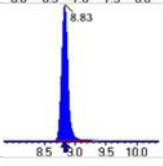  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2317898<br>( 163.0 / 69.0 ) 62952 | ( 2.79 , 0.74 )<br>( N/A , 0.00 , 0.0) | 13254.7<br>2982.2 | 0.0272<br>100.0<br>100.0 | 9.2970 | N/A | 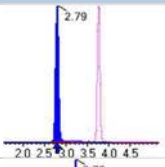 | 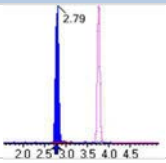 | |
| PFBA | ( 213.0 / 169.0 ) 4838830 | ( 3.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3323.8 | N/A<br>0.0<br>0.0 | 18.3594 | N/A | 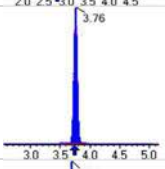 | | |
| PFPeA | ( 263.0 / 219.0 ) 2128919<br>( 263.0 / 69.0 ) 25420 | ( 4.84 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5361.1<br>340.3 | 0.0119<br>100.0<br>100.0 | 9.1456 | N/A | 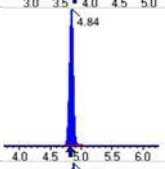 | 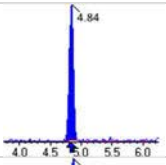 | |
| PFHxA | ( 313.0 / 269.0 ) 1219406<br>( 313.0 / 119.0 ) 141590 | ( 6.06 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2354.3<br>1418.0 | 0.1161<br>100.0<br>100.0 | 4.5868 | N/A | 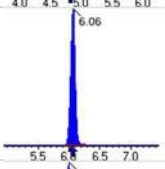 | 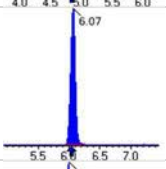 | |
| PFHpA | ( 363.0 / 319.0 ) 1387492<br>( 363.0 / 169.0 ) 420528 | ( 7.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1776.8<br>1251.9 | 0.3031<br>100.0<br>100.0 | 4.5659 | N/A | 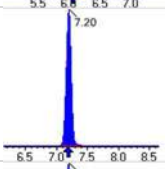 | 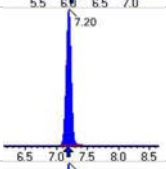 | |
| PFOA | ( 413.0 / 369.0 ) 1841616<br>( 413.0 / 169.0 ) 673207 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.0) | 773.3<br>1201.4 | 0.3656<br>100.0<br>100.0 | 4.5711 | N/A | 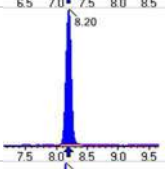 | 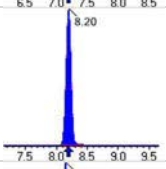 | |
| PFNA | ( 463.0 / 419.0 ) 1251905<br>( 463.0 / 169.0 ) 319604 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1250.5<br>1086.4 | 0.2553<br>100.0<br>100.0 | 4.7429 | N/A | 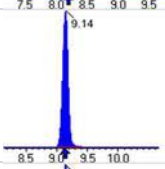 | 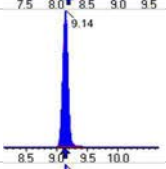 | |
| PFDA | ( 513.0 / 469.0 ) 1434654<br>( 513.0 / 169.0 ) 168105 | ( 10.04 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3306.9<br>1965.1 | 0.1172<br>100.0<br>100.0 | 4.4342 | N/A | 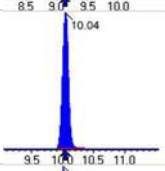 | 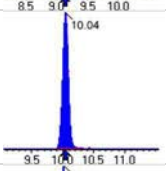 | |
| PFUnA | ( 563.0 / 519.0 ) 1605332<br>( 563.0 / 169.0 ) 227512 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1211.8<br>818.3 | 0.1417<br>100.0<br>100.0 | 4.8033 | N/A | 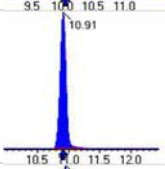 | 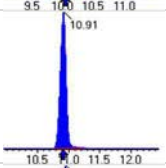 | |
| PFDoA | ( 613.0 / 569.0 ) 1716228<br>( 613.0 / 169.0 ) 271263 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1381.0<br>1036.4 | 0.1581<br>100.0<br>100.0 | 4.8505 | N/A | 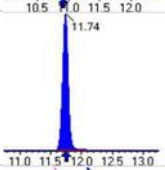 | 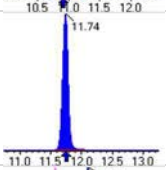 | |
| PFTrDA | ( 663.0 / 619.0 ) 1712256<br>( 663.0 / 169.0 ) 440712 | ( 12.37 , 1.05 )<br>( N/A , 0.00 , -0.1) | 1318.3<br>1430.7 | 0.2574<br>100.0<br>100.0 | 4.9471 | N/A | 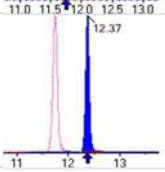 | 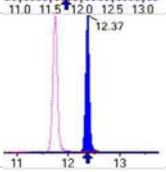 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1428181<br>( 713.0 / 169.0 ) 385493 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1791.2<br>1117.8 | 0.2699<br>100.0<br>100.0 | 4.8801 | N/A | 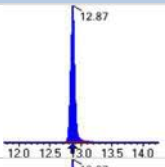 | 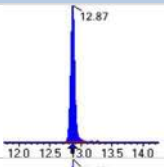 | |
| PFHxDA | ( 813.0 / 769.0 ) 1138852<br>( 813.0 / 169.0 ) 278641 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1735.3<br>1315.5 | 0.2447<br>100.0<br>100.0 | 4.6269 | N/A | 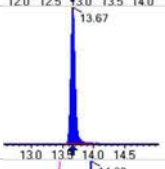 | 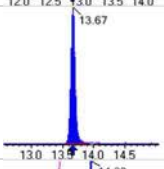 | |
| PFODA | ( 913.0 / 869.0 ) 731197<br>( 913.0 / 169.0 ) 261984 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1733.9<br>942.0 | 0.3583<br>100.0<br>100.0 | 4.7485 | N/A | 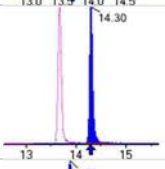 | 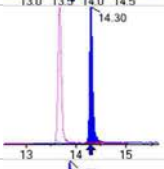 | |
| PFBS | ( 299.0 / 80.0 ) 1759688<br>( 299.0 / 99.0 ) 1244474 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4249.9<br>3308.4 | 0.7072<br>100.0<br>100.0 | 4.2546 | N/A | 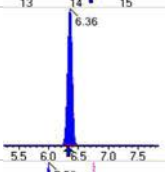 | 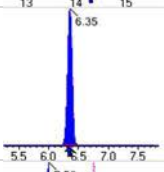 | |
| PFPeS | ( 349.0 / 80.0 ) 4474419<br>( 349.0 / 99.0 ) 1609058 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2447.9<br>2689.5 | 0.3596<br>100.0<br>100.0 | 4.5657 | N/A | 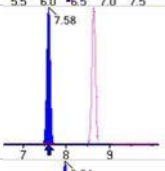 | 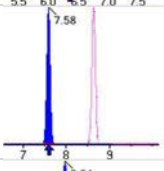 | |
| PFHxS | ( 399.0 / 80.0 ) 5007143<br>( 399.0 / 99.0 ) 1594633 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3769.6<br>5809.6 | 0.3185<br>100.0<br>100.0 | 4.3987 | N/A | 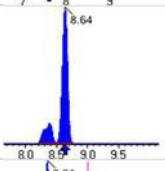 | 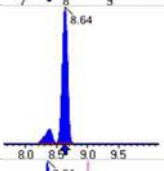 | |
| PFHpS | ( 449.0 / 80.0 ) 4180068<br>( 449.0 / 99.0 ) 1106181 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1994.9<br>1790.0 | 0.2646<br>100.0<br>100.0 | 4.4654 | N/A | 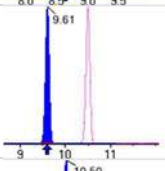 | 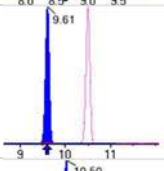 | |
| PFOS | ( 499.0 / 80.0 ) 3790499<br>( 499.0 / 99.0 ) 885961 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2368.6<br>8764.9 | 0.2337<br>100.0<br>100.0 | 4.2007 | N/A | 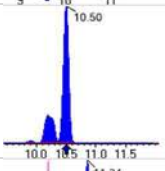 | 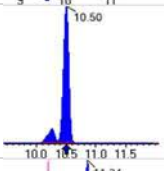 | |
| PFNS | ( 549.0 / 80.0 ) 3830828<br>( 549.0 / 99.0 ) 1044035 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2949.8<br>2999.3 | 0.2725<br>100.0<br>100.0 | 4.5343 | N/A | 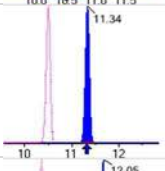 | 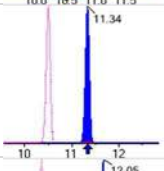 | |
| PFDS | ( 599.0 / 80.0 ) 4687891<br>( 599.0 / 99.0 ) 1274601 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2654.5<br>1953.7 | 0.2719<br>100.0<br>100.0 | 4.5442 | N/A | 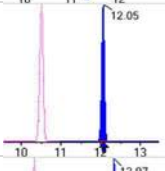 | 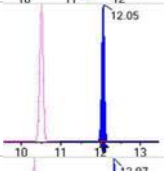 | |
| PFDoS | ( 699.0 / 80.0 ) 4217083<br>( 699.0 / 99.0 ) 985007 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3687.0<br>3177.3 | 0.2336<br>100.0<br>100.0 | 4.6370 | N/A | 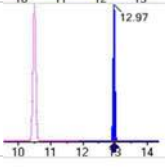 | 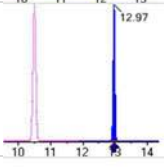 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6427716<br>( 327.0 / 81.0 ) 5608160 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4802.8<br>3822.4 | 0.8725<br>100.0<br>100.0 | 18.6621 | N/A | 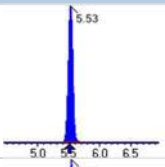 | 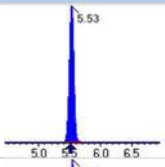 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6162619<br>( 427.0 / 81.0 ) 7728420 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4425.7<br>3867.2 | 1.2541<br>100.0<br>100.0 | 17.5116 | N/A | 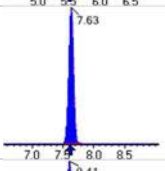 | 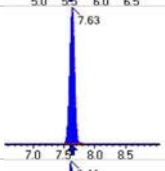 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5813599<br>( 527.0 / 81.0 ) 6323842 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1535.7<br>1692.5 | 1.0878<br>100.0<br>100.0 | 18.5585 | N/A | 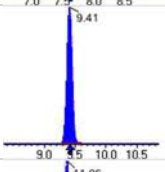 | 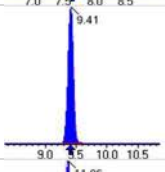 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4546994<br>( 627.0 / 81.0 ) 6545746 | ( 11.06 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1429.6<br>1779.0 | 1.4396<br>100.0<br>100.0 | 18.1733 | N/A | 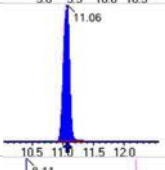 | 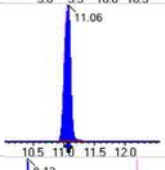 | |
| PFBSA | ( 297.9 / 78.0 ) 3784890<br>( 297.9 / 278.0 ) 5173 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , -0.7) | 2391.2<br>252.6 | 0.0014<br>100.0<br>100.0 | 5.2941 | N/A | 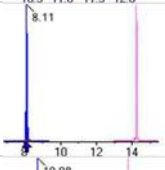 | 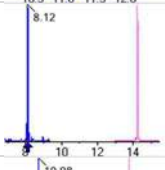 | |
| PFHxSA | ( 397.9 / 78.0 ) 4138663<br>( 397.9 / 378.0 ) 16909 | ( 10.98 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1475.0<br>328.4 | 0.0041<br>100.0<br>100.0 | 4.2697 | N/A | 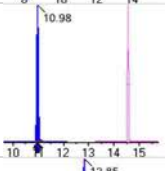 | 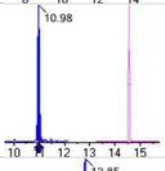 | |
| PFOSA | ( 498.0 / 78.0 ) 3268359<br>( 498.0 / 478.0 ) 45862 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2465.7<br>1324.9 | 0.0140<br>100.0<br>100.0 | 4.9031 | N/A | 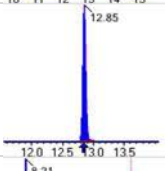 | 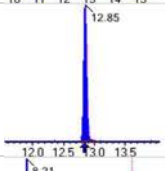 | |
| TFSI | ( 279.7 / 147.0 ) 8554250<br>( 279.7 / 211.0 ) 718623 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 65.6<br>60.6 | 0.0840<br>100.0<br>100.0 | 4.8735 | N/A | 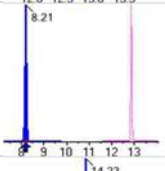 | 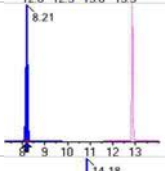 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2617190<br>( 512.0 / 169.0 ) 1958777 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 2.6) | 3160.0<br>1591.2 | 0.7484<br>100.0<br>100.0 | 19.0008 | N/A | 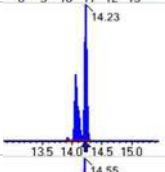 | 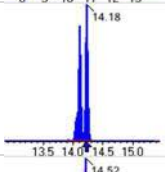 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3302859<br>( 526.0 / 169.0 ) 4077880 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4176.5<br>3268.5 | 1.2347<br>100.0<br>100.0 | 18.6986 | N/A | 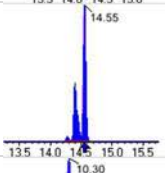 | 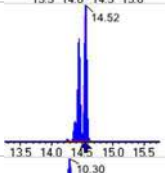 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 941372<br>( 570.0 / 483.0 ) 412806 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2558.8<br>1637.7 | 0.4385<br>100.0<br>100.0 | 4.7122 | N/A | 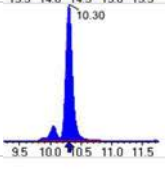 | 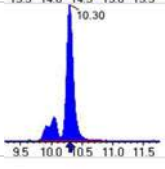 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 830082<br>( 584.0 / 526.0 ) 511873 | ( 10.83 , 1.00 ) ( 0.01 , N/A , 0.0) | 1802.1<br>671.1 | 0.6167<br>100.0<br>100.0 | 4.4891 | N/A | 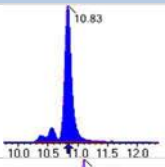 | 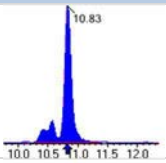 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1309209 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 2267.5 | N/A<br>0.0<br>0.0 | 17.7400 | N/A | 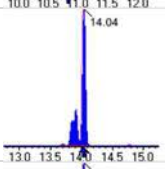 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1093975 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 3642.1 | N/A<br>0.0<br>0.0 | 18.6997 | N/A | 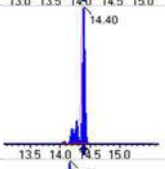 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 350291<br>( 285.0 / 185.0 ) 968672 | ( 6.52 , 1.00 ) ( 0.00 , N/A , 0.1) | 1900.4<br>2107.7 | 2.7653<br>100.0<br>100.0 | 4.8596 | N/A | 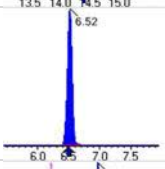 | 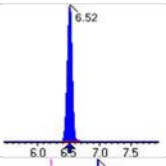 | |
| ADONA | ( 377.0 / 85.0 ) 3944718<br>( 377.0 / 251.0 ) 402093 | ( 7.59 , 1.16 ) ( N/A , 0.00 , 0.0) | 1901.3<br>1951.7 | 0.1019<br>100.0<br>100.0 | 4.6907 | N/A | 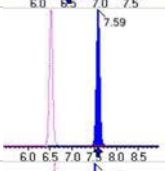 | 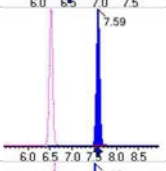 | |
| PFEESA | ( 315.0 / 135.0 ) 1573841<br>( 315.0 / 83.0 ) 877164 | ( 6.95 , 1.15 ) ( N/A , 0.00 , -0.1) | 3219.1<br>1327.1 | 0.5573<br>100.0<br>100.0 | 8.2438 | N/A | 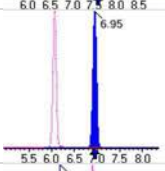 | 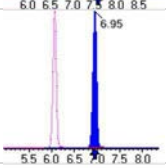 | |
| PFMPA | ( 229.0 / 85.0 ) 686112 | ( 4.15 , 0.86 ) ( N/A , 0.00 , 0.0) | 5599.0 | N/A<br>0.0<br>0.0 | 9.2883 | N/A | 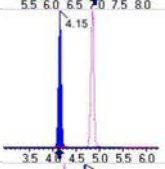 | | |
| PFMBA | ( 279.0 / 85.0 ) 1810024 | ( 5.21 , 1.08 ) ( N/A , 0.00 , 0.0) | 5286.0 | N/A<br>0.0<br>0.0 | 9.0155 | N/A | 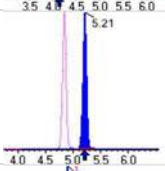 | | |
| NFDHA | ( 295.0 / 201.0 ) 855237<br>( 295.0 / 85.0 ) 922794 | ( 5.92 , 0.98 ) ( N/A , 0.00 , 0.0) | 3414.5<br>3145.8 | 1.0790<br>100.0<br>100.0 | 8.6171 | N/A | 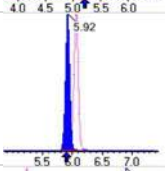 | 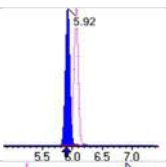 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4165488<br>( 533.0 / 353.0 ) 1303420 | ( 11.14 , 1.71 ) ( N/A , 0.00 , -0.1) | 2574.2<br>3005.6 | 0.3129<br>100.0<br>100.0 | 4.5860 | N/A | 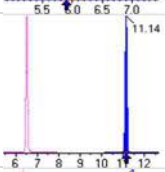 | 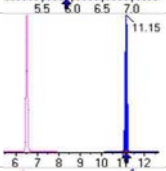 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3346515<br>( 633.0 / 453.0 ) 1111515 | ( 12.47 , 1.91 ) ( N/A , 0.00 , -0.1) | 3618.9<br>2674.6 | 0.3321<br>100.0<br>100.0 | 4.7909 | N/A | 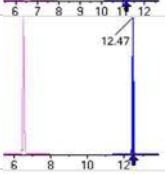 | 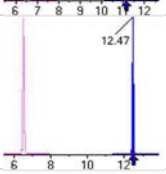 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2114337<br>( 461.0 / 381.2 ) 842629 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , -0.1) | 2784.3<br>3053.0 | 0.3985<br>100.0<br>100.0 | 4.1534 | N/A | 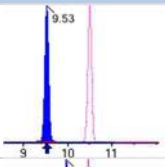 | 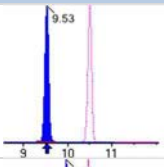 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 238302<br>( 241.0 / 117.0 ) 502064 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2642.2<br>2673.1 | 2.1068<br>100.0<br>100.0 | 17.9956 | N/A | 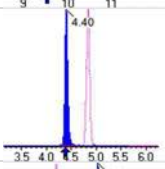 | 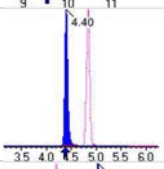 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1331676<br>( 341.0 / 217.0 ) 2023067 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1058.3<br>1362.0 | 1.5192<br>100.0<br>100.0 | 18.0626 | N/A | 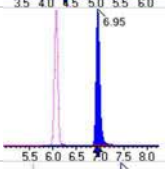 | 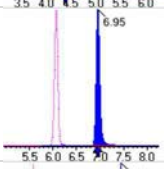 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2128903<br>( 441.0 / 337.0 ) 1952501 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4363.7<br>7659.6 | 0.9171<br>100.0<br>100.0 | 17.5963 | N/A | 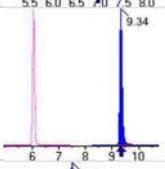 | 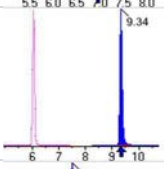 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1497038<br>( 357.2 / 243.0 ) 165062 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1712.0<br>900.3 | 0.1103<br>100.0<br>100.0 | 4.8782 | N/A | 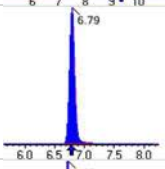 | 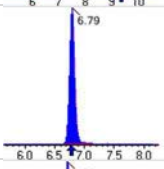 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1119562<br>( 457.2 / 343.0 ) 46429 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.1) | 781.1<br>326.6 | 0.0415<br>100.0<br>100.0 | 5.1103 | N/A | 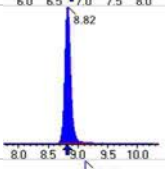 | 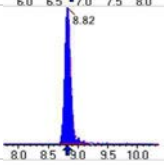 | |
| TDCA | ( 499.0 / 80.0 ) 2892255 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 15801.2 | N/A<br>0.0<br>0.0 | 4.7022 | N/A | 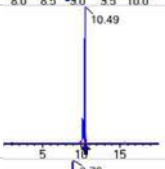 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 234275 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1105.2 | N/A | 0.9826<br>[ 1.0000 ] | 98.3%<br>{ 100.0% } | 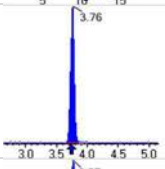 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119482 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 4024.8 | N/A | 0.9419<br>[ 1.0000 ] | 94.2%<br>{ 100.0% } | 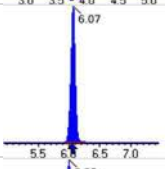 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379944 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3214.4 | N/A | 0.9611<br>[ 1.0000 ] | 96.1%<br>{ 100.0% } | 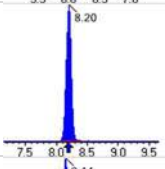 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 266244 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1068.8 | N/A | 0.9361<br>[ 1.0000 ] | 93.6%<br>{ 100.0% } | 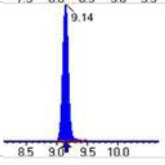 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 267877 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 4037.1 | N/A | 0.9173 [ 1.0000 ] | 91.7% { 100.0% } | 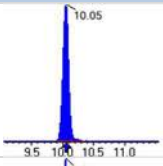  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 900173 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4526.5 | N/A | 0.9485 [ 1.0000 ] | 94.9% { 100.0% } | 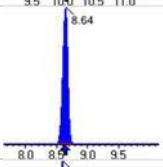  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 700749 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2461.4 | N/A | 0.9201 [ 1.0000 ] | 92.0% { 100.0% } | 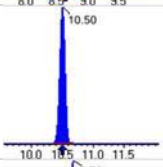  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115201 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 29283.2 | N/A | 7.9034 [ 8.0000 ] | 98.8% { 100.0% } | 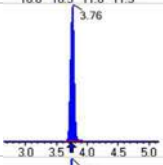  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 921682 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5969.4 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 100.0% } | 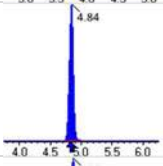  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 553414 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6046.0 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 100.0% } | 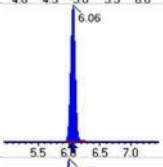  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 619345 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 4798.4 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 100.0% } | 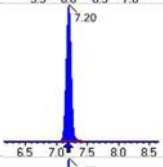  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 819908 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2642.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 100.0% } | 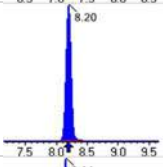  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262623 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 3992.5 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 100.0% } | 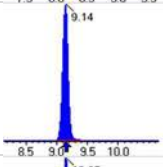  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316652 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 937.0 | N/A | 1.0548 [ 1.0000 ] | 105.5% { 100.0% } | 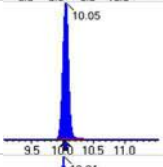  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 361334 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 805.5 | N/A | 1.0231 [ 1.0000 ] | 102.3% { 100.0% } | 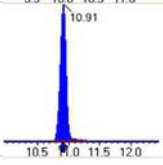  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351702 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1444.1 | N/A | 0.9778 [ 1.0000 ] | 97.8% { 100.0% } | 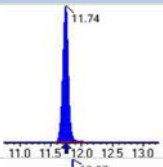 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 312483 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1264.0 | N/A | 1.0202 [ 1.0000 ] | 102.0% { 100.0% } | 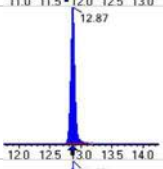 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 516108 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2242.9 | N/A | 1.9737 [ 2.0000 ] | 98.7% { 100.0% } | 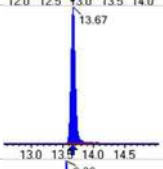 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1593184 | ( 6.36 , N/A ) ( N/A , 0.00 , N/A ) | 1038.1 | N/A | 1.9589 [ 2.0000 ] | 97.9% { 100.0% } | 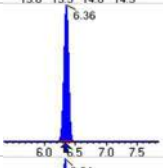 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1280605 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3673.4 | N/A | 1.9727 [ 2.0000 ] | 98.6% { 100.0% } | 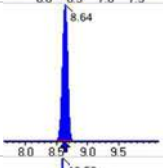 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1562530 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1579.3 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 100.0% } | 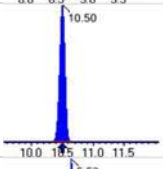 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524953 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 86.3 | N/A | 3.7410 [ 4.0000 ] | 93.5% { 100.0% } | 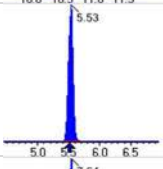 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1699930 | ( 7.64 , N/A ) ( N/A , 0.00 , N/A ) | 3997.9 | N/A | 4.0480 [ 4.0000 ] | 101.2% { 100.0% } | 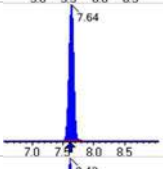 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1319404 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1220.6 | N/A | 4.0060 [ 4.0000 ] | 100.1% { 100.0% } | 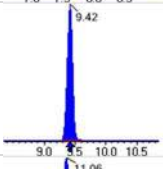 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2596951 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1243.7 | N/A | 7.5446 [ 8.0000 ] | 94.3% { 100.0% } | 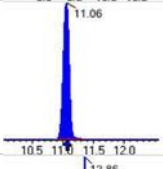 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1333164 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2944.9 | N/A | 1.9911 [ 2.0000 ] | 99.6% { 100.0% } | 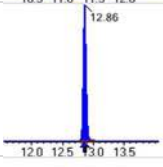 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 277449 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1901.8 | N/A | 1.9537 [ 2.0000 ] | 97.7% { 100.0% } | 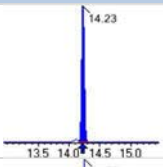  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315440 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2388.3 | N/A | 2.0713 [ 2.0000 ] | 103.6% { 100.0% } | 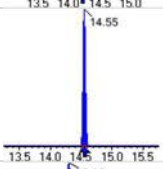  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 837819 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2395.5 | N/A | 4.3096 [ 4.0000 ] | 107.7% { 100.0% } | 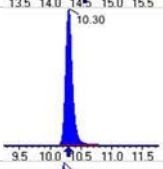  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 756123 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2001.2 | N/A | 4.2674 [ 4.0000 ] | 106.7% { 100.0% } | 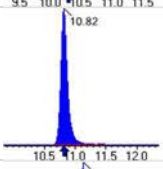  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1345588 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2202.6 | N/A | 21.0846 [ 20.0000 ] | 105.4% { 100.0% } | 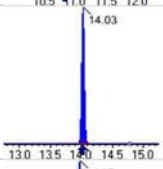  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316921 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4403.9 | N/A | 20.3309 [ 20.0000 ] | 101.7% { 100.0% } | 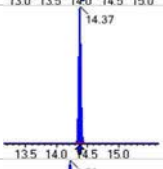  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977892 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2111.7 | N/A | 7.8745 [ 8.0000 ] | 98.4% { 100.0% } | 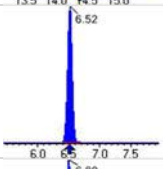  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 577314 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1093.1 | N/A | 1.9878 [ 2.0000 ] | 99.4% { 100.0% } | 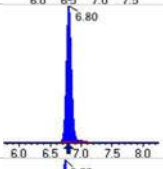  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 537205 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 658.4 | N/A | 2.0318 [ 2.0000 ] | 101.6% { 100.0% } | 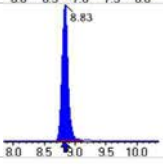  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 4976227<br>( 163.0 / 69.0 ) 132304 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 25558.3<br>5992.4 | 0.0266<br>97.9<br>97.9 | 19.9572 | N/A | 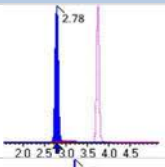 | 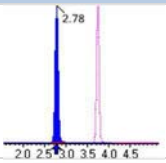 | |
| PFBA | ( 213.0 / 169.0 ) 10221233 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5237.8 | N/A<br>0.0<br>0.0 | 38.7767 | N/A | 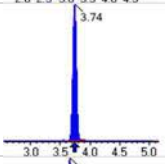 | | |
| PFPeA | ( 263.0 / 219.0 ) 4600759<br>( 263.0 / 69.0 ) 53659 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , -0.2) | 7458.7<br>673.0 | 0.0117<br>97.7<br>97.7 | 19.6841 | N/A | 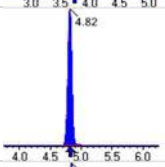 | 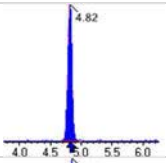 | |
| PFHxA | ( 313.0 / 269.0 ) 2674025<br>( 313.0 / 119.0 ) 304997 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , -0.2) | 3132.9<br>2330.2 | 0.1141<br>98.2<br>98.2 | 9.7037 | N/A | 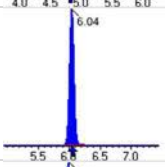 | 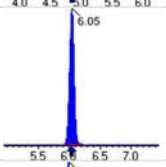 | |
| PFHpA | ( 363.0 / 319.0 ) 3133962<br>( 363.0 / 169.0 ) 979167 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1898.2<br>1646.0 | 0.3124<br>103.1<br>103.1 | 9.6945 | N/A | 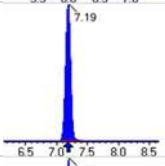 | 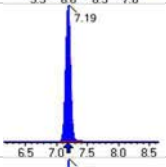 | |
| PFOA | ( 413.0 / 369.0 ) 4116055<br>( 413.0 / 169.0 ) 1484961 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1022.2<br>1403.5 | 0.3608<br>98.7<br>98.7 | 9.3377 | N/A | 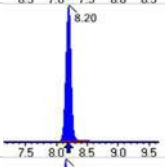 | 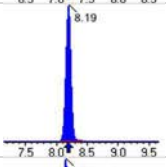 | |
| PFNA | ( 463.0 / 419.0 ) 2850976<br>( 463.0 / 169.0 ) 722819 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1530.8<br>1452.7 | 0.2535<br>99.3<br>99.3 | 9.7006 | N/A | 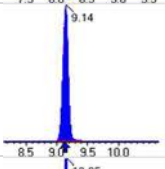 | 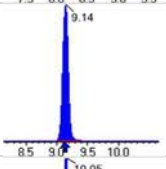 | |
| PFDA | ( 513.0 / 469.0 ) 3194205<br>( 513.0 / 169.0 ) 393804 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3654.4<br>3624.5 | 0.1233<br>105.2<br>105.2 | 9.1536 | N/A | 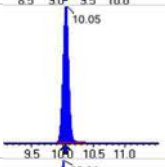 | 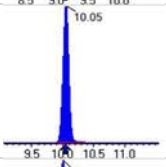 | |
| PFUnA | ( 563.0 / 519.0 ) 3630994<br>( 563.0 / 169.0 ) 527822 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1014.1<br>931.4 | 0.1454<br>102.6<br>102.6 | 9.9823 | N/A | 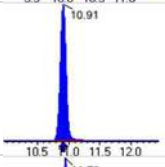 | 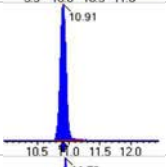 | |
| PFDoA | ( 613.0 / 569.0 ) 4033515<br>( 613.0 / 169.0 ) 625874 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1766.4<br>1315.4 | 0.1552<br>98.2<br>98.2 | 10.0099 | N/A | 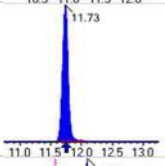 | 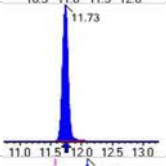 | |
| PFTrDA | ( 663.0 / 619.0 ) 3904086<br>( 663.0 / 169.0 ) 1037013 | ( 12.36 , 1.05 )<br>( N/A , -0.01 , -0.1) | 1403.0<br>1491.0 | 0.2656<br>103.2<br>103.2 | 9.9045 | N/A | 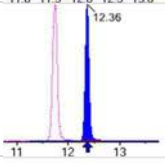 | 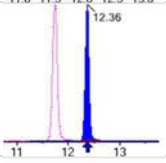 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3274865<br>( 713.0 / 169.0 ) 872542 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1863.1<br>1420.4 | 0.2664<br>98.7<br>98.7 | 10.0480 | N/A | 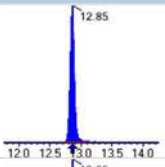 | 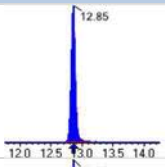 | |
| PFHxDA | ( 813.0 / 769.0 ) 2771994<br>( 813.0 / 169.0 ) 672443 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2671.6<br>1712.5 | 0.2426<br>99.1<br>99.1 | 9.5663 | N/A | 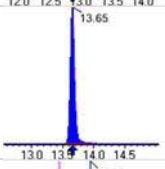 | 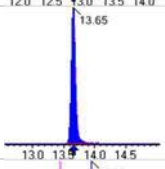 | |
| PFODA | ( 913.0 / 869.0 ) 1755825<br>( 913.0 / 169.0 ) 595303 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , -0.1) | 2292.7<br>1524.1 | 0.3390<br>94.6<br>94.6 | 9.6858 | N/A | 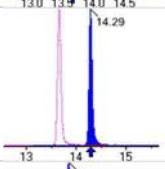 | 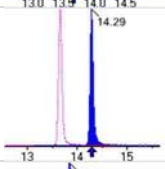 | |
| PFBS | ( 299.0 / 80.0 ) 3954355<br>( 299.0 / 99.0 ) 2802024 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3950.8<br>3555.4 | 0.7086<br>100.2<br>100.2 | 8.8614 | N/A | 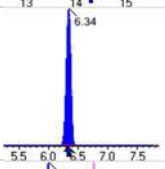 | 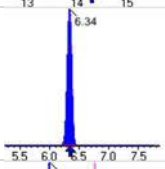 | |
| PFPeS | ( 349.0 / 80.0 ) 10113671<br>( 349.0 / 99.0 ) 3414890 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.1) | 3006.5<br>2142.2 | 0.3377<br>93.9<br>93.9 | 9.7116 | N/A | 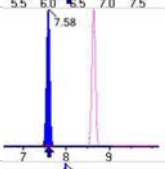 | 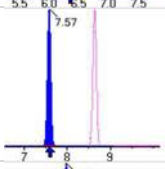 | |
| PFHxS | ( 399.0 / 80.0 ) 10933094<br>( 399.0 / 99.0 ) 3587030 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3851.3<br>3667.5 | 0.3281<br>103.0<br>103.0 | 9.0385 | N/A | 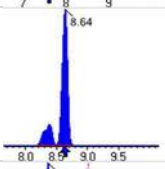 | 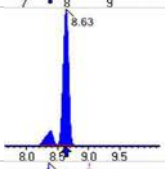 | |
| PFHpS | ( 449.0 / 80.0 ) 10182649<br>( 449.0 / 99.0 ) 2481015 | ( 9.61 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2251.9<br>2141.8 | 0.2437<br>92.1<br>92.1 | 9.8391 | N/A | 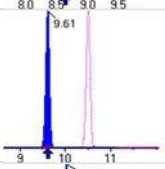 | 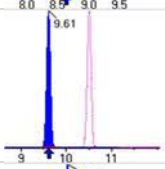 | |
| PFOS | ( 499.0 / 80.0 ) 8996676<br>( 499.0 / 99.0 ) 2052837 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3105.0<br>5613.8 | 0.2282<br>97.6<br>97.6 | 9.0184 | N/A | 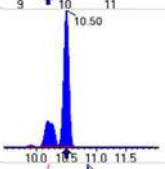 | 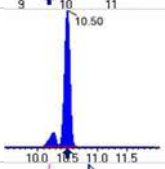 | |
| PFNS | ( 549.0 / 80.0 ) 8681127<br>( 549.0 / 99.0 ) 2337302 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2556.4<br>2538.4 | 0.2692<br>98.8<br>98.8 | 9.2942 | N/A | 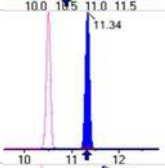 | 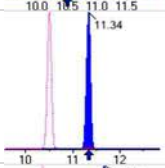 | |
| PFDS | ( 599.0 / 80.0 ) 10573938<br>( 599.0 / 99.0 ) 2638031 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3076.0<br>2562.7 | 0.2495<br>91.8<br>91.8 | 9.2712 | N/A | 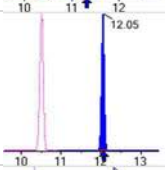 | 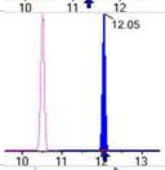 | |
| PFDoS | ( 699.0 / 80.0 ) 10115664<br>( 699.0 / 99.0 ) 2234349 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.0) | 4057.4<br>3770.2 | 0.2209<br>94.6<br>94.6 | 10.0609 | N/A | 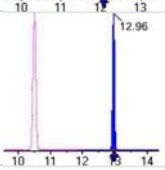 | 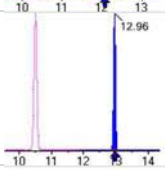 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12141384<br>( 327.0 / 81.0 ) 11228944 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 5417.9<br>3453.7 | 0.9248<br>106.0<br>106.0 | 37.7355 | N/A | 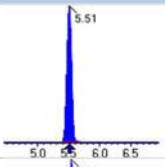 | 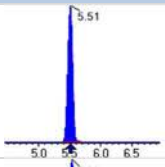 | |
| 6:2FTS | ( 427.0 / 407.0 ) 10900294<br>( 427.0 / 81.0 ) 14811616 | ( 7.63 , 1.00 ) ( 0.00 , N/A , 0.1) | 4185.7<br>4990.4 | 1.3588<br>108.4<br>108.4 | 35.7625 | N/A | 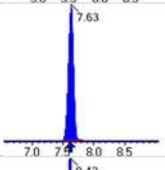 | 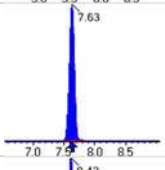 | |
| 8:2FTS | ( 527.0 / 507.0 ) 11942343<br>( 527.0 / 81.0 ) 12425264 | ( 9.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 1621.8<br>1564.2 | 1.0404<br>95.6<br>95.6 | 35.7744 | N/A | 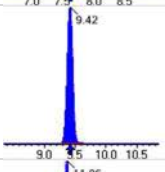 | 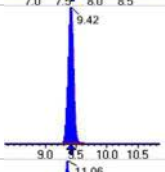 | |
| 10:2FTS | ( 627.0 / 607.0 ) 9925774<br>( 627.0 / 81.0 ) 13942585 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.4) | 1561.8<br>1571.2 | 1.4047<br>97.6<br>97.6 | 38.6373 | N/A | 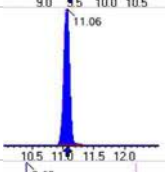 | 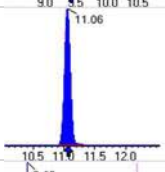 | |
| PFBSA | ( 297.9 / 78.0 ) 8323910<br>( 297.9 / 278.0 ) 11763 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.4) | 1757.1<br>273.7 | 0.0014<br>103.4<br>103.4 | 10.3645 | N/A | 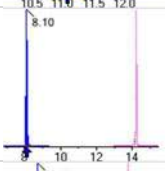 | 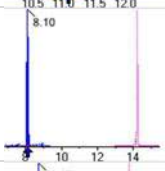 | |
| PFHxSA | ( 397.9 / 78.0 ) 10756836<br>( 397.9 / 378.0 ) 44787 | ( 10.98 , 0.76 ) ( N/A , 0.00 , 0.1) | 1403.3<br>850.1 | 0.0042<br>101.9<br>101.9 | 10.4696 | N/A | 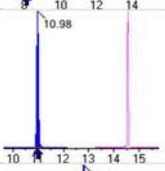 | 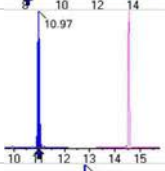 | |
| PFOSA | ( 498.0 / 78.0 ) 7435186<br>( 498.0 / 478.0 ) 96496 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 2452.2<br>1261.2 | 0.0130<br>92.5<br>92.5 | 10.0824 | N/A | 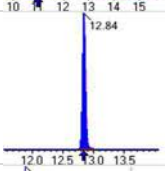 | 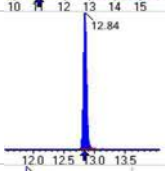 | |
| TFSI | ( 279.7 / 147.0 ) 19532191<br>( 279.7 / 211.0 ) 1661545 | ( 8.20 , 0.64 ) ( N/A , 0.00 , -0.1) | 66.5<br>62.7 | 0.0851<br>101.3<br>101.3 | 10.0587 | N/A | 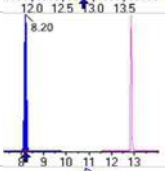 | 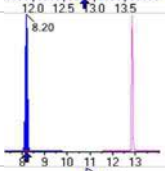 | |
| NMeFOSA | ( 512.0 / 219.0 ) 6233211<br>( 512.0 / 169.0 ) 4662319 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.9) | 3243.4<br>1391.3 | 0.7480<br>99.9<br>99.9 | 40.2840 | N/A | 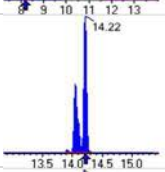 | 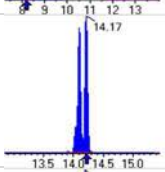 | |
| NEtFOSA | ( 526.0 / 219.0 ) 7427048<br>( 526.0 / 169.0 ) 9493854 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 4701.3<br>3802.9 | 1.2783<br>103.5<br>103.5 | 39.6683 | N/A | 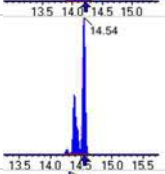 | 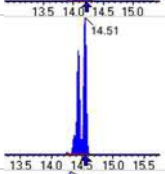 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1945852<br>( 570.0 / 483.0 ) 893329 | ( 10.31 , 1.00 ) ( 0.00 , N/A , 0.2) | 3953.1<br>1913.0 | 0.4591<br>104.7<br>104.7 | 9.3754 | N/A | 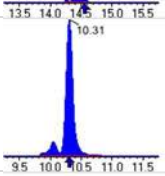 | 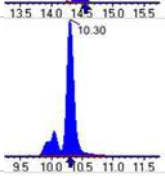 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1886130<br>( 584.0 / 526.0 ) 1111226 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1796.1<br>739.5 | 0.5892<br>95.5<br>95.5 | 9.8885 | N/A | 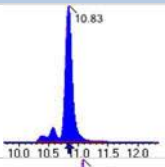 | 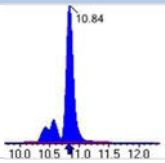 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3070058 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3573.3 | N/A<br>0.0<br>0.0 | 38.7608 | N/A | 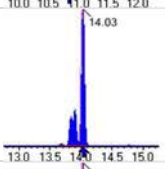 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2588455 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4718.1 | N/A<br>0.0<br>0.0 | 40.2337 | N/A | 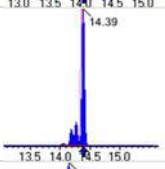 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 774472<br>( 285.0 / 185.0 ) 2152195 | ( 6.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1908.8<br>2139.2 | 2.7789<br>100.5<br>100.5 | 9.8848 | N/A | 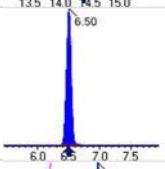 | 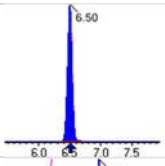 | |
| ADONA | ( 377.0 / 85.0 ) 8831827<br>( 377.0 / 251.0 ) 872179 | ( 7.58 , 1.17 )<br>( N/A , -0.01 , 0.2) | 2174.0<br>1762.1 | 0.0988<br>96.9<br>96.9 | 9.6620 | N/A | 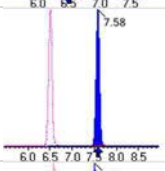 | 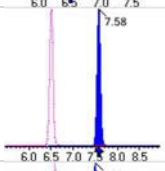 | |
| PFEESA | ( 315.0 / 135.0 ) 3656765<br>( 315.0 / 83.0 ) 1984703 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 3111.9<br>1767.9 | 0.5427<br>97.4<br>97.4 | 18.4785 | N/A | 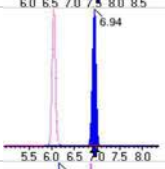 | 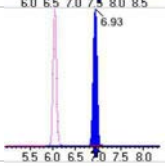 | |
| PFMPA | ( 229.0 / 85.0 ) 1521484 | ( 4.13 , 0.86 )<br>( N/A , -0.02 , 0.0) | 8416.3 | N/A<br>0.0<br>0.0 | 20.5135 | N/A | 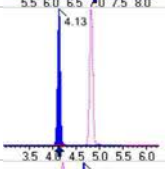 | | |
| PFMBA | ( 279.0 / 85.0 ) 4133561 | ( 5.19 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6193.2 | N/A<br>0.0<br>0.0 | 20.5050 | N/A | 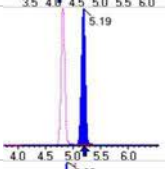 | | |
| NFDHA | ( 295.0 / 201.0 ) 2053635<br>( 295.0 / 85.0 ) 2216174 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 3475.3<br>2940.0 | 1.0791<br>100.0<br>100.0 | 19.9620 | N/A | 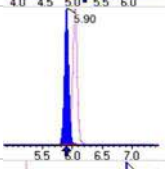 | 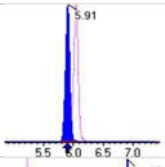 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 9136171<br>( 533.0 / 353.0 ) 2848253 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2897.4<br>2497.0 | 0.3118<br>99.6<br>99.6 | 9.2537 | N/A | 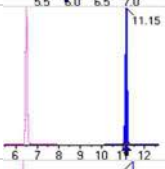 | 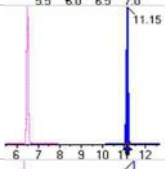 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 7304357<br>( 633.0 / 453.0 ) 2453189 | ( 12.46 , 1.92 )<br>( N/A , -0.01 , 0.1) | 3572.6<br>3729.2 | 0.3359<br>101.1<br>101.1 | 9.6204 | N/A | 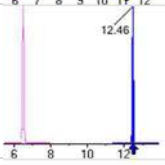 | 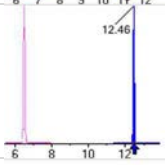 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 5039330<br>( 461.0 / 381.2 ) 1905718 | ( 9.53 , 0.91 )<br>( N/A , 0.01 , 0.3) | 3789.8<br>3403.6 | 0.3782<br>94.9<br>94.9 | 8.9542 | N/A | 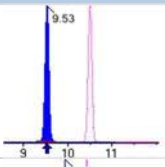 | 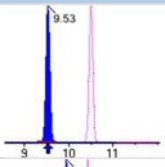 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 538629<br>( 241.0 / 117.0 ) 1253240 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 3197.1<br>4283.1 | 2.3267<br>110.4<br>110.4 | 40.5098 | N/A | 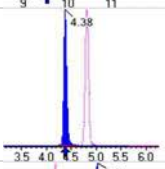 | 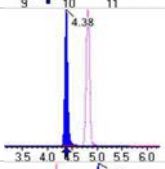 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 3029615<br>( 341.0 / 217.0 ) 4650574 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1393.7<br>1345.8 | 1.5350<br>101.0<br>101.0 | 39.6437 | N/A | 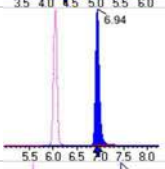 | 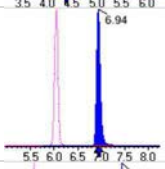 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5123403<br>( 441.0 / 337.0 ) 4460709 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , -0.1) | 5551.5<br>5955.7 | 0.8707<br>94.9<br>94.9 | 40.8535 | N/A | 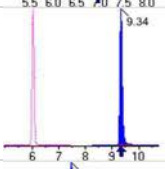 | 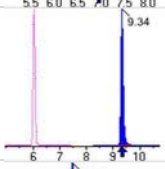 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3452949<br>( 357.2 / 243.0 ) 358650 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1773.4<br>994.0 | 0.1039<br>94.2<br>94.2 | 10.0613 | N/A | 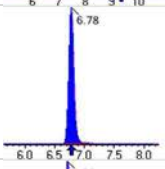 | 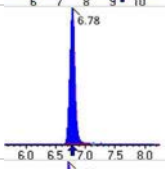 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2505275<br>( 457.2 / 343.0 ) 105248 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 860.7<br>599.2 | 0.0420<br>101.3<br>101.3 | 10.2092 | N/A | 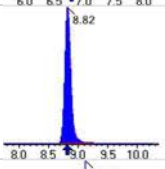 | 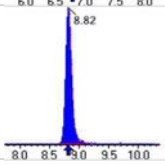 | |
| TDCA | ( 499.0 / 80.0 ) 6236770 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 25056.2 | N/A<br>0.0<br>0.0 | 9.1716 | N/A | 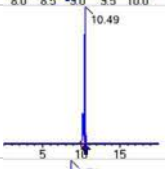 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 219824 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 996.6 | N/A | 0.9219<br>[ 1.0000 ] | 92.2%<br>{ 93.8% } | 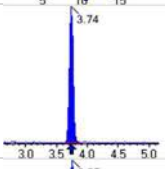 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124014 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 119243.9 | N/A | 0.9776<br>[ 1.0000 ] | 97.8%<br>{ 103.8% } | 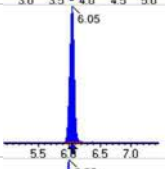 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390461 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3609.6 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 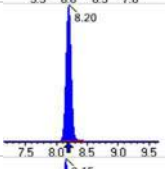 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 275253 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 905.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 103.4% } | 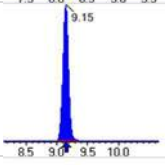 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286139 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 6661.6 | N/A | 0.9798 [ 1.0000 ] | 98.0% { 106.8% } | 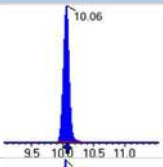 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 911912 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4728.4 | N/A | 0.9609 [ 1.0000 ] | 96.1% { 101.3% } | 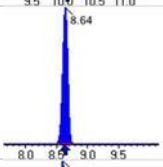 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727281 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2280.6 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 103.8% } | 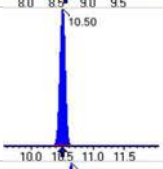 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115448 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 30999.9 | N/A | 8.4239 [ 8.0000 ] | 105.3% { 100.0% } | 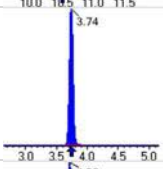 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 925445 | ( 4.82 , N/A ) ( N/A , -0.03 , N/A ) | 4720.5 | N/A | 3.9995 [ 4.0000 ] | 100.0% { 100.4% } | 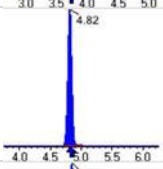 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 573646 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 8004.1 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 103.7% } | 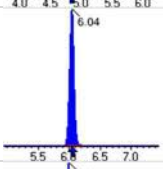 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 658863 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5435.3 | N/A | 2.0932 [ 2.0000 ] | 104.7% { 106.4% } | 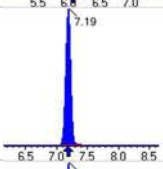 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 890902 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2701.9 | N/A | 2.1295 [ 2.0000 ] | 106.5% { 108.7% } | 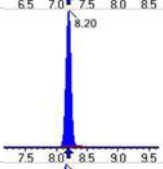 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292416 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2988.5 | N/A | 1.0835 [ 1.0000 ] | 108.3% { 111.3% } | 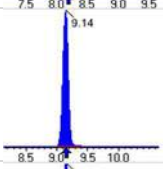 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341522 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1370.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 107.9% } | 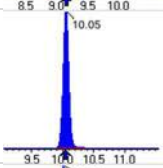 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393261 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1047.7 | N/A | 1.0424 [ 1.0000 ] | 104.2% { 108.8% } | 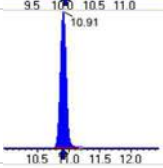 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 400532 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1477.9 | N/A | 1.0425 [ 1.0000 ] | 104.3% { 113.9% } | 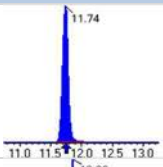  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348002 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1107.0 | N/A | 1.0636 [ 1.0000 ] | 106.4% { 111.4% } | 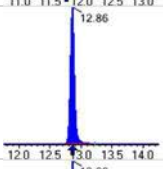  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607589 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2704.1 | N/A | 2.1752 [ 2.0000 ] | 108.8% { 117.7% } | 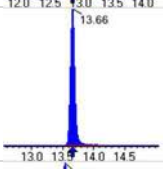  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1718936 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1168.5 | N/A | 2.0863 [ 2.0000 ] | 104.3% { 107.9% } | 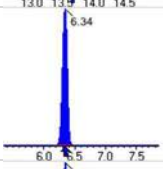  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1360815 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3521.2 | N/A | 2.0692 [ 2.0000 ] | 103.5% { 106.3% } | 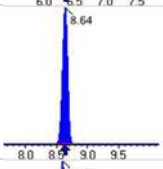  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1727455 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1864.4 | N/A | 2.2029 [ 2.0000 ] | 110.1% { 110.6% } | 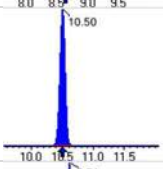  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 490391 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.9 | N/A | 3.4497 [ 4.0000 ] | 86.2% { 93.4% } | 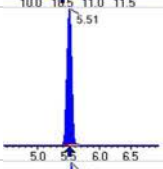  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1472319 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3472.6 | N/A | 3.4608 [ 4.0000 ] | 86.5% { 86.6% } | 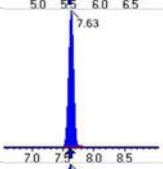  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1406025 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1127.1 | N/A | 4.2140 [ 4.0000 ] | 105.4% { 106.6% } | 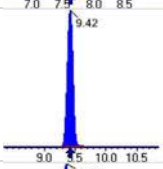  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2666437 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1321.4 | N/A | 7.6467 [ 8.0000 ] | 95.6% { 102.7% } | 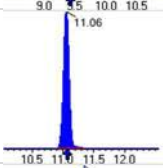  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1474856 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2149.7 | N/A | 2.1223 [ 2.0000 ] | 106.1% { 110.6% } | 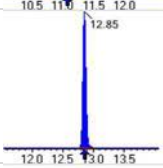  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 311674 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1807.7 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 112.3% } | 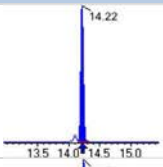  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334355 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2233.0 | N/A | 2.1154 [ 2.0000 ] | 105.8% { 106.0% } | 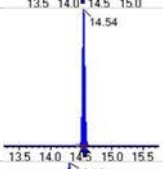  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 870435 | ( 10.30 , N/A ) ( N/A , 0.01 , N/A ) | 2098.7 | N/A | 4.3140 [ 4.0000 ] | 107.8% { 103.9% } | 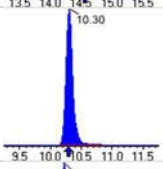  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 779965 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2137.1 | N/A | 4.2413 [ 4.0000 ] | 106.0% { 103.2% } | 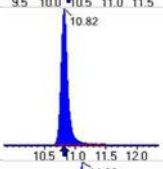  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1444142 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2682.5 | N/A | 21.8033 [ 20.0000 ] | 109.0% { 107.3% } | 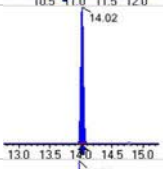  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1448227 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 4302.5 | N/A | 21.5424 [ 20.0000 ] | 107.7% { 110.0% } | 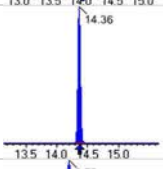  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1062925 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2462.9 | N/A | 8.2465 [ 8.0000 ] | 103.1% { 108.7% } | 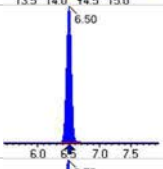  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 645613 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1154.9 | N/A | 2.0811 [ 2.0000 ] | 104.1% { 111.8% } | 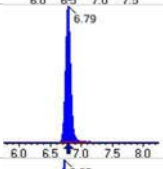  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 601731 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 832.3 | N/A | 2.1306 [ 2.0000 ] | 106.5% { 112.0% } | 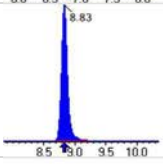  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 9647783<br>( 163.0 / 69.0 ) 248180 | ( 2.77 , 0.74 ) ( N/A , -0.02 , 0.0) | 43056.1<br>9147.9 | 0.0257<br>94.7<br>94.7 | 44.1686 | N/A | 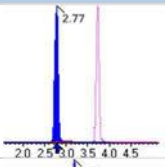 | 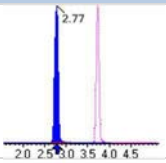 | |
| PFBA | ( 213.0 / 169.0 ) 19202801 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 7585.4 | N/A<br>0.0<br>0.0 | 83.1608 | N/A | 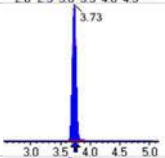 | | |
| PFPeA | ( 263.0 / 219.0 ) 9729713<br>( 263.0 / 69.0 ) 109623 | ( 4.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 6819.6<br>1166.1 | 0.0113<br>94.4<br>94.4 | 42.6830 | N/A | 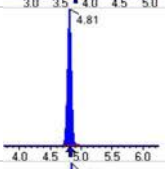 | 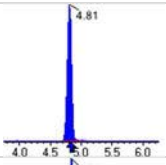 | |
| PFHxA | ( 313.0 / 269.0 ) 5855022<br>( 313.0 / 119.0 ) 657854 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3525.9<br>3080.6 | 0.1124<br>96.8<br>96.8 | 21.0786 | N/A | 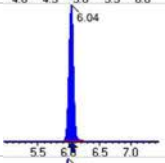 | 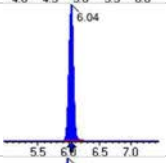 | |
| PFHpA | ( 363.0 / 319.0 ) 6773290<br>( 363.0 / 169.0 ) 1976592 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1787.9<br>1424.4 | 0.2918<br>96.3<br>96.3 | 21.3548 | N/A | 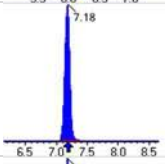 | 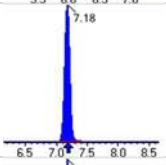 | |
| PFOA | ( 413.0 / 369.0 ) 8939778<br>( 413.0 / 169.0 ) 3151658 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1127.7<br>1395.0 | 0.3525<br>96.4<br>96.4 | 21.1396 | N/A | 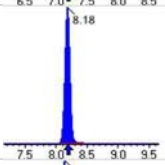 | 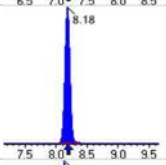 | |
| PFNA | ( 463.0 / 419.0 ) 6037894<br>( 463.0 / 169.0 ) 1493594 | ( 9.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1348.3<br>1184.5 | 0.2474<br>96.9<br>96.9 | 21.7350 | N/A | 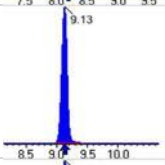 | 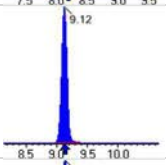 | |
| PFDA | ( 513.0 / 469.0 ) 6762404<br>( 513.0 / 169.0 ) 825163 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 4792.5<br>4492.2 | 0.1220<br>104.1<br>104.1 | 19.9979 | N/A | 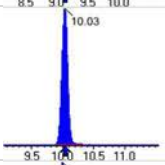 | 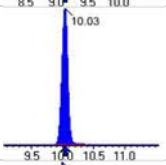 | |
| PFUnA | ( 563.0 / 519.0 ) 7387064<br>( 563.0 / 169.0 ) 1075499 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1049.6<br>1214.6 | 0.1456<br>102.7<br>102.7 | 20.9526 | N/A | 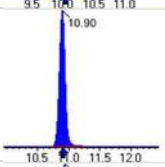 | 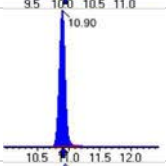 | |
| PFDoA | ( 613.0 / 569.0 ) 8414637<br>( 613.0 / 169.0 ) 1279847 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.1) | 1974.2<br>1748.5 | 0.1521<br>96.2<br>96.2 | 21.0663 | N/A | 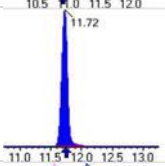 | 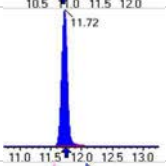 | |
| PFTrDA | ( 663.0 / 619.0 ) 7977805<br>( 663.0 / 169.0 ) 2091790 | ( 12.35 , 1.05 ) ( N/A , -0.02 , -0.1) | 1535.5<br>1229.9 | 0.2622<br>101.9<br>101.9 | 20.4176 | N/A | 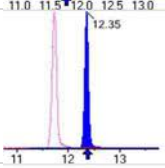 | 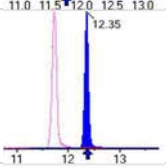 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6332836<br>( 713.0 / 169.0 ) 1709460 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1729.0<br>1376.3 | 0.2699<br>100.0<br>100.0 | 20.1993 | N/A | 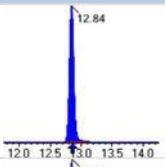 | 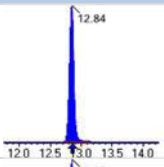 | |
| PFHxDA | ( 813.0 / 769.0 ) 5638902<br>( 813.0 / 169.0 ) 1397067 | ( 13.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2906.6<br>1972.3 | 0.2478<br>101.3<br>101.3 | 20.4809 | N/A | 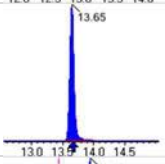 | 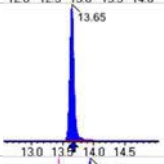 | |
| PFODA | ( 913.0 / 869.0 ) 3499803<br>( 913.0 / 169.0 ) 1172832 | ( 14.28 , 1.05 )<br>( N/A , -0.02 , 0.0) | 2345.2<br>1896.8 | 0.3351<br>93.5<br>93.5 | 20.3190 | N/A | 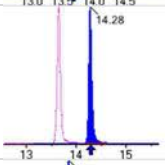 | 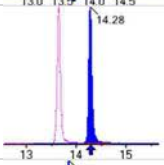 | |
| PFBS | ( 299.0 / 80.0 ) 8605541<br>( 299.0 / 99.0 ) 6210338 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3746.5<br>3688.7 | 0.7217<br>102.0<br>102.0 | 18.7196 | N/A | 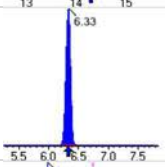 | 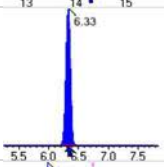 | |
| PFPeS | ( 349.0 / 80.0 ) 20173078<br>( 349.0 / 99.0 ) 6917231 | ( 7.56 , 0.88 )<br>( N/A , -0.02 , 0.0) | 3260.6<br>2666.4 | 0.3429<br>95.4<br>95.4 | 19.2674 | N/A | 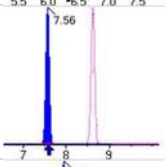 | 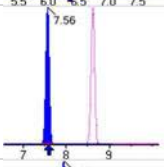 | |
| PFHxS | ( 399.0 / 80.0 ) 22725319<br>( 399.0 / 99.0 ) 7646781 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4713.5<br>6241.9 | 0.3365<br>105.7<br>105.7 | 18.6865 | N/A | 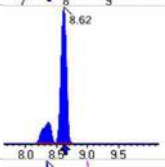 | 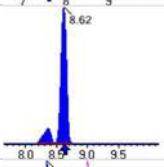 | |
| PFHpS | ( 449.0 / 80.0 ) 20274394<br>( 449.0 / 99.0 ) 5555187 | ( 9.59 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2318.9<br>2835.7 | 0.2740<br>103.5<br>103.5 | 20.6440 | N/A | 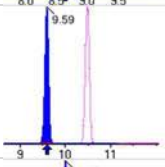 | 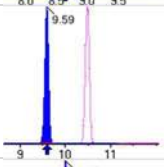 | |
| PFOS | ( 499.0 / 80.0 ) 18767964<br>( 499.0 / 99.0 ) 4295232 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3739.6<br>5295.9 | 0.2289<br>97.9<br>97.9 | 19.8251 | N/A | 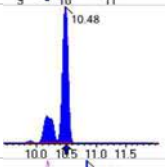 | 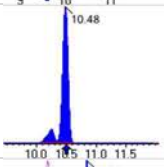 | |
| PFNS | ( 549.0 / 80.0 ) 18086906<br>( 549.0 / 99.0 ) 4780266 | ( 11.32 , 1.08 )<br>( N/A , -0.01 , 0.1) | 2954.4<br>3018.0 | 0.2643<br>97.0<br>97.0 | 20.4057 | N/A | 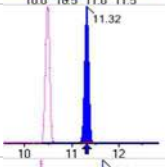 | 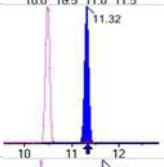 | |
| PFDS | ( 599.0 / 80.0 ) 20905375<br>( 599.0 / 99.0 ) 5646584 | ( 12.04 , 1.15 )<br>( N/A , -0.02 , 0.1) | 3970.4<br>3658.7 | 0.2701<br>99.3<br>99.3 | 19.3156 | N/A | 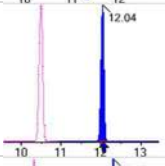 | 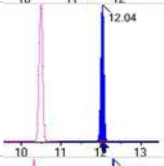 | |
| PFDoS | ( 699.0 / 80.0 ) 19306218<br>( 699.0 / 99.0 ) 4469745 | ( 12.95 , 1.23 )<br>( N/A , -0.02 , 0.0) | 4489.1<br>4098.7 | 0.2315<br>99.1<br>99.1 | 20.2345 | N/A | 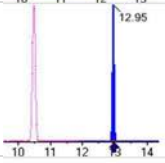 | 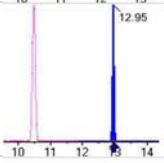 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 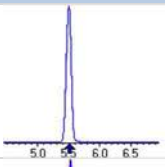 | 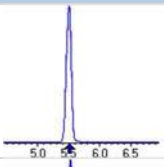 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 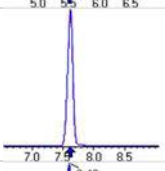 | 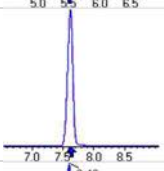 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>21815878<br>( 527.0 / 81.0 )<br>21959418 | ( 9.40 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1473.9<br>1574.1 | 1.0066<br>92.5<br>92.5 | 76.5421 | N/A | 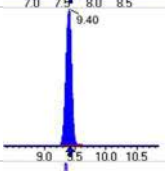 | 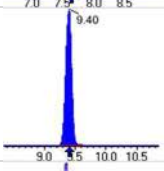 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 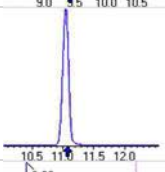 | 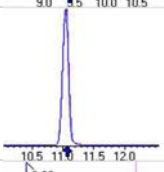 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>16725985<br>( 297.9 / 278.0 )<br>24255 | ( 8.09 , 0.57 )<br>( N/A , -0.02 , 0.2) | 1517.0<br>776.4 | 0.0015<br>106.1<br>106.1 | 20.2686 | N/A | 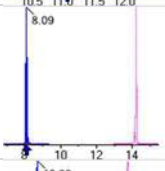 | 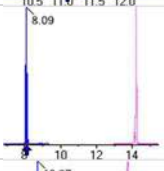 | |
| PFHxSA | ( 397.9 / 78.0 )<br>21492712<br>( 397.9 / 378.0 )<br>91450 | ( 10.96 , 0.75 )<br>( N/A , -0.01 , -0.1) | 1346.4<br>847.0 | 0.0043<br>104.1<br>104.1 | 20.9006 | N/A | 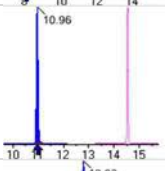 | 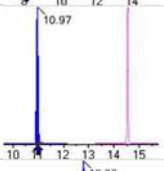 | |
| PFOSA | ( 498.0 / 78.0 )<br>14753844<br>( 498.0 / 478.0 )<br>214805 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3170.7<br>2253.7 | 0.0146<br>103.8<br>103.8 | 21.1703 | N/A | 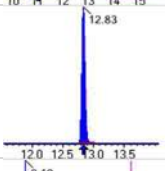 | 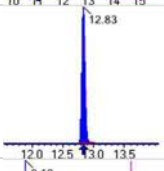 | |
| TFSI | ( 279.7 / 147.0 )<br>39395227<br>( 279.7 / 211.0 )<br>3549226 | ( 8.19 , 0.64 )<br>( N/A , -0.02 , 0.1) | 64.0<br>55.4 | 0.0901<br>107.2<br>107.2 | 21.4677 | N/A | 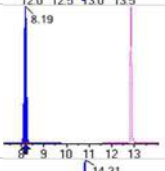 | 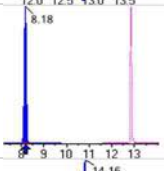 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>13014238<br>( 512.0 / 169.0 )<br>9825343 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3652.8<br>1356.9 | 0.7550<br>100.9<br>100.9 | 81.8558 | N/A | 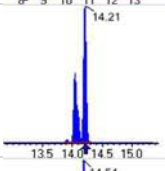 | 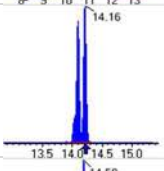 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>15594093<br>( 526.0 / 169.0 )<br>19500224 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4569.2<br>3815.8 | 1.2505<br>101.3<br>101.3 | 83.2165 | N/A | 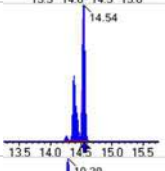 | 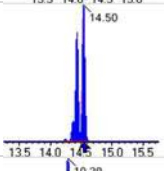 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4070736<br>( 570.0 / 483.0 )<br>1893315 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3587.1<br>1948.3 | 0.4651<br>106.1<br>106.1 | 20.6918 | N/A | 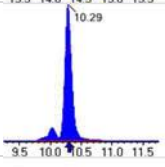 | 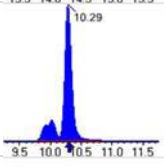 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 3731836<br>( 584.0 / 526.0 ) 2286417 | ( 10.81 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1729.9<br>773.9 | 0.6127<br>99.4<br>99.4 | 20.2888 | N/A | 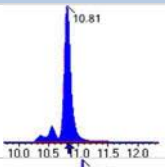 | 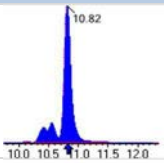 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6128623 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4554.8 | N/A<br>0.0<br>0.0 | 85.4742 | N/A | 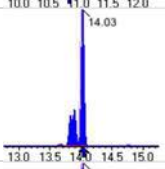 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5195417 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7894.3 | N/A<br>0.0<br>0.0 | 85.6651 | N/A | 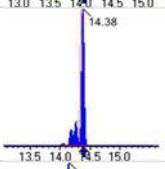 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1720793<br>( 285.0 / 185.0 ) 4583880 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2261.5<br>2416.9 | 2.6638<br>96.3<br>96.3 | 21.8580 | N/A | 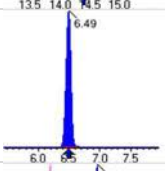 | 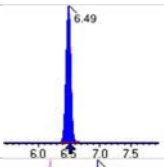 | |
| ADONA | ( 377.0 / 85.0 ) 17774690<br>( 377.0 / 251.0 ) 1760043 | ( 7.56 , 1.16 )<br>( N/A , -0.02 , -0.1) | 2163.5<br>2341.5 | 0.0990<br>97.1<br>97.1 | 19.3525 | N/A | 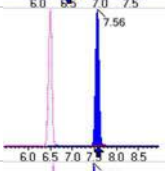 | 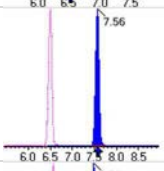 | |
| PFEESA | ( 315.0 / 135.0 ) 7875914<br>( 315.0 / 83.0 ) 4276233 | ( 6.92 , 1.15 )<br>( N/A , -0.02 , 0.0) | 3888.8<br>2934.4 | 0.5430<br>97.4<br>97.4 | 39.4834 | N/A | 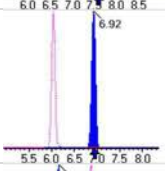 | 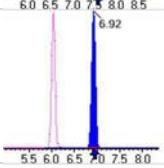 | |
| PFMPA | ( 229.0 / 85.0 ) 3131989 | ( 4.12 , 0.86 )<br>( N/A , -0.03 , 0.0) | 8390.9 | N/A<br>0.0<br>0.0 | 43.2975 | N/A | 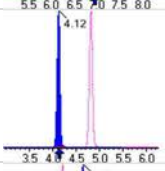 | | |
| PFMBA | ( 279.0 / 85.0 ) 8569933 | ( 5.18 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6457.3 | N/A<br>0.0<br>0.0 | 43.5896 | N/A | 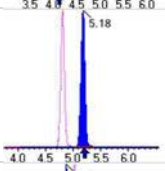 | | |
| NFDHA | ( 295.0 / 201.0 ) 4231075<br>( 295.0 / 85.0 ) 4662644 | ( 5.90 , 0.98 )<br>( N/A , -0.03 , 0.0) | 3412.8<br>4004.1 | 1.1020<br>102.1<br>102.1 | 40.8014 | N/A | 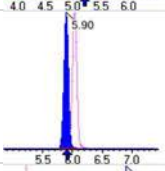 | 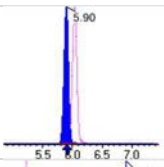 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19556832<br>( 533.0 / 353.0 ) 6135024 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.1) | 2536.0<br>3191.0 | 0.3137<br>100.3<br>100.3 | 19.7139 | N/A | 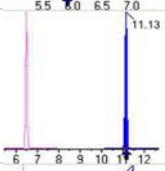 | 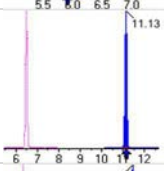 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14798782<br>( 633.0 / 453.0 ) 4988130 | ( 12.45 , 1.92 )<br>( N/A , -0.02 , 0.0) | 3882.5<br>3613.8 | 0.3371<br>101.5<br>101.5 | 19.3980 | N/A | 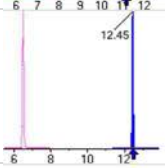 | 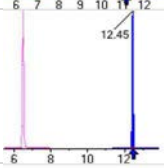 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10780581<br>( 461.0 / 381.2 ) 4171218 | ( 9.51 , 0.91 )<br>( N/A , -0.01 , 0.0) | 3973.4<br>5001.9 | 0.3869<br>97.1<br>97.1 | 20.1859 | N/A | 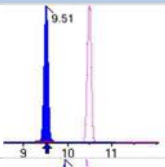 | 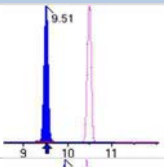 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1199816<br>( 241.0 / 117.0 ) 2599094 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 4619.1<br>5835.8 | 2.1662<br>102.8<br>102.8 | 92.5241 | N/A | 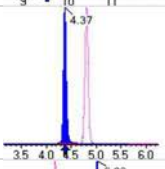 | 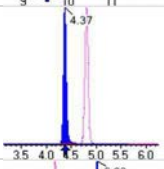 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6037188<br>( 341.0 / 217.0 ) 9245366 | ( 6.93 , 1.15 )<br>( N/A , -0.02 , 0.1) | 1108.9<br>1195.3 | 1.5314<br>100.8<br>100.8 | 78.3727 | N/A | 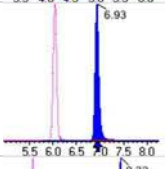 | 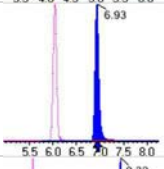 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10461798<br>( 441.0 / 337.0 ) 8986336 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 6894.1<br>7952.6 | 0.8590<br>93.7<br>93.7 | 82.7600 | N/A | 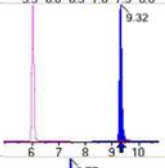 | 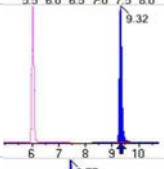 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6947700<br>( 357.2 / 243.0 ) 729149 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1649.6<br>1284.1 | 0.1049<br>95.2<br>95.2 | 20.7843 | N/A | 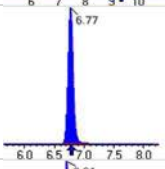 | 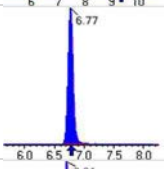 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5159787<br>( 457.2 / 343.0 ) 209477 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1021.2<br>820.8 | 0.0406<br>97.9<br>97.9 | 22.0825 | N/A | 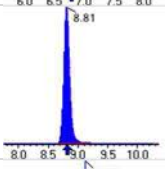 | 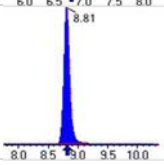 | |
| TDCA | ( 499.0 / 80.0 ) 14278125 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 61589.3 | N/A<br>0.0<br>0.0 | 22.1263 | N/A | 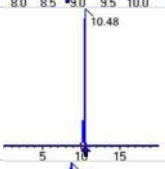 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 213815 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 908.6 | N/A | 0.8967<br>[ 1.0000 ] | 89.7%<br>{ 91.3% } | 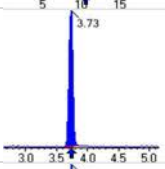 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130959 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 14399.3 | N/A | 1.0323<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 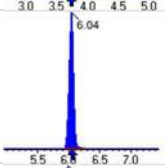 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 423217 | ( 8.18 , N/A )<br>( N/A , -0.02 , N/A ) | 3205.1 | N/A | 1.0706<br>[ 1.0000 ] | 107.1%<br>{ 111.4% } | 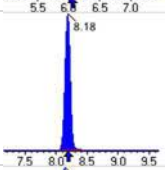 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317274 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1199.3 | N/A | 1.1156<br>[ 1.0000 ] | 111.6%<br>{ 119.2% } | 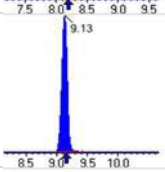 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307005 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 6206.5 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 114.6% } | 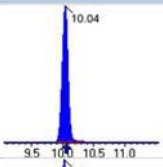 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1022285 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 4039.3 | N/A | 1.0772 [ 1.0000 ] | 107.7% { 113.6% } | 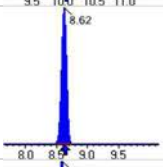 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 784809 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2679.6 | N/A | 1.0304 [ 1.0000 ] | 103.0% { 112.0% } | 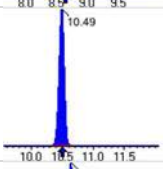 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1853173 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 31229.1 | N/A | 7.5869 [ 8.0000 ] | 94.8% { 87.6% } | 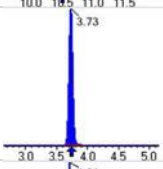 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 902569 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4796.3 | N/A | 3.6938 [ 4.0000 ] | 92.3% { 97.9% } | 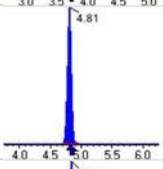 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 578230 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 6570.9 | N/A | 1.9352 [ 2.0000 ] | 96.8% { 104.5% } | 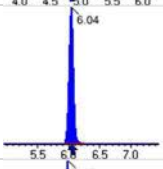 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 646447 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 5437.1 | N/A | 1.9449 [ 2.0000 ] | 97.2% { 104.4% } | 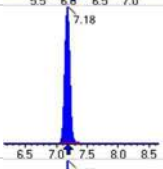 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 836012 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 2325.3 | N/A | 1.8436 [ 2.0000 ] | 92.2% { 102.0% } | 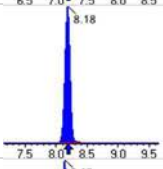 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276398 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2897.8 | N/A | 0.8885 [ 1.0000 ] | 88.8% { 105.2% } | 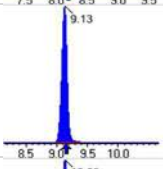 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 330952 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 920.3 | N/A | 0.9619 [ 1.0000 ] | 96.2% { 104.5% } | 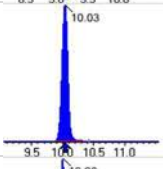 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 381172 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1015.8 | N/A | 0.9417 [ 1.0000 ] | 94.2% { 105.5% } | 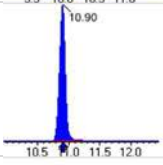 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 397037 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1215.8 | N/A | 0.9632 [ 1.0000 ] | 96.3% { 112.9% } | 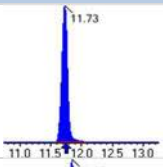 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334756 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 1243.4 | N/A | 0.9536 [ 1.0000 ] | 95.4% { 107.1% } | 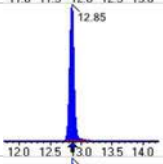 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577308 | ( 13.65 , N/A ) ( N/A , -0.02 , N/A ) | 2610.4 | N/A | 1.9264 [ 2.0000 ] | 96.3% { 111.9% } | 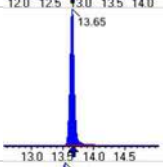 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1770797 | ( 6.33 , N/A ) ( N/A , -0.03 , N/A ) | 1012.2 | N/A | 1.9172 [ 2.0000 ] | 95.9% { 111.1% } | 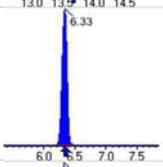 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1368143 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 5008.8 | N/A | 1.8558 [ 2.0000 ] | 92.8% { 106.8% } | 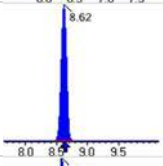 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1639289 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1716.2 | N/A | 1.9372 [ 2.0000 ] | 96.9% { 104.9% } | 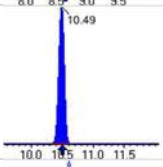 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 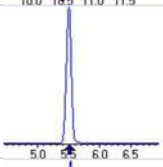 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 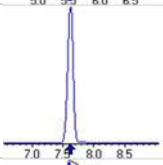 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1200464 | ( 9.40 , N/A ) ( N/A , -0.02 , N/A ) | 1165.9 | N/A | 3.2095 [ 4.0000 ] | 80.2% { 91.0% } | 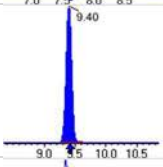 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 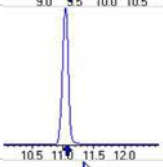 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393797 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2113.9 | N/A | 1.8587 [ 2.0000 ] | 92.9% { 104.5% } | 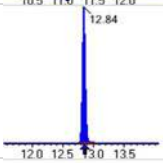 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 320251 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 1578.0 | N/A | 2.0135 [ 2.0000 ] | 100.7% { 115.4% } | 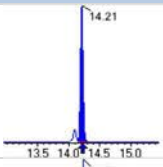 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334646 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 2115.5 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 106.1% } | 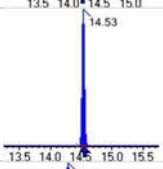 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825069 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2394.9 | N/A | 3.7894 [ 4.0000 ] | 94.7% { 98.5% } | 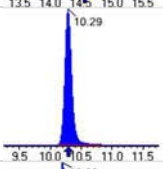 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 752141 | ( 10.80 , N/A ) ( N/A , -0.02 , N/A ) | 1637.7 | N/A | 3.7902 [ 4.0000 ] | 94.8% { 99.5% } | 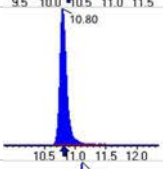 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1307327 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 2301.3 | N/A | 18.2909 [ 20.0000 ] | 91.5% { 97.2% } | 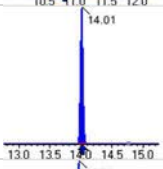 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365219 | ( 14.36 , N/A ) ( N/A , -0.02 , N/A ) | 4099.9 | N/A | 18.8191 [ 20.0000 ] | 94.1% { 103.7% } | 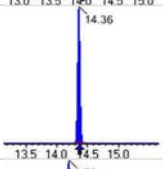 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068027 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2447.7 | N/A | 7.8467 [ 8.0000 ] | 98.1% { 109.2% } | 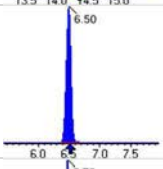 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 628842 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1472.0 | N/A | 1.8893 [ 2.0000 ] | 94.5% { 108.9% } | 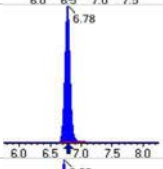 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 572954 | ( 8.82 , N/A ) ( N/A , -0.02 , N/A ) | 739.0 | N/A | 1.8909 [ 2.0000 ] | 94.5% { 106.7% } | 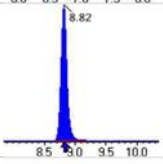 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 18974629<br>( 163.0 / 69.0 ) 488087 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 70690.9<br>13739.8 | 0.0257<br>94.7<br>94.7 | 107.2343 | N/A | 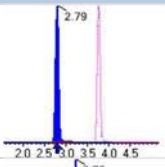 | 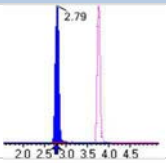 | |
| PFBA | ( 213.0 / 169.0 ) 36143718 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6528.7 | N/A<br>0.0<br>0.0 | 193.2239 | N/A | 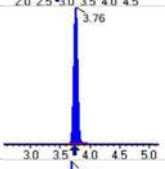 | | |
| PFPeA | ( 263.0 / 219.0 ) 21275073<br>( 263.0 / 69.0 ) 243959 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 7762.8<br>1933.6 | 0.0115<br>96.0<br>96.0 | 106.9360 | N/A | 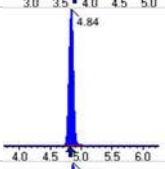 | 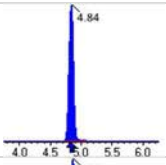 | |
| PFHxA | ( 313.0 / 269.0 ) 13819927<br>( 313.0 / 119.0 ) 1515042 | ( 6.06 , 1.00 ) ( 0.00 , N/A , -0.1) | 2643.2<br>2771.6 | 0.1096<br>94.4<br>94.4 | 54.0335 | N/A | 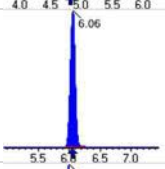 | 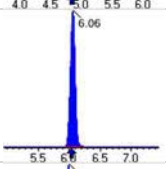 | |
| PFHpA | ( 363.0 / 319.0 ) 16363723<br>( 363.0 / 169.0 ) 4845368 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 2319.6<br>2179.9 | 0.2961<br>97.7<br>97.7 | 54.3504 | N/A | 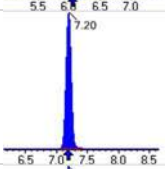 | 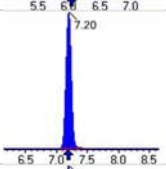 | |
| PFOA | ( 413.0 / 369.0 ) 20511400<br>( 413.0 / 169.0 ) 7143544 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 1200.9<br>1228.6 | 0.3483<br>95.3<br>95.3 | 49.7336 | N/A | 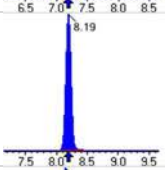 | 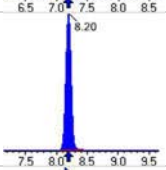 | |
| PFNA | ( 463.0 / 419.0 ) 15160237<br>( 463.0 / 169.0 ) 3759387 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1194.0<br>1234.6 | 0.2480<br>97.1<br>97.1 | 54.2235 | N/A | 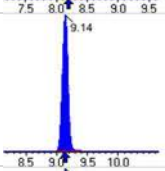 | 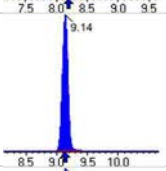 | |
| PFDA | ( 513.0 / 469.0 ) 16549921<br>( 513.0 / 169.0 ) 1960035 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 4733.0<br>3460.2 | 0.1184<br>101.1<br>101.1 | 50.8911 | N/A | 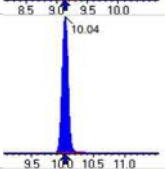 | 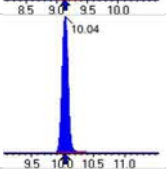 | |
| PFUnA | ( 563.0 / 519.0 ) 17529105<br>( 563.0 / 169.0 ) 2579837 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1095.8<br>945.9 | 0.1472<br>103.8<br>103.8 | 52.5694 | N/A | 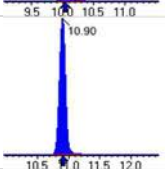 | 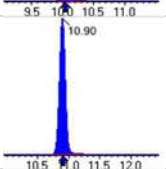 | |
| PFDoA | ( 613.0 / 569.0 ) 19672736<br>( 613.0 / 169.0 ) 2984947 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1817.3<br>1597.9 | 0.1517<br>96.0<br>96.0 | 50.3317 | N/A | 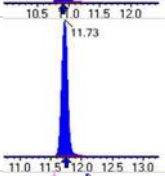 | 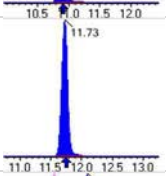 | |
| PFTrDA | ( 663.0 / 619.0 ) 18692956<br>( 663.0 / 169.0 ) 4857776 | ( 12.36 , 1.05 ) ( N/A , -0.01 , 0.0) | 1465.4<br>1395.6 | 0.2599<br>101.0<br>101.0 | 48.8903 | N/A | 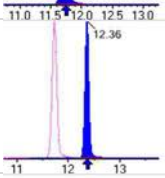 | 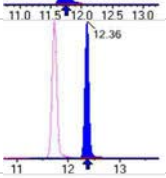 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 14422438<br>( 713.0 / 169.0 ) 3869832 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1604.9<br>1603.7 | 0.2683<br>99.4<br>99.4 | 49.6150 | N/A | 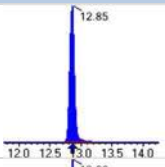 | 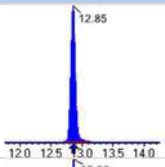 | |
| PFHxDA | ( 813.0 / 769.0 ) 12985593<br>( 813.0 / 169.0 ) 3309620 | ( 13.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3023.2<br>2100.0 | 0.2549<br>104.2<br>104.2 | 52.2078 | N/A | 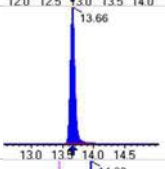 | 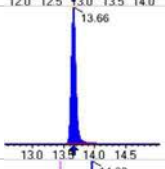 | |
| PFODA | ( 913.0 / 869.0 ) 8428626<br>( 913.0 / 169.0 ) 2699374 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2761.4<br>2328.9 | 0.3203<br>89.4<br>89.4 | 54.1669 | N/A | 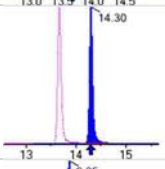 | 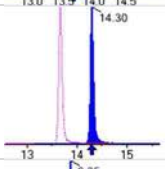 | |
| PFBS | ( 299.0 / 80.0 ) 20178278<br>( 299.0 / 99.0 ) 14705802 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4435.5<br>4419.2 | 0.7288<br>103.1<br>103.1 | 46.4917 | N/A | 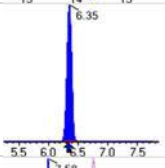 | 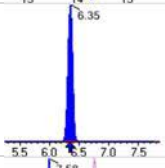 | |
| PFPeS | ( 349.0 / 80.0 ) 41380196<br>( 349.0 / 99.0 ) 14964570 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2699.2<br>2609.5 | 0.3616<br>100.6<br>100.6 | 39.6330 | N/A | 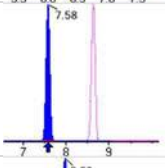 | 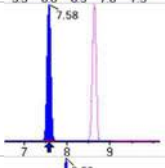 | |
| PFHxS | ( 399.0 / 80.0 ) 55723597<br>( 399.0 / 99.0 ) 18950635 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4944.5<br>6249.7 | 0.3401<br>106.8<br>106.8 | 45.9485 | N/A | 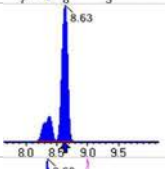 | 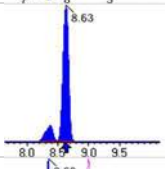 | |
| PFHpS | ( 449.0 / 80.0 ) 48346852<br>( 449.0 / 99.0 ) 13585169 | ( 9.60 , 0.92 )<br>( N/A , 0.00 , 0.0) | 2463.5<br>2621.1 | 0.2810<br>106.2<br>106.2 | 48.9228 | N/A | 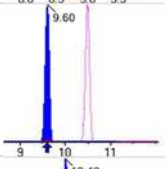 | 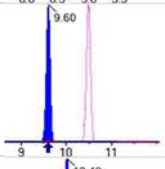 | |
| PFOS | ( 499.0 / 80.0 ) 46166280<br>( 499.0 / 99.0 ) 10682806 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , -0.3) | 3771.6<br>6407.9 | 0.2314<br>99.0<br>99.0 | 48.4641 | N/A | 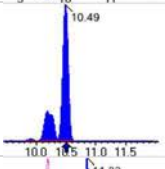 | 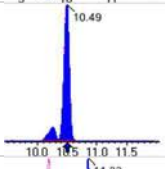 | |
| PFNS | ( 549.0 / 80.0 ) 41110649<br>( 549.0 / 99.0 ) 11520445 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , -0.1) | 2974.0<br>3168.7 | 0.2802<br>102.8<br>102.8 | 46.0934 | N/A | 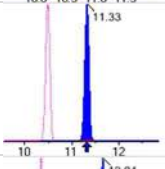 | 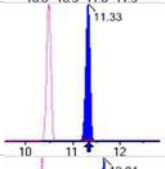 | |
| PFDS | ( 599.0 / 80.0 ) 45339968<br>( 599.0 / 99.0 ) 12673501 | ( 12.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 3051.7<br>3599.9 | 0.2795<br>102.8<br>102.8 | 41.6321 | N/A | 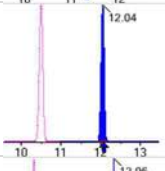 | 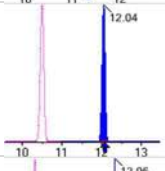 | |
| PFDoS | ( 699.0 / 80.0 ) 39685043<br>( 699.0 / 99.0 ) 9961357 | ( 12.96 , 1.24 )<br>( N/A , -0.01 , 0.0) | 3541.3<br>4746.4 | 0.2510<br>107.5<br>107.5 | 41.3351 | N/A | 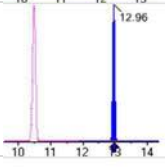 | 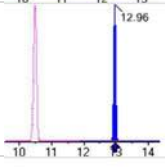 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 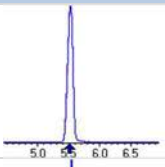 | 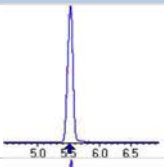 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 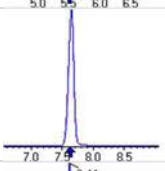 | 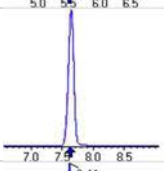 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>41238569<br>( 527.0 / 81.0 )<br>42183724 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1165.4<br>1290.5 | 1.0229<br>94.0<br>94.0 | 155.9708 | N/A | 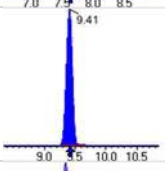 | 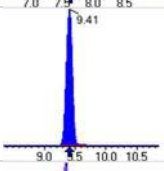 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 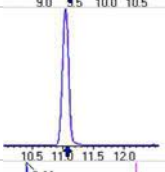 | 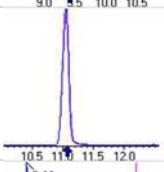 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>38451265<br>( 297.9 / 278.0 )<br>57954 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , 0.0) | 1670.7<br>874.9 | 0.0015<br>110.3<br>110.3 | 45.8105 | N/A | 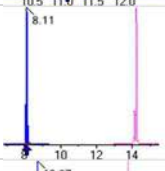 | 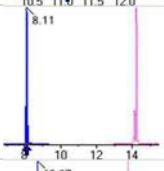 | |
| PFHxSA | ( 397.9 / 78.0 )<br>47457548<br>( 397.9 / 378.0 )<br>219987 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1106.1<br>1093.7 | 0.0046<br>113.5<br>113.5 | 48.8276 | N/A | 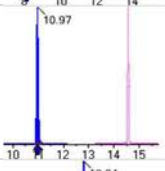 | 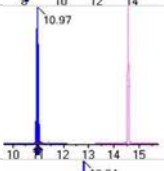 | |
| PFOSA | ( 498.0 / 78.0 )<br>33121164<br>( 498.0 / 478.0 )<br>519111 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2063.1<br>1533.3 | 0.0157<br>111.7<br>111.7 | 48.4514 | N/A | 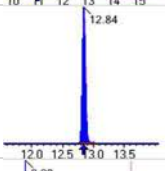 | 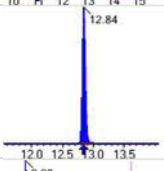 | |
| TFSI | ( 279.7 / 147.0 )<br>89551922<br>( 279.7 / 211.0 )<br>9318714 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.0) | 61.5<br>64.2 | 0.1041<br>123.9<br>123.9 | 49.7502 | N/A | 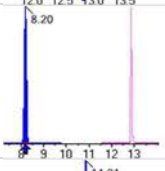 | 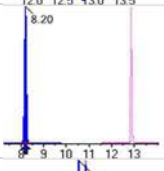 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>31158072<br>( 512.0 / 169.0 )<br>23786332 | ( 14.21 , 1.00 )<br>( -0.01 , N/A , 2.6) | 3423.3<br>1507.4 | 0.7634<br>102.0<br>102.0 | 192.6744 | N/A | 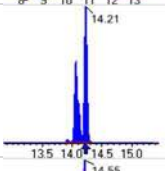 | 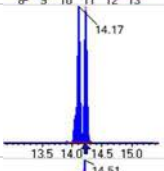 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>36572268<br>( 526.0 / 169.0 )<br>45187617 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4357.1<br>3467.4 | 1.2356<br>100.1<br>100.1 | 206.4874 | N/A | 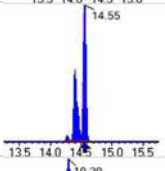 | 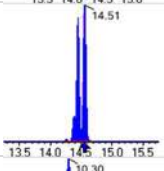 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>9584003<br>( 570.0 / 483.0 )<br>4353591 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3124.3<br>1697.0 | 0.4543<br>103.6<br>103.6 | 48.7309 | N/A | 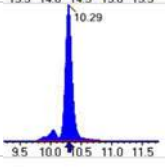 | 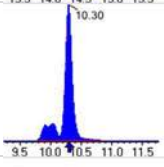 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8573256<br>( 584.0 / 526.0 ) 5089065 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1535.4<br>691.5 | 0.5936<br>96.3<br>96.3 | 52.6411 | N/A | 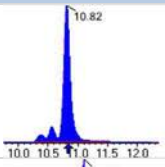 | 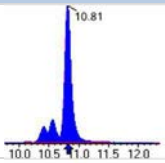 | |
| NMeFOSE | ( 616.0 / 59.0 ) 15619595 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 6843.3 | N/A<br>0.0<br>0.0 | 212.8361 | N/A | 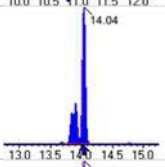 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 12847687 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 8204.0 | N/A<br>0.0<br>0.0 | 208.1601 | N/A | 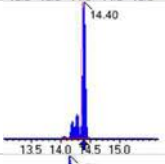 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4124497<br>( 285.0 / 185.0 ) 11215111 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2319.1<br>2629.5 | 2.7191<br>98.3<br>98.3 | 53.1094 | N/A | 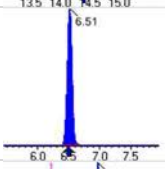 | 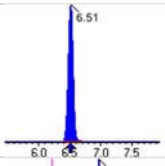 | |
| ADONA | ( 377.0 / 85.0 ) 37268440<br>( 377.0 / 251.0 ) 3924149 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1824.1<br>1716.0 | 0.1053<br>103.3<br>103.3 | 41.1334 | N/A | 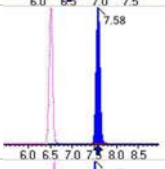 | 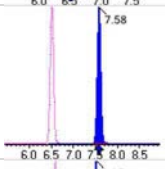 | |
| PFEESA | ( 315.0 / 135.0 ) 17270325<br>( 315.0 / 83.0 ) 9569584 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4689.4<br>2913.5 | 0.5541<br>99.4<br>99.4 | 94.0283 | N/A | 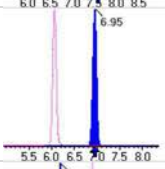 | 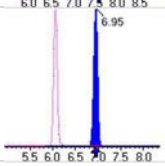 | |
| PFMPA | ( 229.0 / 85.0 ) 7031121 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 11838.0 | N/A<br>0.0<br>0.0 | 111.3690 | N/A | 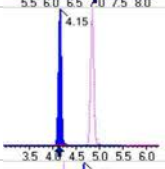 | | |
| PFMBA | ( 279.0 / 85.0 ) 19312765 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 5832.4 | N/A<br>0.0<br>0.0 | 112.5505 | N/A | 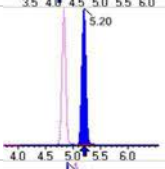 | | |
| NFDHA | ( 295.0 / 201.0 ) 10109374<br>( 295.0 / 85.0 ) 10024417 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.2) | 2773.1<br>3906.7 | 0.9916<br>91.9<br>91.9 | 105.8748 | N/A | 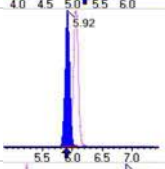 | 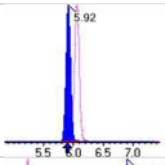 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 46137015<br>( 533.0 / 353.0 ) 15129295 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.0) | 2626.2<br>3001.4 | 0.3279<br>104.8<br>104.8 | 47.1457 | N/A | 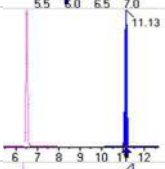 | 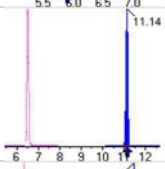 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 34117971<br>( 633.0 / 453.0 ) 11179213 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 4219.2<br>3394.1 | 0.3277<br>98.7<br>98.7 | 45.3348 | N/A | 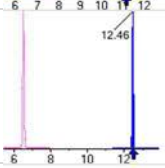 | 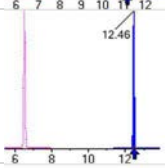 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 28343319<br>( 461.0 / 381.2 ) 10851018 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4228.4<br>5758.6 | 0.3828<br>96.1<br>96.1 | 52.7417 | N/A | 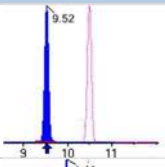 | 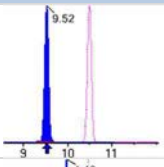 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2927372<br>( 241.0 / 117.0 ) 6626809 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4507.1<br>8408.0 | 2.2637<br>107.4<br>107.4 | 258.6519 | N/A | 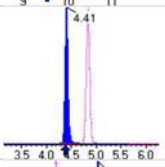 | 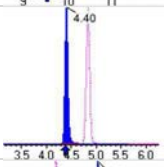 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14119793<br>( 341.0 / 217.0 ) 20897347 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1091.2<br>1008.4 | 1.4800<br>97.4<br>97.4 | 199.0686 | N/A | 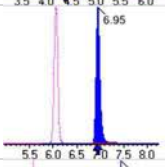 | 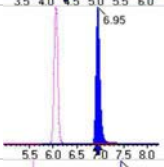 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 25389555<br>( 441.0 / 337.0 ) 22326814 | ( 9.33 , 1.54 )<br>( N/A , -0.01 , 0.1) | 7581.4<br>11370.4 | 0.8794<br>95.9<br>95.9 | 218.1292 | N/A | 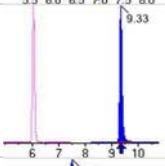 | 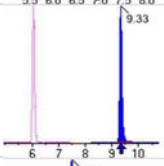 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 16158195<br>( 357.2 / 243.0 ) 1678319 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1736.3<br>1407.1 | 0.1039<br>94.2<br>94.2 | 50.4495 | N/A | 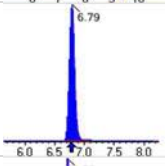 | 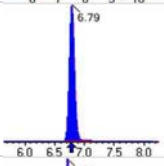 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 12612139<br>( 457.2 / 343.0 ) 508517 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 892.6<br>781.7 | 0.0403<br>97.2<br>97.2 | 53.8903 | N/A | 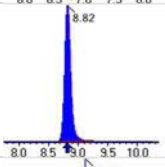 | 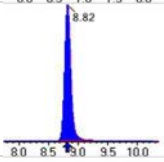 | |
| TDCA | ( 499.0 / 80.0 ) 34553361 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 58261.0 | N/A<br>0.0<br>0.0 | 53.2138 | N/A | 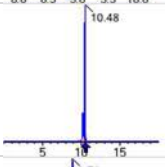 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 167285 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 708.8 | N/A | 0.7016<br>[ 1.0000 ] | 70.2%<br>{ 71.4% } | 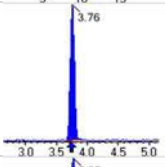 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130924 | ( 6.06 , N/A )<br>( N/A , 0.00 , N/A ) | 6147.8 | N/A | 1.0321<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 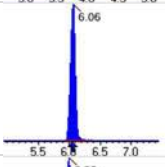 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 365760 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2442.2 | N/A | 0.9252<br>[ 1.0000 ] | 92.5%<br>{ 96.3% } | 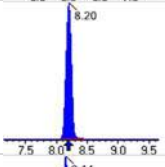 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282978 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 970.5 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 106.3% } | 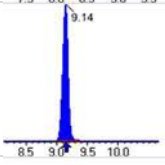 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294951 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 3067.1 | N/A | 1.0100 [ 1.0000 ] | 101.0% { 110.1% } | 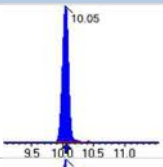 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 936593 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3290.6 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 104.0% } | 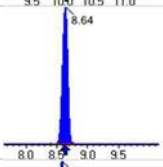 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785932 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2145.3 | N/A | 1.0319 [ 1.0000 ] | 103.2% { 112.2% } | 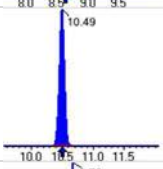 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1501211 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 26047.2 | N/A | 7.8555 [ 8.0000 ] | 98.2% { 71.0% } | 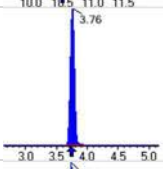 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 787740 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 4786.2 | N/A | 3.2247 [ 4.0000 ] | 80.6% { 85.5% } | 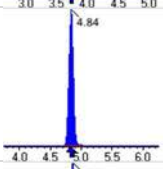 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 532422 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6348.1 | N/A | 1.7823 [ 2.0000 ] | 89.1% { 96.2% } | 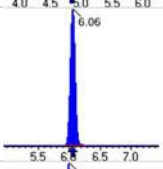 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613632 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 3886.1 | N/A | 1.8466 [ 2.0000 ] | 92.3% { 99.1% } | 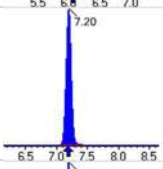 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 772186 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2358.8 | N/A | 1.9704 [ 2.0000 ] | 98.5% { 94.2% } | 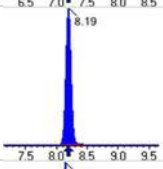 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 278181 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2465.4 | N/A | 1.0026 [ 1.0000 ] | 100.3% { 105.9% } | 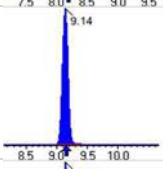 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318276 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1070.1 | N/A | 0.9629 [ 1.0000 ] | 96.3% { 100.5% } | 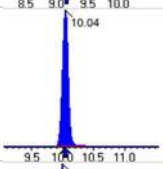 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 360507 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 905.9 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 99.8% } | 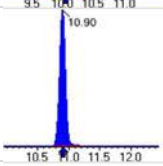 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388515 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1338.0 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 110.5% } | 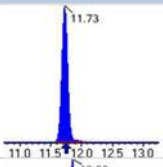  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310379 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1125.7 | N/A | 0.9203 [ 1.0000 ] | 92.0% { 99.3% } | 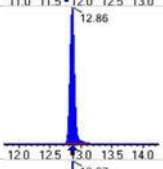  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521541 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 1978.3 | N/A | 1.8114 [ 2.0000 ] | 90.6% { 101.1% } | 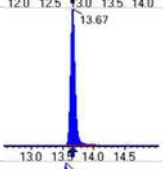  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1671847 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 1059.8 | N/A | 1.9757 [ 2.0000 ] | 98.8% { 104.9% } | 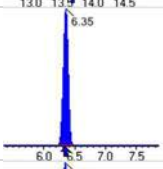  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1364325 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3793.2 | N/A | 2.0199 [ 2.0000 ] | 101.0% { 106.5% } | 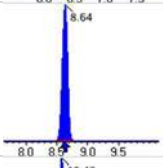  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1649524 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1301.1 | N/A | 1.9466 [ 2.0000 ] | 97.3% { 105.6% } | 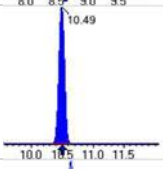  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 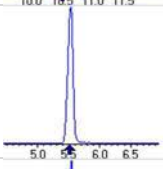 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 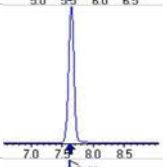 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1113619 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1147.4 | N/A | 3.2497 [ 4.0000 ] | 81.2% { 84.4% } | 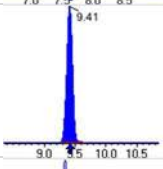  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 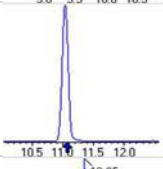 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1367165 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1785.0 | N/A | 1.8206 [ 2.0000 ] | 91.0% { 102.6% } | 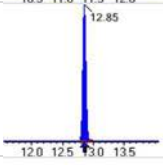  | | |

APPL
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A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 325737 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1453.6 | N/A | 2.0451 [ 2.0000 ] | 102.3% { 117.4% } | 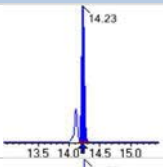  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316296 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2128.6 | N/A | 1.8518 [ 2.0000 ] | 92.6% { 100.3% } | 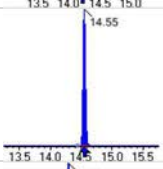  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 824817 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 1731.0 | N/A | 3.7828 [ 4.0000 ] | 94.6% { 98.4% } | 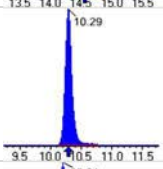  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 665968 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 1789.7 | N/A | 3.3512 [ 4.0000 ] | 83.8% { 88.1% } | 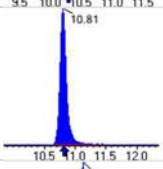  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1338076 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2515.8 | N/A | 18.6944 [ 20.0000 ] | 93.5% { 99.4% } | 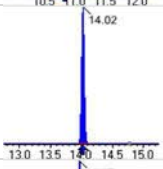  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1389356 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4052.7 | N/A | 19.1244 [ 20.0000 ] | 95.6% { 105.5% } | 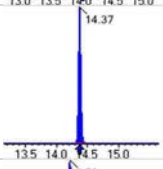  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1053570 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2170.3 | N/A | 7.7425 [ 8.0000 ] | 96.8% { 107.7% } | 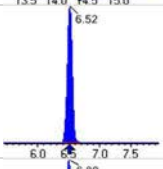  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 602520 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1431.9 | N/A | 1.8842 [ 2.0000 ] | 94.2% { 104.4% } | 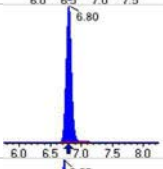  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 573873 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 871.6 | N/A | 1.9713 [ 2.0000 ] | 98.6% { 106.8% } | 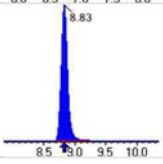  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0094L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.86L | -3.5L | 30.00L |
| PFPeAL | 4.00L | 3.91L | -2.3L | 30.00L |
| PFHxAL | 4.00L | 3.64L | -9.1L | 30.00L |
| PFHpAL | 4.00L | 3.53L | -11.6L | 30.00L |
| PFOAL | 4.00L | 3.36L | -16.0L | 30.00L |
| PFNAL | 4.00L | 3.77L | -5.7L | 30.00L |
| PFDAL | 4.00L | 3.78L | -5.6L | 30.00L |
| PFUnAL | 4.00L | 3.59L | -10.1L | 30.00L |
| PFDoAL | 4.00L | 3.31L | -17.2L | 30.00L |
| PFTrDAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFTeDAL | 4.00L | 4.12L | 2.9L | 30.00L |
| PFHxDAL | 4.00L | 3.10L | -22.5L | 30.00L |
| PFODAL | 4.00L | 3.04L | -24.1L | 30.00L |
| PFBSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFPeSL | 4.00L | 4.10L | 2.4L | 30.00L |
| PFHxSL | 4.00L | 3.93L | -1.8L | 30.00L |
| PFHpSL | 4.00L | 3.70L | -7.4L | 30.00L |
| PFOSL | 4.00L | 3.53L | -11.8L | 30.00L |
| PFNSL | 4.00L | 3.75L | -6.3L | 30.00L |
| PFDSL | 4.00L | 3.87L | -3.3L | 30.00L |
| PFDoSL | 4.00L | 3.66L | -8.4L | 30.00L |
| 4:2FTSL | 4.00L | 4.00L | -0.01L | 30.00L |
| 6:2FTSL | 4.00L | 3.91L | -2.2L | 30.00L |
| 8:2FTSL | 4.00L | 4.28L | 7.1L | 30.00L |
| 10:2FTSL | 3.86L | 3.98L | 3.1L | 30.00L |
| PFOSAL | 4.00L | 3.81L | -4.7L | 30.00L |
| NMeFOSAL | 4.00L | 3.34L | -16.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0094L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.59L | -10.4L | 30.00L |
| NMeFOSAAL | 4.00L | 3.74L | -6.4L | 30.00L |
| NEtFOSAAL | 4.00L | 3.49L | -12.8L | 30.00L |
| NMeFOSEL | 4.00L | 4.03L | 0.8L | 30.00L |
| NEtFOSEL | 4.00L | 4.57L | 14.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.93L | -1.7L | 30.00L |
| ADONAL | 4.00L | 3.63L | -9.3L | 30.00L |
| PFEESAL | 4.00L | 3.30L | -17.6L | 30.00L |
| PFMPAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFMBAL | 4.00L | 3.42L | -14.4L | 30.00L |
| NFDHAL | 4.00L | 3.55L | -11.3L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.87L | -3.4L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 4.00L | 0.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.60L | -10.0L | 30.00L |
| 5:3FTCAL | 4.00L | 3.95L | -1.3L | 30.00L |
| 7:3FTCAL | 4.00L | 3.72L | -7.0L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.63L | 7.9L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.53L | 13.3L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.23L | 11.5L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.11L | 11.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.07L | 7.4L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.08L | 8.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.09L | 9.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.28L | 14.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.44L | 21.9L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.28L | 13.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0094L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.76L | 19.1L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.88L | 22.1L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.86L | 21.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 10.3L | 29.1L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.16L | 7.8L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.17L | 8.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.19L | 9.5L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.59L | 14.9L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D7-NMEFOSEL | 20.0L | 22.7L | 13.6L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.3L | 11.7L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.74L | 9.3L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 962397<br>( 163.0 / 69.0 ) 25274 | ( 2.80 , 0.74 ) ( N/A , 0.01 , 0.1) | 6782.6<br>1223.6 | 0.0263<br>96.7<br>96.7 | 3.3415 | N/A | 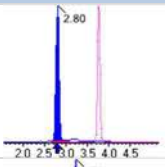 | 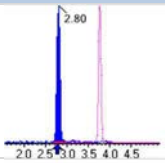 | |
| PFBA | ( 213.0 / 169.0 ) 1175661 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 937.3 | N/A<br>0.0<br>0.0 | 3.8614 | N/A | 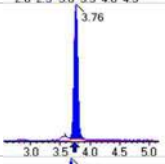 | | |
| PFPeA | ( 263.0 / 219.0 ) 978897<br>( 263.0 / 69.0 ) 10248 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 3495.1<br>136.4 | 0.0105<br>87.7<br>87.7 | 3.9064 | N/A | 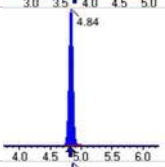 | 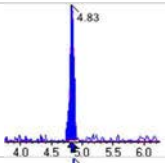 | |
| PFHxA | ( 313.0 / 269.0 ) 1080521<br>( 313.0 / 119.0 ) 119388 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.9<br>990.2 | 0.1105<br>95.2<br>95.2 | 3.6367 | N/A | 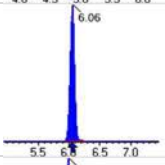 | 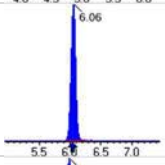 | |
| PFHpA | ( 363.0 / 319.0 ) 1143038<br>( 363.0 / 169.0 ) 356252 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1509.0<br>1329.3 | 0.3117<br>102.8<br>102.8 | 3.5350 | N/A | 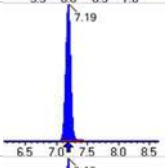 | 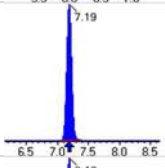 | |
| PFOA | ( 413.0 / 369.0 ) 1461316<br>( 413.0 / 169.0 ) 523450 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 588.7<br>754.1 | 0.3582<br>98.0<br>98.0 | 3.3594 | N/A | 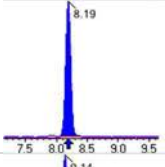 | 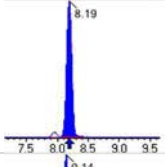 | |
| PFNA | ( 463.0 / 419.0 ) 1118591<br>( 463.0 / 169.0 ) 289643 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.2<br>983.5 | 0.2589<br>101.4<br>101.4 | 3.7732 | N/A | 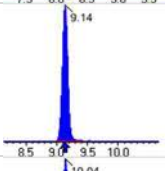 | 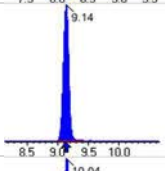 | |
| PFDA | ( 513.0 / 469.0 ) 1264134<br>( 513.0 / 169.0 ) 157234 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2953.9<br>1885.8 | 0.1244<br>106.1<br>106.1 | 3.7761 | N/A | 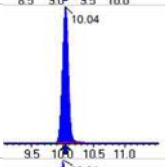 | 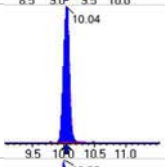 | |
| PFUnA | ( 563.0 / 519.0 ) 1294321<br>( 563.0 / 169.0 ) 184407 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 893.4<br>429.0 | 0.1425<br>100.5<br>100.5 | 3.5942 | N/A | 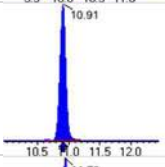 | 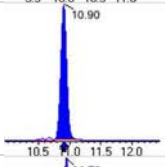 | |
| PFDoA | ( 613.0 / 569.0 ) 1365550<br>( 613.0 / 169.0 ) 224325 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1128.0<br>583.1 | 0.1643<br>103.9<br>103.9 | 3.3107 | N/A | 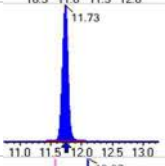 | 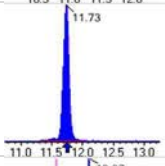 | |
| PFTrDA | ( 663.0 / 619.0 ) 1370908<br>( 663.0 / 169.0 ) 363516 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.0) | 1167.0<br>776.2 | 0.2652<br>103.0<br>103.0 | 3.3977 | N/A | 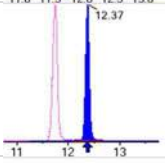 | 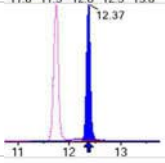 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1309098<br>( 713.0 / 169.0 ) 347062 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1509.2<br>784.5 | 0.2651<br>98.2<br>98.2 | 4.1165 | N/A | 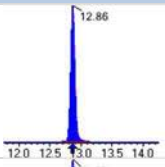 | 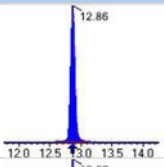 | |
| PFHxDA | ( 813.0 / 769.0 ) 897399<br>( 813.0 / 169.0 ) 229591 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1782.4<br>984.2 | 0.2558<br>104.6<br>104.6 | 3.0982 | N/A | 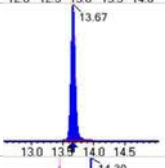 | 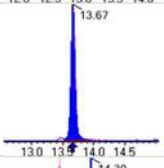 | |
| PFODA | ( 913.0 / 869.0 ) 550450<br>( 913.0 / 169.0 ) 180510 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1511.9<br>649.4 | 0.3279<br>91.5<br>91.5 | 3.0377 | N/A | 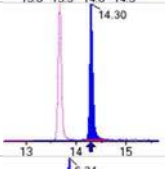 | 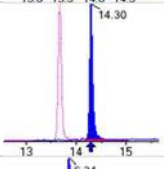 | |
| PFBS | ( 299.0 / 80.0 ) 1756089<br>( 299.0 / 99.0 ) 1281223 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3552.9<br>3591.0 | 0.7296<br>103.2<br>103.2 | 3.6666 | N/A | 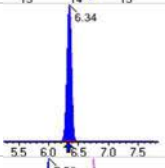 | 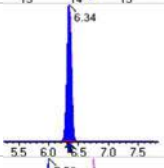 | |
| PFPeS | ( 349.0 / 80.0 ) 4305626<br>( 349.0 / 99.0 ) 1490386 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , -0.1) | 2601.1<br>2414.4 | 0.3461<br>96.3<br>96.3 | 4.0953 | N/A | 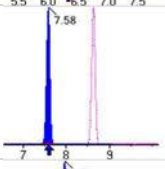 | 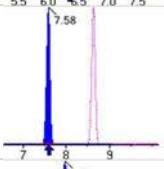 | |
| PFHxS | ( 399.0 / 80.0 ) 4796231<br>( 399.0 / 99.0 ) 1513608 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3672.2<br>5896.7 | 0.3156<br>99.1<br>99.1 | 3.9275 | N/A | 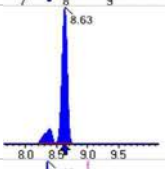 | 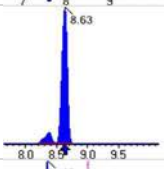 | |
| PFHpS | ( 449.0 / 80.0 ) 3732941<br>( 449.0 / 99.0 ) 1001282 | ( 9.60 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2007.8<br>1891.4 | 0.2682<br>101.4<br>101.4 | 3.7048 | N/A | 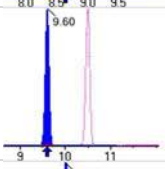 | 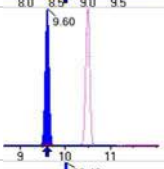 | |
| PFOS | ( 499.0 / 80.0 ) 3424865<br>( 499.0 / 99.0 ) 734477 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1720.3<br>3896.8 | 0.2145<br>91.8<br>91.8 | 3.5262 | N/A | 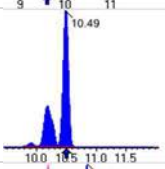 | 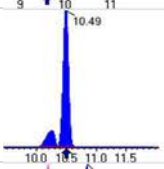 | |
| PFNS | ( 549.0 / 80.0 ) 3407348<br>( 549.0 / 99.0 ) 929910 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2946.3<br>1937.3 | 0.2729<br>100.1<br>100.1 | 3.7468 | N/A | 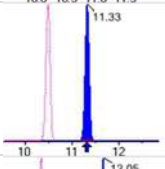 | 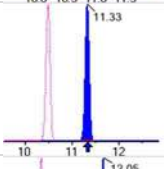 | |
| PFDS | ( 599.0 / 80.0 ) 4296316<br>( 599.0 / 99.0 ) 1123221 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3304.8<br>2395.7 | 0.2614<br>96.2<br>96.2 | 3.8691 | N/A | 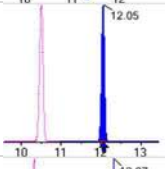 | 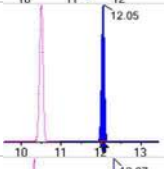 | |
| PFDoS | ( 699.0 / 80.0 ) 3586345<br>( 699.0 / 99.0 ) 846775 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3630.7<br>2702.9 | 0.2361<br>101.1<br>101.1 | 3.6636 | N/A | 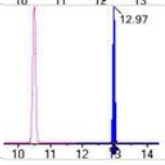 | 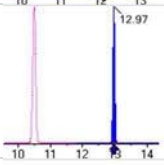 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1631620<br>( 327.0 / 81.0 ) 1506467 | ( 5.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 4752.9<br>2173.4 | 0.9233<br>105.8<br>105.8 | 3.9996 | N/A | 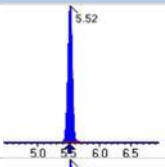 | 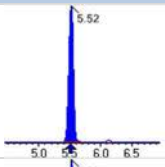 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1545553<br>( 427.0 / 81.0 ) 1968397 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 3426.6<br>2929.0 | 1.2736<br>101.6<br>101.6 | 3.9140 | N/A | 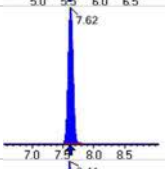 | 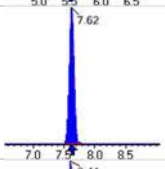 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1515669<br>( 527.0 / 81.0 ) 1596380 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 1461.7<br>1647.7 | 1.0533<br>96.8<br>96.8 | 4.2844 | N/A | 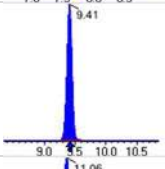 | 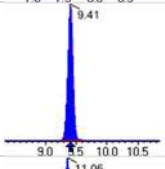 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1267274<br>( 627.0 / 81.0 ) 1749805 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1302.1<br>1148.2 | 1.3808<br>95.9<br>95.9 | 3.9787 | N/A | 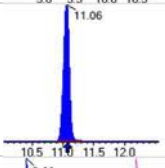 | 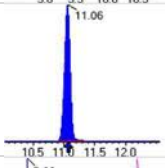 | |
| PFBSA | ( 297.9 / 78.0 ) 3621025<br>( 297.9 / 278.0 ) 4711 | ( 8.11 , 0.57 ) ( N/A , 0.00 , 0.2) | 1692.7<br>159.7 | 0.0013<br>95.2<br>95.2 | 4.4829 | N/A | 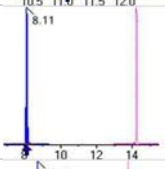 | 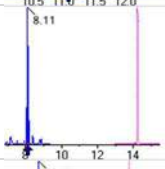 | |
| PFHxSA | ( 397.9 / 78.0 ) 4011801<br>( 397.9 / 378.0 ) 16835 | ( 10.98 , 0.75 ) ( N/A , 0.00 , 0.0) | 854.3<br>330.5 | 0.0042<br>102.7<br>102.7 | 3.8415 | N/A | 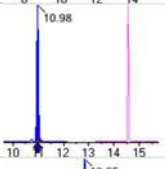 | 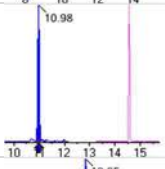 | |
| PFOSA | ( 498.0 / 78.0 ) 2805456<br>( 498.0 / 478.0 ) 40688 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.2) | 937.8<br>497.9 | 0.0145<br>103.4<br>103.4 | 3.8140 | N/A | 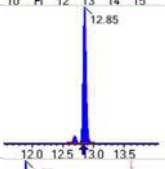 | 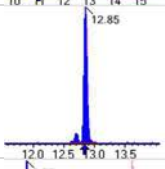 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 ) 7301953<br>( 279.7 / 211.0 ) 635631 | ( 8.20 , 0.64 ) ( N/A , -0.01 , 0.0) | 52.1<br>66.4 | 0.0870<br>103.6<br>103.6 | 3.7699 | N/A | 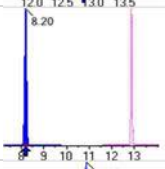 | 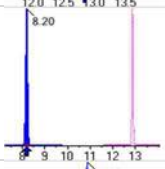 | |
| NMeFOSA | ( 512.0 / 219.0 ) 519804<br>( 512.0 / 169.0 ) 328008 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 5814.7<br>2023.3 | 0.6310<br>84.3<br>84.3 | 3.3402 | N/A | 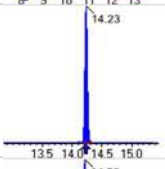 | 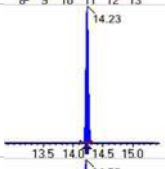 | |
| NEtFOSA | ( 526.0 / 219.0 ) 682268<br>( 526.0 / 169.0 ) 720469 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 0.0) | 6107.0<br>4732.1 | 1.0560<br>85.5<br>85.5 | 3.5850 | N/A | 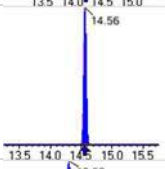 | 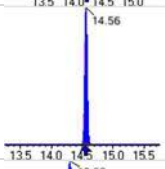 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 812540<br>( 570.0 / 483.0 ) 375737 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2801.5<br>1944.1 | 0.4624<br>105.5<br>105.5 | 3.7449 | N/A | 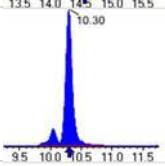 | 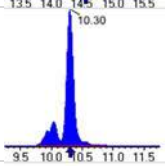 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 733069<br>( 584.0 / 526.0 ) 451026 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1461.0<br>814.2 | 0.6153<br>99.8<br>99.8 | 3.4878 | N/A | 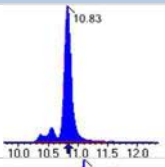 | 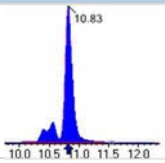 | |
| NMeFOSE | ( 616.0 / 59.0 ) 326625 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2612.6 | N/A<br>0.0<br>0.0 | 4.0313 | N/A | 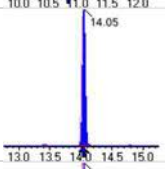 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 299443 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4202.9 | N/A<br>0.0<br>0.0 | 4.5715 | N/A | 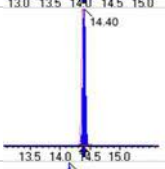 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 308973<br>( 285.0 / 185.0 ) 797962 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1326.1<br>2486.0 | 2.5826<br>93.4<br>93.4 | 3.9307 | N/A | 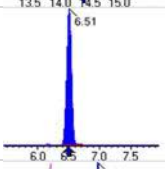 | 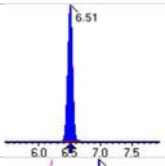 | |
| ADONA | ( 377.0 / 85.0 ) 3325389<br>( 377.0 / 251.0 ) 344342 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.0) | 1872.8<br>1723.5 | 0.1035<br>101.6<br>101.6 | 3.6262 | N/A | 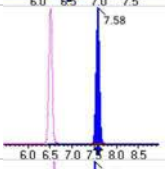 | 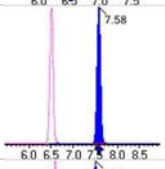 | |
| PFEESA | ( 315.0 / 135.0 ) 703088<br>( 315.0 / 83.0 ) 404699 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 2387.2<br>769.5 | 0.5756<br>103.3<br>103.3 | 3.2953 | N/A | 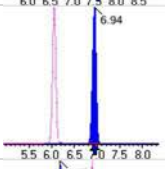 | 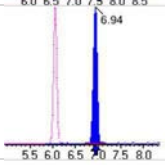 | |
| PFMPA | ( 229.0 / 85.0 ) 296369 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 3321.0 | N/A<br>0.0<br>0.0 | 3.7270 | N/A | 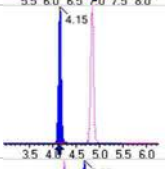 | | |
| PFMBA | ( 279.0 / 85.0 ) 739601 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3653.3 | N/A<br>0.0<br>0.0 | 3.4221 | N/A | 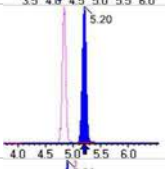 | | |
| NFDHA | ( 295.0 / 201.0 ) 393340<br>( 295.0 / 85.0 ) 422944 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2490.4<br>1874.9 | 1.0753<br>99.7<br>99.7 | 3.5461 | N/A | 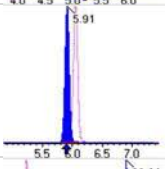 | 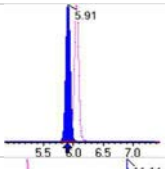 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3829034<br>( 533.0 / 353.0 ) 1211420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3048.6<br>2273.9 | 0.3164<br>101.1<br>101.1 | 3.8658 | N/A | 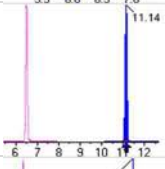 | 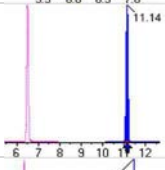 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3049840<br>( 633.0 / 453.0 ) 1009005 | ( 12.47 , 1.92 )<br>( N/A , 0.00 , 0.1) | 4050.8<br>2878.1 | 0.3308<br>99.6<br>99.6 | 4.0039 | N/A | 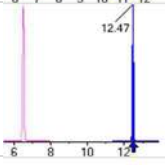 | 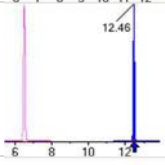 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1920262<br>( 461.0 / 381.2 ) 718117 | ( 9.52 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2117.4<br>2583.3 | 0.3740<br>93.8<br>93.8 | 3.5045 | N/A | 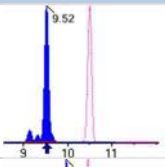 | 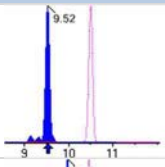 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 51311<br>( 241.0 / 117.0 ) 125661 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1068.2<br>1017.9 | 2.4490<br>116.2<br>116.2 | 3.5994 | N/A | 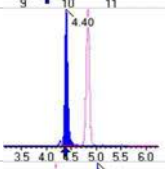 | 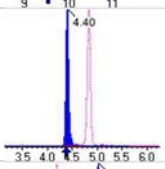 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 325323<br>( 341.0 / 217.0 ) 467661 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.2) | 983.3<br>713.5 | 1.4375<br>94.6<br>94.6 | 3.9483 | N/A | 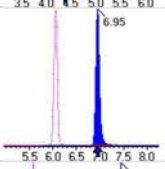 | 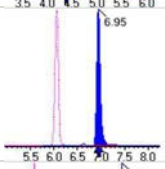 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 503088<br>( 441.0 / 337.0 ) 447992 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 2199.0<br>3436.5 | 0.8905<br>97.1<br>97.1 | 3.7207 | N/A | 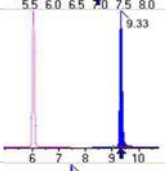 | 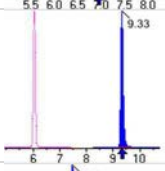 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1368915<br>( 357.2 / 243.0 ) 138696 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1462.3<br>919.1 | 0.1013<br>91.9<br>91.9 | 3.7993 | N/A | 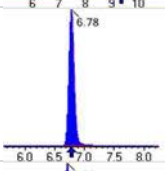 | 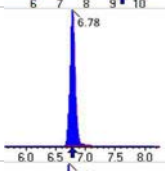 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1040258<br>( 457.2 / 343.0 ) 44906 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 751.1<br>400.9 | 0.0432<br>104.1<br>104.1 | 4.0322 | N/A | 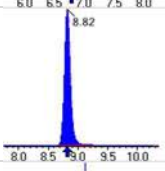 | 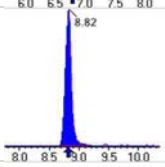 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 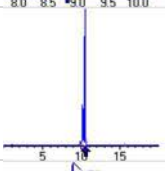 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 247846 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1075.6 | N/A | 1.0395<br>[ 1.0000 ] | 103.9%<br>{ 105.8% } | 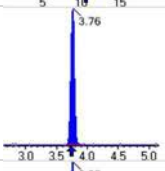 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117348 | ( 6.06 , N/A )<br>( N/A , -0.01 , N/A ) | 16220.9 | N/A | 0.9251<br>[ 1.0000 ] | 92.5%<br>{ 98.2% } | 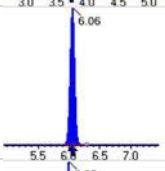 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370834 | ( 8.20 , N/A )<br>( N/A , -0.01 , N/A ) | 3643.5 | N/A | 0.9381<br>[ 1.0000 ] | 93.8%<br>{ 97.6% } | 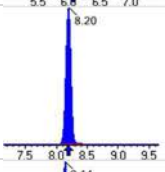 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270783 | ( 9.14 , N/A )<br>( N/A , -0.01 , N/A ) | 892.5 | N/A | 0.9521<br>[ 1.0000 ] | 95.2%<br>{ 101.7% } | 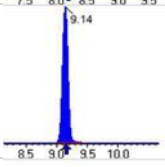 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272326 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 13544.9 | N/A | 0.9325 [ 1.0000 ] | 93.3% { 101.7% } | 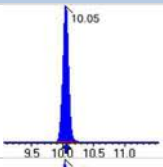 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 837221 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4279.8 | N/A | 0.8822 [ 1.0000 ] | 88.2% { 93.0% } | 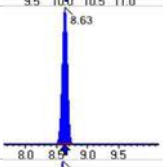 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713825 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2190.3 | N/A | 0.9372 [ 1.0000 ] | 93.7% { 101.9% } | 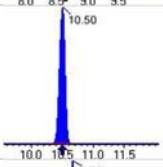 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2443491 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 41170.2 | N/A | 8.6301 [ 8.0000 ] | 107.9% { 115.5% } | 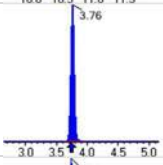 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 992188 | ( 4.84 , N/A ) ( N/A , -0.01 , N/A ) | 5611.5 | N/A | 4.5315 [ 4.0000 ] | 113.3% { 107.6% } | 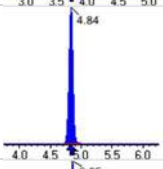 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 618494 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 6938.9 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 111.8% } | 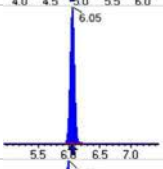 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659031 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4583.8 | N/A | 2.2127 [ 2.0000 ] | 110.6% { 106.4% } | 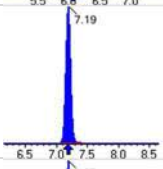 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 885699 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2803.9 | N/A | 2.2291 [ 2.0000 ] | 111.5% { 108.0% } | 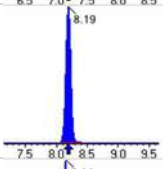 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294966 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2846.1 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 112.3% } | 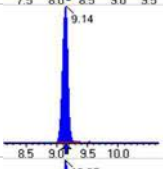 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 327639 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1335.9 | N/A | 1.0736 [ 1.0000 ] | 107.4% { 103.5% } | 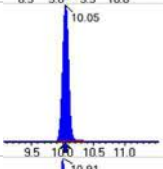 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389334 | ( 10.91 , N/A ) ( N/A , -0.01 , N/A ) | 1101.6 | N/A | 1.0844 [ 1.0000 ] | 108.4% { 107.7% } | 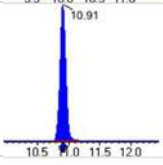 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409989 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1223.9 | N/A | 1.1213 [ 1.0000 ] | 112.1% { 116.6% } | 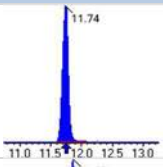  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 339554 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1486.2 | N/A | 1.0905 [ 1.0000 ] | 109.0% { 108.7% } | 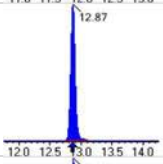  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607345 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2904.6 | N/A | 2.2847 [ 2.0000 ] | 114.2% { 117.7% } | 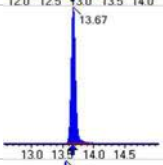  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1844891 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 1003.0 | N/A | 2.4390 [ 2.0000 ] | 121.9% { 115.8% } | 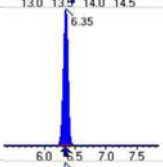  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373837 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4235.8 | N/A | 2.2754 [ 2.0000 ] | 113.8% { 107.3% } | 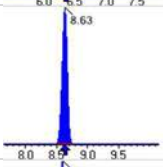  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1681874 | ( 10.50 , N/A ) ( N/A , -0.01 , N/A ) | 1417.8 | N/A | 2.1852 [ 2.0000 ] | 109.3% { 107.6% } | 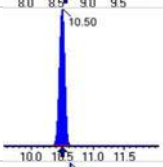  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 621764 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.3 | N/A | 4.7641 [ 4.0000 ] | 119.1% { 118.4% } | 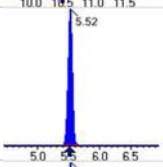  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1907472 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 3543.7 | N/A | 4.8837 [ 4.0000 ] | 122.1% { 112.2% } | 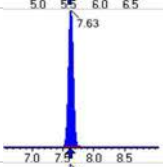  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490025 | ( 9.41 , N/A ) ( N/A , 0.00 , N/A ) | 1234.3 | N/A | 4.8642 [ 4.0000 ] | 121.6% { 112.9% } | 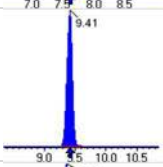  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3305966 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1721.4 | N/A | 10.3266 [ 8.0000 ] | 129.1% { 127.3% } | 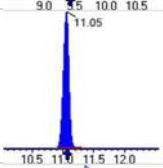  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1471109 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 1781.5 | N/A | 2.1569 [ 2.0000 ] | 107.8% { 110.3% } | 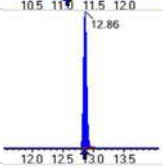  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 313468 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 2395.1 | N/A | 2.1669 [ 2.0000 ] | 108.3% { 113.0% } | 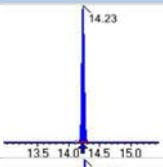  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339856 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 2214.0 | N/A | 2.1907 [ 2.0000 ] | 109.5% { 107.7% } | 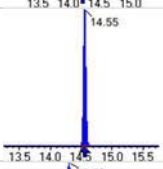  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 909945 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2882.7 | N/A | 4.5948 [ 4.0000 ] | 114.9% { 108.6% } | 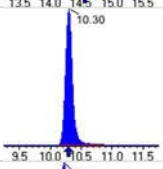  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 859454 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1808.0 | N/A | 4.7617 [ 4.0000 ] | 119.0% { 113.7% } | 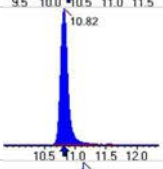  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1477259 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 2309.5 | N/A | 22.7237 [ 20.0000 ] | 113.6% { 109.8% } | 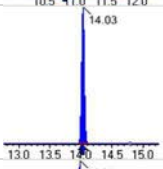  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1474480 | ( 14.38 , N/A ) ( N/A , 0.00 , N/A ) | 3886.4 | N/A | 22.3464 [ 20.0000 ] | 111.7% { 112.0% } | 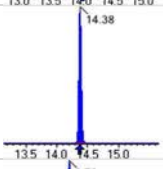  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1066376 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2035.6 | N/A | 8.7432 [ 8.0000 ] | 109.3% { 109.0% } | 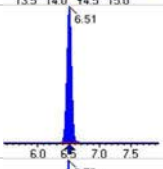  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677811 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1143.2 | N/A | 2.2957 [ 2.0000 ] | 114.8% { 117.4% } | 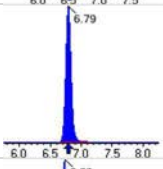  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 632603 | ( 8.83 , N/A ) ( N/A , -0.01 , N/A ) | 843.1 | N/A | 2.3536 [ 2.0000 ] | 117.7% { 117.8% } | 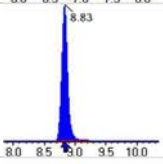  | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0094L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.412L | 2.9L | 30.00L |
| PFPeAL | 0.200L | 0.208L | 4.0L | 30.00L |
| PFHxAL | 0.100L | 0.0989L | -1.1L | 30.00L |
| PFHpAL | 0.100L | 0.0936L | -6.4L | 30.00L |
| PFOAL | 0.100L | 0.112L | 12.0L | 30.00L |
| PFNAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFDAL | 0.100L | 0.109L | 8.9L | 30.00L |
| PFUnAL | 0.100L | 0.101L | 1.3L | 30.00L |
| PFDoAL | 0.100L | 0.105L | 4.9L | 30.00L |
| PFTrDAL | 0.100L | 0.0940L | -6.0L | 30.00L |
| PFTeDAL | 0.100L | 0.0978L | -2.2L | 30.00L |
| PFHxDAL | 0.100L | 0.0965L | -3.5L | 30.00L |
| PFODAL | 0.100L | 0.0984L | -1.6L | 30.00L |
| PFBSL | 0.0885L | 0.0922L | 4.2L | 30.00L |
| PFPeSL | 0.0940L | 0.0887L | -5.6L | 30.00L |
| PFHxSL | 0.0915L | 0.0881L | -3.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0824L | -13.7L | 30.00L |
| PFOSL | 0.0930L | 0.0974L | 4.8L | 30.00L |
| PFNSL | 0.0960L | 0.0859L | -10.5L | 30.00L |
| PFDSL | 0.0965L | 0.0905L | -6.2L | 30.00L |
| PFDoSL | 0.0970L | 0.0876L | -9.7L | 30.00L |
| 4:2FTSL | 0.375L | 0.354L | -5.6L | 30.00L |
| 6:2FTSL | 0.380L | 0.399L | 5.0L | 30.00L |
| 8:2FTSL | 0.384L | 0.364L | -5.1L | 30.00L |
| 10:2FTSL | 0.386L | 0.360L | -6.7L | 30.00L |
| PFOSAL | 0.100L | 0.0896L | -10.4L | 30.00L |
| NMeFOSAL | 0.400L | 0.385L | -3.6L | 30.00L |
| NEtFOSAL | 0.400L | 0.359L | -10.3L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0094L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0869L | -13.1L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0961L | -3.9L | 30.00L |
| NMeFOSEL | 0.400L | 0.387L | -3.3L | 30.00L |
| NEtFOSEL | 0.400L | 0.386L | -3.4L | 30.00L |
| HFPO-DAL | 0.100L | 0.0941L | -5.9L | 30.00L |
| ADONAL | 0.0945L | 0.0894L | -5.3L | 30.00L |
| PFEESAL | 0.178L | 0.175L | -1.5L | 30.00L |
| PFMPAL | 0.200L | 0.174L | -12.9L | 30.00L |
| PFMBAL | 0.200L | 0.179L | -10.5L | 30.00L |
| NFDHAL | 0.200L | 0.189L | -5.3L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0865L | -7.5L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0829L | -12.3L | 30.00L |
| 3:3FTCAL | 0.400L | 0.308L | -23.0L | 30.00L |
| 5:3FTCAL | 0.400L | 0.387L | -3.1L | 30.00L |
| 7:3FTCAL | 0.400L | 0.383L | -4.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 47067<br>( 163.0 / 69.0 ) 1316 | ( 2.78 , 0.74 ) ( N/A , -0.02 , -0.4) | 355.9<br>61.6 | 0.0280<br>103.0<br>106.1 | 0.1478<br>[ 0.2000 ] | 73.9% | 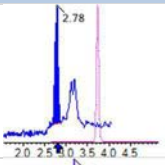 | 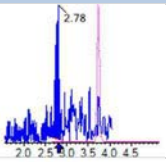 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 138592 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 108.4 | N/A<br>0.0<br>0.0 | 0.4116<br>[ 0.4000 ] | 102.9% | 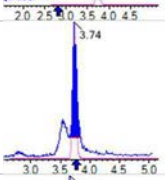 | | MI5 ABK 3/19/24 |
| PFPeA | ( 263.0 / 219.0 ) 60330<br>( 263.0 / 69.0 ) 274 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 1.0) | 334.1<br>11.7 | 0.0045<br>38.0<br>40.9 | 0.2080<br>[ 0.2000 ] | 104.0% | 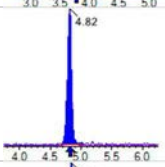 | 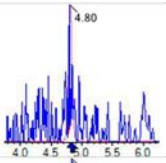 | |
| PFHxA | ( 313.0 / 269.0 ) 31048<br>( 313.0 / 119.0 ) 3804 | ( 6.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 218.1<br>76.3 | 0.1225<br>105.5<br>104.7 | 0.0989<br>[ 0.1000 ] | 98.9% | 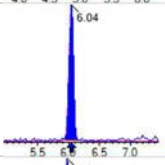 | 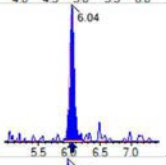 | |
| PFHpA | ( 363.0 / 319.0 ) 32104<br>( 363.0 / 169.0 ) 10165 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.1) | 282.8<br>149.1 | 0.3166<br>104.5<br>107.3 | 0.0936<br>[ 0.1000 ] | 93.6% | 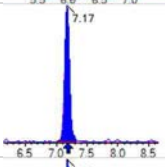 | 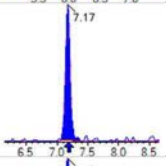 | |
| PFOA | ( 413.0 / 369.0 ) 61826<br>( 413.0 / 169.0 ) 21484 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 84.0<br>115.4 | 0.3475<br>95.1<br>101.2 | 0.1120<br>[ 0.1000 ] | 112.0% | 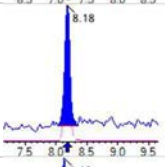 | 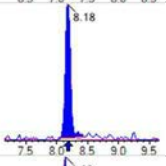 | |
| PFNA | ( 463.0 / 419.0 ) 29580<br>( 463.0 / 169.0 ) 6943 | ( 9.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 240.2<br>119.7 | 0.2347<br>91.9<br>97.6 | 0.0959<br>[ 0.1000 ] | 95.9% | 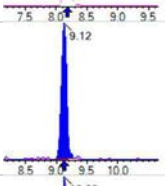 | 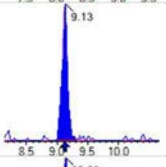 | |
| PFDA | ( 513.0 / 469.0 ) 40655<br>( 513.0 / 169.0 ) 5291 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.3) | 500.2<br>217.6 | 0.1301<br>111.1<br>108.7 | 0.1089<br>[ 0.1000 ] | 108.9% | 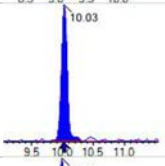 | 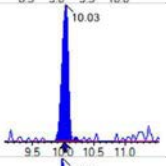 | |
| PFUnA | ( 563.0 / 519.0 ) 40509<br>( 563.0 / 169.0 ) 6769 | ( 10.89 , 1.00 ) ( 0.00 , N/A , -0.5) | 276.0<br>131.2 | 0.1671<br>117.9<br>117.6 | 0.1013<br>[ 0.1000 ] | 101.3% | 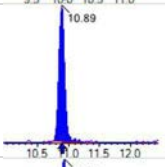 | 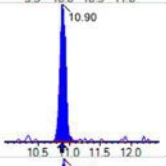 | |
| PFDoA | ( 613.0 / 569.0 ) 45754<br>( 613.0 / 169.0 ) 6839 | ( 11.71 , 1.00 ) ( -0.01 , N/A , 0.6) | 261.3<br>77.8 | 0.1495<br>94.6<br>101.1 | 0.1049<br>[ 0.1000 ] | 104.9% | 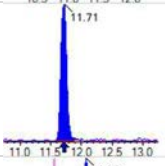 | 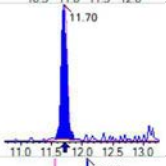 | |
| PFTrDA | ( 663.0 / 619.0 ) 40077<br>( 663.0 / 169.0 ) 12540 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 189.2<br>161.2 | 0.3129<br>121.6<br>120.8 | 0.0940<br>[ 0.1000 ] | 94.0% | 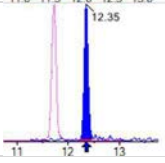 | 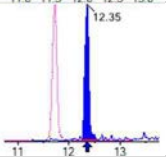 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 32062<br>( 713.0 / 169.0 ) 9163 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 280.6<br>82.3 | 0.2858<br>105.9<br>107.5 | 0.0978<br>[ 0.1000 ] | 97.8% | 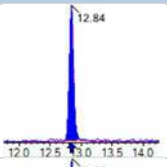 | 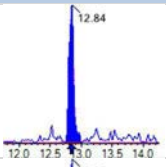 | |
| PFHxDA | ( 813.0 / 769.0 ) 26666<br>( 813.0 / 169.0 ) 5158 | ( 13.65 , 1.00 ) ( 0.00 , N/A , -0.1) | 205.7<br>48.2 | 0.1934<br>79.1<br>75.8 | 0.0965<br>[ 0.1000 ] | 96.5% | 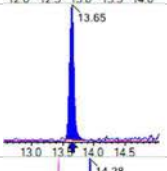 | 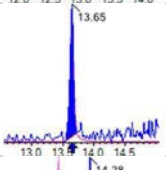 | |
| PFODA | ( 913.0 / 869.0 ) 17005<br>( 913.0 / 169.0 ) 6421 | ( 14.28 , 1.05 ) ( N/A , -0.01 , -0.5) | 92.3<br>35.7 | 0.3776<br>105.4<br>110.8 | 0.0984<br>[ 0.1000 ] | 98.4% | 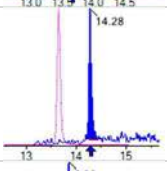 | 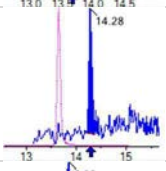 | |
| PFBS | ( 299.0 / 80.0 ) 44646<br>( 299.0 / 99.0 ) 27872 | ( 6.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 383.3<br>165.4 | 0.6243<br>88.3<br>84.9 | 0.0922<br>[ 0.0885 ] | 104.2% | 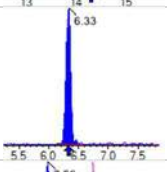 | 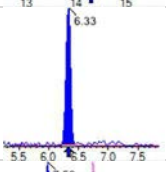 | |
| PFPeS | ( 349.0 / 80.0 ) 101159<br>( 349.0 / 99.0 ) 36023 | ( 7.56 , 0.88 ) ( N/A , 0.00 , -0.2) | 377.7<br>381.4 | 0.3561<br>99.0<br>101.1 | 0.0887<br>[ 0.0938 ] | 94.5% | 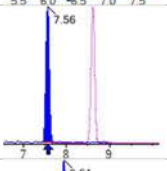 | 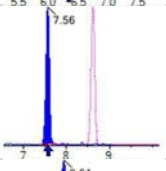 | |
| PFHxS | ( 399.0 / 80.0 ) 116709<br>( 399.0 / 99.0 ) 38098 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 575.1<br>430.6 | 0.3264<br>102.5<br>97.6 | 0.0881<br>[ 0.0911 ] | 96.7% | 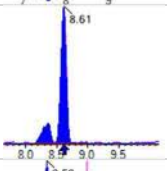 | 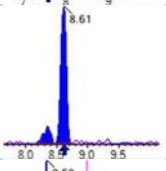 | |
| PFHpS | ( 449.0 / 80.0 ) 87202<br>( 449.0 / 99.0 ) 26573 | ( 9.59 , 0.91 ) ( N/A , 0.01 , 0.2) | 325.7<br>293.6 | 0.3047<br>115.1<br>115.1 | 0.0824<br>[ 0.0951 ] | 86.6% | 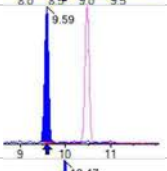 | 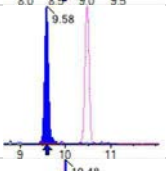 | |
| PFOS | ( 499.0 / 80.0 ) 99408<br>( 499.0 / 99.0 ) 23088 | ( 10.47 , 1.00 ) ( 0.00 , N/A , -0.6) | 316.8<br>8184.8 | 0.2323<br>99.4<br>96.7 | 0.0974<br>[ 0.0927 ] | 105.1% | 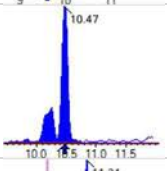 | 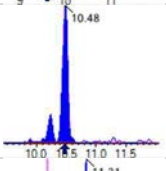 | |
| PFNS | ( 549.0 / 80.0 ) 82027<br>( 549.0 / 99.0 ) 23150 | ( 11.31 , 1.08 ) ( N/A , 0.00 , 0.1) | 271.8<br>203.4 | 0.2822<br>103.6<br>104.7 | 0.0859<br>[ 0.0960 ] | 89.5% | 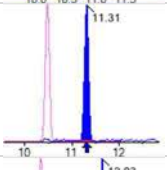 | 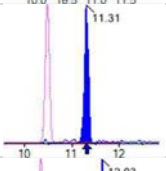 | |
| PFDS | ( 599.0 / 80.0 ) 105536<br>( 599.0 / 99.0 ) 29516 | ( 12.03 , 1.15 ) ( N/A , 0.00 , -0.2) | 384.1<br>182.1 | 0.2797<br>102.9<br>104.6 | 0.0905<br>[ 0.0963 ] | 94.0% | 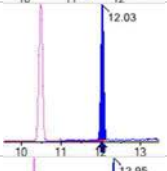 | 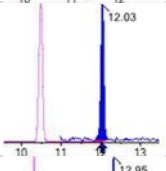 | |
| PFDoS | ( 699.0 / 80.0 ) 90038<br>( 699.0 / 99.0 ) 21141 | ( 12.95 , 1.24 ) ( N/A , 0.00 , 0.2) | 633.3<br>245.9 | 0.2348<br>100.5<br>102.5 | 0.0876<br>[ 0.0970 ] | 90.3% | 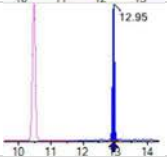 | 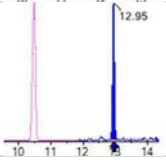 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 171899<br>( 327.0 / 81.0 ) 150442 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1717.6<br>683.9 | 0.8752<br>100.3<br>97.2 | 0.3539<br>[ 0.3738 ] | 94.7% | 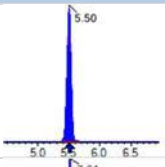 | 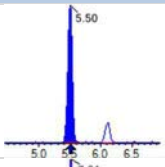 | |
| 6:2FTS | ( 427.0 / 407.0 ) 166522<br>( 427.0 / 81.0 ) 197744 | ( 7.61 , 1.00 ) ( -0.01 , N/A , 0.0) | 2378.9<br>1070.7 | 1.1875<br>94.7<br>89.7 | 0.3988<br>[ 0.3796 ] | 105.1% | 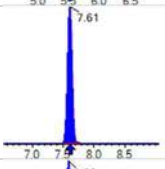 | 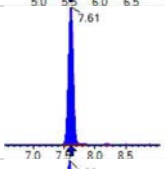 | |
| 8:2FTS | ( 527.0 / 507.0 ) 144163<br>( 527.0 / 81.0 ) 157932 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.1) | 941.2<br>658.7 | 1.0955<br>100.7<br>107.5 | 0.3643<br>[ 0.3833 ] | 95.1% | 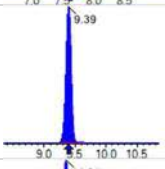 | 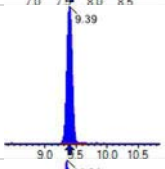 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119303<br>( 627.0 / 81.0 ) 176570 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 738.6<br>403.5 | 1.4800<br>102.8<br>101.5 | 0.3600<br>[ 0.3865 ] | 93.2% | 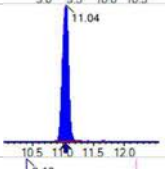 | 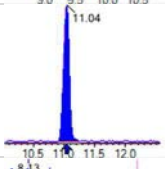 | |
| PFBSA | ( 297.9 / 78.0 ) 85442<br>( 297.9 / 278.0 ) 256 | ( 8.10 , 0.57 ) ( N/A , 0.00 , -2.0) | 513.5<br>10.9 | 0.0030<br>219.5<br>193.6 | 0.1039<br>[ 0.1000 ] | 103.9% | 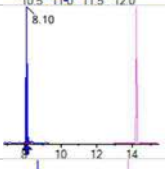 | 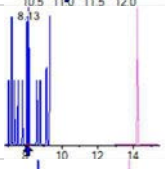 | |
| PFHxSA | ( 397.9 / 78.0 ) 109513<br>( 397.9 / 378.0 ) 757 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.1) | 794.2<br>30.1 | 0.0069<br>169.2<br>165.2 | 0.0991<br>[ 0.1000 ] | 99.1% | 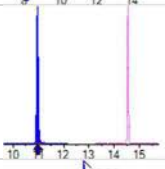 | 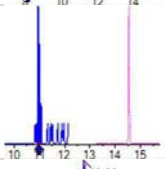 | |
| PFOSA | ( 498.0 / 78.0 ) 72856<br>( 498.0 / 478.0 ) 1203 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.8) | 695.3<br>58.1 | 0.0165<br>117.6<br>110.9 | 0.0896<br>[ 0.1000 ] | 89.6% | 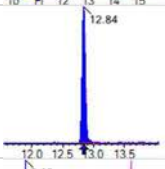 | 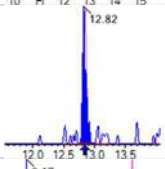 | |
| TFSI | ( 279.7 / 147.0 ) 192505<br>( 279.7 / 211.0 ) 18747 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.2) | 49.6<br>23.7 | 0.0974<br>115.9<br>113.8 | 0.0899<br>[ 0.0979 ] | 91.8% | 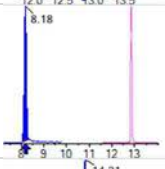 | 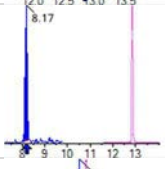 | |
| NMeFOSA | ( 512.0 / 219.0 ) 61072<br>( 512.0 / 169.0 ) 45751 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.5) | 689.5<br>323.4 | 0.7491<br>100.1<br>98.8 | 0.3855<br>[ 0.4000 ] | 96.4% | 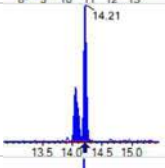 | 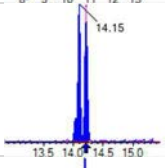 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72281<br>( 526.0 / 169.0 ) 87162 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 814.9<br>622.0 | 1.2059<br>97.7<br>97.1 | 0.3588<br>[ 0.4000 ] | 89.7% | 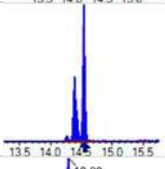 | 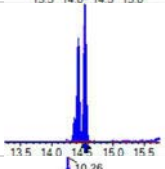 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 19339<br>( 570.0 / 483.0 ) 9536 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 1.4) | 48407.4<br>49763.3 | 0.4931<br>112.5<br>105.5 | 0.0869<br>[ 0.1000 ] | 86.9% | 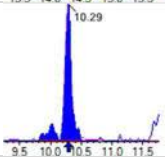 | 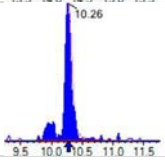 | MI4 ABK 3/19/24 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21192<br>( 584.0 / 526.0 ) 11046 | ( 10.82 , 1.00 )<br>( 0.02 , N/A , 0.8) | 143962.1<br>234.0 | 0.5212<br>84.5<br>88.1 | 0.0961<br>[ 0.1000 ] | 96.1% | 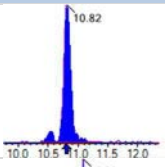 | 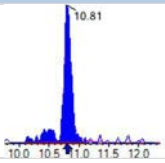 | MI4 ABK 3/19/24 |
| NMeFOSE | ( 616.0 / 59.0 ) 31285 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 199.9 | N/A<br>0.0<br>0.0 | 0.3866<br>[ 0.4000 ] | 96.7% | 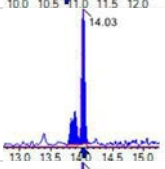 | | MI3 ABK 3/19/24 |
| NEtFOSE | ( 630.0 / 59.0 ) 25347 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 258.7 | N/A<br>0.0<br>0.0 | 0.3864<br>[ 0.4000 ] | 96.6% | 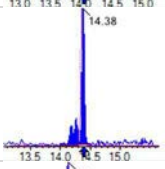 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7969<br>( 285.0 / 185.0 ) 22073 | ( 6.48 , 1.00 )<br>( -0.01 , N/A , -0.3) | 172.6<br>171.4 | 2.7698<br>100.2<br>105.0 | 0.0941<br>[ 0.1000 ] | 94.1% | 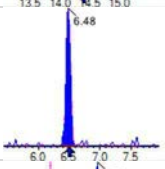 | 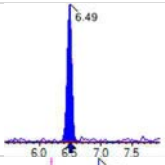 | |
| ADONA | ( 377.0 / 85.0 ) 88358<br>( 377.0 / 251.0 ) 9014 | ( 7.56 , 1.17 )<br>( N/A , 0.00 , 0.2) | 604.2<br>141.8 | 0.1020<br>100.1<br>97.6 | 0.0894<br>[ 0.0943 ] | 94.9% | 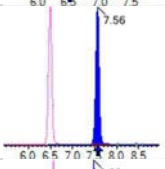 | 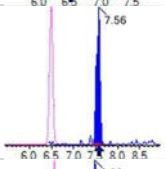 | |
| PFEESA | ( 315.0 / 135.0 ) 39560<br>( 315.0 / 83.0 ) 25099 | ( 6.92 , 1.15 )<br>( N/A , -0.01 , -0.4) | 780.1<br>83.9 | 0.6345<br>113.8<br>112.0 | 0.1754<br>[ 0.1785 ] | 98.3% | 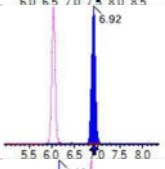 | 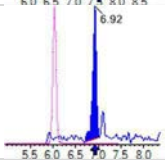 | |
| PFMPA | ( 229.0 / 85.0 ) 16031 | ( 4.12 , 0.86 )<br>( N/A , -0.02 , 0.0) | 334.6 | N/A<br>0.0<br>0.0 | 0.1742<br>[ 0.2000 ] | 87.1% | 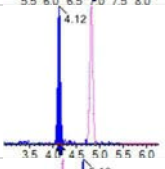 | | |
| PFMBA | ( 279.0 / 85.0 ) 44800 | ( 5.18 , 1.08 )<br>( N/A , -0.01 , 0.0) | 597.2 | N/A<br>0.0<br>0.0 | 0.1791<br>[ 0.2000 ] | 89.5% | 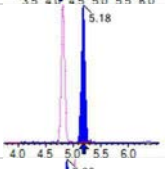 | | |
| NFDHA | ( 295.0 / 201.0 ) 22208<br>( 295.0 / 85.0 ) 22515 | ( 5.90 , 0.98 )<br>( N/A , 0.00 , 0.2) | 653.0<br>208.4 | 1.0138<br>94.0<br>100.8 | 0.1894<br>[ 0.2000 ] | 94.7% | 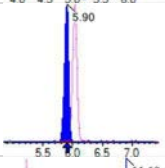 | 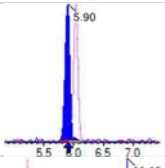 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 92247<br>( 533.0 / 353.0 ) 27025 | ( 11.13 , 1.71 )<br>( N/A , 0.01 , 0.3) | 1045.0<br>479.6 | 0.2930<br>93.6<br>88.9 | 0.0865<br>[ 0.0933 ] | 92.6% | 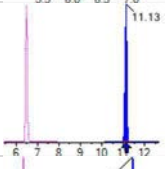 | 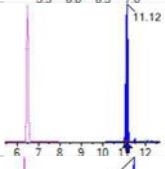 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 67993<br>( 633.0 / 453.0 ) 23083 | ( 12.44 , 1.92 )<br>( N/A , 0.00 , -0.2) | 1180.5<br>305.0 | 0.3395<br>102.2<br>99.2 | 0.0829<br>[ 0.0943 ] | 87.9% | 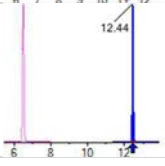 | 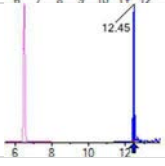 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 47255<br>( 461.0 / 381.2 ) 20429 | ( 9.51 , 0.91 )<br>( N/A , 0.00 , 0.1) | 785.8<br>377.2 | 0.4323<br>108.5<br>109.0 | 0.0821<br>[ 0.0924 ] | 88.9% | 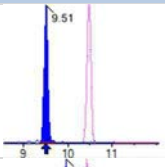 | 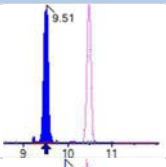 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5084<br>( 241.0 / 117.0 ) 13448 | ( 4.38 , 0.91 )<br>( N/A , -0.01 , 0.0) | 299.2<br>194.9 | 2.6448<br>125.5<br>121.9 | 0.3081<br>[ 0.4000 ] | 77.0% | 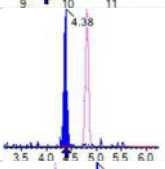 | 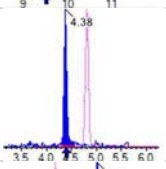 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 33751<br>( 341.0 / 217.0 ) 52605 | ( 6.93 , 1.15 )<br>( N/A , -0.01 , 0.0) | 268.0<br>252.9 | 1.5586<br>102.6<br>107.1 | 0.3875<br>[ 0.4000 ] | 96.9% | 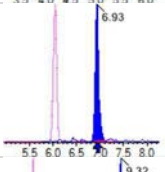 | 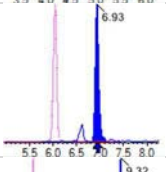 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54752<br>( 441.0 / 337.0 ) 50432 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , 0.0) | 6985.1<br>5483054.5 | 0.9211<br>100.4<br>105.3 | 0.3831<br>[ 0.4000 ] | 95.8% | 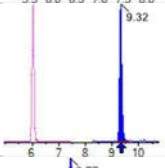 | 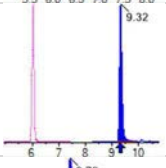 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 35681<br>( 357.2 / 243.0 ) 5762 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 296.0<br>77.3 | 0.1615<br>146.5<br>155.1 | 0.0905<br>[ 0.1000 ] | 90.5% | 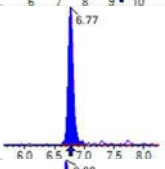 | 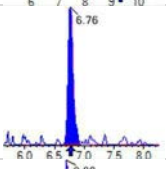 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24379<br>( 457.2 / 343.0 ) 1534 | ( 8.80 , 1.00 )<br>( -0.02 , N/A , -0.4) | 217.0<br>80.7 | 0.0629<br>151.7<br>138.8 | 0.0887<br>[ 0.1000 ] | 88.7% | 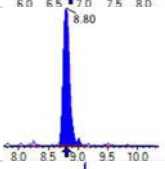 | 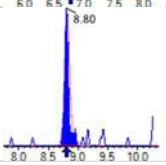 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 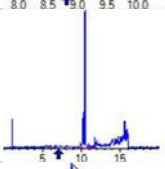 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282417 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1316.3 | N/A | 1.1845<br>[ 1.0000 ] | 118.4%<br>{ 119.4% } | 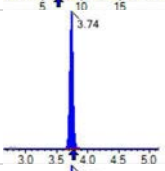 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 132714 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 6222.6 | N/A | 1.0462<br>[ 1.0000 ] | 104.6%<br>{ 104.8% } | 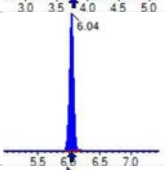 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 445408 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3769.0 | N/A | 1.1267<br>[ 1.0000 ] | 112.7%<br>{ 117.4% } | 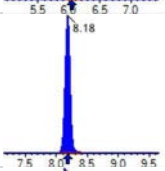 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317549 | ( 9.12 , N/A )<br>( N/A , 0.01 , N/A ) | 1127.4 | N/A | 1.1165<br>[ 1.0000 ] | 111.7%<br>{ 112.9% } | 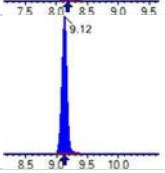 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303337 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3256.1 | N/A | 1.0387 [ 1.0000 ] | 103.9% { 104.9% } | 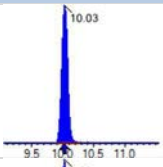 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1014053 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 5000.9 | N/A | 1.0685 [ 1.0000 ] | 106.9% { 108.6% } | 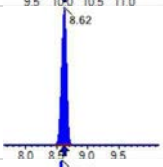 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 795109 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1897.5 | N/A | 1.0439 [ 1.0000 ] | 104.4% { 111.7% } | 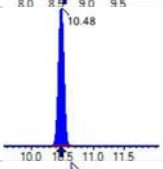 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2702588 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40570.3 | N/A | 8.3767 [ 8.0000 ] | 104.7% { 120.7% } | 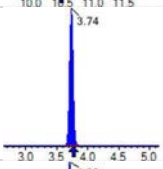 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1148479 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6049.7 | N/A | 4.6380 [ 4.0000 ] | 115.9% { 117.7% } | 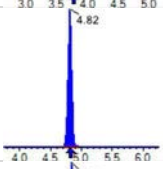 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 653814 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 9511.1 | N/A | 2.1592 [ 2.0000 ] | 108.0% { 110.8% } | 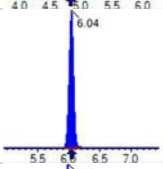 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 699408 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 7443.9 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 106.5% } | 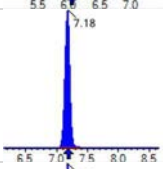 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 929590 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 4049.2 | N/A | 1.9478 [ 2.0000 ] | 97.4% { 107.8% } | 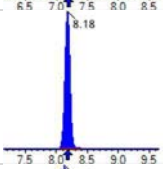 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 307041 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3378.4 | N/A | 0.9861 [ 1.0000 ] | 98.6% { 113.8% } | 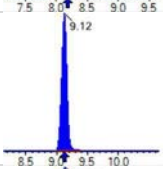 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 365279 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 996.8 | N/A | 1.0745 [ 1.0000 ] | 107.5% { 113.5% } | 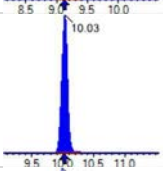 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432373 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 808.4 | N/A | 1.0811 [ 1.0000 ] | 108.1% { 116.2% } | 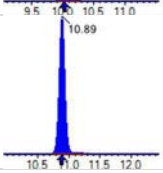 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433394 | ( 11.72 , N/A ) ( N/A , 0.00 , N/A ) | 1303.4 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 116.2% } | 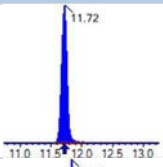  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 350124 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1144.3 | N/A | 1.0095 [ 1.0000 ] | 100.9% { 107.2% } | 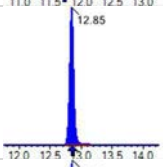  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579308 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2648.7 | N/A | 1.9564 [ 2.0000 ] | 97.8% { 114.7% } | 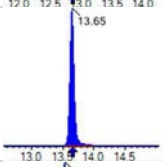  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1865423 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1146.5 | N/A | 2.0361 [ 2.0000 ] | 101.8% { 111.2% } | 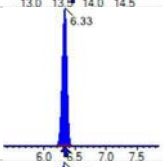  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1489931 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4743.7 | N/A | 2.0374 [ 2.0000 ] | 101.9% { 113.0% } | 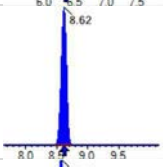  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1766562 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1601.6 | N/A | 2.0606 [ 2.0000 ] | 103.0% { 114.0% } | 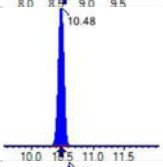  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 740312 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 90.1 | N/A | 4.6833 [ 4.0000 ] | 117.1% { 125.7% } | 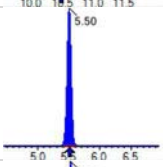  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2016832 | ( 7.62 , N/A ) ( N/A , 0.01 , N/A ) | 3498.2 | N/A | 4.2632 [ 4.0000 ] | 106.6% { 121.0% } | 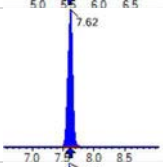  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1666535 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1318.4 | N/A | 4.4917 [ 4.0000 ] | 112.3% { 121.8% } | 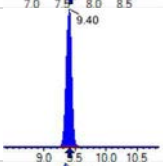  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3439402 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1774.5 | N/A | 8.8699 [ 8.0000 ] | 110.9% { 134.7% } | 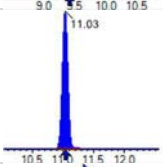  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1626298 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2527.3 | N/A | 2.1406 [ 2.0000 ] | 107.0% { 118.4% } | 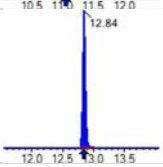  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 319120 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1934.6 | N/A | 1.9804 [ 2.0000 ] | 99.0% { 110.8% } | 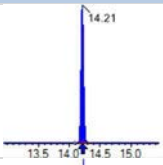  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 359797 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2191.0 | N/A | 2.0821 [ 2.0000 ] | 104.1% { 117.3% } | 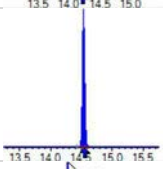 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 933377 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2330.1 | N/A | 4.2313 [ 4.0000 ] | 105.8% { 110.4% } | 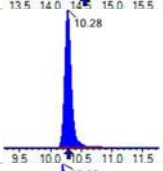  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 901988 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1892.3 | N/A | 4.4865 [ 4.0000 ] | 112.2% { 117.1% } | 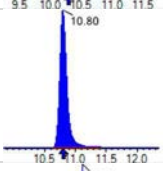  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475303 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1625.0 | N/A | 20.3737 [ 20.0000 ] | 101.9% { 107.3% } | 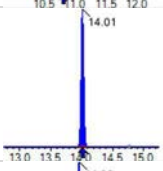  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1476802 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4748.1 | N/A | 20.0935 [ 20.0000 ] | 100.5% { 114.5% } | 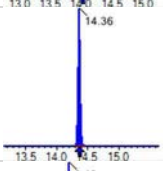  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148686 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2151.5 | N/A | 8.3276 [ 8.0000 ] | 104.1% { 112.3% } | 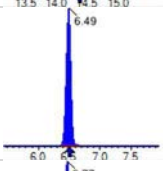  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 741493 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1122.8 | N/A | 2.2546 [ 2.0000 ] | 112.7% { 120.2% } | 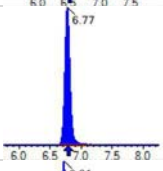  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 674096 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 797.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 121.8% } | 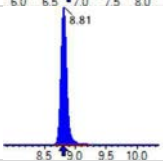  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | PFBA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.10A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.47A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.50A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.43A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.78A | 95.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.44A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.54A | 90.8A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.08A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.53A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.58A | 95.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.24A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.54A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.39A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.67A | 96.3A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.4A | 92.5A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 99.9A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.4A | 101A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.5A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.52A | 90.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.3A | 91.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.8A | 94.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | NMeFOSEA | 20.0A | 17.8A | 88.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 95.9A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.05A | 101A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.40A | 93.2A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.95A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.02A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.04A | 90.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.17A | 91.7A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.30A | 91.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.53A | 96.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 17.8A | 89.1A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 17.9A | 89.5A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2372019<br>( 163.0 / 69.0 ) 62514 | ( 2.80 , 0.74 ) ( N/A , 0.00 , 0.1) | 13913.0<br>2584.8 | 0.0264<br>97.0<br>100.0 | 8.9879<br>[ 10.0000 ] | 89.9% | 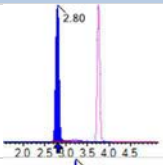 | 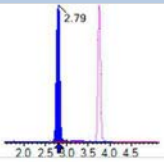 | |
| PFBA | ( 213.0 / 169.0 ) 4986352 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.8 | N/A<br>0.0<br>0.0 | 17.8727<br>[ 20.0000 ] | 89.4% | 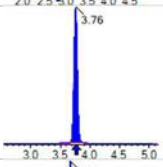 | | |
| PFPeA | ( 263.0 / 219.0 ) 2243443<br>( 263.0 / 69.0 ) 24889 | ( 4.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 5617.4<br>382.6 | 0.0111<br>92.9<br>100.0 | 9.1014<br>[ 10.0000 ] | 91.0% | 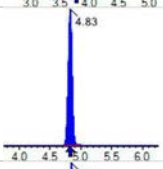 | 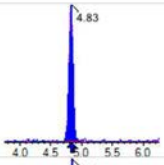 | |
| PFHxA | ( 313.0 / 269.0 ) 1266538<br>( 313.0 / 119.0 ) 148224 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.1) | 2320.7<br>1439.8 | 0.1170<br>100.8<br>100.0 | 4.4684<br>[ 5.0000 ] | 89.4% | 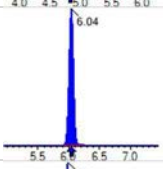 | 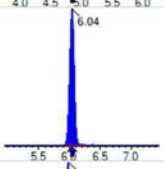 | |
| PFHpA | ( 363.0 / 319.0 ) 1450446<br>( 363.0 / 169.0 ) 428196 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 1901.5<br>1629.8 | 0.2952<br>97.4<br>100.0 | 4.5031<br>[ 5.0000 ] | 90.1% | 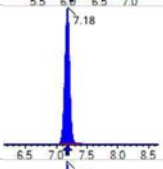 | 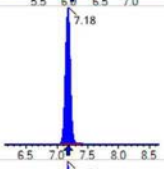 | |
| PFOA | ( 413.0 / 369.0 ) 2002153<br>( 413.0 / 169.0 ) 687361 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 897.9<br>1153.0 | 0.3433<br>93.9<br>100.0 | 4.7249<br>[ 5.0000 ] | 94.5% | 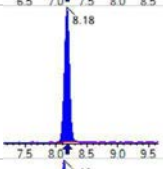 | 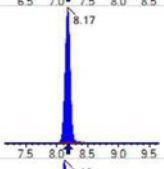 | |
| PFNA | ( 463.0 / 419.0 ) 1283413<br>( 463.0 / 169.0 ) 308707 | ( 9.12 , 1.00 ) ( 0.00 , N/A , 0.1) | 1323.8<br>992.2 | 0.2405<br>94.2<br>100.0 | 4.7313<br>[ 5.0000 ] | 94.6% | 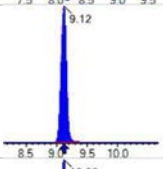 | 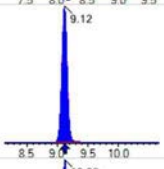 | |
| PFDA | ( 513.0 / 469.0 ) 1457239<br>( 513.0 / 169.0 ) 174432 | ( 10.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 3628.8<br>1931.7 | 0.1197<br>102.2<br>100.0 | 4.4330<br>[ 5.0000 ] | 88.7% | 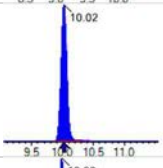 | 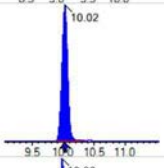 | |
| PFUnA | ( 563.0 / 519.0 ) 1643541<br>( 563.0 / 169.0 ) 233570 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 959.0<br>907.0 | 0.1421<br>100.3<br>100.0 | 4.7773<br>[ 5.0000 ] | 95.5% | 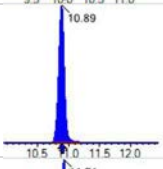 | 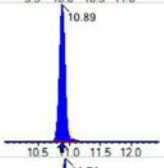 | |
| PFDoA | ( 613.0 / 569.0 ) 1793459<br>( 613.0 / 169.0 ) 265167 | ( 11.71 , 1.00 ) ( 0.00 , N/A , 0.0) | 1158.4<br>870.7 | 0.1479<br>93.5<br>100.0 | 4.7806<br>[ 5.0000 ] | 95.6% | 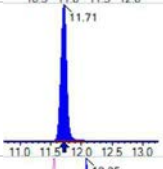 | 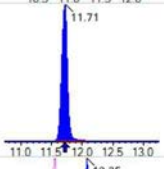 | |
| PFTrDA | ( 663.0 / 619.0 ) 1689975<br>( 663.0 / 169.0 ) 437674 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 1578.2<br>1081.4 | 0.2590<br>100.6<br>100.0 | 4.6051<br>[ 5.0000 ] | 92.1% | 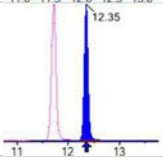 | 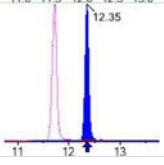 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1356735<br>( 713.0 / 169.0 ) 360534 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1740.6<br>1078.6 | 0.2657<br>98.5<br>100.0 | 4.4375<br>[ 5.0000 ] | 88.7% | 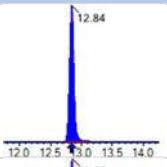 | 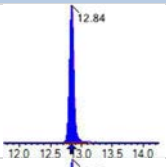 | |
| PFHxDA | ( 813.0 / 769.0 ) 1109449<br>( 813.0 / 169.0 ) 283268 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1965.8<br>1206.1 | 0.2553<br>104.4<br>100.0 | 4.6054<br>[ 5.0000 ] | 92.1% | 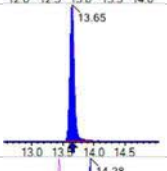 | 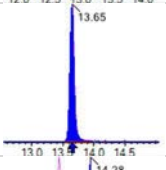 | |
| PFODA | ( 913.0 / 869.0 ) 683892<br>( 913.0 / 169.0 ) 233111 | ( 14.28 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2010.8<br>850.7 | 0.3409<br>95.1<br>100.0 | 4.5379<br>[ 5.0000 ] | 90.8% | 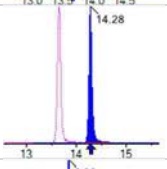 | 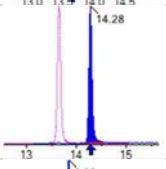 | |
| PFBS | ( 299.0 / 80.0 ) 1776776<br>( 299.0 / 99.0 ) 1306667 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3528.0<br>2910.9 | 0.7354<br>104.0<br>100.0 | 4.0783<br>[ 4.4237 ] | 92.2% | 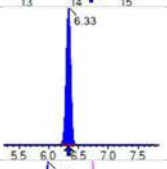 | 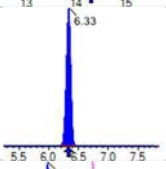 | |
| PFPeS | ( 349.0 / 80.0 ) 4572433<br>( 349.0 / 99.0 ) 1610319 | ( 7.56 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2516.4<br>2164.2 | 0.3522<br>97.9<br>100.0 | 4.5312<br>[ 4.6919 ] | 96.6% | 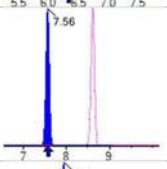 | 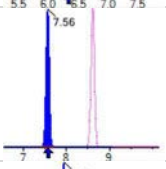 | |
| PFHxS | ( 399.0 / 80.0 ) 4833210<br>( 399.0 / 99.0 ) 1616028 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3301.5<br>4483.9 | 0.3344<br>105.0<br>100.0 | 4.1236<br>[ 4.5549 ] | 90.5% | 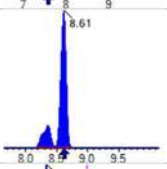 | 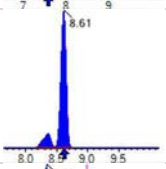 | |
| PFHpS | ( 449.0 / 80.0 ) 4254224<br>( 449.0 / 99.0 ) 1126368 | ( 9.58 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2066.6<br>2304.9 | 0.2648<br>100.0<br>100.0 | 4.5831<br>[ 4.7570 ] | 96.3% | 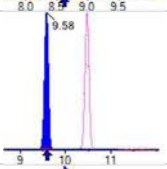 | 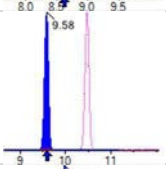 | |
| PFOS | ( 499.0 / 80.0 ) 3789953<br>( 499.0 / 99.0 ) 909936 | ( 10.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2527.5<br>9767.3 | 0.2401<br>102.7<br>100.0 | 4.2357<br>[ 4.6375 ] | 91.3% | 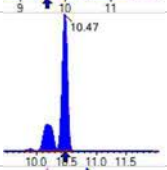 | 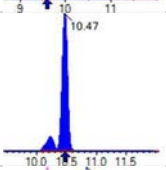 | |
| PFNS | ( 549.0 / 80.0 ) 3806892<br>( 549.0 / 99.0 ) 1025720 | ( 11.31 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2649.7<br>2424.8 | 0.2694<br>98.9<br>100.0 | 4.5441<br>[ 4.7994 ] | 94.7% | 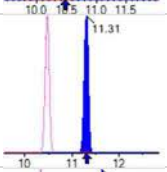 | 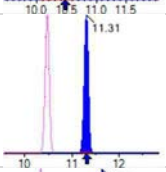 | |
| PFDS | ( 599.0 / 80.0 ) 4494028<br>( 599.0 / 99.0 ) 1201321 | ( 12.03 , 1.15 )<br>( N/A , 0.00 , 0.0) | 2480.1<br>2375.2 | 0.2673<br>98.3<br>100.0 | 4.3932<br>[ 4.8155 ] | 91.2% | 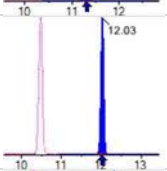 | 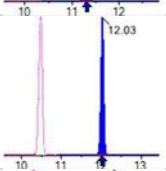 | |
| PFDoS | ( 699.0 / 80.0 ) 4211625<br>( 699.0 / 99.0 ) 964350 | ( 12.95 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3894.8<br>3231.8 | 0.2290<br>98.0<br>100.0 | 4.6702<br>[ 4.8478 ] | 96.3% | 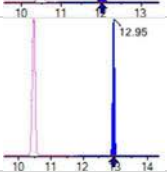 | 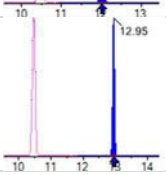 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6723472<br>( 327.0 / 81.0 ) 6052601 | ( 5.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5893.7<br>4257.3 | 0.9002<br>103.2<br>100.0 | 17.3957<br>[ 18.6906 ] | 93.1% | 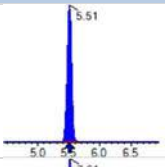 | 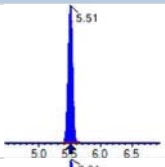 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6550499<br>( 427.0 / 81.0 ) 8675827 | ( 7.61 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4655.5<br>4712.5 | 1.3245<br>105.6<br>100.0 | 18.9841<br>[ 18.9808 ] | 100.0% | 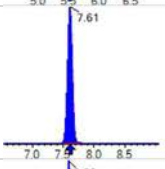 | 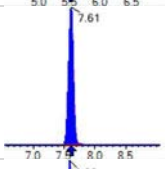 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6285503<br>( 527.0 / 81.0 ) 6405924 | ( 9.39 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1836.8<br>1754.0 | 1.0192<br>93.7<br>100.0 | 19.3547<br>[ 19.1658 ] | 101.0% | 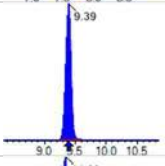 | 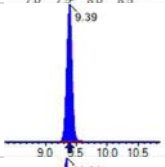 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4792812<br>( 627.0 / 81.0 ) 6991963 | ( 11.03 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1314.8<br>1502.6 | 1.4588<br>101.3<br>100.0 | 19.4893<br>[ 19.3236 ] | 100.9% | 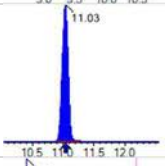 | 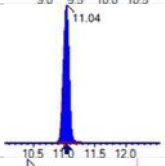 | |
| PFBSA | ( 297.9 / 78.0 ) 3525714<br>( 297.9 / 278.0 ) 5463 | ( 8.10 , 0.57 )<br>( N/A , 0.00 , 0.5) | 1695.3<br>251.5 | 0.0015<br>113.4<br>100.0 | 4.7511<br>[ 5.0000 ] | 95.0% | 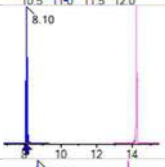 | 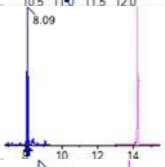 | |
| PFHxSA | ( 397.9 / 78.0 ) 4197148<br>( 397.9 / 378.0 ) 17568 | ( 10.96 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1478.3<br>418.3 | 0.0042<br>102.4<br>100.0 | 4.4538<br>[ 5.0000 ] | 89.1% | 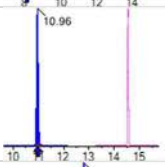 | 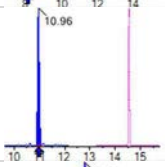 | |
| PFOSA | ( 498.0 / 78.0 ) 3104104<br>( 498.0 / 478.0 ) 46212 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2218.1<br>1112.6 | 0.0149<br>106.1<br>100.0 | 4.5183<br>[ 5.0000 ] | 90.4% | 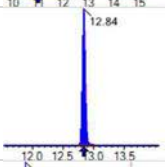 | 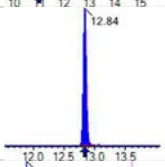 | |
| TFSI | ( 279.7 / 147.0 ) 8803222<br>( 279.7 / 211.0 ) 753322 | ( 8.18 , 0.64 )<br>( N/A , 0.00 , 0.0) | 60.2<br>54.6 | 0.0856<br>101.9<br>100.0 | 4.8663<br>[ 4.8967 ] | 99.4% | 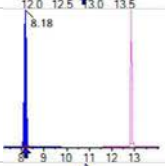 | 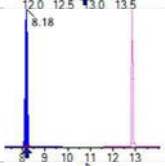 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2614289<br>( 512.0 / 169.0 ) 1982385 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.5) | 3210.8<br>1364.9 | 0.7583<br>101.3<br>100.0 | 18.2851<br>[ 20.0000 ] | 91.4% | 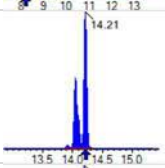 | 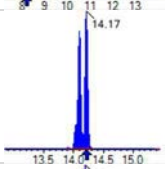 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3236003<br>( 526.0 / 169.0 ) 4018548 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.2) | 4263.0<br>4095.8 | 1.2418<br>100.6<br>100.0 | 18.8439<br>[ 20.0000 ] | 94.2% | 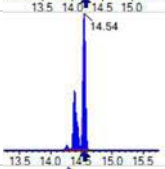 | 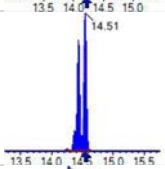 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 913337<br>( 570.0 / 483.0 ) 426919 | ( 10.28 , 1.00 )<br>( 0.01 , N/A , 0.2) | 2705.3<br>1697.2 | 0.4674<br>106.6<br>100.0 | 4.5300<br>[ 5.0000 ] | 90.6% | 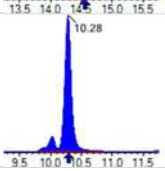 | 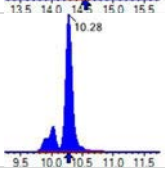 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 887553<br>( 584.0 / 526.0 ) 524891 | ( 10.81 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1604.5<br>743.0 | 0.5914<br>95.9<br>100.0 | 4.7124<br>[ 5.0000 ] | 94.2% | 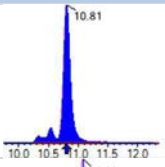 | 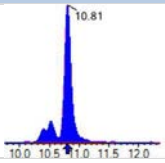 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1339066 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2300.7 | N/A<br>0.0<br>0.0 | 17.7635<br>[ 20.0000 ] | 88.8% | 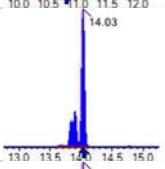 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1098743 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3411.8 | N/A<br>0.0<br>0.0 | 19.1717<br>[ 20.0000 ] | 95.9% | 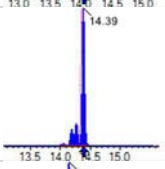 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 380390<br>( 285.0 / 185.0 ) 1003592 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1880.8<br>2181.2 | 2.6383<br>95.4<br>100.0 | 5.0462<br>[ 5.0000 ] | 100.9% | 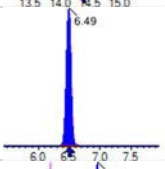 | 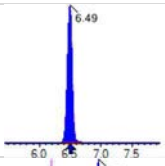 | |
| ADONA | ( 377.0 / 85.0 ) 3869589<br>( 377.0 / 251.0 ) 404618 | ( 7.56 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1810.2<br>1474.1 | 0.1046<br>102.6<br>100.0 | 4.4000<br>[ 4.7135 ] | 93.3% | 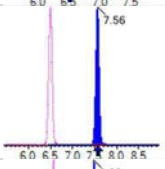 | 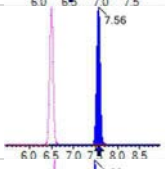 | |
| PFEESA | ( 315.0 / 135.0 ) 1617314<br>( 315.0 / 83.0 ) 915772 | ( 6.92 , 1.15 )<br>( N/A , 0.00 , 0.1) | 3997.6<br>1231.2 | 0.5662<br>101.6<br>100.0 | 7.9456<br>[ 8.9246 ] | 89.0% | 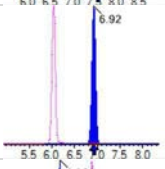 | 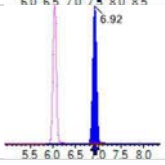 | |
| PFMPA | ( 229.0 / 85.0 ) 705416 | ( 4.14 , 0.86 )<br>( N/A , 0.00 , 0.0) | 6992.0 | N/A<br>0.0<br>0.0 | 9.0183<br>[ 10.0000 ] | 90.2% | 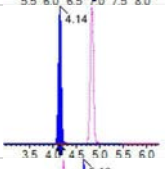 | | |
| PFMBA | ( 279.0 / 85.0 ) 1921542 | ( 5.19 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5369.8 | N/A<br>0.0<br>0.0 | 9.0384<br>[ 10.0000 ] | 90.4% | 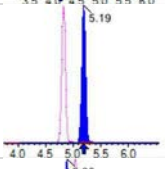 | | |
| NFDHA | ( 295.0 / 201.0 ) 969933<br>( 295.0 / 85.0 ) 975334 | ( 5.90 , 0.98 )<br>( N/A , 0.00 , 0.2) | 2782.9<br>3168.6 | 1.0056<br>93.2<br>100.0 | 9.1661<br>[ 10.0000 ] | 91.7% | 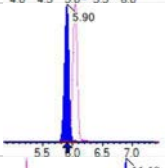 | 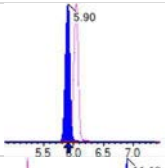 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4087296<br>( 533.0 / 353.0 ) 1347063 | ( 11.12 , 1.71 )<br>( N/A , 0.00 , 0.0) | 2680.8<br>2619.2 | 0.3296<br>105.3<br>100.0 | 4.3029<br>[ 4.6663 ] | 92.2% | 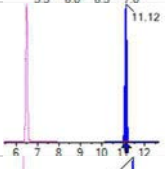 | 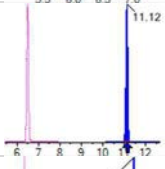 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3311751<br>( 633.0 / 453.0 ) 1133851 | ( 12.44 , 1.92 )<br>( N/A , 0.00 , 0.2) | 4100.5<br>2989.7 | 0.3424<br>103.1<br>100.0 | 4.5336<br>[ 4.7160 ] | 96.1% | 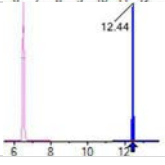 | 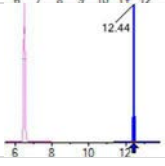 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2140660<br>( 461.0 / 381.2 ) 848710 | ( 9.50 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3568.0<br>3221.6 | 0.3965<br>99.5<br>100.0 | 4.2408<br>[ 4.6193 ] | 91.8% | 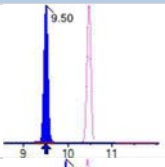 | 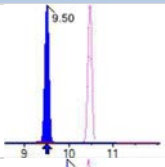 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 250641<br>( 241.0 / 117.0 ) 543725 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2462.4<br>2395.7 | 2.1693<br>103.0<br>100.0 | 17.8744<br>[ 20.0000 ] | 89.4% | 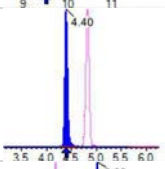 | 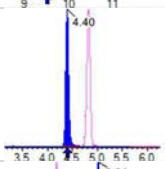 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1400179<br>( 341.0 / 217.0 ) 2037968 | ( 6.93 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1226.3<br>1321.6 | 1.4555<br>95.8<br>100.0 | 17.8129<br>[ 20.0000 ] | 89.1% | 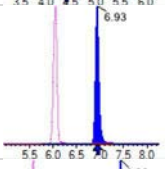 | 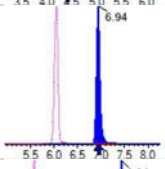 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2309905<br>( 441.0 / 337.0 ) 2020407 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , 0.1) | 4835.4<br>5971.4 | 0.8747<br>95.4<br>100.0 | 17.9072<br>[ 20.0000 ] | 89.5% | 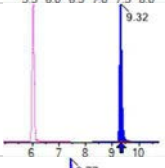 | 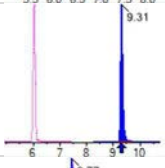 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1550464<br>( 357.2 / 243.0 ) 161386 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1205.4<br>827.6 | 0.1041<br>94.4<br>100.0 | 4.7278<br>[ 5.0000 ] | 94.6% | 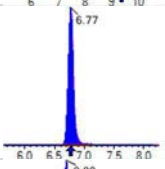 | 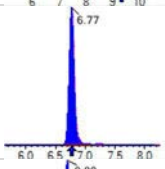 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1154425<br>( 457.2 / 343.0 ) 52338 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -0.2) | 931.8<br>340.3 | 0.0453<br>109.3<br>100.0 | 5.1167<br>[ 5.0000 ] | 102.3% | 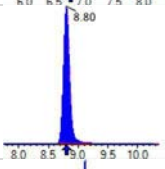 | 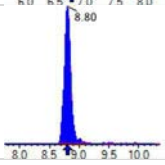 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 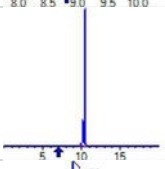 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 236533 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1101.8 | N/A | 0.9920<br>[ 1.0000 ] | 99.2%<br>{ 100.0% } | 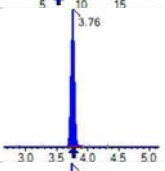 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126603 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 69331.2 | N/A | 0.9980<br>[ 1.0000 ] | 99.8%<br>{ 100.0% } | 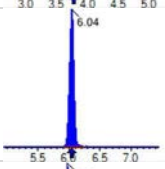 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379350 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3677.7 | N/A | 0.9596<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 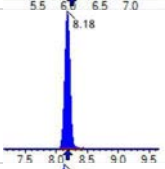 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281253 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 841.7 | N/A | 0.9889<br>[ 1.0000 ] | 98.9%<br>{ 100.0% } | 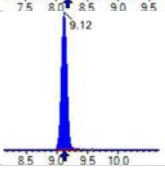 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 289297 | ( 10.03 , N/A ) ( N/A , 0.00 , N/A ) | 3430.1 | N/A | 0.9907 [ 1.0000 ] | 99.1% { 100.0% } | 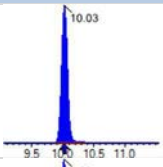 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 933370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4734.1 | N/A | 0.9835 [ 1.0000 ] | 98.3% { 100.0% } | 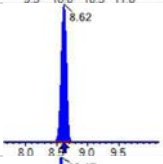 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 711998 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2262.1 | N/A | 0.9348 [ 1.0000 ] | 93.5% { 100.0% } | 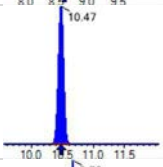 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2239045 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 37591.9 | N/A | 8.2862 [ 8.0000 ] | 103.6% { 100.0% } | 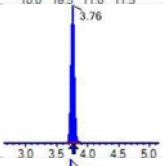 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 975984 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 6092.8 | N/A | 4.1317 [ 4.0000 ] | 103.3% { 100.0% } | 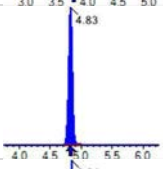 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 590039 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 15322.1 | N/A | 2.0426 [ 2.0000 ] | 102.1% { 100.0% } | 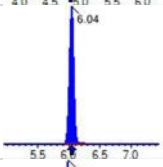 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 656479 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 4259.1 | N/A | 2.0430 [ 2.0000 ] | 102.2% { 100.0% } | 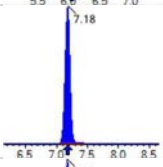 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862246 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3033.4 | N/A | 2.1213 [ 2.0000 ] | 106.1% { 100.0% } | 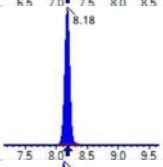 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269897 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3269.5 | N/A | 0.9787 [ 1.0000 ] | 97.9% { 100.0% } | 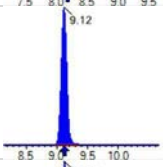 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321721 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 932.0 | N/A | 0.9923 [ 1.0000 ] | 99.2% { 100.0% } | 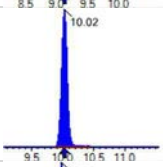 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 371951 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 1176.3 | N/A | 0.9752 [ 1.0000 ] | 97.5% { 100.0% } | 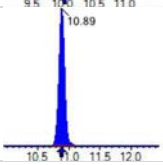 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 372900 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 1140.4 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 100.0% } | 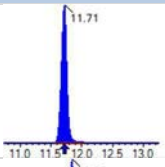 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 326459 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1457.1 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 100.0% } | 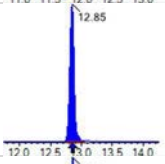 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 505124 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2276.2 | N/A | 1.7887 [ 2.0000 ] | 89.4% { 100.0% } | 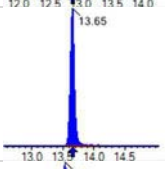 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1678205 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1604.5 | N/A | 1.9901 [ 2.0000 ] | 99.5% { 100.0% } | 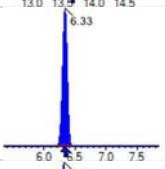 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1318602 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 4229.8 | N/A | 1.9590 [ 2.0000 ] | 97.9% { 100.0% } | 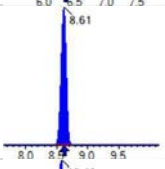 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1549392 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1607.9 | N/A | 2.0183 [ 2.0000 ] | 100.9% { 100.0% } | 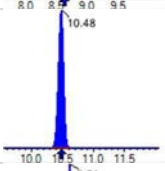 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 589081 | ( 5.51 , N/A ) ( N/A , 0.00 , N/A ) | 92.9 | N/A | 4.0487 [ 4.0000 ] | 101.2% { 100.0% } | 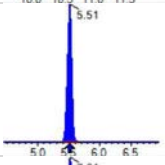 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1666770 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 4013.9 | N/A | 3.8278 [ 4.0000 ] | 95.7% { 100.0% } | 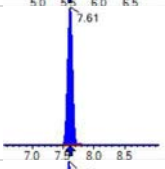 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1367825 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1522.8 | N/A | 4.0053 [ 4.0000 ] | 100.1% { 100.0% } | 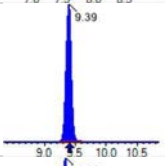 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2552514 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1280.0 | N/A | 7.1518 [ 8.0000 ] | 89.4% { 100.0% } | 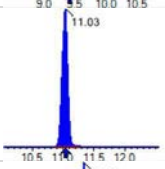 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1373982 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 3023.7 | N/A | 2.0196 [ 2.0000 ] | 101.0% { 100.0% } | 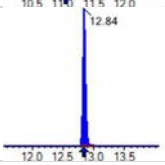 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 287989 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1960.3 | N/A | 1.9959 [ 2.0000 ] | 99.8% { 100.0% } | 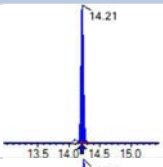  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 306672 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2411.5 | N/A | 1.9819 [ 2.0000 ] | 99.1% { 100.0% } | 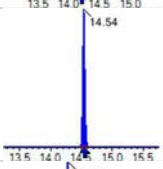  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 845576 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2402.7 | N/A | 4.2807 [ 4.0000 ] | 107.0% { 100.0% } | 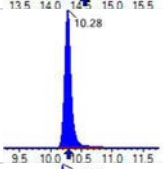  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 770166 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1846.4 | N/A | 4.2779 [ 4.0000 ] | 106.9% { 100.0% } | 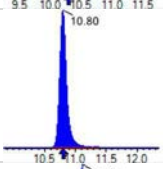  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1374456 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2535.5 | N/A | 21.1966 [ 20.0000 ] | 106.0% { 100.0% } | 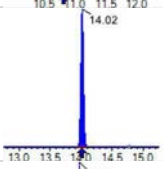  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1290095 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3979.5 | N/A | 19.6021 [ 20.0000 ] | 98.0% { 100.0% } | 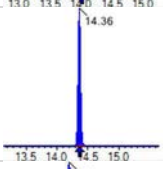  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022651 | ( 6.50 , N/A ) ( N/A , 0.00 , N/A ) | 2065.9 | N/A | 7.7718 [ 8.0000 ] | 97.1% { 100.0% } | 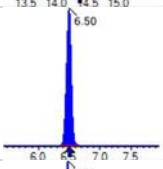  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 616938 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1272.7 | N/A | 1.9669 [ 2.0000 ] | 98.3% { 100.0% } | 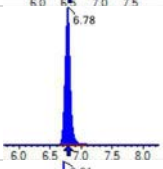  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 553242 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 748.1 | N/A | 1.9376 [ 2.0000 ] | 96.9% { 100.0% } | 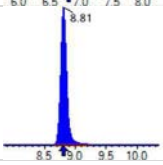  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | PFBA | 20.0A | 18.4A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 8.81A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.49A | 89.8A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.74A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.66A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.29A | 85.8A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.51A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.45A | 88.9A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.64A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.86A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.36A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.61A | 96.5A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.35A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.46A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.51A | 93.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.9A | 95.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 100A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.7A | 97.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.7A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.45A | 89.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.2A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.6A | 93.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.32A | 86.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.5A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | NMeFOSEA | 20.0A | 17.7A | 88.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 18.5A | 92.3A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.66A | 93.3A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.73A | 100A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.57A | 85.1A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.30A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.97A | 89.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.19A | 91.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 96.0A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.39A | 93.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.2A | 85.8A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.3A | 91.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2378964<br>( 163.0 / 69.0 ) 64297 | ( 2.77 , 0.74 ) ( N/A , -0.03 , 0.0) | 14801.2<br>2730.5 | 0.0270<br>99.5<br>102.6 | 9.3340<br>[ 10.0000 ] | 93.3% | 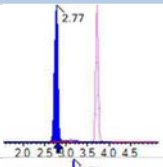 | 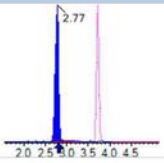 | |
| PFBA | ( 213.0 / 169.0 ) 4962164 | ( 3.72 , 1.00 ) ( 0.00 , N/A , 0.0) | 1056.7 | N/A<br>0.0<br>0.0 | 18.4170<br>[ 20.0000 ] | 92.1% | 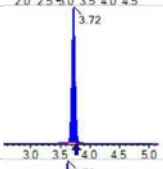 | | |
| PFPeA | ( 263.0 / 219.0 ) 1964295<br>( 263.0 / 69.0 ) 23803 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 5001.8<br>313.7 | 0.0121<br>101.5<br>109.2 | 8.8051<br>[ 10.0000 ] | 88.1% | 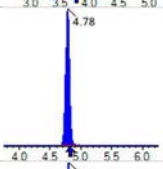 | 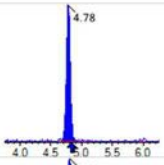 | |
| PFHxA | ( 313.0 / 269.0 ) 1139298<br>( 313.0 / 119.0 ) 135752 | ( 6.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 2222.6<br>989.0 | 0.1192<br>102.6<br>101.8 | 4.4896<br>[ 5.0000 ] | 89.8% | 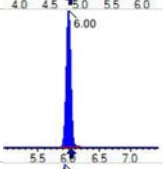 | 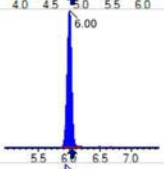 | |
| PFHpA | ( 363.0 / 319.0 ) 1368859<br>( 363.0 / 169.0 ) 405628 | ( 7.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 1710.5<br>1989.9 | 0.2963<br>97.8<br>100.4 | 4.7419<br>[ 5.0000 ] | 94.8% | 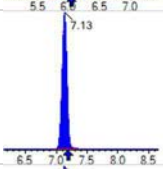 | 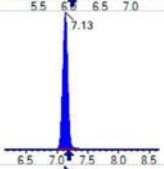 | |
| PFOA | ( 413.0 / 369.0 ) 1786147<br>( 413.0 / 169.0 ) 651972 | ( 8.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 798.7<br>1080.4 | 0.3650<br>99.9<br>106.3 | 4.8440<br>[ 5.0000 ] | 96.9% | 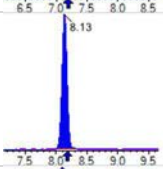 | 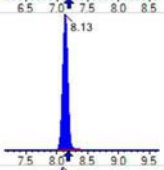 | |
| PFNA | ( 463.0 / 419.0 ) 1103867<br>( 463.0 / 169.0 ) 297773 | ( 9.08 , 1.00 ) ( 0.00 , N/A , 0.1) | 1157.8<br>1207.6 | 0.2698<br>105.7<br>112.1 | 4.6624<br>[ 5.0000 ] | 93.2% | 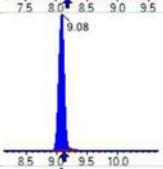 | 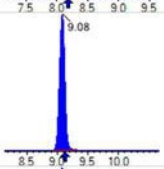 | |
| PFDA | ( 513.0 / 469.0 ) 1303129<br>( 513.0 / 169.0 ) 162758 | ( 9.98 , 1.00 ) ( -0.01 , N/A , 0.0) | 2898.2<br>7014.5 | 0.1249<br>106.6<br>104.3 | 4.2894<br>[ 5.0000 ] | 85.8% | 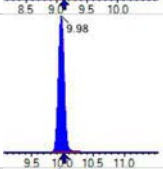 | 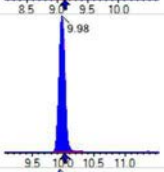 | |
| PFUnA | ( 563.0 / 519.0 ) 1504447<br>( 563.0 / 169.0 ) 214421 | ( 10.84 , 1.00 ) ( 0.00 , N/A , 0.3) | 1010.8<br>921.6 | 0.1425<br>100.6<br>100.3 | 4.7775<br>[ 5.0000 ] | 95.5% | 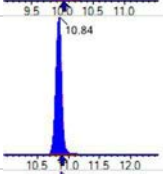 | 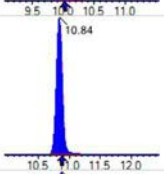 | |
| PFDoA | ( 613.0 / 569.0 ) 1613864<br>( 613.0 / 169.0 ) 252110 | ( 11.67 , 1.00 ) ( -0.01 , N/A , 0.1) | 1840.5<br>968.7 | 0.1562<br>98.8<br>105.7 | 4.5106<br>[ 5.0000 ] | 90.2% | 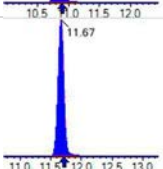 | 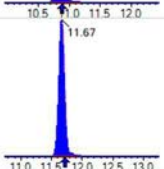 | |
| PFTrDA | ( 663.0 / 619.0 ) 1556368<br>( 663.0 / 169.0 ) 404634 | ( 12.31 , 1.05 ) ( N/A , -0.04 , 0.0) | 1518.3<br>1018.4 | 0.2600<br>101.0<br>100.4 | 4.4468<br>[ 5.0000 ] | 88.9% | 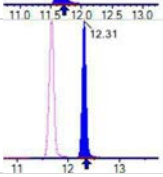 | 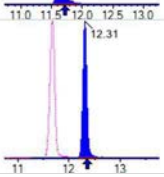 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1336619<br>( 713.0 / 169.0 ) 352276 | ( 12.81 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1673.3<br>1445.2 | 0.2636<br>97.6<br>99.2 | 4.7175<br>[ 5.0000 ] | 94.4% | 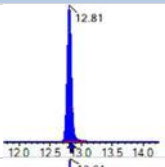 | 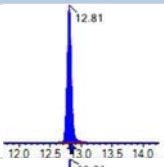 | |
| PFHxDA | ( 813.0 / 769.0 ) 1045243<br>( 813.0 / 169.0 ) 247123 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2235.2<br>1365.9 | 0.2364<br>96.6<br>92.6 | 4.6391<br>[ 5.0000 ] | 92.8% | 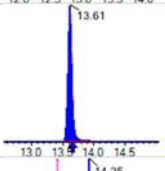 | 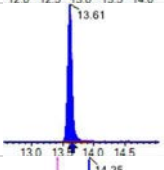 | |
| PFODA | ( 913.0 / 869.0 ) 638713<br>( 913.0 / 169.0 ) 212994 | ( 14.25 , 1.05 )<br>( N/A , -0.03 , 0.0) | 1665.4<br>773.2 | 0.3335<br>93.1<br>97.8 | 4.5313<br>[ 5.0000 ] | 90.6% | 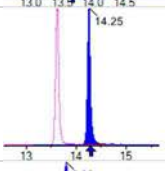 | 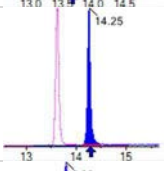 | |
| PFBS | ( 299.0 / 80.0 ) 1627685<br>( 299.0 / 99.0 ) 1224818 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3238.3<br>3086.7 | 0.7525<br>106.4<br>102.3 | 3.8554<br>[ 4.4237 ] | 87.2% | 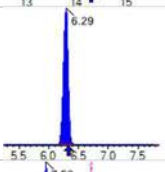 | 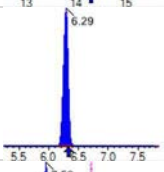 | |
| PFPeS | ( 349.0 / 80.0 ) 4267064<br>( 349.0 / 99.0 ) 1508835 | ( 7.52 , 0.88 )<br>( N/A , -0.04 , 0.0) | 2601.9<br>2729.5 | 0.3536<br>98.3<br>100.4 | 4.3633<br>[ 4.6919 ] | 93.0% | 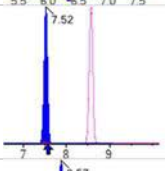 | 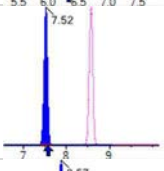 | |
| PFHxS | ( 399.0 / 80.0 ) 4682444<br>( 399.0 / 99.0 ) 1568239 | ( 8.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3191.0<br>5120.3 | 0.3349<br>105.2<br>100.2 | 4.1222<br>[ 4.5549 ] | 90.5% | 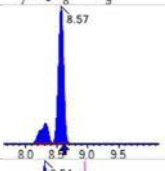 | 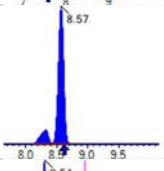 | |
| PFHpS | ( 449.0 / 80.0 ) 3963620<br>( 449.0 / 99.0 ) 1056950 | ( 9.54 , 0.91 )<br>( N/A , -0.04 , 0.2) | 1866.9<br>1788.5 | 0.2667<br>100.8<br>100.7 | 4.6124<br>[ 4.7570 ] | 97.0% | 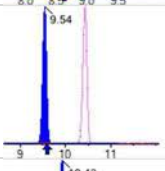 | 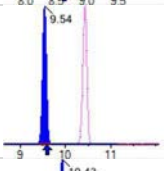 | |
| PFOS | ( 499.0 / 80.0 ) 3603689<br>( 499.0 / 99.0 ) 817942 | ( 10.43 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2425.1<br>5017.0 | 0.2270<br>97.1<br>94.5 | 4.3504<br>[ 4.6375 ] | 93.8% | 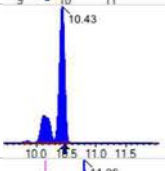 | 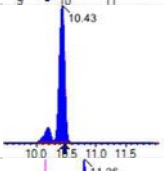 | |
| PFNS | ( 549.0 / 80.0 ) 3468340<br>( 549.0 / 99.0 ) 965249 | ( 11.26 , 1.08 )<br>( N/A , -0.05 , 0.0) | 2102.5<br>2163.0 | 0.2783<br>102.1<br>103.3 | 4.4719<br>[ 4.7994 ] | 93.2% | 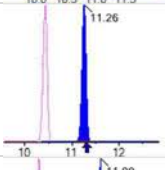 | 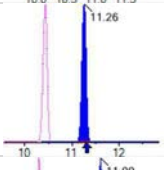 | |
| PFDS | ( 599.0 / 80.0 ) 4222164<br>( 599.0 / 99.0 ) 1106568 | ( 11.99 , 1.15 )<br>( N/A , -0.04 , 0.0) | 2905.0<br>2256.8 | 0.2621<br>96.4<br>98.0 | 4.4583<br>[ 4.8155 ] | 92.6% | 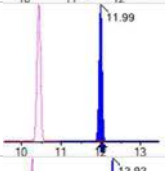 | 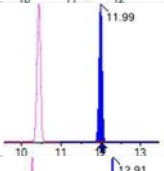 | |
| PFDoS | ( 699.0 / 80.0 ) 3767492<br>( 699.0 / 99.0 ) 863898 | ( 12.92 , 1.24 )<br>( N/A , -0.03 , 0.1) | 3602.5<br>2723.8 | 0.2293<br>98.2<br>100.1 | 4.5126<br>[ 4.8478 ] | 93.1% | 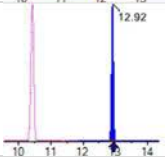 | 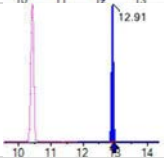 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6590145<br>( 327.0 / 81.0 ) 6177428 | ( 5.47 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5348.5<br>3700.4 | 0.9374<br>107.4<br>104.1 | 17.8690<br>[ 18.6906 ] | 95.6% | 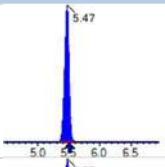 | 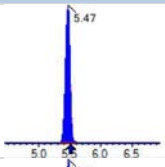 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5994527<br>( 427.0 / 81.0 ) 7759723 | ( 7.57 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4461.7<br>4269.3 | 1.2945<br>103.2<br>97.7 | 18.9906<br>[ 18.9808 ] | 100.1% | 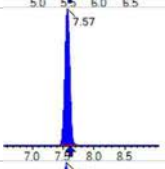 | 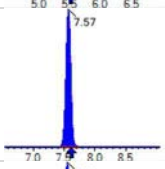 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5876343<br>( 527.0 / 81.0 ) 5982935 | ( 9.35 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1353.8<br>1577.4 | 1.0181<br>93.6<br>99.9 | 18.7255<br>[ 19.1658 ] | 97.7% | 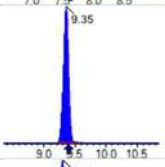 | 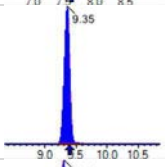 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4526371<br>( 627.0 / 81.0 ) 6382279 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1513.8<br>1069.6 | 1.4100<br>97.9<br>96.7 | 19.7053<br>[ 19.3236 ] | 102.0% | 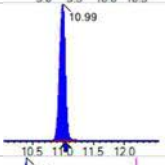 | 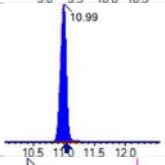 | |
| PFBSA | ( 297.9 / 78.0 ) 3334810<br>( 297.9 / 278.0 ) 4485 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , -0.3) | 1741.3<br>202.5 | 0.0013<br>98.4<br>86.8 | 4.7654<br>[ 5.0000 ] | 95.3% | 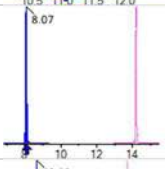 | 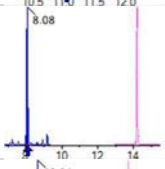 | |
| PFHxSA | ( 397.9 / 78.0 ) 3958312<br>( 397.9 / 378.0 ) 17623 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1103.5<br>335.6 | 0.0045<br>109.0<br>106.4 | 4.4831<br>[ 5.0000 ] | 89.7% | 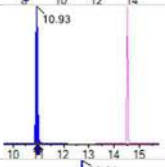 | 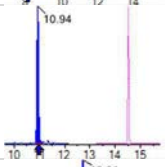 | |
| PFOSA | ( 498.0 / 78.0 ) 2879733<br>( 498.0 / 478.0 ) 42636 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2046.3<br>862.4 | 0.0148<br>105.5<br>99.5 | 4.4547<br>[ 5.0000 ] | 89.1% | 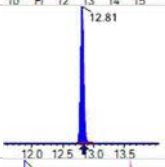 | 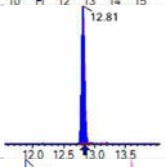 | |
| TFSI | ( 279.7 / 147.0 ) 7825439<br>( 279.7 / 211.0 ) 668795 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , -0.1) | 58.3<br>53.6 | 0.0855<br>101.7<br>99.9 | 4.5972<br>[ 4.8967 ] | 93.9% | 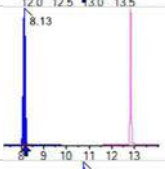 | 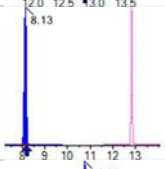 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2456061<br>( 512.0 / 169.0 ) 1821625 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.4) | 3631.2<br>1412.5 | 0.7417<br>99.1<br>97.8 | 18.2166<br>[ 20.0000 ] | 91.1% | 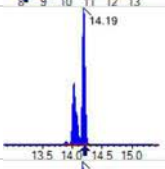 | 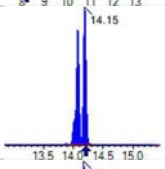 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2997658<br>( 526.0 / 169.0 ) 3780141 | ( 14.52 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4360.4<br>3570.2 | 1.2610<br>102.1<br>101.5 | 18.6306<br>[ 20.0000 ] | 93.2% | 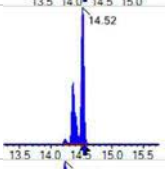 | 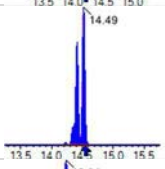 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 850093<br>( 570.0 / 483.0 ) 406893 | ( 10.24 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3275.4<br>1659.4 | 0.4786<br>109.2<br>102.4 | 4.3212<br>[ 5.0000 ] | 86.4% | 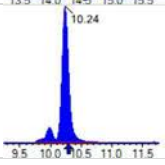 | 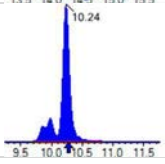 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 838599<br>( 584.0 / 526.0 ) 474799 | ( 10.77 , 1.00 ) ( 0.01 , N/A , 0.0) | 1574.6<br>700.1 | 0.5662<br>91.8<br>95.7 | 4.6763<br>[ 5.0000 ] | 93.5% | 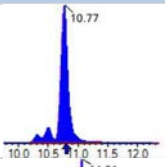 | 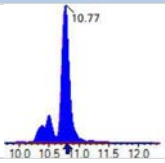 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1240906 | ( 14.01 , 1.00 ) ( 0.02 , N/A , 0.0) | 2612.3 | N/A<br>0.0<br>0.0 | 17.7211<br>[ 20.0000 ] | 88.6% | 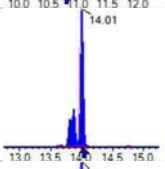 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1028639 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 3543.8 | N/A<br>0.0<br>0.0 | 18.4632<br>[ 20.0000 ] | 92.3% | 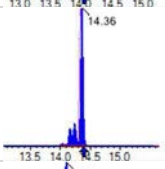 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 320064<br>( 285.0 / 185.0 ) 938906 | ( 6.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1645.8<br>1827.1 | 2.9335<br>106.1<br>111.2 | 4.6629<br>[ 5.0000 ] | 93.3% | 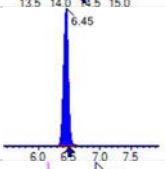 | 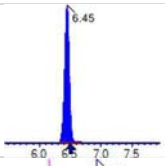 | |
| ADONA | ( 377.0 / 85.0 ) 3785743<br>( 377.0 / 251.0 ) 388915 | ( 7.52 , 1.17 ) ( N/A , -0.04 , 0.0) | 1953.2<br>1653.5 | 0.1027<br>100.8<br>98.2 | 4.7274<br>[ 4.7135 ] | 100.3% | 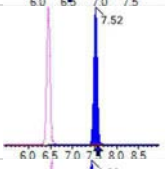 | 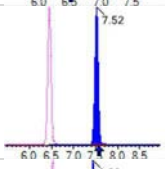 | |
| PFEESA | ( 315.0 / 135.0 ) 1379581<br>( 315.0 / 83.0 ) 835352 | ( 6.88 , 1.15 ) ( N/A , -0.05 , -0.1) | 2846.8<br>1383.0 | 0.6055<br>108.6<br>106.9 | 7.5704<br>[ 8.9246 ] | 84.8% | 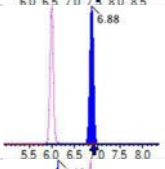 | 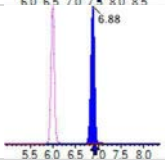 | |
| PFMPA | ( 229.0 / 85.0 ) 658152 | ( 4.10 , 0.86 ) ( N/A , -0.04 , 0.0) | 5900.9 | N/A<br>0.0<br>0.0 | 9.2969<br>[ 10.0000 ] | 93.0% | 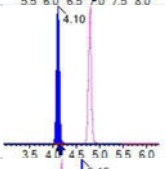 | | |
| PFMBA | ( 279.0 / 85.0 ) 1725265 | ( 5.15 , 1.08 ) ( N/A , -0.04 , 0.0) | 5457.6 | N/A<br>0.0<br>0.0 | 8.9667<br>[ 10.0000 ] | 89.7% | 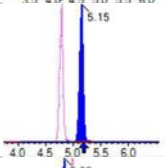 | | |
| NFDHA | ( 295.0 / 201.0 ) 870715<br>( 295.0 / 85.0 ) 937888 | ( 5.86 , 0.98 ) ( N/A , -0.04 , 0.0) | 3410.7<br>3099.7 | 1.0771<br>99.8<br>107.1 | 9.1909<br>[ 10.0000 ] | 91.9% | 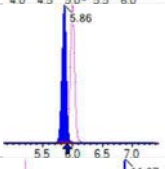 | 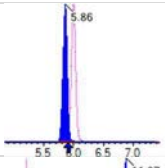 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3886723<br>( 533.0 / 353.0 ) 1262079 | ( 11.07 , 1.72 ) ( N/A , -0.05 , -0.1) | 3185.7<br>2377.6 | 0.3247<br>103.8<br>98.5 | 4.4936<br>[ 4.6663 ] | 96.3% | 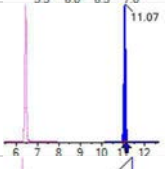 | 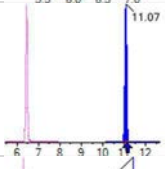 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2918297<br>( 633.0 / 453.0 ) 1027198 | ( 12.41 , 1.92 ) ( N/A , -0.04 , 0.1) | 3388.9<br>2348.3 | 0.3520<br>106.0<br>102.8 | 4.3873<br>[ 4.7160 ] | 93.0% | 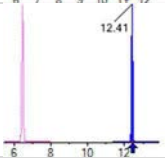 | 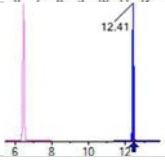 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1973970<br>( 461.0 / 381.2 ) 810159 | ( 9.46 , 0.91 )<br>( N/A , -0.04 , -0.1) | 3144.8<br>3066.2 | 0.4104<br>103.0<br>103.5 | 4.2241<br>[ 4.6193 ] | 91.4% | 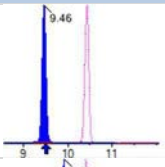 | 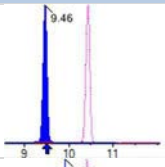 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 217843<br>( 241.0 / 117.0 ) 492517 | ( 4.36 , 0.91 )<br>( N/A , -0.04 , 0.0) | 2089.0<br>2396.0 | 2.2609<br>107.3<br>104.2 | 17.1654<br>[ 20.0000 ] | 85.8% | 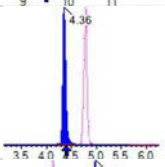 | 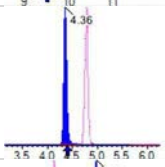 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1290079<br>( 341.0 / 217.0 ) 1923890 | ( 6.90 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1222.8<br>1122.5 | 1.4913<br>98.2<br>102.5 | 18.3319<br>[ 20.0000 ] | 91.7% | 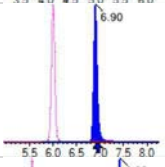 | 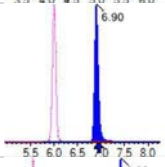 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2244279<br>( 441.0 / 337.0 ) 1995764 | ( 9.28 , 1.55 )<br>( N/A , -0.03 , 0.0) | 4730.2<br>12438.0 | 0.8893<br>97.0<br>101.7 | 19.4335<br>[ 20.0000 ] | 97.2% | 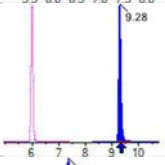 | 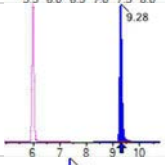 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1575139<br>( 357.2 / 243.0 ) 159747 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1389.7<br>885.7 | 0.1014<br>92.0<br>97.4 | 5.2833<br>[ 5.0000 ] | 105.7% | 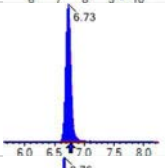 | 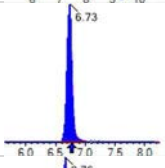 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1101155<br>( 457.2 / 343.0 ) 46469 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 784.0<br>415.8 | 0.0422<br>101.8<br>93.1 | 5.2508<br>[ 5.0000 ] | 105.0% | 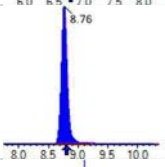 | 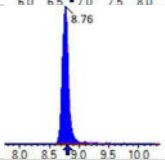 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 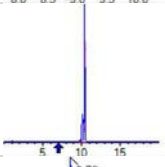 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238528 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1223.5 | N/A | 1.0004<br>[ 1.0000 ] | 100.0%<br>{ 100.8% } | 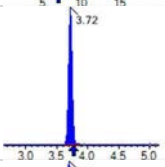 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117813 | ( 6.00 , N/A )<br>( N/A , -0.04 , N/A ) | 19470.1 | N/A | 0.9287<br>[ 1.0000 ] | 92.9%<br>{ 93.1% } | 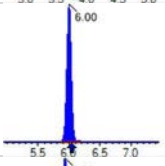 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353797 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 2717.8 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 93.3% } | 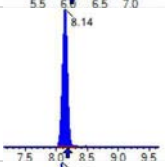 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 246426 | ( 9.08 , N/A )<br>( N/A , -0.04 , N/A ) | 1158.6 | N/A | 0.8665<br>[ 1.0000 ] | 86.6%<br>{ 87.6% } | 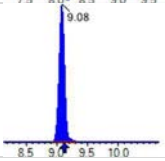 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 239242 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 4215.1 | N/A | 0.8192 [ 1.0000 ] | 81.9% { 82.7% } | 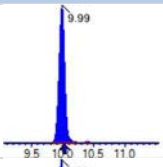 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 854562 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3664.1 | N/A | 0.9005 [ 1.0000 ] | 90.0% { 91.6% } | 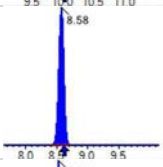 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 650661 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1902.2 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 91.4% } | 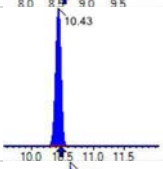 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2162335 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 39646.7 | N/A | 7.9354 [ 8.0000 ] | 99.2% { 96.6% } | 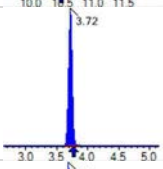 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 883302 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 4911.8 | N/A | 4.0183 [ 4.0000 ] | 100.5% { 90.5% } | 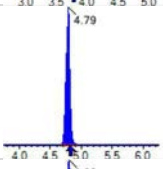 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 528251 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6662.7 | N/A | 1.9652 [ 2.0000 ] | 98.3% { 89.5% } | 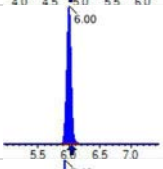 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588344 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5166.4 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 89.6% } | 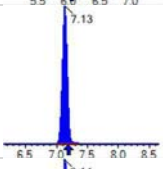 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 750222 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 2782.3 | N/A | 1.9790 [ 2.0000 ] | 99.0% { 87.0% } | 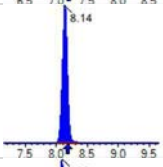 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235567 | ( 9.08 , N/A ) ( N/A , -0.04 , N/A ) | 4040.1 | N/A | 0.9749 [ 1.0000 ] | 97.5% { 87.3% } | 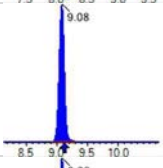 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 297330 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1218.8 | N/A | 1.1090 [ 1.0000 ] | 110.9% { 92.4% } | 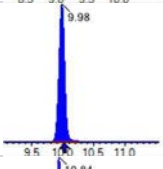 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 340461 | ( 10.84 , N/A ) ( N/A , -0.04 , N/A ) | 887.2 | N/A | 1.0794 [ 1.0000 ] | 107.9% { 91.5% } | 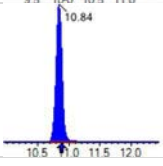 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 355643 | ( 11.67 , N/A ) ( N/A , -0.04 , N/A ) | 1210.1 | N/A | 1.1071 [ 1.0000 ] | 110.7% { 95.4% } | 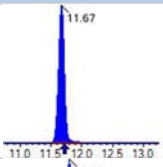  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 302523 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1505.7 | N/A | 1.1059 [ 1.0000 ] | 110.6% { 92.7% } | 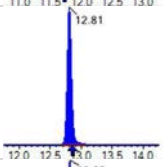  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472442 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 2123.3 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 93.5% } | 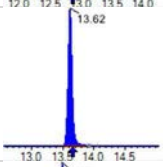  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1626264 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1235.1 | N/A | 2.1063 [ 2.0000 ] | 105.3% { 96.9% } | 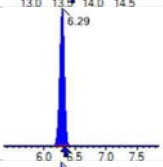  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1277887 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 3706.7 | N/A | 2.0735 [ 2.0000 ] | 103.7% { 96.9% } | 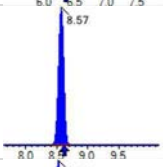  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1434404 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1519.4 | N/A | 2.0446 [ 2.0000 ] | 102.2% { 92.6% } | 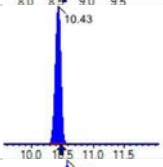  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 562105 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 93.4 | N/A | 4.2196 [ 4.0000 ] | 105.5% { 95.4% } | 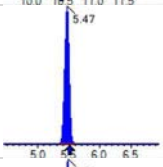  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1524781 | ( 7.58 , N/A ) ( N/A , -0.04 , N/A ) | 3290.4 | N/A | 3.8247 [ 4.0000 ] | 95.6% { 91.5% } | 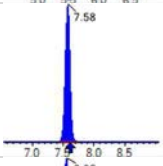  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1321750 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1361.5 | N/A | 4.2273 [ 4.0000 ] | 105.7% { 96.6% } | 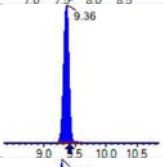  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2384194 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1345.3 | N/A | 7.2962 [ 8.0000 ] | 91.2% { 93.4% } | 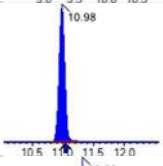  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1292885 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1723.3 | N/A | 2.0796 [ 2.0000 ] | 104.0% { 94.1% } | 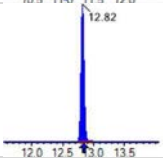  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 271577 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1986.4 | N/A | 2.0596 [ 2.0000 ] | 103.0% { 94.3% } | 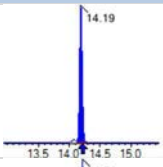  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 287336 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2556.1 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 93.7% } | 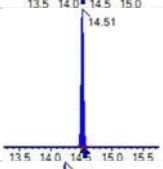  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825052 | ( 10.23 , N/A ) ( N/A , -0.04 , N/A ) | 2783.2 | N/A | 4.5706 [ 4.0000 ] | 114.3% { 97.6% } | 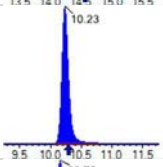  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 733311 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1886.2 | N/A | 4.4572 [ 4.0000 ] | 111.4% { 95.2% } | 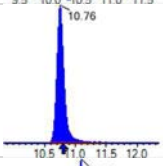  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1276745 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 2423.0 | N/A | 21.5459 [ 20.0000 ] | 107.7% { 92.9% } | 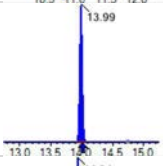  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1254125 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 3850.5 | N/A | 20.8519 [ 20.0000 ] | 104.3% { 97.2% } | 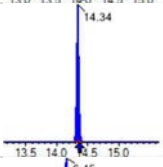  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 931197 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2356.5 | N/A | 7.6047 [ 8.0000 ] | 95.1% { 91.1% } | 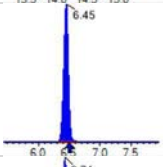  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 560849 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1169.2 | N/A | 2.1622 [ 2.0000 ] | 108.1% { 90.9% } | 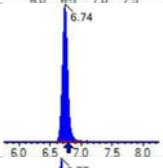  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514238 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 662.4 | N/A | 2.1778 [ 2.0000 ] | 108.9% { 92.9% } | 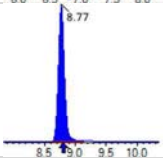  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | PFBA | 20.0A | 18.2A | 91.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.32A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.62A | 92.4A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.59A | 91.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.58A | 91.7A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.84A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.54A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.44A | 88.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.11A | 82.2A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.97A | 89.9A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.46A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.04A | 88.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.50A | 94.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.22A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.43A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.71A | 97.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.8A | 100A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.8A | 92.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.5A | 106A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.59A | 91.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.6A | 93.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 95.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.56A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | NMeFOSEA | 20.0A | 17.6A | 87.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.79A | 95.8A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.80A | 102A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.82A | 87.8A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.1A | 101A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.36A | 93.6A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.09A | 90.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 95.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.44A | 94.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.7A | 93.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.7A | 98.6A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2367399<br>( 163.0 / 69.0 ) 64584 | ( 2.76 , 0.74 )<br>( N/A , -0.04 , -0.1) | 15329.5<br>3014.2 | 0.0273<br>100.4<br>103.5 | 9.2456<br>[ 10.0000 ] | 92.5% | 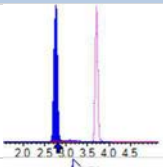 | 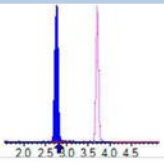 | |
| PFBA | ( 213.0 / 169.0 ) 4938197 | ( 3.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1010.4 | N/A<br>0.0<br>0.0 | 18.2431<br>[ 20.0000 ] | 91.2% | 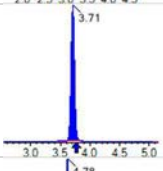 | | |
| PFPeA | ( 263.0 / 219.0 ) 1952041<br>( 263.0 / 69.0 ) 22313 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , -0.2) | 6296.0<br>311.0 | 0.0114<br>95.7<br>103.0 | 9.3156<br>[ 10.0000 ] | 93.2% | 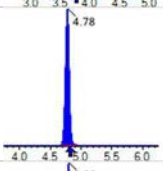 | 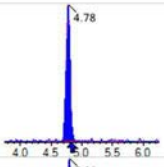 | |
| PFHxA | ( 313.0 / 269.0 ) 1143503<br>( 313.0 / 119.0 ) 136657 | ( 6.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2490.5<br>1220.4 | 0.1195<br>102.9<br>102.1 | 4.4029<br>[ 5.0000 ] | 88.1% | 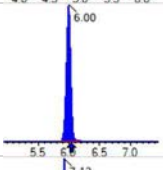 | 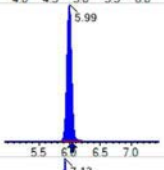 | |
| PFHpA | ( 363.0 / 319.0 ) 1327067<br>( 363.0 / 169.0 ) 392839 | ( 7.13 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1685.8<br>1722.7 | 0.2960<br>97.7<br>100.3 | 4.6211<br>[ 5.0000 ] | 92.4% | 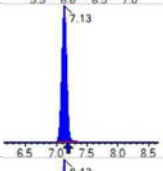 | 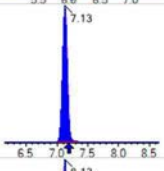 | |
| PFOA | ( 413.0 / 369.0 ) 1774774<br>( 413.0 / 169.0 ) 664651 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 671.5<br>1155.4 | 0.3745<br>102.4<br>109.1 | 4.5926<br>[ 5.0000 ] | 91.9% | 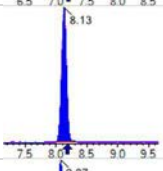 | 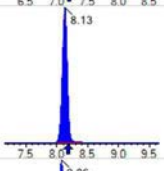 | |
| PFNA | ( 463.0 / 419.0 ) 1093482<br>( 463.0 / 169.0 ) 288536 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1019.0<br>1085.4 | 0.2639<br>103.4<br>109.7 | 4.5828<br>[ 5.0000 ] | 91.7% | 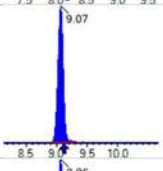 | 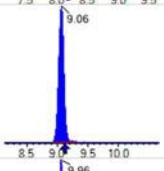 | |
| PFDA | ( 513.0 / 469.0 ) 1344408<br>( 513.0 / 169.0 ) 158845 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , 0.3) | 3615.1<br>3512.0 | 0.1182<br>100.8<br>98.7 | 4.7227<br>[ 5.0000 ] | 94.5% | 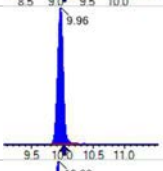 | 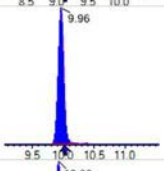 | |
| PFUnA | ( 563.0 / 519.0 ) 1452979<br>( 563.0 / 169.0 ) 216965 | ( 10.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1064.1<br>802.3 | 0.1493<br>105.4<br>105.1 | 4.8313<br>[ 5.0000 ] | 96.6% | 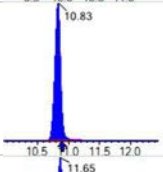 | 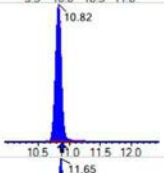 | |
| PFDoA | ( 613.0 / 569.0 ) 1678445<br>( 613.0 / 169.0 ) 250811 | ( 11.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1502.8<br>1014.6 | 0.1494<br>94.5<br>101.1 | 4.8405<br>[ 5.0000 ] | 96.8% | 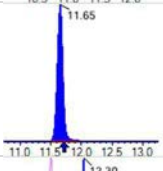 | 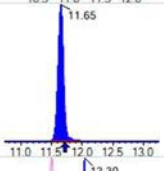 | |
| PFTrDA | ( 663.0 / 619.0 ) 1588969<br>( 663.0 / 169.0 ) 395314 | ( 12.30 , 1.06 )<br>( N/A , -0.05 , 0.0) | 1670.0<br>1085.0 | 0.2488<br>96.7<br>96.1 | 4.6846<br>[ 5.0000 ] | 93.7% | 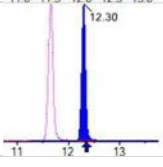 | 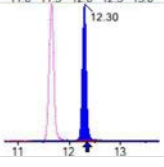 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1292021<br>( 713.0 / 169.0 ) 331808 | ( 12.80 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1599.4<br>1158.0 | 0.2568<br>95.1<br>96.6 | 4.5354<br>[ 5.0000 ] | 90.7% | 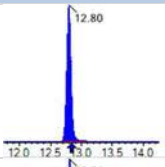 | 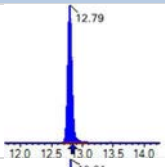 | |
| PFHxDA | ( 813.0 / 769.0 ) 959448<br>( 813.0 / 169.0 ) 244513 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2115.3<br>1085.7 | 0.2548<br>104.2<br>99.8 | 4.4410<br>[ 5.0000 ] | 88.8% | 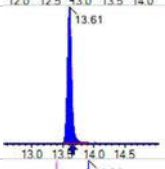 | 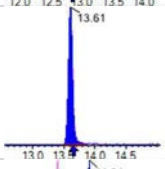 | |
| PFODA | ( 913.0 / 869.0 ) 555525<br>( 913.0 / 169.0 ) 176212 | ( 14.24 , 1.05 )<br>( N/A , -0.04 , 0.1) | 1533.3<br>666.2 | 0.3172<br>88.5<br>93.1 | 4.1103<br>[ 5.0000 ] | 82.2% | 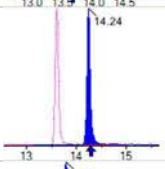 | 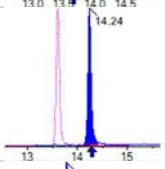 | |
| PFBS | ( 299.0 / 80.0 ) 1656522<br>( 299.0 / 99.0 ) 1193997 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3188.4<br>2361.7 | 0.7208<br>101.9<br>98.0 | 3.9717<br>[ 4.4237 ] | 89.8% | 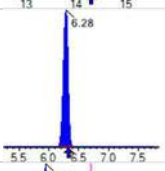 | 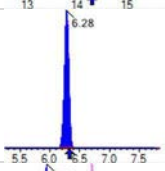 | |
| PFPeS | ( 349.0 / 80.0 ) 4364826<br>( 349.0 / 99.0 ) 1539819 | ( 7.51 , 0.88 )<br>( N/A , -0.05 , 0.0) | 2505.8<br>2399.7 | 0.3528<br>98.1<br>100.2 | 4.4621<br>[ 4.6919 ] | 95.1% | 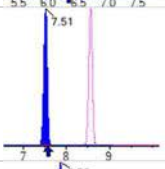 | 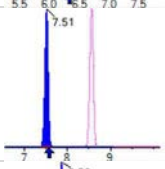 | |
| PFHxS | ( 399.0 / 80.0 ) 4588863<br>( 399.0 / 99.0 ) 1488980 | ( 8.56 , 1.00 )<br>( -0.01 , N/A , -0.1) | 3633.0<br>3900.2 | 0.3245<br>101.9<br>97.0 | 4.0388<br>[ 4.5549 ] | 88.7% | 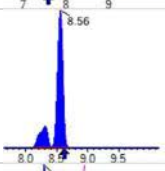 | 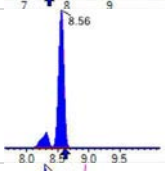 | |
| PFHpS | ( 449.0 / 80.0 ) 3918478<br>( 449.0 / 99.0 ) 1063335 | ( 9.53 , 0.91 )<br>( N/A , -0.06 , 0.2) | 2329.7<br>2231.5 | 0.2714<br>102.5<br>102.5 | 4.4966<br>[ 4.7570 ] | 94.5% | 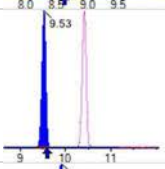 | 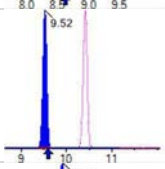 | |
| PFOS | ( 499.0 / 80.0 ) 3542371<br>( 499.0 / 99.0 ) 835566 | ( 10.41 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2549.2<br>5061.5 | 0.2359<br>100.9<br>98.2 | 4.2171<br>[ 4.6375 ] | 90.9% | 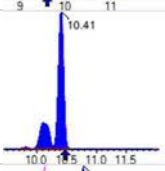 | 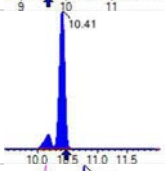 | |
| PFNS | ( 549.0 / 80.0 ) 3512432<br>( 549.0 / 99.0 ) 956650 | ( 11.24 , 1.08 )<br>( N/A , -0.06 , 0.1) | 2489.8<br>2059.6 | 0.2724<br>99.9<br>101.1 | 4.4660<br>[ 4.7994 ] | 93.1% | 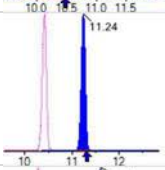 | 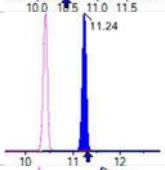 | |
| PFDS | ( 599.0 / 80.0 ) 4256592<br>( 599.0 / 99.0 ) 1131746 | ( 11.98 , 1.15 )<br>( N/A , -0.05 , 0.1) | 2251.2<br>1959.5 | 0.2659<br>97.8<br>99.5 | 4.4324<br>[ 4.8155 ] | 92.0% | 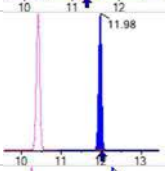 | 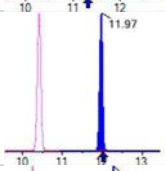 | |
| PFDoS | ( 699.0 / 80.0 ) 3983483<br>( 699.0 / 99.0 ) 924754 | ( 12.91 , 1.24 )<br>( N/A , -0.04 , 0.0) | 4923.6<br>3458.4 | 0.2321<br>99.4<br>101.4 | 4.7052<br>[ 4.8478 ] | 97.1% | 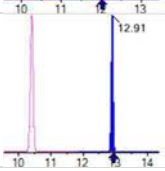 | 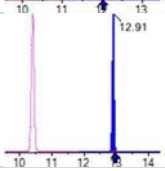 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6925673<br>( 327.0 / 81.0 ) 6151043 | ( 5.46 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5410.5<br>3125.5 | 0.8882<br>101.8<br>98.7 | 18.8218<br>[ 18.6906 ] | 100.7% | 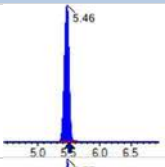 | 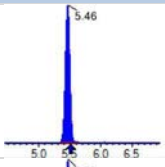 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6149806<br>( 427.0 / 81.0 ) 7739720 | ( 7.57 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4376.2<br>4638.3 | 1.2585<br>100.4<br>95.0 | 18.7627<br>[ 18.9808 ] | 98.9% | 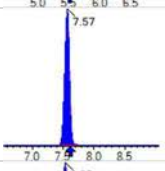 | 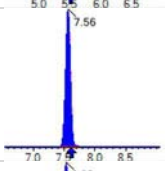 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5762780<br>( 527.0 / 81.0 ) 6401646 | ( 9.33 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1453.4<br>1746.1 | 1.1109<br>102.1<br>109.0 | 17.7583<br>[ 19.1658 ] | 92.7% | 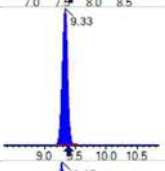 | 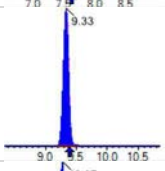 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4974834<br>( 627.0 / 81.0 ) 6986472 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1627.2<br>1202.9 | 1.4044<br>97.6<br>96.3 | 20.4850<br>[ 19.3236 ] | 106.0% | 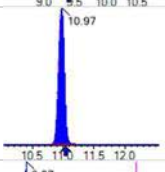 | 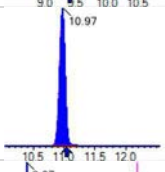 | |
| PFBSA | ( 297.9 / 78.0 ) 3152738<br>( 297.9 / 278.0 ) 4804 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , 0.4) | 1679.8<br>110.1 | 0.0015<br>111.5<br>98.3 | 4.6672<br>[ 5.0000 ] | 93.3% | 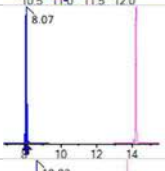 | 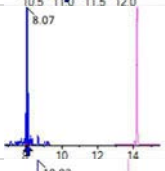 | |
| PFHxSA | ( 397.9 / 78.0 ) 4125480<br>( 397.9 / 378.0 ) 18513 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1667.8<br>440.1 | 0.0045<br>109.8<br>107.2 | 4.8956<br>[ 5.0000 ] | 97.9% | 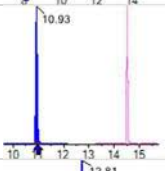 | 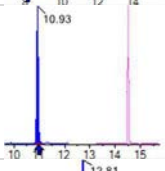 | |
| PFOSA | ( 498.0 / 78.0 ) 2839233<br>( 498.0 / 478.0 ) 42245 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2289.2<br>995.4 | 0.0149<br>106.0<br>99.9 | 4.5918<br>[ 5.0000 ] | 91.8% | 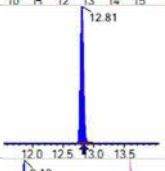 | 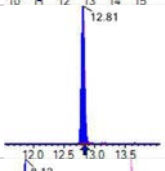 | |
| TFSI | ( 279.7 / 147.0 ) 7714508<br>( 279.7 / 211.0 ) 650024 | ( 8.13 , 0.63 )<br>( N/A , -0.06 , 0.1) | 61.5<br>54.1 | 0.0843<br>100.3<br>98.5 | 4.7382<br>[ 4.8967 ] | 96.8% | 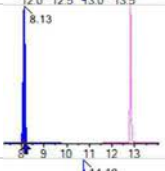 | 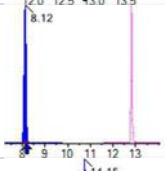 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2422123<br>( 512.0 / 169.0 ) 1722291 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.2) | 3506.2<br>1475.4 | 0.7111<br>95.0<br>93.8 | 18.6108<br>[ 20.0000 ] | 93.1% | 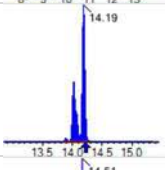 | 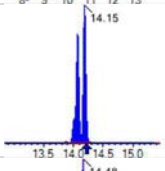 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2919094<br>( 526.0 / 169.0 ) 3586942 | ( 14.51 , 1.00 )<br>( 0.01 , N/A , 2.1) | 4109.1<br>3423.3 | 1.2288<br>99.5<br>99.0 | 19.0089<br>[ 20.0000 ] | 95.0% | 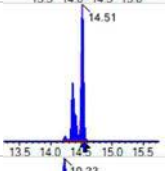 | 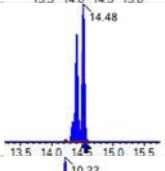 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 883998<br>( 570.0 / 483.0 ) 425739 | ( 10.22 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2187.1<br>2061.2 | 0.4816<br>109.8<br>103.0 | 4.5556<br>[ 5.0000 ] | 91.1% | 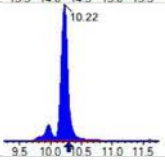 | 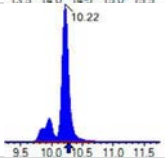 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 846492<br>( 584.0 / 526.0 ) 505649 | ( 10.75 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1320.3<br>728.3 | 0.5973<br>96.9<br>101.0 | 4.6690<br>[ 5.0000 ] | 93.4% | 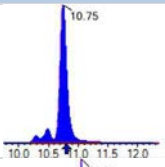 | 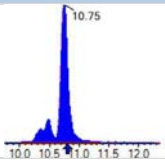 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1174210 | ( 14.00 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2175.0 | N/A<br>0.0<br>0.0 | 17.5573<br>[ 20.0000 ] | 87.8% | 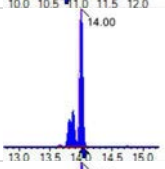 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 952667 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3367.8 | N/A<br>0.0<br>0.0 | 19.1064<br>[ 20.0000 ] | 95.5% | 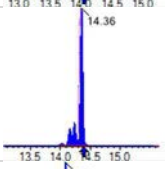 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 335333<br>( 285.0 / 185.0 ) 921530 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1679.9<br>2119.9 | 2.7481<br>99.4<br>104.2 | 4.7893<br>[ 5.0000 ] | 95.8% | 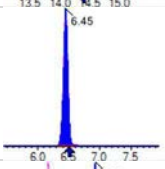 | 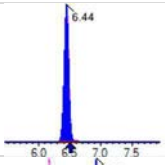 | |
| ADONA | ( 377.0 / 85.0 ) 3917027<br>( 377.0 / 251.0 ) 395090 | ( 7.52 , 1.17 )<br>( N/A , -0.05 , 0.1) | 1912.2<br>1698.7 | 0.1009<br>99.0<br>96.5 | 4.7951<br>[ 4.7135 ] | 101.7% | 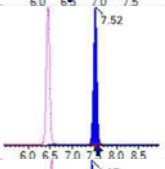 | 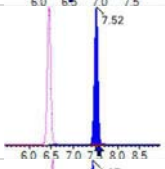 | |
| PFEESA | ( 315.0 / 135.0 ) 1457699<br>( 315.0 / 83.0 ) 880051 | ( 6.87 , 1.15 )<br>( N/A , -0.05 , 0.1) | 3024.4<br>1480.6 | 0.6037<br>108.3<br>106.6 | 7.8158<br>[ 8.9246 ] | 87.6% | 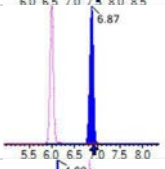 | 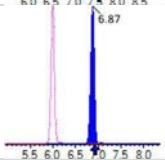 | |
| PFMPA | ( 229.0 / 85.0 ) 670808 | ( 4.09 , 0.86 )<br>( N/A , -0.05 , 0.0) | 7073.3 | N/A<br>0.0<br>0.0 | 10.0880<br>[ 10.0000 ] | 100.9% | 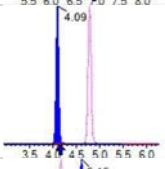 | | |
| PFMBA | ( 279.0 / 85.0 ) 1691235 | ( 5.15 , 1.08 )<br>( N/A , -0.04 , 0.0) | 5263.2 | N/A<br>0.0<br>0.0 | 9.3578<br>[ 10.0000 ] | 93.6% | 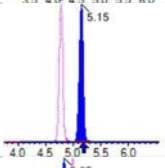 | | |
| NFDHA | ( 295.0 / 201.0 ) 881152<br>( 295.0 / 85.0 ) 924860 | ( 5.85 , 0.98 )<br>( N/A , -0.05 , 0.1) | 3525.4<br>3071.2 | 1.0496<br>97.3<br>104.4 | 9.0879<br>[ 10.0000 ] | 90.9% | 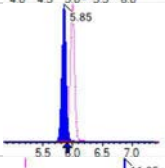 | 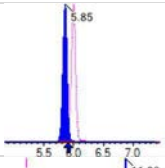 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3959168<br>( 533.0 / 353.0 ) 1253384 | ( 11.05 , 1.71 )<br>( N/A , -0.06 , -0.1) | 2476.5<br>1972.7 | 0.3166<br>101.2<br>96.1 | 4.4873<br>[ 4.6663 ] | 96.2% | 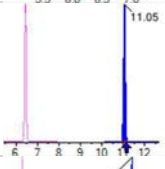 | 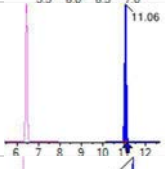 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3014684<br>( 633.0 / 453.0 ) 1022326 | ( 12.40 , 1.92 )<br>( N/A , -0.05 , 0.0) | 3608.7<br>2766.0 | 0.3391<br>102.1<br>99.0 | 4.4431<br>[ 4.7160 ] | 94.2% | 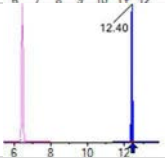 | 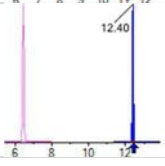 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2020350<br>( 461.0 / 381.2 ) 812351 | ( 9.44 , 0.91 )<br>( N/A , -0.06 , 0.1) | 3414.9<br>2997.1 | 0.4021<br>100.9<br>101.4 | 4.2634<br>[ 4.6193 ] | 92.3% | 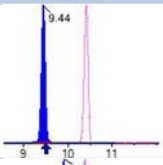 | 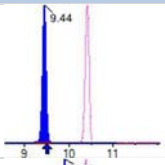 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 243703<br>( 241.0 / 117.0 ) 527396 | ( 4.35 , 0.91 )<br>( N/A , -0.05 , 0.0) | 2235.1<br>3091.4 | 2.1641<br>102.7<br>99.8 | 20.4440<br>[ 20.0000 ] | 102.2% | 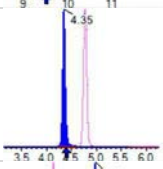 | 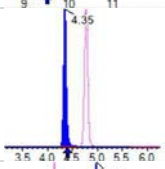 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1349798<br>( 341.0 / 217.0 ) 2078273 | ( 6.89 , 1.15 )<br>( N/A , -0.04 , -0.1) | 1371.5<br>1269.5 | 1.5397<br>101.3<br>105.8 | 18.7409<br>[ 20.0000 ] | 93.7% | 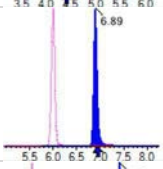 | 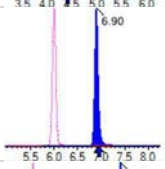 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2330546<br>( 441.0 / 337.0 ) 2001106 | ( 9.27 , 1.55 )<br>( N/A , -0.05 , 0.0) | 5147.2<br>7268.1 | 0.8586<br>93.6<br>98.2 | 19.7180<br>[ 20.0000 ] | 98.6% | 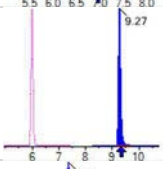 | 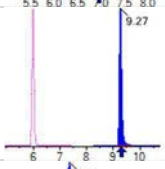 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1617558<br>( 357.2 / 243.0 ) 167412 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1281.5<br>830.5 | 0.1035<br>93.9<br>99.4 | 4.9832<br>[ 5.0000 ] | 99.7% | 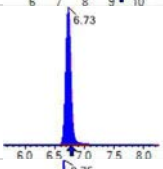 | 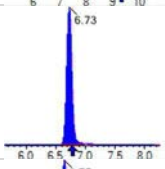 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1115931<br>( 457.2 / 343.0 ) 49442 | ( 8.75 , 1.00 )<br>( -0.01 , N/A , 0.2) | 803.9<br>345.3 | 0.0443<br>106.8<br>97.7 | 5.1052<br>[ 5.0000 ] | 102.1% | 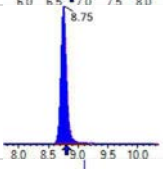 | 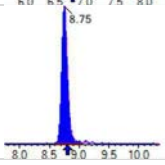 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 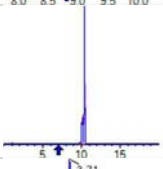 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235544 | ( 3.71 , N/A )<br>( N/A , -0.05 , N/A ) | 1044.9 | N/A | 0.9879<br>[ 1.0000 ] | 98.8%<br>{ 99.6% } | 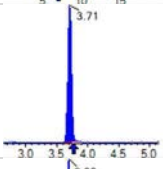 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116031 | ( 6.00 , N/A )<br>( N/A , -0.05 , N/A ) | 17659879.2 | N/A | 0.9147<br>[ 1.0000 ] | 91.5%<br>{ 91.6% } | 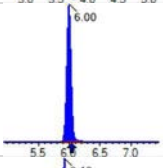 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 357603 | ( 8.13 , N/A )<br>( N/A , -0.05 , N/A ) | 6031.4 | N/A | 0.9046<br>[ 1.0000 ] | 90.5%<br>{ 94.3% } | 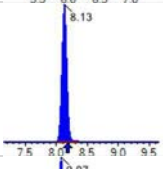 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 244998 | ( 9.07 , N/A )<br>( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8614<br>[ 1.0000 ] | 86.1%<br>{ 87.1% } | 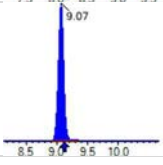 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246940 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6188.6 | N/A | 0.8456 [ 1.0000 ] | 84.6% { 85.4% } | 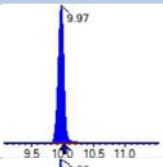 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 851608 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 4143.3 | N/A | 0.8973 [ 1.0000 ] | 89.7% { 91.2% } | 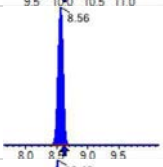 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 651713 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 1691.7 | N/A | 0.8557 [ 1.0000 ] | 85.6% { 91.5% } | 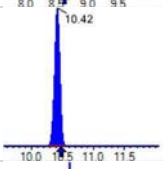 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2172396 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 33235.4 | N/A | 8.0733 [ 8.0000 ] | 100.9% { 97.0% } | 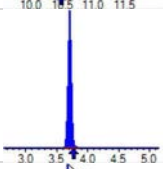 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 829688 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 4857.0 | N/A | 3.8324 [ 4.0000 ] | 95.8% { 85.0% } | 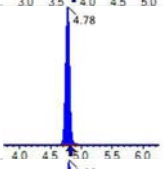 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 540642 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6844.7 | N/A | 2.0422 [ 2.0000 ] | 102.1% { 91.6% } | 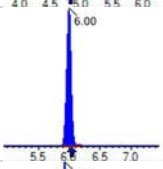 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 585294 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 4036.3 | N/A | 1.9875 [ 2.0000 ] | 99.4% { 89.2% } | 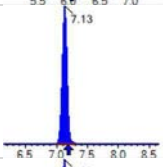 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 786424 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 2817.1 | N/A | 2.0525 [ 2.0000 ] | 102.6% { 91.2% } | 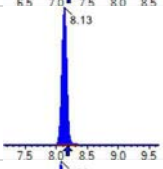 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 237405 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 2978.9 | N/A | 0.9883 [ 1.0000 ] | 98.8% { 88.0% } | 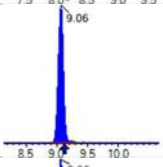 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 278603 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 929.4 | N/A | 1.0067 [ 1.0000 ] | 100.7% { 86.6% } | 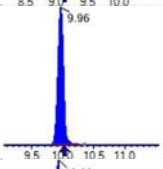 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 325150 | ( 10.83 , N/A ) ( N/A , -0.06 , N/A ) | 729.4 | N/A | 0.9987 [ 1.0000 ] | 99.9% { 87.4% } | 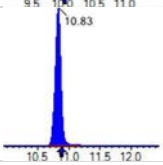 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 344666 | ( 11.66 , N/A ) ( N/A , -0.06 , N/A ) | 1474.6 | N/A | 1.0395 [ 1.0000 ] | 104.0% { 92.4% } | 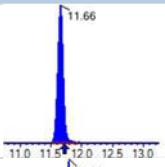 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 304176 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1304.7 | N/A | 1.0773 [ 1.0000 ] | 107.7% { 93.2% } | 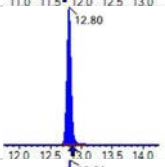 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 453000 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2095.0 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 89.7% } | 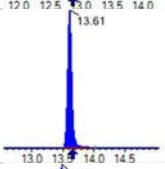 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1606611 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1072.8 | N/A | 2.0881 [ 2.0000 ] | 104.4% { 95.7% } | 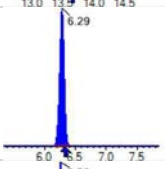 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1278226 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3790.9 | N/A | 2.0813 [ 2.0000 ] | 104.1% { 96.9% } | 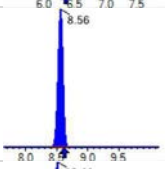 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1454557 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 1435.6 | N/A | 2.0700 [ 2.0000 ] | 103.5% { 93.9% } | 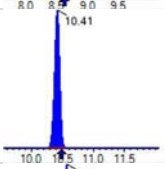 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 560822 | ( 5.46 , N/A ) ( N/A , -0.05 , N/A ) | 91.4 | N/A | 4.2246 [ 4.0000 ] | 105.6% { 95.2% } | 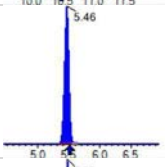 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1583281 | ( 7.57 , N/A ) ( N/A , -0.04 , N/A ) | 3703.7 | N/A | 3.9852 [ 4.0000 ] | 99.6% { 95.0% } | 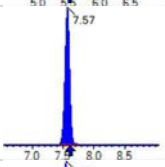 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1366805 | ( 9.34 , N/A ) ( N/A , -0.05 , N/A ) | 1239.8 | N/A | 4.3866 [ 4.0000 ] | 109.7% { 99.9% } | 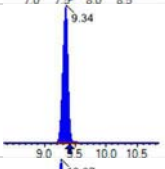 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2520675 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1178.2 | N/A | 7.7406 [ 8.0000 ] | 96.8% { 98.8% } | 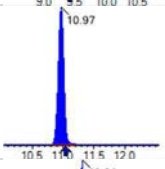 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1236625 | ( 12.81 , N/A ) ( N/A , -0.03 , N/A ) | 2642.7 | N/A | 1.9859 [ 2.0000 ] | 99.3% { 90.0% } | 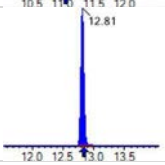 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 262151 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 1726.6 | N/A | 1.9849 [ 2.0000 ] | 99.2% { 91.0% } | 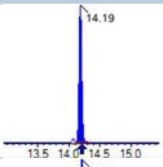 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 274237 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2488.6 | N/A | 1.9362 [ 2.0000 ] | 96.8% { 89.4% } | 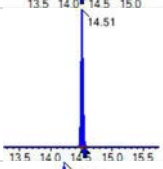 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 813803 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 1927.7 | N/A | 4.5010 [ 4.0000 ] | 112.5% { 96.2% } | 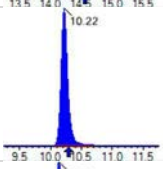 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 741370 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1704.4 | N/A | 4.4989 [ 4.0000 ] | 112.5% { 96.3% } | 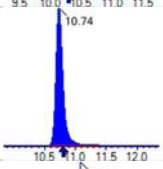 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1219399 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2240.0 | N/A | 20.5449 [ 20.0000 ] | 102.7% { 88.7% } | 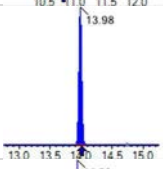 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1122403 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 3817.3 | N/A | 18.6317 [ 20.0000 ] | 93.2% { 87.0% } | 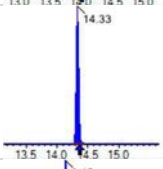 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 949887 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2293.1 | N/A | 7.8766 [ 8.0000 ] | 98.5% { 92.9% } | 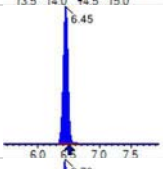 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 610638 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 978.4 | N/A | 2.2808 [ 2.0000 ] | 114.0% { 99.0% } | 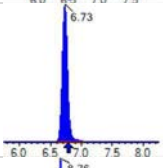 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 535993 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 806.6 | N/A | 2.1991 [ 2.0000 ] | 110.0% { 96.9% } | 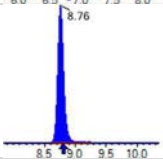 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0180 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .01650 | ng/mL0 | .10 | U |
| | PFTrDA0 | .01630 | ng/mL0 | .10 | U |
| | PFTeDA0 | .02330 | ng/mL0 | .10 | U |
| | PFHxDA0 | .03360 | ng/mL0 | .10 | U |
| | PFODA0 | .03890 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .08510 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02580 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .04090 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .08930 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.990 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.030 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.010 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.050 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA | 0.9990 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9920 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.940 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.020 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.730 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.450 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.110 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.880 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.050 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.360 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0094L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00991L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | D7-NMEFOSE0 | 21.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.740 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 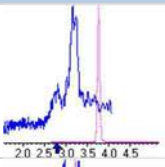 | 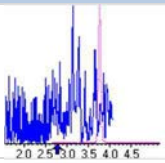 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 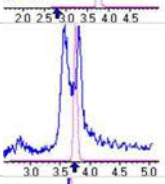 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 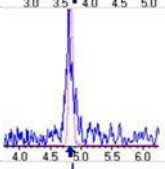 | 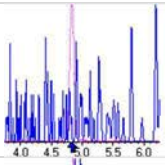 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 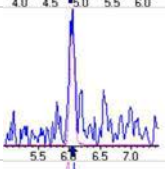 | 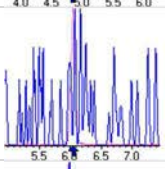 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 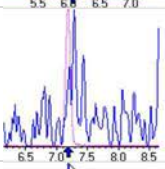 | 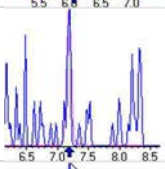 | |
| PFOA | ( 413.0 / 369.0 )<br>16821<br>( 413.0 / 169.0 )<br>7137 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.0) | 26.9<br>42.2 | 0.4243<br>116.1<br>116.1 | 0.0180 | N/A | 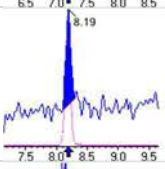 | 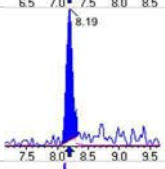 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 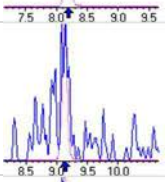 | 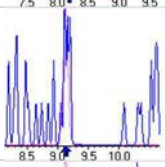 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 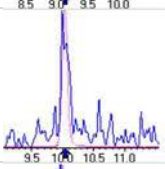 | 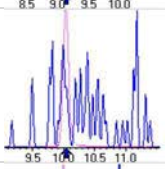 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 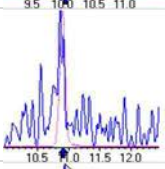 | 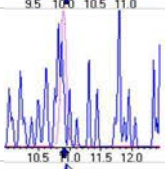 | |
| PFDoA | ( 613.0 / 569.0 )<br>6139<br>( 613.0 / 169.0 )<br>1421 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , -0.2) | 31.7<br>19.2 | 0.2314<br>146.4<br>146.4 | 0.0165 | N/A | 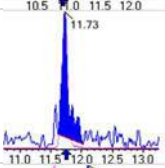 | 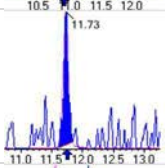 | |
| PFTrDA | ( 663.0 / 619.0 )<br>5903<br>( 663.0 / 169.0 )<br>N/A | ( 12.38 , 1.06 )<br>( N/A , 0.01 , #Value!) | 35.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0163 | N/A | 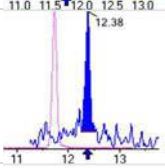 | 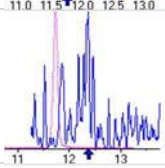 | IR1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6942<br>( 713.0 / 169.0 ) N/A | ( 12.85 , 1.00 )<br>( -0.01 , N/A , #Value!) | 33.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0233 | N/A | 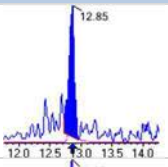 | 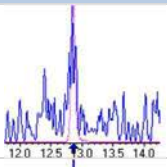 | IR1, |
| PFHxDA | ( 813.0 / 769.0 ) 8386<br>( 813.0 / 169.0 ) N/A | ( 13.65 , 1.00 )<br>( -0.01 , N/A , #Value!) | 40.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0336 | N/A | 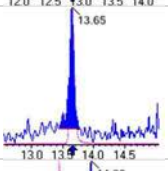 | 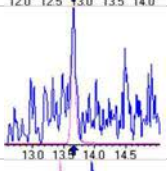 | IR1, |
| PFODA | ( 913.0 / 869.0 ) 6084<br>( 913.0 / 169.0 ) N/A | ( 14.29 , 1.05 )<br>( N/A , -0.01 , #Value!) | 34.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0389 | N/A | 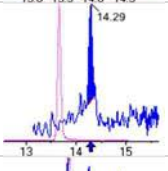 | 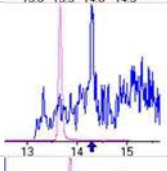 | IR1,MI1 DG 2024-03-19 |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 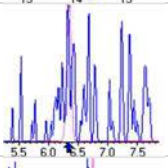 | 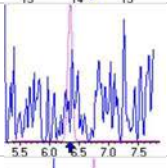 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 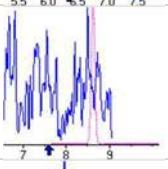 | 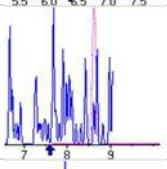 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 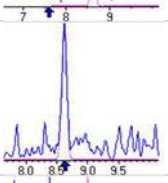 | 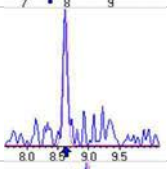 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 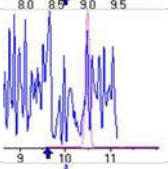 | 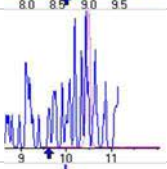 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 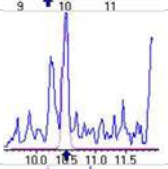 | 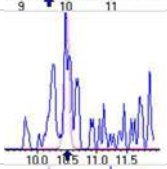 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 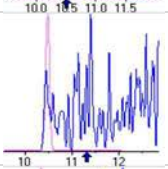 | 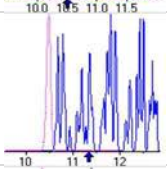 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 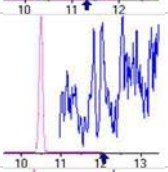 | 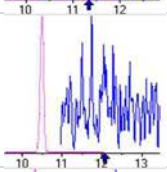 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 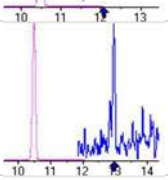 | 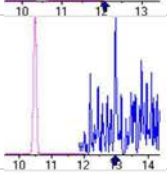 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 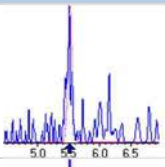 | 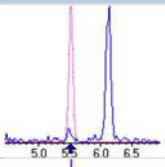 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 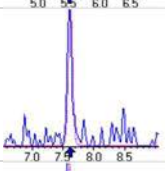 | 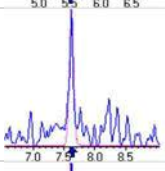 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 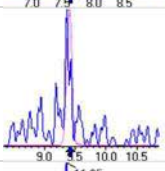 | 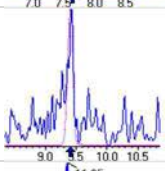 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>22276<br>( 627.0 / 81.0 )<br>24748 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 88.3<br>58.0 | 1.1110<br>77.2<br>77.2 | 0.0851 | N/A | 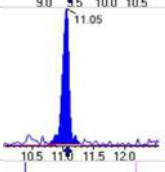 | 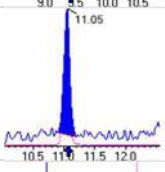 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 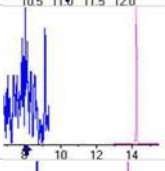 | 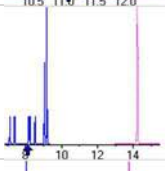 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 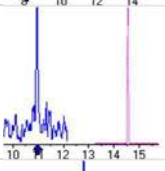 | 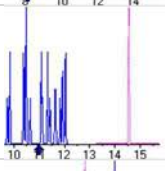 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 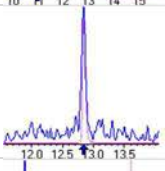 | 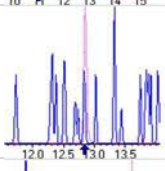 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 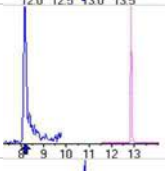 | 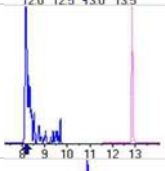 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 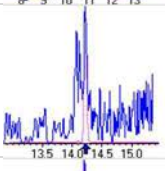 | 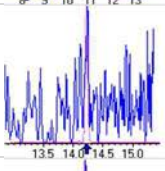 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 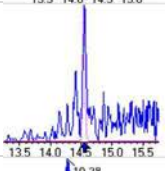 | 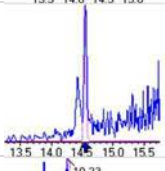 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>5287<br>( 570.0 / 483.0 )<br>1419 | ( 10.28 , 1.00 )<br>( -0.01 , N/A , 2.9) | 55.9<br>17.5 | 0.2684<br>61.2<br>61.2 | 0.0258 | N/A | 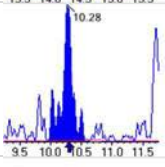 | 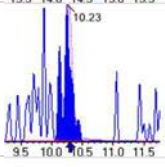 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8150<br>( 584.0 / 526.0 ) 2179 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 2.1) | 98.9<br>33.1 | 0.2674<br>43.4<br>43.4 | 0.0409 | N/A | 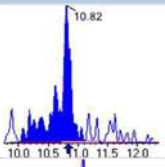 | 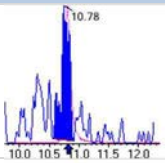 | IR1, |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 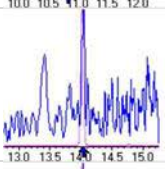 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 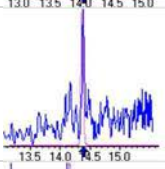 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 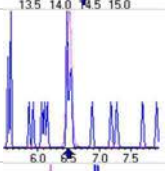 | 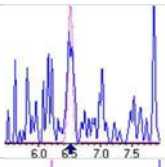 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 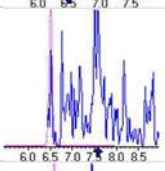 | 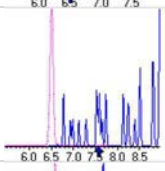 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 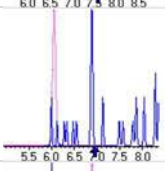 | 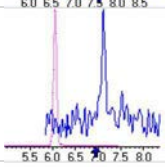 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 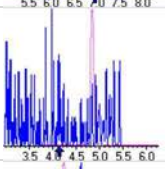 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 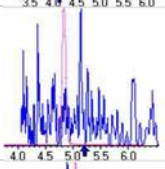 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 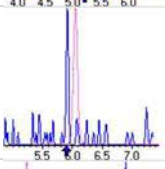 | 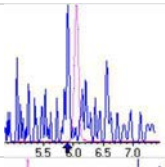 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 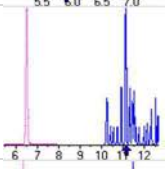 | 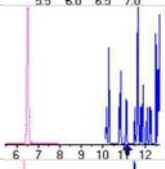 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 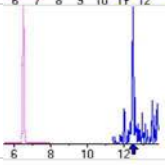 | 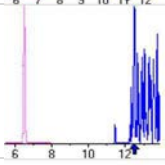 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 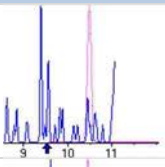 | 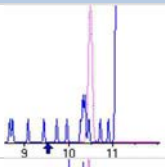 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 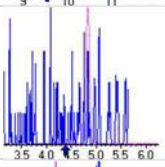 | 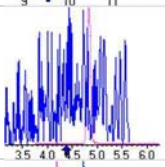 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 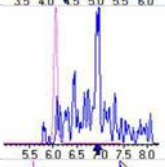 | 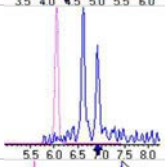 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>10942<br>( 441.0 / 337.0 )<br>9168 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 114.3<br>118.7 | 0.8378<br>91.3<br>91.3 | 0.0893 | N/A | 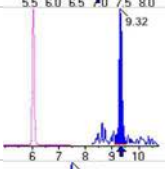 | 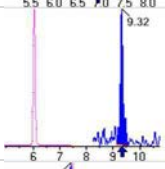 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4865<br>( 357.2 / 243.0 )<br>388 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 1.4) | 25.0<br>10.8 | 0.0797<br>72.3<br>72.3 | 0.0164 | N/A | 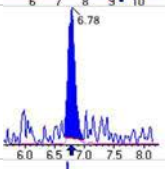 | 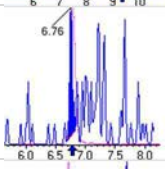 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 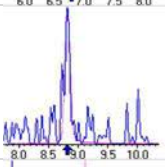 | 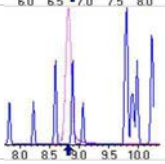 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 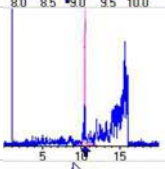 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>247666 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1205.7 | N/A | 1.0387<br>[ 1.0000 ] | 103.9%<br>{ 105.7% } | 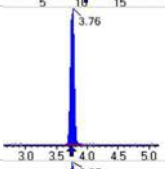 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>118801 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 67668.7 | N/A | 0.9365<br>[ 1.0000 ] | 93.7%<br>{ 99.4% } | 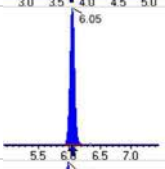 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>364915 | ( 8.19 , N/A )<br>( N/A , -0.02 , N/A ) | 6572.7 | N/A | 0.9231<br>[ 1.0000 ] | 92.3%<br>{ 96.0% } | 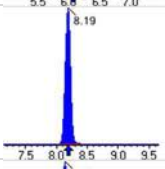 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>273094 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 870.1 | N/A | 0.9602<br>[ 1.0000 ] | 96.0%<br>{ 102.6% } | 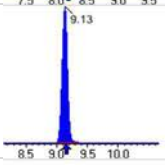 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277135 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 10730.3 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 103.5% } | 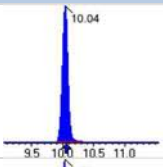 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 876072 | ( 8.63 , N/A ) ( N/A , -0.02 , N/A ) | 3965.9 | N/A | 0.9231 [ 1.0000 ] | 92.3% { 97.3% } | 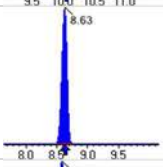 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 709520 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2022.8 | N/A | 0.9316 [ 1.0000 ] | 93.2% { 101.3% } | 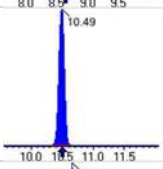 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2260276 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 35338.6 | N/A | 7.9888 [ 8.0000 ] | 99.9% { 106.9% } | 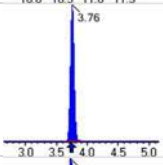 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 892559 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 4410.8 | N/A | 4.0266 [ 4.0000 ] | 100.7% { 96.8% } | 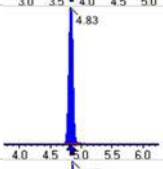 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560711 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 8995.9 | N/A | 2.0686 [ 2.0000 ] | 103.4% { 101.3% } | 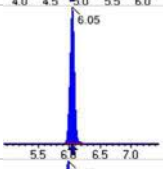 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 605194 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4503.5 | N/A | 2.0071 [ 2.0000 ] | 100.4% { 97.7% } | 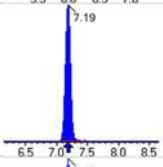 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 802821 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3104.8 | N/A | 2.0533 [ 2.0000 ] | 102.7% { 97.9% } | 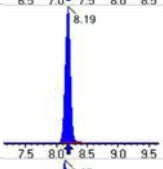 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 267971 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2951.0 | N/A | 1.0008 [ 1.0000 ] | 100.1% { 102.0% } | 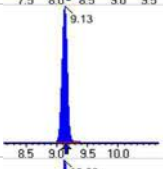 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 310319 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 918.4 | N/A | 0.9992 [ 1.0000 ] | 99.9% { 98.0% } | 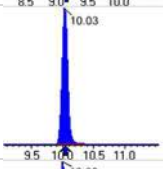 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 370129 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1009.3 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 102.4% } | 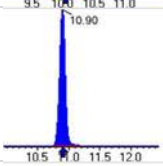 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368993 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1246.5 | N/A | 0.9916 [ 1.0000 ] | 99.2% { 104.9% } | 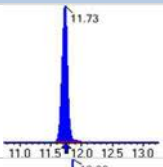 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318629 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1132.2 | N/A | 1.0055 [ 1.0000 ] | 100.6% { 102.0% } | 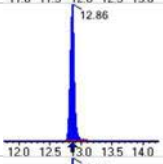 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 523684 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2356.1 | N/A | 1.9358 [ 2.0000 ] | 96.8% { 101.5% } | 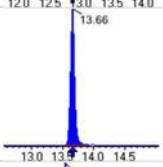 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570777 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 921.3 | N/A | 1.9845 [ 2.0000 ] | 99.2% { 98.6% } | 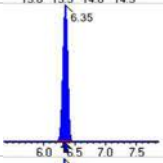 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1291658 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 4087.7 | N/A | 2.0444 [ 2.0000 ] | 102.2% { 100.9% } | 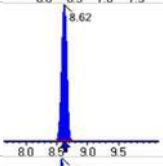 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1543909 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1768.0 | N/A | 2.0181 [ 2.0000 ] | 100.9% { 98.8% } | 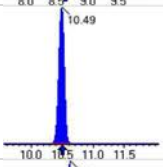 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 645670 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 92.6 | N/A | 4.7279 [ 4.0000 ] | 118.2% { 123.0% } | 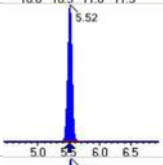 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1820502 | ( 7.62 , N/A ) ( N/A , -0.01 , N/A ) | 4674.4 | N/A | 4.4543 [ 4.0000 ] | 111.4% { 107.1% } | 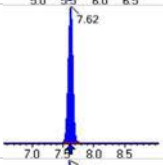 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1444855 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1529.9 | N/A | 4.5076 [ 4.0000 ] | 112.7% { 109.5% } | 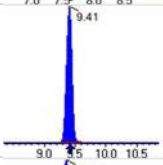 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2718422 | ( 11.05 , N/A ) ( N/A , -0.01 , N/A ) | 1222.5 | N/A | 8.1147 [ 8.0000 ] | 101.4% { 104.7% } | 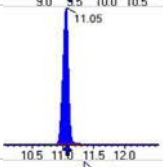 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1357608 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2272.1 | N/A | 2.0025 [ 2.0000 ] | 100.1% { 101.8% } | 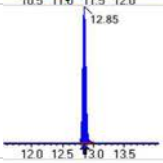 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 270641 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1748.6 | N/A | 1.8822 [ 2.0000 ] | 94.1% { 97.5% } | 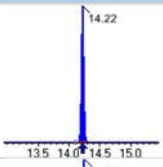  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315933 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2465.7 | N/A | 2.0489 [ 2.0000 ] | 102.4% { 100.2% } | 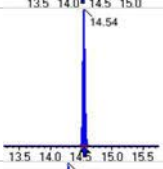  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 858949 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2747.6 | N/A | 4.3636 [ 4.0000 ] | 109.1% { 102.5% } | 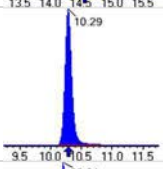  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 815282 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 2006.1 | N/A | 4.5444 [ 4.0000 ] | 113.6% { 107.8% } | 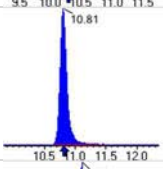  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1364206 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2290.3 | N/A | 21.1120 [ 20.0000 ] | 105.6% { 101.4% } | 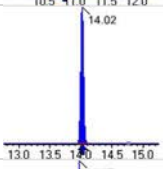  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316295 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4403.7 | N/A | 20.0701 [ 20.0000 ] | 100.4% { 100.0% } | 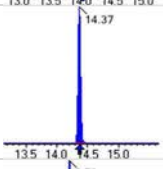  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 955791 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2026.1 | N/A | 7.7407 [ 8.0000 ] | 96.8% { 97.7% } | 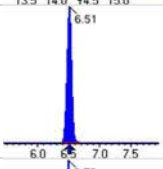  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559796 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1426.0 | N/A | 1.8631 [ 2.0000 ] | 93.2% { 97.0% } | 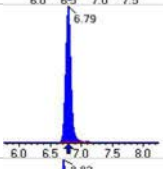  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 528642 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 671.7 | N/A | 1.9327 [ 2.0000 ] | 96.6% { 98.4% } | 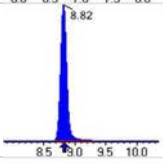  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0094L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06640 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 4.190 | ng/mL0 | | |
| | 13C5-PFHXA | 2.040 | ng/mL0 | | |
| | 13C4-PFHPA | 2.020 | ng/mL0 | | |
| | 13C8-PFOA | 1.990 | ng/mL0 | | |
| | 13C9-PFNA | .9910 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | 1.040 | ng/mL0 | | |
| | 13C2-PFDOA | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.920 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.090 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.0 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.020 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.170 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.940 | ng/mL0 | | |
| | 13C8-PFOSA | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA | 1.910 | ng/mL0 | | |
| | D5-NETFOSA | 1.980 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.320 | ng/mL0 | | |
| | D5-NETFOSAA | 4.410 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | D7-NMEFOSE0 | 20.0 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.80 | ng/mL0 | | |
| | 13C3-HFPO-DA | 8.040 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 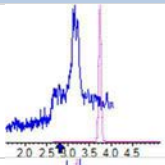 | 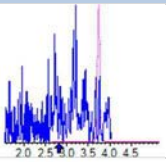 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 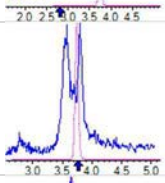 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 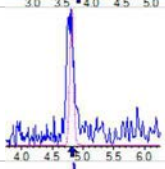 | 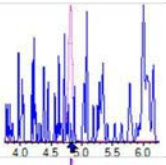 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 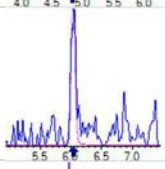 | 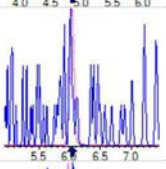 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 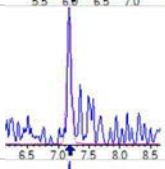 | 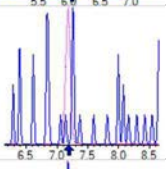 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 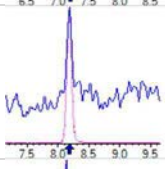 | 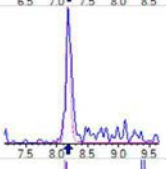 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 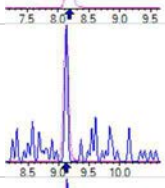 | 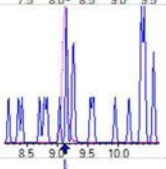 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 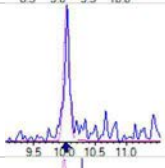 | 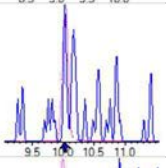 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 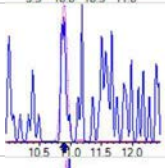 | 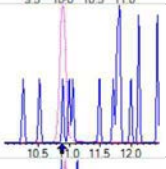 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 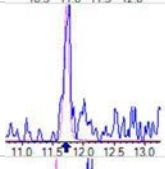 | 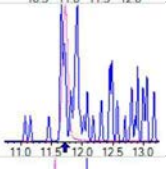 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 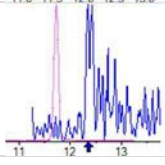 | 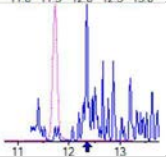 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 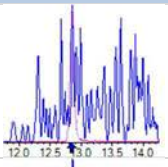 | 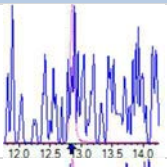 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 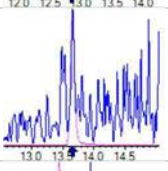 | 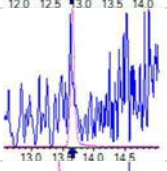 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 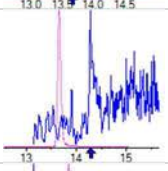 | 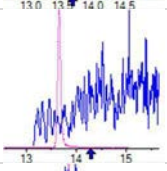 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 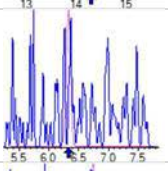 | 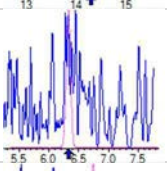 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 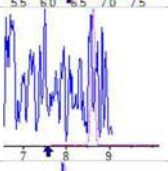 | 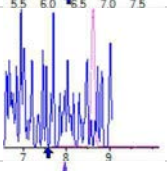 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 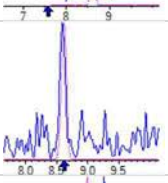 | 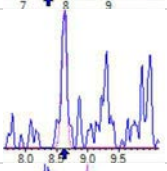 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 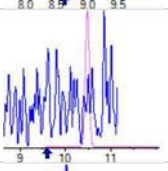 | 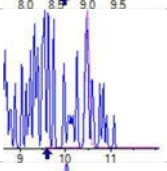 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 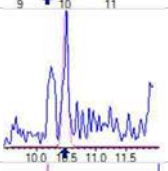 | 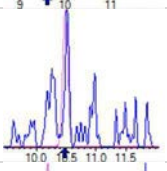 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 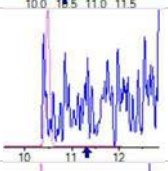 | 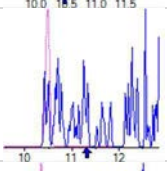 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 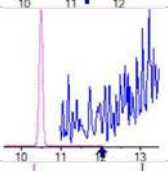 | 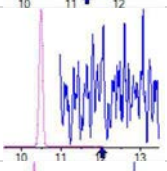 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 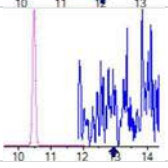 | 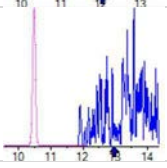 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 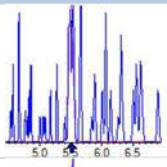 | 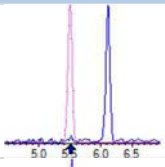 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 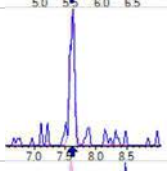 | 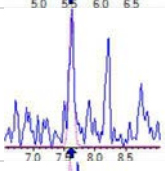 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 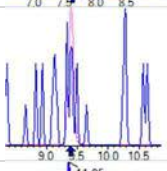 | 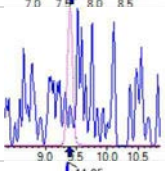 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17573<br>( 627.0 / 81.0 )<br>22471 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.2) | 194.8<br>62.5 | 1.2787<br>88.8<br>87.7 | 0.0664 | N/A | 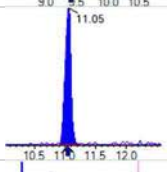 | 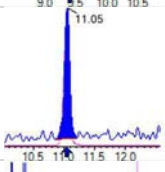 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 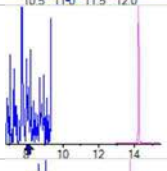 | 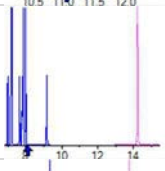 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 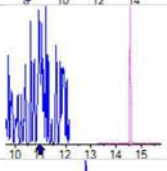 | 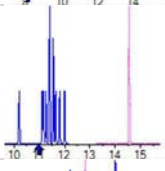 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 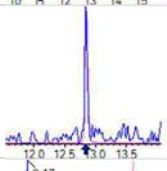 | 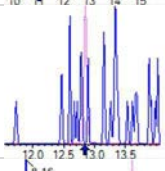 | |
| TFSI | ( 279.7 / 147.0 )<br>33493<br>( 279.7 / 211.0 )<br>2373 | ( 8.17 , 0.64 )<br>( N/A , -0.01 , 0.6) | 28.1<br>10.4 | 0.0709<br>84.3<br>82.8 | 0.0183 | N/A | 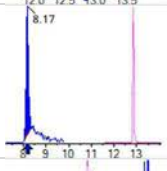 | 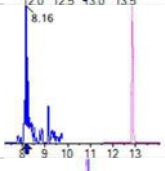 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 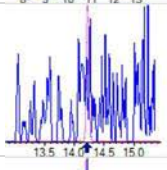 | 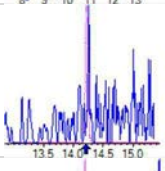 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 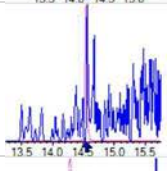 | 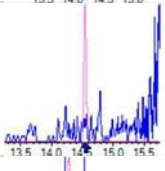 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 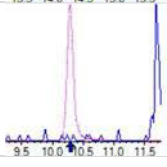 | 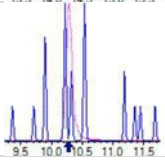 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 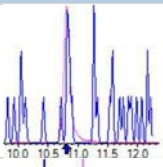 | 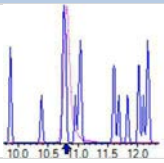 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 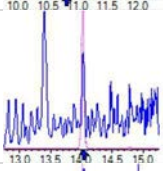 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 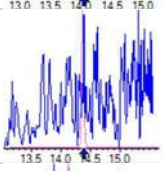 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 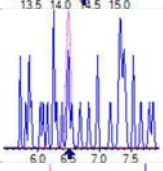 | 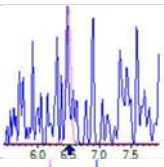 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 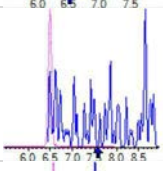 | 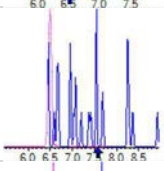 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 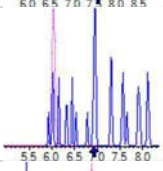 | 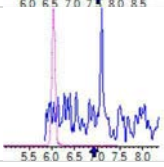 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 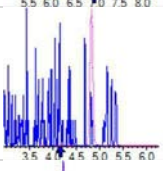 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 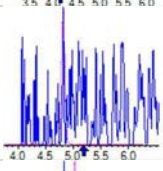 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 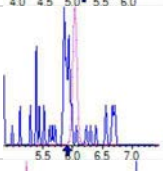 | 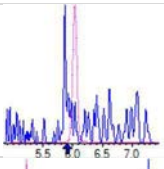 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 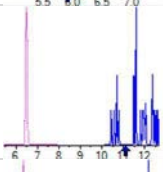 | 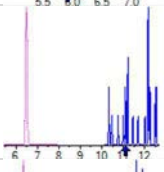 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 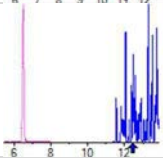 | 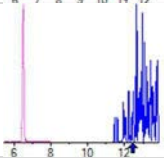 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 )<br>Area Counts*min | R.T.<br>( R.T [min] , R.R.T. )<br>( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio<br>IR Vs MP%<br>IR Vs CV% | Concentration<br>True ng/mL | Q.C. Rec.<br>{Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 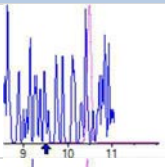 | 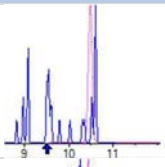 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 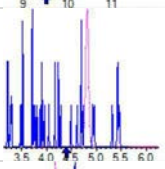 | 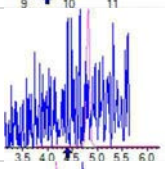 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 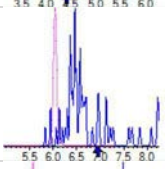 | 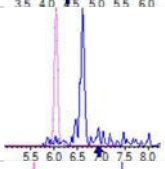 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 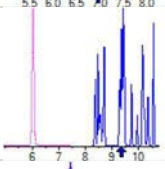 | 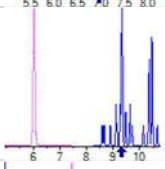 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 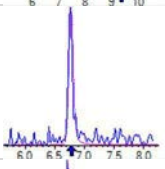 | 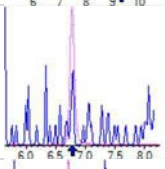 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 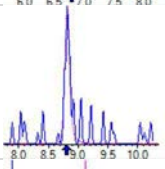 | 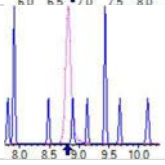 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 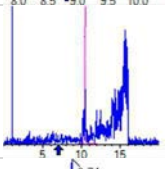 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>252590 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1169.3 | N/A | 1.0594<br>[ 1.0000 ] | 105.9%<br>{ 106.8% } | 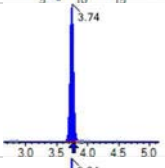 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>122266 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 114320.5 | N/A | 0.9638<br>[ 1.0000 ] | 96.4%<br>{ 96.6% } | 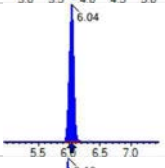 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>402138 | ( 8.18 , N/A )<br>( N/A , 0.01 , N/A ) | 4161.9 | N/A | 1.0173<br>[ 1.0000 ] | 101.7%<br>{ 106.0% } | 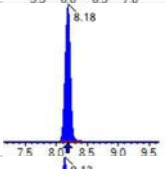 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>291558 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 684.5 | N/A | 1.0251<br>[ 1.0000 ] | 102.5%<br>{ 103.7% } | 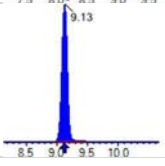 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274577 | ( 10.04 , N/A ) ( N/A , 0.01 , N/A ) | 14456.6 | N/A | 0.9402 [ 1.0000 ] | 94.0% { 94.9% } | 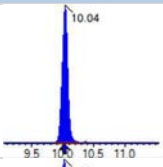 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 905428 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6077.8 | N/A | 0.9541 [ 1.0000 ] | 95.4% { 97.0% } | 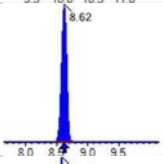 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 729908 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1900.4 | N/A | 0.9583 [ 1.0000 ] | 95.8% { 102.5% } | 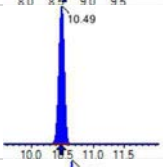 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2389209 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 43004.3 | N/A | 8.2799 [ 8.0000 ] | 103.5% { 106.7% } | 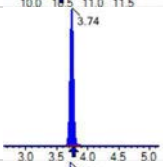 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 955725 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 4880.4 | N/A | 4.1894 [ 4.0000 ] | 104.7% { 97.9% } | 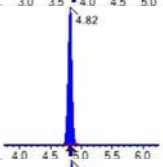 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 570234 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 7465.5 | N/A | 2.0441 [ 2.0000 ] | 102.2% { 96.6% } | 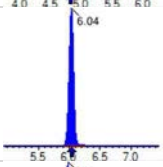 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626841 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 8203.0 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 95.5% } | 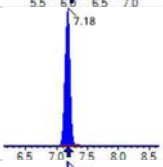 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858291 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3713.4 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 99.5% } | 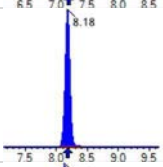 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283296 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3188.1 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 105.0% } | 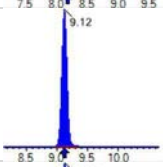 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318936 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 1166.8 | N/A | 1.0365 [ 1.0000 ] | 103.6% { 99.1% } | 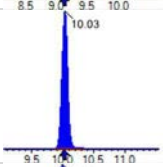 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377227 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 709.9 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 101.4% } | 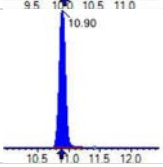 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389990 | ( 11.72 , N/A ) ( N/A , 0.01 , N/A ) | 1430.8 | N/A | 1.0578 [ 1.0000 ] | 105.8% { 104.6% } | 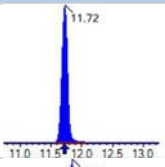 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 313526 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1142.9 | N/A | 0.9986 [ 1.0000 ] | 99.9% { 96.0% } | 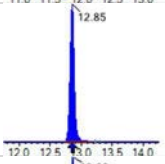 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 514127 | ( 13.66 , N/A ) ( N/A , 0.01 , N/A ) | 2227.5 | N/A | 1.9181 [ 2.0000 ] | 95.9% { 101.8% } | 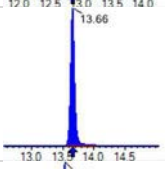 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712691 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1107.7 | N/A | 2.0936 [ 2.0000 ] | 104.7% { 102.1% } | 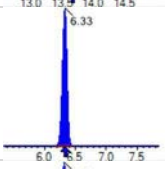 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1329370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 3457.9 | N/A | 2.0359 [ 2.0000 ] | 101.8% { 100.8% } | 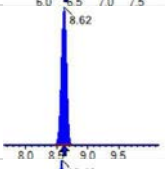 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1575798 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1773.4 | N/A | 2.0023 [ 2.0000 ] | 100.1% { 101.7% } | 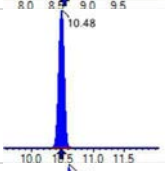 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 707959 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 95.5 | N/A | 5.0159 [ 4.0000 ] | 125.4% { 120.2% } | 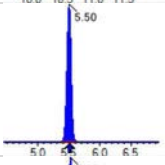 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1763439 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 4459.2 | N/A | 4.1748 [ 4.0000 ] | 104.4% { 105.8% } | 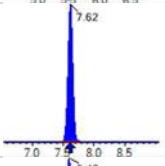 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1531812 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1414.8 | N/A | 4.6239 [ 4.0000 ] | 115.6% { 112.0% } | 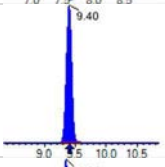 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2748065 | ( 11.04 , N/A ) ( N/A , 0.01 , N/A ) | 1470.7 | N/A | 7.9373 [ 8.0000 ] | 99.2% { 107.7% } | 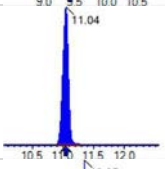 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393050 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1858.7 | N/A | 1.9974 [ 2.0000 ] | 99.9% { 101.4% } | 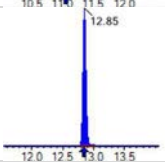 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 282412 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 1812.0 | N/A | 1.9092 [ 2.0000 ] | 95.5% { 98.1% } | 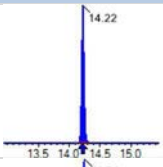 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 314683 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2067.0 | N/A | 1.9837 [ 2.0000 ] | 99.2% { 102.6% } | 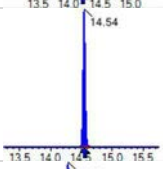 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 875018 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2373.2 | N/A | 4.3211 [ 4.0000 ] | 108.0% { 103.5% } | 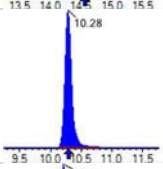 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 813569 | ( 10.81 , N/A ) ( N/A , 0.01 , N/A ) | 2416.9 | N/A | 4.4082 [ 4.0000 ] | 110.2% { 105.6% } | 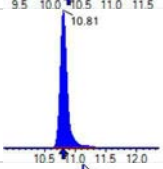 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1326325 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2458.9 | N/A | 19.9525 [ 20.0000 ] | 99.8% { 96.5% } | 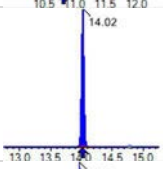 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1334342 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4307.1 | N/A | 19.7770 [ 20.0000 ] | 98.9% { 103.4% } | 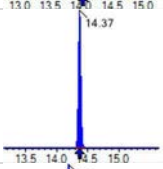 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022222 | ( 6.49 , N/A ) ( N/A , 0.00 , N/A ) | 2755.3 | N/A | 8.0441 [ 8.0000 ] | 100.6% { 100.0% } | 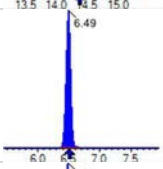 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 613673 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1140.8 | N/A | 2.0614 [ 2.0000 ] | 103.1% { 99.5% } | 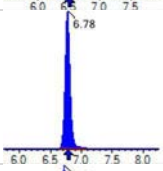 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 558218 | ( 8.82 , N/A ) ( N/A , 0.01 , N/A ) | 840.8 | N/A | 2.0598 [ 2.0000 ] | 103.0% { 100.9% } | 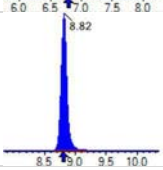 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0094L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06510 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0094L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 3.820 | ng/mL0 | | |
| | 13C5-PFHXA | 1.860 | ng/mL0 | | |
| | 13C4-PFHPA | 1.860 | ng/mL0 | | |
| | 13C8-PFOA | 2.080 | ng/mL0 | | |
| | 13C9-PFNA | 1.060 | ng/mL0 | | |
| | 13C6-PFDA | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA | .9920 | ng/mL0 | | |
| | 13C2-PFDOA | .9850 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.880 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.020 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.0 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.580 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.010 | ng/mL0 | | |
| | 13C8-PFOSA | 2.10 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.20 | ng/mL0 | | |
| | D5-NETFOSAA | 4.430 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0094L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | D7-NMEFOSE0 | 21.30 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.70 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.20 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 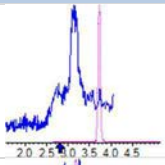 | 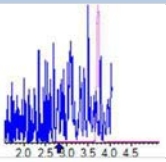 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 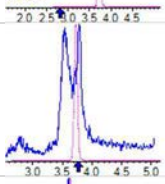 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 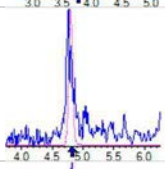 | 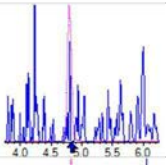 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 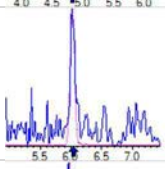 | 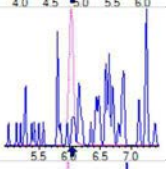 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 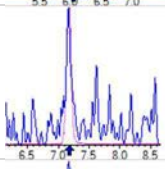 | 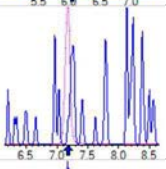 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 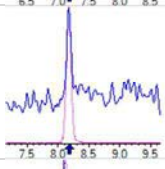 | 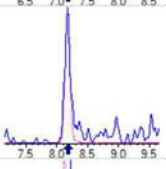 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 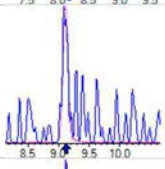 | 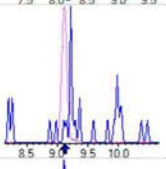 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 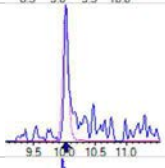 | 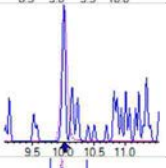 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 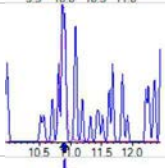 | 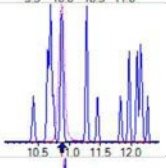 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 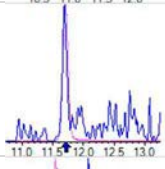 | 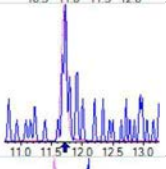 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 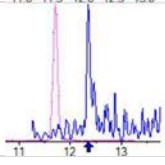 | 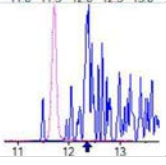 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 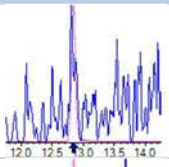 | 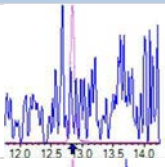 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 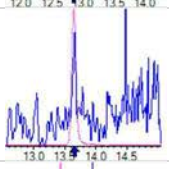 | 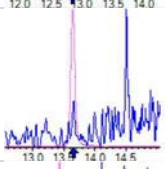 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 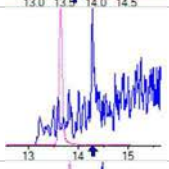 | 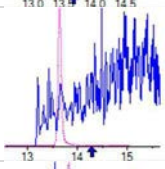 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 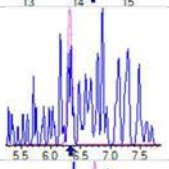 | 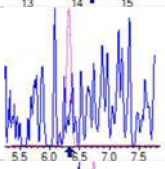 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 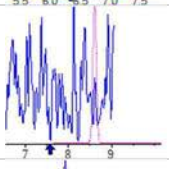 | 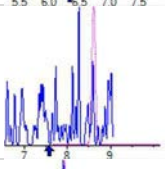 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 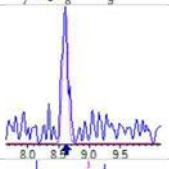 | 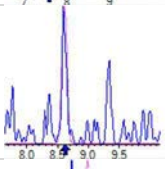 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 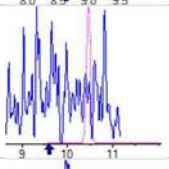 | 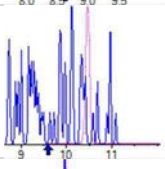 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 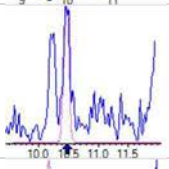 | 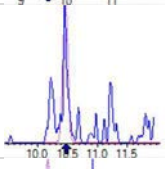 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 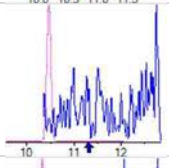 | 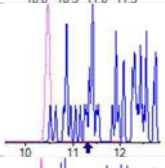 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 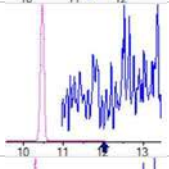 | 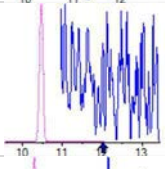 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 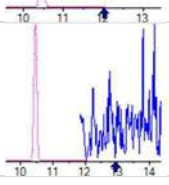 | 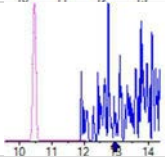 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 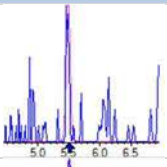 | 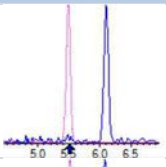 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 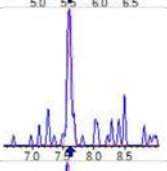 | 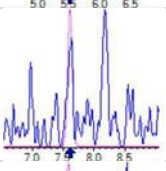 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 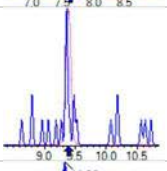 | 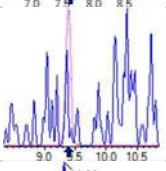 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17813<br>( 627.0 / 81.0 )<br>22348 | ( 11.02 , 1.00 )<br>( 0.00 , N/A , 0.2) | 178.8<br>70.7 | 1.2546<br>87.2<br>86.0 | 0.0651 | N/A | 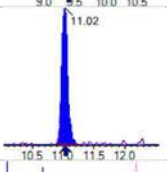 | 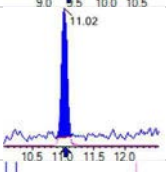 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 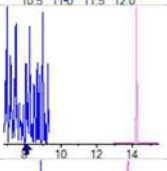 | 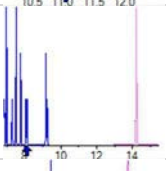 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 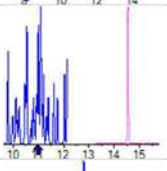 | 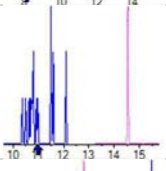 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 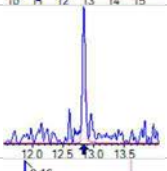 | 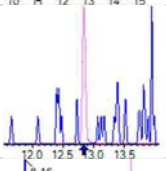 | |
| TFSI | ( 279.7 / 147.0 )<br>27003<br>( 279.7 / 211.0 )<br>3131 | ( 8.16 , 0.64 )<br>( N/A , -0.02 , 0.4) | 20.5<br>9.3 | 0.1159<br>138.0<br>135.5 | 0.0136 | N/A | 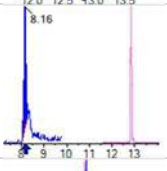 | 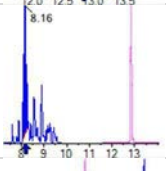 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 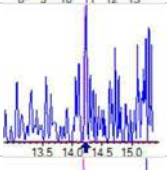 | 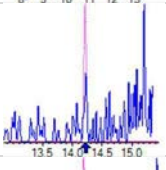 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 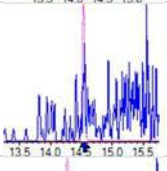 | 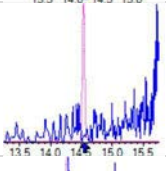 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 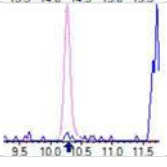 | 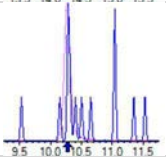 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 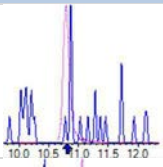 | 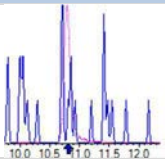 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 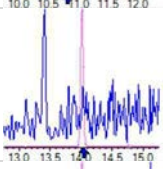 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 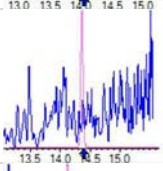 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 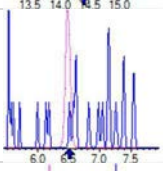 | 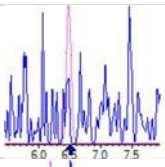 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 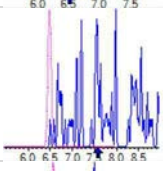 | 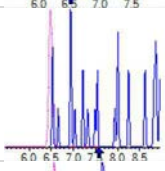 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 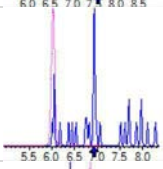 | 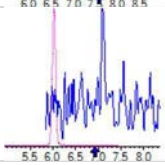 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 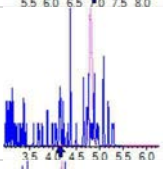 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 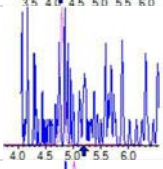 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 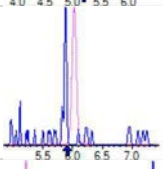 | 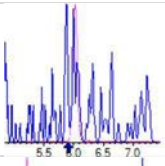 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 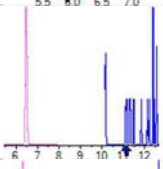 | 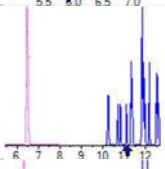 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 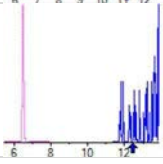 | 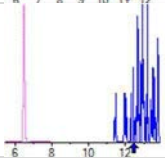 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 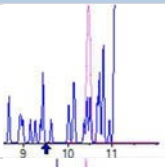 | 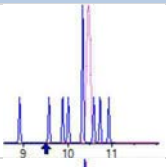 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 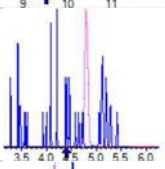 | 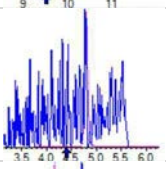 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 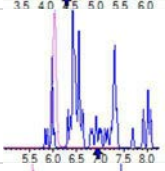 | 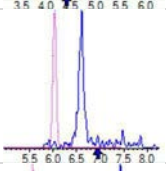 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 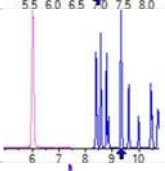 | 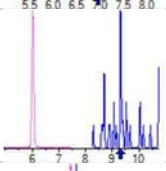 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 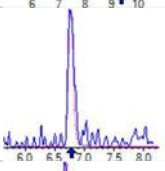 | 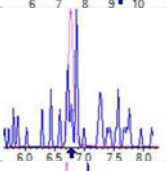 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 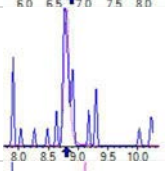 | 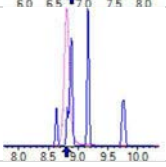 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 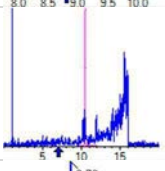 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262976 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1264.8 | N/A | 1.1029 [ 1.0000 ] | 110.3% { 111.2% } | 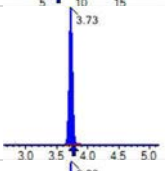 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 137190 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 19929.4 | N/A | 1.0815 [ 1.0000 ] | 108.1% { 108.4% } | 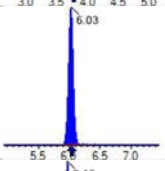 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 389167 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3796.0 | N/A | 0.9844 [ 1.0000 ] | 98.4% { 102.6% } | 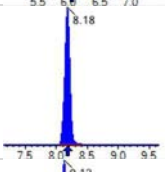 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281293 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 1262.5 | N/A | 0.9890 [ 1.0000 ] | 98.9% { 100.0% } | 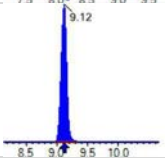 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288262 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 4306.6 | N/A | 0.9871 [ 1.0000 ] | 98.7% { 99.6% } | 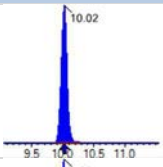 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 926810 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 5981.5 | N/A | 0.9766 [ 1.0000 ] | 97.7% { 99.3% } | 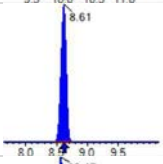 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 753068 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 2288.2 | N/A | 0.9887 [ 1.0000 ] | 98.9% { 105.8% } | 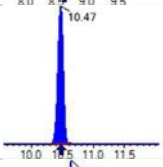 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2487333 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 38314.3 | N/A | 8.2795 [ 8.0000 ] | 103.5% { 111.1% } | 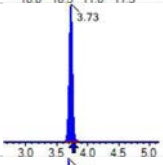 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 977534 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5291.4 | N/A | 3.8189 [ 4.0000 ] | 95.5% { 100.2% } | 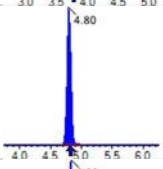 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581828 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 7266.8 | N/A | 1.8588 [ 2.0000 ] | 92.9% { 98.6% } | 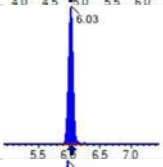 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 647498 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5005.1 | N/A | 1.8596 [ 2.0000 ] | 93.0% { 98.6% } | 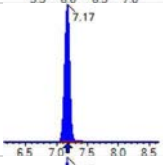 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 869174 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 2744.5 | N/A | 2.0844 [ 2.0000 ] | 104.2% { 100.8% } | 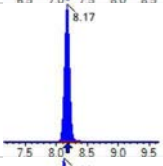 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291733 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 2397.4 | N/A | 1.0577 [ 1.0000 ] | 105.8% { 108.1% } | 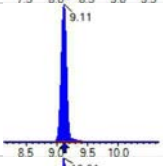 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331768 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 969.7 | N/A | 1.0270 [ 1.0000 ] | 102.7% { 103.1% } | 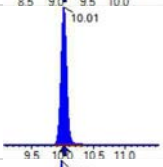 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377077 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 991.8 | N/A | 0.9922 [ 1.0000 ] | 99.2% { 101.4% } | 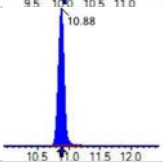 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 381053 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1267.8 | N/A | 0.9845 [ 1.0000 ] | 98.5% { 102.2% } | 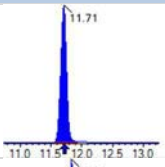 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 329264 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1433.7 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 100.9% } | 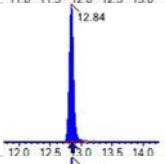 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 527627 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2239.7 | N/A | 1.8751 [ 2.0000 ] | 93.8% { 104.5% } | 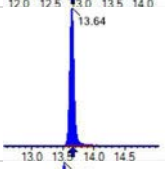 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1695256 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1354.8 | N/A | 2.0245 [ 2.0000 ] | 101.2% { 101.0% } | 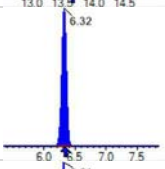 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1339799 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 3617.9 | N/A | 2.0045 [ 2.0000 ] | 100.2% { 101.6% } | 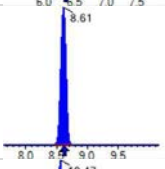 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1599091 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 1759.5 | N/A | 1.9694 [ 2.0000 ] | 98.5% { 103.2% } | 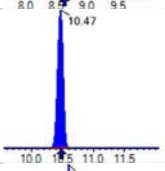 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 712444 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 90.6 | N/A | 4.9313 [ 4.0000 ] | 123.3% { 120.9% } | 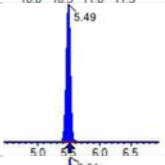 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2019774 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3521.8 | N/A | 4.6714 [ 4.0000 ] | 116.8% { 121.2% } | 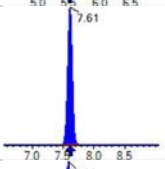 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1553917 | ( 9.39 , N/A ) ( N/A , -0.01 , N/A ) | 1827.4 | N/A | 4.5824 [ 4.0000 ] | 114.6% { 113.6% } | 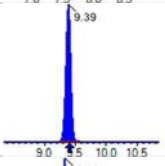 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2837927 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1437.4 | N/A | 8.0077 [ 8.0000 ] | 100.1% { 111.2% } | 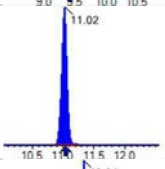 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1512693 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2531.1 | N/A | 2.1023 [ 2.0000 ] | 105.1% { 110.1% } | 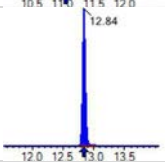 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 289802 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1757.3 | N/A | 1.8989 [ 2.0000 ] | 94.9% { 100.6% } | 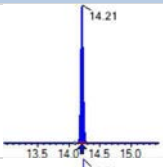 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 320055 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2531.6 | N/A | 1.9556 [ 2.0000 ] | 97.8% { 104.4% } | 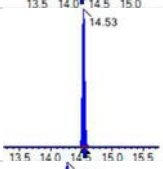 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877073 | ( 10.27 , N/A ) ( N/A , -0.01 , N/A ) | 2449.7 | N/A | 4.1981 [ 4.0000 ] | 105.0% { 103.7% } | 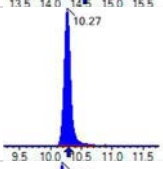 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 844352 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1833.1 | N/A | 4.4342 [ 4.0000 ] | 110.9% { 109.6% } | 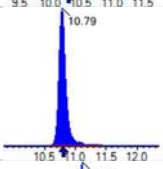 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1459612 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2263.5 | N/A | 21.2823 [ 20.0000 ] | 106.4% { 106.2% } | 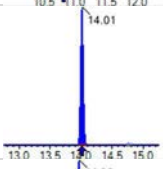 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1442578 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4066.8 | N/A | 20.7236 [ 20.0000 ] | 103.6% { 111.8% } | 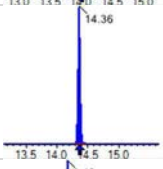 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1026816 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 2225.9 | N/A | 7.2012 [ 8.0000 ] | 90.0% { 100.4% } | 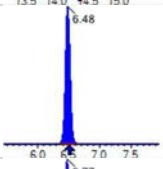 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603581 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1163.2 | N/A | 1.9313 [ 2.0000 ] | 96.6% { 97.8% } | 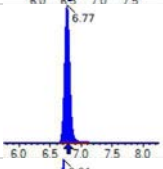 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 592829 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 726.4 | N/A | 2.0837 [ 2.0000 ] | 104.2% { 107.2% } | 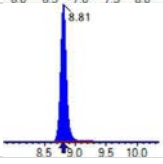 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .02240 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0120 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05620 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0094L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.980 | ng/mL0 | | |
| | 13C5-PFPEA | 4.0 | ng/mL0 | | |
| | 13C5-PFHXA | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA | 1.990 | ng/mL0 | | |
| | 13C8-PFOA | 1.980 | ng/mL0 | | |
| | 13C9-PFNA | .9090 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | .9980 | ng/mL0 | | |
| | 13C2-PFDOA | .9780 | ng/mL0 | | |
| | 13C2-PFTEDA | .9790 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.80 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.910 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.980 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.40 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.50 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.050 | ng/mL0 | | |
| | 13C8-PFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSA | 1.920 | ng/mL0 | | |
| | D5-NETFOSA | 1.880 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.170 | ng/mL0 | | |
| | D5-NETFOSAA | 4.270 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | D7-NMEFOSE0 | 20.20 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.30 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.970 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 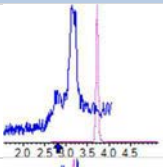 | 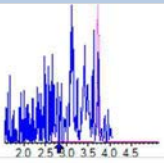 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 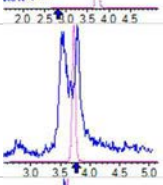 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 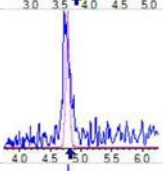 | 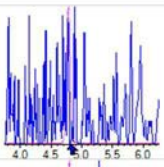 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 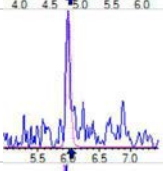 | 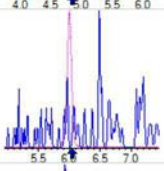 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 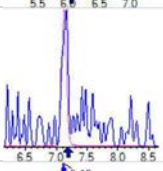 | 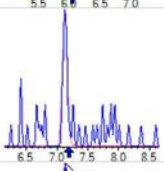 | |
| PFOA | ( 413.0 / 369.0 )<br>18323<br>( 413.0 / 169.0 )<br>6829 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , -0.2) | 17.8<br>41.7 | 0.3727<br>101.9<br>108.6 | 0.0224 | N/A | 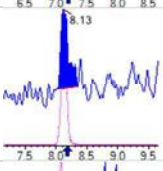 | 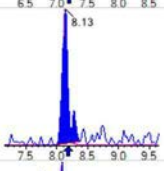 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 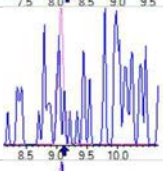 | 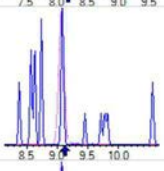 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 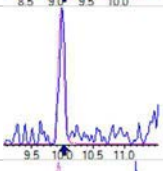 | 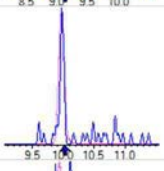 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 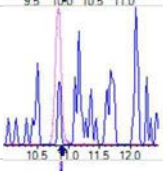 | 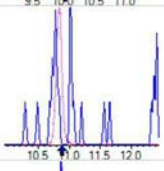 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 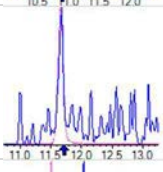 | 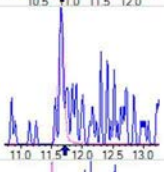 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 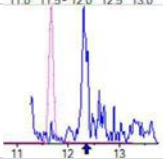 | 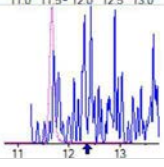 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 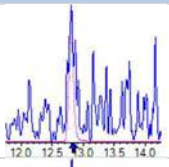 | 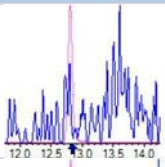 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 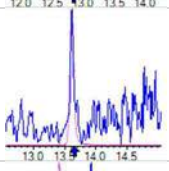 | 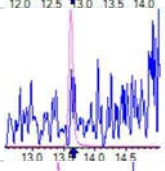 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 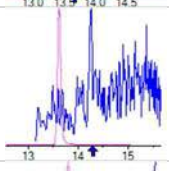 | 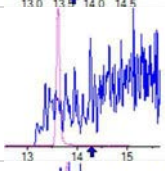 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 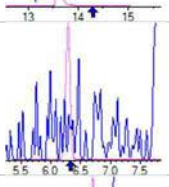 | 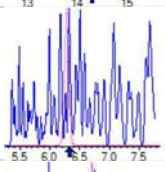 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 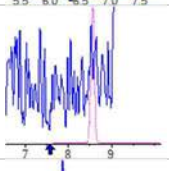 | 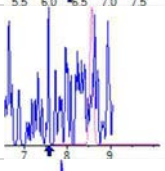 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 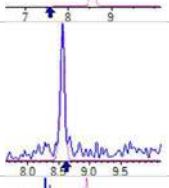 | 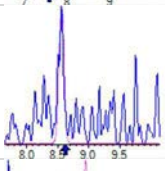 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 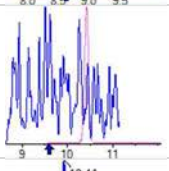 | 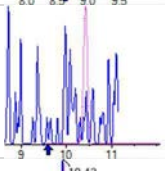 | |
| PFOS | ( 499.0 / 80.0 )<br>10478<br>( 499.0 / 99.0 )<br>2581 | ( 10.41 , 1.00 )<br>( -0.02 , N/A , -0.9) | 49.9<br>308.2 | 0.2463<br>105.4<br>102.6 | 0.0120 | N/A | 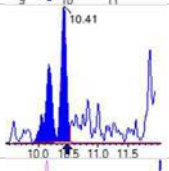 | 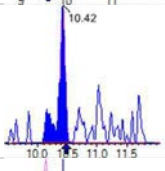 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 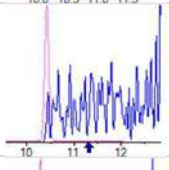 | 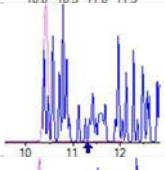 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 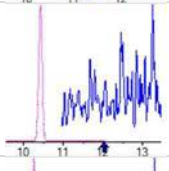 | 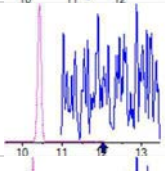 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 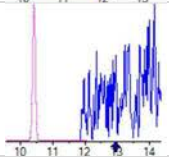 | 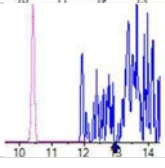 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 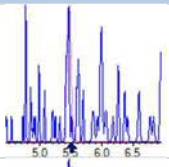 | 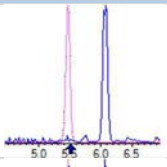 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 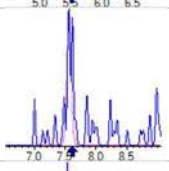 | 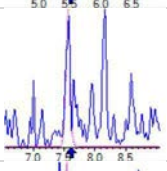 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 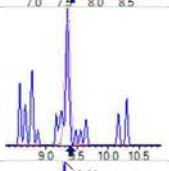 | 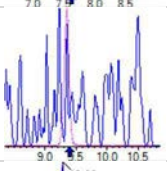 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14755<br>( 627.0 / 81.0 )<br>25191 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.4) | 151.5<br>73.6 | 1.7073<br>118.6<br>117.0 | 0.0562 | N/A | 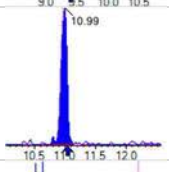 | 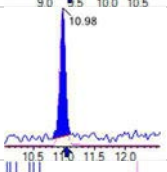 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 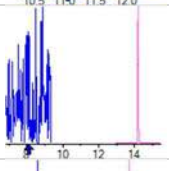 | 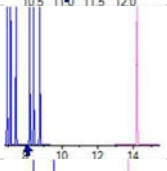 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 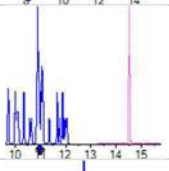 | 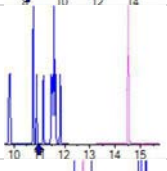 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 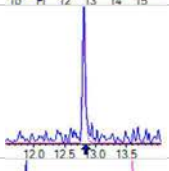 | 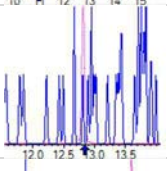 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 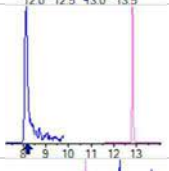 | 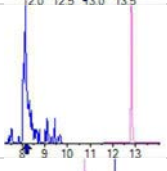 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 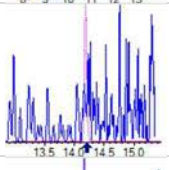 | 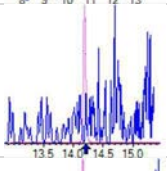 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 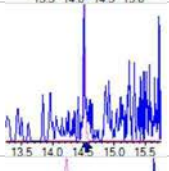 | 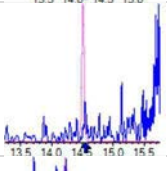 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 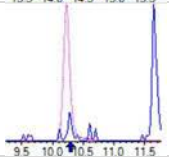 | 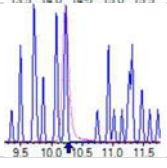 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 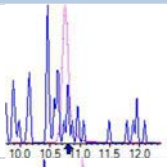 | 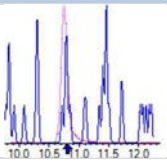 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 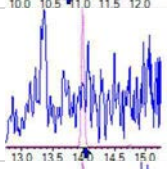 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 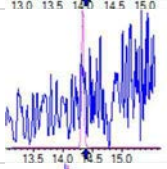 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 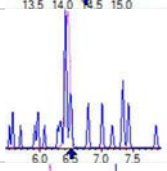 | 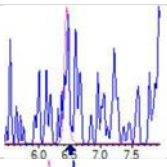 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 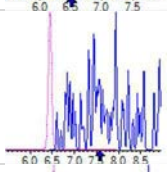 | 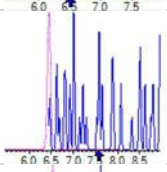 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 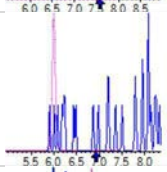 | 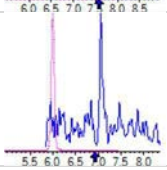 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 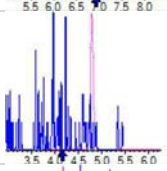 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 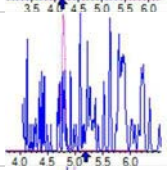 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 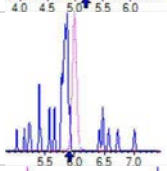 | 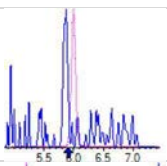 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 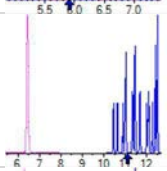 | 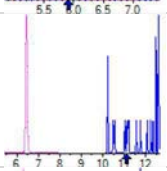 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 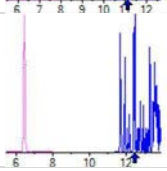 | 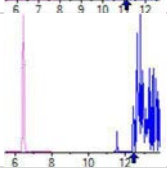 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 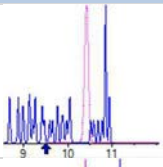 | 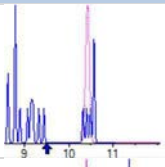 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 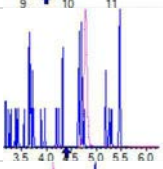 | 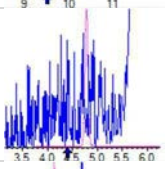 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 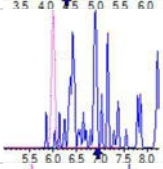 | 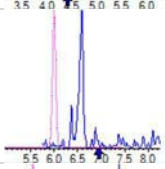 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 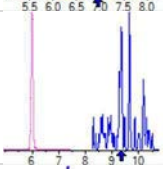 | 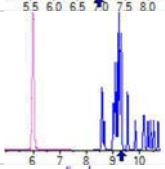 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 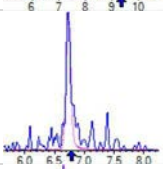 | 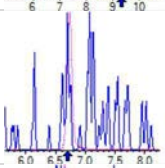 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 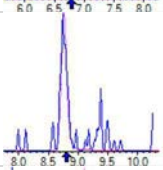 | 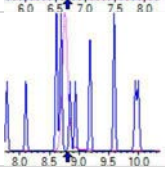 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 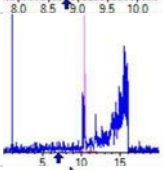 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256296 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 1342.9 | N/A | 1.0749 [ 1.0000 ] | 107.5% { 108.4% } | 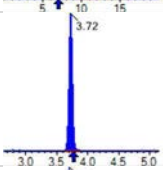 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117918 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 20197.0 | N/A | 0.9295 [ 1.0000 ] | 93.0% { 93.1% } | 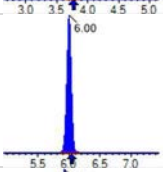 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 372812 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 6218.0 | N/A | 0.9431 [ 1.0000 ] | 94.3% { 98.3% } | 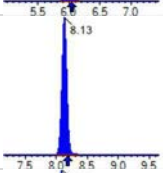 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277069 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 1006.7 | N/A | 0.9742 [ 1.0000 ] | 97.4% { 98.5% } | 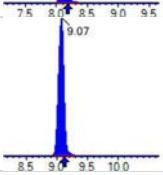 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273034 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1301.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 94.4% } | 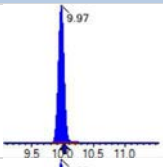 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 886188 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 4958.5 | N/A | 0.9338 [ 1.0000 ] | 93.4% { 94.9% } | 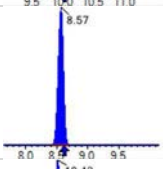 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 733959 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1895.2 | N/A | 0.9637 [ 1.0000 ] | 96.4% { 103.1% } | 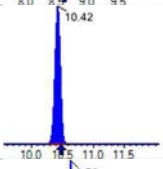 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2335173 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 40991.8 | N/A | 7.9756 [ 8.0000 ] | 99.7% { 104.3% } | 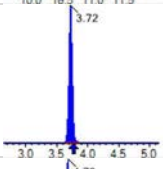 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 880098 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 5161.0 | N/A | 4.0001 [ 4.0000 ] | 100.0% { 90.2% } | 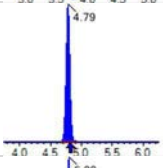 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 555973 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 11242.8 | N/A | 2.0664 [ 2.0000 ] | 103.3% { 94.2% } | 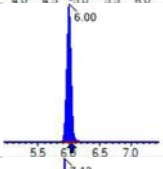 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 596480 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5847.9 | N/A | 1.9930 [ 2.0000 ] | 99.7% { 90.9% } | 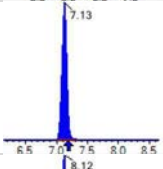 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 792769 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2469.3 | N/A | 1.9846 [ 2.0000 ] | 99.2% { 91.9% } | 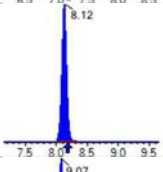 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 246839 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 3156.7 | N/A | 0.9086 [ 1.0000 ] | 90.9% { 91.5% } | 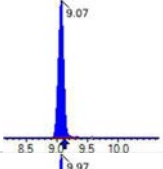 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317562 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 988.0 | N/A | 1.0379 [ 1.0000 ] | 103.8% { 98.7% } | 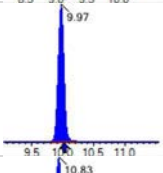 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 359228 | ( 10.83 , N/A ) ( N/A , -0.05 , N/A ) | 994.3 | N/A | 0.9979 [ 1.0000 ] | 99.8% { 96.6% } | 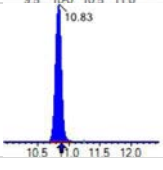 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 358593 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1376.9 | N/A | 0.9782 [ 1.0000 ] | 97.8% { 96.2% } | 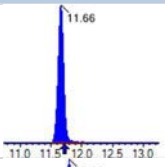 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305570 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1339.8 | N/A | 0.9788 [ 1.0000 ] | 97.9% { 93.6% } | 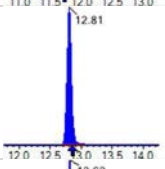 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 479691 | ( 13.62 , N/A ) ( N/A , -0.04 , N/A ) | 2261.1 | N/A | 1.7998 [ 2.0000 ] | 90.0% { 95.0% } | 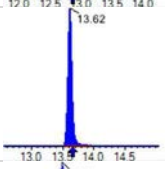 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1646009 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 932.0 | N/A | 2.0558 [ 2.0000 ] | 102.8% { 98.1% } | 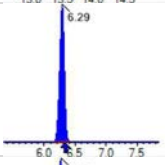 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1314731 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3337.1 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 99.7% } | 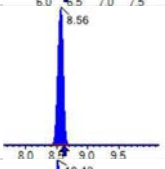 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1507737 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1958.6 | N/A | 1.9052 [ 2.0000 ] | 95.3% { 97.3% } | 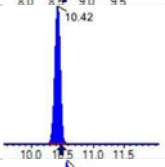 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 688420 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 92.2 | N/A | 4.9834 [ 4.0000 ] | 124.6% { 116.9% } | 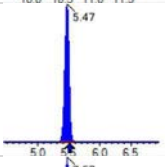 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1818303 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 3961.1 | N/A | 4.3982 [ 4.0000 ] | 110.0% { 109.1% } | 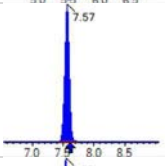 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1459191 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1728.0 | N/A | 4.5003 [ 4.0000 ] | 112.5% { 106.7% } | 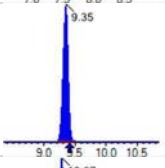 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2726916 | ( 10.97 , N/A ) ( N/A , -0.05 , N/A ) | 1591.3 | N/A | 8.0472 [ 8.0000 ] | 100.6% { 106.8% } | 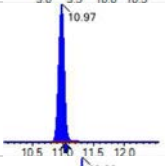 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1346002 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 3079.1 | N/A | 1.9193 [ 2.0000 ] | 96.0% { 98.0% } | 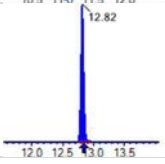 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 286199 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 2013.6 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 99.4% } | 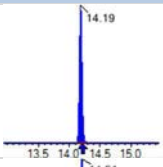  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 299849 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2282.7 | N/A | 1.8798 [ 2.0000 ] | 94.0% { 97.8% } | 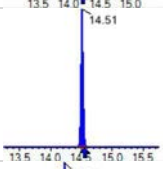  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 849550 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 2448.5 | N/A | 4.1722 [ 4.0000 ] | 104.3% { 100.5% } | 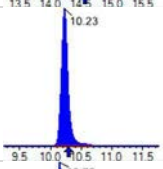  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792134 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 2202.4 | N/A | 4.2683 [ 4.0000 ] | 106.7% { 102.9% } | 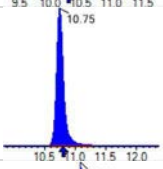  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1353135 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 1956.5 | N/A | 20.2435 [ 20.0000 ] | 101.2% { 98.4% } | 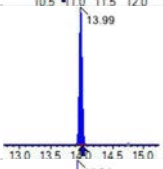  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1307174 | ( 14.34 , N/A ) ( N/A , -0.03 , N/A ) | 3568.0 | N/A | 19.2674 [ 20.0000 ] | 96.3% { 101.3% } | 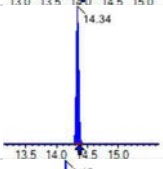  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977389 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2164.6 | N/A | 7.9749 [ 8.0000 ] | 99.7% { 95.6% } | 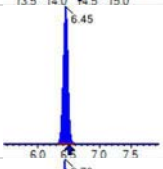  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603450 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1377.5 | N/A | 2.0385 [ 2.0000 ] | 101.9% { 97.8% } | 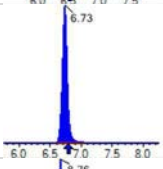  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 547420 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 720.5 | N/A | 2.0314 [ 2.0000 ] | 101.6% { 98.9% } | 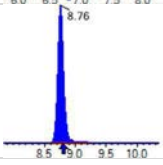  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0094L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | 0.01130 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .01660 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01040 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06450 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0094L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.890 | ng/mL0 | | |
| | 13C5-PFPEA | 3.730 | ng/mL0 | | |
| | 13C5-PFHXA | 1.910 | ng/mL0 | | |
| | 13C4-PFHPA | 1.880 | ng/mL0 | | |
| | 13C8-PFOA | 1.90 | ng/mL0 | | |
| | 13C9-PFNA | 1.010 | ng/mL0 | | |
| | 13C6-PFDA | .9790 | ng/mL0 | | |
| | 13C7-PFUnA | 1.050 | ng/mL0 | | |
| | 13C2-PFDOA | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.040 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.770 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.10 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.960 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.440 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.30 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.70 | ng/mL0 | | |
| | 13C8-PFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.570 | ng/mL0 | | |
| | D5-NETFOSAA | 4.630 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0094L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | D7-NMEFOSE0 | 19.50 | ng/mL | 0 | |
| | D9-NETFOSE0 | 18.60 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.620 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 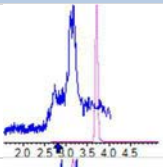 | 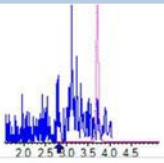 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 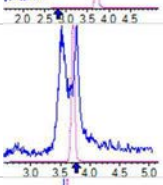 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 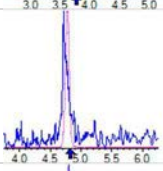 | 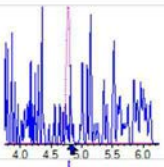 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 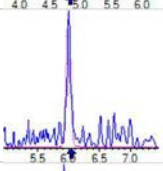 | 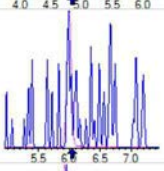 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 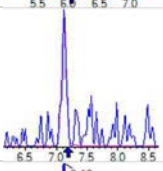 | 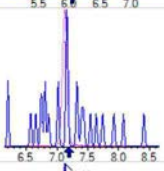 | |
| PFOA | ( 413.0 / 369.0 )<br>13637<br>( 413.0 / 169.0 )<br>6334 | ( 8.12 , 1.00 )<br>( 0.00 , N/A , -0.8) | 18.3<br>46.8 | 0.4644<br>127.1<br>135.3 | 0.0113 | N/A | 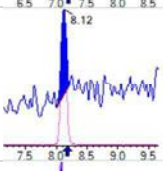 | 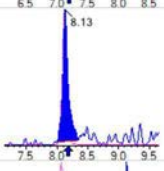 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 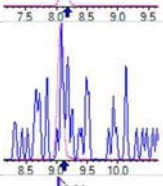 | 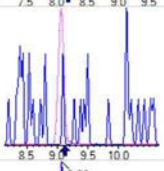 | |
| PFDA | ( 513.0 / 469.0 )<br>4646<br>( 513.0 / 169.0 )<br>996 | ( 9.94 , 1.00 )<br>( -0.02 , N/A , -2.0) | 61.2<br>164.4 | 0.2145<br>183.0<br>179.2 | 0.0166 | N/A | 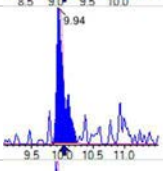 | 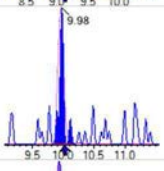 | IR2, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 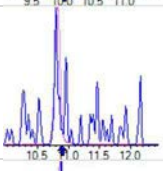 | 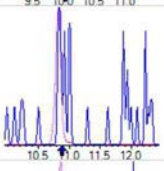 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 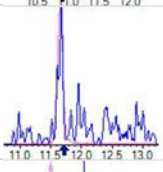 | 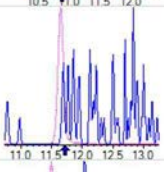 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 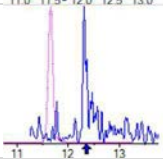 | 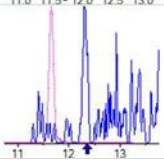 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 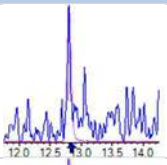 | 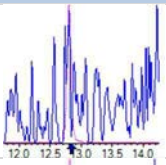 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 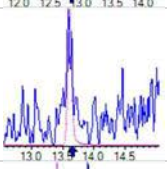 | 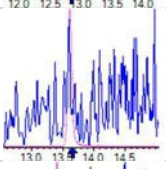 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 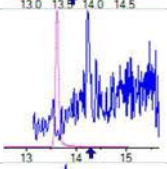 | 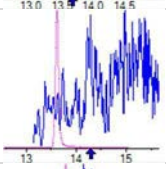 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 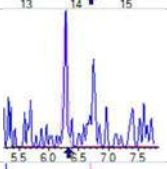 | 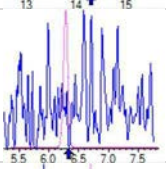 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 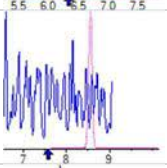 | 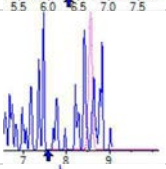 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 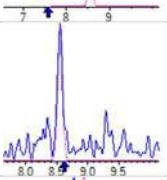 | 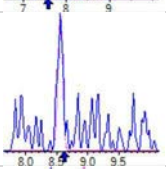 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 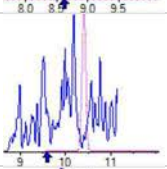 | 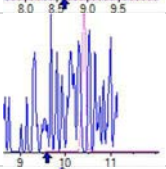 | |
| PFOS | ( 499.0 / 80.0 )<br>8916<br>( 499.0 / 99.0 )<br>2079 | ( 10.41 , 1.00 )<br>( 0.00 , N/A , -0.5) | 41.4<br>168.0 | 0.2331<br>99.7<br>97.1 | 0.0104 | N/A | 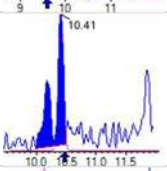 | 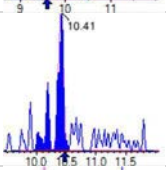 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 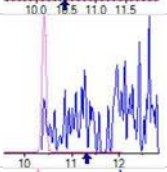 | 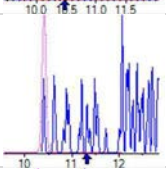 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 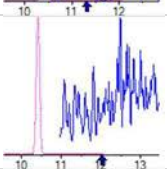 | 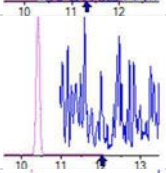 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 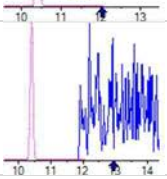 | 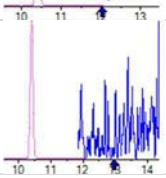 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 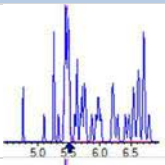 | 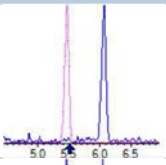 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 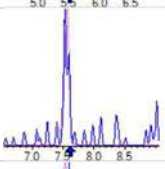 | 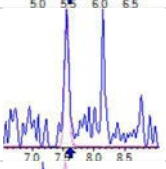 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 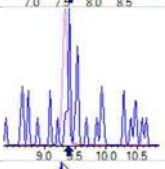 | 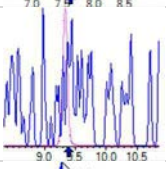 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15745<br>( 627.0 / 81.0 )<br>18532 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.3) | 164.1<br>43.8 | 1.1770<br>81.8<br>80.7 | 0.0645 | N/A | 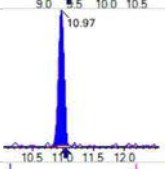 | 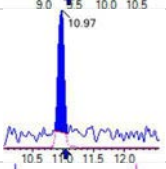 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 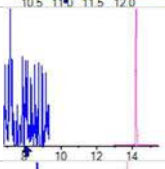 | 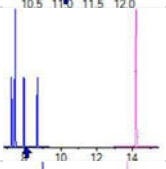 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 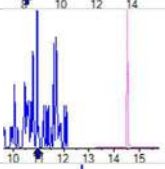 | 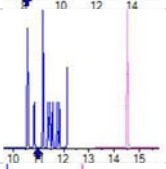 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 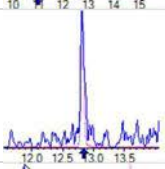 | 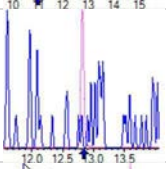 | |
| TFSI | ( 279.7 / 147.0 )<br>27475<br>( 279.7 / 211.0 )<br>1556 | ( 8.12 , 0.63 )<br>( N/A , -0.06 , 0.8) | 22.0<br>11.1 | 0.0567<br>67.4<br>66.2 | 0.0165 | N/A | 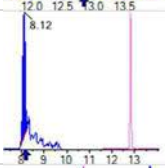 | 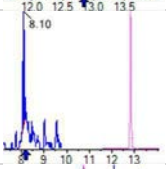 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 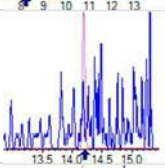 | 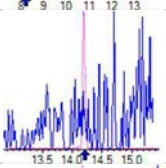 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 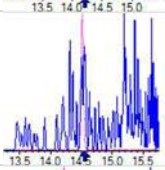 | 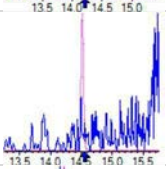 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 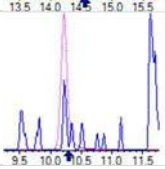 | 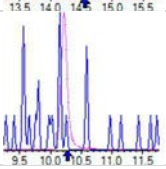 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 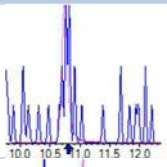 | 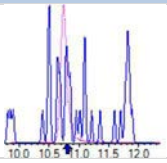 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 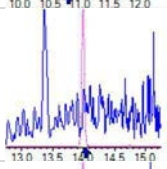 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 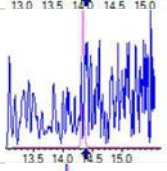 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 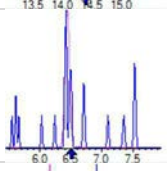 | 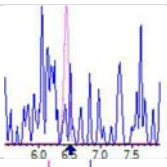 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 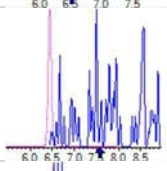 | 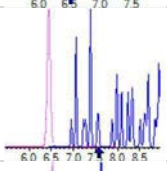 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 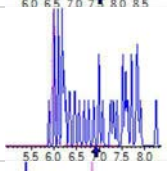 | 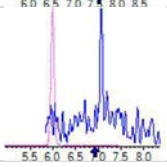 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 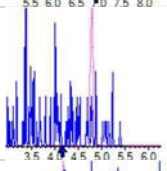 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 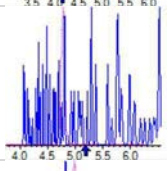 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 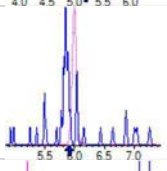 | 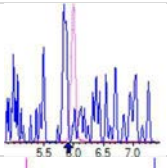 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 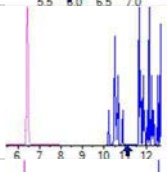 | 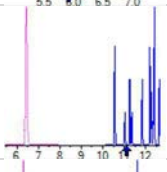 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 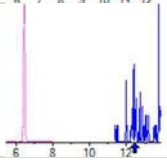 | 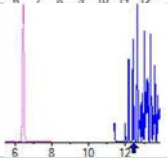 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 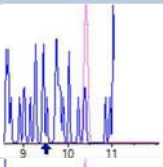 | 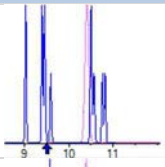 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 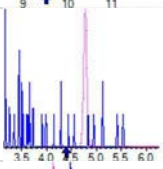 | 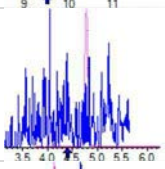 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 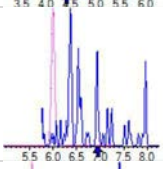 | 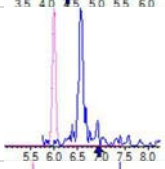 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 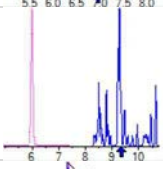 | 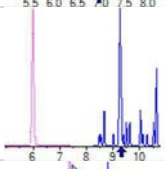 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4079<br>( 357.2 / 243.0 ) 585 | ( 6.72 , 1.00 ) ( -0.01 , N/A , -1.6) | 36.5<br>9.1 | 0.1433<br>130.0<br>137.7 | 0.0127 | N/A | 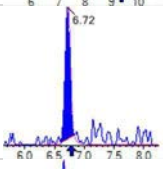 | 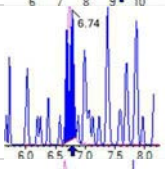 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 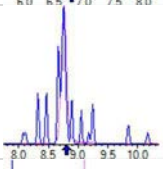 | 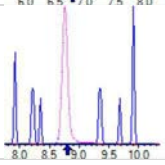 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 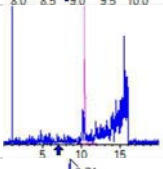 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261851 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 1337.6 | N/A | 1.0982<br>[ 1.0000 ] | 109.8%<br>{ 110.7% } | 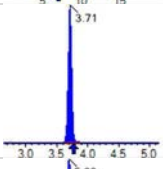 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122225 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 1949.5 | N/A | 0.9635<br>[ 1.0000 ] | 96.3%<br>{ 96.5% } | 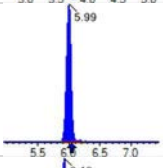 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378012 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 4414.7 | N/A | 0.9562<br>[ 1.0000 ] | 95.6%<br>{ 99.6% } | 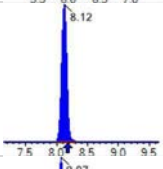 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 243570 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8564<br>[ 1.0000 ] | 85.6%<br>{ 86.6% } | 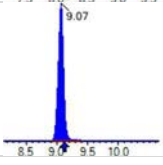 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 249043 | ( 9.97 , N/A ) ( N/A , -0.06 , N/A ) | 13496.6 | N/A | 0.8528 [ 1.0000 ] | 85.3% { 86.1% } | 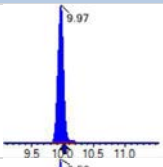 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 860348 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4025.5 | N/A | 0.9066 [ 1.0000 ] | 90.7% { 92.2% } | 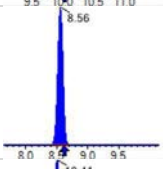 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 676863 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2296.0 | N/A | 0.8887 [ 1.0000 ] | 88.9% { 95.1% } | 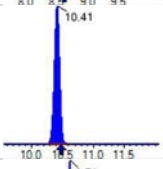 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2361568 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 42554.0 | N/A | 7.8946 [ 8.0000 ] | 98.7% { 105.5% } | 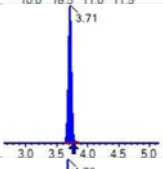 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 850898 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5022.0 | N/A | 3.7311 [ 4.0000 ] | 93.3% { 87.2% } | 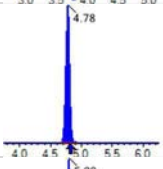 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 533907 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 10215.7 | N/A | 1.9145 [ 2.0000 ] | 95.7% { 90.5% } | 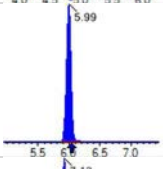 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 584136 | ( 7.12 , N/A ) ( N/A , -0.05 , N/A ) | 6396.9 | N/A | 1.8830 [ 2.0000 ] | 94.1% { 89.0% } | 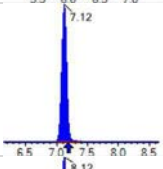 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 770117 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2454.9 | N/A | 1.9014 [ 2.0000 ] | 95.1% { 89.3% } | 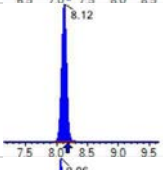 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 240789 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 3328.3 | N/A | 1.0082 [ 1.0000 ] | 100.8% { 89.2% } | 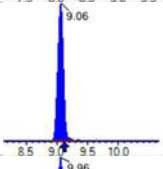 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 273272 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1159.4 | N/A | 0.9791 [ 1.0000 ] | 97.9% { 84.9% } | 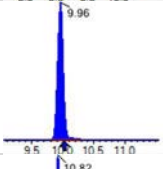 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 344337 | ( 10.82 , N/A ) ( N/A , -0.06 , N/A ) | 928.5 | N/A | 1.0487 [ 1.0000 ] | 104.9% { 92.6% } | 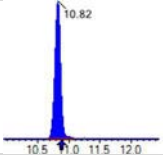 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (37)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 343936 | ( 11.65 , N/A ) ( N/A , -0.06 , N/A ) | 1056.5 | N/A | 1.0286 [ 1.0000 ] | 102.9% { 92.2% } | 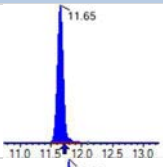 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295022 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1239.8 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 90.4% } | 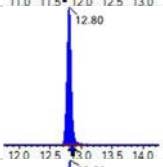 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 429520 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2258.1 | N/A | 1.7668 [ 2.0000 ] | 88.3% { 85.0% } | 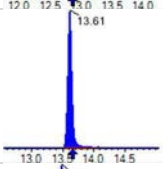 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1603797 | ( 6.28 , N/A ) ( N/A , -0.05 , N/A ) | 990.1 | N/A | 2.0632 [ 2.0000 ] | 103.2% { 95.6% } | 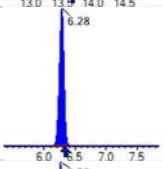 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1303820 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4967.6 | N/A | 2.1014 [ 2.0000 ] | 105.1% { 98.9% } | 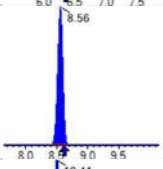 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1479061 | ( 10.41 , N/A ) ( N/A , -0.07 , N/A ) | 1616.5 | N/A | 2.0266 [ 2.0000 ] | 101.3% { 95.5% } | 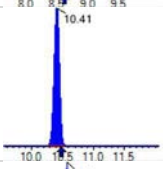 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 665228 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 97.6 | N/A | 4.9601 [ 4.0000 ] | 124.0% { 112.9% } | 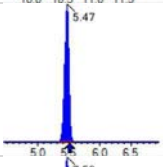 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1780844 | ( 7.56 , N/A ) ( N/A , -0.05 , N/A ) | 4514.1 | N/A | 4.4369 [ 4.0000 ] | 110.9% { 106.8% } | 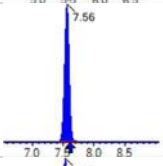 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1354290 | ( 9.34 , N/A ) ( N/A , -0.06 , N/A ) | 1695.0 | N/A | 4.3022 [ 4.0000 ] | 107.6% { 99.0% } | 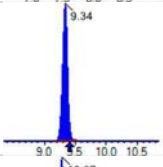 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2534783 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1126.8 | N/A | 7.7049 [ 8.0000 ] | 96.3% { 99.3% } | 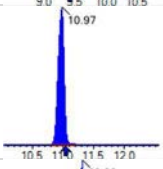 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1264522 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 2176.7 | N/A | 1.9552 [ 2.0000 ] | 97.8% { 92.0% } | 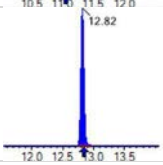 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 260773 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1698.6 | N/A | 1.9011 [ 2.0000 ] | 95.1% { 90.5% } | 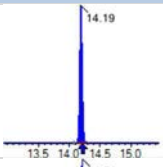  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 281981 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2400.9 | N/A | 1.9169 [ 2.0000 ] | 95.8% { 91.9% } | 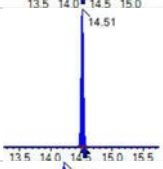  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 857289 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 2460.4 | N/A | 4.5653 [ 4.0000 ] | 114.1% { 101.4% } | 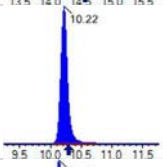  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792921 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1959.0 | N/A | 4.6330 [ 4.0000 ] | 115.8% { 103.0% } | 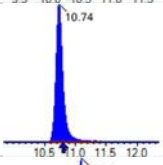  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1199404 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 2280.1 | N/A | 19.4572 [ 20.0000 ] | 97.3% { 87.3% } | 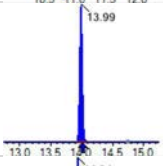  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1160864 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 4100.8 | N/A | 18.5541 [ 20.0000 ] | 92.8% { 90.0% } | 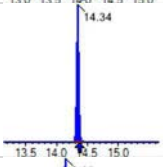  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 967466 | ( 6.44 , N/A ) ( N/A , -0.05 , N/A ) | 2453.2 | N/A | 7.6157 [ 8.0000 ] | 95.2% { 94.6% } | 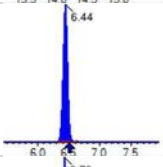  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603151 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1238.1 | N/A | 2.2338 [ 2.0000 ] | 111.7% { 97.8% } | 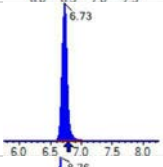  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 530105 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 742.7 | N/A | 2.1566 [ 2.0000 ] | 107.8% { 95.8% } | 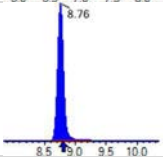  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 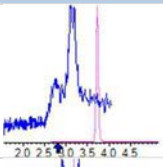 | 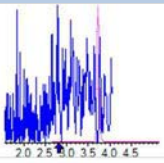 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 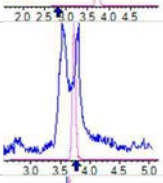 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 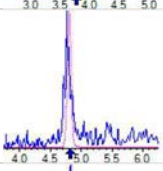 | 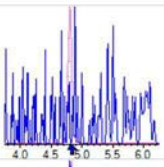 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 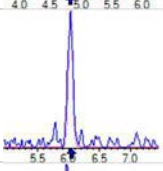 | 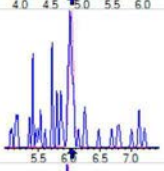 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 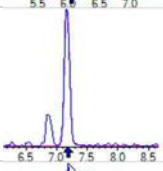 | 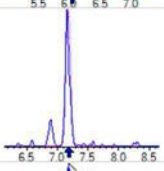 | |
| PFOA | ( 413.0 / 369.0 )<br>3210508<br>( 413.0 / 169.0 )<br>1253633 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.1) | 390.5<br>334.5 | 0.3905<br>106.8<br>113.7 | 7.3269 | N/A | 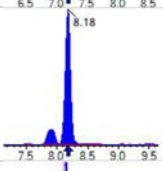 | 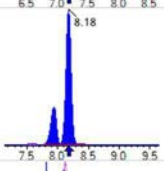 | MI4 ABK 3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 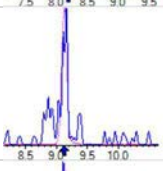 | 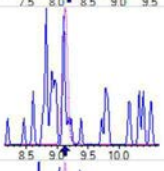 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 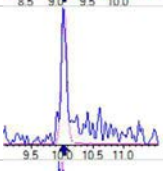 | 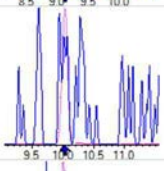 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 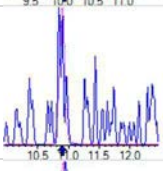 | 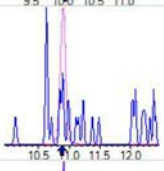 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 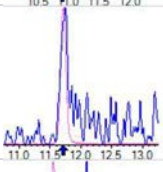 | 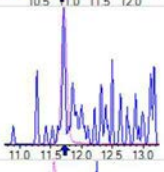 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 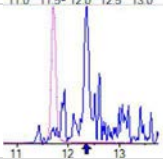 | 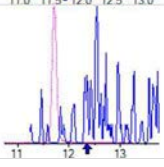 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 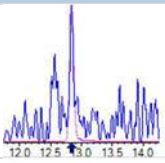 | 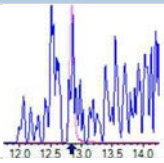 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 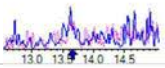 | 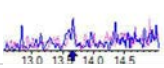 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 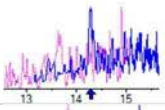 | 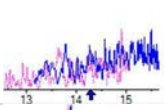 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 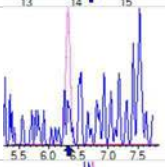 | 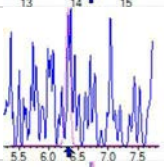 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 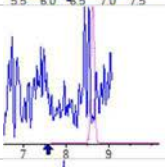 | 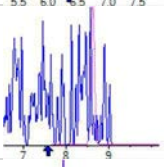 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 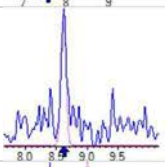 | 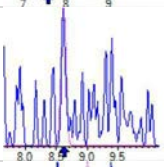 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 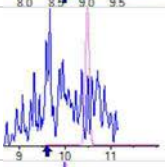 | 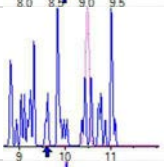 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 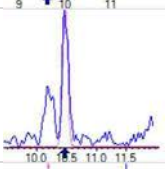 | 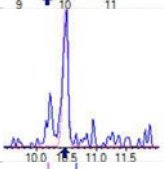 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 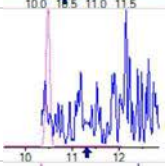 | 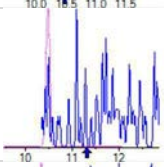 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 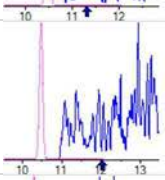 | 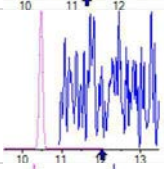 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 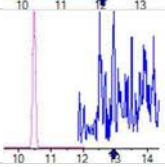 | 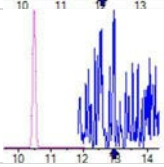 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 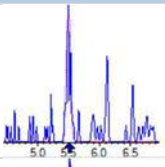 | 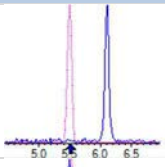 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 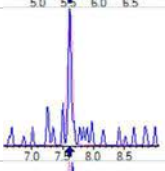 | 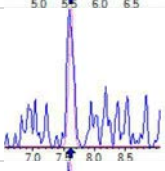 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 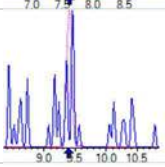 | 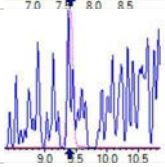 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 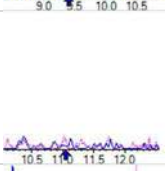 | 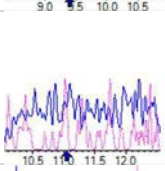 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 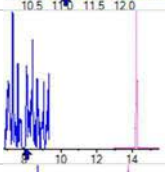 | 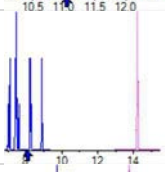 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 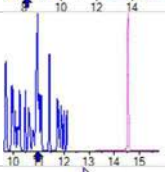 | 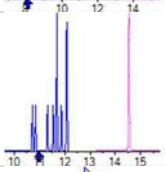 | |
| PFOSA | ( 498.0 / 78.0 )<br>6877109<br>( 498.0 / 478.0 )<br>99030 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 429.6<br>334.5 | 0.0144<br>102.6<br>96.7 | 9.4296 | N/A | 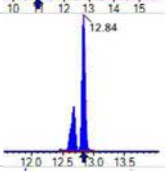 | 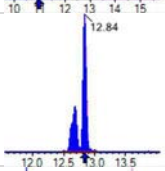 | MI4 ABK 3/19/24 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 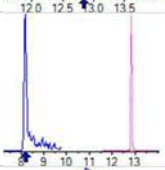 | 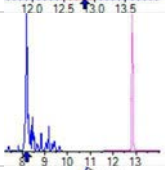 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1285923<br>( 512.0 / 169.0 )<br>940847 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.8) | 3496.8<br>1493.3 | 0.7317<br>97.8<br>96.5 | 8.5401 | N/A | 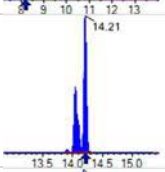 | 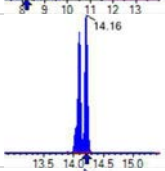 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>1506523<br>( 526.0 / 169.0 )<br>1906366 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.0) | 3724.9<br>3295.0 | 1.2654<br>102.5<br>101.9 | 8.4436 | N/A | 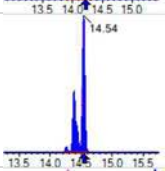 | 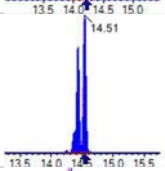 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 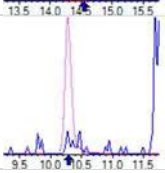 | 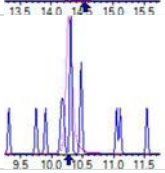 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 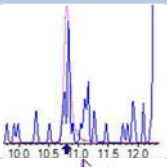 | 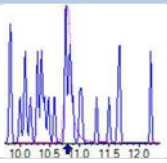 | |
| NMeFOSE | ( 616.0 / 59.0 ) 747241 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 1656.5 | N/A<br>0.0<br>0.0 | 9.5158 | N/A | 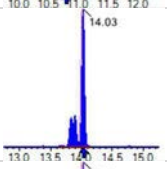 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 614232 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 2466.7 | N/A<br>0.0<br>0.0 | 9.4444 | N/A | 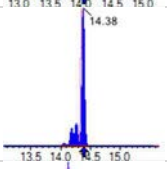 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 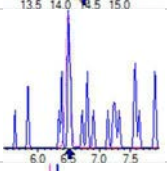 | 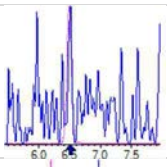 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 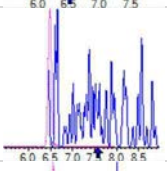 | 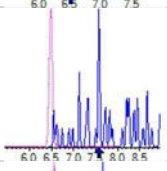 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 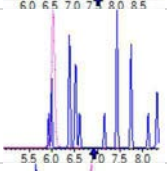 | 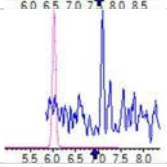 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 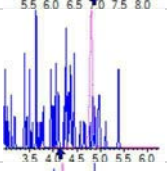 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 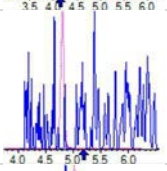 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 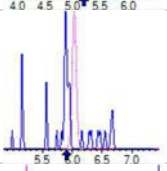 | 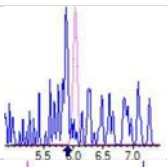 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 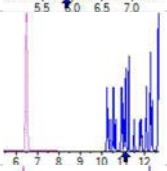 | 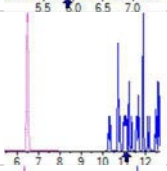 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 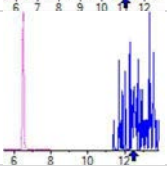 | 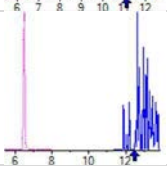 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 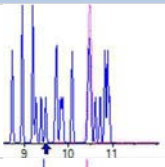 | 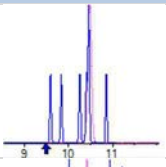 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 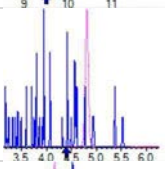 | 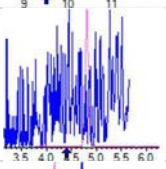 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 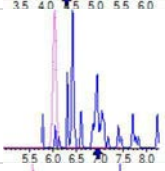 | 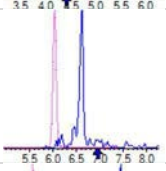 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 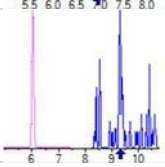 | 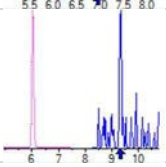 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 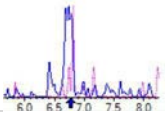 | 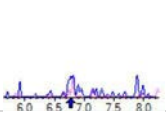 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 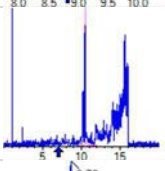 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261979 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1320.1 | N/A | 1.0987<br>[ 1.0000 ] | 109.9%<br>{ 110.8% } | 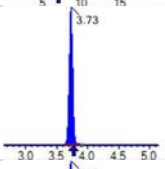 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122507 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 105609.8 | N/A | 0.9657<br>[ 1.0000 ] | 96.6%<br>{ 96.8% } | 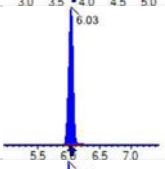 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379384 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 4686.4 | N/A | 0.9597<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 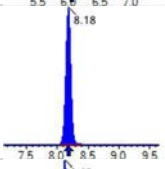 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 269870 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 731.1 | N/A | 0.9489<br>[ 1.0000 ] | 94.9%<br>{ 96.0% } | 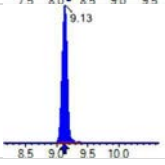 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281459 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3561.4 | N/A | 0.9638 [ 1.0000 ] | 96.4% { 97.3% } | 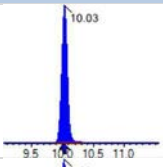 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 857437 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6887.8 | N/A | 0.9035 [ 1.0000 ] | 90.3% { 91.9% } | 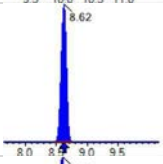 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 685748 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1960.7 | N/A | 0.9004 [ 1.0000 ] | 90.0% { 96.3% } | 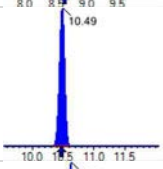 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2587544 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 42428.4 | N/A | 8.6458 [ 8.0000 ] | 108.1% { 115.6% } | 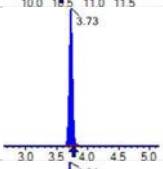 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1010634 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 6226.7 | N/A | 4.4214 [ 4.0000 ] | 110.5% { 103.6% } | 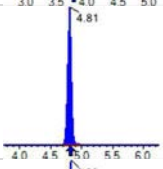 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 607029 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 8072.2 | N/A | 2.1717 [ 2.0000 ] | 108.6% { 102.9% } | 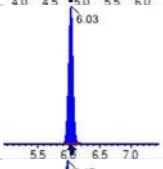 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 655104 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5211.4 | N/A | 2.1069 [ 2.0000 ] | 105.3% { 99.8% } | 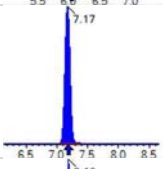 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 888575 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 3594.6 | N/A | 2.1859 [ 2.0000 ] | 109.3% { 103.1% } | 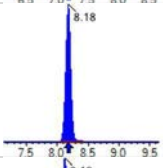 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 277647 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 2559.1 | N/A | 1.0493 [ 1.0000 ] | 104.9% { 102.9% } | 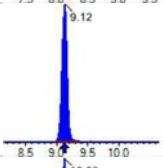 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331598 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 999.2 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 103.1% } | 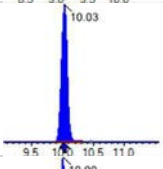 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393599 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 1043.4 | N/A | 1.0607 [ 1.0000 ] | 106.1% { 105.8% } | 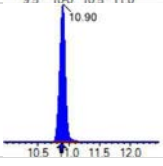 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392681 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 960.1 | N/A | 1.0391 [ 1.0000 ] | 103.9% { 105.3% } | 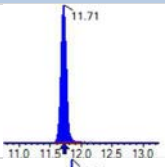 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327075 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1060.3 | N/A | 1.0163 [ 1.0000 ] | 101.6% { 100.2% } | 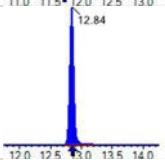 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729415 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1189.6 | N/A | 2.2324 [ 2.0000 ] | 111.6% { 103.1% } | 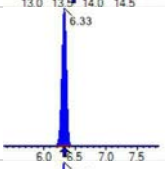 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1348867 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4105.7 | N/A | 2.1814 [ 2.0000 ] | 109.1% { 102.3% } | 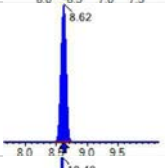 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1602565 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1826.7 | N/A | 2.1674 [ 2.0000 ] | 108.4% { 103.4% } | 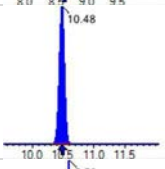 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 709206 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 97.6 | N/A | 5.3060 [ 4.0000 ] | 132.7% { 120.4% } | 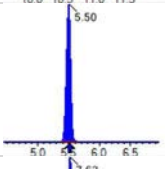 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1825907 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 3054.8 | N/A | 4.5647 [ 4.0000 ] | 114.1% { 109.5% } | 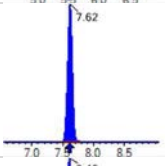 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1614348 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1240.5 | N/A | 5.1458 [ 4.0000 ] | 128.6% { 118.0% } | 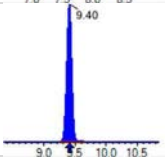 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1458588 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2083.8 | N/A | 2.2261 [ 2.0000 ] | 111.3% { 106.2% } | 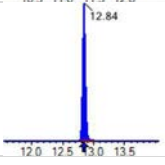 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 303300 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2184.5 | N/A | 2.1824 [ 2.0000 ] | 109.1% { 105.3% } | 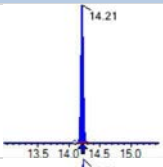  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 318629 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2334.3 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 103.9% } | 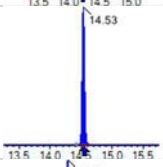  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 884165 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2410.3 | N/A | 4.6474 [ 4.0000 ] | 116.2% { 104.6% } | 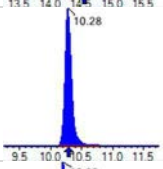  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 837390 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1815.5 | N/A | 4.8294 [ 4.0000 ] | 120.7% { 108.7% } | 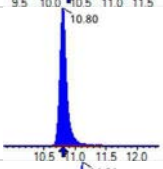  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1431759 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1901.3 | N/A | 22.9256 [ 20.0000 ] | 114.6% { 104.2% } | 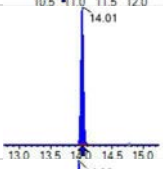  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1464004 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4722.6 | N/A | 23.0960 [ 20.0000 ] | 115.5% { 113.5% } | 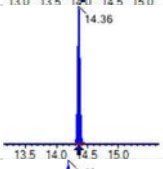  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068447 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2382.1 | N/A | 8.3913 [ 8.0000 ] | 104.9% { 104.5% } | 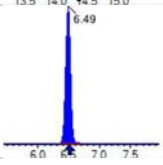  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 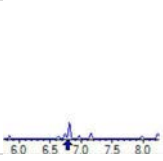 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 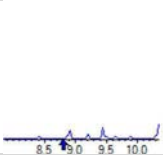 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (5)
Acquired: 2024/03/19 - 17:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26550<br>( 499.0 / 99.0 ) N/A | ( 9.89 , 0.94 ) ( -0.60 , N/A , #Value!) | 7.8 | N/A<br>0.0<br>0.0 | 0.0297 | N/A | 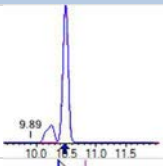 | 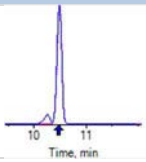 | |
| TDCA | ( 499.0 / 80.0 ) 7504397 | ( 7.03 , 0.67 ) ( N/A , #Value! , 0.0) | 33165.9 | N/A<br>0.0<br>0.0 | 12.3258 | N/A | 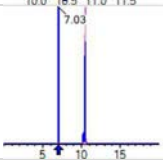 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.89 - 7.03 = 2.87 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | NDa | 0.15a | 0.40a | Ua |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0642a | 0.064a | 0.40a | MI3, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 30716<br>( 163.0 / 69.0 ) 794 | ( 2.79 , 0.75 )<br>( N/A , 0.00 , -0.4) | 147.1<br>54.0 | 0.0259<br>95.2<br>98.1 | 0.0941 | N/A | 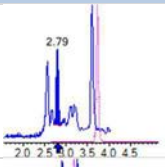 | 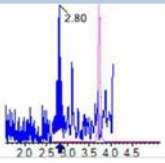 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 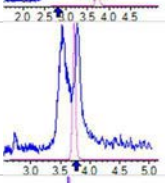 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 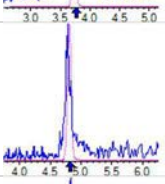 | 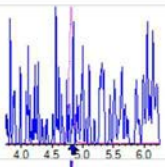 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 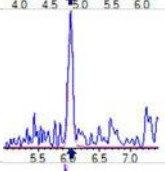 | 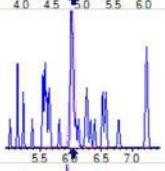 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 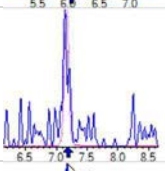 | 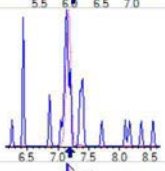 | |
| PFOA | ( 413.0 / 369.0 ) 17745<br>( 413.0 / 169.0 ) 7655 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 1.1) | 23.5<br>55.2 | 0.4314<br>118.0<br>125.7 | 0.0164 | N/A | 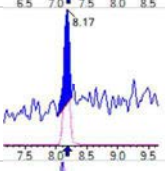 | 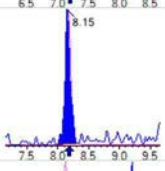 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 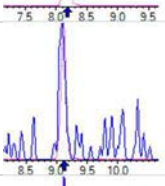 | 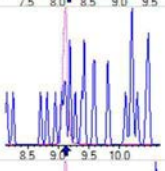 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 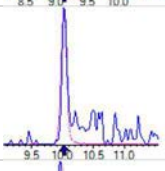 | 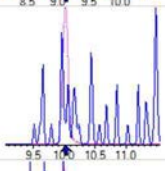 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 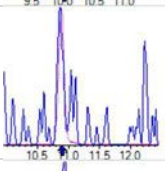 | 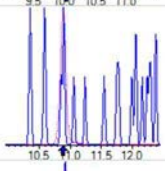 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 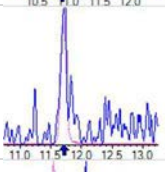 | 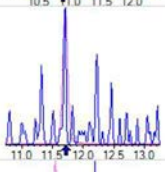 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 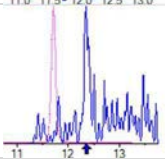 | 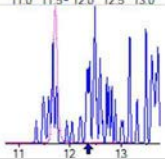 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 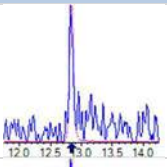 | 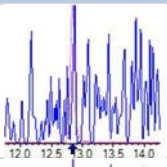 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 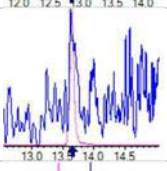 | 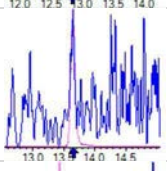 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 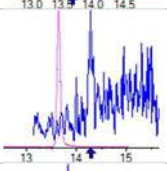 | 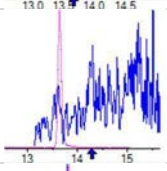 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 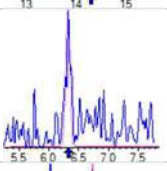 | 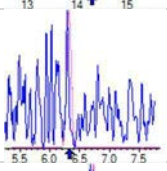 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 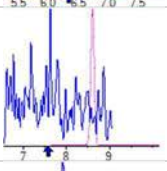 | 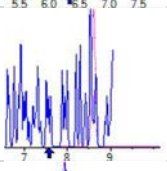 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 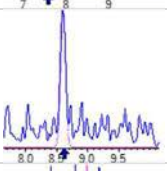 | 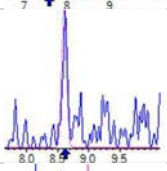 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 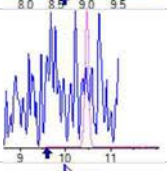 | 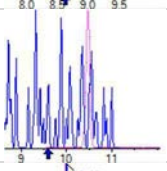 | |
| PFOS | ( 499.0 / 80.0 )<br>15016<br>( 499.0 / 99.0 )<br>3667 | ( 10.46 , 1.00 )<br>( -0.01 , N/A , 0.1) | 62.6<br>243.6 | 0.2442<br>104.5<br>101.7 | 0.0160 | N/A | 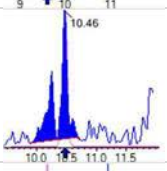 | 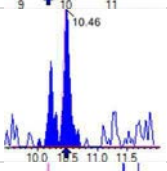 | MI3 ABK<br>3/19/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 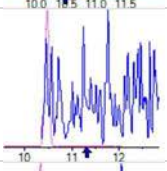 | 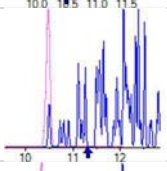 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 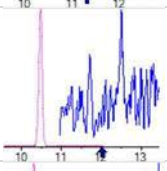 | 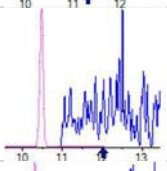 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 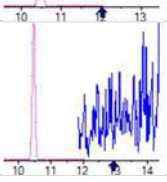 | 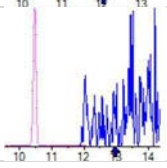 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 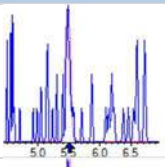 | 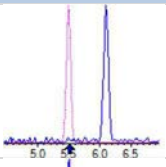 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 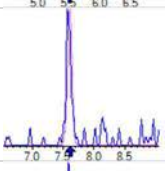 | 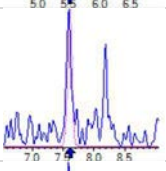 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 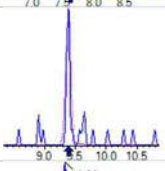 | 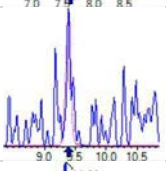 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15591<br>( 627.0 / 81.0 )<br>23976 | ( 11.03 , 1.00 )<br>( 0.00 , N/A , 0.0) | 258.3<br>70.5 | 1.5378<br>106.8<br>105.4 | 0.0540 | N/A | 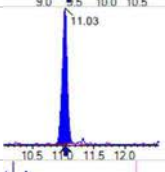 | 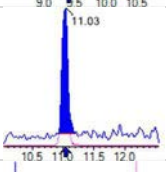 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 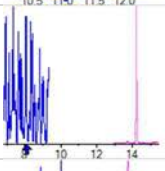 | 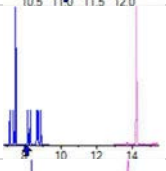 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 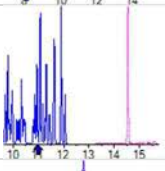 | 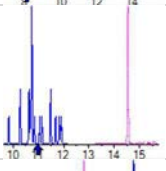 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 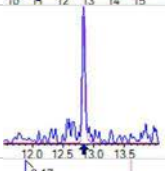 | 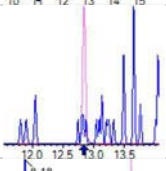 | |
| TFSI | ( 279.7 / 147.0 )<br>31503<br>( 279.7 / 211.0 )<br>3480 | ( 8.17 , 0.64 )<br>( N/A , -0.01 , -0.4) | 22.0<br>10.2 | 0.1105<br>131.5<br>129.1 | 0.0424 | N/A | 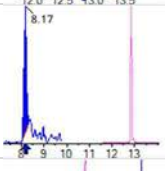 | 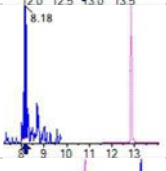 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 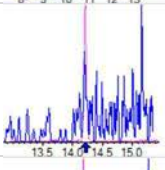 | 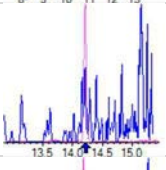 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 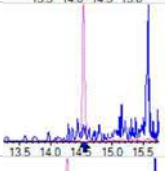 | 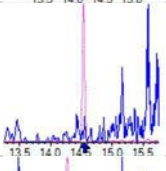 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 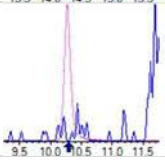 | 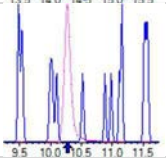 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 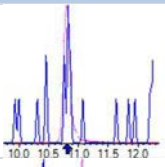 | 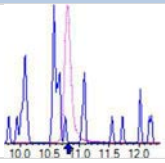 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 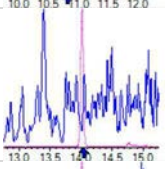 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 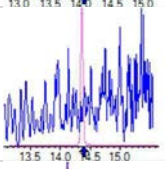 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 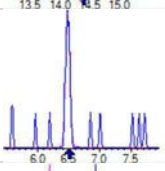 | 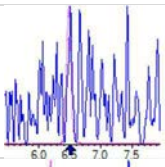 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 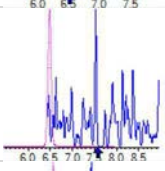 | 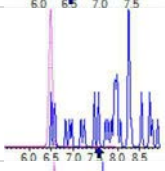 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 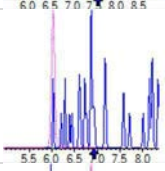 | 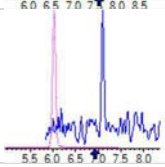 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 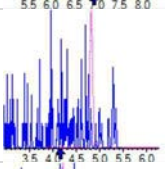 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 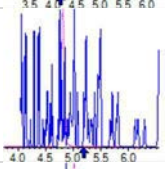 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 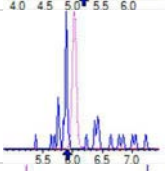 | 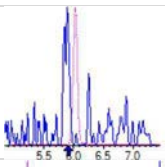 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 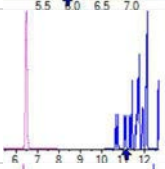 | 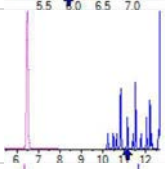 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 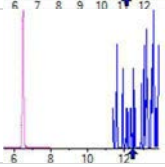 | 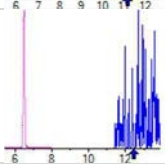 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 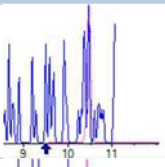 | 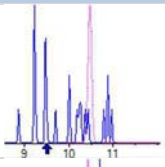 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 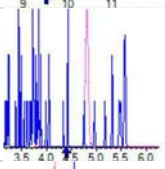 | 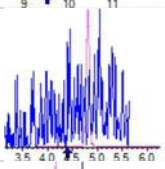 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 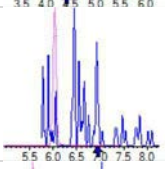 | 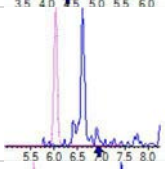 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 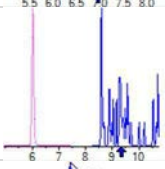 | 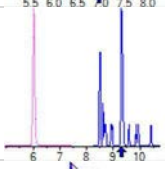 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>6111<br>( 357.2 / 243.0 )<br>1079 | ( 6.76 , 1.00 )<br>( -0.01 , N/A , 1.0) | 57.6<br>23.3 | 0.1765<br>160.1<br>169.6 | 0.0166 | N/A | 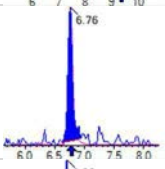 | 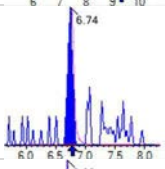 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>2987<br>( 457.2 / 343.0 )<br>271 | ( 8.80 , 1.00 )<br>( 0.00 , N/A , 0.2) | 50.7<br>994.1 | 0.0908<br>219.0<br>200.3 | 0.0122 | N/A | 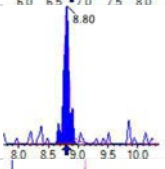 | 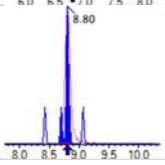 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 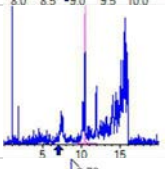 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>269451 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1284.1 | N/A | 1.1301<br>[ 1.0000 ] | 113.0%<br>{ 113.9% } | 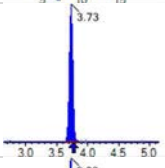 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>124700 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 21374.7 | N/A | 0.9830<br>[ 1.0000 ] | 98.3%<br>{ 98.5% } | 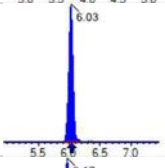 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>399378 | ( 8.17 , N/A )<br>( N/A , -0.01 , N/A ) | 2972.8 | N/A | 1.0103<br>[ 1.0000 ] | 101.0%<br>{ 105.3% } | 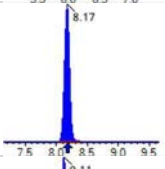 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>287211 | ( 9.11 , N/A )<br>( N/A , 0.00 , N/A ) | 881.2 | N/A | 1.0099<br>[ 1.0000 ] | 101.0%<br>{ 102.1% } | 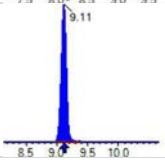 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273214 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 11747.2 | N/A | 0.9356 [ 1.0000 ] | 93.6% { 94.4% } | 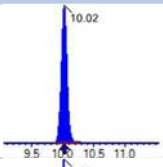 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 915276 | ( 8.61 , N/A ) ( N/A , -0.01 , N/A ) | 5214.4 | N/A | 0.9644 [ 1.0000 ] | 96.4% { 98.1% } | 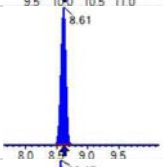 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 747632 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2282.9 | N/A | 0.9816 [ 1.0000 ] | 98.2% { 105.0% } | 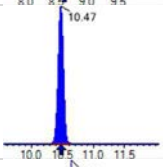 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2769353 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 43154.2 | N/A | 8.9967 [ 8.0000 ] | 112.5% { 123.7% } | 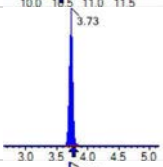 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1031291 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 5289.8 | N/A | 4.4324 [ 4.0000 ] | 110.8% { 105.7% } | 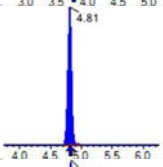 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 626257 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 8500.0 | N/A | 2.2011 [ 2.0000 ] | 110.1% { 106.1% } | 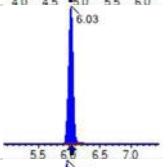 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 665371 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 3884.4 | N/A | 2.1023 [ 2.0000 ] | 105.1% { 101.4% } | 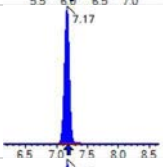 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879344 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 3101.2 | N/A | 2.0549 [ 2.0000 ] | 102.7% { 102.0% } | 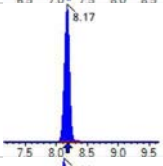 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294542 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 4973.4 | N/A | 1.0459 [ 1.0000 ] | 104.6% { 109.1% } | 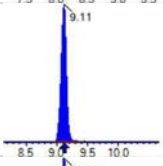 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 346207 | ( 10.02 , N/A ) ( N/A , -0.01 , N/A ) | 990.7 | N/A | 1.1307 [ 1.0000 ] | 113.1% { 107.6% } | 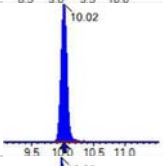 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 402327 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 1001.9 | N/A | 1.1169 [ 1.0000 ] | 111.7% { 108.2% } | 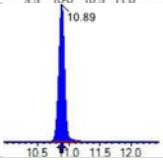 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-BLK1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389079 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1526.5 | N/A | 1.0606 [ 1.0000 ] | 106.1% { 104.3% } | 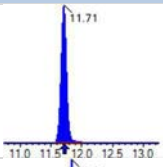  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327472 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1268.0 | N/A | 1.0482 [ 1.0000 ] | 104.8% { 100.3% } | 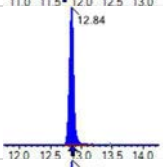  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 407836 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2082.9 | N/A | 1.5292 [ 2.0000 ] | 76.5% { 80.7% } | 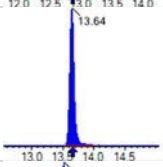  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1882946 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 939.2 | N/A | 2.2770 [ 2.0000 ] | 113.8% { 112.2% } | 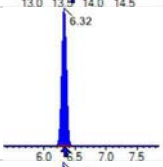  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1466173 | ( 8.61 , N/A ) ( N/A , -0.01 , N/A ) | 3513.9 | N/A | 2.2213 [ 2.0000 ] | 111.1% { 111.2% } | 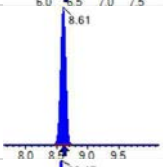  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1620943 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1956.4 | N/A | 2.0108 [ 2.0000 ] | 100.5% { 104.6% } | 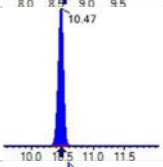  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 721238 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 94.3 | N/A | 5.0550 [ 4.0000 ] | 126.4% { 122.4% } | 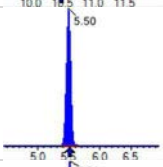  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2065310 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3922.4 | N/A | 4.8369 [ 4.0000 ] | 120.9% { 123.9% } | 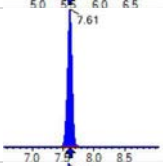  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1519397 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1897.0 | N/A | 4.5371 [ 4.0000 ] | 113.4% { 111.1% } | 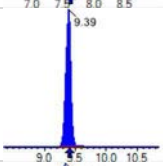  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2997464 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1700.0 | N/A | 8.5645 [ 8.0000 ] | 107.1% { 117.4% } | 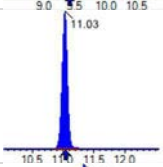  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 563824 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2260.2 | N/A | 0.7893 [ 2.0000 ] | 39.5% { 41.0% } | 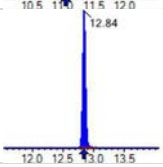  | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 77970 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 674.2 | N/A | 0.5146 [ 2.0000 ] | 25.7% { 27.1% } | 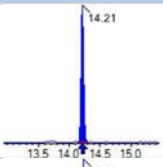  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 90560 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 874.2 | N/A | 0.5574 [ 2.0000 ] | 27.9% { 29.5% } | 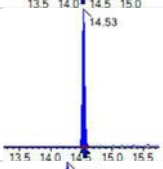  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 885593 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2682.6 | N/A | 4.2697 [ 4.0000 ] | 106.7% { 104.7% } | 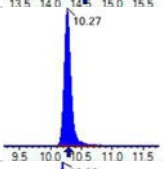  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 831653 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1770.6 | N/A | 4.3993 [ 4.0000 ] | 110.0% { 108.0% } | 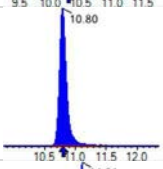  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 409433 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 861.1 | N/A | 6.0133 [ 20.0000 ] | 30.1% { 29.8% } | 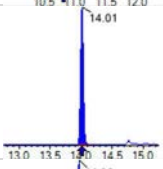  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 420606 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2415.7 | N/A | 6.0862 [ 20.0000 ] | 30.4% { 32.6% } | 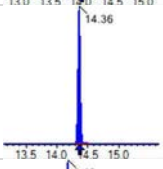  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1039084 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 1834.7 | N/A | 8.0171 [ 8.0000 ] | 100.2% { 101.6% } | 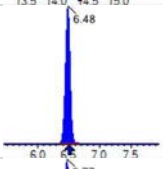  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 692753 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1167.2 | N/A | 2.3387 [ 2.0000 ] | 116.9% { 112.3% } | 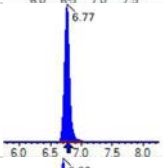  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 602760 | ( 8.80 , N/A ) ( N/A , 0.00 , N/A ) | 790.3 | N/A | 2.2353 [ 2.0000 ] | 111.8% { 109.0% } | 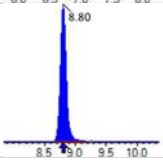  | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BS1a | File ID:a | S2024-03-19B (9)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:13a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 15.5a | 0.21a | 1.6a | |
| PFPeAa | 8.54a | 0.065a | 0.80a | |
| PFHxAa | 3.96a | 0.055a | 0.40a | |
| PFHpAa | 4.20a | 0.041a | 0.40a | |
| PFOAa | 4.39a | 0.15a | 0.40a | |
| PFNAa | 4.27a | 0.082a | 0.40a | |
| PFDAa | 3.96a | 0.10a | 0.40a | |
| PFUnAa | 4.34a | 0.16a | 0.40a | |
| PFDoAa | 4.22a | 0.11a | 0.40a | |
| PFTrDAa | 4.20a | 0.20a | 0.40a | |
| PFTeDAa | 4.43a | 0.20a | 0.40a | |
| PFHxDAa | 4.38a | 0.20a | 0.40a | |
| PFODAa | 3.97a | 0.20a | 0.40a | |
| PFBSa | 3.60a | 0.037a | 0.40a | |
| PFPeSa | 4.01a | 0.063a | 0.40a | |
| PFHxSa | 3.72a | 0.032a | 0.40a | |
| PFHpSa | 4.17a | 0.051a | 0.40a | |
| PFOSa | 3.78a | 0.064a | 0.40a | |
| PFNSa | 4.00a | 0.12a | 0.40a | |
| PFDSa | 4.08a | 0.15a | 0.40a | |
| PFDoSa | 3.73a | 0.12a | 0.40a | |
| 4:2FTSa | 15.9a | 0.29a | 1.6a | |
| 6:2FTSa | 16.5a | 0.31a | 1.6a | |
| 8:2FTSa | 16.8a | 0.082a | 1.6a | |
| 10:2FTSa | 16.9a | 0.40a | 1.6a | |
| PFOSAa | 4.55a | 0.10a | 0.40a | |
| NMeFOSAa | 17.5a | 0.47a | 1.6a | |
| NEtFOSAa | 16.7a | 0.41a | 1.6a | |
| NMeFOSAAa | 4.28a | 0.11a | 0.40a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BS1a | File ID:a | S2024-03-19B (9)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:13a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.8a | 1.0a | 1.6a | |
| NEtFOSEa | 17.6a | 1.0a | 1.6a | |
| HFPO-DAa | 4.20a | 0.17a | 0.80a | |
| ADONAa | 4.05a | 0.12a | 0.80a | |
| PFEESAa | 7.47a | 0.11a | 0.80a | |
| PFMPAa | 9.00a | 0.054a | 0.80a | |
| PFMBAa | 8.26a | 0.091a | 0.80a | |
| NFDHAa | 8.02a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.95a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 4.05a | 0.21a | 0.80a | |
| 3:3FTCAa | 14.6a | 0.57a | 1.6a | |
| 5:3FTCAa | 15.3a | 0.44a | 1.6a | |
| 7:3FTCAa | 14.0a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 658522<br>( 163.0 / 69.0 ) 17345 | ( 2.80 , 0.75 ) ( N/A , 0.00 , 0.0) | 3782.6<br>913.1 | 0.0263<br>97.0<br>99.9 | 2.0310<br>[ 2.0000 ] | 101.6% | 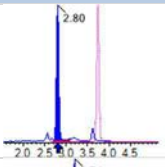 | 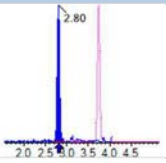 | |
| PFBA | ( 213.0 / 169.0 ) 1330184 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 592.3 | N/A<br>0.0<br>0.0 | 3.8808<br>[ 4.0000 ] | 97.0% | 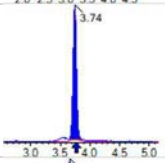 | | |
| PFPeA | ( 263.0 / 219.0 ) 568509<br>( 263.0 / 69.0 ) 6644 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.2) | 2367.4<br>104.8 | 0.0117<br>97.9<br>105.3 | 2.1340<br>[ 2.0000 ] | 106.7% | 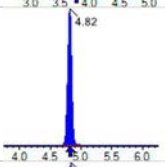 | 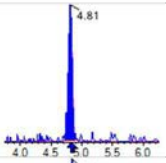 | |
| PFHxA | ( 313.0 / 269.0 ) 304333<br>( 313.0 / 119.0 ) 36503 | ( 6.03 , 1.00 ) ( 0.00 , N/A , -0.2) | 1124.1<br>413.2 | 0.1199<br>103.3<br>102.5 | 0.9901<br>[ 1.0000 ] | 99.0% | 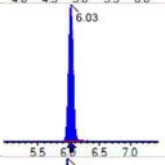 | 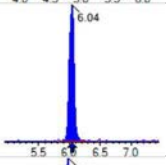 | |
| PFHpA | ( 363.0 / 319.0 ) 343879<br>( 363.0 / 169.0 ) 109244 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.0) | 1054.4<br>971.4 | 0.3177<br>104.8<br>107.6 | 1.0510<br>[ 1.0000 ] | 105.1% | 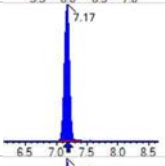 | 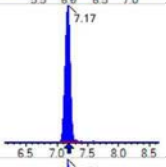 | |
| PFOA | ( 413.0 / 369.0 ) 485514<br>( 413.0 / 169.0 ) 170373 | ( 8.17 , 1.00 ) ( 0.00 , N/A , -0.1) | 373.5<br>597.1 | 0.3509<br>96.0<br>102.2 | 1.0975<br>[ 1.0000 ] | 109.8% | 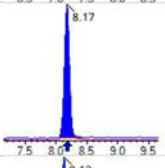 | 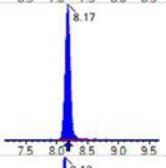 | |
| PFNA | ( 463.0 / 419.0 ) 311098<br>( 463.0 / 169.0 ) 74633 | ( 9.12 , 1.00 ) ( 0.00 , N/A , 0.0) | 934.1<br>648.9 | 0.2399<br>94.0<br>99.7 | 1.0680<br>[ 1.0000 ] | 106.8% | 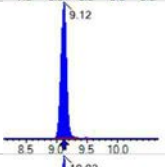 | 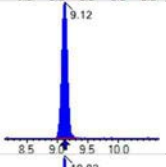 | |
| PFDA | ( 513.0 / 469.0 ) 362353<br>( 513.0 / 169.0 ) 43616 | ( 10.02 , 1.00 ) ( 0.00 , N/A , 0.1) | 1761.2<br>5662.8 | 0.1204<br>102.7<br>100.6 | 0.9892<br>[ 1.0000 ] | 98.9% | 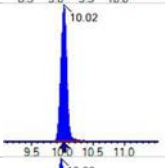 | 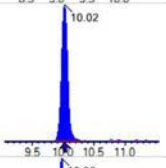 | |
| PFUnA | ( 563.0 / 519.0 ) 388756<br>( 563.0 / 169.0 ) 60684 | ( 10.88 , 1.00 ) ( 0.00 , N/A , 0.2) | 849.1<br>575.4 | 0.1561<br>110.1<br>109.8 | 1.0853<br>[ 1.0000 ] | 108.5% | 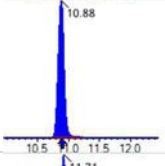 | 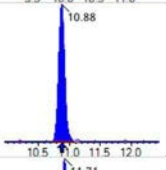 | |
| PFDoA | ( 613.0 / 569.0 ) 426340<br>( 613.0 / 169.0 ) 64905 | ( 11.71 , 1.00 ) ( 0.00 , N/A , -0.3) | 1209.7<br>402.6 | 0.1522<br>96.3<br>103.0 | 1.0554<br>[ 1.0000 ] | 105.5% | 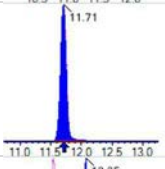 | 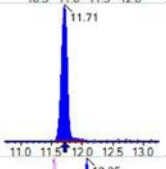 | |
| PFTrDA | ( 663.0 / 619.0 ) 414625<br>( 663.0 / 169.0 ) 107952 | ( 12.35 , 1.05 ) ( N/A , 0.00 , -0.1) | 1200.8<br>600.0 | 0.2604<br>101.2<br>100.5 | 1.0493<br>[ 1.0000 ] | 104.9% | 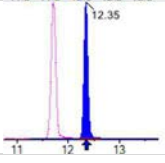 | 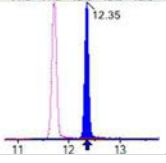 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 314966<br>( 713.0 / 169.0 ) 84892 | ( 12.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 1042.9<br>589.4 | 0.2695<br>99.9<br>101.4 | 1.1081<br>[ 1.0000 ] | 110.8% | 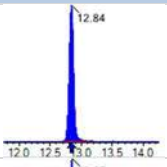 | 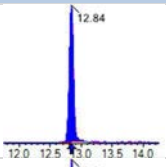 | |
| PFHxDA | ( 813.0 / 769.0 ) 211008<br>( 813.0 / 169.0 ) 49584 | ( 13.65 , 1.00 ) ( 0.00 , N/A , 0.1) | 1120.5<br>348.6 | 0.2350<br>96.0<br>92.0 | 1.0962<br>[ 1.0000 ] | 109.6% | 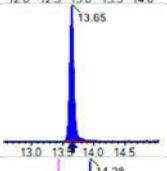 | 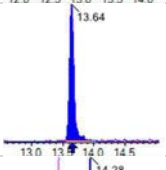 | |
| PFODA | ( 913.0 / 869.0 ) 119628<br>( 913.0 / 169.0 ) 38790 | ( 14.28 , 1.05 ) ( N/A , 0.00 , 0.1) | 572.4<br>211.3 | 0.3243<br>90.5<br>95.1 | 0.9934<br>[ 1.0000 ] | 99.3% | 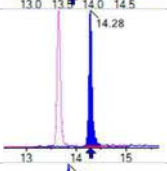 | 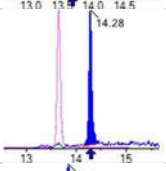 | |
| PFBS | ( 299.0 / 80.0 ) 437050<br>( 299.0 / 99.0 ) 312468 | ( 6.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 1473.2<br>1206.3 | 0.7149<br>101.1<br>97.2 | 0.9000<br>[ 0.8847 ] | 101.7% | 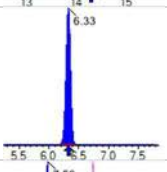 | 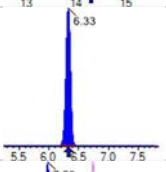 | |
| PFPeS | ( 349.0 / 80.0 ) 1085205<br>( 349.0 / 99.0 ) 405216 | ( 7.56 , 0.88 ) ( N/A , 0.00 , 0.0) | 1520.8<br>1260.3 | 0.3734<br>103.8<br>106.0 | 1.0023<br>[ 0.9384 ] | 106.8% | 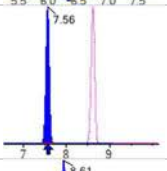 | 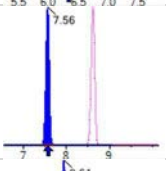 | |
| PFHxS | ( 399.0 / 80.0 ) 1168011<br>( 399.0 / 99.0 ) 395944 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 1519.5<br>1945.3 | 0.3390<br>106.4<br>101.4 | 0.9288<br>[ 0.9110 ] | 102.0% | 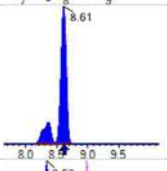 | 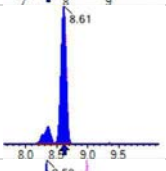 | |
| PFHpS | ( 449.0 / 80.0 ) 1065601<br>( 449.0 / 99.0 ) 272406 | ( 9.58 , 0.92 ) ( N/A , 0.00 , 0.0) | 1333.7<br>1215.7 | 0.2556<br>96.6<br>96.6 | 1.0414<br>[ 0.9514 ] | 109.5% | 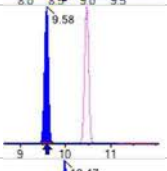 | 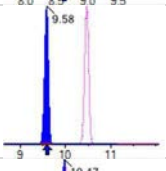 | |
| PFOS | ( 499.0 / 80.0 ) 931730<br>( 499.0 / 99.0 ) 229975 | ( 10.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 1137.9<br>2768.0 | 0.2468<br>105.6<br>102.8 | 0.9446<br>[ 0.9275 ] | 101.8% | 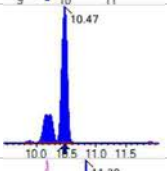 | 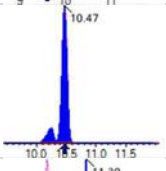 | |
| PFNS | ( 549.0 / 80.0 ) 923887<br>( 549.0 / 99.0 ) 250473 | ( 11.30 , 1.08 ) ( N/A , 0.00 , 0.0) | 1531.7<br>1160.1 | 0.2711<br>99.5<br>100.6 | 1.0004<br>[ 0.9599 ] | 104.2% | 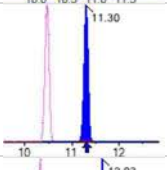 | 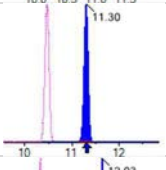 | |
| PFDS | ( 599.0 / 80.0 ) 1150437<br>( 599.0 / 99.0 ) 293361 | ( 12.03 , 1.15 ) ( N/A , 0.00 , -0.1) | 1677.8<br>840.9 | 0.2550<br>93.8<br>95.4 | 1.0202<br>[ 0.9631 ] | 105.9% | 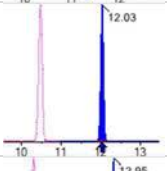 | 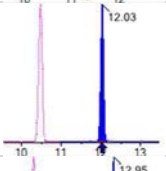 | |
| PFDoS | ( 699.0 / 80.0 ) 927981<br>( 699.0 / 99.0 ) 223325 | ( 12.95 , 1.24 ) ( N/A , 0.00 , 0.0) | 2684.7<br>1468.4 | 0.2407<br>103.0<br>105.1 | 0.9335<br>[ 0.9696 ] | 96.3% | 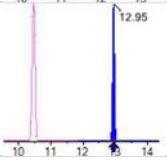 | 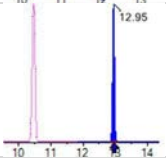 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1888288<br>( 327.0 / 81.0 ) 1684119 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.1) | 4761.5<br>2468.2 | 0.8919<br>102.2<br>99.1 | 3.9786<br>[ 3.7381 ] | 106.4% | 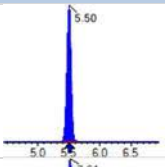 | 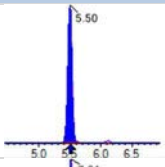 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1699257<br>( 427.0 / 81.0 ) 2192178 | ( 7.61 , 1.00 ) ( 0.00 , N/A , 0.2) | 4272.5<br>3962.9 | 1.2901<br>102.9<br>97.4 | 4.1130<br>[ 3.7962 ] | 108.3% | 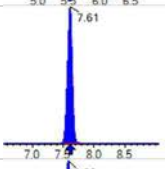 | 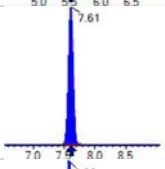 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1574000<br>( 527.0 / 81.0 ) 1695388 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.1) | 1590.5<br>1506.8 | 1.0771<br>99.0<br>105.7 | 4.2039<br>[ 3.8332 ] | 109.7% | 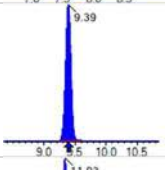 | 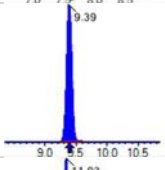 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1293643<br>( 627.0 / 81.0 ) 1795873 | ( 11.03 , 1.00 ) ( 0.00 , N/A , -0.2) | 1597.6<br>1061.0 | 1.3882<br>96.4<br>95.2 | 4.2334<br>[ 3.8647 ] | 109.5% | 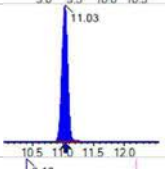 | 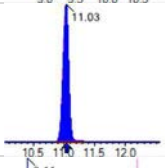 | |
| PFBSA | ( 297.9 / 78.0 ) 470302<br>( 297.9 / 278.0 ) 796 | ( 8.10 , 0.57 ) ( N/A , 0.00 , -0.6) | 1227.6<br>49.0 | 0.0017<br>123.8<br>109.2 | 2.5700<br>[ 1.0000 ] | 257.0% | 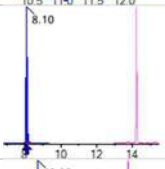 | 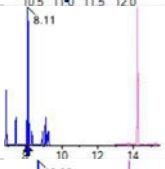 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 509205<br>( 397.9 / 378.0 ) 1643 | ( 10.96 , 0.75 ) ( N/A , 0.00 , 0.1) | 1077.1<br>45.1 | 0.0032<br>79.0<br>77.1 | 1.9573<br>[ 1.0000 ] | 195.7% | 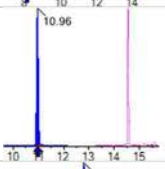 | 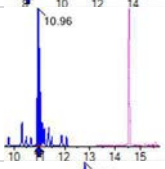 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 310523<br>( 498.0 / 478.0 ) 5173 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 1404.4<br>155.5 | 0.0167<br>118.7<br>111.9 | 1.1373<br>[ 1.0000 ] | 113.7% | 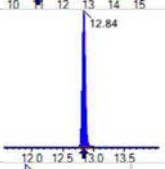 | 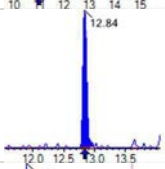 | |
| TFSI | ( 279.7 / 147.0 ) 1943457<br>( 279.7 / 211.0 ) 168179 | ( 8.18 , 0.64 ) ( N/A , 0.00 , -0.1) | 61.3<br>45.0 | 0.0865<br>103.0<br>101.1 | 2.7033<br>[ 0.9793 ] | 276.0% | 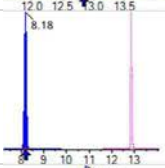 | 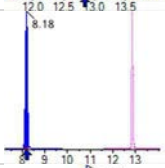 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 154247<br>( 512.0 / 169.0 ) 118807 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.0) | 1394.8<br>574.7 | 0.7702<br>102.9<br>101.6 | 4.3750<br>[ 4.0000 ] | 109.4% | 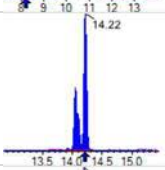 | 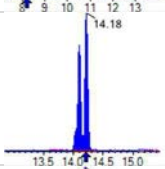 | |
| NEtFOSA | ( 526.0 / 219.0 ) 198207<br>( 526.0 / 169.0 ) 235177 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 1.7) | 1824.3<br>1134.7 | 1.1865<br>96.1<br>95.5 | 4.1808<br>[ 4.0000 ] | 104.5% | 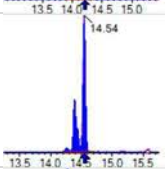 | 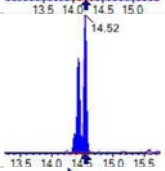 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 223879<br>( 570.0 / 483.0 ) 108010 | ( 10.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 1825.9<br>4128936.4 | 0.4824<br>110.0<br>103.2 | 1.0705<br>[ 1.0000 ] | 107.1% | 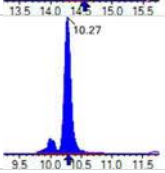 | 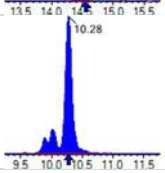 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 204283<br>( 584.0 / 526.0 ) 125155 | ( 10.81 , 1.00 ) ( 0.01 , N/A , 0.0) | 1719.5<br>638.4 | 0.6127<br>99.4<br>103.6 | 1.0391<br>[ 1.0000 ] | 103.9% | 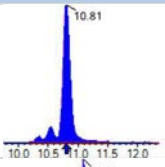 | 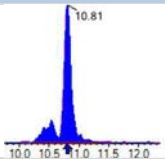 | |
| NMeFOSE | ( 616.0 / 59.0 ) 105465 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 466.3 | N/A<br>0.0<br>0.0 | 4.1907<br>[ 4.0000 ] | 104.8% | 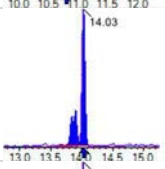 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 86627 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 623.5 | N/A<br>0.0<br>0.0 | 4.3936<br>[ 4.0000 ] | 109.8% | 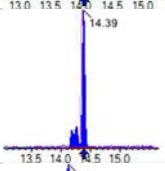 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 86657<br>( 285.0 / 185.0 ) 239925 | ( 6.49 , 1.00 ) ( 0.00 , N/A , 0.0) | 820.4<br>1188.6 | 2.7687<br>100.1<br>104.9 | 1.0508<br>[ 1.0000 ] | 105.1% | 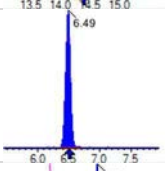 | 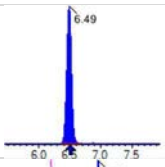 | |
| ADONA | ( 377.0 / 85.0 ) 974125<br>( 377.0 / 251.0 ) 96497 | ( 7.56 , 1.17 ) ( N/A , 0.00 , 0.1) | 2418.2<br>817.9 | 0.0991<br>97.2<br>94.7 | 1.0125<br>[ 0.9427 ] | 107.4% | 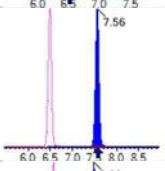 | 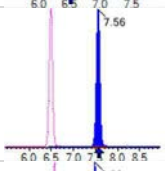 | |
| PFEESA | ( 315.0 / 135.0 ) 412151<br>( 315.0 / 83.0 ) 231711 | ( 6.92 , 1.15 ) ( N/A , 0.00 , 0.0) | 2048.0<br>539.7 | 0.5622<br>100.9<br>99.3 | 1.8672<br>[ 1.7849 ] | 104.6% | 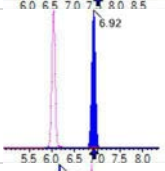 | 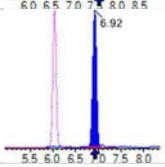 | |
| PFMPA | ( 229.0 / 85.0 ) 190115 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 2950.8 | N/A<br>0.0<br>0.0 | 2.2488<br>[ 2.0000 ] | 112.4% | 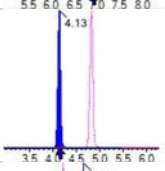 | | |
| PFMBA | ( 279.0 / 85.0 ) 474721 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 3902.7 | N/A<br>0.0<br>0.0 | 2.0660<br>[ 2.0000 ] | 103.3% | 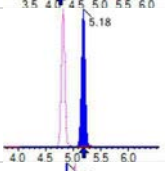 | | |
| NFDHA | ( 295.0 / 201.0 ) 230149<br>( 295.0 / 85.0 ) 235254 | ( 5.90 , 0.98 ) ( N/A , -0.01 , 0.3) | 1867.1<br>1396.5 | 1.0222<br>94.7<br>101.7 | 2.0056<br>[ 2.0000 ] | 100.3% | 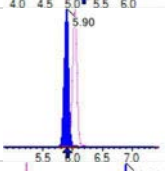 | 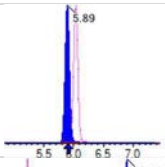 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1025621<br>( 533.0 / 353.0 ) 318115 | ( 11.11 , 1.71 ) ( N/A , 0.00 , 0.0) | 2659.2<br>1612.8 | 0.3102<br>99.1<br>94.1 | 0.9869<br>[ 0.9333 ] | 105.8% | 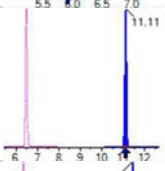 | 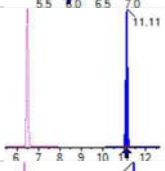 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 809534<br>( 633.0 / 453.0 ) 274783 | ( 12.44 , 1.92 ) ( N/A , 0.00 , 0.1) | 3038.1<br>1534.5 | 0.3394<br>102.2<br>99.1 | 1.0130<br>[ 0.9432 ] | 107.4% | 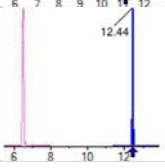 | 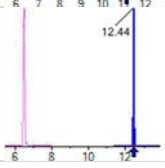 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-BS1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 510455<br>( 461.0 / 381.2 ) 210453 | ( 9.50 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2115.6<br>1576.3 | 0.4123<br>103.5<br>104.0 | 0.9173<br>[ 0.9239 ] | 99.3% | 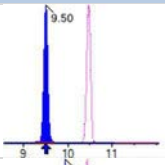 | 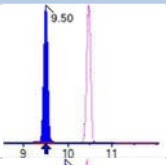 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 55419<br>( 241.0 / 117.0 ) 122403 | ( 4.38 , 0.91 )<br>( N/A , -0.01 , 0.0) | 1151.4<br>1091.7 | 2.2087<br>104.8<br>101.8 | 3.6568<br>[ 4.0000 ] | 91.4% | 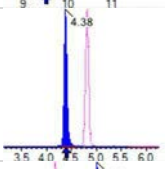 | 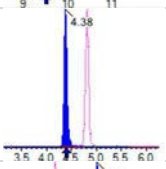 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 326246<br>( 341.0 / 217.0 ) 452405 | ( 6.93 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1049.7<br>679.9 | 1.3867<br>91.3<br>95.3 | 3.8273<br>[ 4.0000 ] | 95.7% | 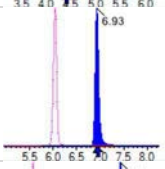 | 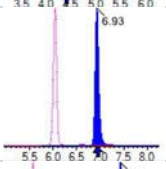 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 490153<br>( 441.0 / 337.0 ) 426722 | ( 9.31 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4223.1<br>7866.2 | 0.8706<br>94.9<br>99.5 | 3.5040<br>[ 4.0000 ] | 87.6% | 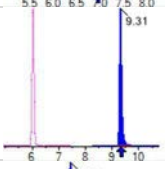 | 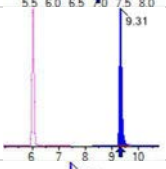 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 385698<br>( 357.2 / 243.0 ) 42220 | ( 6.76 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1229.6<br>312.3 | 0.1095<br>99.3<br>105.2 | 1.0044<br>[ 1.0000 ] | 100.4% | 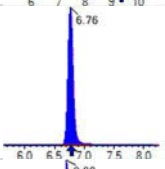 | 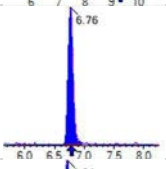 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 275205<br>( 457.2 / 343.0 ) 11895 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -0.5) | 703.9<br>125.9 | 0.0432<br>104.2<br>95.3 | 1.0804<br>[ 1.0000 ] | 108.0% | 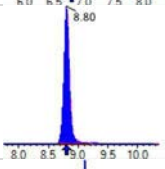 | 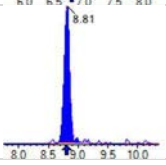 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 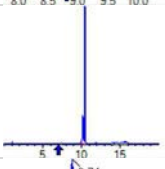 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284990 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1462.1 | N/A | 1.1953<br>[ 1.0000 ] | 119.5%<br>{ 120.5% } | 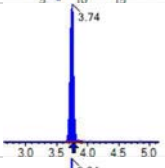 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122766 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 8610.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 97.0% } | 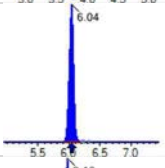 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 371575 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3197.0 | N/A | 0.9399<br>[ 1.0000 ] | 94.0%<br>{ 98.0% } | 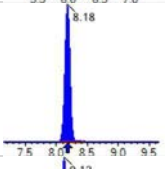 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 279365 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 926.0 | N/A | 0.9823<br>[ 1.0000 ] | 98.2%<br>{ 99.3% } | 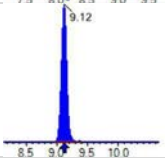 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288121 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 4678.8 | N/A | 0.9866 [ 1.0000 ] | 98.7% { 99.6% } | 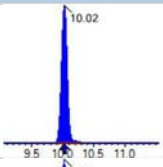 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 889914 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4317.3 | N/A | 0.9377 [ 1.0000 ] | 93.8% { 95.3% } | 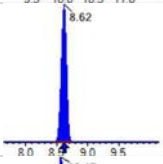 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 706168 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1727.9 | N/A | 0.9272 [ 1.0000 ] | 92.7% { 99.2% } | 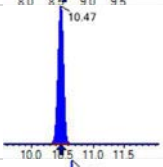 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2750823 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 42758.1 | N/A | 8.4493 [ 8.0000 ] | 105.6% { 122.9% } | 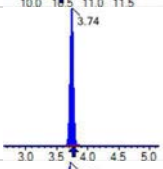 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1054835 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5085.7 | N/A | 4.6050 [ 4.0000 ] | 115.1% { 108.1% } | 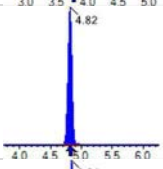 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 639854 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 7745.1 | N/A | 2.2843 [ 2.0000 ] | 114.2% { 108.4% } | 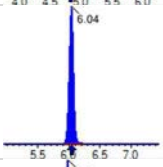 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 666850 | ( 7.17 , N/A ) ( N/A , 0.00 , N/A ) | 4151.4 | N/A | 2.1401 [ 2.0000 ] | 107.0% { 101.6% } | 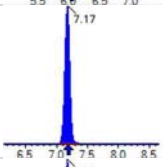 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 891188 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3383.4 | N/A | 2.2384 [ 2.0000 ] | 111.9% { 103.4% } | 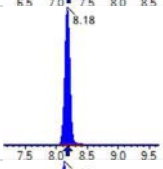 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 289823 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3816.1 | N/A | 1.0581 [ 1.0000 ] | 105.8% { 107.4% } | 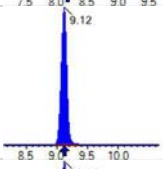 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 358491 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 1052.8 | N/A | 1.1103 [ 1.0000 ] | 111.0% { 111.4% } | 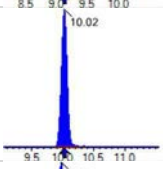 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 387269 | ( 10.88 , N/A ) ( N/A , 0.00 , N/A ) | 1192.9 | N/A | 1.0195 [ 1.0000 ] | 101.9% { 104.1% } | 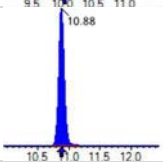 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-BS1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 401539 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 1260.3 | N/A | 1.0380 [ 1.0000 ] | 103.8% { 107.7% } | 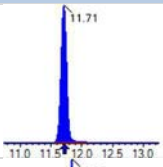 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 303502 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1292.6 | N/A | 0.9213 [ 1.0000 ] | 92.1% { 93.0% } | 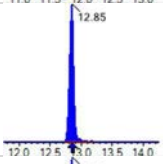 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 403628 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2080.9 | N/A | 1.4351 [ 2.0000 ] | 71.8% { 79.9% } | 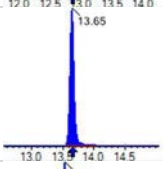 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1870628 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1276.0 | N/A | 2.3265 [ 2.0000 ] | 116.3% { 111.5% } | 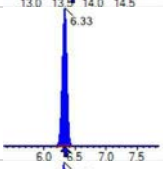 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1414805 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4021.7 | N/A | 2.2045 [ 2.0000 ] | 110.2% { 107.3% } | 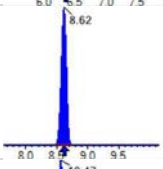 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1708031 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1735.5 | N/A | 2.2433 [ 2.0000 ] | 112.2% { 110.2% } | 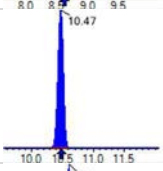 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 723364 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 87.9 | N/A | 5.2144 [ 4.0000 ] | 130.4% { 122.8% } | 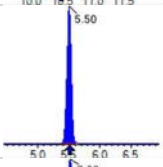 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1995683 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 3600.7 | N/A | 4.8070 [ 4.0000 ] | 120.2% { 119.7% } | 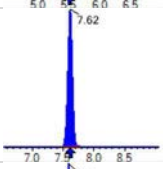 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1576990 | ( 9.40 , N/A ) ( N/A , 0.00 , N/A ) | 1433.4 | N/A | 4.8433 [ 4.0000 ] | 121.1% { 115.3% } | 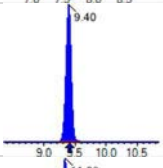 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3171791 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1639.0 | N/A | 9.3208 [ 8.0000 ] | 116.5% { 124.3% } | 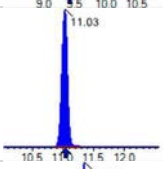 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 546044 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 2326.7 | N/A | 0.8093 [ 2.0000 ] | 40.5% { 39.7% } | 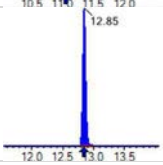 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 71017 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 689.6 | N/A | 0.4962 [ 2.0000 ] | 24.8% { 24.7% } | 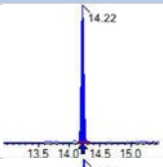 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 84663 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 835.4 | N/A | 0.5517 [ 2.0000 ] | 27.6% { 27.6% } | 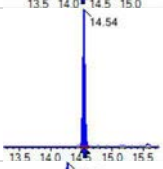 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877080 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2582.3 | N/A | 4.4769 [ 4.0000 ] | 111.9% { 103.7% } | 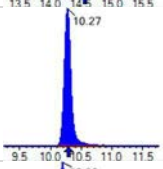 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 803914 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1779.1 | N/A | 4.5023 [ 4.0000 ] | 112.6% { 104.4% } | 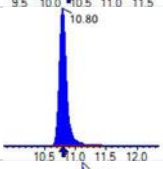 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 458856 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 974.7 | N/A | 7.1348 [ 20.0000 ] | 35.7% { 33.4% } | 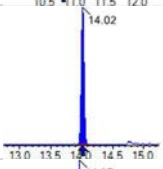 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 443830 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 2119.4 | N/A | 6.7994 [ 20.0000 ] | 34.0% { 34.4% } | 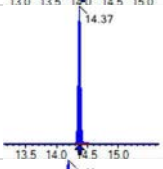 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1118791 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2015.0 | N/A | 8.7681 [ 8.0000 ] | 109.6% { 109.4% } | 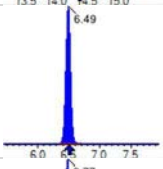 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 722383 | ( 6.77 , N/A ) ( N/A , 0.00 , N/A ) | 1289.2 | N/A | 2.3125 [ 2.0000 ] | 115.6% { 117.1% } | 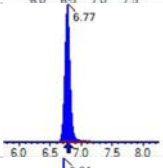 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 624590 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 900.9 | N/A | 2.1964 [ 2.0000 ] | 109.8% { 112.9% } | 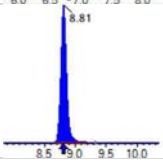 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MRL1a | File ID:a | S2024-03-19B (10)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:33a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 3.46a | 0.21a | 1.6a | |
| PFPeAa | 1.59a | 0.065a | 0.80a | |
| PFHxAa | 0.809a | 0.055a | 0.40a | |
| PFHpAa | 0.841a | 0.041a | 0.40a | |
| PFOAa | 0.922a | 0.15a | 0.40a | |
| PFNAa | 0.740a | 0.082a | 0.40a | |
| PFDAa | 0.788a | 0.10a | 0.40a | |
| PFUnAa | 0.777a | 0.16a | 0.40a | |
| PFDoAa | 0.812a | 0.11a | 0.40a | |
| PFTrDAa | 0.766a | 0.20a | 0.40a | |
| PFTeDAa | 0.891a | 0.20a | 0.40a | |
| PFHxDAa | 0.774a | 0.20a | 0.40a | |
| PFODAa | 0.668a | 0.20a | 0.40a | |
| PFBSa | 0.627a | 0.037a | 0.40a | |
| PFPeSa | 0.755a | 0.063a | 0.40a | |
| PFHxSa | 0.754a | 0.032a | 0.40a | |
| PFHpSa | 0.734a | 0.051a | 0.40a | |
| PFOSa | 0.801a | 0.064a | 0.40a | |
| PFNSa | 0.743a | 0.12a | 0.40a | |
| PFDSa | 0.767a | 0.15a | 0.40a | |
| PFDoSa | 0.703a | 0.12a | 0.40a | |
| 4:2FTSa | 2.92a | 0.29a | 1.6a | |
| 6:2FTSa | 3.14a | 0.31a | 1.6a | |
| 8:2FTSa | 3.31a | 0.082a | 1.6a | |
| 10:2FTSa | 3.26a | 0.40a | 1.6a | |
| PFOSAa | 0.837a | 0.10a | 0.40a | |
| NMeFOSAa | 3.05a | 0.47a | 1.6a | |
| NEtFOSAa | 2.99a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.808a | 0.11a | 0.40a | |
| NEtFOSAAa | 0.808a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MRL1a | File ID:a | S2024-03-19B (10)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:33a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 3.31a | 1.0a | 1.6a | MI4a |
| NEtFOSEa | 3.40a | 1.0a | 1.6a | |
| HFPO-DAa | 0.833a | 0.17a | 0.80a | |
| ADONAa | 0.763a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.30a | 0.11a | 0.80a | |
| PFMPAa | 1.53a | 0.054a | 0.80a | |
| PFMBAa | 1.61a | 0.091a | 0.80a | |
| NFDHAa | 1.49a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.712a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.709a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.50a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.77a | 0.44a | 1.6a | |
| 7:3FTCAa | 2.97a | 0.55a | 1.6a | |

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Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 161673<br>( 163.0 / 69.0 ) 4494 | ( 2.80 , 0.75 )<br>( N/A , 0.01 , -0.1) | 478.8<br>245.4 | 0.0278<br>102.3<br>105.5 | 0.4994<br>[ 0.4000 ] | 124.8% | 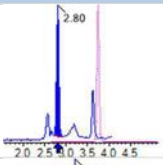 | 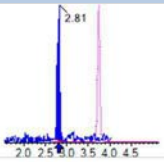 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 296136 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 274.7 | N/A<br>0.0<br>0.0 | 0.8653<br>[ 0.8000 ] | 108.2% | 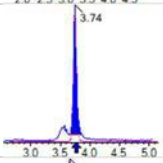 | | |
| PFPeA | ( 263.0 / 219.0 ) 106395<br>( 263.0 / 69.0 ) 1319 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , 0.4) | 555.3<br>19.1 | 0.0124<br>103.9<br>111.8 | 0.3976<br>[ 0.4000 ] | 99.4% | 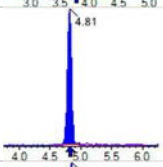 | 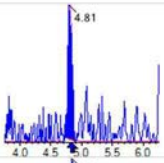 | |
| PFHxA | ( 313.0 / 269.0 ) 61539<br>( 313.0 / 119.0 ) 6117 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 412.4<br>137.1 | 0.0994<br>85.6<br>84.9 | 0.2024<br>[ 0.2000 ] | 101.2% | 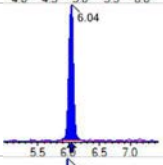 | 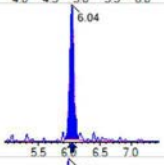 | |
| PFHpA | ( 363.0 / 319.0 ) 68871<br>( 363.0 / 169.0 ) 21857 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , -0.2) | 452.8<br>428.7 | 0.3174<br>104.7<br>107.5 | 0.2102<br>[ 0.2000 ] | 105.1% | 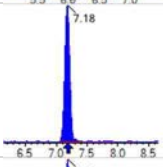 | 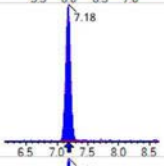 | |
| PFOA | ( 413.0 / 369.0 ) 118012<br>( 413.0 / 169.0 ) 37353 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , -0.1) | 164.9<br>201.6 | 0.3165<br>86.6<br>92.2 | 0.2305<br>[ 0.2000 ] | 115.3% | 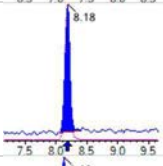 | 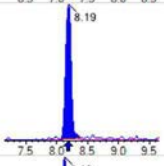 | |
| PFNA | ( 463.0 / 419.0 ) 58751<br>( 463.0 / 169.0 ) 13675 | ( 9.12 , 1.00 )<br>( 0.00 , N/A , 0.1) | 378.3<br>214.1 | 0.2328<br>91.2<br>96.8 | 0.1849<br>[ 0.2000 ] | 92.5% | 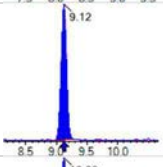 | 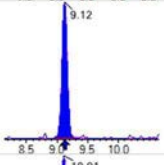 | |
| PFDA | ( 513.0 / 469.0 ) 74337<br>( 513.0 / 169.0 ) 9004 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , 0.4) | 922.3<br>339.6 | 0.1211<br>103.4<br>101.2 | 0.1971<br>[ 0.2000 ] | 98.5% | 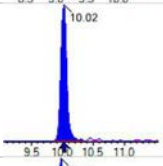 | 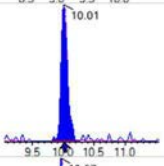 | |
| PFUnA | ( 563.0 / 519.0 ) 72105<br>( 563.0 / 169.0 ) 11313 | ( 10.88 , 1.00 )<br>( 0.00 , N/A , 0.3) | 456.1<br>146.6 | 0.1569<br>110.7<br>110.4 | 0.1942<br>[ 0.2000 ] | 97.1% | 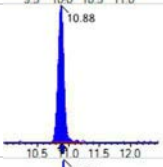 | 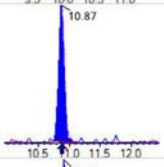 | |
| PFDoA | ( 613.0 / 569.0 ) 84587<br>( 613.0 / 169.0 ) 13835 | ( 11.71 , 1.00 )<br>( 0.00 , N/A , 0.5) | 445.0<br>150.7 | 0.1636<br>103.5<br>110.6 | 0.2030<br>[ 0.2000 ] | 101.5% | 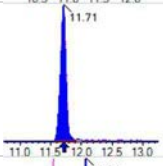 | 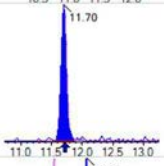 | |
| PFTrDA | ( 663.0 / 619.0 ) 78104<br>( 663.0 / 169.0 ) 21372 | ( 12.34 , 1.05 )<br>( N/A , -0.01 , -0.1) | 442.3<br>240.3 | 0.2736<br>106.3<br>105.7 | 0.1916<br>[ 0.2000 ] | 95.8% | 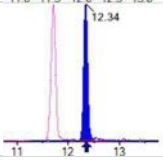 | 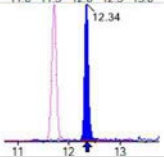 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 67242<br>( 713.0 / 169.0 ) 16772 | ( 12.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 428.4<br>139.6 | 0.2494<br>92.4<br>93.9 | 0.2227<br>[ 0.2000 ] | 111.3% | 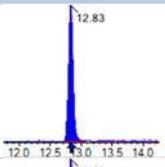 | 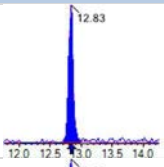 | |
| PFHxDA | ( 813.0 / 769.0 ) 38229<br>( 813.0 / 169.0 ) 9619 | ( 13.63 , 1.00 ) ( -0.01 , N/A , 0.1) | 240.5<br>70.1 | 0.2516<br>102.8<br>98.5 | 0.1934<br>[ 0.2000 ] | 96.7% | 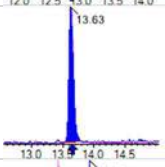 | 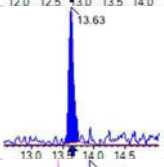 | |
| PFODA | ( 913.0 / 869.0 ) 20659<br>( 913.0 / 169.0 ) 7331 | ( 14.27 , 1.05 ) ( N/A , -0.01 , 0.1) | 112.8<br>42.0 | 0.3548<br>99.0<br>104.1 | 0.1671<br>[ 0.2000 ] | 83.5% | 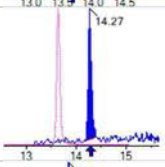 | 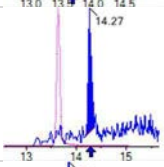 | |
| PFBS | ( 299.0 / 80.0 ) 78582<br>( 299.0 / 99.0 ) 60061 | ( 6.33 , 1.00 ) ( 0.00 , N/A , -0.1) | 403.0<br>379.2 | 0.7643<br>108.1<br>103.9 | 0.1568<br>[ 0.1769 ] | 88.6% | 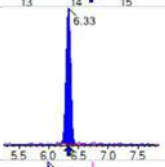 | 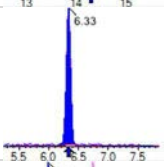 | |
| PFPeS | ( 349.0 / 80.0 ) 212573<br>( 349.0 / 99.0 ) 74217 | ( 7.57 , 0.88 ) ( N/A , 0.01 , 0.0) | 665.0<br>429.8 | 0.3491<br>97.1<br>99.1 | 0.1887<br>[ 0.1877 ] | 100.5% | 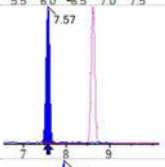 | 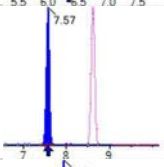 | |
| PFHxS | ( 399.0 / 80.0 ) 246587<br>( 399.0 / 99.0 ) 79371 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.2) | 763.5<br>1883.3 | 0.3219<br>101.1<br>96.3 | 0.1884<br>[ 0.1822 ] | 103.4% | 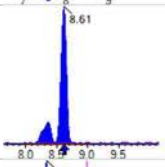 | 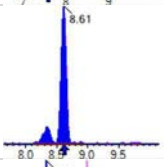 | |
| PFHpS | ( 449.0 / 80.0 ) 191516<br>( 449.0 / 99.0 ) 55727 | ( 9.58 , 0.92 ) ( N/A , 0.00 , 0.1) | 450.6<br>348.3 | 0.2910<br>110.0<br>109.9 | 0.1836<br>[ 0.1903 ] | 96.5% | 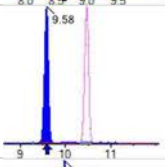 | 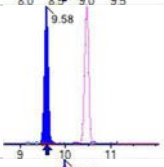 | |
| PFOS | ( 499.0 / 80.0 ) 201297<br>( 499.0 / 99.0 ) 46385 | ( 10.47 , 1.00 ) ( 0.00 , N/A , 0.3) | 529.6<br>1100.8 | 0.2304<br>98.6<br>96.0 | 0.2002<br>[ 0.1855 ] | 107.9% | 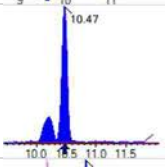 | 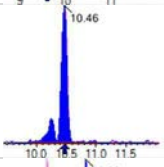 | |
| PFNS | ( 549.0 / 80.0 ) 174813<br>( 549.0 / 99.0 ) 49033 | ( 11.30 , 1.08 ) ( N/A , -0.01 , 0.0) | 591.5<br>366.1 | 0.2805<br>102.9<br>104.1 | 0.1857<br>[ 0.1920 ] | 96.7% | 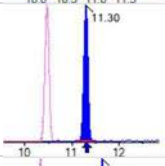 | 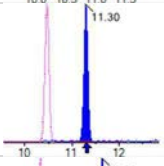 | |
| PFDS | ( 599.0 / 80.0 ) 220381<br>( 599.0 / 99.0 ) 53859 | ( 12.02 , 1.15 ) ( N/A , -0.01 , 0.1) | 489.3<br>241.2 | 0.2444<br>89.9<br>91.4 | 0.1917<br>[ 0.1926 ] | 99.5% | 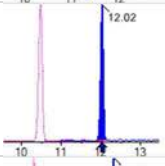 | 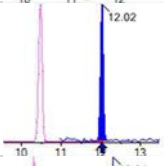 | |
| PFDoS | ( 699.0 / 80.0 ) 178143<br>( 699.0 / 99.0 ) 42559 | ( 12.94 , 1.24 ) ( N/A , -0.01 , 0.3) | 889.1<br>457.7 | 0.2389<br>102.3<br>104.3 | 0.1758<br>[ 0.1939 ] | 90.6% | 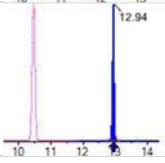 | 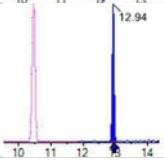 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 366291<br>( 327.0 / 81.0 ) 310480 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.2) | 3329.8<br>1169.7 | 0.8476<br>97.2<br>94.2 | 0.7303<br>[ 0.7476 ] | 97.7% | 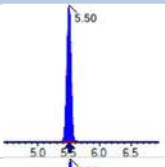 | 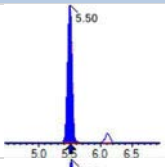 | |
| 6:2FTS | ( 427.0 / 407.0 ) 356855<br>( 427.0 / 81.0 ) 442825 | ( 7.62 , 1.00 ) ( -0.01 , N/A , 0.0) | 2925.4<br>1585.8 | 1.2409<br>98.9<br>93.7 | 0.7848<br>[ 0.7592 ] | 103.4% | 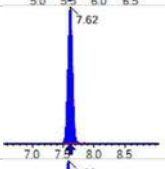 | 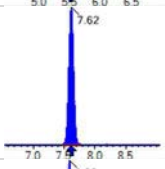 | |
| 8:2FTS | ( 527.0 / 507.0 ) 344588<br>( 527.0 / 81.0 ) 340687 | ( 9.39 , 1.00 ) ( -0.01 , N/A , -0.3) | 1179.1<br>913.7 | 0.9887<br>90.9<br>97.0 | 0.8281<br>[ 0.7666 ] | 108.0% | 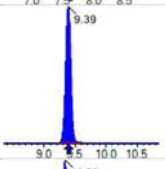 | 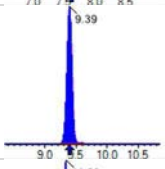 | |
| 10:2FTS | ( 627.0 / 607.0 ) 275498<br>( 627.0 / 81.0 ) 384880 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.0) | 958.8<br>604.0 | 1.3970<br>97.0<br>95.8 | 0.8139<br>[ 0.7729 ] | 105.3% | 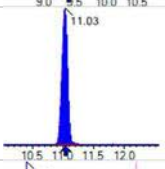 | 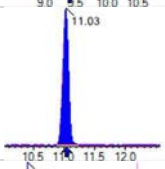 | |
| PFBSA | ( 297.9 / 78.0 ) 104872<br>( 297.9 / 278.0 ) 209 | ( 8.10 , 0.57 ) ( N/A , 0.01 , 0.9) | 705.8<br>11.4 | 0.0020<br>146.1<br>128.9 | 0.5371<br>[ 0.2000 ] | 268.6% | 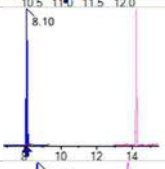 | 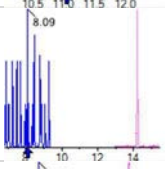 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 99713<br>( 397.9 / 378.0 ) 451 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.8) | 695.8<br>186.2 | 0.0045<br>110.8<br>108.1 | 0.3599<br>[ 0.2000 ] | 180.0% | 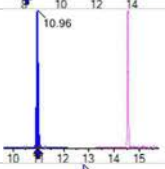 | 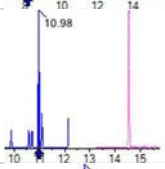 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 61645<br>( 498.0 / 478.0 ) 914 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.1) | 587.0<br>47.9 | 0.0148<br>105.6<br>99.6 | 0.2092<br>[ 0.2000 ] | 104.6% | 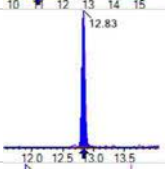 | 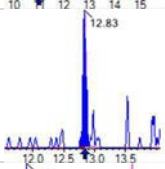 | |
| TFSI | ( 279.7 / 147.0 ) 402430<br>( 279.7 / 211.0 ) 39248 | ( 8.19 , 0.64 ) ( N/A , 0.01 , 0.1) | 52.0<br>29.8 | 0.0975<br>116.1<br>114.0 | 0.5187<br>[ 0.1959 ] | 264.8% | 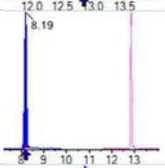 | 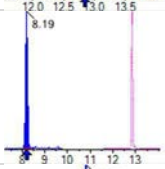 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 28666<br>( 512.0 / 169.0 ) 22860 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.3) | 347.2<br>172.7 | 0.7975<br>106.6<br>105.2 | 0.7620<br>[ 0.8000 ] | 95.3% | 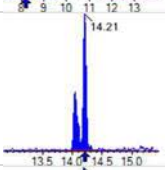 | 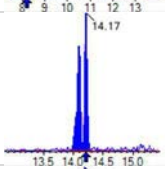 | |
| NEtFOSA | ( 526.0 / 219.0 ) 37681<br>( 526.0 / 169.0 ) 44376 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 1.1) | 490.0<br>358.9 | 1.1777<br>95.4<br>94.8 | 0.7464<br>[ 0.8000 ] | 93.3% | 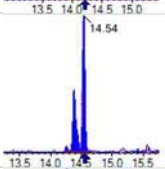 | 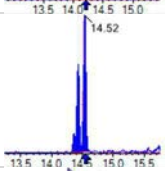 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 43060<br>( 570.0 / 483.0 ) 19458 | ( 10.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 2441.0<br>1316.4 | 0.4519<br>103.0<br>96.7 | 0.2019<br>[ 0.2000 ] | 101.0% | 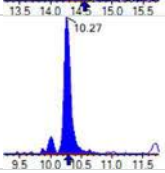 | 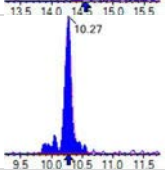 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 41991<br>( 584.0 / 526.0 ) 25379 | ( 10.80 , 1.00 ) ( 0.01 , N/A , -0.1) | 1840.4<br>477.0 | 0.6044<br>98.0<br>102.2 | 0.2014<br>[ 0.2000 ] | 100.7% | 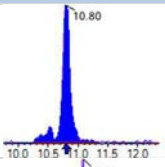 | 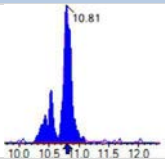 | |
| NMeFOSE | ( 616.0 / 59.0 ) 19531 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 120.3 | N/A<br>0.0<br>0.0 | 0.8275<br>[ 0.8000 ] | 103.4% | 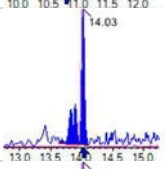 | | MI4 ABK 3/19/24 |
| NEtFOSE | ( 630.0 / 59.0 ) 16805 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 194.0 | N/A<br>0.0<br>0.0 | 0.8488<br>[ 0.8000 ] | 106.1% | 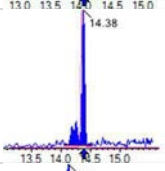 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 17556<br>( 285.0 / 185.0 ) 45622 | ( 6.49 , 1.00 ) ( -0.01 , N/A , -0.2) | 318.5<br>343.3 | 2.5987<br>94.0<br>98.5 | 0.2083<br>[ 0.2000 ] | 104.2% | 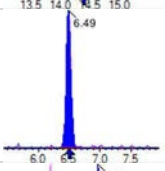 | 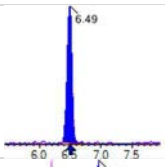 | |
| ADONA | ( 377.0 / 85.0 ) 187558<br>( 377.0 / 251.0 ) 16792 | ( 7.57 , 1.17 ) ( N/A , 0.01 , 0.3) | 1069.7<br>258.5 | 0.0895<br>87.8<br>85.6 | 0.1908<br>[ 0.1885 ] | 101.2% | 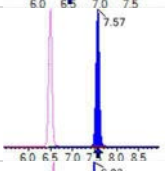 | 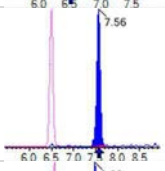 | |
| PFEESA | ( 315.0 / 135.0 ) 70701<br>( 315.0 / 83.0 ) 42524 | ( 6.93 , 1.15 ) ( N/A , 0.00 , 0.3) | 1032.8<br>132.1 | 0.6015<br>107.9<br>106.2 | 0.3238<br>[ 0.3570 ] | 90.7% | 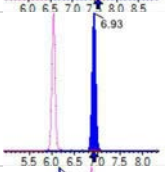 | 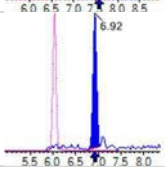 | |
| PFMPA | ( 229.0 / 85.0 ) 32517 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 885.8 | N/A<br>0.0<br>0.0 | 0.3829<br>[ 0.4000 ] | 95.7% | 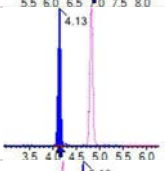 | | |
| PFMBA | ( 279.0 / 85.0 ) 92789 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 996.4 | N/A<br>0.0<br>0.0 | 0.4021<br>[ 0.4000 ] | 100.5% | 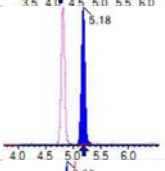 | | |
| NFDHA | ( 295.0 / 201.0 ) 42400<br>( 295.0 / 85.0 ) 43963 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.1) | 602.8<br>527.8 | 1.0369<br>96.1<br>103.1 | 0.3735<br>[ 0.4000 ] | 93.4% | 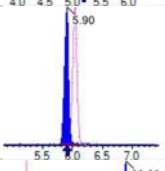 | 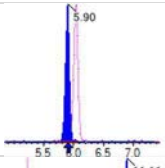 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 189086<br>( 533.0 / 353.0 ) 61335 | ( 11.11 , 1.71 ) ( N/A , -0.01 , -0.1) | 1542.4<br>626.6 | 0.3244<br>103.7<br>98.4 | 0.1781<br>[ 0.1867 ] | 95.4% | 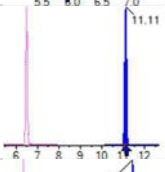 | 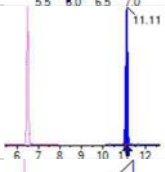 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 144744<br>( 633.0 / 453.0 ) 49400 | ( 12.43 , 1.91 ) ( N/A , -0.01 , 0.1) | 1583.3<br>527.4 | 0.3413<br>102.8<br>99.7 | 0.1773<br>[ 0.1886 ] | 94.0% | 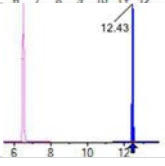 | 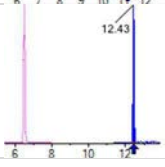 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 93257<br>( 461.0 / 381.2 ) 39675 | ( 9.51 , 0.91 )<br>( N/A , 0.00 , -0.1) | 1131.5<br>1153.8 | 0.4254<br>106.8<br>107.3 | 0.1644<br>[ 0.1848 ] | 89.0% | 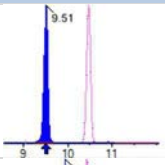 | 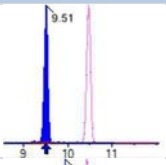 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 9500<br>( 241.0 / 117.0 ) 22984 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 428.3<br>218.0 | 2.4193<br>114.8<br>111.5 | 0.6241<br>[ 0.8000 ] | 78.0% | 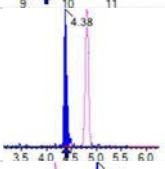 | 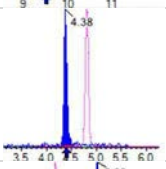 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 58331<br>( 341.0 / 217.0 ) 92000 | ( 6.93 , 1.15 )<br>( N/A , 0.00 , -0.1) | 465.2<br>337.3 | 1.5772<br>103.8<br>108.4 | 0.6917<br>[ 0.8000 ] | 86.5% | 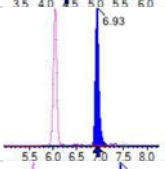 | 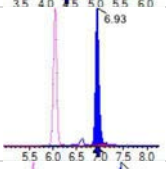 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 102736<br>( 441.0 / 337.0 ) 79818 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , -0.3) | 4630.2<br>9780.9 | 0.7769<br>84.7<br>88.8 | 0.7424<br>[ 0.8000 ] | 92.8% | 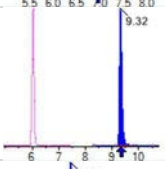 | 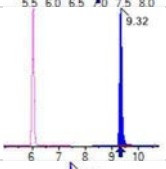 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 77737<br>( 357.2 / 243.0 ) 7324 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.0) | 500.7<br>119.3 | 0.0942<br>85.5<br>90.5 | 0.1973<br>[ 0.2000 ] | 98.7% | 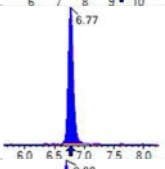 | 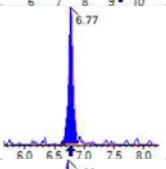 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 55869<br>( 457.2 / 343.0 ) 3299 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -1.2) | 309.1<br>99.8 | 0.0590<br>142.4<br>130.2 | 0.2134<br>[ 0.2000 ] | 106.7% | 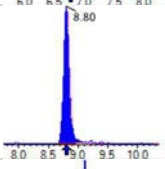 | 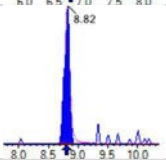 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 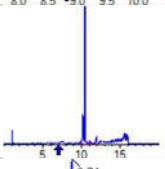 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 266106 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1322.8 | N/A | 1.1161<br>[ 1.0000 ] | 111.6%<br>{ 112.5% } | 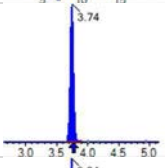 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125247 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 18864.0 | N/A | 0.9873<br>[ 1.0000 ] | 98.7%<br>{ 98.9% } | 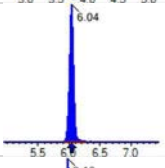 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 393560 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 2896.1 | N/A | 0.9956<br>[ 1.0000 ] | 99.6%<br>{ 103.7% } | 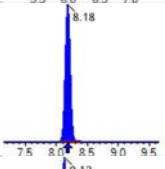 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 273424 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 836.6 | N/A | 0.9614<br>[ 1.0000 ] | 96.1%<br>{ 97.2% } | 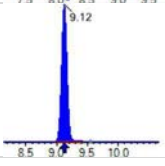 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 291119 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 6124.9 | N/A | 0.9969 [ 1.0000 ] | 99.7% { 100.6% } | 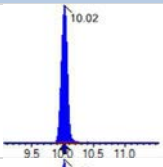 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 956213 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 5043.8 | N/A | 1.0076 [ 1.0000 ] | 100.8% { 102.4% } | 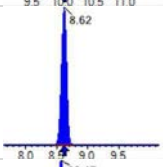 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 710285 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1860.1 | N/A | 0.9326 [ 1.0000 ] | 93.3% { 99.8% } | 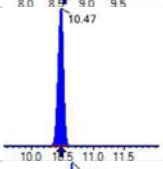 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2746738 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 45267.4 | N/A | 9.0354 [ 8.0000 ] | 112.9% { 122.7% } | 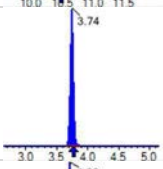 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1059490 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5029.5 | N/A | 4.5337 [ 4.0000 ] | 113.3% { 108.6% } | 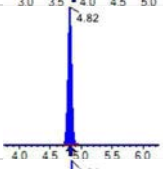 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 633013 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 11970.6 | N/A | 2.2151 [ 2.0000 ] | 110.8% { 107.3% } | 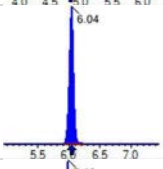 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 667842 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 3589.3 | N/A | 2.1009 [ 2.0000 ] | 105.0% { 101.7% } | 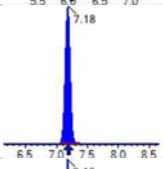 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 952414 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 3062.0 | N/A | 2.2586 [ 2.0000 ] | 112.9% { 110.5% } | 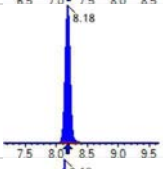 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 316088 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3291.8 | N/A | 1.1790 [ 1.0000 ] | 117.9% { 117.1% } | 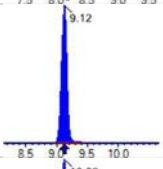 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 369193 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 1133.4 | N/A | 1.1316 [ 1.0000 ] | 113.2% { 114.8% } | 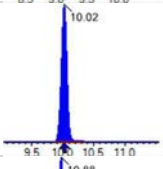 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 401492 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 977.1 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 107.9% } | 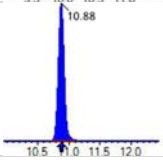 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414219 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1662.3 | N/A | 1.0597 [ 1.0000 ] | 106.0% { 111.1% } | 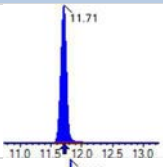 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 322418 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1183.9 | N/A | 0.9686 [ 1.0000 ] | 96.9% { 98.8% } | 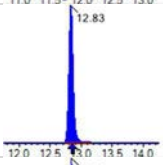 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 414443 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2139.2 | N/A | 1.4584 [ 2.0000 ] | 72.9% { 82.0% } | 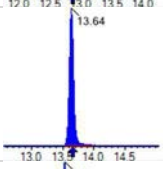 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1930202 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1250.6 | N/A | 2.2342 [ 2.0000 ] | 111.7% { 115.0% } | 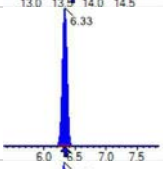 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1472271 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4411.7 | N/A | 2.1350 [ 2.0000 ] | 106.7% { 111.7% } | 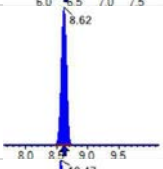 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1741364 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 1617.1 | N/A | 2.2738 [ 2.0000 ] | 113.7% { 112.4% } | 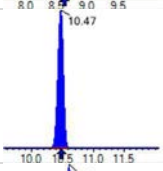 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 764426 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 94.6 | N/A | 5.1284 [ 4.0000 ] | 128.2% { 129.8% } | 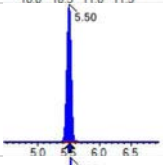 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2196524 | ( 7.62 , N/A ) ( N/A , 0.01 , N/A ) | 4700.6 | N/A | 4.9239 [ 4.0000 ] | 123.1% { 131.8% } | 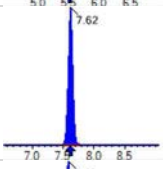 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1752697 | ( 9.40 , N/A ) ( N/A , 0.00 , N/A ) | 1467.3 | N/A | 5.0097 [ 4.0000 ] | 125.2% { 128.1% } | 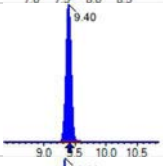 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3513510 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1541.8 | N/A | 9.6091 [ 8.0000 ] | 120.1% { 137.6% } | 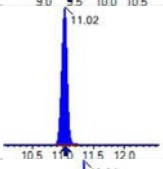 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 589287 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2026.6 | N/A | 0.8683 [ 2.0000 ] | 43.4% { 42.9% } | 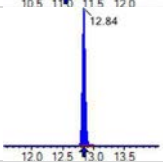 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 75773 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 734.7 | N/A | 0.5264 [ 2.0000 ] | 26.3% { 26.3% } | 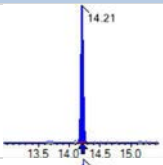 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 90154 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 902.2 | N/A | 0.5840 [ 2.0000 ] | 29.2% { 29.4% } | 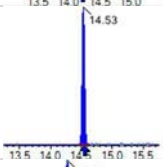 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 894404 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2227.9 | N/A | 4.5389 [ 4.0000 ] | 113.5% { 105.8% } | 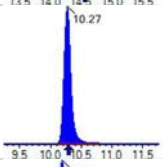 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 852515 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1690.4 | N/A | 4.7468 [ 4.0000 ] | 118.7% { 110.7% } | 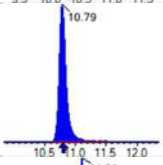 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 430335 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1306.0 | N/A | 6.6526 [ 20.0000 ] | 33.3% { 31.3% } | 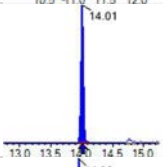 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 445703 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2245.5 | N/A | 6.7885 [ 20.0000 ] | 33.9% { 34.5% } | 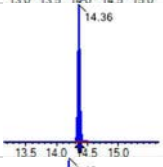 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1143193 | ( 6.49 , N/A ) ( N/A , 0.00 , N/A ) | 2127.6 | N/A | 8.7819 [ 8.0000 ] | 109.8% { 111.8% } | 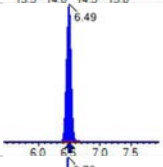 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 741014 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1107.2 | N/A | 2.3477 [ 2.0000 ] | 117.4% { 120.1% } | 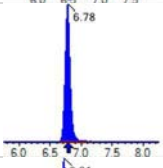 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 642102 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 728.7 | N/A | 2.2347 [ 2.0000 ] | 111.7% { 116.1% } | 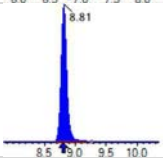 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MS1a | File ID:a | S2024-03-19B (11)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 17.5a | 0.19a | 1.5a | |
| PFPeAa | 8.71a | 0.061a | 0.75a | |
| PFHxAa | 4.50a | 0.051a | 0.37a | |
| PFHpAa | 4.31a | 0.038a | 0.37a | |
| PFOAa | 4.52a | 0.14a | 0.37a | |
| PFNAa | 4.17a | 0.076a | 0.37a | |
| PFDAa | 3.74a | 0.094a | 0.37a | |
| PFUnAa | 3.80a | 0.15a | 0.37a | |
| PFDoAa | 4.03a | 0.10a | 0.37a | |
| PFTrDAa | 3.78a | 0.19a | 0.37a | |
| PFTeDAa | 3.85a | 0.18a | 0.37a | |
| PFHxDAa | 4.25a | 0.19a | 0.37a | |
| PFODAa | 4.79a | 0.19a | 0.37a | |
| PFBSa | 6.98a | 0.034a | 0.37a | |
| PFPeSa | 4.12a | 0.058a | 0.37a | |
| PFHxSa | 5.09a | 0.030a | 0.37a | |
| PFHpSa | 4.14a | 0.048a | 0.37a | |
| PFOSa | 6.39a | 0.059a | 0.37a | |
| PFNSa | 3.90a | 0.11a | 0.37a | |
| PFDSa | 3.61a | 0.14a | 0.37a | |
| PFDoSa | 3.49a | 0.11a | 0.37a | |
| 4:2FTSa | 14.2a | 0.27a | 1.5a | |
| 6:2FTSa | 15.0a | 0.29a | 1.5a | |
| 8:2FTSa | 16.8a | 0.077a | 1.5a | |
| 10:2FTSa | 16.1a | 0.37a | 1.5a | |
| PFOSAa | 4.13a | 0.097a | 0.37a | |
| NMeFOSAa | 16.4a | 0.44a | 1.5a | |
| NEtFOSAa | 15.9a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.82a | 0.099a | 0.37a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MS1a | File ID:a | S2024-03-19B (11)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 15.2a | 0.94a | 1.5a | |
| NEtFOSEa | 16.3a | 0.98a | 1.5a | |
| HFPO-DAa | 4.07a | 0.16a | 0.75a | |
| ADONAa | 4.11a | 0.11a | 0.75a | |
| PFEESAa | 6.85a | 0.10a | 0.75a | |
| PFMPAa | 8.48a | 0.050a | 0.75a | |
| PFMBAa | 7.86a | 0.085a | 0.75a | |
| NFDHAa | 6.92a | 0.28a | 0.75a | |
| 9Cl-PF3ONSa | 3.68a | 0.20a | 0.75a | |
| 11Cl-PF3OUDSa | 3.77a | 0.19a | 0.75a | |
| 3:3FTCAa | 12.9a | 0.54a | 1.5a | |
| 5:3FTCAa | 13.1a | 0.41a | 1.5a | |
| 7:3FTCAa | 12.8a | 0.52a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (11)
Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 249762<br>( 163.0 / 69.0 ) 6492 | ( 2.79 , 0.75 ) ( N/A , 0.00 , 0.0) | 868.7<br>308.6 | 0.0260<br>95.7<br>98.6 | 0.9444 | N/A | 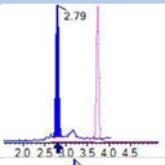 | 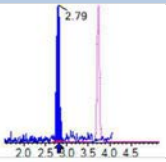 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 1312571 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 726.9 | N/A<br>0.0<br>0.0 | 4.6947 | N/A | 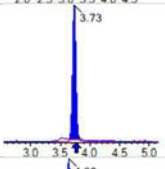 | | |
| PFPeA | ( 263.0 / 219.0 ) 591219<br>( 263.0 / 69.0 ) 6250 | ( 4.80 , 1.00 ) ( 0.00 , N/A , 0.1) | 2188.0<br>74.9 | 0.0106<br>88.5<br>95.3 | 2.3335 | N/A | 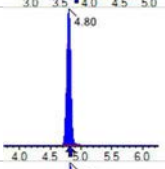 | 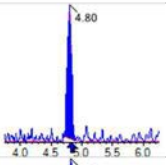 | |
| PFHxA | ( 313.0 / 269.0 ) 357430<br>( 313.0 / 119.0 ) 37250 | ( 6.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 1152.4<br>544.6 | 0.1042<br>89.8<br>89.1 | 1.2053 | N/A | 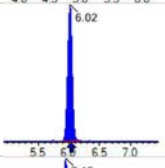 | 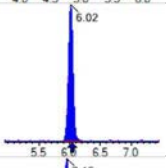 | |
| PFHpA | ( 363.0 / 319.0 ) 360822<br>( 363.0 / 169.0 ) 109987 | ( 7.15 , 1.00 ) ( 0.00 , N/A , -0.2) | 1128.5<br>705.6 | 0.3048<br>100.6<br>103.3 | 1.1565 | N/A | 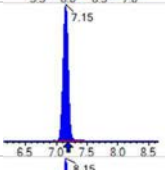 | 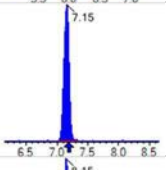 | |
| PFOA | ( 413.0 / 369.0 ) 513687<br>( 413.0 / 169.0 ) 186204 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 340.3<br>561.3 | 0.3625<br>99.2<br>105.6 | 1.2113 | N/A | 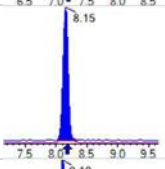 | 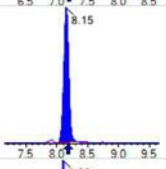 | |
| PFNA | ( 463.0 / 419.0 ) 303076<br>( 463.0 / 169.0 ) 80752 | ( 9.10 , 1.00 ) ( 0.00 , N/A , 0.2) | 749.3<br>398.0 | 0.2664<br>104.4<br>110.8 | 1.1173 | N/A | 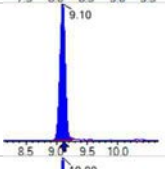 | 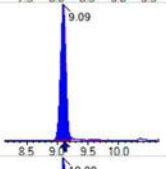 | |
| PFDA | ( 513.0 / 469.0 ) 325299<br>( 513.0 / 169.0 ) 39778 | ( 10.00 , 1.00 ) ( 0.00 , N/A , 0.1) | 1149.0<br>664.0 | 0.1223<br>104.4<br>102.2 | 1.0028 | N/A | 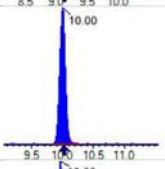 | 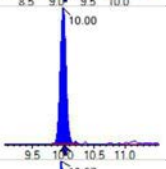 | |
| PFUnA | ( 563.0 / 519.0 ) 348034<br>( 563.0 / 169.0 ) 50776 | ( 10.86 , 1.00 ) ( 0.00 , N/A , -0.1) | 1018.0<br>327.1 | 0.1459<br>102.9<br>102.7 | 1.0186 | N/A | 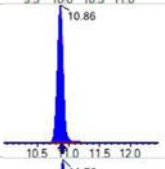 | 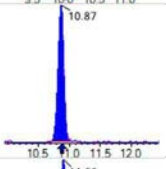 | |
| PFDoA | ( 613.0 / 569.0 ) 399902<br>( 613.0 / 169.0 ) 60505 | ( 11.70 , 1.00 ) ( 0.00 , N/A , 0.2) | 882.4<br>424.7 | 0.1513<br>95.7<br>102.3 | 1.0793 | N/A | 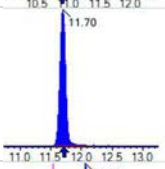 | 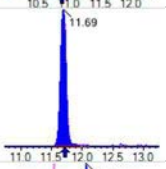 | |
| PFTrDA | ( 663.0 / 619.0 ) 367042<br>( 663.0 / 169.0 ) 99723 | ( 12.33 , 1.05 ) ( N/A , -0.01 , 0.1) | 1124.5<br>707.2 | 0.2717<br>105.6<br>104.9 | 1.0127 | N/A | 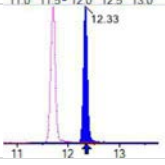 | 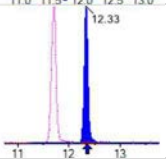 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (11)
Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 294363<br>( 713.0 / 169.0 ) 79357 | ( 12.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1159.6<br>674.7 | 0.2696<br>99.9<br>101.4 | 1.0320 | N/A | 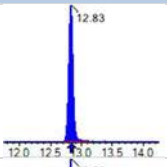 | 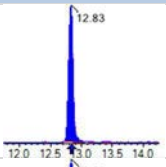 | |
| PFHxDA | ( 813.0 / 769.0 ) 206210<br>( 813.0 / 169.0 ) 47004 | ( 13.63 , 1.00 ) ( 0.00 , N/A , 0.0) | 939.9<br>291.3 | 0.2279<br>93.2<br>89.3 | 1.1403 | N/A | 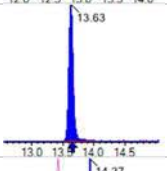 | 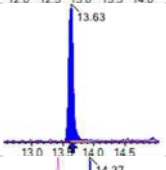 | |
| PFODA | ( 913.0 / 869.0 ) 145196<br>( 913.0 / 169.0 ) 49980 | ( 14.27 , 1.05 ) ( N/A , -0.01 , 0.1) | 554.1<br>260.6 | 0.3442<br>96.1<br>101.0 | 1.2834 | N/A | 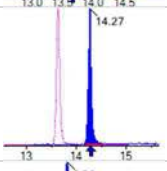 | 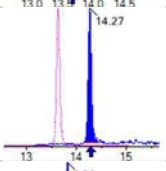 | |
| PFBS | ( 299.0 / 80.0 ) 835321<br>( 299.0 / 99.0 ) 608032 | ( 6.31 , 1.00 ) ( 0.00 , N/A , -0.2) | 1568.3<br>1556.1 | 0.7279<br>102.9<br>99.0 | 1.8719 | N/A | 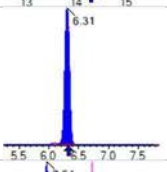 | 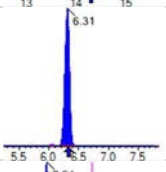 | |
| PFPeS | ( 349.0 / 80.0 ) 1135699<br>( 349.0 / 99.0 ) 401935 | ( 7.54 , 0.88 ) ( N/A , -0.02 , 0.0) | 1179.7<br>1177.9 | 0.3539<br>98.4<br>100.5 | 1.1041 | N/A | 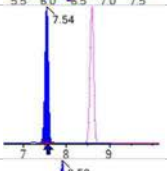 | 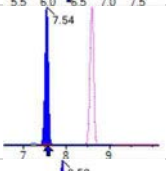 | |
| PFHxS | ( 399.0 / 80.0 ) 1628849<br>( 399.0 / 99.0 ) 507951 | ( 8.59 , 1.00 ) ( 0.00 , N/A , -0.1) | 1264.8<br>1011.6 | 0.3118<br>97.9<br>93.3 | 1.3634 | N/A | 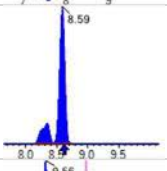 | 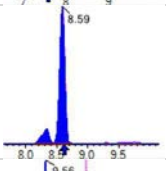 | |
| PFHpS | ( 449.0 / 80.0 ) 1067611<br>( 449.0 / 99.0 ) 284711 | ( 9.56 , 0.92 ) ( N/A , -0.02 , 0.1) | 751.6<br>597.0 | 0.2667<br>100.8<br>100.7 | 1.1101 | N/A | 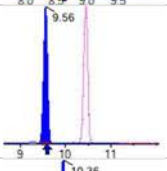 | 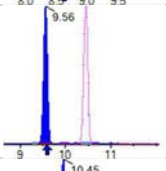 | |
| PFOS | ( 499.0 / 80.0 ) 1588929<br>( 499.0 / 99.0 ) 280138 | ( 10.36 , 0.99 ) ( -0.09 , N/A , -5.4) | 562.6<br>878.5 | 0.1763<br>75.4<br>73.4 | 1.7140 | N/A | 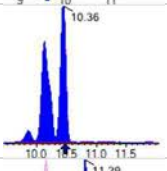 | 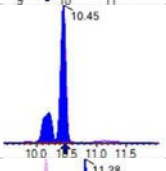 | |
| PFNS | ( 549.0 / 80.0 ) 907400<br>( 549.0 / 99.0 ) 241368 | ( 11.29 , 1.08 ) ( N/A , -0.02 , 0.1) | 1329.0<br>1046.9 | 0.2660<br>97.6<br>98.7 | 1.0454 | N/A | 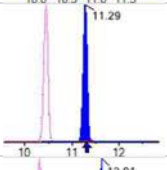 | 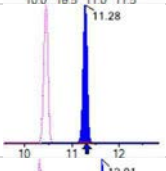 | |
| PFDS | ( 599.0 / 80.0 ) 1024248<br>( 599.0 / 99.0 ) 280534 | ( 12.01 , 1.15 ) ( N/A , -0.02 , -0.2) | 1493.4<br>798.8 | 0.2739<br>100.7<br>102.5 | 0.9664 | N/A | 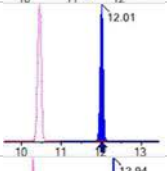 | 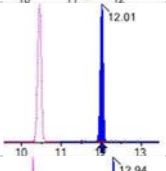 | |
| PFDoS | ( 699.0 / 80.0 ) 874347<br>( 699.0 / 99.0 ) 202404 | ( 12.94 , 1.24 ) ( N/A , -0.01 , 0.2) | 2165.9<br>1530.8 | 0.2315<br>99.1<br>101.1 | 0.9358 | N/A | 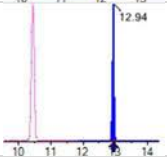 | 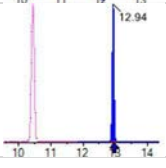 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (11)
Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1594419<br>( 327.0 / 81.0 ) 1444434 | ( 5.49 , 1.00 ) ( 0.00 , N/A , 0.1) | 3842.5<br>1631.8 | 0.9059<br>103.8<br>100.6 | 3.7989 | N/A | 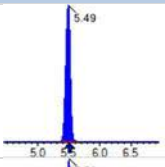 | 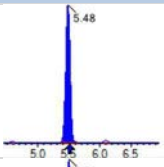 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1621354<br>( 427.0 / 81.0 ) 2072877 | ( 7.59 , 1.00 ) ( 0.00 , N/A , 0.1) | 3178.8<br>1903.2 | 1.2785<br>101.9<br>96.5 | 4.0154 | N/A | 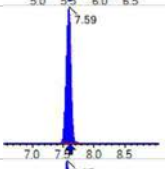 | 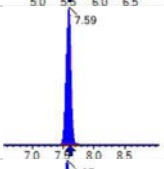 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1597591<br>( 527.0 / 81.0 ) 1739857 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 1481.6<br>1379.6 | 1.0891<br>100.1<br>106.9 | 4.5154 | N/A | 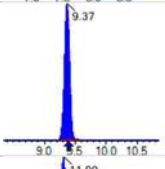 | 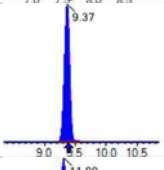 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1160372<br>( 627.0 / 81.0 ) 1602577 | ( 11.00 , 1.00 ) ( 0.01 , N/A , 0.1) | 1716.0<br>1236.3 | 1.3811<br>95.9<br>94.7 | 4.3224 | N/A | 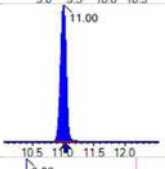 | 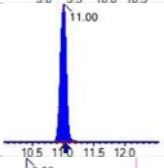 | |
| PFBSA | ( 297.9 / 78.0 ) 456950<br>( 297.9 / 278.0 ) 1037 | ( 8.08 , 0.57 ) ( N/A , -0.02 , -0.1) | 1379.7<br>58.8 | 0.0023<br>166.0<br>146.4 | 2.2581 | N/A | 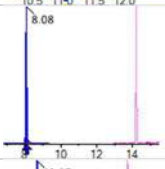 | 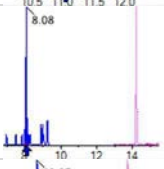 | |
| PFHxSA | ( 397.9 / 78.0 ) 545091<br>( 397.9 / 378.0 ) 2089 | ( 10.95 , 0.75 ) ( N/A , -0.01 , 0.1) | 1367.4<br>51.2 | 0.0038<br>93.8<br>91.5 | 2.2417 | N/A | 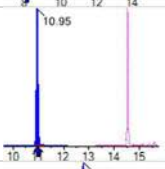 | 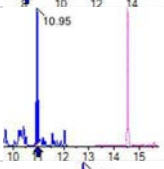 | |
| PFOSA | ( 498.0 / 78.0 ) 362005<br>( 498.0 / 478.0 ) 5992 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.1) | 1134.6<br>122.5 | 0.0166<br>118.0<br>111.2 | 1.1074 | N/A | 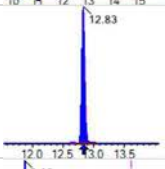 | 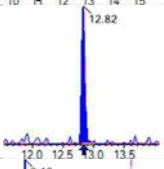 | |
| TFSI | ( 279.7 / 147.0 ) 1872403<br>( 279.7 / 211.0 ) 167549 | ( 8.16 , 0.64 ) ( N/A , -0.02 , 0.1) | 56.9<br>41.7 | 0.0895<br>106.5<br>104.6 | 2.1752 | N/A | 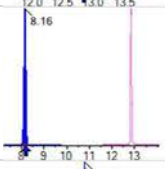 | 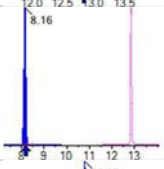 | |
| NMeFOSA | ( 512.0 / 219.0 ) 171269<br>( 512.0 / 169.0 ) 122536 | ( 14.20 , 1.00 ) ( 0.00 , N/A , 2.0) | 1273.4<br>545.8 | 0.7155<br>95.6<br>94.4 | 4.3929 | N/A | 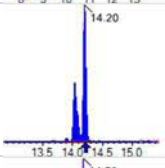 | 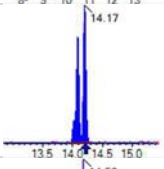 | |
| NEtFOSA | ( 526.0 / 219.0 ) 188921<br>( 526.0 / 169.0 ) 235098 | ( 14.53 , 1.00 ) ( 0.01 , N/A , 2.2) | 1314.2<br>1150.5 | 1.2444<br>100.8<br>100.2 | 4.2635 | N/A | 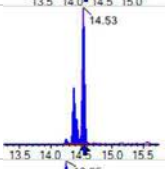 | 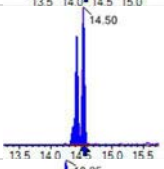 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 183747<br>( 570.0 / 483.0 ) 92368 | ( 10.25 , 1.00 ) ( 0.00 , N/A , 0.3) | 1587.4<br>38747.2 | 0.5027<br>114.6<br>107.5 | 1.0252 | N/A | 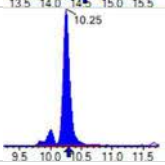 | 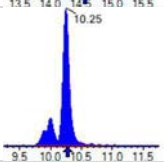 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (11)
Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 183353<br>( 584.0 / 526.0 ) 101637 | ( 10.79 , 1.00 ) ( 0.01 , N/A , 0.1) | 1148.5<br>464.9 | 0.5543<br>89.9<br>93.7 | 1.0234 | N/A | 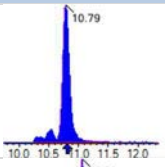 | 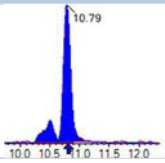 | |
| NMeFOSE | ( 616.0 / 59.0 ) 94259 | ( 14.02 , 1.00 ) ( 0.02 , N/A , 0.0) | 442.3 | N/A<br>0.0<br>0.0 | 4.0618 | N/A | 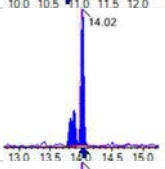 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 77385 | ( 14.37 , 1.00 ) ( 0.02 , N/A , 0.0) | 692.0 | N/A<br>0.0<br>0.0 | 4.3610 | N/A | 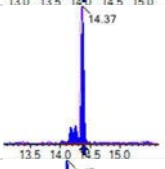 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 81428<br>( 285.0 / 185.0 ) 207070 | ( 6.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 1078.0<br>984.7 | 2.5430<br>92.0<br>96.4 | 1.0900 | N/A | 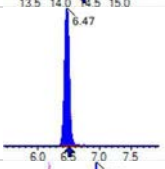 | 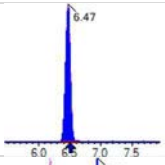 | |
| ADONA | ( 377.0 / 85.0 ) 960799<br>( 377.0 / 251.0 ) 95110 | ( 7.54 , 1.16 ) ( N/A , -0.03 , -0.1) | 1375.6<br>559.9 | 0.0990<br>97.1<br>94.7 | 1.1024 | N/A | 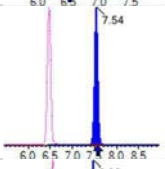 | 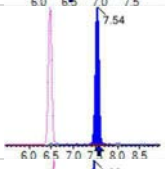 | |
| PFEESA | ( 315.0 / 135.0 ) 390911<br>( 315.0 / 83.0 ) 230972 | ( 6.90 , 1.15 ) ( N/A , -0.02 , 0.1) | 1989.5<br>487.9 | 0.5909<br>106.0<br>104.3 | 1.8356 | N/A | 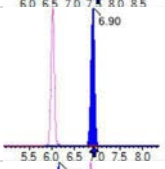 | 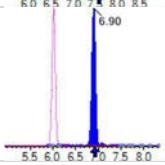 | |
| PFMPA | ( 229.0 / 85.0 ) 182684 | ( 4.12 , 0.86 ) ( N/A , -0.02 , 0.0) | 2875.7 | N/A<br>0.0<br>0.0 | 2.2722 | N/A | 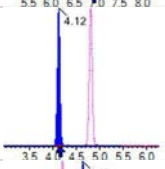 | | |
| PFMBA | ( 279.0 / 85.0 ) 460606 | ( 5.17 , 1.08 ) ( N/A , -0.02 , 0.0) | 2870.5 | N/A<br>0.0<br>0.0 | 2.1078 | N/A | 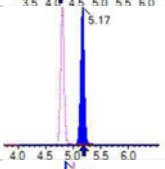 | | |
| NFDHA | ( 295.0 / 201.0 ) 205470<br>( 295.0 / 85.0 ) 231868 | ( 5.88 , 0.98 ) ( N/A , -0.02 , 0.1) | 1855.2<br>1229.9 | 1.1285<br>104.6<br>112.2 | 1.8559 | N/A | 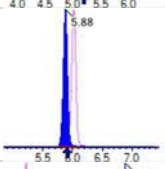 | 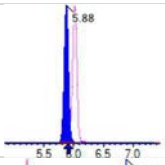 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 929141<br>( 533.0 / 353.0 ) 298906 | ( 11.10 , 1.71 ) ( N/A , -0.02 , 0.1) | 2715.4<br>1613.6 | 0.3217<br>102.8<br>97.6 | 0.9870 | N/A | 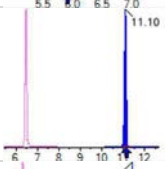 | 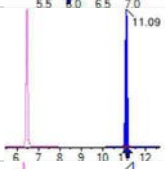 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 731119<br>( 633.0 / 453.0 ) 242191 | ( 12.43 , 1.92 ) ( N/A , -0.02 , 0.1) | 2844.2<br>1396.7 | 0.3313<br>99.7<br>96.8 | 1.0099 | N/A | 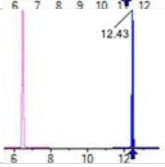 | 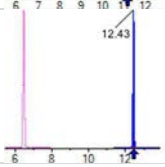 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (11)
Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 522753<br>( 461.0 / 381.2 ) 195003 | ( 9.48 , 0.91 ) ( N/A , -0.02 , 0.0) | 1664.5<br>997.8 | 0.3730<br>93.6<br>94.1 | 0.9996 | N/A | 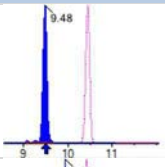 | 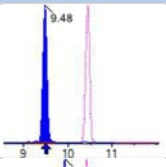 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 49738<br>( 241.0 / 117.0 ) 110911 | ( 4.37 , 0.91 ) ( N/A , -0.02 , 0.2) | 1213.2<br>959.8 | 2.2299<br>105.8<br>102.8 | 3.4509 | N/A | 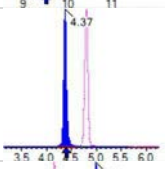 | 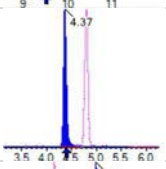 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 289533<br>( 341.0 / 217.0 ) 434881 | ( 6.91 , 1.15 ) ( N/A , -0.02 , 0.1) | 1037.6<br>715.4 | 1.5020<br>98.9<br>103.2 | 3.5205 | N/A | 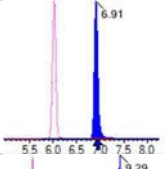 | 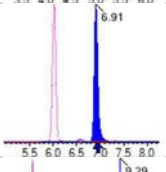 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 462145<br>( 441.0 / 337.0 ) 406190 | ( 9.29 , 1.54 ) ( N/A , -0.02 , -0.1) | 1640.6<br>3117.4 | 0.8789<br>95.8<br>100.5 | 3.4243 | N/A | 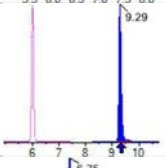 | 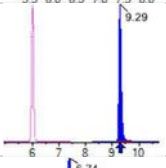 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 386274<br>( 357.2 / 243.0 ) 39868 | ( 6.75 , 1.00 ) ( -0.01 , N/A , 0.2) | 1168.3<br>178.2 | 0.1032<br>93.6<br>99.2 | 1.0112 | N/A | 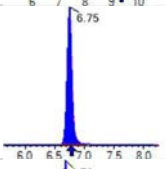 | 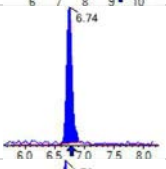 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 296475<br>( 457.2 / 343.0 ) 12882 | ( 8.78 , 1.00 ) ( -0.01 , N/A , 0.0) | 681.8<br>120.7 | 0.0435<br>104.8<br>95.8 | 1.1725 | N/A | 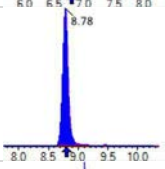 | 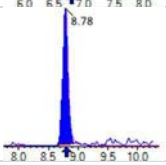 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 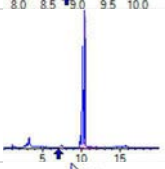 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256763 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1200.0 | N/A | 1.0769 [ 1.0000 ] | 107.7% { 108.6% } | 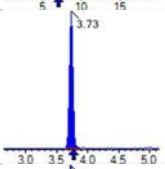 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 123281 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 19477.5 | N/A | 0.9718 [ 1.0000 ] | 97.2% { 97.4% } | 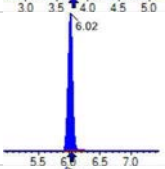 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 358618 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 2777.5 | N/A | 0.9072 [ 1.0000 ] | 90.7% { 94.5% } | 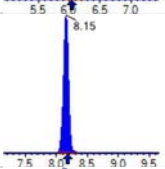 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 263519 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 811.8 | N/A | 0.9266 [ 1.0000 ] | 92.7% { 93.7% } | 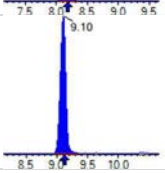 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (11)
Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 247598 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 5742.5 | N/A | 0.8479 [ 1.0000 ] | 84.8% { 85.6% } | 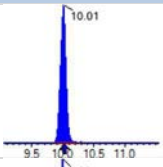 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 845452 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 3977.1 | N/A | 0.8909 [ 1.0000 ] | 89.1% { 90.6% } | 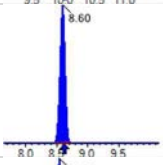 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 702559 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1253.9 | N/A | 0.9224 [ 1.0000 ] | 92.2% { 98.7% } | 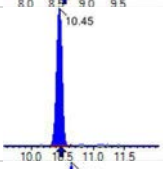 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2243805 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 29975.9 | N/A | 7.6496 [ 8.0000 ] | 95.6% { 100.2% } | 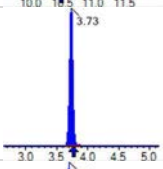 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1003181 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 4944.3 | N/A | 4.3612 [ 4.0000 ] | 109.0% { 102.8% } | 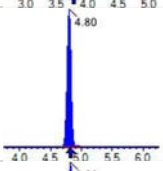 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 617339 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 10406.3 | N/A | 2.1947 [ 2.0000 ] | 109.7% { 104.6% } | 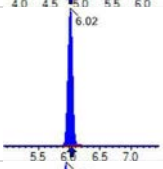 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 635856 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 5633.3 | N/A | 2.0322 [ 2.0000 ] | 101.6% { 96.9% } | 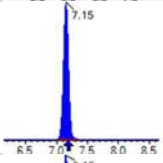 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 855959 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 2208.0 | N/A | 2.2276 [ 2.0000 ] | 111.4% { 99.3% } | 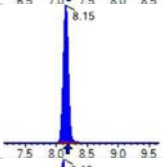 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269895 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 1686.0 | N/A | 1.0446 [ 1.0000 ] | 104.5% { 100.0% } | 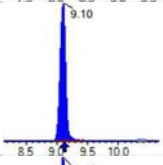 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317480 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1185.7 | N/A | 1.1442 [ 1.0000 ] | 114.4% { 98.7% } | 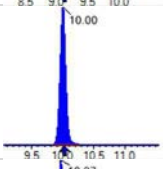 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 369413 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 1004.3 | N/A | 1.1316 [ 1.0000 ] | 113.2% { 99.3% } | 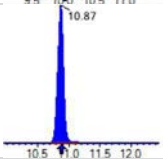 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MS1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368304 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 993.9 | N/A | 1.1079 [ 1.0000 ] | 110.8% { 98.8% } | 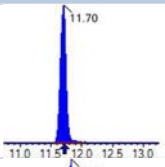  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 304551 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1078.1 | N/A | 1.0757 [ 1.0000 ] | 107.6% { 93.3% } | 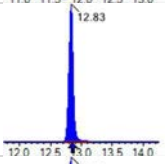  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 379191 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 1870.4 | N/A | 1.5689 [ 2.0000 ] | 78.4% { 75.1% } | 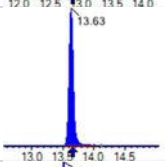  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1718930 | ( 6.31 , N/A ) ( N/A , -0.02 , N/A ) | 909.2 | N/A | 2.2503 [ 2.0000 ] | 112.5% { 102.4% } | 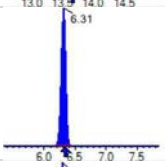  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1344073 | ( 8.59 , N/A ) ( N/A , -0.02 , N/A ) | 2664.0 | N/A | 2.2044 [ 2.0000 ] | 110.2% { 101.9% } | 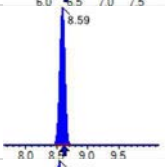  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1605248 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1230.9 | N/A | 2.1191 [ 2.0000 ] | 106.0% { 103.6% } | 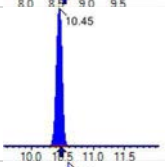  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 639682 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 88.8 | N/A | 4.8537 [ 4.0000 ] | 121.3% { 108.6% } | 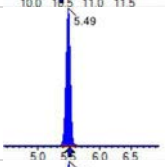  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1950464 | ( 7.59 , N/A ) ( N/A , -0.02 , N/A ) | 2410.6 | N/A | 4.9452 [ 4.0000 ] | 123.6% { 117.0% } | 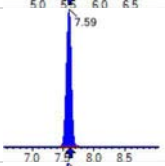  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490217 | ( 9.37 , N/A ) ( N/A , -0.02 , N/A ) | 1339.9 | N/A | 4.8175 [ 4.0000 ] | 120.4% { 108.9% } | 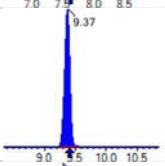  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2786407 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1254.2 | N/A | 8.6189 [ 8.0000 ] | 107.7% { 109.2% } | 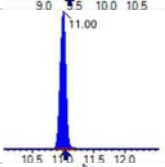  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 653781 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2917.9 | N/A | 0.9739 [ 2.0000 ] | 48.7% { 47.6% } | 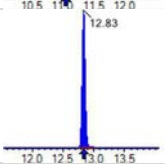  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MS1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 78532 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 738.9 | N/A | 0.5516 [ 2.0000 ] | 27.6% { 27.3% } | 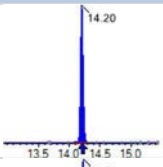 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 79132 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 733.5 | N/A | 0.5183 [ 2.0000 ] | 25.9% { 25.8% } | 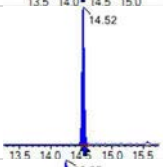 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 751690 | ( 10.25 , N/A ) ( N/A , -0.03 , N/A ) | 2381.8 | N/A | 3.8566 [ 4.0000 ] | 96.4% { 88.9% } | 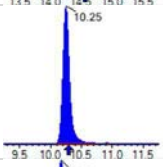 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 732586 | ( 10.77 , N/A ) ( N/A , -0.03 , N/A ) | 2099.7 | N/A | 4.1239 [ 4.0000 ] | 103.1% { 95.1% } | 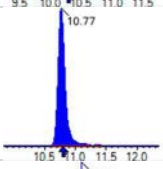 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 423112 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1090.6 | N/A | 6.6128 [ 20.0000 ] | 33.1% { 30.8% } | 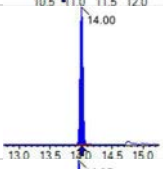 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 399442 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 1434.5 | N/A | 6.1508 [ 20.0000 ] | 30.8% { 31.0% } | 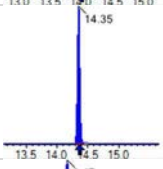 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1013464 | ( 6.47 , N/A ) ( N/A , -0.03 , N/A ) | 2129.9 | N/A | 7.9095 [ 8.0000 ] | 98.9% { 99.1% } | 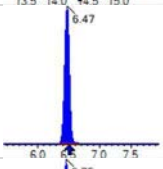 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 718607 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1249.0 | N/A | 2.6769 [ 2.0000 ] | 133.8% { 116.5% } | 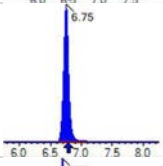 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 620022 | ( 8.79 , N/A ) ( N/A , -0.02 , N/A ) | 898.8 | N/A | 2.5371 [ 2.0000 ] | 126.9% { 112.1% } | 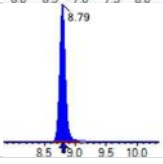 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MSD1a | File ID:a | S2024-03-19B (12)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 20:14a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 17.9a | 0.19a | 1.5a | |
| PFPeAa | 8.83a | 0.061a | 0.75a | |
| PFHxAa | 4.78a | 0.051a | 0.37a | |
| PFHpAa | 4.15a | 0.038a | 0.37a | |
| PFOAa | 4.58a | 0.14a | 0.37a | |
| PFNAa | 3.96a | 0.076a | 0.37a | |
| PFDAa | 3.70a | 0.094a | 0.37a | |
| PFUnAa | 4.08a | 0.15a | 0.37a | |
| PFDoAa | 4.12a | 0.10a | 0.37a | |
| PFTrDAa | 3.74a | 0.19a | 0.37a | |
| PFTeDAa | 4.00a | 0.18a | 0.37a | |
| PFHxDAa | 4.03a | 0.19a | 0.37a | |
| PFODAa | 4.42a | 0.19a | 0.37a | |
| PFBSa | 6.84a | 0.034a | 0.37a | |
| PFPeSa | 3.94a | 0.058a | 0.37a | |
| PFHxSa | 4.91a | 0.030a | 0.37a | |
| PFHpSa | 4.04a | 0.048a | 0.37a | |
| PFOSa | 6.98a | 0.059a | 0.37a | |
| PFNSa | 3.95a | 0.11a | 0.37a | |
| PFDSa | 3.82a | 0.14a | 0.37a | |
| PFDoSa | 3.80a | 0.11a | 0.37a | |
| 4:2FTSa | 15.4a | 0.27a | 1.5a | |
| 6:2FTSa | 16.0a | 0.29a | 1.5a | |
| 8:2FTSa | 16.1a | 0.077a | 1.5a | |
| 10:2FTSa | 14.9a | 0.37a | 1.5a | |
| PFOSAa | 3.89a | 0.097a | 0.37a | |
| NMeFOSAa | 17.6a | 0.44a | 1.5a | |
| NEtFOSAa | 16.9a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.88a | 0.099a | 0.37a | |
| NEtFOSAAa | 4.13a | 0.11a | 0.37a | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0094a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MSD1a | File ID:a | S2024-03-19B (12)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 20:14a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.6a | 0.94a | 1.5a | |
| NEtFOSEa | 16.6a | 0.98a | 1.5a | |
| HFPO-DAa | 3.84a | 0.16a | 0.75a | |
| ADONAa | 3.97a | 0.11a | 0.75a | |
| PFEESAa | 6.81a | 0.10a | 0.75a | |
| PFMPAa | 8.12a | 0.050a | 0.75a | |
| PFMBAa | 7.98a | 0.085a | 0.75a | |
| NFDHAa | 7.33a | 0.28a | 0.75a | |
| 9Cl-PF3ONSa | 3.98a | 0.19a | 0.75a | |
| 11Cl-PF3OUDSa | 4.07a | 0.19a | 0.75a | |
| 3:3FTCAa | 13.1a | 0.54a | 1.5a | |
| 5:3FTCAa | 14.7a | 0.41a | 1.5a | |
| 7:3FTCAa | 14.0a | 0.52a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (12)
Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 282212<br>( 163.0 / 69.0 ) 8013 | ( 2.78 , 0.75 ) ( N/A , -0.01 , 0.2) | 1188.1<br>458.0 | 0.0284<br>104.5<br>107.7 | 1.1018 | N/A | 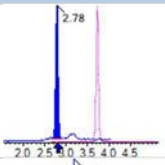 | 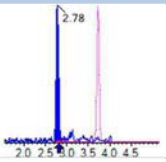 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 1301536 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 737.2 | N/A<br>0.0<br>0.0 | 4.8069 | N/A | 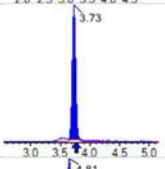 | | |
| PFPeA | ( 263.0 / 219.0 ) 593705<br>( 263.0 / 69.0 ) 6455 | ( 4.81 , 1.00 ) ( 0.00 , N/A , 0.3) | 2263.6<br>76.4 | 0.0109<br>91.1<br>98.0 | 2.3688 | N/A | 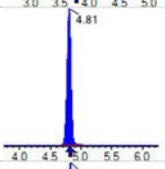 | 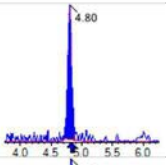 | |
| PFHxA | ( 313.0 / 269.0 ) 369766<br>( 313.0 / 119.0 ) 40155 | ( 6.03 , 1.00 ) ( 0.00 , N/A , 0.2) | 1294.4<br>478.3 | 0.1086<br>93.5<br>92.8 | 1.2820 | N/A | 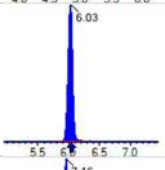 | 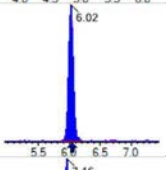 | |
| PFHpA | ( 363.0 / 319.0 ) 375454<br>( 363.0 / 169.0 ) 104413 | ( 7.16 , 1.00 ) ( 0.00 , N/A , 0.0) | 1026.7<br>655.3 | 0.2781<br>91.8<br>94.2 | 1.1128 | N/A | 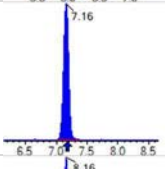 | 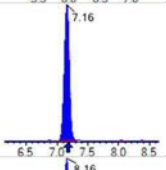 | |
| PFOA | ( 413.0 / 369.0 ) 544047<br>( 413.0 / 169.0 ) 193332 | ( 8.16 , 1.00 ) ( 0.00 , N/A , 0.3) | 355.1<br>540.6 | 0.3554<br>97.2<br>103.5 | 1.2274 | N/A | 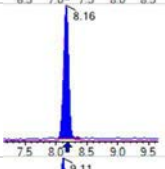 | 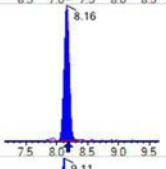 | |
| PFNA | ( 463.0 / 419.0 ) 308943<br>( 463.0 / 169.0 ) 75603 | ( 9.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 641.6<br>457.6 | 0.2447<br>95.9<br>101.7 | 1.0634 | N/A | 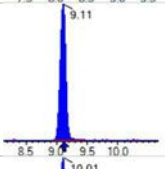 | 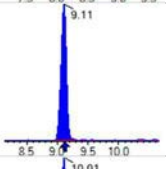 | |
| PFDA | ( 513.0 / 469.0 ) 354044<br>( 513.0 / 169.0 ) 47872 | ( 10.01 , 1.00 ) ( 0.00 , N/A , -0.1) | 1451.5<br>727.2 | 0.1352<br>115.4<br>113.0 | 0.9918 | N/A | 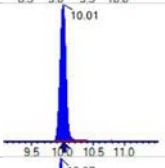 | 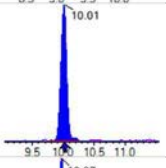 | |
| PFUnA | ( 563.0 / 519.0 ) 387044<br>( 563.0 / 169.0 ) 59046 | ( 10.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 858.4<br>393.2 | 0.1526<br>107.6<br>107.3 | 1.0933 | N/A | 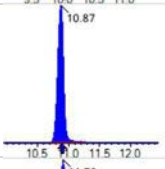 | 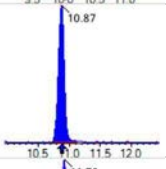 | |
| PFDoA | ( 613.0 / 569.0 ) 434183<br>( 613.0 / 169.0 ) 64477 | ( 11.70 , 1.00 ) ( 0.00 , N/A , -0.3) | 1230.9<br>541.7 | 0.1485<br>94.0<br>100.4 | 1.1050 | N/A | 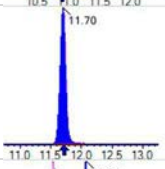 | 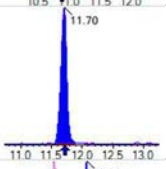 | |
| PFTrDA | ( 663.0 / 619.0 ) 385569<br>( 663.0 / 169.0 ) 100149 | ( 12.34 , 1.05 ) ( N/A , -0.01 , 0.0) | 1123.4<br>663.5 | 0.2597<br>100.9<br>100.3 | 1.0031 | N/A | 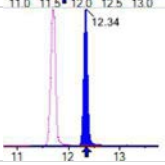 | 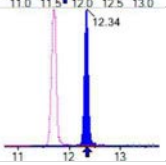 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MSD1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 311171<br>( 713.0 / 169.0 ) 85532 | ( 12.83 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1097.8<br>593.3 | 0.2749<br>101.8<br>103.4 | 1.0735 | N/A | 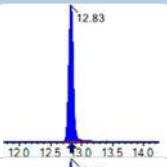 | 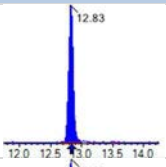 | |
| PFHxDA | ( 813.0 / 769.0 ) 214061<br>( 813.0 / 169.0 ) 53393 | ( 13.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 911.4<br>328.1 | 0.2494<br>101.9<br>97.7 | 1.0814 | N/A | 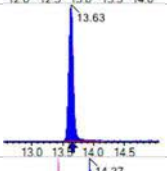 | 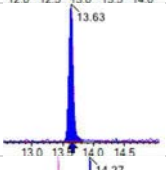 | |
| PFODA | ( 913.0 / 869.0 ) 146721<br>( 913.0 / 169.0 ) 47430 | ( 14.27 , 1.05 )<br>( N/A , -0.01 , -0.2) | 589.9<br>208.3 | 0.3233<br>90.2<br>94.8 | 1.1848 | N/A | 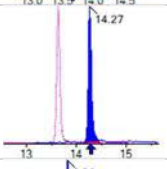 | 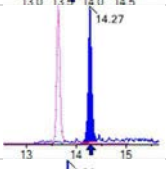 | |
| PFBS | ( 299.0 / 80.0 ) 864175<br>( 299.0 / 99.0 ) 600855 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1472.0<br>1835.3 | 0.6953<br>98.3<br>94.5 | 1.8361 | N/A | 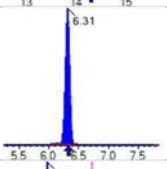 | 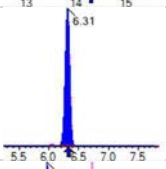 | |
| PFPeS | ( 349.0 / 80.0 ) 1180651<br>( 349.0 / 99.0 ) 413190 | ( 7.55 , 0.88 )<br>( N/A , -0.02 , 0.0) | 1122.5<br>1151.0 | 0.3500<br>97.3<br>99.4 | 1.0567 | N/A | 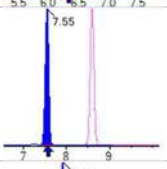 | 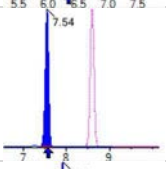 | |
| PFHxS | ( 399.0 / 80.0 ) 1711109<br>( 399.0 / 99.0 ) 553780 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1286.2<br>1006.1 | 0.3236<br>101.6<br>96.8 | 1.3184 | N/A | 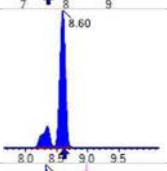 | 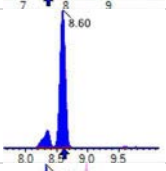 | |
| PFHpS | ( 449.0 / 80.0 ) 1095385<br>( 449.0 / 99.0 ) 295404 | ( 9.57 , 0.91 )<br>( N/A , -0.01 , 0.0) | 867.3<br>695.3 | 0.2697<br>101.9<br>101.9 | 1.0845 | N/A | 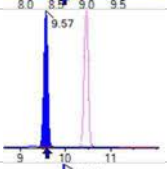 | 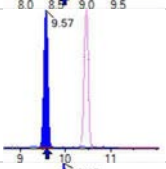 | |
| PFOS | ( 499.0 / 80.0 ) 1821967<br>( 499.0 / 99.0 ) 307882 | ( 10.32 , 0.99 )<br>( -0.13 , N/A , -7.8) | 601.7<br>1252.5 | 0.1690<br>72.3<br>70.4 | 1.8714 | N/A | 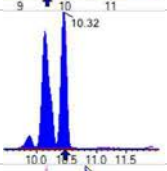 | 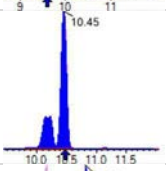 | |
| PFNS | ( 549.0 / 80.0 ) 965787<br>( 549.0 / 99.0 ) 269121 | ( 11.29 , 1.08 )<br>( N/A , -0.02 , -0.1) | 1352.0<br>937.3 | 0.2787<br>102.2<br>103.4 | 1.0595 | N/A | 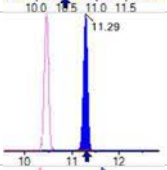 | 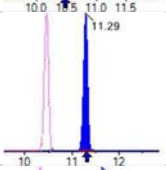 | |
| PFDS | ( 599.0 / 80.0 ) 1140721<br>( 599.0 / 99.0 ) 302566 | ( 12.02 , 1.15 )<br>( N/A , -0.01 , -0.2) | 1238.0<br>864.4 | 0.2652<br>97.6<br>99.2 | 1.0248 | N/A | 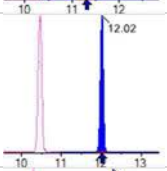 | 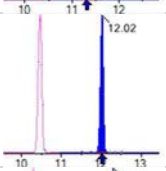 | |
| PFDoS | ( 699.0 / 80.0 ) 1001120<br>( 699.0 / 99.0 ) 233042 | ( 12.94 , 1.24 )<br>( N/A , -0.01 , 0.0) | 2219.1<br>1449.1 | 0.2328<br>99.7<br>101.7 | 1.0202 | N/A | 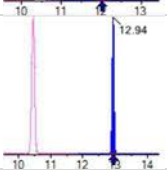 | 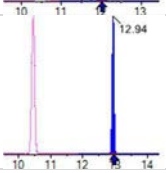 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (12)
Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1691803<br>( 327.0 / 81.0 ) 1547602 | ( 5.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 5180.4<br>1592.2 | 0.9148<br>104.8<br>101.6 | 4.1332 | N/A | 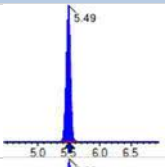 | 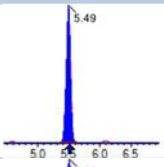 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1730190<br>( 427.0 / 81.0 ) 2304791 | ( 7.60 , 1.00 ) ( -0.01 , N/A , 0.0) | 3792.8<br>2238.1 | 1.3321<br>106.2<br>100.6 | 4.2912 | N/A | 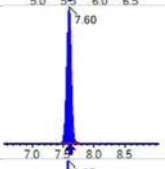 | 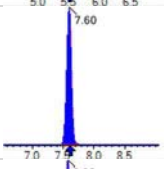 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1628478<br>( 527.0 / 81.0 ) 1707780 | ( 9.37 , 1.00 ) ( -0.01 , N/A , -0.2) | 1503.8<br>1520.4 | 1.0487<br>96.4<br>102.9 | 4.3175 | N/A | 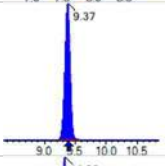 | 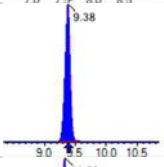 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1299253<br>( 627.0 / 81.0 ) 1951985 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.1) | 1223.0<br>1148.8 | 1.5024<br>104.4<br>103.0 | 3.9845 | N/A | 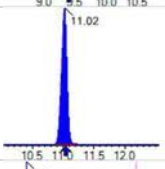 | 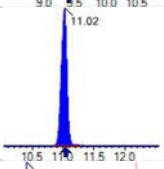 | |
| PFBSA | ( 297.9 / 78.0 ) 563978<br>( 297.9 / 278.0 ) 741 | ( 8.09 , 0.57 ) ( N/A , -0.01 , -0.1) | 1201.5<br>79.0 | 0.0013<br>96.2<br>84.9 | 2.4286 | N/A | 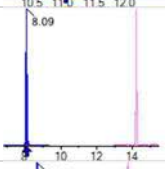 | 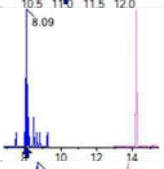 | |
| PFHxSA | ( 397.9 / 78.0 ) 628977<br>( 397.9 / 378.0 ) 2759 | ( 10.96 , 0.75 ) ( N/A , -0.01 , 0.6) | 1483.8<br>62.6 | 0.0044<br>107.4<br>104.8 | 2.2404 | N/A | 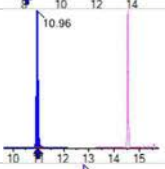 | 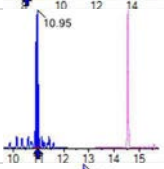 | |
| PFOSA | ( 498.0 / 78.0 ) 379335<br>( 498.0 / 478.0 ) 5450 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.0) | 1555.3<br>139.9 | 0.0144<br>102.4<br>96.5 | 1.0439 | N/A | 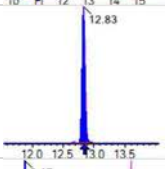 | 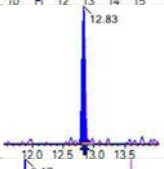 | |
| TFSI | ( 279.7 / 147.0 ) 1926404<br>( 279.7 / 211.0 ) 173017 | ( 8.17 , 0.64 ) ( N/A , -0.01 , -0.1) | 64.5<br>48.7 | 0.0898<br>106.9<br>105.0 | 2.0132 | N/A | 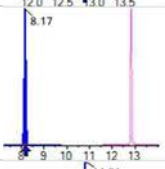 | 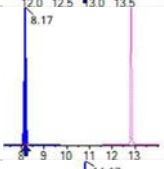 | |
| NMeFOSA | ( 512.0 / 219.0 ) 211471<br>( 512.0 / 169.0 ) 155833 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.3) | 1465.1<br>657.3 | 0.7369<br>98.5<br>97.2 | 4.7265 | N/A | 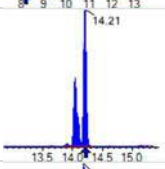 | 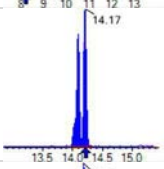 | |
| NEtFOSA | ( 526.0 / 219.0 ) 231305<br>( 526.0 / 169.0 ) 294301 | ( 14.53 , 1.00 ) ( 0.01 , N/A , 1.8) | 1738.0<br>1541.8 | 1.2724<br>103.1<br>102.5 | 4.5212 | N/A | 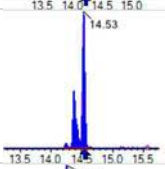 | 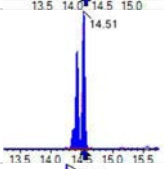 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 212080<br>( 570.0 / 483.0 ) 103097 | ( 10.26 , 1.00 ) ( 0.00 , N/A , -0.1) | 2004.0<br>1199.0 | 0.4861<br>110.9<br>104.0 | 1.0405 | N/A | 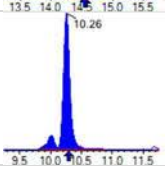 | 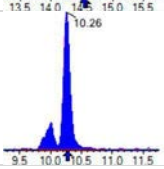 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (12)
Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 213041<br>( 584.0 / 526.0 ) 128627 | ( 10.79 , 1.00 ) ( 0.01 , N/A , 0.0) | 1404.5<br>653.1 | 0.6038<br>97.9<br>102.1 | 1.1050 | N/A | 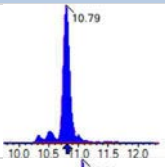 | 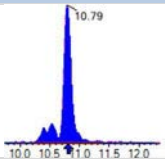 | |
| NMeFOSE | ( 616.0 / 59.0 ) 104395 | ( 14.02 , 1.00 ) ( 0.02 , N/A , 0.0) | 477.8 | N/A<br>0.0<br>0.0 | 4.4488 | N/A | 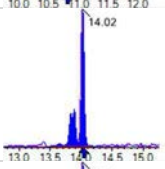 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 80322 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 649.5 | N/A<br>0.0<br>0.0 | 4.4618 | N/A | 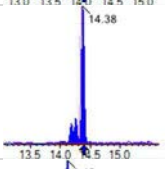 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 80149<br>( 285.0 / 185.0 ) 226600 | ( 6.48 , 1.00 ) ( 0.00 , N/A , 0.1) | 972.3<br>1008.3 | 2.8272<br>102.2<br>107.2 | 1.0314 | N/A | 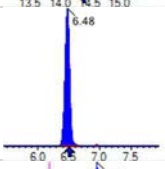 | 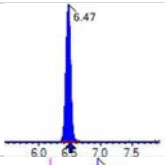 | |
| ADONA | ( 377.0 / 85.0 ) 965819<br>( 377.0 / 251.0 ) 102809 | ( 7.55 , 1.17 ) ( N/A , -0.02 , 0.0) | 1146.3<br>681.4 | 0.1064<br>104.4<br>101.8 | 1.0653 | N/A | 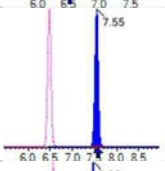 | 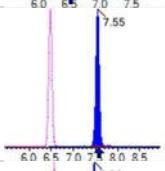 | |
| PFEESA | ( 315.0 / 135.0 ) 378129<br>( 315.0 / 83.0 ) 231258 | ( 6.90 , 1.15 ) ( N/A , -0.02 , -0.2) | 2013.9<br>582.6 | 0.6116<br>109.7<br>108.0 | 1.8255 | N/A | 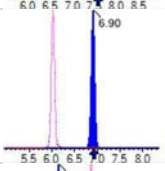 | 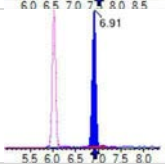 | |
| PFMPA | ( 229.0 / 85.0 ) 173304 | ( 4.12 , 0.86 ) ( N/A , -0.02 , 0.0) | 2628.1 | N/A<br>0.0<br>0.0 | 2.1790 | N/A | 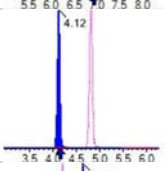 | | |
| PFMBA | ( 279.0 / 85.0 ) 462822 | ( 5.17 , 1.08 ) ( N/A , -0.02 , 0.0) | 3363.1 | N/A<br>0.0<br>0.0 | 2.1410 | N/A | 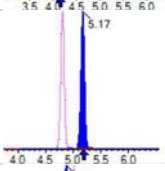 | | |
| NFDHA | ( 295.0 / 201.0 ) 211757<br>( 295.0 / 85.0 ) 228750 | ( 5.88 , 0.98 ) ( N/A , -0.02 , 0.0) | 1725.8<br>1208.5 | 1.0802<br>100.1<br>107.4 | 1.9665 | N/A | 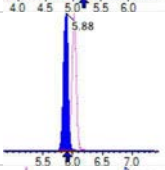 | 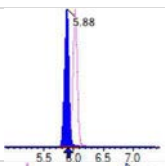 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1045125<br>( 533.0 / 353.0 ) 329731 | ( 11.10 , 1.71 ) ( N/A , -0.02 , 0.1) | 2281.8<br>1703.6 | 0.3155<br>100.8<br>95.7 | 1.0673 | N/A | 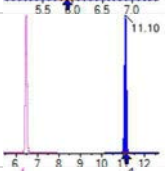 | 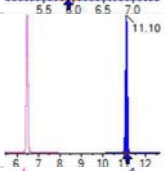 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 821972<br>( 633.0 / 453.0 ) 265364 | ( 12.43 , 1.92 ) ( N/A , -0.01 , 0.1) | 2780.6<br>1750.7 | 0.3228<br>97.2<br>94.3 | 1.0915 | N/A | 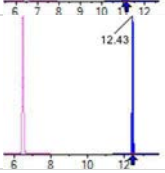 | 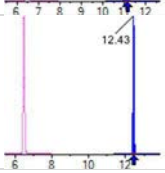 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MSD1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 551156<br>( 461.0 / 381.2 ) 217624 | ( 9.49 , 0.91 )<br>( N/A , -0.02 , 0.2) | 1439.0<br>1457.8 | 0.3949<br>99.1<br>99.6 | 1.0035 | N/A | 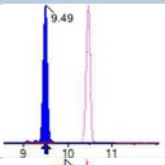 | 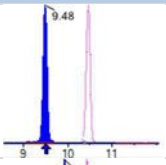 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 50117<br>( 241.0 / 117.0 ) 120024 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 945.7<br>953.8 | 2.3949<br>113.7<br>110.4 | 3.5150 | N/A | 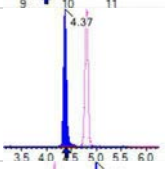 | 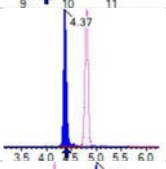 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 314710<br>( 341.0 / 217.0 ) 454203 | ( 6.92 , 1.15 )<br>( N/A , -0.02 , -0.1) | 1117.1<br>736.5 | 1.4432<br>95.0<br>99.2 | 3.9344 | N/A | 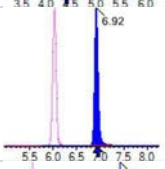 | 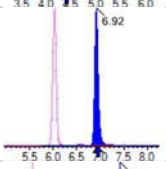 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 493979<br>( 441.0 / 337.0 ) 443284 | ( 9.30 , 1.54 )<br>( N/A , -0.01 , 0.1) | 1584.9<br>7622.2 | 0.8974<br>97.8<br>102.6 | 3.7632 | N/A | 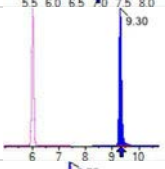 | 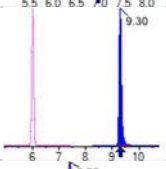 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 408377<br>( 357.2 / 243.0 ) 41790 | ( 6.75 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1199.5<br>209.8 | 0.1023<br>92.8<br>98.3 | 1.0229 | N/A | 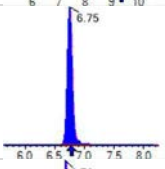 | 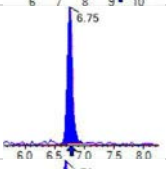 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 309033<br>( 457.2 / 343.0 ) 13274 | ( 8.79 , 1.00 )<br>( -0.01 , N/A , 0.0) | 686.8<br>125.8 | 0.0430<br>103.6<br>94.7 | 1.1993 | N/A | 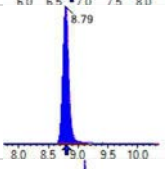 | 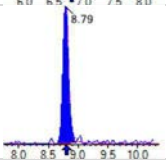 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 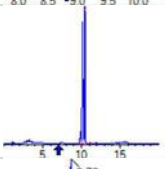 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 257477 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1167.3 | N/A | 1.0799<br>[ 1.0000 ] | 108.0%<br>{ 108.9% } | 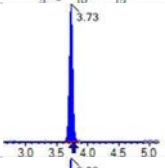 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126553 | ( 6.03 , N/A )<br>( N/A , -0.02 , N/A ) | 64412.8 | N/A | 0.9976<br>[ 1.0000 ] | 99.8%<br>{ 100.0% } | 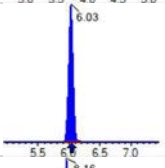 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 371314 | ( 8.16 , N/A )<br>( N/A , -0.02 , N/A ) | 3044.2 | N/A | 0.9393<br>[ 1.0000 ] | 93.9%<br>{ 97.9% } | 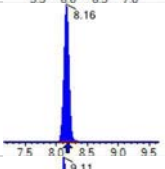 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 259950 | ( 9.11 , N/A )<br>( N/A , -0.01 , N/A ) | 872.7 | N/A | 0.9140<br>[ 1.0000 ] | 91.4%<br>{ 92.4% } | 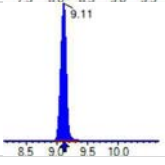 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (12)
Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277765 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 3053.4 | N/A | 0.9512 [ 1.0000 ] | 95.1% { 96.0% } | 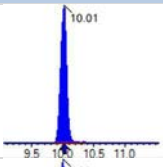 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 901272 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 3827.3 | N/A | 0.9497 [ 1.0000 ] | 95.0% { 96.6% } | 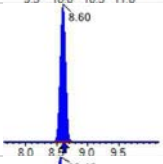 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 742046 | ( 10.46 , N/A ) ( N/A , -0.01 , N/A ) | 1165.3 | N/A | 0.9743 [ 1.0000 ] | 97.4% { 104.2% } | 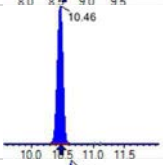 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2173009 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 35956.4 | N/A | 7.3877 [ 8.0000 ] | 92.3% { 97.1% } | 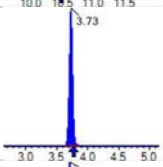 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 992379 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 5591.8 | N/A | 4.2027 [ 4.0000 ] | 105.1% { 101.7% } | 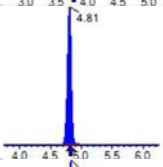 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 600433 | ( 6.02 , N/A ) ( N/A , -0.02 , N/A ) | 9616.7 | N/A | 2.0794 [ 2.0000 ] | 104.0% { 101.8% } | 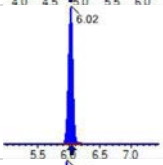 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 687646 | ( 7.16 , N/A ) ( N/A , -0.02 , N/A ) | 4672.1 | N/A | 2.1409 [ 2.0000 ] | 107.0% { 104.7% } | 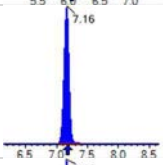 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 894877 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 3706.8 | N/A | 2.2493 [ 2.0000 ] | 112.5% { 103.8% } | 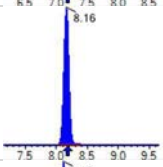 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 289050 | ( 9.10 , N/A ) ( N/A , -0.01 , N/A ) | 1845.1 | N/A | 1.1341 [ 1.0000 ] | 113.4% { 107.1% } | 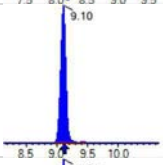 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 349354 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 1212.0 | N/A | 1.1223 [ 1.0000 ] | 112.2% { 108.6% } | 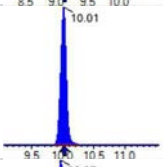 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 382739 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 901.1 | N/A | 1.0451 [ 1.0000 ] | 104.5% { 102.9% } | 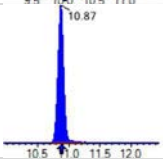 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MSD1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 390584 | ( 11.70 , N/A ) ( N/A , -0.01 , N/A ) | 1060.7 | N/A | 1.0473 [ 1.0000 ] | 104.7% { 104.7% } | 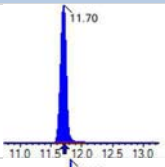 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 309517 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1413.6 | N/A | 0.9745 [ 1.0000 ] | 97.5% { 94.8% } | 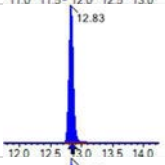 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 415068 | ( 13.64 , N/A ) ( N/A , -0.02 , N/A ) | 1991.1 | N/A | 1.5308 [ 2.0000 ] | 76.5% { 82.2% } | 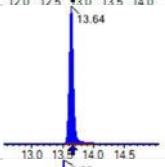 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1812995 | ( 6.32 , N/A ) ( N/A , -0.02 , N/A ) | 1121.5 | N/A | 2.2265 [ 2.0000 ] | 111.3% { 108.0% } | 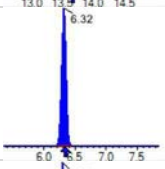 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1460048 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 3264.8 | N/A | 2.2463 [ 2.0000 ] | 112.3% { 110.7% } | 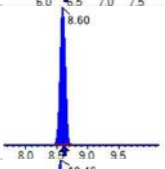 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1685899 | ( 10.46 , N/A ) ( N/A , -0.02 , N/A ) | 1187.3 | N/A | 2.1071 [ 2.0000 ] | 105.4% { 108.8% } | 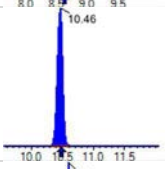 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 623859 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 90.1 | N/A | 4.4405 [ 4.0000 ] | 111.0% { 105.9% } | 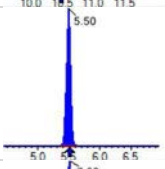 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1947622 | ( 7.60 , N/A ) ( N/A , -0.01 , N/A ) | 2018.6 | N/A | 4.6321 [ 4.0000 ] | 115.8% { 116.9% } | 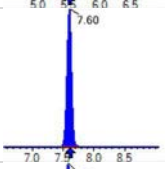 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1588644 | ( 9.38 , N/A ) ( N/A , -0.01 , N/A ) | 1246.6 | N/A | 4.8176 [ 4.0000 ] | 120.4% { 116.1% } | 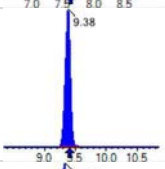 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3384495 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1537.1 | N/A | 9.8206 [ 8.0000 ] | 122.8% { 132.6% } | 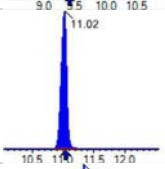 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 726771 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2064.2 | N/A | 1.0250 [ 2.0000 ] | 51.3% { 52.9% } | 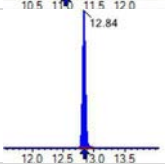 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (12)
Acquired: 2024/03/19 - 20:14

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 90121 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 795.5 | N/A | 0.5993 [ 2.0000 ] | 30.0% { 31.3% } | 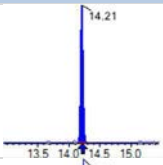  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 91361 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1041.0 | N/A | 0.5665 [ 2.0000 ] | 28.3% { 29.8% } | 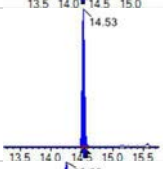  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 854846 | ( 10.26 , N/A ) ( N/A , -0.02 , N/A ) | 3011.0 | N/A | 4.1524 [ 4.0000 ] | 103.8% { 101.1% } | 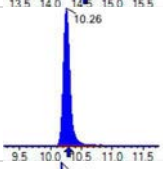  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 788353 | ( 10.78 , N/A ) ( N/A , -0.02 , N/A ) | 1980.8 | N/A | 4.2017 [ 4.0000 ] | 105.0% { 102.4% } | 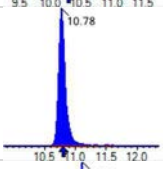  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 427853 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1236.7 | N/A | 6.3311 [ 20.0000 ] | 31.7% { 31.1% } | 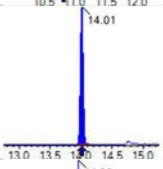  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 405240 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 1680.8 | N/A | 5.9080 [ 20.0000 ] | 29.5% { 31.4% } | 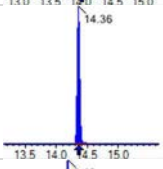  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1054255 | ( 6.48 , N/A ) ( N/A , -0.02 , N/A ) | 2233.3 | N/A | 8.0151 [ 8.0000 ] | 100.2% { 103.1% } | 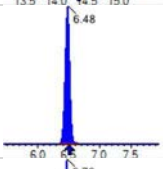  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 751027 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1400.2 | N/A | 2.4939 [ 2.0000 ] | 124.7% { 121.7% } | 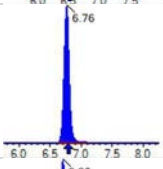  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 631855 | ( 8.80 , N/A ) ( N/A , -0.01 , N/A ) | 905.1 | N/A | 2.3048 [ 2.0000 ] | 115.2% { 114.2% } | 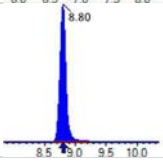  | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | PPL, LLC | Work Order: | 24C0094 |
| Client: | Tidewater, Inc. | Project: | JPL-GW Monitoring |
| Batch: | BDC0200 | Batch Matrix: | Water |
| | | Preparation: | EPA 1633A |

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-22-3- | 24C0094-01- | 03/18/24 11:40- | 512.60- | 2.00- |
| MW-22-2- | 24C0094-02- | 03/18/24 11:40- | 547.12- | 2.00- |
| MW-22-1- | 24C0094-03- | 03/18/24 11:40- | 542.72- | 2.00- |
| MW-3-4- | 24C0094-04- | 03/18/24 11:40- | 539.91- | 2.00- |
| MW-3-3- | 24C0094-05- | 03/18/24 11:40- | 545.60- | 2.00- |
| MW-3-2- | 24C0094-06- | 03/18/24 11:40- | 543.84- | 2.00- |
| MW-3-1- | 24C0094-07- | 03/18/24 11:40- | 550.79- | 2.00- |
| EB-4-031424- | 24C0094-08- | 03/18/24 11:40- | 539.22- | 2.00- |
| FB-4-031424- | 24C0094-09- | 03/18/24 11:40- | 523.30- | 2.00- |
| Blank- | BDC0200-BLK1- | 03/18/24 11:40- | 500.00- | 2.00- |
| LCS- | BDC0200-BS1- | 03/18/24 11:40- | 500.00- | 2.00- |
| MRL Check- | BDC0200-MRL1- | 03/18/24 11:40- | 500.00- | 2.00- |
| MW-3-2- | BDC0200-MS1- | 03/18/24 11:40- | 536.08- | 2.00- |
| MW-3-2- | BDC0200-MSD1- | 03/18/24 11:40- | 536.50- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/19/2024 2:44 pm

BDC0200

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0094-01 A | MW-22-3 A | 558.196 | 45.593 | 7 | 3/18/2024 11:40:00AM | 512.603 | 2 | | 200 , 200 | |
| 24C0094-02 A | MW-22-2 A | 592.854 | 45.735 | 7 | 3/18/2024 11:40:00AM | 547.119 | 2 | | 200 , 200 | |
| 24C0094-03 A | MW-22-1 A | 588.583 | 45.864 | 7 | 3/18/2024 11:40:00AM | 542.719 | 2 | | 200 , 200 | |
| 24C0094-04 A | MW-3-4 A | 586.392 | 46.482 | 7 | 3/18/2024 11:40:00AM | 539.91 | 2 | | 200 , 200 | |
| 24C0094-05 A | MW-3-3 A | 590.893 | 45.289 | 7 | 3/18/2024 11:40:00AM | 545.604 | 2 | | 200 , 200 | |
| 24C0094-06 A | MW-3-2 A | 589.361 | 45.518 | 7 | 3/18/2024 11:40:00AM | 543.843 | 2 | | 200 , 200 | |
| 24C0094-07 A | MW-3-1 A | 596.414 | 45.624 | 7 | 3/18/2024 11:40:00AM | 550.79 | 2 | | 200 , 200 | |
| 24C0094-08 A | EB-4-031424 A | 584.271 | 45.049 | 7 | 3/18/2024 11:40:00AM | 539.222 | 2 | | 200 , 200 | |
| 24C0094-09 A | FB-4-031424 A | 569.301 | 45.997 | 7 | 3/18/2024 11:40:00AM | 523.304 | 2 | | 200 , 200 | |
| 24C0103-01 A | MW-17-4 A | 585.342 | 45.24 | 7 | 3/18/2024 11:40:00AM | 540.102 | 2 | | 200 , 200 | |
| 24C0103-02 A | MW-17-3 A | 589.669 | 45.374 | 7 | 3/18/2024 11:40:00AM | 544.295 | 2 | | 200 , 200 | |
| 24C0103-03 A | DUP-3-031524 A | 588.87 | 45.775 | 7 | 3/18/2024 11:40:00AM | 543.095 | 2 | | 200 , 200 | |
| 24C0103-04 A | MW-17-2 A | 586.792 | 45.596 | 7 | 3/18/2024 11:40:00AM | 541.196 | 2 | | 200 , 200 | |
| 24C0103-05 A | MW-17-1 A | 587.314 | 46.013 | 7 | 3/18/2024 11:40:00AM | 541.301 | 2 | | 200 , 200 | |
| 24C0103-06 A | MW-11-3 A | 584.017 | 45.961 | 7 | 3/18/2024 11:40:00AM | 538.056 | 2 | | 200 , 200 | |
| 24C0103-07 A | MW-11-2 A | 598.868 | 45.735 | 7 | 3/18/2024 11:40:00AM | 553.133 | 2 | | 200 , 200 | |
| 24C0103-08 A | MW-11-1 A | 587.1 | 45.913 | 7 | 3/18/2024 11:40:00AM | 541.187 | 2 | | 200 , 200 | |
| 24C0103-09 A | EB-5-031524 A | 597.345 | 45.556 | 7 | 3/18/2024 11:40:00AM | 551.789 | 2 | | 200 , 200 | |
| 24C0103-10 A | FB-5-031524 A | 579.476 | 45.303 | 7 | 3/18/2024 11:40:00AM | 534.173 | 2 | | 200 , 200 | |
| BDC0200-BLK1 | Blank | | | | 3/18/2024 11:40:00AM | 500 | 2 | | 200 , 200 | |
| BDC0200-BS1 | LCS | | | | 3/18/2024 11:40:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MRL1 | MRL Check | | | | 3/18/2024 11:40:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0200-MS1 | Matrix Spike [24C0094-06] | 581.102 | 45.024 | | 3/18/2024 11:40:00AM | 536.078 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MS2 | Matrix Spike [24C0103-07] | 613.842 | 45.335 | | 3/18/2024 11:40:00AM | 568.507 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD1 | Matrix Spike Dup [24C009 | 581.712 | 45.212 | | 3/18/2024 11:40:00AM | 536.5 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD2 | Matrix Spike Dup [24C010 | 589.963 | 45.094 | | 3/18/2024 11:40:00AM | 544.869 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0552 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0324 | 1633 EIS MIXB 20-80ng/mL |

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3/19/24



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/19/2024 2:44 pm

BDC0200

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0483 | Am. Ac. preservative | R021040 |
| 24B0661 | Reagent - 0.05MFA wash | 50009265 |
| 24C0303 | Reagent -0.3M Formic Acid | 50009265 |
| 24C0389 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |

Batch Comments:

Spiked By: KMY 3/18/24
Witness By: CFM
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23172102PB
Concentration: 3/19/24 11:09-11:35
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3/19/24



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/18/2024 10:50 am

BDC0200

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID (ID's Confirmed By: CFM) | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24C0094-01 | A | X MW-22-3 | A | 558.196 | 45.593 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-02 | A | X MW-22-2 | A | 592.854 | 45.735 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-03 | A | X MW-22-1 | A | 588.583 | 45.864 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-04 | A | X MW-3-4 | A | 586.352 | 46.482 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-05 | A | X MW-3-3 | A | 590.893 | 45.289 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-06 | A | X MW-3-2 | A | 589.361 | 45.518 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-07 | A | X MW-3-1 | A | 596.414 | 45.624 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-08 | A | X EB-4-031424 | A | 584.271 | 45.049 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-09 | A | X FB-4-031424 | A | 569.301 | 45.997 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-01 | A | X MW-17-4 | A | 585.342 | 45.240 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-02 | A | X MW-17-3 | A | 589.669 | 45.374 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-03 | A | X DUP-3-031524 | A | 588.870 | 45.775 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-04 | A | X MW-17-2 | A | 556.792 | 45.596 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-05 | A | X MW-17-1 | A | 587.314 | 46.013 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-06 | A | X MW-11-3 | A | 584.017 | 45.961 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-07 | A | X MW-11-2 | A | 598.868 | 45.735 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-08 | A | X MW-11-1 | A | 587.100 | 45.913 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-09 | A | X EB-5-031524 | A | 597.345 | 45.551 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-10 | A | X FB-5-031524 | A | 579.476 | 45.303 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| BDC0200-BLK1 | | | Blank | | | 7 | 3/14/2024 7:18:00AM | 500 | 2 | | 200 , 200 | |
| BDC0200-BS1 | | | LCS | | | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MRL1 | | | MRL Check | | | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0200-MS1 | | X Matrix Spike [24C0094-06] | B | 581.102 | 45.024 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MS2 | | X Matrix Spike [24C0103-07] | B | 613.842 | 45.335 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD1 | | X Matrix Spike Dup [24C0094-06] | C | 581.712 | 45.212 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD2 | | X Matrix Spike Dup [24C0103-07] | C | 589.963 | 45.094 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

24C0392 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0552 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0324 | 1633 EIS MIXB 20-80ng/mL |

24C0280 1633 EIS MIXB 20-80ng/mL

Kmy/CFM 11:40 — Spiking Witnessed By

03/18/24 — Date

CFM — Preparation Reviewed By

Date

Extracts Received By

Date



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/18/2024 10:50 am

BDC0200

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**
**Balances:** SCALE
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0483 | AmAc | |
| 24C0389 | 1% | |
| 24C0303 | 0.3 M | |
| 24CB0661 | 0.05 FA | |

Batch Comments:

Spiked By:
Witness By:
pH Lot: 10BDH3431
Biotage Cartridge Lot: 2317210 2 PB
Concentration: 3/19/24 11:09 – 11:35
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____



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# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00991A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00991-CAL1A | S2024-03-19A (1)A | 03/19/24 12:02A |
| Cal Standardl | SD00991-CAL2A | S2024-03-19A (2)A | 03/19/24 12:22A |
| Cal Standardl | SD00991-CAL3A | S2024-03-19A (3)A | 03/19/24 12:43A |
| Cal Standardl | SD00991-CAL4A | S2024-03-19A (4)A | 03/19/24 13:03A |
| Cal Standardl | SD00991-CAL5A | S2024-03-19A (5)A | 03/19/24 13:24A |
| Cal Standardl | SD00991-CAL6A | S2024-03-19A (6)A | 03/19/24 13:44A |
| Cal Standardl | SD00991-CAL7A | S2024-03-19A (7)A | 03/19/24 14:05A |
| Cal Standardl | SD00991-CAL8A | S2024-03-19A (8)A | 03/19/24 14:25A |
| Initial Cal Blankl | SD00991-ICB1A | S2024-03-19A (9)A | 03/19/24 14:46A |
| Secondary Cal Checkl | SD00991-SCV1A | S2024-03-19A (10)A | 03/19/24 15:06A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0094A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01003A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration BlankI | SD01003-CCB1A | S2024-03-19B (1)A | 03/19/24 16:28A |
| Low Cal CheckI | SD01003-LCV1A | S2024-03-19B (2)A | 03/19/24 16:49A |
| Calibration CheckI | SD01003-CCV1A | S2024-03-19B (3)A | 03/19/24 17:09A |
| Performance MixI | SD01003-PEM1A | S2024-03-19B (4)A | 03/19/24 17:30A |
| Performance MixI | SD01003-PEM2A | S2024-03-19B (5)A | 03/19/24 17:51A |
| Calibration BlankI | SD01003-CCB2A | S2024-03-19B (6)A | 03/19/24 18:11A |
| BlankI | BDC0200-BLK1A | S2024-03-19B (8)A | 03/19/24 18:52A |
| LCSI | BDC0200-BS1A | S2024-03-19B (9)A | 03/19/24 19:13A |
| MRL CheckI | BDC0200-MRL1A | S2024-03-19B (10)A | 03/19/24 19:33A |
| MW-3-2I | BDC0200-MS1A | S2024-03-19B (11)A | 03/19/24 19:54A |
| MW-3-2I | BDC0200-MSD1A | S2024-03-19B (12)A | 03/19/24 20:14A |
| MW-22-3I | 24C0094-01A | S2024-03-19B (15)A | 03/19/24 21:16A |
| MW-22-2I | 24C0094-02A | S2024-03-19B (16)A | 03/19/24 21:36A |
| MW-22-1I | 24C0094-03A | S2024-03-19B (17)A | 03/19/24 21:57A |
| MW-3-4I | 24C0094-04A | S2024-03-19B (18)A | 03/19/24 22:17A |
| MW-3-3I | 24C0094-05A | S2024-03-19B (19)A | 03/19/24 22:38A |
| MW-3-2I | 24C0094-06A | S2024-03-19B (20)A | 03/19/24 22:58A |
| MW-3-1I | 24C0094-07A | S2024-03-19B (21)A | 03/19/24 23:19A |
| EB-4-031424I | 24C0094-08A | S2024-03-19B (22)A | 03/19/24 23:39A |
| FB-4-031424I | 24C0094-09A | S2024-03-19B (23)A | 03/20/24 00:00A |
| Calibration CheckI | SD01003-CCV2A | S2024-03-19B (24)A | 03/20/24 00:20A |
| Calibration BlankI | SD01003-CCB3A | S2024-03-19B (25)A | 03/20/24 00:41A |
| Calibration CheckI | SD01003-CCV3A | S2024-03-19B (36)A | 03/20/24 04:27A |
| Calibration BlankI | SD01003-CCB4A | S2024-03-19B (37)A | 03/20/24 04:47A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**
**CAS #:** 356-02-5

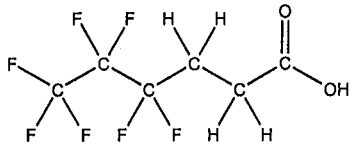

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

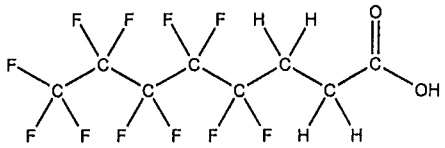

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

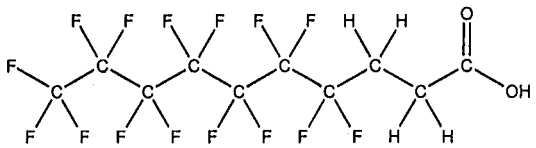

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_5F_{15}O_2$ | **MOLECULAR WEIGHT:** | 442.12 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

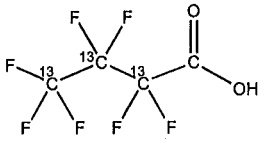

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

**22A0117L**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

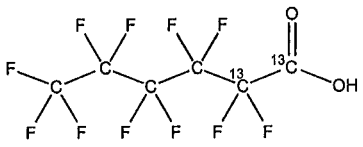

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_4HF_{11}O_2$ | **MOLECULAR WEIGHT:** | 316.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/04/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/04/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

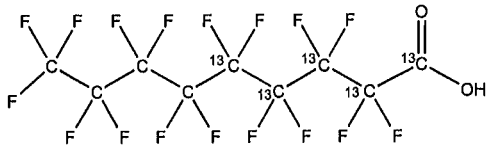

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

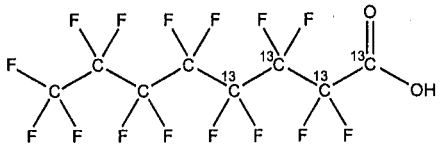

**MOLECULAR FORMULA:** $^{13}C_4{}^{12}C_4HF_{15}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 418.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 12/07/2021
**EXPIRY DATE:** (mm/dd/yyyy) 12/07/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record0

**22A0120**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

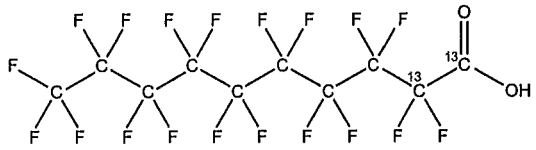

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFOS | **LOT NUMBER:** | MPFOS0821 |
| **COMPOUND:** | Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | 960315-53-1 |

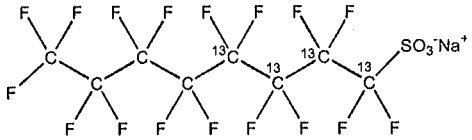

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2,3,4$-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 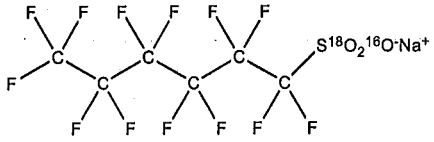 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |



**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Calbiochem®

Certificate of Analysis

## Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

### Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

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| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

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# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

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# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

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# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

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# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

## 23A0 220

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

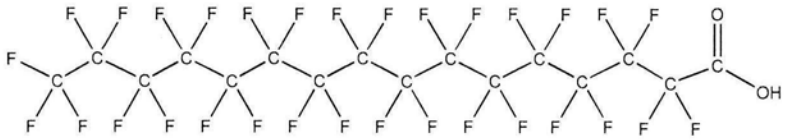

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** PFODA
**COMPOUND:** Perfluoro-n-octadecanoic acid
**LOT NUMBER:** PFODA0622

**STRUCTURE:**
**CAS #:** 16517-11-6

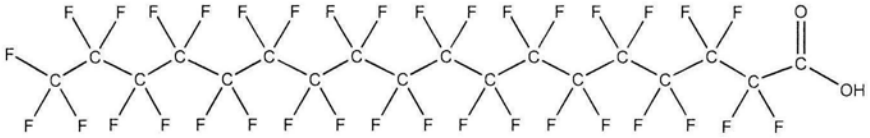

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

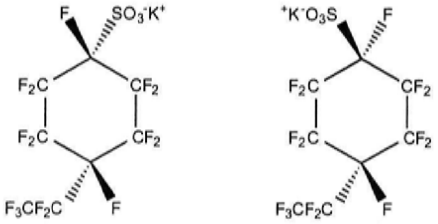


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

**MOLECULAR FORMULA:** $C_8F_{15}SO_3K$ **MOLECULAR WEIGHT:** 500.22

**CONCENTRATION:** 50.0 ± 2.5 µg/mL (K salt)
46.2 ± 2.3 µg/mL (PFECHS acid)
46.1 ± 2.3 µg/mL (PFECHS anion)

**SOLVENT(S):** Methanol

**CHEMICAL PURITY:** >98%

**LAST TESTED:** (mm/dd/yyyy) 03/28/2022

**EXPIRY DATE:** (mm/dd/yyyy) 03/28/2027

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

**23C0155C**

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FBSA-I
**COMPOUND:** Perfluoro-1-butanesulfonamide

**LOT NUMBER:** FBSA0123I

**STRUCTURE:**

**CAS #:** 30334-69-1

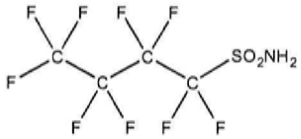

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

**23C0156C**

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**

**CAS #:** 41997-13-1

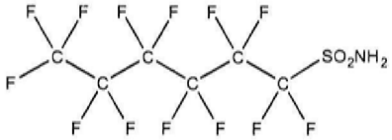

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctane-sulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
800-368-1131
www.absolutestandards.com

**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| | | |
|---|---|---|
| Formulated By: | Prashant Chauhan | 051723 DATE |
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4448& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| odecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| eptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| eptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| eptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| eptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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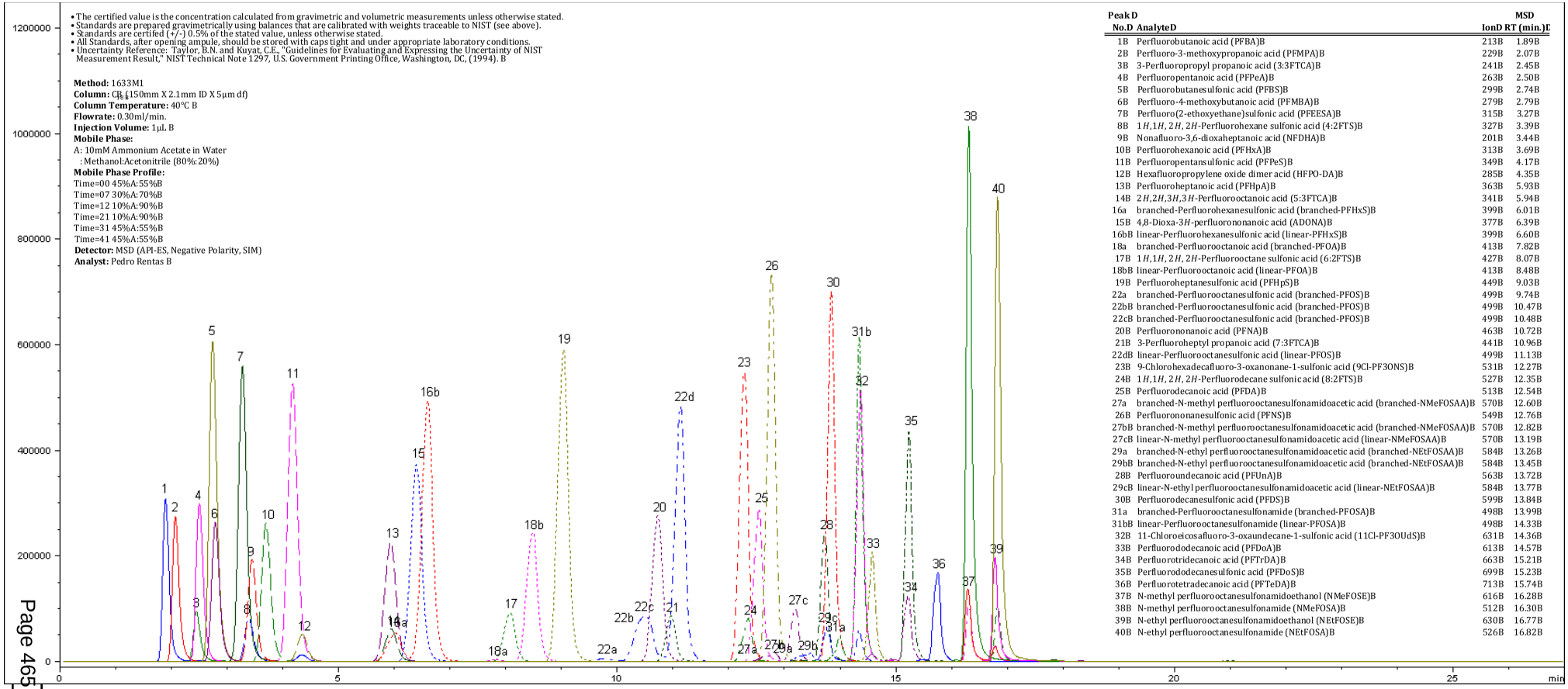


| Peak No. | Analyte | D IonD | MSD RT (min.) | D |
|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA)B | 213B | 1.89B | |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA)B | 229B | 2.07B | |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA)B | 241B | 2.45B | |
| 4B | Perfluoropentanoic acid (PFPeA)B | 263B | 2.50B | |
| 5B | Perfluorobutanesulfonic acid (PFBS)B | 299B | 2.74B | |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA)B | 279B | 2.79B | |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)B | 315B | 3.27B | |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS)B | 327B | 3.39B | |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)B | 201B | 3.44B | |
| 10B | Perfluorohexanoic acid (PFHxA)B | 313B | 3.69B | |
| 11B | Perfluoropentansulfonic acid (PFPeS)B | 349B | 4.17B | |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA)B | 285B | 4.35B | |
| 13B | Perfluoroheptanoic acid (PFHpA)B | 363B | 5.93B | |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA)B | 341B | 5.94B | |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS)B | 399B | 6.01B | |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA)B | 377B | 6.39B | |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS)B | 399B | 6.60B | |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA)B | 413B | 7.82B | |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS)B | 427B | 8.07B | |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA)B | 413B | 8.48B | |
| 19B | Perfluoroheptanesulfonic acid (PFHpS)B | 449B | 9.03B | |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS)B | 499B | 9.74B | |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS)B | 499B | 10.47B | |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS)B | 499B | 10.48B | |
| 20B | Perfluorononanoic acid (PFNA)B | 463B | 10.72B | |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA)B | 441B | 10.96B | |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS)B | 499B | 11.13B | |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)B | 531B | 12.27B | |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS)B | 527B | 12.35B | |
| 25B | Perfluorodecanoic acid (PFDA)B | 513B | 12.54B | |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA)B | 570B | 12.60B | |
| 26B | Perfluorononanesulfonic acid (PFNS)B | 549B | 12.76B | |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA)B | 570B | 12.82B | |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA)B | 570B | 13.19B | |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA)B | 584B | 13.26B | |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA)B | 584B | 13.45B | |
| 28B | Perfluoroundecanoic acid (PFUnA)B | 563B | 13.72B | |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA)B | 584B | 13.77B | |
| 30B | Perfluorodecanesulfonic acid (PFDS)B | 599B | 13.84B | |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA)B | 498B | 13.99B | |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA)B | 498B | 14.33B | |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)B | 631B | 14.36B | |
| 33B | Perfluorododecanoic acid (PFDoA)B | 613B | 14.57B | |
| 34B | Perfluorotridecanoic acid (PFTrDA)B | 663B | 15.21B | |
| 35B | Perfluorododecanesulfonic acid (PFDoS)B | 699B | 15.23B | |
| 36B | Perfluorotetradecanoic acid (PFTeDA)B | 713B | 15.74B | |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)B | 616B | 16.28B | |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA)B | 512B | 16.30B | |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)B | 630B | 16.77B | |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA)B | 526B | 16.82B | |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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)0-368-1131
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*Certified Reference Material CRM*

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

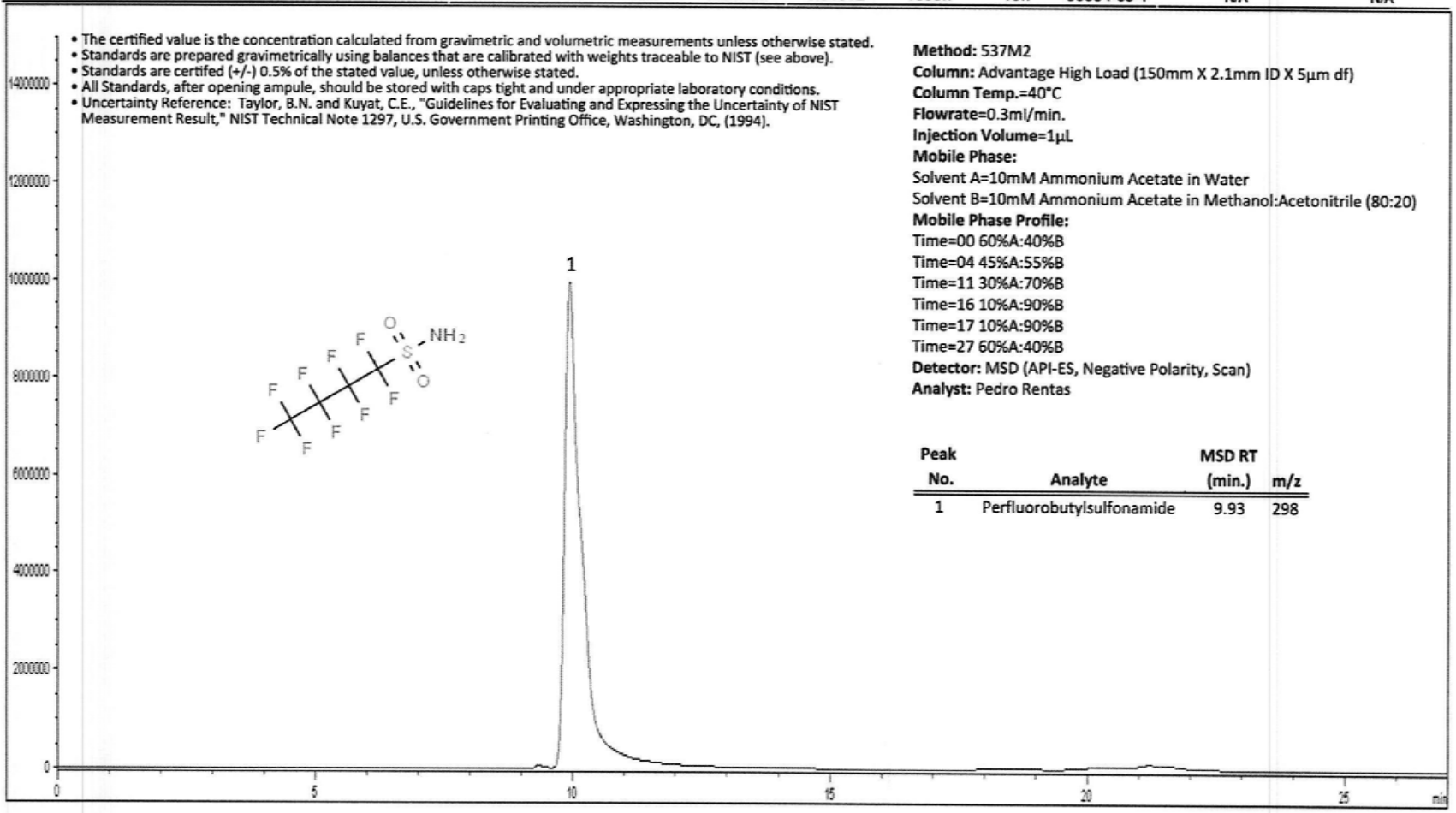


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 091125 | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 23060 | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 091120 |
| Formulated By: | Benson Chan | DATE |
| | | 091120 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | | 25.0 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

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# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

## 23L0007 D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

## PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

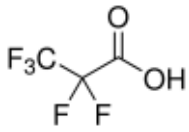


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0011B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0011** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

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Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

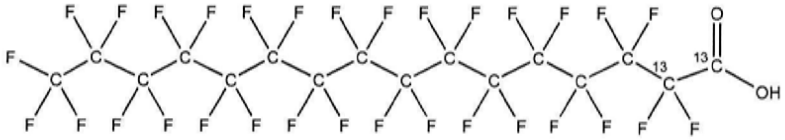

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

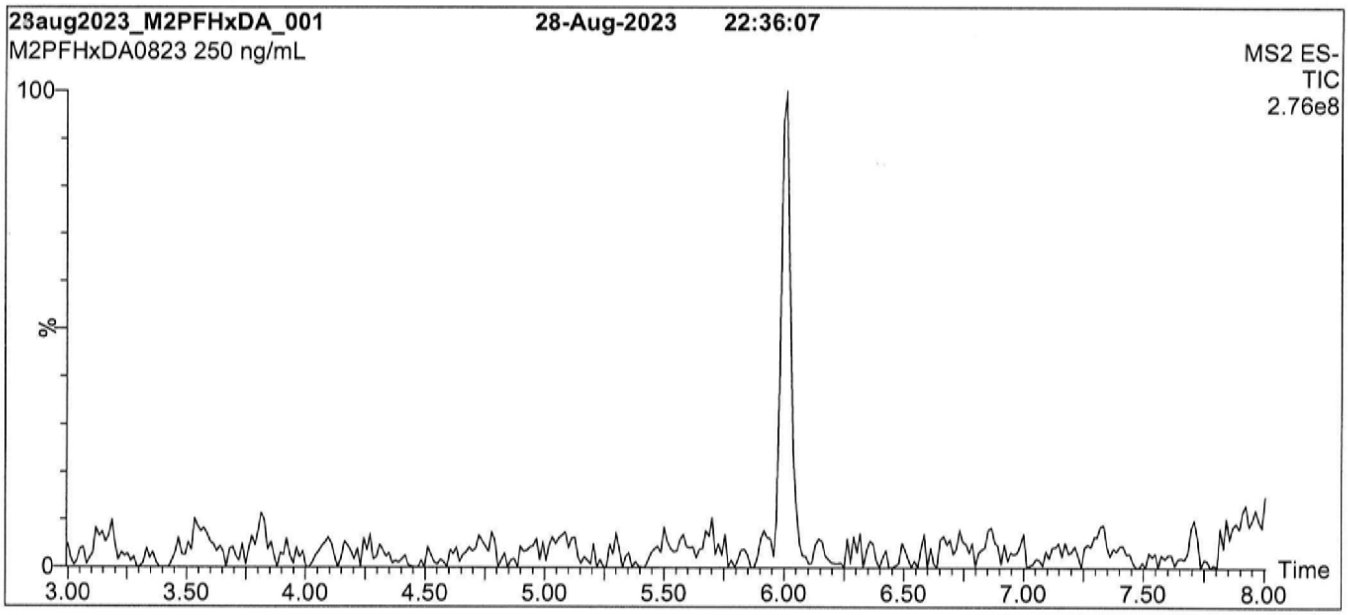


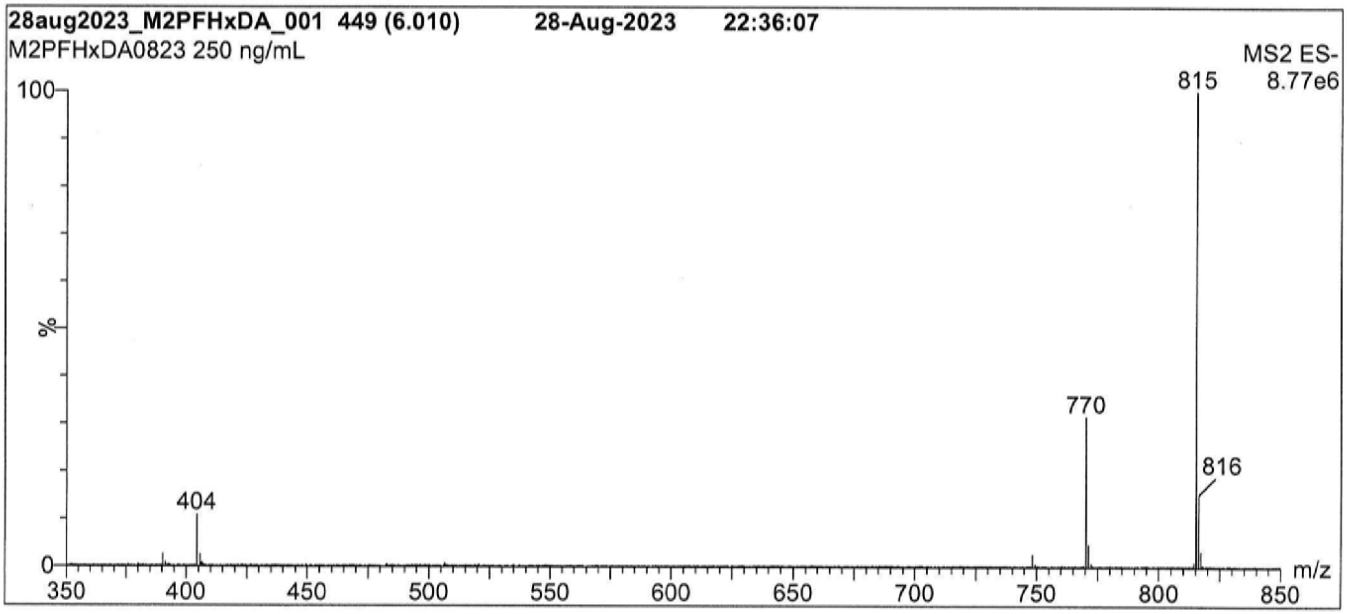


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

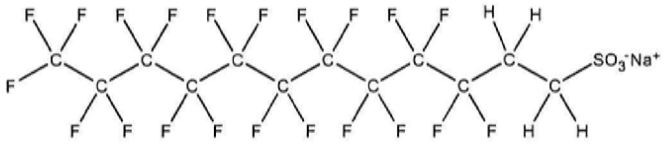


**MOLECULAR FORMULA:** $C_{12}H_4F_{21}SO_3Na$ **MOLECULAR WEIGHT:** 650.18
**CONCENTRATION:** 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
48.3 ± 2.4 µg/mL (10:2FTS acid)
48.2 ± 2.4 µg/mL (10:2FTS anion)
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 09/13/2023
**EXPIRY DATE:** (mm/dd/yyyy) 09/13/2028
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

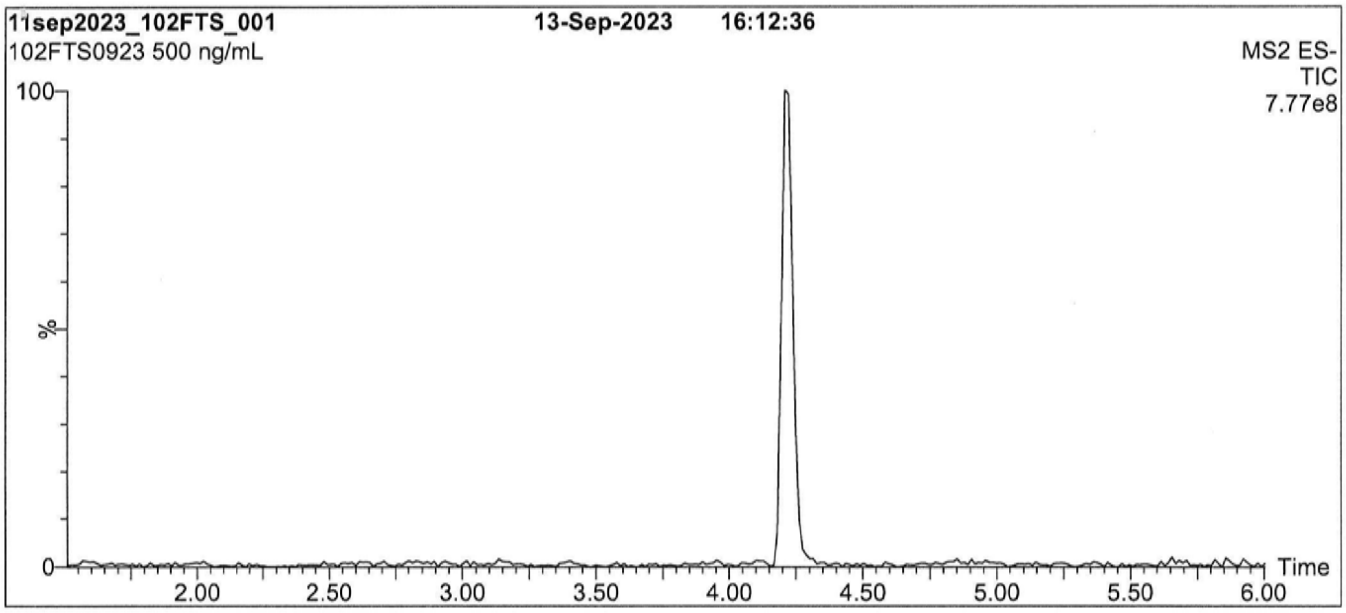


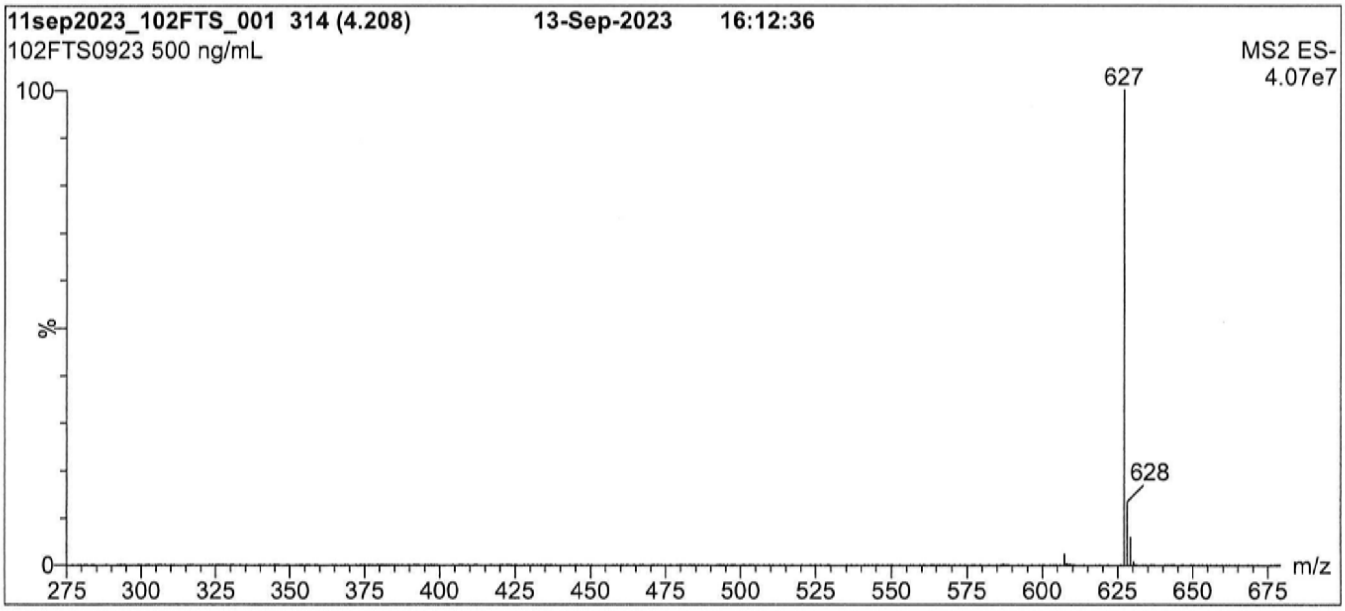


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

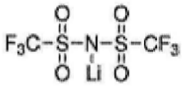

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

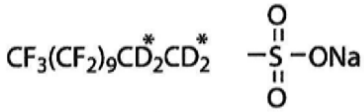

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

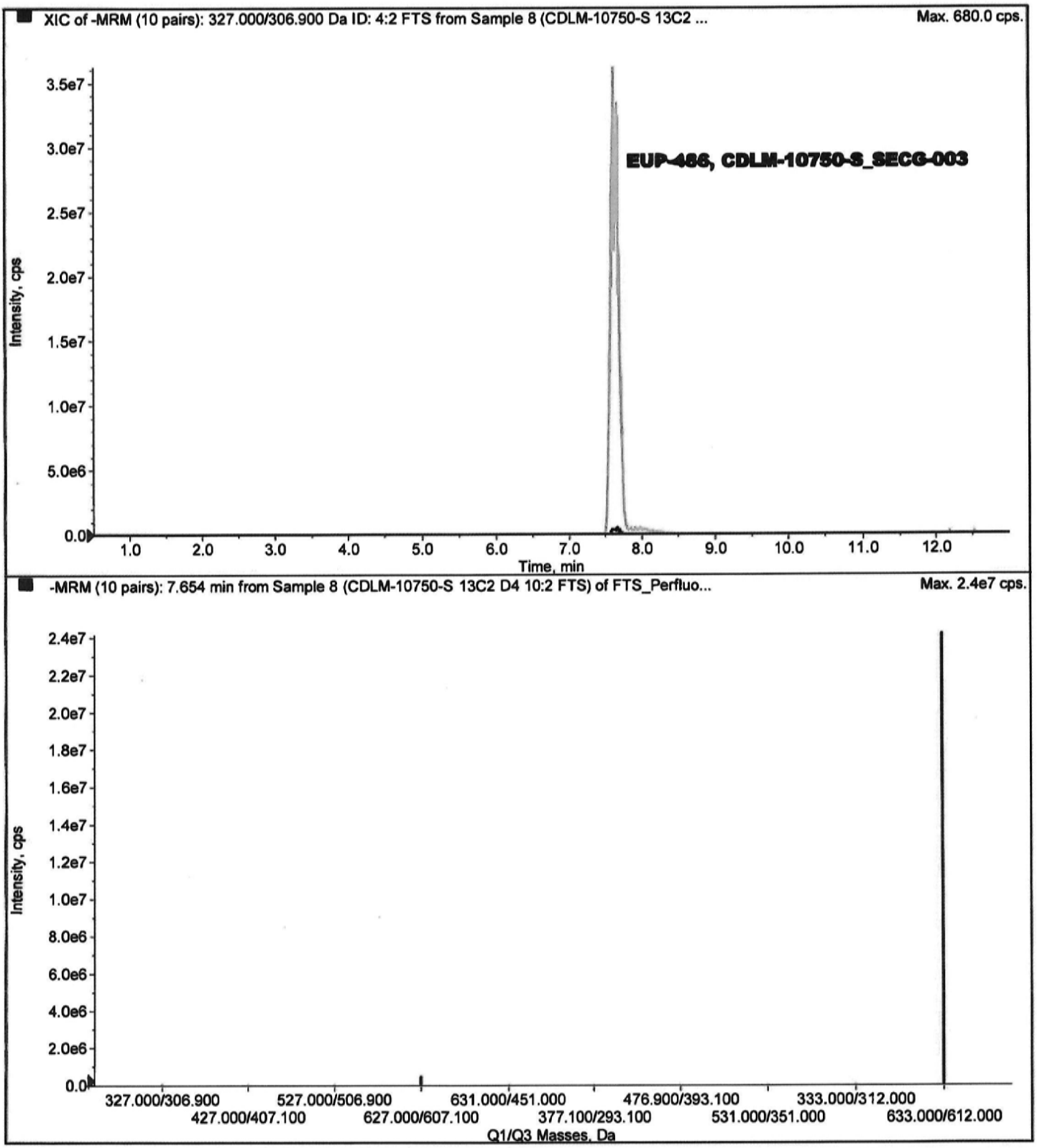

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

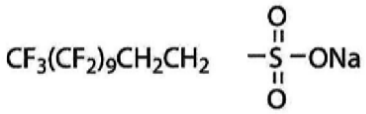

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FOUEA | **LOT NUMBER:** | FOUEA1123 |
| **COMPOUND:** | 2H-Perfluoro-2-decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 70887-84-2 |

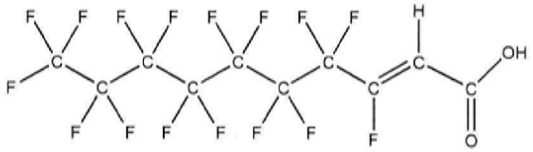

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

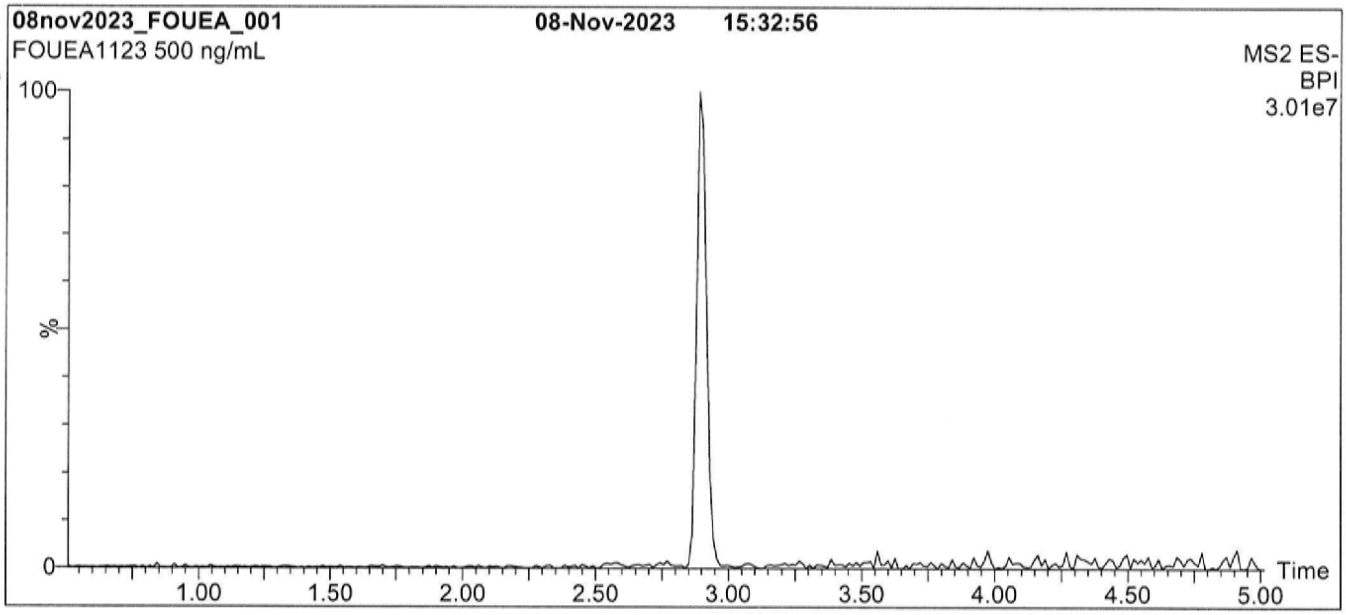


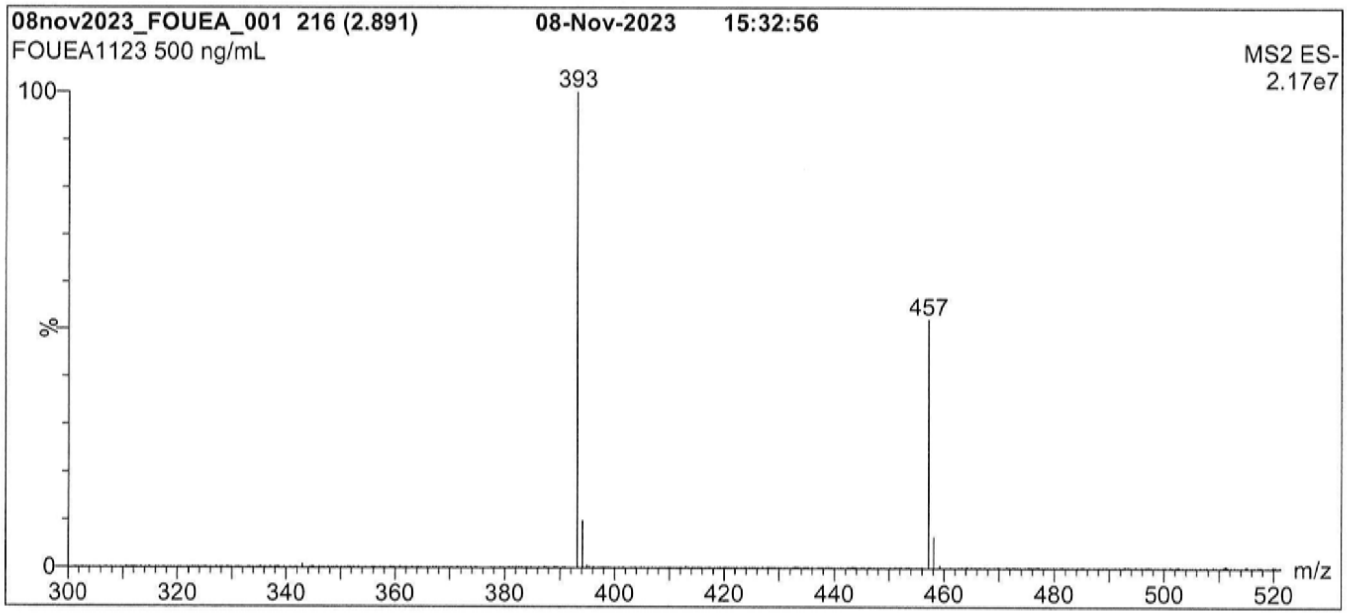


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

**24B0292**

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

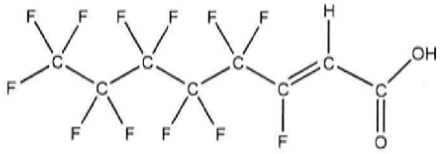

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

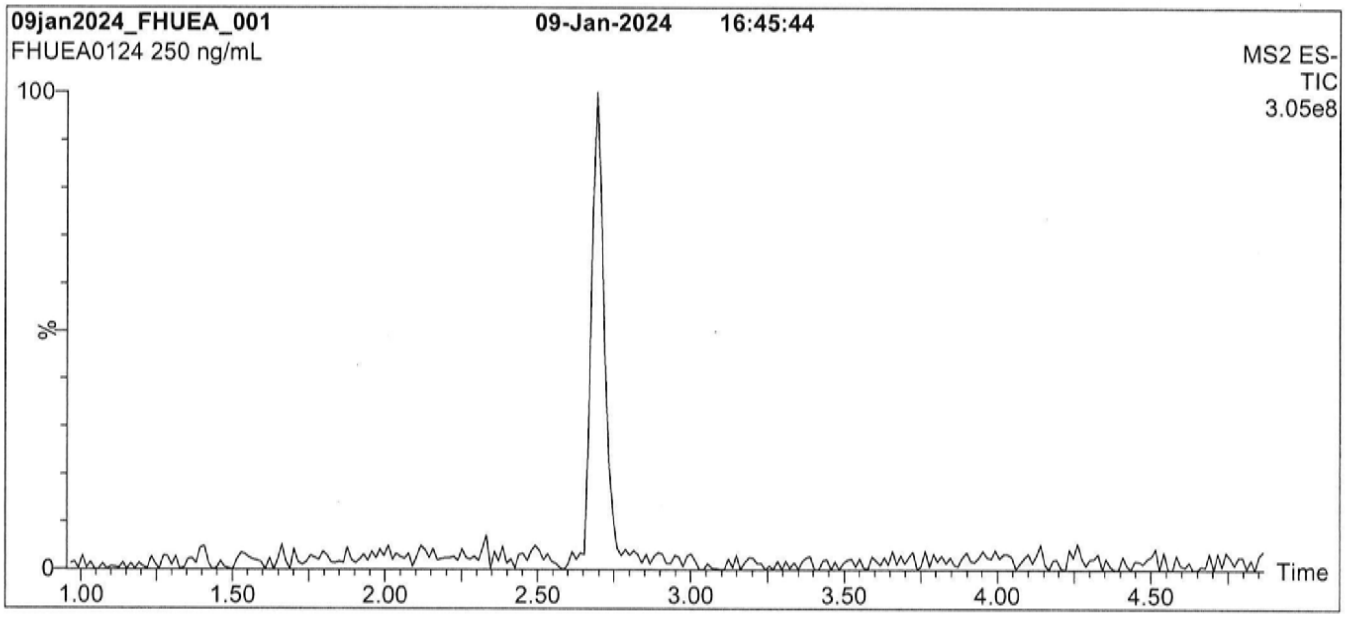


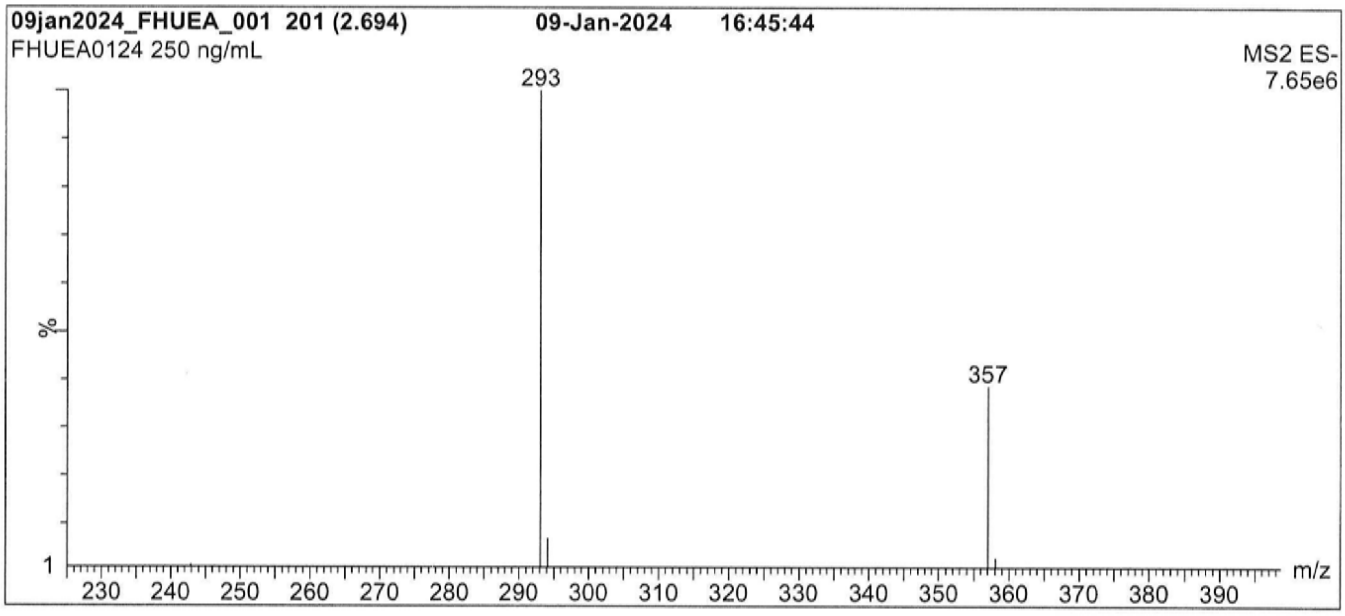


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

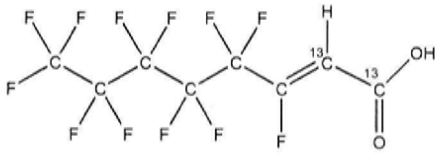

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-($1,2\text{-}^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-($1,2\text{-}^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

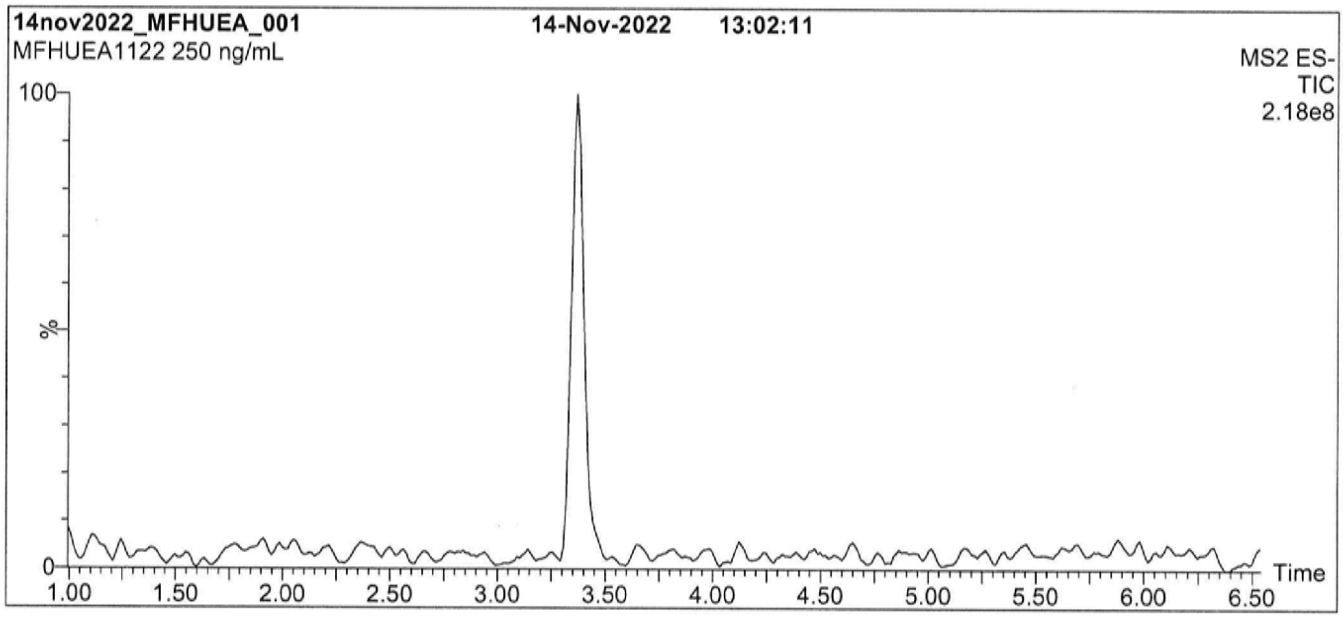


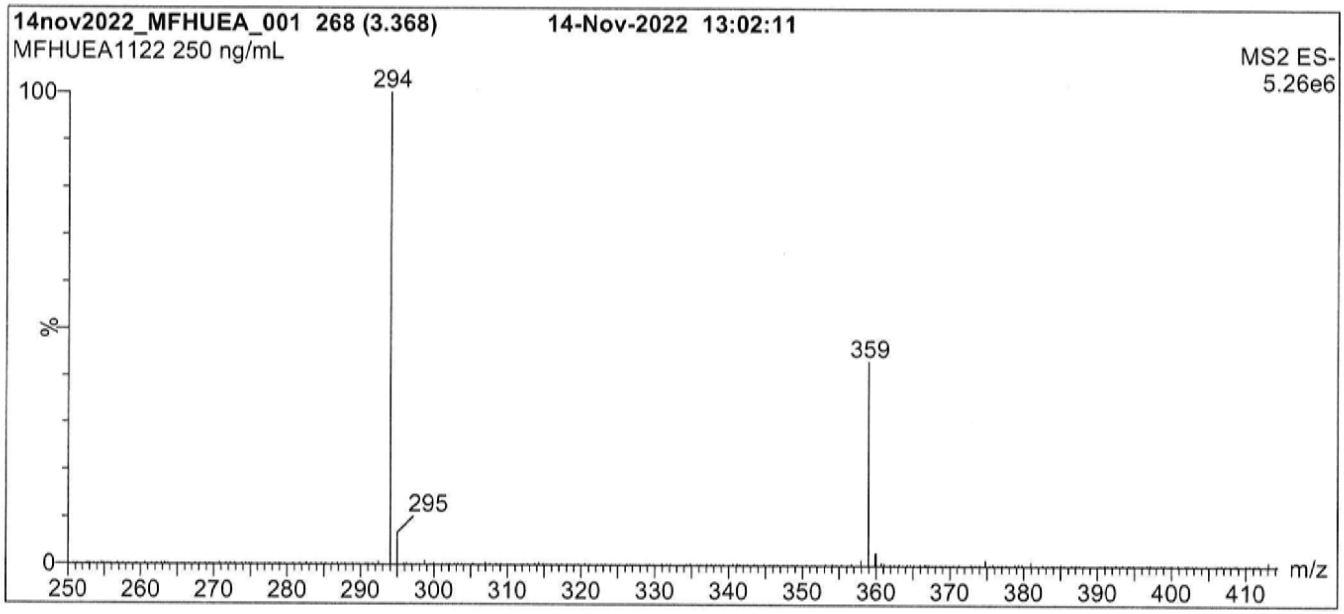


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

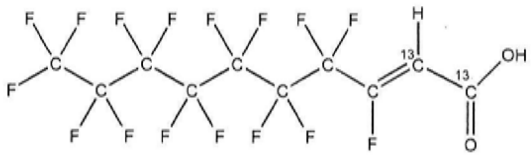

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

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**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

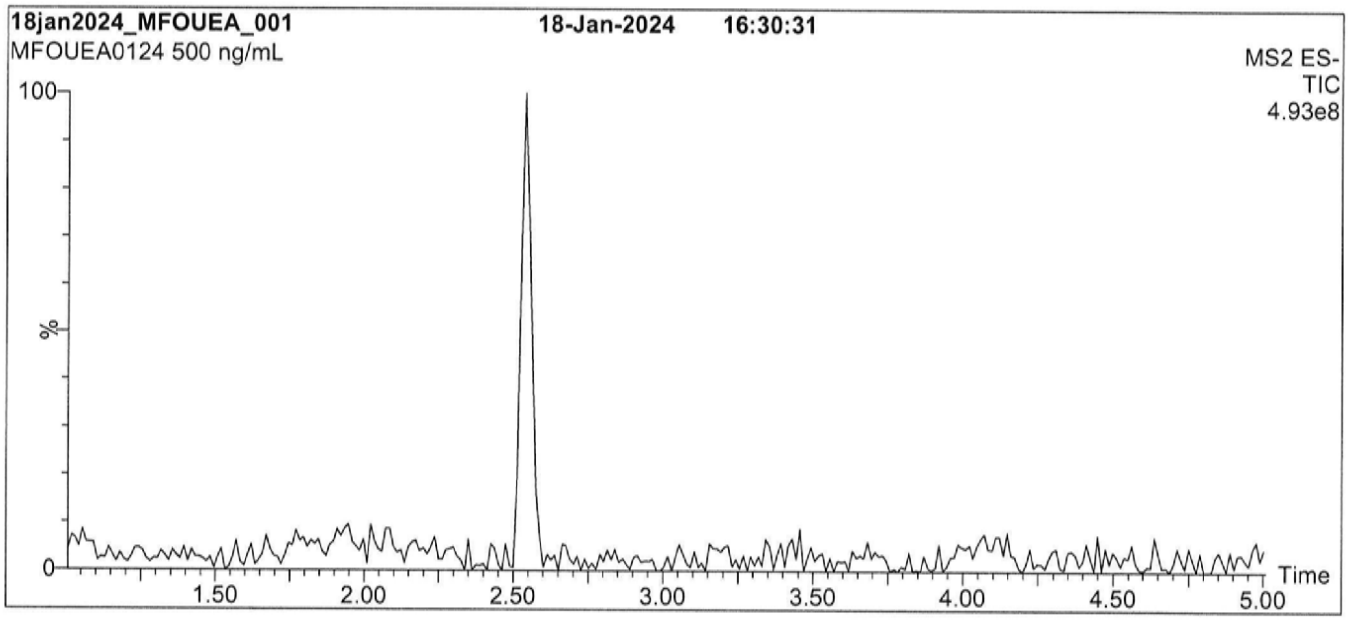


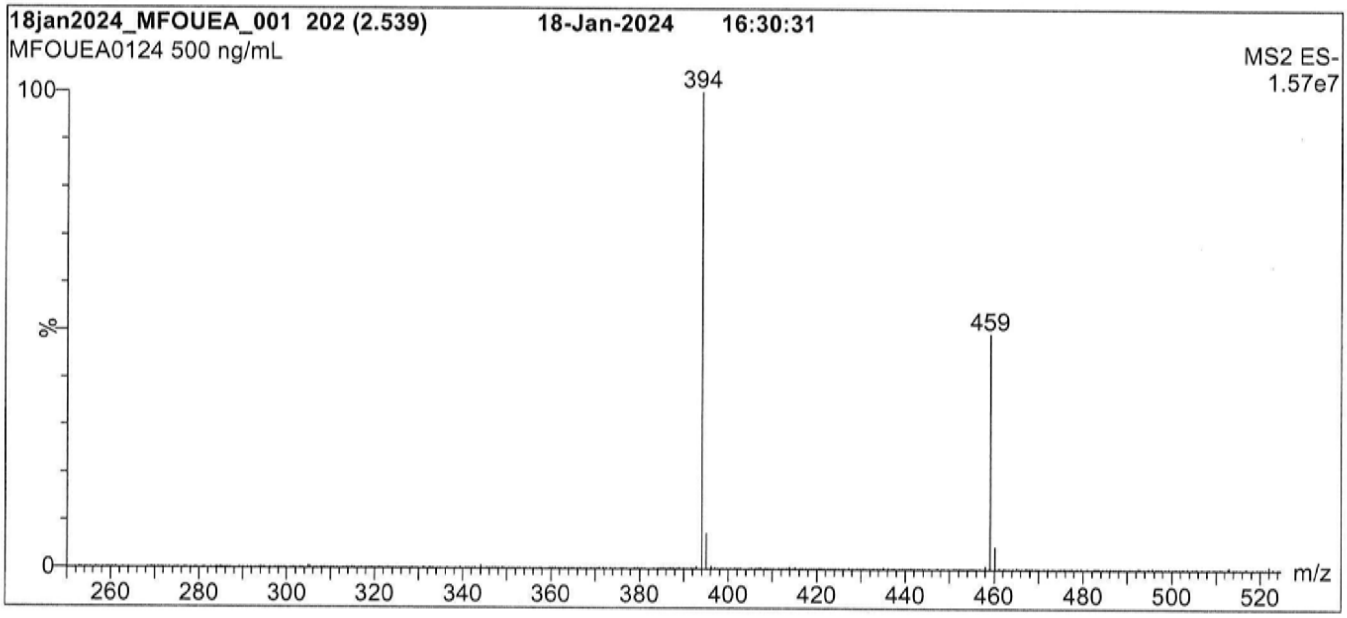


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0474B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

3050 Spruce Street, Saint Louis, MO 63103, USA
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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

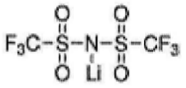

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# nalytical Standard RecordA

**24C0322**

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 09/11/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/15/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/15/2024 11:08 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.02s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.08s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.02s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0324

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/15/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/15/2024 11:44 by DAGs |
| Lot Number: | 64011s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24C0322s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0322s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24C0322s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24C0322s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0322s | 1633 EIS MIXB s 100-400ng/mLs | 03/15/2024s | In houses | 64211s | 09/11/2024s | 03/15/2024 11:08s | by DAGs | 1s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

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908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.comL

NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

April 01, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0103L

Enclosed are the results of analyses for samples received by our laboratory on 3/16/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

S C For Eric Ogden
Project Managern

eric.ogden@metirigroup.comn

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

# Data Validatable Report

## Analysis Case Narrativen

n

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical t justification are provided as data qualifiers. t

The extracted internal standard 13C8-PFOSA recovered below the lower control limit in the method blank BDC0200-BLK1.t

## Samples in this Reportn

| Lab IDn | Sample n | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0103-01o | MW-17-4o | Watero | 03/15/2024 08:10o | 03/16/2024o |
| 24C0103-02o | MW-17-3o | Watero | 03/15/2024 08:30o | 03/16/2024o |
| 24C0103-03o | DUP-3-031524o | Watero | 03/15/2024 08:40o | 03/16/2024o |
| 24C0103-04o | MW-17-2o | Watero | 03/15/2024 08:55o | 03/16/2024o |
| 24C0103-05o | MW-17-1o | Watero | 03/15/2024 09:15o | 03/16/2024o |
| 24C0103-06o | MW-11-3o | Watero | 03/15/2024 10:35o | 03/16/2024o |
| 24C0103-07o | MW-11-2o | Watero | 03/15/2024 11:00o | 03/16/2024o |
| 24C0103-08o | MW-11-1o | Watero | 03/15/2024 11:45o | 03/16/2024o |
| 24C0103-09o | EB-5-031524o | Watero | 03/15/2024 12:00o | 03/16/2024o |
| 24C0103-10o | FB-5-031524o | Watero | 03/15/2024 12:10o | 03/16/2024o |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0103-01t | | | |
| | 500mL Pt | 1t | |
| 24C0103-02t | | | |
| | 500mL Pt | 1t | |
| 24C0103-03t | | | |
| | 500mL Pt | 1t | |
| 24C0103-04t | | | |
| | 500mL Pt | 1t | |
| 24C0103-05t | | | |
| | 500mL Pt | 1t | |
| 24C0103-06t | | | |
| | 500mL Pt | 1t | |
| 24C0103-07t | | | |
| | 500mL Pt | 3t | |
| 24C0103-08t | | | |
| | 500mL Pt | 1t | |
| 24C0103-09t | | | |
| | 500mL Pt | 1t | |
| 24C0103-10t | | | |
| | 500mL Pt | 1t | |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

a

**Sample: aMW-17-4 a**

**24C0103-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.88o | Jo | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.60o | Jo | 0.74o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.48o | | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.38o | | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.66o | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.11o | MI2, Jo | 0.37o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.33o | Jo | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.25o | Jo | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.8o | | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | 0.057o | Jo | 0.37o | 0.048o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 1.6o | MI1o | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *89.2%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-17-4 (Continued)a

**24C0103-01 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *107%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *102%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *123%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *122%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *110%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *112%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *109%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *103%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *92.7%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *111%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *114%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *112%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *129%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *122%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *121%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *124%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *60.3%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *38.4%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *37.9%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *108%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *114%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *42.2%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *40.8%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oJPL-GW Monitoringo
Project Number:oJPL-GW Monitoringo
Project Manager:oDavid Connero

Reported: 04/01/2024 12:13o

## Sample Resultsa

**(Continued) a**

**Sample: aMW-17-3 a**

**24C0103-02 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.89o | Jo | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 1.1o | | 0.73o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.76o | | 0.37o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.39o | | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.98o | MI5o | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.34o | Jo | 0.37o | 0.075o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 1.1o | | 0.37o | 0.093o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 1.9o | | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.32o | Jo | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.6o | | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 6.0o | | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | 0.10o | MI5, Jo | 0.37o | 0.097o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.73o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *95.8%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/01/2024 12:13 |

## Sample Results

**(Continued)**

### Sample: MW-17-3 (Continued)

**24C0103-02 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *102%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *103%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *104%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *104%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *118%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *121%* | | *30-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *116%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *119%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *108%* | | *20-150* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *115%* | | *40-135* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *111%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *107%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *128%* | | *40-200* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *124%* | | *40-200* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *110%* | | *40-300* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *120%* | | *20-150* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *85.0%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *46.5%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *44.5%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *115%* | | *40-170* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *118%* | | *25-135* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *56.5%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *56.1%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *97.0%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-3-031524 a**

**24C0103-03 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 1.8o | | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 1.4o | | 0.74o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.81o | | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.49o | | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 1.0o | MI5o | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.28o | Jo | 0.37o | 0.075o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.79o | | 0.37o | 0.093o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | IR1, o | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | IR1, o | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 2.0o | | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.28o | Jo | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 1.3o | | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 4.0o | | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | 0.14o | IR2, Jo | 0.37o | 0.097o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *88.5%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *93.5%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aDUP-3-031524 (Continued)a

**24C0103-03 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *97.8%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *93.0%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *102%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *113%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *104%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *116%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *111%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *110%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *105%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *110%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *115%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *110%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *114%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *104%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *72.2%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *41.4%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *38.6%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *99.7%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *104%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *56.9%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *52.6%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *92.6%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-17-2 a**

**24C0103-04 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.78o | Jo | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.20o | Jo | 0.74o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.15o | Jo | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.10o | Jo | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.26o | Jo | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.19o | IR2, Jo | 0.37o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | IR1, o | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 1.9o | | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.075o | Jo | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.49o | | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 1.1o | | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | 0.11o | IR2, Jo | 0.37o | 0.098o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *89.7%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *108%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/01/2024 12:13 |

## Sample Results

**(Continued)**

### Sample: MW-17-2 (Continued)

**24C0103-04 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *111%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *109%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *110%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *113%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *115%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *130%* | | *30-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *130%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *127%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *108%* | | *20-150* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *109%* | | *40-135* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *117%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *106%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *118%* | | *40-200* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *113%* | | *40-200* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *112%* | | *40-300* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *108%* | | *20-150* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *66.2%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *42.5%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *40.3%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *101%* | | *40-170* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *113%* | | *25-135* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *43.9%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *44.9%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *108%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-17-1 a**

**24C0103-05 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.77o | MI6, Jo | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.20o | Jo | 0.74o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.10o | Jo | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.081o | Jo | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 0.37o | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.098o | Jo | 0.37o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.10o | Jo | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.12o | MI5, Jo | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 1.2o | MI2o | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | MI5, o | 0.37o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *93.7%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *99.4%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-17-1 (Continued)a

**24C0103-05 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *107%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *114%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *117%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *114%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *112%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *97.8%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *111%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *109%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *120%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *115%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *113%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *114%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *95.8%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *55.8%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *51.7%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *104%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *111%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *74.6%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *66.3%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oJPL-GW Monitoringo
Project Number:oJPL-GW Monitoringo
Project Manager:oDavid Connero

Reported: 04/01/2024 12:13o

## Sample Resultsa

**(Continued) a**

### Sample: aMW-11-3 a

**24C0103-06 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.82o | Jo | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.45o | Jo | 0.74o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.61o | | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.31o | Jo | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 1.5o | MI5o | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.20o | Jo | 0.37o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | 0.60o | | 0.37o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | IR2, o | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | 0.13o | IR1, Jo | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.77o | MI2o | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.14o | MI1, Jo | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.74o | MI2o | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | 0.17o | MI5, Jo | 0.37o | 0.097o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | 0.23o | Jo | 0.37o | 0.098o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | 0.29o | Jo | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | 0.51o | Jo | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *89.8%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-11-3 (Continued)a

**24C0103-06 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *100%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *98.7%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *110%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *109%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *104%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *99.5%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *85.3%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *101%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *103%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *113%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *107%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *92.4%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *81.7%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *86.6%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *48.5%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *45.3%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *94.0%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *103%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *62.5%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *60.6%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *96.4%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-11-2 a**

**24C0103-07 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 1.3o | Jo | 1.4o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.82o | | 0.72o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.57o | | 0.36o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 0.41o | | 0.36o | 0.037o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 1.3o | MI5o | 0.36o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | IR2, o | 0.36o | 0.092o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 0.68o | | 0.36o | 0.033o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.13o | Jo | 0.36o | 0.057o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.64o | MI1o | 0.36o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 1.7o | | 0.36o | 0.057o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.4o | 0.95o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.72o | 0.099o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.72o | 0.049o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *90.0%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *103%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-11-2 (Continued)a

**24C0103-07 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *107%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *102%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *103%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *115%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *117%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *114%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *110%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *104%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *107%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *111%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *102%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *102%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *105%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *89.1%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *50.2%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *47.9%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *108%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *110%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *68.8%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *64.2%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *103%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-11-1 a**

**24C0103-08 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 3.3o | | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 3.9o | | 0.74o | 0.060o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 3.0o | | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | 1.6o | | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | 2.7o | MI5o | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | 0.74o | | 0.37o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | IR2, o | 0.37o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | 2.0o | | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | 0.12o | Jo | 0.37o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | 0.67o | | 0.37o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | 0.050o | IR1, Jo | 0.37o | 0.047o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 3.6o | | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *84.0%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-11-1 (Continued)a

**24C0103-08 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *96.2%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *95.8%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *107%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *97.3%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *115%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *122%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *115%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *115%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *113%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *101%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *113%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *108%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *104%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *102%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *91.4%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *57.0%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *53.4%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *100%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *108%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *71.5%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *66.8%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *89.1%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-5-031524 a**

**24C0103-09 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | NDo | 1.4o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | NDo | 0.72o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | NDo | 0.36o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | NDo | 0.36o | 0.037o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | NDo | 0.36o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | 0.36o | 0.074o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | 0.36o | 0.092o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | 0.36o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | 0.36o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | 0.36o | 0.18o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | NDo | 0.36o | 0.033o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | 0.36o | 0.057o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | NDo | 0.36o | 0.029o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | 0.36o | 0.047o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.062o MI2, Jo | 0.36o | 0.058o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | 0.36o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | 0.36o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | 0.36o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | 1.4o | 0.26o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | 1.4o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | 1.4o | 0.074o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | 1.4o | 0.36o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | 0.36o | 0.094o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | 1.4o | 0.43o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | 1.4o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | 0.36o | 0.096o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | 0.36o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | 1.4o | 0.92o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | 1.4o | 0.95o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | 0.72o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | 0.72o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | 0.72o | 0.099o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | 0.72o | 0.049o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | 0.72o | 0.082o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | 0.72o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | 0.72o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | 0.72o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | 1.4o | 0.52o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | 1.4o | 0.40o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | 1.4o | 0.50o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *109%o* | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *102%o* | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

### Sample: aEB-5-031524 (Continued)a

**24C0103-09 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *111%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *105%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *98.9%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *109%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *115%o* | | *30-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *110%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *107%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *91.5%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *107%o* | | *40-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *106%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *127%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *113%o* | | *40-200o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *107%o* | | *40-300o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *103%o* | | *20-150o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *62.9%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *40.6%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *37.6%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *115%o* | | *40-170o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *114%o* | | *25-135o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *49.0%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *45.9%o* | | *10-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *104%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-5-031524 a**

**24C0103-10 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeAo | 0.098o | Jo | 0.75o | 0.061o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxAo | 0.052o | Jo | 0.37o | 0.051o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpAo | NDo | | 0.37o | 0.038o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOAo | NDo | MI2, o | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNAo | NDo | | 0.37o | 0.077o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFTeDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFPeSo | NDo | | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHxSo | NDo | | 0.37o | 0.030o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSo | 0.060o | Jo | 0.37o | 0.059o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFNSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFDoSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSAAo | NDo | | 0.37o | 0.099o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NMeFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NEtFOSEo | NDo | | 1.5o | 0.98o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMPAo | NDo | | 0.75o | 0.050o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/20/24o | 1o | EPA 1633o | BDC0200o |
| *Surrogate: 13C4-PFBAo* | *107%o* | | *5-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *115%o* | | *40-130o* | | | *03/20/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/01/2024 12:13 |

## Sample Results

**(Continued)**

### Sample: FB-5-031524 (Continued)

**24C0103-10 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *115%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *116%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *108%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *110%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *111%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *113%* | | *30-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *110%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *113%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *91.7%* | | *20-150* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *110%* | | *40-135* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *108%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *107%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *135%* | | *40-200* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *123%* | | *40-200* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *118%* | | *40-300* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *109%* | | *20-150* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *67.2%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *40.0%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *39.7%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *111%* | | *40-170* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *116%* | | *25-135* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *42.8%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *40.5%* | | *10-130* | | | *03/20/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *117%* | | *40-130* | | | *03/20/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0200 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0200-BLK1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 18:52o | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/Lo | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/Lo | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/Lo | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/Lo | | | | | | |
| PFOAo | NDo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/Lo | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/Lo | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/Lo | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/Lo | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/Lo | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/Lo | | | | | | |
| PFOSo | 0.0642 MI3, Jo | 0.40o | 0.064o | ng/Lo | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/Lo | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/Lo | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/Lo | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/Lo | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/Lo | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/Lo | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/Lo | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/Lo | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/Lo | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/Lo | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/Lo | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/Lo | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/Lo | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/Lo | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/Lo | | | | | | |
| *Surrogate: 13C4-PFBAo* | *36.0o* | | | *ng/Lo* | *32.0o* | | *112o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *111o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.80o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.41o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-130o* | | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0200-BLK1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 18:52o | | | | | |
| *Surrogate: 13C8-PFOAo* | *8.22o* | | | *ng/Lo* | *8.00o* | | *103o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *4.18o* | | | *ng/Lo* | *4.00o* | | *105o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *4.52o* | | | *ng/Lo* | *4.00o* | | *113o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *4.47o* | | | *ng/Lo* | *4.00o* | | *112o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *4.24o* | | | *ng/Lo* | *4.00o* | | *106o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.19o* | | | *ng/Lo* | *4.00o* | | *105o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.12o* | | | *ng/Lo* | *8.00o* | | *76.5o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *9.11o* | | | *ng/Lo* | *8.00o* | | *114o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.88o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *8.04o* | | | *ng/Lo* | *8.00o* | | *101o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.2o* | | | *ng/Lo* | *16.0o* | | *126o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.3o* | | | *ng/Lo* | *16.0o* | | *121o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *34.3o* | | | *ng/Lo* | *32.0o* | | *107o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *3.16 S1o* | | | *ng/Lo* | *8.00o* | | *39.5o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.06o* | | | *ng/Lo* | *8.00o* | | *25.7o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.23o* | | | *ng/Lo* | *8.00o* | | *27.9o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.1o* | | | *ng/Lo* | *16.0o* | | *107o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *17.6o* | | | *ng/Lo* | *16.0o* | | *110o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *24.1o* | | | *ng/Lo* | *80.0o* | | *30.1o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *24.3o* | | | *ng/Lo* | *80.0o* | | *30.4o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.1o* | | | *ng/Lo* | *32.0o* | | *100o* | *40-130o* | | |
| **LCS (BDC0200-BS1)u** | | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 19:13o | | | | | |
| PFBAo | 15.5o | | 0.21o | ng/Lo | 16.0o | | 97.0o | 70-140o | | |
| PFPeAo | 8.54o | | 0.065o | ng/Lo | 8.00o | | 107o | 65-135o | | |
| PFHxAo | 3.96o | | 0.055o | ng/Lo | 4.00o | | 99.0o | 70-145o | | |
| PFHpAo | 4.20o | | 0.041o | ng/Lo | 4.00o | | 105o | 70-150o | | |
| PFOAo | 4.39o | | 0.15o | ng/Lo | 4.00o | | 110o | 70-150o | | |
| PFNAo | 4.27o | | 0.082o | ng/Lo | 4.00o | | 107o | 70-150o | | |
| PFDAo | 3.96o | | 0.10o | ng/Lo | 4.00o | | 98.9o | 70-140o | | |
| PFUnAo | 4.34o | | 0.16o | ng/Lo | 4.00o | | 109o | 70-145o | | |
| PFDoAo | 4.22o | | 0.11o | ng/Lo | 4.00o | | 106o | 70-140o | | |
| PFTrDAo | 4.20o | | 0.20o | ng/Lo | 4.00o | | 105o | 65-140o | | |
| PFTeDAo | 4.43o | | 0.20o | ng/Lo | 4.00o | | 111o | 60-140o | | |
| PFHxDAo | 4.38o | | 0.20o | ng/Lo | 4.00o | | 110o | 40-150o | | |
| PFODAo | 3.97o | | 0.20o | ng/Lo | 4.00o | | 99.3o | 40-150o | | |
| PFBSo | 3.60o | | 0.037o | ng/Lo | 3.54o | | 102o | 60-145o | | |
| PFPeSo | 4.01o | | 0.063o | ng/Lo | 3.76o | | 107o | 65-140o | | |
| PFHxSo | 3.72o | | 0.032o | ng/Lo | 3.66o | | 102o | 65-145o | | |
| PFHpSo | 4.17o | | 0.051o | ng/Lo | 3.82o | | 109o | 70-150o | | |
| PFOSo | 3.78o | | 0.064o | ng/Lo | 3.72o | | 102o | 55-150o | | |
| PFNSo | 4.00o | | 0.12o | ng/Lo | 3.84o | | 104o | 65-145o | | |
| PFDSo | 4.08o | | 0.15o | ng/Lo | 3.86o | | 106o | 60-145o | | |
| PFDoSo | 3.73o | | 0.12o | ng/Lo | 3.88o | | 96.2o | 50-145o | | |
| 4:2FTSo | 15.9o | | 0.29o | ng/Lo | 15.0o | | 106o | 70-145o | | |
| 6:2FTSo | 16.5o | | 0.31o | ng/Lo | 15.2o | | 108o | 65-155o | | |
| 8:2FTSo | 16.8o | | 0.082o | ng/Lo | 15.4o | | 109o | 60-150o | | |
| 10:2FTSo | 16.9o | | 0.40o | ng/Lo | 15.4o | | 110o | 40-150o | | |
| PFOSAo | 4.55o | | 0.10o | ng/Lo | 4.00o | | 114o | 70-145o | | |

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*No duplication of this report is allowed, except in its entirety.o*

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0200-BS1)u** | | | | | Prepared: 03/18/24 11:40 | | Analyzed: 03/19/24 19:13o | | | |
| NMeFOSAo | 17.5o | | 0.47o | ng/L | 16.0o | | 109 | 60-150 | | |
| NEtFOSAo | 16.7o | | 0.41o | ng/L | 16.0o | | 105 | 65-145 | | |
| NMeFOSAAo | 4.28o | | 0.11o | ng/L | 4.00o | | 107 | 50-140 | | |
| NEtFOSAAo | 4.16o | | 0.11o | ng/L | 4.00o | | 104 | 70-145 | | |
| NMeFOSEo | 16.8o | | 1.0o | ng/L | 16.0o | | 105 | 70-145 | | |
| NEtFOSEo | 17.6o | | 1.0o | ng/L | 16.0o | | 110 | 70-135 | | |
| HFPO-DAo | 4.20o | | 0.17o | ng/L | 4.00o | | 105 | 70-140 | | |
| ADONAo | 4.05o | | 0.12o | ng/L | 3.78o | | 107 | 65-145 | | |
| PFEESAo | 7.47o | | 0.11o | ng/L | 7.12o | | 105 | 70-140 | | |
| PFMPAo | 9.00o | | 0.054o | ng/L | 8.00o | | 112 | 55-140 | | |
| PFMBAo | 8.26o | | 0.091o | ng/L | 8.00o | | 103 | 60-150 | | |
| NFDHAo | 8.02o | | 0.30o | ng/L | 8.00o | | 100 | 50-150 | | |
| 9Cl-PF3ONSo | 3.95o | | 0.21o | ng/L | 3.74o | | 106 | 70-155 | | |
| 11Cl-PF3OUDSo | 4.05o | | 0.21o | ng/L | 3.78o | | 107 | 55-160 | | |
| 3:3FTCAo | 14.6o | | 0.57o | ng/L | 16.0o | | 91.4 | 65-130 | | |
| 5:3FTCAo | 15.3o | | 0.44o | ng/L | 16.0o | | 95.7 | 70-135 | | |
| 7:3FTCAo | 14.0o | | 0.55o | ng/L | 16.0o | | 87.6 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.8o* | | | *ng/Lo* | *32.0o* | | *106* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *18.4o* | | | *ng/Lo* | *16.0o* | | *115* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *9.14o* | | | *ng/Lo* | *8.00o* | | *114* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.56o* | | | *ng/Lo* | *8.00o* | | *107* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.95o* | | | *ng/Lo* | *8.00o* | | *112* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.23o* | | | *ng/Lo* | *4.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.44o* | | | *ng/Lo* | *4.00o* | | *111* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.08o* | | | *ng/Lo* | *4.00o* | | *102* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.15o* | | | *ng/Lo* | *4.00o* | | *104* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.69o* | | | *ng/Lo* | *4.00o* | | *92.1* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.74o* | | | *ng/Lo* | *8.00o* | | *71.8* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *9.31o* | | | *ng/Lo* | *8.00o* | | *116* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.82o* | | | *ng/Lo* | *8.00o* | | *110* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.97o* | | | *ng/Lo* | *8.00o* | | *112* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.9o* | | | *ng/Lo* | *16.0o* | | *130* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.2o* | | | *ng/Lo* | *16.0o* | | *120* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.4o* | | | *ng/Lo* | *16.0o* | | *121* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *37.3o* | | | *ng/Lo* | *32.0o* | | *117* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.24o* | | | *ng/Lo* | *8.00o* | | *40.5* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.98o* | | | *ng/Lo* | *8.00o* | | *24.8* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *2.21o* | | | *ng/Lo* | *8.00o* | | *27.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.9o* | | | *ng/Lo* | *16.0o* | | *112* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *18.0o* | | | *ng/Lo* | *16.0o* | | *113* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *28.5o* | | | *ng/Lo* | *80.0o* | | *35.7* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *27.2o* | | | *ng/Lo* | *80.0o* | | *34.0* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *35.1o* | | | *ng/Lo* | *32.0o* | | *110* | *40-130* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0200-MRL1)u** | | | | | Prepared: 03/18/24 11:40 | Analyzed: 03/19/24 19:33o | | | | |
| PFBAo | 3.46o | | 0.21o | ng/Lo | 3.20o | | 108o | 70-140 | | |
| PFPeAo | 1.59o | | 0.065o | ng/Lo | 1.60o | | 99.4o | 65-135 | | |
| PFHxAo | 0.809o | | 0.055o | ng/Lo | 0.800o | | 101o | 70-145 | | |
| PFHpAo | 0.841o | | 0.041o | ng/Lo | 0.800o | | 105o | 70-150 | | |
| PFOAo | 0.922o | | 0.15o | ng/Lo | 0.800o | | 115o | 70-150 | | |
| PFNAo | 0.740o | | 0.082o | ng/Lo | 0.800o | | 92.5o | 70-150 | | |
| PFDAo | 0.788o | | 0.10o | ng/Lo | 0.800o | | 98.5o | 70-140 | | |
| PFUnAo | 0.777o | | 0.16o | ng/Lo | 0.800o | | 97.1o | 70-145 | | |
| PFDoAo | 0.812o | | 0.11o | ng/Lo | 0.800o | | 101o | 70-140 | | |
| PFTrDAo | 0.766o | | 0.20o | ng/Lo | 0.800o | | 95.8o | 65-140 | | |
| PFTeDAo | 0.891o | | 0.20o | ng/Lo | 0.800o | | 111o | 60-140 | | |
| PFHxDAo | 0.774o | | 0.20o | ng/Lo | 0.800o | | 96.7o | 40-150 | | |
| PFODAo | 0.668o | | 0.20o | ng/Lo | 0.800o | | 83.5o | 40-150 | | |
| PFBSo | 0.627o | | 0.037o | ng/Lo | 0.708o | | 88.6o | 60-145 | | |
| PFPeSo | 0.755o | | 0.063o | ng/Lo | 0.752o | | 100o | 65-140 | | |
| PFHxSo | 0.754o | | 0.032o | ng/Lo | 0.732o | | 103o | 65-145 | | |
| PFHpSo | 0.734o | | 0.051o | ng/Lo | 0.764o | | 96.1o | 70-150 | | |
| PFOSo | 0.801o | | 0.064o | ng/Lo | 0.744o | | 108o | 55-150 | | |
| PFNSo | 0.743o | | 0.12o | ng/Lo | 0.768o | | 96.7o | 65-145 | | |
| PFDSo | 0.767o | | 0.15o | ng/Lo | 0.772o | | 99.3o | 60-145 | | |
| PFDoSo | 0.703o | | 0.12o | ng/Lo | 0.776o | | 90.6o | 50-145 | | |
| 4:2FTSo | 2.92o | | 0.29o | ng/Lo | 3.00o | | 97.4o | 70-145 | | |
| 6:2FTSo | 3.14o | | 0.31o | ng/Lo | 3.04o | | 103o | 65-155 | | |
| 8:2FTSo | 3.31o | | 0.082o | ng/Lo | 3.07o | | 108o | 60-150 | | |
| 10:2FTSo | 3.26o | | 0.40o | ng/Lo | 3.09o | | 105o | 40-150 | | |
| PFOSAo | 0.837o | | 0.10o | ng/Lo | 0.800o | | 105o | 70-145 | | |
| NMeFOSAo | 3.05o | | 0.47o | ng/Lo | 3.20o | | 95.3o | 60-150 | | |
| NEtFOSAo | 2.99o | | 0.41o | ng/Lo | 3.20o | | 93.3o | 65-145 | | |
| NMeFOSAAo | 0.808o | | 0.11o | ng/Lo | 0.800o | | 101o | 50-140 | | |
| NEtFOSAAo | 0.806o | | 0.11o | ng/Lo | 0.800o | | 101o | 70-145 | | |
| NMeFOSEo | 3.31oMI4o | | 1.0o | ng/Lo | 3.20o | | 103o | 70-145 | | |
| NEtFOSEo | 3.40o | | 1.0o | ng/Lo | 3.20o | | 106o | 70-135 | | |
| HFPO-DAo | 0.833o | | 0.17o | ng/Lo | 0.800o | | 104o | 70-140 | | |
| ADONAo | 0.763oJo | | 0.12o | ng/Lo | 0.756o | | 101o | 65-145 | | |
| PFEESAo | 1.30o | | 0.11o | ng/Lo | 1.42o | | 90.9o | 70-140 | | |
| PFMPAo | 1.53o | | 0.054o | ng/Lo | 1.60o | | 95.7o | 55-140 | | |
| PFMBAo | 1.61o | | 0.091o | ng/Lo | 1.60o | | 101o | 60-150 | | |
| NFDHAo | 1.49o | | 0.30o | ng/Lo | 1.60o | | 93.4o | 50-150 | | |
| 9Cl-PF3ONSo | 0.712oJo | | 0.21o | ng/Lo | 0.748o | | 95.2o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.709oJo | | 0.21o | ng/Lo | 0.756o | | 93.8o | 55-160 | | |
| 3:3FTCAo | 2.50o | | 0.57o | ng/Lo | 3.20o | | 78.0o | 65-130 | | |
| 5:3FTCAo | 2.77o | | 0.44o | ng/Lo | 3.20o | | 86.5o | 70-135 | | |
| 7:3FTCAo | 2.97o | | 0.55o | ng/Lo | 3.20o | | 92.8o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *36.1o* | | | *ng/Lo* | *32.0o* | | *113o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.86o* | | | *ng/Lo* | *8.00o* | | *111o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.40o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *9.03o* | | | *ng/Lo* | *8.00o* | | *113o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.72o* | | | *ng/Lo* | *4.00o* | | *118o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.53o* | | | *ng/Lo* | *4.00o* | | *113o* | *40-130 o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0200-MRL1)u** | | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 19:33o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *4.18o* | | | *ng/Lo* | *4.00o* | | *105o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *4.24o* | | | *ng/Lo* | *4.00o* | | *106o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.87o* | | | *ng/Lo* | *4.00o* | | *96.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.83o* | | | *ng/Lo* | *8.00o* | | *72.9o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.94o* | | | *ng/Lo* | *8.00o* | | *112o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.54o* | | | *ng/Lo* | *8.00o* | | *107o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *9.10o* | | | *ng/Lo* | *8.00o* | | *114o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.5o* | | | *ng/Lo* | *16.0o* | | *128o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.7o* | | | *ng/Lo* | *16.0o* | | *123o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *20.0o* | | | *ng/Lo* | *16.0o* | | *125o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *38.4o* | | | *ng/Lo* | *32.0o* | | *120o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *3.47o* | | | *ng/Lo* | *8.00o* | | *43.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.11o* | | | *ng/Lo* | *8.00o* | | *26.3o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.34o* | | | *ng/Lo* | *8.00o* | | *29.2o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *18.2o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *19.0o* | | | *ng/Lo* | *16.0o* | | *119o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *26.6o* | | | *ng/Lo* | *80.0o* | | *33.3o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *27.2o* | | | *ng/Lo* | *80.0o* | | *33.9o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *35.1o* | | | *ng/Lo* | *32.0o* | | *110o* | *40-130o* | | |
| **Matrix Spike (BDC0200-MS2)u** | **Source: 24C0103-07u** | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 20:35o | | | | | | |
| PFBAo | 15.5o | | 0.18o | ng/Lo | 14.1o | 1.33o | 101o | 70-140o | | |
| PFPeAo | 8.23o | | 0.057o | ng/Lo | 7.04o | 0.823o | 105o | 65-135o | | |
| PFHxAo | 4.17o | | 0.048o | ng/Lo | 3.52o | 0.572o | 102o | 70-145o | | |
| PFHpAo | 4.11o | | 0.036o | ng/Lo | 3.52o | 0.407o | 105o | 70-150o | | |
| PFOAo | 4.83oMI4o | | 0.13o | ng/Lo | 3.52o | 1.32o | 99.8o | 70-150o | | |
| PFNAo | 3.66o | | 0.072o | ng/Lo | 3.52o | NDo | 104o | 70-150o | | |
| PFDAo | 3.52o | | 0.089o | ng/Lo | 3.52o | NDo | 100o | 70-140o | | |
| PFUnAo | 3.70o | | 0.14o | ng/Lo | 3.52o | NDo | 105o | 70-145o | | |
| PFDoAo | 3.73o | | 0.098o | ng/Lo | 3.52o | NDo | 106o | 70-140o | | |
| PFTrDAo | 3.76o | | 0.18o | ng/Lo | 3.52o | NDo | 107o | 65-140o | | |
| PFTeDAo | 3.75o | | 0.17o | ng/Lo | 3.52o | NDo | 107o | 60-140o | | |
| PFHxDAo | 3.72o | | 0.18o | ng/Lo | 3.52o | NDo | 106o | 40-150o | | |
| PFODAo | 3.50o | | 0.18o | ng/Lo | 3.52o | NDo | 99.5o | 40-150o | | |
| PFBSo | 4.06o | | 0.032o | ng/Lo | 3.11o | 0.683o | 108o | 60-145o | | |
| PFPeSo | 3.71o | | 0.055o | ng/Lo | 3.31o | 0.129o | 108o | 65-140o | | |
| PFHxSo | 3.90o | | 0.028o | ng/Lo | 3.22o | 0.639o | 101o | 65-145o | | |
| PFHpSo | 3.89o | | 0.045o | ng/Lo | 3.36o | NDo | 116o | 70-150o | | |
| PFOSo | 5.20o | | 0.056o | ng/Lo | 3.27o | 1.68o | 108o | 55-150o | | |
| PFNSo | 3.77o | | 0.11o | ng/Lo | 3.38o | NDo | 112o | 65-145o | | |
| PFDSo | 3.70o | | 0.13o | ng/Lo | 3.39o | NDo | 109o | 60-145o | | |
| PFDoSo | 3.54o | | 0.11o | ng/Lo | 3.41o | NDo | 104o | 50-145o | | |
| 4:2FTSo | 14.1o | | 0.26o | ng/Lo | 13.2o | NDo | 107o | 70-145o | | |
| 6:2FTSo | 14.9o | | 0.28o | ng/Lo | 13.4o | NDo | 111o | 65-155o | | |
| 8:2FTSo | 15.0o | | 0.072o | ng/Lo | 13.5o | NDo | 111o | 60-150o | | |
| 10:2FTSo | 15.6o | | 0.35o | ng/Lo | 13.6o | NDo | 115o | 40-150o | | |
| PFOSAo | 3.67o | | 0.092o | ng/Lo | 3.52o | NDo | 104o | 70-145o | | |
| NMeFOSAo | 15.3o | | 0.42o | ng/Lo | 14.1o | NDo | 108o | 60-150o | | |
| NEtFOSAo | 16.2o | | 0.36o | ng/Lo | 14.1o | NDo | 115o | 65-145o | | |
| NMeFOSAAo | 3.60o | | 0.093o | ng/Lo | 3.52o | NDo | 102o | 50-140o | | |

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*No duplication of this report is allowed, except in its entirety.o*

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0200-MS2)u** | **Source: 24C0103-07** | | | | Prepared: 03/18/24 11:40 | | Analyzed: 03/19/24 20:35 | | | |
| NEtFOSAAo | 3.81o | | 0.10o | ng/L | 3.52o | NDo | 108 | 70-145 | | |
| NMeFOSEo | 15.3o | | 0.89o | ng/L | 14.1o | NDo | 109 | 70-145 | | |
| NEtFOSEo | 16.2o | | 0.92o | ng/L | 14.1o | NDo | 115 | 70-135 | | |
| HFPO-DAo | 3.67o | | 0.15o | ng/L | 3.52o | NDo | 104 | 70-140 | | |
| ADONAo | 3.85o | | 0.11o | ng/L | 3.32o | NDo | 116 | 65-145 | | |
| PFEESAo | 6.39o | | 0.096o | ng/L | 6.26o | NDo | 102 | 70-140 | | |
| PFMPAo | 8.03o | | 0.047o | ng/L | 7.04o | NDo | 114 | 55-140 | | |
| PFMBAo | 7.14o | | 0.080o | ng/L | 7.04o | NDo | 101 | 60-150 | | |
| NFDHAo | 6.64o | | 0.26o | ng/L | 7.04o | NDo | 94.4 | 50-150 | | |
| 9Cl-PF3ONSo | 3.54o | | 0.18o | ng/L | 3.29o | NDo | 108 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.47o | | 0.18o | ng/L | 3.32o | NDo | 104 | 55-160 | | |
| 3:3FTCAo | 13.1o | | 0.51o | ng/L | 14.1o | NDo | 93.2 | 65-130 | | |
| 5:3FTCAo | 13.7o | | 0.39o | ng/L | 14.1o | NDo | 97.2 | 70-135 | | |
| 7:3FTCAo | 13.2o | | 0.49o | ng/L | 14.1o | NDo | 93.5 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *25.2o* | | | *ng/Lo* | *28.1o* | | *89.5* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *14.7o* | | | *ng/Lo* | *14.1o* | | *105* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *7.19o* | | | *ng/Lo* | *7.04o* | | *102* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *7.15o* | | | *ng/Lo* | *7.04o* | | *102* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.93o* | | | *ng/Lo* | *7.04o* | | *113* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.74o* | | | *ng/Lo* | *3.52o* | | *106* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.73o* | | | *ng/Lo* | *3.52o* | | *106* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *3.86o* | | | *ng/Lo* | *3.52o* | | *110* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.87o* | | | *ng/Lo* | *3.52o* | | *110* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.75o* | | | *ng/Lo* | *3.52o* | | *107* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.37o* | | | *ng/Lo* | *7.04o* | | *90.5* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *7.79o* | | | *ng/Lo* | *7.04o* | | *111* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.01o* | | | *ng/Lo* | *7.04o* | | *114* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *6.83o* | | | *ng/Lo* | *7.04o* | | *97.1* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *17.2o* | | | *ng/Lo* | *14.1o* | | *122* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *17.1o* | | | *ng/Lo* | *14.1o* | | *121* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *16.4o* | | | *ng/Lo* | *14.1o* | | *117* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *32.8o* | | | *ng/Lo* | *28.1o* | | *117* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.39o* | | | *ng/Lo* | *7.04o* | | *48.2* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.12o* | | | *ng/Lo* | *7.04o* | | *30.1* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.99o* | | | *ng/Lo* | *7.04o* | | *28.3* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *14.5o* | | | *ng/Lo* | *14.1o* | | *103* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *14.4o* | | | *ng/Lo* | *14.1o* | | *103* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *21.5o* | | | *ng/Lo* | *70.4o* | | *30.5* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *20.5o* | | | *ng/Lo* | *70.4o* | | *29.2* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *27.4o* | | | *ng/Lo* | *28.1o* | | *97.4* | *40-130* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0200-MSD2)u** | **Source: 24C0103-07u** | | | Prepared: 03/18/24 11:40 | Analyzed: 03/19/24 20:55o | | | | | |
| PFBAo | 16.0o | | 0.19o | ng/Lo | 14.7o | 1.33o | 99.9o | 70-140o | 2.91o | 30o |
| PFPeAo | 8.52o | | 0.060o | ng/Lo | 7.34o | 0.823o | 105o | 65-135o | 3.50o | 30o |
| PFHxAo | 4.47o | | 0.050o | ng/Lo | 3.67o | 0.572o | 106o | 70-145o | 7.15o | 30o |
| PFHpAo | 4.37o | | 0.038o | ng/Lo | 3.67o | 0.407o | 108o | 70-150o | 6.06o | 30o |
| PFOAo | 5.17oMI4o | | 0.14o | ng/Lo | 3.67o | 1.32o | 105o | 70-150o | 6.81o | 30o |
| PFNAo | 4.16o | | 0.075o | ng/Lo | 3.67o | NDo | 113o | 70-150o | 12.8o | 30o |
| PFDAo | 3.81o | | 0.093o | ng/Lo | 3.67o | NDo | 104o | 70-140o | 7.99o | 30o |
| PFUnAo | 3.94o | | 0.15o | ng/Lo | 3.67o | NDo | 107o | 70-145o | 6.40o | 30o |
| PFDoAo | 3.93o | | 0.10o | ng/Lo | 3.67o | NDo | 107o | 70-140o | 5.19o | 30o |
| PFTrDAo | 3.93o | | 0.19o | ng/Lo | 3.67o | NDo | 107o | 65-140o | 4.44o | 30o |
| PFTeDAo | 4.23o | | 0.18o | ng/Lo | 3.67o | NDo | 115o | 60-140o | 12.1o | 30o |
| PFHxDAo | 4.06o | | 0.18o | ng/Lo | 3.67o | NDo | 111o | 40-150o | 8.56o | 30o |
| PFODAo | 3.51o | | 0.18o | ng/Lo | 3.67o | NDo | 95.7o | 40-150o | 0.352o | 30o |
| PFBSo | 4.17o | | 0.034o | ng/Lo | 3.25o | 0.683o | 107o | 60-145o | 2.77o | 30o |
| PFPeSo | 3.99o | | 0.058o | ng/Lo | 3.45o | 0.129o | 112o | 65-140o | 7.21o | 30o |
| PFHxSo | 4.27o | | 0.029o | ng/Lo | 3.36o | 0.639o | 108o | 65-145o | 9.10o | 30o |
| PFHpSo | 4.07o | | 0.047o | ng/Lo | 3.51o | NDo | 116o | 70-150o | 4.44o | 30o |
| PFOSo | 5.07o | | 0.058o | ng/Lo | 3.41o | 1.68o | 99.2o | 55-150o | 2.58o | 30o |
| PFNSo | 3.82o | | 0.11o | ng/Lo | 3.52o | NDo | 108o | 65-145o | 1.30o | 30o |
| PFDSo | 3.62o | | 0.14o | ng/Lo | 3.54o | NDo | 102o | 60-145o | 2.08o | 30o |
| PFDoSo | 3.37o | | 0.11o | ng/Lo | 3.56o | NDo | 94.7o | 50-145o | 5.00o | 30o |
| 4:2FTSo | 15.3o | | 0.27o | ng/Lo | 13.8o | NDo | 111o | 70-145o | 8.17o | 30o |
| 6:2FTSo | 16.0o | | 0.29o | ng/Lo | 13.9o | NDo | 115o | 65-155o | 7.28o | 30o |
| 8:2FTSo | 16.1o | | 0.075o | ng/Lo | 14.1o | NDo | 114o | 60-150o | 6.90o | 30o |
| 10:2FTSo | 13.7o | | 0.37o | ng/Lo | 14.2o | NDo | 97.0o | 40-150o | 12.8o | 30o |
| PFOSAo | 4.40o | | 0.096o | ng/Lo | 3.67o | NDo | 120o | 70-145o | 18.0o | 30o |
| NMeFOSAo | 15.9o | | 0.43o | ng/Lo | 14.7o | NDo | 109o | 60-150o | 4.45o | 30o |
| NEtFOSAo | 14.9o | | 0.38o | ng/Lo | 14.7o | NDo | 102o | 65-145o | 7.89o | 30o |
| NMeFOSAAo | 3.99o | | 0.097o | ng/Lo | 3.67o | NDo | 109o | 50-140o | 10.2o | 30o |
| NEtFOSAAo | 3.85o | | 0.11o | ng/Lo | 3.67o | NDo | 105o | 70-145o | 1.01o | 30o |
| NMeFOSEo | 16.4o | | 0.93o | ng/Lo | 14.7o | NDo | 112o | 70-145o | 6.76o | 30o |
| NEtFOSEo | 16.4o | | 0.96o | ng/Lo | 14.7o | NDo | 112o | 70-135o | 0.935o | 30o |
| HFPO-DAo | 3.85o | | 0.16o | ng/Lo | 3.67o | NDo | 105o | 70-140o | 4.59o | 30o |
| ADONAo | 3.85o | | 0.11o | ng/Lo | 3.47o | NDo | 111o | 65-145o | 0.0579o | 30o |
| PFEESAo | 6.88o | | 0.10o | ng/Lo | 6.53o | NDo | 105o | 70-140o | 7.38o | 30o |
| PFMPAo | 8.24o | | 0.049o | ng/Lo | 7.34o | NDo | 112o | 55-140o | 2.64o | 30o |
| PFMBAo | 7.76o | | 0.083o | ng/Lo | 7.34o | NDo | 106o | 60-150o | 8.36o | 30o |
| NFDHAo | 7.64o | | 0.28o | ng/Lo | 7.34o | NDo | 104o | 50-150o | 13.9o | 30o |
| 9Cl-PF3ONSo | 3.71o | | 0.19o | ng/Lo | 3.43o | NDo | 108o | 70-155o | 4.70o | 30o |
| 11Cl-PF3OUDSo | 3.56o | | 0.19o | ng/Lo | 3.47o | NDo | 103o | 55-160o | 2.64o | 30o |
| 3:3FTCAo | 13.9o | | 0.53o | ng/Lo | 14.7o | NDo | 94.4o | 65-130o | 5.56o | 30o |
| 5:3FTCAo | 14.3o | | 0.41o | ng/Lo | 14.7o | NDo | 97.1o | 70-135o | 4.10o | 30o |
| 7:3FTCAo | 15.1o | | 0.51o | ng/Lo | 14.7o | NDo | 103o | 50-145o | 13.7o | 30o |
| *Surrogate: 13C4-PFBAo* | *26.0o* | | | *ng/Lo* | *29.4o* | | *88.5o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *15.6o* | | | *ng/Lo* | *14.7o* | | *106o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.63o* | | | *ng/Lo* | *7.34o* | | *104o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.46o* | | | *ng/Lo* | *7.34o* | | *102o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *7.78o* | | | *ng/Lo* | *7.34o* | | *106o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *3.55o* | | | *ng/Lo* | *3.67o* | | *96.6o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *3.78o* | | | *ng/Lo* | *3.67o* | | *103o* | *40-130 o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 12:13o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0200-MSD2)u** | **Source: 24C0103-07u** | | | Prepared: 03/18/24 11:40 Analyzed: 03/19/24 20:55o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *4.09o* | | | *ng/Lo* | *3.67o* | | *111o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.94o* | | | *ng/Lo* | *3.67o* | | *107o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.66o* | | | *ng/Lo* | *3.67o* | | *99.8o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.94o* | | | *ng/Lo* | *7.34o* | | *94.5o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *7.61o* | | | *ng/Lo* | *7.34o* | | *104o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.50o* | | | *ng/Lo* | *7.34o* | | *102o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *7.49o* | | | *ng/Lo* | *7.34o* | | *102o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *16.9o* | | | *ng/Lo* | *14.7o* | | *115o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *16.9o* | | | *ng/Lo* | *14.7o* | | *115o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *16.9o* | | | *ng/Lo* | *14.7o* | | *115o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *31.4o* | | | *ng/Lo* | *29.4o* | | *107o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *3.55o* | | | *ng/Lo* | *7.34o* | | *48.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.13o* | | | *ng/Lo* | *7.34o* | | *29.0o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.17o* | | | *ng/Lo* | *7.34o* | | *29.5o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.2o* | | | *ng/Lo* | *14.7o* | | *89.9o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *14.1o* | | | *ng/Lo* | *14.7o* | | *96.2o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *21.4o* | | | *ng/Lo* | *73.4o* | | *29.2o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *21.4o* | | | *ng/Lo* | *73.4o* | | *29.1o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *29.3o* | | | *ng/Lo* | *29.4o* | | *99.9o* | *40-130o* | | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 12:13o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI3o | Manual integration, peaks split o |
| MI4o | Manual integration, peak unsplit o |
| MI5o | Manual integration, whole peak was not integrated o |
| MI6o | Manual integration, wrong peak integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0103** R

Printed: 04/01/2024 12:13 pmi

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/16/2024 09:50 AMi
Date Due:i 04/01/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Sophia Herrerai

| Analysisa | Commentsa |
|---|---|

**24C0103-01 MW-17-4 [Water] Sampled 3/15/2024 8:10:00AMR**
1633i NASA Listi

**24C0103-02 MW-17-3 [Water] Sampled 3/15/2024 8:30:00AMR**
1633i NASA Listi

**24C0103-03 DUP-3-031524 [Water] Sampled 3/15/2024 8:40:00AMR**
1633i NASA Listi

**24C0103-04 MW-17-2 [Water] Sampled 3/15/2024 8:55:00AMR**
1633i NASA Listi

**24C0103-05 MW-17-1 [Water] Sampled 3/15/2024 9:15:00AMR**
1633i NASA Listi

**24C0103-06 MW-11-3 [Water] Sampled 3/15/2024 10:35:00AMR**
1633i NASA Listi

**24C0103-07 MW-11-2 [Water] Sampled 3/15/2024 11:00:00AMR**
***Sample Comments: MS.MSDR***
1633i NASA Listi

**24C0103-08 MW-11-1 [Water] Sampled 3/15/2024 11:45:00AMR**
1633i NASA Listi

**24C0103-09 EB-5-031524 [Water] Sampled 3/15/2024 12:00:00PMR**
1633i NASA Listi

**24C0103-10 FB-5-031524 [Water] Sampled 3/15/2024 12:10:00PMR**
1633i NASA Listi

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A METIRI GROUP COMPANY

# WORK ORDER

**24C0103** R

Printed: 04/01/2024 12:13 pmi

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0103C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **0.7°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yes i |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yes i |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yes i |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yes i |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yes i |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | No i |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | No i |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | No i |

APPL LABS

APPL, Inc. 24C0103
908 N Temperance Ave
Clovis, CA 93611
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coc@applinc.com

# CHAIN OF CUSTODY RECORD

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: 626-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 | Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh20.net | | Email: david.conner@tideh20.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Thinh Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | Analysis Requested/Method Number: PFAS 1633 | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-17-4 | | 03/15/24 | 0810 | | 1 | X | | | X | Laboratory, please |
| MW-17-3 | | | 0830 | | 1 | X | | | X | select ZSP65 |
| DUP-3-031524 | | | 0840 | | 1 | X | | | X | for Level IV |
| MW-17-2 | | | 0855 | | 1 | X | | | X | Validation |
| MW-17-1 | | | 0915 | | 1 | X | | | X | |
| MW-11-3 | | | 1035 | | 1 | X | | | X | |
| MW-11-2 | | | 1100 | | 3 | X | | | X | MS/MSD |
| MW-11-1 | | | 1145 | | 1 | X | | | X | |
| EB-5-031524 | | | 1200 | | 1 | X | | | X | |
| FB-5-031524 | | | 1210 | | 1 | X | | | X | |

Shuttle Temperature: RB 0.8/0.7°C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal: ☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/15/24 | 1455 | | | | | |
| **Relinquished by:** | **Date** | **Time** | **Received by:** | **Relinquished by:** | **Date** | **Time** | **Received at lab by:** |
| | | | | | 03/16/24 | 09:50 | Appl Inc. |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information



Table of Contents

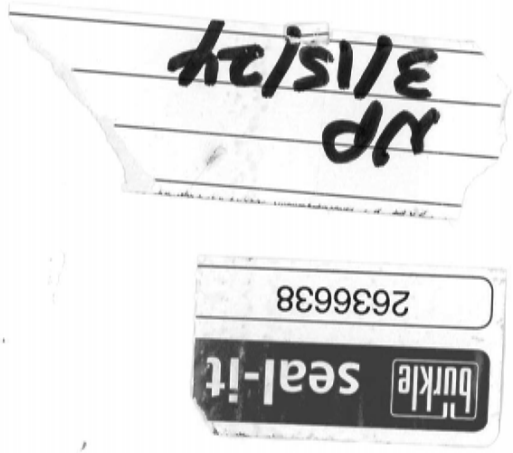
JP
3/15/24
Burkle seal-it
2636638

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

## MW-17-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-01- | File ID:- | S2024-03-19B (26)- |
| Sampled:- | 03/15/24 08:10- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 01:01- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 540.102 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.88- | 0.19- | 1.5- | J- |
| PFPeA- | 0.60- | 0.060- | 0.74- | J- |
| PFHxA- | 0.48- | 0.051- | 0.37- | |
| PFHpA- | 0.38- | 0.038- | 0.37- | |
| PFOA- | 0.66- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | 0.11- | 0.094- | 0.37- | MI2, J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 0.33- | 0.034- | 0.37- | J- |
| PFPeS- | 0.25- | 0.058- | 0.37- | J- |
| PFHxS- | 1.8- | 0.029- | 0.37- | |
| PFHpS- | 0.057- | 0.048- | 0.37- | J- |
| PFOS- | 1.6- | 0.059- | 0.37- | MI1- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-17-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-01- | File ID:- | S2024-03-19B (26)- |
| Sampled:- | 03/15/24 08:10- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 01:01- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 540.102 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 51127<br>( 163.0 / 69.0 ) 1207 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , -0.4) | 349.5<br>82.4 | 0.0236<br>86.9<br>89.6 | 0.1938 | N/A | 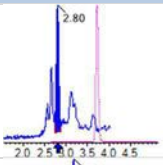 | 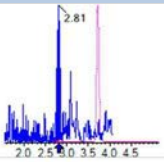 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 66360 | ( 3.74 , 1.00 )<br>( 0.02 , N/A , 0.0) | 41.4 | N/A<br>0.0<br>0.0 | 0.2379 | N/A | 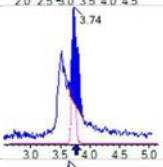 | | |
| PFPeA | ( 263.0 / 219.0 ) 39202<br>( 263.0 / 69.0 ) 796 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , -1.1) | 193.7<br>11.5 | 0.0203<br>170.1<br>183.0 | 0.1614 | N/A | 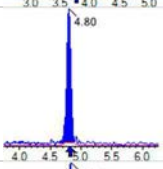 | 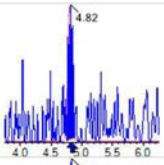 | |
| PFHxA | ( 313.0 / 269.0 ) 36778<br>( 313.0 / 119.0 ) 4477 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , -0.1) | 202.9<br>75.5 | 0.1217<br>104.8<br>104.0 | 0.1284 | N/A | 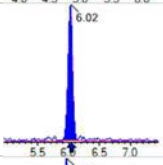 | 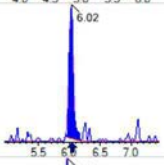 | |
| PFHpA | ( 363.0 / 319.0 ) 31832<br>( 363.0 / 169.0 ) 9943 | ( 7.16 , 1.00 )<br>( 0.00 , N/A , 0.0) | 156.4<br>127.2 | 0.3124<br>103.1<br>105.8 | 0.1028 | N/A | 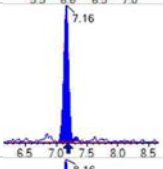 | 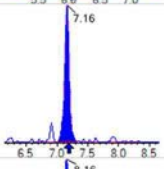 | |
| PFOA | ( 413.0 / 369.0 ) 94032<br>( 413.0 / 169.0 ) 46468 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.0) | 117.9<br>154.9 | 0.4942<br>135.2<br>143.9 | 0.1775 | N/A | 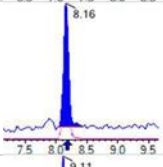 | 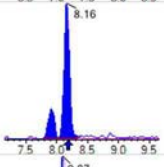 | |
| PFNA | ( 463.0 / 419.0 ) 4254<br>( 463.0 / 169.0 ) 1451 | ( 9.11 , 1.00 )<br>( 0.01 , N/A , 2.3) | 33.1<br>22.3 | 0.3410<br>133.6<br>141.8 | 0.0145 | N/A | 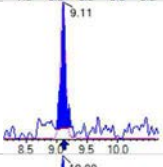 | 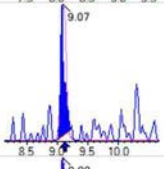 | |
| PFDA | ( 513.0 / 469.0 ) 9750<br>( 513.0 / 169.0 ) 1705 | ( 10.00 , 1.00 )<br>( 0.00 , N/A , 0.9) | 88.5<br>98.1 | 0.1748<br>149.2<br>146.1 | 0.0294 | N/A | 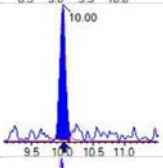 | 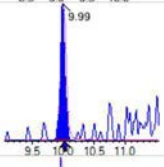 | MI2 DG 2024-03-20 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 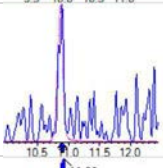 | 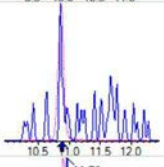 | |
| PFDoA | ( 613.0 / 569.0 ) 6173<br>( 613.0 / 169.0 ) 978 | ( 11.69 , 1.00 )<br>( 0.00 , N/A , -1.6) | 33.2<br>10.8 | 0.1584<br>100.2<br>107.1 | 0.0159 | N/A | 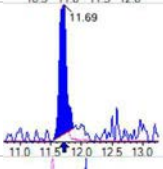 | 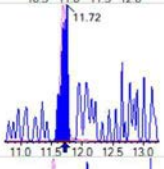 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 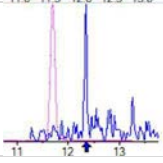 | 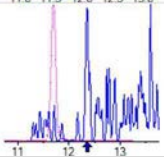 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 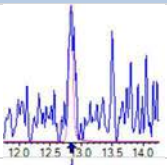 | 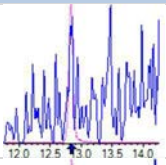 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 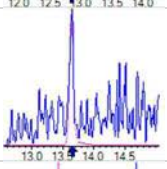 | 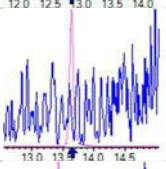 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 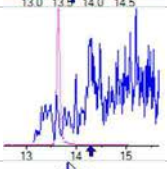 | 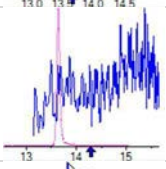 | |
| PFBS | ( 299.0 / 80.0 )<br>41206<br>( 299.0 / 99.0 )<br>33567 | ( 6.32 , 1.00 )<br>( 0.00 , N/A , 0.0) | 100.8<br>171.3 | 0.8146<br>115.2<br>110.8 | 0.0903 | N/A | 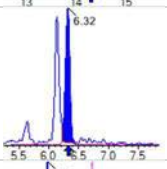 | 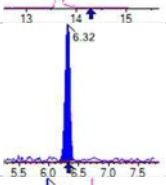 | |
| PFPeS | ( 349.0 / 80.0 )<br>74413<br>( 349.0 / 99.0 )<br>30660 | ( 7.55 , 0.88 )<br>( N/A , -0.01 , 0.3) | 95.0<br>153.3 | 0.4120<br>114.6<br>117.0 | 0.0678 | N/A | 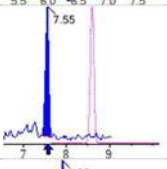 | 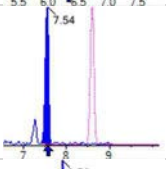 | |
| PFHxS | ( 399.0 / 80.0 )<br>615704<br>( 399.0 / 99.0 )<br>137960 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , 0.0) | 543.0<br>633.8 | 0.2241<br>70.4<br>67.0 | 0.4829 | N/A | 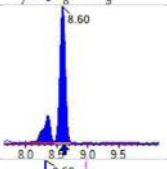 | 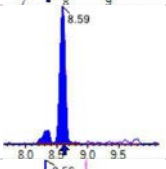 | |
| PFHpS | ( 449.0 / 80.0 )<br>15503<br>( 449.0 / 99.0 )<br>4775 | ( 9.56 , 0.91 )<br>( N/A , -0.02 , 0.1) | 37.5<br>21.8 | 0.3080<br>116.4<br>116.3 | 0.0154 | N/A | 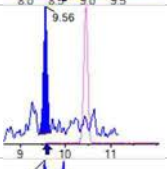 | 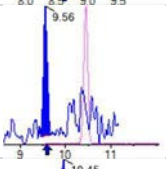 | |
| PFOS | ( 499.0 / 80.0 )<br>420375<br>( 499.0 / 99.0 )<br>79655 | ( 10.29 , 0.98 )<br>( -0.16 , N/A , -9.8) | 228.2<br>396.4 | 0.1895<br>81.1<br>78.9 | 0.4326 | N/A | 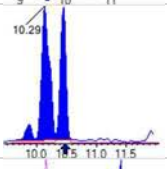 | 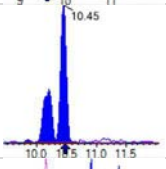 | MI1 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 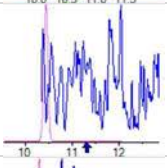 | 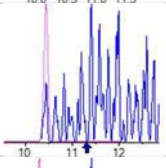 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 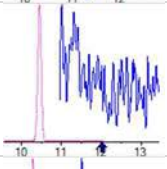 | 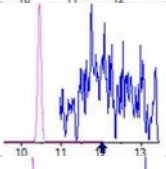 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 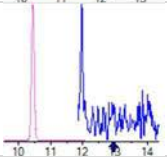 | 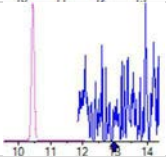 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 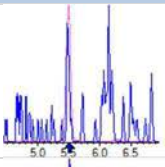 | 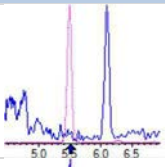 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 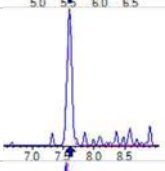 | 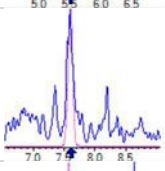 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 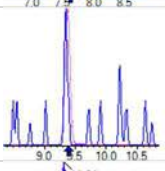 | 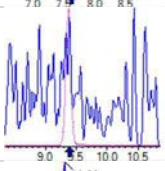 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17913<br>( 627.0 / 81.0 )<br>26867 | ( 11.01 , 1.00 )<br>( 0.01 , N/A , 0.6) | 199.5<br>68.5 | 1.4998<br>104.2<br>102.8 | 0.0559 | N/A | 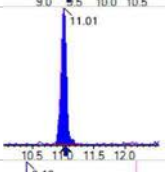 | 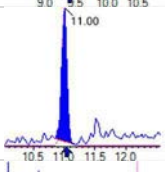 | |
| PFBSA | ( 297.9 / 78.0 )<br>15056<br>( 297.9 / 278.0 )<br>N/A | ( 8.10 , 0.57 )<br>( N/A , 0.00 , #Value!) | 138.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0539 | N/A | 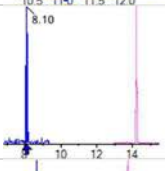 | 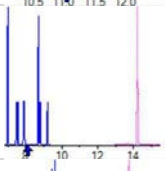 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 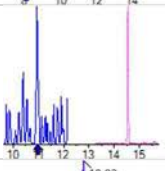 | 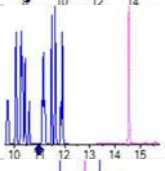 | |
| PFOSA | ( 498.0 / 78.0 )<br>8247<br>( 498.0 / 478.0 )<br>126 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , -2.1) | 102.1<br>3.6 | 0.0152<br>108.6<br>102.4 | 0.0206 | N/A | 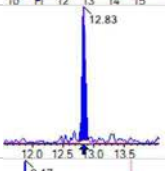 | 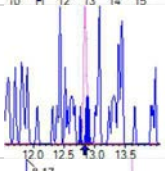 | |
| TFSI | ( 279.7 / 147.0 )<br>25059<br>( 279.7 / 211.0 )<br>4380 | ( 8.17 , 0.64 )<br>( N/A , -0.02 , -0.2) | 22.8<br>14.7 | 0.1748<br>208.1<br>204.3 | 0.0237 | N/A | 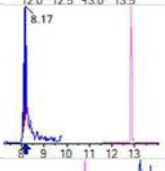 | 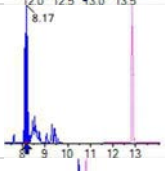 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 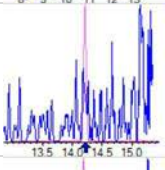 | 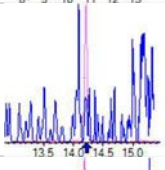 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 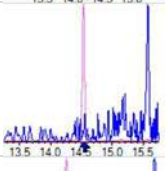 | 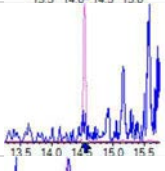 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 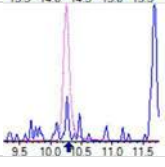 | 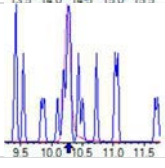 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 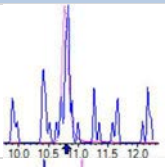 | 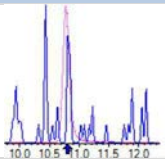 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 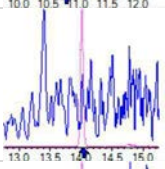 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 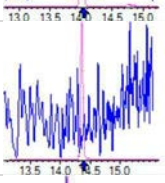 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 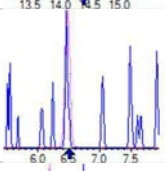 | 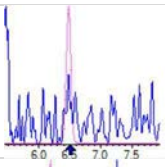 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 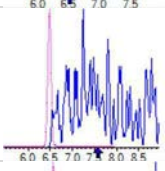 | 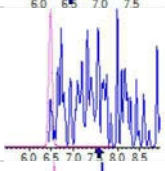 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 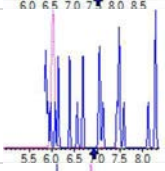 | 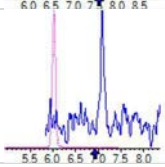 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 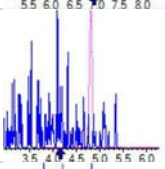 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 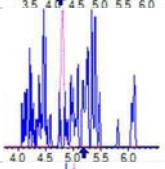 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 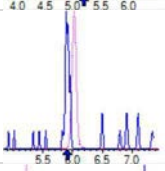 | 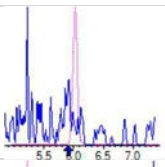 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 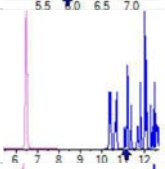 | 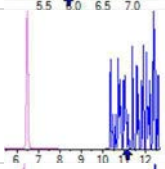 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 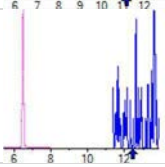 | 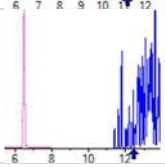 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 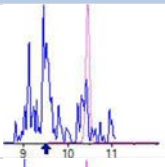 | 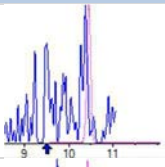 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 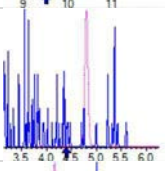 | 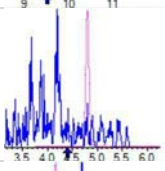 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 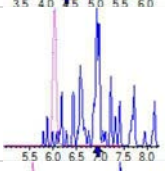 | 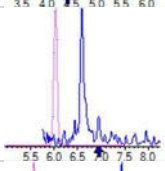 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 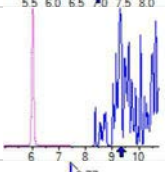 | 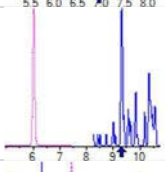 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 5528<br>( 357.2 / 243.0 ) N/A | ( 6.77 , 1.00 ) ( 0.00 , N/A , #Value!) | 47.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0136 | N/A | 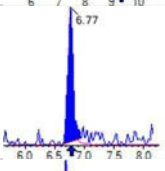 | 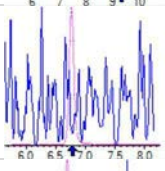 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 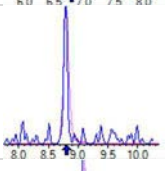 | 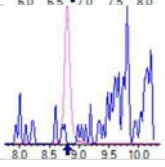 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 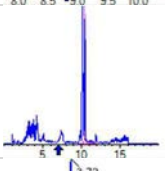 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 274516 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 1350.5 | N/A | 1.1513 [ 1.0000 ] | 115.1% { 116.1% } | 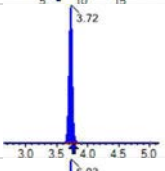 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122241 | ( 6.03 , N/A ) ( N/A , -0.02 , N/A ) | 1117039.0 | N/A | 0.9636 [ 1.0000 ] | 96.4% { 96.6% } | 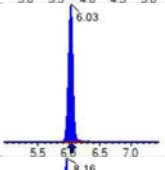 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 363369 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 4970.3 | N/A | 0.9192 [ 1.0000 ] | 91.9% { 95.8% } | 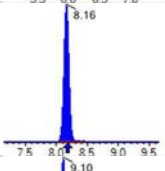 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 244237 | ( 9.10 , N/A ) ( N/A , -0.01 , N/A ) | 881.1 | N/A | 0.8588 [ 1.0000 ] | 85.9% { 86.8% } | 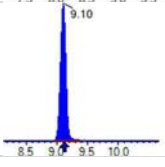 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 262808 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 2681.4 | N/A | 0.8999 [ 1.0000 ] | 90.0% { 90.8% } | 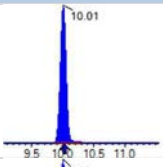 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 873161 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 4639.8 | N/A | 0.9201 [ 1.0000 ] | 92.0% { 93.5% } | 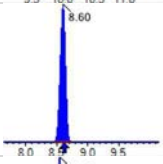 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 696300 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 1339.0 | N/A | 0.9142 [ 1.0000 ] | 91.4% { 97.8% } | 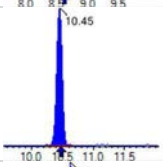 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2238430 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 38935.0 | N/A | 7.1378 [ 8.0000 ] | 89.2% { 100.0% } | 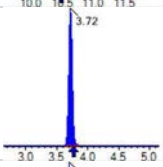 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 961534 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 4856.3 | N/A | 4.2157 [ 4.0000 ] | 105.4% { 98.5% } | 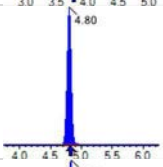 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 596218 | ( 6.03 , N/A ) ( N/A , -0.02 , N/A ) | 12591.4 | N/A | 2.1377 [ 2.0000 ] | 106.9% { 101.0% } | 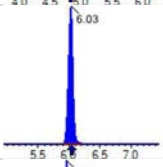 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 630884 | ( 7.16 , N/A ) ( N/A , -0.02 , N/A ) | 3908.0 | N/A | 2.0334 [ 2.0000 ] | 101.7% { 96.1% } | 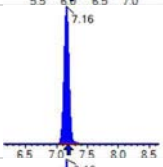 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 957145 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 3373.5 | N/A | 2.4584 [ 2.0000 ] | 122.9% { 111.0% } | 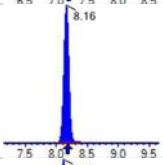 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291239 | ( 9.10 , N/A ) ( N/A , -0.01 , N/A ) | 1936.8 | N/A | 1.2162 [ 1.0000 ] | 121.6% { 107.9% } | 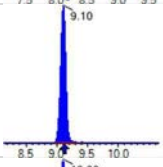 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 324267 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 870.8 | N/A | 1.1010 [ 1.0000 ] | 110.1% { 100.8% } | 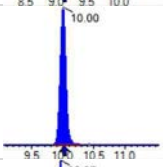 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 386671 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 920.9 | N/A | 1.1159 [ 1.0000 ] | 111.6% { 104.0% } | 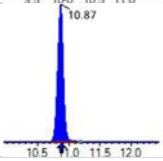 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-01 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (26)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 385705 | ( 11.69 , N/A ) ( N/A , -0.02 , N/A ) | 1053.0 | N/A | 1.0931 [ 1.0000 ] | 109.3% { 103.4% } | 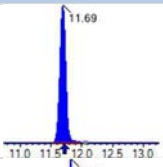 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 309811 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1145.5 | N/A | 1.0310 [ 1.0000 ] | 103.1% { 94.9% } | 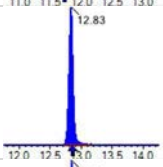 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 475723 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2262.0 | N/A | 1.8543 [ 2.0000 ] | 92.7% { 94.2% } | 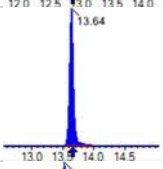 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1757538 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 915.1 | N/A | 2.2278 [ 2.0000 ] | 111.4% { 104.7% } | 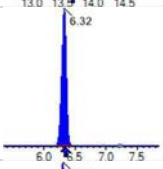 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1434466 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 3080.4 | N/A | 2.2780 [ 2.0000 ] | 113.9% { 108.8% } | 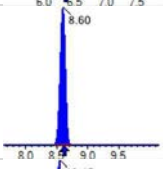 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1682534 | ( 10.45 , N/A ) ( N/A , -0.03 , N/A ) | 1245.4 | N/A | 2.2411 [ 2.0000 ] | 112.1% { 108.6% } | 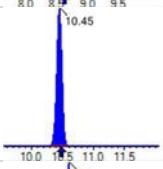 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 703671 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 80.1 | N/A | 5.1698 [ 4.0000 ] | 129.2% { 119.5% } | 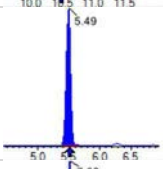 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1992292 | ( 7.60 , N/A ) ( N/A , -0.01 , N/A ) | 2094.4 | N/A | 4.8909 [ 4.0000 ] | 122.3% { 119.5% } | 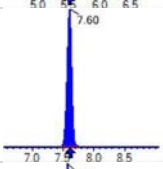 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1540668 | ( 9.38 , N/A ) ( N/A , -0.02 , N/A ) | 1437.5 | N/A | 4.8225 [ 4.0000 ] | 120.6% { 112.6% } | 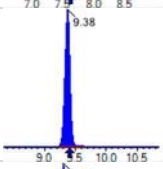 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3325447 | ( 11.00 , N/A ) ( N/A , -0.03 , N/A ) | 1457.0 | N/A | 9.9599 [ 8.0000 ] | 124.5% { 130.3% } | 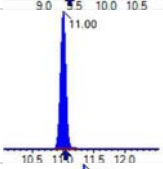 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 802258 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2361.4 | N/A | 1.2058 [ 2.0000 ] | 60.3% { 58.4% } | 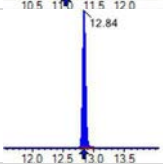 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (26)
Acquired: 2024/03/20 - 01:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 108333 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 738.2 | N/A | 0.7677 [ 2.0000 ] | 38.4% { 37.6% } | 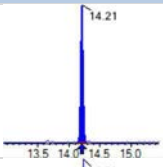 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 114747 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 1023.7 | N/A | 0.7583 [ 2.0000 ] | 37.9% { 37.4% } | 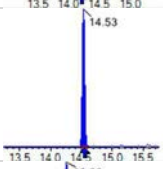 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 835058 | ( 10.26 , N/A ) ( N/A , -0.02 , N/A ) | 2876.8 | N/A | 4.3228 [ 4.0000 ] | 108.1% { 98.8% } | 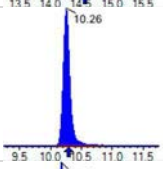 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 801747 | ( 10.78 , N/A ) ( N/A , -0.02 , N/A ) | 1742.4 | N/A | 4.5538 [ 4.0000 ] | 113.8% { 104.1% } | 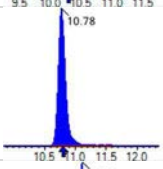 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 534851 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1505.0 | N/A | 8.4344 [ 20.0000 ] | 42.2% { 38.9% } | 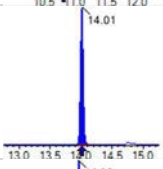 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 525102 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 1914.6 | N/A | 8.1585 [ 20.0000 ] | 40.8% { 40.7% } | 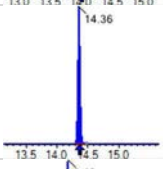 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068727 | ( 6.48 , N/A ) ( N/A , -0.02 , N/A ) | 2368.8 | N/A | 8.4117 [ 8.0000 ] | 105.1% { 104.5% } | 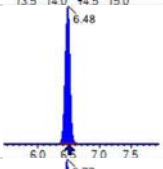 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 767119 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1430.1 | N/A | 2.6923 [ 2.0000 ] | 134.6% { 124.3% } | 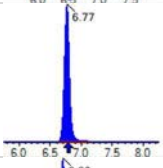 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 638521 | ( 8.80 , N/A ) ( N/A , -0.01 , N/A ) | 714.2 | N/A | 2.4616 [ 2.0000 ] | 123.1% { 115.4% } | 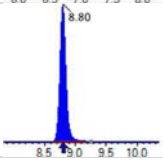 | | |

# ANALYSIS DATA SHEETL

## MW-17-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-02- | File ID:- | S2024-03-19B (27)- |
| Sampled:- | 03/15/24 08:30- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 01:22- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 544.295 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.89- | 0.19- | 1.5- | J- |
| PFPeA- | 1.1- | 0.060- | 0.73- | |
| PFHxA- | 0.76- | 0.050- | 0.37- | |
| PFHpA- | 0.39- | 0.038- | 0.37- | |
| PFOA- | 0.98- | 0.14- | 0.37- | MI5- |
| PFNA- | 0.34- | 0.075- | 0.37- | J- |
| PFDA- | 1.1- | 0.093- | 0.37- | |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 1.9- | 0.034- | 0.37- | |
| PFPeS- | 0.32- | 0.058- | 0.37- | J- |
| PFHxS- | 1.6- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 6.0- | 0.058- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | 0.10- | 0.097- | 0.37- | MI5, J- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-17-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-02- | File ID:- | S2024-03-19B (27)- |
| Sampled:- | 03/15/24 08:30- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 01:22- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 544.295 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.050- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (27)
Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 93355<br>( 163.0 / 69.0 ) 2613 | ( 2.81 , 0.75 )<br>( N/A , 0.01 , 0.0) | 615.1<br>127.3 | 0.0280<br>103.1<br>106.2 | 0.3325 | N/A | 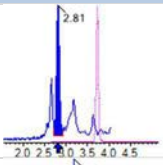 | 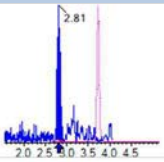 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 71661 | ( 3.74 , 1.00 )<br>( 0.01 , N/A , 0.0) | 48.8 | N/A<br>0.0<br>0.0 | 0.2415 | N/A | 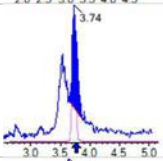 | | |
| PFPeA | ( 263.0 / 219.0 ) 69688<br>( 263.0 / 69.0 ) 811 | ( 4.79 , 1.00 )<br>( 0.00 , N/A , 0.8) | 293.3<br>11.8 | 0.0116<br>97.4<br>104.9 | 0.2969 | N/A | 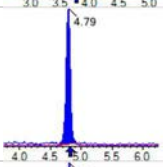 | 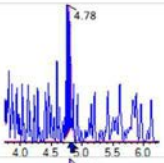 | |
| PFHxA | ( 313.0 / 269.0 ) 57467<br>( 313.0 / 119.0 ) 6697 | ( 6.01 , 1.00 )<br>( 0.00 , N/A , 0.2) | 245.4<br>99.3 | 0.1165<br>100.4<br>99.6 | 0.2077 | N/A | 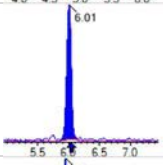 | 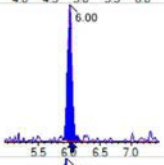 | |
| PFHpA | ( 363.0 / 319.0 ) 33434<br>( 363.0 / 169.0 ) 11369 | ( 7.14 , 1.00 )<br>( 0.00 , N/A , 0.3) | 127.7<br>132.7 | 0.3400<br>112.2<br>115.2 | 0.1052 | N/A | 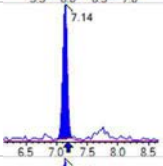 | 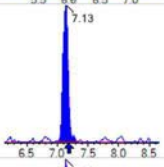 | |
| PFOA | ( 413.0 / 369.0 ) 118950<br>( 413.0 / 169.0 ) 44096 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 124.7<br>130.3 | 0.3707<br>101.4<br>108.0 | 0.2661 | N/A | 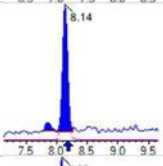 | 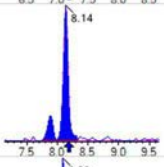 | MI5 DG 2024-03-20 |
| PFNA | ( 463.0 / 419.0 ) 24595<br>( 463.0 / 169.0 ) 6012 | ( 9.08 , 1.00 )<br>( 0.00 , N/A , -0.2) | 118.6<br>97.8 | 0.2445<br>95.8<br>101.6 | 0.0929 | N/A | 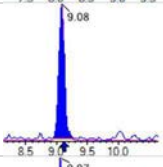 | 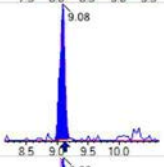 | |
| PFDA | ( 513.0 / 469.0 ) 84987<br>( 513.0 / 169.0 ) 10709 | ( 9.97 , 1.00 )<br>( 0.00 , N/A , -1.2) | 572.2<br>181.2 | 0.1260<br>107.5<br>105.3 | 0.2864 | N/A | 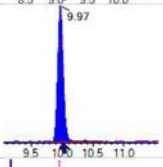 | 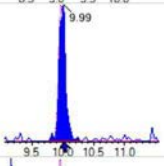 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 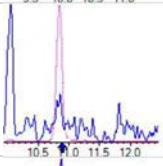 | 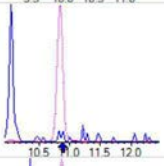 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 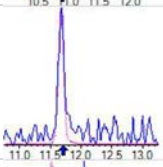 | 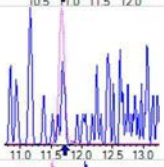 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 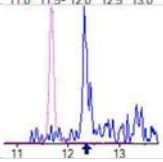 | 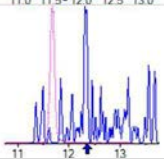 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (27)
Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 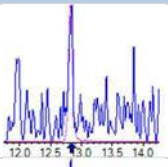 | 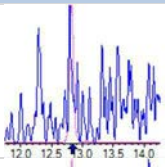 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 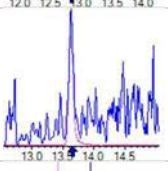 | 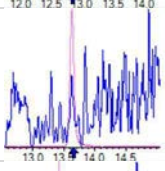 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 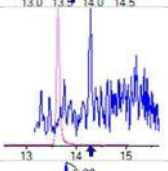 | 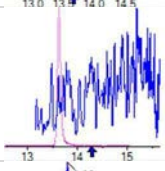 | |
| PFBS | ( 299.0 / 80.0 )<br>230107<br>( 299.0 / 99.0 )<br>166491 | ( 6.29 , 1.00 )<br>( -0.01 , N/A , 0.0) | 307.6<br>601.2 | 0.7235<br>102.3<br>98.4 | 0.5115 | N/A | 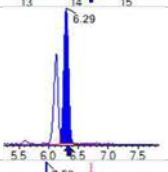 | 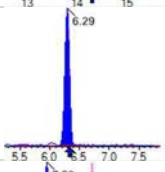 | |
| PFPeS | ( 349.0 / 80.0 )<br>88812<br>( 349.0 / 99.0 )<br>32699 | ( 7.53 , 0.88 )<br>( N/A , -0.03 , 0.4) | 131.3<br>119.8 | 0.3682<br>102.4<br>104.5 | 0.0873 | N/A | 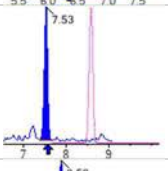 | 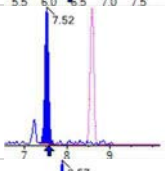 | |
| PFHxS | ( 399.0 / 80.0 )<br>507443<br>( 399.0 / 99.0 )<br>133917 | ( 8.58 , 1.00 )<br>( 0.00 , N/A , 0.2) | 705.1<br>612.8 | 0.2639<br>82.9<br>78.9 | 0.4292 | N/A | 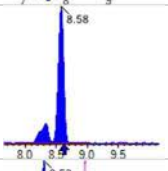 | 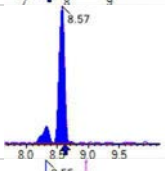 | |
| PFHpS | ( 449.0 / 80.0 )<br>10613<br>( 449.0 / 99.0 )<br>1516 | ( 9.53 , 0.91 )<br>( N/A , -0.05 , -0.8) | 28.8<br>11.4 | 0.1429<br>54.0<br>54.0 | 0.0122 | N/A | 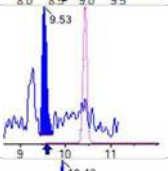 | 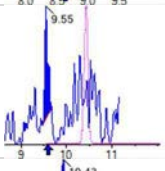 | |
| PFOS | ( 499.0 / 80.0 )<br>1375156<br>( 499.0 / 99.0 )<br>326272 | ( 10.43 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1154.7<br>1878.7 | 0.2373<br>101.5<br>98.8 | 1.6412 | N/A | 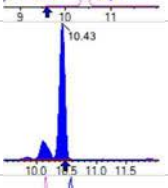 | 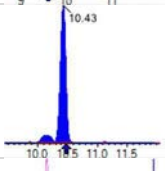 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 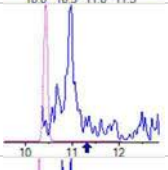 | 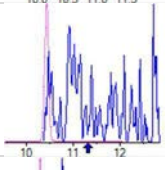 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 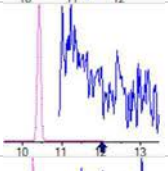 | 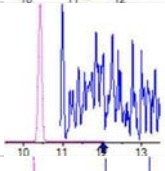 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 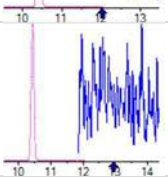 | 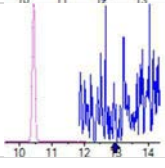 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-02 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 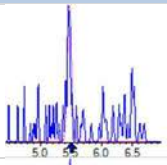 | 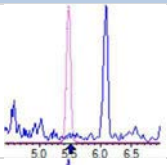 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 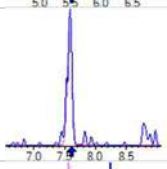 | 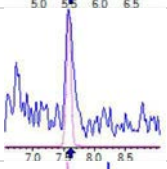 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 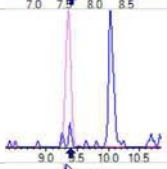 | 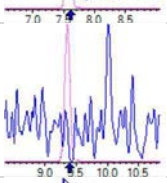 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16944<br>( 627.0 / 81.0 )<br>23648 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , 0.5) | 140.5<br>60.6 | 1.3957<br>97.0<br>95.7 | 0.0576 | N/A | 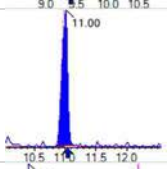 | 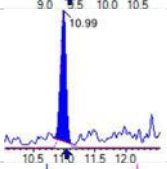 | |
| PFBSA | ( 297.9 / 78.0 )<br>17246<br>( 297.9 / 278.0 )<br>N/A | ( 8.09 , 0.57 )<br>( N/A , -0.01 , #Value!) | 178.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0562 | N/A | 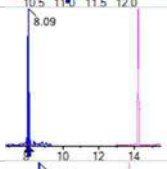 | 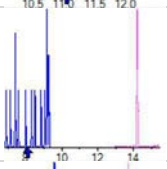 | |
| PFHxSA | ( 397.9 / 78.0 )<br>4955<br>( 397.9 / 378.0 )<br>N/A | ( 10.95 , 0.75 )<br>( N/A , -0.02 , #Value!) | 73.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0132 | N/A | 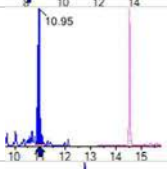 | 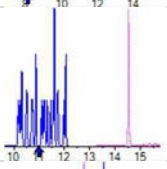 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 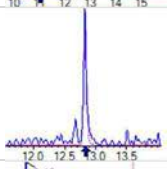 | 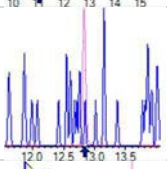 | |
| TFSI | ( 279.7 / 147.0 )<br>33037<br>( 279.7 / 211.0 )<br>3058 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , 0.5) | 22.5<br>11.8 | 0.0926<br>110.2<br>108.2 | 0.0245 | N/A | 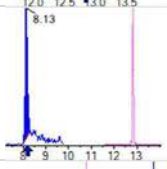 | 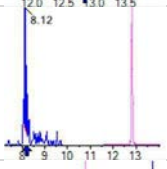 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 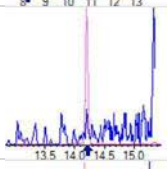 | 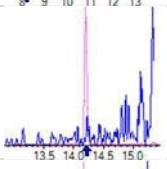 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 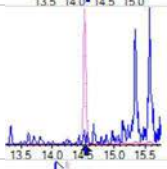 | 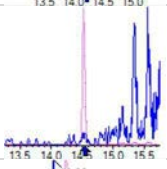 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>5237<br>( 570.0 / 483.0 )<br>3203 | ( 10.04 , 0.98 )<br>( -0.19 , N/A , 1.0) | 615.9<br>156.1 | 0.6116<br>139.5<br>130.8 | 0.0273 | N/A | 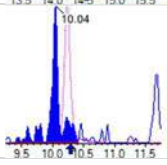 | 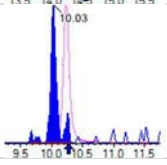 | MI5 DG<br>2024-03-20 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (27)
Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 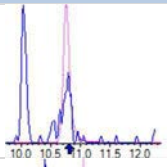 | 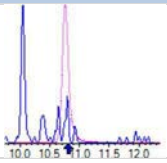 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 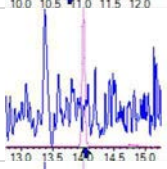 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 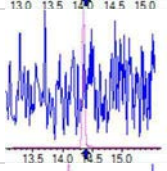 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 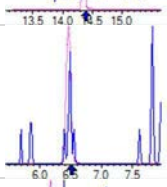 | 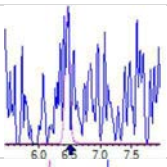 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 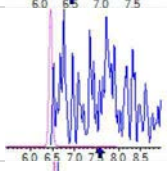 | 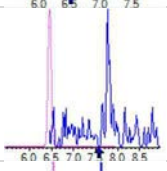 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 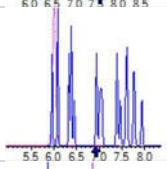 | 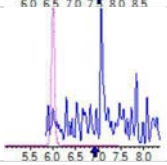 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 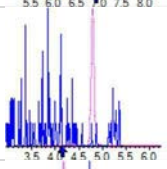 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 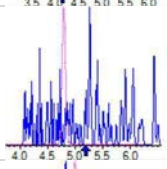 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 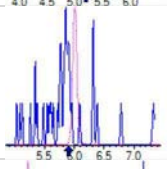 | 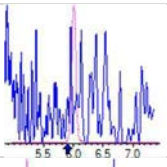 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 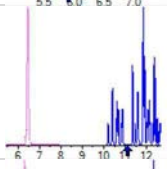 | 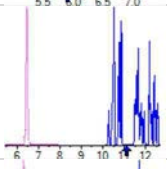 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 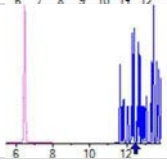 | 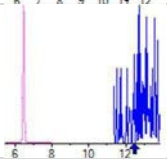 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-02 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 5643<br>( 461.0 / 381.2 ) 1456 | ( 9.42 , 0.90 )<br>( N/A , -0.08 , -8.2) | 27.3<br>17.2 | 0.2581<br>64.8<br>65.1 | 0.0119 | N/A | 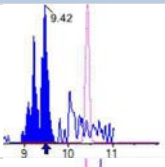 | 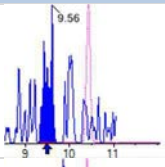 | MI5 DG 2024-03-20 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 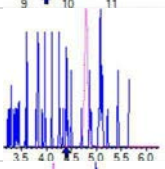 | 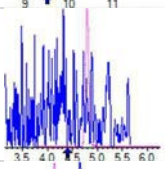 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 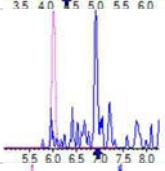 | 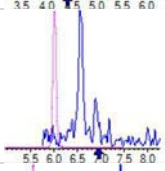 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 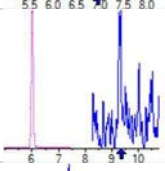 | 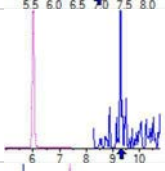 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 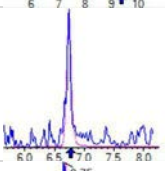 | 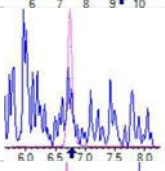 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 3298<br>( 457.2 / 343.0 ) 289 | ( 8.75 , 1.00 )<br>( -0.03 , N/A , 1.4) | 34.2<br>5.1 | 0.0876<br>211.2<br>193.2 | 0.0113 | N/A | 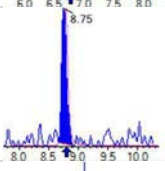 | 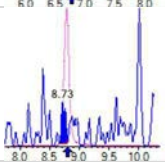 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 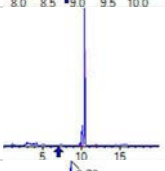 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 272069 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1231.8 | N/A | 1.1411<br>[ 1.0000 ] | 114.1%<br>{ 115.0% } | 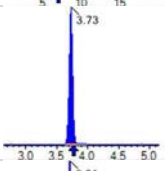 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 123555 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 65020.2 | N/A | 0.9740<br>[ 1.0000 ] | 97.4%<br>{ 97.6% } | 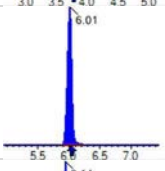 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379264 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 3184.6 | N/A | 0.9594<br>[ 1.0000 ] | 95.9%<br>{ 100.0% } | 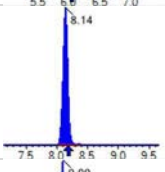 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 258120 | ( 9.09 , N/A )<br>( N/A , -0.03 , N/A ) | 876.8 | N/A | 0.9076<br>[ 1.0000 ] | 90.8%<br>{ 91.8% } | 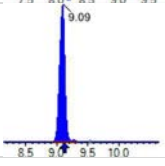 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (27)
Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 218849 | ( 9.98 , N/A ) ( N/A , -0.05 , N/A ) | 4898.6 | N/A | 0.7494 [ 1.0000 ] | 74.9% { 75.6% } | 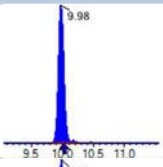 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 833865 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 4015.3 | N/A | 0.8786 [ 1.0000 ] | 87.9% { 89.3% } | 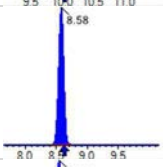 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 631671 | ( 10.44 , N/A ) ( N/A , -0.04 , N/A ) | 1067.2 | N/A | 0.8294 [ 1.0000 ] | 82.9% { 88.7% } | 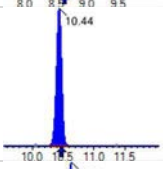 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2381887 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 39111.3 | N/A | 7.6635 [ 8.0000 ] | 95.8% { 106.4% } | 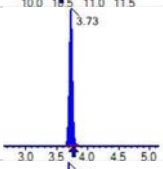 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 929420 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 5314.4 | N/A | 4.0316 [ 4.0000 ] | 100.8% { 95.2% } | 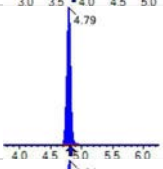 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 575842 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 8737.9 | N/A | 2.0427 [ 2.0000 ] | 102.1% { 97.6% } | 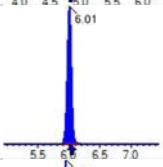 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 647995 | ( 7.14 , N/A ) ( N/A , -0.04 , N/A ) | 4420.2 | N/A | 2.0664 [ 2.0000 ] | 103.3% { 98.7% } | 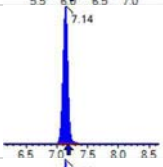 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 842628 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 3605.9 | N/A | 2.0736 [ 2.0000 ] | 103.7% { 97.7% } | 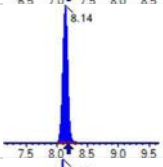 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 263431 | ( 9.09 , N/A ) ( N/A , -0.03 , N/A ) | 1653.4 | N/A | 1.0409 [ 1.0000 ] | 104.1% { 97.6% } | 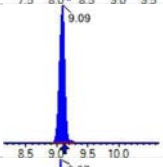 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 290418 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1032.2 | N/A | 1.1841 [ 1.0000 ] | 118.4% { 90.3% } | 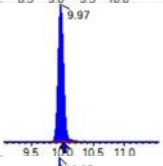 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 350502 | ( 10.85 , N/A ) ( N/A , -0.04 , N/A ) | 695.8 | N/A | 1.2147 [ 1.0000 ] | 121.5% { 94.2% } | 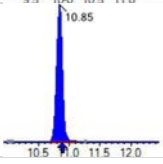 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (27)
Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 340114 | ( 11.67 , N/A ) ( N/A , -0.04 , N/A ) | 1088.8 | N/A | 1.1575 [ 1.0000 ] | 115.7% { 91.2% } | 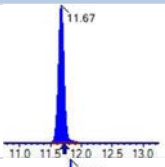  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 297516 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1125.8 | N/A | 1.1889 [ 1.0000 ] | 118.9% { 91.1% } | 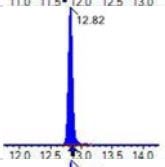  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 460616 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2070.3 | N/A | 2.1561 [ 2.0000 ] | 107.8% { 91.2% } | 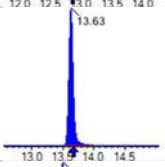  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1733030 | ( 6.30 , N/A ) ( N/A , -0.04 , N/A ) | 1126.9 | N/A | 2.3003 [ 2.0000 ] | 115.0% { 103.3% } | 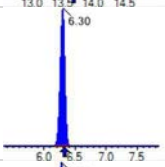  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1329939 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 2696.1 | N/A | 2.2116 [ 2.0000 ] | 110.6% { 100.9% } | 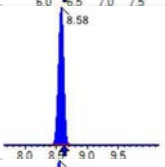  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1450895 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1515.1 | N/A | 2.1303 [ 2.0000 ] | 106.5% { 93.6% } | 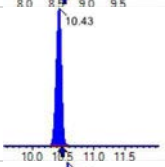  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 663189 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 89.1 | N/A | 5.1020 [ 4.0000 ] | 127.5% { 112.6% } | 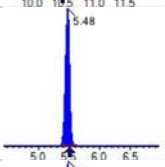  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1927946 | ( 7.58 , N/A ) ( N/A , -0.03 , N/A ) | 2363.7 | N/A | 4.9560 [ 4.0000 ] | 123.9% { 115.7% } | 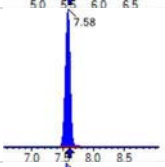  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1343428 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1200.4 | N/A | 4.4033 [ 4.0000 ] | 110.1% { 98.2% } | 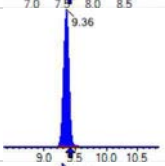  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3054812 | ( 10.99 , N/A ) ( N/A , -0.04 , N/A ) | 1486.3 | N/A | 9.5805 [ 8.0000 ] | 119.8% { 119.7% } | 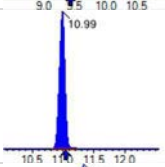  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1025953 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2636.7 | N/A | 1.6998 [ 2.0000 ] | 85.0% { 74.7% } | 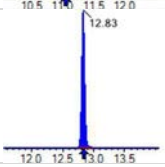  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-02 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 01:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 119004 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 890.3 | N/A | 0.9296 [ 2.0000 ] | 46.5% { 41.3% } | 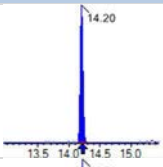 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 122162 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 882.1 | N/A | 0.8899 [ 2.0000 ] | 44.5% { 39.8% } | 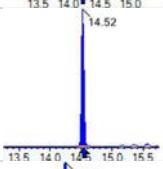 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 804478 | ( 10.24 , N/A ) ( N/A , -0.04 , N/A ) | 2068.7 | N/A | 4.5906 [ 4.0000 ] | 114.8% { 95.1% } | 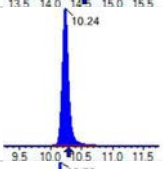 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 752703 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1702.0 | N/A | 4.7126 [ 4.0000 ] | 117.8% { 97.7% } | 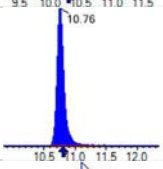 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 649614 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1195.6 | N/A | 11.2922 [ 20.0000 ] | 56.5% { 47.3% } | 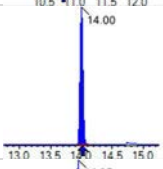 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 654546 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 2423.5 | N/A | 11.2101 [ 20.0000 ] | 56.1% { 50.7% } | 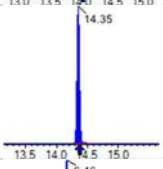 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 996303 | ( 6.46 , N/A ) ( N/A , -0.04 , N/A ) | 2239.7 | N/A | 7.7583 [ 8.0000 ] | 97.0% { 97.4% } | 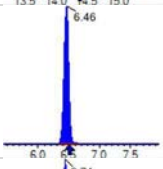 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 844390 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1031.8 | N/A | 3.5587 [ 2.0000 ] | 177.9% { 136.9% } | 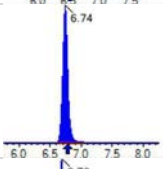 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 718417 | ( 8.78 , N/A ) ( N/A , -0.03 , N/A ) | 843.0 | N/A | 3.3260 [ 2.0000 ] | 166.3% { 129.9% } | 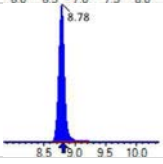 | | |

# ANALYSIS DATA SHEETL

## DUP-3-031524P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0103P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0103-03P | File ID: | S2024-03-19B (28)P |
| Sampled:P | 03/15/24 08:40P | repared:P | 03/18/24 11:40P | Analyzed: | 03/20/24 01:42P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 543.095 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0200P | Sequence:P | SD01003P | Calibration:P | 2412010P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| FBAP | 1.8P | 0.19P | 1.5 | |
| PFPeAP | 1.4P | 0.060P | 0.74 | |
| PFHxAP | 0.81P | 0.051P | 0.37 | |
| PFHpAP | 0.49P | 0.038P | 0.37 | |
| PFOAP | 1.0P | 0.14P | 0.37 | MI5P |
| FNAP | 0.28P | 0.075P | 0.37 | JP |
| FDAP | 0.79P | 0.093P | 0.37 | |
| PFUnAP | NDP | 0.15P | 0.37 | UP |
| FDoAP | NDP | 0.10P | 0.37 | UP |
| PFTrDAP | NDP | 0.19P | 0.37 | IR1, UP |
| PFTeDAP | NDP | 0.18P | 0.37 | UP |
| FHxDAP | NDP | 0.18P | 0.37 | IR1, UP |
| FODAP | NDP | 0.18P | 0.37 | UP |
| FBSP | 2.0P | 0.034P | 0.37 | |
| PFPeSP | 0.28P | 0.058P | 0.37 | JP |
| FHxSP | 1.3P | 0.029P | 0.37 | |
| PFHpSP | NDP | 0.047P | 0.37 | UP |
| FOSP | 4.0P | 0.058P | 0.37 | |
| PFNSP | NDP | 0.11P | 0.37 | UP |
| FDSP | NDP | 0.14P | 0.37 | UP |
| FDoSP | NDP | 0.11P | 0.37 | UP |
| 4:2FTSP | NDP | 0.27P | 1.5P | UP |
| 6:2FTSP | NDP | 0.29P | 1.5P | UP |
| 8:2FTSP | NDP | 0.076P | 1.5P | UP |
| 10:2FTSP | NDP | 0.37P | 1.5P | UP |
| FOSAP | NDP | 0.096P | 0.37 | UP |
| NMeFOSAP | NDP | 0.44P | 1.5P | UP |
| NEtFOSAP | NDP | 0.38P | 1.5P | UP |
| NMeFOSAAP | 0.14P | 0.097P | 0.37P | IR2, JP |
| NEtFOSAAP | NDP | 0.11P | 0.37P | UP |

# ANALYSIS DATA SHEETL

## DUP-3-031524P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0103P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0103-03P | File ID: | S2024-03-19B (28)P |
| Sampled:P | 03/15/24 08:40P | repared:P | 03/18/24 11:40P | Analyzed: | 03/20/24 01:42P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 543.095 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0200P | Sequence:P | SD01003 | Calibration:P | 2412010P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.93P | 1.5P | UP |
| NEtFOSEP | NDP | 0.96P | 1.5P | UP |
| HFPO-DAP | NDP | 0.16P | 0.74P | UP |
| ADONAP | NDP | 0.11P | 0.74P | UP |
| FEESAP | NDP | 0.10P | 0.74 | UP |
| PFMPAP | NDP | 0.050P | 0.74 | UP |
| FMBAP | NDP | 0.084P | 0.74 | UP |
| NFDHAP | NDP | 0.28P | 0.74P | UP |
| 9Cl-PF3ONSP | NDP | 0.19P | 0.74P | UP |
| 11Cl-PF3OUDSP | NDP | 0.19P | 0.74P | UP |
| 3:3FTCAP | NDP | 0.53P | 1.5P | UP |
| 5:3FTCAP | NDP | 0.41P | 1.5P | UP |
| 7:3FTCAP | NDP | 0.51P | 1.5P | UP |

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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 209609<br>( 163.0 / 69.0 ) 5811 | ( 2.79 , 0.75 )<br>( N/A , -0.01 , 0.1) | 1283.8<br>288.9 | 0.0277<br>102.1<br>105.2 | 0.8126 | N/A | 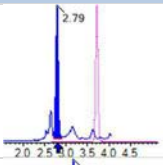 | 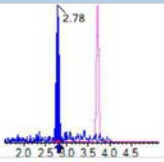 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 133873 | ( 3.72 , 1.00 )<br>( 0.00 , N/A , 0.0) | 93.6 | N/A<br>0.0<br>0.0 | 0.4910 | N/A | 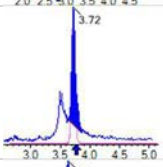 | | |
| PFPeA | ( 263.0 / 219.0 ) 85383<br>( 263.0 / 69.0 ) 690 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , -1.2) | 352.9<br>12.3 | 0.0081<br>67.7<br>72.8 | 0.3802 | N/A | 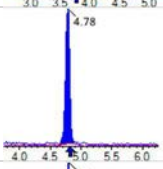 | 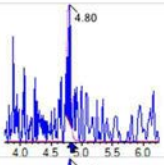 | |
| PFHxA | ( 313.0 / 269.0 ) 59856<br>( 313.0 / 119.0 ) 6421 | ( 5.99 , 1.00 )<br>( 0.00 , N/A , -0.6) | 296.9<br>71.2 | 0.1073<br>92.4<br>91.7 | 0.2190 | N/A | 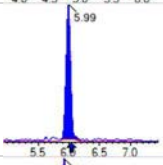 | 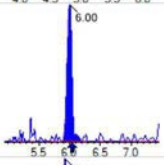 | |
| PFHpA | ( 363.0 / 319.0 ) 39464<br>( 363.0 / 169.0 ) 12203 | ( 7.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 122.9<br>143.2 | 0.3092<br>102.0<br>104.7 | 0.1338 | N/A | 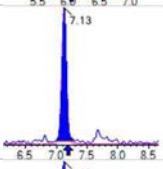 | 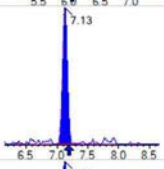 | |
| PFOA | ( 413.0 / 369.0 ) 126563<br>( 413.0 / 169.0 ) 47986 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.1) | 123.1<br>192.4 | 0.3791<br>103.7<br>110.4 | 0.2785 | N/A | 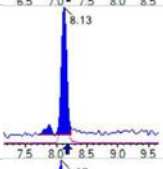 | 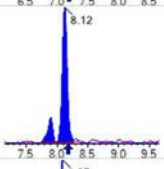 | MI5 DG 2024-03-20 |
| PFNA | ( 463.0 / 419.0 ) 20544<br>( 463.0 / 169.0 ) 4802 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , 0.3) | 95.2<br>46.9 | 0.2337<br>91.6<br>97.2 | 0.0772 | N/A | 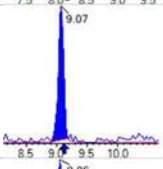 | 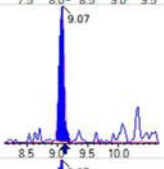 | |
| PFDA | ( 513.0 / 469.0 ) 63242<br>( 513.0 / 169.0 ) 10029 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , -0.6) | 404.0<br>135.4 | 0.1586<br>135.3<br>132.5 | 0.2148 | N/A | 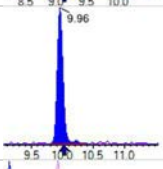 | 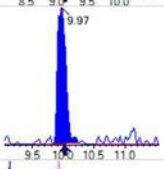 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 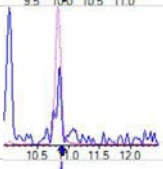 | 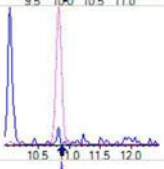 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 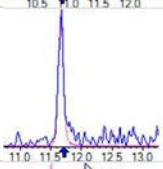 | 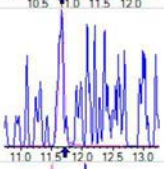 | |
| PFTrDA | ( 663.0 / 619.0 ) 4418<br>( 663.0 / 169.0 ) N/A | ( 12.32 , 1.06 )<br>( N/A , -0.03 , #Value!) | 32.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0127 | N/A | 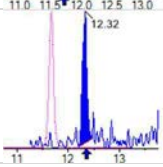 | 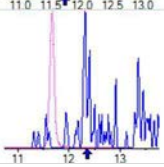 | IR1, |

APPL
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A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 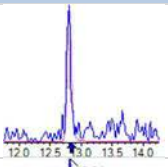 | 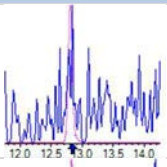 | |
| PFHxDA | ( 813.0 / 769.0 )<br>3133<br>( 813.0 / 169.0 )<br>N/A | ( 13.61 , 1.00 )<br>( -0.01 , N/A , #Value!) | 23.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0134 | N/A | 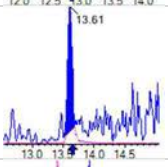 | 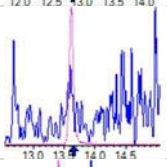 | IR1, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 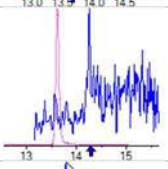 | 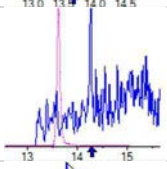 | |
| PFBS | ( 299.0 / 80.0 )<br>225934<br>( 299.0 / 99.0 )<br>163177 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , 0.1) | 231.9<br>674.8 | 0.7222<br>102.1<br>98.2 | 0.5313 | N/A | 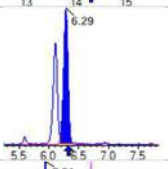 | 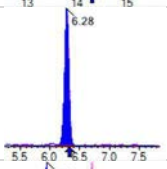 | |
| PFPeS | ( 349.0 / 80.0 )<br>80449<br>( 349.0 / 99.0 )<br>29899 | ( 7.51 , 0.88 )<br>( N/A , -0.05 , 0.0) | 104.9<br>126.9 | 0.3716<br>103.3<br>105.5 | 0.0766 | N/A | 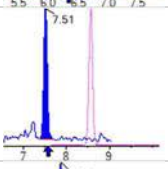 | 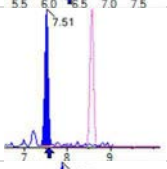 | |
| PFHxS | ( 399.0 / 80.0 )<br>426993<br>( 399.0 / 99.0 )<br>118363 | ( 8.56 , 1.00 )<br>( 0.00 , N/A , -0.1) | 505.3<br>470.5 | 0.2772<br>87.0<br>82.9 | 0.3502 | N/A | 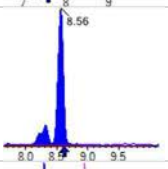 | 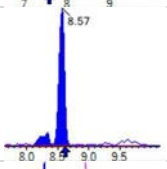 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 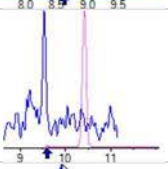 | 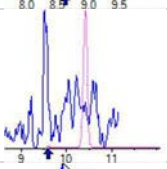 | |
| PFOS | ( 499.0 / 80.0 )<br>916269<br>( 499.0 / 99.0 )<br>218895 | ( 10.41 , 1.00 )<br>( -0.01 , N/A , 0.0) | 784.5<br>1018.5 | 0.2389<br>102.2<br>99.5 | 1.0773 | N/A | 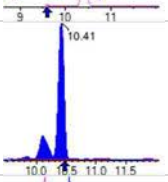 | 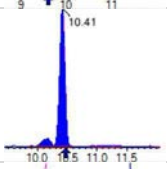 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 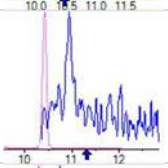 | 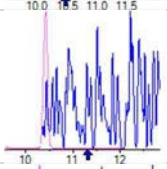 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 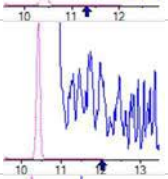 | 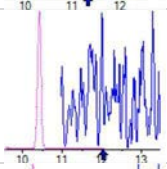 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 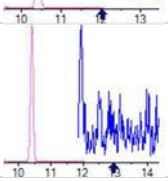 | 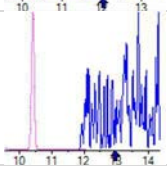 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 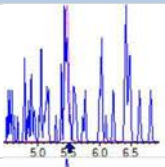 | 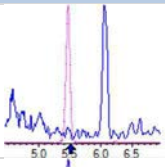 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 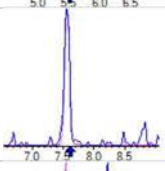 | 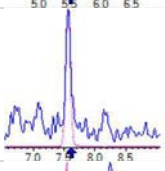 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 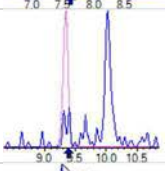 | 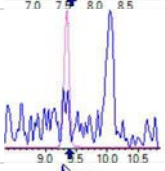 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15121<br>( 627.0 / 81.0 )<br>24184 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.2) | 137.1<br>60.6 | 1.5994<br>111.1<br>109.6 | 0.0568 | N/A | 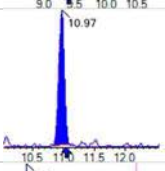 | 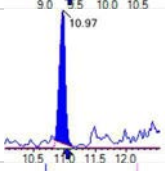 | |
| PFBSA | ( 297.9 / 78.0 )<br>15356<br>( 297.9 / 278.0 )<br>N/A | ( 8.07 , 0.57 )<br>( N/A , -0.03 , #Value!) | 149.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0540 | N/A | 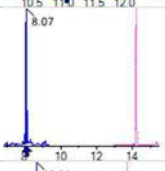 | 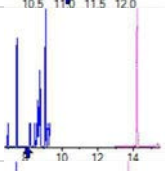 | |
| PFHxSA | ( 397.9 / 78.0 )<br>3796<br>( 397.9 / 378.0 )<br>N/A | ( 10.94 , 0.75 )<br>( N/A , -0.03 , #Value!) | 39.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0112 | N/A | 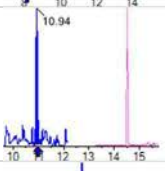 | 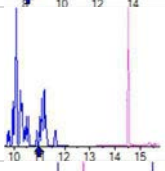 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 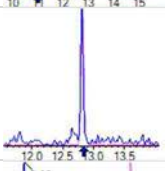 | 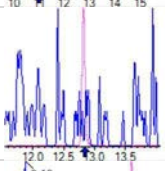 | |
| TFSI | ( 279.7 / 147.0 )<br>28164<br>( 279.7 / 211.0 )<br>1089 | ( 8.12 , 0.63 )<br>( N/A , -0.06 , -0.3) | 22.3<br>6.4 | 0.0387<br>46.0<br>45.2 | 0.0236 | N/A | 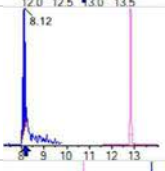 | 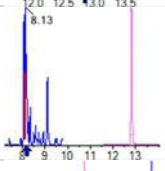 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 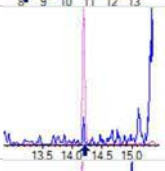 | 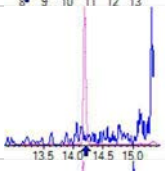 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 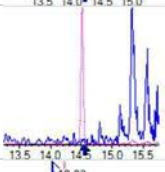 | 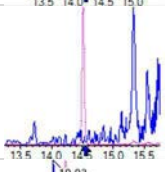 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>6774<br>( 570.0 / 483.0 )<br>5990 | ( 10.03 , 0.98 )<br>( -0.19 , N/A , 0.3) | 111.7<br>238.0 | 0.8842<br>201.6<br>189.2 | 0.0391 | N/A | 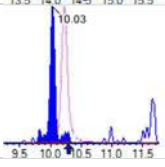 | 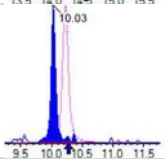 | IR2, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 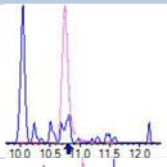 | 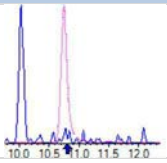 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 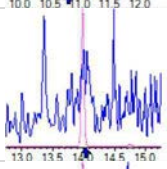 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 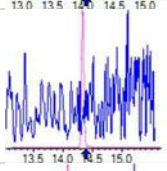 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 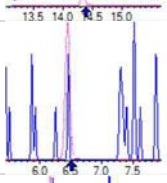 | 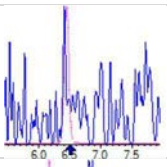 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 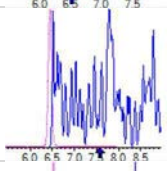 | 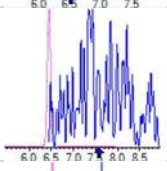 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 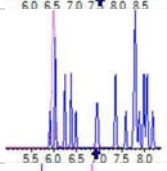 | 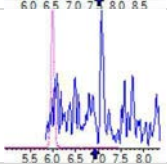 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 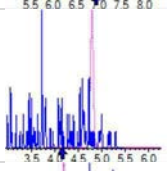 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 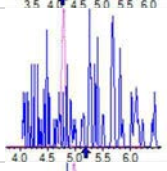 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 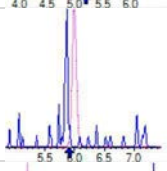 | 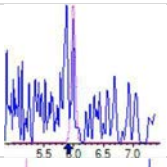 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 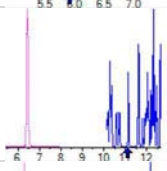 | 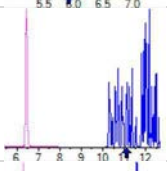 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 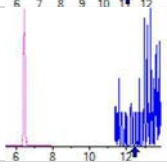 | 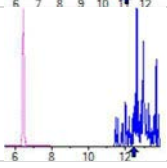 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 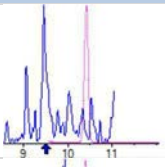 | 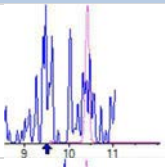 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 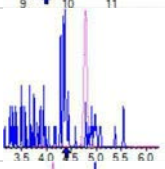 | 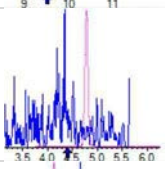 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 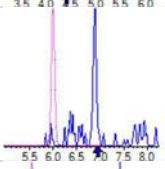 | 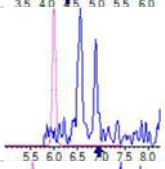 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 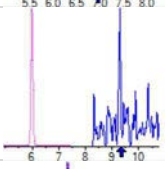 | 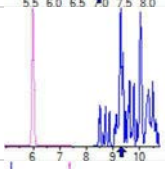 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 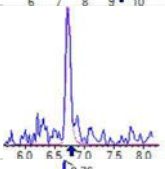 | 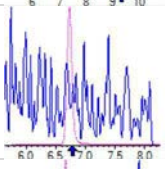 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 3561<br>( 457.2 / 343.0 ) N/A | ( 8.76 , 1.00 ) ( -0.01 , N/A , #Value!) | 26.5<br>N/A | N/A<br>0.0<br>0.0 | 0.0124 | N/A | 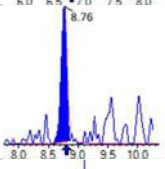 | 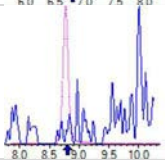 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 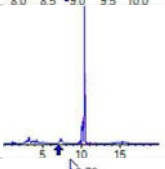 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 270610 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 1274.6 | N/A | 1.1349 [ 1.0000 ] | 113.5% { 114.4% } | 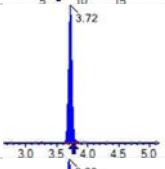 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127409 | ( 6.00 , N/A ) ( N/A , -0.05 , N/A ) | 111901.7 | N/A | 1.0044 [ 1.0000 ] | 100.4% { 100.6% } | 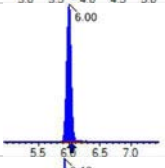 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378839 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 3590.2 | N/A | 0.9583 [ 1.0000 ] | 95.8% { 99.9% } | 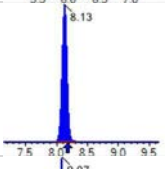 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 265150 | ( 9.07 , N/A ) ( N/A , -0.04 , N/A ) | 875.7 | N/A | 0.9323 [ 1.0000 ] | 93.2% { 94.3% } | 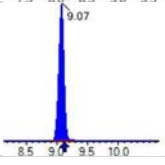 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 227508 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 2620.7 | N/A | 0.7791 [ 1.0000 ] | 77.9% { 78.6% } | 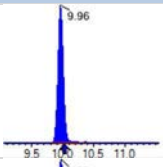 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 864398 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 4916.4 | N/A | 0.9108 [ 1.0000 ] | 91.1% { 92.6% } | 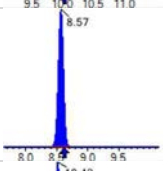 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 657141 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 960.2 | N/A | 0.8628 [ 1.0000 ] | 86.3% { 92.3% } | 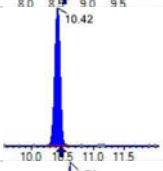 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2188380 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 32592.5 | N/A | 7.0789 [ 8.0000 ] | 88.5% { 97.7% } | 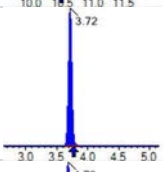 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 889292 | ( 4.78 , N/A ) ( N/A , -0.04 , N/A ) | 4884.0 | N/A | 3.7408 [ 4.0000 ] | 93.5% { 91.1% } | 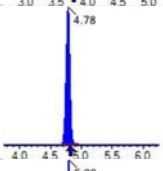 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 568858 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 7186.1 | N/A | 1.9568 [ 2.0000 ] | 97.8% { 96.4% } | 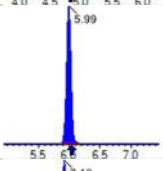 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 601214 | ( 7.12 , N/A ) ( N/A , -0.05 , N/A ) | 5304.1 | N/A | 1.8592 [ 2.0000 ] | 93.0% { 91.6% } | 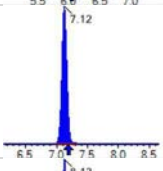 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 859966 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 3035.3 | N/A | 2.1186 [ 2.0000 ] | 105.9% { 99.7% } | 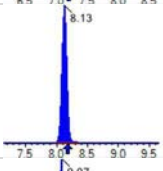 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 264626 | ( 9.07 , N/A ) ( N/A , -0.04 , N/A ) | 1759.7 | N/A | 1.0179 [ 1.0000 ] | 101.8% { 98.0% } | 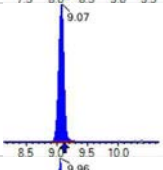 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 288151 | ( 9.96 , N/A ) ( N/A , -0.07 , N/A ) | 1074.3 | N/A | 1.1302 [ 1.0000 ] | 113.0% { 89.6% } | 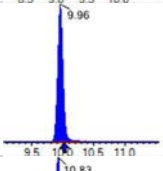 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 312681 | ( 10.83 , N/A ) ( N/A , -0.05 , N/A ) | 636.5 | N/A | 1.0424 [ 1.0000 ] | 104.2% { 84.1% } | 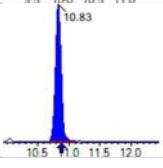 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-03 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 353134 | ( 11.67 , N/A ) ( N/A , -0.05 , N/A ) | 1267.5 | N/A | 1.1560 [ 1.0000 ] | 115.6% { 94.7% } | 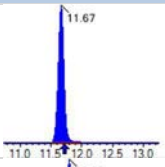  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 288388 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1361.7 | N/A | 1.1086 [ 1.0000 ] | 110.9% { 88.3% } | 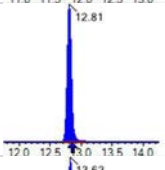  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 490747 | ( 13.62 , N/A ) ( N/A , -0.04 , N/A ) | 2249.6 | N/A | 2.2097 [ 2.0000 ] | 110.5% { 97.2% } | 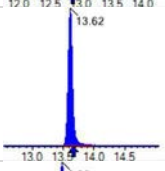  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1638128 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1061.1 | N/A | 2.0975 [ 2.0000 ] | 104.9% { 97.6% } | 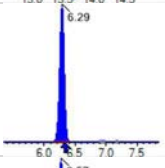  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1371523 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 2567.2 | N/A | 2.2002 [ 2.0000 ] | 110.0% { 104.0% } | 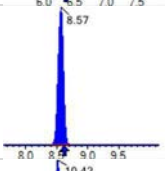  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1472809 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 987.3 | N/A | 2.0786 [ 2.0000 ] | 103.9% { 95.1% } | 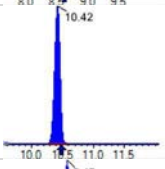  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 618767 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 81.2 | N/A | 4.5921 [ 4.0000 ] | 114.8% { 105.0% } | 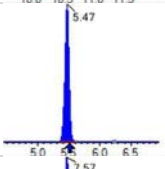  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1778195 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 1866.4 | N/A | 4.4096 [ 4.0000 ] | 110.2% { 106.7% } | 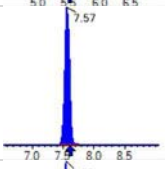  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1437558 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1213.2 | N/A | 4.5454 [ 4.0000 ] | 113.6% { 105.1% } | 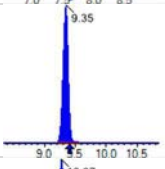  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2761949 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1305.2 | N/A | 8.3560 [ 8.0000 ] | 104.5% { 108.2% } | 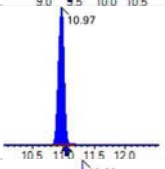  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 907179 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 2040.8 | N/A | 1.4448 [ 2.0000 ] | 72.2% { 66.0% } | 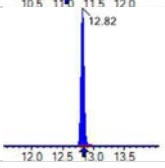  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (28)
Acquired: 2024/03/20 - 01:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 110334 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 712.8 | N/A | 0.8285 [ 2.0000 ] | 41.4% { 38.3% } | 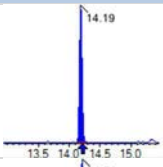 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 110367 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 800.3 | N/A | 0.7728 [ 2.0000 ] | 38.6% { 36.0% } | 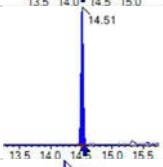 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 726693 | ( 10.22 , N/A ) ( N/A , -0.05 , N/A ) | 1893.4 | N/A | 3.9860 [ 4.0000 ] | 99.7% { 85.9% } | 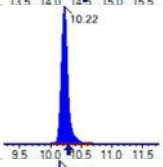 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 690047 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 1673.8 | N/A | 4.1529 [ 4.0000 ] | 103.8% { 89.6% } | 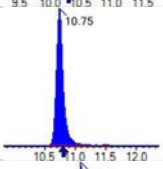 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 681559 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 1703.6 | N/A | 11.3883 [ 20.0000 ] | 56.9% { 49.6% } | 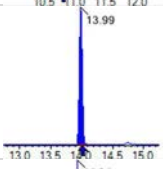 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 638825 | ( 14.34 , N/A ) ( N/A , -0.03 , N/A ) | 1863.5 | N/A | 10.5168 [ 20.0000 ] | 52.6% { 49.5% } | 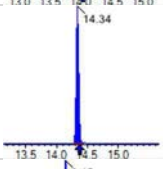 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 980907 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2262.3 | N/A | 7.4074 [ 8.0000 ] | 92.6% { 95.9% } | 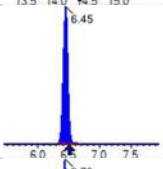 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 791788 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1299.0 | N/A | 3.2100 [ 2.0000 ] | 160.5% { 128.3% } | 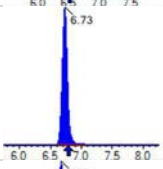 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 703718 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 837.5 | N/A | 3.1339 [ 2.0000 ] | 156.7% { 127.2% } | 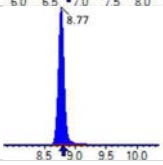 | | |

# ANALYSIS DATA SHEETL

## MW-17-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-04- | File ID:- | S2024-03-19B (29)- |
| Sampled:- | 03/15/24 08:55- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 02:03- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.196 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.78- | 0.19- | 1.5- | J- |
| PFPeA- | 0.20- | 0.060- | 0.74- | J- |
| PFHxA- | 0.15- | 0.051- | 0.37- | J- |
| PFHpA- | 0.10- | 0.038- | 0.37- | J- |
| PFOA- | 0.26- | 0.14- | 0.37- | J- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | 0.19- | 0.094- | 0.37- | IR2, J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | IR1, U- |
| PFBS- | 1.9- | 0.034- | 0.37- | |
| PFPeS- | 0.075- | 0.058- | 0.37- | J- |
| PFHxS- | 0.49- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 1.1- | 0.059- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | 0.11- | 0.098- | 0.37- | IR2, J- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-17-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-04- | File ID:- | S2024-03-19B (29)- |
| Sampled:- | 03/15/24 08:55- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 02:03- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.196 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (29)
Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 117639<br>( 163.0 / 69.0 ) 3002 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , 0.3) | 659.3<br>190.2 | 0.0255<br>94.0<br>96.8 | 0.4808 | N/A | 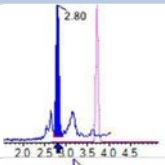 | 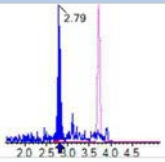 | |
| PFBA | ( 213.0 / 169.0 ) 54521 | ( 3.74 , 1.01 )<br>( 0.02 , N/A , 0.0) | 34.3 | N/A<br>0.0<br>0.0 | 0.2108 | N/A | 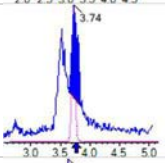 | | |
| PFPeA | ( 263.0 / 219.0 ) 11850<br>( 263.0 / 69.0 ) 222 | ( 4.78 , 1.00 )<br>( -0.01 , N/A , 23.9) | 65.0<br>12.0 | 0.0187<br>156.8<br>168.8 | 0.0551 | N/A | 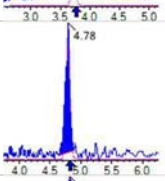 | 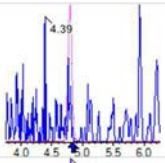 | |
| PFHxA | ( 313.0 / 269.0 ) 10435<br>( 313.0 / 119.0 ) 1603 | ( 6.02 , 1.00 )<br>( 0.01 , N/A , 0.4) | 58.7<br>39.9 | 0.1536<br>132.3<br>131.3 | 0.0407 | N/A | 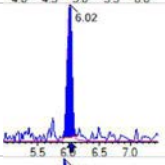 | 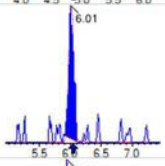 | |
| PFHpA | ( 363.0 / 319.0 ) 8134<br>( 363.0 / 169.0 ) 1888 | ( 7.14 , 1.00 )<br>( 0.00 , N/A , 0.5) | 41.0<br>35.9 | 0.2321<br>76.6<br>78.6 | 0.0284 | N/A | 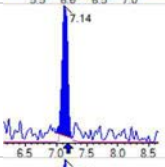 | 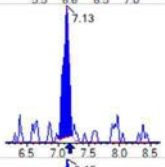 | |
| PFOA | ( 413.0 / 369.0 ) 38617<br>( 413.0 / 169.0 ) 12215 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , -0.6) | 44.6<br>59.7 | 0.3163<br>86.5<br>92.1 | 0.0717 | N/A | 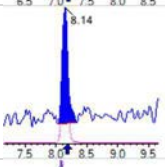 | 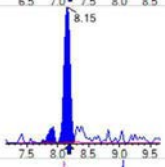 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 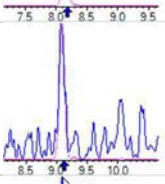 | 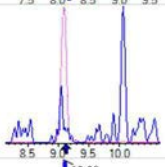 | |
| PFDA | ( 513.0 / 469.0 ) 13127<br>( 513.0 / 169.0 ) 3844 | ( 9.99 , 1.00 )<br>( 0.01 , N/A , -1.6) | 121.3<br>51.1 | 0.2929<br>249.9<br>244.7 | 0.0522 | N/A | 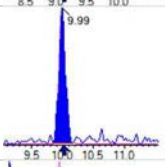 | 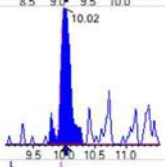 | IR2, |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 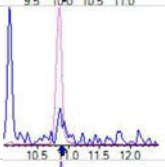 | 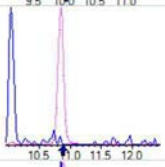 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 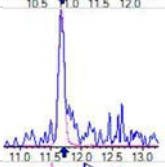 | 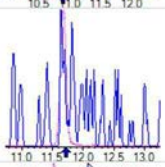 | |
| PFTrDA | ( 663.0 / 619.0 ) 4359<br>( 663.0 / 169.0 ) 935 | ( 12.32 , 1.05 )<br>( N/A , -0.03 , -1.4) | 32.9<br>19.3 | 0.2145<br>83.3<br>82.8 | 0.0133 | N/A | 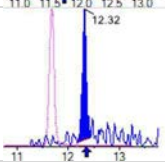 | 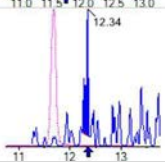 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 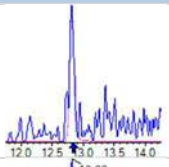 | 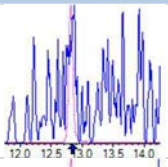 | |
| PFHxDA | ( 813.0 / 769.0 )<br>2824<br>( 813.0 / 169.0 )<br>593 | ( 13.62 , 1.00 )<br>( 0.00 , N/A , 0.5) | 24.8<br>9.2 | 0.2099<br>85.8<br>82.2 | 0.0148 | N/A | 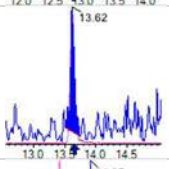 | 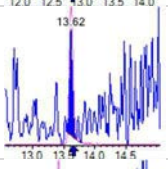 | |
| PFODA | ( 913.0 / 869.0 )<br>2271<br>( 913.0 / 169.0 )<br>N/A | ( 14.25 , 1.05 )<br>( N/A , -0.03 , #Value!) | 12.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0191 | N/A | 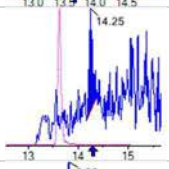 | 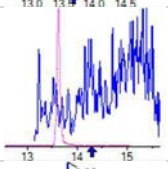 | IR1, |
| PFBS | ( 299.0 / 80.0 )<br>218781<br>( 299.0 / 99.0 )<br>163320 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.1) | 525.2<br>649.7 | 0.7465<br>105.6<br>101.5 | 0.5228 | N/A | 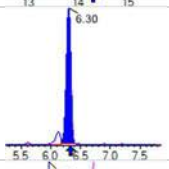 | 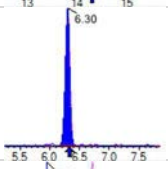 | |
| PFPeS | ( 349.0 / 80.0 )<br>21426<br>( 349.0 / 99.0 )<br>8411 | ( 7.53 , 0.88 )<br>( N/A , -0.03 , 0.8) | 56.9<br>55.0 | 0.3926<br>109.2<br>111.5 | 0.0203 | N/A | 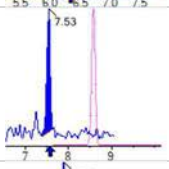 | 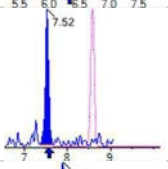 | |
| PFHxS | ( 399.0 / 80.0 )<br>164111<br>( 399.0 / 99.0 )<br>50164 | ( 8.58 , 1.00 )<br>( 0.00 , N/A , -0.1) | 362.5<br>260.8 | 0.3057<br>96.0<br>91.4 | 0.1336 | N/A | 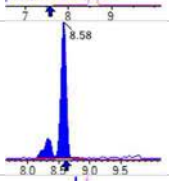 | 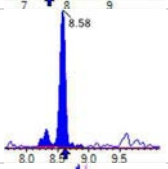 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 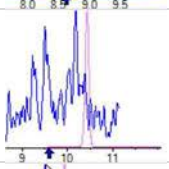 | 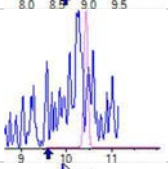 | |
| PFOS | ( 499.0 / 80.0 )<br>246509<br>( 499.0 / 99.0 )<br>34071 | ( 10.13 , 0.97 )<br>( -0.31 , N/A , -17.2) | 214.8<br>138.7 | 0.1382<br>59.1<br>57.6 | 0.3052 | N/A | 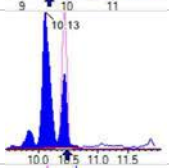 | 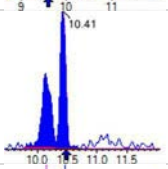 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 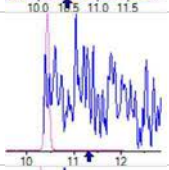 | 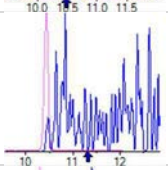 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 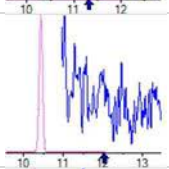 | 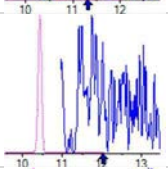 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 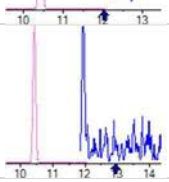 | 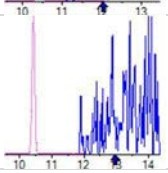 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (29)
Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 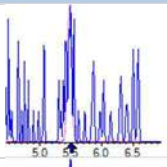 | 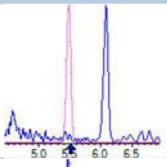 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 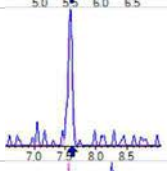 | 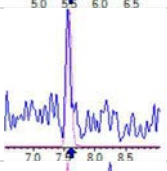 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 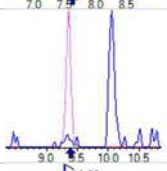 | 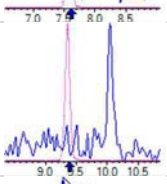 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14504<br>( 627.0 / 81.0 )<br>20385 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , 0.6) | 135.8<br>57.5 | 1.4055<br>97.6<br>96.3 | 0.0557 | N/A | 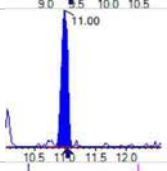 | 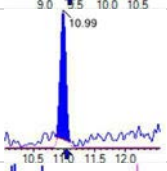 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 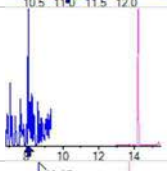 | 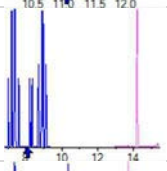 | |
| PFHxSA | ( 397.9 / 78.0 )<br>4347<br>( 397.9 / 378.0 )<br>N/A | ( 10.95 , 0.75 )<br>( N/A , -0.02 , #Value!) | 45.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0132 | N/A | 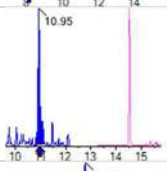 | 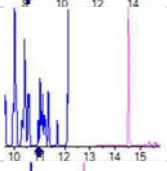 | |
| PFOSA | ( 498.0 / 78.0 )<br>4884<br>( 498.0 / 478.0 )<br>N/A | ( 12.82 , 1.00 )<br>( 0.00 , N/A , #Value!) | 45.5<br>N/A | N/A<br>0.0<br>0.0 | 0.0126 | N/A | 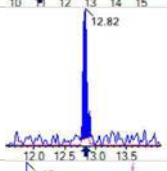 | 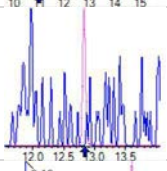 | |
| TFSI | ( 279.7 / 147.0 )<br>29551<br>( 279.7 / 211.0 )<br>2027 | ( 8.15 , 0.63 )<br>( N/A , -0.04 , -0.7) | 24.6<br>10.7 | 0.0686<br>81.6<br>80.1 | 0.0290 | N/A | 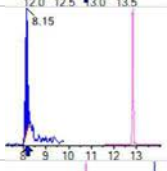 | 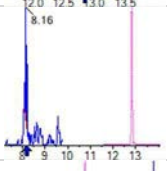 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 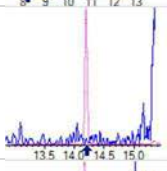 | 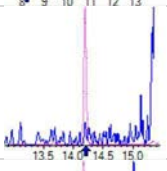 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 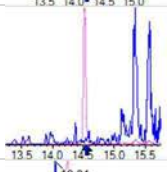 | 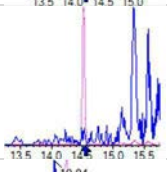 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4738<br>( 570.0 / 483.0 )<br>4462 | ( 10.04 , 0.98 )<br>( -0.20 , N/A , 0.0) | 588.4<br>43150.0 | 0.9418<br>214.8<br>201.5 | 0.0290 | N/A | 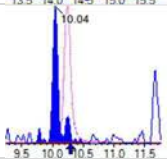 | 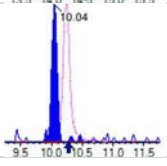 | IR2, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (29)
Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 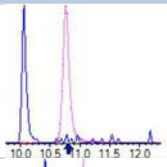 | 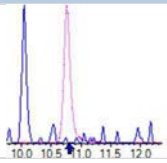 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 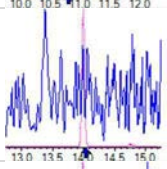 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 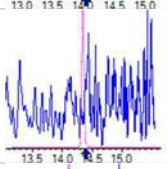 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 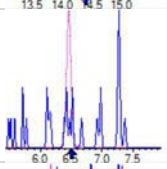 | 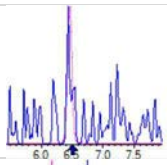 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 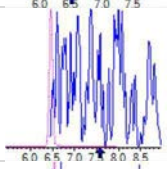 | 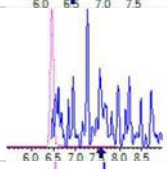 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 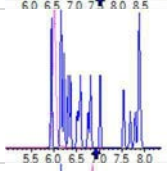 | 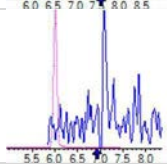 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 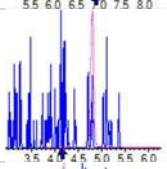 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 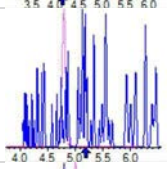 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 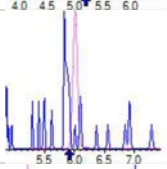 | 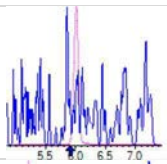 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 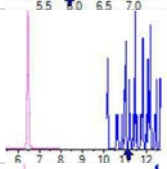 | 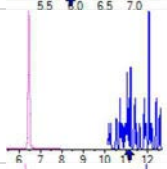 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 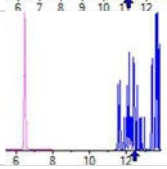 | 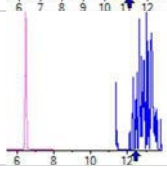 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 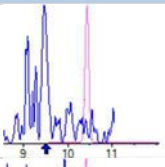 | 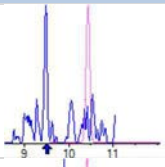 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 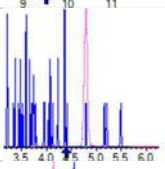 | 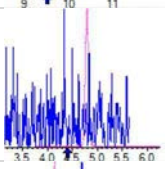 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 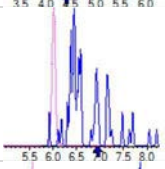 | 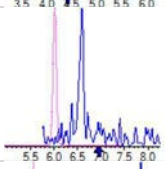 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 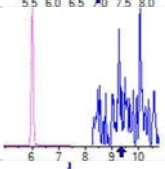 | 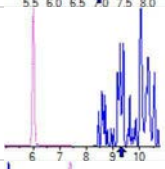 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 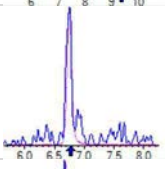 | 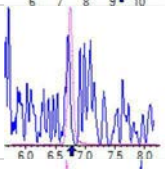 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 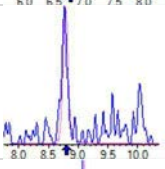 | 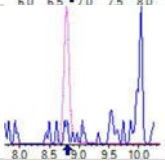 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 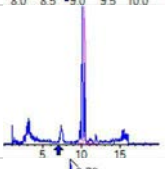 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>253251 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1268.1 | N/A | 1.0621<br>[ 1.0000 ] | 106.2%<br>{ 107.1% } | 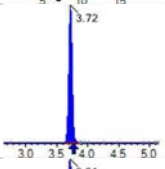 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>105618 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 17244.6 | N/A | 0.8326<br>[ 1.0000 ] | 83.3%<br>{ 83.4% } | 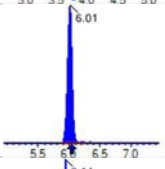 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>348915 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 2839.3 | N/A | 0.8826<br>[ 1.0000 ] | 88.3%<br>{ 92.0% } | 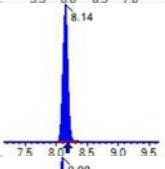 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>232556 | ( 9.09 , N/A )<br>( N/A , -0.03 , N/A ) | 884.7 | N/A | 0.8177<br>[ 1.0000 ] | 81.8%<br>{ 82.7% } | 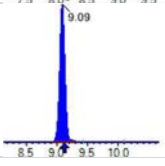 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 190212 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 3276.5 | N/A | 0.6514 [ 1.0000 ] | 65.1% { 65.7% } | 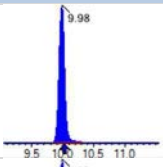 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 815816 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 4669.8 | N/A | 0.8596 [ 1.0000 ] | 86.0% { 87.4% } | 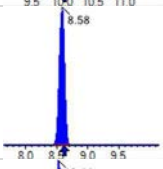 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 612322 | ( 10.44 , N/A ) ( N/A , -0.04 , N/A ) | 1160.3 | N/A | 0.8040 [ 1.0000 ] | 80.4% { 86.0% } | 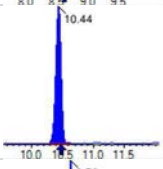 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2075999 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 35602.5 | N/A | 7.1757 [ 8.0000 ] | 89.7% { 92.7% } | 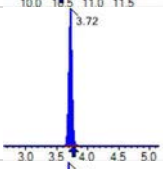 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 852300 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 5539.5 | N/A | 4.3249 [ 4.0000 ] | 108.1% { 87.3% } | 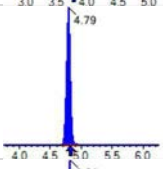 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 533963 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 6637.9 | N/A | 2.2158 [ 2.0000 ] | 110.8% { 90.5% } | 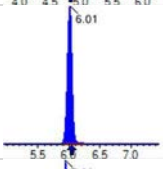 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 584649 | ( 7.14 , N/A ) ( N/A , -0.03 , N/A ) | 5413.5 | N/A | 2.1810 [ 2.0000 ] | 109.0% { 89.1% } | 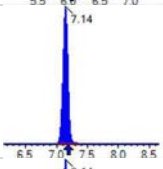 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 822066 | ( 8.14 , N/A ) ( N/A , -0.03 , N/A ) | 3078.8 | N/A | 2.1989 [ 2.0000 ] | 109.9% { 95.3% } | 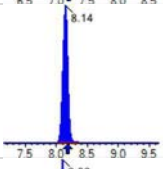 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 258001 | ( 9.09 , N/A ) ( N/A , -0.03 , N/A ) | 1540.5 | N/A | 1.1315 [ 1.0000 ] | 113.1% { 95.6% } | 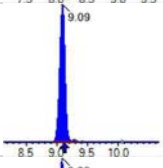 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 245968 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1003.3 | N/A | 1.1539 [ 1.0000 ] | 115.4% { 76.5% } | 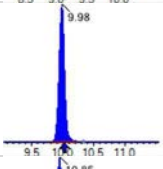 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 327062 | ( 10.85 , N/A ) ( N/A , -0.04 , N/A ) | 747.8 | N/A | 1.3042 [ 1.0000 ] | 130.4% { 87.9% } | 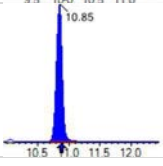 | | S2, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0103-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 333025 | ( 11.68 , N/A ) ( N/A , -0.04 , N/A ) | 1019.7 | N/A | 1.3040 [ 1.0000 ] | 130.4% { 89.3% } | 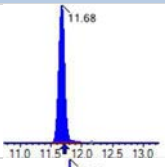 | | S2, |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 276923 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1348.2 | N/A | 1.2733 [ 1.0000 ] | 127.3% { 84.8% } | 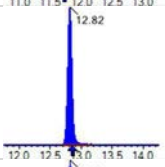 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 399258 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 2126.9 | N/A | 2.1503 [ 2.0000 ] | 107.5% { 79.0% } | 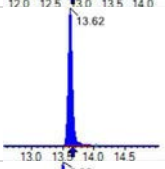 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1611879 | ( 6.30 , N/A ) ( N/A , -0.03 , N/A ) | 1090.7 | N/A | 2.1868 [ 2.0000 ] | 109.3% { 96.0% } | 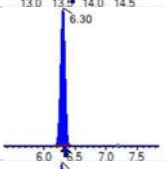 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1381540 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 3207.2 | N/A | 2.3482 [ 2.0000 ] | 117.4% { 104.8% } | 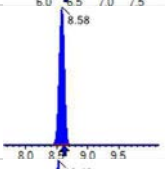 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1398562 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1029.9 | N/A | 2.1183 [ 2.0000 ] | 105.9% { 90.3% } | 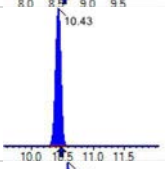 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 602033 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 84.7 | N/A | 4.7340 [ 4.0000 ] | 118.3% { 102.2% } | 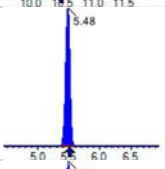 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1713162 | ( 7.58 , N/A ) ( N/A , -0.03 , N/A ) | 2203.8 | N/A | 4.5013 [ 4.0000 ] | 112.5% { 102.8% } | 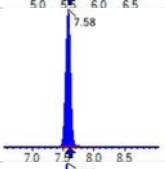 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1334520 | ( 9.36 , N/A ) ( N/A , -0.03 , N/A ) | 1513.1 | N/A | 4.4709 [ 4.0000 ] | 111.8% { 97.6% } | 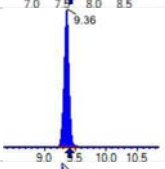 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2703373 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1419.1 | N/A | 8.6659 [ 8.0000 ] | 108.3% { 105.9% } | 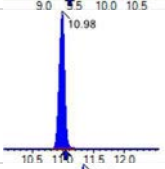 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 774298 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 2306.5 | N/A | 1.3234 [ 2.0000 ] | 66.2% { 56.4% } | 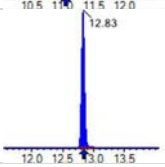 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0103-04 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 105405 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 810.3 | N/A | 0.8494 [ 2.0000 ] | 42.5% { 36.6% } | 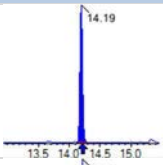 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 107366 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 794.8 | N/A | 0.8068 [ 2.0000 ] | 40.3% { 35.0% } | 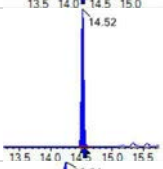 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 685744 | ( 10.24 , N/A ) ( N/A , -0.04 , N/A ) | 2009.2 | N/A | 4.0367 [ 4.0000 ] | 100.9% { 81.1% } | 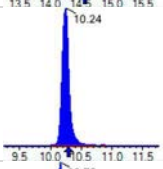 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 697246 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1493.0 | N/A | 4.5034 [ 4.0000 ] | 112.6% { 90.5% } | 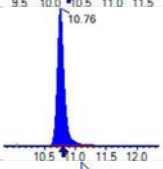 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 489572 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 1174.6 | N/A | 8.7791 [ 20.0000 ] | 43.9% { 35.6% } | 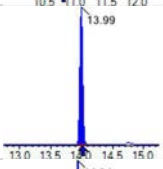 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 508467 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2649.0 | N/A | 8.9834 [ 20.0000 ] | 44.9% { 39.4% } | 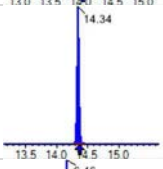 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 952777 | ( 6.46 , N/A ) ( N/A , -0.03 , N/A ) | 2333.2 | N/A | 8.6794 [ 8.0000 ] | 108.5% { 93.2% } | 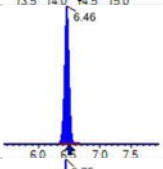 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 728970 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1673.1 | N/A | 3.5348 [ 2.0000 ] | 176.7% { 118.2% } | 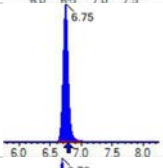 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 641747 | ( 8.79 , N/A ) ( N/A , -0.02 , N/A ) | 694.8 | N/A | 3.4183 [ 2.0000 ] | 170.9% { 116.0% } | 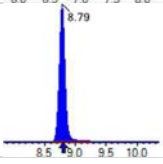 | | |

# ANALYSIS DATA SHEETL

## MW-17-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-05- | File ID:- | S2024-03-19B (30)- |
| Sampled:- | 03/15/24 09:15- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 02:24- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.301 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.77- | 0.19- | 1.5- | MI6, J- |
| PFPeA- | 0.20- | 0.060- | 0.74- | J- |
| PFHxA- | 0.10- | 0.051- | 0.37- | J- |
| PFHpA- | 0.081- | 0.038- | 0.37- | J- |
| PFOA- | 0.37- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | 0.098- | 0.094- | 0.37- | J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 0.10- | 0.034- | 0.37- | J- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | 0.12- | 0.029- | 0.37- | MI5, J- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 1.2- | 0.059- | 0.37- | MI2- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | MI5, U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-17-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-05- | File ID:- | S2024-03-19B (30)- |
| Sampled:- | 03/15/24 09:15- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 02:24- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.301 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (30)
Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 105401<br>( 163.0 / 69.0 ) 2755 | ( 2.81 , 0.75 )<br>( N/A , 0.02 , 0.1) | 602.3<br>170.0 | 0.0261<br>96.3<br>99.2 | 0.3967 | N/A | 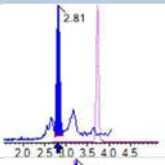 | 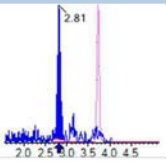 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 58756 | ( 3.75 , 1.01 )<br>( 0.02 , N/A , 0.0) | 35.1 | N/A<br>0.0<br>0.0 | 0.2092 | N/A | 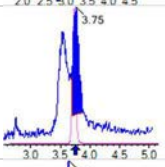 | | MI6 DG 2024-03-20 |
| PFPeA | ( 263.0 / 219.0 ) 11240<br>( 263.0 / 69.0 ) N/A | ( 4.78 , 1.00 )<br>( -0.01 , N/A , #Value!) | 44.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0540 | N/A | 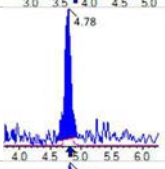 | 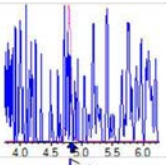 | |
| PFHxA | ( 313.0 / 269.0 ) 7036<br>( 313.0 / 119.0 ) 720 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , 0.3) | 39.7<br>22.1 | 0.1023<br>88.1<br>87.4 | 0.0274 | N/A | 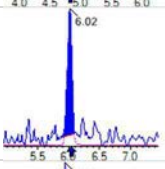 | 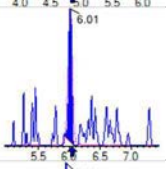 | |
| PFHpA | ( 363.0 / 319.0 ) 6437<br>( 363.0 / 169.0 ) 1353 | ( 7.14 , 1.00 )<br>( -0.01 , N/A , -0.1) | 36.1<br>30.7 | 0.2102<br>69.3<br>71.2 | 0.0219 | N/A | 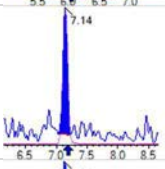 | 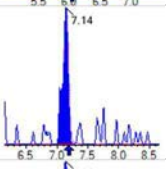 | |
| PFOA | ( 413.0 / 369.0 ) 49343<br>( 413.0 / 169.0 ) 18884 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , 0.3) | 58.2<br>77.1 | 0.3827<br>104.7<br>111.5 | 0.1003 | N/A | 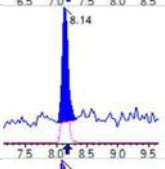 | 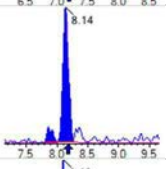 | |
| PFNA | ( 463.0 / 419.0 ) 4300<br>( 463.0 / 169.0 ) 616 | ( 9.10 , 1.00 )<br>( 0.01 , N/A , 0.4) | 23.0<br>12.9 | 0.1432<br>56.1<br>59.5 | 0.0169 | N/A | 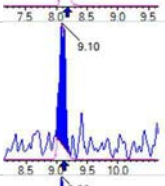 | 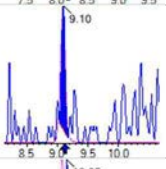 | |
| PFDA | ( 513.0 / 469.0 ) 7304<br>( 513.0 / 169.0 ) 765 | ( 9.99 , 1.00 )<br>( 0.01 , N/A , -3.9) | 57.6<br>33.3 | 0.1047<br>89.4<br>87.5 | 0.0264 | N/A | 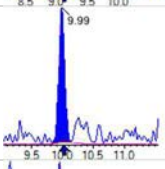 | 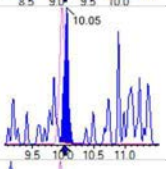 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 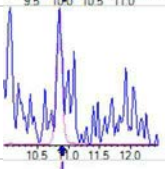 | 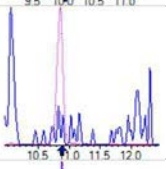 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 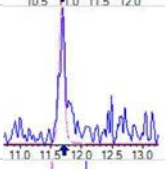 | 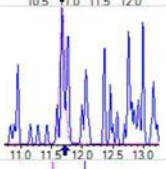 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 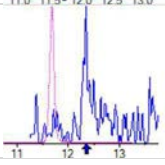 | 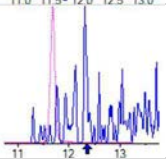 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (30)
Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 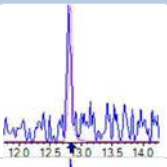 | 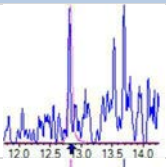 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 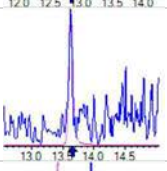 | 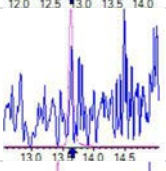 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 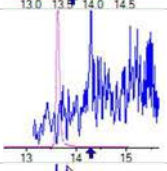 | 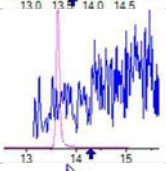 | |
| PFBS | ( 299.0 / 80.0 ) 12092<br>( 299.0 / 99.0 ) 8136 | ( 6.30 , 1.00 ) ( 0.00 , N/A , -0.8) | 46.7<br>53.0 | 0.6728<br>95.1<br>91.5 | 0.0279 | N/A | 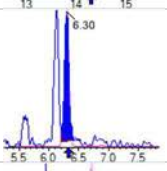 | 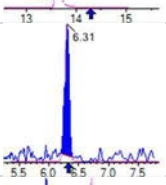 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 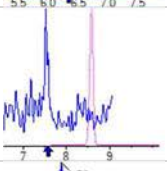 | 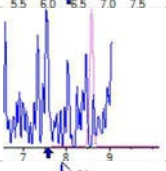 | |
| PFHxS | ( 399.0 / 80.0 ) 37829<br>( 399.0 / 99.0 ) 15567 | ( 8.58 , 1.00 ) ( -0.01 , N/A , -0.1) | 144.1<br>92.3 | 0.4115<br>129.2<br>123.1 | 0.0324 | N/A | 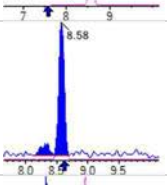 | 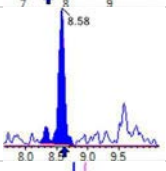 | MI5 DG 2024-03-20 |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 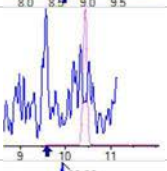 | 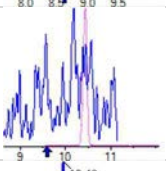 | |
| PFOS | ( 499.0 / 80.0 ) 258723<br>( 499.0 / 99.0 ) 54244 | ( 10.36 , 0.99 ) ( -0.07 , N/A , -4.3) | 252.6<br>289.2 | 0.2097<br>89.7<br>87.3 | 0.3153 | N/A | 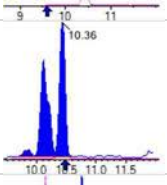 | 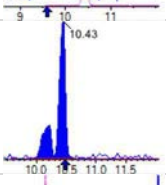 | MI2 DG 2024-03-20 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 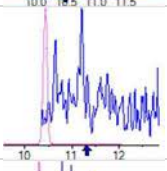 | 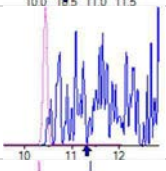 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 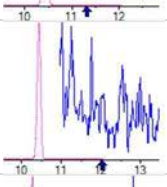 | 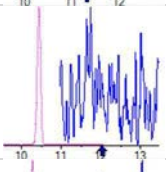 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 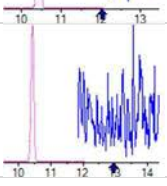 | 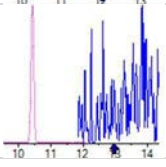 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (30)
Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 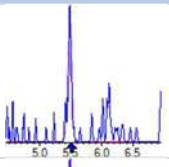 | 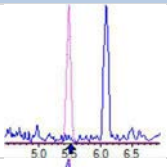 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 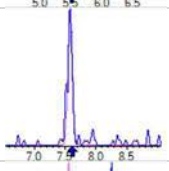 | 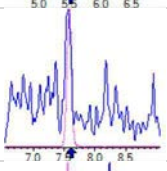 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 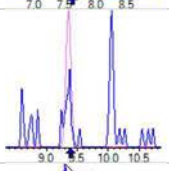 | 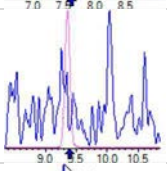 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15119<br>( 627.0 / 81.0 )<br>21700 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.2) | 164.6<br>53.3 | 1.4353<br>99.7<br>98.4 | 0.0540 | N/A | 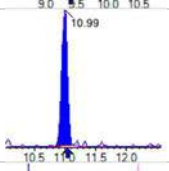 | 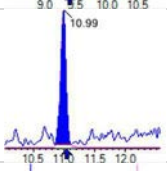 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 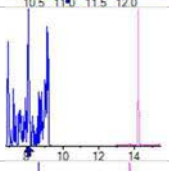 | 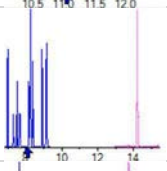 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 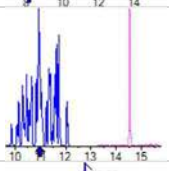 | 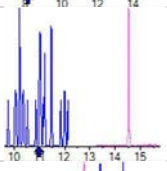 | |
| PFOSA | ( 498.0 / 78.0 )<br>9486<br>( 498.0 / 478.0 )<br>N/A | ( 12.83 , 1.00 )<br>( -0.01 , N/A , #Value!) | 87.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0165 | N/A | 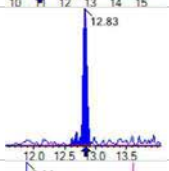 | 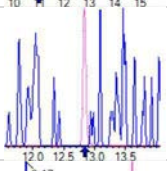 | MI5 DG 2024-03-20 |
| TFSI | ( 279.7 / 147.0 )<br>23398<br>( 279.7 / 211.0 )<br>1910 | ( 8.14 , 0.63 )<br>( N/A , -0.04 , -2.1) | 21.7<br>8.6 | 0.0816<br>97.2<br>95.4 | 0.0155 | N/A | 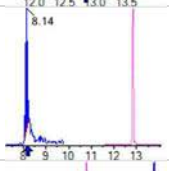 | 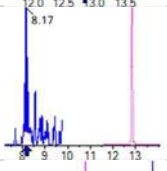 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 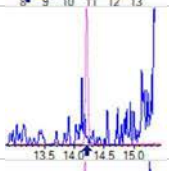 | 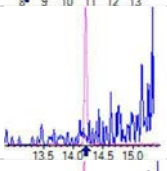 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 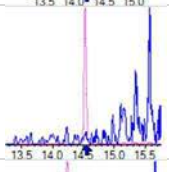 | 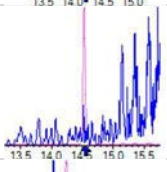 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 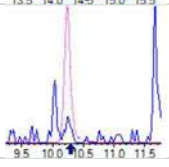 | 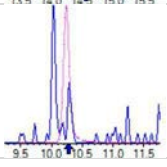 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (30)
Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 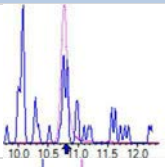 | 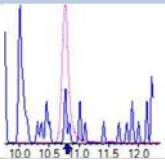 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 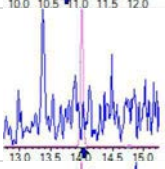 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 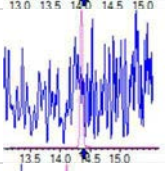 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 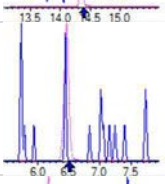 | 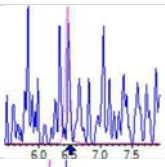 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 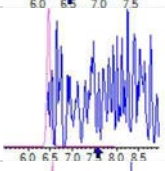 | 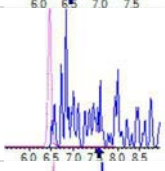 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 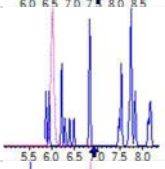 | 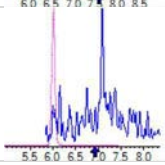 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 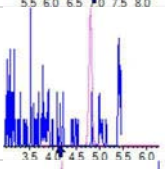 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 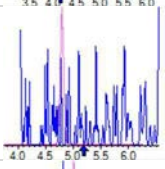 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 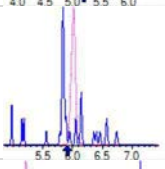 | 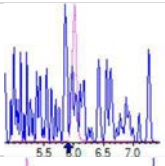 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 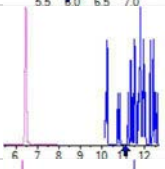 | 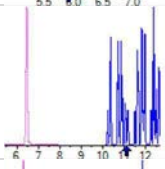 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 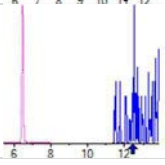 | 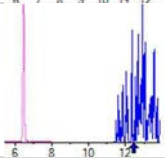 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-05 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 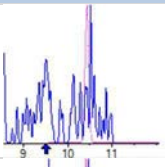 | 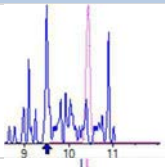 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 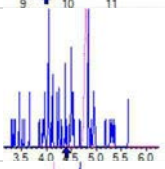 | 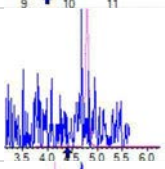 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 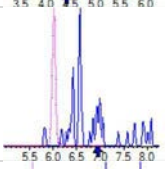 | 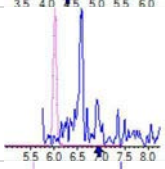 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 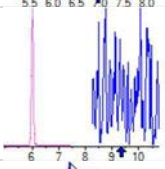 | 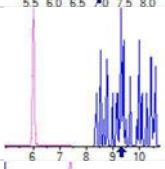 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4183<br>( 357.2 / 243.0 )<br>N/A | ( 6.74 , 1.00 )<br>( -0.01 , N/A , #Value!) | 38.8<br>N/A | N/A<br>0.0<br>0.0 | 0.0112 | N/A | 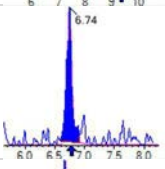 | 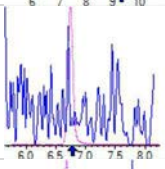 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 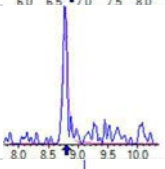 | 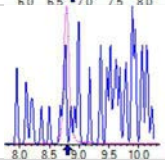 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 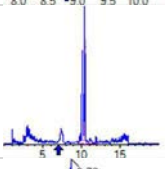 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>263329 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1279.4 | N/A | 1.1044<br>[ 1.0000 ] | 110.4%<br>{ 111.3% } | 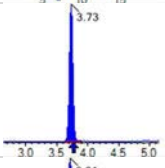 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>111016 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 4412.8 | N/A | 0.8751<br>[ 1.0000 ] | 87.5%<br>{ 87.7% } | 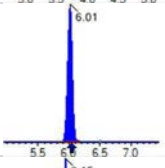 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>353813 | ( 8.15 , N/A )<br>( N/A , -0.03 , N/A ) | 3881.1 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 93.3% } | 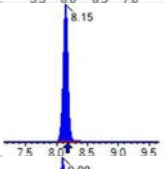 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>242432 | ( 9.09 , N/A )<br>( N/A , -0.03 , N/A ) | 878.2 | N/A | 0.8524<br>[ 1.0000 ] | 85.2%<br>{ 86.2% } | 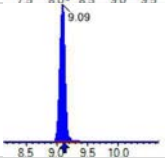 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-05 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 211869 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 3216.6 | N/A | 0.7255 [ 1.0000 ] | 72.6% { 73.2% } | 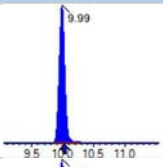 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 835733 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 4312.6 | N/A | 0.8806 [ 1.0000 ] | 88.1% { 89.5% } | 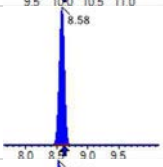 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 628159 | ( 10.44 , N/A ) ( N/A , -0.04 , N/A ) | 1235.8 | N/A | 0.8247 [ 1.0000 ] | 82.5% { 88.2% } | 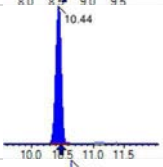 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2254315 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 32128.2 | N/A | 7.4938 [ 8.0000 ] | 93.7% { 100.7% } | 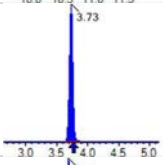 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 823742 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 4199.5 | N/A | 3.9768 [ 4.0000 ] | 99.4% { 84.4% } | 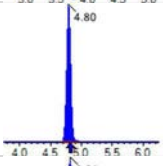 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 534530 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 8566.4 | N/A | 2.1103 [ 2.0000 ] | 105.5% { 90.6% } | 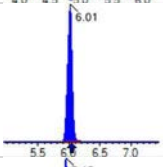 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 599762 | ( 7.15 , N/A ) ( N/A , -0.03 , N/A ) | 5516.9 | N/A | 2.1286 [ 2.0000 ] | 106.4% { 91.4% } | 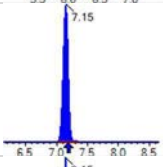 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 811239 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 2982.6 | N/A | 2.1399 [ 2.0000 ] | 107.0% { 94.1% } | 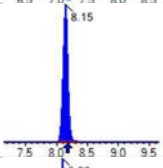 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 253052 | ( 9.09 , N/A ) ( N/A , -0.03 , N/A ) | 2082.4 | N/A | 1.0646 [ 1.0000 ] | 106.5% { 93.8% } | 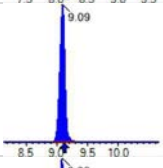 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 270839 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1235.2 | N/A | 1.1407 [ 1.0000 ] | 114.1% { 84.2% } | 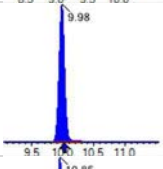 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 327779 | ( 10.85 , N/A ) ( N/A , -0.03 , N/A ) | 614.8 | N/A | 1.1734 [ 1.0000 ] | 117.3% { 88.1% } | 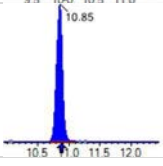 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-05 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 324477 | ( 11.68 , N/A ) ( N/A , -0.03 , N/A ) | 1278.8 | N/A | 1.1406 [ 1.0000 ] | 114.1% { 87.0% } | 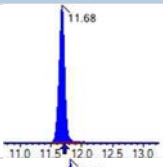 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 270608 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1165.6 | N/A | 1.1170 [ 1.0000 ] | 111.7% { 82.9% } | 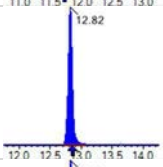 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 404681 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 1846.7 | N/A | 1.9567 [ 2.0000 ] | 97.8% { 80.1% } | 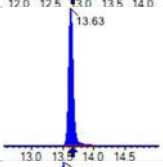 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1671974 | ( 6.30 , N/A ) ( N/A , -0.03 , N/A ) | 756.0 | N/A | 2.2143 [ 2.0000 ] | 110.7% { 99.6% } | 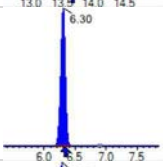 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1314244 | ( 8.58 , N/A ) ( N/A , -0.03 , N/A ) | 2943.5 | N/A | 2.1806 [ 2.0000 ] | 109.0% { 99.7% } | 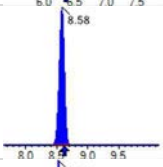 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1420958 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1219.4 | N/A | 2.0980 [ 2.0000 ] | 104.9% { 91.7% } | 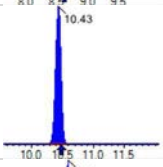 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 626412 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 94.8 | N/A | 4.8083 [ 4.0000 ] | 120.2% { 106.3% } | 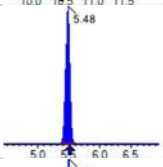 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1787894 | ( 7.59 , N/A ) ( N/A , -0.03 , N/A ) | 2425.8 | N/A | 4.5857 [ 4.0000 ] | 114.6% { 107.3% } | 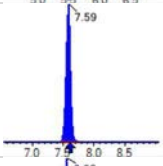 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1384010 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1231.1 | N/A | 4.5261 [ 4.0000 ] | 113.2% { 101.2% } | 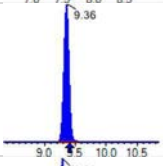 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2905761 | ( 10.99 , N/A ) ( N/A , -0.04 , N/A ) | 1383.5 | N/A | 9.0926 [ 8.0000 ] | 113.7% { 113.8% } | 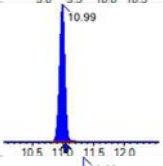 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1149420 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2113.8 | N/A | 1.9150 [ 2.0000 ] | 95.8% { 83.7% } | 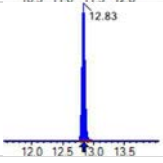 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (30)
Acquired: 2024/03/20 - 02:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 142191 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1085.4 | N/A | 1.1170 [ 2.0000 ] | 55.8% { 49.4% } | 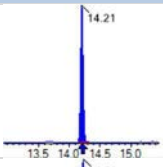  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 141288 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 1106.8 | N/A | 1.0349 [ 2.0000 ] | 51.7% { 46.1% } | 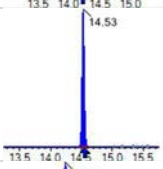  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 727604 | ( 10.24 , N/A ) ( N/A , -0.04 , N/A ) | 2141.7 | N/A | 4.1751 [ 4.0000 ] | 104.4% { 86.0% } | 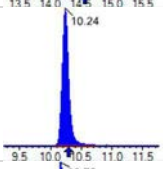  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 707380 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1766.2 | N/A | 4.4536 [ 4.0000 ] | 111.3% { 91.8% } | 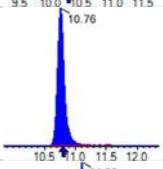  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 853893 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1800.8 | N/A | 14.9262 [ 20.0000 ] | 74.6% { 62.1% } | 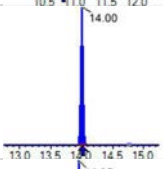  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 769747 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 3469.3 | N/A | 13.2568 [ 20.0000 ] | 66.3% { 59.7% } | 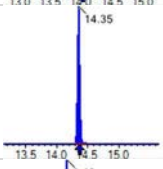  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 932215 | ( 6.46 , N/A ) ( N/A , -0.03 , N/A ) | 2240.4 | N/A | 8.0792 [ 8.0000 ] | 101.0% { 91.2% } | 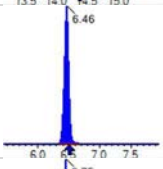  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 702921 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1475.9 | N/A | 3.0601 [ 2.0000 ] | 153.0% { 113.9% } | 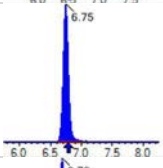  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 578677 | ( 8.78 , N/A ) ( N/A , -0.03 , N/A ) | 692.6 | N/A | 2.7673 [ 2.0000 ] | 138.4% { 104.6% } | 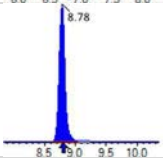  | | |

# ANALYSIS DATA SHEETL

MW-11-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-06- | File ID:- | S2024-03-19B (31)- |
| Sampled:- | 03/15/24 10:35- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 02:44- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 538.056 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.82- | 0.19- | 1.5- | J- |
| PFPeA- | 0.45- | 0.060- | 0.74- | J- |
| PFHxA- | 0.61- | 0.051- | 0.37- | |
| PFHpA- | 0.31- | 0.038- | 0.37- | J- |
| PFOA- | 1.5- | 0.14- | 0.37- | MI5- |
| PFNA- | 0.20- | 0.076- | 0.37- | J- |
| PFDA- | 0.60- | 0.094- | 0.37- | |
| PFUnA- | ND- | 0.15- | 0.37- | IR2, U- |
| PFDoA- | 0.13- | 0.10- | 0.37- | IR1, J- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 0.77- | 0.034- | 0.37- | MI2- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | 0.14- | 0.029- | 0.37- | MI1, J- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.74- | 0.059- | 0.37- | MI2- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | 0.17- | 0.097- | 0.37- | MI5, J- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | 0.23- | 0.098- | 0.37- | J- |
| NEtFOSAA- | 0.29- | 0.11- | 0.37- | J- |

# ANALYSIS DATA SHEETL

MW-11-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-06- | File ID:- | S2024-03-19B (31)- |
| Sampled:- | 03/15/24 10:35- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 02:44- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 538.056 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | 0.51- | 0.51- | 1.5- | J- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 50062<br>( 163.0 / 69.0 ) 1318 | ( 2.83 , 0.76 ) ( N/A , 0.03 , 1.0) | 193.1<br>68.8 | 0.0263<br>97.0<br>99.9 | 0.2051 | N/A | 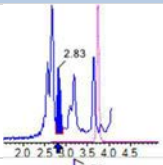 | 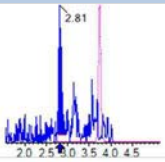 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 56819 | ( 3.76 , 1.01 ) ( 0.02 , N/A , 0.0) | 32.2 | N/A<br>0.0<br>0.0 | 0.2201 | N/A | 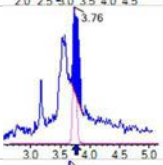 | | |
| PFPeA | ( 263.0 / 219.0 ) 26529<br>( 263.0 / 69.0 ) N/A | ( 4.81 , 1.00 ) ( 0.00 , N/A , #Value!) | 96.0<br>N/A | N/A<br>0.0<br>0.0 | 0.1217 | N/A | 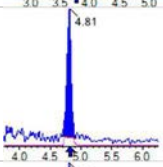 | 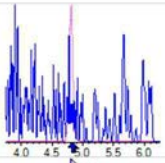 | |
| PFHxA | ( 313.0 / 269.0 ) 41054<br>( 313.0 / 119.0 ) 4828 | ( 6.01 , 1.00 ) ( 0.00 , N/A , 0.3) | 205.3<br>69.5 | 0.1176<br>101.3<br>100.5 | 0.1641 | N/A | 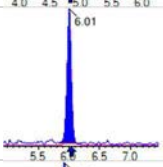 | 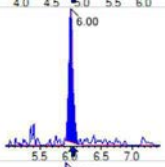 | |
| PFHpA | ( 363.0 / 319.0 ) 23709<br>( 363.0 / 169.0 ) 7247 | ( 7.13 , 1.00 ) ( 0.00 , N/A , 0.3) | 111.5<br>74.3 | 0.3057<br>100.9<br>103.5 | 0.0846 | N/A | 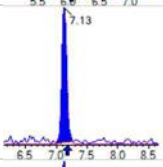 | 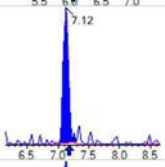 | |
| PFOA | ( 413.0 / 369.0 ) 161337<br>( 413.0 / 169.0 ) 63815 | ( 8.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 195.7<br>205.1 | 0.3955<br>108.2<br>115.2 | 0.4039 | N/A | 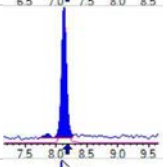 | 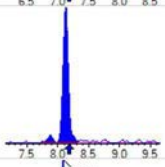 | MI5 DG 2024-03-20 |
| PFNA | ( 463.0 / 419.0 ) 13225<br>( 463.0 / 169.0 ) 4374 | ( 9.07 , 1.00 ) ( 0.00 , N/A , -0.1) | 62.3<br>38.3 | 0.3308<br>129.6<br>137.5 | 0.0539 | N/A | 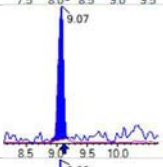 | 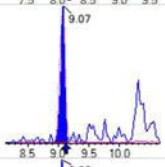 | |
| PFDA | ( 513.0 / 469.0 ) 42804<br>( 513.0 / 169.0 ) 6595 | ( 9.96 , 1.00 ) ( 0.00 , N/A , 0.2) | 317.0<br>117.3 | 0.1541<br>131.5<br>128.7 | 0.1604 | N/A | 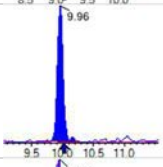 | 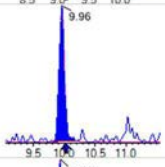 | |
| PFUnA | ( 563.0 / 519.0 ) 7208<br>( 563.0 / 169.0 ) 1866 | ( 10.82 , 1.00 ) ( -0.01 , N/A , -0.6) | 48.4<br>34.2 | 0.2589<br>182.7<br>182.2 | 0.0256 | N/A | 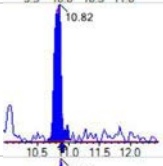 | 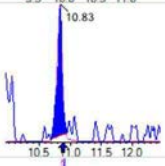 | IR2, |
| PFDoA | ( 613.0 / 569.0 ) 10244<br>( 613.0 / 169.0 ) N/A | ( 11.65 , 1.00 ) ( -0.01 , N/A , #Value!) | 62.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0344 | N/A | 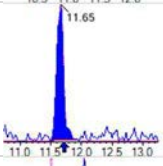 | 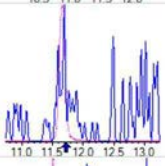 | IR1, |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 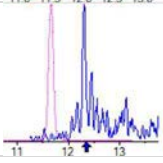 | 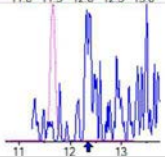 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 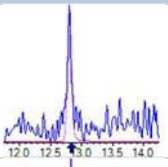 | 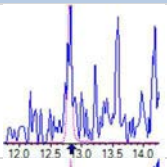 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 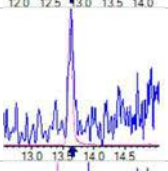 | 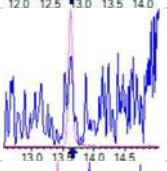 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 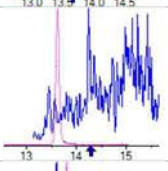 | 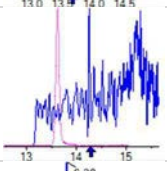 | |
| PFBS | ( 299.0 / 80.0 ) 83655<br>( 299.0 / 99.0 ) 68495 | ( 6.30 , 1.00 ) ( 0.00 , N/A , 0.1) | 60.0<br>208.4 | 0.8188<br>115.8<br>111.3 | 0.2074 | N/A | 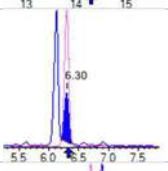 | 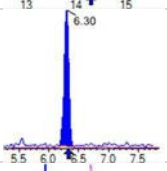 | MI2 DG 2024-03-20 |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 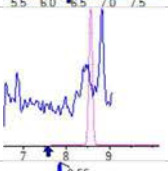 | 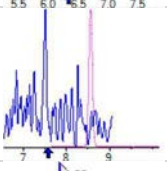 | |
| PFHxS | ( 399.0 / 80.0 ) 43208<br>( 399.0 / 99.0 ) 10920 | ( 8.55 , 1.00 ) ( -0.01 , N/A , 0.0) | 39.3<br>60.6 | 0.2527<br>79.4<br>75.6 | 0.0382 | N/A | 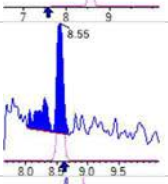 | 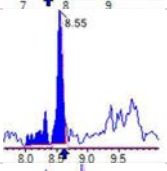 | MI1 DG 2024-03-20 |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 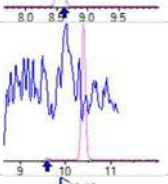 | 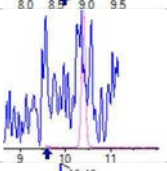 | |
| PFOS | ( 499.0 / 80.0 ) 149204<br>( 499.0 / 99.0 ) 29196 | ( 10.40 , 1.00 ) ( 0.00 , N/A , -0.1) | 141.1<br>198.6 | 0.1957<br>83.7<br>81.5 | 0.1988 | N/A | 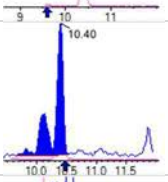 | 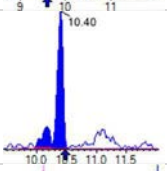 | MI2 DG 2024-03-20 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 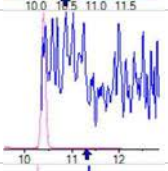 | 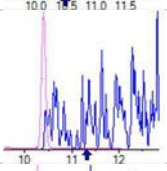 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 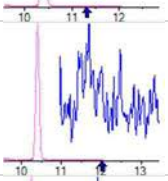 | 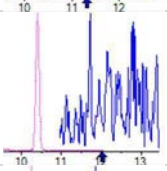 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 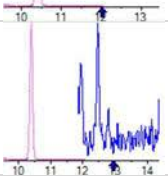 | 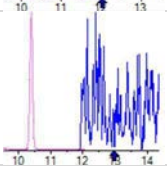 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 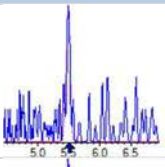 | 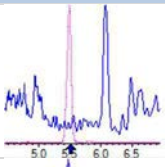 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 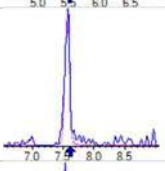 | 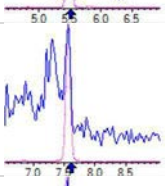 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 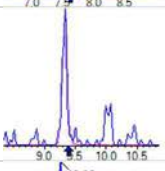 | 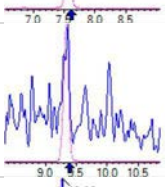 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>13066<br>( 627.0 / 81.0 )<br>21668 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , -0.2) | 167.1<br>55.0 | 1.6584<br>115.2<br>113.7 | 0.0635 | N/A | 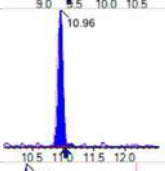 | 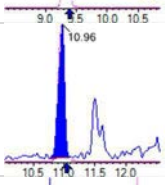 | |
| PFBSA | ( 297.9 / 78.0 )<br>3615<br>( 297.9 / 278.0 )<br>N/A | ( 8.07 , 0.57 )<br>( N/A , -0.02 , #Value!) | 39.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0125 | N/A | 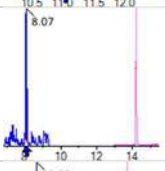 | 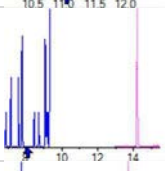 | |
| PFHxSA | ( 397.9 / 78.0 )<br>4402<br>( 397.9 / 378.0 )<br>N/A | ( 10.93 , 0.75 )<br>( N/A , -0.03 , #Value!) | 38.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0127 | N/A | 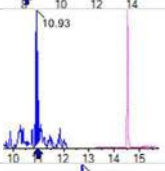 | 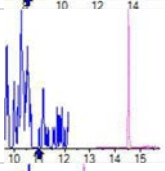 | |
| PFOSA | ( 498.0 / 78.0 )<br>21445<br>( 498.0 / 478.0 )<br>583 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , -0.4) | 140.2<br>10.3 | 0.0272<br>193.6<br>182.5 | 0.0452 | N/A | 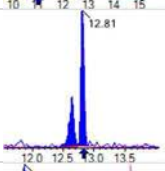 | 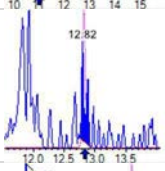 | MI5 DG<br>2024-03-20 |
| TFSI | ( 279.7 / 147.0 )<br>39313<br>( 279.7 / 211.0 )<br>2653 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , -1.2) | 21.3<br>11.1 | 0.0675<br>80.3<br>78.9 | 0.0315 | N/A | 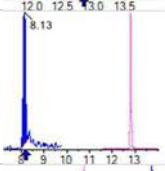 | 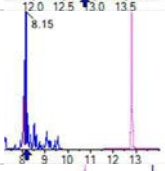 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 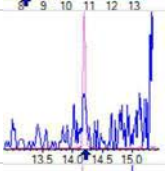 | 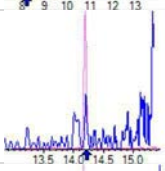 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 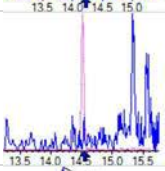 | 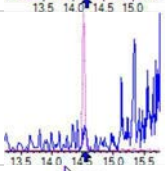 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>8645<br>( 570.0 / 483.0 )<br>5211 | ( 10.20 , 1.00 )<br>( -0.01 , N/A , 2.9) | 5250.6<br>1940.6 | 0.6027<br>137.5<br>128.9 | 0.0606 | N/A | 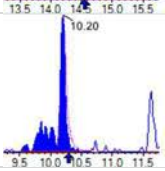 | 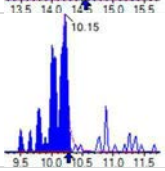 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 11339<br>( 584.0 / 526.0 ) 8313 | ( 10.75 , 1.00 )<br>( 0.01 , N/A , -0.4) | 222.8<br>99.2 | 0.7331<br>118.9<br>124.0 | 0.0778 | N/A | 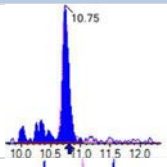 | 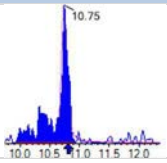 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 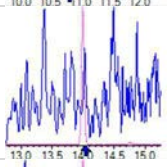 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 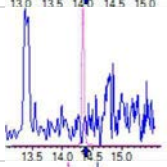 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 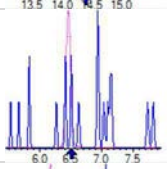 | 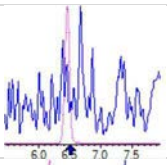 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 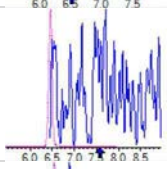 | 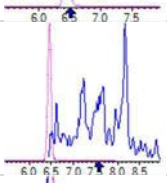 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 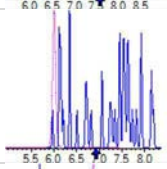 | 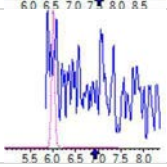 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 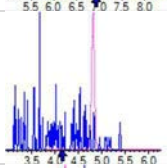 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 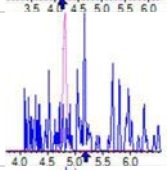 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 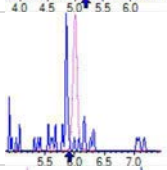 | 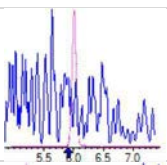 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 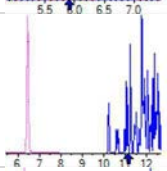 | 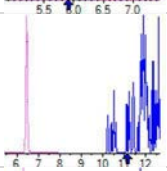 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 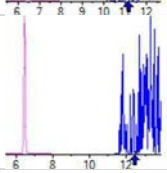 | 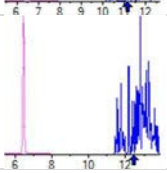 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 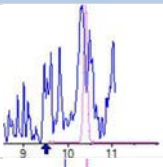 | 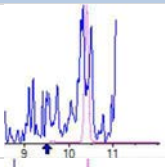 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 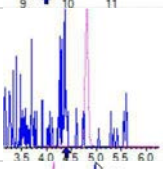 | 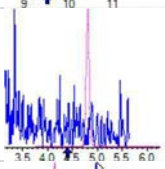 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>5801<br>( 341.0 / 217.0 )<br>9504 | ( 6.90 , 1.15 )<br>( N/A , -0.04 , -0.1) | 77.9<br>48.7 | 1.6385<br>107.9<br>112.6 | 0.0836 | N/A | 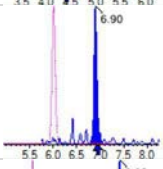 | 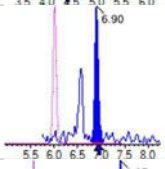 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>15509<br>( 441.0 / 337.0 )<br>13591 | ( 9.26 , 1.54 )<br>( N/A , -0.05 , -0.3) | 104.5<br>223.8 | 0.8763<br>95.6<br>100.2 | 0.1362 | N/A | 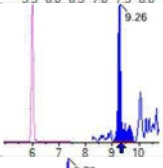 | 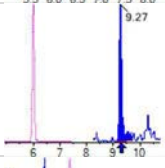 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>5764<br>( 357.2 / 243.0 )<br>1307 | ( 6.72 , 1.00 )<br>( -0.02 , N/A , -0.4) | 46.2<br>4.7 | 0.2268<br>205.7<br>217.9 | 0.0131 | N/A | 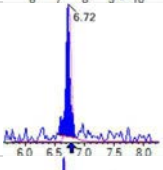 | 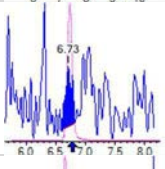 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 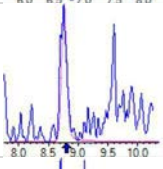 | 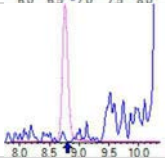 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 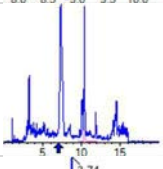 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>252300 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1044.5 | N/A | 1.0582<br>[ 1.0000 ] | 105.8%<br>{ 106.7% } | 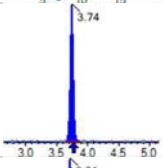 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>114018 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 19123.0 | N/A | 0.8988<br>[ 1.0000 ] | 89.9%<br>{ 90.1% } | 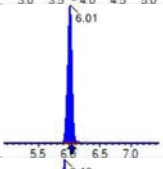 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>348316 | ( 8.13 , N/A )<br>( N/A , -0.05 , N/A ) | 2950.6 | N/A | 0.8811<br>[ 1.0000 ] | 88.1%<br>{ 91.8% } | 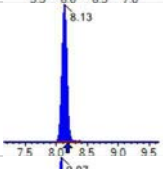 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>240145 | ( 9.07 , N/A )<br>( N/A , -0.05 , N/A ) | 595.0 | N/A | 0.8444<br>[ 1.0000 ] | 84.4%<br>{ 85.4% } | 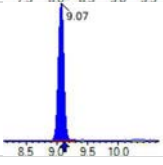 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 211482 | ( 9.96 , N/A ) ( N/A , -0.07 , N/A ) | 1892.2 | N/A | 0.7242 [ 1.0000 ] | 72.4% { 73.1% } | 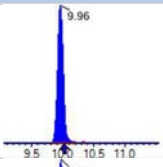 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 854422 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 3233.7 | N/A | 0.9003 [ 1.0000 ] | 90.0% { 91.5% } | 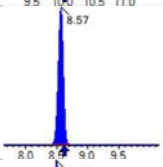 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 573191 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 702.1 | N/A | 0.7526 [ 1.0000 ] | 75.3% { 80.5% } | 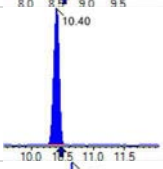 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2071321 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 34390.2 | N/A | 7.1865 [ 8.0000 ] | 89.8% { 92.5% } | 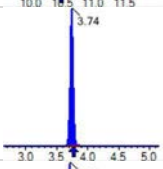 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 863401 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 4900.6 | N/A | 4.0585 [ 4.0000 ] | 101.5% { 88.5% } | 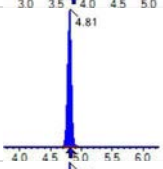 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 520766 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 4731.3 | N/A | 2.0018 [ 2.0000 ] | 100.1% { 88.3% } | 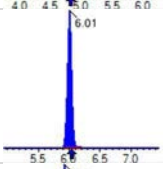 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 571432 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 4148.4 | N/A | 1.9746 [ 2.0000 ] | 98.7% { 87.0% } | 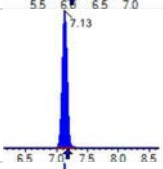 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 775809 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 2419.4 | N/A | 2.0788 [ 2.0000 ] | 103.9% { 90.0% } | 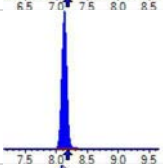 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 244239 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 1487.2 | N/A | 1.0373 [ 1.0000 ] | 103.7% { 90.5% } | 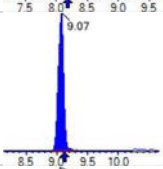 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 261171 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 967.2 | N/A | 1.1020 [ 1.0000 ] | 110.2% { 81.2% } | 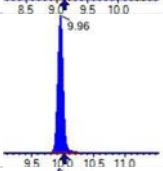 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 304030 | ( 10.83 , N/A ) ( N/A , -0.06 , N/A ) | 1141.5 | N/A | 1.0904 [ 1.0000 ] | 109.0% { 81.7% } | 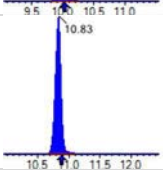 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 296083 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1171.3 | N/A | 1.0427 [ 1.0000 ] | 104.3% { 79.4% } | 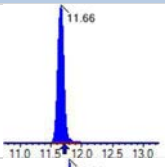  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 240695 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1174.2 | N/A | 0.9954 [ 1.0000 ] | 99.5% { 73.7% } | 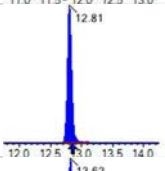  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 352192 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 1933.2 | N/A | 1.7060 [ 2.0000 ] | 85.3% { 69.7% } | 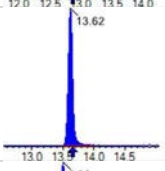  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1553894 | ( 6.30 , N/A ) ( N/A , -0.03 , N/A ) | 835.8 | N/A | 2.0129 [ 2.0000 ] | 100.6% { 92.6% } | 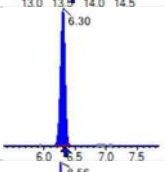  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1271063 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 1577.7 | N/A | 2.0628 [ 2.0000 ] | 103.1% { 96.4% } | 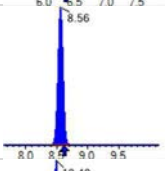  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1299932 | ( 10.40 , N/A ) ( N/A , -0.08 , N/A ) | 792.0 | N/A | 2.1034 [ 2.0000 ] | 105.2% { 83.9% } | 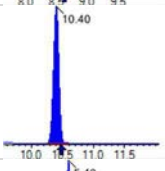  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 600772 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 84.5 | N/A | 4.5106 [ 4.0000 ] | 112.8% { 102.0% } | 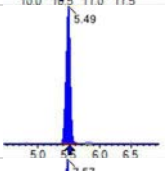  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1705809 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 1415.2 | N/A | 4.2795 [ 4.0000 ] | 107.0% { 102.3% } | 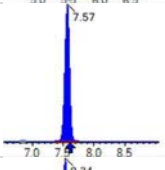  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1155548 | ( 9.34 , N/A ) ( N/A , -0.06 , N/A ) | 1220.7 | N/A | 3.6963 [ 4.0000 ] | 92.4% { 84.5% } | 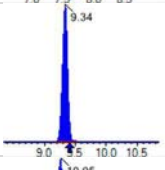  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2135355 | ( 10.95 , N/A ) ( N/A , -0.08 , N/A ) | 1593.1 | N/A | 6.5358 [ 8.0000 ] | 81.7% { 83.7% } | 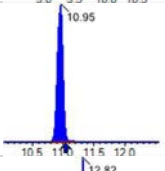  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 948357 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 2595.3 | N/A | 1.7316 [ 2.0000 ] | 86.6% { 69.0% } | 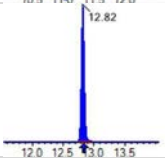  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (31)
Acquired: 2024/03/20 - 02:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 112593 | ( 14.20 , N/A ) ( N/A , -0.02 , N/A ) | 878.6 | N/A | 0.9693 [ 2.0000 ] | 48.5% { 39.1% } | 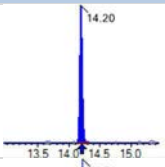  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 112954 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 918.8 | N/A | 0.9067 [ 2.0000 ] | 45.3% { 36.8% } | 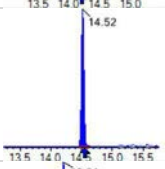  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 597973 | ( 10.21 , N/A ) ( N/A , -0.07 , N/A ) | 3083.3 | N/A | 3.7603 [ 4.0000 ] | 94.0% { 70.7% } | 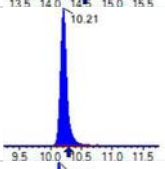  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 595680 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1348.8 | N/A | 4.1100 [ 4.0000 ] | 102.8% { 77.3% } | 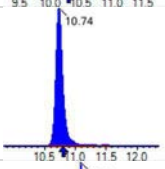  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 652979 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 1383.8 | N/A | 12.5088 [ 20.0000 ] | 62.5% { 47.5% } | 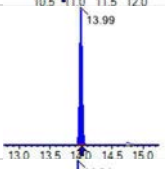  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 642028 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2679.9 | N/A | 12.1175 [ 20.0000 ] | 60.6% { 49.8% } | 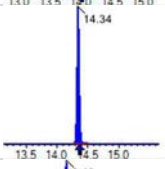  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 913554 | ( 6.46 , N/A ) ( N/A , -0.04 , N/A ) | 1748.2 | N/A | 7.7090 [ 8.0000 ] | 96.4% { 89.3% } | 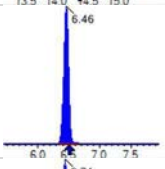  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 827313 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1446.9 | N/A | 3.6082 [ 2.0000 ] | 180.4% { 134.1% } | 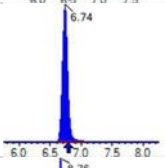  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 609364 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 665.2 | N/A | 2.9194 [ 2.0000 ] | 146.0% { 110.1% } | 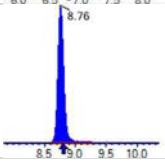  | | |

# ANALYSIS DATA SHEETL

## MW-11-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-07- | File ID: | S2024-03-19B (32)- |
| Sampled:- | 03/15/24 11:00- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 03:05 |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 553.133 mL / 2 mL- | | | Instrument:- | Saphira |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010 |

| COMPOUNDL | CONC. (ng/L) | MD | PQ | Q |
|---|---|---|---|---|
| PFBA- | 1.3- | 0.19- | 1.4 | J |
| PFPeA- | 0.82- | 0.059- | 0.72 | |
| PFHxA- | 0.57- | 0.050- | 0.36 | |
| PFHpA- | 0.41- | 0.037- | 0.36 | |
| PFOA- | 1.3- | 0.14- | 0.36 | MI5 |
| PFNA- | ND- | 0.074- | 0.36 | U |
| PFDA- | ND- | 0.092- | 0.36 | IR2, U |
| PFUnA- | ND- | 0.14- | 0.36 | U |
| PFDoA- | ND- | 0.10- | 0.36 | U |
| PFTrDA- | ND- | 0.18- | 0.36 | U |
| PFTeDA- | ND- | 0.18- | 0.36 | U |
| PFHxDA- | ND- | 0.18- | 0.36 | U |
| PFODA- | ND- | 0.18- | 0.36 | U |
| PFBS- | 0.68- | 0.033- | 0.36 | |
| PFPeS- | 0.13- | 0.057- | 0.36 | J |
| PFHxS- | 0.64- | 0.029- | 0.36 | MI1 |
| PFHpS- | ND- | 0.046- | 0.36 | U |
| PFOS- | 1.7- | 0.057- | 0.36 | |
| PFNS- | ND- | 0.11- | 0.36 | U |
| PFDS- | ND- | 0.14- | 0.36 | U |
| PFDoS- | ND- | 0.11- | 0.36 | U |
| 4:2FTS- | ND- | 0.26- | 1.4 | U |
| 6:2FTS- | ND- | 0.28- | 1.4 | U |
| 8:2FTS- | ND- | 0.074- | 1.4 | U |
| 10:2FTS- | ND- | 0.36- | 1.4 | U |
| PFOSA- | ND- | 0.094- | 0.36 | U |
| NMeFOSA- | ND- | 0.43- | 1.4 | U |
| NEtFOSA- | ND- | 0.37- | 1.4 | U |
| NMeFOSAA- | ND- | 0.096- | 0.36 | U |
| NEtFOSAA- | ND- | 0.10- | 0.36 | U |

# ANALYSIS DATA SHEETL

MW-11-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-07- | File ID:- | S2024-03-19B (32)- |
| Sampled:- | 03/15/24 11:00- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 03:05- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 553.133 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.95- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.099- | 0.72- | U- |
| PFMPA- | ND- | 0.049- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (32)
Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 70439<br>( 163.0 / 69.0 ) 2129 | ( 2.82 , 0.76 ) ( N/A , 0.03 , -0.3) | 505.8<br>134.3 | 0.0302<br>111.3<br>114.7 | 0.2769 | N/A | 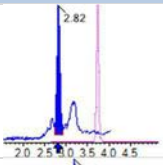 | 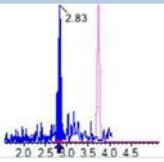 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 99040 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 73.3 | N/A<br>0.0<br>0.0 | 0.3683 | N/A | 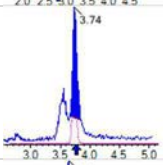 | | |
| PFPeA | ( 263.0 / 219.0 ) 47601<br>( 263.0 / 69.0 ) 727 | ( 4.80 , 1.00 ) ( 0.00 , N/A , -1.1) | 281.1<br>25.2 | 0.0153<br>127.8<br>137.6 | 0.2277 | N/A | 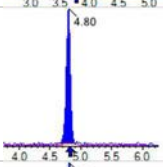 | 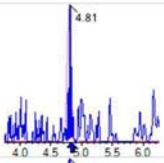 | |
| PFHxA | ( 313.0 / 269.0 ) 39492<br>( 313.0 / 119.0 ) 4985 | ( 6.01 , 1.00 ) ( 0.00 , N/A , 0.1) | 193.7<br>111.0 | 0.1262<br>108.7<br>107.9 | 0.1581 | N/A | 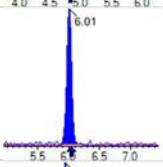 | 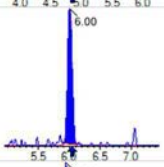 | |
| PFHpA | ( 363.0 / 319.0 ) 32237<br>( 363.0 / 169.0 ) 10787 | ( 7.14 , 1.00 ) ( 0.00 , N/A , 0.2) | 158.2<br>139.0 | 0.3346<br>110.4<br>113.3 | 0.1127 | N/A | 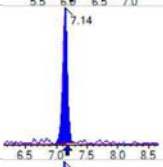 | 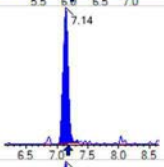 | |
| PFOA | ( 413.0 / 369.0 ) 147640<br>( 413.0 / 169.0 ) 60308 | ( 8.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 142.7<br>185.2 | 0.4085<br>111.7<br>119.0 | 0.3651 | N/A | 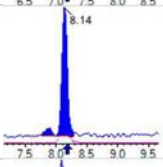 | 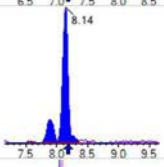 | MI5 DG 2024-03-20 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 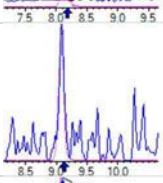 | 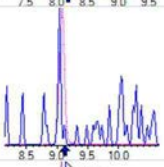 | |
| PFDA | ( 513.0 / 469.0 ) 4672<br>( 513.0 / 169.0 ) 1609 | ( 9.99 , 1.00 ) ( 0.02 , N/A , -3.0) | 46.7<br>45.9 | 0.3445<br>294.0<br>287.8 | 0.0171 | N/A | 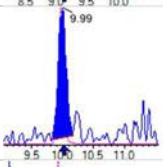 | 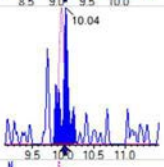 | IR2,MI2 DG 2024-03-20 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 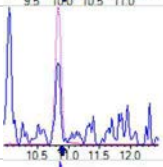 | 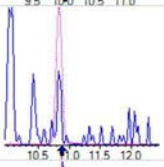 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 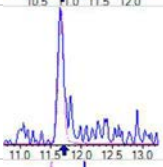 | 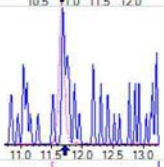 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 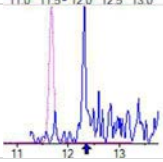 | 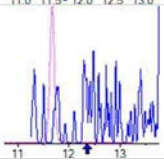 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (32)
Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 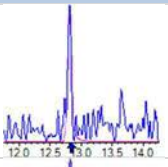 | 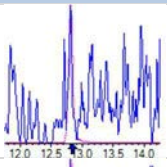 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 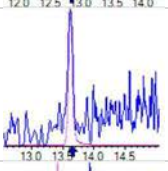 | 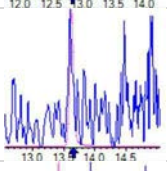 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 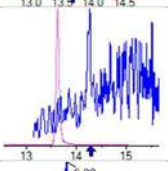 | 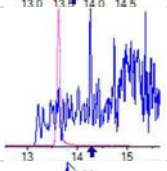 | |
| PFBS | ( 299.0 / 80.0 )<br>78928<br>( 299.0 / 99.0 )<br>59643 | ( 6.29 , 1.00 )<br>( -0.01 , N/A , 0.2) | 308.5<br>327.0 | 0.7557<br>106.9<br>102.8 | 0.1890 | N/A | 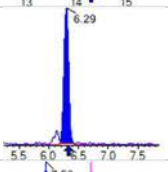 | 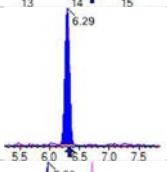 | |
| PFPeS | ( 349.0 / 80.0 )<br>36247<br>( 349.0 / 99.0 )<br>13334 | ( 7.52 , 0.88 )<br>( N/A , -0.04 , -0.6) | 71.0<br>85.5 | 0.3679<br>102.3<br>104.5 | 0.0356 | N/A | 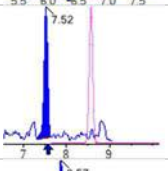 | 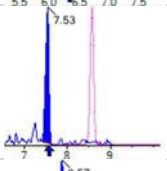 | |
| PFHxS | ( 399.0 / 80.0 )<br>209046<br>( 399.0 / 99.0 )<br>65538 | ( 8.57 , 1.00 )<br>( -0.01 , N/A , 0.0) | 468.9<br>556.9 | 0.3135<br>98.4<br>93.8 | 0.1768 | N/A | 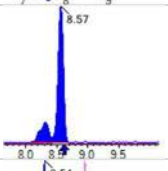 | 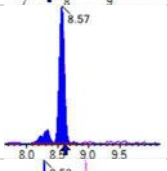 | MI1 DG<br>2024-03-20 |
| PFHpS | ( 449.0 / 80.0 )<br>9644<br>( 449.0 / 99.0 )<br>2888 | ( 9.54 , 0.91 )<br>( N/A , -0.05 , 1.1) | 27.0<br>13.8 | 0.2995<br>113.2<br>113.1 | 0.0114 | N/A | 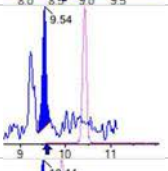 | 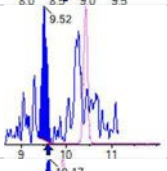 | |
| PFOS | ( 499.0 / 80.0 )<br>377769<br>( 499.0 / 99.0 )<br>47214 | ( 10.11 , 0.97 )<br>( -0.31 , N/A , -3.9) | 408.4<br>171.7 | 0.1250<br>53.5<br>52.1 | 0.4643 | N/A | 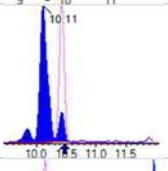 | 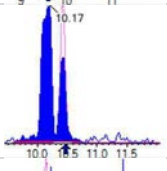 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 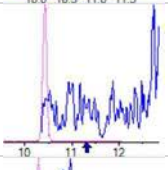 | 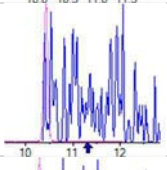 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 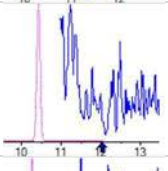 | 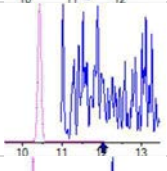 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 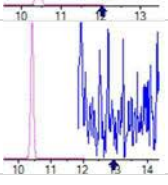 | 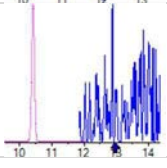 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (32)
Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 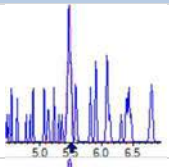 | 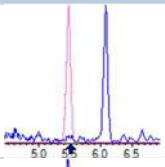 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 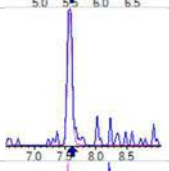 | 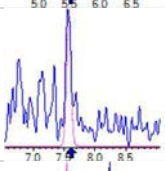 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 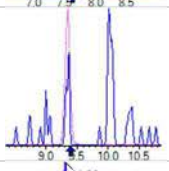 | 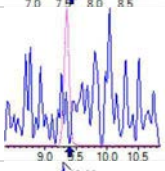 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16062<br>( 627.0 / 81.0 )<br>22895 | ( 11.00 , 1.00 )<br>( 0.02 , N/A , 0.9) | 165.1<br>63.7 | 1.4254<br>99.0<br>97.7 | 0.0602 | N/A | 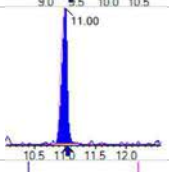 | 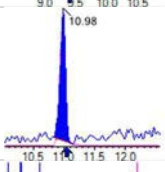 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 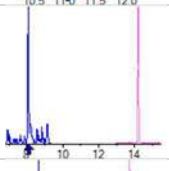 | 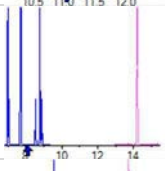 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 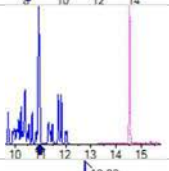 | 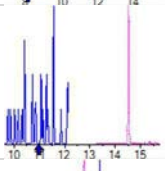 | |
| PFOSA | ( 498.0 / 78.0 )<br>9813<br>( 498.0 / 478.0 )<br>284 | ( 12.82 , 1.00 )<br>( -0.01 , N/A , -0.5) | 142.8<br>12.3 | 0.0290<br>206.3<br>194.5 | 0.0184 | N/A | 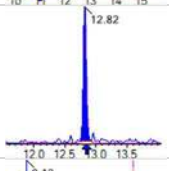 | 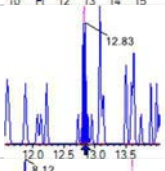 | |
| TFSI | ( 279.7 / 147.0 )<br>17515<br>( 279.7 / 211.0 )<br>1764 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , 0.6) | 17.3<br>7.7 | 0.1007<br>119.9<br>117.7 | 0.0125 | N/A | 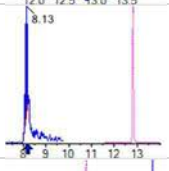 | 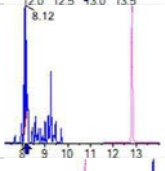 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 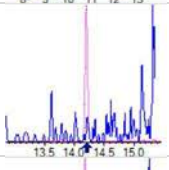 | 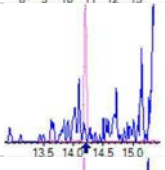 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 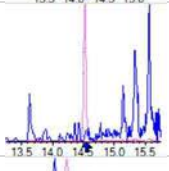 | 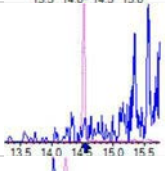 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 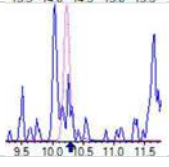 | 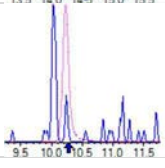 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (32)
Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 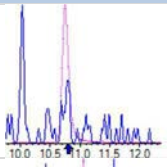 | 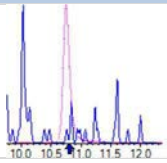 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 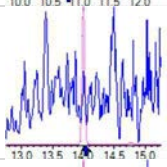 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 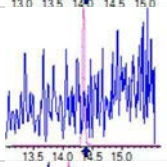 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 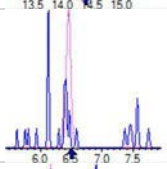 | 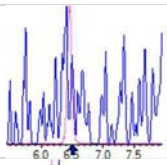 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 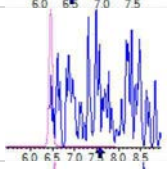 | 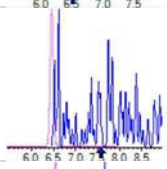 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 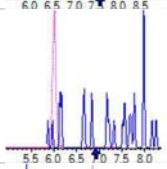 | 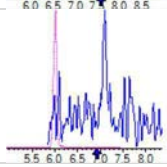 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 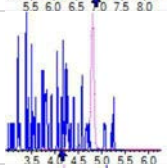 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 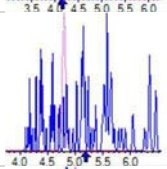 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 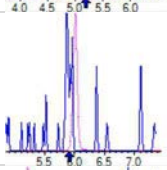 | 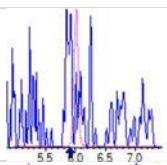 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 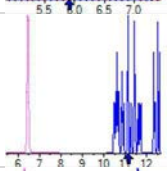 | 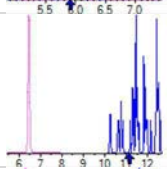 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 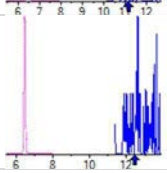 | 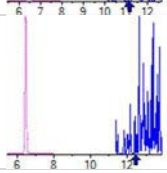 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (32)
Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 9942<br>( 461.0 / 381.2 ) 3763 | ( 9.44 , 0.91 )<br>( N/A , -0.06 , 0.3) | 47.8<br>23.6 | 0.3785<br>95.0<br>95.5 | 0.0217 | N/A | 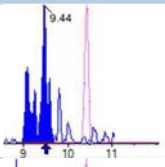 | 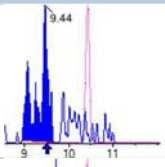 | MI5 DG 2024-03-20 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 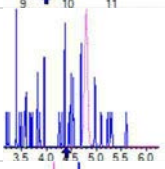 | 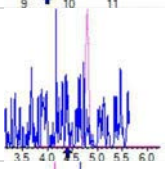 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 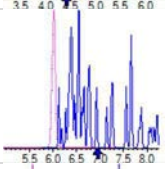 | 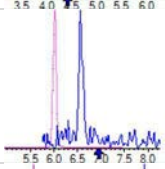 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 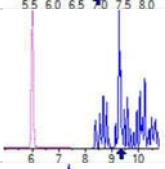 | 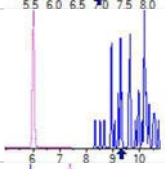 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 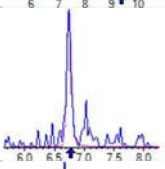 | 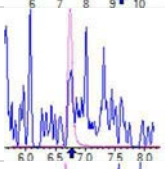 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 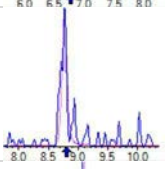 | 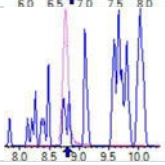 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 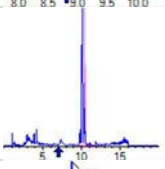 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262391 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1174.1 | N/A | 1.1005<br>[ 1.0000 ] | 110.0%<br>{ 110.9% } | 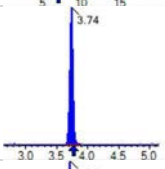 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 107173 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 677989.4 | N/A | 0.8448<br>[ 1.0000 ] | 84.5%<br>{ 84.7% } | 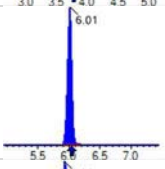 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 355764 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 3741.5 | N/A | 0.8999<br>[ 1.0000 ] | 90.0%<br>{ 93.8% } | 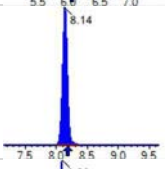 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 245577 | ( 9.08 , N/A )<br>( N/A , -0.04 , N/A ) | 875.0 | N/A | 0.8635<br>[ 1.0000 ] | 86.3%<br>{ 87.3% } | 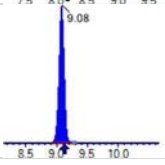 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (32)
Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 207844 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 2091.1 | N/A | 0.7117 [ 1.0000 ] | 71.2% { 71.8% } | 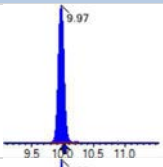 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 859688 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 4097.1 | N/A | 0.9059 [ 1.0000 ] | 90.6% { 92.1% } | 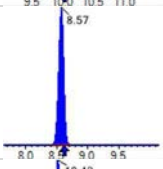 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 626247 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1456.5 | N/A | 0.8222 [ 1.0000 ] | 82.2% { 88.0% } | 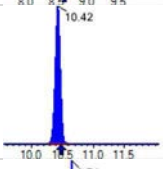 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2158313 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 33196.0 | N/A | 7.2003 [ 8.0000 ] | 90.0% { 96.4% } | 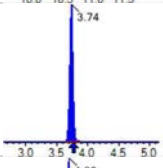 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 827673 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5581.9 | N/A | 4.1390 [ 4.0000 ] | 103.5% { 84.8% } | 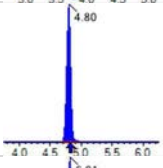 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 520019 | ( 6.01 , N/A ) ( N/A , -0.03 , N/A ) | 6210.3 | N/A | 2.1266 [ 2.0000 ] | 106.3% { 88.1% } | 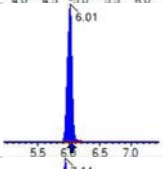 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 583048 | ( 7.14 , N/A ) ( N/A , -0.04 , N/A ) | 4162.6 | N/A | 2.1435 [ 2.0000 ] | 107.2% { 88.8% } | 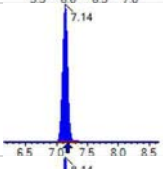 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 780661 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 2626.3 | N/A | 2.0480 [ 2.0000 ] | 102.4% { 90.5% } | 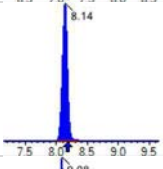 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 247378 | ( 9.08 , N/A ) ( N/A , -0.04 , N/A ) | 2150.5 | N/A | 1.0274 [ 1.0000 ] | 102.7% { 91.7% } | 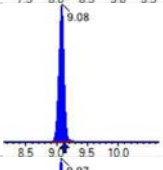 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 266892 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1104.5 | N/A | 1.1458 [ 1.0000 ] | 114.6% { 83.0% } | 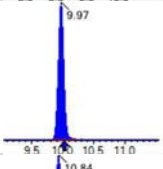 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 319876 | ( 10.84 , N/A ) ( N/A , -0.05 , N/A ) | 854.9 | N/A | 1.1673 [ 1.0000 ] | 116.7% { 86.0% } | 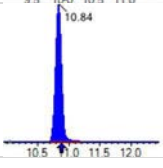 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-07 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 318920 | ( 11.67 , N/A ) ( N/A , -0.05 , N/A ) | 1146.3 | N/A | 1.1428 [ 1.0000 ] | 114.3% { 85.5% } | 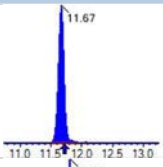  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 260760 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1373.9 | N/A | 1.0972 [ 1.0000 ] | 109.7% { 79.9% } | 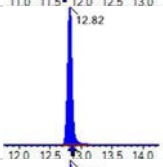  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 423764 | ( 13.63 , N/A ) ( N/A , -0.03 , N/A ) | 2300.4 | N/A | 2.0886 [ 2.0000 ] | 104.4% { 83.9% } | 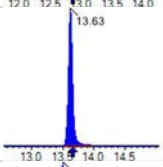  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1608569 | ( 6.30 , N/A ) ( N/A , -0.03 , N/A ) | 954.4 | N/A | 2.0710 [ 2.0000 ] | 103.5% { 95.9% } | 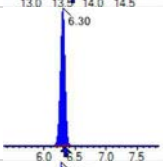  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1330137 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 2921.1 | N/A | 2.1455 [ 2.0000 ] | 107.3% { 100.9% } | 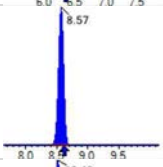  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1408793 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1588.8 | N/A | 2.0864 [ 2.0000 ] | 104.3% { 90.9% } | 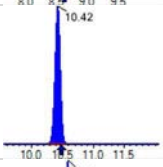  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 592817 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 95.9 | N/A | 4.4236 [ 4.0000 ] | 110.6% { 100.6% } | 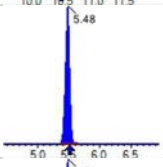  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1628385 | ( 7.58 , N/A ) ( N/A , -0.04 , N/A ) | 3063.2 | N/A | 4.0602 [ 4.0000 ] | 101.5% { 97.7% } | 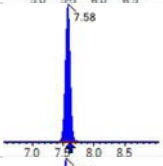  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1278351 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1262.2 | N/A | 4.0641 [ 4.0000 ] | 101.6% { 93.5% } | 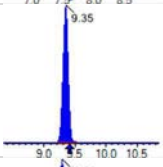  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2769838 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1283.5 | N/A | 8.4258 [ 8.0000 ] | 105.3% { 108.5% } | 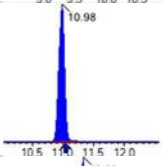  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1066061 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 2524.8 | N/A | 1.7816 [ 2.0000 ] | 89.1% { 77.6% } | 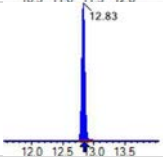  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-07 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 127446 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 949.1 | N/A | 1.0042 [ 2.0000 ] | 50.2% { 44.3% } | 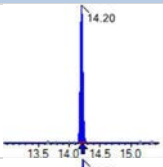 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 130415 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 794.1 | N/A | 0.9582 [ 2.0000 ] | 47.9% { 42.5% } | 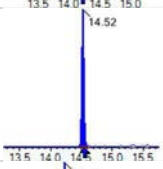 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 751314 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 2064.2 | N/A | 4.3244 [ 4.0000 ] | 108.1% { 88.9% } | 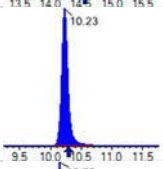 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 696305 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 1628.5 | N/A | 4.3973 [ 4.0000 ] | 109.9% { 90.4% } | 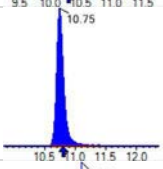 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 785019 | ( 14.00 , N/A ) ( N/A , -0.02 , N/A ) | 2070.9 | N/A | 13.7642 [ 20.0000 ] | 68.8% { 57.1% } | 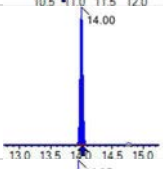 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 742982 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 3169.7 | N/A | 12.8349 [ 20.0000 ] | 64.2% { 57.6% } | 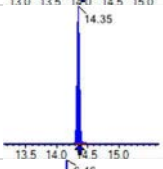 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 915485 | ( 6.46 , N/A ) ( N/A , -0.04 , N/A ) | 2472.8 | N/A | 8.2187 [ 8.0000 ] | 102.7% { 89.5% } | 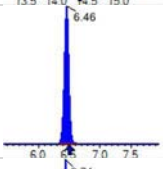 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 692696 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1277.8 | N/A | 3.0740 [ 2.0000 ] | 153.7% { 112.3% } | 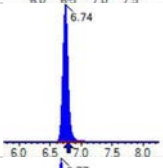 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 549527 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 554.2 | N/A | 2.6788 [ 2.0000 ] | 133.9% { 99.3% } | 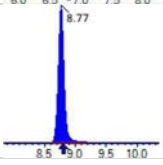 | | |

# ANALYSIS DATA SHEETL

MW-11-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-08- | File ID:- | S2024-03-19B (33)- |
| Sampled:- | 03/15/24 11:45- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 03:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.187 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 3.3- | 0.19- | 1.5- | |
| PFPeA- | 3.9- | 0.060- | 0.74- | |
| PFHxA- | 3.0- | 0.051- | 0.37- | |
| PFHpA- | 1.6- | 0.038- | 0.37- | |
| PFOA- | 2.7- | 0.14- | 0.37- | MI5- |
| PFNA- | 0.74- | 0.076- | 0.37- | |
| PFDA- | ND- | 0.094- | 0.37- | IR2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 2.0- | 0.034- | 0.37- | |
| PFPeS- | 0.12- | 0.058- | 0.37- | J- |
| PFHxS- | 0.67- | 0.029- | 0.37- | |
| PFHpS- | 0.050- | 0.047- | 0.37- | IR1, J- |
| PFOS- | 3.6- | 0.059- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-11-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-08- | File ID:- | S2024-03-19B (33)- |
| Sampled:- | 03/15/24 11:45- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 03:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.187 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (33)
Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 88587<br>( 163.0 / 69.0 ) 2258 | ( 2.79 , 0.75 ) ( N/A , 0.00 , 0.0) | 742.7<br>122.6 | 0.0255<br>93.9<br>96.7 | 0.3958 | N/A | 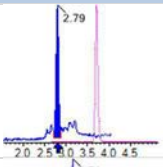 | 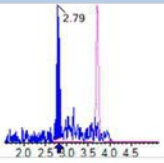 | MI2 DG 2024-03-20 |
| PFBA | ( 213.0 / 169.0 ) 211342 | ( 3.71 , 1.00 ) ( 0.00 , N/A , 0.0) | 169.4 | N/A<br>0.0<br>0.0 | 0.8932 | N/A | 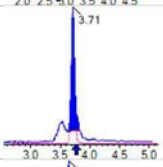 | | |
| PFPeA | ( 263.0 / 219.0 ) 221319<br>( 263.0 / 69.0 ) 3008 | ( 4.80 , 1.00 ) ( 0.00 , N/A , 0.0) | 1176.2<br>47.4 | 0.0136<br>113.8<br>122.5 | 1.0475 | N/A | 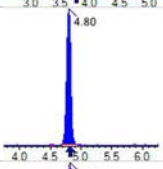 | 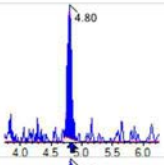 | |
| PFHxA | ( 313.0 / 269.0 ) 188862<br>( 313.0 / 119.0 ) 21577 | ( 6.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 801.4<br>338.0 | 0.1142<br>98.4<br>97.6 | 0.8086 | N/A | 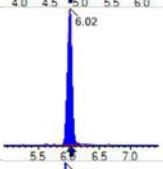 | 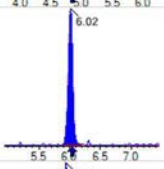 | |
| PFHpA | ( 363.0 / 319.0 ) 111787<br>( 363.0 / 169.0 ) 35008 | ( 7.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 418.4<br>292.5 | 0.3132<br>103.3<br>106.1 | 0.4233 | N/A | 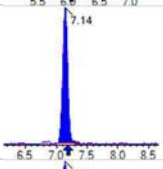 | 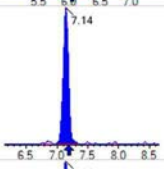 | |
| PFOA | ( 413.0 / 369.0 ) 275599<br>( 413.0 / 169.0 ) 110484 | ( 8.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 245.2<br>289.8 | 0.4009<br>109.7<br>116.8 | 0.7383 | N/A | 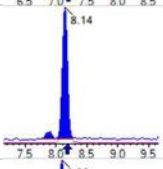 | 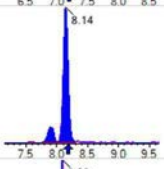 | MI5 DG 2024-03-20 |
| PFNA | ( 463.0 / 419.0 ) 44798<br>( 463.0 / 169.0 ) 13231 | ( 9.08 , 1.00 ) ( 0.00 , N/A , 0.4) | 216.4<br>135.6 | 0.2953<br>115.7<br>122.8 | 0.1997 | N/A | 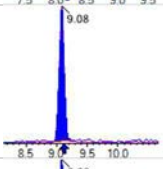 | 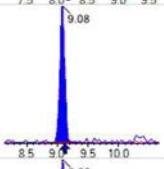 | |
| PFDA | ( 513.0 / 469.0 ) 4160<br>( 513.0 / 169.0 ) 1016 | ( 9.98 , 1.00 ) ( 0.01 , N/A , -0.4) | 36.1<br>31.4 | 0.2444<br>208.6<br>204.2 | 0.0162 | N/A | 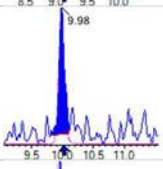 | 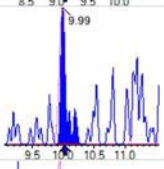 | IR2,MI2 DG 2024-03-20 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 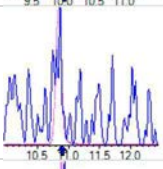 | 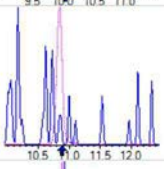 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 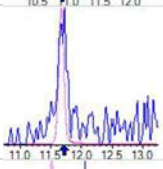 | 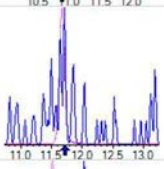 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 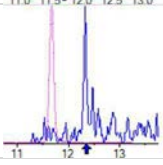 | 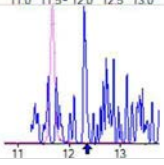 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (33)
Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 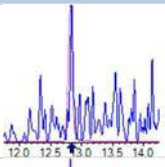 | 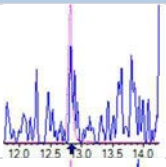 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 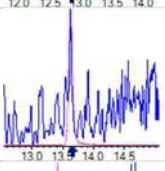 | 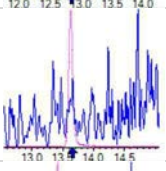 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 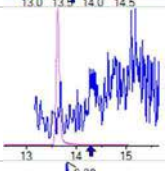 | 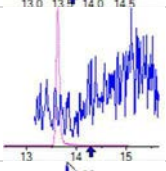 | |
| PFBS | ( 299.0 / 80.0 )<br>212181<br>( 299.0 / 99.0 )<br>156785 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , -0.1) | 715.4<br>807.5 | 0.7389<br>104.5<br>100.5 | 0.5452 | N/A | 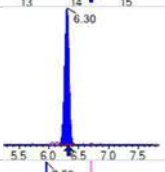 | 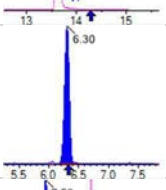 | |
| PFPeS | ( 349.0 / 80.0 )<br>29910<br>( 349.0 / 99.0 )<br>11470 | ( 7.53 , 0.88 )<br>( N/A , -0.03 , 0.3) | 76.2<br>68.3 | 0.3835<br>106.6<br>108.9 | 0.0317 | N/A | 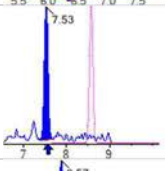 | 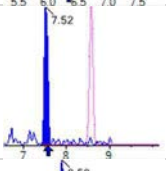 | |
| PFHxS | ( 399.0 / 80.0 )<br>199455<br>( 399.0 / 99.0 )<br>58940 | ( 8.57 , 1.00 )<br>( -0.01 , N/A , -0.2) | 478.1<br>312.8 | 0.2955<br>92.8<br>88.4 | 0.1817 | N/A | 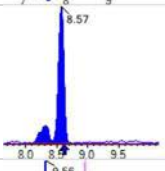 | 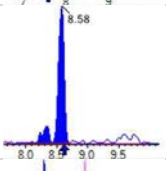 | |
| PFHpS | ( 449.0 / 80.0 )<br>10839<br>( 449.0 / 99.0 )<br>N/A | ( 9.56 , 0.92 )<br>( N/A , -0.02 , #Value!) | 30.5<br>N/A | N/A<br>0.0<br>0.0 | 0.0134 | N/A | 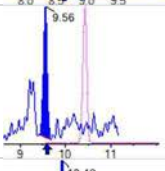 | 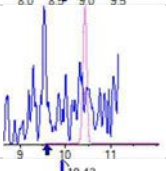 | IR1, |
| PFOS | ( 499.0 / 80.0 )<br>752283<br>( 499.0 / 99.0 )<br>177944 | ( 10.42 , 1.00 )<br>( 0.00 , N/A , 0.0) | 635.3<br>1033.2 | 0.2365<br>101.2<br>98.5 | 0.9677 | N/A | 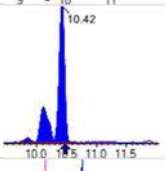 | 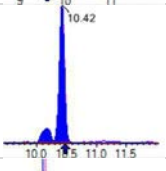 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 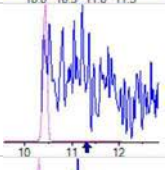 | 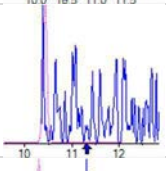 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 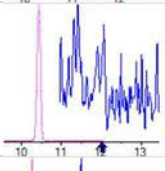 | 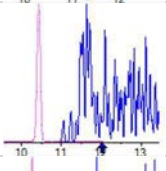 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 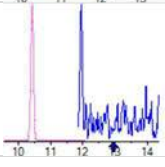 | 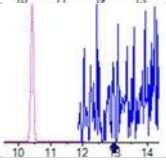 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 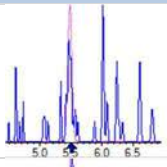 | 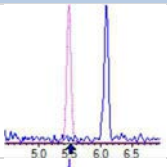 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 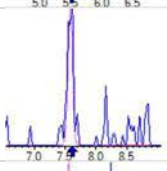 | 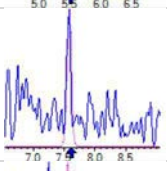 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 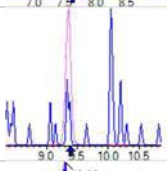 | 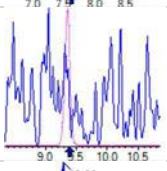 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16076<br>( 627.0 / 81.0 )<br>23921 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.4) | 192.2<br>58.3 | 1.4880<br>103.4<br>102.0 | 0.0652 | N/A | 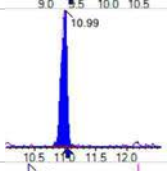 | 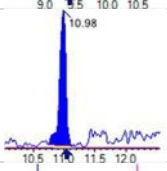 | |
| PFBSA | ( 297.9 / 78.0 )<br>5650<br>( 297.9 / 278.0 )<br>N/A | ( 8.09 , 0.57 )<br>( N/A , -0.01 , #Value!) | 52.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0157 | N/A | 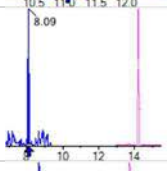 | 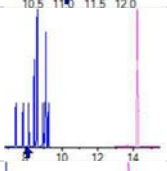 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 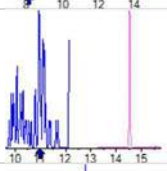 | 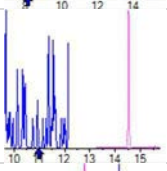 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 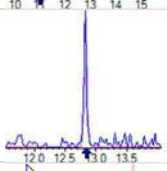 | 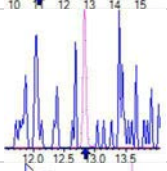 | |
| TFSI | ( 279.7 / 147.0 )<br>42051<br>( 279.7 / 211.0 )<br>3230 | ( 8.14 , 0.63 )<br>( N/A , -0.04 , -0.3) | 23.9<br>10.9 | 0.0768<br>91.4<br>89.8 | 0.0303 | N/A | 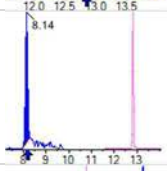 | 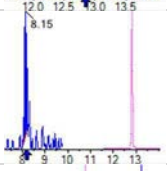 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 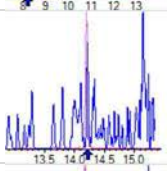 | 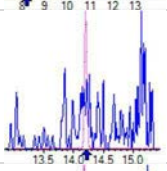 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 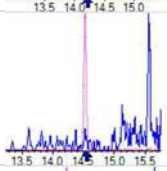 | 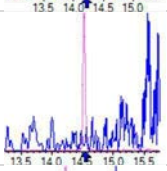 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 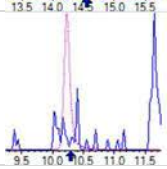 | 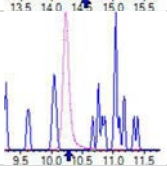 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 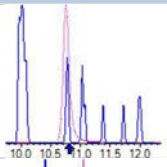 | 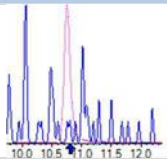 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 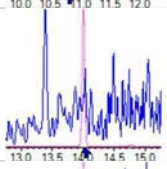 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 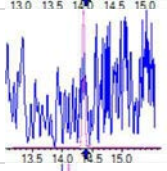 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 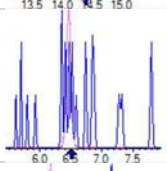 | 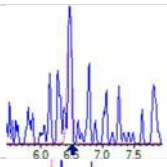 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 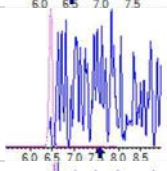 | 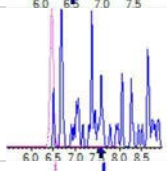 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 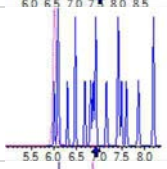 | 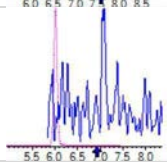 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 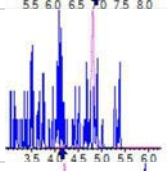 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 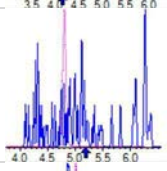 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 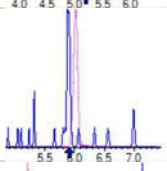 | 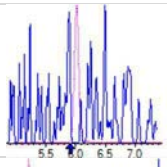 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 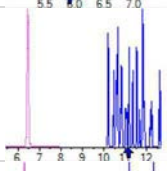 | 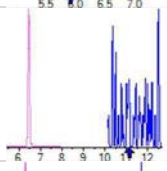 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 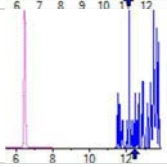 | 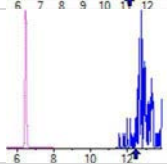 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 7571<br>( 461.0 / 381.2 ) 3128 | ( 9.48 , 0.91 )<br>( N/A , -0.02 , 2.0) | 33.6<br>25.6 | 0.4132<br>103.7<br>104.2 | 0.0173 | N/A | 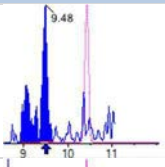 | 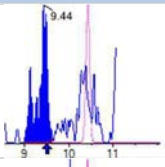 | MI5 DG 2024-03-20 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 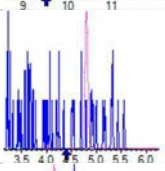 | 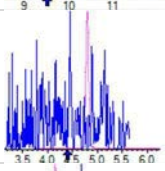 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 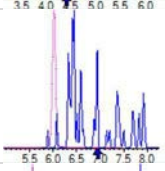 | 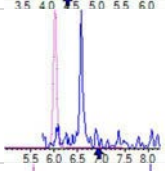 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 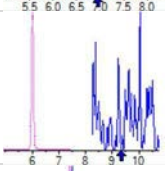 | 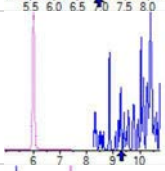 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 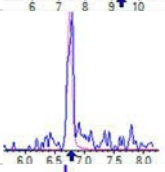 | 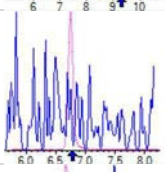 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 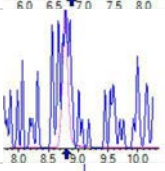 | 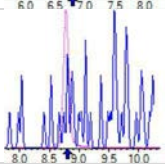 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 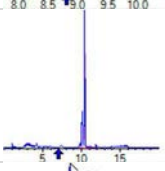 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 247344 | ( 3.71 , N/A )<br>( N/A , -0.05 , N/A ) | 1094.5 | N/A | 1.0374<br>[ 1.0000 ] | 103.7%<br>{ 104.6% } | 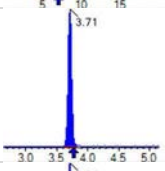 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 110716 | ( 6.01 , N/A )<br>( N/A , -0.03 , N/A ) | 9669.1 | N/A | 0.8728<br>[ 1.0000 ] | 87.3%<br>{ 87.5% } | 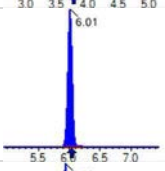 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 323452 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 3731.3 | N/A | 0.8182<br>[ 1.0000 ] | 81.8%<br>{ 85.3% } | 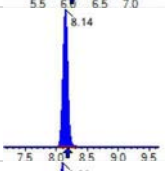 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 233960 | ( 9.09 , N/A )<br>( N/A , -0.03 , N/A ) | 868.6 | N/A | 0.8226<br>[ 1.0000 ] | 82.3%<br>{ 83.2% } | 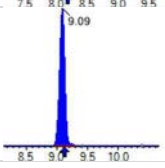 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 195363 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 2785.5 | N/A | 0.6690 [ 1.0000 ] | 66.9% { 67.5% } | 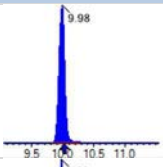 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 819329 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3985.9 | N/A | 0.8633 [ 1.0000 ] | 86.3% { 87.8% } | 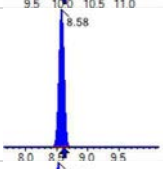 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 602812 | ( 10.43 , N/A ) ( N/A , -0.05 , N/A ) | 1044.2 | N/A | 0.7915 [ 1.0000 ] | 79.1% { 84.7% } | 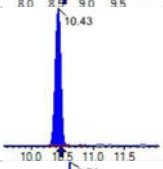 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1898882 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 31370.2 | N/A | 6.7202 [ 8.0000 ] | 84.0% { 84.8% } | 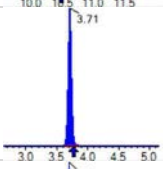 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 836538 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 5342.5 | N/A | 4.0495 [ 4.0000 ] | 101.2% { 85.7% } | 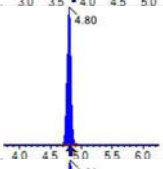 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 486216 | ( 6.02 , N/A ) ( N/A , -0.03 , N/A ) | 9302.9 | N/A | 1.9247 [ 2.0000 ] | 96.2% { 82.4% } | 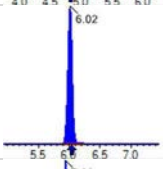 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 538293 | ( 7.14 , N/A ) ( N/A , -0.03 , N/A ) | 3345.0 | N/A | 1.9156 [ 2.0000 ] | 95.8% { 82.0% } | 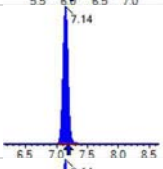 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 744365 | ( 8.14 , N/A ) ( N/A , -0.03 , N/A ) | 3343.9 | N/A | 2.1478 [ 2.0000 ] | 107.4% { 86.3% } | 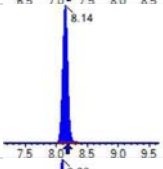 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 223210 | ( 9.08 , N/A ) ( N/A , -0.03 , N/A ) | 1542.1 | N/A | 0.9730 [ 1.0000 ] | 97.3% { 82.7% } | 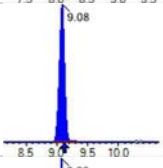 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 251886 | ( 9.98 , N/A ) ( N/A , -0.05 , N/A ) | 969.0 | N/A | 1.1505 [ 1.0000 ] | 115.1% { 78.3% } | 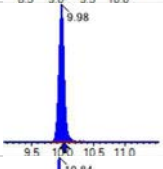 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 315388 | ( 10.84 , N/A ) ( N/A , -0.04 , N/A ) | 926.6 | N/A | 1.2245 [ 1.0000 ] | 122.4% { 84.8% } | 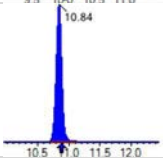 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-08 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 301492 | ( 11.67 , N/A ) ( N/A , -0.04 , N/A ) | 1168.1 | N/A | 1.1494 [ 1.0000 ] | 114.9% { 80.9% } | 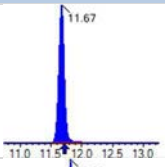 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 256422 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1192.5 | N/A | 1.1479 [ 1.0000 ] | 114.8% { 78.5% } | 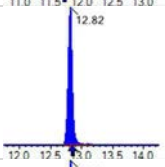 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 431560 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2324.6 | N/A | 2.2629 [ 2.0000 ] | 113.1% { 85.4% } | 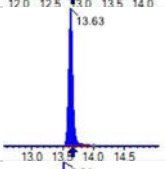 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1498996 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 1341.9 | N/A | 2.0250 [ 2.0000 ] | 101.2% { 89.3% } | 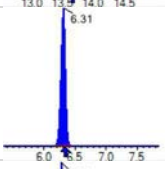 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1234706 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3211.3 | N/A | 2.0896 [ 2.0000 ] | 104.5% { 93.6% } | 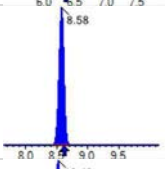 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1346208 | ( 10.43 , N/A ) ( N/A , -0.05 , N/A ) | 1138.9 | N/A | 2.0712 [ 2.0000 ] | 103.6% { 86.9% } | 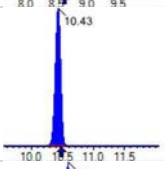 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 575149 | ( 5.48 , N/A ) ( N/A , -0.03 , N/A ) | 93.3 | N/A | 4.5032 [ 4.0000 ] | 112.6% { 97.6% } | 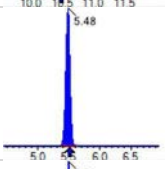 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1653356 | ( 7.59 , N/A ) ( N/A , -0.03 , N/A ) | 2086.7 | N/A | 4.3255 [ 4.0000 ] | 108.1% { 99.2% } | 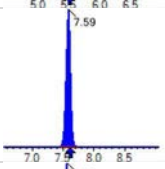 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1241374 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1303.7 | N/A | 4.1410 [ 4.0000 ] | 103.5% { 90.8% } | 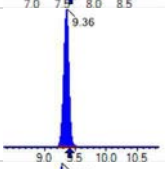 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2558601 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1379.3 | N/A | 8.1666 [ 8.0000 ] | 102.1% { 100.2% } | 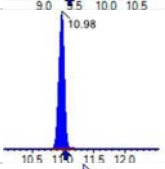 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1052895 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 2660.7 | N/A | 1.8280 [ 2.0000 ] | 91.4% { 76.6% } | 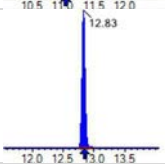 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (33)
Acquired: 2024/03/20 - 03:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 139249 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 1170.3 | N/A | 1.1398 [ 2.0000 ] | 57.0% { 48.4% } | 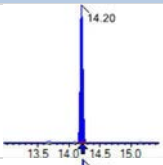 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 139933 | ( 14.52 , N/A ) ( N/A , -0.01 , N/A ) | 1306.4 | N/A | 1.0681 [ 2.0000 ] | 53.4% { 45.6% } | 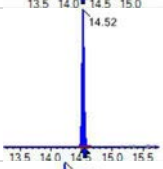 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 668887 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 1551.9 | N/A | 3.9996 [ 4.0000 ] | 100.0% { 79.1% } | 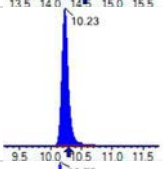 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 659045 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 1704.9 | N/A | 4.3238 [ 4.0000 ] | 108.1% { 85.6% } | 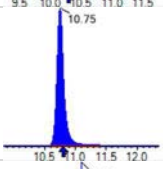 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 785236 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1572.8 | N/A | 14.3032 [ 20.0000 ] | 71.5% { 57.1% } | 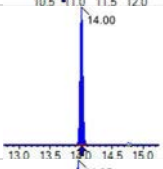 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 744392 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 3014.4 | N/A | 13.3592 [ 20.0000 ] | 66.8% { 57.7% } | 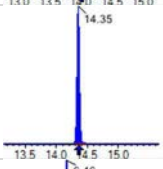 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 819998 | ( 6.46 , N/A ) ( N/A , -0.03 , N/A ) | 2240.0 | N/A | 7.1259 [ 8.0000 ] | 89.1% { 80.2% } | 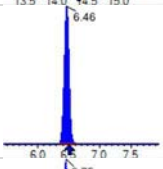 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 676624 | ( 6.75 , N/A ) ( N/A , -0.03 , N/A ) | 1292.6 | N/A | 3.1945 [ 2.0000 ] | 159.7% { 109.7% } | 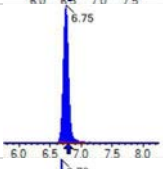 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 513733 | ( 8.78 , N/A ) ( N/A , -0.03 , N/A ) | 693.1 | N/A | 2.6643 [ 2.0000 ] | 133.2% { 92.9% } | 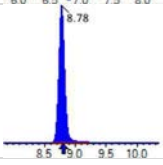 | | |

# ANALYSIS DATA SHEETL

EB-5-031524-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-09- | File ID:- | S2024-03-19B (34)- |
| Sampled:- | 03/15/24 12:00- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 03:46- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 551.789 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.4- | U- |
| PFPeA- | ND- | 0.059- | 0.72- | U- |
| PFHxA- | ND- | 0.050- | 0.36- | U- |
| PFHpA- | ND- | 0.037- | 0.36- | U- |
| PFOA- | ND- | 0.14- | 0.36- | U- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | ND- | 0.092- | 0.36- | U- |
| PFUnA- | ND- | 0.15- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | ND- | 0.033- | 0.36- | U- |
| PFPeS- | ND- | 0.057- | 0.36- | U- |
| PFHxS- | ND- | 0.029- | 0.36- | U- |
| PFHpS- | ND- | 0.047- | 0.36- | U- |
| PFOS- | 0.062- | 0.058- | 0.36- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.094- | 0.36- | U- |
| NMeFOSA- | ND- | 0.43- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.096- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

EB-5-031524-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-09- | File ID:- | S2024-03-19B (34)- |
| Sampled:- | 03/15/24 12:00- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 03:46- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 551.789 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.4- | U- |
| NEtFOSE- | ND- | 0.95- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.099- | 0.72- | U- |
| PFMPA- | ND- | 0.049- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (34)
Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>24655<br>( 163.0 / 69.0 )<br>668 | ( 2.80 , 0.75 )<br>( N/A , 0.01 , -0.4) | 178.3<br>54.6 | 0.0271<br>99.8<br>102.8 | 0.0814 | N/A | 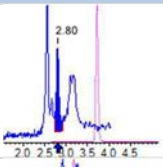 | 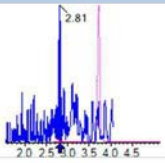 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 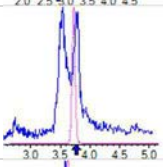 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 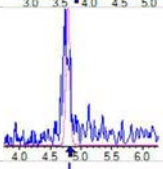 | 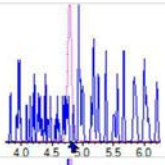 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 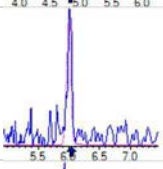 | 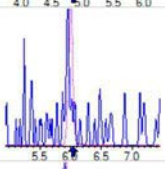 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 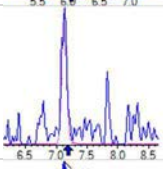 | 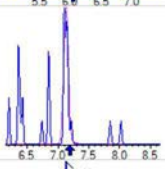 | |
| PFOA | ( 413.0 / 369.0 )<br>18019<br>( 413.0 / 169.0 )<br>7536 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.1) | 23.8<br>52.9 | 0.4182<br>114.4<br>121.8 | 0.0211 | N/A | 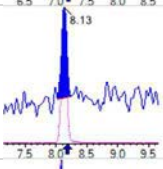 | 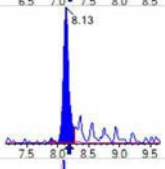 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 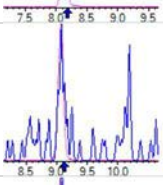 | 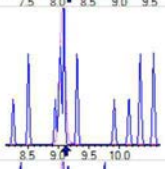 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 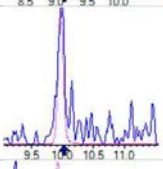 | 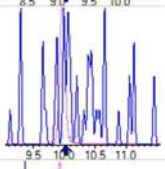 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 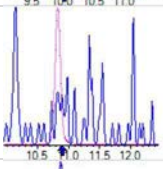 | 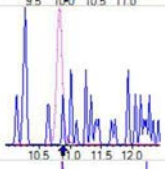 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 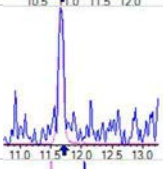 | 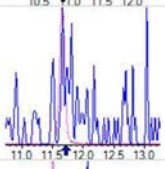 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 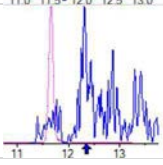 | 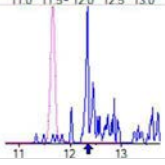 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (34)
Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 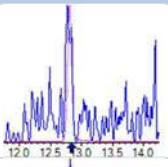 | 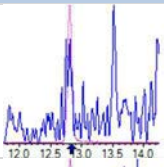 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 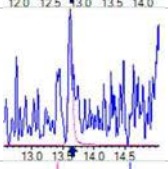 | 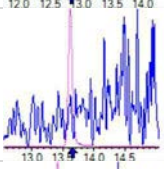 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 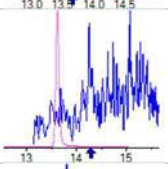 | 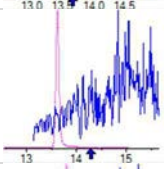 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 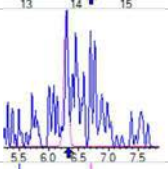 | 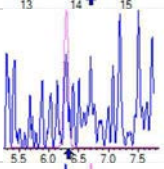 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 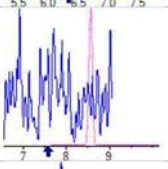 | 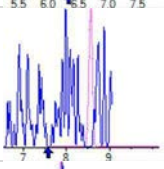 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 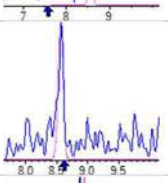 | 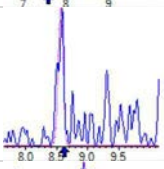 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 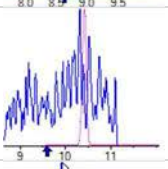 | 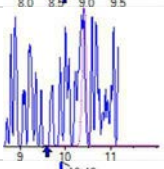 | |
| PFOS | ( 499.0 / 80.0 )<br>15364<br>( 499.0 / 99.0 )<br>2782 | ( 10.35 , 0.99 )<br>( -0.07 , N/A , -3.4) | 47.8<br>114.4 | 0.1811<br>77.5<br>75.4 | 0.0172 | N/A | 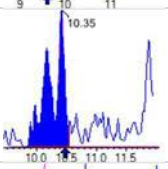 | 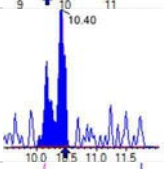 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 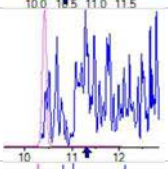 | 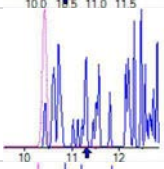 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 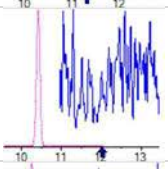 | 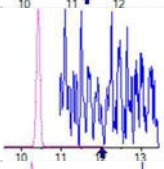 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 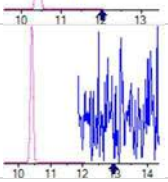 | 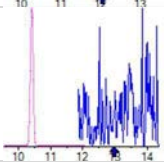 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 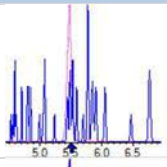 | 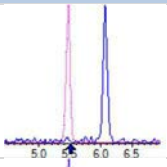 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 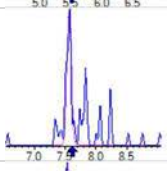 | 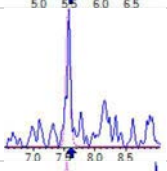 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 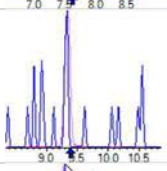 | 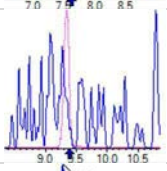 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15201<br>( 627.0 / 81.0 )<br>21812 | ( 10.99 , 1.00 )<br>( 0.02 , N/A , 0.9) | 224.3<br>57.2 | 1.4349<br>99.7<br>98.4 | 0.0572 | N/A | 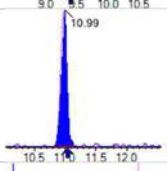 | 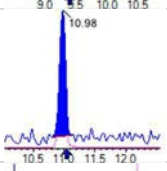 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 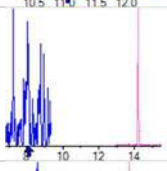 | 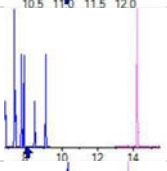 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 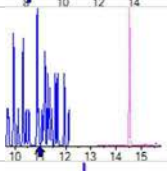 | 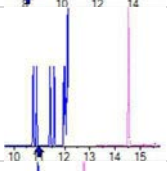 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 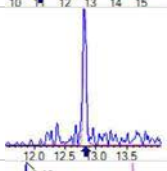 | 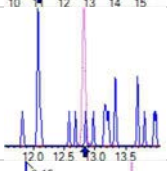 | |
| TFSI | ( 279.7 / 147.0 )<br>25499<br>( 279.7 / 211.0 )<br>2327 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , -1.0) | 20.5<br>9.8 | 0.0912<br>108.6<br>106.6 | 0.0238 | N/A | 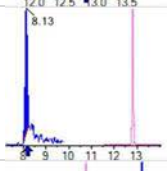 | 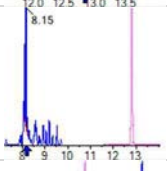 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 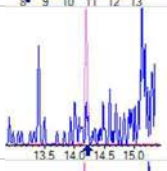 | 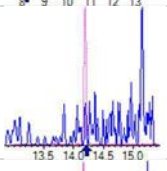 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 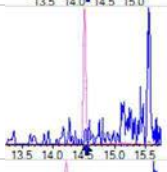 | 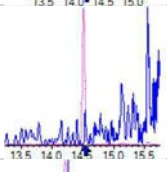 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 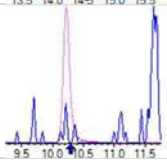 | 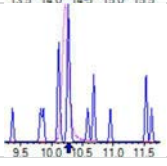 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (34)
Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 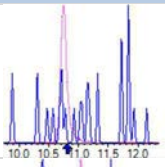 | 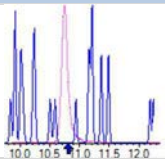 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 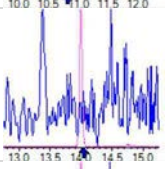 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 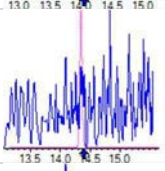 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 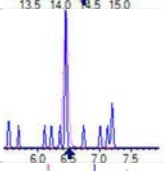 | 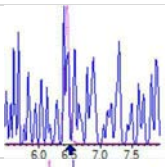 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 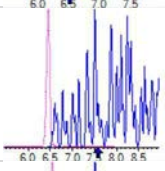 | 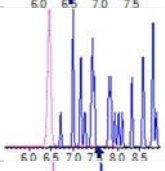 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 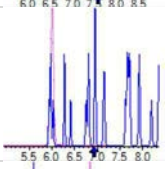 | 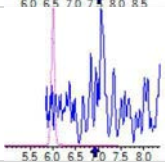 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 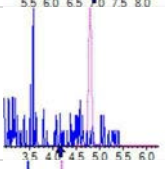 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 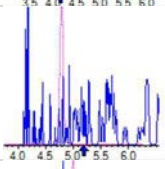 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 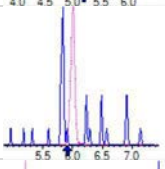 | 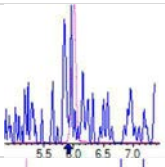 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 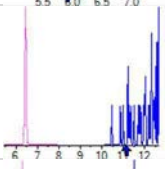 | 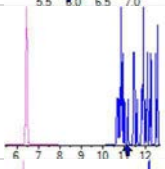 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 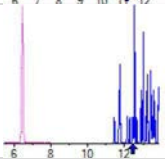 | 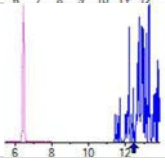 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (34)
Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 )<br>Area Counts*min | R.T.<br>( R.T [min] , R.R.T. )<br>( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio<br>IR Vs MP%<br>IR Vs CV% | Concentration<br>[ True ] ng/mL | Q.C. Rec.<br>{Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 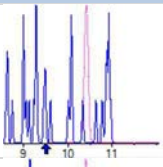 | 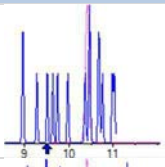 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 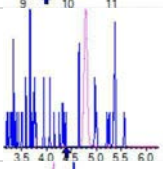 | 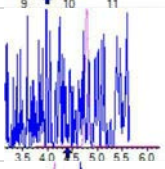 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 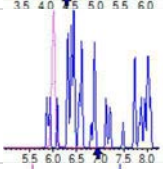 | 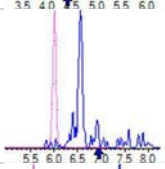 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 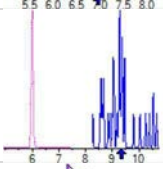 | 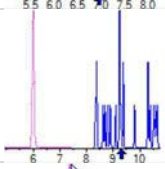 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>5332<br>( 357.2 / 243.0 )<br>745 | ( 6.72 , 1.00 )<br>( -0.01 , N/A , -1.2) | 49.9<br>19.1 | 0.1397<br>126.7<br>134.3 | 0.0159 | N/A | 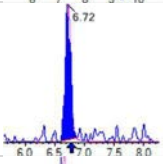 | 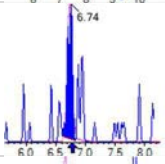 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 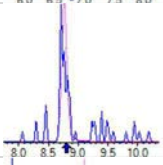 | 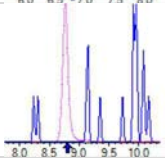 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 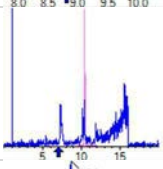 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>258621 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1374.1 | N/A | 1.0847<br>[ 1.0000 ] | 108.5%<br>{ 109.3% } | 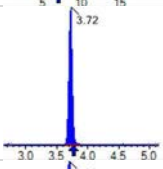 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>116371 | ( 6.00 , N/A )<br>( N/A , -0.04 , N/A ) | 10719.7 | N/A | 0.9174<br>[ 1.0000 ] | 91.7%<br>{ 91.9% } | 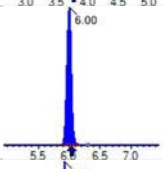 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>355106 | ( 8.13 , N/A )<br>( N/A , -0.05 , N/A ) | 3520.3 | N/A | 0.8983<br>[ 1.0000 ] | 89.8%<br>{ 93.6% } | 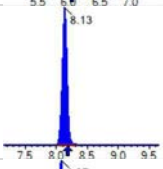 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>249528 | ( 9.07 , N/A )<br>( N/A , -0.05 , N/A ) | 1028.5 | N/A | 0.8774<br>[ 1.0000 ] | 87.7%<br>{ 88.7% } | 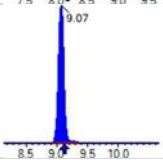 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (34)
Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 245758 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 4144.9 | N/A | 0.8416 [ 1.0000 ] | 84.2% { 85.0% } | 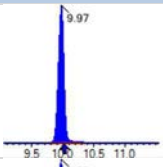 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 872587 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 6389.0 | N/A | 0.9194 [ 1.0000 ] | 91.9% { 93.5% } | 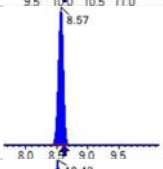 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 678449 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 1835.5 | N/A | 0.8908 [ 1.0000 ] | 89.1% { 95.3% } | 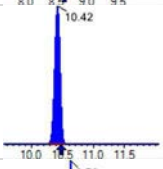 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2570379 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 42186.4 | N/A | 8.7000 [ 8.0000 ] | 108.7% { 114.8% } | 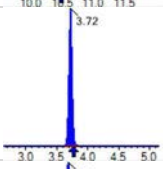 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 882128 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 4693.1 | N/A | 4.0627 [ 4.0000 ] | 101.6% { 90.4% } | 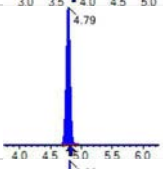 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 589038 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 9572.3 | N/A | 2.2184 [ 2.0000 ] | 110.9% { 99.8% } | 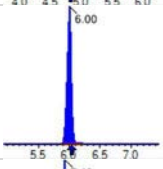 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 620186 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5098.9 | N/A | 2.0998 [ 2.0000 ] | 105.0% { 94.5% } | 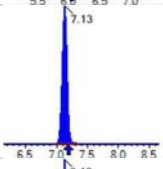 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 801127 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 3371.8 | N/A | 2.1055 [ 2.0000 ] | 105.3% { 92.9% } | 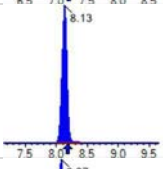 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 242067 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 2055.2 | N/A | 0.9894 [ 1.0000 ] | 98.9% { 89.7% } | 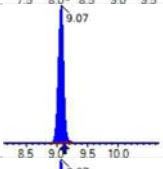 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 299056 | ( 9.97 , N/A ) ( N/A , -0.06 , N/A ) | 1002.8 | N/A | 1.0859 [ 1.0000 ] | 108.6% { 93.0% } | 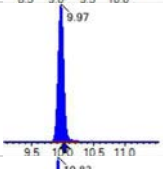 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 373215 | ( 10.83 , N/A ) ( N/A , -0.06 , N/A ) | 1115.7 | N/A | 1.1518 [ 1.0000 ] | 115.2% { 100.3% } | 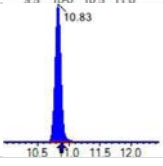 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-09 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 364499 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1243.3 | N/A | 1.1046 [ 1.0000 ] | 110.5% { 97.7% } | 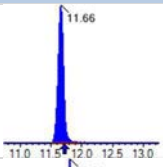  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 299606 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 992.0 | N/A | 1.0662 [ 1.0000 ] | 106.6% { 91.8% } | 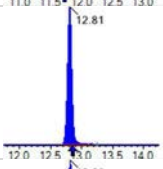  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 438816 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 1927.0 | N/A | 1.8291 [ 2.0000 ] | 91.5% { 86.9% } | 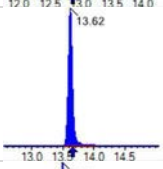  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1684523 | ( 6.29 , N/A ) ( N/A , -0.04 , N/A ) | 1249.0 | N/A | 2.1367 [ 2.0000 ] | 106.8% { 100.4% } | 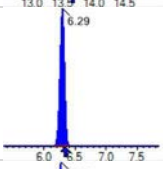  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1330787 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3721.1 | N/A | 2.1148 [ 2.0000 ] | 105.7% { 100.9% } | 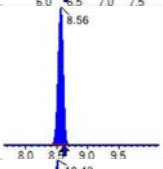  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1546629 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 1935.7 | N/A | 2.1143 [ 2.0000 ] | 105.7% { 99.8% } | 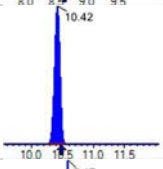  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 691241 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 114.8 | N/A | 5.0818 [ 4.0000 ] | 127.0% { 117.3% } | 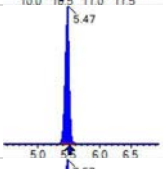  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1847938 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 4072.2 | N/A | 4.5395 [ 4.0000 ] | 113.5% { 110.9% } | 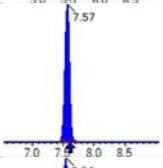  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1372695 | ( 9.34 , N/A ) ( N/A , -0.05 , N/A ) | 1399.6 | N/A | 4.2995 [ 4.0000 ] | 107.5% { 100.4% } | 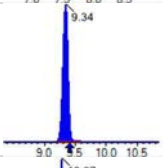  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2758126 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1315.1 | N/A | 8.2662 [ 8.0000 ] | 103.3% { 108.1% } | 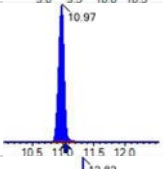  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 815298 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 2672.6 | N/A | 1.2577 [ 2.0000 ] | 62.9% { 59.3% } | 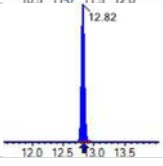  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (34)
Acquired: 2024/03/20 - 03:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 111598 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1220.1 | N/A | 0.8117 [ 2.0000 ] | 40.6% { 38.8% } | 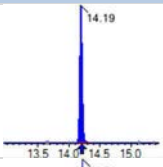  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 111013 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 1082.1 | N/A | 0.7529 [ 2.0000 ] | 37.6% { 36.2% } | 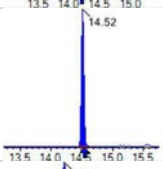  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863839 | ( 10.22 , N/A ) ( N/A , -0.05 , N/A ) | 2662.6 | N/A | 4.5895 [ 4.0000 ] | 114.7% { 102.2% } | 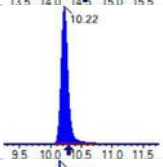  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 781526 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1620.9 | N/A | 4.5557 [ 4.0000 ] | 113.9% { 101.5% } | 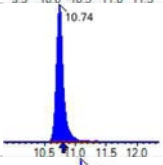  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 605343 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 1554.6 | N/A | 9.7971 [ 20.0000 ] | 49.0% { 44.0% } | 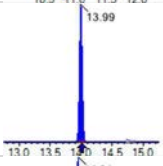  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 575679 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2186.4 | N/A | 9.1796 [ 20.0000 ] | 45.9% { 44.6% } | 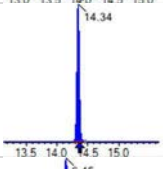  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1002225 | ( 6.45 , N/A ) ( N/A , -0.04 , N/A ) | 2388.1 | N/A | 8.2862 [ 8.0000 ] | 103.6% { 98.0% } | 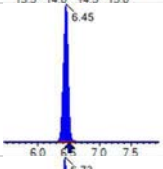  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 632407 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1357.7 | N/A | 2.3735 [ 2.0000 ] | 118.7% { 102.5% } | 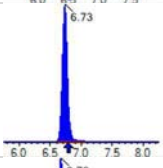  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 546475 | ( 8.76 , N/A ) ( N/A , -0.04 , N/A ) | 699.0 | N/A | 2.2529 [ 2.0000 ] | 112.6% { 98.8% } | 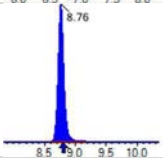  | | |

# ANALYSIS DATA SHEETL

FB-5-031524-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-10- | File ID:- | S2024-03-19B (35)- |
| Sampled:- | 03/15/24 12:10- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 04:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.173 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.098- | 0.061- | 0.75- | J- |
| PFHxA- | 0.052- | 0.051- | 0.37- | J- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | ND- | 0.14- | 0.37- | MI2, U- |
| PFNA- | ND- | 0.077- | 0.37- | U- |
| PFDA- | ND- | 0.095- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.19- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.059- | 0.37- | U- |
| PFHxS- | ND- | 0.030- | 0.37- | U- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.060- | 0.059- | 0.37- | J- |
| PFNS- | ND- | 0.12- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.12- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.099- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

FB-5-031524-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0103-10- | File ID:- | S2024-03-19B (35)- |
| Sampled:- | 03/15/24 12:10- | Prepared:- | 03/18/24 11:40- | Analyzed:- | 03/20/24 04:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.173 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0200- | Sequence:- | SD01003 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.050- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (35)
Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>44713<br>( 163.0 / 69.0 )<br>1551 | ( 2.81 , 0.76 )<br>( N/A , 0.01 , 0.4) | 265.6<br>90.2 | 0.0347<br>127.7<br>131.6 | 0.1508 | N/A | 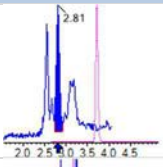 | 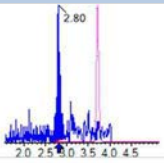 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 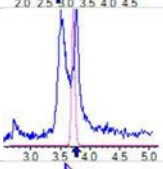 | | |
| PFPeA | ( 263.0 / 219.0 )<br>6071<br>( 263.0 / 69.0 )<br>N/A | ( 4.75 , 0.99 )<br>( -0.04 , N/A , #Value!) | 43.9<br>N/A | N/A<br>0.0<br>0.0 | 0.0262 | N/A | 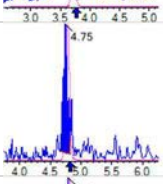 | 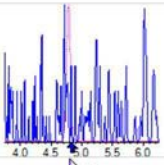 | |
| PFHxA | ( 313.0 / 269.0 )<br>3765<br>( 313.0 / 119.0 )<br>540 | ( 5.99 , 1.00 )<br>( -0.02 , N/A , -1.3) | 26.4<br>17.0 | 0.1433<br>123.4<br>122.4 | 0.0140 | N/A | 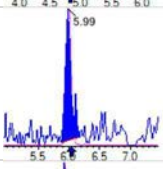 | 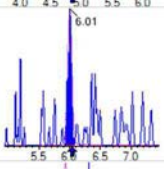 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 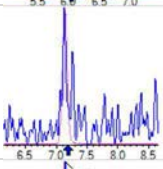 | 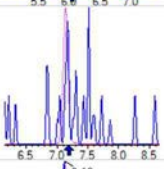 | |
| PFOA | ( 413.0 / 369.0 )<br>17669<br>( 413.0 / 169.0 )<br>6738 | ( 8.15 , 1.00 )<br>( 0.01 , N/A , 1.0) | 28.7<br>39.8 | 0.3813<br>104.3<br>111.1 | 0.0181 | N/A | 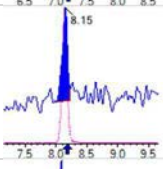 | 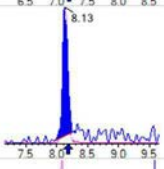 | MI2 DG<br>2024-03-20 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 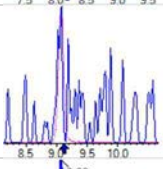 | 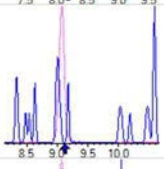 | |
| PFDA | ( 513.0 / 469.0 )<br>4579<br>( 513.0 / 169.0 )<br>402 | ( 9.98 , 1.00 )<br>( 0.01 , N/A , -0.9) | 49.6<br>45.9 | 0.0879<br>75.0<br>73.4 | 0.0151 | N/A | 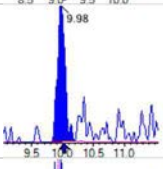 | 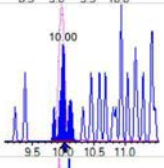 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 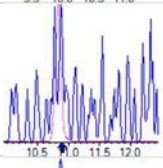 | 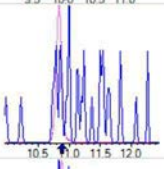 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 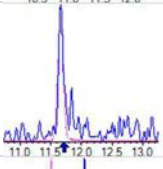 | 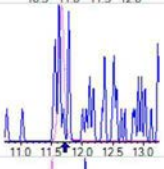 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 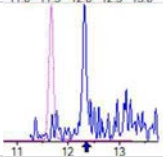 | 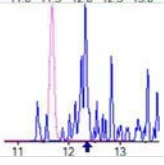 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (35)
Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 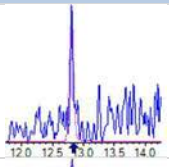 | 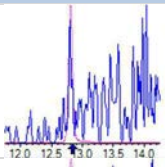 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 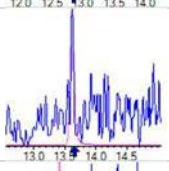 | 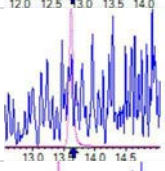 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 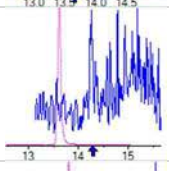 | 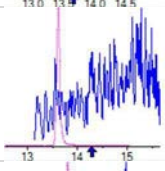 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 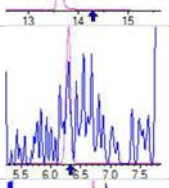 | 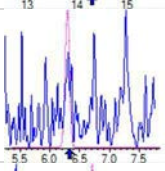 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 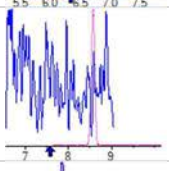 | 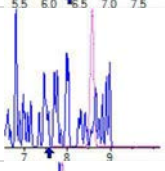 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 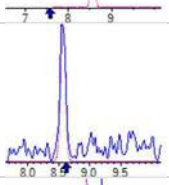 | 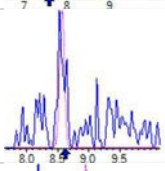 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 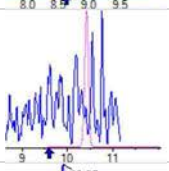 | 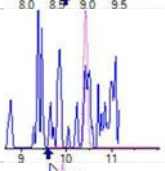 | |
| PFOS | ( 499.0 / 80.0 )<br>14492<br>( 499.0 / 99.0 )<br>2872 | ( 10.35 , 0.99 )<br>( -0.07 , N/A , 2.9) | 44.0<br>179.4 | 0.1982<br>84.8<br>82.5 | 0.0161 | N/A | 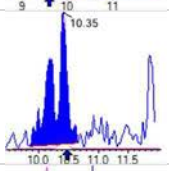 | 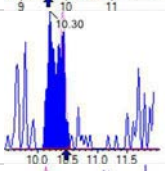 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 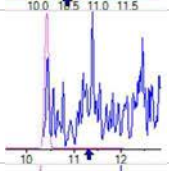 | 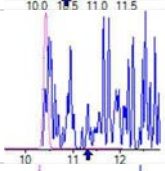 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 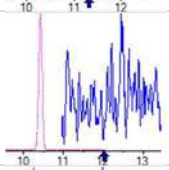 | 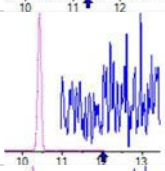 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 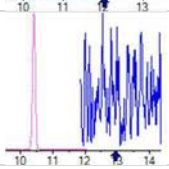 | 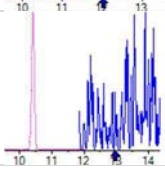 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (35)
Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 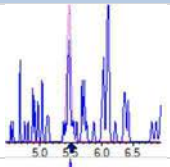 | 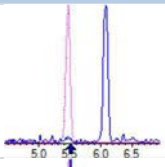 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 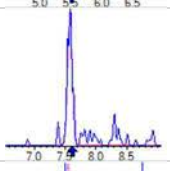 | 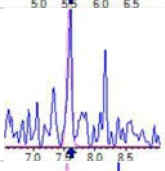 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 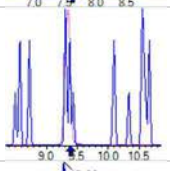 | 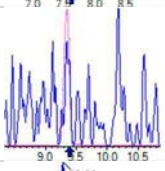 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>13955<br>( 627.0 / 81.0 )<br>23696 | ( 10.98 , 1.00 )<br>( 0.00 , N/A , 0.1) | 233.2<br>53.8 | 1.6981<br>118.0<br>116.4 | 0.0506 | N/A | 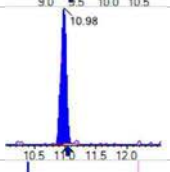 | 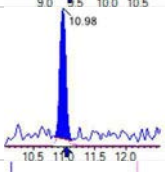 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 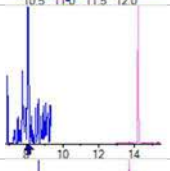 | 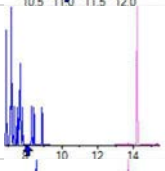 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 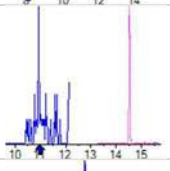 | 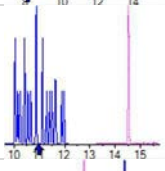 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 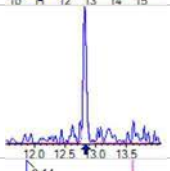 | 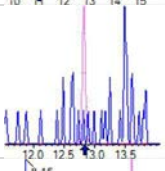 | |
| TFSI | ( 279.7 / 147.0 )<br>29743<br>( 279.7 / 211.0 )<br>3125 | ( 8.14 , 0.63 )<br>( N/A , -0.04 , -0.9) | 22.4<br>12.0 | 0.1051<br>125.1<br>122.8 | 0.0260 | N/A | 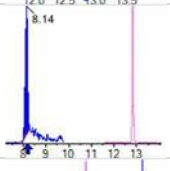 | 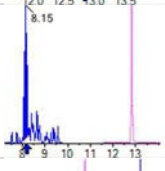 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 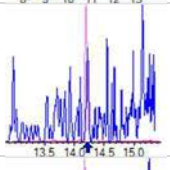 | 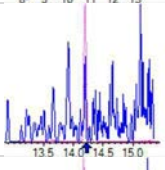 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 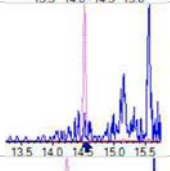 | 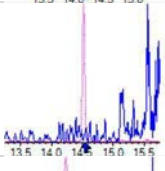 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 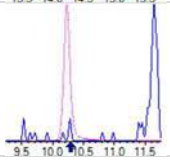 | 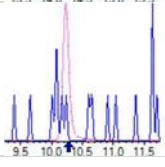 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (35)
Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 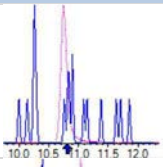 | 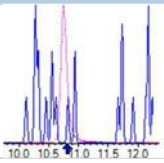 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 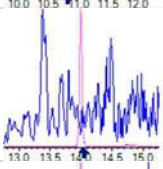 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 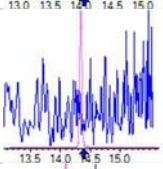 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 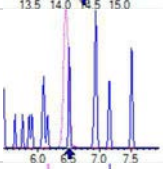 | 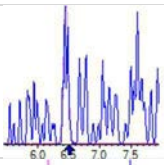 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 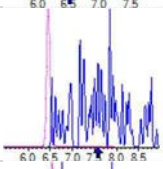 | 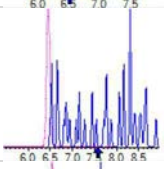 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 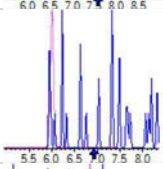 | 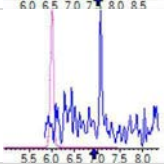 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 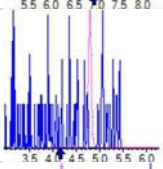 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 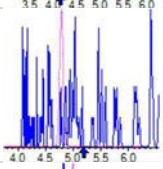 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 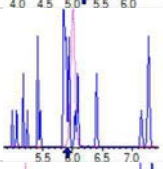 | 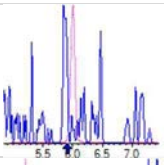 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 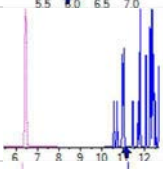 | 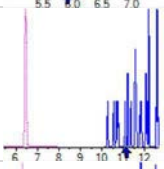 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 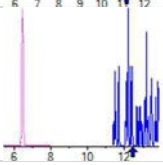 | 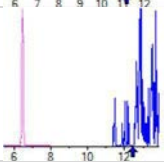 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0103-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (35)
Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 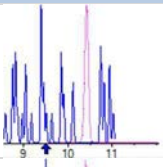 | 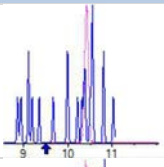 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 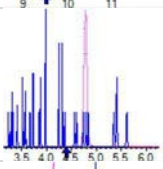 | 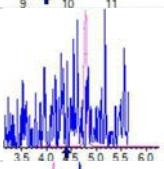 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 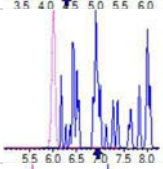 | 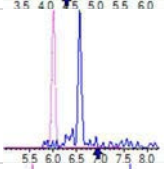 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 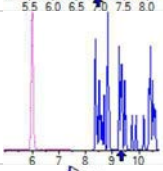 | 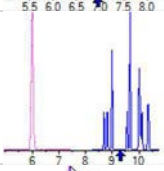 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>5127<br>( 357.2 / 243.0 )<br>869 | ( 6.74 , 1.00 )<br>( 0.00 , N/A , -1.6) | 48.5<br>17.5 | 0.1695<br>153.7<br>162.8 | 0.0156 | N/A | 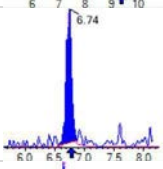 | 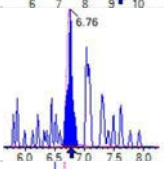 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 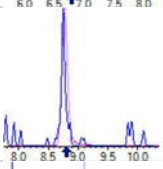 | 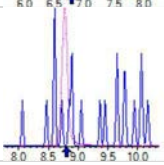 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 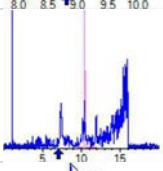 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>256080 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1226.0 | N/A | 1.0740<br>[ 1.0000 ] | 107.4%<br>{ 108.3% } | 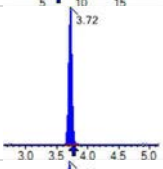 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>106433 | ( 6.00 , N/A )<br>( N/A , -0.04 , N/A ) | 16084.5 | N/A | 0.8390<br>[ 1.0000 ] | 83.9%<br>{ 84.1% } | 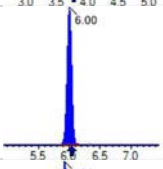 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>363363 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 3974.9 | N/A | 0.9192<br>[ 1.0000 ] | 91.9%<br>{ 95.8% } | 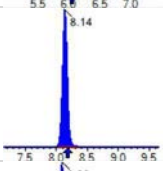 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>245398 | ( 9.08 , N/A )<br>( N/A , -0.04 , N/A ) | 1034.9 | N/A | 0.8628<br>[ 1.0000 ] | 86.3%<br>{ 87.3% } | 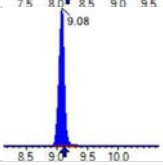 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-10 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 239664 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 5651.3 | N/A | 0.8207 [ 1.0000 ] | 82.1% { 82.8% } | 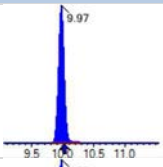 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 857746 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 4150.0 | N/A | 0.9038 [ 1.0000 ] | 90.4% { 91.9% } | 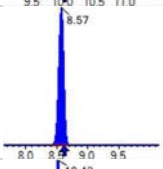 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 676811 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1695.3 | N/A | 0.8886 [ 1.0000 ] | 88.9% { 95.1% } | 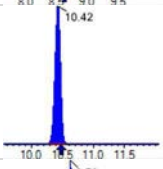 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2515274 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 44001.6 | N/A | 8.5980 [ 8.0000 ] | 107.5% { 112.3% } | 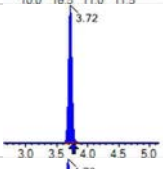 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 917171 | ( 4.78 , N/A ) ( N/A , -0.04 , N/A ) | 5887.6 | N/A | 4.6185 [ 4.0000 ] | 115.5% { 94.0% } | 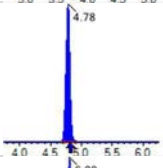 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 559956 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 10449.5 | N/A | 2.3058 [ 2.0000 ] | 115.3% { 94.9% } | 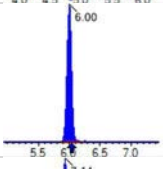 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 628741 | ( 7.14 , N/A ) ( N/A , -0.04 , N/A ) | 6000.2 | N/A | 2.3275 [ 2.0000 ] | 116.4% { 95.8% } | 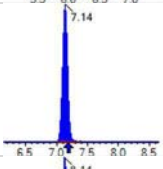 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 840896 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 2498.7 | N/A | 2.1598 [ 2.0000 ] | 108.0% { 97.5% } | 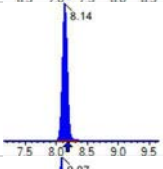 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 265527 | ( 9.07 , N/A ) ( N/A , -0.04 , N/A ) | 2488.5 | N/A | 1.1035 [ 1.0000 ] | 110.4% { 98.4% } | 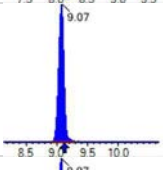 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 297051 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 966.9 | N/A | 1.1060 [ 1.0000 ] | 110.6% { 92.3% } | 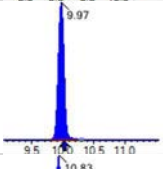 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 357864 | ( 10.83 , N/A ) ( N/A , -0.05 , N/A ) | 1111.4 | N/A | 1.1325 [ 1.0000 ] | 113.3% { 96.2% } | 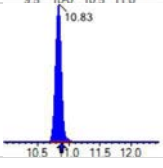 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-10 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 354826 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1391.8 | N/A | 1.1027 [ 1.0000 ] | 110.3% { 95.2% } | 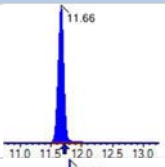 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310625 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1264.7 | N/A | 1.1335 [ 1.0000 ] | 113.4% { 95.1% } | 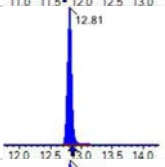 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 429154 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 2226.3 | N/A | 1.8344 [ 2.0000 ] | 91.7% { 85.0% } | 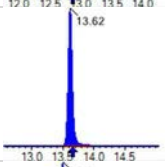 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1702118 | ( 6.29 , N/A ) ( N/A , -0.04 , N/A ) | 1226.5 | N/A | 2.1964 [ 2.0000 ] | 109.8% { 101.4% } | 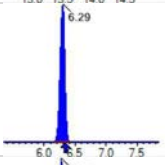 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1335687 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 4497.0 | N/A | 2.1593 [ 2.0000 ] | 108.0% { 101.3% } | 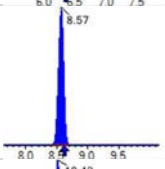 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1557268 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 2023.9 | N/A | 2.1340 [ 2.0000 ] | 106.7% { 100.5% } | 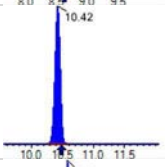 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 722423 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 88.2 | N/A | 5.4029 [ 4.0000 ] | 135.1% { 122.6% } | 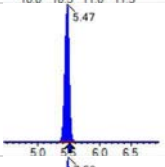 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1963346 | ( 7.58 , N/A ) ( N/A , -0.04 , N/A ) | 5388.3 | N/A | 4.9065 [ 4.0000 ] | 122.7% { 117.8% } | 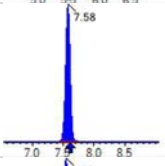 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1480814 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1717.4 | N/A | 4.7184 [ 4.0000 ] | 118.0% { 108.3% } | 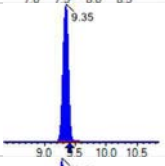 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2865300 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1540.6 | N/A | 8.7359 [ 8.0000 ] | 109.2% { 112.3% } | 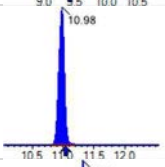 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 869505 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 2744.1 | N/A | 1.3445 [ 2.0000 ] | 67.2% { 63.3% } | 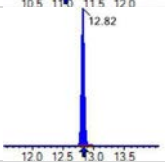 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0103-10 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 109759 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1018.9 | N/A | 0.8002 [ 2.0000 ] | 40.0% { 38.1% } | 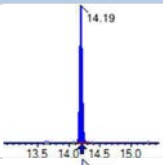  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 116827 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 1099.5 | N/A | 0.7942 [ 2.0000 ] | 39.7% { 38.1% } | 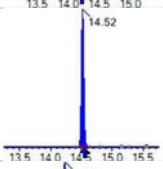  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 831389 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 2402.1 | N/A | 4.4277 [ 4.0000 ] | 110.7% { 98.3% } | 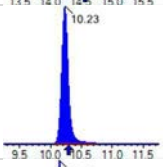  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 790875 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 1882.8 | N/A | 4.6214 [ 4.0000 ] | 115.5% { 102.7% } | 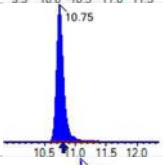  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 527483 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 977.0 | N/A | 8.5577 [ 20.0000 ] | 42.8% { 38.4% } | 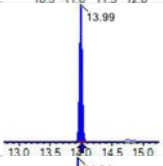  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 506802 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 1803.2 | N/A | 8.1009 [ 20.0000 ] | 40.5% { 39.3% } | 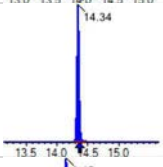  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1032198 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 3008.9 | N/A | 9.3309 [ 8.0000 ] | 116.6% { 100.9% } | 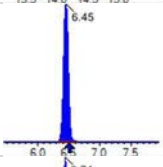  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 619987 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1160.9 | N/A | 2.3860 [ 2.0000 ] | 119.3% { 100.5% } | 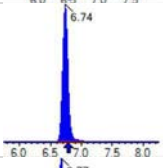  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 538799 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 775.3 | N/A | 2.2778 [ 2.0000 ] | 113.9% { 97.4% } | 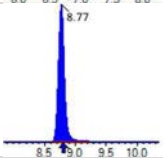  | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-17-4 (24C0103-01 ) ng/L** | Lab File ID: S2024-03-19B (26) | | | Analyzed: 03/20/24 01:01 |
| 13C4-PFBA | 29.6 | 89.2 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.41 | 107 | 40 - 130 | |
| 13C4-PFHPA | 7.41 | 102 | 40 - 130 | |
| 13C8-PFOA | 7.41 | 123 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 122 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 110 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 112 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 109 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 103 | 10 - 130 | |
| 13C2-PFHxDA | 7.41 | 92.7 | 20 - 150 | |
| 13C3-PFBS | 7.41 | 111 | 40 - 135 | |
| 13C3-PFHXS | 7.41 | 114 | 40 - 130 | |
| 13C8-PFOS | 7.41 | 112 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 129 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 121 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 124 | 20 - 150 | |
| 13C8-PFOSA | 7.41 | 60.3 | 40 - 130 | |
| D3-NMEFOSA | 7.41 | 38.4 | 10 - 130 | |
| D5-NETFOSA | 7.41 | 37.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 108 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 114 | 25 - 135 | |
| D7-NMEFOSE | 74.1 | 42.2 | 10 - 130 | |
| D9-NETFOSE | 74.1 | 40.8 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 105 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-17-3 (24C0103-02 ) ng/L** | Lab File ID: S2024-03-19B (27) | | | Analyzed: 03/20/24 01:22 |
| 13C4-PFBA | 29.4 | 95.8 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.35 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.35 | 103 | 40 - 130 | |
| 13C8-PFOA | 7.35 | 104 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 118 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 121 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 116 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 119 | 10 - 130 | |
| 13C2-PFHxDA | 7.35 | 108 | 20 - 150 | |
| 13C3-PFBS | 7.35 | 115 | 40 - 135 | |
| 13C3-PFHXS | 7.35 | 111 | 40 - 130 | |
| 13C8-PFOS | 7.35 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 128 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 124 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 110 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.4 | 120 | 20 - 150 | |
| 13C8-PFOSA | 7.35 | 85.0 | 40 - 130 | |
| D3-NMEFOSA | 7.35 | 46.5 | 10 - 130 | |
| D5-NETFOSA | 7.35 | 44.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 115 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 118 | 25 - 135 | |
| D7-NMEFOSE | 73.5 | 56.5 | 10 - 130 | |
| D9-NETFOSE | 73.5 | 56.1 | 10 - 130 | |
| 13C3-HFPO-DA | 29.4 | 97.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-3-031524 (24C0103-03 ) ng/L** | Lab File ID: S2024-03-19B (28) | | | Analyzed: 03/20/24 01:42 |
| 13C4-PFBA | 29.5 | 88.5 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 93.5 | 40 - 130 | |
| 13C5-PFHXA | 7.37 | 97.8 | 40 - 130 | |
| 13C4-PFHPA | 7.37 | 93.0 | 40 - 130 | |
| 13C8-PFOA | 7.37 | 106 | 40 - 130 | |
| 13C9-PFNA | 3.68 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.68 | 113 | 40 - 130 | |
| 13C7-PFUnA | 3.68 | 104 | 30 - 130 | |
| 13C2-PFDOA | 3.68 | 116 | 10 - 130 | |
| 13C2-PFTEDA | 3.68 | 111 | 10 - 130 | |
| 13C2-PFHxDA | 7.37 | 110 | 20 - 150 | |
| 13C3-PFBS | 7.37 | 105 | 40 - 135 | |
| 13C3-PFHXS | 7.37 | 110 | 40 - 130 | |
| 13C8-PFOS | 7.37 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 115 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 110 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 114 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.5 | 104 | 20 - 150 | |
| 13C8-PFOSA | 7.37 | 72.2 | 40 - 130 | |
| D3-NMEFOSA | 7.37 | 41.4 | 10 - 130 | |
| D5-NETFOSA | 7.37 | 38.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 99.7 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 104 | 25 - 135 | |
| D7-NMEFOSE | 73.7 | 56.9 | 10 - 130 | |
| D9-NETFOSE | 73.7 | 52.6 | 10 - 130 | |
| 13C3-HFPO-DA | 29.5 | 92.6 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-17-2 (24C0103-04 ) ng/L** | Lab File ID: S2024-03-19B (29) | | | Analyzed: 03/20/24 02:03 |
| 13C4-PFBA | 29.6 | 89.7 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 108 | 40 - 130 | |
| 13C5-PFHXA | 7.39 | 111 | 40 - 130 | |
| 13C4-PFHPA | 7.39 | 109 | 40 - 130 | |
| 13C8-PFOA | 7.39 | 110 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 113 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 115 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 130 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 130 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 127 | 10 - 130 | |
| 13C2-PFHxDA | 7.39 | 108 | 20 - 150 | |
| 13C3-PFBS | 7.39 | 109 | 40 - 135 | |
| 13C3-PFHXS | 7.39 | 117 | 40 - 130 | |
| 13C8-PFOS | 7.39 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 118 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 113 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 112 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 108 | 20 - 150 | |
| 13C8-PFOSA | 7.39 | 66.2 | 40 - 130 | |
| D3-NMEFOSA | 7.39 | 42.5 | 10 - 130 | |
| D5-NETFOSA | 7.39 | 40.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 101 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 113 | 25 - 135 | |
| D7-NMEFOSE | 73.9 | 43.9 | 10 - 130 | |
| D9-NETFOSE | 73.9 | 44.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 108 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-17-1 (24C0103-05 ) ng/L** | Lab File ID: S2024-03-19B (30) | | | Analyzed: 03/20/24 02:24 |
| 13C4-PFBA | 29.6 | 93.7 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 99.4 | 40 - 130 | |
| 13C5-PFHXA | 7.39 | 106 | 40 - 130 | |
| 13C4-PFHPA | 7.39 | 106 | 40 - 130 | |
| 13C8-PFOA | 7.39 | 107 | 40 - 130 | |
| 13C9-PFNA | 3.69 | 106 | 40 - 130 | |
| 13C6-PFDA | 3.69 | 114 | 40 - 130 | |
| 13C7-PFUnA | 3.69 | 117 | 30 - 130 | |
| 13C2-PFDOA | 3.69 | 114 | 10 - 130 | |
| 13C2-PFTEDA | 3.69 | 112 | 10 - 130 | |
| 13C2-PFHxDA | 7.39 | 97.8 | 20 - 150 | |
| 13C3-PFBS | 7.39 | 111 | 40 - 135 | |
| 13C3-PFHXS | 7.39 | 109 | 40 - 130 | |
| 13C8-PFOS | 7.39 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 120 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 114 | 20 - 150 | |
| 13C8-PFOSA | 7.39 | 95.8 | 40 - 130 | |
| D3-NMEFOSA | 7.39 | 55.8 | 10 - 130 | |
| D5-NETFOSA | 7.39 | 51.7 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 104 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 111 | 25 - 135 | |
| D7-NMEFOSE | 73.9 | 74.6 | 10 - 130 | |
| D9-NETFOSE | 73.9 | 66.3 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-11-3 (24C0103-06 ) ng/L** | Lab File ID: S2024-03-19B (31) | | | Analyzed: 03/20/24 02:44 |
| 13C4-PFBA | 29.7 | 89.8 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.43 | 100 | 40 - 130 | |
| 13C4-PFHPA | 7.43 | 98.7 | 40 - 130 | |
| 13C8-PFOA | 7.43 | 104 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 110 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 109 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 99.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.43 | 85.3 | 20 - 150 | |
| 13C3-PFBS | 7.43 | 101 | 40 - 135 | |
| 13C3-PFHXS | 7.43 | 103 | 40 - 130 | |
| 13C8-PFOS | 7.43 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 107 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 92.4 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 81.7 | 20 - 150 | |
| 13C8-PFOSA | 7.43 | 86.6 | 40 - 130 | |
| D3-NMEFOSA | 7.43 | 48.5 | 10 - 130 | |
| D5-NETFOSA | 7.43 | 45.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 94.0 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 103 | 25 - 135 | |
| D7-NMEFOSE | 74.3 | 62.5 | 10 - 130 | |
| D9-NETFOSE | 74.3 | 60.6 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 96.4 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-11-2 (24C0103-07 ) ng/L** | Lab File ID: S2024-03-19B (32) | | | Analyzed: 03/20/24 03:05 |
| 13C4-PFBA | 28.9 | 90.0 | 5 - 130 | |
| 13C5-PFPEA | 14.5 | 103 | 40 - 130 | |
| 13C5-PFHXA | 7.23 | 106 | 40 - 130 | |
| 13C4-PFHPA | 7.23 | 107 | 40 - 130 | |
| 13C8-PFOA | 7.23 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.62 | 103 | 40 - 130 | |
| 13C6-PFDA | 3.62 | 115 | 40 - 130 | |
| 13C7-PFUnA | 3.62 | 117 | 30 - 130 | |
| 13C2-PFDOA | 3.62 | 114 | 10 - 130 | |
| 13C2-PFTEDA | 3.62 | 110 | 10 - 130 | |
| 13C2-PFHxDA | 7.23 | 104 | 20 - 150 | |
| 13C3-PFBS | 7.23 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.23 | 107 | 40 - 130 | |
| 13C8-PFOS | 7.23 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 14.5 | 111 | 40 - 200 | |
| 13C2-6:2FTS | 14.5 | 102 | 40 - 200 | |
| 13C2-8:2FTS | 14.5 | 102 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.9 | 105 | 20 - 150 | |
| 13C8-PFOSA | 7.23 | 89.1 | 40 - 130 | |
| D3-NMEFOSA | 7.23 | 50.2 | 10 - 130 | |
| D5-NETFOSA | 7.23 | 47.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.5 | 108 | 40 - 170 | |
| D5-NETFOSAA | 14.5 | 110 | 25 - 135 | |
| D7-NMEFOSE | 72.3 | 68.8 | 10 - 130 | |
| D9-NETFOSE | 72.3 | 64.2 | 10 - 130 | |
| 13C3-HFPO-DA | 28.9 | 103 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-11-1 (24C0103-08 ) ng/L** | Lab File ID: S2024-03-19B (33) | | | Analyzed: 03/20/24 03:25 |
| 13C4-PFBA | 29.6 | 84.0 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.39 | 96.2 | 40 - 130 | |
| 13C4-PFHPA | 7.39 | 95.8 | 40 - 130 | |
| 13C8-PFOA | 7.39 | 107 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 97.3 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 115 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 122 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 115 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 115 | 10 - 130 | |
| 13C2-PFHxDA | 7.39 | 113 | 20 - 150 | |
| 13C3-PFBS | 7.39 | 101 | 40 - 135 | |
| 13C3-PFHXS | 7.39 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.39 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 108 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 104 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 102 | 20 - 150 | |
| 13C8-PFOSA | 7.39 | 91.4 | 40 - 130 | |
| D3-NMEFOSA | 7.39 | 57.0 | 10 - 130 | |
| D5-NETFOSA | 7.39 | 53.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 100 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 108 | 25 - 135 | |
| D7-NMEFOSE | 73.9 | 71.5 | 10 - 130 | |
| D9-NETFOSE | 73.9 | 66.8 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 89.1 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-5-031524 (24C0103-09 ) ng/L** | Lab File ID: S2024-03-19B (34) | | | Analyzed: 03/20/24 03:46 |
| 13C4-PFBA | 29.0 | 109 | 5 - 130 | |
| 13C5-PFPEA | 14.5 | 102 | 40 - 130 | |
| 13C5-PFHXA | 7.25 | 111 | 40 - 130 | |
| 13C4-PFHPA | 7.25 | 105 | 40 - 130 | |
| 13C8-PFOA | 7.25 | 105 | 40 - 130 | |
| 13C9-PFNA | 3.62 | 98.9 | 40 - 130 | |
| 13C6-PFDA | 3.62 | 109 | 40 - 130 | |
| 13C7-PFUnA | 3.62 | 115 | 30 - 130 | |
| 13C2-PFDOA | 3.62 | 110 | 10 - 130 | |
| 13C2-PFTEDA | 3.62 | 107 | 10 - 130 | |
| 13C2-PFHxDA | 7.25 | 91.5 | 20 - 150 | |
| 13C3-PFBS | 7.25 | 107 | 40 - 135 | |
| 13C3-PFHXS | 7.25 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.25 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.5 | 127 | 40 - 200 | |
| 13C2-6:2FTS | 14.5 | 113 | 40 - 200 | |
| 13C2-8:2FTS | 14.5 | 107 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.0 | 103 | 20 - 150 | |
| 13C8-PFOSA | 7.25 | 62.9 | 40 - 130 | |
| D3-NMEFOSA | 7.25 | 40.6 | 10 - 130 | |
| D5-NETFOSA | 7.25 | 37.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.5 | 115 | 40 - 170 | |
| D5-NETFOSAA | 14.5 | 114 | 25 - 135 | |
| D7-NMEFOSE | 72.5 | 49.0 | 10 - 130 | |
| D9-NETFOSE | 72.5 | 45.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.0 | 104 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-5-031524 (24C0103-10 ) ng/L** | Lab File ID: S2024-03-19B (35) | | | Analyzed: 03/20/24 04:06 |
| 13C4-PFBA | 30.0 | 107 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 115 | 40 - 130 | |
| 13C5-PFHXA | 7.49 | 115 | 40 - 130 | |
| 13C4-PFHPA | 7.49 | 116 | 40 - 130 | |
| 13C8-PFOA | 7.49 | 108 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 110 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 111 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 113 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 110 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 113 | 10 - 130 | |
| 13C2-PFHxDA | 7.49 | 91.7 | 20 - 150 | |
| 13C3-PFBS | 7.49 | 110 | 40 - 135 | |
| 13C3-PFHXS | 7.49 | 108 | 40 - 130 | |
| 13C8-PFOS | 7.49 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 135 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 123 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 118 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.0 | 109 | 20 - 150 | |
| 13C8-PFOSA | 7.49 | 67.2 | 40 - 130 | |
| D3-NMEFOSA | 7.49 | 40.0 | 10 - 130 | |
| D5-NETFOSA | 7.49 | 39.7 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 111 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 116 | 25 - 135 | |
| D7-NMEFOSE | 74.9 | 42.8 | 10 - 130 | |
| D9-NETFOSE | 74.9 | 40.5 | 10 - 130 | |
| 13C3-HFPO-DA | 30.0 | 117 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0200-BLK1 ) ng/L** | Lab File ID: S2024-03-19B (8) | | | Analyzed: 03/19/24 18:52 |
| 13C4-PFBA | 32.0 | 112 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 111 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 110 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 103 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 105 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 113 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 112 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 105 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 76.5 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 114 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 111 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 126 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 121 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 107 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 39.5 | 40 - 130 | *R |
| D3-NMEFOSA | 8.00 | 25.7 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 27.9 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 107 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 110 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 30.1 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 30.4 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0200-BS1 ) ng/L | Lab File ID: S2024-03-19B (9) | | | Analyzed: 03/19/24 19:13 |
| 13C4-PFBA | 32.0 | 106 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 115 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 114 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 112 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 106 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 111 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 102 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 92.1 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 71.8 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 116 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 110 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 112 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 130 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 120 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 121 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 117 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 40.5 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 24.8 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 27.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 112 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 113 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 35.7 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 34.0 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0200-MRL1 ) ng/L** | Lab File ID: S2024-03-19B (10) | | | Analyzed: 03/19/24 19:33 |
| 13C4-PFBA | 32.0 | 113 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 113 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 111 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 113 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 118 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 113 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 105 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 106 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 96.9 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 72.9 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 112 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 114 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 128 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 123 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 125 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 120 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 43.4 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 26.3 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 29.2 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 113 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 119 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 33.3 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 33.9 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0200-MS2 ) ng/L** | Lab File ID: S2024-03-19B (13) | | | Analyzed: 03/19/24 20:35 |
| 13C4-PFBA | 28.1 | 89.5 | 5 - 130 | |
| 13C5-PFPEA | 14.1 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.04 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.04 | 102 | 40 - 130 | |
| 13C8-PFOA | 7.04 | 113 | 40 - 130 | |
| 13C9-PFNA | 3.52 | 106 | 40 - 130 | |
| 13C6-PFDA | 3.52 | 106 | 40 - 130 | |
| 13C7-PFUnA | 3.52 | 110 | 30 - 130 | |
| 13C2-PFDOA | 3.52 | 110 | 10 - 130 | |
| 13C2-PFTEDA | 3.52 | 107 | 10 - 130 | |
| 13C2-PFHxDA | 7.04 | 90.5 | 20 - 150 | |
| 13C3-PFBS | 7.04 | 111 | 40 - 135 | |
| 13C3-PFHXS | 7.04 | 114 | 40 - 130 | |
| 13C8-PFOS | 7.04 | 97.1 | 40 - 130 | |
| 13C2-4:2FTS | 14.1 | 122 | 40 - 200 | |
| 13C2-6:2FTS | 14.1 | 121 | 40 - 200 | |
| 13C2-8:2FTS | 14.1 | 117 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.1 | 117 | 20 - 150 | |
| 13C8-PFOSA | 7.04 | 48.2 | 40 - 130 | |
| D3-NMEFOSA | 7.04 | 30.1 | 10 - 130 | |
| D5-NETFOSA | 7.04 | 28.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.1 | 103 | 40 - 170 | |
| D5-NETFOSAA | 14.1 | 103 | 25 - 135 | |
| D7-NMEFOSE | 70.4 | 30.5 | 10 - 130 | |
| D9-NETFOSE | 70.4 | 29.2 | 10 - 130 | |
| 13C3-HFPO-DA | 28.1 | 97.4 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0103
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0200-MSD2 ) ng/L** | Lab File ID: S2024-03-19B (14) | | | Analyzed: 03/19/24 20:55 |
| 13C4-PFBA | 29.4 | 88.5 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 106 | 40 - 130 | |
| 13C5-PFHXA | 7.34 | 104 | 40 - 130 | |
| 13C4-PFHPA | 7.34 | 102 | 40 - 130 | |
| 13C8-PFOA | 7.34 | 106 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 96.6 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 103 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 111 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 107 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 99.8 | 10 - 130 | |
| 13C2-PFHxDA | 7.34 | 94.5 | 20 - 150 | |
| 13C3-PFBS | 7.34 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.34 | 102 | 40 - 130 | |
| 13C8-PFOS | 7.34 | 102 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 115 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.4 | 107 | 20 - 150 | |
| 13C8-PFOSA | 7.34 | 48.4 | 40 - 130 | |
| D3-NMEFOSA | 7.34 | 29.0 | 10 - 130 | |
| D5-NETFOSA | 7.34 | 29.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 89.9 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 96.2 | 25 - 135 | |
| D7-NMEFOSE | 73.4 | 29.2 | 10 - 130 | |
| D9-NETFOSE | 73.4 | 29.1 | 10 - 130 | |
| 13C3-HFPO-DA | 29.4 | 99.9 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0103T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0200-BLK1T Batch:T BDC0200T Prepared:T 03/18/2024 11:40/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0200-BS1T | S2024-03-19B (9)T | 19:13T |
| MRL CheckT | BDC0200-MRL1T | S2024-03-19B (10)T | 19:33T |
| Matrix SpikeT | BDC0200-MS2T | S2024-03-19B (13)T | 20:35T |
| Matrix Spike DupT | BDC0200-MSD2T | S2024-03-19B (14)T | 20:55T |
| MW-17-4T | 24C0103-01T | S2024-03-19B (26)T | 01:01T |
| MW-17-3T | 24C0103-02T | S2024-03-19B (27)T | 01:22T |
| DUP-3-031524T | 24C0103-03T | S2024-03-19B (28)T | 01:42T |
| MW-17-2T | 24C0103-04T | S2024-03-19B (29)T | 02:03T |
| MW-17-1T | 24C0103-05T | S2024-03-19B (30)T | 02:24T |
| MW-11-3T | 24C0103-06T | S2024-03-19B (31)T | 02:44T |
| MW-11-2T | 24C0103-07T | S2024-03-19B (32)T | 03:05T |
| MW-11-1T | 24C0103-08T | S2024-03-19B (33)T | 03:25T |
| EB-5-031524T | 24C0103-09T | S2024-03-19B (34)T | 03:46T |
| FB-5-031524T | 24C0103-10T | S2024-03-19B (35)T | 04:06T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | NDa | 0.15a | 0.40a | Ua |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0642a | 0.064a | 0.40a | MI3, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0200A | Laboratory ID:A | BDC0200-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 15.5A | 97.0A | 70 - 140A |
| PFPeA | 8.00A | 8.54A | 107A | 65 - 135A |
| PFHxA | 4.00A | 3.96A | 99.0A | 70 - 145A |
| PFHpA | 4.00A | 4.20A | 105A | 70 - 150A |
| PFOA | 4.00A | 4.39A | 110A | 70 - 150A |
| PFNA | 4.00A | 4.27A | 107A | 70 - 150A |
| PFDA | 4.00A | 3.96A | 98.9A | 70 - 140A |
| PFUnA | 4.00A | 4.34A | 109A | 70 - 145A |
| PFDoA | 4.00A | 4.22A | 106A | 70 - 140A |
| PFTrDA | 4.00A | 4.20A | 105A | 65 - 140A |
| PFTeDA | 4.00A | 4.43A | 111A | 60 - 140A |
| PFHxDA | 4.00A | 4.38A | 110A | 40 - 150A |
| PFODA | 4.00A | 3.97A | 99.3A | 40 - 150A |
| PFBSA | 3.54A | 3.60A | 102A | 60 - 145A |
| PFPeSA | 3.76A | 4.01A | 107A | 65 - 140A |
| PFHxSA | 3.66A | 3.72A | 102A | 65 - 145A |
| PFHpSA | 3.82A | 4.17A | 109A | 70 - 150A |
| PFOSA | 3.72A | 3.78A | 102A | 55 - 150A |
| PFNSA | 3.84A | 4.00A | 104A | 65 - 145A |
| PFDSA | 3.86A | 4.08A | 106A | 60 - 145A |
| PFDoSA | 3.88A | 3.73A | 96.2A | 50 - 145A |
| 4:2FTSA | 15.0A | 15.9A | 106A | 70 - 145A |
| 6:2FTSA | 15.2A | 16.5A | 108A | 65 - 155A |
| 8:2FTSA | 15.4A | 16.8A | 109A | 60 - 150A |
| 10:2FTSA | 15.4A | 16.9A | 110A | 40 - 150A |
| PFOSA | 4.00A | 4.55A | 114A | 70 - 145A |
| NMeFOSA | 16.0A | 17.5A | 109A | 60 - 150A |
| NEtFOSA | 16.0A | 16.7A | 105A | 65 - 145A |
| NMeFOSA | 4.00A | 4.28A | 107A | 50 - 140A |
| NEtFOSA | 4.00A | 4.16A | 104A | 70 - 145A |
| NMeFOSEA | 16.0A | 16.8A | 105A | 70 - 145A |
| NEtFOSEA | 16.0A | 17.6A | 110A | 70 - 135A |
| HFPO-DA | 4.00A | 4.20A | 105 | 70 - 140A |
| DONA | 3.78A | 4.05A | 107A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0200A | Laboratory ID:A | BDC0200-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.47A | 105A | 70 - 140A |
| PFMPA | 8.00A | 9.00A | 112A | 55 - 140A |
| PFMBA | 8.00A | 8.26A | 103A | 60 - 150A |
| NFDHA | 8.00A | 8.02A | 100A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.95A | 106A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 4.05A | 107A | 55 - 160A |
| 3:3FTCA | 16.0A | 14.6A | 91.4A | 65 - 130A |
| 5:3FTCA | 16.0A | 15.3A | 95.7A | 70 - 135A |
| 7:3FTCA | 16.0A | 14.0A | 87.6A | 50 - 145A |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-11-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MS2- |
| Column:- | | Sample Lab ID:- | 24C0103-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 14.1- | 1.33- | 15.5- | 101- | 70 - 140- |
| PFPeA- | 7.04- | 0.823- | 8.23- | 105- | 65 - 135- |
| PFHxA- | 3.52- | 0.572- | 4.17- | 102- | 70 - 145- |
| PFHpA- | 3.52- | 0.407- | 4.11- | 105- | 70 - 150- |
| PFOA- | 3.52- | 1.32- | 4.83- | 99.8- | 70 - 150- |
| PFNA- | 3.52- | ND- | 3.66- | 104- | 70 - 150- |
| PFDA- | 3.52- | ND- | 3.52- | 100- | 70 - 140- |
| PFUnA- | 3.52- | ND- | 3.70- | 105- | 70 - 145- |
| PFDoA- | 3.52- | ND- | 3.73- | 106- | 70 - 140- |
| PFTrDA- | 3.52- | ND- | 3.76- | 107- | 65 - 140- |
| PFTeDA- | 3.52- | ND- | 3.75- | 107- | 60 - 140- |
| PFHxDA- | 3.52- | ND- | 3.72- | 106- | 40 - 150- |
| PFODA- | 3.52- | ND- | 3.50- | 99.5- | 40 - 150- |
| PFBS- | 3.11- | 0.683- | 4.06- | 108- | 60 - 145- |
| PFPeS- | 3.31- | 0.129- | 3.71- | 108- | 65 - 140- |
| PFHxS- | 3.22- | 0.639- | 3.90- | 101- | 65 - 145- |
| PFHpS- | 3.36- | ND- | 3.89- | 116- | 70 - 150- |
| PFOS- | 3.27- | 1.68- | 5.20- | 108- | 55 - 150- |
| PFNS- | 3.38- | ND- | 3.77- | 112- | 65 - 145- |
| PFDS- | 3.39- | ND- | 3.70- | 109- | 60 - 145- |
| PFDoS- | 3.41- | ND- | 3.54- | 104- | 50 - 145- |
| 4:2FTS- | 13.2- | ND- | 14.1- | 107- | 70 - 145- |
| 6:2FTS- | 13.4- | ND- | 14.9- | 111- | 65 - 155- |
| 8:2FTS- | 13.5- | ND- | 15.0- | 111- | 60 - 150- |
| 10:2FTS- | 13.6- | ND- | 15.6- | 115- | 40 - 150- |
| PFOSA- | 3.52- | ND- | 3.67- | 104- | 70 - 145- |
| NMeFOSA- | 14.1- | ND- | 15.3- | 108- | 60 - 150- |
| NEtFOSA- | 14.1- | ND- | 16.2- | 115- | 65 - 145- |
| NMeFOSAA- | 3.52- | ND- | 3.60- | 102- | 50 - 140- |
| NEtFOSAA- | 3.52- | ND- | 3.81- | 108- | 70 - 145- |
| NMeFOSE- | 14.1- | ND- | 15.3- | 109- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-11-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MS2- |
| Column:- | | Sample Lab ID:- | 24C0103-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 14.1- | ND- | 16.2- | 115- | 70 - 135- |
| HFPO-DA- | 3.52- | ND- | 3.67- | 104- | 70 - 140- |
| ADONA- | 3.32- | ND- | 3.85- | 116- | 65 - 145- |
| PFEESA- | 6.26- | ND- | 6.39- | 102- | 70 - 140- |
| PFMPA- | 7.04- | ND- | 8.03- | 114- | 55 - 140- |
| PFMBA- | 7.04- | ND- | 7.14- | 101- | 60 - 150- |
| NFDHA- | 7.04- | ND- | 6.64- | 94.4- | 50 - 150- |
| 9Cl-PF3ONS- | 3.29- | ND- | 3.54- | 108- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.32- | ND- | 3.47- | 104- | 55 - 160- |
| 3:3FTCA- | 14.1- | ND- | 13.1- | 93.2- | 65 - 130- |
| 5:3FTCA- | 14.1- | ND- | 13.7- | 97.2- | 70 - 135- |
| 7:3FTCA- | 14.1- | ND- | 13.2- | 93.5- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW 11-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MSD2- |
| Column:- | | Sample Lab ID:- | 24C0103-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.7- | 16.0- | 99.9- | 2.91- | 30- | 70 - 140- |
| PFPeA- | 7.34- | 8.52- | 105- | 3.50- | 30- | 65 - 135- |
| PFHxA- | 3.67- | 4.47- | 106- | 7.15- | 30- | 70 - 145- |
| PFHpA- | 3.67- | 4.37- | 108- | 6.06- | 30- | 70 - 150- |
| PFOA- | 3.67- | 5.17- | 105- | 6.81- | 30- | 70 - 150- |
| PFNA- | 3.67- | 4.16- | 113- | 12.8- | 30- | 70 - 150- |
| PFDA- | 3.67- | 3.81- | 104- | 7.99- | 30- | 70 - 140- |
| PFUnA- | 3.67- | 3.94- | 107- | 6.40- | 30- | 70 - 145- |
| PFDoA- | 3.67- | 3.93- | 107- | 5.19- | 30- | 70 - 140- |
| PFTrDA- | 3.67- | 3.93- | 107- | 4.44- | 30- | 65 - 140- |
| PFTeDA- | 3.67- | 4.23- | 115- | 12.1- | 30- | 60 - 140- |
| PFHxDA- | 3.67- | 4.06- | 111- | 8.56- | 30- | 40 - 150- |
| PFODA- | 3.67- | 3.51- | 95.7- | 0.352- | 30- | 40 - 150- |
| PFBS- | 3.25- | 4.17- | 107- | 2.77- | 30- | 60 - 145- |
| PFPeS- | 3.45- | 3.99- | 112- | 7.21- | 30- | 65 - 140- |
| PFHxS- | 3.36- | 4.27- | 108- | 9.10- | 30- | 65 - 145- |
| PFHpS- | 3.51- | 4.07- | 116- | 4.44- | 30- | 70 - 150- |
| PFOS- | 3.41- | 5.07- | 99.2- | 2.58- | 30- | 55 - 150- |
| PFNS- | 3.52- | 3.82- | 108- | 1.30- | 30- | 65 - 145- |
| PFDS- | 3.54- | 3.62- | 102- | 2.08- | 30- | 60 - 145- |
| PFDoS- | 3.56- | 3.37- | 94.7- | 5.00- | 30- | 50 - 145- |
| 4:2FTS- | 13.8- | 15.3- | 111- | 8.17- | 30- | 70 - 145- |
| 6:2FTS- | 13.9- | 16.0- | 115- | 7.28- | 30- | 65 - 155- |
| 8:2FTS- | 14.1- | 16.1- | 114- | 6.90- | 30- | 60 - 150- |
| 10:2FTS- | 14.2- | 13.7- | 97.0- | 12.8- | 30- | 40 - 150- |
| PFOSA- | 3.67- | 4.40- | 120- | 18.0- | 30- | 70 - 145- |
| NMeFOSA- | 14.7- | 15.9- | 109- | 4.45- | 30- | 60 - 150- |
| NEtFOSA- | 14.7- | 14.9- | 102- | 7.89- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW 11-2-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0103- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0200- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0200-MSD2- |
| Column:- | | Sample Lab ID:- | 24C0103-07- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.67- | 3.99- | 109- | 10.2- | 30- | 50 - 140- |
| NEtFOSAA- | 3.67- | 3.85- | 105- | 1.01- | 30- | 70 - 145- |
| NMeFOSE- | 14.7- | 16.4- | 112- | 6.76- | 30- | 70 - 145- |
| NEtFOSE- | 14.7- | 16.4- | 112- | 0.935- | 30- | 70 - 135- |
| HFPO-DA- | 3.67- | 3.85- | 105- | 4.59- | 30- | 70 - 140- |
| ADONA- | 3.47- | 3.85- | 111- | 0.0579- | 30- | 65 - 145- |
| PFEESA- | 6.53- | 6.88- | 105- | 7.38- | 30- | 70 - 140- |
| PFMPA- | 7.34- | 8.24- | 112- | 2.64- | 30- | 55 - 140- |
| PFMBA- | 7.34- | 7.76- | 106- | 8.36- | 30- | 60 - 150- |
| NFDHA- | 7.34- | 7.64- | 104- | 13.9- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.43- | 3.71- | 108- | 4.70- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.47- | 3.56- | 103- | 2.64- | 30- | 55 - 160- |
| 3:3FTCA- | 14.7- | 13.9- | 94.4- | 5.56- | 30- | 65 - 130- |
| 5:3FTCA- | 14.7- | 14.3- | 97.1- | 4.10- | 30- | 70 - 135- |
| 7:3FTCA- | 14.7- | 15.1- | 103- | 13.7- | 30- | 50 - 145- |

# CALIBRATION SUMMARYL

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.23574 x (std. dev. = 0.01485) (weighting: None) | %RSE=6.3 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49841 x (std. dev. = 0.03017) (weighting: None) | %RSE=6.1 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50512 x (std. dev. = 0.02794) (weighting: None) | %RSE=5.5 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48038 x (std. dev. = 0.02636) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49065 x (std. dev. = 0.03123) (weighting: None) | %RSE=6.4 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 9.99867e-4 x^2 + 0.48413 x + 0.01226 (r = 0.99905) (weighting: 1 / x) | %RSE=7.3 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00506 x (std. dev. = 0.07345) (weighting: None) | %RSE=7.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 1.02176 x (std. dev. = 0.07981) (weighting: None) | %RSE=7.8 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.92494 x (std. dev. = 0.04119) (weighting: None) | %RSE=4.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00604 x (std. dev. = 0.03628) (weighting: None) | %RSE=3.6 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98412 x (std. dev. = 0.02772) (weighting: None) | %RSE=2.8 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93655 x (std. dev. = 0.03297) (weighting: None) | %RSE=3.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.47691 x (std. dev. = 0.01946) (weighting: None) | %RSE=4.1 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29836 x (std. dev. = 0.01281) (weighting: None) | %RSE=4.3 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.22968 x (std. dev. = 0.01218) (weighting: None) | %RSE=5.3 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.71812 x (std. dev. = 0.05325) (weighting: None) | %RSE=7.4 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80977 x (std. dev. = 0.02624) (weighting: None) | %RSE=3.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.56999 x (std. dev. = 0.03426) (weighting: None) | %RSE=6.0 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53562 x (std. dev. = 0.02668) (weighting: None) | %RSE=5.0 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.51901 x (std. dev. = 0.02103) (weighting: None) | %RSE=4.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.63587 x (std. dev. = 0.04565) (weighting: None) | %RSE=7.2 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.56432 x (std. dev. = 0.04069) (weighting: None) | %RSE=7.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.45261 x (std. dev. = 0.08690) (weighting: None) | %RSE=3.5 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.78588 x (std. dev. = 0.04847) (weighting: None) | %RSE=6.2 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.91008 x (std. dev. = 0.10404) (weighting: None) | %RSE=11.4 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.37234 x (std. dev. = 0.02276) (weighting: None) | %RSE=6.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.57679 x (std. dev. = 0.13834) (weighting: None) | %RSE=5.4 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.07289 x (std. dev. = 0.21947) (weighting: None) | %RSE=7.1 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.50001 x (std. dev. = 0.02156) (weighting: None) | %RSE=4.3 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.28942 x (std. dev. = 0.09531) (weighting: None) | %RSE=7.4 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.98582 x (std. dev. = 0.09760) (weighting: None) | %RSE=4.9 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.23988 x (std. dev. = 0.08781) (weighting: None) | %RSE=3.9 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23844 x (std. dev. = 0.01045) (weighting: None) | %RSE=4.4 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24455 x (std. dev. = 0.01542) (weighting: None) | %RSE=6.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21938 x (std. dev. = 0.01283) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17769 x (std. dev. = 0.01004) (weighting: None) | %RSE=5.6 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07371 x (std. dev. = 0.00395) (weighting: None) | %RSE=5.4 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.81069 x (std. dev. = 0.04465) (weighting: None) | %RSE=5.5 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.61575 x (std. dev. = 0.03779) (weighting: None) | %RSE=6.1 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16029 x (std. dev. = 0.01308) (weighting: None) | %RSE=8.2 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.43566 x (std. dev. = 0.03766) (weighting: None) | %RSE=8.6 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.35868 x (std. dev. = 0.02163) (weighting: None) | %RSE=6.0 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 0.86685 x (std. dev. = 0.02525) (weighting: None) | %RSE=2.9 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.67374 x (std. dev. = 0.02028) (weighting: None) | %RSE=3.0 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30098 x (std. dev. = 0.02588) (weighting: None) | %RSE=8.6 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.05747 x (std. dev. = 0.00909) (weighting: None) | %RSE=15.8 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.53288 x (std. dev. = 0.02986) (weighting: None) | %RSE=5.6 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.87447 x (std. dev. = 0.07090) (weighting: None) | %RSE=8.1 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53158 x (std. dev. = 0.01736) (weighting: None) | %RSE=3.3 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.40781 x (std. dev. = 0.04430) (weighting: None) | %RSE=10.9 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39365 x (std. dev. = 0.02523) (weighting: None) | %RSE=6.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 238433.9480 x | %RSD=15.9 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 126855.7219 x | %RSD=7.8 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 395316.5081 x | %RSD=6.4 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 284407.9695 x | %RSD=7.7 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 292026.6901 x | %RSD=5.1 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 949032.5442 x | %RSD=6.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 761641.2582 x | %RSD=6.3 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 9.1391 x | %RSD=3.3 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.4634 x | %RSD=11.5 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.5633 x | %RSD=6.5 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 5.0762 x | %RSD=7.1 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1429 x | %RSD=4.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9805 x | %RSD=6.0 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1207 x | %RSD=4.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3184 x | %RSD=5.0 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3427 x | %RSD=4.5 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1434 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9523 x | %RSD=6.6 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.8070 x | %RSD=5.2 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4423 x | %RSD=5.2 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1564 x | %RSD=6.3 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.6235 x | %RSD=9.6 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.8661 x | %RSD=7.0 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.4635 x | %RSD=12.9 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.0591 x | %RSD=7.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 1.9110 x | %RSD=6.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4053 x | %RSD=5.6 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4347 x | %RSD=6.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.1097 x | %RSD=6.8 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0114 x | %RSD=8.2 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8214 x | %RSD=7.4 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8487 x | %RSD=6.5 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 8.3148 x | %RSD=5.9 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1684 x | %RSD=4.0 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9740 x | %RSD=5.2 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result} \left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

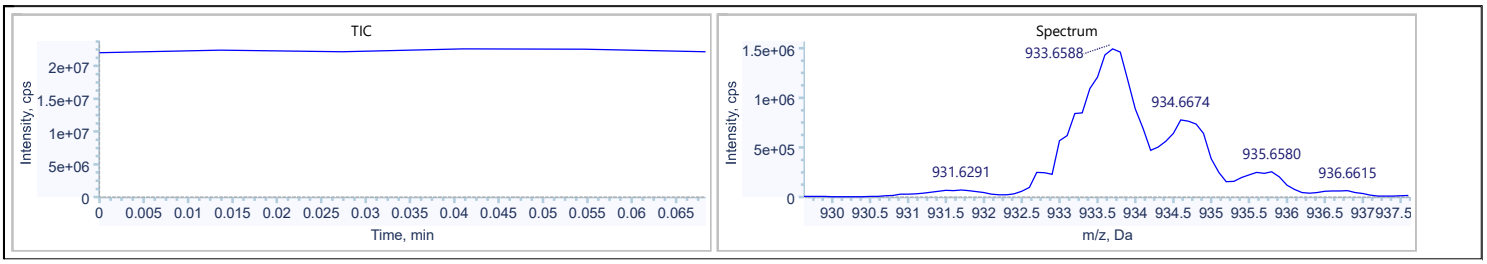


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

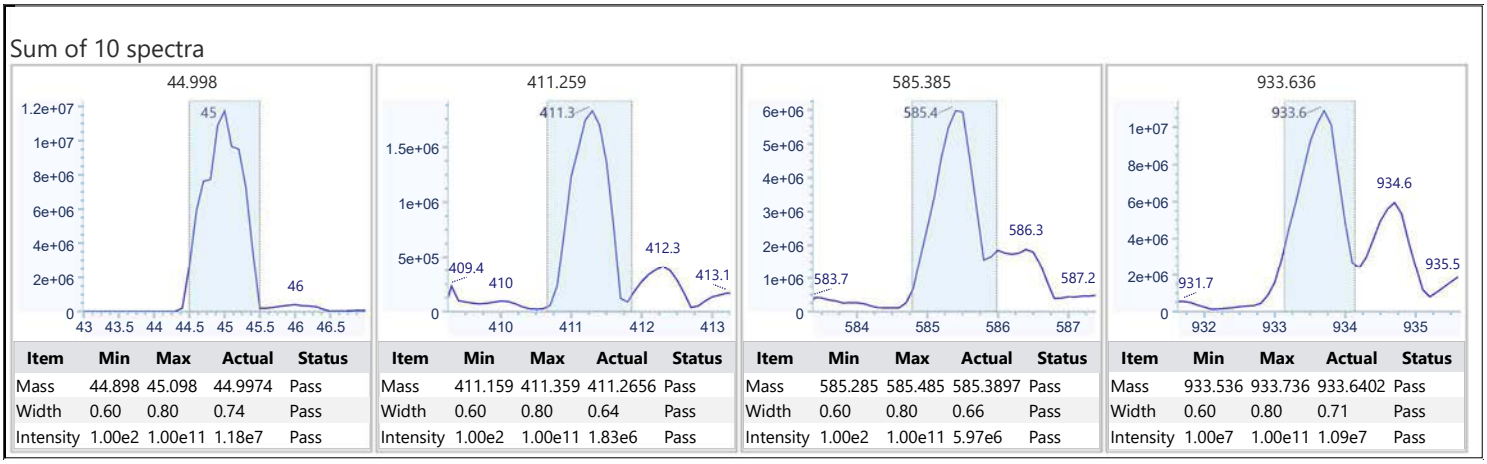


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

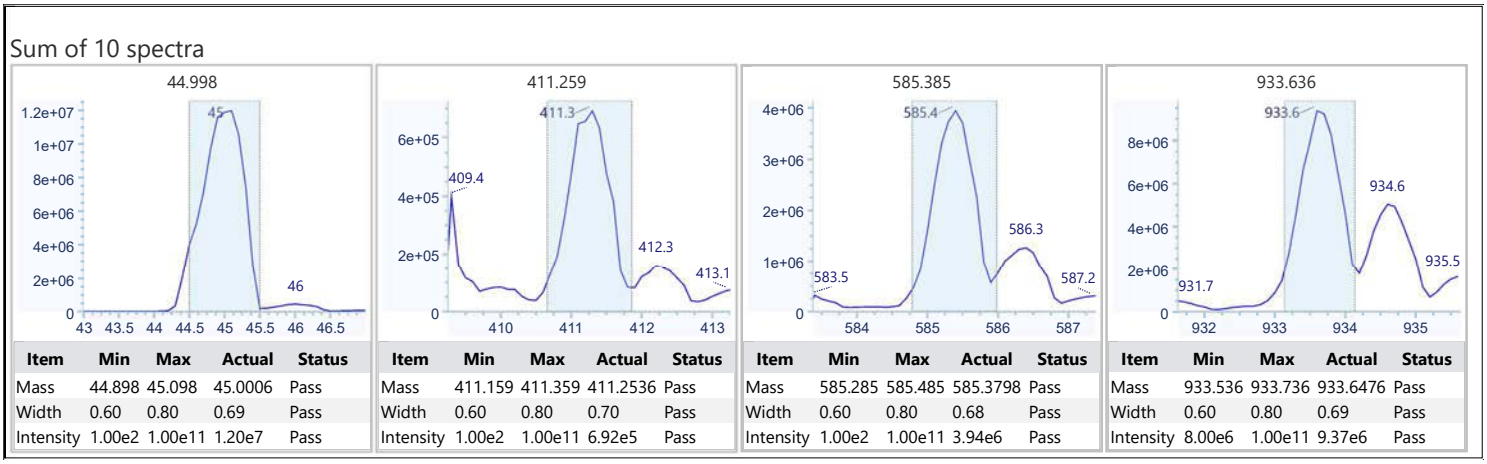


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

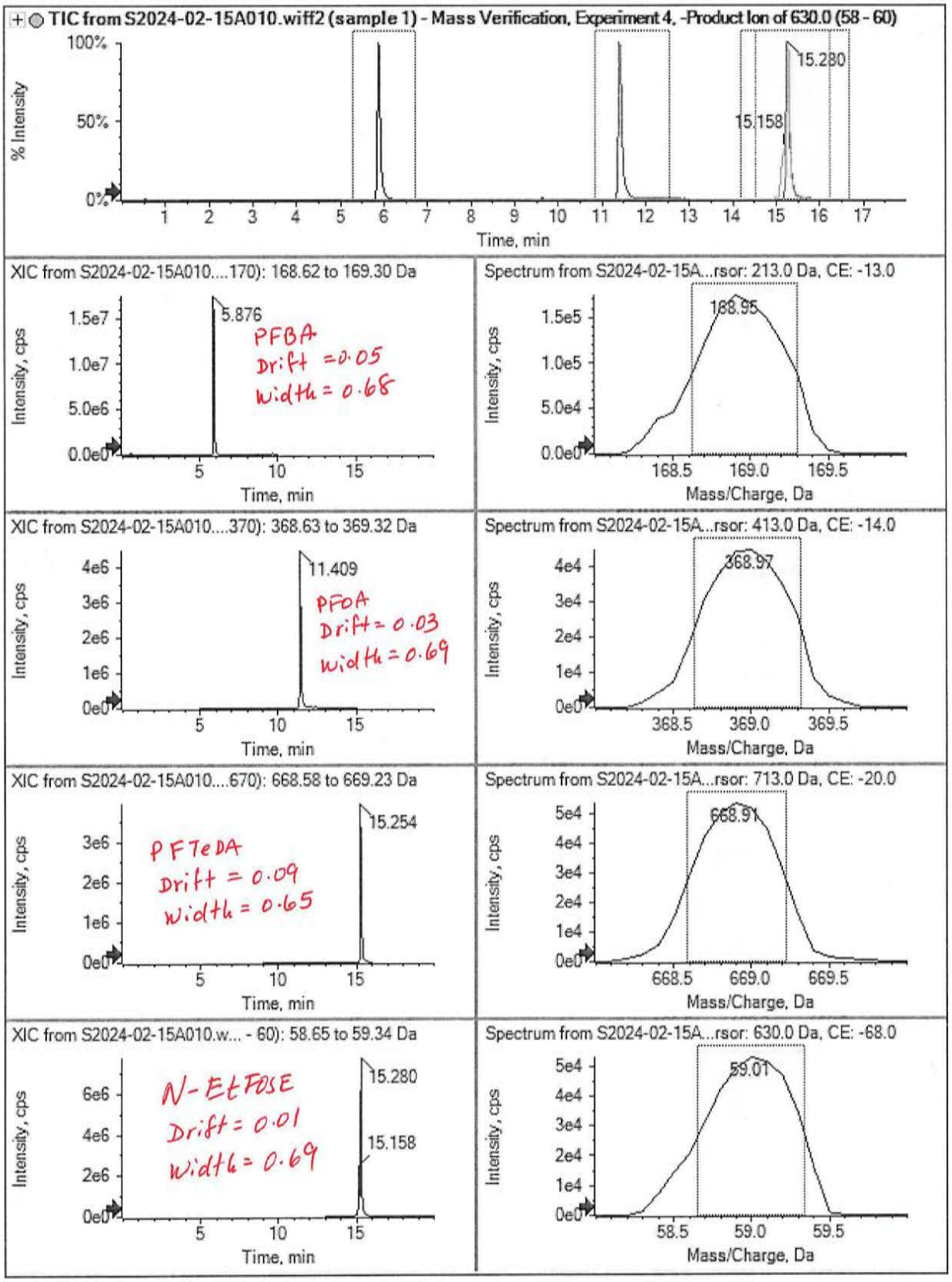

# EPA 1633A

Initial Calibration: SD00991 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 56754<br>( 163.0 / 69.0 ) 1270 | ( 2.79 , 0.74 ) ( N/A , 0.00 , -0.4) | 384.2<br>53.0 | 0.0224<br>82.4<br>82.4 | 0.1977 | N/A | 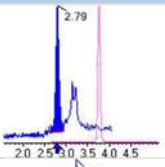 | 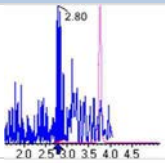 | |
| PFBA | ( 213.0 / 169.0 ) 136258 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 106.2 | N/A<br>0.0<br>0.0 | 0.4489 | N/A | 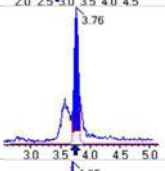 | | |
| PFPeA | ( 263.0 / 219.0 ) 51948<br>( 263.0 / 69.0 ) 452 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -1.2) | 324.2<br>10.2 | 0.0087<br>72.8<br>72.8 | 0.2066 | N/A | 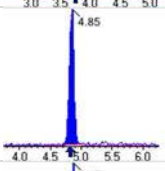 | 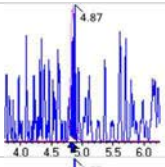 | |
| PFHxA | ( 313.0 / 269.0 ) 28303<br>( 313.0 / 119.0 ) 2598 | ( 6.07 , 1.00 ) ( 0.00 , N/A , -0.6) | 211.6<br>65.5 | 0.0918<br>79.1<br>79.1 | 0.1048 | N/A | 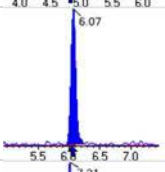 | 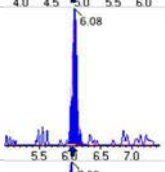 | |
| PFHpA | ( 363.0 / 319.0 ) 29431<br>( 363.0 / 169.0 ) 10099 | ( 7.21 , 1.00 ) ( 0.00 , N/A , -0.5) | 207.3<br>144.2 | 0.3431<br>113.2<br>113.2 | 0.0936 | N/A | 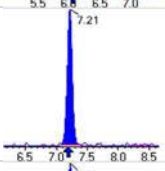 | 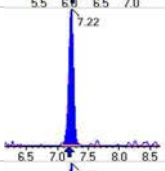 | |
| PFOA | ( 413.0 / 369.0 ) 52214<br>( 413.0 / 169.0 ) 20858 | ( 8.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 69.2<br>131.3 | 0.3995<br>109.3<br>109.3 | 0.0973 | N/A | 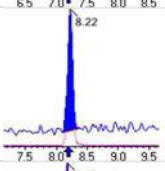 | 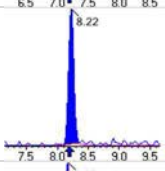 | |
| PFNA | ( 463.0 / 419.0 ) 24013<br>( 463.0 / 169.0 ) 7912 | ( 9.17 , 1.00 ) ( 0.01 , N/A , 0.5) | 245.2<br>151.2 | 0.3295<br>129.1<br>129.1 | 0.0870 | N/A | 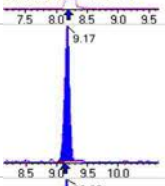 | 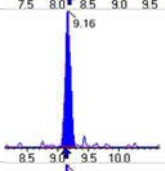 | |
| PFDA | ( 513.0 / 469.0 ) 38668<br>( 513.0 / 169.0 ) 3883 | ( 10.06 , 1.00 ) ( -0.01 , N/A , 0.0) | 462.4<br>300.3 | 0.1004<br>85.7<br>85.7 | 0.1143 | N/A | 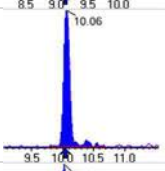 | 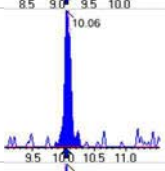 | |
| PFUnA | ( 563.0 / 519.0 ) 36147<br>( 563.0 / 169.0 ) 4589 | ( 10.93 , 1.00 ) ( 0.00 , N/A , -1.0) | 249.6<br>92.0 | 0.1270<br>89.6<br>89.6 | 0.0946 | N/A | 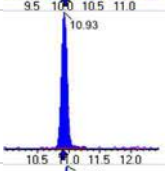 | 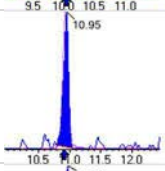 | |
| PFDoA | ( 613.0 / 569.0 ) 40420<br>( 613.0 / 169.0 ) 7186 | ( 11.76 , 1.00 ) ( 0.00 , N/A , -0.5) | 255.5<br>118.2 | 0.1778<br>112.5<br>112.5 | 0.0950 | N/A | 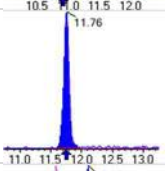 | 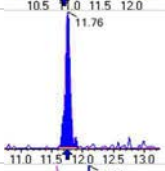 | |
| PFTrDA | ( 663.0 / 619.0 ) 40921<br>( 663.0 / 169.0 ) 9844 | ( 12.38 , 1.05 ) ( N/A , 0.01 , -0.1) | 299.5<br>147.5 | 0.2406<br>93.5<br>93.5 | 0.0984 | N/A | 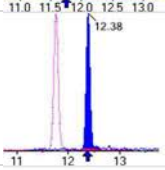 | 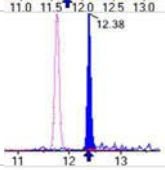 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30255<br>( 713.0 / 169.0 ) 9045 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 201.3<br>91.0 | 0.2990<br>110.8<br>110.8 | 0.0932 | N/A | 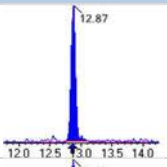 | 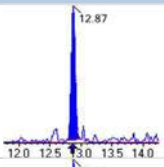 | |
| PFHxDA | ( 813.0 / 769.0 ) 27334<br>( 813.0 / 169.0 ) 7950 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.3) | 174.8<br>67.9 | 0.2908<br>118.9<br>118.9 | 0.1034 | N/A | 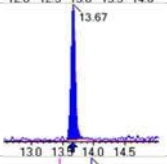 | 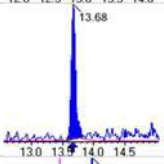 | |
| PFODA | ( 913.0 / 869.0 ) 15819<br>( 913.0 / 169.0 ) 6681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , -0.4) | 73.9<br>28.2 | 0.4223<br>117.9<br>117.9 | 0.0956 | N/A | 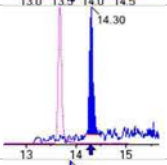 | 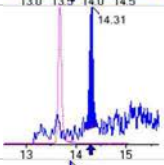 | |
| PFBS | ( 299.0 / 80.0 ) 35573<br>( 299.0 / 99.0 ) 26416 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.2) | 334.4<br>161.3 | 0.7426<br>105.0<br>105.0 | 0.0792 | N/A | 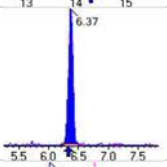 | 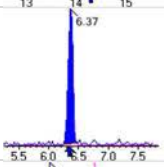 | |
| PFPeS | ( 349.0 / 80.0 ) 97489<br>( 349.0 / 99.0 ) 33196 | ( 7.61 , 0.88 )<br>( N/A , 0.02 , 0.1) | 355.9<br>243.8 | 0.3405<br>94.7<br>94.7 | 0.0909 | N/A | 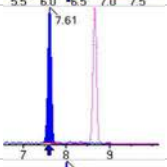 | 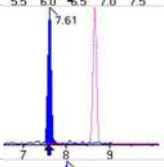 | |
| PFHxS | ( 399.0 / 80.0 ) 110405<br>( 399.0 / 99.0 ) 38767 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , -0.1) | 482.8<br>534.8 | 0.3511<br>110.3<br>110.3 | 0.0887 | N/A | 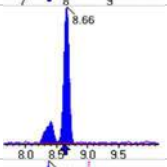 | 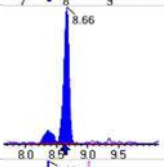 | |
| PFHpS | ( 449.0 / 80.0 ) 83548<br>( 449.0 / 99.0 ) 26287 | ( 9.63 , 0.92 )<br>( N/A , 0.02 , 0.3) | 322.3<br>244.1 | 0.3146<br>118.9<br>118.9 | 0.0858 | N/A | 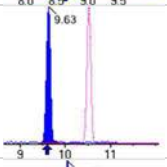 | 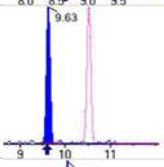 | |
| PFOS | ( 499.0 / 80.0 ) 87691<br>( 499.0 / 99.0 ) 22883 | ( 10.52 , 1.00 )<br>( 0.00 , N/A , 0.4) | 345.3<br>1768.7 | 0.2609<br>111.6<br>111.6 | 0.0934 | N/A | 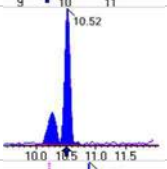 | 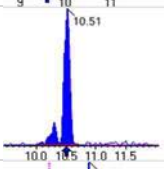 | |
| PFNS | ( 549.0 / 80.0 ) 83900<br>( 549.0 / 99.0 ) 23316 | ( 11.37 , 1.08 )<br>( N/A , 0.03 , 0.3) | 349.0<br>203.8 | 0.2779<br>102.0<br>102.0 | 0.0954 | N/A | 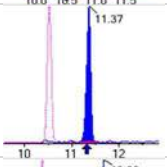 | 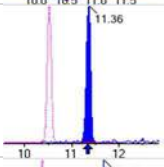 | |
| PFDS | ( 599.0 / 80.0 ) 108245<br>( 599.0 / 99.0 ) 28207 | ( 12.06 , 1.15 )<br>( N/A , 0.01 , -0.3) | 392.8<br>137.7 | 0.2606<br>95.8<br>95.8 | 0.1008 | N/A | 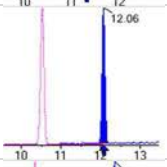 | 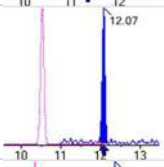 | |
| PFDoS | ( 699.0 / 80.0 ) 90182<br>( 699.0 / 99.0 ) 22019 | ( 12.98 , 1.23 )<br>( N/A , 0.01 , -0.1) | 480.9<br>258.2 | 0.2442<br>104.5<br>104.5 | 0.0953 | N/A | 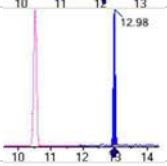 | 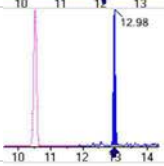 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 138266<br>( 327.0 / 81.0 ) 132939 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1481.0<br>723.3 | 0.9615<br>110.2<br>110.2 | 0.3493 | N/A | 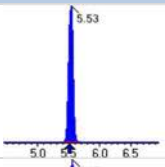 | 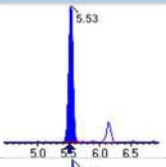 | |
| 6:2FTS | ( 427.0 / 407.0 ) 137083<br>( 427.0 / 81.0 ) 177481 | ( 7.65 , 1.00 )<br>( -0.01 , N/A , -0.3) | 1795.6<br>972.6 | 1.2947<br>103.2<br>103.2 | 0.3738 | N/A | 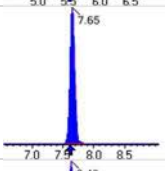 | 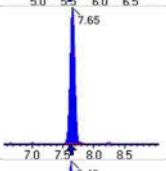 | |
| 8:2FTS | ( 527.0 / 507.0 ) 135114<br>( 527.0 / 81.0 ) 148723 | ( 9.43 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1178.6<br>706.0 | 1.1007<br>101.2<br>101.2 | 0.3727 | N/A | 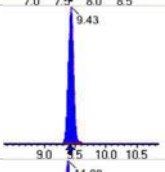 | 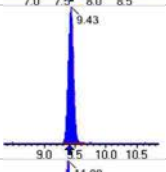 | |
| 10:2FTS | ( 627.0 / 607.0 ) 113285<br>( 627.0 / 81.0 ) 169067 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.0) | 776.4<br>354.6 | 1.4924<br>103.7<br>103.7 | 0.3842 | N/A | 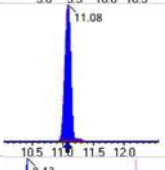 | 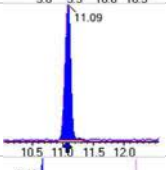 | |
| PFBSA | ( 297.9 / 78.0 ) 77257<br>( 297.9 / 278.0 ) 42 | ( 8.13 , 0.57 )<br>( N/A , 0.02 , 0.5) | 590.4<br>6.4 | 0.0005<br>39.4<br>39.4 | 0.0966 | N/A | 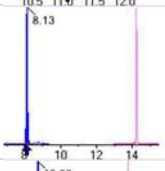 | 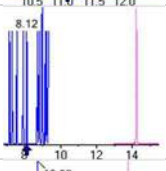 | |
| PFHxSA | ( 397.9 / 78.0 ) 102666<br>( 397.9 / 378.0 ) 421 | ( 10.99 , 0.76 )<br>( N/A , 0.02 , 0.9) | 582.4<br>24.9 | 0.0041<br>100.4<br>100.4 | 0.0979 | N/A | 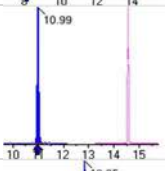 | 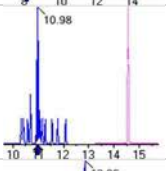 | |
| PFOSA | ( 498.0 / 78.0 ) 74467<br>( 498.0 / 478.0 ) 886 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.5) | 606.2<br>33.7 | 0.0119<br>84.8<br>84.8 | 0.0950 | N/A | 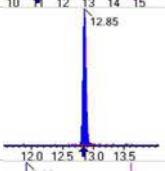 | 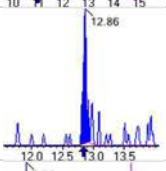 | |
| TFSI | ( 279.7 / 147.0 ) 175179<br>( 279.7 / 211.0 ) 15047 | ( 8.23 , 0.64 )<br>( N/A , 0.03 , -0.2) | 46.0<br>21.9 | 0.0859<br>102.2<br>102.2 | 0.0849 | N/A | 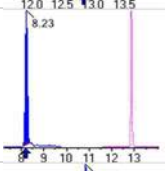 | 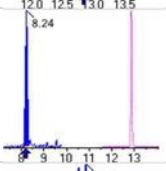 | |
| NMeFOSA | ( 512.0 / 219.0 ) 57698<br>( 512.0 / 169.0 ) 44722 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 560.7<br>223.4 | 0.7751<br>103.6<br>103.6 | 0.3745 | N/A | 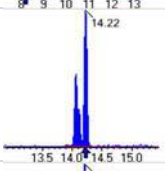 | 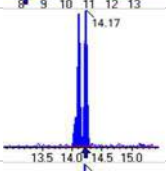 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72453<br>( 526.0 / 169.0 ) 88312 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.5) | 828.6<br>691.6 | 1.2189<br>98.7<br>98.7 | 0.3790 | N/A | 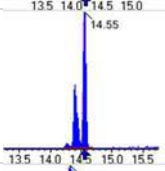 | 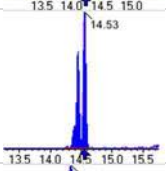 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 21494<br>( 570.0 / 483.0 ) 9989 | ( 10.33 , 1.00 )<br>( 0.01 , N/A , 0.1) | 69489.4<br>2801.3 | 0.4647<br>106.0<br>106.0 | 0.1015 | N/A | 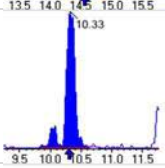 | 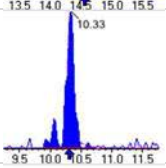 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 18396<br>( 584.0 / 526.0 ) 12082 | ( 10.86 , 1.00 )<br>( 0.01 , N/A , 0.6) | 62964.4<br>389.2 | 0.6568<br>106.5<br>106.5 | 0.0917 | N/A | 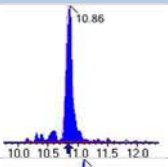 | 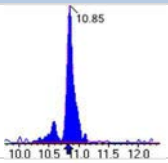 | |
| NMeFOSE | ( 616.0 / 59.0 ) 32728 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 202.5 | N/A<br>0.0<br>0.0 | 0.4046 | N/A | 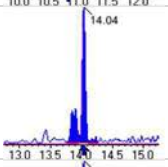 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 24283 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 263.9 | N/A<br>0.0<br>0.0 | 0.3613 | N/A | 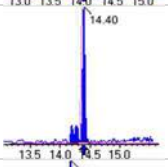 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7677<br>( 285.0 / 185.0 ) 19134 | ( 6.53 , 1.00 )<br>( 0.00 , N/A , -0.1) | 309.3<br>127.0 | 2.4924<br>90.1<br>90.1 | 0.1012 | N/A | 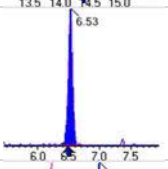 | 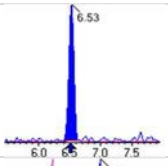 | |
| ADONA | ( 377.0 / 85.0 ) 86497<br>( 377.0 / 251.0 ) 6881 | ( 7.61 , 1.16 )<br>( N/A , 0.02 , -0.1) | 669.7<br>111.4 | 0.0796<br>78.0<br>78.0 | 0.0977 | N/A | 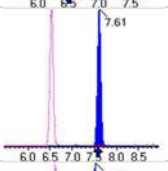 | 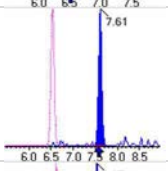 | |
| PFEESA | ( 315.0 / 135.0 ) 32797<br>( 315.0 / 83.0 ) 24495 | ( 6.97 , 1.15 )<br>( N/A , 0.02 , -0.2) | 555.1<br>75.6 | 0.7469<br>134.0<br>134.0 | 0.1691 | N/A | 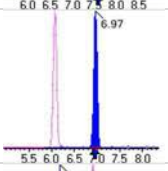 | 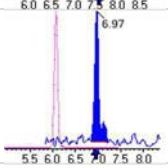 | |
| PFMPA | ( 229.0 / 85.0 ) 14437 | ( 4.15 , 0.86 )<br>( N/A , 0.01 , 0.0) | 396.2 | N/A<br>0.0<br>0.0 | 0.1810 | N/A | 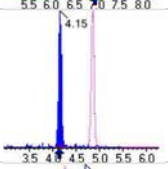 | | |
| PFMBA | ( 279.0 / 85.0 ) 38487 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 415.6 | N/A<br>0.0<br>0.0 | 0.1775 | N/A | 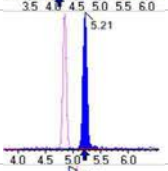 | | |
| NFDHA | ( 295.0 / 201.0 ) 19867<br>( 295.0 / 85.0 ) 19074 | ( 5.94 , 0.98 )<br>( N/A , 0.02 , 0.4) | 825.6<br>224.5 | 0.9601<br>89.0<br>89.0 | 0.1970 | N/A | 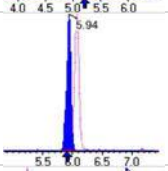 | 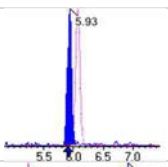 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86451<br>( 533.0 / 353.0 ) 30185 | ( 11.17 , 1.71 )<br>( N/A , 0.02 , -0.2) | 1132.8<br>400.3 | 0.3492<br>111.6<br>111.6 | 0.0904 | N/A | 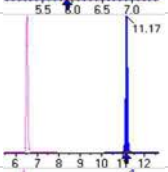 | 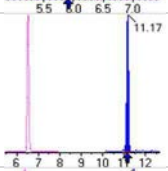 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 69462<br>( 633.0 / 453.0 ) 22673 | ( 12.48 , 1.91 )<br>( N/A , 0.01 , -0.1) | 820.0<br>211.9 | 0.3264<br>98.3<br>98.3 | 0.0945 | N/A | 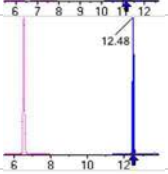 | 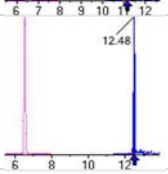 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 44635<br>( 461.0 / 381.2 ) 17189 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.6) | 466.0<br>312.6 | 0.3851<br>96.6<br>96.6 | 0.0843 | N/A | 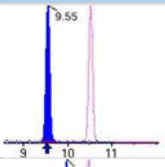 | 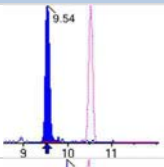 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 4575<br>( 241.0 / 117.0 ) 11441 | ( 4.41 , 0.91 ) ( N/A , 0.01 , -0.2) | 329.5<br>126.3 | 2.5007<br>118.7<br>118.7 | 0.3199 | N/A | 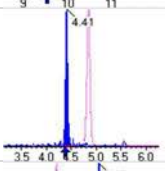 | 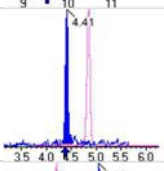 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30417<br>( 341.0 / 217.0 ) 46943 | ( 6.97 , 1.15 ) ( N/A , 0.02 , 0.2) | 303.3<br>268.0 | 1.5433<br>101.6<br>101.6 | 0.4060 | N/A | 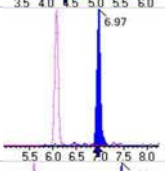 | 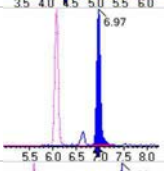 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54097<br>( 441.0 / 337.0 ) 44506 | ( 9.36 , 1.54 ) ( N/A , 0.02 , -0.2) | 24010.5<br>4188.6 | 0.8227<br>89.7<br>89.7 | 0.4401 | N/A | 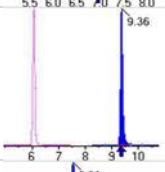 | 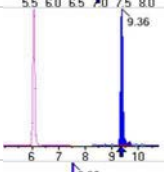 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 33721<br>( 357.2 / 243.0 ) 2710 | ( 6.81 , 1.00 ) ( 0.00 , N/A , 0.5) | 224.8<br>46.5 | 0.0804<br>72.9<br>72.9 | 0.0953 | N/A | 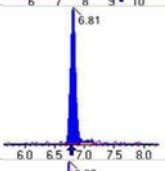 | 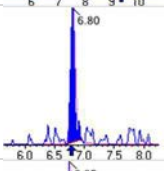 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 18228<br>( 457.2 / 343.0 ) 723 | ( 8.85 , 1.00 ) ( -0.01 , N/A , -0.3) | 328.9<br>66.3 | 0.0397<br>95.7<br>95.7 | 0.0750 | N/A | 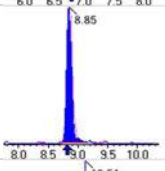 | 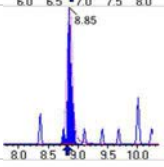 | |
| TDCA | ( 499.0 / 80.0 ) 62947 | ( 10.51 , 1.00 ) ( N/A , 0.02 , 0.0) | 745.7 | N/A<br>0.0<br>0.0 | 0.0984 | N/A | 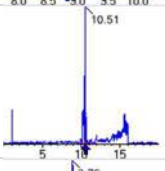 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269964 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 1513.6 | N/A | 1.1322<br>[ 1.0000 ] | 113.2%<br>{ 115.2% } | 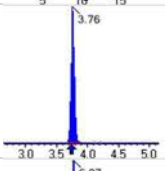 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111056 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 118187.6 | N/A | 0.8754<br>[ 1.0000 ] | 87.5%<br>{ 92.9% } | 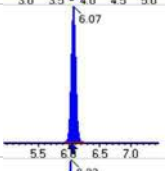 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 395428 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3733.5 | N/A | 1.0003<br>[ 1.0000 ] | 100.0%<br>{ 104.1% } | 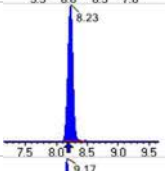 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 274681 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 866.2 | N/A | 0.9658<br>[ 1.0000 ] | 96.6%<br>{ 103.2% } | 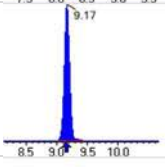 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 296205 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 4479.4 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 110.6% } | 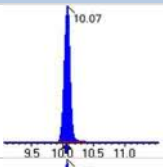 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 887857 | ( 8.67 , N/A ) ( N/A , 0.02 , N/A ) | 5438.8 | N/A | 0.9355 [ 1.0000 ] | 93.6% { 98.6% } | 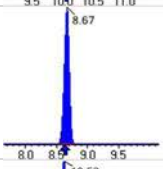 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 744274 | ( 10.53 , N/A ) ( N/A , 0.02 , N/A ) | 1977.9 | N/A | 0.9772 [ 1.0000 ] | 97.7% { 106.2% } | 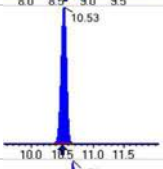 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2435804 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 41491.6 | N/A | 7.8981 [ 8.0000 ] | 98.7% { 115.2% } | 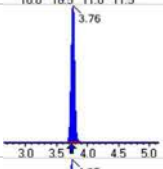 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 995379 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 6790.9 | N/A | 4.8037 [ 4.0000 ] | 120.1% { 108.0% } | 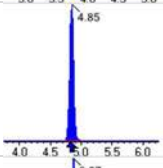 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 562315 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 10449.6 | N/A | 2.2192 [ 2.0000 ] | 111.0% { 101.6% } | 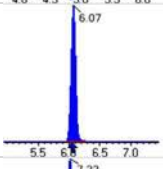 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 641086 | ( 7.22 , N/A ) ( N/A , 0.02 , N/A ) | 5851.9 | N/A | 2.2744 [ 2.0000 ] | 113.7% { 103.5% } | 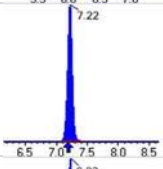 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879761 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3170.1 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 107.3% } | 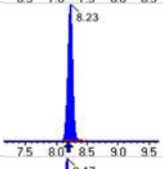 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274748 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 3274.8 | N/A | 1.0201 [ 1.0000 ] | 102.0% { 104.6% } | 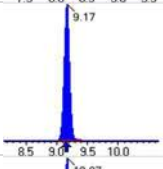 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331041 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1094.7 | N/A | 0.9973 [ 1.0000 ] | 99.7% { 104.5% } | 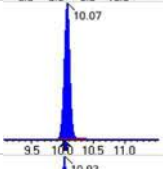 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412925 | ( 10.93 , N/A ) ( N/A , 0.02 , N/A ) | 1057.2 | N/A | 1.0573 [ 1.0000 ] | 105.7% { 114.3% } | 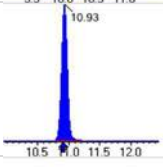 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 422727 | ( 11.76 , N/A ) ( N/A , 0.02 , N/A ) | 1235.8 | N/A | 1.0629 [ 1.0000 ] | 106.3% { 120.2% } | 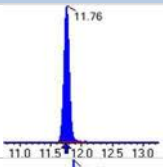  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 346712 | ( 12.88 , N/A ) ( N/A , 0.01 , N/A ) | 1297.7 | N/A | 1.0237 [ 1.0000 ] | 102.4% { 111.0% } | 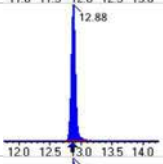  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554558 | ( 13.68 , N/A ) ( N/A , 0.01 , N/A ) | 2058.7 | N/A | 1.9179 [ 2.0000 ] | 95.9% { 107.5% } | 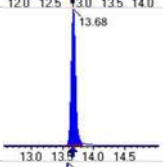  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729492 | ( 6.37 , N/A ) ( N/A , 0.02 , N/A ) | 1031.7 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 108.6% } | 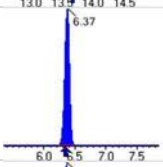  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400831 | ( 8.66 , N/A ) ( N/A , 0.03 , N/A ) | 3163.0 | N/A | 2.1878 [ 2.0000 ] | 109.4% { 109.4% } | 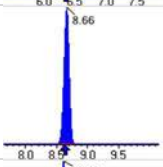  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1625759 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1645.8 | N/A | 2.0259 [ 2.0000 ] | 101.3% { 104.0% } | 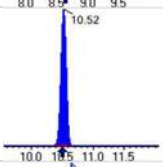  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 603279 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 91.6 | N/A | 4.3589 [ 4.0000 ] | 109.0% { 114.9% } | 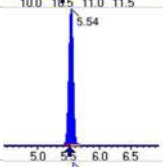  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1771435 | ( 7.66 , N/A ) ( N/A , 0.03 , N/A ) | 3327.3 | N/A | 4.2767 [ 4.0000 ] | 106.9% { 104.2% } | 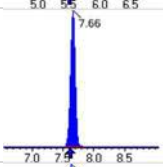  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527095 | ( 9.44 , N/A ) ( N/A , 0.02 , N/A ) | 1433.7 | N/A | 4.7009 [ 4.0000 ] | 117.5% { 115.7% } | 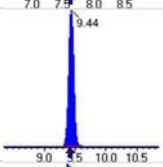  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3060105 | ( 11.07 , N/A ) ( N/A , 0.02 , N/A ) | 1576.9 | N/A | 9.0135 [ 8.0000 ] | 112.7% { 117.8% } | 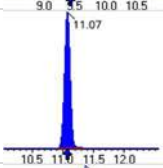  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1567982 | ( 12.86 , N/A ) ( N/A , 0.01 , N/A ) | 1673.5 | N/A | 2.2048 [ 2.0000 ] | 110.2% { 117.6% } | 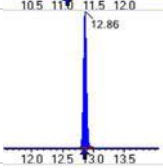  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 310360 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1785.9 | N/A | 2.0576 [ 2.0000 ] | 102.9% { 111.9% } | 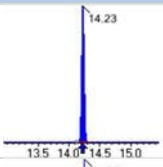  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 341394 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2508.3 | N/A | 2.1106 [ 2.0000 ] | 105.5% { 108.2% } | 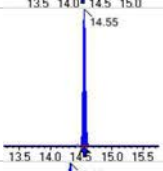  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 888303 | ( 10.32 , N/A ) ( N/A , 0.02 , N/A ) | 2741.2 | N/A | 4.3020 [ 4.0000 ] | 107.6% { 106.0% } | 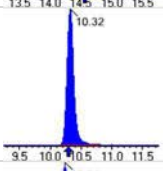  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 820340 | ( 10.84 , N/A ) ( N/A , 0.02 , N/A ) | 1993.4 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 108.5% } | 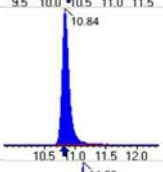  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475020 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 21.7611 [ 20.0000 ] | 108.8% { 109.6% } | 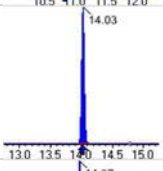  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1513000 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3678.2 | N/A | 21.9921 [ 20.0000 ] | 110.0% { 114.9% } | 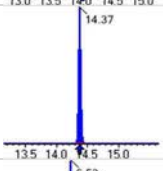  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1029123 | ( 6.53 , N/A ) ( N/A , 0.01 , N/A ) | 2714.8 | N/A | 8.9159 [ 8.0000 ] | 111.4% { 105.2% } | 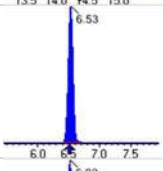  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 665466 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1425.6 | N/A | 2.0722 [ 2.0000 ] | 103.6% { 115.3% } | 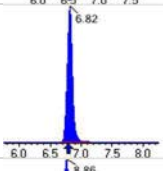  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 596324 | ( 8.86 , N/A ) ( N/A , 0.02 , N/A ) | 778.6 | N/A | 2.0397 [ 2.0000 ] | 102.0% { 111.0% } | 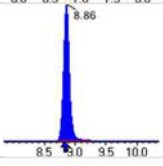  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 270243<br>( 163.0 / 69.0 ) 6407 | ( 2.78 , 0.74 ) ( N/A , 0.00 , -0.3) | 1728.8<br>290.1 | 0.0237<br>87.3<br>87.3 | 0.9507 | N/A | 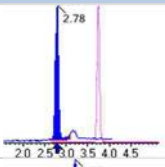 | 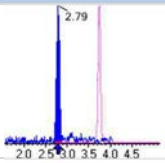 | |
| PFBA | ( 213.0 / 169.0 ) 601138 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 533.4 | N/A<br>0.0<br>0.0 | 2.0004 | N/A | 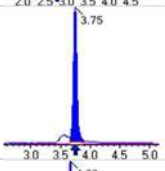 | | |
| PFPeA | ( 263.0 / 219.0 ) 236977<br>( 263.0 / 69.0 ) 2370 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.4) | 1167.2<br>40.3 | 0.0100<br>83.8<br>83.8 | 0.9417 | N/A | 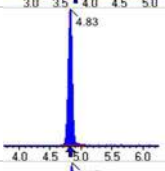 | 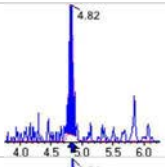 | |
| PFHxA | ( 313.0 / 269.0 ) 139970<br>( 313.0 / 119.0 ) 15702 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 805.1<br>325.5 | 0.1122<br>96.6<br>96.6 | 0.4869 | N/A | 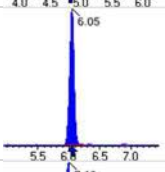 | 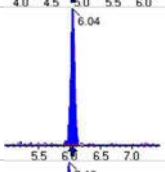 | |
| PFHpA | ( 363.0 / 319.0 ) 153182<br>( 363.0 / 169.0 ) 47571 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 795.4<br>513.0 | 0.3106<br>102.5<br>102.5 | 0.4856 | N/A | 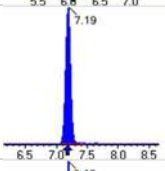 | 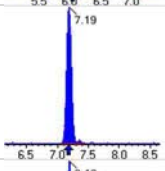 | |
| PFOA | ( 413.0 / 369.0 ) 219264<br>( 413.0 / 169.0 ) 76818 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 244.8<br>400.1 | 0.3503<br>95.8<br>95.8 | 0.5151 | N/A | 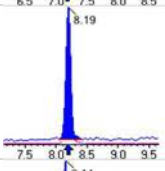 | 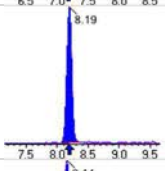 | |
| PFNA | ( 463.0 / 419.0 ) 137279<br>( 463.0 / 169.0 ) 33380 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 798.0<br>432.7 | 0.2432<br>95.2<br>95.2 | 0.5090 | N/A | 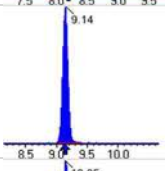 | 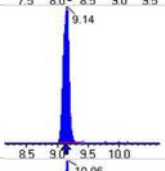 | |
| PFDA | ( 513.0 / 469.0 ) 168954<br>( 513.0 / 169.0 ) 20337 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.5) | 1427.3<br>879.5 | 0.1204<br>102.7<br>102.7 | 0.5207 | N/A | 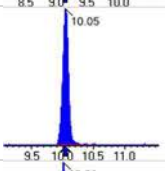 | 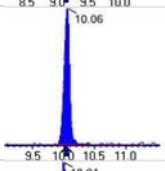 | |
| PFUnA | ( 563.0 / 519.0 ) 171379<br>( 563.0 / 169.0 ) 24402 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.3) | 762.3<br>223.0 | 0.1424<br>100.5<br>100.5 | 0.4723 | N/A | 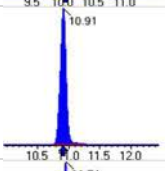 | 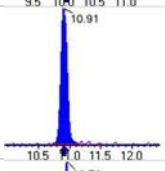 | |
| PFDoA | ( 613.0 / 569.0 ) 185419<br>( 613.0 / 169.0 ) 28647 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.1) | 650.7<br>310.6 | 0.1545<br>97.7<br>97.7 | 0.4817 | N/A | 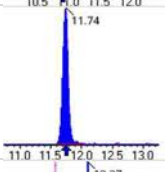 | 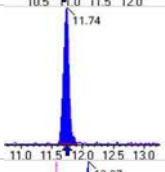 | |
| PFTrDA | ( 663.0 / 619.0 ) 187393<br>( 663.0 / 169.0 ) 51467 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.2) | 715.2<br>527.9 | 0.2746<br>106.7<br>106.7 | 0.4977 | N/A | 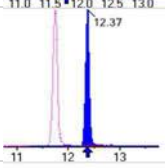 | 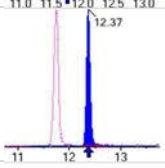 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 158224<br>( 713.0 / 169.0 ) 40722 | ( 12.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 963.7<br>336.5 | 0.2574<br>95.4<br>95.4 | 0.5074 | N/A | 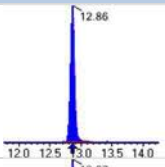 | 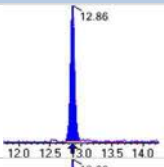 | |
| PFHxDA | ( 813.0 / 769.0 ) 137951<br>( 813.0 / 169.0 ) 33076 | ( 13.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 845.2<br>255.3 | 0.2398<br>98.0<br>98.0 | 0.5012 | N/A | 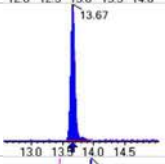 | 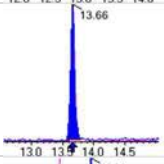 | |
| PFODA | ( 913.0 / 869.0 ) 87214<br>( 913.0 / 169.0 ) 26681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 415.1<br>133.0 | 0.3059<br>85.4<br>85.4 | 0.5065 | N/A | 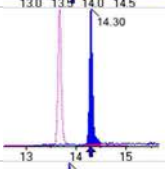 | 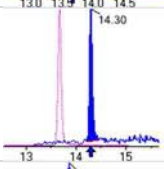 | |
| PFBS | ( 299.0 / 80.0 ) 198065<br>( 299.0 / 99.0 ) 132926 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1381.9<br>709.2 | 0.6711<br>94.9<br>94.9 | 0.4518 | N/A | 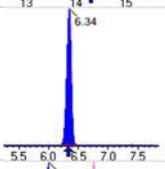 | 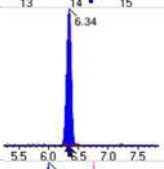 | |
| PFPeS | ( 349.0 / 80.0 ) 497722<br>( 349.0 / 99.0 ) 172204 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.0) | 1143.3<br>1025.2 | 0.3460<br>96.2<br>96.2 | 0.4717 | N/A | 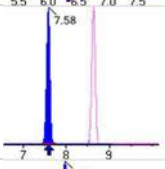 | 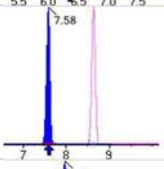 | |
| PFHxS | ( 399.0 / 80.0 ) 542542<br>( 399.0 / 99.0 ) 185937 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1189.0<br>1277.1 | 0.3427<br>107.6<br>107.6 | 0.4426 | N/A | 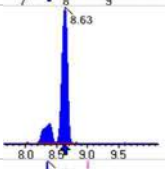 | 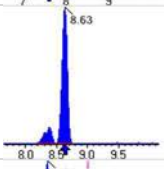 | |
| PFHpS | ( 449.0 / 80.0 ) 454824<br>( 449.0 / 99.0 ) 118403 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 980.7<br>650.1 | 0.2603<br>98.4<br>98.4 | 0.4757 | N/A | 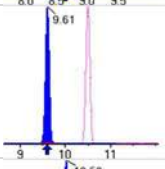 | 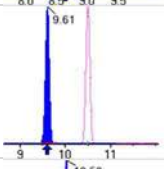 | |
| PFOS | ( 499.0 / 80.0 ) 424655<br>( 499.0 / 99.0 ) 97429 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.2) | 865.6<br>2087.7 | 0.2294<br>98.2<br>98.2 | 0.4608 | N/A | 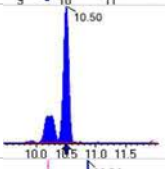 | 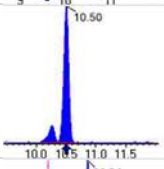 | |
| PFNS | ( 549.0 / 80.0 ) 419634<br>( 549.0 / 99.0 ) 115472 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 999.8<br>699.2 | 0.2752<br>101.0<br>101.0 | 0.4863 | N/A | 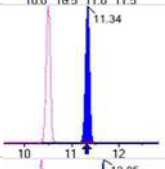 | 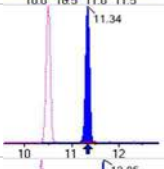 | |
| PFDS | ( 599.0 / 80.0 ) 531726<br>( 599.0 / 99.0 ) 138592 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 979.2<br>576.8 | 0.2606<br>95.9<br>95.9 | 0.5047 | N/A | 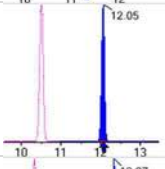 | 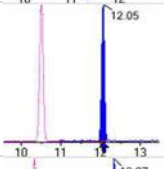 | |
| PFDoS | ( 699.0 / 80.0 ) 448366<br>( 699.0 / 99.0 ) 109465 | ( 12.97 , 1.23 )<br>( N/A , 0.00 , 0.0) | 1926.4<br>1068.2 | 0.2441<br>104.5<br>104.5 | 0.4827 | N/A | 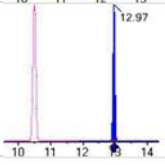 | 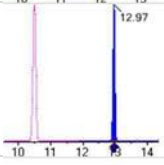 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 754240<br>( 327.0 / 81.0 ) 686574 | ( 5.51 , 1.00 )<br>( -0.01 , N/A , -0.2) | 3506.2<br>1884.3 | 0.9103<br>104.3<br>104.3 | 1.9200 | N/A | 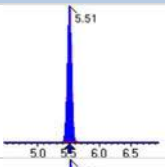 | 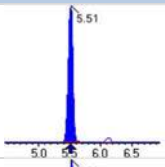 | |
| 6:2FTS | ( 427.0 / 407.0 ) 743646<br>( 427.0 / 81.0 ) 871699 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.3) | 3382.5<br>2278.6 | 1.1722<br>93.5<br>93.5 | 1.9637 | N/A | 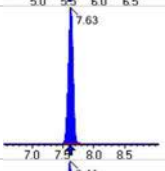 | 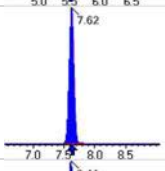 | |
| 8:2FTS | ( 527.0 / 507.0 ) 720596<br>( 527.0 / 81.0 ) 776814 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1864.9<br>1134.6 | 1.0780<br>99.1<br>99.1 | 2.0117 | N/A | 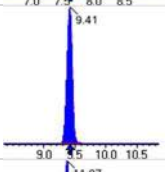 | 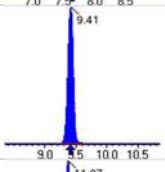 | |
| 10:2FTS | ( 627.0 / 607.0 ) 538928<br>( 627.0 / 81.0 ) 829622 | ( 11.07 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1479.4<br>1094.4 | 1.5394<br>106.9<br>106.9 | 1.8031 | N/A | 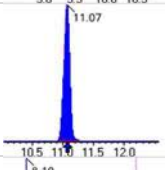 | 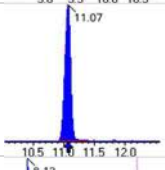 | |
| PFBSA | ( 297.9 / 78.0 ) 377825<br>( 297.9 / 278.0 ) 593 | ( 8.10 , 0.57 )<br>( N/A , -0.01 , -1.1) | 1359.0<br>35.1 | 0.0016<br>114.8<br>114.8 | 0.4989 | N/A | 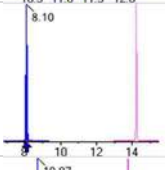 | 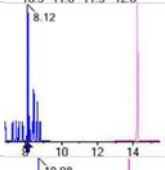 | |
| PFHxSA | ( 397.9 / 78.0 ) 506230<br>( 397.9 / 378.0 ) 2031 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , -0.3) | 1295.9<br>58.9 | 0.0040<br>98.2<br>98.2 | 0.5209 | N/A | 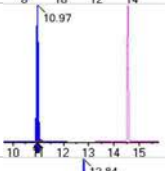 | 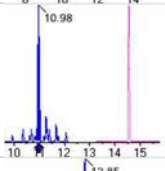 | |
| PFOSA | ( 498.0 / 78.0 ) 387069<br>( 498.0 / 478.0 ) 4980 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1381.2<br>211.1 | 0.0129<br>91.7<br>91.7 | 0.5254 | N/A | 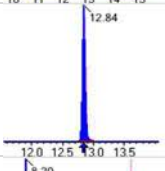 | 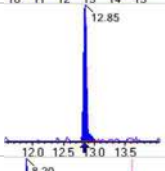 | |
| TFSI | ( 279.7 / 147.0 ) 914573<br>( 279.7 / 211.0 ) 73594 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.1) | 56.4<br>41.8 | 0.0805<br>95.8<br>95.8 | 0.4714 | N/A | 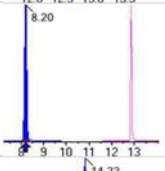 | 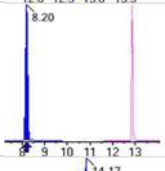 | |
| NMeFOSA | ( 512.0 / 219.0 ) 289760<br>( 512.0 / 169.0 ) 219586 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 1564.6<br>722.0 | 0.7578<br>101.3<br>101.3 | 1.9861 | N/A | 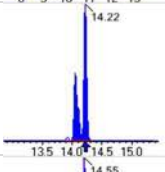 | 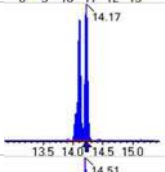 | |
| NEtFOSA | ( 526.0 / 219.0 ) 357885<br>( 526.0 / 169.0 ) 435343 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.2) | 2096.7<br>1693.7 | 1.2164<br>98.5<br>98.5 | 2.0207 | N/A | 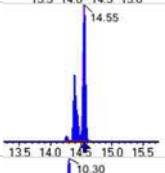 | 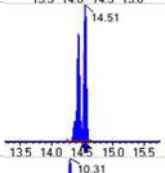 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 101165<br>( 570.0 / 483.0 ) 44729 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1433.8<br>321.8 | 0.4421<br>100.8<br>100.8 | 0.5077 | N/A | 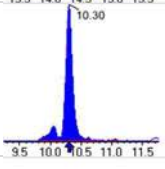 | 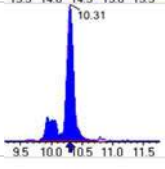 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 101975<br>( 584.0 / 526.0 ) 55503 | ( 10.84 , 1.00 ) ( 0.01 , N/A , -0.1) | 3375617.3<br>499.1 | 0.5443<br>88.3<br>88.3 | 0.5375 | N/A | 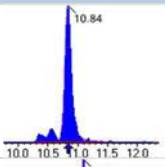 | 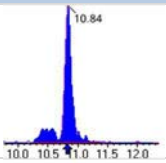 | |
| NMeFOSE | ( 616.0 / 59.0 ) 147340 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 760.5 | N/A<br>0.0<br>0.0 | 2.0427 | N/A | 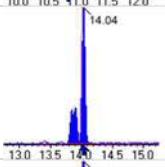 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 117168 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 956.6 | N/A<br>0.0<br>0.0 | 1.9790 | N/A | 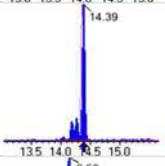 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 35584<br>( 285.0 / 185.0 ) 106028 | ( 6.50 , 1.00 ) ( -0.01 , N/A , -0.2) | 642.7<br>688.7 | 2.9796<br>107.7<br>107.7 | 0.4650 | N/A | 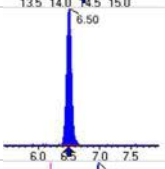 | 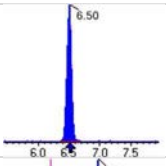 | |
| ADONA | ( 377.0 / 85.0 ) 413542<br>( 377.0 / 251.0 ) 38104 | ( 7.58 , 1.16 ) ( N/A , -0.01 , 0.1) | 1102.2<br>428.3 | 0.0921<br>90.4<br>90.4 | 0.4632 | N/A | 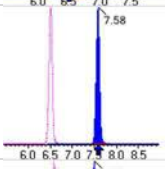 | 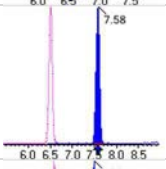 | |
| PFEESA | ( 315.0 / 135.0 ) 179792<br>( 315.0 / 83.0 ) 102089 | ( 6.94 , 1.15 ) ( N/A , -0.01 , 0.1) | 1604.0<br>254.7 | 0.5678<br>101.9<br>101.9 | 0.8709 | N/A | 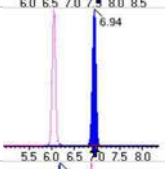 | 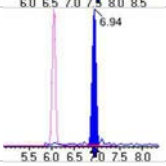 | |
| PFMPA | ( 229.0 / 85.0 ) 71647 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 1573.5 | N/A<br>0.0<br>0.0 | 0.8972 | N/A | 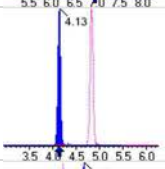 | | |
| PFMBA | ( 279.0 / 85.0 ) 202423 | ( 5.19 , 1.08 ) ( N/A , -0.02 , 0.0) | 1629.0 | N/A<br>0.0<br>0.0 | 0.9326 | N/A | 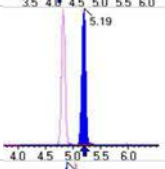 | | |
| NFDHA | ( 295.0 / 201.0 ) 108804<br>( 295.0 / 85.0 ) 115646 | ( 5.90 , 0.98 ) ( N/A , -0.02 , -0.2) | 2039.9<br>957.9 | 1.0629<br>98.5<br>98.5 | 1.0138 | N/A | 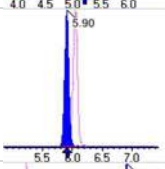 | 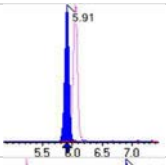 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 441071<br>( 533.0 / 353.0 ) 140189 | ( 11.15 , 1.71 ) ( N/A , 0.01 , 0.1) | 2047.3<br>1154.6 | 0.3178<br>101.6<br>101.6 | 0.4574 | N/A | 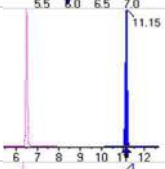 | 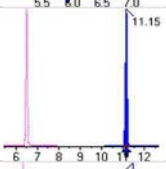 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 340892<br>( 633.0 / 453.0 ) 116659 | ( 12.46 , 1.92 ) ( N/A , 0.00 , -0.1) | 2111.2<br>1169.2 | 0.3422<br>103.0<br>103.0 | 0.4597 | N/A | 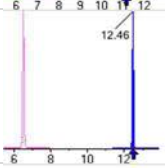 | 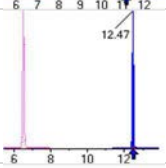 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 226835<br>( 461.0 / 381.2 ) 88383 | ( 9.53 , 0.91 ) ( N/A , 0.00 , 0.0) | 2081.7<br>1590.3 | 0.3896<br>97.8<br>97.8 | 0.4363 | N/A | 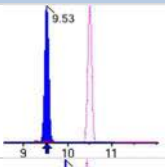 | 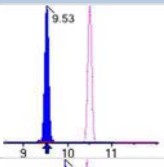 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25450<br>( 241.0 / 117.0 ) 56322 | ( 4.39 , 0.91 ) ( N/A , -0.01 , 0.0) | 836.2<br>518.4 | 2.2130<br>105.0<br>105.0 | 1.7777 | N/A | 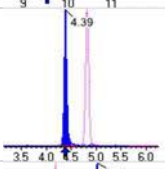 | 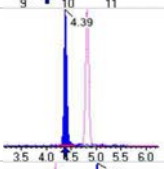 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 171905<br>( 341.0 / 217.0 ) 241610 | ( 6.94 , 1.15 ) ( N/A , -0.01 , 0.0) | 759.6<br>653.2 | 1.4055<br>92.5<br>92.5 | 2.1563 | N/A | 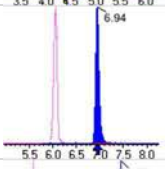 | 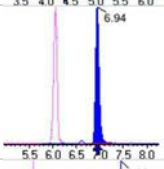 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 258113<br>( 441.0 / 337.0 ) 220700 | ( 9.34 , 1.54 ) ( N/A , 0.00 , 0.1) | 3902.4<br>4652.4 | 0.8551<br>93.2<br>93.2 | 1.9730 | N/A | 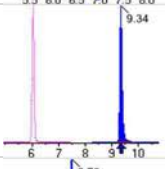 | 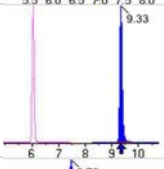 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172883<br>( 357.2 / 243.0 ) 19248 | ( 6.78 , 1.00 ) ( -0.01 , N/A , 0.1) | 854.8<br>275.3 | 0.1113<br>101.0<br>101.0 | 0.4857 | N/A | 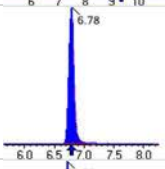 | 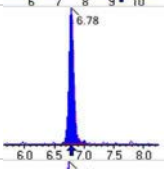 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 121222<br>( 457.2 / 343.0 ) 4083 | ( 8.82 , 1.00 ) ( -0.01 , N/A , -0.7) | 565.3<br>104.4 | 0.0337<br>81.2<br>81.2 | 0.5056 | N/A | 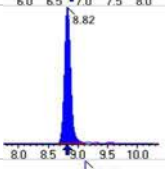 | 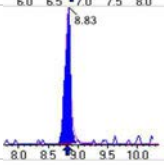 | |
| TDCA | ( 499.0 / 80.0 ) 308828 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 2696.4 | N/A<br>0.0<br>0.0 | 0.4916 | N/A | 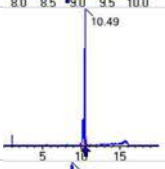 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261563 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 1100.3 | N/A | 1.0970<br>[ 1.0000 ] | 109.7%<br>{ 111.6% } | 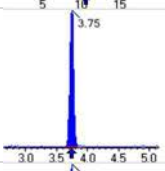 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125307 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 10148.5 | N/A | 0.9878<br>[ 1.0000 ] | 98.8%<br>{ 104.9% } | 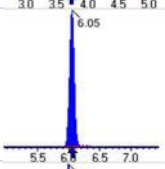 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390460 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 5378.3 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 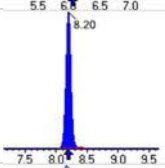 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278335 | ( 9.15 , N/A ) ( N/A , 0.00 , N/A ) | 1109.0 | N/A | 0.9786<br>[ 1.0000 ] | 97.9%<br>{ 104.5% } | 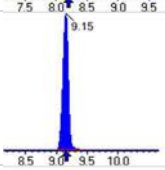 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307138 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6465.5 | N/A | 1.0517 [ 1.0000 ] | 105.2% { 114.7% } | 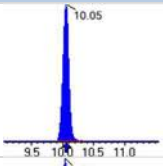 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981307 | ( 8.64 , N/A ) ( N/A , -0.01 , N/A ) | 6565.2 | N/A | 1.0340 [ 1.0000 ] | 103.4% { 109.0% } | 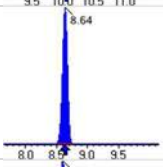 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 789235 | ( 10.51 , N/A ) ( N/A , 0.00 , N/A ) | 2423.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 112.6% } | 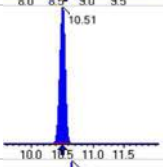 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2411767 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 38473.3 | N/A | 8.0713 [ 8.0000 ] | 100.9% { 114.0% } | 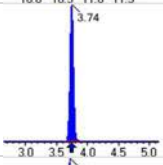 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 996419 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5316.2 | N/A | 4.2618 [ 4.0000 ] | 106.5% { 108.1% } | 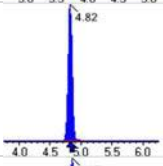 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 598415 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 7772.4 | N/A | 2.0930 [ 2.0000 ] | 104.7% { 108.1% } | 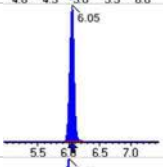 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642898 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4139.3 | N/A | 2.0214 [ 2.0000 ] | 101.1% { 103.8% } | 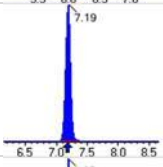 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 837262 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2865.2 | N/A | 2.0013 [ 2.0000 ] | 100.1% { 102.1% } | 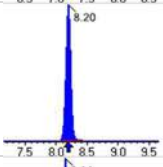 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 268319 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2813.0 | N/A | 0.9832 [ 1.0000 ] | 98.3% { 102.2% } | 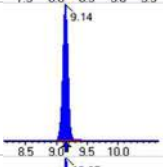 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317534 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1393.5 | N/A | 0.9225 [ 1.0000 ] | 92.3% { 100.3% } | 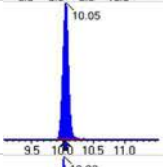 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392266 | ( 10.92 , N/A ) ( N/A , 0.00 , N/A ) | 889.3 | N/A | 0.9687 [ 1.0000 ] | 96.9% { 108.6% } | 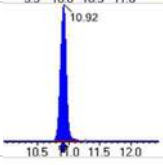 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382608 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1180.8 | N/A | 0.9278 [ 1.0000 ] | 92.8% { 108.8% } | 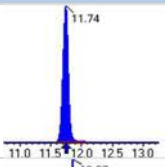 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 332937 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1583.7 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 106.5% } | 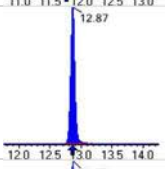 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577159 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 1.9250 [ 2.0000 ] | 96.3% { 111.8% } | 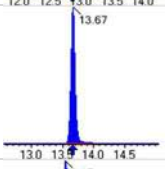 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1688757 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 883.0 | N/A | 1.9047 [ 2.0000 ] | 95.2% { 106.0% } | 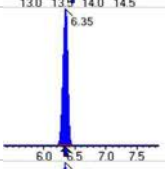 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1378939 | ( 8.63 , N/A ) ( N/A , 0.00 , N/A ) | 4407.3 | N/A | 1.9485 [ 2.0000 ] | 97.4% { 107.7% } | 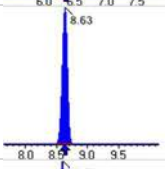 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1595802 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1706.0 | N/A | 1.8753 [ 2.0000 ] | 93.8% { 102.1% } | 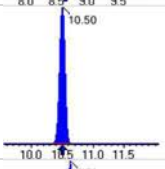 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598745 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 79.8 | N/A | 3.9141 [ 4.0000 ] | 97.9% { 114.1% } | 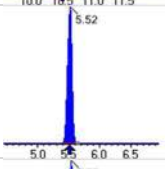 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1829265 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3435.0 | N/A | 3.9958 [ 4.0000 ] | 99.9% { 107.6% } | 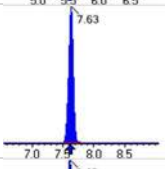 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1508713 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1476.9 | N/A | 4.2020 [ 4.0000 ] | 105.1% { 114.3% } | 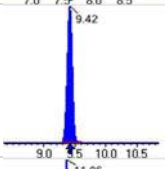 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3102262 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1234.2 | N/A | 8.2675 [ 8.0000 ] | 103.3% { 119.5% } | 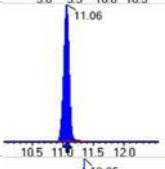 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1473534 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1630.0 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 110.5% } | 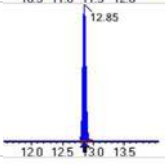 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 293876 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2091.2 | N/A | 1.8374 [ 2.0000 ] | 91.9% { 105.9% } | 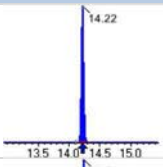  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316276 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2498.1 | N/A | 1.8439 [ 2.0000 ] | 92.2% { 100.3% } | 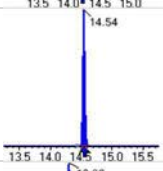  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 835724 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2699.7 | N/A | 3.8168 [ 4.0000 ] | 95.4% { 99.7% } | 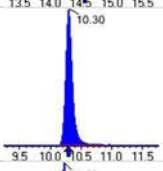  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 775814 | ( 10.83 , N/A ) ( N/A , 0.01 , N/A ) | 2136.8 | N/A | 3.8876 [ 4.0000 ] | 97.2% { 102.6% } | 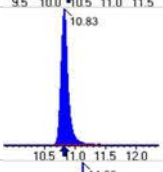  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1315136 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2600.8 | N/A | 18.2970 [ 20.0000 ] | 91.5% { 97.7% } | 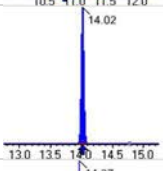  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1332738 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4801.6 | N/A | 18.2683 [ 20.0000 ] | 91.3% { 101.2% } | 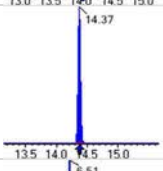  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1038084 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2605.4 | N/A | 7.9707 [ 8.0000 ] | 99.6% { 106.2% } | 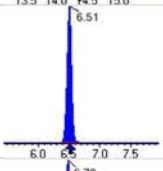  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 669550 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1235.7 | N/A | 2.0107 [ 2.0000 ] | 100.5% { 116.0% } | 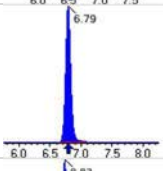  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 587942 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 696.3 | N/A | 1.9395 [ 2.0000 ] | 97.0% { 109.4% } | 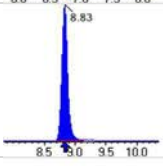  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 572081<br>( 163.0 / 69.0 ) 15453 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , -0.1) | 3331.6<br>685.8 | 0.0270<br>99.5<br>99.5 | 1.8766 | N/A | 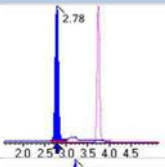 | 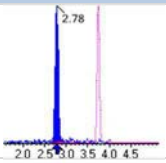 | |
| PFBA | ( 213.0 / 169.0 ) 1291256 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 977.6 | N/A<br>0.0<br>0.0 | 4.0067 | N/A | 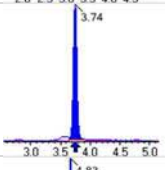 | | |
| PFPeA | ( 263.0 / 219.0 ) 515447<br>( 263.0 / 69.0 ) 5565 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , -0.6) | 2722.5<br>101.7 | 0.0108<br>90.4<br>90.4 | 1.9936 | N/A | 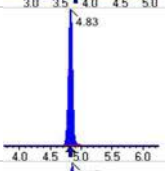 | 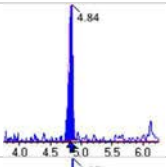 | |
| PFHxA | ( 313.0 / 269.0 ) 299582<br>( 313.0 / 119.0 ) 31742 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1493.9<br>435.1 | 0.1060<br>91.3<br>91.3 | 0.9811 | N/A | 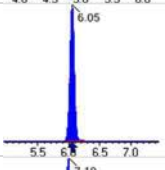 | 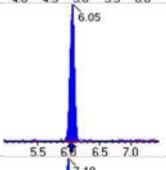 | |
| PFHpA | ( 363.0 / 319.0 ) 337151<br>( 363.0 / 169.0 ) 99321 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1122.0<br>1188.9 | 0.2946<br>97.2<br>97.2 | 1.0032 | N/A | 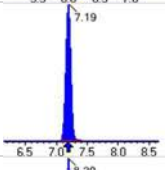 | 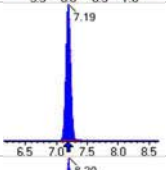 | |
| PFOA | ( 413.0 / 369.0 ) 460701<br>( 413.0 / 169.0 ) 156073 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , -0.2) | 411.7<br>644.7 | 0.3388<br>92.7<br>92.7 | 0.9980 | N/A | 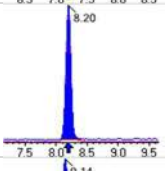 | 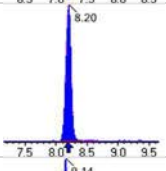 | |
| PFNA | ( 463.0 / 419.0 ) 295897<br>( 463.0 / 169.0 ) 74193 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 828.0<br>576.3 | 0.2507<br>98.2<br>98.2 | 0.9829 | N/A | 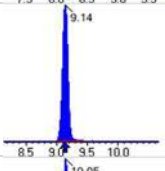 | 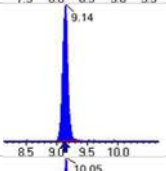 | |
| PFDA | ( 513.0 / 469.0 ) 352635<br>( 513.0 / 169.0 ) 43955 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2404.3<br>865.6 | 0.1246<br>106.4<br>106.4 | 1.0071 | N/A | 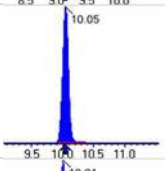 | 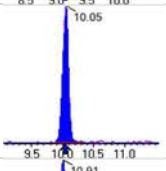 | |
| PFUnA | ( 563.0 / 519.0 ) 381432<br>( 563.0 / 169.0 ) 53955 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 999.2<br>403.6 | 0.1415<br>99.8<br>99.8 | 1.0353 | N/A | 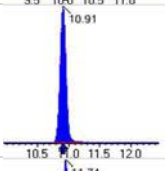 | 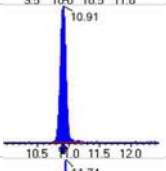 | |
| PFDoA | ( 613.0 / 569.0 ) 427017<br>( 613.0 / 169.0 ) 60201 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1103.2<br>515.1 | 0.1410<br>89.2<br>89.2 | 1.0255 | N/A | 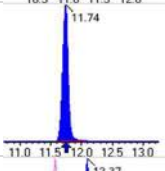 | 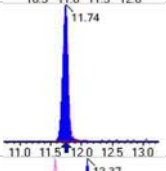 | |
| PFTrDA | ( 663.0 / 619.0 ) 399605<br>( 663.0 / 169.0 ) 106227 | ( 12.37 , 1.05 )<br>( N/A , -0.01 , 0.0) | 1077.2<br>701.1 | 0.2658<br>103.3<br>103.3 | 0.9810 | N/A | 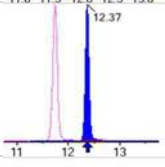 | 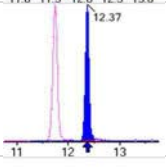 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 342493<br>( 713.0 / 169.0 ) 87584 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1309.5<br>476.1 | 0.2557<br>94.7<br>94.7 | 1.0520 | N/A | 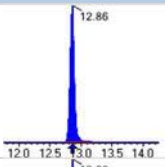 | 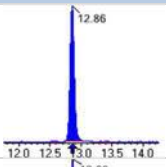 | |
| PFHxDA | ( 813.0 / 769.0 ) 295487<br>( 813.0 / 169.0 ) 71255 | ( 13.66 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1293.3<br>536.6 | 0.2411<br>98.6<br>98.6 | 0.9920 | N/A | 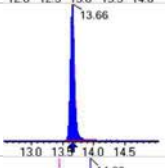 | 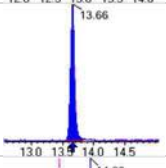 | |
| PFODA | ( 913.0 / 869.0 ) 188029<br>( 913.0 / 169.0 ) 59688 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , 0.2) | 765.7<br>286.7 | 0.3174<br>88.6<br>88.6 | 1.0090 | N/A | 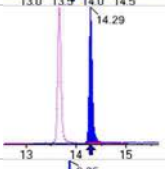 | 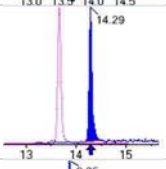 | |
| PFBS | ( 299.0 / 80.0 ) 407079<br>( 299.0 / 99.0 ) 304744 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2093.0<br>1197.3 | 0.7486<br>105.9<br>105.9 | 0.8714 | N/A | 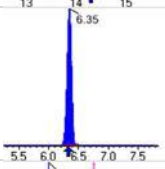 | 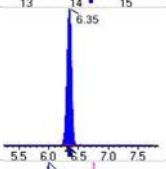 | |
| PFPeS | ( 349.0 / 80.0 ) 1109577<br>( 349.0 / 99.0 ) 395272 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.2) | 1653.8<br>1364.1 | 0.3562<br>99.1<br>99.1 | 1.0024 | N/A | 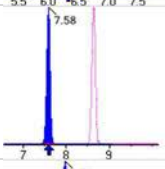 | 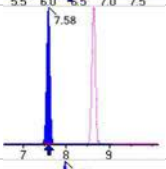 | |
| PFHxS | ( 399.0 / 80.0 ) 1171862<br>( 399.0 / 99.0 ) 378800 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1877.4<br>2472.1 | 0.3232<br>101.5<br>101.5 | 0.9114 | N/A | 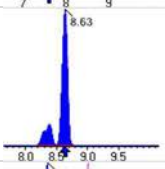 | 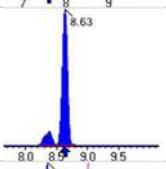 | |
| PFHpS | ( 449.0 / 80.0 ) 990486<br>( 449.0 / 99.0 ) 270859 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1237.4<br>959.9 | 0.2735<br>103.3<br>103.3 | 0.9914 | N/A | 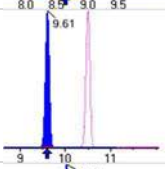 | 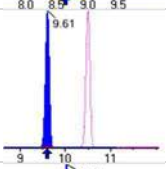 | |
| PFOS | ( 499.0 / 80.0 ) 915045<br>( 499.0 / 99.0 ) 214297 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1166.7<br>2416.7 | 0.2342<br>100.2<br>100.2 | 0.9501 | N/A | 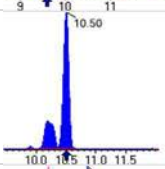 | 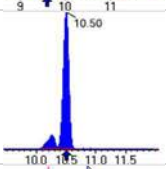 | |
| PFNS | ( 549.0 / 80.0 ) 896593<br>( 549.0 / 99.0 ) 249551 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1601.3<br>1206.4 | 0.2783<br>102.1<br>102.1 | 0.9943 | N/A | 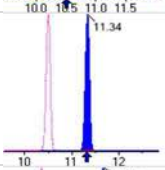 | 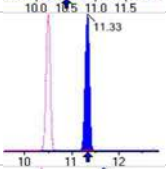 | |
| PFDS | ( 599.0 / 80.0 ) 1127572<br>( 599.0 / 99.0 ) 302383 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1436.2<br>916.8 | 0.2682<br>98.6<br>98.6 | 1.0241 | N/A | 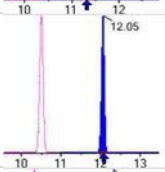 | 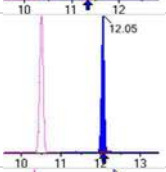 | |
| PFDoS | ( 699.0 / 80.0 ) 1018920<br>( 699.0 / 99.0 ) 244059 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.1) | 2808.2<br>1602.4 | 0.2395<br>102.5<br>102.5 | 1.0497 | N/A | 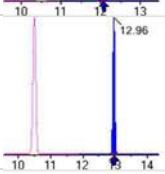 | 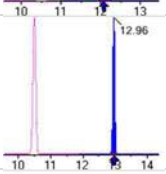 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1636735<br>( 327.0 / 81.0 ) 1473856 | ( 5.52 , 1.00 )<br>( -0.01 , N/A , -0.2) | 5204.7<br>2602.4 | 0.9005<br>103.2<br>103.2 | 3.7254 | N/A | 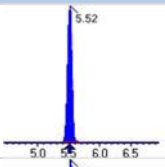 | 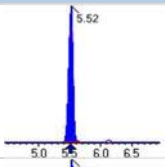 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1622158<br>( 427.0 / 81.0 ) 2083355 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4238.9<br>2696.5 | 1.2843<br>102.4<br>102.4 | 3.9122 | N/A | 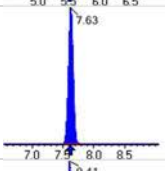 | 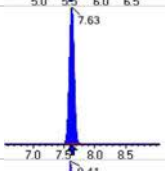 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1596229<br>( 527.0 / 81.0 ) 1699957 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1759.6<br>1660.8 | 1.0650<br>97.9<br>97.9 | 4.0286 | N/A | 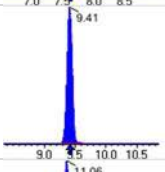 | 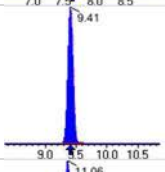 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1186863<br>( 627.0 / 81.0 ) 1648684 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1185.3<br>1102.0 | 1.3891<br>96.5<br>96.5 | 4.0027 | N/A | 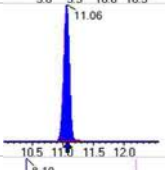 | 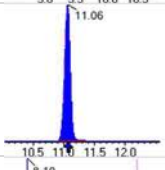 | |
| PFBSA | ( 297.9 / 78.0 ) 868869<br>( 297.9 / 278.0 ) 1723 | ( 8.10 , 0.57 )<br>( N/A , 0.00 , 0.3) | 1316.9<br>72.3 | 0.0020<br>145.1<br>145.1 | 1.0646 | N/A | 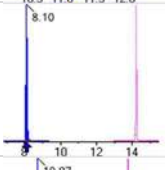 | 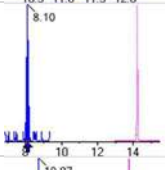 | |
| PFHxSA | ( 397.9 / 78.0 ) 1138067<br>( 397.9 / 378.0 ) 5913 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.2) | 1254.0<br>145.3 | 0.0052<br>127.2<br>127.2 | 1.0822 | N/A | 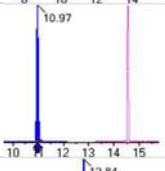 | 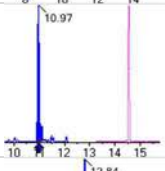 | |
| PFOSA | ( 498.0 / 78.0 ) 762063<br>( 498.0 / 478.0 ) 11669 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1669.7<br>330.8 | 0.0153<br>109.1<br>109.1 | 0.9531 | N/A | 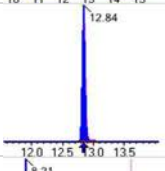 | 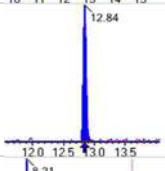 | |
| TFSI | ( 279.7 / 147.0 ) 1968069<br>( 279.7 / 211.0 ) 180774 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 64.3<br>58.0 | 0.0919<br>109.3<br>109.3 | 0.9348 | N/A | 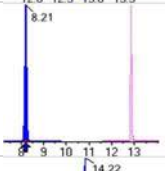 | 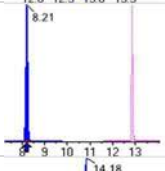 | |
| NMeFOSA | ( 512.0 / 219.0 ) 676418<br>( 512.0 / 169.0 ) 494118 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.5) | 2998.4<br>1222.2 | 0.7305<br>97.6<br>97.6 | 4.3018 | N/A | 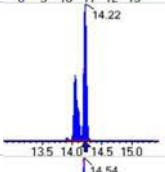 | 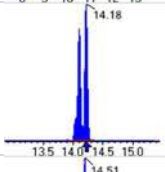 | |
| NEtFOSA | ( 526.0 / 219.0 ) 784152<br>( 526.0 / 169.0 ) 968317 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3542.8<br>2523.2 | 1.2349<br>100.0<br>100.0 | 4.0920 | N/A | 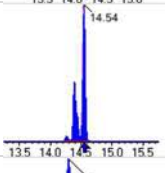 | 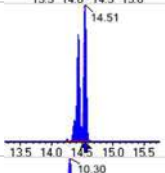 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 217987<br>( 570.0 / 483.0 ) 97828 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2749.9<br>7363.6 | 0.4488<br>102.3<br>102.3 | 1.0587 | N/A | 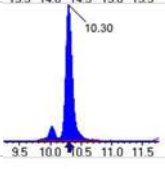 | 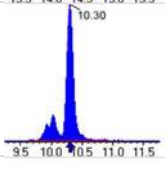 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 215279<br>( 584.0 / 526.0 ) 113495 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1923.7<br>570.6 | 0.5272<br>85.5<br>85.5 | 1.0388 | N/A | 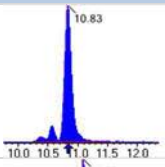 | 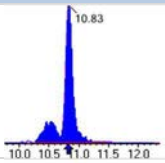 | |
| NMeFOSE | ( 616.0 / 59.0 ) 322501 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1109.7 | N/A<br>0.0<br>0.0 | 3.8876 | N/A | 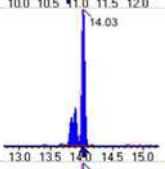 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 275023 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1504.4 | N/A<br>0.0<br>0.0 | 4.0518 | N/A | 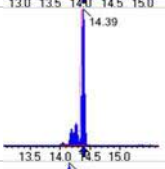 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78310<br>( 285.0 / 185.0 ) 225338 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1215.6<br>1094.8 | 2.8775<br>104.1<br>104.1 | 0.9672 | N/A | 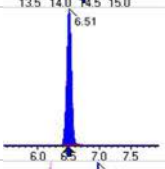 | 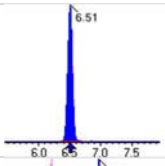 | |
| ADONA | ( 377.0 / 85.0 ) 925674<br>( 377.0 / 251.0 ) 94429 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1684.4<br>863.1 | 0.1020<br>100.1<br>100.1 | 0.9800 | N/A | 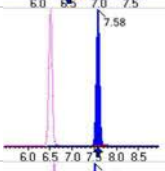 | 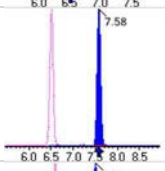 | |
| PFEESA | ( 315.0 / 135.0 ) 374674<br>( 315.0 / 83.0 ) 221014 | ( 6.94 , 1.15 )<br>( N/A , 0.00 , 0.2) | 1629.8<br>585.3 | 0.5899<br>105.8<br>105.8 | 1.7087 | N/A | 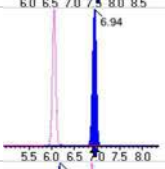 | 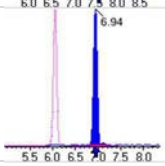 | |
| PFMPA | ( 229.0 / 85.0 ) 165620 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 2153.7 | N/A<br>0.0<br>0.0 | 2.0187 | N/A | 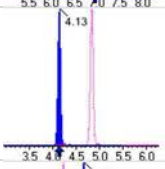 | | |
| PFMBA | ( 279.0 / 85.0 ) 459608 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 3304.8 | N/A<br>0.0<br>0.0 | 2.0611 | N/A | 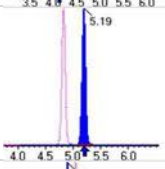 | | |
| NFDHA | ( 295.0 / 201.0 ) 233407<br>( 295.0 / 85.0 ) 232887 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.0) | 1871.1<br>1404.3 | 0.9978<br>92.5<br>92.5 | 2.0475 | N/A | 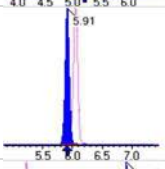 | 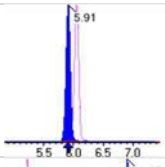 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 977169<br>( 533.0 / 353.0 ) 307774 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.0) | 2252.5<br>1904.5 | 0.3150<br>100.7<br>100.7 | 0.9578 | N/A | 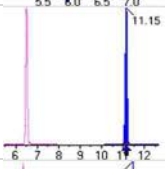 | 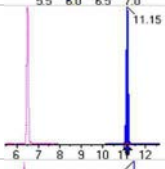 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 766742<br>( 633.0 / 453.0 ) 257032 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 3376.0<br>1473.6 | 0.3352<br>100.9<br>100.9 | 0.9772 | N/A | 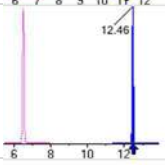 | 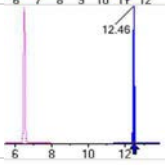 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 518904<br>( 461.0 / 381.2 ) 203061 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2559.7<br>2244.6 | 0.3913<br>98.2<br>98.2 | 0.9551 | N/A | 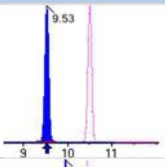 | 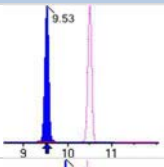 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 58421<br>( 241.0 / 117.0 ) 131714 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.1) | 1288.6<br>1011.6 | 2.2545<br>107.0<br>107.0 | 3.9721 | N/A | 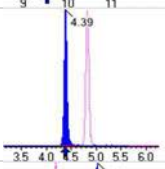 | 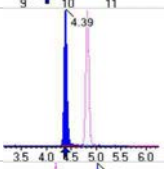 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 362070<br>( 341.0 / 217.0 ) 543142 | ( 6.95 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1018.7<br>864.9 | 1.5001<br>98.7<br>98.7 | 4.2758 | N/A | 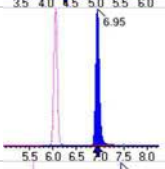 | 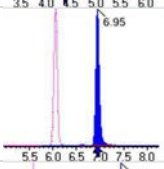 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 552565<br>( 441.0 / 337.0 ) 493299 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , -0.1) | 3905.8<br>9480.9 | 0.8927<br>97.3<br>97.3 | 3.9764 | N/A | 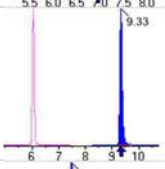 | 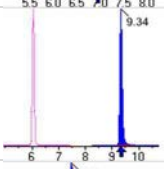 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 363940<br>( 357.2 / 243.0 ) 37601 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1173.5<br>370.6 | 0.1033<br>93.7<br>93.7 | 0.9982 | N/A | 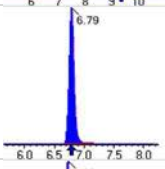 | 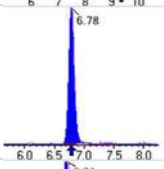 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 254977<br>( 457.2 / 343.0 ) 9972 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.6) | 714.0<br>141.1 | 0.0391<br>94.3<br>94.3 | 0.9768 | N/A | 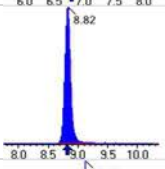 | 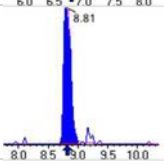 | |
| TDCA | ( 499.0 / 80.0 ) 680639 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 4167.6 | N/A<br>0.0<br>0.0 | 1.0368 | N/A | 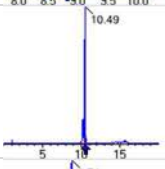 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284719 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1250.4 | N/A | 1.1941<br>[ 1.0000 ] | 119.4%<br>{ 121.5% } | 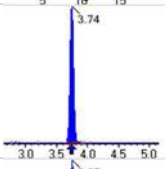 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145345 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 124720.9 | N/A | 1.1457<br>[ 1.0000 ] | 114.6%<br>{ 121.6% } | 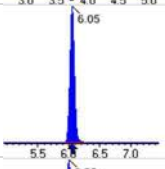 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441486 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3424.8 | N/A | 1.1168<br>[ 1.0000 ] | 111.7%<br>{ 116.2% } | 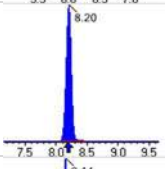 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 318843 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 964.0 | N/A | 1.1211<br>[ 1.0000 ] | 112.1%<br>{ 119.8% } | 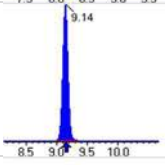 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303537 | ( 10.05 , N/A ) ( N/A , 0.01 , N/A ) | 4251.2 | N/A | 1.0394 [ 1.0000 ] | 103.9% { 113.3% } | 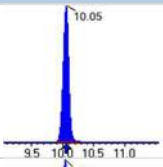 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056155 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 5014.7 | N/A | 1.1129 [ 1.0000 ] | 111.3% { 117.3% } | 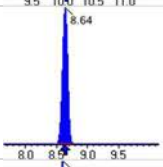 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 845268 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.3 | N/A | 1.1098 [ 1.0000 ] | 111.0% { 120.6% } | 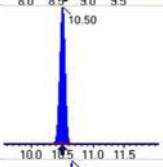 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2586413 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 42750.2 | N/A | 7.9518 [ 8.0000 ] | 99.4% { 122.3% } | 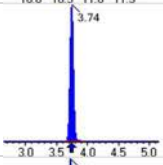 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1023700 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5286.2 | N/A | 3.7748 [ 4.0000 ] | 94.4% { 111.1% } | 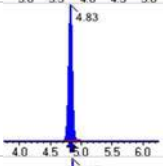 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 635630 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 14493.6 | N/A | 1.9167 [ 2.0000 ] | 95.8% { 114.9% } | 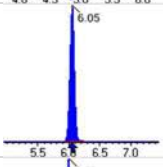 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 684966 | ( 7.19 , N/A ) ( N/A , 0.00 , N/A ) | 3794.1 | N/A | 1.8568 [ 2.0000 ] | 92.8% { 110.6% } | 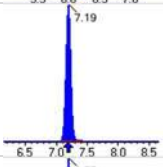 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 928103 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 3322.1 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 113.2% } | 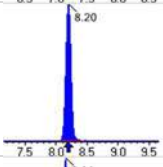 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299515 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2214.7 | N/A | 0.9581 [ 1.0000 ] | 95.8% { 114.0% } | 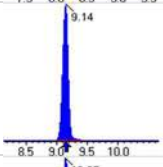 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342697 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1103.1 | N/A | 1.0075 [ 1.0000 ] | 100.7% { 108.2% } | 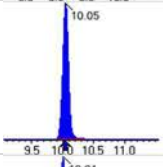 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 398315 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 933.5 | N/A | 0.9953 [ 1.0000 ] | 99.5% { 110.2% } | 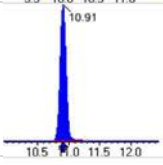 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413909 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1336.1 | N/A | 1.0156 [ 1.0000 ] | 101.6% { 117.7% } | 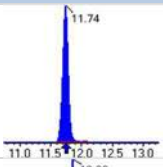  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 347613 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1409.1 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 111.2% } | 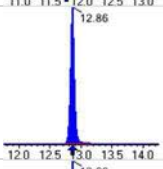  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624611 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2743.3 | N/A | 2.1080 [ 2.0000 ] | 105.4% { 121.0% } | 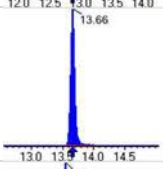  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1799397 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 935.1 | N/A | 1.8857 [ 2.0000 ] | 94.3% { 112.9% } | 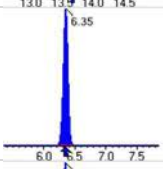  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1446436 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3951.6 | N/A | 1.8990 [ 2.0000 ] | 95.0% { 112.9% } | 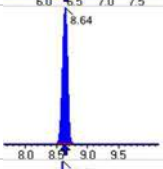  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1667685 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1621.2 | N/A | 1.8298 [ 2.0000 ] | 91.5% { 106.7% } | 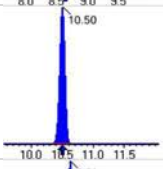  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 669628 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 86.3 | N/A | 4.0673 [ 4.0000 ] | 101.7% { 127.6% } | 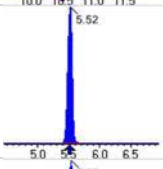  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2002935 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4006.0 | N/A | 4.0651 [ 4.0000 ] | 101.6% { 117.8% } | 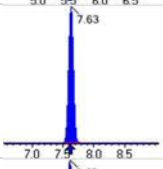  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1668856 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1752.0 | N/A | 4.3187 [ 4.0000 ] | 108.0% { 126.5% } | 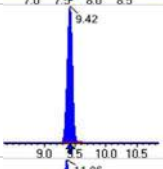  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3077655 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1620.4 | N/A | 7.6206 [ 8.0000 ] | 95.3% { 118.5% } | 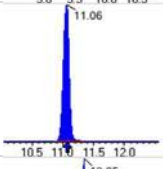  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1599050 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2792.1 | N/A | 1.9799 [ 2.0000 ] | 99.0% { 119.9% } | 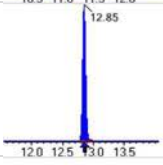  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 316727 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2067.3 | N/A | 1.8490 [ 2.0000 ] | 92.4% { 114.2% } | 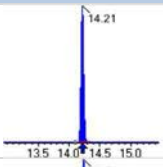  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 342216 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2475.5 | N/A | 1.8629 [ 2.0000 ] | 93.1% { 108.5% } | 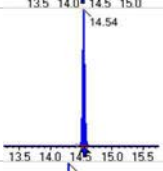  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863550 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2856.7 | N/A | 3.6825 [ 4.0000 ] | 92.1% { 103.1% } | 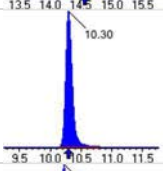  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 847460 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1855.6 | N/A | 3.9651 [ 4.0000 ] | 99.1% { 112.1% } | 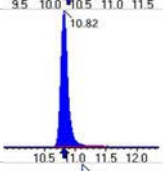  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1512548 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2500.9 | N/A | 19.6485 [ 20.0000 ] | 98.2% { 112.4% } | 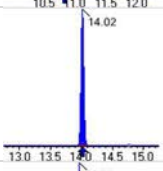  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1527927 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3992.3 | N/A | 19.5555 [ 20.0000 ] | 97.8% { 116.0% } | 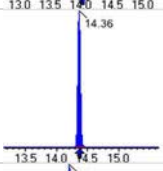  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1098397 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 1915.2 | N/A | 7.2711 [ 8.0000 ] | 90.9% { 112.3% } | 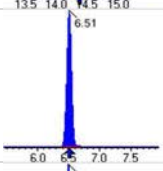  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 685864 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1284.4 | N/A | 2.0841 [ 2.0000 ] | 104.2% { 118.8% } | 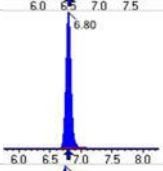  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640047 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 831.7 | N/A | 2.1364 [ 2.0000 ] | 106.8% { 119.1% } | 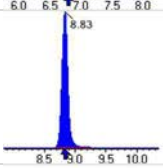  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1167070<br>( 163.0 / 69.0 ) 30804 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 6613.1<br>1428.5 | 0.0264<br>97.2<br>97.2 | 4.0742 | N/A | 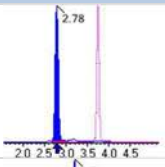 | 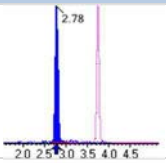 | |
| PFBA | ( 213.0 / 169.0 ) 2380850 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1790.8 | N/A<br>0.0<br>0.0 | 7.8622 | N/A | 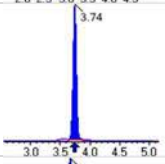 | | |
| PFPeA | ( 263.0 / 219.0 ) 982336<br>( 263.0 / 69.0 ) 11786 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.4) | 3478.0<br>129.5 | 0.0120<br>100.5<br>100.5 | 3.9724 | N/A | 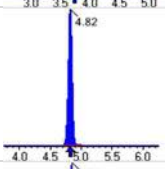 | 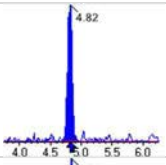 | |
| PFHxA | ( 313.0 / 269.0 ) 545073<br>( 313.0 / 119.0 ) 68593 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1809.3<br>693.8 | 0.1258<br>108.4<br>108.4 | 1.9499 | N/A | 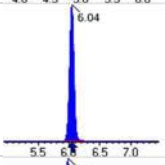 | 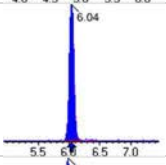 | |
| PFHpA | ( 363.0 / 319.0 ) 643126<br>( 363.0 / 169.0 ) 190819 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1661.0<br>1337.1 | 0.2967<br>97.9<br>97.9 | 2.1051 | N/A | 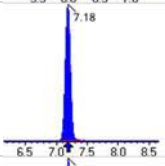 | 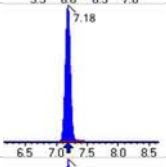 | |
| PFOA | ( 413.0 / 369.0 ) 872213<br>( 413.0 / 169.0 ) 301378 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 570.6<br>871.9 | 0.3455<br>94.5<br>94.5 | 2.1989 | N/A | 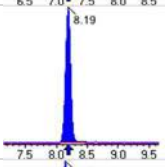 | 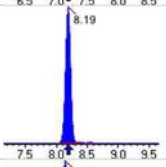 | |
| PFNA | ( 463.0 / 419.0 ) 567165<br>( 463.0 / 169.0 ) 151317 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1085.3<br>759.0 | 0.2668<br>104.5<br>104.5 | 2.0790 | N/A | 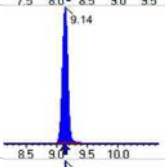 | 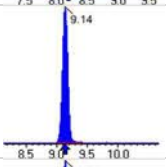 | |
| PFDA | ( 513.0 / 469.0 ) 636050<br>( 513.0 / 169.0 ) 72425 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2724.0<br>2618.5 | 0.1139<br>97.2<br>97.2 | 1.9766 | N/A | 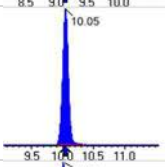 | 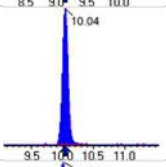 | |
| PFUnA | ( 563.0 / 519.0 ) 707227<br>( 563.0 / 169.0 ) 104233 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1094.1<br>630.7 | 0.1474<br>104.0<br>104.0 | 2.0313 | N/A | 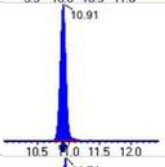 | 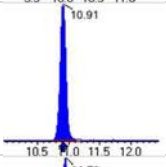 | |
| PFDoA | ( 613.0 / 569.0 ) 782512<br>( 613.0 / 169.0 ) 130444 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1319.2<br>723.5 | 0.1667<br>105.5<br>105.5 | 2.0593 | N/A | 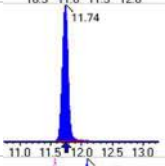 | 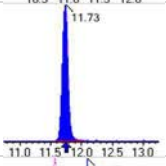 | |
| PFTrDA | ( 663.0 / 619.0 ) 789089<br>( 663.0 / 169.0 ) 212271 | ( 12.37 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1336.2<br>873.5 | 0.2690<br>104.5<br>104.5 | 2.1228 | N/A | 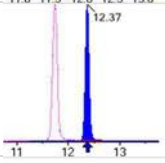 | 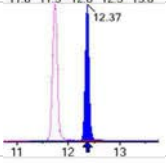 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 637286<br>( 713.0 / 169.0 ) 170472 | ( 12.86 , 1.00 ) ( 0.00 , N/A , 0.1) | 1613.6<br>792.6 | 0.2675<br>99.1<br>99.1 | 2.0366 | N/A | 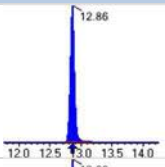 | 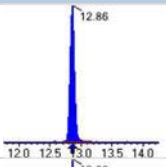 | |
| PFHxDA | ( 813.0 / 769.0 ) 562479<br>( 813.0 / 169.0 ) 139657 | ( 13.66 , 1.00 ) ( 0.00 , N/A , 0.1) | 1879.1<br>883.2 | 0.2483<br>101.5<br>101.5 | 2.0439 | N/A | 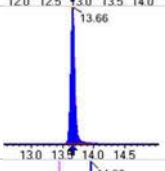 | 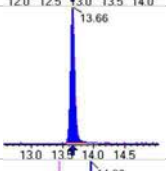 | |
| PFODA | ( 913.0 / 869.0 ) 345836<br>( 913.0 / 169.0 ) 120025 | ( 14.29 , 1.05 ) ( N/A , 0.00 , 0.1) | 1113.8<br>518.3 | 0.3471<br>96.9<br>96.9 | 2.0088 | N/A | 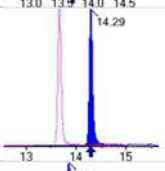 | 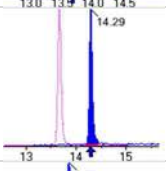 | |
| PFBS | ( 299.0 / 80.0 ) 807070<br>( 299.0 / 99.0 ) 599114 | ( 6.34 , 1.00 ) ( 0.00 , N/A , 0.1) | 2517.2<br>1691.5 | 0.7423<br>105.0<br>105.0 | 1.8154 | N/A | 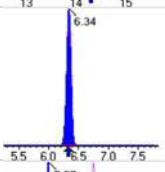 | 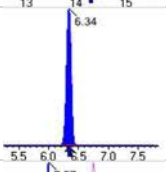 | |
| PFPeS | ( 349.0 / 80.0 ) 2047999<br>( 349.0 / 99.0 ) 717347 | ( 7.57 , 0.88 ) ( N/A , -0.01 , 0.0) | 2149.2<br>1871.5 | 0.3503<br>97.4<br>97.4 | 2.0232 | N/A | 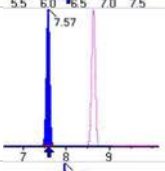 | 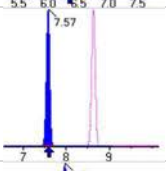 | |
| PFHxS | ( 399.0 / 80.0 ) 2275361<br>( 399.0 / 99.0 ) 716614 | ( 8.63 , 1.00 ) ( 0.00 , N/A , -0.3) | 2510.6<br>3505.7 | 0.3149<br>98.9<br>98.9 | 1.9353 | N/A | 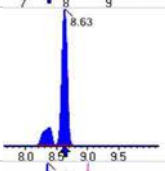 | 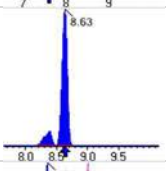 | |
| PFHpS | ( 449.0 / 80.0 ) 1804024<br>( 449.0 / 99.0 ) 504967 | ( 9.61 , 0.91 ) ( N/A , 0.00 , 0.1) | 1569.3<br>1421.3 | 0.2799<br>105.8<br>105.8 | 1.8460 | N/A | 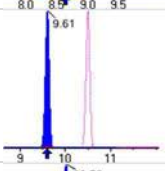 | 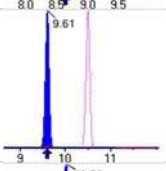 | |
| PFOS | ( 499.0 / 80.0 ) 1717687<br>( 499.0 / 99.0 ) 415698 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1681.3<br>3443.9 | 0.2420<br>103.5<br>103.5 | 1.8234 | N/A | 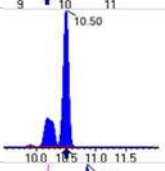 | 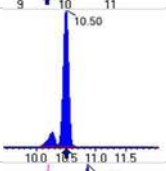 | |
| PFNS | ( 549.0 / 80.0 ) 1727422<br>( 549.0 / 99.0 ) 477926 | ( 11.33 , 1.08 ) ( N/A , 0.00 , 0.0) | 2123.3<br>1732.9 | 0.2767<br>101.5<br>101.5 | 1.9585 | N/A | 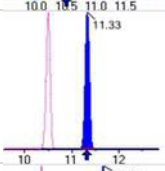 | 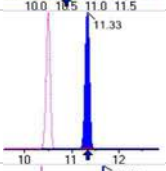 | |
| PFDS | ( 599.0 / 80.0 ) 2215571<br>( 599.0 / 99.0 ) 567898 | ( 12.05 , 1.15 ) ( N/A , 0.00 , 0.0) | 2083.6<br>1457.0 | 0.2563<br>94.3<br>94.3 | 2.0572 | N/A | 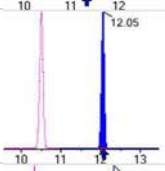 | 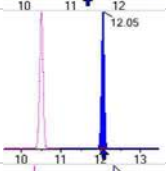 | |
| PFDoS | ( 699.0 / 80.0 ) 1929958<br>( 699.0 / 99.0 ) 452362 | ( 12.97 , 1.23 ) ( N/A , 0.00 , 0.2) | 3211.3<br>2064.4 | 0.2344<br>100.3<br>100.3 | 2.0327 | N/A | 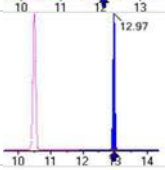 | 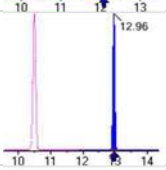 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3165018<br>( 327.0 / 81.0 ) 2801149 | ( 5.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5253.6<br>3183.2 | 0.8850<br>101.4<br>101.4 | 7.7285 | N/A | 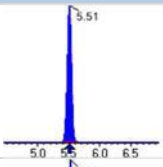 | 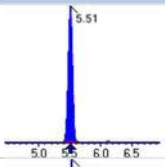 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2962118<br>( 427.0 / 81.0 ) 3791569 | ( 7.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4973.3<br>4315.3 | 1.2800<br>102.1<br>102.1 | 8.2415 | N/A | 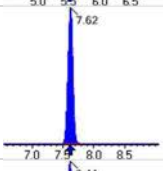 | 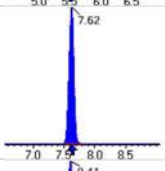 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2967875<br>( 527.0 / 81.0 ) 3049271 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , 0.3) | 1388.1<br>1687.5 | 1.0274<br>94.5<br>94.5 | 9.3020 | N/A | 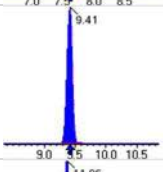 | 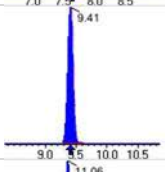 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2212496<br>( 627.0 / 81.0 ) 3256559 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1502.8<br>1201.7 | 1.4719<br>102.2<br>102.2 | 8.4769 | N/A | 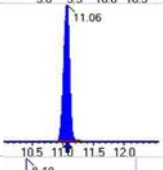 | 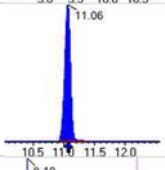 | |
| PFBSA | ( 297.9 / 78.0 ) 1506188<br>( 297.9 / 278.0 ) 2085 | ( 8.10 , 0.57 )<br>( N/A , -0.01 , 0.1) | 1678.4<br>162.1 | 0.0014<br>101.3<br>101.3 | 1.8931 | N/A | 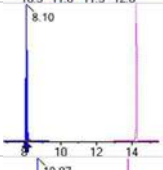 | 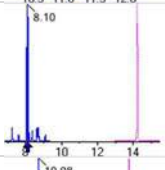 | |
| PFHxSA | ( 397.9 / 78.0 ) 2033326<br>( 397.9 / 378.0 ) 7799 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , -0.5) | 1288.8<br>260.0 | 0.0038<br>93.9<br>93.9 | 1.9498 | N/A | 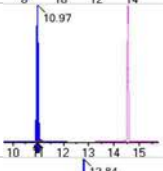 | 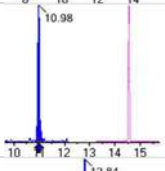 | |
| PFOSA | ( 498.0 / 78.0 ) 1456812<br>( 498.0 / 478.0 ) 21062 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2311.6<br>609.7 | 0.0145<br>103.0<br>103.0 | 2.0599 | N/A | 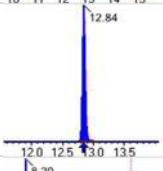 | 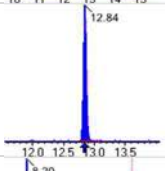 | |
| TFSI | ( 279.7 / 147.0 ) 3946578<br>( 279.7 / 211.0 ) 343736 | ( 8.20 , 0.64 )<br>( N/A , -0.01 , -0.1) | 58.0<br>63.6 | 0.0871<br>103.7<br>103.7 | 2.1192 | N/A | 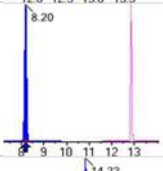 | 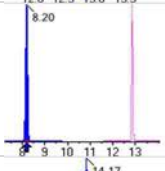 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1289595<br>( 512.0 / 169.0 ) 982667 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.8) | 2679.7<br>1218.1 | 0.7620<br>101.8<br>101.8 | 8.4131 | N/A | 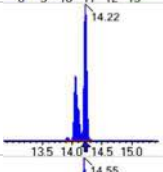 | 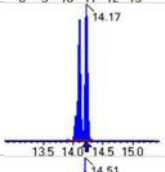 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1550489<br>( 526.0 / 169.0 ) 1954696 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3681.3<br>2879.5 | 1.2607<br>102.1<br>102.1 | 8.1588 | N/A | 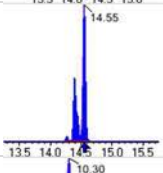 | 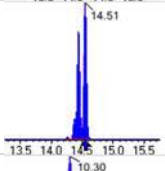 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 387312<br>( 570.0 / 483.0 ) 170497 | ( 10.30 , 1.00 )<br>( 0.01 , N/A , 0.0) | 2659.6<br>1694.2 | 0.4402<br>100.4<br>100.4 | 2.0441 | N/A | 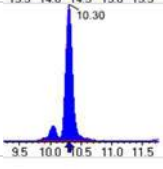 | 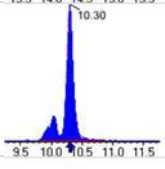 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 371840<br>( 584.0 / 526.0 ) 223765 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1679.5<br>567.2 | 0.6018<br>97.6<br>97.6 | 2.0307 | N/A | 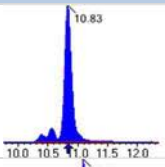 | 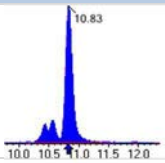 | |
| NMeFOSE | ( 616.0 / 59.0 ) 587826 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1822.9 | N/A<br>0.0<br>0.0 | 8.0538 | N/A | 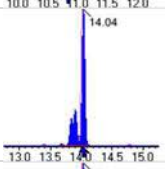 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 498830 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2471.3 | N/A<br>0.0<br>0.0 | 8.3350 | N/A | 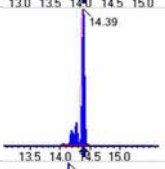 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 155250<br>( 285.0 / 185.0 ) 430625 | ( 6.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1419.6<br>1605.4 | 2.7738<br>100.3<br>100.3 | 1.9504 | N/A | 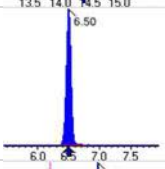 | 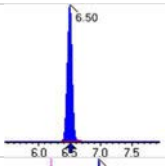 | |
| ADONA | ( 377.0 / 85.0 ) 1788880<br>( 377.0 / 251.0 ) 182995 | ( 7.57 , 1.17 )<br>( N/A , -0.01 , 0.0) | 1568.4<br>1057.9 | 0.1023<br>100.4<br>100.4 | 1.9263 | N/A | 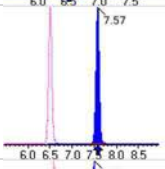 | 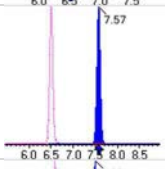 | |
| PFEESA | ( 315.0 / 135.0 ) 717362<br>( 315.0 / 83.0 ) 425934 | ( 6.93 , 1.15 )<br>( N/A , -0.01 , -0.1) | 3571.8<br>934.1 | 0.5938<br>106.5<br>106.5 | 3.5735 | N/A | 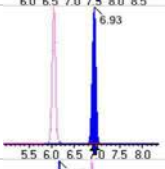 | 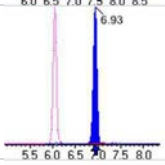 | |
| PFMPA | ( 229.0 / 85.0 ) 325814 | ( 4.13 , 0.86 )<br>( N/A , -0.02 , 0.0) | 4750.1 | N/A<br>0.0<br>0.0 | 4.1520 | N/A | 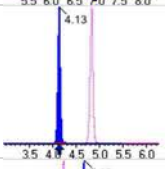 | | |
| PFMBA | ( 279.0 / 85.0 ) 859316 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 4011.9 | N/A<br>0.0<br>0.0 | 4.0290 | N/A | 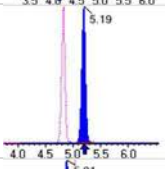 | | |
| NFDHA | ( 295.0 / 201.0 ) 433621<br>( 295.0 / 85.0 ) 453198 | ( 5.91 , 0.98 )<br>( N/A , -0.02 , 0.0) | 2536.7<br>1960.5 | 1.0451<br>96.9<br>96.9 | 4.1550 | N/A | 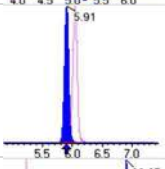 | 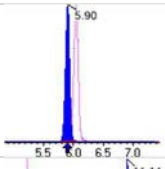 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1841173<br>( 533.0 / 353.0 ) 582312 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.1) | 3390.1<br>2790.6 | 0.3163<br>101.1<br>101.1 | 1.8356 | N/A | 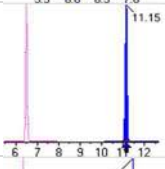 | 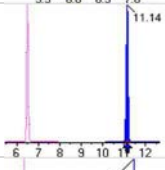 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1399623<br>( 633.0 / 453.0 ) 481280 | ( 12.46 , 1.92 )<br>( N/A , 0.00 , 0.0) | 3352.1<br>2343.7 | 0.3439<br>103.5<br>103.5 | 1.8145 | N/A | 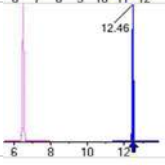 | 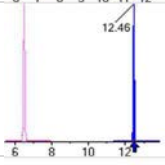 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 988702<br>( 461.0 / 381.2 ) 369799 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3569.1<br>2525.0 | 0.3740<br>93.9<br>93.9 | 1.8604 | N/A | 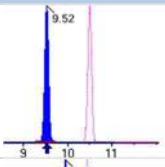 | 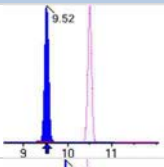 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 107582<br>( 241.0 / 117.0 ) 252826 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , 0.1) | 1855.3<br>1674.9 | 2.3501<br>111.5<br>111.5 | 7.6476 | N/A | 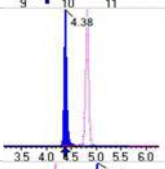 | 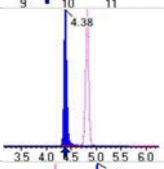 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 600676<br>( 341.0 / 217.0 ) 948229 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1068.2<br>1017.6 | 1.5786<br>103.9<br>103.9 | 7.7484 | N/A | 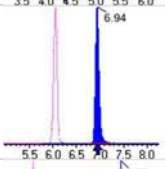 | 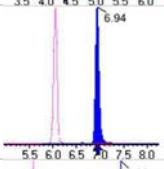 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 908795<br>( 441.0 / 337.0 ) 796144 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 4807.8<br>10397.6 | 0.8760<br>95.5<br>95.5 | 7.1437 | N/A | 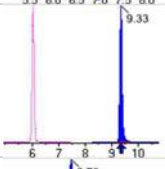 | 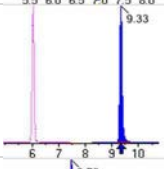 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 656805<br>( 357.2 / 243.0 ) 69587 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1423.9<br>609.7 | 0.1059<br>96.1<br>96.1 | 2.0942 | N/A | 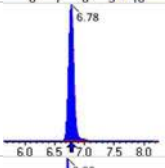 | 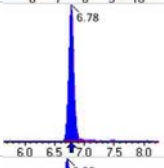 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 424616<br>( 457.2 / 343.0 ) 18607 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 720.9<br>173.8 | 0.0438<br>105.7<br>105.7 | 2.0751 | N/A | 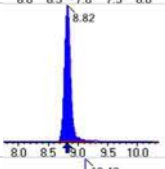 | 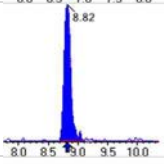 | |
| TDCA | ( 499.0 / 80.0 ) 1243423 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 9081.2 | N/A<br>0.0<br>0.0 | 1.9364 | N/A | 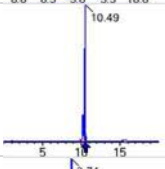 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256028 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1098.6 | N/A | 1.0738<br>[ 1.0000 ] | 107.4%<br>{ 109.3% } | 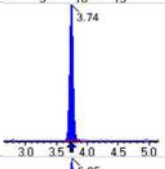 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127760 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 116465.1 | N/A | 1.0071<br>[ 1.0000 ] | 100.7%<br>{ 106.9% } | 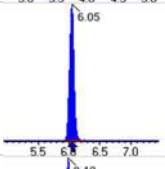 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 375777 | ( 8.19 , N/A )<br>( N/A , -0.01 , N/A ) | 3449.1 | N/A | 0.9506<br>[ 1.0000 ] | 95.1%<br>{ 98.9% } | 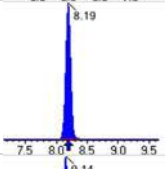 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 261656 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1169.2 | N/A | 0.9200<br>[ 1.0000 ] | 92.0%<br>{ 98.3% } | 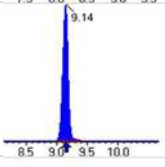 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273361 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6361.8 | N/A | 0.9361 [ 1.0000 ] | 93.6% { 102.0% } | 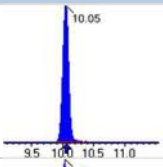  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 895978 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 6222.1 | N/A | 0.9441 [ 1.0000 ] | 94.4% { 99.5% } | 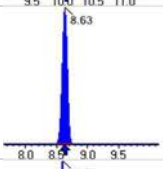  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715584 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.4 | N/A | 0.9395 [ 1.0000 ] | 94.0% { 102.1% } | 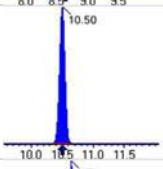  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2430274 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40566.0 | N/A | 8.3091 [ 8.0000 ] | 103.9% { 114.9% } | 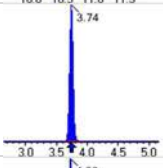  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979123 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5288.2 | N/A | 4.1074 [ 4.0000 ] | 102.7% { 106.2% } | 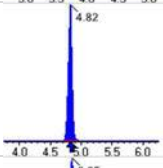  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581916 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 6715.1 | N/A | 1.9963 [ 2.0000 ] | 99.8% { 105.2% } | 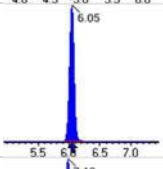  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 622669 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5519.9 | N/A | 1.9202 [ 2.0000 ] | 96.0% { 100.5% } | 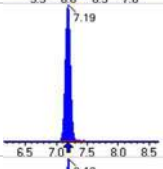  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806392 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2713.5 | N/A | 2.0028 [ 2.0000 ] | 100.1% { 98.4% } | 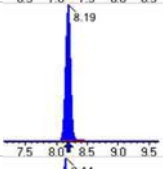  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 271437 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2533.1 | N/A | 1.0580 [ 1.0000 ] | 105.8% { 103.4% } | 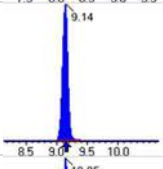  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314936 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1334.1 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 99.5% } | 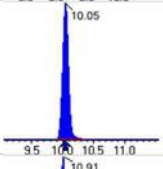  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376422 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 888.9 | N/A | 1.0444 [ 1.0000 ] | 104.4% { 104.2% } | 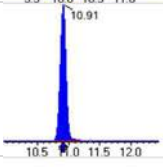  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 377714 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1130.3 | N/A | 1.0291 [ 1.0000 ] | 102.9% { 107.4% } | 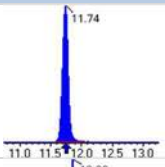 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334117 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1287.0 | N/A | 1.0689 [ 1.0000 ] | 106.9% { 106.9% } | 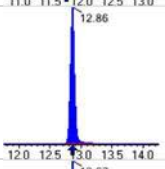 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577032 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2353.0 | N/A | 2.1624 [ 2.0000 ] | 108.1% { 111.8% } | 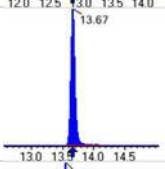 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712494 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1082.5 | N/A | 2.1155 [ 2.0000 ] | 105.8% { 107.5% } | 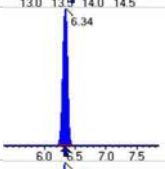 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1322704 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5231.9 | N/A | 2.0471 [ 2.0000 ] | 102.4% { 103.3% } | 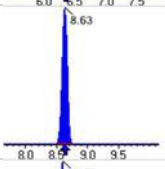 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1631255 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1422.0 | N/A | 2.1142 [ 2.0000 ] | 105.7% { 104.4% } | 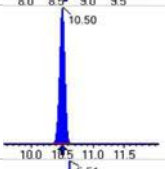 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 624175 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.1 | N/A | 4.4690 [ 4.0000 ] | 111.7% { 118.9% } | 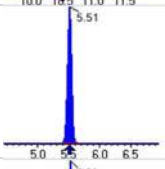 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1736153 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4394.5 | N/A | 4.1536 [ 4.0000 ] | 103.8% { 102.1% } | 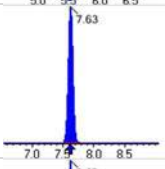 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1343832 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1566.8 | N/A | 4.0993 [ 4.0000 ] | 102.5% { 101.9% } | 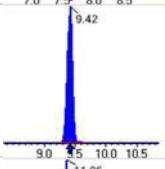 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2709064 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1402.5 | N/A | 7.9071 [ 8.0000 ] | 98.8% { 104.3% } | 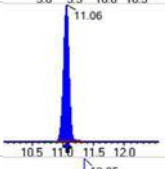 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1414425 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1760.1 | N/A | 2.0687 [ 2.0000 ] | 103.4% { 106.1% } | 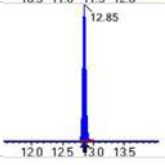 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 308758 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2279.8 | N/A | 2.1291 [ 2.0000 ] | 106.5% { 111.3% } | 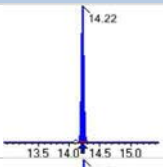  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339372 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2361.4 | N/A | 2.1822 [ 2.0000 ] | 109.1% { 107.6% } | 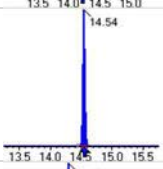  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 794659 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 1882.2 | N/A | 4.0028 [ 4.0000 ] | 100.1% { 94.8% } | 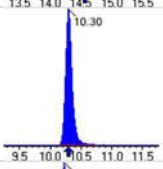  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 748744 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2202.1 | N/A | 4.1381 [ 4.0000 ] | 103.5% { 99.0% } | 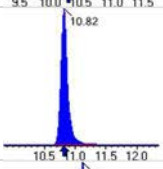  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1330777 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2545.4 | N/A | 20.4202 [ 20.0000 ] | 102.1% { 98.9% } | 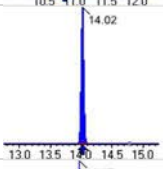  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347196 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3939.5 | N/A | 20.3672 [ 20.0000 ] | 101.8% { 102.3% } | 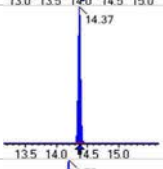  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1079864 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 1987.0 | N/A | 8.1322 [ 8.0000 ] | 101.7% { 110.4% } | 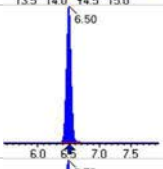  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 590008 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1397.6 | N/A | 1.9907 [ 2.0000 ] | 99.5% { 102.2% } | 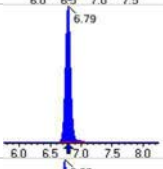  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 501757 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 686.7 | N/A | 1.8597 [ 2.0000 ] | 93.0% { 93.4% } | 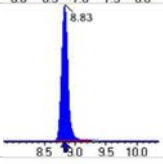  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2317898<br>( 163.0 / 69.0 ) 62952 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 13254.7<br>2982.2 | 0.0272<br>100.0<br>100.0 | 9.2970 | N/A | 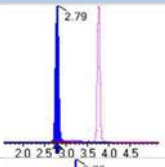 | 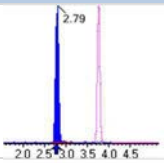 | |
| PFBA | ( 213.0 / 169.0 ) 4838830 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 3323.8 | N/A<br>0.0<br>0.0 | 18.3594 | N/A | 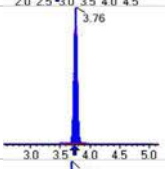 | | |
| PFPeA | ( 263.0 / 219.0 ) 2128919<br>( 263.0 / 69.0 ) 25420 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.1) | 5361.1<br>340.3 | 0.0119<br>100.0<br>100.0 | 9.1456 | N/A | 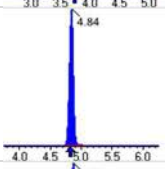 | 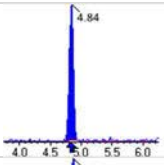 | |
| PFHxA | ( 313.0 / 269.0 ) 1219406<br>( 313.0 / 119.0 ) 141590 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2354.3<br>1418.0 | 0.1161<br>100.0<br>100.0 | 4.5868 | N/A | 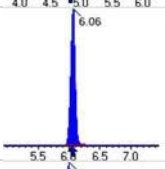 | 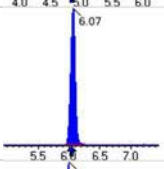 | |
| PFHpA | ( 363.0 / 319.0 ) 1387492<br>( 363.0 / 169.0 ) 420528 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 1776.8<br>1251.9 | 0.3031<br>100.0<br>100.0 | 4.5659 | N/A | 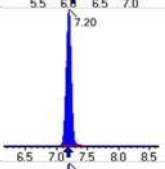 | 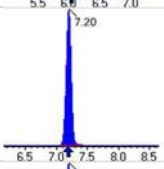 | |
| PFOA | ( 413.0 / 369.0 ) 1841616<br>( 413.0 / 169.0 ) 673207 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 773.3<br>1201.4 | 0.3656<br>100.0<br>100.0 | 4.5711 | N/A | 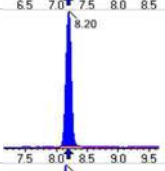 | 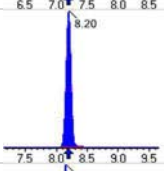 | |
| PFNA | ( 463.0 / 419.0 ) 1251905<br>( 463.0 / 169.0 ) 319604 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1250.5<br>1086.4 | 0.2553<br>100.0<br>100.0 | 4.7429 | N/A | 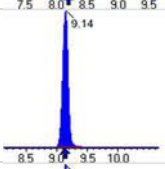 | 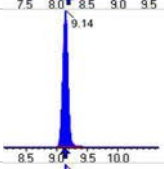 | |
| PFDA | ( 513.0 / 469.0 ) 1434654<br>( 513.0 / 169.0 ) 168105 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3306.9<br>1965.1 | 0.1172<br>100.0<br>100.0 | 4.4342 | N/A | 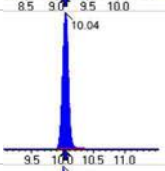 | 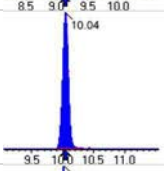 | |
| PFUnA | ( 563.0 / 519.0 ) 1605332<br>( 563.0 / 169.0 ) 227512 | ( 10.91 , 1.00 ) ( 0.00 , N/A , -0.2) | 1211.8<br>818.3 | 0.1417<br>100.0<br>100.0 | 4.8033 | N/A | 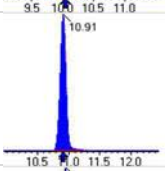 | 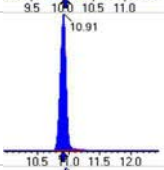 | |
| PFDoA | ( 613.0 / 569.0 ) 1716228<br>( 613.0 / 169.0 ) 271263 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1381.0<br>1036.4 | 0.1581<br>100.0<br>100.0 | 4.8505 | N/A | 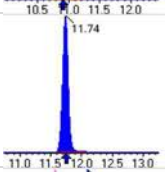 | 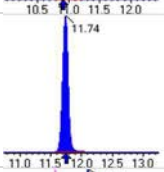 | |
| PFTrDA | ( 663.0 / 619.0 ) 1712256<br>( 663.0 / 169.0 ) 440712 | ( 12.37 , 1.05 ) ( N/A , 0.00 , -0.1) | 1318.3<br>1430.7 | 0.2574<br>100.0<br>100.0 | 4.9471 | N/A | 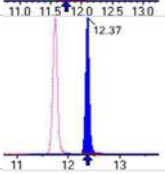 | 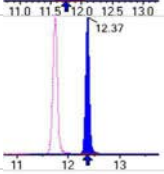 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1428181<br>( 713.0 / 169.0 ) 385493 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1791.2<br>1117.8 | 0.2699<br>100.0<br>100.0 | 4.8801 | N/A | 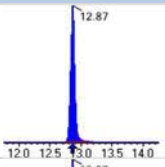 | 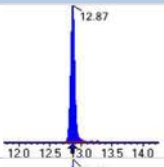 | |
| PFHxDA | ( 813.0 / 769.0 ) 1138852<br>( 813.0 / 169.0 ) 278641 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1735.3<br>1315.5 | 0.2447<br>100.0<br>100.0 | 4.6269 | N/A | 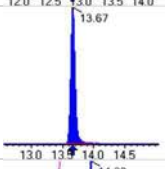 | 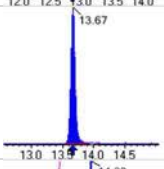 | |
| PFODA | ( 913.0 / 869.0 ) 731197<br>( 913.0 / 169.0 ) 261984 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1733.9<br>942.0 | 0.3583<br>100.0<br>100.0 | 4.7485 | N/A | 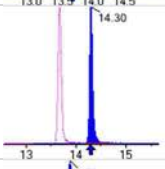 | 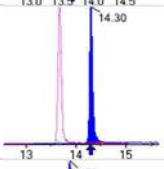 | |
| PFBS | ( 299.0 / 80.0 ) 1759688<br>( 299.0 / 99.0 ) 1244474 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4249.9<br>3308.4 | 0.7072<br>100.0<br>100.0 | 4.2546 | N/A | 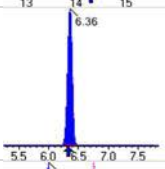 | 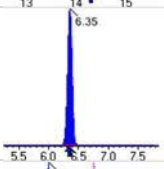 | |
| PFPeS | ( 349.0 / 80.0 ) 4474419<br>( 349.0 / 99.0 ) 1609058 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2447.9<br>2689.5 | 0.3596<br>100.0<br>100.0 | 4.5657 | N/A | 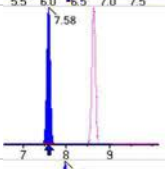 | 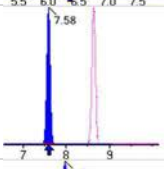 | |
| PFHxS | ( 399.0 / 80.0 ) 5007143<br>( 399.0 / 99.0 ) 1594633 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3769.6<br>5809.6 | 0.3185<br>100.0<br>100.0 | 4.3987 | N/A | 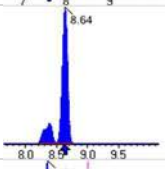 | 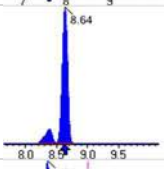 | |
| PFHpS | ( 449.0 / 80.0 ) 4180068<br>( 449.0 / 99.0 ) 1106181 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1994.9<br>1790.0 | 0.2646<br>100.0<br>100.0 | 4.4654 | N/A | 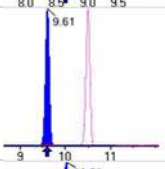 | 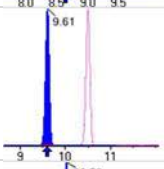 | |
| PFOS | ( 499.0 / 80.0 ) 3790499<br>( 499.0 / 99.0 ) 885961 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2368.6<br>8764.9 | 0.2337<br>100.0<br>100.0 | 4.2007 | N/A | 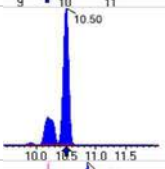 | 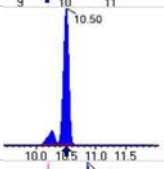 | |
| PFNS | ( 549.0 / 80.0 ) 3830828<br>( 549.0 / 99.0 ) 1044035 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2949.8<br>2999.3 | 0.2725<br>100.0<br>100.0 | 4.5343 | N/A | 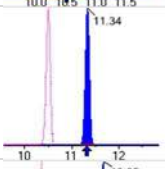 | 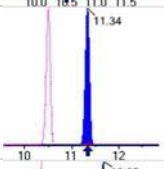 | |
| PFDS | ( 599.0 / 80.0 ) 4687891<br>( 599.0 / 99.0 ) 1274601 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2654.5<br>1953.7 | 0.2719<br>100.0<br>100.0 | 4.5442 | N/A | 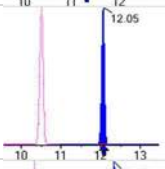 | 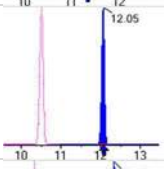 | |
| PFDoS | ( 699.0 / 80.0 ) 4217083<br>( 699.0 / 99.0 ) 985007 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3687.0<br>3177.3 | 0.2336<br>100.0<br>100.0 | 4.6370 | N/A | 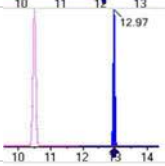 | 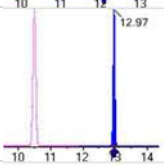 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6427716<br>( 327.0 / 81.0 ) 5608160 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4802.8<br>3822.4 | 0.8725<br>100.0<br>100.0 | 18.6621 | N/A | 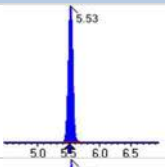 | 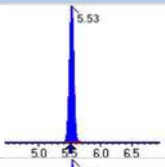 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6162619<br>( 427.0 / 81.0 ) 7728420 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 4425.7<br>3867.2 | 1.2541<br>100.0<br>100.0 | 17.5116 | N/A | 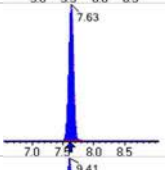 | 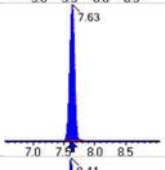 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5813599<br>( 527.0 / 81.0 ) 6323842 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1535.7<br>1692.5 | 1.0878<br>100.0<br>100.0 | 18.5585 | N/A | 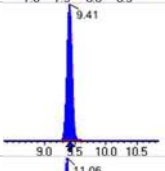 | 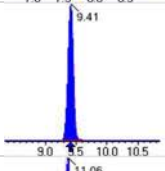 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4546994<br>( 627.0 / 81.0 ) 6545746 | ( 11.06 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1429.6<br>1779.0 | 1.4396<br>100.0<br>100.0 | 18.1733 | N/A | 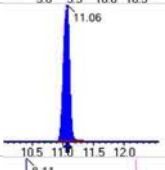 | 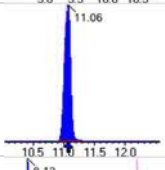 | |
| PFBSA | ( 297.9 / 78.0 ) 3784890<br>( 297.9 / 278.0 ) 5173 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , -0.7) | 2391.2<br>252.6 | 0.0014<br>100.0<br>100.0 | 5.2941 | N/A | 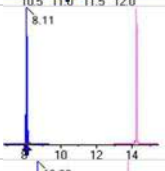 | 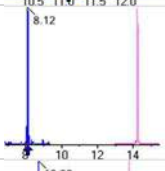 | |
| PFHxSA | ( 397.9 / 78.0 ) 4138663<br>( 397.9 / 378.0 ) 16909 | ( 10.98 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1475.0<br>328.4 | 0.0041<br>100.0<br>100.0 | 4.2697 | N/A | 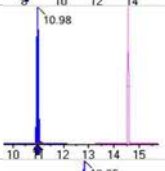 | 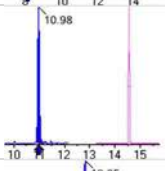 | |
| PFOSA | ( 498.0 / 78.0 ) 3268359<br>( 498.0 / 478.0 ) 45862 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2465.7<br>1324.9 | 0.0140<br>100.0<br>100.0 | 4.9031 | N/A | 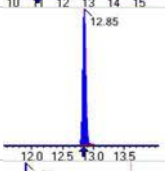 | 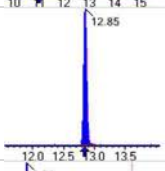 | |
| TFSI | ( 279.7 / 147.0 ) 8554250<br>( 279.7 / 211.0 ) 718623 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 65.6<br>60.6 | 0.0840<br>100.0<br>100.0 | 4.8735 | N/A | 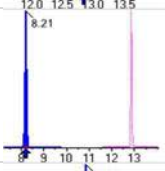 | 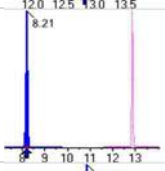 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2617190<br>( 512.0 / 169.0 ) 1958777 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 2.6) | 3160.0<br>1591.2 | 0.7484<br>100.0<br>100.0 | 19.0008 | N/A | 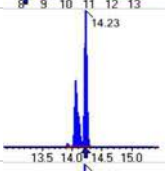 | 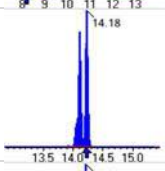 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3302859<br>( 526.0 / 169.0 ) 4077880 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4176.5<br>3268.5 | 1.2347<br>100.0<br>100.0 | 18.6986 | N/A | 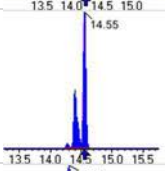 | 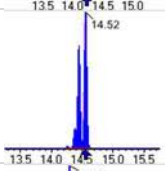 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 941372<br>( 570.0 / 483.0 ) 412806 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2558.8<br>1637.7 | 0.4385<br>100.0<br>100.0 | 4.7122 | N/A | 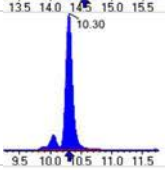 | 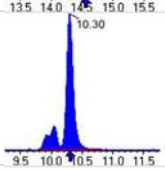 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 830082<br>( 584.0 / 526.0 ) 511873 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1802.1<br>671.1 | 0.6167<br>100.0<br>100.0 | 4.4891 | N/A | 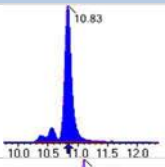 | 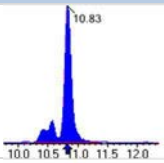 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1309209 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2267.5 | N/A<br>0.0<br>0.0 | 17.7400 | N/A | 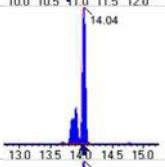 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1093975 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3642.1 | N/A<br>0.0<br>0.0 | 18.6997 | N/A | 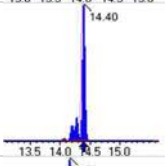 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 350291<br>( 285.0 / 185.0 ) 968672 | ( 6.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1900.4<br>2107.7 | 2.7653<br>100.0<br>100.0 | 4.8596 | N/A | 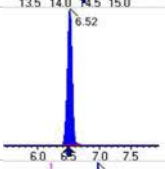 | 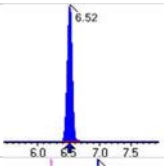 | |
| ADONA | ( 377.0 / 85.0 ) 3944718<br>( 377.0 / 251.0 ) 402093 | ( 7.59 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1901.3<br>1951.7 | 0.1019<br>100.0<br>100.0 | 4.6907 | N/A | 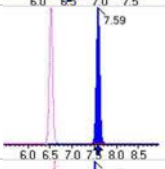 | 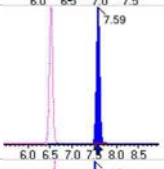 | |
| PFEESA | ( 315.0 / 135.0 ) 1573841<br>( 315.0 / 83.0 ) 877164 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 3219.1<br>1327.1 | 0.5573<br>100.0<br>100.0 | 8.2438 | N/A | 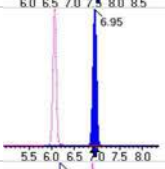 | 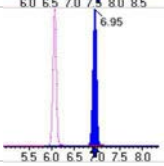 | |
| PFMPA | ( 229.0 / 85.0 ) 686112 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 5599.0 | N/A<br>0.0<br>0.0 | 9.2883 | N/A | 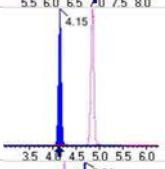 | | |
| PFMBA | ( 279.0 / 85.0 ) 1810024 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5286.0 | N/A<br>0.0<br>0.0 | 9.0155 | N/A | 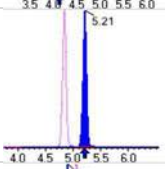 | | |
| NFDHA | ( 295.0 / 201.0 ) 855237<br>( 295.0 / 85.0 ) 922794 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3414.5<br>3145.8 | 1.0790<br>100.0<br>100.0 | 8.6171 | N/A | 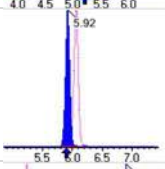 | 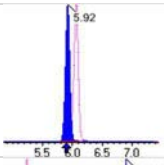 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4165488<br>( 533.0 / 353.0 ) 1303420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , -0.1) | 2574.2<br>3005.6 | 0.3129<br>100.0<br>100.0 | 4.5860 | N/A | 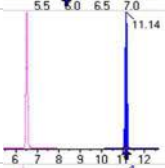 | 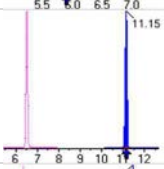 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3346515<br>( 633.0 / 453.0 ) 1111515 | ( 12.47 , 1.91 )<br>( N/A , 0.00 , -0.1) | 3618.9<br>2674.6 | 0.3321<br>100.0<br>100.0 | 4.7909 | N/A | 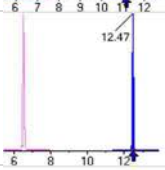 | 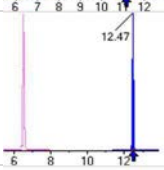 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2114337<br>( 461.0 / 381.2 ) 842629 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , -0.1) | 2784.3<br>3053.0 | 0.3985<br>100.0<br>100.0 | 4.1534 | N/A | 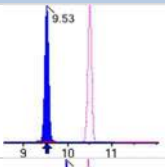 | 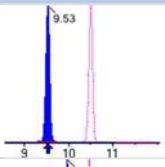 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 238302<br>( 241.0 / 117.0 ) 502064 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2642.2<br>2673.1 | 2.1068<br>100.0<br>100.0 | 17.9956 | N/A | 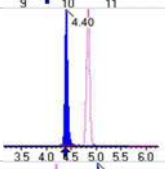 | 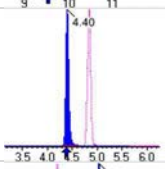 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1331676<br>( 341.0 / 217.0 ) 2023067 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1058.3<br>1362.0 | 1.5192<br>100.0<br>100.0 | 18.0626 | N/A | 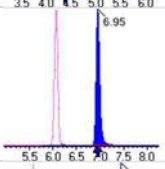 | 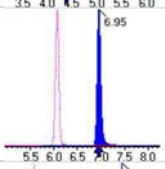 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2128903<br>( 441.0 / 337.0 ) 1952501 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4363.7<br>7659.6 | 0.9171<br>100.0<br>100.0 | 17.5963 | N/A | 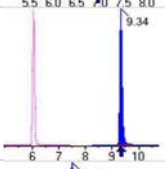 | 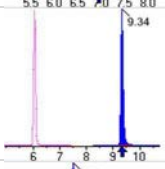 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1497038<br>( 357.2 / 243.0 ) 165062 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1712.0<br>900.3 | 0.1103<br>100.0<br>100.0 | 4.8782 | N/A | 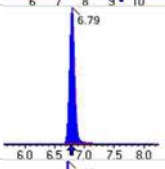 | 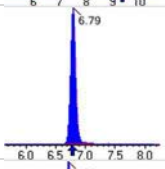 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1119562<br>( 457.2 / 343.0 ) 46429 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.1) | 781.1<br>326.6 | 0.0415<br>100.0<br>100.0 | 5.1103 | N/A | 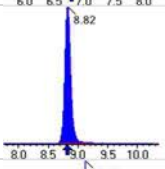 | 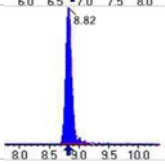 | |
| TDCA | ( 499.0 / 80.0 ) 2892255 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 15801.2 | N/A<br>0.0<br>0.0 | 4.7022 | N/A | 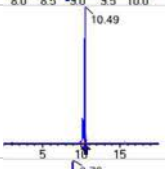 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 234275 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1105.2 | N/A | 0.9826<br>[ 1.0000 ] | 98.3%<br>{ 100.0% } | 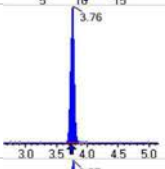 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119482 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 4024.8 | N/A | 0.9419<br>[ 1.0000 ] | 94.2%<br>{ 100.0% } | 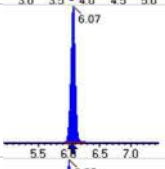 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379944 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3214.4 | N/A | 0.9611<br>[ 1.0000 ] | 96.1%<br>{ 100.0% } | 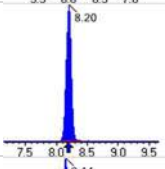 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 266244 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1068.8 | N/A | 0.9361<br>[ 1.0000 ] | 93.6%<br>{ 100.0% } | 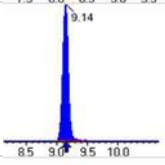 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 267877 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 4037.1 | N/A | 0.9173 [ 1.0000 ] | 91.7% { 100.0% } | 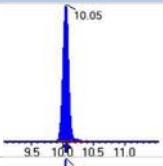 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 900173 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4526.5 | N/A | 0.9485 [ 1.0000 ] | 94.9% { 100.0% } | 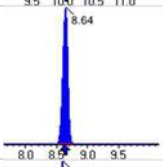 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 700749 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2461.4 | N/A | 0.9201 [ 1.0000 ] | 92.0% { 100.0% } | 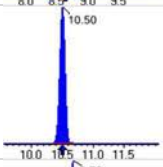 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115201 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 29283.2 | N/A | 7.9034 [ 8.0000 ] | 98.8% { 100.0% } | 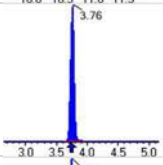 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 921682 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5969.4 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 100.0% } | 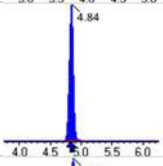 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 553414 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6046.0 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 100.0% } | 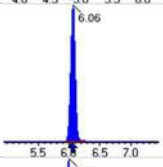 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 619345 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 4798.4 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 100.0% } | 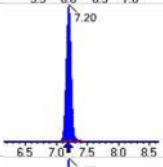 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 819908 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2642.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 100.0% } | 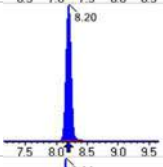 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262623 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 3992.5 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 100.0% } | 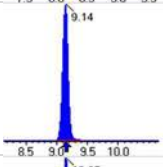 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316652 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 937.0 | N/A | 1.0548 [ 1.0000 ] | 105.5% { 100.0% } | 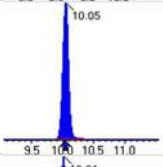 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 361334 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 805.5 | N/A | 1.0231 [ 1.0000 ] | 102.3% { 100.0% } | 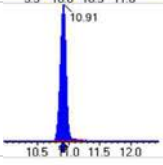 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351702 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1444.1 | N/A | 0.9778 [ 1.0000 ] | 97.8% { 100.0% } | 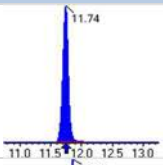  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 312483 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1264.0 | N/A | 1.0202 [ 1.0000 ] | 102.0% { 100.0% } | 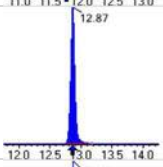  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 516108 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2242.9 | N/A | 1.9737 [ 2.0000 ] | 98.7% { 100.0% } | 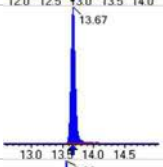  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1593184 | ( 6.36 , N/A ) ( N/A , 0.00 , N/A ) | 1038.1 | N/A | 1.9589 [ 2.0000 ] | 97.9% { 100.0% } | 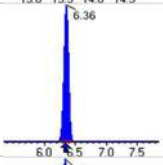  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1280605 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3673.4 | N/A | 1.9727 [ 2.0000 ] | 98.6% { 100.0% } | 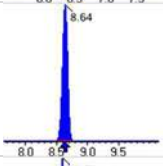  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1562530 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1579.3 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 100.0% } | 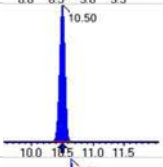  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524953 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 86.3 | N/A | 3.7410 [ 4.0000 ] | 93.5% { 100.0% } | 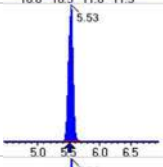  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1699930 | ( 7.64 , N/A ) ( N/A , 0.00 , N/A ) | 3997.9 | N/A | 4.0480 [ 4.0000 ] | 101.2% { 100.0% } | 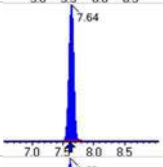  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1319404 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1220.6 | N/A | 4.0060 [ 4.0000 ] | 100.1% { 100.0% } | 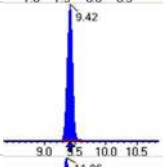  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2596951 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1243.7 | N/A | 7.5446 [ 8.0000 ] | 94.3% { 100.0% } | 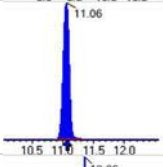  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1333164 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2944.9 | N/A | 1.9911 [ 2.0000 ] | 99.6% { 100.0% } | 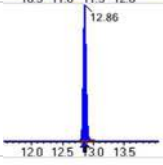  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 277449 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1901.8 | N/A | 1.9537 [ 2.0000 ] | 97.7% { 100.0% } | 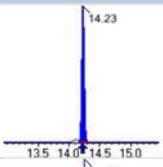  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315440 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2388.3 | N/A | 2.0713 [ 2.0000 ] | 103.6% { 100.0% } | 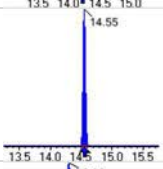  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 837819 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2395.5 | N/A | 4.3096 [ 4.0000 ] | 107.7% { 100.0% } | 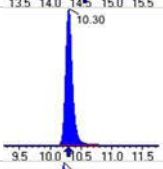  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 756123 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2001.2 | N/A | 4.2674 [ 4.0000 ] | 106.7% { 100.0% } | 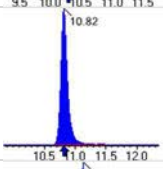  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1345588 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2202.6 | N/A | 21.0846 [ 20.0000 ] | 105.4% { 100.0% } | 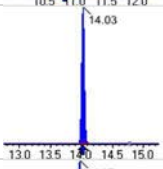  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316921 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4403.9 | N/A | 20.3309 [ 20.0000 ] | 101.7% { 100.0% } | 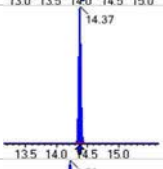  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977892 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2111.7 | N/A | 7.8745 [ 8.0000 ] | 98.4% { 100.0% } | 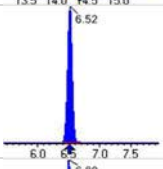  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 577314 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1093.1 | N/A | 1.9878 [ 2.0000 ] | 99.4% { 100.0% } | 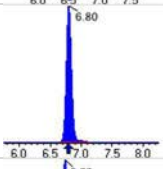  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 537205 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 658.4 | N/A | 2.0318 [ 2.0000 ] | 101.6% { 100.0% } | 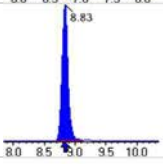  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 4976227<br>( 163.0 / 69.0 ) 132304 | ( 2.78 , 0.74 ) ( N/A , -0.01 , 0.1) | 25558.3<br>5992.4 | 0.0266<br>97.9<br>97.9 | 19.9572 | N/A | 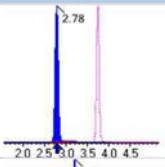 | 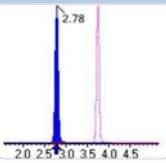 | |
| PFBA | ( 213.0 / 169.0 ) 10221233 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 5237.8 | N/A<br>0.0<br>0.0 | 38.7767 | N/A | 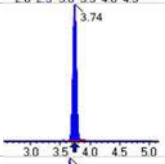 | | |
| PFPeA | ( 263.0 / 219.0 ) 4600759<br>( 263.0 / 69.0 ) 53659 | ( 4.82 , 1.00 ) ( 0.00 , N/A , -0.2) | 7458.7<br>673.0 | 0.0117<br>97.7<br>97.7 | 19.6841 | N/A | 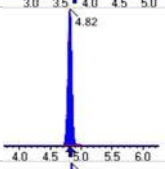 | 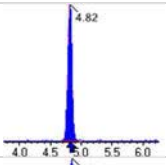 | |
| PFHxA | ( 313.0 / 269.0 ) 2674025<br>( 313.0 / 119.0 ) 304997 | ( 6.04 , 1.00 ) ( 0.00 , N/A , -0.2) | 3132.9<br>2330.2 | 0.1141<br>98.2<br>98.2 | 9.7037 | N/A | 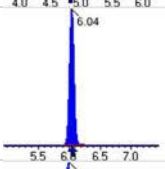 | 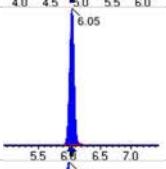 | |
| PFHpA | ( 363.0 / 319.0 ) 3133962<br>( 363.0 / 169.0 ) 979167 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 1898.2<br>1646.0 | 0.3124<br>103.1<br>103.1 | 9.6945 | N/A | 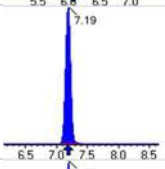 | 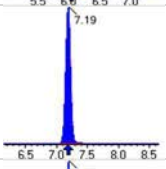 | |
| PFOA | ( 413.0 / 369.0 ) 4116055<br>( 413.0 / 169.0 ) 1484961 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.1) | 1022.2<br>1403.5 | 0.3608<br>98.7<br>98.7 | 9.3377 | N/A | 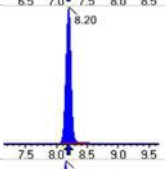 | 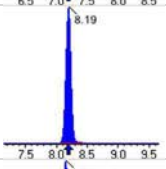 | |
| PFNA | ( 463.0 / 419.0 ) 2850976<br>( 463.0 / 169.0 ) 722819 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1530.8<br>1452.7 | 0.2535<br>99.3<br>99.3 | 9.7006 | N/A | 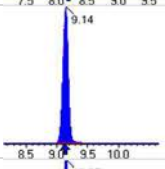 | 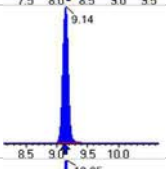 | |
| PFDA | ( 513.0 / 469.0 ) 3194205<br>( 513.0 / 169.0 ) 393804 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 3654.4<br>3624.5 | 0.1233<br>105.2<br>105.2 | 9.1536 | N/A | 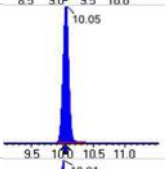 | 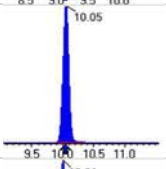 | |
| PFUnA | ( 563.0 / 519.0 ) 3630994<br>( 563.0 / 169.0 ) 527822 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 1014.1<br>931.4 | 0.1454<br>102.6<br>102.6 | 9.9823 | N/A | 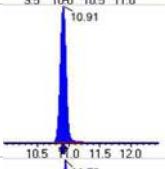 | 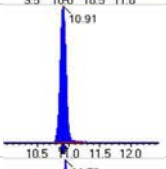 | |
| PFDoA | ( 613.0 / 569.0 ) 4033515<br>( 613.0 / 169.0 ) 625874 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1766.4<br>1315.4 | 0.1552<br>98.2<br>98.2 | 10.0099 | N/A | 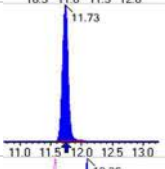 | 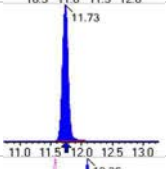 | |
| PFTrDA | ( 663.0 / 619.0 ) 3904086<br>( 663.0 / 169.0 ) 1037013 | ( 12.36 , 1.05 ) ( N/A , -0.01 , -0.1) | 1403.0<br>1491.0 | 0.2656<br>103.2<br>103.2 | 9.9045 | N/A | 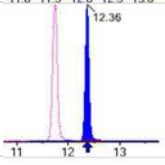 | 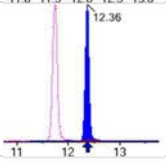 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3274865<br>( 713.0 / 169.0 ) 872542 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1863.1<br>1420.4 | 0.2664<br>98.7<br>98.7 | 10.0480 | N/A | 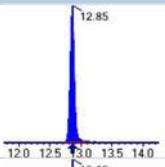 | 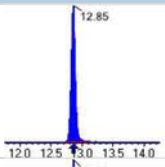 | |
| PFHxDA | ( 813.0 / 769.0 ) 2771994<br>( 813.0 / 169.0 ) 672443 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2671.6<br>1712.5 | 0.2426<br>99.1<br>99.1 | 9.5663 | N/A | 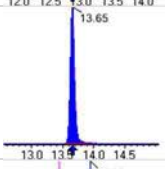 | 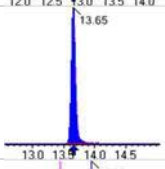 | |
| PFODA | ( 913.0 / 869.0 ) 1755825<br>( 913.0 / 169.0 ) 595303 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , -0.1) | 2292.7<br>1524.1 | 0.3390<br>94.6<br>94.6 | 9.6858 | N/A | 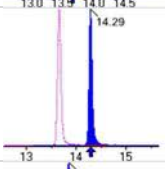 | 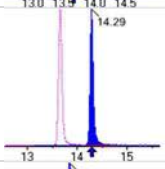 | |
| PFBS | ( 299.0 / 80.0 ) 3954355<br>( 299.0 / 99.0 ) 2802024 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3950.8<br>3555.4 | 0.7086<br>100.2<br>100.2 | 8.8614 | N/A | 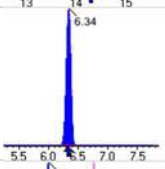 | 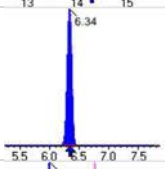 | |
| PFPeS | ( 349.0 / 80.0 ) 10113671<br>( 349.0 / 99.0 ) 3414890 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.1) | 3006.5<br>2142.2 | 0.3377<br>93.9<br>93.9 | 9.7116 | N/A | 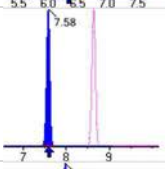 | 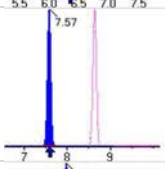 | |
| PFHxS | ( 399.0 / 80.0 ) 10933094<br>( 399.0 / 99.0 ) 3587030 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3851.3<br>3667.5 | 0.3281<br>103.0<br>103.0 | 9.0385 | N/A | 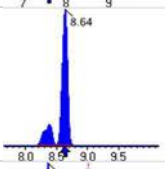 | 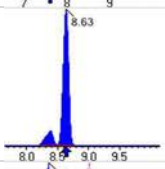 | |
| PFHpS | ( 449.0 / 80.0 ) 10182649<br>( 449.0 / 99.0 ) 2481015 | ( 9.61 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2251.9<br>2141.8 | 0.2437<br>92.1<br>92.1 | 9.8391 | N/A | 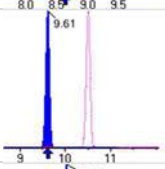 | 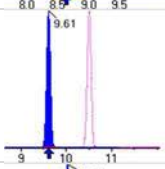 | |
| PFOS | ( 499.0 / 80.0 ) 8996676<br>( 499.0 / 99.0 ) 2052837 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3105.0<br>5613.8 | 0.2282<br>97.6<br>97.6 | 9.0184 | N/A | 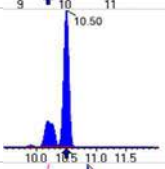 | 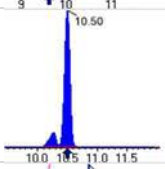 | |
| PFNS | ( 549.0 / 80.0 ) 8681127<br>( 549.0 / 99.0 ) 2337302 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2556.4<br>2538.4 | 0.2692<br>98.8<br>98.8 | 9.2942 | N/A | 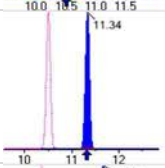 | 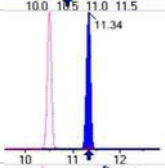 | |
| PFDS | ( 599.0 / 80.0 ) 10573938<br>( 599.0 / 99.0 ) 2638031 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3076.0<br>2562.7 | 0.2495<br>91.8<br>91.8 | 9.2712 | N/A | 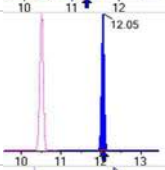 | 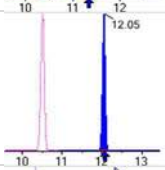 | |
| PFDoS | ( 699.0 / 80.0 ) 10115664<br>( 699.0 / 99.0 ) 2234349 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.0) | 4057.4<br>3770.2 | 0.2209<br>94.6<br>94.6 | 10.0609 | N/A | 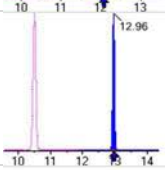 | 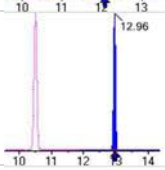 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12141384<br>( 327.0 / 81.0 ) 11228944 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 5417.9<br>3453.7 | 0.9248<br>106.0<br>106.0 | 37.7355 | N/A | 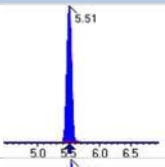 | 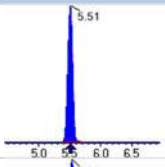 | |
| 6:2FTS | ( 427.0 / 407.0 ) 10900294<br>( 427.0 / 81.0 ) 14811616 | ( 7.63 , 1.00 ) ( 0.00 , N/A , 0.1) | 4185.7<br>4990.4 | 1.3588<br>108.4<br>108.4 | 35.7625 | N/A | 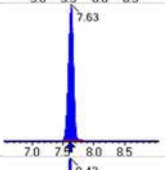 | 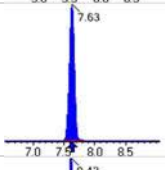 | |
| 8:2FTS | ( 527.0 / 507.0 ) 11942343<br>( 527.0 / 81.0 ) 12425264 | ( 9.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 1621.8<br>1564.2 | 1.0404<br>95.6<br>95.6 | 35.7744 | N/A | 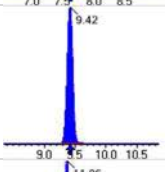 | 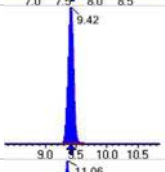 | |
| 10:2FTS | ( 627.0 / 607.0 ) 9925774<br>( 627.0 / 81.0 ) 13942585 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.4) | 1561.8<br>1571.2 | 1.4047<br>97.6<br>97.6 | 38.6373 | N/A | 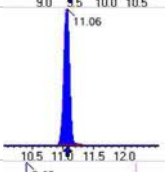 | 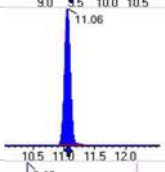 | |
| PFBSA | ( 297.9 / 78.0 ) 8323910<br>( 297.9 / 278.0 ) 11763 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.4) | 1757.1<br>273.7 | 0.0014<br>103.4<br>103.4 | 10.3645 | N/A | 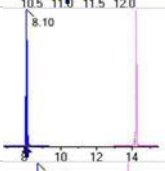 | 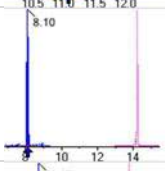 | |
| PFHxSA | ( 397.9 / 78.0 ) 10756836<br>( 397.9 / 378.0 ) 44787 | ( 10.98 , 0.76 ) ( N/A , 0.00 , 0.1) | 1403.3<br>850.1 | 0.0042<br>101.9<br>101.9 | 10.4696 | N/A | 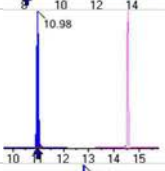 | 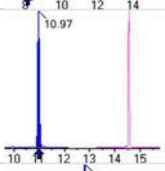 | |
| PFOSA | ( 498.0 / 78.0 ) 7435186<br>( 498.0 / 478.0 ) 96496 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 2452.2<br>1261.2 | 0.0130<br>92.5<br>92.5 | 10.0824 | N/A | 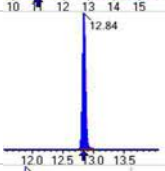 | 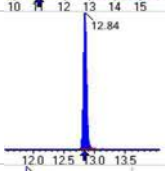 | |
| TFSI | ( 279.7 / 147.0 ) 19532191<br>( 279.7 / 211.0 ) 1661545 | ( 8.20 , 0.64 ) ( N/A , 0.00 , -0.1) | 66.5<br>62.7 | 0.0851<br>101.3<br>101.3 | 10.0587 | N/A | 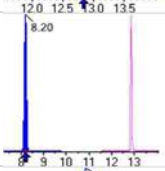 | 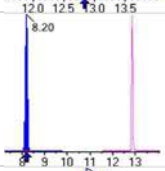 | |
| NMeFOSA | ( 512.0 / 219.0 ) 6233211<br>( 512.0 / 169.0 ) 4662319 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.9) | 3243.4<br>1391.3 | 0.7480<br>99.9<br>99.9 | 40.2840 | N/A | 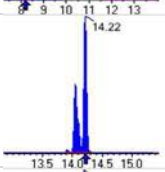 | 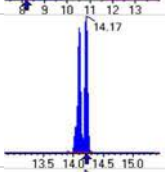 | |
| NEtFOSA | ( 526.0 / 219.0 ) 7427048<br>( 526.0 / 169.0 ) 9493854 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 4701.3<br>3802.9 | 1.2783<br>103.5<br>103.5 | 39.6683 | N/A | 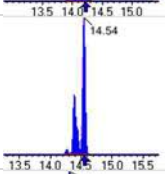 | 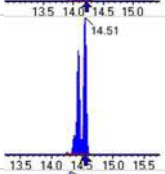 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1945852<br>( 570.0 / 483.0 ) 893329 | ( 10.31 , 1.00 ) ( 0.00 , N/A , 0.2) | 3953.1<br>1913.0 | 0.4591<br>104.7<br>104.7 | 9.3754 | N/A | 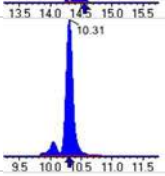 | 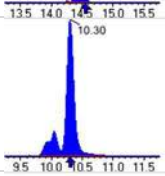 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1886130<br>( 584.0 / 526.0 ) 1111226 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1796.1<br>739.5 | 0.5892<br>95.5<br>95.5 | 9.8885 | N/A | 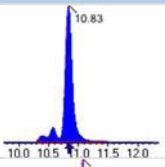 | 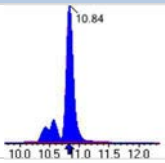 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3070058 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3573.3 | N/A<br>0.0<br>0.0 | 38.7608 | N/A | 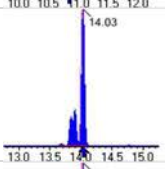 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2588455 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4718.1 | N/A<br>0.0<br>0.0 | 40.2337 | N/A | 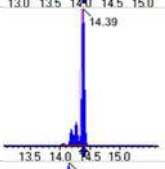 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 774472<br>( 285.0 / 185.0 ) 2152195 | ( 6.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1908.8<br>2139.2 | 2.7789<br>100.5<br>100.5 | 9.8848 | N/A | 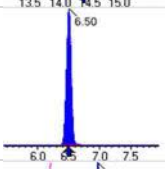 | 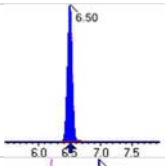 | |
| ADONA | ( 377.0 / 85.0 ) 8831827<br>( 377.0 / 251.0 ) 872179 | ( 7.58 , 1.17 )<br>( N/A , -0.01 , 0.2) | 2174.0<br>1762.1 | 0.0988<br>96.9<br>96.9 | 9.6620 | N/A | 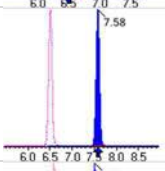 | 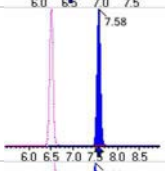 | |
| PFEESA | ( 315.0 / 135.0 ) 3656765<br>( 315.0 / 83.0 ) 1984703 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 3111.9<br>1767.9 | 0.5427<br>97.4<br>97.4 | 18.4785 | N/A | 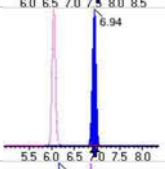 | 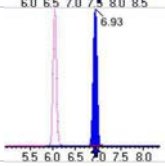 | |
| PFMPA | ( 229.0 / 85.0 ) 1521484 | ( 4.13 , 0.86 )<br>( N/A , -0.02 , 0.0) | 8416.3 | N/A<br>0.0<br>0.0 | 20.5135 | N/A | 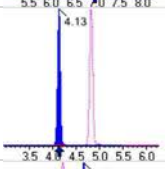 | | |
| PFMBA | ( 279.0 / 85.0 ) 4133561 | ( 5.19 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6193.2 | N/A<br>0.0<br>0.0 | 20.5050 | N/A | 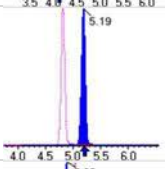 | | |
| NFDHA | ( 295.0 / 201.0 ) 2053635<br>( 295.0 / 85.0 ) 2216174 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 3475.3<br>2940.0 | 1.0791<br>100.0<br>100.0 | 19.9620 | N/A | 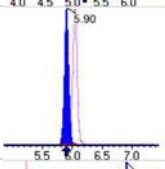 | 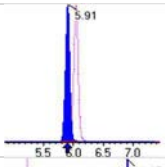 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 9136171<br>( 533.0 / 353.0 ) 2848253 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2897.4<br>2497.0 | 0.3118<br>99.6<br>99.6 | 9.2537 | N/A | 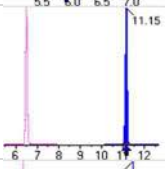 | 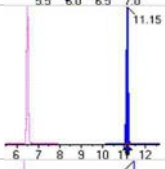 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 7304357<br>( 633.0 / 453.0 ) 2453189 | ( 12.46 , 1.92 )<br>( N/A , -0.01 , 0.1) | 3572.6<br>3729.2 | 0.3359<br>101.1<br>101.1 | 9.6204 | N/A | 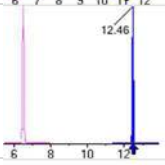 | 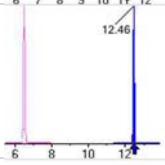 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 5039330<br>( 461.0 / 381.2 ) 1905718 | ( 9.53 , 0.91 )<br>( N/A , 0.01 , 0.3) | 3789.8<br>3403.6 | 0.3782<br>94.9<br>94.9 | 8.9542 | N/A | 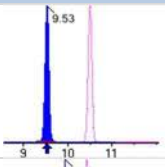 | 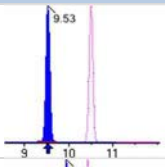 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 538629<br>( 241.0 / 117.0 ) 1253240 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 3197.1<br>4283.1 | 2.3267<br>110.4<br>110.4 | 40.5098 | N/A | 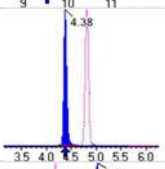 | 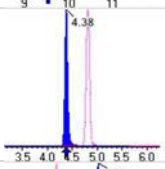 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 3029615<br>( 341.0 / 217.0 ) 4650574 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1393.7<br>1345.8 | 1.5350<br>101.0<br>101.0 | 39.6437 | N/A | 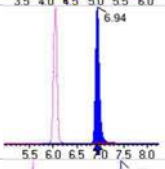 | 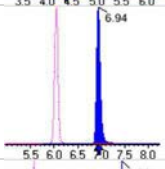 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5123403<br>( 441.0 / 337.0 ) 4460709 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , -0.1) | 5551.5<br>5955.7 | 0.8707<br>94.9<br>94.9 | 40.8535 | N/A | 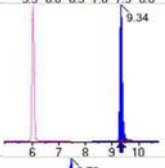 | 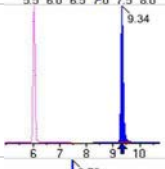 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3452949<br>( 357.2 / 243.0 ) 358650 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1773.4<br>994.0 | 0.1039<br>94.2<br>94.2 | 10.0613 | N/A | 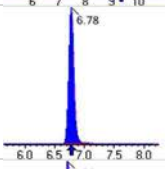 | 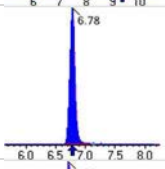 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2505275<br>( 457.2 / 343.0 ) 105248 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 860.7<br>599.2 | 0.0420<br>101.3<br>101.3 | 10.2092 | N/A | 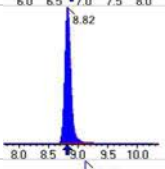 | 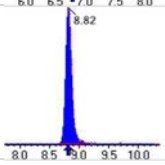 | |
| TDCA | ( 499.0 / 80.0 ) 6236770 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 25056.2 | N/A<br>0.0<br>0.0 | 9.1716 | N/A | 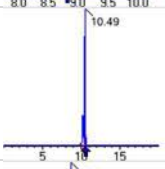 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 219824 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 996.6 | N/A | 0.9219<br>[ 1.0000 ] | 92.2%<br>{ 93.8% } | 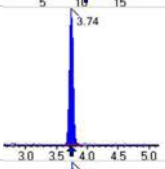 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124014 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 119243.9 | N/A | 0.9776<br>[ 1.0000 ] | 97.8%<br>{ 103.8% } | 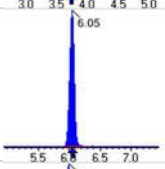 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390461 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3609.6 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 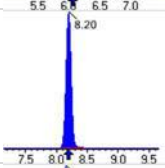 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 275253 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 905.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 103.4% } | 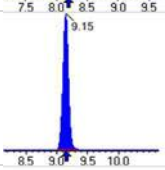 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286139 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 6661.6 | N/A | 0.9798 [ 1.0000 ] | 98.0% { 106.8% } | 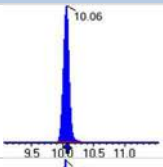 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 911912 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4728.4 | N/A | 0.9609 [ 1.0000 ] | 96.1% { 101.3% } | 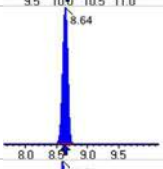 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727281 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2280.6 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 103.8% } | 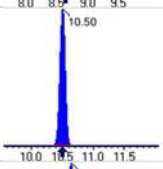 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115448 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 30999.9 | N/A | 8.4239 [ 8.0000 ] | 105.3% { 100.0% } | 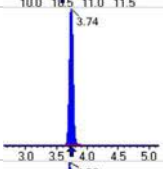 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 925445 | ( 4.82 , N/A ) ( N/A , -0.03 , N/A ) | 4720.5 | N/A | 3.9995 [ 4.0000 ] | 100.0% { 100.4% } | 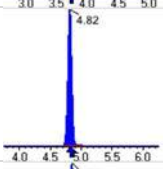 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 573646 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 8004.1 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 103.7% } | 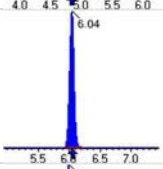 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 658863 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5435.3 | N/A | 2.0932 [ 2.0000 ] | 104.7% { 106.4% } | 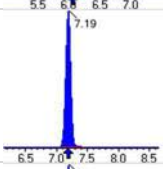 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 890902 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2701.9 | N/A | 2.1295 [ 2.0000 ] | 106.5% { 108.7% } | 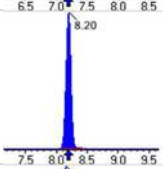 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292416 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2988.5 | N/A | 1.0835 [ 1.0000 ] | 108.3% { 111.3% } | 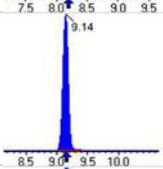 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341522 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1370.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 107.9% } | 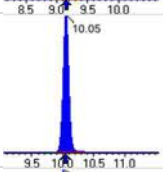 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393261 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1047.7 | N/A | 1.0424 [ 1.0000 ] | 104.2% { 108.8% } | 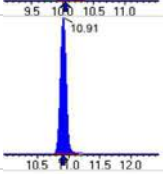 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 400532 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1477.9 | N/A | 1.0425 [ 1.0000 ] | 104.3% { 113.9% } | 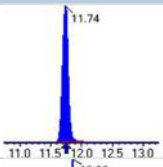  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348002 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1107.0 | N/A | 1.0636 [ 1.0000 ] | 106.4% { 111.4% } | 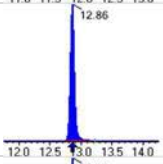  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607589 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2704.1 | N/A | 2.1752 [ 2.0000 ] | 108.8% { 117.7% } | 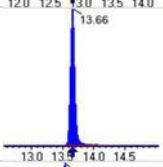  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1718936 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1168.5 | N/A | 2.0863 [ 2.0000 ] | 104.3% { 107.9% } | 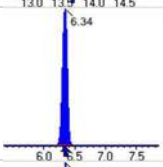  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1360815 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3521.2 | N/A | 2.0692 [ 2.0000 ] | 103.5% { 106.3% } | 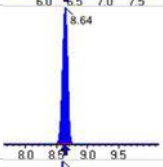  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1727455 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1864.4 | N/A | 2.2029 [ 2.0000 ] | 110.1% { 110.6% } | 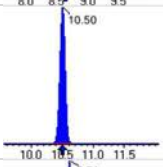  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 490391 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.9 | N/A | 3.4497 [ 4.0000 ] | 86.2% { 93.4% } | 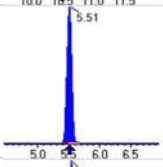  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1472319 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3472.6 | N/A | 3.4608 [ 4.0000 ] | 86.5% { 86.6% } | 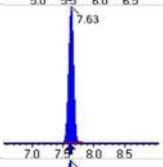  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1406025 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1127.1 | N/A | 4.2140 [ 4.0000 ] | 105.4% { 106.6% } | 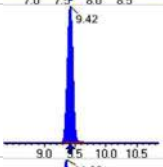  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2666437 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1321.4 | N/A | 7.6467 [ 8.0000 ] | 95.6% { 102.7% } | 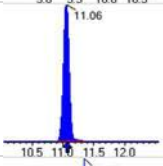  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1474856 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2149.7 | N/A | 2.1223 [ 2.0000 ] | 106.1% { 110.6% } | 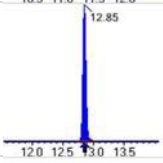  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 311674 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1807.7 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 112.3% } | 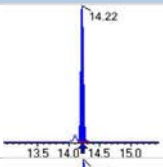  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334355 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2233.0 | N/A | 2.1154 [ 2.0000 ] | 105.8% { 106.0% } | 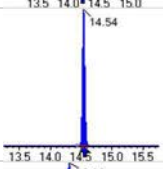  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 870435 | ( 10.30 , N/A ) ( N/A , 0.01 , N/A ) | 2098.7 | N/A | 4.3140 [ 4.0000 ] | 107.8% { 103.9% } | 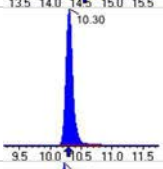  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 779965 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2137.1 | N/A | 4.2413 [ 4.0000 ] | 106.0% { 103.2% } | 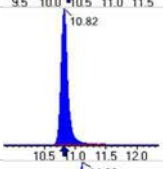  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1444142 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2682.5 | N/A | 21.8033 [ 20.0000 ] | 109.0% { 107.3% } | 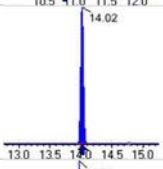  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1448227 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 4302.5 | N/A | 21.5424 [ 20.0000 ] | 107.7% { 110.0% } | 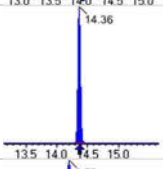  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1062925 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2462.9 | N/A | 8.2465 [ 8.0000 ] | 103.1% { 108.7% } | 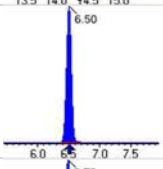  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 645613 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1154.9 | N/A | 2.0811 [ 2.0000 ] | 104.1% { 111.8% } | 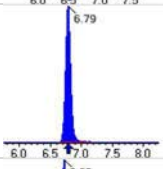  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 601731 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 832.3 | N/A | 2.1306 [ 2.0000 ] | 106.5% { 112.0% } | 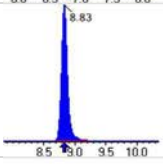  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 9647783<br>( 163.0 / 69.0 ) 248180 | ( 2.77 , 0.74 ) ( N/A , -0.02 , 0.0) | 43056.1<br>9147.9 | 0.0257<br>94.7<br>94.7 | 44.1686 | N/A | 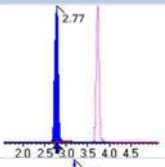 | 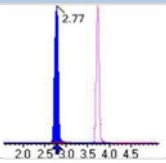 | |
| PFBA | ( 213.0 / 169.0 ) 19202801 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 7585.4 | N/A<br>0.0<br>0.0 | 83.1608 | N/A | 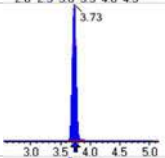 | | |
| PFPeA | ( 263.0 / 219.0 ) 9729713<br>( 263.0 / 69.0 ) 109623 | ( 4.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 6819.6<br>1166.1 | 0.0113<br>94.4<br>94.4 | 42.6830 | N/A | 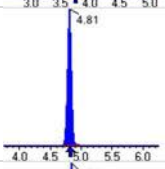 | 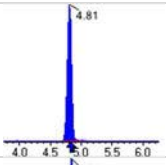 | |
| PFHxA | ( 313.0 / 269.0 ) 5855022<br>( 313.0 / 119.0 ) 657854 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3525.9<br>3080.6 | 0.1124<br>96.8<br>96.8 | 21.0786 | N/A | 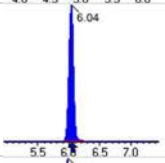 | 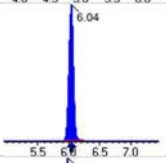 | |
| PFHpA | ( 363.0 / 319.0 ) 6773290<br>( 363.0 / 169.0 ) 1976592 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1787.9<br>1424.4 | 0.2918<br>96.3<br>96.3 | 21.3548 | N/A | 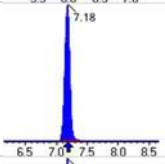 | 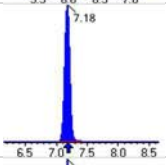 | |
| PFOA | ( 413.0 / 369.0 ) 8939778<br>( 413.0 / 169.0 ) 3151658 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1127.7<br>1395.0 | 0.3525<br>96.4<br>96.4 | 21.1396 | N/A | 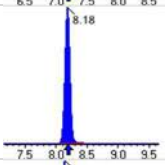 | 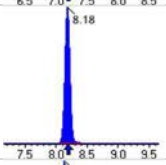 | |
| PFNA | ( 463.0 / 419.0 ) 6037894<br>( 463.0 / 169.0 ) 1493594 | ( 9.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1348.3<br>1184.5 | 0.2474<br>96.9<br>96.9 | 21.7350 | N/A | 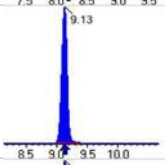 | 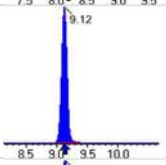 | |
| PFDA | ( 513.0 / 469.0 ) 6762404<br>( 513.0 / 169.0 ) 825163 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 4792.5<br>4492.2 | 0.1220<br>104.1<br>104.1 | 19.9979 | N/A | 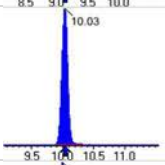 | 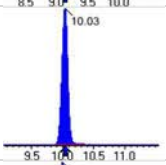 | |
| PFUnA | ( 563.0 / 519.0 ) 7387064<br>( 563.0 / 169.0 ) 1075499 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1049.6<br>1214.6 | 0.1456<br>102.7<br>102.7 | 20.9526 | N/A | 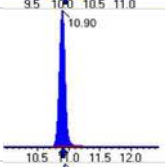 | 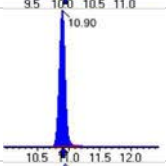 | |
| PFDoA | ( 613.0 / 569.0 ) 8414637<br>( 613.0 / 169.0 ) 1279847 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.1) | 1974.2<br>1748.5 | 0.1521<br>96.2<br>96.2 | 21.0663 | N/A | 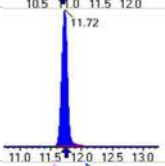 | 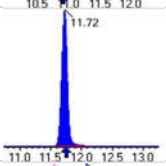 | |
| PFTrDA | ( 663.0 / 619.0 ) 7977805<br>( 663.0 / 169.0 ) 2091790 | ( 12.35 , 1.05 ) ( N/A , -0.02 , -0.1) | 1535.5<br>1229.9 | 0.2622<br>101.9<br>101.9 | 20.4176 | N/A | 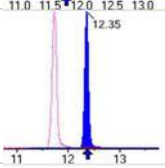 | 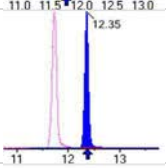 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6332836<br>( 713.0 / 169.0 ) 1709460 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1729.0<br>1376.3 | 0.2699<br>100.0<br>100.0 | 20.1993 | N/A | 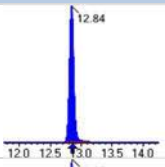 | 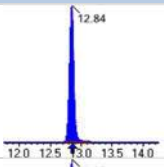 | |
| PFHxDA | ( 813.0 / 769.0 ) 5638902<br>( 813.0 / 169.0 ) 1397067 | ( 13.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2906.6<br>1972.3 | 0.2478<br>101.3<br>101.3 | 20.4809 | N/A | 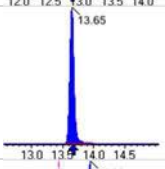 | 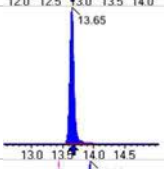 | |
| PFODA | ( 913.0 / 869.0 ) 3499803<br>( 913.0 / 169.0 ) 1172832 | ( 14.28 , 1.05 )<br>( N/A , -0.02 , 0.0) | 2345.2<br>1896.8 | 0.3351<br>93.5<br>93.5 | 20.3190 | N/A | 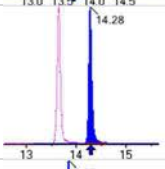 | 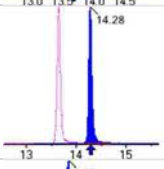 | |
| PFBS | ( 299.0 / 80.0 ) 8605541<br>( 299.0 / 99.0 ) 6210338 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3746.5<br>3688.7 | 0.7217<br>102.0<br>102.0 | 18.7196 | N/A | 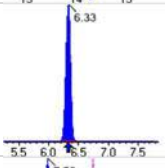 | 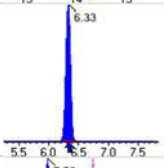 | |
| PFPeS | ( 349.0 / 80.0 ) 20173078<br>( 349.0 / 99.0 ) 6917231 | ( 7.56 , 0.88 )<br>( N/A , -0.02 , 0.0) | 3260.6<br>2666.4 | 0.3429<br>95.4<br>95.4 | 19.2674 | N/A | 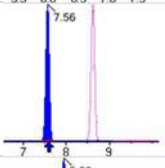 | 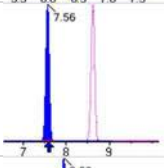 | |
| PFHxS | ( 399.0 / 80.0 ) 22725319<br>( 399.0 / 99.0 ) 7646781 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4713.5<br>6241.9 | 0.3365<br>105.7<br>105.7 | 18.6865 | N/A | 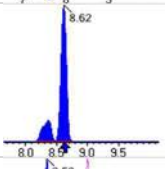 | 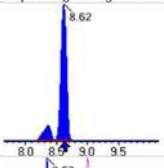 | |
| PFHpS | ( 449.0 / 80.0 ) 20274394<br>( 449.0 / 99.0 ) 5555187 | ( 9.59 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2318.9<br>2835.7 | 0.2740<br>103.5<br>103.5 | 20.6440 | N/A | 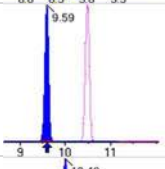 | 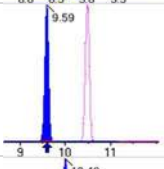 | |
| PFOS | ( 499.0 / 80.0 ) 18767964<br>( 499.0 / 99.0 ) 4295232 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3739.6<br>5295.9 | 0.2289<br>97.9<br>97.9 | 19.8251 | N/A | 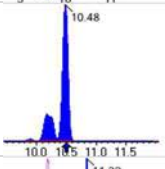 | 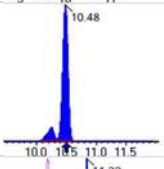 | |
| PFNS | ( 549.0 / 80.0 ) 18086906<br>( 549.0 / 99.0 ) 4780266 | ( 11.32 , 1.08 )<br>( N/A , -0.01 , 0.1) | 2954.4<br>3018.0 | 0.2643<br>97.0<br>97.0 | 20.4057 | N/A | 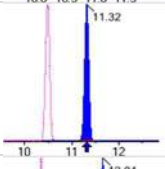 | 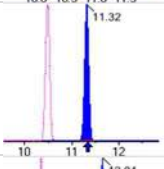 | |
| PFDS | ( 599.0 / 80.0 ) 20905375<br>( 599.0 / 99.0 ) 5646584 | ( 12.04 , 1.15 )<br>( N/A , -0.02 , 0.1) | 3970.4<br>3658.7 | 0.2701<br>99.3<br>99.3 | 19.3156 | N/A | 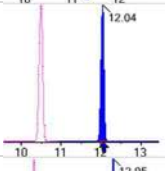 | 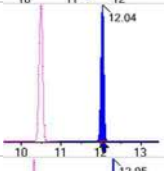 | |
| PFDoS | ( 699.0 / 80.0 ) 19306218<br>( 699.0 / 99.0 ) 4469745 | ( 12.95 , 1.23 )<br>( N/A , -0.02 , 0.0) | 4489.1<br>4098.7 | 0.2315<br>99.1<br>99.1 | 20.2345 | N/A | 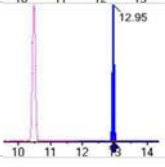 | 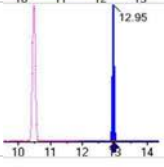 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 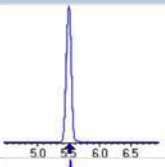 | 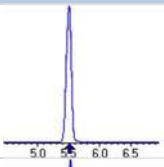 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 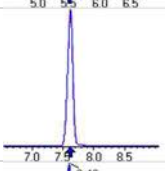 | 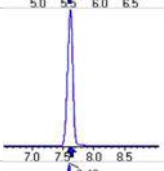 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>21815878<br>( 527.0 / 81.0 )<br>21959418 | ( 9.40 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1473.9<br>1574.1 | 1.0066<br>92.5<br>92.5 | 76.5421 | N/A | 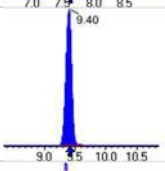 | 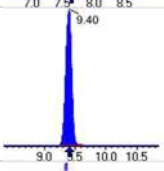 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 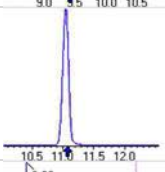 | 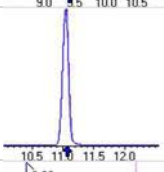 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>16725985<br>( 297.9 / 278.0 )<br>24255 | ( 8.09 , 0.57 )<br>( N/A , -0.02 , 0.2) | 1517.0<br>776.4 | 0.0015<br>106.1<br>106.1 | 20.2686 | N/A | 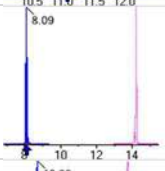 | 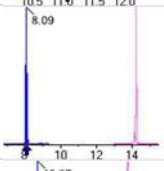 | |
| PFHxSA | ( 397.9 / 78.0 )<br>21492712<br>( 397.9 / 378.0 )<br>91450 | ( 10.96 , 0.75 )<br>( N/A , -0.01 , -0.1) | 1346.4<br>847.0 | 0.0043<br>104.1<br>104.1 | 20.9006 | N/A | 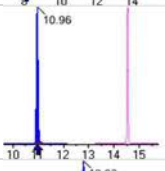 | 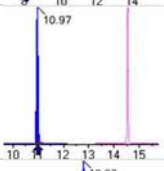 | |
| PFOSA | ( 498.0 / 78.0 )<br>14753844<br>( 498.0 / 478.0 )<br>214805 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3170.7<br>2253.7 | 0.0146<br>103.8<br>103.8 | 21.1703 | N/A | 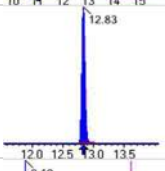 | 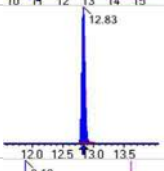 | |
| TFSI | ( 279.7 / 147.0 )<br>39395227<br>( 279.7 / 211.0 )<br>3549226 | ( 8.19 , 0.64 )<br>( N/A , -0.02 , 0.1) | 64.0<br>55.4 | 0.0901<br>107.2<br>107.2 | 21.4677 | N/A | 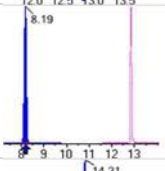 | 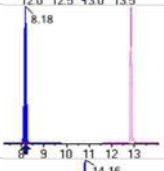 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>13014238<br>( 512.0 / 169.0 )<br>9825343 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3652.8<br>1356.9 | 0.7550<br>100.9<br>100.9 | 81.8558 | N/A | 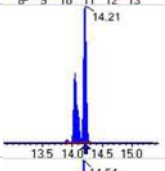 | 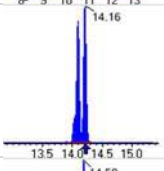 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>15594093<br>( 526.0 / 169.0 )<br>19500224 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4569.2<br>3815.8 | 1.2505<br>101.3<br>101.3 | 83.2165 | N/A | 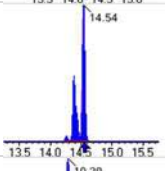 | 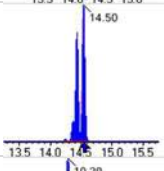 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4070736<br>( 570.0 / 483.0 )<br>1893315 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3587.1<br>1948.3 | 0.4651<br>106.1<br>106.1 | 20.6918 | N/A | 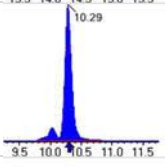 | 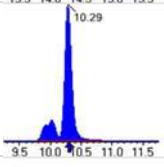 | |

APPL
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Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 3731836<br>( 584.0 / 526.0 ) 2286417 | ( 10.81 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1729.9<br>773.9 | 0.6127<br>99.4<br>99.4 | 20.2888 | N/A | 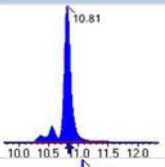 | 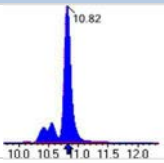 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6128623 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4554.8 | N/A<br>0.0<br>0.0 | 85.4742 | N/A | 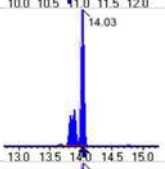 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5195417 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7894.3 | N/A<br>0.0<br>0.0 | 85.6651 | N/A | 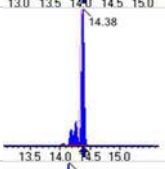 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1720793<br>( 285.0 / 185.0 ) 4583880 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2261.5<br>2416.9 | 2.6638<br>96.3<br>96.3 | 21.8580 | N/A | 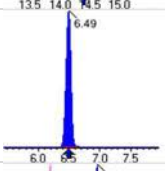 | 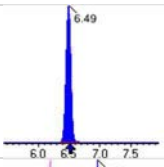 | |
| ADONA | ( 377.0 / 85.0 ) 17774690<br>( 377.0 / 251.0 ) 1760043 | ( 7.56 , 1.16 )<br>( N/A , -0.02 , -0.1) | 2163.5<br>2341.5 | 0.0990<br>97.1<br>97.1 | 19.3525 | N/A | 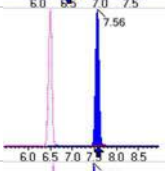 | 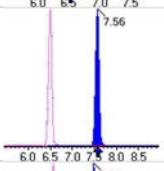 | |
| PFEESA | ( 315.0 / 135.0 ) 7875914<br>( 315.0 / 83.0 ) 4276233 | ( 6.92 , 1.15 )<br>( N/A , -0.02 , 0.0) | 3888.8<br>2934.4 | 0.5430<br>97.4<br>97.4 | 39.4834 | N/A | 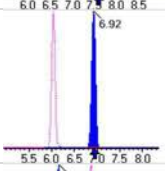 | 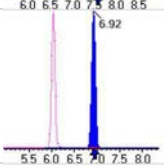 | |
| PFMPA | ( 229.0 / 85.0 ) 3131989 | ( 4.12 , 0.86 )<br>( N/A , -0.03 , 0.0) | 8390.9 | N/A<br>0.0<br>0.0 | 43.2975 | N/A | 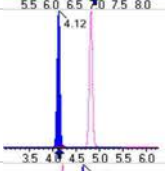 | | |
| PFMBA | ( 279.0 / 85.0 ) 8569933 | ( 5.18 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6457.3 | N/A<br>0.0<br>0.0 | 43.5896 | N/A | 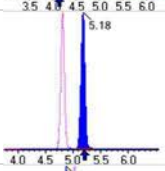 | | |
| NFDHA | ( 295.0 / 201.0 ) 4231075<br>( 295.0 / 85.0 ) 4662644 | ( 5.90 , 0.98 )<br>( N/A , -0.03 , 0.0) | 3412.8<br>4004.1 | 1.1020<br>102.1<br>102.1 | 40.8014 | N/A | 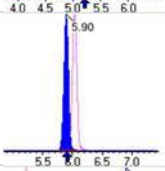 | 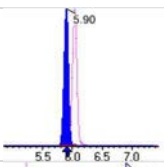 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19556832<br>( 533.0 / 353.0 ) 6135024 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.1) | 2536.0<br>3191.0 | 0.3137<br>100.3<br>100.3 | 19.7139 | N/A | 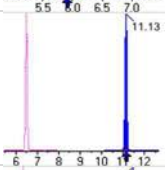 | 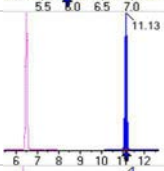 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14798782<br>( 633.0 / 453.0 ) 4988130 | ( 12.45 , 1.92 )<br>( N/A , -0.02 , 0.0) | 3882.5<br>3613.8 | 0.3371<br>101.5<br>101.5 | 19.3980 | N/A | 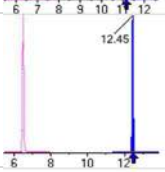 | 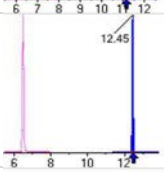 | |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10780581<br>( 461.0 / 381.2 ) 4171218 | ( 9.51 , 0.91 )<br>( N/A , -0.01 , 0.0) | 3973.4<br>5001.9 | 0.3869<br>97.1<br>97.1 | 20.1859 | N/A | 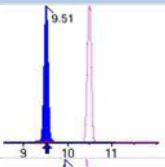 | 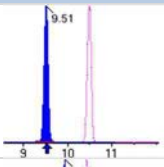 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1199816<br>( 241.0 / 117.0 ) 2599094 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 4619.1<br>5835.8 | 2.1662<br>102.8<br>102.8 | 92.5241 | N/A | 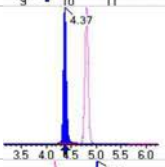 | 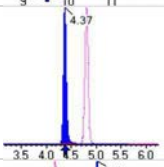 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6037188<br>( 341.0 / 217.0 ) 9245366 | ( 6.93 , 1.15 )<br>( N/A , -0.02 , 0.1) | 1108.9<br>1195.3 | 1.5314<br>100.8<br>100.8 | 78.3727 | N/A | 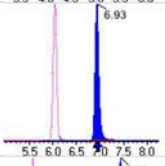 | 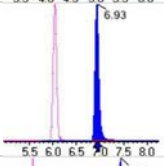 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10461798<br>( 441.0 / 337.0 ) 8986336 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 6894.1<br>7952.6 | 0.8590<br>93.7<br>93.7 | 82.7600 | N/A | 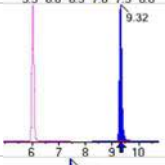 | 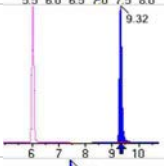 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6947700<br>( 357.2 / 243.0 ) 729149 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1649.6<br>1284.1 | 0.1049<br>95.2<br>95.2 | 20.7843 | N/A | 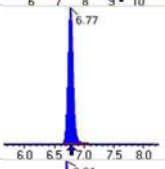 | 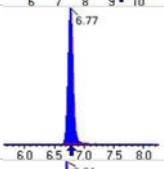 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5159787<br>( 457.2 / 343.0 ) 209477 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1021.2<br>820.8 | 0.0406<br>97.9<br>97.9 | 22.0825 | N/A | 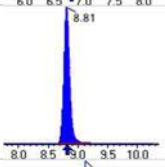 | 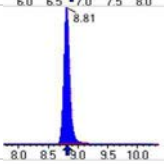 | |
| TDCA | ( 499.0 / 80.0 ) 14278125 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 61589.3 | N/A<br>0.0<br>0.0 | 22.1263 | N/A | 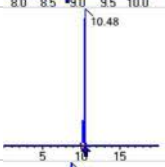 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 213815 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 908.6 | N/A | 0.8967<br>[ 1.0000 ] | 89.7%<br>{ 91.3% } | 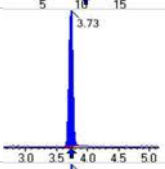 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130959 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 14399.3 | N/A | 1.0323<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 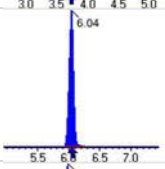 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 423217 | ( 8.18 , N/A )<br>( N/A , -0.02 , N/A ) | 3205.1 | N/A | 1.0706<br>[ 1.0000 ] | 107.1%<br>{ 111.4% } | 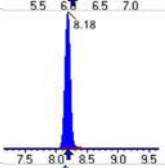 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317274 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1199.3 | N/A | 1.1156<br>[ 1.0000 ] | 111.6%<br>{ 119.2% } | 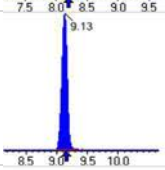 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307005 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 6206.5 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 114.6% } | 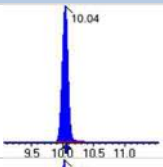 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1022285 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 4039.3 | N/A | 1.0772 [ 1.0000 ] | 107.7% { 113.6% } | 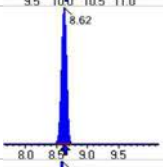 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 784809 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2679.6 | N/A | 1.0304 [ 1.0000 ] | 103.0% { 112.0% } | 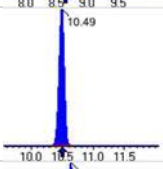 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1853173 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 31229.1 | N/A | 7.5869 [ 8.0000 ] | 94.8% { 87.6% } | 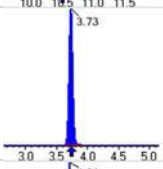 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 902569 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4796.3 | N/A | 3.6938 [ 4.0000 ] | 92.3% { 97.9% } | 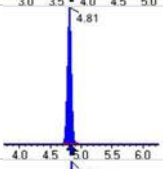 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 578230 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 6570.9 | N/A | 1.9352 [ 2.0000 ] | 96.8% { 104.5% } | 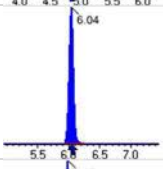 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 646447 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 5437.1 | N/A | 1.9449 [ 2.0000 ] | 97.2% { 104.4% } | 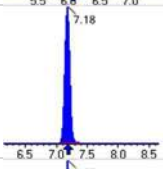 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 836012 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 2325.3 | N/A | 1.8436 [ 2.0000 ] | 92.2% { 102.0% } | 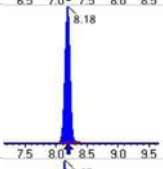 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276398 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2897.8 | N/A | 0.8885 [ 1.0000 ] | 88.8% { 105.2% } | 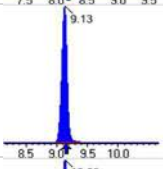 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 330952 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 920.3 | N/A | 0.9619 [ 1.0000 ] | 96.2% { 104.5% } | 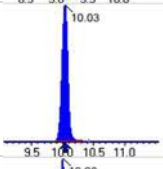 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 381172 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1015.8 | N/A | 0.9417 [ 1.0000 ] | 94.2% { 105.5% } | 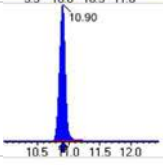 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 397037 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1215.8 | N/A | 0.9632 [ 1.0000 ] | 96.3% { 112.9% } | 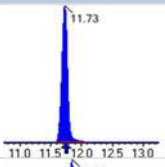 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334756 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 1243.4 | N/A | 0.9536 [ 1.0000 ] | 95.4% { 107.1% } | 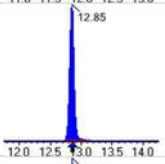 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577308 | ( 13.65 , N/A ) ( N/A , -0.02 , N/A ) | 2610.4 | N/A | 1.9264 [ 2.0000 ] | 96.3% { 111.9% } | 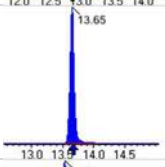 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1770797 | ( 6.33 , N/A ) ( N/A , -0.03 , N/A ) | 1012.2 | N/A | 1.9172 [ 2.0000 ] | 95.9% { 111.1% } | 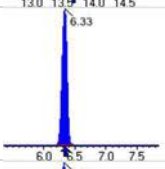 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1368143 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 5008.8 | N/A | 1.8558 [ 2.0000 ] | 92.8% { 106.8% } | 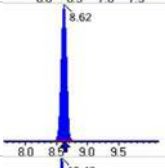 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1639289 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1716.2 | N/A | 1.9372 [ 2.0000 ] | 96.9% { 104.9% } | 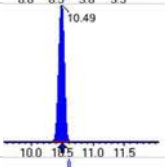 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 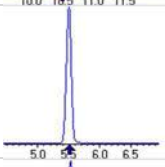 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 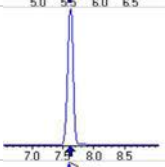 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1200464 | ( 9.40 , N/A ) ( N/A , -0.02 , N/A ) | 1165.9 | N/A | 3.2095 [ 4.0000 ] | 80.2% { 91.0% } | 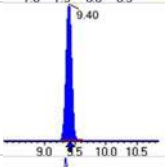 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 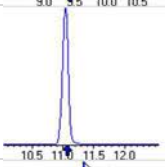 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393797 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2113.9 | N/A | 1.8587 [ 2.0000 ] | 92.9% { 104.5% } | 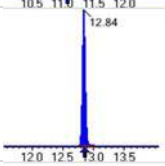 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 320251 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 1578.0 | N/A | 2.0135 [ 2.0000 ] | 100.7% { 115.4% } | 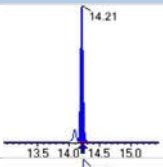 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334646 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 2115.5 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 106.1% } | 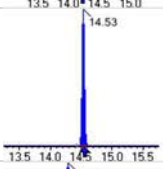 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825069 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2394.9 | N/A | 3.7894 [ 4.0000 ] | 94.7% { 98.5% } | 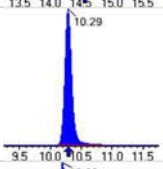 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 752141 | ( 10.80 , N/A ) ( N/A , -0.02 , N/A ) | 1637.7 | N/A | 3.7902 [ 4.0000 ] | 94.8% { 99.5% } | 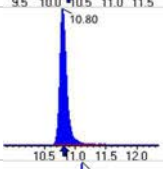 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1307327 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 2301.3 | N/A | 18.2909 [ 20.0000 ] | 91.5% { 97.2% } | 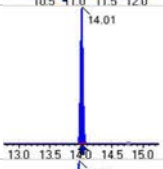 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365219 | ( 14.36 , N/A ) ( N/A , -0.02 , N/A ) | 4099.9 | N/A | 18.8191 [ 20.0000 ] | 94.1% { 103.7% } | 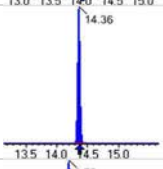 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068027 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2447.7 | N/A | 7.8467 [ 8.0000 ] | 98.1% { 109.2% } | 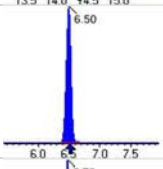 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 628842 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1472.0 | N/A | 1.8893 [ 2.0000 ] | 94.5% { 108.9% } | 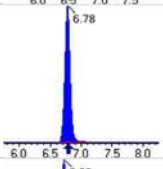 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 572954 | ( 8.82 , N/A ) ( N/A , -0.02 , N/A ) | 739.0 | N/A | 1.8909 [ 2.0000 ] | 94.5% { 106.7% } | 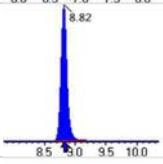 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 18974629<br>( 163.0 / 69.0 ) 488087 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 70690.9<br>13739.8 | 0.0257<br>94.7<br>94.7 | 107.2343 | N/A | 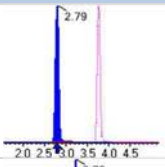 | 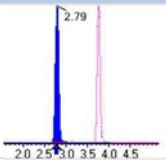 | |
| PFBA | ( 213.0 / 169.0 ) 36143718 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6528.7 | N/A<br>0.0<br>0.0 | 193.2239 | N/A | 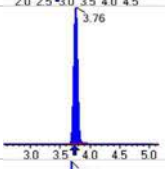 | | |
| PFPeA | ( 263.0 / 219.0 ) 21275073<br>( 263.0 / 69.0 ) 243959 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 7762.8<br>1933.6 | 0.0115<br>96.0<br>96.0 | 106.9360 | N/A | 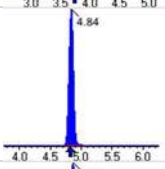 | 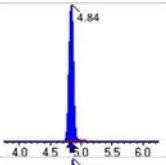 | |
| PFHxA | ( 313.0 / 269.0 ) 13819927<br>( 313.0 / 119.0 ) 1515042 | ( 6.06 , 1.00 ) ( 0.00 , N/A , -0.1) | 2643.2<br>2771.6 | 0.1096<br>94.4<br>94.4 | 54.0335 | N/A | 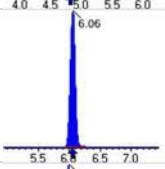 | 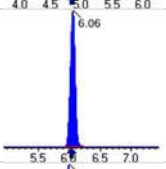 | |
| PFHpA | ( 363.0 / 319.0 ) 16363723<br>( 363.0 / 169.0 ) 4845368 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 2319.6<br>2179.9 | 0.2961<br>97.7<br>97.7 | 54.3504 | N/A | 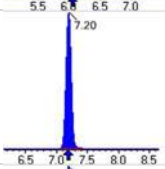 | 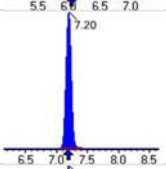 | |
| PFOA | ( 413.0 / 369.0 ) 20511400<br>( 413.0 / 169.0 ) 7143544 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 1200.9<br>1228.6 | 0.3483<br>95.3<br>95.3 | 49.7336 | N/A | 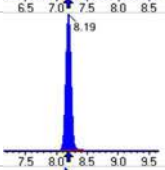 | 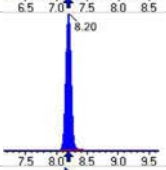 | |
| PFNA | ( 463.0 / 419.0 ) 15160237<br>( 463.0 / 169.0 ) 3759387 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1194.0<br>1234.6 | 0.2480<br>97.1<br>97.1 | 54.2235 | N/A | 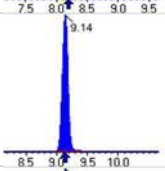 | 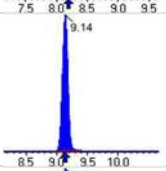 | |
| PFDA | ( 513.0 / 469.0 ) 16549921<br>( 513.0 / 169.0 ) 1960035 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 4733.0<br>3460.2 | 0.1184<br>101.1<br>101.1 | 50.8911 | N/A | 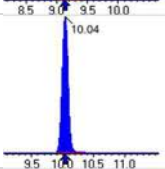 | 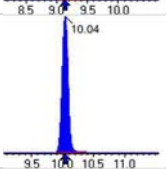 | |
| PFUnA | ( 563.0 / 519.0 ) 17529105<br>( 563.0 / 169.0 ) 2579837 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1095.8<br>945.9 | 0.1472<br>103.8<br>103.8 | 52.5694 | N/A | 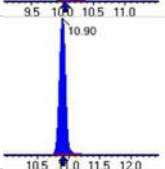 | 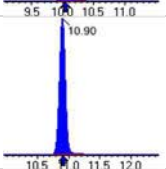 | |
| PFDoA | ( 613.0 / 569.0 ) 19672736<br>( 613.0 / 169.0 ) 2984947 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1817.3<br>1597.9 | 0.1517<br>96.0<br>96.0 | 50.3317 | N/A | 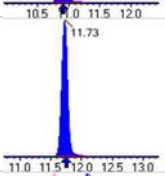 | 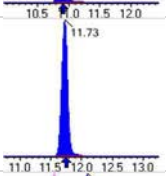 | |
| PFTrDA | ( 663.0 / 619.0 ) 18692956<br>( 663.0 / 169.0 ) 4857776 | ( 12.36 , 1.05 ) ( N/A , -0.01 , 0.0) | 1465.4<br>1395.6 | 0.2599<br>101.0<br>101.0 | 48.8903 | N/A | 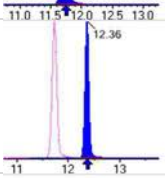 | 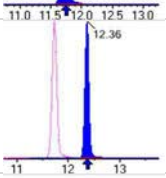 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 14422438<br>( 713.0 / 169.0 ) 3869832 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1604.9<br>1603.7 | 0.2683<br>99.4<br>99.4 | 49.6150 | N/A | 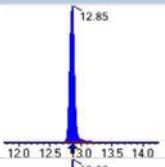 | 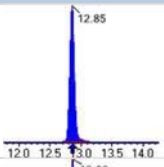 | |
| PFHxDA | ( 813.0 / 769.0 ) 12985593<br>( 813.0 / 169.0 ) 3309620 | ( 13.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3023.2<br>2100.0 | 0.2549<br>104.2<br>104.2 | 52.2078 | N/A | 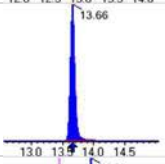 | 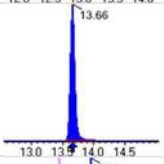 | |
| PFODA | ( 913.0 / 869.0 ) 8428626<br>( 913.0 / 169.0 ) 2699374 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2761.4<br>2328.9 | 0.3203<br>89.4<br>89.4 | 54.1669 | N/A | 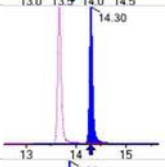 | 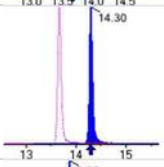 | |
| PFBS | ( 299.0 / 80.0 ) 20178278<br>( 299.0 / 99.0 ) 14705802 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4435.5<br>4419.2 | 0.7288<br>103.1<br>103.1 | 46.4917 | N/A | 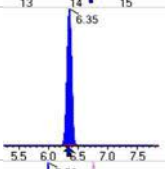 | 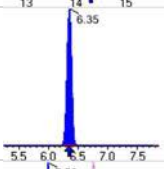 | |
| PFPeS | ( 349.0 / 80.0 ) 41380196<br>( 349.0 / 99.0 ) 14964570 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2699.2<br>2609.5 | 0.3616<br>100.6<br>100.6 | 39.6330 | N/A | 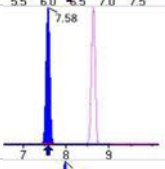 | 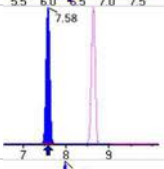 | |
| PFHxS | ( 399.0 / 80.0 ) 55723597<br>( 399.0 / 99.0 ) 18950635 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4944.5<br>6249.7 | 0.3401<br>106.8<br>106.8 | 45.9485 | N/A | 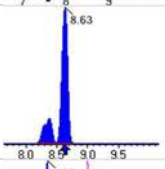 | 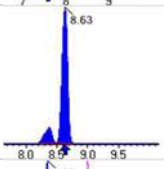 | |
| PFHpS | ( 449.0 / 80.0 ) 48346852<br>( 449.0 / 99.0 ) 13585169 | ( 9.60 , 0.92 )<br>( N/A , 0.00 , 0.0) | 2463.5<br>2621.1 | 0.2810<br>106.2<br>106.2 | 48.9228 | N/A | 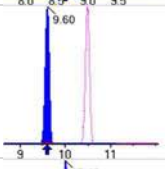 | 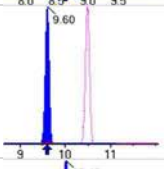 | |
| PFOS | ( 499.0 / 80.0 ) 46166280<br>( 499.0 / 99.0 ) 10682806 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , -0.3) | 3771.6<br>6407.9 | 0.2314<br>99.0<br>99.0 | 48.4641 | N/A | 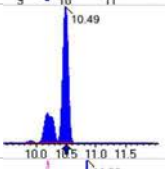 | 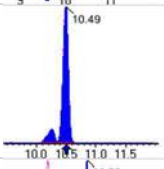 | |
| PFNS | ( 549.0 / 80.0 ) 41110649<br>( 549.0 / 99.0 ) 11520445 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , -0.1) | 2974.0<br>3168.7 | 0.2802<br>102.8<br>102.8 | 46.0934 | N/A | 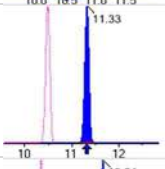 | 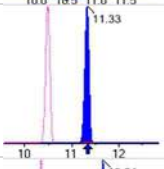 | |
| PFDS | ( 599.0 / 80.0 ) 45339968<br>( 599.0 / 99.0 ) 12673501 | ( 12.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 3051.7<br>3599.9 | 0.2795<br>102.8<br>102.8 | 41.6321 | N/A | 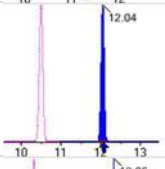 | 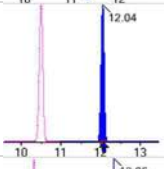 | |
| PFDoS | ( 699.0 / 80.0 ) 39685043<br>( 699.0 / 99.0 ) 9961357 | ( 12.96 , 1.24 )<br>( N/A , -0.01 , 0.0) | 3541.3<br>4746.4 | 0.2510<br>107.5<br>107.5 | 41.3351 | N/A | 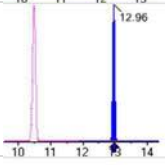 | 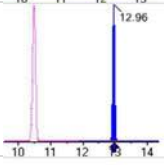 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 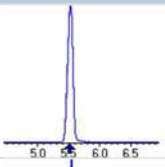 | 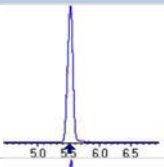 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 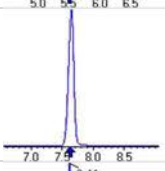 | 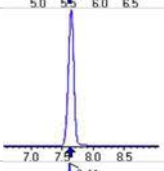 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) 41238569<br>( 527.0 / 81.0 ) 42183724 | ( 9.41 , 1.00 ) ( -0.01 , N/A , 0.0) | 1165.4<br>1290.5 | 1.0229<br>94.0<br>94.0 | 155.9708 | N/A | 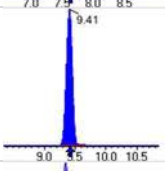 | 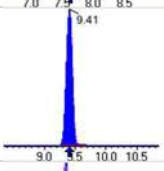 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 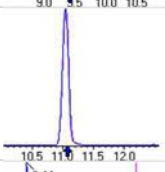 | 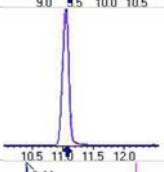 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 38451265<br>( 297.9 / 278.0 ) 57954 | ( 8.11 , 0.57 ) ( N/A , 0.00 , 0.0) | 1670.7<br>874.9 | 0.0015<br>110.3<br>110.3 | 45.8105 | N/A | 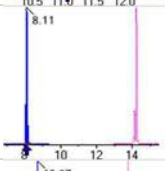 | 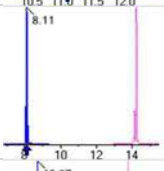 | |
| PFHxSA | ( 397.9 / 78.0 ) 47457548<br>( 397.9 / 378.0 ) 219987 | ( 10.97 , 0.75 ) ( N/A , 0.00 , 0.0) | 1106.1<br>1093.7 | 0.0046<br>113.5<br>113.5 | 48.8276 | N/A | 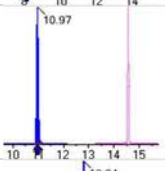 | 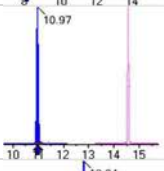 | |
| PFOSA | ( 498.0 / 78.0 ) 33121164<br>( 498.0 / 478.0 ) 519111 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 2063.1<br>1533.3 | 0.0157<br>111.7<br>111.7 | 48.4514 | N/A | 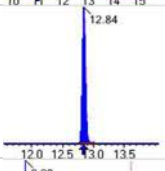 | 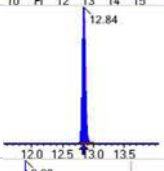 | |
| TFSI | ( 279.7 / 147.0 ) 89551922<br>( 279.7 / 211.0 ) 9318714 | ( 8.20 , 0.64 ) ( N/A , 0.00 , 0.0) | 61.5<br>64.2 | 0.1041<br>123.9<br>123.9 | 49.7502 | N/A | 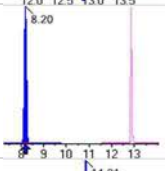 | 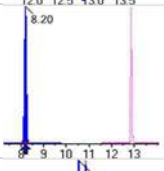 | |
| NMeFOSA | ( 512.0 / 219.0 ) 31158072<br>( 512.0 / 169.0 ) 23786332 | ( 14.21 , 1.00 ) ( -0.01 , N/A , 2.6) | 3423.3<br>1507.4 | 0.7634<br>102.0<br>102.0 | 192.6744 | N/A | 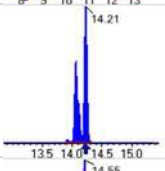 | 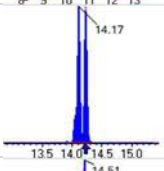 | |
| NEtFOSA | ( 526.0 / 219.0 ) 36572268<br>( 526.0 / 169.0 ) 45187617 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.6) | 4357.1<br>3467.4 | 1.2356<br>100.1<br>100.1 | 206.4874 | N/A | 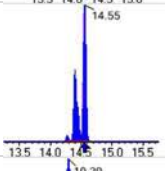 | 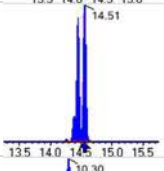 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 9584003<br>( 570.0 / 483.0 ) 4353591 | ( 10.29 , 1.00 ) ( 0.00 , N/A , -0.1) | 3124.3<br>1697.0 | 0.4543<br>103.6<br>103.6 | 48.7309 | N/A | 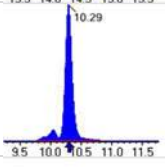 | 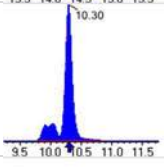 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8573256<br>( 584.0 / 526.0 ) 5089065 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1535.4<br>691.5 | 0.5936<br>96.3<br>96.3 | 52.6411 | N/A | 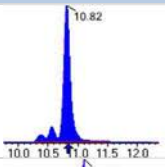 | 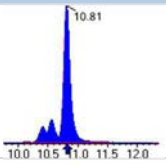 | |
| NMeFOSE | ( 616.0 / 59.0 ) 15619595 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 6843.3 | N/A<br>0.0<br>0.0 | 212.8361 | N/A | 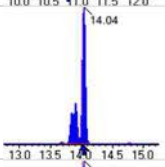 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 12847687 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 8204.0 | N/A<br>0.0<br>0.0 | 208.1601 | N/A | 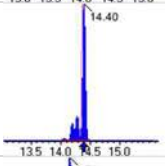 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4124497<br>( 285.0 / 185.0 ) 11215111 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2319.1<br>2629.5 | 2.7191<br>98.3<br>98.3 | 53.1094 | N/A | 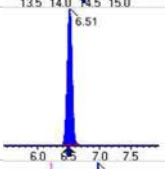 | 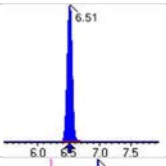 | |
| ADONA | ( 377.0 / 85.0 ) 37268440<br>( 377.0 / 251.0 ) 3924149 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1824.1<br>1716.0 | 0.1053<br>103.3<br>103.3 | 41.1334 | N/A | 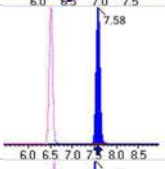 | 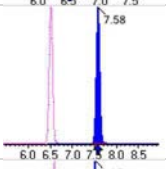 | |
| PFEESA | ( 315.0 / 135.0 ) 17270325<br>( 315.0 / 83.0 ) 9569584 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4689.4<br>2913.5 | 0.5541<br>99.4<br>99.4 | 94.0283 | N/A | 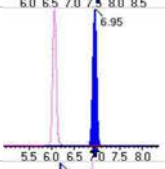 | 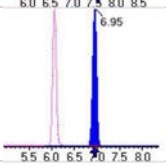 | |
| PFMPA | ( 229.0 / 85.0 ) 7031121 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 11838.0 | N/A<br>0.0<br>0.0 | 111.3690 | N/A | 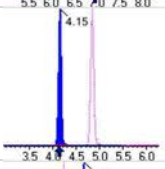 | | |
| PFMBA | ( 279.0 / 85.0 ) 19312765 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 5832.4 | N/A<br>0.0<br>0.0 | 112.5505 | N/A | 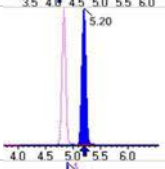 | | |
| NFDHA | ( 295.0 / 201.0 ) 10109374<br>( 295.0 / 85.0 ) 10024417 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.2) | 2773.1<br>3906.7 | 0.9916<br>91.9<br>91.9 | 105.8748 | N/A | 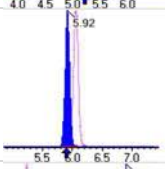 | 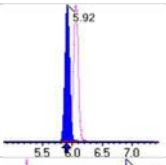 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 46137015<br>( 533.0 / 353.0 ) 15129295 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.0) | 2626.2<br>3001.4 | 0.3279<br>104.8<br>104.8 | 47.1457 | N/A | 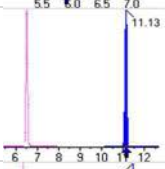 | 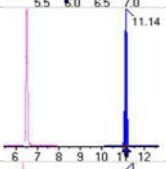 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 34117971<br>( 633.0 / 453.0 ) 11179213 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 4219.2<br>3394.1 | 0.3277<br>98.7<br>98.7 | 45.3348 | N/A | 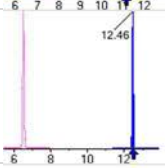 | 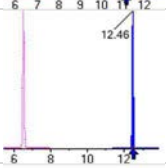 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 28343319<br>( 461.0 / 381.2 ) 10851018 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4228.4<br>5758.6 | 0.3828<br>96.1<br>96.1 | 52.7417 | N/A | 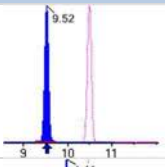 | 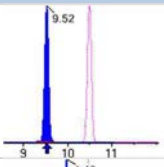 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2927372<br>( 241.0 / 117.0 ) 6626809 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4507.1<br>8408.0 | 2.2637<br>107.4<br>107.4 | 258.6519 | N/A | 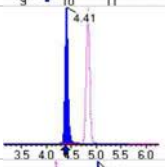 | 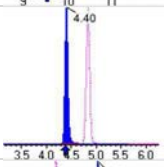 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14119793<br>( 341.0 / 217.0 ) 20897347 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1091.2<br>1008.4 | 1.4800<br>97.4<br>97.4 | 199.0686 | N/A | 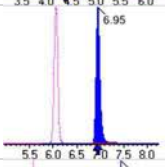 | 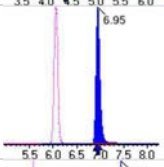 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 25389555<br>( 441.0 / 337.0 ) 22326814 | ( 9.33 , 1.54 )<br>( N/A , -0.01 , 0.1) | 7581.4<br>11370.4 | 0.8794<br>95.9<br>95.9 | 218.1292 | N/A | 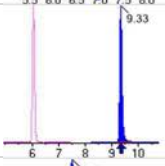 | 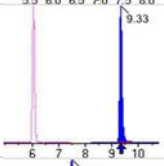 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 16158195<br>( 357.2 / 243.0 ) 1678319 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1736.3<br>1407.1 | 0.1039<br>94.2<br>94.2 | 50.4495 | N/A | 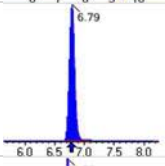 | 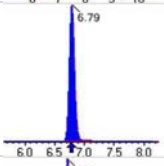 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 12612139<br>( 457.2 / 343.0 ) 508517 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 892.6<br>781.7 | 0.0403<br>97.2<br>97.2 | 53.8903 | N/A | 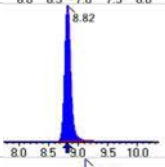 | 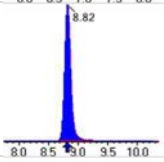 | |
| TDCA | ( 499.0 / 80.0 ) 34553361 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 58261.0 | N/A<br>0.0<br>0.0 | 53.2138 | N/A | 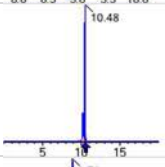 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 167285 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 708.8 | N/A | 0.7016<br>[ 1.0000 ] | 70.2%<br>{ 71.4% } | 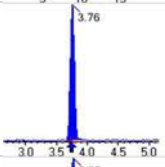 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130924 | ( 6.06 , N/A )<br>( N/A , 0.00 , N/A ) | 6147.8 | N/A | 1.0321<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 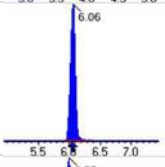 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 365760 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2442.2 | N/A | 0.9252<br>[ 1.0000 ] | 92.5%<br>{ 96.3% } | 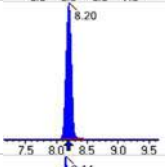 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282978 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 970.5 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 106.3% } | 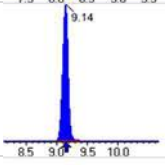 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294951 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 3067.1 | N/A | 1.0100 [ 1.0000 ] | 101.0% { 110.1% } | 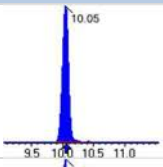 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 936593 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3290.6 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 104.0% } | 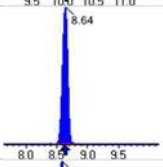 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785932 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2145.3 | N/A | 1.0319 [ 1.0000 ] | 103.2% { 112.2% } | 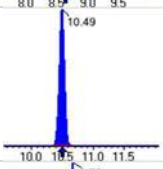 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1501211 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 26047.2 | N/A | 7.8555 [ 8.0000 ] | 98.2% { 71.0% } | 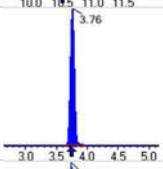 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 787740 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 4786.2 | N/A | 3.2247 [ 4.0000 ] | 80.6% { 85.5% } | 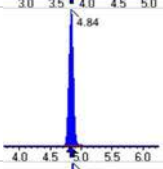 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 532422 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6348.1 | N/A | 1.7823 [ 2.0000 ] | 89.1% { 96.2% } | 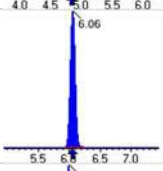 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613632 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 3886.1 | N/A | 1.8466 [ 2.0000 ] | 92.3% { 99.1% } | 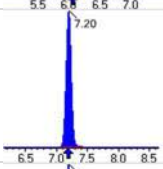 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 772186 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2358.8 | N/A | 1.9704 [ 2.0000 ] | 98.5% { 94.2% } | 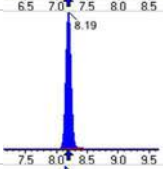 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 278181 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2465.4 | N/A | 1.0026 [ 1.0000 ] | 100.3% { 105.9% } | 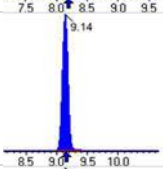 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318276 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1070.1 | N/A | 0.9629 [ 1.0000 ] | 96.3% { 100.5% } | 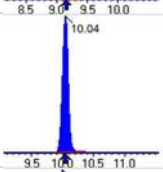 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 360507 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 905.9 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 99.8% } | 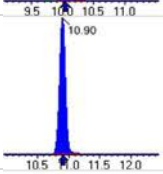 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388515 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1338.0 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 110.5% } | 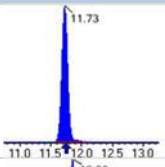  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310379 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1125.7 | N/A | 0.9203 [ 1.0000 ] | 92.0% { 99.3% } | 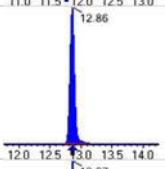  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521541 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 1978.3 | N/A | 1.8114 [ 2.0000 ] | 90.6% { 101.1% } | 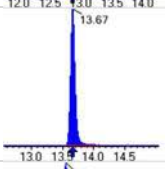  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1671847 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 1059.8 | N/A | 1.9757 [ 2.0000 ] | 98.8% { 104.9% } | 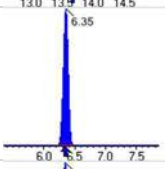  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1364325 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3793.2 | N/A | 2.0199 [ 2.0000 ] | 101.0% { 106.5% } | 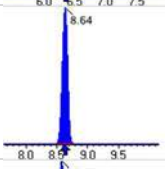  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1649524 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1301.1 | N/A | 1.9466 [ 2.0000 ] | 97.3% { 105.6% } | 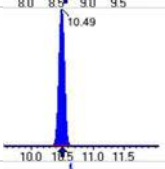  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 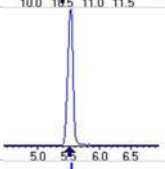  | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 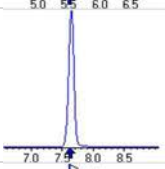  | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1113619 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1147.4 | N/A | 3.2497 [ 4.0000 ] | 81.2% { 84.4% } | 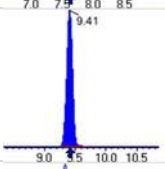  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 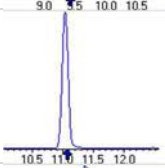  | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1367165 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1785.0 | N/A | 1.8206 [ 2.0000 ] | 91.0% { 102.6% } | 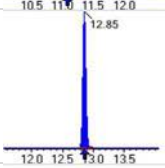  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 325737 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1453.6 | N/A | 2.0451 [ 2.0000 ] | 102.3% { 117.4% } | 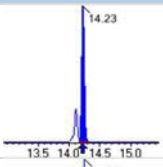  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316296 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2128.6 | N/A | 1.8518 [ 2.0000 ] | 92.6% { 100.3% } | 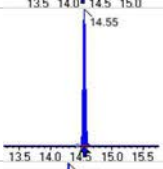  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 824817 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 1731.0 | N/A | 3.7828 [ 4.0000 ] | 94.6% { 98.4% } | 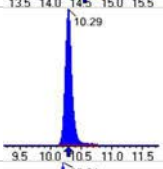  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 665968 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 1789.7 | N/A | 3.3512 [ 4.0000 ] | 83.8% { 88.1% } | 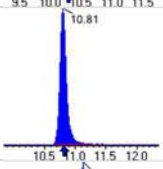  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1338076 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2515.8 | N/A | 18.6944 [ 20.0000 ] | 93.5% { 99.4% } | 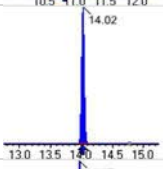  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1389356 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4052.7 | N/A | 19.1244 [ 20.0000 ] | 95.6% { 105.5% } | 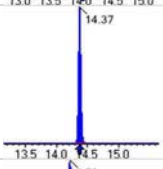  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1053570 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2170.3 | N/A | 7.7425 [ 8.0000 ] | 96.8% { 107.7% } | 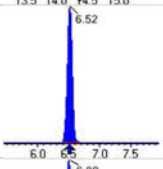  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 602520 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1431.9 | N/A | 1.8842 [ 2.0000 ] | 94.2% { 104.4% } | 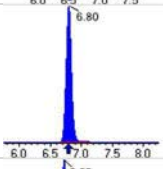  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 573873 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 871.6 | N/A | 1.9713 [ 2.0000 ] | 98.6% { 106.8% } | 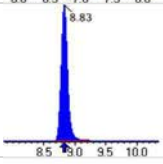  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0103L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.86L | -3.5L | 30.00L |
| PFPeAL | 4.00L | 3.91L | -2.3L | 30.00L |
| PFHxAL | 4.00L | 3.64L | -9.1L | 30.00L |
| PFHpAL | 4.00L | 3.53L | -11.6L | 30.00L |
| PFOAL | 4.00L | 3.36L | -16.0L | 30.00L |
| PFNAL | 4.00L | 3.77L | -5.7L | 30.00L |
| PFDAL | 4.00L | 3.78L | -5.6L | 30.00L |
| PFUnAL | 4.00L | 3.59L | -10.1L | 30.00L |
| PFDoAL | 4.00L | 3.31L | -17.2L | 30.00L |
| PFTrDAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFTeDAL | 4.00L | 4.12L | 2.9L | 30.00L |
| PFHxDAL | 4.00L | 3.10L | -22.5L | 30.00L |
| PFODAL | 4.00L | 3.04L | -24.1L | 30.00L |
| PFBSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFPeSL | 4.00L | 4.10L | 2.4L | 30.00L |
| PFHxSL | 4.00L | 3.93L | -1.8L | 30.00L |
| PFHpSL | 4.00L | 3.70L | -7.4L | 30.00L |
| PFOSL | 4.00L | 3.53L | -11.8L | 30.00L |
| PFNSL | 4.00L | 3.75L | -6.3L | 30.00L |
| PFDSL | 4.00L | 3.87L | -3.3L | 30.00L |
| PFDoSL | 4.00L | 3.66L | -8.4L | 30.00L |
| 4:2FTSL | 4.00L | 4.00L | -0.01L | 30.00L |
| 6:2FTSL | 4.00L | 3.91L | -2.2L | 30.00L |
| 8:2FTSL | 4.00L | 4.28L | 7.1L | 30.00L |
| 10:2FTSL | 3.86L | 3.98L | 3.1L | 30.00L |
| PFOSAL | 4.00L | 3.81L | -4.7L | 30.00L |
| NMeFOSAL | 4.00L | 3.34L | -16.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0103L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.59L | -10.4L | 30.00L |
| NMeFOSAAL | 4.00L | 3.74L | -6.4L | 30.00L |
| NEtFOSAAL | 4.00L | 3.49L | -12.8L | 30.00L |
| NMeFOSEL | 4.00L | 4.03L | 0.8L | 30.00L |
| NEtFOSEL | 4.00L | 4.57L | 14.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.93L | -1.7L | 30.00L |
| ADONAL | 4.00L | 3.63L | -9.3L | 30.00L |
| PFEESAL | 4.00L | 3.30L | -17.6L | 30.00L |
| PFMPAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFMBAL | 4.00L | 3.42L | -14.4L | 30.00L |
| NFDHAL | 4.00L | 3.55L | -11.3L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.87L | -3.4L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 4.00L | 0.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.60L | -10.0L | 30.00L |
| 5:3FTCAL | 4.00L | 3.95L | -1.3L | 30.00L |
| 7:3FTCAL | 4.00L | 3.72L | -7.0L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.63L | 7.9L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.53L | 13.3L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.23L | 11.5L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.11L | 11.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.07L | 7.4L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.08L | 8.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.09L | 9.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.28L | 14.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.44L | 21.9L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.28L | 13.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0103L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.76L | 19.1L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.88L | 22.1L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.86L | 21.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 10.3L | 29.1L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.16L | 7.8L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.17L | 8.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.19L | 9.5L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.59L | 14.9L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D7-NMEFOSEL | 20.0L | 22.7L | 13.6L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.3L | 11.7L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.74L | 9.3L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 962397<br>( 163.0 / 69.0 ) 25274 | ( 2.80 , 0.74 ) ( N/A , 0.01 , 0.1) | 6782.6<br>1223.6 | 0.0263<br>96.7<br>96.7 | 3.3415 | N/A | 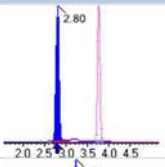 | 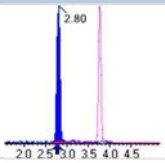 | |
| PFBA | ( 213.0 / 169.0 ) 1175661 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 937.3 | N/A<br>0.0<br>0.0 | 3.8614 | N/A | 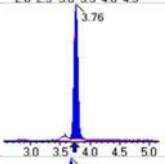 | | |
| PFPeA | ( 263.0 / 219.0 ) 978897<br>( 263.0 / 69.0 ) 10248 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 3495.1<br>136.4 | 0.0105<br>87.7<br>87.7 | 3.9064 | N/A | 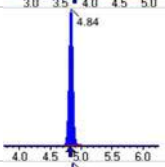 | 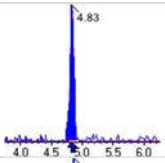 | |
| PFHxA | ( 313.0 / 269.0 ) 1080521<br>( 313.0 / 119.0 ) 119388 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.9<br>990.2 | 0.1105<br>95.2<br>95.2 | 3.6367 | N/A | 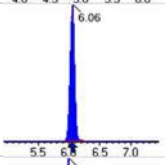 | 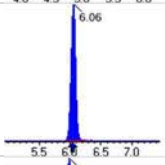 | |
| PFHpA | ( 363.0 / 319.0 ) 1143038<br>( 363.0 / 169.0 ) 356252 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1509.0<br>1329.3 | 0.3117<br>102.8<br>102.8 | 3.5350 | N/A | 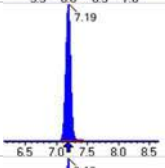 | 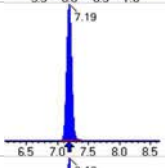 | |
| PFOA | ( 413.0 / 369.0 ) 1461316<br>( 413.0 / 169.0 ) 523450 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 588.7<br>754.1 | 0.3582<br>98.0<br>98.0 | 3.3594 | N/A | 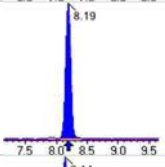 | 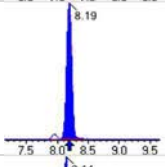 | |
| PFNA | ( 463.0 / 419.0 ) 1118591<br>( 463.0 / 169.0 ) 289643 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.2<br>983.5 | 0.2589<br>101.4<br>101.4 | 3.7732 | N/A | 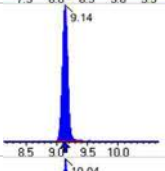 | 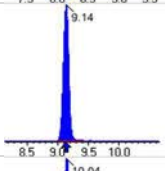 | |
| PFDA | ( 513.0 / 469.0 ) 1264134<br>( 513.0 / 169.0 ) 157234 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2953.9<br>1885.8 | 0.1244<br>106.1<br>106.1 | 3.7761 | N/A | 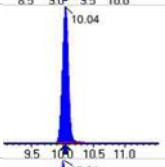 | 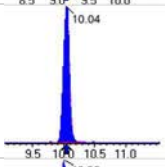 | |
| PFUnA | ( 563.0 / 519.0 ) 1294321<br>( 563.0 / 169.0 ) 184407 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 893.4<br>429.0 | 0.1425<br>100.5<br>100.5 | 3.5942 | N/A | 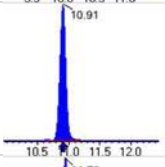 | 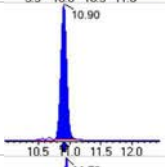 | |
| PFDoA | ( 613.0 / 569.0 ) 1365550<br>( 613.0 / 169.0 ) 224325 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1128.0<br>583.1 | 0.1643<br>103.9<br>103.9 | 3.3107 | N/A | 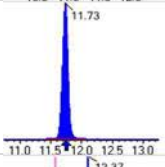 | 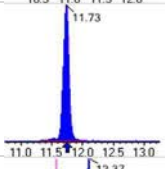 | |
| PFTrDA | ( 663.0 / 619.0 ) 1370908<br>( 663.0 / 169.0 ) 363516 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.0) | 1167.0<br>776.2 | 0.2652<br>103.0<br>103.0 | 3.3977 | N/A | 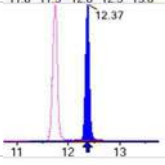 | 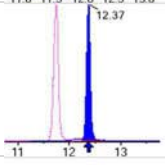 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1309098<br>( 713.0 / 169.0 ) 347062 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1509.2<br>784.5 | 0.2651<br>98.2<br>98.2 | 4.1165 | N/A | 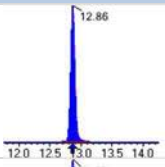 | 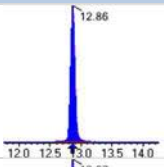 | |
| PFHxDA | ( 813.0 / 769.0 ) 897399<br>( 813.0 / 169.0 ) 229591 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1782.4<br>984.2 | 0.2558<br>104.6<br>104.6 | 3.0982 | N/A | 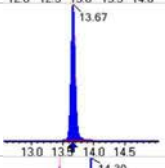 | 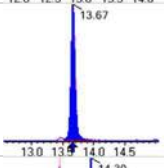 | |
| PFODA | ( 913.0 / 869.0 ) 550450<br>( 913.0 / 169.0 ) 180510 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1511.9<br>649.4 | 0.3279<br>91.5<br>91.5 | 3.0377 | N/A | 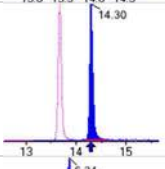 | 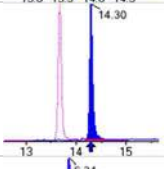 | |
| PFBS | ( 299.0 / 80.0 ) 1756089<br>( 299.0 / 99.0 ) 1281223 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3552.9<br>3591.0 | 0.7296<br>103.2<br>103.2 | 3.6666 | N/A | 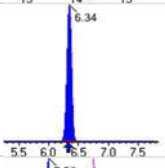 | 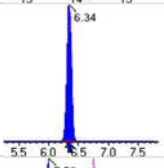 | |
| PFPeS | ( 349.0 / 80.0 ) 4305626<br>( 349.0 / 99.0 ) 1490386 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , -0.1) | 2601.1<br>2414.4 | 0.3461<br>96.3<br>96.3 | 4.0953 | N/A | 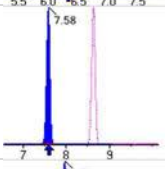 | 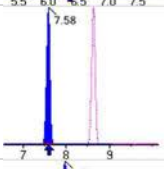 | |
| PFHxS | ( 399.0 / 80.0 ) 4796231<br>( 399.0 / 99.0 ) 1513608 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3672.2<br>5896.7 | 0.3156<br>99.1<br>99.1 | 3.9275 | N/A | 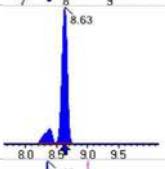 | 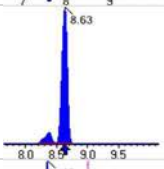 | |
| PFHpS | ( 449.0 / 80.0 ) 3732941<br>( 449.0 / 99.0 ) 1001282 | ( 9.60 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2007.8<br>1891.4 | 0.2682<br>101.4<br>101.4 | 3.7048 | N/A | 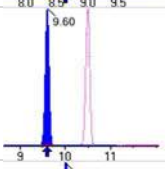 | 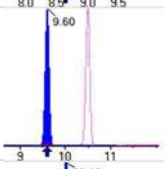 | |
| PFOS | ( 499.0 / 80.0 ) 3424865<br>( 499.0 / 99.0 ) 734477 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1720.3<br>3896.8 | 0.2145<br>91.8<br>91.8 | 3.5262 | N/A | 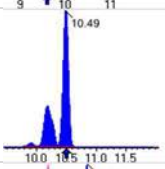 | 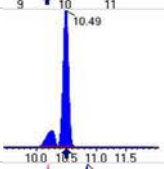 | |
| PFNS | ( 549.0 / 80.0 ) 3407348<br>( 549.0 / 99.0 ) 929910 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2946.3<br>1937.3 | 0.2729<br>100.1<br>100.1 | 3.7468 | N/A | 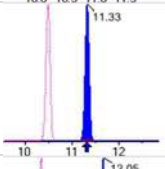 | 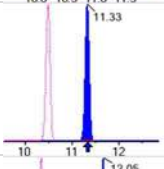 | |
| PFDS | ( 599.0 / 80.0 ) 4296316<br>( 599.0 / 99.0 ) 1123221 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3304.8<br>2395.7 | 0.2614<br>96.2<br>96.2 | 3.8691 | N/A | 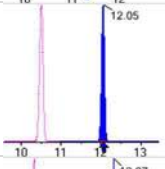 | 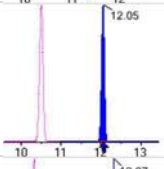 | |
| PFDoS | ( 699.0 / 80.0 ) 3586345<br>( 699.0 / 99.0 ) 846775 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3630.7<br>2702.9 | 0.2361<br>101.1<br>101.1 | 3.6636 | N/A | 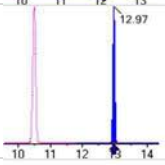 | 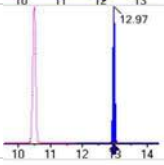 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1631620<br>( 327.0 / 81.0 ) 1506467 | ( 5.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 4752.9<br>2173.4 | 0.9233<br>105.8<br>105.8 | 3.9996 | N/A | 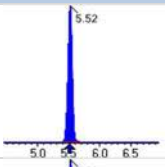 | 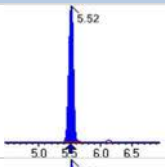 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1545553<br>( 427.0 / 81.0 ) 1968397 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 3426.6<br>2929.0 | 1.2736<br>101.6<br>101.6 | 3.9140 | N/A | 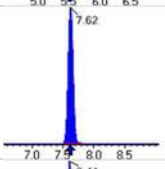 | 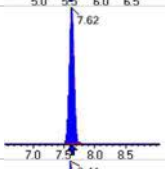 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1515669<br>( 527.0 / 81.0 ) 1596380 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 1461.7<br>1647.7 | 1.0533<br>96.8<br>96.8 | 4.2844 | N/A | 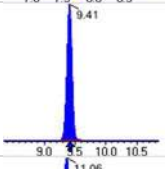 | 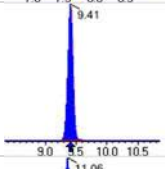 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1267274<br>( 627.0 / 81.0 ) 1749805 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1302.1<br>1148.2 | 1.3808<br>95.9<br>95.9 | 3.9787 | N/A | 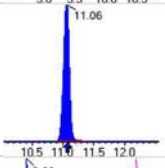 | 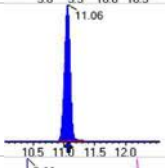 | |
| PFBSA | ( 297.9 / 78.0 ) 3621025<br>( 297.9 / 278.0 ) 4711 | ( 8.11 , 0.57 ) ( N/A , 0.00 , 0.2) | 1692.7<br>159.7 | 0.0013<br>95.2<br>95.2 | 4.4829 | N/A | 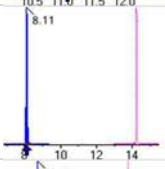 | 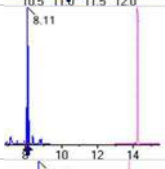 | |
| PFHxSA | ( 397.9 / 78.0 ) 4011801<br>( 397.9 / 378.0 ) 16835 | ( 10.98 , 0.75 ) ( N/A , 0.00 , 0.0) | 854.3<br>330.5 | 0.0042<br>102.7<br>102.7 | 3.8415 | N/A | 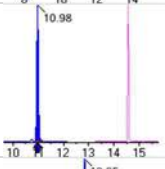 | 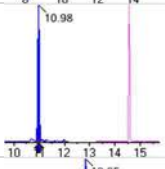 | |
| PFOSA | ( 498.0 / 78.0 ) 2805456<br>( 498.0 / 478.0 ) 40688 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.2) | 937.8<br>497.9 | 0.0145<br>103.4<br>103.4 | 3.8140 | N/A | 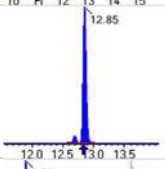 | 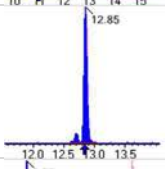 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 ) 7301953<br>( 279.7 / 211.0 ) 635631 | ( 8.20 , 0.64 ) ( N/A , -0.01 , 0.0) | 52.1<br>66.4 | 0.0870<br>103.6<br>103.6 | 3.7699 | N/A | 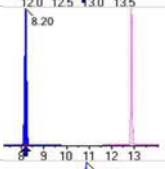 | 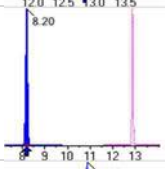 | |
| NMeFOSA | ( 512.0 / 219.0 ) 519804<br>( 512.0 / 169.0 ) 328008 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 5814.7<br>2023.3 | 0.6310<br>84.3<br>84.3 | 3.3402 | N/A | 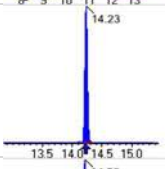 | 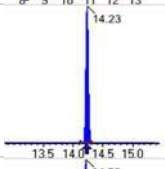 | |
| NEtFOSA | ( 526.0 / 219.0 ) 682268<br>( 526.0 / 169.0 ) 720469 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 0.0) | 6107.0<br>4732.1 | 1.0560<br>85.5<br>85.5 | 3.5850 | N/A | 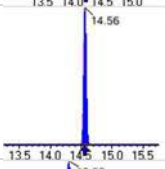 | 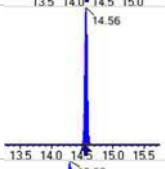 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 812540<br>( 570.0 / 483.0 ) 375737 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2801.5<br>1944.1 | 0.4624<br>105.5<br>105.5 | 3.7449 | N/A | 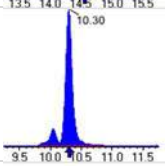 | 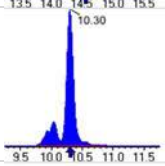 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 733069<br>( 584.0 / 526.0 ) 451026 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1461.0<br>814.2 | 0.6153<br>99.8<br>99.8 | 3.4878 | N/A | 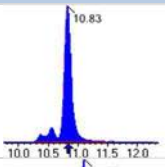 | 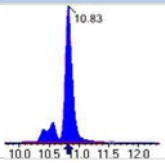 | |
| NMeFOSE | ( 616.0 / 59.0 ) 326625 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2612.6 | N/A<br>0.0<br>0.0 | 4.0313 | N/A | 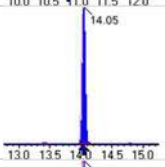 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 299443 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4202.9 | N/A<br>0.0<br>0.0 | 4.5715 | N/A | 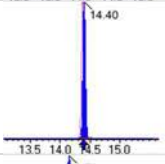 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 308973<br>( 285.0 / 185.0 ) 797962 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1326.1<br>2486.0 | 2.5826<br>93.4<br>93.4 | 3.9307 | N/A | 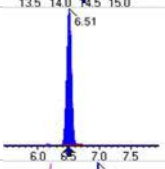 | 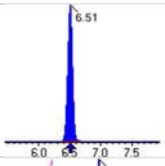 | |
| ADONA | ( 377.0 / 85.0 ) 3325389<br>( 377.0 / 251.0 ) 344342 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.0) | 1872.8<br>1723.5 | 0.1035<br>101.6<br>101.6 | 3.6262 | N/A | 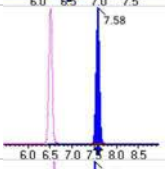 | 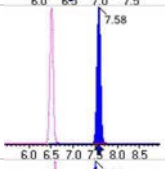 | |
| PFEESA | ( 315.0 / 135.0 ) 703088<br>( 315.0 / 83.0 ) 404699 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 2387.2<br>769.5 | 0.5756<br>103.3<br>103.3 | 3.2953 | N/A | 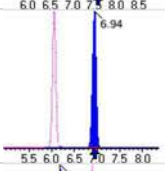 | 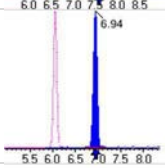 | |
| PFMPA | ( 229.0 / 85.0 ) 296369 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 3321.0 | N/A<br>0.0<br>0.0 | 3.7270 | N/A | 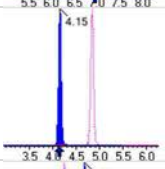 | | |
| PFMBA | ( 279.0 / 85.0 ) 739601 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3653.3 | N/A<br>0.0<br>0.0 | 3.4221 | N/A | 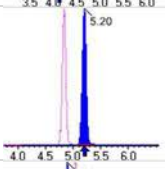 | | |
| NFDHA | ( 295.0 / 201.0 ) 393340<br>( 295.0 / 85.0 ) 422944 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2490.4<br>1874.9 | 1.0753<br>99.7<br>99.7 | 3.5461 | N/A | 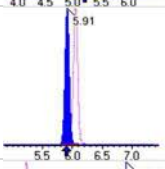 | 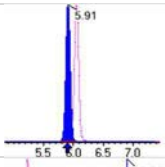 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3829034<br>( 533.0 / 353.0 ) 1211420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3048.6<br>2273.9 | 0.3164<br>101.1<br>101.1 | 3.8658 | N/A | 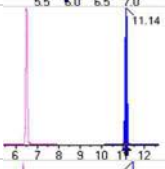 | 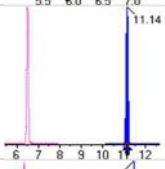 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3049840<br>( 633.0 / 453.0 ) 1009005 | ( 12.47 , 1.92 )<br>( N/A , 0.00 , 0.1) | 4050.8<br>2878.1 | 0.3308<br>99.6<br>99.6 | 4.0039 | N/A | 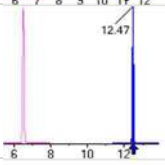 | 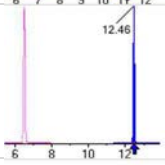 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1920262<br>( 461.0 / 381.2 ) 718117 | ( 9.52 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2117.4<br>2583.3 | 0.3740<br>93.8<br>93.8 | 3.5045 | N/A | 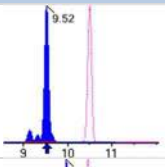 | 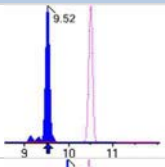 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 51311<br>( 241.0 / 117.0 ) 125661 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1068.2<br>1017.9 | 2.4490<br>116.2<br>116.2 | 3.5994 | N/A | 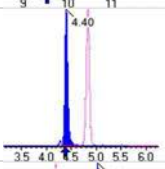 | 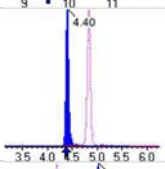 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 325323<br>( 341.0 / 217.0 ) 467661 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.2) | 983.3<br>713.5 | 1.4375<br>94.6<br>94.6 | 3.9483 | N/A | 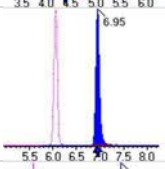 | 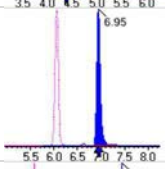 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 503088<br>( 441.0 / 337.0 ) 447992 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 2199.0<br>3436.5 | 0.8905<br>97.1<br>97.1 | 3.7207 | N/A | 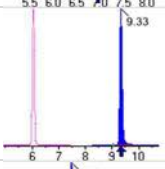 | 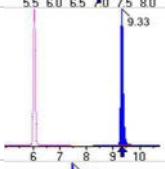 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1368915<br>( 357.2 / 243.0 ) 138696 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1462.3<br>919.1 | 0.1013<br>91.9<br>91.9 | 3.7993 | N/A | 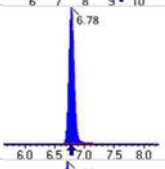 | 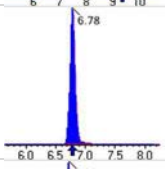 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1040258<br>( 457.2 / 343.0 ) 44906 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 751.1<br>400.9 | 0.0432<br>104.1<br>104.1 | 4.0322 | N/A | 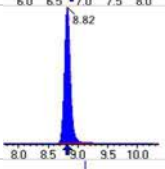 | 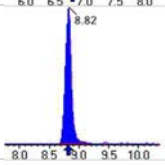 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 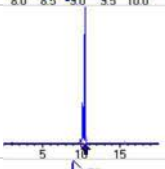 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 247846 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1075.6 | N/A | 1.0395<br>[ 1.0000 ] | 103.9%<br>{ 105.8% } | 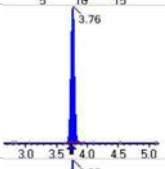 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117348 | ( 6.06 , N/A )<br>( N/A , -0.01 , N/A ) | 16220.9 | N/A | 0.9251<br>[ 1.0000 ] | 92.5%<br>{ 98.2% } | 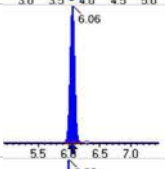 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370834 | ( 8.20 , N/A )<br>( N/A , -0.01 , N/A ) | 3643.5 | N/A | 0.9381<br>[ 1.0000 ] | 93.8%<br>{ 97.6% } | 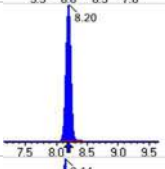 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270783 | ( 9.14 , N/A )<br>( N/A , -0.01 , N/A ) | 892.5 | N/A | 0.9521<br>[ 1.0000 ] | 95.2%<br>{ 101.7% } | 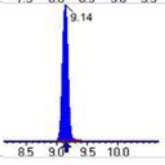 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272326 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 13544.9 | N/A | 0.9325 [ 1.0000 ] | 93.3% { 101.7% } | 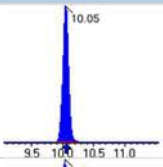 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 837221 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4279.8 | N/A | 0.8822 [ 1.0000 ] | 88.2% { 93.0% } | 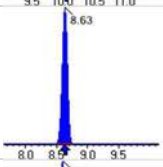 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713825 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2190.3 | N/A | 0.9372 [ 1.0000 ] | 93.7% { 101.9% } | 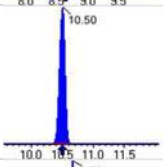 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2443491 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 41170.2 | N/A | 8.6301 [ 8.0000 ] | 107.9% { 115.5% } | 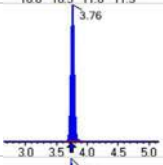 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 992188 | ( 4.84 , N/A ) ( N/A , -0.01 , N/A ) | 5611.5 | N/A | 4.5315 [ 4.0000 ] | 113.3% { 107.6% } | 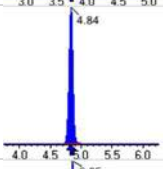 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 618494 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 6938.9 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 111.8% } | 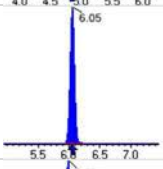 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659031 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4583.8 | N/A | 2.2127 [ 2.0000 ] | 110.6% { 106.4% } | 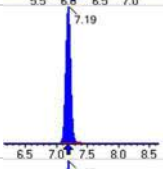 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 885699 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2803.9 | N/A | 2.2291 [ 2.0000 ] | 111.5% { 108.0% } | 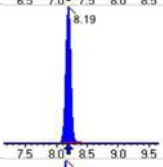 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294966 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2846.1 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 112.3% } | 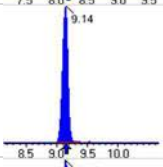 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 327639 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1335.9 | N/A | 1.0736 [ 1.0000 ] | 107.4% { 103.5% } | 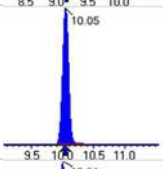 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389334 | ( 10.91 , N/A ) ( N/A , -0.01 , N/A ) | 1101.6 | N/A | 1.0844 [ 1.0000 ] | 108.4% { 107.7% } | 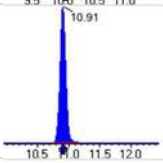 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409989 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1223.9 | N/A | 1.1213 [ 1.0000 ] | 112.1% { 116.6% } | 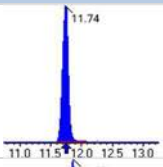  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 339554 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1486.2 | N/A | 1.0905 [ 1.0000 ] | 109.0% { 108.7% } | 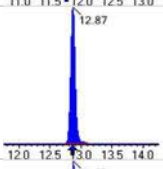  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607345 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2904.6 | N/A | 2.2847 [ 2.0000 ] | 114.2% { 117.7% } | 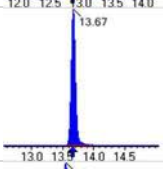  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1844891 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 1003.0 | N/A | 2.4390 [ 2.0000 ] | 121.9% { 115.8% } | 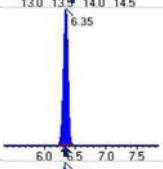  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373837 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4235.8 | N/A | 2.2754 [ 2.0000 ] | 113.8% { 107.3% } | 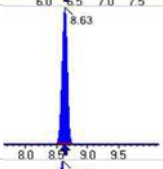  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1681874 | ( 10.50 , N/A ) ( N/A , -0.01 , N/A ) | 1417.8 | N/A | 2.1852 [ 2.0000 ] | 109.3% { 107.6% } | 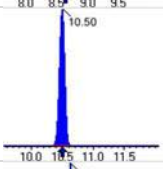  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 621764 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.3 | N/A | 4.7641 [ 4.0000 ] | 119.1% { 118.4% } | 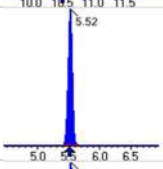  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1907472 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 3543.7 | N/A | 4.8837 [ 4.0000 ] | 122.1% { 112.2% } | 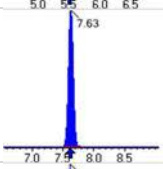  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490025 | ( 9.41 , N/A ) ( N/A , 0.00 , N/A ) | 1234.3 | N/A | 4.8642 [ 4.0000 ] | 121.6% { 112.9% } | 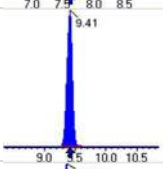  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3305966 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1721.4 | N/A | 10.3266 [ 8.0000 ] | 129.1% { 127.3% } | 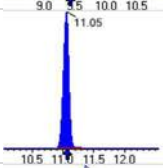  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1471109 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 1781.5 | N/A | 2.1569 [ 2.0000 ] | 107.8% { 110.3% } | 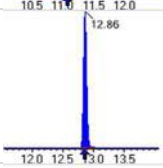  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 313468 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 2395.1 | N/A | 2.1669 [ 2.0000 ] | 108.3% { 113.0% } | 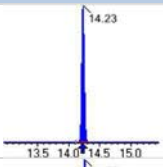  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339856 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 2214.0 | N/A | 2.1907 [ 2.0000 ] | 109.5% { 107.7% } | 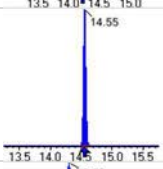  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 909945 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2882.7 | N/A | 4.5948 [ 4.0000 ] | 114.9% { 108.6% } | 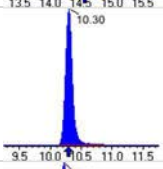  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 859454 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1808.0 | N/A | 4.7617 [ 4.0000 ] | 119.0% { 113.7% } | 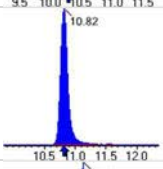  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1477259 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 2309.5 | N/A | 22.7237 [ 20.0000 ] | 113.6% { 109.8% } | 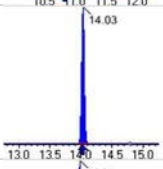  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1474480 | ( 14.38 , N/A ) ( N/A , 0.00 , N/A ) | 3886.4 | N/A | 22.3464 [ 20.0000 ] | 111.7% { 112.0% } | 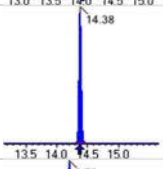  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1066376 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2035.6 | N/A | 8.7432 [ 8.0000 ] | 109.3% { 109.0% } | 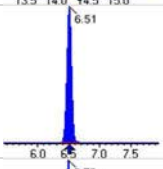  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677811 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1143.2 | N/A | 2.2957 [ 2.0000 ] | 114.8% { 117.4% } | 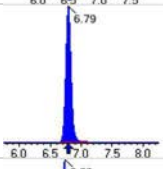  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 632603 | ( 8.83 , N/A ) ( N/A , -0.01 , N/A ) | 843.1 | N/A | 2.3536 [ 2.0000 ] | 117.7% { 117.8% } | 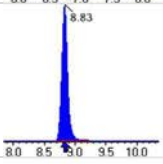  | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0103L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.412L | 2.9L | 30.00L |
| PFPeAL | 0.200L | 0.208L | 4.0L | 30.00L |
| PFHxAL | 0.100L | 0.0989L | -1.1L | 30.00L |
| PFHpAL | 0.100L | 0.0936L | -6.4L | 30.00L |
| PFOAL | 0.100L | 0.112L | 12.0L | 30.00L |
| PFNAL | 0.100L | 0.0959L | -4.1L | 30.00L |
| PFDAL | 0.100L | 0.109L | 8.9L | 30.00L |
| PFUnAL | 0.100L | 0.101L | 1.3L | 30.00L |
| PFDoAL | 0.100L | 0.105L | 4.9L | 30.00L |
| PFTrDAL | 0.100L | 0.0940L | -6.0L | 30.00L |
| PFTeDAL | 0.100L | 0.0978L | -2.2L | 30.00L |
| PFHxDAL | 0.100L | 0.0965L | -3.5L | 30.00L |
| PFODAL | 0.100L | 0.0984L | -1.6L | 30.00L |
| PFBSL | 0.0885L | 0.0922L | 4.2L | 30.00L |
| PFPeSL | 0.0940L | 0.0887L | -5.6L | 30.00L |
| PFHxSL | 0.0915L | 0.0881L | -3.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0824L | -13.7L | 30.00L |
| PFOSL | 0.0930L | 0.0974L | 4.8L | 30.00L |
| PFNSL | 0.0960L | 0.0859L | -10.5L | 30.00L |
| PFDSL | 0.0965L | 0.0905L | -6.2L | 30.00L |
| PFDoSL | 0.0970L | 0.0876L | -9.7L | 30.00L |
| 4:2FTSL | 0.375L | 0.354L | -5.6L | 30.00L |
| 6:2FTSL | 0.380L | 0.399L | 5.0L | 30.00L |
| 8:2FTSL | 0.384L | 0.364L | -5.1L | 30.00L |
| 10:2FTSL | 0.386L | 0.360L | -6.7L | 30.00L |
| PFOSAL | 0.100L | 0.0896L | -10.4L | 30.00L |
| NMeFOSAL | 0.400L | 0.385L | -3.6L | 30.00L |
| NEtFOSAL | 0.400L | 0.359L | -10.3L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0103L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01003-LCV1L

**Sequence:W**SD01003L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0869L | -13.1L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0961L | -3.9L | 30.00L |
| NMeFOSEL | 0.400L | 0.387L | -3.3L | 30.00L |
| NEtFOSEL | 0.400L | 0.386L | -3.4L | 30.00L |
| HFPO-DAL | 0.100L | 0.0941L | -5.9L | 30.00L |
| ADONAL | 0.0945L | 0.0894L | -5.3L | 30.00L |
| PFEESAL | 0.178L | 0.175L | -1.5L | 30.00L |
| PFMPAL | 0.200L | 0.174L | -12.9L | 30.00L |
| PFMBAL | 0.200L | 0.179L | -10.5L | 30.00L |
| NFDHAL | 0.200L | 0.189L | -5.3L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0865L | -7.5L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0829L | -12.3L | 30.00L |
| 3:3FTCAL | 0.400L | 0.308L | -23.0L | 30.00L |
| 5:3FTCAL | 0.400L | 0.387L | -3.1L | 30.00L |
| 7:3FTCAL | 0.400L | 0.383L | -4.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 47067<br>( 163.0 / 69.0 ) 1316 | ( 2.78 , 0.74 ) ( N/A , -0.02 , -0.4) | 355.9<br>61.6 | 0.0280<br>103.0<br>106.1 | 0.1478<br>[ 0.2000 ] | 73.9% | 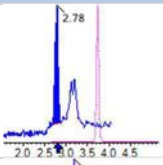 | 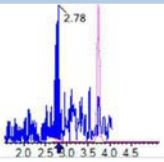 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 138592 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 108.4 | N/A<br>0.0<br>0.0 | 0.4116<br>[ 0.4000 ] | 102.9% | 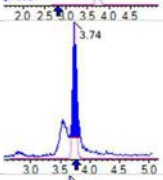 | | MI5 ABK 3/19/24 |
| PFPeA | ( 263.0 / 219.0 ) 60330<br>( 263.0 / 69.0 ) 274 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 1.0) | 334.1<br>11.7 | 0.0045<br>38.0<br>40.9 | 0.2080<br>[ 0.2000 ] | 104.0% | 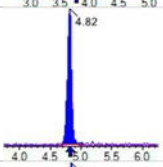 | 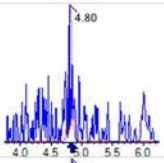 | |
| PFHxA | ( 313.0 / 269.0 ) 31048<br>( 313.0 / 119.0 ) 3804 | ( 6.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 218.1<br>76.3 | 0.1225<br>105.5<br>104.7 | 0.0989<br>[ 0.1000 ] | 98.9% | 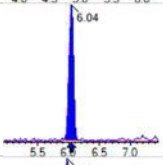 | 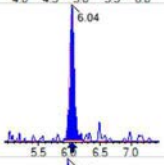 | |
| PFHpA | ( 363.0 / 319.0 ) 32104<br>( 363.0 / 169.0 ) 10165 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.1) | 282.8<br>149.1 | 0.3166<br>104.5<br>107.3 | 0.0936<br>[ 0.1000 ] | 93.6% | 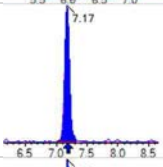 | 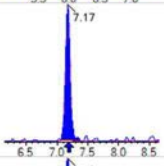 | |
| PFOA | ( 413.0 / 369.0 ) 61826<br>( 413.0 / 169.0 ) 21484 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 84.0<br>115.4 | 0.3475<br>95.1<br>101.2 | 0.1120<br>[ 0.1000 ] | 112.0% | 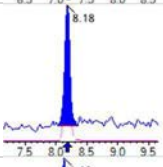 | 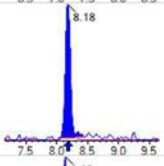 | |
| PFNA | ( 463.0 / 419.0 ) 29580<br>( 463.0 / 169.0 ) 6943 | ( 9.12 , 1.00 ) ( 0.00 , N/A , -0.1) | 240.2<br>119.7 | 0.2347<br>91.9<br>97.6 | 0.0959<br>[ 0.1000 ] | 95.9% | 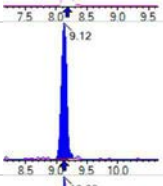 | 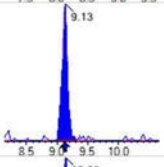 | |
| PFDA | ( 513.0 / 469.0 ) 40655<br>( 513.0 / 169.0 ) 5291 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.3) | 500.2<br>217.6 | 0.1301<br>111.1<br>108.7 | 0.1089<br>[ 0.1000 ] | 108.9% | 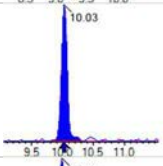 | 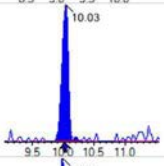 | |
| PFUnA | ( 563.0 / 519.0 ) 40509<br>( 563.0 / 169.0 ) 6769 | ( 10.89 , 1.00 ) ( 0.00 , N/A , -0.5) | 276.0<br>131.2 | 0.1671<br>117.9<br>117.6 | 0.1013<br>[ 0.1000 ] | 101.3% | 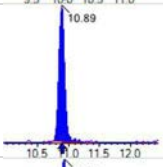 | 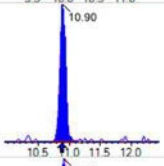 | |
| PFDoA | ( 613.0 / 569.0 ) 45754<br>( 613.0 / 169.0 ) 6839 | ( 11.71 , 1.00 ) ( -0.01 , N/A , 0.6) | 261.3<br>77.8 | 0.1495<br>94.6<br>101.1 | 0.1049<br>[ 0.1000 ] | 104.9% | 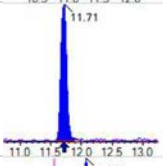 | 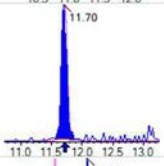 | |
| PFTrDA | ( 663.0 / 619.0 ) 40077<br>( 663.0 / 169.0 ) 12540 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 189.2<br>161.2 | 0.3129<br>121.6<br>120.8 | 0.0940<br>[ 0.1000 ] | 94.0% | 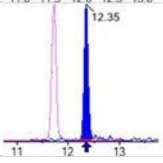 | 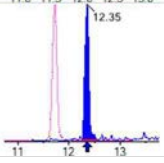 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 32062<br>( 713.0 / 169.0 ) 9163 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 280.6<br>82.3 | 0.2858<br>105.9<br>107.5 | 0.0978<br>[ 0.1000 ] | 97.8% | 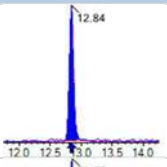 | 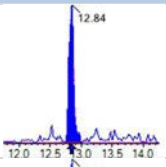 | |
| PFHxDA | ( 813.0 / 769.0 ) 26666<br>( 813.0 / 169.0 ) 5158 | ( 13.65 , 1.00 ) ( 0.00 , N/A , -0.1) | 205.7<br>48.2 | 0.1934<br>79.1<br>75.8 | 0.0965<br>[ 0.1000 ] | 96.5% | 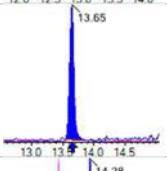 | 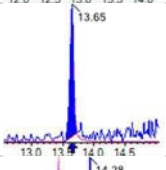 | |
| PFODA | ( 913.0 / 869.0 ) 17005<br>( 913.0 / 169.0 ) 6421 | ( 14.28 , 1.05 ) ( N/A , -0.01 , -0.5) | 92.3<br>35.7 | 0.3776<br>105.4<br>110.8 | 0.0984<br>[ 0.1000 ] | 98.4% | 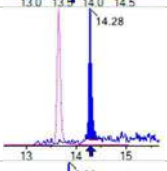 | 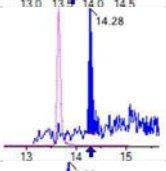 | |
| PFBS | ( 299.0 / 80.0 ) 44646<br>( 299.0 / 99.0 ) 27872 | ( 6.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 383.3<br>165.4 | 0.6243<br>88.3<br>84.9 | 0.0922<br>[ 0.0885 ] | 104.2% | 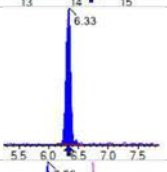 | 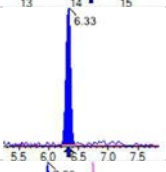 | |
| PFPeS | ( 349.0 / 80.0 ) 101159<br>( 349.0 / 99.0 ) 36023 | ( 7.56 , 0.88 ) ( N/A , 0.00 , -0.2) | 377.7<br>381.4 | 0.3561<br>99.0<br>101.1 | 0.0887<br>[ 0.0938 ] | 94.5% | 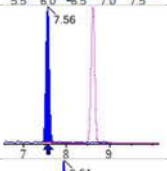 | 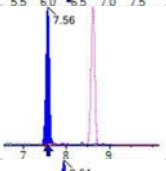 | |
| PFHxS | ( 399.0 / 80.0 ) 116709<br>( 399.0 / 99.0 ) 38098 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 575.1<br>430.6 | 0.3264<br>102.5<br>97.6 | 0.0881<br>[ 0.0911 ] | 96.7% | 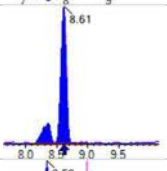 | 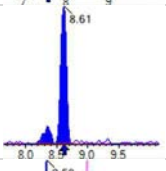 | |
| PFHpS | ( 449.0 / 80.0 ) 87202<br>( 449.0 / 99.0 ) 26573 | ( 9.59 , 0.91 ) ( N/A , 0.01 , 0.2) | 325.7<br>293.6 | 0.3047<br>115.1<br>115.1 | 0.0824<br>[ 0.0951 ] | 86.6% | 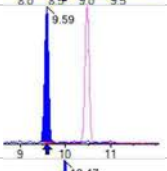 | 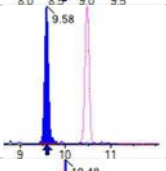 | |
| PFOS | ( 499.0 / 80.0 ) 99408<br>( 499.0 / 99.0 ) 23088 | ( 10.47 , 1.00 ) ( 0.00 , N/A , -0.6) | 316.8<br>8184.8 | 0.2323<br>99.4<br>96.7 | 0.0974<br>[ 0.0927 ] | 105.1% | 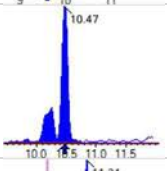 | 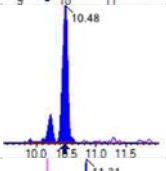 | |
| PFNS | ( 549.0 / 80.0 ) 82027<br>( 549.0 / 99.0 ) 23150 | ( 11.31 , 1.08 ) ( N/A , 0.00 , 0.1) | 271.8<br>203.4 | 0.2822<br>103.6<br>104.7 | 0.0859<br>[ 0.0960 ] | 89.5% | 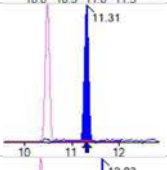 | 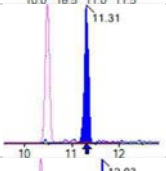 | |
| PFDS | ( 599.0 / 80.0 ) 105536<br>( 599.0 / 99.0 ) 29516 | ( 12.03 , 1.15 ) ( N/A , 0.00 , -0.2) | 384.1<br>182.1 | 0.2797<br>102.9<br>104.6 | 0.0905<br>[ 0.0963 ] | 94.0% | 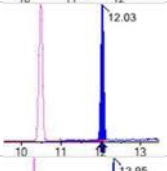 | 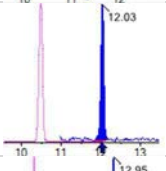 | |
| PFDoS | ( 699.0 / 80.0 ) 90038<br>( 699.0 / 99.0 ) 21141 | ( 12.95 , 1.24 ) ( N/A , 0.00 , 0.2) | 633.3<br>245.9 | 0.2348<br>100.5<br>102.5 | 0.0876<br>[ 0.0970 ] | 90.3% | 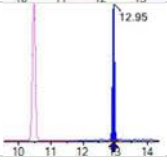 | 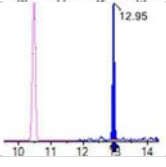 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 171899<br>( 327.0 / 81.0 ) 150442 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1717.6<br>683.9 | 0.8752<br>100.3<br>97.2 | 0.3539<br>[ 0.3738 ] | 94.7% | 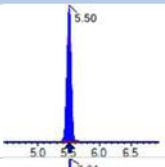 | 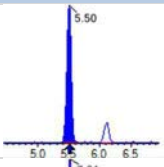 | |
| 6:2FTS | ( 427.0 / 407.0 ) 166522<br>( 427.0 / 81.0 ) 197744 | ( 7.61 , 1.00 ) ( -0.01 , N/A , 0.0) | 2378.9<br>1070.7 | 1.1875<br>94.7<br>89.7 | 0.3988<br>[ 0.3796 ] | 105.1% | 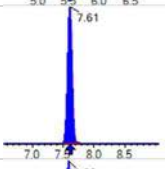 | 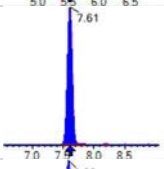 | |
| 8:2FTS | ( 527.0 / 507.0 ) 144163<br>( 527.0 / 81.0 ) 157932 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.1) | 941.2<br>658.7 | 1.0955<br>100.7<br>107.5 | 0.3643<br>[ 0.3833 ] | 95.1% | 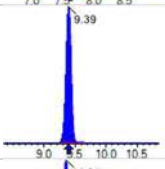 | 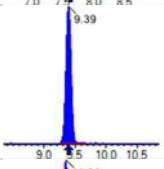 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119303<br>( 627.0 / 81.0 ) 176570 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.0) | 738.6<br>403.5 | 1.4800<br>102.8<br>101.5 | 0.3600<br>[ 0.3865 ] | 93.2% | 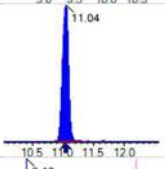 | 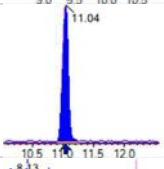 | |
| PFBSA | ( 297.9 / 78.0 ) 85442<br>( 297.9 / 278.0 ) 256 | ( 8.10 , 0.57 ) ( N/A , 0.00 , -2.0) | 513.5<br>10.9 | 0.0030<br>219.5<br>193.6 | 0.1039<br>[ 0.1000 ] | 103.9% | 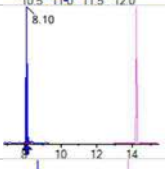 | 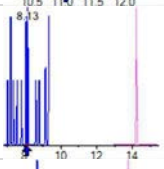 | |
| PFHxSA | ( 397.9 / 78.0 ) 109513<br>( 397.9 / 378.0 ) 757 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.1) | 794.2<br>30.1 | 0.0069<br>169.2<br>165.2 | 0.0991<br>[ 0.1000 ] | 99.1% | 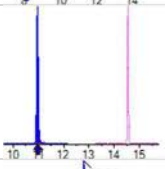 | 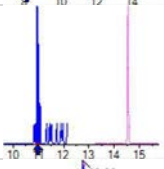 | |
| PFOSA | ( 498.0 / 78.0 ) 72856<br>( 498.0 / 478.0 ) 1203 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.8) | 695.3<br>58.1 | 0.0165<br>117.6<br>110.9 | 0.0896<br>[ 0.1000 ] | 89.6% | 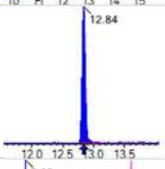 | 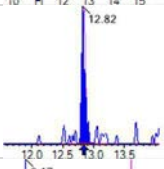 | |
| TFSI | ( 279.7 / 147.0 ) 192505<br>( 279.7 / 211.0 ) 18747 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.2) | 49.6<br>23.7 | 0.0974<br>115.9<br>113.8 | 0.0899<br>[ 0.0979 ] | 91.8% | 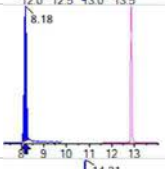 | 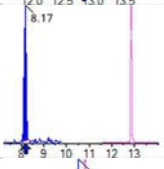 | |
| NMeFOSA | ( 512.0 / 219.0 ) 61072<br>( 512.0 / 169.0 ) 45751 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.5) | 689.5<br>323.4 | 0.7491<br>100.1<br>98.8 | 0.3855<br>[ 0.4000 ] | 96.4% | 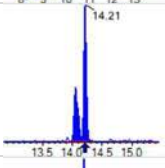 | 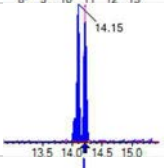 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72281<br>( 526.0 / 169.0 ) 87162 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.0) | 814.9<br>622.0 | 1.2059<br>97.7<br>97.1 | 0.3588<br>[ 0.4000 ] | 89.7% | 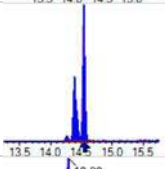 | 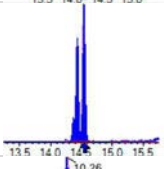 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 19339<br>( 570.0 / 483.0 ) 9536 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 1.4) | 48407.4<br>49763.3 | 0.4931<br>112.5<br>105.5 | 0.0869<br>[ 0.1000 ] | 86.9% | 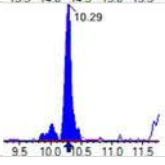 | 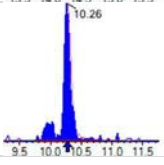 | MI4 ABK 3/19/24 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21192<br>( 584.0 / 526.0 ) 11046 | ( 10.82 , 1.00 ) ( 0.02 , N/A , 0.8) | 143962.1<br>234.0 | 0.5212<br>84.5<br>88.1 | 0.0961<br>[ 0.1000 ] | 96.1% | 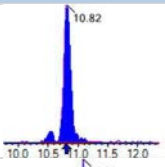 | 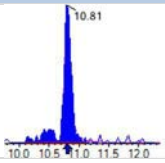 | MI4 ABK 3/19/24 |
| NMeFOSE | ( 616.0 / 59.0 ) 31285 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 199.9 | N/A<br>0.0<br>0.0 | 0.3866<br>[ 0.4000 ] | 96.7% | 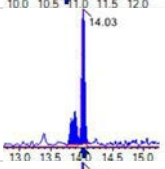 | | MI3 ABK 3/19/24 |
| NEtFOSE | ( 630.0 / 59.0 ) 25347 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 258.7 | N/A<br>0.0<br>0.0 | 0.3864<br>[ 0.4000 ] | 96.6% | 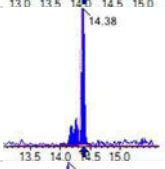 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7969<br>( 285.0 / 185.0 ) 22073 | ( 6.48 , 1.00 ) ( -0.01 , N/A , -0.3) | 172.6<br>171.4 | 2.7698<br>100.2<br>105.0 | 0.0941<br>[ 0.1000 ] | 94.1% | 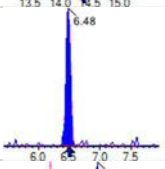 | 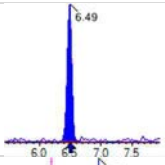 | |
| ADONA | ( 377.0 / 85.0 ) 88358<br>( 377.0 / 251.0 ) 9014 | ( 7.56 , 1.17 ) ( N/A , 0.00 , 0.2) | 604.2<br>141.8 | 0.1020<br>100.1<br>97.6 | 0.0894<br>[ 0.0943 ] | 94.9% | 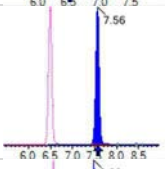 | 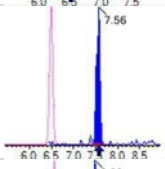 | |
| PFEESA | ( 315.0 / 135.0 ) 39560<br>( 315.0 / 83.0 ) 25099 | ( 6.92 , 1.15 ) ( N/A , -0.01 , -0.4) | 780.1<br>83.9 | 0.6345<br>113.8<br>112.0 | 0.1754<br>[ 0.1785 ] | 98.3% | 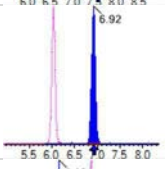 | 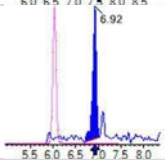 | |
| PFMPA | ( 229.0 / 85.0 ) 16031 | ( 4.12 , 0.86 ) ( N/A , -0.02 , 0.0) | 334.6 | N/A<br>0.0<br>0.0 | 0.1742<br>[ 0.2000 ] | 87.1% | 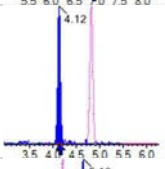 | | |
| PFMBA | ( 279.0 / 85.0 ) 44800 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 597.2 | N/A<br>0.0<br>0.0 | 0.1791<br>[ 0.2000 ] | 89.5% | 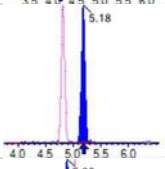 | | |
| NFDHA | ( 295.0 / 201.0 ) 22208<br>( 295.0 / 85.0 ) 22515 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.2) | 653.0<br>208.4 | 1.0138<br>94.0<br>100.8 | 0.1894<br>[ 0.2000 ] | 94.7% | 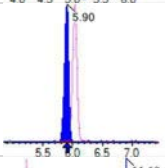 | 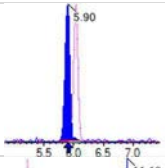 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 92247<br>( 533.0 / 353.0 ) 27025 | ( 11.13 , 1.71 ) ( N/A , 0.01 , 0.3) | 1045.0<br>479.6 | 0.2930<br>93.6<br>88.9 | 0.0865<br>[ 0.0933 ] | 92.6% | 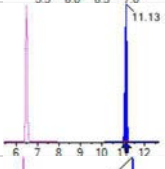 | 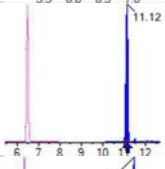 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 67993<br>( 633.0 / 453.0 ) 23083 | ( 12.44 , 1.92 ) ( N/A , 0.00 , -0.2) | 1180.5<br>305.0 | 0.3395<br>102.2<br>99.2 | 0.0829<br>[ 0.0943 ] | 87.9% | 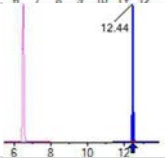 | 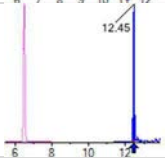 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 47255<br>( 461.0 / 381.2 ) 20429 | ( 9.51 , 0.91 ) ( N/A , 0.00 , 0.1) | 785.8<br>377.2 | 0.4323<br>108.5<br>109.0 | 0.0821<br>[ 0.0924 ] | 88.9% | 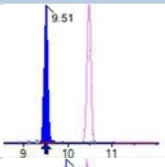 | 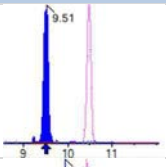 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 5084<br>( 241.0 / 117.0 ) 13448 | ( 4.38 , 0.91 ) ( N/A , -0.01 , 0.0) | 299.2<br>194.9 | 2.6448<br>125.5<br>121.9 | 0.3081<br>[ 0.4000 ] | 77.0% | 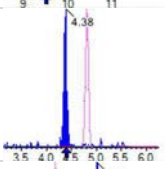 | 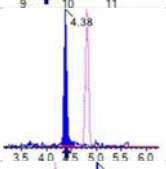 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 33751<br>( 341.0 / 217.0 ) 52605 | ( 6.93 , 1.15 ) ( N/A , -0.01 , 0.0) | 268.0<br>252.9 | 1.5586<br>102.6<br>107.1 | 0.3875<br>[ 0.4000 ] | 96.9% | 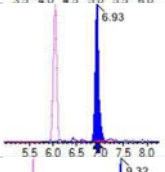 | 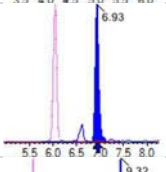 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54752<br>( 441.0 / 337.0 ) 50432 | ( 9.32 , 1.54 ) ( N/A , 0.00 , 0.0) | 6985.1<br>5483054.5 | 0.9211<br>100.4<br>105.3 | 0.3831<br>[ 0.4000 ] | 95.8% | 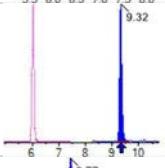 | 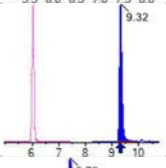 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 35681<br>( 357.2 / 243.0 ) 5762 | ( 6.77 , 1.00 ) ( -0.01 , N/A , 0.2) | 296.0<br>77.3 | 0.1615<br>146.5<br>155.1 | 0.0905<br>[ 0.1000 ] | 90.5% | 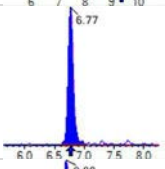 | 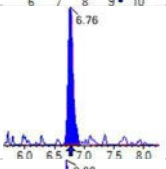 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24379<br>( 457.2 / 343.0 ) 1534 | ( 8.80 , 1.00 ) ( -0.02 , N/A , -0.4) | 217.0<br>80.7 | 0.0629<br>151.7<br>138.8 | 0.0887<br>[ 0.1000 ] | 88.7% | 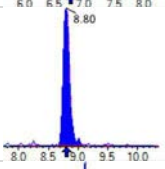 | 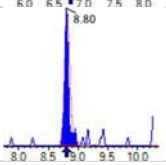 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 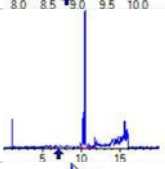 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 282417 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1316.3 | N/A | 1.1845<br>[ 1.0000 ] | 118.4%<br>{ 119.4% } | 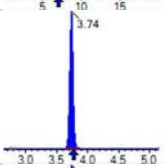 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 132714 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 6222.6 | N/A | 1.0462<br>[ 1.0000 ] | 104.6%<br>{ 104.8% } | 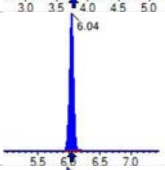 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 445408 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3769.0 | N/A | 1.1267<br>[ 1.0000 ] | 112.7%<br>{ 117.4% } | 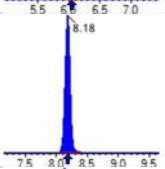 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317549 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 1127.4 | N/A | 1.1165<br>[ 1.0000 ] | 111.7%<br>{ 112.9% } | 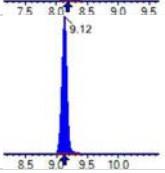 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303337 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3256.1 | N/A | 1.0387 [ 1.0000 ] | 103.9% { 104.9% } | 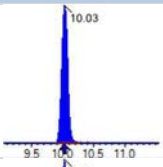 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1014053 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 5000.9 | N/A | 1.0685 [ 1.0000 ] | 106.9% { 108.6% } | 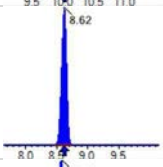 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 795109 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1897.5 | N/A | 1.0439 [ 1.0000 ] | 104.4% { 111.7% } | 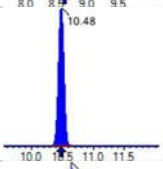 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2702588 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40570.3 | N/A | 8.3767 [ 8.0000 ] | 104.7% { 120.7% } | 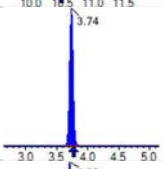 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1148479 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6049.7 | N/A | 4.6380 [ 4.0000 ] | 115.9% { 117.7% } | 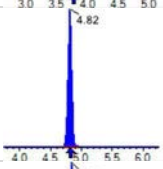 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 653814 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 9511.1 | N/A | 2.1592 [ 2.0000 ] | 108.0% { 110.8% } | 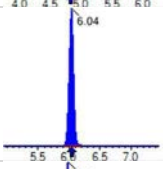 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 699408 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 7443.9 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 106.5% } | 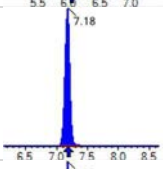 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 929590 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 4049.2 | N/A | 1.9478 [ 2.0000 ] | 97.4% { 107.8% } | 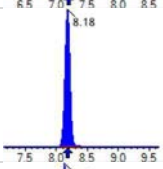 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 307041 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3378.4 | N/A | 0.9861 [ 1.0000 ] | 98.6% { 113.8% } | 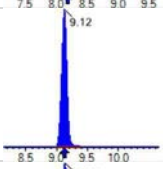 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 365279 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 996.8 | N/A | 1.0745 [ 1.0000 ] | 107.5% { 113.5% } | 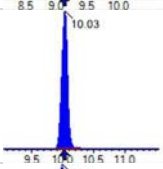 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 432373 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 808.4 | N/A | 1.0811 [ 1.0000 ] | 108.1% { 116.2% } | 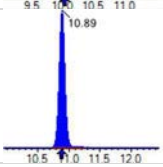 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-LCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433394 | ( 11.72 , N/A ) ( N/A , 0.00 , N/A ) | 1303.4 | N/A | 1.0641 [ 1.0000 ] | 106.4% { 116.2% } | 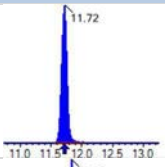  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 350124 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1144.3 | N/A | 1.0095 [ 1.0000 ] | 100.9% { 107.2% } | 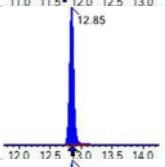  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 579308 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2648.7 | N/A | 1.9564 [ 2.0000 ] | 97.8% { 114.7% } | 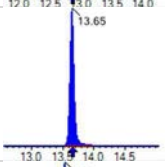  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1865423 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1146.5 | N/A | 2.0361 [ 2.0000 ] | 101.8% { 111.2% } | 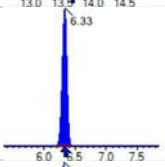  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1489931 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4743.7 | N/A | 2.0374 [ 2.0000 ] | 101.9% { 113.0% } | 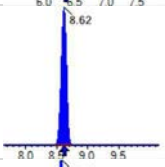  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1766562 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1601.6 | N/A | 2.0606 [ 2.0000 ] | 103.0% { 114.0% } | 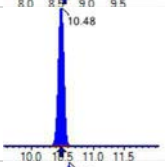  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 740312 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 90.1 | N/A | 4.6833 [ 4.0000 ] | 117.1% { 125.7% } | 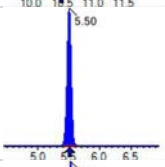  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2016832 | ( 7.62 , N/A ) ( N/A , 0.01 , N/A ) | 3498.2 | N/A | 4.2632 [ 4.0000 ] | 106.6% { 121.0% } | 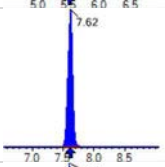  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1666535 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1318.4 | N/A | 4.4917 [ 4.0000 ] | 112.3% { 121.8% } | 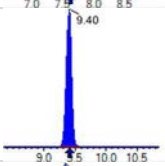  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3439402 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1774.5 | N/A | 8.8699 [ 8.0000 ] | 110.9% { 134.7% } | 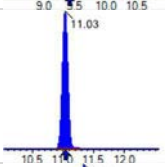  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1626298 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2527.3 | N/A | 2.1406 [ 2.0000 ] | 107.0% { 118.4% } | 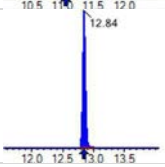  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (2)
Acquired: 2024/03/19 - 16:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 319120 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1934.6 | N/A | 1.9804 [ 2.0000 ] | 99.0% { 110.8% } | 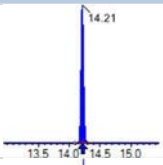  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 359797 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2191.0 | N/A | 2.0821 [ 2.0000 ] | 104.1% { 117.3% } | 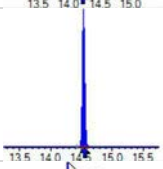  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 933377 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2330.1 | N/A | 4.2313 [ 4.0000 ] | 105.8% { 110.4% } | 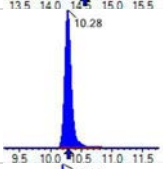  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 901988 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1892.3 | N/A | 4.4865 [ 4.0000 ] | 112.2% { 117.1% } | 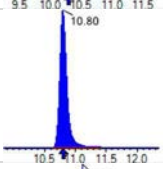  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475303 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1625.0 | N/A | 20.3737 [ 20.0000 ] | 101.9% { 107.3% } | 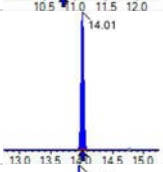  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1476802 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4748.1 | N/A | 20.0935 [ 20.0000 ] | 100.5% { 114.5% } | 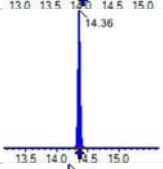  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1148686 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2151.5 | N/A | 8.3276 [ 8.0000 ] | 104.1% { 112.3% } | 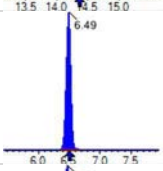  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 741493 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1122.8 | N/A | 2.2546 [ 2.0000 ] | 112.7% { 120.2% } | 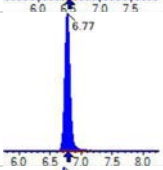  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 674096 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 797.5 | N/A | 2.2516 [ 2.0000 ] | 112.6% { 121.8% } | 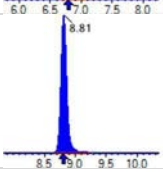  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | PFBA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.10A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.47A | 89.4A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.50A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.43A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.78A | 95.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.44A | 88.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.54A | 90.8A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.08A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.53A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.58A | 95.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.24A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.54A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.39A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.67A | 96.3A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.4A | 92.5A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 99.9A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.4A | 101A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.5A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.52A | 90.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.3A | 91.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.8A | 94.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV1A | NMeFOSEA | 20.0A | 17.8A | 88.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 95.9A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 5.05A | 101A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.40A | 93.2A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.95A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.02A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.04A | 90.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.17A | 91.7A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.30A | 91.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.53A | 96.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.9A | 89.4A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 17.8A | 89.1A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 17.9A | 89.5A | ng/mLA | +/- 30.00%A |

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A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2372019<br>( 163.0 / 69.0 ) 62514 | ( 2.80 , 0.74 ) ( N/A , 0.00 , 0.1) | 13913.0<br>2584.8 | 0.0264<br>97.0<br>100.0 | 8.9879<br>[ 10.0000 ] | 89.9% | 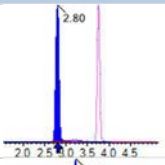 | 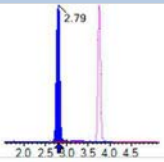 | |
| PFBA | ( 213.0 / 169.0 ) 4986352 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.8 | N/A<br>0.0<br>0.0 | 17.8727<br>[ 20.0000 ] | 89.4% | 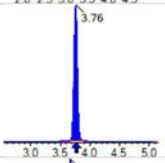 | | |
| PFPeA | ( 263.0 / 219.0 ) 2243443<br>( 263.0 / 69.0 ) 24889 | ( 4.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 5617.4<br>382.6 | 0.0111<br>92.9<br>100.0 | 9.1014<br>[ 10.0000 ] | 91.0% | 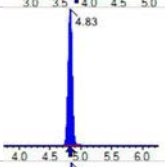 | 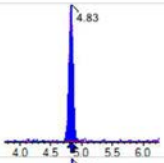 | |
| PFHxA | ( 313.0 / 269.0 ) 1266538<br>( 313.0 / 119.0 ) 148224 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.1) | 2320.7<br>1439.8 | 0.1170<br>100.8<br>100.0 | 4.4684<br>[ 5.0000 ] | 89.4% | 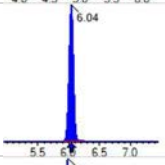 | 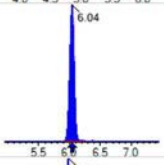 | |
| PFHpA | ( 363.0 / 319.0 ) 1450446<br>( 363.0 / 169.0 ) 428196 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 1901.5<br>1629.8 | 0.2952<br>97.4<br>100.0 | 4.5031<br>[ 5.0000 ] | 90.1% | 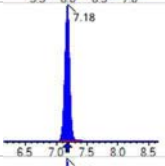 | 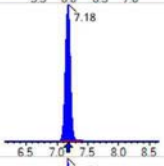 | |
| PFOA | ( 413.0 / 369.0 ) 2002153<br>( 413.0 / 169.0 ) 687361 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 897.9<br>1153.0 | 0.3433<br>93.9<br>100.0 | 4.7249<br>[ 5.0000 ] | 94.5% | 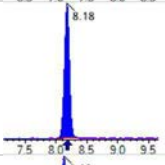 | 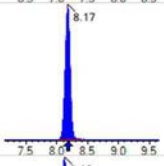 | |
| PFNA | ( 463.0 / 419.0 ) 1283413<br>( 463.0 / 169.0 ) 308707 | ( 9.12 , 1.00 ) ( 0.00 , N/A , 0.1) | 1323.8<br>992.2 | 0.2405<br>94.2<br>100.0 | 4.7313<br>[ 5.0000 ] | 94.6% | 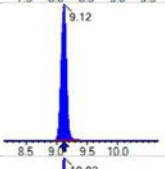 | 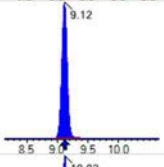 | |
| PFDA | ( 513.0 / 469.0 ) 1457239<br>( 513.0 / 169.0 ) 174432 | ( 10.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 3628.8<br>1931.7 | 0.1197<br>102.2<br>100.0 | 4.4330<br>[ 5.0000 ] | 88.7% | 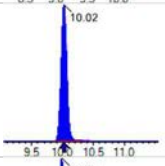 | 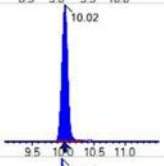 | |
| PFUnA | ( 563.0 / 519.0 ) 1643541<br>( 563.0 / 169.0 ) 233570 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 959.0<br>907.0 | 0.1421<br>100.3<br>100.0 | 4.7773<br>[ 5.0000 ] | 95.5% | 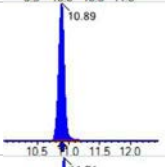 | 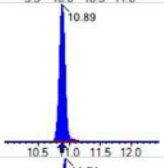 | |
| PFDoA | ( 613.0 / 569.0 ) 1793459<br>( 613.0 / 169.0 ) 265167 | ( 11.71 , 1.00 ) ( 0.00 , N/A , 0.0) | 1158.4<br>870.7 | 0.1479<br>93.5<br>100.0 | 4.7806<br>[ 5.0000 ] | 95.6% | 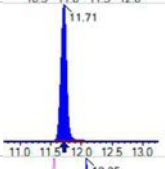 | 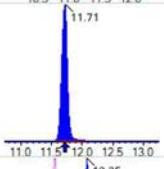 | |
| PFTrDA | ( 663.0 / 619.0 ) 1689975<br>( 663.0 / 169.0 ) 437674 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 1578.2<br>1081.4 | 0.2590<br>100.6<br>100.0 | 4.6051<br>[ 5.0000 ] | 92.1% | 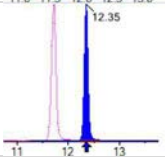 | 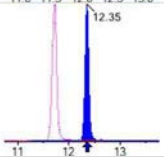 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1356735<br>( 713.0 / 169.0 ) 360534 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1740.6<br>1078.6 | 0.2657<br>98.5<br>100.0 | 4.4375<br>[ 5.0000 ] | 88.7% | 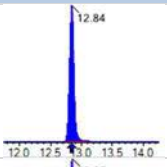 | 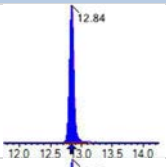 | |
| PFHxDA | ( 813.0 / 769.0 ) 1109449<br>( 813.0 / 169.0 ) 283268 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1965.8<br>1206.1 | 0.2553<br>104.4<br>100.0 | 4.6054<br>[ 5.0000 ] | 92.1% | 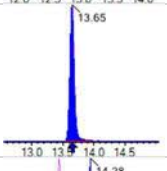 | 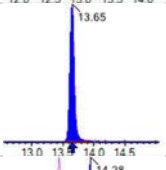 | |
| PFODA | ( 913.0 / 869.0 ) 683892<br>( 913.0 / 169.0 ) 233111 | ( 14.28 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2010.8<br>850.7 | 0.3409<br>95.1<br>100.0 | 4.5379<br>[ 5.0000 ] | 90.8% | 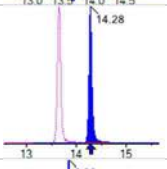 | 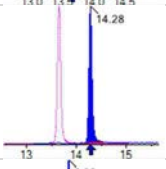 | |
| PFBS | ( 299.0 / 80.0 ) 1776776<br>( 299.0 / 99.0 ) 1306667 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3528.0<br>2910.9 | 0.7354<br>104.0<br>100.0 | 4.0783<br>[ 4.4237 ] | 92.2% | 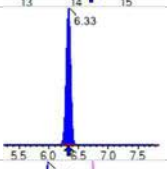 | 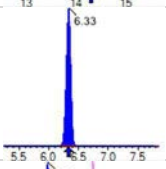 | |
| PFPeS | ( 349.0 / 80.0 ) 4572433<br>( 349.0 / 99.0 ) 1610319 | ( 7.56 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2516.4<br>2164.2 | 0.3522<br>97.9<br>100.0 | 4.5312<br>[ 4.6919 ] | 96.6% | 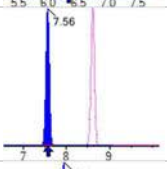 | 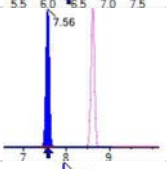 | |
| PFHxS | ( 399.0 / 80.0 ) 4833210<br>( 399.0 / 99.0 ) 1616028 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3301.5<br>4483.9 | 0.3344<br>105.0<br>100.0 | 4.1236<br>[ 4.5549 ] | 90.5% | 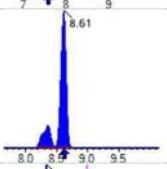 | 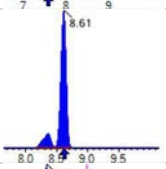 | |
| PFHpS | ( 449.0 / 80.0 ) 4254224<br>( 449.0 / 99.0 ) 1126368 | ( 9.58 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2066.6<br>2304.9 | 0.2648<br>100.0<br>100.0 | 4.5831<br>[ 4.7570 ] | 96.3% | 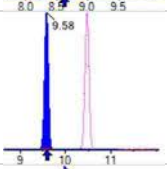 | 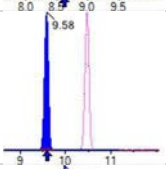 | |
| PFOS | ( 499.0 / 80.0 ) 3789953<br>( 499.0 / 99.0 ) 909936 | ( 10.47 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2527.5<br>9767.3 | 0.2401<br>102.7<br>100.0 | 4.2357<br>[ 4.6375 ] | 91.3% | 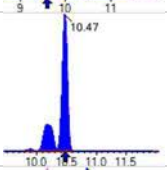 | 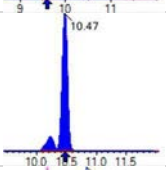 | |
| PFNS | ( 549.0 / 80.0 ) 3806892<br>( 549.0 / 99.0 ) 1025720 | ( 11.31 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2649.7<br>2424.8 | 0.2694<br>98.9<br>100.0 | 4.5441<br>[ 4.7994 ] | 94.7% | 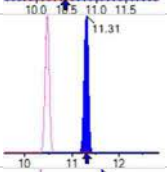 | 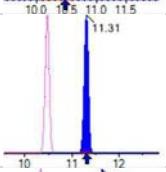 | |
| PFDS | ( 599.0 / 80.0 ) 4494028<br>( 599.0 / 99.0 ) 1201321 | ( 12.03 , 1.15 )<br>( N/A , 0.00 , 0.0) | 2480.1<br>2375.2 | 0.2673<br>98.3<br>100.0 | 4.3932<br>[ 4.8155 ] | 91.2% | 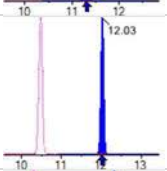 | 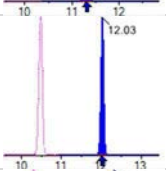 | |
| PFDoS | ( 699.0 / 80.0 ) 4211625<br>( 699.0 / 99.0 ) 964350 | ( 12.95 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3894.8<br>3231.8 | 0.2290<br>98.0<br>100.0 | 4.6702<br>[ 4.8478 ] | 96.3% | 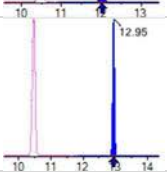 | 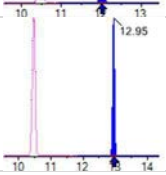 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6723472<br>( 327.0 / 81.0 ) 6052601 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.1) | 5893.7<br>4257.3 | 0.9002<br>103.2<br>100.0 | 17.3957<br>[ 18.6906 ] | 93.1% | 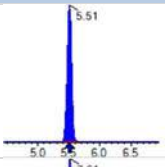 | 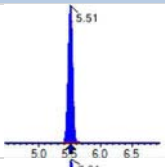 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6550499<br>( 427.0 / 81.0 ) 8675827 | ( 7.61 , 1.00 ) ( 0.00 , N/A , -0.1) | 4655.5<br>4712.5 | 1.3245<br>105.6<br>100.0 | 18.9841<br>[ 18.9808 ] | 100.0% | 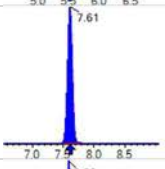 | 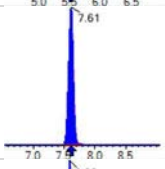 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6285503<br>( 527.0 / 81.0 ) 6405924 | ( 9.39 , 1.00 ) ( 0.00 , N/A , 0.1) | 1836.8<br>1754.0 | 1.0192<br>93.7<br>100.0 | 19.3547<br>[ 19.1658 ] | 101.0% | 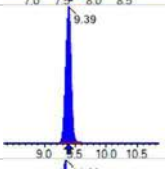 | 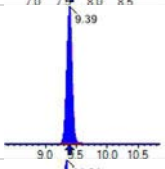 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4792812<br>( 627.0 / 81.0 ) 6991963 | ( 11.03 , 1.00 ) ( 0.01 , N/A , -0.1) | 1314.8<br>1502.6 | 1.4588<br>101.3<br>100.0 | 19.4893<br>[ 19.3236 ] | 100.9% | 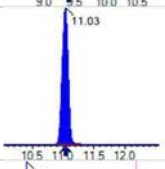 | 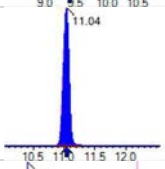 | |
| PFBSA | ( 297.9 / 78.0 ) 3525714<br>( 297.9 / 278.0 ) 5463 | ( 8.10 , 0.57 ) ( N/A , 0.00 , 0.5) | 1695.3<br>251.5 | 0.0015<br>113.4<br>100.0 | 4.7511<br>[ 5.0000 ] | 95.0% | 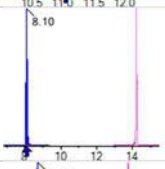 | 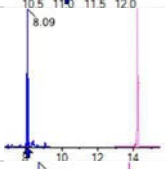 | |
| PFHxSA | ( 397.9 / 78.0 ) 4197148<br>( 397.9 / 378.0 ) 17568 | ( 10.96 , 0.75 ) ( N/A , 0.00 , 0.0) | 1478.3<br>418.3 | 0.0042<br>102.4<br>100.0 | 4.4538<br>[ 5.0000 ] | 89.1% | 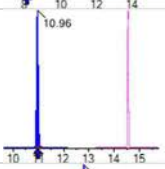 | 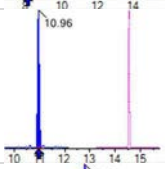 | |
| PFOSA | ( 498.0 / 78.0 ) 3104104<br>( 498.0 / 478.0 ) 46212 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 2218.1<br>1112.6 | 0.0149<br>106.1<br>100.0 | 4.5183<br>[ 5.0000 ] | 90.4% | 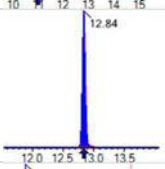 | 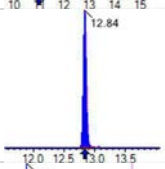 | |
| TFSI | ( 279.7 / 147.0 ) 8803222<br>( 279.7 / 211.0 ) 753322 | ( 8.18 , 0.64 ) ( N/A , 0.00 , 0.0) | 60.2<br>54.6 | 0.0856<br>101.9<br>100.0 | 4.8663<br>[ 4.8967 ] | 99.4% | 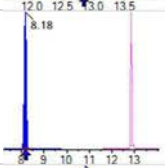 | 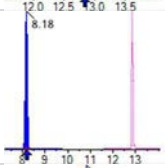 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2614289<br>( 512.0 / 169.0 ) 1982385 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.5) | 3210.8<br>1364.9 | 0.7583<br>101.3<br>100.0 | 18.2851<br>[ 20.0000 ] | 91.4% | 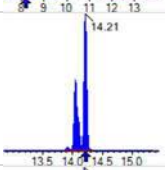 | 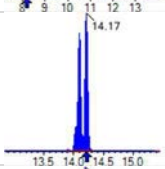 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3236003<br>( 526.0 / 169.0 ) 4018548 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.2) | 4263.0<br>4095.8 | 1.2418<br>100.6<br>100.0 | 18.8439<br>[ 20.0000 ] | 94.2% | 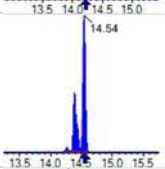 | 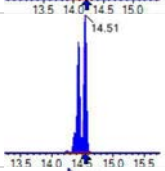 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 913337<br>( 570.0 / 483.0 ) 426919 | ( 10.28 , 1.00 ) ( 0.01 , N/A , 0.2) | 2705.3<br>1697.2 | 0.4674<br>106.6<br>100.0 | 4.5300<br>[ 5.0000 ] | 90.6% | 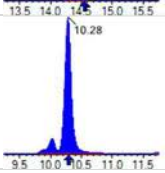 | 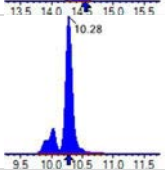 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 887553<br>( 584.0 / 526.0 ) 524891 | ( 10.81 , 1.00 ) ( 0.01 , N/A , 0.0) | 1604.5<br>743.0 | 0.5914<br>95.9<br>100.0 | 4.7124<br>[ 5.0000 ] | 94.2% | 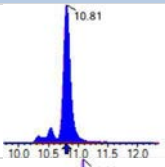 | 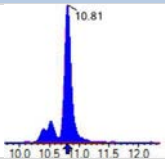 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1339066 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 2300.7 | N/A<br>0.0<br>0.0 | 17.7635<br>[ 20.0000 ] | 88.8% | 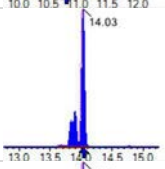 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1098743 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 3411.8 | N/A<br>0.0<br>0.0 | 19.1717<br>[ 20.0000 ] | 95.9% | 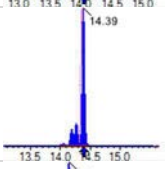 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 380390<br>( 285.0 / 185.0 ) 1003592 | ( 6.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 1880.8<br>2181.2 | 2.6383<br>95.4<br>100.0 | 5.0462<br>[ 5.0000 ] | 100.9% | 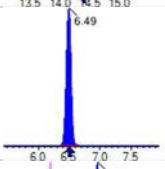 | 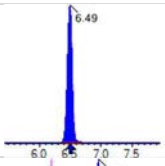 | |
| ADONA | ( 377.0 / 85.0 ) 3869589<br>( 377.0 / 251.0 ) 404618 | ( 7.56 , 1.16 ) ( N/A , 0.00 , 0.0) | 1810.2<br>1474.1 | 0.1046<br>102.6<br>100.0 | 4.4000<br>[ 4.7135 ] | 93.3% | 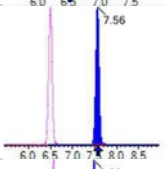 | 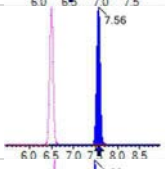 | |
| PFEESA | ( 315.0 / 135.0 ) 1617314<br>( 315.0 / 83.0 ) 915772 | ( 6.92 , 1.15 ) ( N/A , 0.00 , 0.1) | 3997.6<br>1231.2 | 0.5662<br>101.6<br>100.0 | 7.9456<br>[ 8.9246 ] | 89.0% | 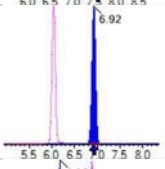 | 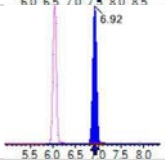 | |
| PFMPA | ( 229.0 / 85.0 ) 705416 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 6992.0 | N/A<br>0.0<br>0.0 | 9.0183<br>[ 10.0000 ] | 90.2% | 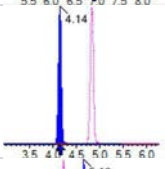 | | |
| PFMBA | ( 279.0 / 85.0 ) 1921542 | ( 5.19 , 1.08 ) ( N/A , 0.00 , 0.0) | 5369.8 | N/A<br>0.0<br>0.0 | 9.0384<br>[ 10.0000 ] | 90.4% | 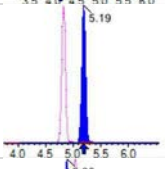 | | |
| NFDHA | ( 295.0 / 201.0 ) 969933<br>( 295.0 / 85.0 ) 975334 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.2) | 2782.9<br>3168.6 | 1.0056<br>93.2<br>100.0 | 9.1661<br>[ 10.0000 ] | 91.7% | 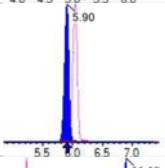 | 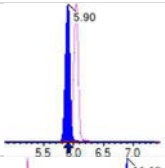 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4087296<br>( 533.0 / 353.0 ) 1347063 | ( 11.12 , 1.71 ) ( N/A , 0.00 , 0.0) | 2680.8<br>2619.2 | 0.3296<br>105.3<br>100.0 | 4.3029<br>[ 4.6663 ] | 92.2% | 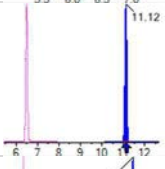 | 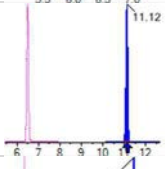 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3311751<br>( 633.0 / 453.0 ) 1133851 | ( 12.44 , 1.92 ) ( N/A , 0.00 , 0.2) | 4100.5<br>2989.7 | 0.3424<br>103.1<br>100.0 | 4.5336<br>[ 4.7160 ] | 96.1% | 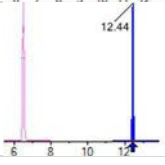 | 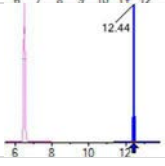 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2140660<br>( 461.0 / 381.2 ) 848710 | ( 9.50 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3568.0<br>3221.6 | 0.3965<br>99.5<br>100.0 | 4.2408<br>[ 4.6193 ] | 91.8% | 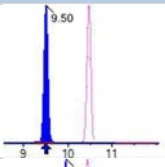 | 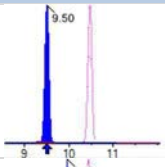 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 250641<br>( 241.0 / 117.0 ) 543725 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2462.4<br>2395.7 | 2.1693<br>103.0<br>100.0 | 17.8744<br>[ 20.0000 ] | 89.4% | 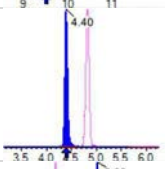 | 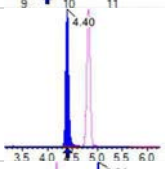 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1400179<br>( 341.0 / 217.0 ) 2037968 | ( 6.93 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1226.3<br>1321.6 | 1.4555<br>95.8<br>100.0 | 17.8129<br>[ 20.0000 ] | 89.1% | 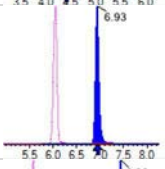 | 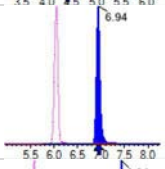 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2309905<br>( 441.0 / 337.0 ) 2020407 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , 0.1) | 4835.4<br>5971.4 | 0.8747<br>95.4<br>100.0 | 17.9072<br>[ 20.0000 ] | 89.5% | 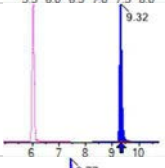 | 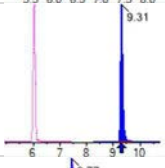 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1550464<br>( 357.2 / 243.0 ) 161386 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1205.4<br>827.6 | 0.1041<br>94.4<br>100.0 | 4.7278<br>[ 5.0000 ] | 94.6% | 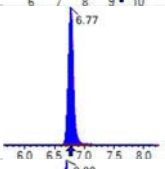 | 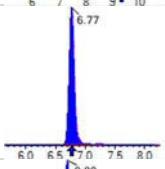 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1154425<br>( 457.2 / 343.0 ) 52338 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -0.2) | 931.8<br>340.3 | 0.0453<br>109.3<br>100.0 | 5.1167<br>[ 5.0000 ] | 102.3% | 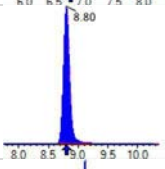 | 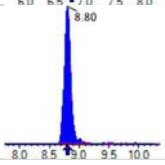 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 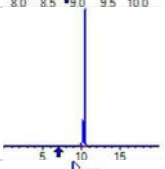 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 236533 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1101.8 | N/A | 0.9920<br>[ 1.0000 ] | 99.2%<br>{ 100.0% } | 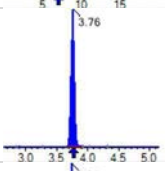 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126603 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 69331.2 | N/A | 0.9980<br>[ 1.0000 ] | 99.8%<br>{ 100.0% } | 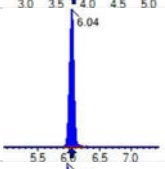 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379350 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 3677.7 | N/A | 0.9596<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 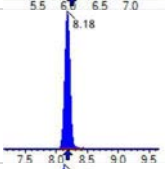 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281253 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 841.7 | N/A | 0.9889<br>[ 1.0000 ] | 98.9%<br>{ 100.0% } | 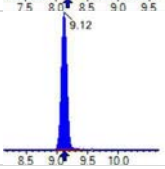 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 289297 | ( 10.03 , N/A ) ( N/A , 0.00 , N/A ) | 3430.1 | N/A | 0.9907 [ 1.0000 ] | 99.1% { 100.0% } | 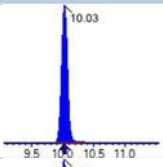 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 933370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4734.1 | N/A | 0.9835 [ 1.0000 ] | 98.3% { 100.0% } | 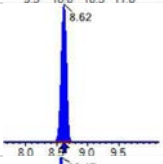 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 711998 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2262.1 | N/A | 0.9348 [ 1.0000 ] | 93.5% { 100.0% } | 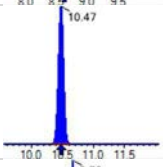 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2239045 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 37591.9 | N/A | 8.2862 [ 8.0000 ] | 103.6% { 100.0% } | 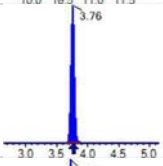 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 975984 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 6092.8 | N/A | 4.1317 [ 4.0000 ] | 103.3% { 100.0% } | 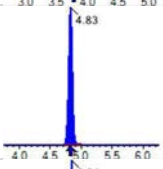 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 590039 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 15322.1 | N/A | 2.0426 [ 2.0000 ] | 102.1% { 100.0% } | 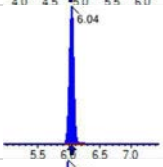 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 656479 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 4259.1 | N/A | 2.0430 [ 2.0000 ] | 102.2% { 100.0% } | 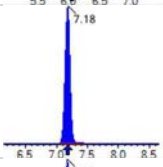 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862246 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3033.4 | N/A | 2.1213 [ 2.0000 ] | 106.1% { 100.0% } | 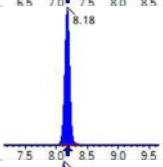 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269897 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3269.5 | N/A | 0.9787 [ 1.0000 ] | 97.9% { 100.0% } | 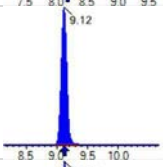 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321721 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 932.0 | N/A | 0.9923 [ 1.0000 ] | 99.2% { 100.0% } | 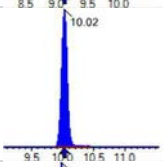 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 371951 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 1176.3 | N/A | 0.9752 [ 1.0000 ] | 97.5% { 100.0% } | 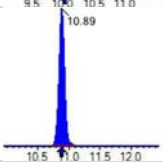 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 372900 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 1140.4 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 100.0% } | 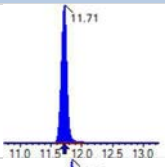 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 326459 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1457.1 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 100.0% } | 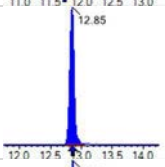 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 505124 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2276.2 | N/A | 1.7887 [ 2.0000 ] | 89.4% { 100.0% } | 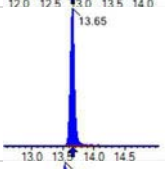 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1678205 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1604.5 | N/A | 1.9901 [ 2.0000 ] | 99.5% { 100.0% } | 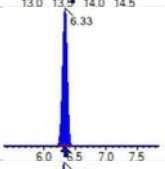 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1318602 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 4229.8 | N/A | 1.9590 [ 2.0000 ] | 97.9% { 100.0% } | 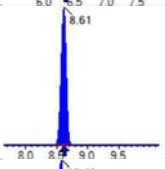 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1549392 | ( 10.48 , N/A ) ( N/A , 0.00 , N/A ) | 1607.9 | N/A | 2.0183 [ 2.0000 ] | 100.9% { 100.0% } | 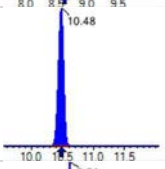 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 589081 | ( 5.51 , N/A ) ( N/A , 0.00 , N/A ) | 92.9 | N/A | 4.0487 [ 4.0000 ] | 101.2% { 100.0% } | 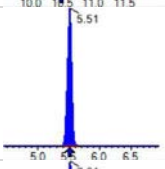 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1666770 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 4013.9 | N/A | 3.8278 [ 4.0000 ] | 95.7% { 100.0% } | 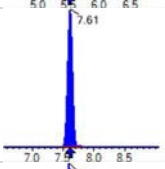 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1367825 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1522.8 | N/A | 4.0053 [ 4.0000 ] | 100.1% { 100.0% } | 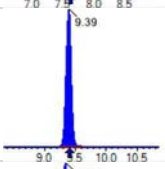 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2552514 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1280.0 | N/A | 7.1518 [ 8.0000 ] | 89.4% { 100.0% } | 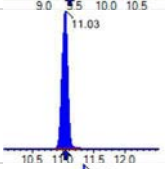 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1373982 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 3023.7 | N/A | 2.0196 [ 2.0000 ] | 101.0% { 100.0% } | 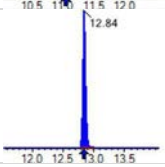 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (3)
Acquired: 2024/03/19 - 17:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 287989 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1960.3 | N/A | 1.9959 [ 2.0000 ] | 99.8% { 100.0% } | 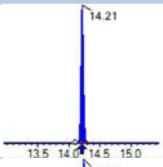  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 306672 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2411.5 | N/A | 1.9819 [ 2.0000 ] | 99.1% { 100.0% } | 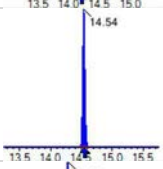  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 845576 | ( 10.28 , N/A ) ( N/A , 0.00 , N/A ) | 2402.7 | N/A | 4.2807 [ 4.0000 ] | 107.0% { 100.0% } | 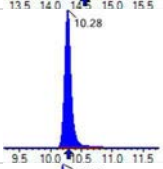  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 770166 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1846.4 | N/A | 4.2779 [ 4.0000 ] | 106.9% { 100.0% } | 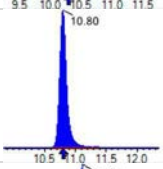  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1374456 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2535.5 | N/A | 21.1966 [ 20.0000 ] | 106.0% { 100.0% } | 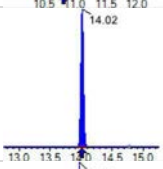  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1290095 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3979.5 | N/A | 19.6021 [ 20.0000 ] | 98.0% { 100.0% } | 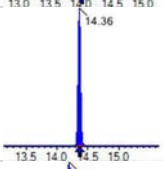  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022651 | ( 6.50 , N/A ) ( N/A , 0.00 , N/A ) | 2065.9 | N/A | 7.7718 [ 8.0000 ] | 97.1% { 100.0% } | 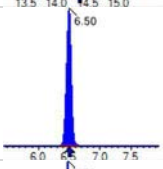  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 616938 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1272.7 | N/A | 1.9669 [ 2.0000 ] | 98.3% { 100.0% } | 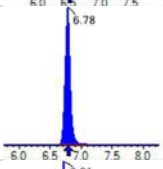  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 553242 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 748.1 | N/A | 1.9376 [ 2.0000 ] | 96.9% { 100.0% } | 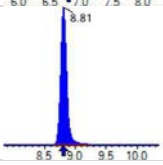  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | PFBA | 20.0A | 18.4A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 8.81A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.49A | 89.8A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.74A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.66A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.29A | 85.8A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.51A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.45A | 88.9A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.64A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.53A | 90.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.86A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.36A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.12A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.61A | 96.5A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.35A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.46A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.51A | 93.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.9A | 95.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 100A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.7A | 97.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.7A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.45A | 89.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.2A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.6A | 93.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.32A | 86.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.5A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV2A | NMeFOSEA | 20.0A | 17.7A | 88.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 18.5A | 92.3A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.66A | 93.3A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.73A | 100A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.57A | 85.1A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.30A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.97A | 89.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.19A | 91.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 96.0A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.39A | 93.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 17.2A | 85.8A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.3A | 91.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |

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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2378964<br>( 163.0 / 69.0 ) 64297 | ( 2.77 , 0.74 ) ( N/A , -0.03 , 0.0) | 14801.2<br>2730.5 | 0.0270<br>99.5<br>102.6 | 9.3340<br>[ 10.0000 ] | 93.3% | 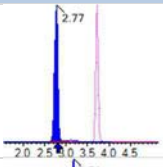 | 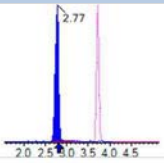 | |
| PFBA | ( 213.0 / 169.0 ) 4962164 | ( 3.72 , 1.00 ) ( 0.00 , N/A , 0.0) | 1056.7 | N/A<br>0.0<br>0.0 | 18.4170<br>[ 20.0000 ] | 92.1% | 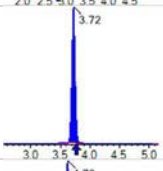 | | |
| PFPeA | ( 263.0 / 219.0 ) 1964295<br>( 263.0 / 69.0 ) 23803 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 5001.8<br>313.7 | 0.0121<br>101.5<br>109.2 | 8.8051<br>[ 10.0000 ] | 88.1% | 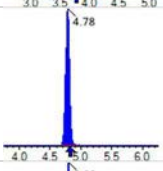 | 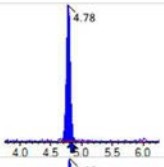 | |
| PFHxA | ( 313.0 / 269.0 ) 1139298<br>( 313.0 / 119.0 ) 135752 | ( 6.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 2222.6<br>989.0 | 0.1192<br>102.6<br>101.8 | 4.4896<br>[ 5.0000 ] | 89.8% | 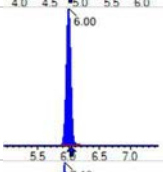 | 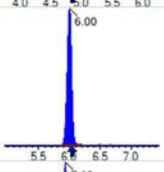 | |
| PFHpA | ( 363.0 / 319.0 ) 1368859<br>( 363.0 / 169.0 ) 405628 | ( 7.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 1710.5<br>1989.9 | 0.2963<br>97.8<br>100.4 | 4.7419<br>[ 5.0000 ] | 94.8% | 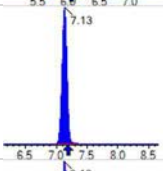 | 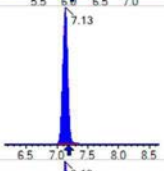 | |
| PFOA | ( 413.0 / 369.0 ) 1786147<br>( 413.0 / 169.0 ) 651972 | ( 8.13 , 1.00 ) ( 0.00 , N/A , -0.1) | 798.7<br>1080.4 | 0.3650<br>99.9<br>106.3 | 4.8440<br>[ 5.0000 ] | 96.9% | 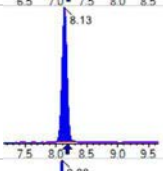 | 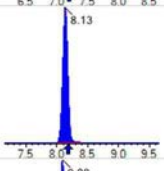 | |
| PFNA | ( 463.0 / 419.0 ) 1103867<br>( 463.0 / 169.0 ) 297773 | ( 9.08 , 1.00 ) ( 0.00 , N/A , 0.1) | 1157.8<br>1207.6 | 0.2698<br>105.7<br>112.1 | 4.6624<br>[ 5.0000 ] | 93.2% | 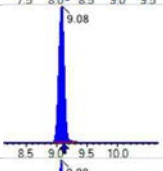 | 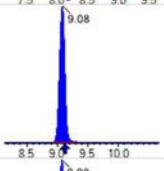 | |
| PFDA | ( 513.0 / 469.0 ) 1303129<br>( 513.0 / 169.0 ) 162758 | ( 9.98 , 1.00 ) ( -0.01 , N/A , 0.0) | 2898.2<br>7014.5 | 0.1249<br>106.6<br>104.3 | 4.2894<br>[ 5.0000 ] | 85.8% | 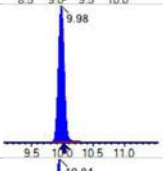 | 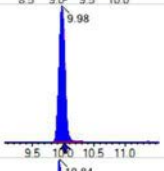 | |
| PFUnA | ( 563.0 / 519.0 ) 1504447<br>( 563.0 / 169.0 ) 214421 | ( 10.84 , 1.00 ) ( 0.00 , N/A , 0.3) | 1010.8<br>921.6 | 0.1425<br>100.6<br>100.3 | 4.7775<br>[ 5.0000 ] | 95.5% | 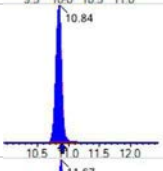 | 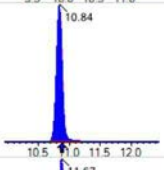 | |
| PFDoA | ( 613.0 / 569.0 ) 1613864<br>( 613.0 / 169.0 ) 252110 | ( 11.67 , 1.00 ) ( -0.01 , N/A , 0.1) | 1840.5<br>968.7 | 0.1562<br>98.8<br>105.7 | 4.5106<br>[ 5.0000 ] | 90.2% | 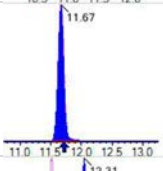 | 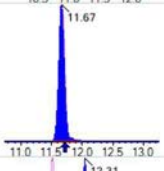 | |
| PFTrDA | ( 663.0 / 619.0 ) 1556368<br>( 663.0 / 169.0 ) 404634 | ( 12.31 , 1.05 ) ( N/A , -0.04 , 0.0) | 1518.3<br>1018.4 | 0.2600<br>101.0<br>100.4 | 4.4468<br>[ 5.0000 ] | 88.9% | 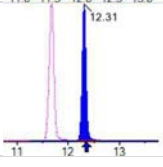 | 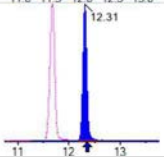 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1336619<br>( 713.0 / 169.0 ) 352276 | ( 12.81 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1673.3<br>1445.2 | 0.2636<br>97.6<br>99.2 | 4.7175<br>[ 5.0000 ] | 94.4% | 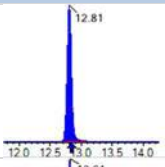 | 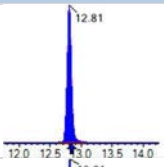 | |
| PFHxDA | ( 813.0 / 769.0 ) 1045243<br>( 813.0 / 169.0 ) 247123 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2235.2<br>1365.9 | 0.2364<br>96.6<br>92.6 | 4.6391<br>[ 5.0000 ] | 92.8% | 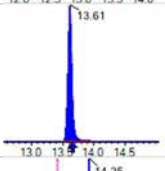 | 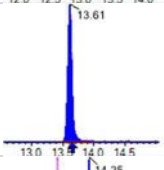 | |
| PFODA | ( 913.0 / 869.0 ) 638713<br>( 913.0 / 169.0 ) 212994 | ( 14.25 , 1.05 )<br>( N/A , -0.03 , 0.0) | 1665.4<br>773.2 | 0.3335<br>93.1<br>97.8 | 4.5313<br>[ 5.0000 ] | 90.6% | 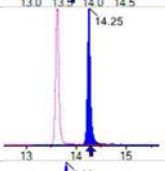 | 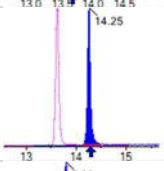 | |
| PFBS | ( 299.0 / 80.0 ) 1627685<br>( 299.0 / 99.0 ) 1224818 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3238.3<br>3086.7 | 0.7525<br>106.4<br>102.3 | 3.8554<br>[ 4.4237 ] | 87.2% | 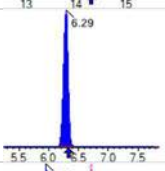 | 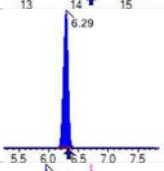 | |
| PFPeS | ( 349.0 / 80.0 ) 4267064<br>( 349.0 / 99.0 ) 1508835 | ( 7.52 , 0.88 )<br>( N/A , -0.04 , 0.0) | 2601.9<br>2729.5 | 0.3536<br>98.3<br>100.4 | 4.3633<br>[ 4.6919 ] | 93.0% | 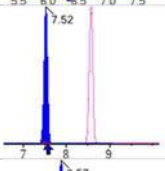 | 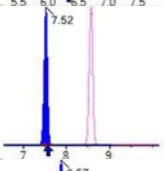 | |
| PFHxS | ( 399.0 / 80.0 ) 4682444<br>( 399.0 / 99.0 ) 1568239 | ( 8.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3191.0<br>5120.3 | 0.3349<br>105.2<br>100.2 | 4.1222<br>[ 4.5549 ] | 90.5% | 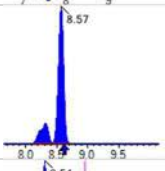 | 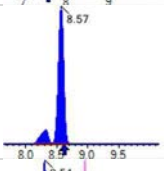 | |
| PFHpS | ( 449.0 / 80.0 ) 3963620<br>( 449.0 / 99.0 ) 1056950 | ( 9.54 , 0.91 )<br>( N/A , -0.04 , 0.2) | 1866.9<br>1788.5 | 0.2667<br>100.8<br>100.7 | 4.6124<br>[ 4.7570 ] | 97.0% | 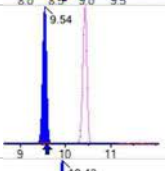 | 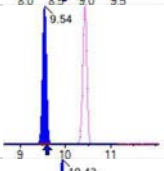 | |
| PFOS | ( 499.0 / 80.0 ) 3603689<br>( 499.0 / 99.0 ) 817942 | ( 10.43 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2425.1<br>5017.0 | 0.2270<br>97.1<br>94.5 | 4.3504<br>[ 4.6375 ] | 93.8% | 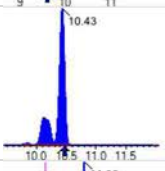 | 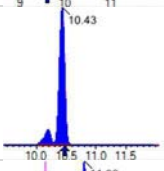 | |
| PFNS | ( 549.0 / 80.0 ) 3468340<br>( 549.0 / 99.0 ) 965249 | ( 11.26 , 1.08 )<br>( N/A , -0.05 , 0.0) | 2102.5<br>2163.0 | 0.2783<br>102.1<br>103.3 | 4.4719<br>[ 4.7994 ] | 93.2% | 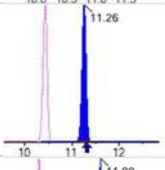 | 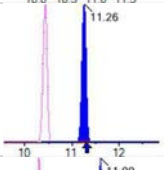 | |
| PFDS | ( 599.0 / 80.0 ) 4222164<br>( 599.0 / 99.0 ) 1106568 | ( 11.99 , 1.15 )<br>( N/A , -0.04 , 0.0) | 2905.0<br>2256.8 | 0.2621<br>96.4<br>98.0 | 4.4583<br>[ 4.8155 ] | 92.6% | 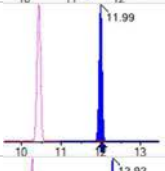 | 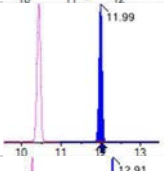 | |
| PFDoS | ( 699.0 / 80.0 ) 3767492<br>( 699.0 / 99.0 ) 863898 | ( 12.92 , 1.24 )<br>( N/A , -0.03 , 0.1) | 3602.5<br>2723.8 | 0.2293<br>98.2<br>100.1 | 4.5126<br>[ 4.8478 ] | 93.1% | 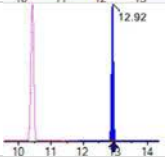 | 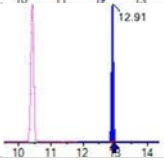 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6590145<br>( 327.0 / 81.0 ) 6177428 | ( 5.47 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5348.5<br>3700.4 | 0.9374<br>107.4<br>104.1 | 17.8690<br>[ 18.6906 ] | 95.6% | 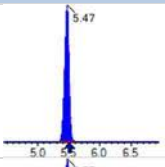 | 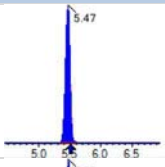 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5994527<br>( 427.0 / 81.0 ) 7759723 | ( 7.57 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4461.7<br>4269.3 | 1.2945<br>103.2<br>97.7 | 18.9906<br>[ 18.9808 ] | 100.1% | 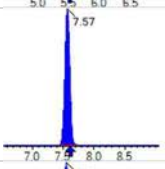 | 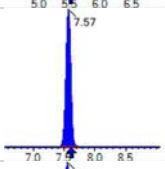 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5876343<br>( 527.0 / 81.0 ) 5982935 | ( 9.35 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1353.8<br>1577.4 | 1.0181<br>93.6<br>99.9 | 18.7255<br>[ 19.1658 ] | 97.7% | 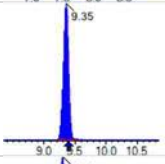 | 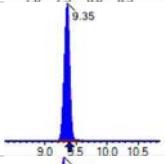 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4526371<br>( 627.0 / 81.0 ) 6382279 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1513.8<br>1069.6 | 1.4100<br>97.9<br>96.7 | 19.7053<br>[ 19.3236 ] | 102.0% | 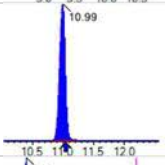 | 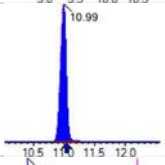 | |
| PFBSA | ( 297.9 / 78.0 ) 3334810<br>( 297.9 / 278.0 ) 4485 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , -0.3) | 1741.3<br>202.5 | 0.0013<br>98.4<br>86.8 | 4.7654<br>[ 5.0000 ] | 95.3% | 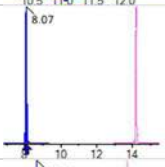 | 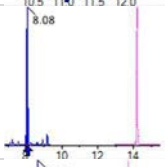 | |
| PFHxSA | ( 397.9 / 78.0 ) 3958312<br>( 397.9 / 378.0 ) 17623 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1103.5<br>335.6 | 0.0045<br>109.0<br>106.4 | 4.4831<br>[ 5.0000 ] | 89.7% | 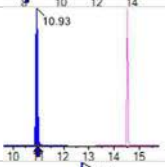 | 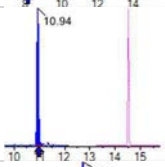 | |
| PFOSA | ( 498.0 / 78.0 ) 2879733<br>( 498.0 / 478.0 ) 42636 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2046.3<br>862.4 | 0.0148<br>105.5<br>99.5 | 4.4547<br>[ 5.0000 ] | 89.1% | 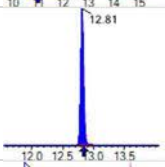 | 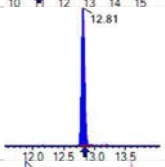 | |
| TFSI | ( 279.7 / 147.0 ) 7825439<br>( 279.7 / 211.0 ) 668795 | ( 8.13 , 0.63 )<br>( N/A , -0.05 , -0.1) | 58.3<br>53.6 | 0.0855<br>101.7<br>99.9 | 4.5972<br>[ 4.8967 ] | 93.9% | 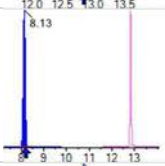 | 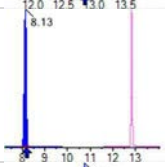 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2456061<br>( 512.0 / 169.0 ) 1821625 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.4) | 3631.2<br>1412.5 | 0.7417<br>99.1<br>97.8 | 18.2166<br>[ 20.0000 ] | 91.1% | 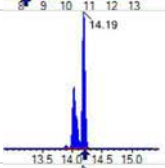 | 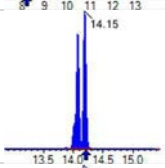 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2997658<br>( 526.0 / 169.0 ) 3780141 | ( 14.52 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4360.4<br>3570.2 | 1.2610<br>102.1<br>101.5 | 18.6306<br>[ 20.0000 ] | 93.2% | 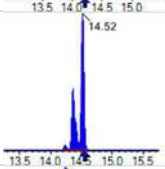 | 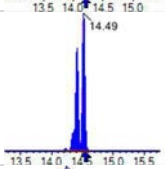 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 850093<br>( 570.0 / 483.0 ) 406893 | ( 10.24 , 1.00 )<br>( 0.01 , N/A , 0.1) | 3275.4<br>1659.4 | 0.4786<br>109.2<br>102.4 | 4.3212<br>[ 5.0000 ] | 86.4% | 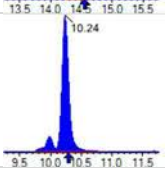 | 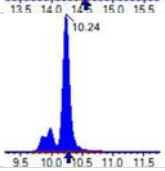 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 838599<br>( 584.0 / 526.0 ) 474799 | ( 10.77 , 1.00 ) ( 0.01 , N/A , 0.0) | 1574.6<br>700.1 | 0.5662<br>91.8<br>95.7 | 4.6763<br>[ 5.0000 ] | 93.5% | 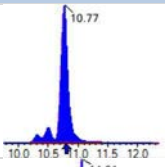 | 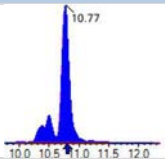 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1240906 | ( 14.01 , 1.00 ) ( 0.02 , N/A , 0.0) | 2612.3 | N/A<br>0.0<br>0.0 | 17.7211<br>[ 20.0000 ] | 88.6% | 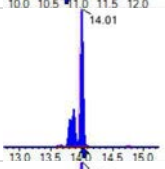 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1028639 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 3543.8 | N/A<br>0.0<br>0.0 | 18.4632<br>[ 20.0000 ] | 92.3% | 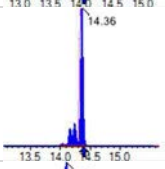 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 320064<br>( 285.0 / 185.0 ) 938906 | ( 6.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1645.8<br>1827.1 | 2.9335<br>106.1<br>111.2 | 4.6629<br>[ 5.0000 ] | 93.3% | 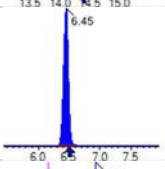 | 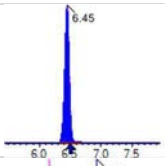 | |
| ADONA | ( 377.0 / 85.0 ) 3785743<br>( 377.0 / 251.0 ) 388915 | ( 7.52 , 1.17 ) ( N/A , -0.04 , 0.0) | 1953.2<br>1653.5 | 0.1027<br>100.8<br>98.2 | 4.7274<br>[ 4.7135 ] | 100.3% | 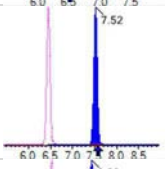 | 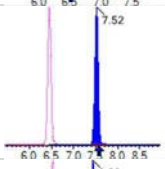 | |
| PFEESA | ( 315.0 / 135.0 ) 1379581<br>( 315.0 / 83.0 ) 835352 | ( 6.88 , 1.15 ) ( N/A , -0.05 , -0.1) | 2846.8<br>1383.0 | 0.6055<br>108.6<br>106.9 | 7.5704<br>[ 8.9246 ] | 84.8% | 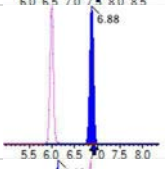 | 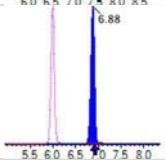 | |
| PFMPA | ( 229.0 / 85.0 ) 658152 | ( 4.10 , 0.86 ) ( N/A , -0.04 , 0.0) | 5900.9 | N/A<br>0.0<br>0.0 | 9.2969<br>[ 10.0000 ] | 93.0% | 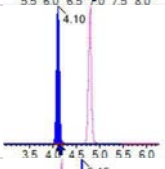 | | |
| PFMBA | ( 279.0 / 85.0 ) 1725265 | ( 5.15 , 1.08 ) ( N/A , -0.04 , 0.0) | 5457.6 | N/A<br>0.0<br>0.0 | 8.9667<br>[ 10.0000 ] | 89.7% | 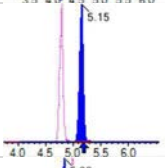 | | |
| NFDHA | ( 295.0 / 201.0 ) 870715<br>( 295.0 / 85.0 ) 937888 | ( 5.86 , 0.98 ) ( N/A , -0.04 , 0.0) | 3410.7<br>3099.7 | 1.0771<br>99.8<br>107.1 | 9.1909<br>[ 10.0000 ] | 91.9% | 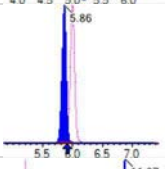 | 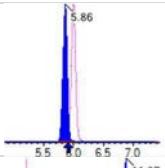 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3886723<br>( 533.0 / 353.0 ) 1262079 | ( 11.07 , 1.72 ) ( N/A , -0.05 , -0.1) | 3185.7<br>2377.6 | 0.3247<br>103.8<br>98.5 | 4.4936<br>[ 4.6663 ] | 96.3% | 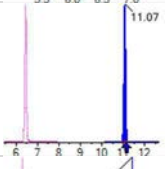 | 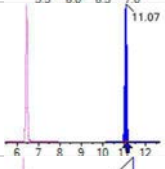 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2918297<br>( 633.0 / 453.0 ) 1027198 | ( 12.41 , 1.92 ) ( N/A , -0.04 , 0.1) | 3388.9<br>2348.3 | 0.3520<br>106.0<br>102.8 | 4.3873<br>[ 4.7160 ] | 93.0% | 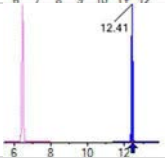 | 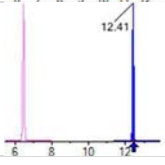 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1973970<br>( 461.0 / 381.2 ) 810159 | ( 9.46 , 0.91 )<br>( N/A , -0.04 , -0.1) | 3144.8<br>3066.2 | 0.4104<br>103.0<br>103.5 | 4.2241<br>[ 4.6193 ] | 91.4% | 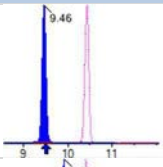 | 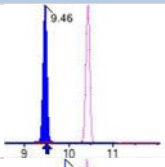 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 217843<br>( 241.0 / 117.0 ) 492517 | ( 4.36 , 0.91 )<br>( N/A , -0.04 , 0.0) | 2089.0<br>2396.0 | 2.2609<br>107.3<br>104.2 | 17.1654<br>[ 20.0000 ] | 85.8% | 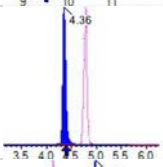 | 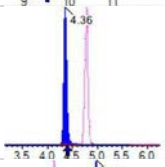 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1290079<br>( 341.0 / 217.0 ) 1923890 | ( 6.90 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1222.8<br>1122.5 | 1.4913<br>98.2<br>102.5 | 18.3319<br>[ 20.0000 ] | 91.7% | 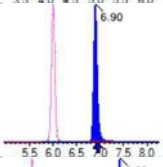 | 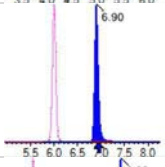 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2244279<br>( 441.0 / 337.0 ) 1995764 | ( 9.28 , 1.55 )<br>( N/A , -0.03 , 0.0) | 4730.2<br>12438.0 | 0.8893<br>97.0<br>101.7 | 19.4335<br>[ 20.0000 ] | 97.2% | 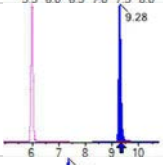 | 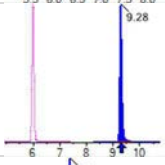 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1575139<br>( 357.2 / 243.0 ) 159747 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1389.7<br>885.7 | 0.1014<br>92.0<br>97.4 | 5.2833<br>[ 5.0000 ] | 105.7% | 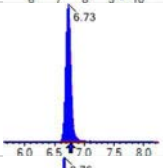 | 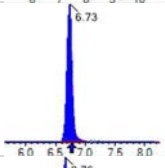 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1101155<br>( 457.2 / 343.0 ) 46469 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , -0.1) | 784.0<br>415.8 | 0.0422<br>101.8<br>93.1 | 5.2508<br>[ 5.0000 ] | 105.0% | 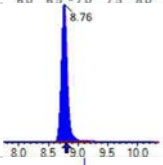 | 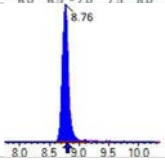 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 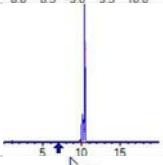 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238528 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1223.5 | N/A | 1.0004<br>[ 1.0000 ] | 100.0%<br>{ 100.8% } | 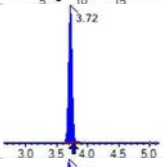 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117813 | ( 6.00 , N/A )<br>( N/A , -0.04 , N/A ) | 19470.1 | N/A | 0.9287<br>[ 1.0000 ] | 92.9%<br>{ 93.1% } | 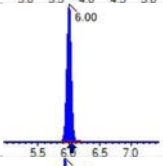 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353797 | ( 8.14 , N/A )<br>( N/A , -0.04 , N/A ) | 2717.8 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 93.3% } | 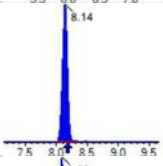 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 246426 | ( 9.08 , N/A )<br>( N/A , -0.04 , N/A ) | 1158.6 | N/A | 0.8665<br>[ 1.0000 ] | 86.6%<br>{ 87.6% } | 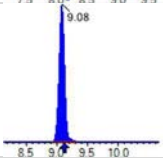 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 239242 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 4215.1 | N/A | 0.8192 [ 1.0000 ] | 81.9% { 82.7% } | 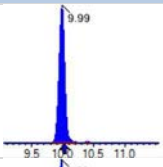 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 854562 | ( 8.58 , N/A ) ( N/A , -0.04 , N/A ) | 3664.1 | N/A | 0.9005 [ 1.0000 ] | 90.0% { 91.6% } | 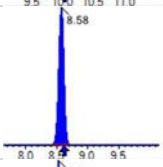 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 650661 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1902.2 | N/A | 0.8543 [ 1.0000 ] | 85.4% { 91.4% } | 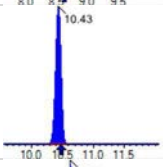 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2162335 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 39646.7 | N/A | 7.9354 [ 8.0000 ] | 99.2% { 96.6% } | 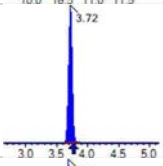 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 883302 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 4911.8 | N/A | 4.0183 [ 4.0000 ] | 100.5% { 90.5% } | 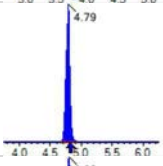 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 528251 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6662.7 | N/A | 1.9652 [ 2.0000 ] | 98.3% { 89.5% } | 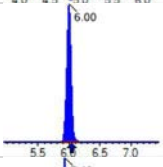 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588344 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5166.4 | N/A | 1.9676 [ 2.0000 ] | 98.4% { 89.6% } | 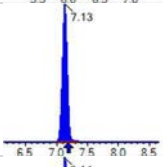 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 750222 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 2782.3 | N/A | 1.9790 [ 2.0000 ] | 99.0% { 87.0% } | 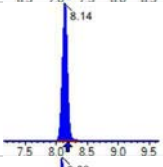 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235567 | ( 9.08 , N/A ) ( N/A , -0.04 , N/A ) | 4040.1 | N/A | 0.9749 [ 1.0000 ] | 97.5% { 87.3% } | 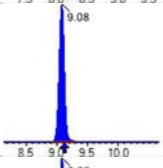 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 297330 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1218.8 | N/A | 1.1090 [ 1.0000 ] | 110.9% { 92.4% } | 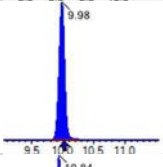 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 340461 | ( 10.84 , N/A ) ( N/A , -0.04 , N/A ) | 887.2 | N/A | 1.0794 [ 1.0000 ] | 107.9% { 91.5% } | 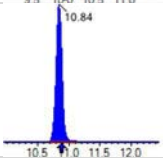 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 355643 | ( 11.67 , N/A ) ( N/A , -0.04 , N/A ) | 1210.1 | N/A | 1.1071 [ 1.0000 ] | 110.7% { 95.4% } | 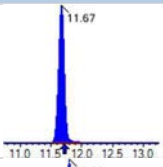 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 302523 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1505.7 | N/A | 1.1059 [ 1.0000 ] | 110.6% { 92.7% } | 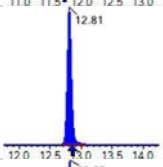 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472442 | ( 13.62 , N/A ) ( N/A , -0.03 , N/A ) | 2123.3 | N/A | 2.0229 [ 2.0000 ] | 101.1% { 93.5% } | 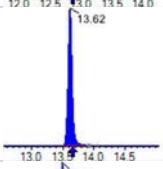 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1626264 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1235.1 | N/A | 2.1063 [ 2.0000 ] | 105.3% { 96.9% } | 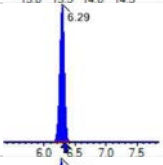 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1277887 | ( 8.57 , N/A ) ( N/A , -0.04 , N/A ) | 3706.7 | N/A | 2.0735 [ 2.0000 ] | 103.7% { 96.9% } | 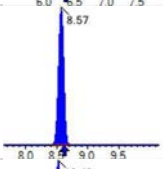 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1434404 | ( 10.43 , N/A ) ( N/A , -0.04 , N/A ) | 1519.4 | N/A | 2.0446 [ 2.0000 ] | 102.2% { 92.6% } | 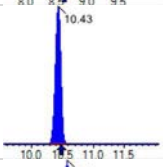 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 562105 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 93.4 | N/A | 4.2196 [ 4.0000 ] | 105.5% { 95.4% } | 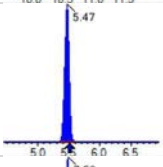 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1524781 | ( 7.58 , N/A ) ( N/A , -0.04 , N/A ) | 3290.4 | N/A | 3.8247 [ 4.0000 ] | 95.6% { 91.5% } | 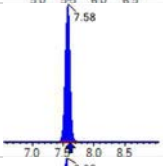 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1321750 | ( 9.36 , N/A ) ( N/A , -0.04 , N/A ) | 1361.5 | N/A | 4.2273 [ 4.0000 ] | 105.7% { 96.6% } | 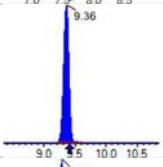 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2384194 | ( 10.98 , N/A ) ( N/A , -0.05 , N/A ) | 1345.3 | N/A | 7.2962 [ 8.0000 ] | 91.2% { 93.4% } | 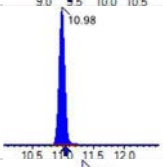 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1292885 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1723.3 | N/A | 2.0796 [ 2.0000 ] | 104.0% { 94.1% } | 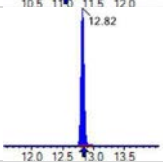 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (24)
Acquired: 2024/03/20 - 00:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 271577 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1986.4 | N/A | 2.0596 [ 2.0000 ] | 103.0% { 94.3% } | 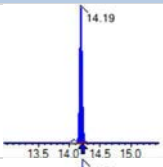  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 287336 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2556.1 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 93.7% } | 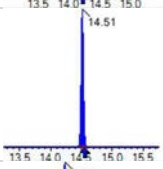  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825052 | ( 10.23 , N/A ) ( N/A , -0.04 , N/A ) | 2783.2 | N/A | 4.5706 [ 4.0000 ] | 114.3% { 97.6% } | 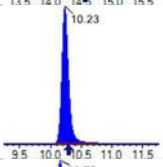  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 733311 | ( 10.76 , N/A ) ( N/A , -0.04 , N/A ) | 1886.2 | N/A | 4.4572 [ 4.0000 ] | 111.4% { 95.2% } | 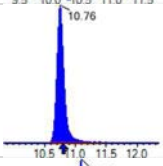  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1276745 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 2423.0 | N/A | 21.5459 [ 20.0000 ] | 107.7% { 92.9% } | 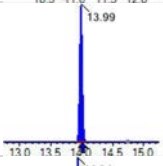  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1254125 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 3850.5 | N/A | 20.8519 [ 20.0000 ] | 104.3% { 97.2% } | 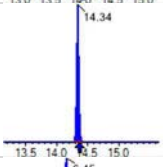  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 931197 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2356.5 | N/A | 7.6047 [ 8.0000 ] | 95.1% { 91.1% } | 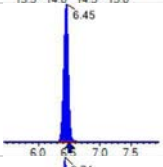  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 560849 | ( 6.74 , N/A ) ( N/A , -0.04 , N/A ) | 1169.2 | N/A | 2.1622 [ 2.0000 ] | 108.1% { 90.9% } | 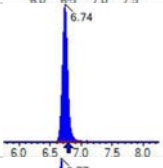  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 514238 | ( 8.77 , N/A ) ( N/A , -0.04 , N/A ) | 662.4 | N/A | 2.1778 [ 2.0000 ] | 108.9% { 92.9% } | 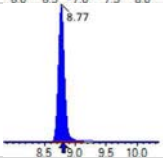  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | PFBA | 20.0A | 18.2A | 91.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.32A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.62A | 92.4A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.59A | 91.9A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.58A | 91.7A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.84A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.54A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.44A | 88.8A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.11A | 82.2A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.97A | 89.9A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.46A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.04A | 88.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.50A | 94.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.22A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.47A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.43A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.71A | 97.0A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.8A | 100A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.8A | 92.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.5A | 106A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.59A | 91.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.6A | 93.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 95.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.56A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01003A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01003-CCV3A | NMeFOSEA | 20.0A | 17.6A | 87.8A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.79A | 95.8A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.80A | 102A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.82A | 87.8A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.1A | 101A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.36A | 93.6A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.09A | 90.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.49A | 95.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.44A | 94.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.7A | 93.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.7A | 98.6A | ng/mLA | +/- 30.00%A |

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A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2367399<br>( 163.0 / 69.0 ) 64584 | ( 2.76 , 0.74 )<br>( N/A , -0.04 , -0.1) | 15329.5<br>3014.2 | 0.0273<br>100.4<br>103.5 | 9.2456<br>[ 10.0000 ] | 92.5% | 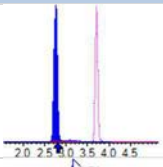 | 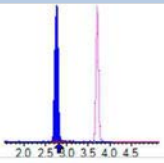 | |
| PFBA | ( 213.0 / 169.0 ) 4938197 | ( 3.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1010.4 | N/A<br>0.0<br>0.0 | 18.2431<br>[ 20.0000 ] | 91.2% | 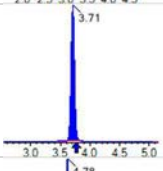 | | |
| PFPeA | ( 263.0 / 219.0 ) 1952041<br>( 263.0 / 69.0 ) 22313 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , -0.2) | 6296.0<br>311.0 | 0.0114<br>95.7<br>103.0 | 9.3156<br>[ 10.0000 ] | 93.2% | 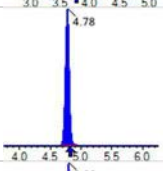 | 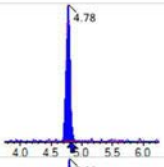 | |
| PFHxA | ( 313.0 / 269.0 ) 1143503<br>( 313.0 / 119.0 ) 136657 | ( 6.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2490.5<br>1220.4 | 0.1195<br>102.9<br>102.1 | 4.4029<br>[ 5.0000 ] | 88.1% | 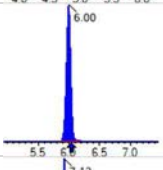 | 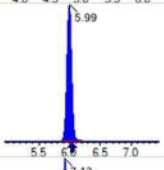 | |
| PFHpA | ( 363.0 / 319.0 ) 1327067<br>( 363.0 / 169.0 ) 392839 | ( 7.13 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1685.8<br>1722.7 | 0.2960<br>97.7<br>100.3 | 4.6211<br>[ 5.0000 ] | 92.4% | 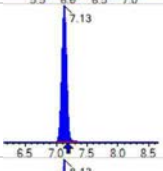 | 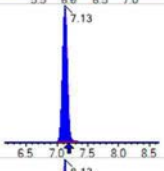 | |
| PFOA | ( 413.0 / 369.0 ) 1774774<br>( 413.0 / 169.0 ) 664651 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 671.5<br>1155.4 | 0.3745<br>102.4<br>109.1 | 4.5926<br>[ 5.0000 ] | 91.9% | 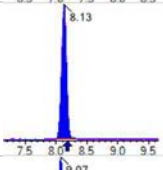 | 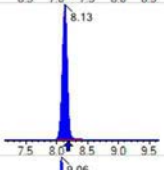 | |
| PFNA | ( 463.0 / 419.0 ) 1093482<br>( 463.0 / 169.0 ) 288536 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1019.0<br>1085.4 | 0.2639<br>103.4<br>109.7 | 4.5828<br>[ 5.0000 ] | 91.7% | 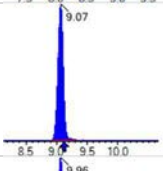 | 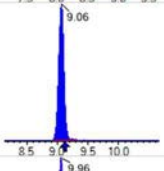 | |
| PFDA | ( 513.0 / 469.0 ) 1344408<br>( 513.0 / 169.0 ) 158845 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , 0.3) | 3615.1<br>3512.0 | 0.1182<br>100.8<br>98.7 | 4.7227<br>[ 5.0000 ] | 94.5% | 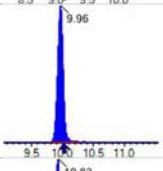 | 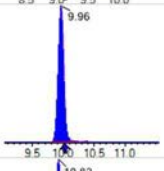 | |
| PFUnA | ( 563.0 / 519.0 ) 1452979<br>( 563.0 / 169.0 ) 216965 | ( 10.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1064.1<br>802.3 | 0.1493<br>105.4<br>105.1 | 4.8313<br>[ 5.0000 ] | 96.6% | 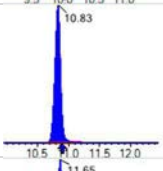 | 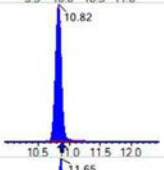 | |
| PFDoA | ( 613.0 / 569.0 ) 1678445<br>( 613.0 / 169.0 ) 250811 | ( 11.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1502.8<br>1014.6 | 0.1494<br>94.5<br>101.1 | 4.8405<br>[ 5.0000 ] | 96.8% | 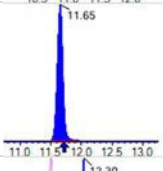 | 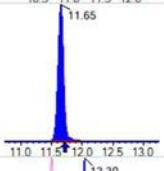 | |
| PFTrDA | ( 663.0 / 619.0 ) 1588969<br>( 663.0 / 169.0 ) 395314 | ( 12.30 , 1.06 )<br>( N/A , -0.05 , 0.0) | 1670.0<br>1085.0 | 0.2488<br>96.7<br>96.1 | 4.6846<br>[ 5.0000 ] | 93.7% | 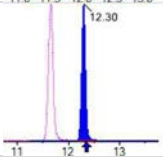 | 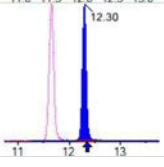 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1292021<br>( 713.0 / 169.0 ) 331808 | ( 12.80 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1599.4<br>1158.0 | 0.2568<br>95.1<br>96.6 | 4.5354<br>[ 5.0000 ] | 90.7% | 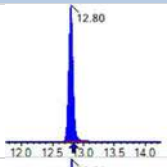 | 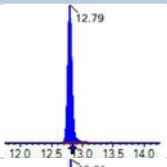 | |
| PFHxDA | ( 813.0 / 769.0 ) 959448<br>( 813.0 / 169.0 ) 244513 | ( 13.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2115.3<br>1085.7 | 0.2548<br>104.2<br>99.8 | 4.4410<br>[ 5.0000 ] | 88.8% | 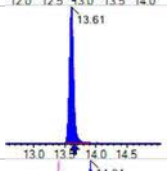 | 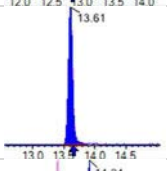 | |
| PFODA | ( 913.0 / 869.0 ) 555525<br>( 913.0 / 169.0 ) 176212 | ( 14.24 , 1.05 )<br>( N/A , -0.04 , 0.1) | 1533.3<br>666.2 | 0.3172<br>88.5<br>93.1 | 4.1103<br>[ 5.0000 ] | 82.2% | 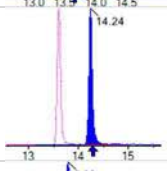 | 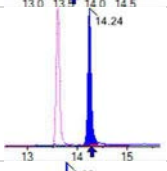 | |
| PFBS | ( 299.0 / 80.0 ) 1656522<br>( 299.0 / 99.0 ) 1193997 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3188.4<br>2361.7 | 0.7208<br>101.9<br>98.0 | 3.9717<br>[ 4.4237 ] | 89.8% | 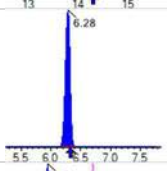 | 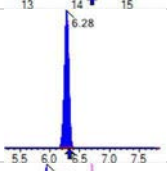 | |
| PFPeS | ( 349.0 / 80.0 ) 4364826<br>( 349.0 / 99.0 ) 1539819 | ( 7.51 , 0.88 )<br>( N/A , -0.05 , 0.0) | 2505.8<br>2399.7 | 0.3528<br>98.1<br>100.2 | 4.4621<br>[ 4.6919 ] | 95.1% | 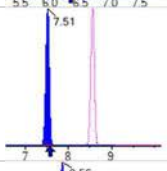 | 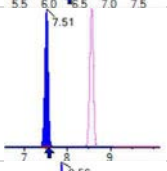 | |
| PFHxS | ( 399.0 / 80.0 ) 4588863<br>( 399.0 / 99.0 ) 1488980 | ( 8.56 , 1.00 )<br>( -0.01 , N/A , -0.1) | 3633.0<br>3900.2 | 0.3245<br>101.9<br>97.0 | 4.0388<br>[ 4.5549 ] | 88.7% | 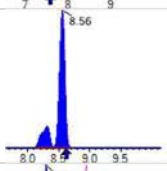 | 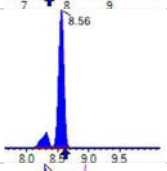 | |
| PFHpS | ( 449.0 / 80.0 ) 3918478<br>( 449.0 / 99.0 ) 1063335 | ( 9.53 , 0.91 )<br>( N/A , -0.06 , 0.2) | 2329.7<br>2231.5 | 0.2714<br>102.5<br>102.5 | 4.4966<br>[ 4.7570 ] | 94.5% | 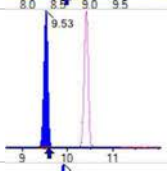 | 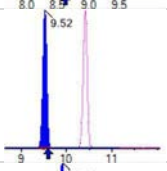 | |
| PFOS | ( 499.0 / 80.0 ) 3542371<br>( 499.0 / 99.0 ) 835566 | ( 10.41 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2549.2<br>5061.5 | 0.2359<br>100.9<br>98.2 | 4.2171<br>[ 4.6375 ] | 90.9% | 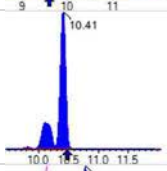 | 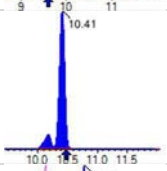 | |
| PFNS | ( 549.0 / 80.0 ) 3512432<br>( 549.0 / 99.0 ) 956650 | ( 11.24 , 1.08 )<br>( N/A , -0.06 , 0.1) | 2489.8<br>2059.6 | 0.2724<br>99.9<br>101.1 | 4.4660<br>[ 4.7994 ] | 93.1% | 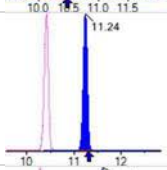 | 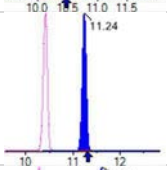 | |
| PFDS | ( 599.0 / 80.0 ) 4256592<br>( 599.0 / 99.0 ) 1131746 | ( 11.98 , 1.15 )<br>( N/A , -0.05 , 0.1) | 2251.2<br>1959.5 | 0.2659<br>97.8<br>99.5 | 4.4324<br>[ 4.8155 ] | 92.0% | 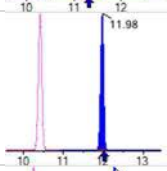 | 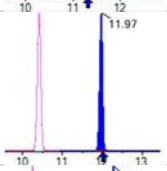 | |
| PFDoS | ( 699.0 / 80.0 ) 3983483<br>( 699.0 / 99.0 ) 924754 | ( 12.91 , 1.24 )<br>( N/A , -0.04 , 0.0) | 4923.6<br>3458.4 | 0.2321<br>99.4<br>101.4 | 4.7052<br>[ 4.8478 ] | 97.1% | 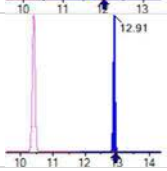 | 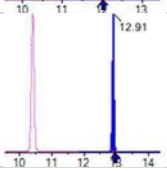 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6925673<br>( 327.0 / 81.0 ) 6151043 | ( 5.46 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5410.5<br>3125.5 | 0.8882<br>101.8<br>98.7 | 18.8218<br>[ 18.6906 ] | 100.7% | 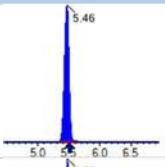 | 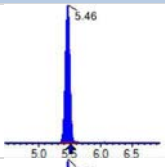 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6149806<br>( 427.0 / 81.0 ) 7739720 | ( 7.57 , 1.00 )<br>( 0.00 , N/A , 0.2) | 4376.2<br>4638.3 | 1.2585<br>100.4<br>95.0 | 18.7627<br>[ 18.9808 ] | 98.9% | 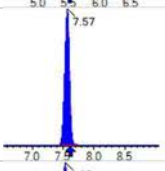 | 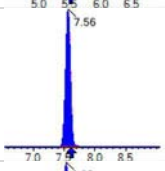 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5762780<br>( 527.0 / 81.0 ) 6401646 | ( 9.33 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1453.4<br>1746.1 | 1.1109<br>102.1<br>109.0 | 17.7583<br>[ 19.1658 ] | 92.7% | 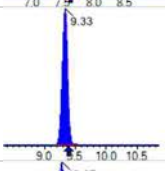 | 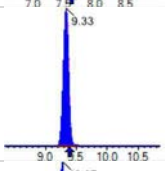 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4974834<br>( 627.0 / 81.0 ) 6986472 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1627.2<br>1202.9 | 1.4044<br>97.6<br>96.3 | 20.4850<br>[ 19.3236 ] | 106.0% | 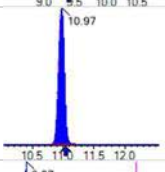 | 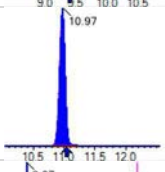 | |
| PFBSA | ( 297.9 / 78.0 ) 3152738<br>( 297.9 / 278.0 ) 4804 | ( 8.07 , 0.57 )<br>( N/A , -0.03 , 0.4) | 1679.8<br>110.1 | 0.0015<br>111.5<br>98.3 | 4.6672<br>[ 5.0000 ] | 93.3% | 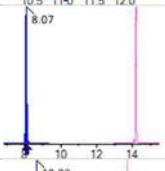 | 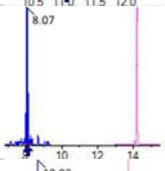 | |
| PFHxSA | ( 397.9 / 78.0 ) 4125480<br>( 397.9 / 378.0 ) 18513 | ( 10.93 , 0.75 )<br>( N/A , -0.03 , -0.1) | 1667.8<br>440.1 | 0.0045<br>109.8<br>107.2 | 4.8956<br>[ 5.0000 ] | 97.9% | 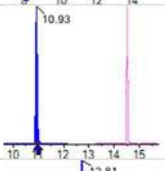 | 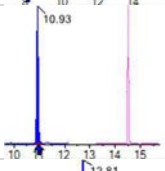 | |
| PFOSA | ( 498.0 / 78.0 ) 2839233<br>( 498.0 / 478.0 ) 42245 | ( 12.81 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2289.2<br>995.4 | 0.0149<br>106.0<br>99.9 | 4.5918<br>[ 5.0000 ] | 91.8% | 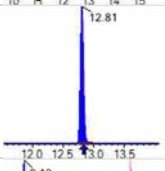 | 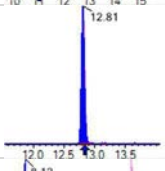 | |
| TFSI | ( 279.7 / 147.0 ) 7714508<br>( 279.7 / 211.0 ) 650024 | ( 8.13 , 0.63 )<br>( N/A , -0.06 , 0.1) | 61.5<br>54.1 | 0.0843<br>100.3<br>98.5 | 4.7382<br>[ 4.8967 ] | 96.8% | 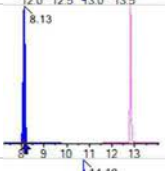 | 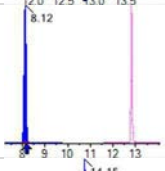 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2422123<br>( 512.0 / 169.0 ) 1722291 | ( 14.19 , 1.00 )<br>( 0.00 , N/A , 2.2) | 3506.2<br>1475.4 | 0.7111<br>95.0<br>93.8 | 18.6108<br>[ 20.0000 ] | 93.1% | 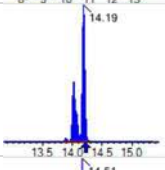 | 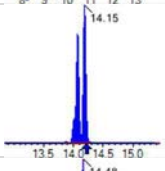 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2919094<br>( 526.0 / 169.0 ) 3586942 | ( 14.51 , 1.00 )<br>( 0.01 , N/A , 2.1) | 4109.1<br>3423.3 | 1.2288<br>99.5<br>99.0 | 19.0089<br>[ 20.0000 ] | 95.0% | 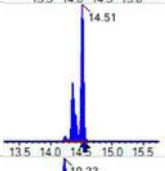 | 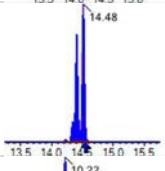 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 883998<br>( 570.0 / 483.0 ) 425739 | ( 10.22 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2187.1<br>2061.2 | 0.4816<br>109.8<br>103.0 | 4.5556<br>[ 5.0000 ] | 91.1% | 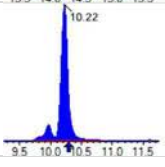 | 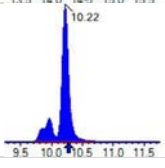 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 846492<br>( 584.0 / 526.0 ) 505649 | ( 10.75 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1320.3<br>728.3 | 0.5973<br>96.9<br>101.0 | 4.6690<br>[ 5.0000 ] | 93.4% | 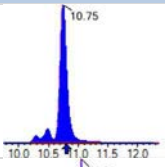 | 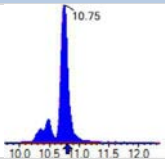 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1174210 | ( 14.00 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2175.0 | N/A<br>0.0<br>0.0 | 17.5573<br>[ 20.0000 ] | 87.8% | 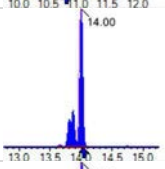 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 952667 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3367.8 | N/A<br>0.0<br>0.0 | 19.1064<br>[ 20.0000 ] | 95.5% | 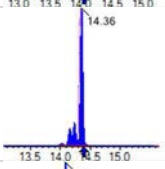 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 335333<br>( 285.0 / 185.0 ) 921530 | ( 6.45 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1679.9<br>2119.9 | 2.7481<br>99.4<br>104.2 | 4.7893<br>[ 5.0000 ] | 95.8% | 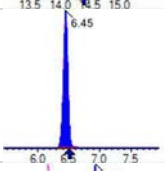 | 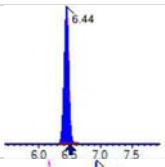 | |
| ADONA | ( 377.0 / 85.0 ) 3917027<br>( 377.0 / 251.0 ) 395090 | ( 7.52 , 1.17 )<br>( N/A , -0.05 , 0.1) | 1912.2<br>1698.7 | 0.1009<br>99.0<br>96.5 | 4.7951<br>[ 4.7135 ] | 101.7% | 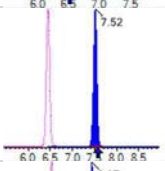 | 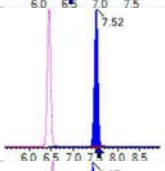 | |
| PFEESA | ( 315.0 / 135.0 ) 1457699<br>( 315.0 / 83.0 ) 880051 | ( 6.87 , 1.15 )<br>( N/A , -0.05 , 0.1) | 3024.4<br>1480.6 | 0.6037<br>108.3<br>106.6 | 7.8158<br>[ 8.9246 ] | 87.6% | 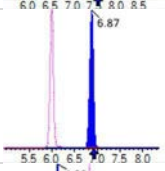 | 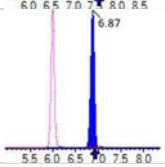 | |
| PFMPA | ( 229.0 / 85.0 ) 670808 | ( 4.09 , 0.86 )<br>( N/A , -0.05 , 0.0) | 7073.3 | N/A<br>0.0<br>0.0 | 10.0880<br>[ 10.0000 ] | 100.9% | 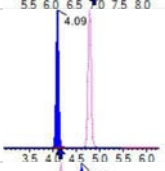 | | |
| PFMBA | ( 279.0 / 85.0 ) 1691235 | ( 5.15 , 1.08 )<br>( N/A , -0.04 , 0.0) | 5263.2 | N/A<br>0.0<br>0.0 | 9.3578<br>[ 10.0000 ] | 93.6% | 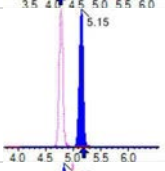 | | |
| NFDHA | ( 295.0 / 201.0 ) 881152<br>( 295.0 / 85.0 ) 924860 | ( 5.85 , 0.98 )<br>( N/A , -0.05 , 0.1) | 3525.4<br>3071.2 | 1.0496<br>97.3<br>104.4 | 9.0879<br>[ 10.0000 ] | 90.9% | 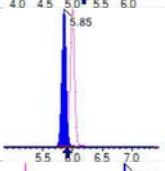 | 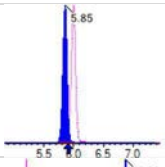 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3959168<br>( 533.0 / 353.0 ) 1253384 | ( 11.05 , 1.71 )<br>( N/A , -0.06 , -0.1) | 2476.5<br>1972.7 | 0.3166<br>101.2<br>96.1 | 4.4873<br>[ 4.6663 ] | 96.2% | 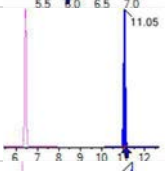 | 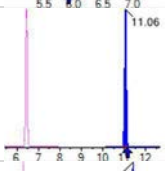 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3014684<br>( 633.0 / 453.0 ) 1022326 | ( 12.40 , 1.92 )<br>( N/A , -0.05 , 0.0) | 3608.7<br>2766.0 | 0.3391<br>102.1<br>99.0 | 4.4431<br>[ 4.7160 ] | 94.2% | 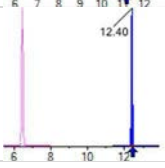 | 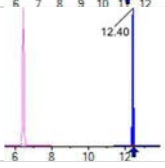 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2020350<br>( 461.0 / 381.2 ) 812351 | ( 9.44 , 0.91 )<br>( N/A , -0.06 , 0.1) | 3414.9<br>2997.1 | 0.4021<br>100.9<br>101.4 | 4.2634<br>[ 4.6193 ] | 92.3% | 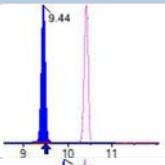 | 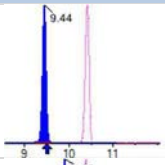 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 243703<br>( 241.0 / 117.0 ) 527396 | ( 4.35 , 0.91 )<br>( N/A , -0.05 , 0.0) | 2235.1<br>3091.4 | 2.1641<br>102.7<br>99.8 | 20.4440<br>[ 20.0000 ] | 102.2% | 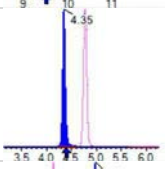 | 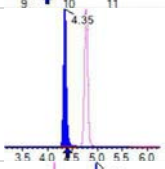 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1349798<br>( 341.0 / 217.0 ) 2078273 | ( 6.89 , 1.15 )<br>( N/A , -0.04 , -0.1) | 1371.5<br>1269.5 | 1.5397<br>101.3<br>105.8 | 18.7409<br>[ 20.0000 ] | 93.7% | 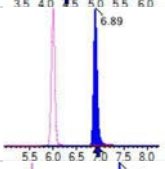 | 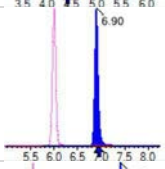 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2330546<br>( 441.0 / 337.0 ) 2001106 | ( 9.27 , 1.55 )<br>( N/A , -0.05 , 0.0) | 5147.2<br>7268.1 | 0.8586<br>93.6<br>98.2 | 19.7180<br>[ 20.0000 ] | 98.6% | 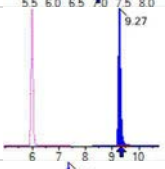 | 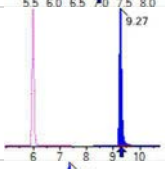 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1617558<br>( 357.2 / 243.0 ) 167412 | ( 6.73 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1281.5<br>830.5 | 0.1035<br>93.9<br>99.4 | 4.9832<br>[ 5.0000 ] | 99.7% | 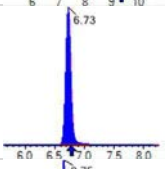 | 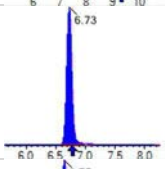 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1115931<br>( 457.2 / 343.0 ) 49442 | ( 8.75 , 1.00 )<br>( -0.01 , N/A , 0.2) | 803.9<br>345.3 | 0.0443<br>106.8<br>97.7 | 5.1052<br>[ 5.0000 ] | 102.1% | 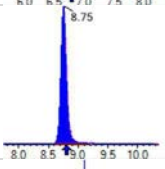 | 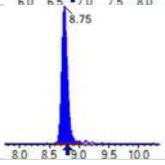 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 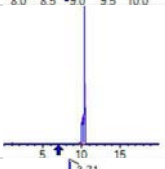 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 235544 | ( 3.71 , N/A )<br>( N/A , -0.05 , N/A ) | 1044.9 | N/A | 0.9879<br>[ 1.0000 ] | 98.8%<br>{ 99.6% } | 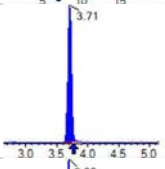 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116031 | ( 6.00 , N/A )<br>( N/A , -0.05 , N/A ) | 17659879.2 | N/A | 0.9147<br>[ 1.0000 ] | 91.5%<br>{ 91.6% } | 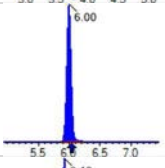 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 357603 | ( 8.13 , N/A )<br>( N/A , -0.05 , N/A ) | 6031.4 | N/A | 0.9046<br>[ 1.0000 ] | 90.5%<br>{ 94.3% } | 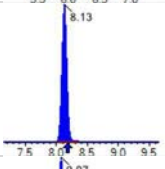 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 244998 | ( 9.07 , N/A )<br>( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8614<br>[ 1.0000 ] | 86.1%<br>{ 87.1% } | 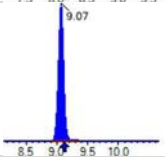 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (36)
Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246940 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6188.6 | N/A | 0.8456 [ 1.0000 ] | 84.6% { 85.4% } | 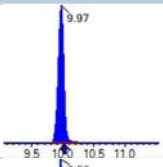 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 851608 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 4143.3 | N/A | 0.8973 [ 1.0000 ] | 89.7% { 91.2% } | 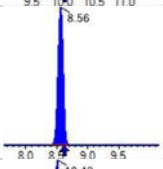 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 651713 | ( 10.42 , N/A ) ( N/A , -0.06 , N/A ) | 1691.7 | N/A | 0.8557 [ 1.0000 ] | 85.6% { 91.5% } | 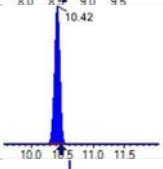 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2172396 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 33235.4 | N/A | 8.0733 [ 8.0000 ] | 100.9% { 97.0% } | 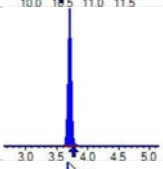 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 829688 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 4857.0 | N/A | 3.8324 [ 4.0000 ] | 95.8% { 85.0% } | 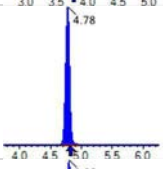 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 540642 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 6844.7 | N/A | 2.0422 [ 2.0000 ] | 102.1% { 91.6% } | 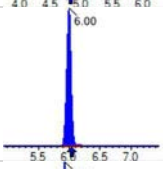 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 585294 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 4036.3 | N/A | 1.9875 [ 2.0000 ] | 99.4% { 89.2% } | 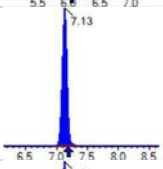 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 786424 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 2817.1 | N/A | 2.0525 [ 2.0000 ] | 102.6% { 91.2% } | 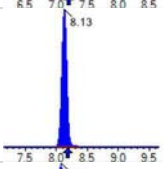 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 237405 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 2978.9 | N/A | 0.9883 [ 1.0000 ] | 98.8% { 88.0% } | 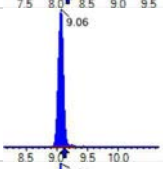 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 278603 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 929.4 | N/A | 1.0067 [ 1.0000 ] | 100.7% { 86.6% } | 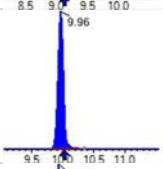 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 325150 | ( 10.83 , N/A ) ( N/A , -0.06 , N/A ) | 729.4 | N/A | 0.9987 [ 1.0000 ] | 99.9% { 87.4% } | 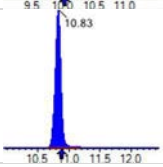 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 344666 | ( 11.66 , N/A ) ( N/A , -0.06 , N/A ) | 1474.6 | N/A | 1.0395 [ 1.0000 ] | 104.0% { 92.4% } | 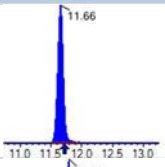 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 304176 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1304.7 | N/A | 1.0773 [ 1.0000 ] | 107.7% { 93.2% } | 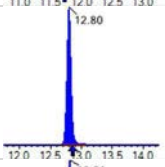 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 453000 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2095.0 | N/A | 1.8792 [ 2.0000 ] | 94.0% { 89.7% } | 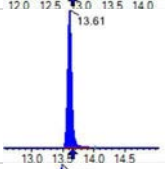 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1606611 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1072.8 | N/A | 2.0881 [ 2.0000 ] | 104.4% { 95.7% } | 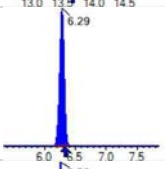 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1278226 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3790.9 | N/A | 2.0813 [ 2.0000 ] | 104.1% { 96.9% } | 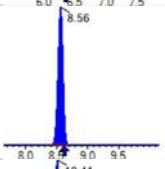 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1454557 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 1435.6 | N/A | 2.0700 [ 2.0000 ] | 103.5% { 93.9% } | 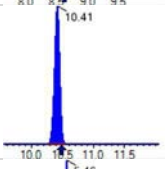 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 560822 | ( 5.46 , N/A ) ( N/A , -0.05 , N/A ) | 91.4 | N/A | 4.2246 [ 4.0000 ] | 105.6% { 95.2% } | 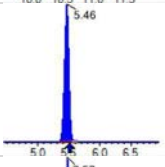 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1583281 | ( 7.57 , N/A ) ( N/A , -0.04 , N/A ) | 3703.7 | N/A | 3.9852 [ 4.0000 ] | 99.6% { 95.0% } | 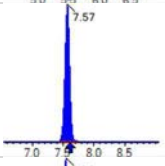 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1366805 | ( 9.34 , N/A ) ( N/A , -0.05 , N/A ) | 1239.8 | N/A | 4.3866 [ 4.0000 ] | 109.7% { 99.9% } | 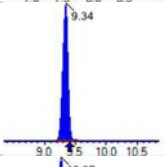 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2520675 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1178.2 | N/A | 7.7406 [ 8.0000 ] | 96.8% { 98.8% } | 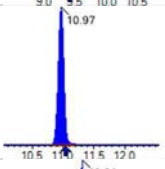 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1236625 | ( 12.81 , N/A ) ( N/A , -0.03 , N/A ) | 2642.7 | N/A | 1.9859 [ 2.0000 ] | 99.3% { 90.0% } | 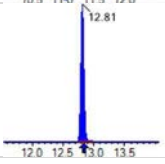 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCV3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 262151 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 1726.6 | N/A | 1.9849 [ 2.0000 ] | 99.2% { 91.0% } | 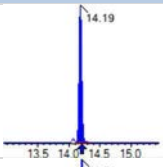 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 274237 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2488.6 | N/A | 1.9362 [ 2.0000 ] | 96.8% { 89.4% } | 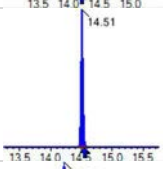 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 813803 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 1927.7 | N/A | 4.5010 [ 4.0000 ] | 112.5% { 96.2% } | 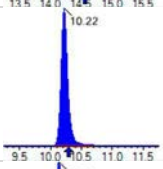 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 741370 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1704.4 | N/A | 4.4989 [ 4.0000 ] | 112.5% { 96.3% } | 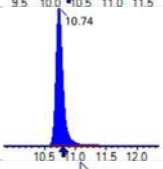 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1219399 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2240.0 | N/A | 20.5449 [ 20.0000 ] | 102.7% { 88.7% } | 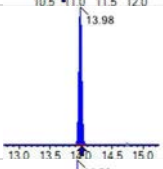 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1122403 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 3817.3 | N/A | 18.6317 [ 20.0000 ] | 93.2% { 87.0% } | 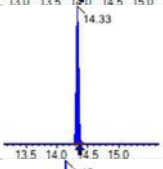 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 949887 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2293.1 | N/A | 7.8766 [ 8.0000 ] | 98.5% { 92.9% } | 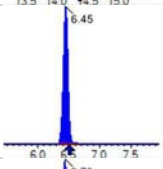 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 610638 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 978.4 | N/A | 2.2808 [ 2.0000 ] | 114.0% { 99.0% } | 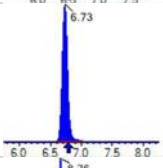 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 535993 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 806.6 | N/A | 2.1991 [ 2.0000 ] | 110.0% { 96.9% } | 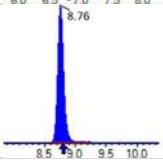 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00991L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0180 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .01650 | ng/mL0 | .10 | U |
| | PFTrDA0 | .01630 | ng/mL0 | .10 | U |
| | PFTeDA0 | .02330 | ng/mL0 | .10 | U |
| | PFHxDA0 | .03360 | ng/mL0 | .10 | U |
| | PFODA0 | .03890 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .08510 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02580 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .04090 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0103L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .08930 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.990 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.030 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.010 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.050 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA | 0.9990 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9920 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.940 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.020 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.730 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.450 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.110 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.880 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.050 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.360 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0103L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD00991L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | D7-NMEFOSE0 | 21.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.740 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 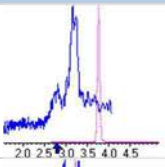 | 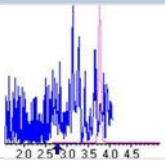 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 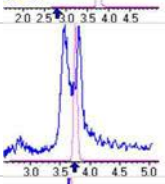 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 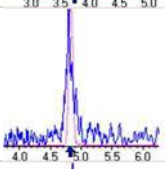 | 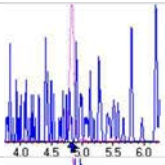 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 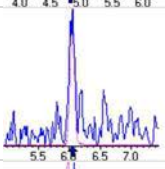 | 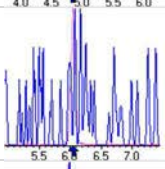 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 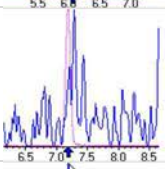 | 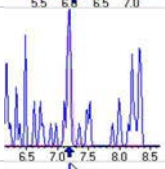 | |
| PFOA | ( 413.0 / 369.0 )<br>16821<br>( 413.0 / 169.0 )<br>7137 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.0) | 26.9<br>42.2 | 0.4243<br>116.1<br>116.1 | 0.0180 | N/A | 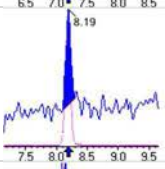 | 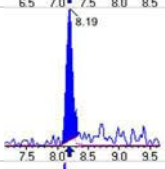 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 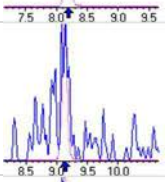 | 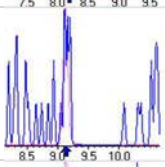 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 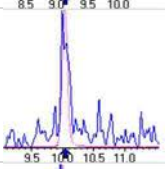 | 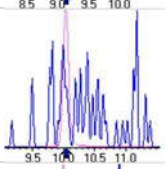 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 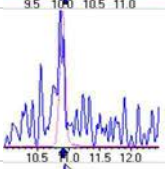 | 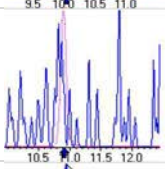 | |
| PFDoA | ( 613.0 / 569.0 )<br>6139<br>( 613.0 / 169.0 )<br>1421 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , -0.2) | 31.7<br>19.2 | 0.2314<br>146.4<br>146.4 | 0.0165 | N/A | 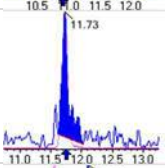 | 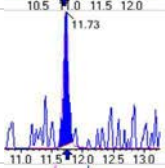 | |
| PFTrDA | ( 663.0 / 619.0 )<br>5903<br>( 663.0 / 169.0 )<br>N/A | ( 12.38 , 1.06 )<br>( N/A , 0.01 , #Value!) | 35.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0163 | N/A | 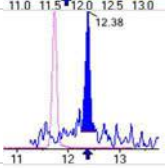 | 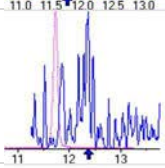 | IR1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6942<br>( 713.0 / 169.0 ) N/A | ( 12.85 , 1.00 ) ( -0.01 , N/A , #Value!) | 33.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0233 | N/A | 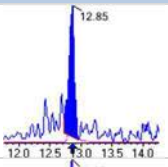 | 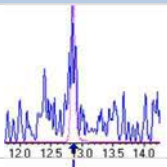 | IR1, |
| PFHxDA | ( 813.0 / 769.0 ) 8386<br>( 813.0 / 169.0 ) N/A | ( 13.65 , 1.00 ) ( -0.01 , N/A , #Value!) | 40.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0336 | N/A | 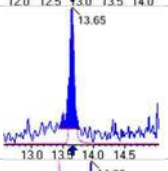 | 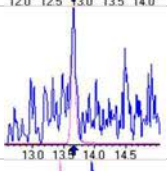 | IR1, |
| PFODA | ( 913.0 / 869.0 ) 6084<br>( 913.0 / 169.0 ) N/A | ( 14.29 , 1.05 ) ( N/A , -0.01 , #Value!) | 34.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0389 | N/A | 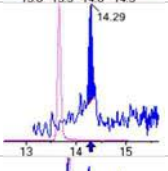 | 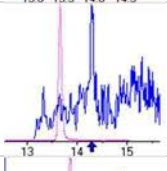 | IR1,MI1 DG 2024-03-19 |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 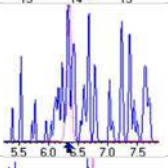 | 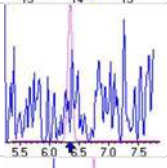 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 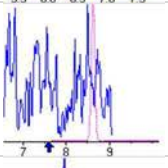 | 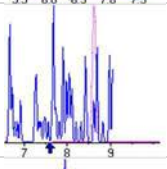 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 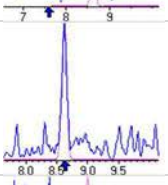 | 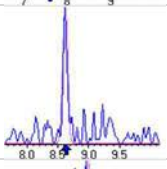 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 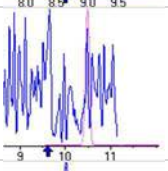 | 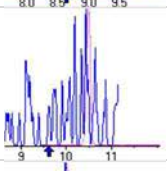 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 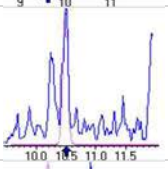 | 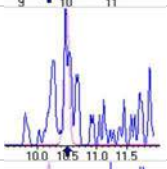 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 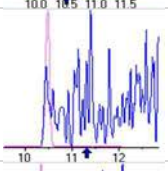 | 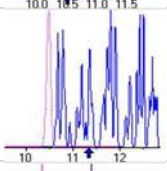 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 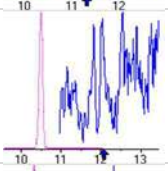 | 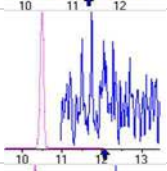 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 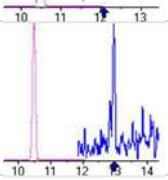 | 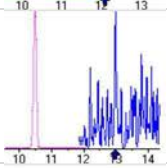 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 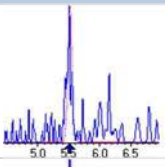 | 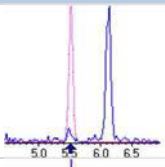 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 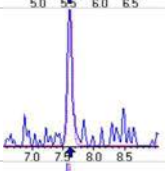 | 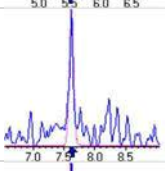 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 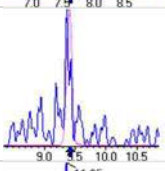 | 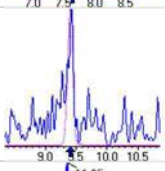 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>22276<br>( 627.0 / 81.0 )<br>24748 | ( 11.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 88.3<br>58.0 | 1.1110<br>77.2<br>77.2 | 0.0851 | N/A | 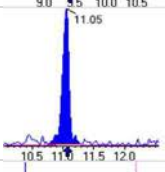 | 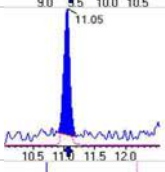 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 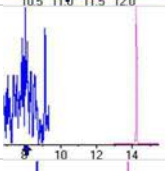 | 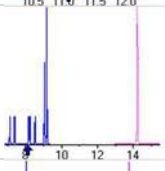 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 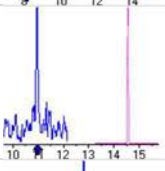 | 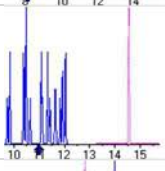 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 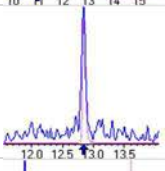 | 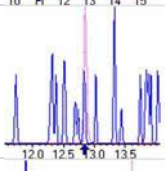 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 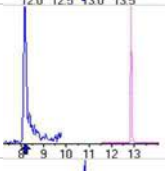 | 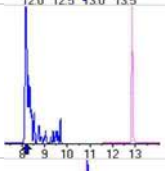 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 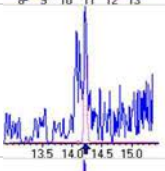 | 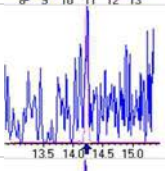 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 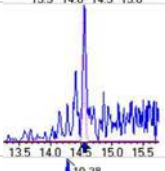 | 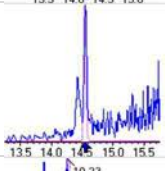 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>5287<br>( 570.0 / 483.0 )<br>1419 | ( 10.28 , 1.00 )<br>( -0.01 , N/A , 2.9) | 55.9<br>17.5 | 0.2684<br>61.2<br>61.2 | 0.0258 | N/A | 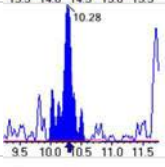 | 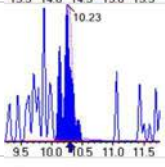 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8150<br>( 584.0 / 526.0 ) 2179 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 2.1) | 98.9<br>33.1 | 0.2674<br>43.4<br>43.4 | 0.0409 | N/A | 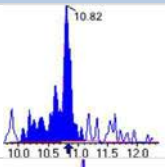 | 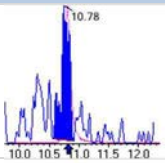 | IR1, |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 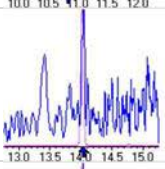 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 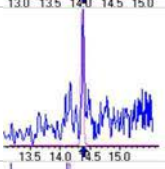 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 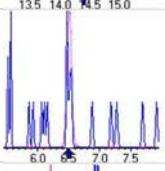 | 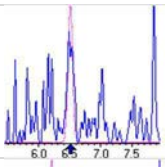 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 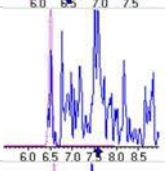 | 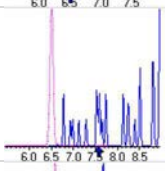 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 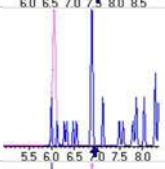 | 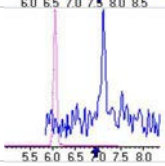 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 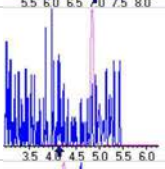 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 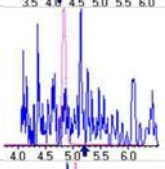 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 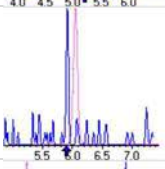 | 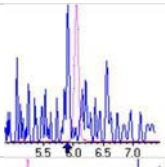 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 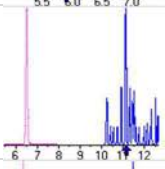 | 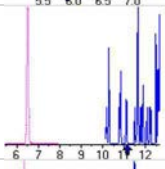 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 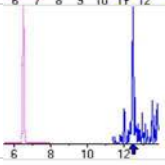 | 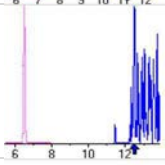 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 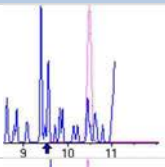 | 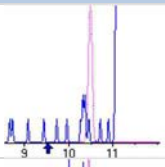 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 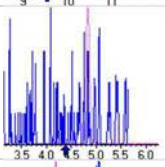 | 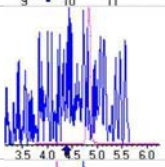 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 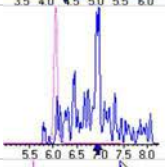 | 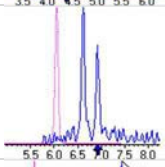 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>10942<br>( 441.0 / 337.0 )<br>9168 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 114.3<br>118.7 | 0.8378<br>91.3<br>91.3 | 0.0893 | N/A | 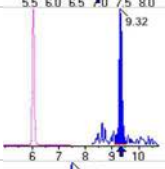 | 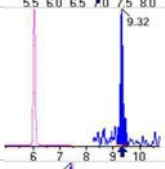 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4865<br>( 357.2 / 243.0 )<br>388 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 1.4) | 25.0<br>10.8 | 0.0797<br>72.3<br>72.3 | 0.0164 | N/A | 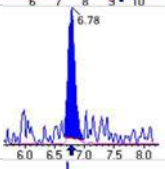 | 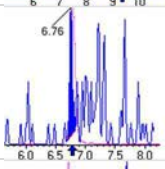 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 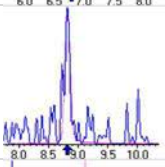 | 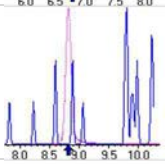 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 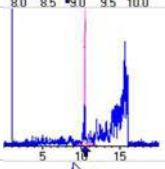 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>247666 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1205.7 | N/A | 1.0387<br>[ 1.0000 ] | 103.9%<br>{ 105.7% } | 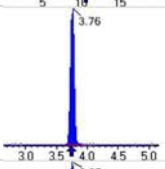 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>118801 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 67668.7 | N/A | 0.9365<br>[ 1.0000 ] | 93.7%<br>{ 99.4% } | 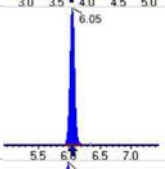 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>364915 | ( 8.19 , N/A )<br>( N/A , -0.02 , N/A ) | 6572.7 | N/A | 0.9231<br>[ 1.0000 ] | 92.3%<br>{ 96.0% } | 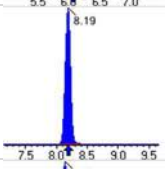 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>273094 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 870.1 | N/A | 0.9602<br>[ 1.0000 ] | 96.0%<br>{ 102.6% } | 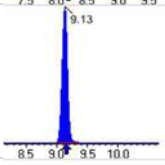 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277135 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 10730.3 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 103.5% } | 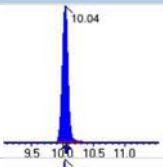 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 876072 | ( 8.63 , N/A ) ( N/A , -0.02 , N/A ) | 3965.9 | N/A | 0.9231 [ 1.0000 ] | 92.3% { 97.3% } | 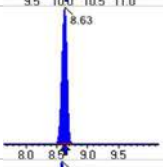 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 709520 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2022.8 | N/A | 0.9316 [ 1.0000 ] | 93.2% { 101.3% } | 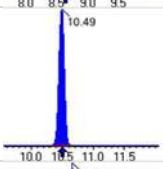 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2260276 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 35338.6 | N/A | 7.9888 [ 8.0000 ] | 99.9% { 106.9% } | 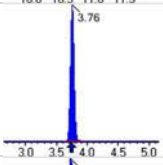 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 892559 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 4410.8 | N/A | 4.0266 [ 4.0000 ] | 100.7% { 96.8% } | 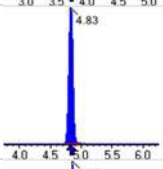 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560711 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 8995.9 | N/A | 2.0686 [ 2.0000 ] | 103.4% { 101.3% } | 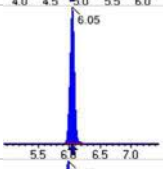 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 605194 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4503.5 | N/A | 2.0071 [ 2.0000 ] | 100.4% { 97.7% } | 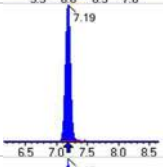 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 802821 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3104.8 | N/A | 2.0533 [ 2.0000 ] | 102.7% { 97.9% } | 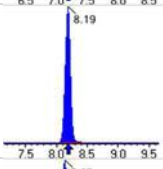 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 267971 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2951.0 | N/A | 1.0008 [ 1.0000 ] | 100.1% { 102.0% } | 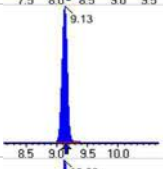 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 310319 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 918.4 | N/A | 0.9992 [ 1.0000 ] | 99.9% { 98.0% } | 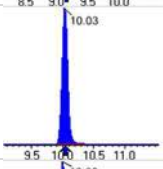 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 370129 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1009.3 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 102.4% } | 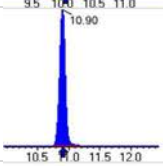 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368993 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1246.5 | N/A | 0.9916 [ 1.0000 ] | 99.2% { 104.9% } | 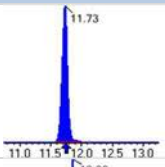  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318629 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1132.2 | N/A | 1.0055 [ 1.0000 ] | 100.6% { 102.0% } | 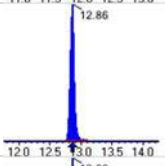  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 523684 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2356.1 | N/A | 1.9358 [ 2.0000 ] | 96.8% { 101.5% } | 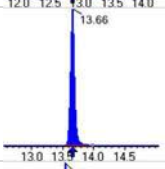  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570777 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 921.3 | N/A | 1.9845 [ 2.0000 ] | 99.2% { 98.6% } | 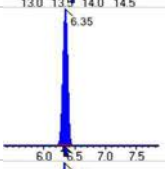  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1291658 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 4087.7 | N/A | 2.0444 [ 2.0000 ] | 102.2% { 100.9% } | 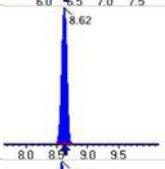  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1543909 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1768.0 | N/A | 2.0181 [ 2.0000 ] | 100.9% { 98.8% } | 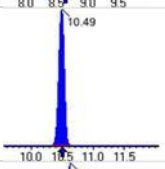  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 645670 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 92.6 | N/A | 4.7279 [ 4.0000 ] | 118.2% { 123.0% } | 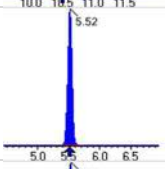  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1820502 | ( 7.62 , N/A ) ( N/A , -0.01 , N/A ) | 4674.4 | N/A | 4.4543 [ 4.0000 ] | 111.4% { 107.1% } | 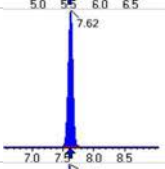  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1444855 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1529.9 | N/A | 4.5076 [ 4.0000 ] | 112.7% { 109.5% } | 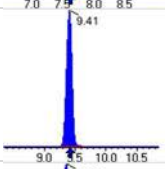  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2718422 | ( 11.05 , N/A ) ( N/A , -0.01 , N/A ) | 1222.5 | N/A | 8.1147 [ 8.0000 ] | 101.4% { 104.7% } | 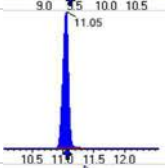  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1357608 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2272.1 | N/A | 2.0025 [ 2.0000 ] | 100.1% { 101.8% } | 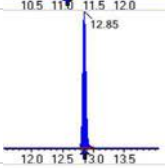  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 270641 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1748.6 | N/A | 1.8822 [ 2.0000 ] | 94.1% { 97.5% } | 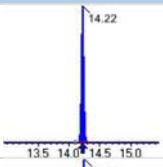  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315933 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2465.7 | N/A | 2.0489 [ 2.0000 ] | 102.4% { 100.2% } | 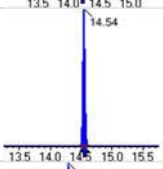  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 858949 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2747.6 | N/A | 4.3636 [ 4.0000 ] | 109.1% { 102.5% } | 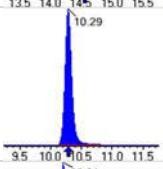  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 815282 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 2006.1 | N/A | 4.5444 [ 4.0000 ] | 113.6% { 107.8% } | 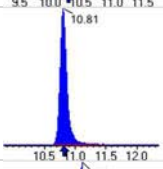  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1364206 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2290.3 | N/A | 21.1120 [ 20.0000 ] | 105.6% { 101.4% } | 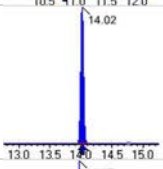  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316295 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4403.7 | N/A | 20.0701 [ 20.0000 ] | 100.4% { 100.0% } | 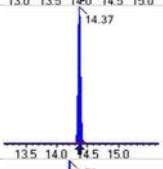  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 955791 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2026.1 | N/A | 7.7407 [ 8.0000 ] | 96.8% { 97.7% } | 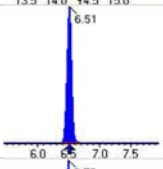  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559796 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1426.0 | N/A | 1.8631 [ 2.0000 ] | 93.2% { 97.0% } | 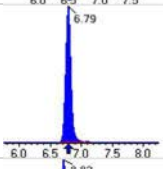  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 528642 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 671.7 | N/A | 1.9327 [ 2.0000 ] | 96.6% { 98.4% } | 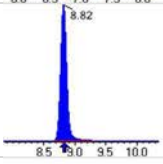  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06640 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 4.190 | ng/mL0 | | |
| | 13C5-PFHXA | 2.040 | ng/mL0 | | |
| | 13C4-PFHPA | 2.020 | ng/mL0 | | |
| | 13C8-PFOA | 1.990 | ng/mL0 | | |
| | 13C9-PFNA | .9910 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | 1.040 | ng/mL0 | | |
| | 13C2-PFDOA | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.920 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.090 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.0 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.020 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.170 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.940 | ng/mL0 | | |
| | 13C8-PFOSA | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA | 1.910 | ng/mL0 | | |
| | D5-NETFOSA | 1.980 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.320 | ng/mL0 | | |
| | D5-NETFOSAA | 4.410 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0103L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB10 | D7-NMEFOSE0 | 20.0 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.80 | ng/mL0 | | |
| | 13C3-HFPO-DA | 8.040 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 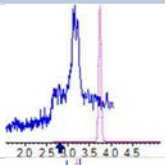 | 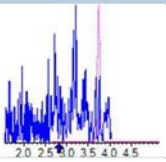 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 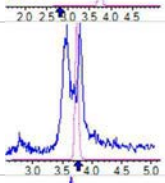 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 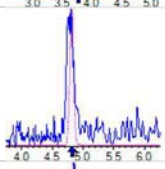 | 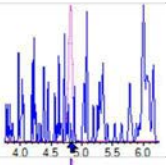 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 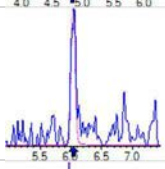 | 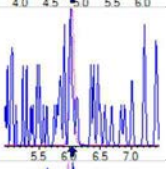 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 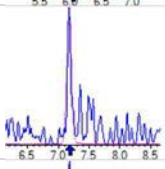 | 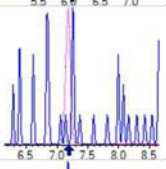 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 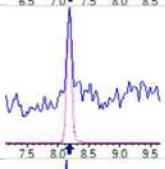 | 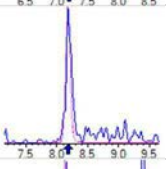 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 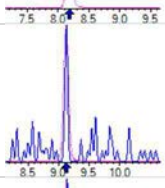 | 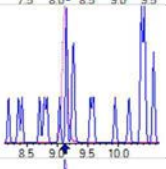 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 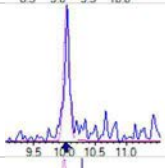 | 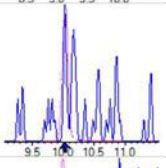 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 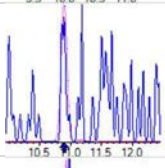 | 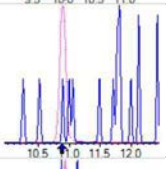 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 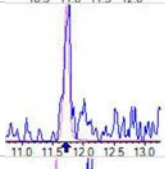 | 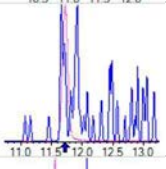 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 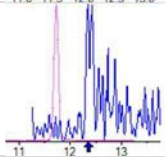 | 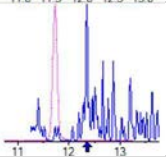 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 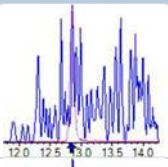 | 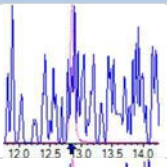 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 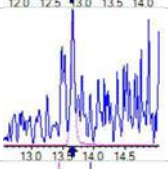 | 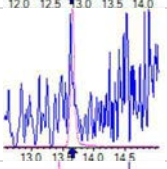 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 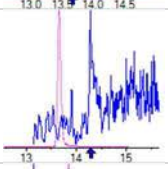 | 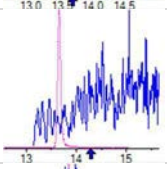 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 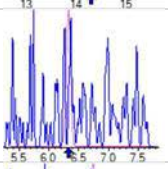 | 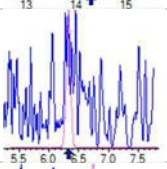 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 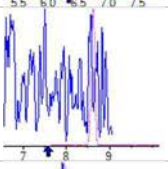 | 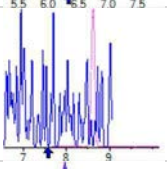 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 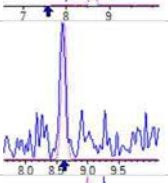 | 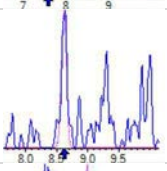 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 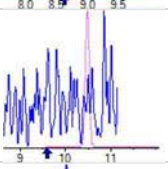 | 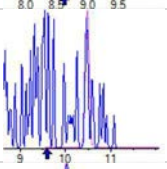 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 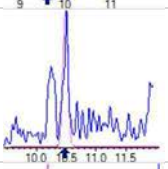 | 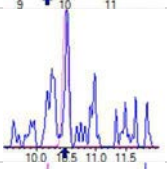 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 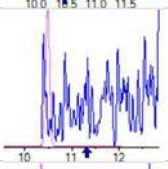 | 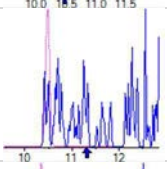 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 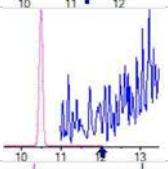 | 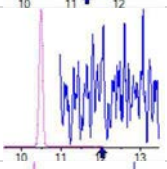 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 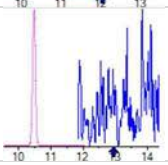 | 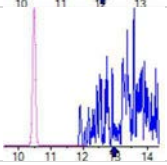 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 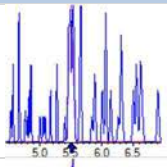 | 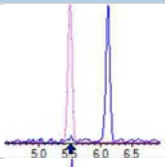 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 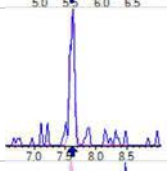 | 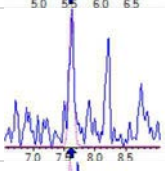 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 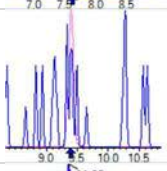 | 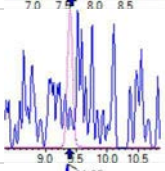 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17573<br>( 627.0 / 81.0 )<br>22471 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.2) | 194.8<br>62.5 | 1.2787<br>88.8<br>87.7 | 0.0664 | N/A | 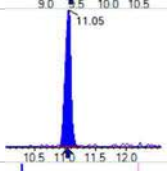 | 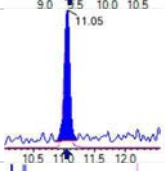 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 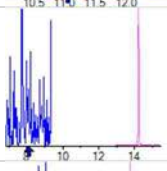 | 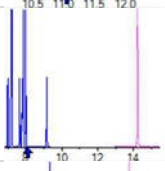 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 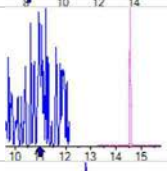 | 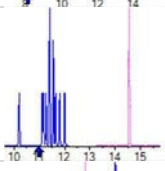 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 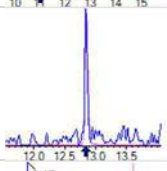 | 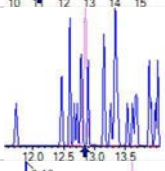 | |
| TFSI | ( 279.7 / 147.0 )<br>33493<br>( 279.7 / 211.0 )<br>2373 | ( 8.17 , 0.64 )<br>( N/A , -0.01 , 0.6) | 28.1<br>10.4 | 0.0709<br>84.3<br>82.8 | 0.0183 | N/A | 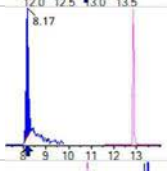 | 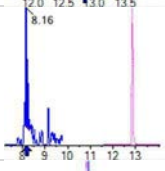 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 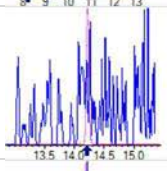 | 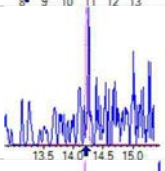 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 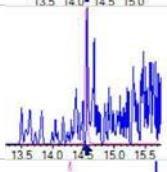 | 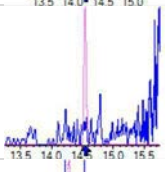 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 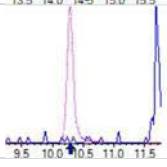 | 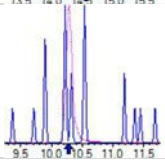 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 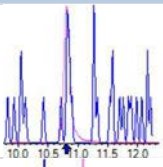 | 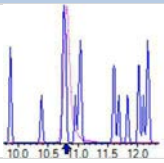 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 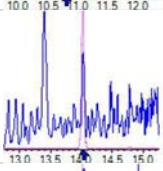 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 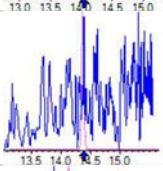 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 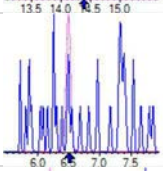 | 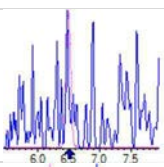 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 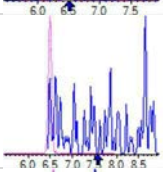 | 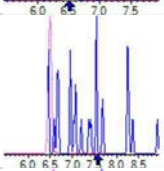 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 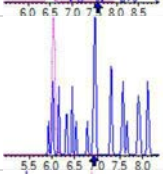 | 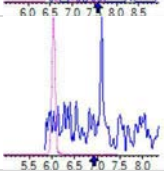 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 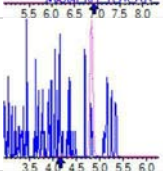 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 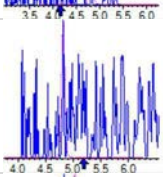 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 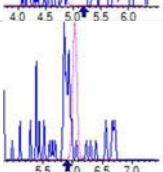 | 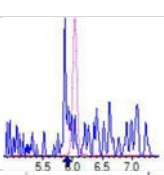 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 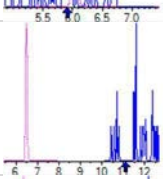 | 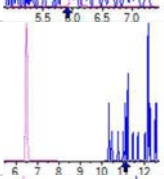 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 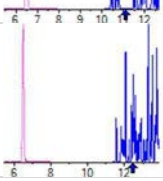 | 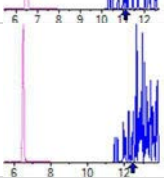 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 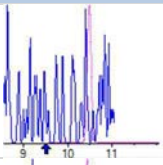 | 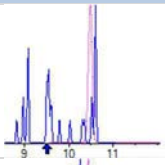 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 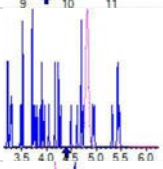 | 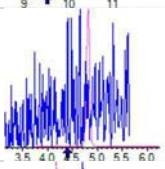 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 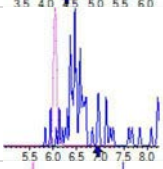 | 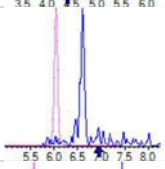 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 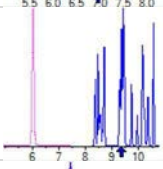 | 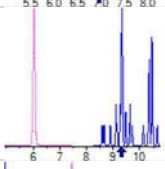 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 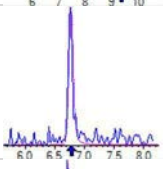 | 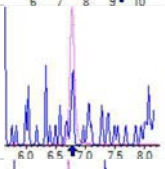 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 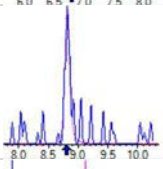 | 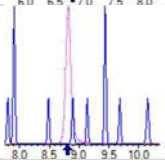 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 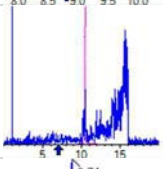 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 252590 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1169.3 | N/A | 1.0594<br>[ 1.0000 ] | 105.9%<br>{ 106.8% } | 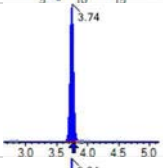 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122266 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 114320.5 | N/A | 0.9638<br>[ 1.0000 ] | 96.4%<br>{ 96.6% } | 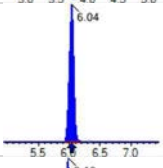 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 402138 | ( 8.18 , N/A )<br>( N/A , 0.01 , N/A ) | 4161.9 | N/A | 1.0173<br>[ 1.0000 ] | 101.7%<br>{ 106.0% } | 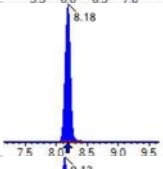 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 291558 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 684.5 | N/A | 1.0251<br>[ 1.0000 ] | 102.5%<br>{ 103.7% } | 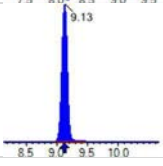 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274577 | ( 10.04 , N/A ) ( N/A , 0.01 , N/A ) | 14456.6 | N/A | 0.9402 [ 1.0000 ] | 94.0% { 94.9% } | 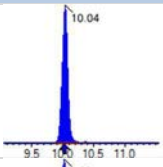 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 905428 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6077.8 | N/A | 0.9541 [ 1.0000 ] | 95.4% { 97.0% } | 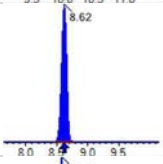 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 729908 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1900.4 | N/A | 0.9583 [ 1.0000 ] | 95.8% { 102.5% } | 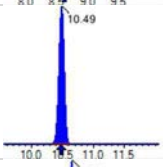 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2389209 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 43004.3 | N/A | 8.2799 [ 8.0000 ] | 103.5% { 106.7% } | 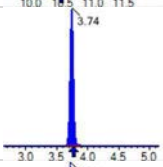 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 955725 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 4880.4 | N/A | 4.1894 [ 4.0000 ] | 104.7% { 97.9% } | 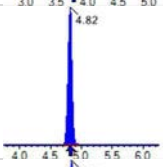 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 570234 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 7465.5 | N/A | 2.0441 [ 2.0000 ] | 102.2% { 96.6% } | 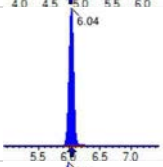 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626841 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 8203.0 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 95.5% } | 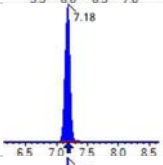 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 858291 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3713.4 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 99.5% } | 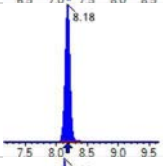 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283296 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 3188.1 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 105.0% } | 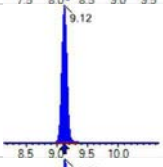 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318936 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 1166.8 | N/A | 1.0365 [ 1.0000 ] | 103.6% { 99.1% } | 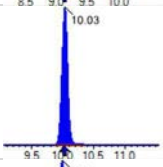 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377227 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 709.9 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 101.4% } | 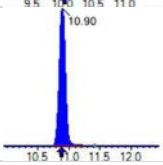 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389990 | ( 11.72 , N/A ) ( N/A , 0.01 , N/A ) | 1430.8 | N/A | 1.0578 [ 1.0000 ] | 105.8% { 104.6% } | 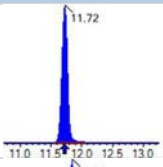 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 313526 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1142.9 | N/A | 0.9986 [ 1.0000 ] | 99.9% { 96.0% } | 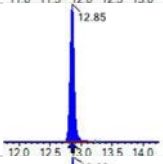 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 514127 | ( 13.66 , N/A ) ( N/A , 0.01 , N/A ) | 2227.5 | N/A | 1.9181 [ 2.0000 ] | 95.9% { 101.8% } | 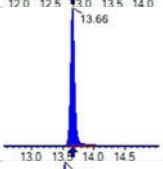 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712691 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1107.7 | N/A | 2.0936 [ 2.0000 ] | 104.7% { 102.1% } | 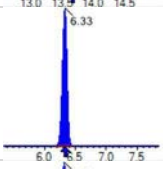 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1329370 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 3457.9 | N/A | 2.0359 [ 2.0000 ] | 101.8% { 100.8% } | 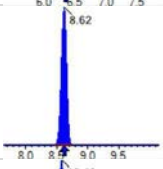 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1575798 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1773.4 | N/A | 2.0023 [ 2.0000 ] | 100.1% { 101.7% } | 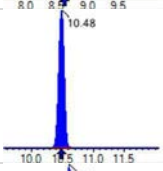 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 707959 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 95.5 | N/A | 5.0159 [ 4.0000 ] | 125.4% { 120.2% } | 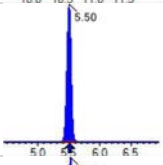 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1763439 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 4459.2 | N/A | 4.1748 [ 4.0000 ] | 104.4% { 105.8% } | 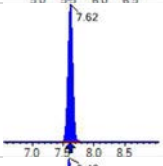 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1531812 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1414.8 | N/A | 4.6239 [ 4.0000 ] | 115.6% { 112.0% } | 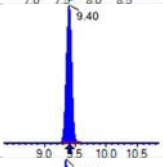 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2748065 | ( 11.04 , N/A ) ( N/A , 0.01 , N/A ) | 1470.7 | N/A | 7.9373 [ 8.0000 ] | 99.2% { 107.7% } | 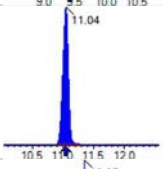 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393050 | ( 12.85 , N/A ) ( N/A , 0.01 , N/A ) | 1858.7 | N/A | 1.9974 [ 2.0000 ] | 99.9% { 101.4% } | 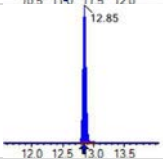 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (1)
Acquired: 2024/03/19 - 16:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 282412 | ( 14.22 , N/A ) ( N/A , 0.01 , N/A ) | 1812.0 | N/A | 1.9092 [ 2.0000 ] | 95.5% { 98.1% } | 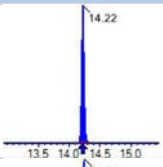  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 314683 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2067.0 | N/A | 1.9837 [ 2.0000 ] | 99.2% { 102.6% } | 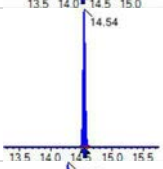  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 875018 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2373.2 | N/A | 4.3211 [ 4.0000 ] | 108.0% { 103.5% } | 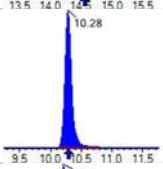  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 813569 | ( 10.81 , N/A ) ( N/A , 0.01 , N/A ) | 2416.9 | N/A | 4.4082 [ 4.0000 ] | 110.2% { 105.6% } | 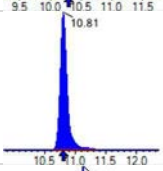  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1326325 | ( 14.02 , N/A ) ( N/A , 0.01 , N/A ) | 2458.9 | N/A | 19.9525 [ 20.0000 ] | 99.8% { 96.5% } | 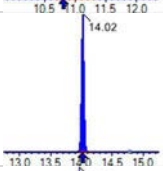  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1334342 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 4307.1 | N/A | 19.7770 [ 20.0000 ] | 98.9% { 103.4% } | 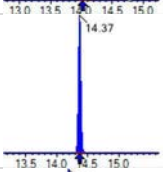  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1022222 | ( 6.49 , N/A ) ( N/A , 0.00 , N/A ) | 2755.3 | N/A | 8.0441 [ 8.0000 ] | 100.6% { 100.0% } | 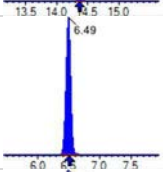  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 613673 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1140.8 | N/A | 2.0614 [ 2.0000 ] | 103.1% { 99.5% } | 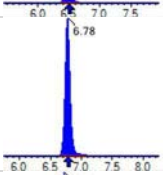  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 558218 | ( 8.82 , N/A ) ( N/A , 0.01 , N/A ) | 840.8 | N/A | 2.0598 [ 2.0000 ] | 103.0% { 100.9% } | 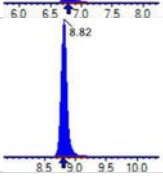  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06510 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.280 | ng/mL0 | | |
| | 13C5-PFPEA | 3.820 | ng/mL0 | | |
| | 13C5-PFHXA | 1.860 | ng/mL0 | | |
| | 13C4-PFHPA | 1.860 | ng/mL0 | | |
| | 13C8-PFOA | 2.080 | ng/mL0 | | |
| | 13C9-PFNA | 1.060 | ng/mL0 | | |
| | 13C6-PFDA | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA | .9920 | ng/mL0 | | |
| | 13C2-PFDOA | .9850 | ng/mL0 | | |
| | 13C2-PFTEDA | .9990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.880 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.020 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.0 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.970 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.580 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.010 | ng/mL0 | | |
| | 13C8-PFOSA | 2.10 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.20 | ng/mL0 | | |
| | D5-NETFOSAA | 4.430 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0103L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB20 | D7-NMEFOSE0 | 21.30 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.70 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.20 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 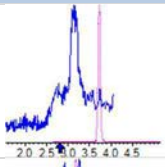 | 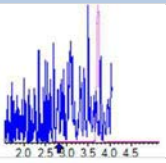 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 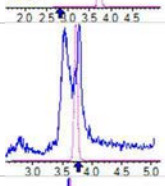 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 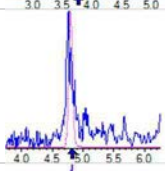 | 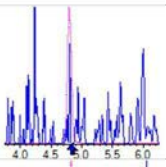 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 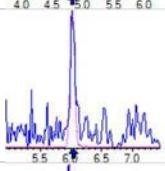 | 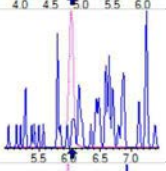 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 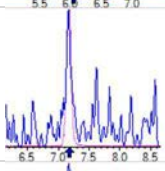 | 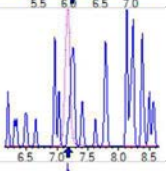 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 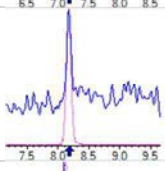 | 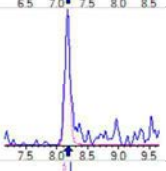 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 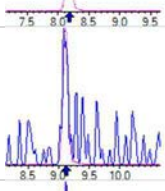 | 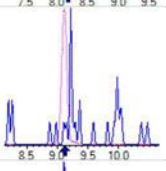 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 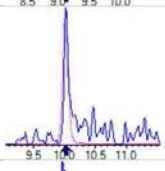 | 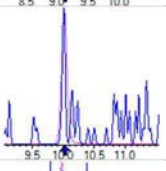 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 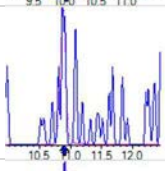 | 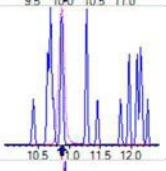 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 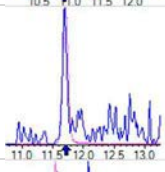 | 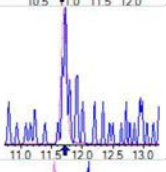 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 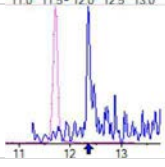 | 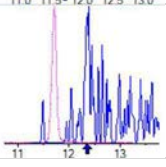 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 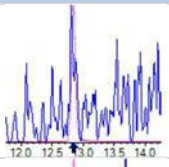 | 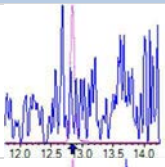 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 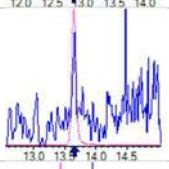 | 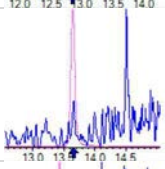 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 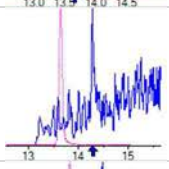 | 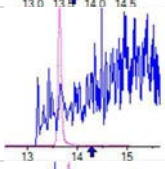 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 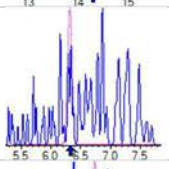 | 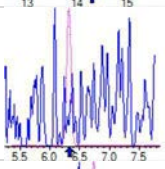 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 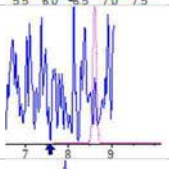 | 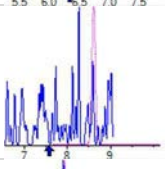 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 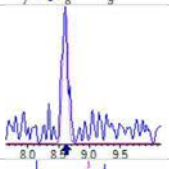 | 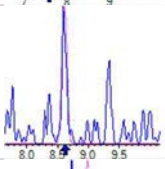 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 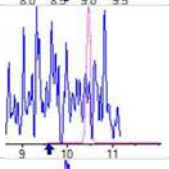 | 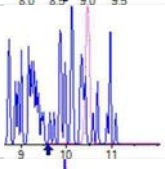 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 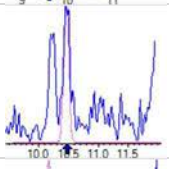 | 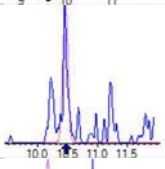 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 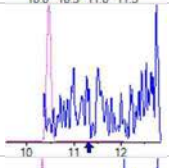 | 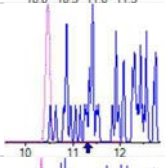 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 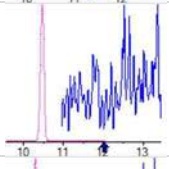 | 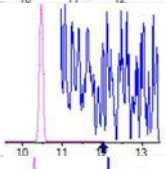 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 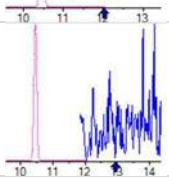 | 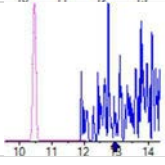 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 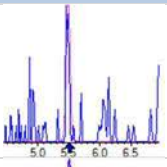 | 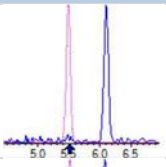 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 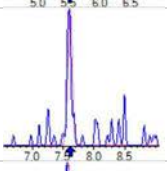 | 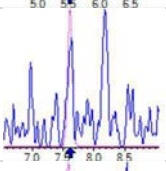 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 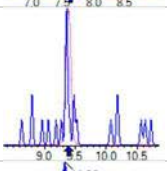 | 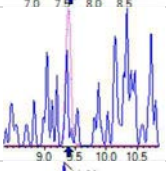 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17813<br>( 627.0 / 81.0 ) 22348 | ( 11.02 , 1.00 ) ( 0.00 , N/A , 0.2) | 178.8<br>70.7 | 1.2546<br>87.2<br>86.0 | 0.0651 | N/A | 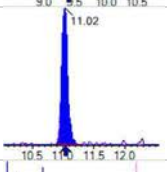 | 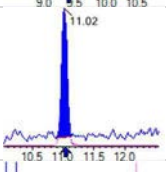 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 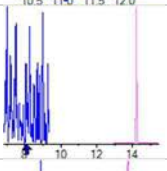 | 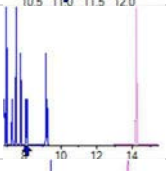 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 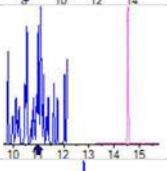 | 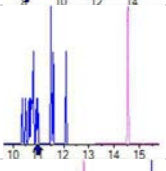 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 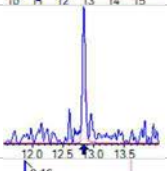 | 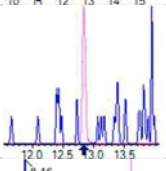 | |
| TFSI | ( 279.7 / 147.0 ) 27003<br>( 279.7 / 211.0 ) 3131 | ( 8.16 , 0.64 ) ( N/A , -0.02 , 0.4) | 20.5<br>9.3 | 0.1159<br>138.0<br>135.5 | 0.0136 | N/A | 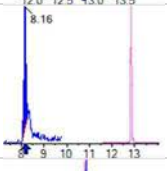 | 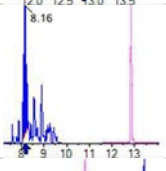 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 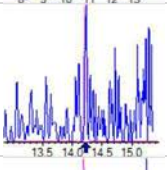 | 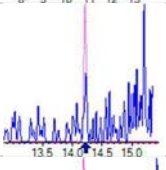 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 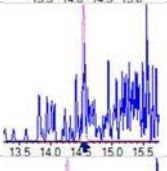 | 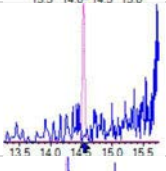 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 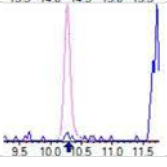 | 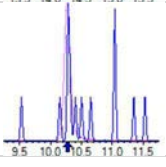 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 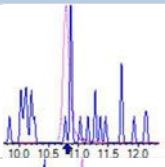 | 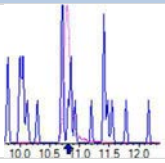 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 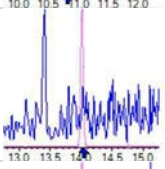 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 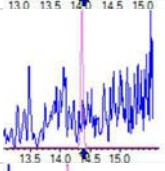 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 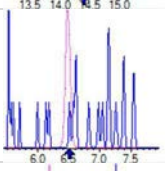 | 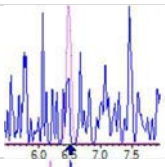 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 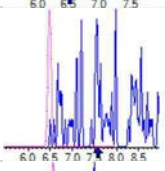 | 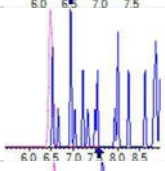 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 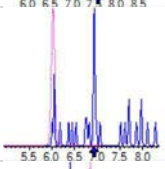 | 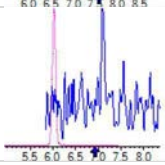 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 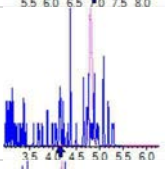 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 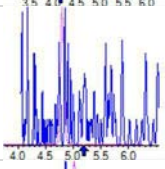 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 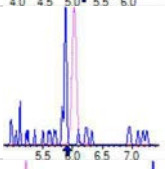 | 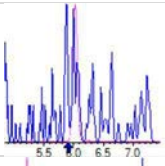 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 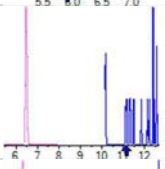 | 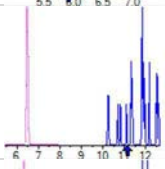 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 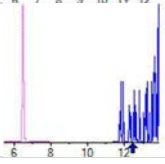 | 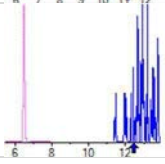 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 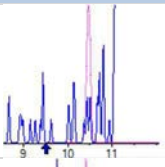 | 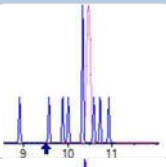 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 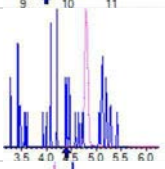 | 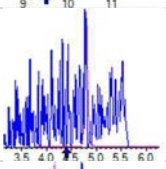 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 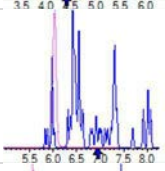 | 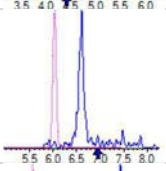 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 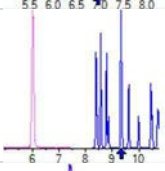 | 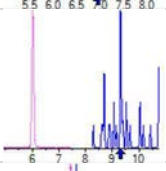 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 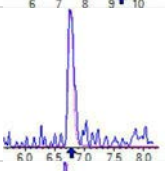 | 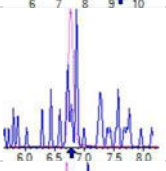 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 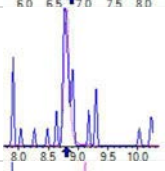 | 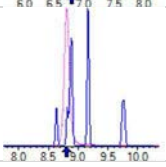 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 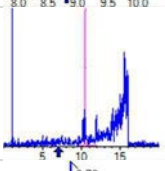 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262976 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1264.8 | N/A | 1.1029 [ 1.0000 ] | 110.3% { 111.2% } | 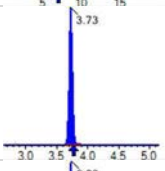 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 137190 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 19929.4 | N/A | 1.0815 [ 1.0000 ] | 108.1% { 108.4% } | 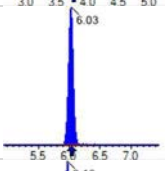 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 389167 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3796.0 | N/A | 0.9844 [ 1.0000 ] | 98.4% { 102.6% } | 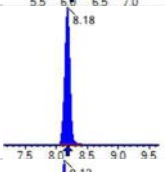 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281293 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 1262.5 | N/A | 0.9890 [ 1.0000 ] | 98.9% { 100.0% } | 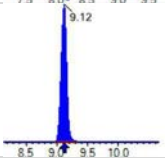 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288262 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 4306.6 | N/A | 0.9871 [ 1.0000 ] | 98.7% { 99.6% } | 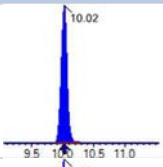 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 926810 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 5981.5 | N/A | 0.9766 [ 1.0000 ] | 97.7% { 99.3% } | 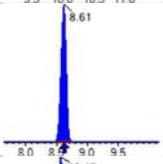 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 753068 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 2288.2 | N/A | 0.9887 [ 1.0000 ] | 98.9% { 105.8% } | 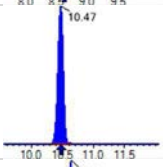 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2487333 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 38314.3 | N/A | 8.2795 [ 8.0000 ] | 103.5% { 111.1% } | 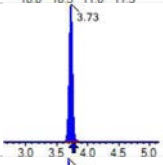 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 977534 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5291.4 | N/A | 3.8189 [ 4.0000 ] | 95.5% { 100.2% } | 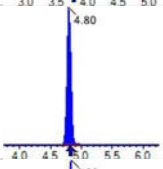 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581828 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 7266.8 | N/A | 1.8588 [ 2.0000 ] | 92.9% { 98.6% } | 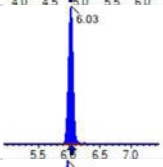 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 647498 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5005.1 | N/A | 1.8596 [ 2.0000 ] | 93.0% { 98.6% } | 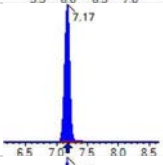 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 869174 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 2744.5 | N/A | 2.0844 [ 2.0000 ] | 104.2% { 100.8% } | 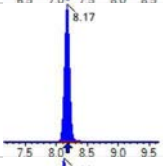 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291733 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 2397.4 | N/A | 1.0577 [ 1.0000 ] | 105.8% { 108.1% } | 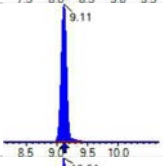 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331768 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 969.7 | N/A | 1.0270 [ 1.0000 ] | 102.7% { 103.1% } | 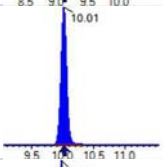 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 377077 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 991.8 | N/A | 0.9922 [ 1.0000 ] | 99.2% { 101.4% } | 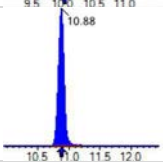 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 381053 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1267.8 | N/A | 0.9845 [ 1.0000 ] | 98.5% { 102.2% } | 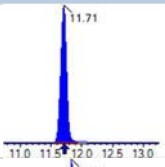  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 329264 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1433.7 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 100.9% } | 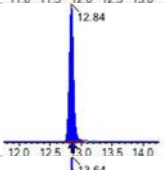  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 527627 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2239.7 | N/A | 1.8751 [ 2.0000 ] | 93.8% { 104.5% } | 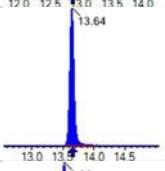  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1695256 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1354.8 | N/A | 2.0245 [ 2.0000 ] | 101.2% { 101.0% } | 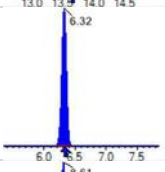  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1339799 | ( 8.61 , N/A ) ( N/A , 0.00 , N/A ) | 3617.9 | N/A | 2.0045 [ 2.0000 ] | 100.2% { 101.6% } | 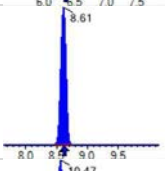  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1599091 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 1759.5 | N/A | 1.9694 [ 2.0000 ] | 98.5% { 103.2% } | 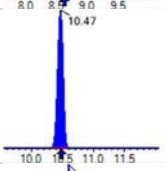  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 712444 | ( 5.49 , N/A ) ( N/A , -0.02 , N/A ) | 90.6 | N/A | 4.9313 [ 4.0000 ] | 123.3% { 120.9% } | 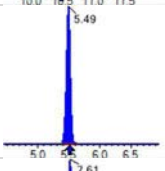  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2019774 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3521.8 | N/A | 4.6714 [ 4.0000 ] | 116.8% { 121.2% } | 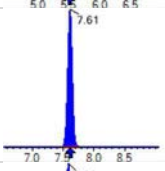  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1553917 | ( 9.39 , N/A ) ( N/A , -0.01 , N/A ) | 1827.4 | N/A | 4.5824 [ 4.0000 ] | 114.6% { 113.6% } | 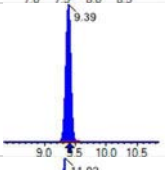  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2837927 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1437.4 | N/A | 8.0077 [ 8.0000 ] | 100.1% { 111.2% } | 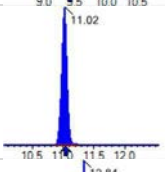  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1512693 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2531.1 | N/A | 2.1023 [ 2.0000 ] | 105.1% { 110.1% } | 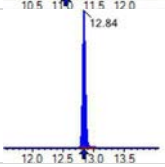  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (6)
Acquired: 2024/03/19 - 18:11

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 289802 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 1757.3 | N/A | 1.8989 [ 2.0000 ] | 94.9% { 100.6% } | 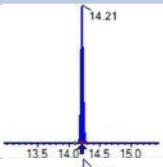  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 320055 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2531.6 | N/A | 1.9556 [ 2.0000 ] | 97.8% { 104.4% } | 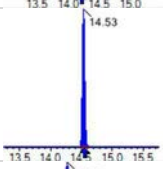  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877073 | ( 10.27 , N/A ) ( N/A , -0.01 , N/A ) | 2449.7 | N/A | 4.1981 [ 4.0000 ] | 105.0% { 103.7% } | 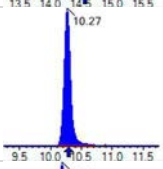  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 844352 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1833.1 | N/A | 4.4342 [ 4.0000 ] | 110.9% { 109.6% } | 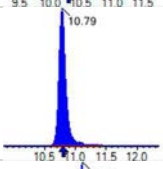  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1459612 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2263.5 | N/A | 21.2823 [ 20.0000 ] | 106.4% { 106.2% } | 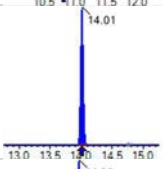  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1442578 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4066.8 | N/A | 20.7236 [ 20.0000 ] | 103.6% { 111.8% } | 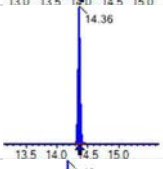  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1026816 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 2225.9 | N/A | 7.2012 [ 8.0000 ] | 90.0% { 100.4% } | 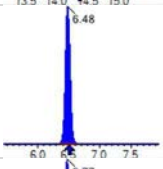  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603581 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1163.2 | N/A | 1.9313 [ 2.0000 ] | 96.6% { 97.8% } | 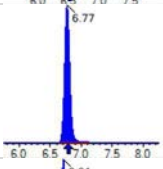  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 592829 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 726.4 | N/A | 2.0837 [ 2.0000 ] | 104.2% { 107.2% } | 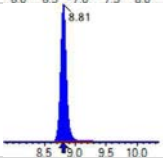  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .02240 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0120 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05620 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.980 | ng/mL0 | | |
| | 13C5-PFPEA | 4.0 | ng/mL0 | | |
| | 13C5-PFHXA | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA | 1.990 | ng/mL0 | | |
| | 13C8-PFOA | 1.980 | ng/mL0 | | |
| | 13C9-PFNA | .9090 | ng/mL0 | | |
| | 13C6-PFDA | 1.040 | ng/mL0 | | |
| | 13C7-PFUnA | .9980 | ng/mL0 | | |
| | 13C2-PFDOA | .9780 | ng/mL0 | | |
| | 13C2-PFTEDA | .9790 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.80 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 1.910 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.980 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.40 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.50 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.050 | ng/mL0 | | |
| | 13C8-PFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSA | 1.920 | ng/mL0 | | |
| | D5-NETFOSA | 1.880 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.170 | ng/mL0 | | |
| | D5-NETFOSAA | 4.270 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0103L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB30 | D7-NMEFOSE0 | 20.20 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.30 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.970 | ng/mL0 | | |

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A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 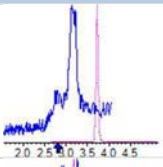 | 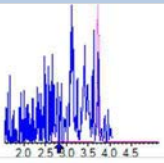 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 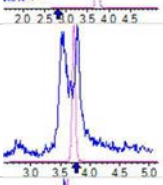 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 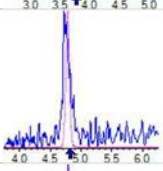 | 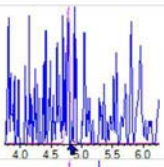 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 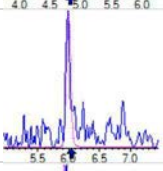 | 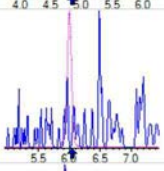 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 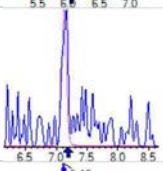 | 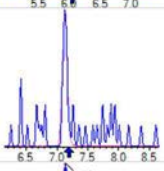 | |
| PFOA | ( 413.0 / 369.0 )<br>18323<br>( 413.0 / 169.0 )<br>6829 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , -0.2) | 17.8<br>41.7 | 0.3727<br>101.9<br>108.6 | 0.0224 | N/A | 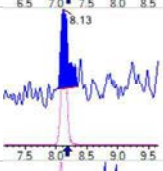 | 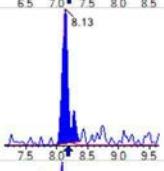 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 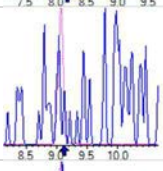 | 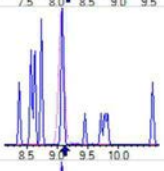 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 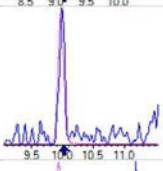 | 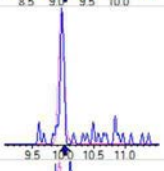 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 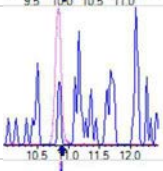 | 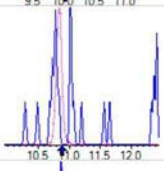 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 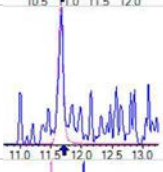 | 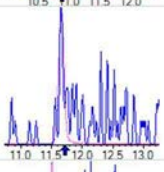 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 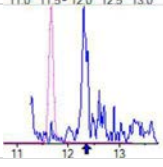 | 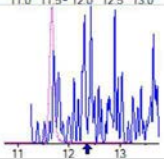 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 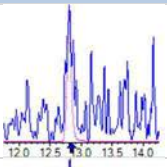 | 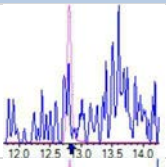 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 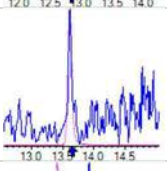 | 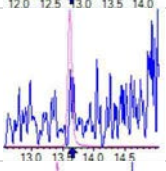 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 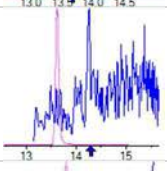 | 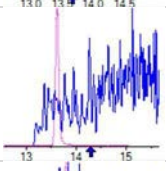 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 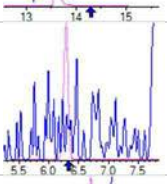 | 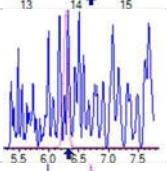 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 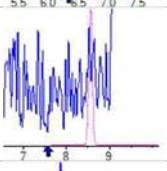 | 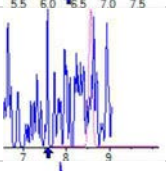 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 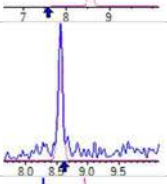 | 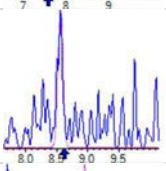 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 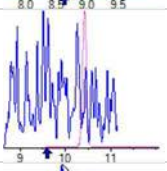 | 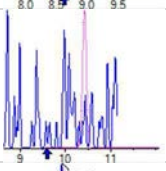 | |
| PFOS | ( 499.0 / 80.0 )<br>10478<br>( 499.0 / 99.0 )<br>2581 | ( 10.41 , 1.00 )<br>( -0.02 , N/A , -0.9) | 49.9<br>308.2 | 0.2463<br>105.4<br>102.6 | 0.0120 | N/A | 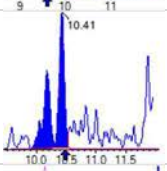 | 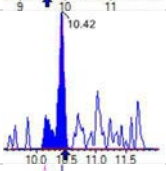 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 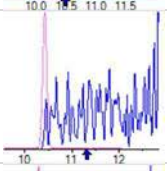 | 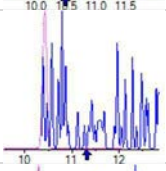 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 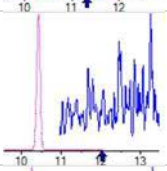 | 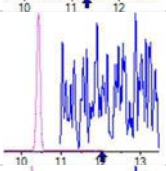 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 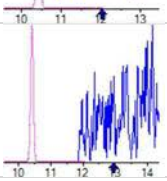 | 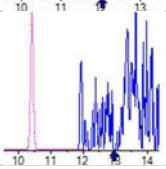 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 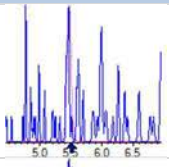 | 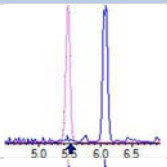 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 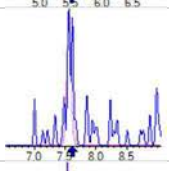 | 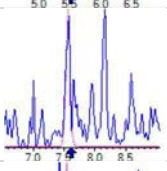 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 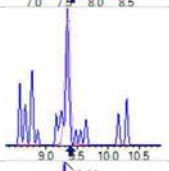 | 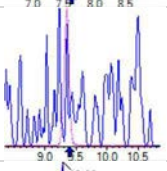 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14755<br>( 627.0 / 81.0 )<br>25191 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.4) | 151.5<br>73.6 | 1.7073<br>118.6<br>117.0 | 0.0562 | N/A | 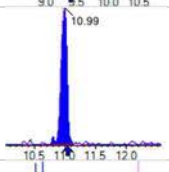 | 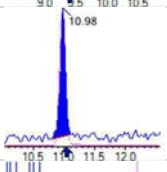 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 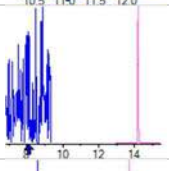 | 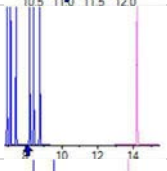 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 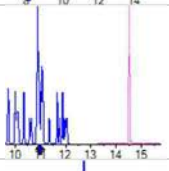 | 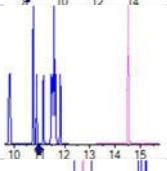 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 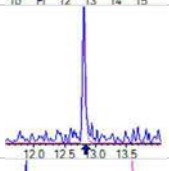 | 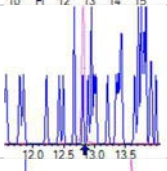 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 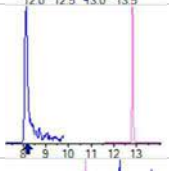 | 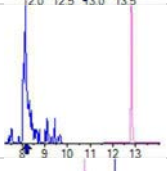 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 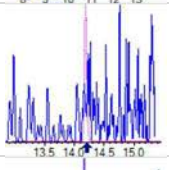 | 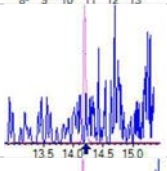 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 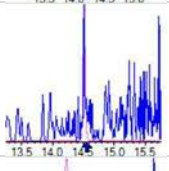 | 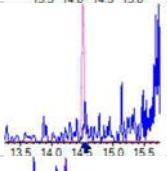 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 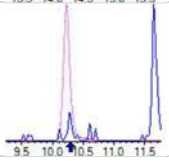 | 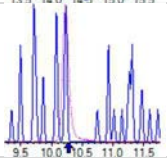 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 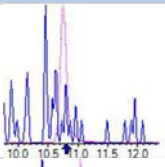 | 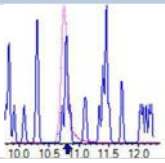 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 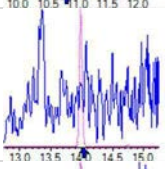 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 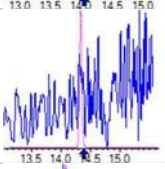 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 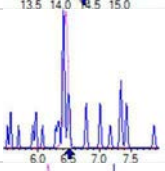 | 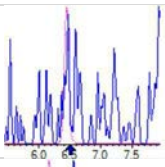 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 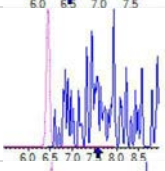 | 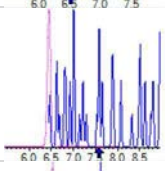 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 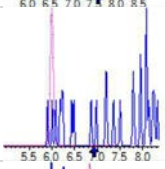 | 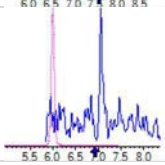 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 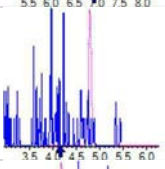 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 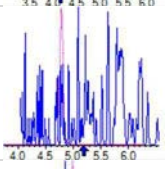 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 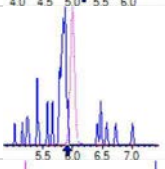 | 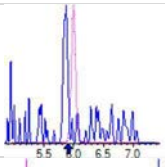 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 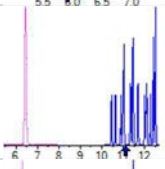 | 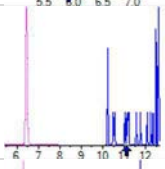 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 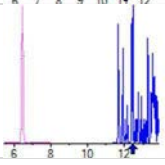 | 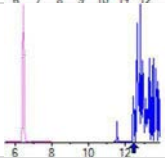 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 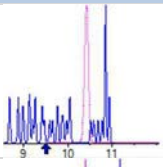 | 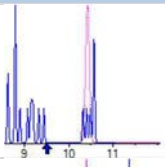 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 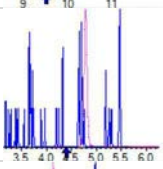 | 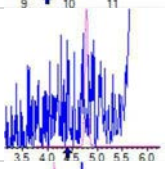 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 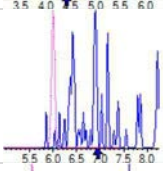 | 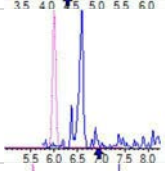 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 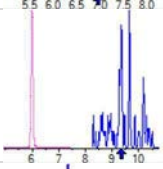 | 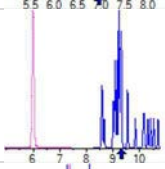 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 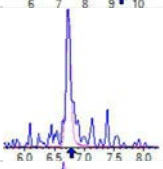 | 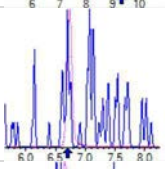 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 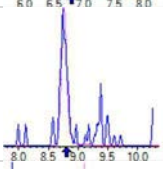 | 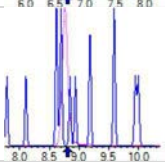 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 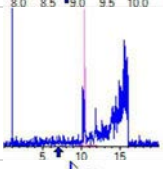 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256296 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 1342.9 | N/A | 1.0749 [ 1.0000 ] | 107.5% { 108.4% } | 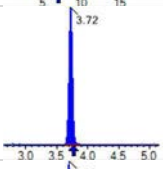 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117918 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 20197.0 | N/A | 0.9295 [ 1.0000 ] | 93.0% { 93.1% } | 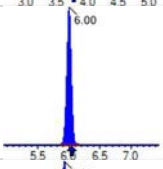 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 372812 | ( 8.13 , N/A ) ( N/A , -0.05 , N/A ) | 6218.0 | N/A | 0.9431 [ 1.0000 ] | 94.3% { 98.3% } | 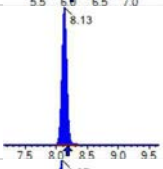 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277069 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 1006.7 | N/A | 0.9742 [ 1.0000 ] | 97.4% { 98.5% } | 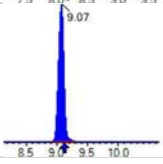 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273034 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1301.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 94.4% } | 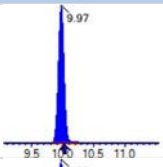 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 886188 | ( 8.57 , N/A ) ( N/A , -0.05 , N/A ) | 4958.5 | N/A | 0.9338 [ 1.0000 ] | 93.4% { 94.9% } | 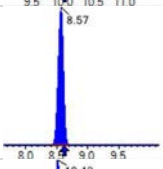 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 733959 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1895.2 | N/A | 0.9637 [ 1.0000 ] | 96.4% { 103.1% } | 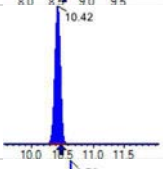 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2335173 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 40991.8 | N/A | 7.9756 [ 8.0000 ] | 99.7% { 104.3% } | 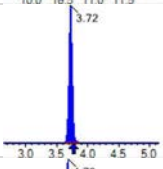 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 880098 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 5161.0 | N/A | 4.0001 [ 4.0000 ] | 100.0% { 90.2% } | 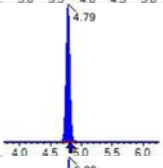 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 555973 | ( 6.00 , N/A ) ( N/A , -0.04 , N/A ) | 11242.8 | N/A | 2.0664 [ 2.0000 ] | 103.3% { 94.2% } | 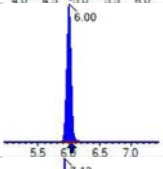 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 596480 | ( 7.13 , N/A ) ( N/A , -0.05 , N/A ) | 5847.9 | N/A | 1.9930 [ 2.0000 ] | 99.7% { 90.9% } | 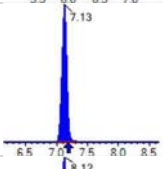 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 792769 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2469.3 | N/A | 1.9846 [ 2.0000 ] | 99.2% { 91.9% } | 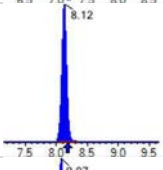 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 246839 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 3156.7 | N/A | 0.9086 [ 1.0000 ] | 90.9% { 91.5% } | 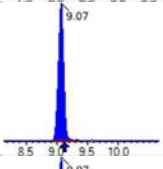 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317562 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 988.0 | N/A | 1.0379 [ 1.0000 ] | 103.8% { 98.7% } | 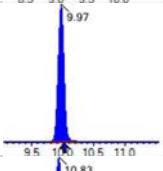 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 359228 | ( 10.83 , N/A ) ( N/A , -0.05 , N/A ) | 994.3 | N/A | 0.9979 [ 1.0000 ] | 99.8% { 96.6% } | 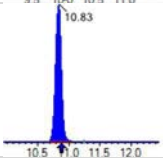 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 358593 | ( 11.66 , N/A ) ( N/A , -0.05 , N/A ) | 1376.9 | N/A | 0.9782 [ 1.0000 ] | 97.8% { 96.2% } | 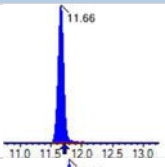  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305570 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1339.8 | N/A | 0.9788 [ 1.0000 ] | 97.9% { 93.6% } | 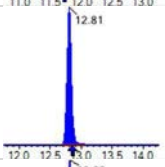  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 479691 | ( 13.62 , N/A ) ( N/A , -0.04 , N/A ) | 2261.1 | N/A | 1.7998 [ 2.0000 ] | 90.0% { 95.0% } | 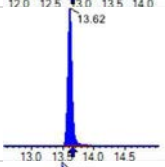  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1646009 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 932.0 | N/A | 2.0558 [ 2.0000 ] | 102.8% { 98.1% } | 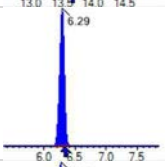  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1314731 | ( 8.56 , N/A ) ( N/A , -0.05 , N/A ) | 3337.1 | N/A | 2.0572 [ 2.0000 ] | 102.9% { 99.7% } | 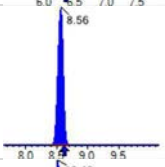  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1507737 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1958.6 | N/A | 1.9052 [ 2.0000 ] | 95.3% { 97.3% } | 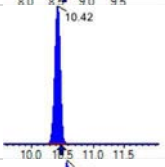  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 688420 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 92.2 | N/A | 4.9834 [ 4.0000 ] | 124.6% { 116.9% } | 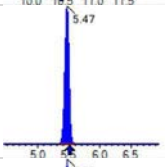  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1818303 | ( 7.57 , N/A ) ( N/A , -0.05 , N/A ) | 3961.1 | N/A | 4.3982 [ 4.0000 ] | 110.0% { 109.1% } | 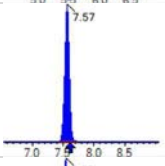  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1459191 | ( 9.35 , N/A ) ( N/A , -0.05 , N/A ) | 1728.0 | N/A | 4.5003 [ 4.0000 ] | 112.5% { 106.7% } | 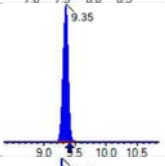  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2726916 | ( 10.97 , N/A ) ( N/A , -0.05 , N/A ) | 1591.3 | N/A | 8.0472 [ 8.0000 ] | 100.6% { 106.8% } | 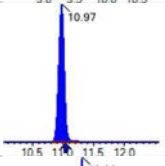  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1346002 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 3079.1 | N/A | 1.9193 [ 2.0000 ] | 96.0% { 98.0% } | 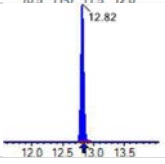  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (25)
Acquired: 2024/03/20 - 00:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 286199 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 2013.6 | N/A | 1.9241 [ 2.0000 ] | 96.2% { 99.4% } | 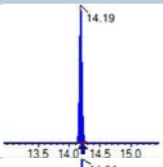  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 299849 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 2282.7 | N/A | 1.8798 [ 2.0000 ] | 94.0% { 97.8% } | 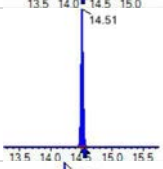  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 849550 | ( 10.23 , N/A ) ( N/A , -0.05 , N/A ) | 2448.5 | N/A | 4.1722 [ 4.0000 ] | 104.3% { 100.5% } | 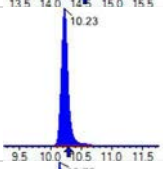  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792134 | ( 10.75 , N/A ) ( N/A , -0.05 , N/A ) | 2202.4 | N/A | 4.2683 [ 4.0000 ] | 106.7% { 102.9% } | 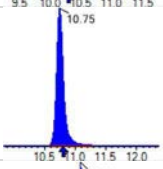  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1353135 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 1956.5 | N/A | 20.2435 [ 20.0000 ] | 101.2% { 98.4% } | 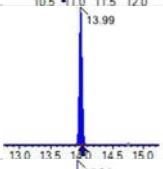  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1307174 | ( 14.34 , N/A ) ( N/A , -0.03 , N/A ) | 3568.0 | N/A | 19.2674 [ 20.0000 ] | 96.3% { 101.3% } | 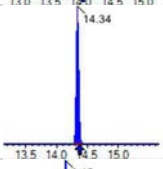  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977389 | ( 6.45 , N/A ) ( N/A , -0.05 , N/A ) | 2164.6 | N/A | 7.9749 [ 8.0000 ] | 99.7% { 95.6% } | 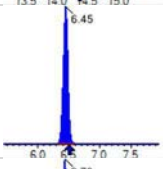  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603450 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1377.5 | N/A | 2.0385 [ 2.0000 ] | 101.9% { 97.8% } | 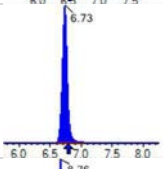  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 547420 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 720.5 | N/A | 2.0314 [ 2.0000 ] | 101.6% { 98.9% } | 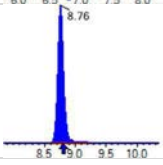  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01003L
Calibration:N 2412010L

SDG:N 24C0103L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | 0.01130 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .01660 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01040 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06450 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0103L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01003L | Instrument:N | SaphiraL |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 7.890 | ng/mL0 | | |
| | 13C5-PFPEA | 3.730 | ng/mL0 | | |
| | 13C5-PFHXA | 1.910 | ng/mL0 | | |
| | 13C4-PFHPA | 1.880 | ng/mL0 | | |
| | 13C8-PFOA | 1.90 | ng/mL0 | | |
| | 13C9-PFNA | 1.010 | ng/mL0 | | |
| | 13C6-PFDA | .9790 | ng/mL0 | | |
| | 13C7-PFUnA | 1.050 | ng/mL0 | | |
| | 13C2-PFDOA | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.040 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.770 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.060 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.10 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.960 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.440 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.30 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 7.70 | ng/mL0 | | |
| | 13C8-PFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSA | 1.90 | ng/mL0 | | |
| | D5-NETFOSA | 1.920 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.570 | ng/mL0 | | |
| | D5-NETFOSAA | 4.630 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0103L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01003L | Instrument: | SaphiraL |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD010 3-CCB40 | D7-NMEFOSE0 | 19.50 | ng/mL0 | | |
| | D9-NETFOSE0 | 18.60 | ng/mL0 | | |
| | 13C3-HFPO-DA | 7.620 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 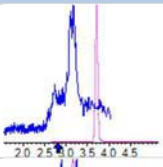 | 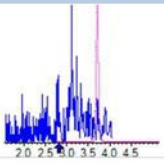 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 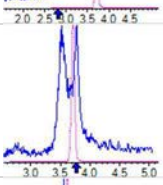 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 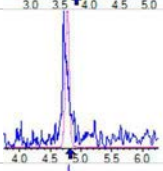 | 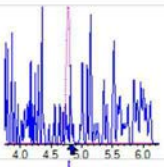 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 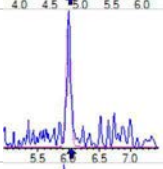 | 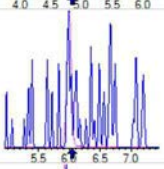 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 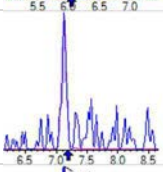 | 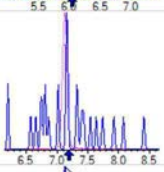 | |
| PFOA | ( 413.0 / 369.0 )<br>13637<br>( 413.0 / 169.0 )<br>6334 | ( 8.12 , 1.00 )<br>( 0.00 , N/A , -0.8) | 18.3<br>46.8 | 0.4644<br>127.1<br>135.3 | 0.0113 | N/A | 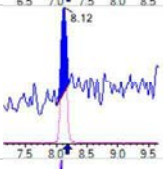 | 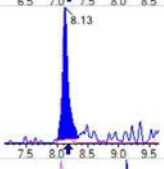 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 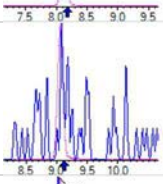 | 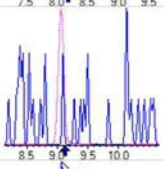 | |
| PFDA | ( 513.0 / 469.0 )<br>4646<br>( 513.0 / 169.0 )<br>996 | ( 9.94 , 1.00 )<br>( -0.02 , N/A , -2.0) | 61.2<br>164.4 | 0.2145<br>183.0<br>179.2 | 0.0166 | N/A | 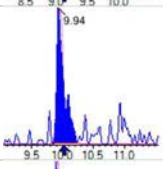 | 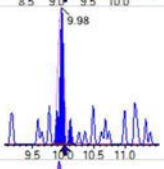 | IR2, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 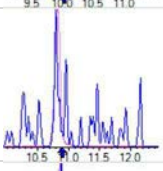 | 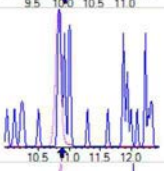 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 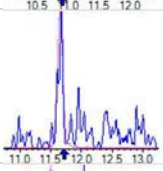 | 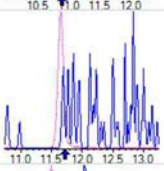 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 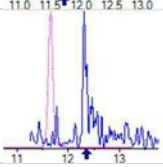 | 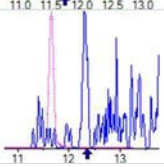 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 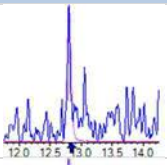 | 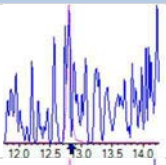 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 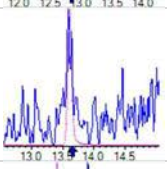 | 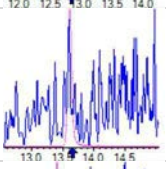 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 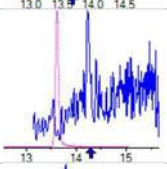 | 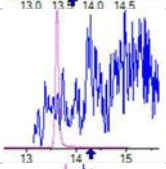 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 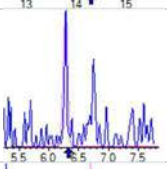 | 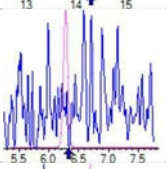 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 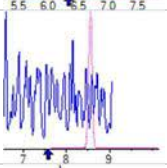 | 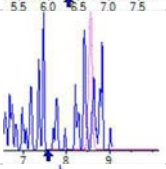 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 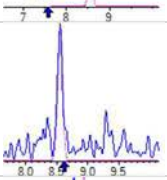 | 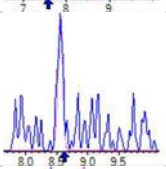 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 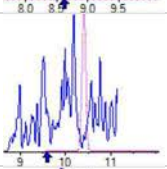 | 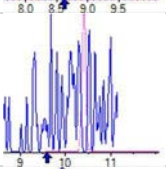 | |
| PFOS | ( 499.0 / 80.0 )<br>8916<br>( 499.0 / 99.0 )<br>2079 | ( 10.41 , 1.00 )<br>( 0.00 , N/A , -0.5) | 41.4<br>168.0 | 0.2331<br>99.7<br>97.1 | 0.0104 | N/A | 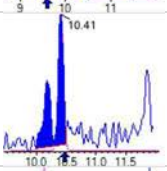 | 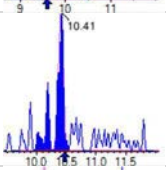 | MI2 DG<br>2024-03-20 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 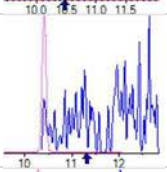 | 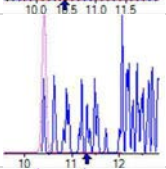 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 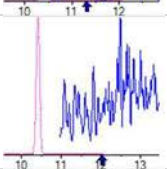 | 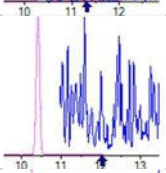 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 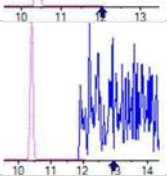 | 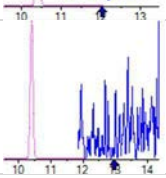 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (37)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 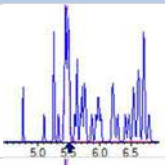 | 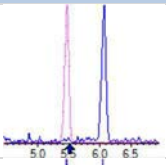 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 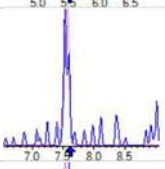 | 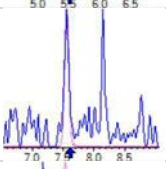 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 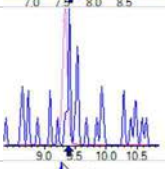 | 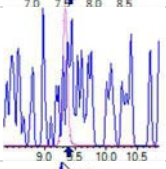 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15745<br>( 627.0 / 81.0 )<br>18532 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.3) | 164.1<br>43.8 | 1.1770<br>81.8<br>80.7 | 0.0645 | N/A | 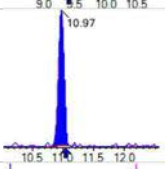 | 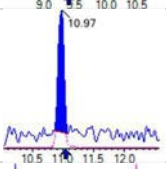 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 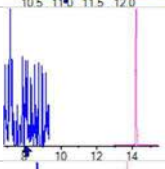 | 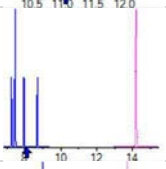 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 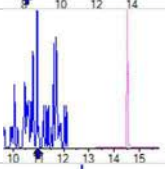 | 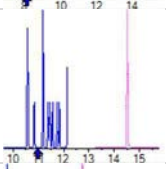 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 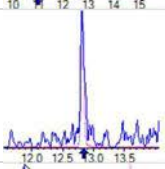 | 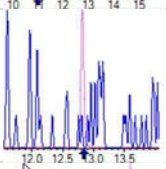 | |
| TFSI | ( 279.7 / 147.0 )<br>27475<br>( 279.7 / 211.0 )<br>1556 | ( 8.12 , 0.63 )<br>( N/A , -0.06 , 0.8) | 22.0<br>11.1 | 0.0567<br>67.4<br>66.2 | 0.0165 | N/A | 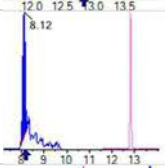 | 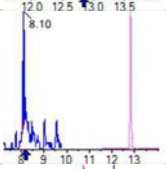 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 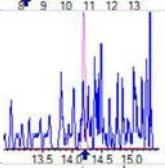 | 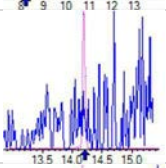 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 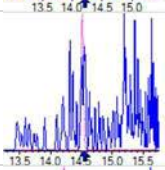 | 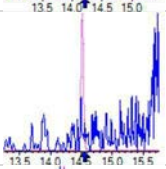 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 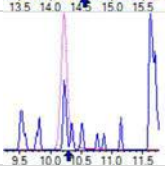 | 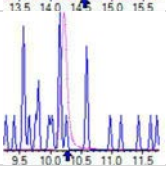 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 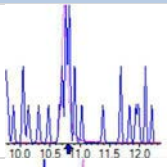 | 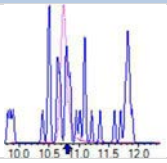 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 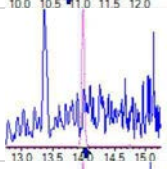 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 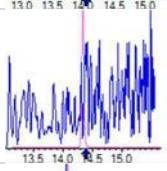 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 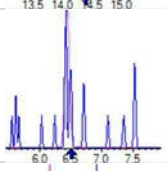 | 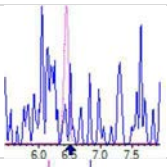 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 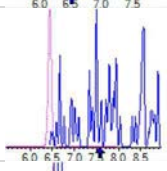 | 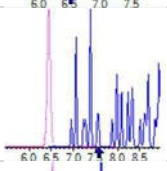 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 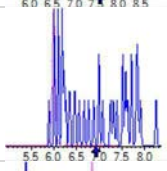 | 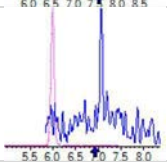 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 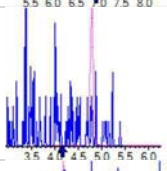 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 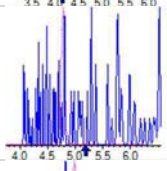 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 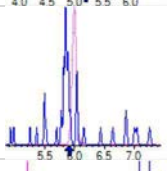 | 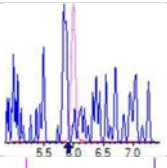 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 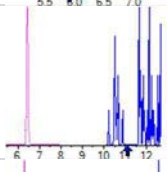 | 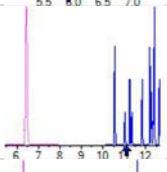 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 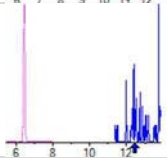 | 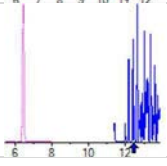 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 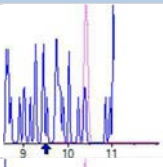 | 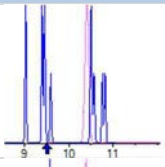 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 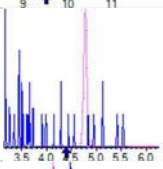 | 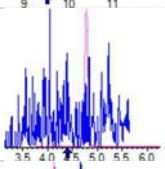 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 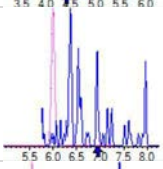 | 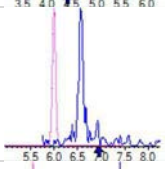 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 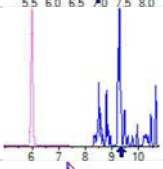 | 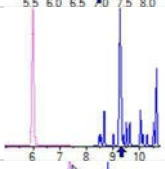 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 4079<br>( 357.2 / 243.0 ) 585 | ( 6.72 , 1.00 ) ( -0.01 , N/A , -1.6) | 36.5<br>9.1 | 0.1433<br>130.0<br>137.7 | 0.0127 | N/A | 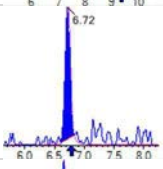 | 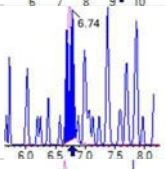 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 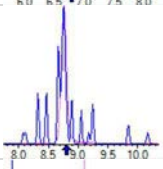 | 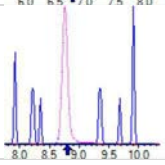 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 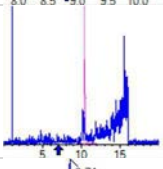 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261851 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 1337.6 | N/A | 1.0982 [ 1.0000 ] | 109.8% { 110.7% } | 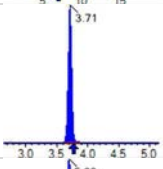 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122225 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 1949.5 | N/A | 0.9635 [ 1.0000 ] | 96.3% { 96.5% } | 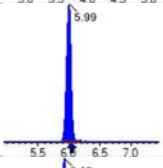 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378012 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 4414.7 | N/A | 0.9562 [ 1.0000 ] | 95.6% { 99.6% } | 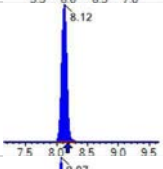 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 243570 | ( 9.07 , N/A ) ( N/A , -0.05 , N/A ) | 839.7 | N/A | 0.8564 [ 1.0000 ] | 85.6% { 86.6% } | 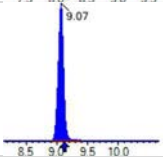 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 249043 | ( 9.97 , N/A ) ( N/A , -0.06 , N/A ) | 13496.6 | N/A | 0.8528 [ 1.0000 ] | 85.3% { 86.1% } | 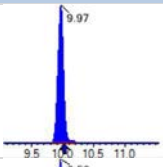 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 860348 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4025.5 | N/A | 0.9066 [ 1.0000 ] | 90.7% { 92.2% } | 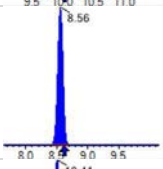 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 676863 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2296.0 | N/A | 0.8887 [ 1.0000 ] | 88.9% { 95.1% } | 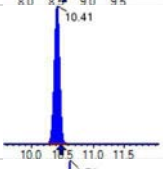 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2361568 | ( 3.71 , N/A ) ( N/A , -0.05 , N/A ) | 42554.0 | N/A | 7.8946 [ 8.0000 ] | 98.7% { 105.5% } | 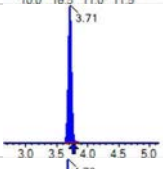 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 850898 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5022.0 | N/A | 3.7311 [ 4.0000 ] | 93.3% { 87.2% } | 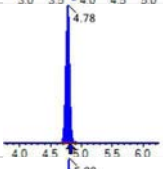 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 533907 | ( 5.99 , N/A ) ( N/A , -0.05 , N/A ) | 10215.7 | N/A | 1.9145 [ 2.0000 ] | 95.7% { 90.5% } | 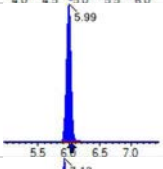 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 584136 | ( 7.12 , N/A ) ( N/A , -0.05 , N/A ) | 6396.9 | N/A | 1.8830 [ 2.0000 ] | 94.1% { 89.0% } | 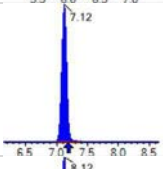 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 770117 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 2454.9 | N/A | 1.9014 [ 2.0000 ] | 95.1% { 89.3% } | 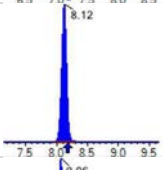 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 240789 | ( 9.06 , N/A ) ( N/A , -0.05 , N/A ) | 3328.3 | N/A | 1.0082 [ 1.0000 ] | 100.8% { 89.2% } | 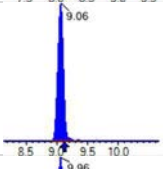 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 273272 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1159.4 | N/A | 0.9791 [ 1.0000 ] | 97.9% { 84.9% } | 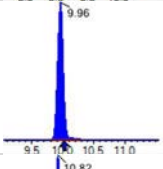 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 344337 | ( 10.82 , N/A ) ( N/A , -0.06 , N/A ) | 928.5 | N/A | 1.0487 [ 1.0000 ] | 104.9% { 92.6% } | 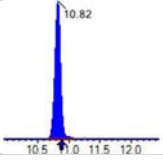 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-CCB4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (37)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 343936 | ( 11.65 , N/A ) ( N/A , -0.06 , N/A ) | 1056.5 | N/A | 1.0286 [ 1.0000 ] | 102.9% { 92.2% } | 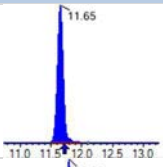 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295022 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1239.8 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 90.4% } | 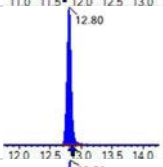 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 429520 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2258.1 | N/A | 1.7668 [ 2.0000 ] | 88.3% { 85.0% } | 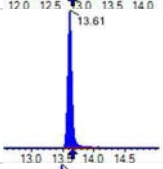 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1603797 | ( 6.28 , N/A ) ( N/A , -0.05 , N/A ) | 990.1 | N/A | 2.0632 [ 2.0000 ] | 103.2% { 95.6% } | 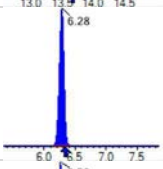 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1303820 | ( 8.56 , N/A ) ( N/A , -0.06 , N/A ) | 4967.6 | N/A | 2.1014 [ 2.0000 ] | 105.1% { 98.9% } | 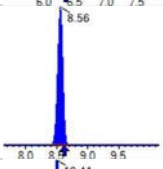 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1479061 | ( 10.41 , N/A ) ( N/A , -0.07 , N/A ) | 1616.5 | N/A | 2.0266 [ 2.0000 ] | 101.3% { 95.5% } | 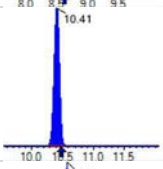 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 665228 | ( 5.47 , N/A ) ( N/A , -0.04 , N/A ) | 97.6 | N/A | 4.9601 [ 4.0000 ] | 124.0% { 112.9% } | 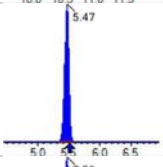 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1780844 | ( 7.56 , N/A ) ( N/A , -0.05 , N/A ) | 4514.1 | N/A | 4.4369 [ 4.0000 ] | 110.9% { 106.8% } | 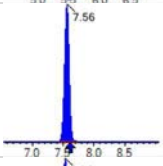 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1354290 | ( 9.34 , N/A ) ( N/A , -0.06 , N/A ) | 1695.0 | N/A | 4.3022 [ 4.0000 ] | 107.6% { 99.0% } | 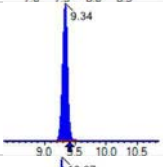 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2534783 | ( 10.97 , N/A ) ( N/A , -0.06 , N/A ) | 1126.8 | N/A | 7.7049 [ 8.0000 ] | 96.3% { 99.3% } | 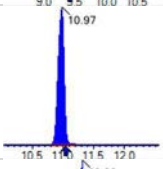 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1264522 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 2176.7 | N/A | 1.9552 [ 2.0000 ] | 97.8% { 92.0% } | 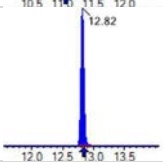 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (37)
Acquired: 2024/03/20 - 04:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 260773 | ( 14.19 , N/A ) ( N/A , -0.02 , N/A ) | 1698.6 | N/A | 1.9011 [ 2.0000 ] | 95.1% { 90.5% } | 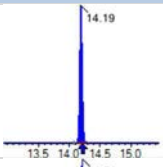  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 281981 | ( 14.51 , N/A ) ( N/A , -0.02 , N/A ) | 2400.9 | N/A | 1.9169 [ 2.0000 ] | 95.8% { 91.9% } | 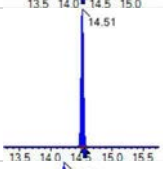  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 857289 | ( 10.22 , N/A ) ( N/A , -0.06 , N/A ) | 2460.4 | N/A | 4.5653 [ 4.0000 ] | 114.1% { 101.4% } | 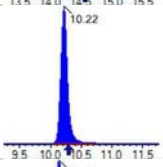  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 792921 | ( 10.74 , N/A ) ( N/A , -0.06 , N/A ) | 1959.0 | N/A | 4.6330 [ 4.0000 ] | 115.8% { 103.0% } | 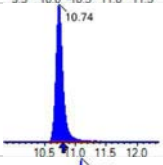  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1199404 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 2280.1 | N/A | 19.4572 [ 20.0000 ] | 97.3% { 87.3% } | 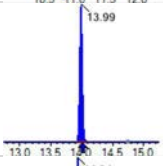  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1160864 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 4100.8 | N/A | 18.5541 [ 20.0000 ] | 92.8% { 90.0% } | 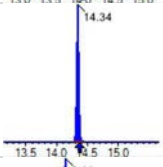  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 967466 | ( 6.44 , N/A ) ( N/A , -0.05 , N/A ) | 2453.2 | N/A | 7.6157 [ 8.0000 ] | 95.2% { 94.6% } | 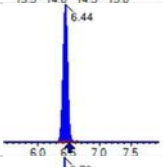  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 603151 | ( 6.73 , N/A ) ( N/A , -0.05 , N/A ) | 1238.1 | N/A | 2.2338 [ 2.0000 ] | 111.7% { 97.8% } | 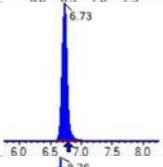  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 530105 | ( 8.76 , N/A ) ( N/A , -0.05 , N/A ) | 742.7 | N/A | 2.1566 [ 2.0000 ] | 107.8% { 95.8% } | 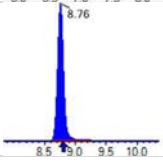  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 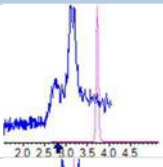 | 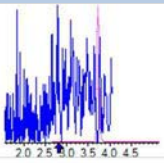 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 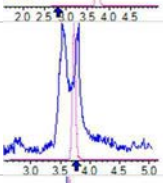 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 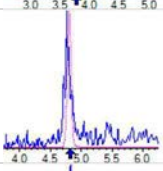 | 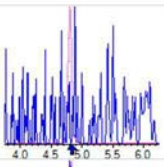 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 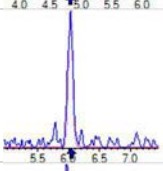 | 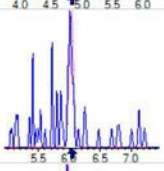 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 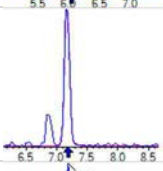 | 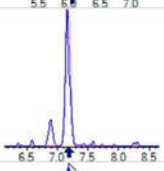 | |
| PFOA | ( 413.0 / 369.0 )<br>3210508<br>( 413.0 / 169.0 )<br>1253633 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.1) | 390.5<br>334.5 | 0.3905<br>106.8<br>113.7 | 7.3269 | N/A | 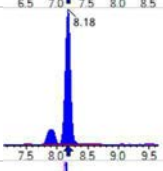 | 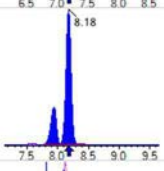 | MI4 ABK<br>3/19/24 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 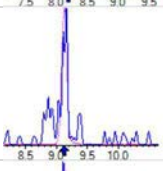 | 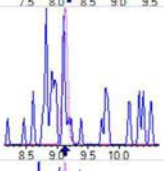 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 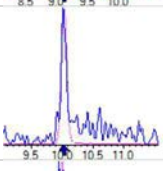 | 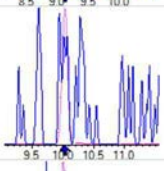 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 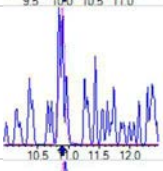 | 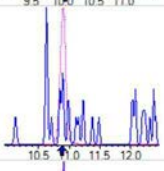 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 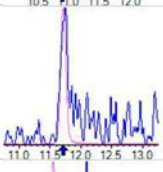 | 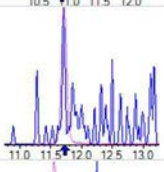 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 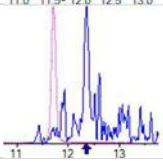 | 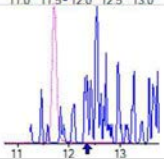 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 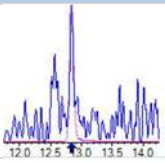 | 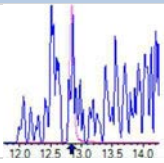 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 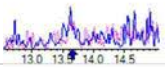 | 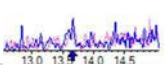 | NR, |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 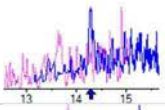 | 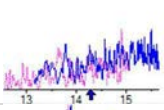 | NR, |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 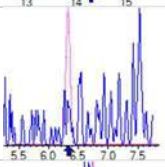 | 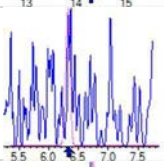 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 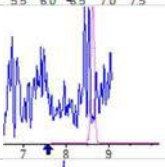 | 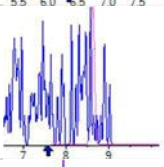 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 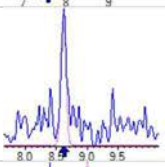 | 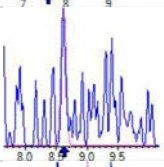 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 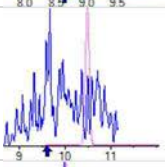 | 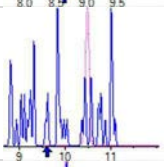 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 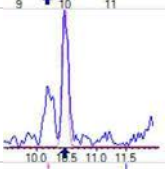 | 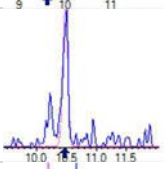 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 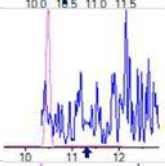 | 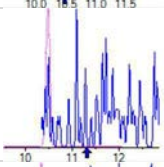 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 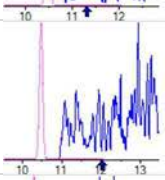 | 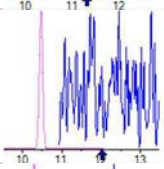 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 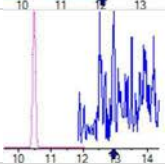 | 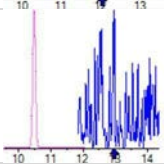 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 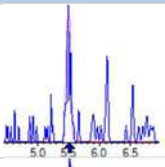 | 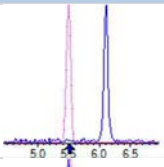 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 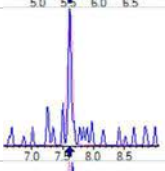 | 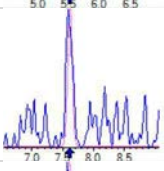 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 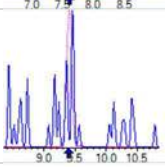 | 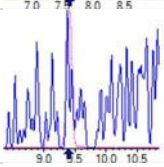 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 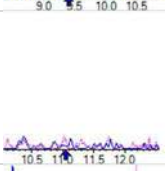 | 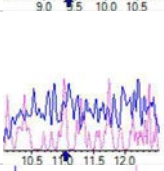 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 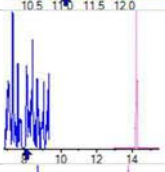 | 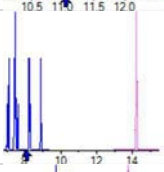 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 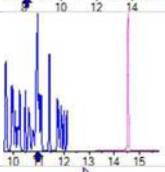 | 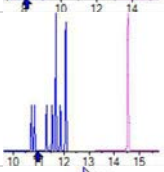 | |
| PFOSA | ( 498.0 / 78.0 )<br>6877109<br>( 498.0 / 478.0 )<br>99030 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 429.6<br>334.5 | 0.0144<br>102.6<br>96.7 | 9.4296 | N/A | 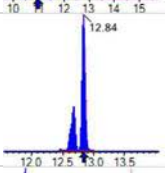 | 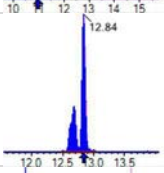 | MI4 ABK 3/19/24 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 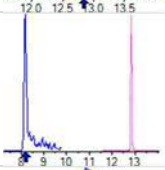 | 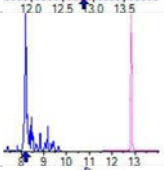 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1285923<br>( 512.0 / 169.0 )<br>940847 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.8) | 3496.8<br>1493.3 | 0.7317<br>97.8<br>96.5 | 8.5401 | N/A | 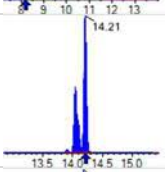 | 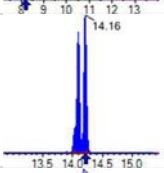 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>1506523<br>( 526.0 / 169.0 )<br>1906366 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.0) | 3724.9<br>3295.0 | 1.2654<br>102.5<br>101.9 | 8.4436 | N/A | 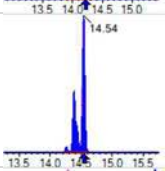 | 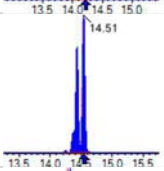 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 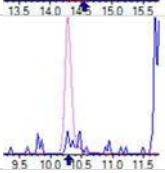 | 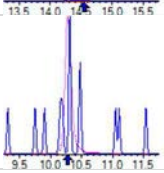 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (4)
Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 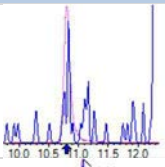 | 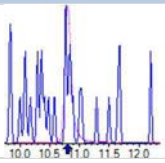 | |
| NMeFOSE | ( 616.0 / 59.0 ) 747241 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 1656.5 | N/A<br>0.0<br>0.0 | 9.5158 | N/A | 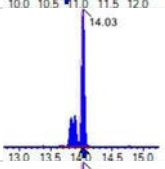 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 614232 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 2466.7 | N/A<br>0.0<br>0.0 | 9.4444 | N/A | 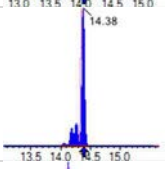 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 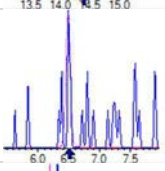 | 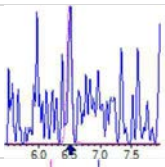 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 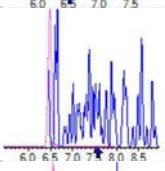 | 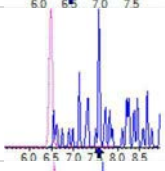 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 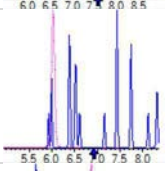 | 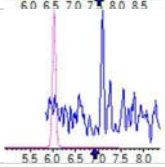 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 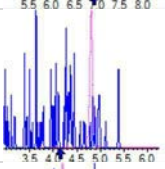 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 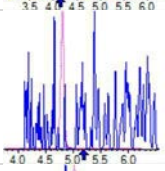 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 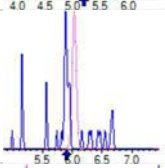 | 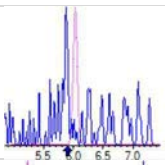 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 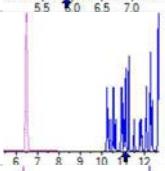 | 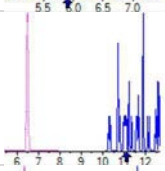 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 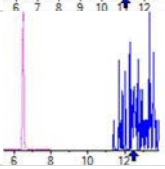 | 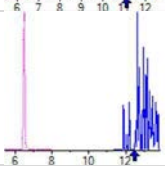 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 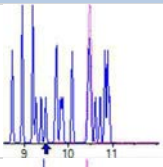 | 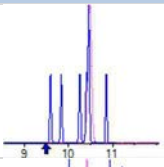 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 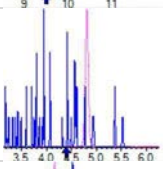 | 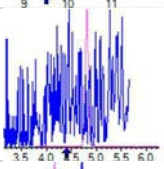 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 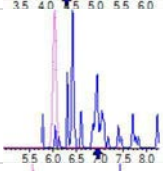 | 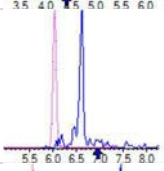 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 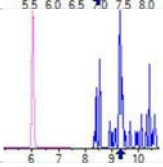 | 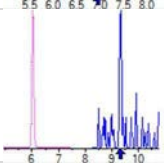 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 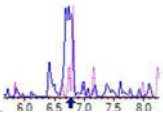 | 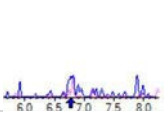 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | NR, |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 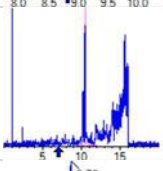 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>261979 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1320.1 | N/A | 1.0987<br>[ 1.0000 ] | 109.9%<br>{ 110.8% } | 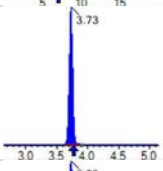 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>122507 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 105609.8 | N/A | 0.9657<br>[ 1.0000 ] | 96.6%<br>{ 96.8% } | 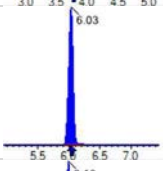 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>379384 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 4686.4 | N/A | 0.9597<br>[ 1.0000 ] | 96.0%<br>{ 100.0% } | 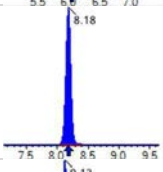 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>269870 | ( 9.13 , N/A )<br>( N/A , 0.01 , N/A ) | 731.1 | N/A | 0.9489<br>[ 1.0000 ] | 94.9%<br>{ 96.0% } | 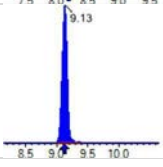 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281459 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 3561.4 | N/A | 0.9638 [ 1.0000 ] | 96.4% { 97.3% } | 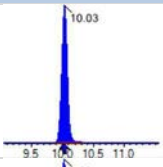 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 857437 | ( 8.62 , N/A ) ( N/A , 0.01 , N/A ) | 6887.8 | N/A | 0.9035 [ 1.0000 ] | 90.3% { 91.9% } | 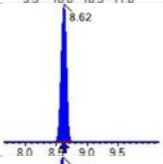 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 685748 | ( 10.49 , N/A ) ( N/A , 0.01 , N/A ) | 1960.7 | N/A | 0.9004 [ 1.0000 ] | 90.0% { 96.3% } | 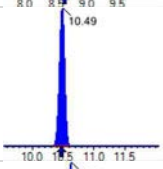 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2587544 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 42428.4 | N/A | 8.6458 [ 8.0000 ] | 108.1% { 115.6% } | 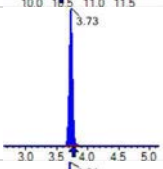 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1010634 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 6226.7 | N/A | 4.4214 [ 4.0000 ] | 110.5% { 103.6% } | 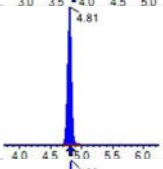 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 607029 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 8072.2 | N/A | 2.1717 [ 2.0000 ] | 108.6% { 102.9% } | 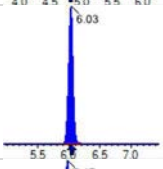 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 655104 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 5211.4 | N/A | 2.1069 [ 2.0000 ] | 105.3% { 99.8% } | 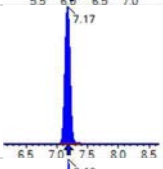 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 888575 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 3594.6 | N/A | 2.1859 [ 2.0000 ] | 109.3% { 103.1% } | 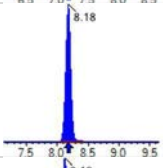 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 277647 | ( 9.12 , N/A ) ( N/A , 0.01 , N/A ) | 2559.1 | N/A | 1.0493 [ 1.0000 ] | 104.9% { 102.9% } | 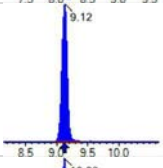 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331598 | ( 10.03 , N/A ) ( N/A , 0.01 , N/A ) | 999.2 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 103.1% } | 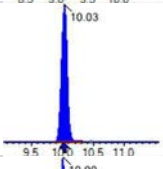 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393599 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 1043.4 | N/A | 1.0607 [ 1.0000 ] | 106.1% { 105.8% } | 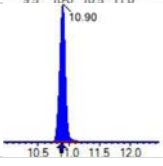 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392681 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 960.1 | N/A | 1.0391 [ 1.0000 ] | 103.9% { 105.3% } | 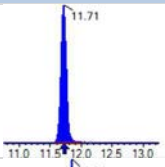 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327075 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1060.3 | N/A | 1.0163 [ 1.0000 ] | 101.6% { 100.2% } | 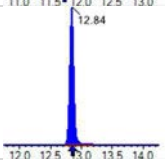 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729415 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1189.6 | N/A | 2.2324 [ 2.0000 ] | 111.6% { 103.1% } | 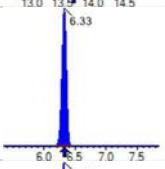 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1348867 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4105.7 | N/A | 2.1814 [ 2.0000 ] | 109.1% { 102.3% } | 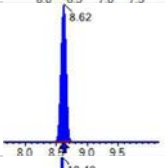 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1602565 | ( 10.48 , N/A ) ( N/A , 0.01 , N/A ) | 1826.7 | N/A | 2.1674 [ 2.0000 ] | 108.4% { 103.4% } | 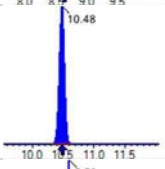 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 709206 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 97.6 | N/A | 5.3060 [ 4.0000 ] | 132.7% { 120.4% } | 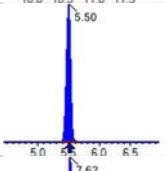 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1825907 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 3054.8 | N/A | 4.5647 [ 4.0000 ] | 114.1% { 109.5% } | 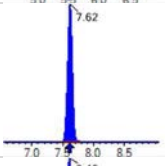 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1614348 | ( 9.40 , N/A ) ( N/A , 0.01 , N/A ) | 1240.5 | N/A | 5.1458 [ 4.0000 ] | 128.6% { 118.0% } | 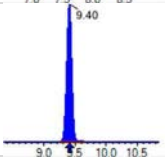 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1458588 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2083.8 | N/A | 2.2261 [ 2.0000 ] | 111.3% { 106.2% } | 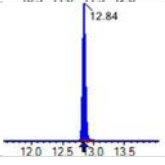 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01003-PEM1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 17:30

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 303300 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 2184.5 | N/A | 2.1824 [ 2.0000 ] | 109.1% { 105.3% } | 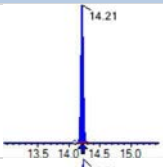  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 318629 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 2334.3 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 103.9% } | 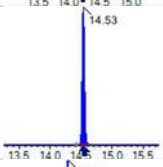  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 884165 | ( 10.28 , N/A ) ( N/A , 0.01 , N/A ) | 2410.3 | N/A | 4.6474 [ 4.0000 ] | 116.2% { 104.6% } | 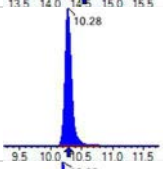  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 837390 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1815.5 | N/A | 4.8294 [ 4.0000 ] | 120.7% { 108.7% } | 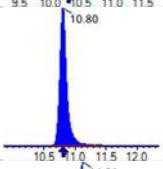  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1431759 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 1901.3 | N/A | 22.9256 [ 20.0000 ] | 114.6% { 104.2% } | 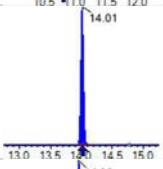  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1464004 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 4722.6 | N/A | 23.0960 [ 20.0000 ] | 115.5% { 113.5% } | 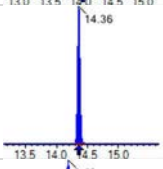  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068447 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2382.1 | N/A | 8.3913 [ 8.0000 ] | 104.9% { 104.5% } | 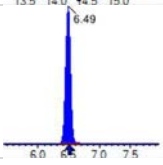  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 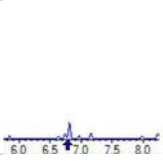 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 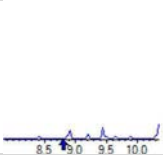 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01003-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (5)
Acquired: 2024/03/19 - 17:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26550<br>( 499.0 / 99.0 ) N/A | ( 9.89 , 0.94 ) ( -0.60 , N/A , #Value!) | 7.8 | N/A<br>0.0<br>0.0 | 0.0297 | N/A | 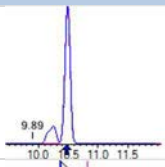 | 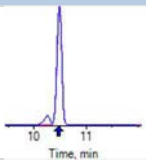 | |
| TDCA | ( 499.0 / 80.0 ) 7504397 | ( 7.03 , 0.67 ) ( N/A , #Value! , 0.0) | 33165.9 | N/A<br>0.0<br>0.0 | 12.3258 | N/A | 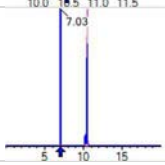 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.89 - 7.03 = 2.87 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | NDa | 0.15a | 0.40a | Ua |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0642a | 0.064a | 0.40a | MI3, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BLK1a | File ID:a | S2024-03-19B (8)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 18:52a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 30716<br>( 163.0 / 69.0 ) 794 | ( 2.79 , 0.75 )<br>( N/A , 0.00 , -0.4) | 147.1<br>54.0 | 0.0259<br>95.2<br>98.1 | 0.0941 | N/A | 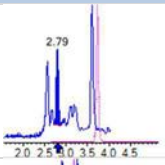 | 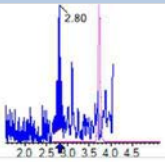 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 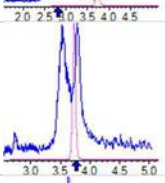 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 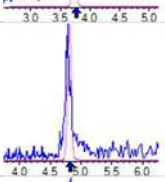 | 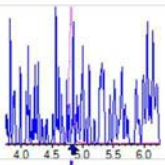 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 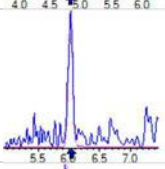 | 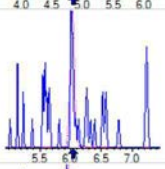 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 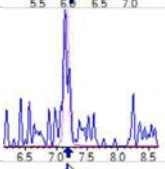 | 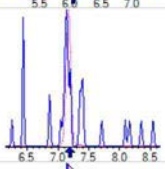 | |
| PFOA | ( 413.0 / 369.0 ) 17745<br>( 413.0 / 169.0 ) 7655 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 1.1) | 23.5<br>55.2 | 0.4314<br>118.0<br>125.7 | 0.0164 | N/A | 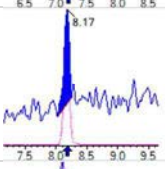 | 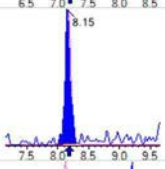 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 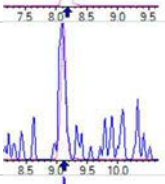 | 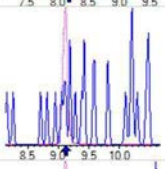 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 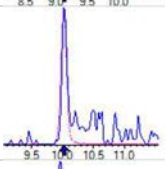 | 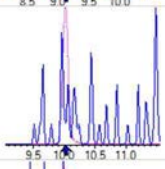 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 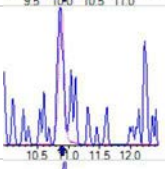 | 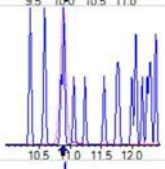 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 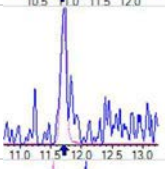 | 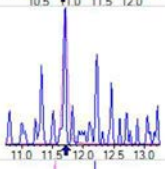 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 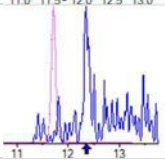 | 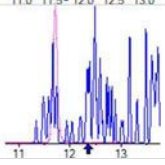 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 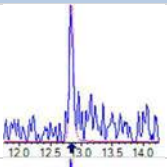 | 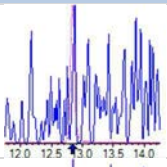 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 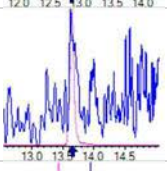 | 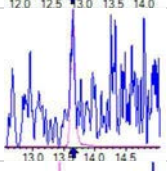 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 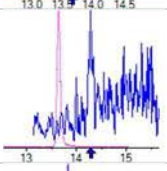 | 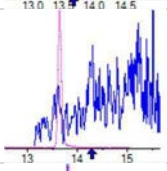 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 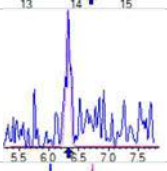 | 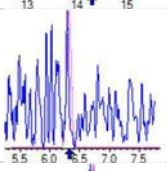 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 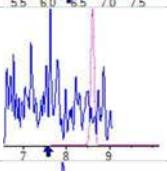 | 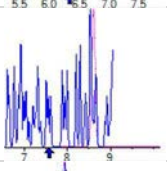 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 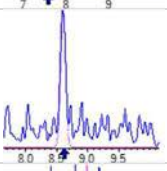 | 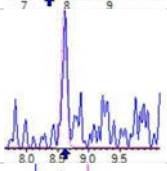 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 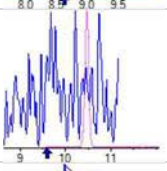 | 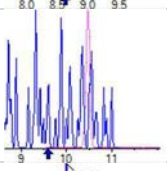 | |
| PFOS | ( 499.0 / 80.0 )<br>15016<br>( 499.0 / 99.0 )<br>3667 | ( 10.46 , 1.00 )<br>( -0.01 , N/A , 0.1) | 62.6<br>243.6 | 0.2442<br>104.5<br>101.7 | 0.0160 | N/A | 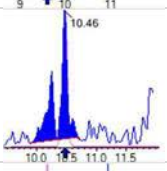 | 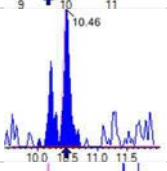 | MI3 ABK 3/19/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 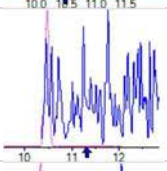 | 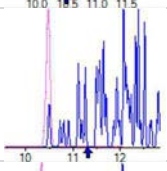 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 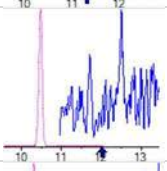 | 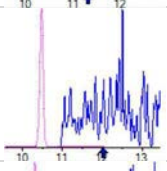 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 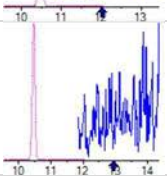 | 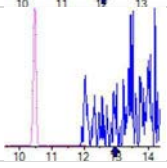 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 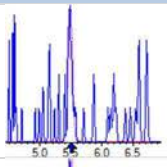 | 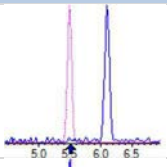 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 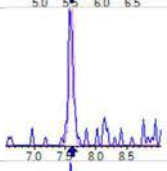 | 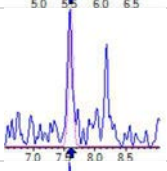 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 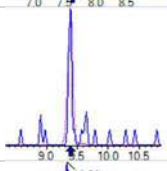 | 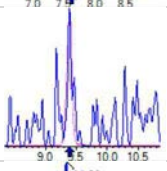 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15591<br>( 627.0 / 81.0 )<br>23976 | ( 11.03 , 1.00 )<br>( 0.00 , N/A , 0.0) | 258.3<br>70.5 | 1.5378<br>106.8<br>105.4 | 0.0540 | N/A | 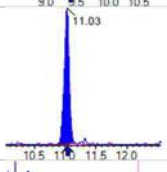 | 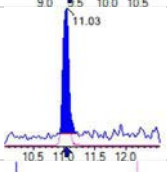 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 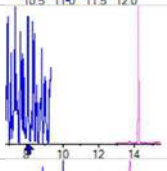 | 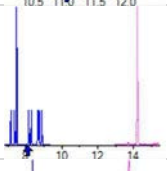 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 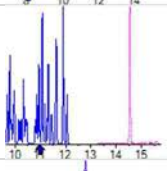 | 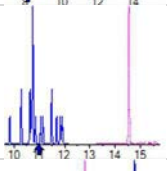 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 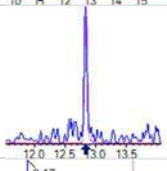 | 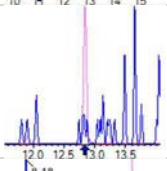 | |
| TFSI | ( 279.7 / 147.0 )<br>31503<br>( 279.7 / 211.0 )<br>3480 | ( 8.17 , 0.64 )<br>( N/A , -0.01 , -0.4) | 22.0<br>10.2 | 0.1105<br>131.5<br>129.1 | 0.0424 | N/A | 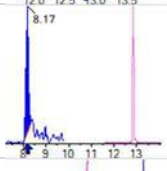 | 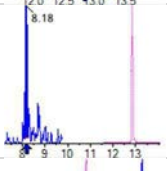 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 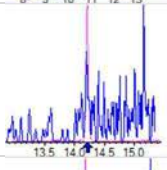 | 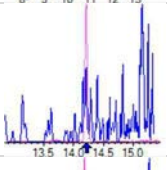 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 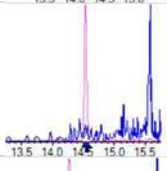 | 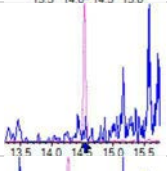 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 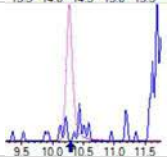 | 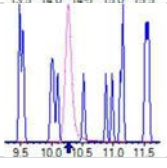 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 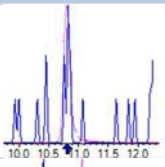 | 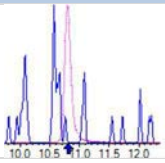 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 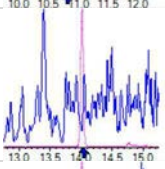 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 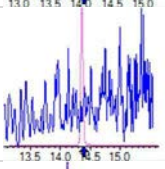 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 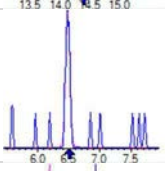 | 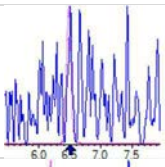 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 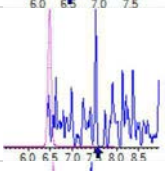 | 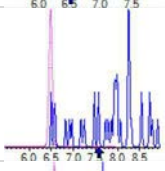 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 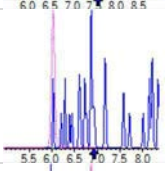 | 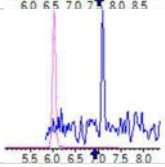 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 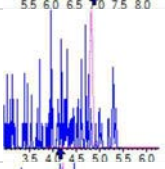 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 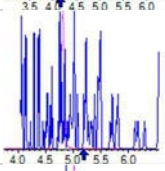 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 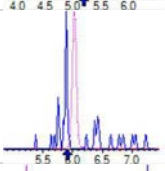 | 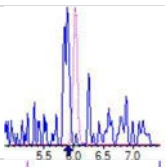 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 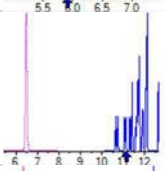 | 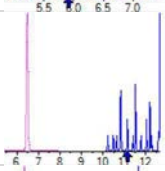 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 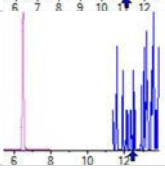 | 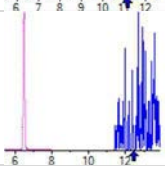 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 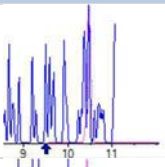 | 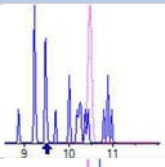 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 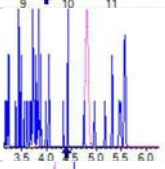 | 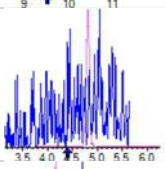 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 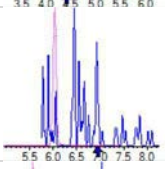 | 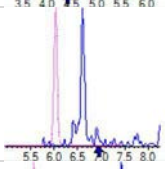 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 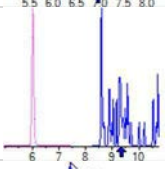 | 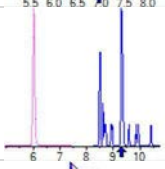 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>6111<br>( 357.2 / 243.0 )<br>1079 | ( 6.76 , 1.00 )<br>( -0.01 , N/A , 1.0) | 57.6<br>23.3 | 0.1765<br>160.1<br>169.6 | 0.0166 | N/A | 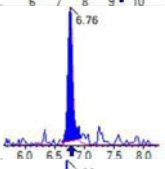 | 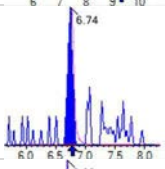 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>2987<br>( 457.2 / 343.0 )<br>271 | ( 8.80 , 1.00 )<br>( 0.00 , N/A , 0.2) | 50.7<br>994.1 | 0.0908<br>219.0<br>200.3 | 0.0122 | N/A | 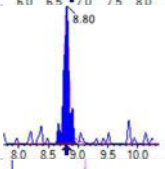 | 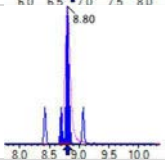 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 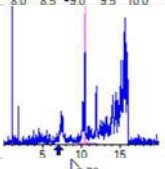 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>269451 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1284.1 | N/A | 1.1301<br>[ 1.0000 ] | 113.0%<br>{ 113.9% } | 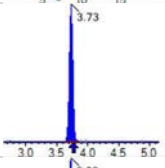 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>124700 | ( 6.03 , N/A )<br>( N/A , -0.01 , N/A ) | 21374.7 | N/A | 0.9830<br>[ 1.0000 ] | 98.3%<br>{ 98.5% } | 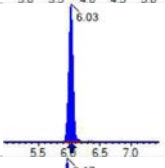 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>399378 | ( 8.17 , N/A )<br>( N/A , -0.01 , N/A ) | 2972.8 | N/A | 1.0103<br>[ 1.0000 ] | 101.0%<br>{ 105.3% } | 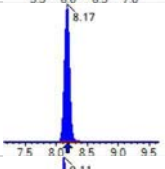 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>287211 | ( 9.11 , N/A )<br>( N/A , 0.00 , N/A ) | 881.2 | N/A | 1.0099<br>[ 1.0000 ] | 101.0%<br>{ 102.1% } | 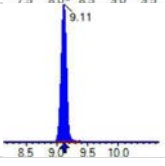 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273214 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 11747.2 | N/A | 0.9356 [ 1.0000 ] | 93.6% { 94.4% } | 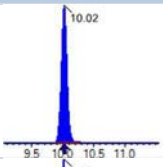 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 915276 | ( 8.61 , N/A ) ( N/A , -0.01 , N/A ) | 5214.4 | N/A | 0.9644 [ 1.0000 ] | 96.4% { 98.1% } | 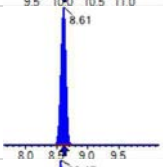 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 747632 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 2282.9 | N/A | 0.9816 [ 1.0000 ] | 98.2% { 105.0% } | 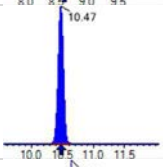 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2769353 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 43154.2 | N/A | 8.9967 [ 8.0000 ] | 112.5% { 123.7% } | 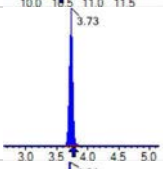 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1031291 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 5289.8 | N/A | 4.4324 [ 4.0000 ] | 110.8% { 105.7% } | 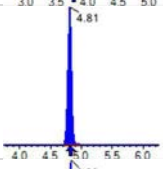 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 626257 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 8500.0 | N/A | 2.2011 [ 2.0000 ] | 110.1% { 106.1% } | 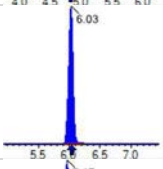 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 665371 | ( 7.17 , N/A ) ( N/A , -0.01 , N/A ) | 3884.4 | N/A | 2.1023 [ 2.0000 ] | 105.1% { 101.4% } | 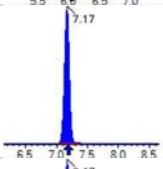 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879344 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 3101.2 | N/A | 2.0549 [ 2.0000 ] | 102.7% { 102.0% } | 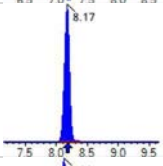 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294542 | ( 9.11 , N/A ) ( N/A , 0.00 , N/A ) | 4973.4 | N/A | 1.0459 [ 1.0000 ] | 104.6% { 109.1% } | 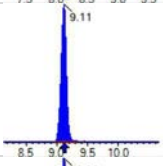 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 346207 | ( 10.02 , N/A ) ( N/A , -0.01 , N/A ) | 990.7 | N/A | 1.1307 [ 1.0000 ] | 113.1% { 107.6% } | 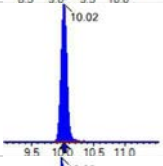 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 402327 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 1001.9 | N/A | 1.1169 [ 1.0000 ] | 111.7% { 108.2% } | 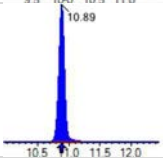 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-BLK1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 389079 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1526.5 | N/A | 1.0606 [ 1.0000 ] | 106.1% { 104.3% } | 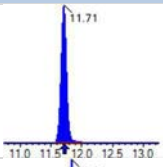  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327472 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1268.0 | N/A | 1.0482 [ 1.0000 ] | 104.8% { 100.3% } | 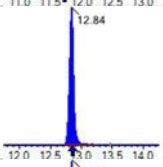  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 407836 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2082.9 | N/A | 1.5292 [ 2.0000 ] | 76.5% { 80.7% } | 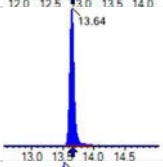  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1882946 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 939.2 | N/A | 2.2770 [ 2.0000 ] | 113.8% { 112.2% } | 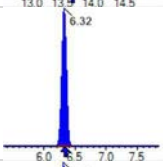  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1466173 | ( 8.61 , N/A ) ( N/A , -0.01 , N/A ) | 3513.9 | N/A | 2.2213 [ 2.0000 ] | 111.1% { 111.2% } | 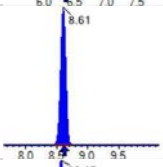  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1620943 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1956.4 | N/A | 2.0108 [ 2.0000 ] | 100.5% { 104.6% } | 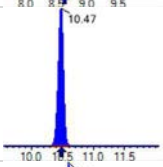  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 721238 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 94.3 | N/A | 5.0550 [ 4.0000 ] | 126.4% { 122.4% } | 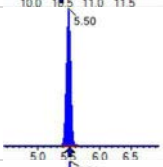  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2065310 | ( 7.61 , N/A ) ( N/A , 0.00 , N/A ) | 3922.4 | N/A | 4.8369 [ 4.0000 ] | 120.9% { 123.9% } | 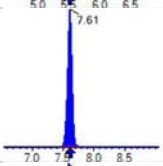  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1519397 | ( 9.39 , N/A ) ( N/A , 0.00 , N/A ) | 1897.0 | N/A | 4.5371 [ 4.0000 ] | 113.4% { 111.1% } | 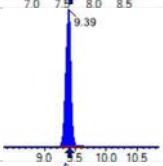  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2997464 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1700.0 | N/A | 8.5645 [ 8.0000 ] | 107.1% { 117.4% } | 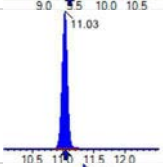  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 563824 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2260.2 | N/A | 0.7893 [ 2.0000 ] | 39.5% { 41.0% } | 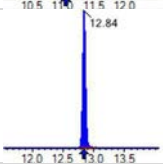  | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (8)
Acquired: 2024/03/19 - 18:52

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 77970 | ( 14.21 , N/A ) ( N/A , 0.00 , N/A ) | 674.2 | N/A | 0.5146 [ 2.0000 ] | 25.7% { 27.1% } | 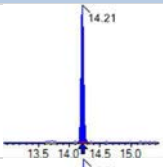  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 90560 | ( 14.53 , N/A ) ( N/A , 0.00 , N/A ) | 874.2 | N/A | 0.5574 [ 2.0000 ] | 27.9% { 29.5% } | 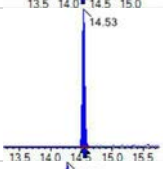  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 885593 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2682.6 | N/A | 4.2697 [ 4.0000 ] | 106.7% { 104.7% } | 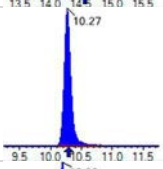  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 831653 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1770.6 | N/A | 4.3993 [ 4.0000 ] | 110.0% { 108.0% } | 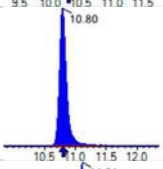  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 409433 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 861.1 | N/A | 6.0133 [ 20.0000 ] | 30.1% { 29.8% } | 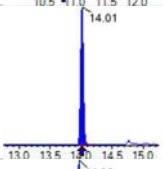  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 420606 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 2415.7 | N/A | 6.0862 [ 20.0000 ] | 30.4% { 32.6% } | 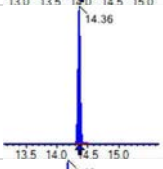  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1039084 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 1834.7 | N/A | 8.0171 [ 8.0000 ] | 100.2% { 101.6% } | 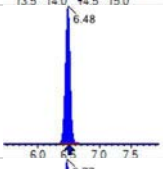  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 692753 | ( 6.77 , N/A ) ( N/A , -0.01 , N/A ) | 1167.2 | N/A | 2.3387 [ 2.0000 ] | 116.9% { 112.3% } | 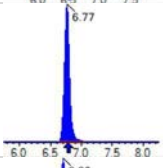  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 602760 | ( 8.80 , N/A ) ( N/A , 0.00 , N/A ) | 790.3 | N/A | 2.2353 [ 2.0000 ] | 111.8% { 109.0% } | 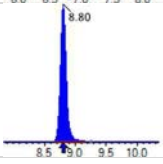  | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BS1a | File ID:a | S2024-03-19B (9)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:13a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 15.5a | 0.21a | 1.6a | |
| PFPeAa | 8.54a | 0.065a | 0.80a | |
| PFHxAa | 3.96a | 0.055a | 0.40a | |
| PFHpAa | 4.20a | 0.041a | 0.40a | |
| PFOAa | 4.39a | 0.15a | 0.40a | |
| PFNAa | 4.27a | 0.082a | 0.40a | |
| PFDAa | 3.96a | 0.10a | 0.40a | |
| PFUnAa | 4.34a | 0.16a | 0.40a | |
| PFDoAa | 4.22a | 0.11a | 0.40a | |
| PFTrDAa | 4.20a | 0.20a | 0.40a | |
| PFTeDAa | 4.43a | 0.20a | 0.40a | |
| PFHxDAa | 4.38a | 0.20a | 0.40a | |
| PFODAa | 3.97a | 0.20a | 0.40a | |
| PFBSa | 3.60a | 0.037a | 0.40a | |
| PFPeSa | 4.01a | 0.063a | 0.40a | |
| PFHxSa | 3.72a | 0.032a | 0.40a | |
| PFHpSa | 4.17a | 0.051a | 0.40a | |
| PFOSa | 3.78a | 0.064a | 0.40a | |
| PFNSa | 4.00a | 0.12a | 0.40a | |
| PFDSa | 4.08a | 0.15a | 0.40a | |
| PFDoSa | 3.73a | 0.12a | 0.40a | |
| 4:2FTSa | 15.9a | 0.29a | 1.6a | |
| 6:2FTSa | 16.5a | 0.31a | 1.6a | |
| 8:2FTSa | 16.8a | 0.082a | 1.6a | |
| 10:2FTSa | 16.9a | 0.40a | 1.6a | |
| PFOSAa | 4.55a | 0.10a | 0.40a | |
| NMeFOSAa | 17.5a | 0.47a | 1.6a | |
| NEtFOSAa | 16.7a | 0.41a | 1.6a | |
| NMeFOSAAa | 4.28a | 0.11a | 0.40a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-BS1a | File ID:a | S2024-03-19B (9)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:13a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.8a | 1.0a | 1.6a | |
| NEtFOSEa | 17.6a | 1.0a | 1.6a | |
| HFPO-DAa | 4.20a | 0.17a | 0.80a | |
| ADONAa | 4.05a | 0.12a | 0.80a | |
| PFEESAa | 7.47a | 0.11a | 0.80a | |
| PFMPAa | 9.00a | 0.054a | 0.80a | |
| PFMBAa | 8.26a | 0.091a | 0.80a | |
| NFDHAa | 8.02a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.95a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 4.05a | 0.21a | 0.80a | |
| 3:3FTCAa | 14.6a | 0.57a | 1.6a | |
| 5:3FTCAa | 15.3a | 0.44a | 1.6a | |
| 7:3FTCAa | 14.0a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 658522<br>( 163.0 / 69.0 ) 17345 | ( 2.80 , 0.75 ) ( N/A , 0.00 , 0.0) | 3782.6<br>913.1 | 0.0263<br>97.0<br>99.9 | 2.0310<br>[ 2.0000 ] | 101.6% | 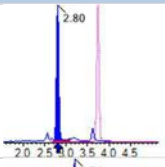 | 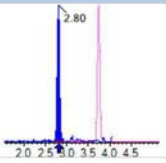 | |
| PFBA | ( 213.0 / 169.0 ) 1330184 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 592.3 | N/A<br>0.0<br>0.0 | 3.8808<br>[ 4.0000 ] | 97.0% | 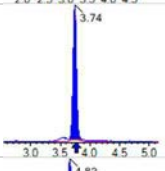 | | |
| PFPeA | ( 263.0 / 219.0 ) 568509<br>( 263.0 / 69.0 ) 6644 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.2) | 2367.4<br>104.8 | 0.0117<br>97.9<br>105.3 | 2.1340<br>[ 2.0000 ] | 106.7% | 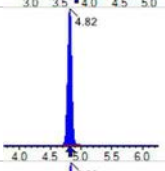 | 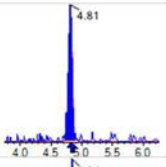 | |
| PFHxA | ( 313.0 / 269.0 ) 304333<br>( 313.0 / 119.0 ) 36503 | ( 6.03 , 1.00 ) ( 0.00 , N/A , -0.2) | 1124.1<br>413.2 | 0.1199<br>103.3<br>102.5 | 0.9901<br>[ 1.0000 ] | 99.0% | 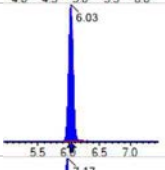 | 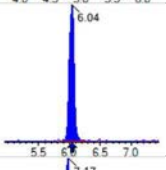 | |
| PFHpA | ( 363.0 / 319.0 ) 343879<br>( 363.0 / 169.0 ) 109244 | ( 7.17 , 1.00 ) ( 0.00 , N/A , 0.0) | 1054.4<br>971.4 | 0.3177<br>104.8<br>107.6 | 1.0510<br>[ 1.0000 ] | 105.1% | 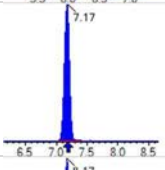 | 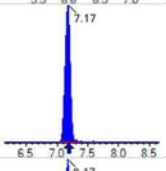 | |
| PFOA | ( 413.0 / 369.0 ) 485514<br>( 413.0 / 169.0 ) 170373 | ( 8.17 , 1.00 ) ( 0.00 , N/A , -0.1) | 373.5<br>597.1 | 0.3509<br>96.0<br>102.2 | 1.0975<br>[ 1.0000 ] | 109.8% | 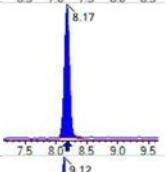 | 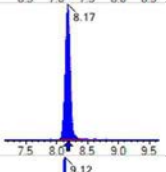 | |
| PFNA | ( 463.0 / 419.0 ) 311098<br>( 463.0 / 169.0 ) 74633 | ( 9.12 , 1.00 ) ( 0.00 , N/A , 0.0) | 934.1<br>648.9 | 0.2399<br>94.0<br>99.7 | 1.0680<br>[ 1.0000 ] | 106.8% | 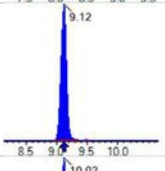 | 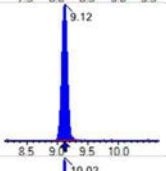 | |
| PFDA | ( 513.0 / 469.0 ) 362353<br>( 513.0 / 169.0 ) 43616 | ( 10.02 , 1.00 ) ( 0.00 , N/A , 0.1) | 1761.2<br>5662.8 | 0.1204<br>102.7<br>100.6 | 0.9892<br>[ 1.0000 ] | 98.9% | 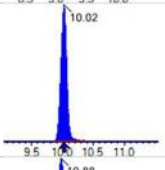 | 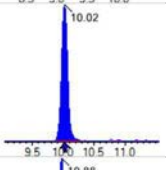 | |
| PFUnA | ( 563.0 / 519.0 ) 388756<br>( 563.0 / 169.0 ) 60684 | ( 10.88 , 1.00 ) ( 0.00 , N/A , 0.2) | 849.1<br>575.4 | 0.1561<br>110.1<br>109.8 | 1.0853<br>[ 1.0000 ] | 108.5% | 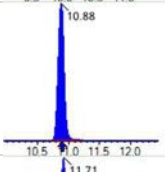 | 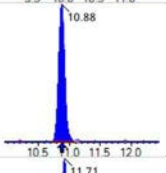 | |
| PFDoA | ( 613.0 / 569.0 ) 426340<br>( 613.0 / 169.0 ) 64905 | ( 11.71 , 1.00 ) ( 0.00 , N/A , -0.3) | 1209.7<br>402.6 | 0.1522<br>96.3<br>103.0 | 1.0554<br>[ 1.0000 ] | 105.5% | 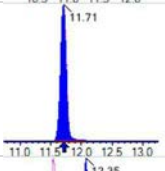 | 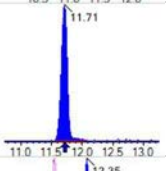 | |
| PFTrDA | ( 663.0 / 619.0 ) 414625<br>( 663.0 / 169.0 ) 107952 | ( 12.35 , 1.05 ) ( N/A , 0.00 , -0.1) | 1200.8<br>600.0 | 0.2604<br>101.2<br>100.5 | 1.0493<br>[ 1.0000 ] | 104.9% | 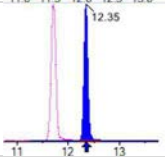 | 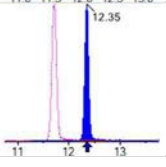 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 314966<br>( 713.0 / 169.0 ) 84892 | ( 12.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 1042.9<br>589.4 | 0.2695<br>99.9<br>101.4 | 1.1081<br>[ 1.0000 ] | 110.8% | 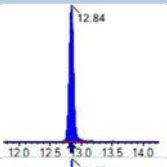 | 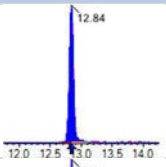 | |
| PFHxDA | ( 813.0 / 769.0 ) 211008<br>( 813.0 / 169.0 ) 49584 | ( 13.65 , 1.00 ) ( 0.00 , N/A , 0.1) | 1120.5<br>348.6 | 0.2350<br>96.0<br>92.0 | 1.0962<br>[ 1.0000 ] | 109.6% | 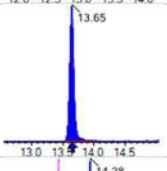 | 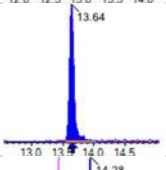 | |
| PFODA | ( 913.0 / 869.0 ) 119628<br>( 913.0 / 169.0 ) 38790 | ( 14.28 , 1.05 ) ( N/A , 0.00 , 0.1) | 572.4<br>211.3 | 0.3243<br>90.5<br>95.1 | 0.9934<br>[ 1.0000 ] | 99.3% | 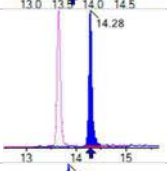 | 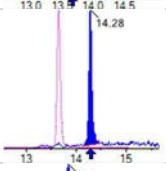 | |
| PFBS | ( 299.0 / 80.0 ) 437050<br>( 299.0 / 99.0 ) 312468 | ( 6.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 1473.2<br>1206.3 | 0.7149<br>101.1<br>97.2 | 0.9000<br>[ 0.8847 ] | 101.7% | 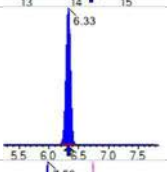 | 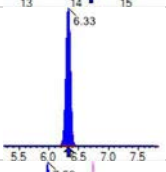 | |
| PFPeS | ( 349.0 / 80.0 ) 1085205<br>( 349.0 / 99.0 ) 405216 | ( 7.56 , 0.88 ) ( N/A , 0.00 , 0.0) | 1520.8<br>1260.3 | 0.3734<br>103.8<br>106.0 | 1.0023<br>[ 0.9384 ] | 106.8% | 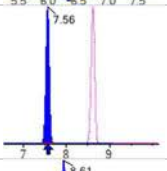 | 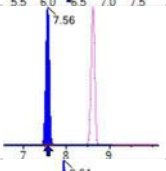 | |
| PFHxS | ( 399.0 / 80.0 ) 1168011<br>( 399.0 / 99.0 ) 395944 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 1519.5<br>1945.3 | 0.3390<br>106.4<br>101.4 | 0.9288<br>[ 0.9110 ] | 102.0% | 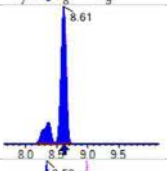 | 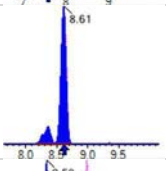 | |
| PFHpS | ( 449.0 / 80.0 ) 1065601<br>( 449.0 / 99.0 ) 272406 | ( 9.58 , 0.92 ) ( N/A , 0.00 , 0.0) | 1333.7<br>1215.7 | 0.2556<br>96.6<br>96.6 | 1.0414<br>[ 0.9514 ] | 109.5% | 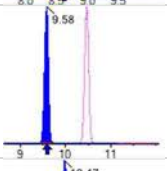 | 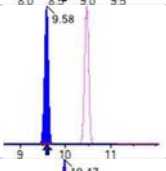 | |
| PFOS | ( 499.0 / 80.0 ) 931730<br>( 499.0 / 99.0 ) 229975 | ( 10.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 1137.9<br>2768.0 | 0.2468<br>105.6<br>102.8 | 0.9446<br>[ 0.9275 ] | 101.8% | 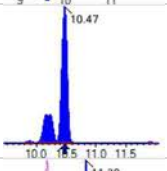 | 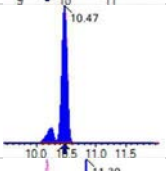 | |
| PFNS | ( 549.0 / 80.0 ) 923887<br>( 549.0 / 99.0 ) 250473 | ( 11.30 , 1.08 ) ( N/A , 0.00 , 0.0) | 1531.7<br>1160.1 | 0.2711<br>99.5<br>100.6 | 1.0004<br>[ 0.9599 ] | 104.2% | 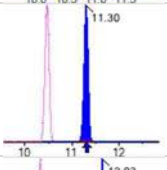 | 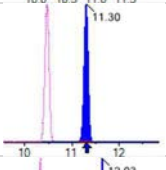 | |
| PFDS | ( 599.0 / 80.0 ) 1150437<br>( 599.0 / 99.0 ) 293361 | ( 12.03 , 1.15 ) ( N/A , 0.00 , -0.1) | 1677.8<br>840.9 | 0.2550<br>93.8<br>95.4 | 1.0202<br>[ 0.9631 ] | 105.9% | 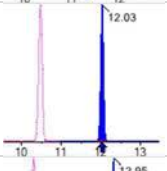 | 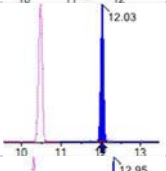 | |
| PFDoS | ( 699.0 / 80.0 ) 927981<br>( 699.0 / 99.0 ) 223325 | ( 12.95 , 1.24 ) ( N/A , 0.00 , 0.0) | 2684.7<br>1468.4 | 0.2407<br>103.0<br>105.1 | 0.9335<br>[ 0.9696 ] | 96.3% | 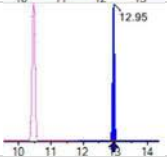 | 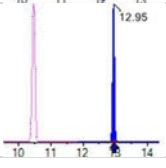 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1888288<br>( 327.0 / 81.0 ) 1684119 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.1) | 4761.5<br>2468.2 | 0.8919<br>102.2<br>99.1 | 3.9786<br>[ 3.7381 ] | 106.4% | 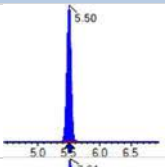 | 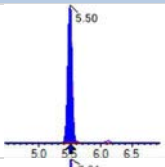 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1699257<br>( 427.0 / 81.0 ) 2192178 | ( 7.61 , 1.00 ) ( 0.00 , N/A , 0.2) | 4272.5<br>3962.9 | 1.2901<br>102.9<br>97.4 | 4.1130<br>[ 3.7962 ] | 108.3% | 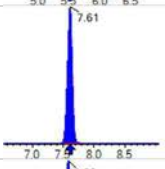 | 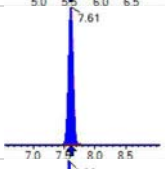 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1574000<br>( 527.0 / 81.0 ) 1695388 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.1) | 1590.5<br>1506.8 | 1.0771<br>99.0<br>105.7 | 4.2039<br>[ 3.8332 ] | 109.7% | 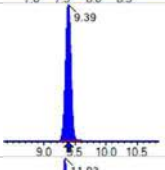 | 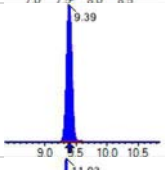 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1293643<br>( 627.0 / 81.0 ) 1795873 | ( 11.03 , 1.00 ) ( 0.00 , N/A , -0.2) | 1597.6<br>1061.0 | 1.3882<br>96.4<br>95.2 | 4.2334<br>[ 3.8647 ] | 109.5% | 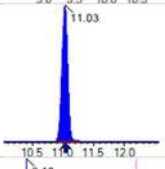 | 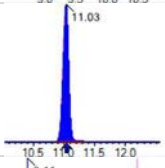 | |
| PFBSA | ( 297.9 / 78.0 ) 470302<br>( 297.9 / 278.0 ) 796 | ( 8.10 , 0.57 ) ( N/A , 0.00 , -0.6) | 1227.6<br>49.0 | 0.0017<br>123.8<br>109.2 | 2.5700<br>[ 1.0000 ] | 257.0% | 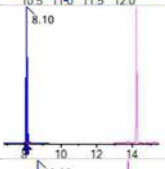 | 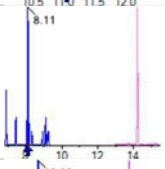 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 509205<br>( 397.9 / 378.0 ) 1643 | ( 10.96 , 0.75 ) ( N/A , 0.00 , 0.1) | 1077.1<br>45.1 | 0.0032<br>79.0<br>77.1 | 1.9573<br>[ 1.0000 ] | 195.7% | 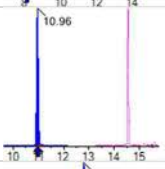 | 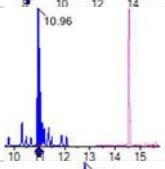 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 310523<br>( 498.0 / 478.0 ) 5173 | ( 12.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 1404.4<br>155.5 | 0.0167<br>118.7<br>111.9 | 1.1373<br>[ 1.0000 ] | 113.7% | 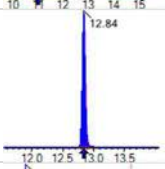 | 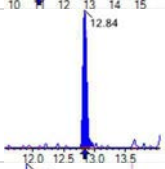 | |
| TFSI | ( 279.7 / 147.0 ) 1943457<br>( 279.7 / 211.0 ) 168179 | ( 8.18 , 0.64 ) ( N/A , 0.00 , -0.1) | 61.3<br>45.0 | 0.0865<br>103.0<br>101.1 | 2.7033<br>[ 0.9793 ] | 276.0% | 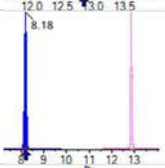 | 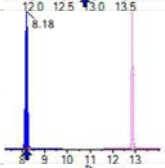 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 154247<br>( 512.0 / 169.0 ) 118807 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.0) | 1394.8<br>574.7 | 0.7702<br>102.9<br>101.6 | 4.3750<br>[ 4.0000 ] | 109.4% | 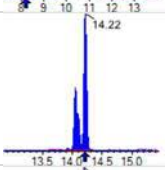 | 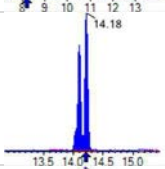 | |
| NEtFOSA | ( 526.0 / 219.0 ) 198207<br>( 526.0 / 169.0 ) 235177 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 1.7) | 1824.3<br>1134.7 | 1.1865<br>96.1<br>95.5 | 4.1808<br>[ 4.0000 ] | 104.5% | 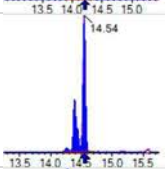 | 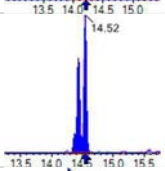 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 223879<br>( 570.0 / 483.0 ) 108010 | ( 10.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 1825.9<br>4128936.4 | 0.4824<br>110.0<br>103.2 | 1.0705<br>[ 1.0000 ] | 107.1% | 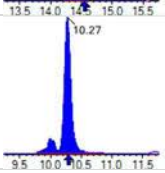 | 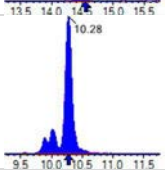 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 204283<br>( 584.0 / 526.0 ) 125155 | ( 10.81 , 1.00 ) ( 0.01 , N/A , 0.0) | 1719.5<br>638.4 | 0.6127<br>99.4<br>103.6 | 1.0391<br>[ 1.0000 ] | 103.9% | 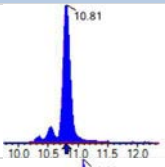 | 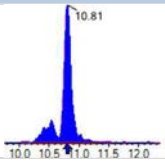 | |
| NMeFOSE | ( 616.0 / 59.0 ) 105465 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 466.3 | N/A<br>0.0<br>0.0 | 4.1907<br>[ 4.0000 ] | 104.8% | 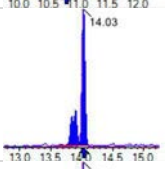 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 86627 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 623.5 | N/A<br>0.0<br>0.0 | 4.3936<br>[ 4.0000 ] | 109.8% | 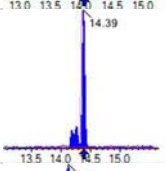 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 86657<br>( 285.0 / 185.0 ) 239925 | ( 6.49 , 1.00 ) ( 0.00 , N/A , 0.0) | 820.4<br>1188.6 | 2.7687<br>100.1<br>104.9 | 1.0508<br>[ 1.0000 ] | 105.1% | 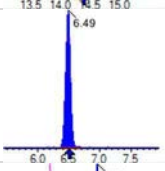 | 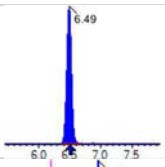 | |
| ADONA | ( 377.0 / 85.0 ) 974125<br>( 377.0 / 251.0 ) 96497 | ( 7.56 , 1.17 ) ( N/A , 0.00 , 0.1) | 2418.2<br>817.9 | 0.0991<br>97.2<br>94.7 | 1.0125<br>[ 0.9427 ] | 107.4% | 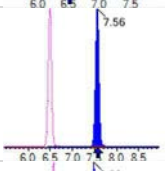 | 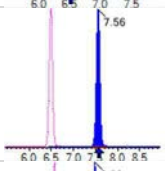 | |
| PFEESA | ( 315.0 / 135.0 ) 412151<br>( 315.0 / 83.0 ) 231711 | ( 6.92 , 1.15 ) ( N/A , 0.00 , 0.0) | 2048.0<br>539.7 | 0.5622<br>100.9<br>99.3 | 1.8672<br>[ 1.7849 ] | 104.6% | 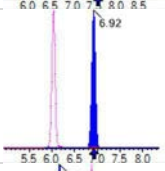 | 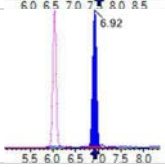 | |
| PFMPA | ( 229.0 / 85.0 ) 190115 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 2950.8 | N/A<br>0.0<br>0.0 | 2.2488<br>[ 2.0000 ] | 112.4% | 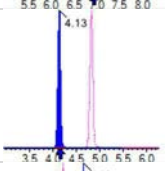 | | |
| PFMBA | ( 279.0 / 85.0 ) 474721 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 3902.7 | N/A<br>0.0<br>0.0 | 2.0660<br>[ 2.0000 ] | 103.3% | 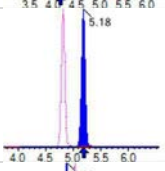 | | |
| NFDHA | ( 295.0 / 201.0 ) 230149<br>( 295.0 / 85.0 ) 235254 | ( 5.90 , 0.98 ) ( N/A , -0.01 , 0.3) | 1867.1<br>1396.5 | 1.0222<br>94.7<br>101.7 | 2.0056<br>[ 2.0000 ] | 100.3% | 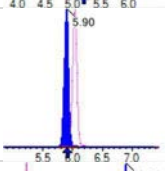 | 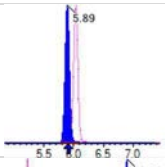 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1025621<br>( 533.0 / 353.0 ) 318115 | ( 11.11 , 1.71 ) ( N/A , 0.00 , 0.0) | 2659.2<br>1612.8 | 0.3102<br>99.1<br>94.1 | 0.9869<br>[ 0.9333 ] | 105.8% | 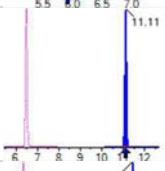 | 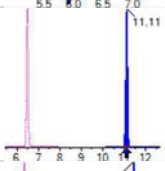 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 809534<br>( 633.0 / 453.0 ) 274783 | ( 12.44 , 1.92 ) ( N/A , 0.00 , 0.1) | 3038.1<br>1534.5 | 0.3394<br>102.2<br>99.1 | 1.0130<br>[ 0.9432 ] | 107.4% | 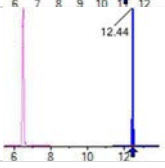 | 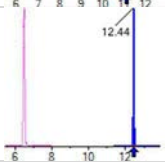 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 510455<br>( 461.0 / 381.2 ) 210453 | ( 9.50 , 0.91 ) ( N/A , 0.00 , 0.0) | 2115.6<br>1576.3 | 0.4123<br>103.5<br>104.0 | 0.9173<br>[ 0.9239 ] | 99.3% | 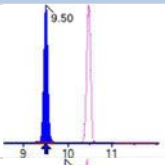 | 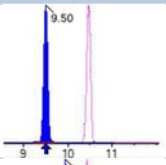 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 55419<br>( 241.0 / 117.0 ) 122403 | ( 4.38 , 0.91 ) ( N/A , -0.01 , 0.0) | 1151.4<br>1091.7 | 2.2087<br>104.8<br>101.8 | 3.6568<br>[ 4.0000 ] | 91.4% | 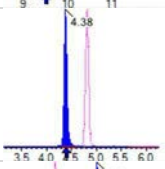 | 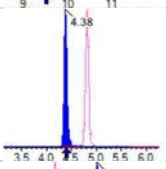 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 326246<br>( 341.0 / 217.0 ) 452405 | ( 6.93 , 1.15 ) ( N/A , -0.01 , 0.0) | 1049.7<br>679.9 | 1.3867<br>91.3<br>95.3 | 3.8273<br>[ 4.0000 ] | 95.7% | 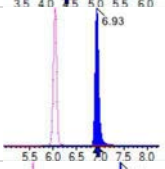 | 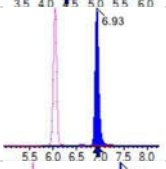 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 490153<br>( 441.0 / 337.0 ) 426722 | ( 9.31 , 1.54 ) ( N/A , 0.00 , 0.0) | 4223.1<br>7866.2 | 0.8706<br>94.9<br>99.5 | 3.5040<br>[ 4.0000 ] | 87.6% | 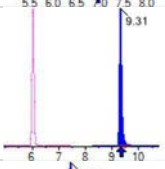 | 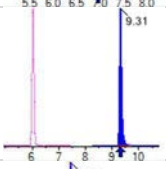 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 385698<br>( 357.2 / 243.0 ) 42220 | ( 6.76 , 1.00 ) ( -0.01 , N/A , 0.0) | 1229.6<br>312.3 | 0.1095<br>99.3<br>105.2 | 1.0044<br>[ 1.0000 ] | 100.4% | 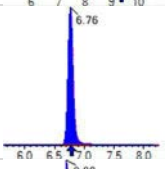 | 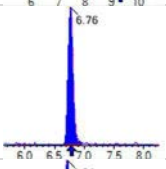 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 275205<br>( 457.2 / 343.0 ) 11895 | ( 8.80 , 1.00 ) ( -0.01 , N/A , -0.5) | 703.9<br>125.9 | 0.0432<br>104.2<br>95.3 | 1.0804<br>[ 1.0000 ] | 108.0% | 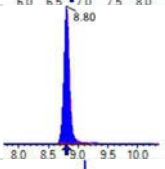 | 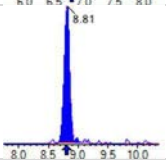 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 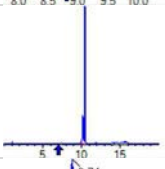 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284990 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1462.1 | N/A | 1.1953<br>[ 1.0000 ] | 119.5%<br>{ 120.5% } | 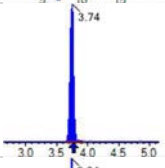 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122766 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 8610.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 97.0% } | 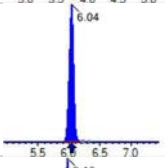 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 371575 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3197.0 | N/A | 0.9399<br>[ 1.0000 ] | 94.0%<br>{ 98.0% } | 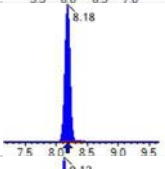 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 279365 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 926.0 | N/A | 0.9823<br>[ 1.0000 ] | 98.2%<br>{ 99.3% } | 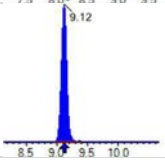 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288121 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 4678.8 | N/A | 0.9866 [ 1.0000 ] | 98.7% { 99.6% } | 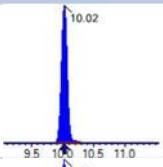  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 889914 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4317.3 | N/A | 0.9377 [ 1.0000 ] | 93.8% { 95.3% } | 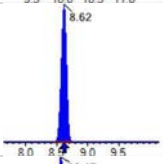  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 706168 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1727.9 | N/A | 0.9272 [ 1.0000 ] | 92.7% { 99.2% } | 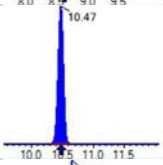  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2750823 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 42758.1 | N/A | 8.4493 [ 8.0000 ] | 105.6% { 122.9% } | 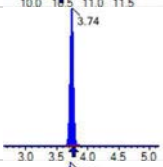  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1054835 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5085.7 | N/A | 4.6050 [ 4.0000 ] | 115.1% { 108.1% } | 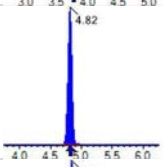  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 639854 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 7745.1 | N/A | 2.2843 [ 2.0000 ] | 114.2% { 108.4% } | 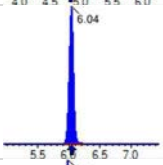  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 666850 | ( 7.17 , N/A ) ( N/A , 0.00 , N/A ) | 4151.4 | N/A | 2.1401 [ 2.0000 ] | 107.0% { 101.6% } | 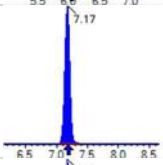  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 891188 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 3383.4 | N/A | 2.2384 [ 2.0000 ] | 111.9% { 103.4% } | 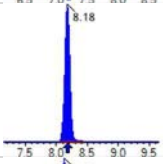  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 289823 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3816.1 | N/A | 1.0581 [ 1.0000 ] | 105.8% { 107.4% } | 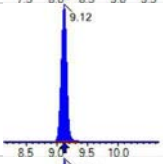  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 358491 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 1052.8 | N/A | 1.1103 [ 1.0000 ] | 111.0% { 111.4% } | 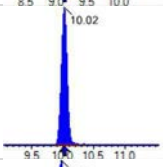  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 387269 | ( 10.88 , N/A ) ( N/A , 0.00 , N/A ) | 1192.9 | N/A | 1.0195 [ 1.0000 ] | 101.9% { 104.1% } | 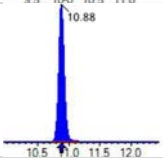  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-BS1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 401539 | ( 11.71 , N/A ) ( N/A , 0.00 , N/A ) | 1260.3 | N/A | 1.0380 [ 1.0000 ] | 103.8% { 107.7% } | 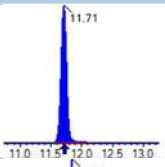  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 303502 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 1292.6 | N/A | 0.9213 [ 1.0000 ] | 92.1% { 93.0% } | 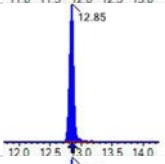  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 403628 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2080.9 | N/A | 1.4351 [ 2.0000 ] | 71.8% { 79.9% } | 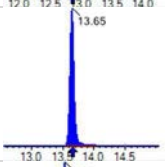  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1870628 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1276.0 | N/A | 2.3265 [ 2.0000 ] | 116.3% { 111.5% } | 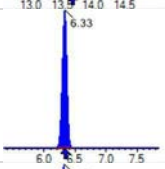  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1414805 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4021.7 | N/A | 2.2045 [ 2.0000 ] | 110.2% { 107.3% } | 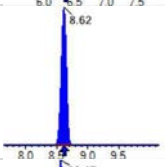  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1708031 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1735.5 | N/A | 2.2433 [ 2.0000 ] | 112.2% { 110.2% } | 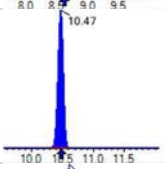  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 723364 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 87.9 | N/A | 5.2144 [ 4.0000 ] | 130.4% { 122.8% } | 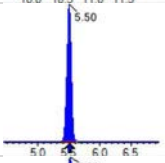  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1995683 | ( 7.62 , N/A ) ( N/A , 0.00 , N/A ) | 3600.7 | N/A | 4.8070 [ 4.0000 ] | 120.2% { 119.7% } | 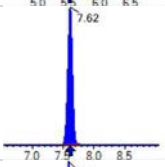  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1576990 | ( 9.40 , N/A ) ( N/A , 0.00 , N/A ) | 1433.4 | N/A | 4.8433 [ 4.0000 ] | 121.1% { 115.3% } | 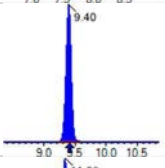  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3171791 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 1639.0 | N/A | 9.3208 [ 8.0000 ] | 116.5% { 124.3% } | 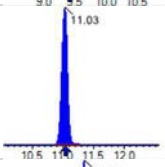  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 546044 | ( 12.85 , N/A ) ( N/A , 0.00 , N/A ) | 2326.7 | N/A | 0.8093 [ 2.0000 ] | 40.5% { 39.7% } | 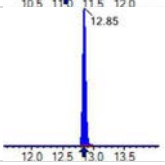  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (9)
Acquired: 2024/03/19 - 19:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 71017 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 689.6 | N/A | 0.4962 [ 2.0000 ] | 24.8% { 24.7% } | 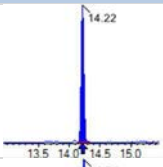 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 84663 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 835.4 | N/A | 0.5517 [ 2.0000 ] | 27.6% { 27.6% } | 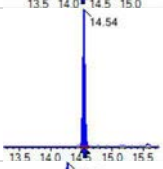 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 877080 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2582.3 | N/A | 4.4769 [ 4.0000 ] | 111.9% { 103.7% } | 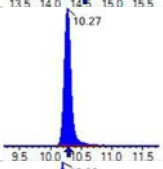 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 803914 | ( 10.80 , N/A ) ( N/A , 0.00 , N/A ) | 1779.1 | N/A | 4.5023 [ 4.0000 ] | 112.6% { 104.4% } | 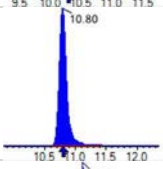 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 458856 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 974.7 | N/A | 7.1348 [ 20.0000 ] | 35.7% { 33.4% } | 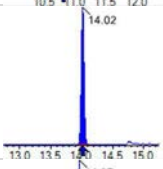 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 443830 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 2119.4 | N/A | 6.7994 [ 20.0000 ] | 34.0% { 34.4% } | 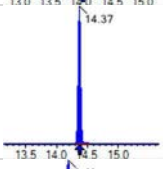 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1118791 | ( 6.49 , N/A ) ( N/A , -0.01 , N/A ) | 2015.0 | N/A | 8.7681 [ 8.0000 ] | 109.6% { 109.4% } | 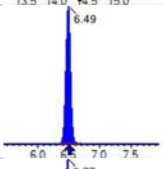 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 722383 | ( 6.77 , N/A ) ( N/A , 0.00 , N/A ) | 1289.2 | N/A | 2.3125 [ 2.0000 ] | 115.6% { 117.1% } | 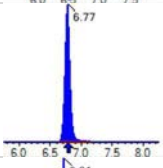 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 624590 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 900.9 | N/A | 2.1964 [ 2.0000 ] | 109.8% { 112.9% } | 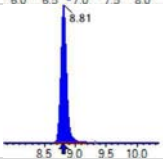 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MRL1a | File ID:a | S2024-03-19B (10)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:33a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 3.46a | 0.21a | 1.6a | |
| PFPeAa | 1.59a | 0.065a | 0.80a | |
| PFHxAa | 0.809a | 0.055a | 0.40a | |
| PFHpAa | 0.841a | 0.041a | 0.40a | |
| PFOAa | 0.922a | 0.15a | 0.40a | |
| PFNAa | 0.740a | 0.082a | 0.40a | |
| PFDAa | 0.788a | 0.10a | 0.40a | |
| PFUnAa | 0.777a | 0.16a | 0.40a | |
| PFDoAa | 0.812a | 0.11a | 0.40a | |
| PFTrDAa | 0.766a | 0.20a | 0.40a | |
| PFTeDAa | 0.891a | 0.20a | 0.40a | |
| PFHxDAa | 0.774a | 0.20a | 0.40a | |
| PFODAa | 0.668a | 0.20a | 0.40a | |
| PFBSa | 0.627a | 0.037a | 0.40a | |
| PFPeSa | 0.755a | 0.063a | 0.40a | |
| PFHxSa | 0.754a | 0.032a | 0.40a | |
| PFHpSa | 0.734a | 0.051a | 0.40a | |
| PFOSa | 0.801a | 0.064a | 0.40a | |
| PFNSa | 0.743a | 0.12a | 0.40a | |
| PFDSa | 0.767a | 0.15a | 0.40a | |
| PFDoSa | 0.703a | 0.12a | 0.40a | |
| 4:2FTSa | 2.92a | 0.29a | 1.6a | |
| 6:2FTSa | 3.14a | 0.31a | 1.6a | |
| 8:2FTSa | 3.31a | 0.082a | 1.6a | |
| 10:2FTSa | 3.26a | 0.40a | 1.6a | |
| PFOSAa | 0.837a | 0.10a | 0.40a | |
| NMeFOSAa | 3.05a | 0.47a | 1.6a | |
| NEtFOSAa | 2.99a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.808a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MRL1a | File ID:a | S2024-03-19B (10)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 19:33a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 3.31a | 1.0a | 1.6a | MI4a |
| NEtFOSEa | 3.40a | 1.0a | 1.6a | |
| HFPO-DAa | 0.833a | 0.17a | 0.80a | |
| ADONAa | 0.763a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.30a | 0.11a | 0.80a | |
| PFMPAa | 1.53a | 0.054a | 0.80a | |
| PFMBAa | 1.61a | 0.091a | 0.80a | |
| NFDHAa | 1.49a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.712a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.709a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.50a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.77a | 0.44a | 1.6a | |
| 7:3FTCAa | 2.97a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 161673<br>( 163.0 / 69.0 ) 4494 | ( 2.80 , 0.75 )<br>( N/A , 0.01 , -0.1) | 478.8<br>245.4 | 0.0278<br>102.3<br>105.5 | 0.4994<br>[ 0.4000 ] | 124.8% | 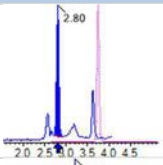 | 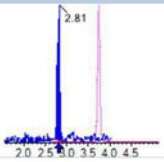 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 296136 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 274.7 | N/A<br>0.0<br>0.0 | 0.8653<br>[ 0.8000 ] | 108.2% | 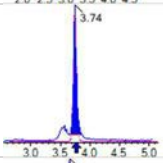 | | |
| PFPeA | ( 263.0 / 219.0 ) 106395<br>( 263.0 / 69.0 ) 1319 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , 0.4) | 555.3<br>19.1 | 0.0124<br>103.9<br>111.8 | 0.3976<br>[ 0.4000 ] | 99.4% | 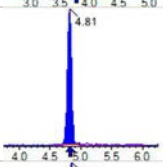 | 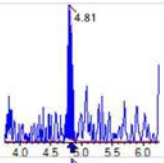 | |
| PFHxA | ( 313.0 / 269.0 ) 61539<br>( 313.0 / 119.0 ) 6117 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 412.4<br>137.1 | 0.0994<br>85.6<br>84.9 | 0.2024<br>[ 0.2000 ] | 101.2% | 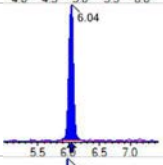 | 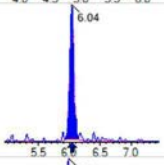 | |
| PFHpA | ( 363.0 / 319.0 ) 68871<br>( 363.0 / 169.0 ) 21857 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , -0.2) | 452.8<br>428.7 | 0.3174<br>104.7<br>107.5 | 0.2102<br>[ 0.2000 ] | 105.1% | 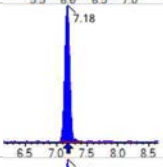 | 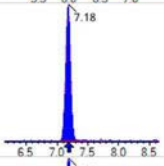 | |
| PFOA | ( 413.0 / 369.0 ) 118012<br>( 413.0 / 169.0 ) 37353 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , -0.1) | 164.9<br>201.6 | 0.3165<br>86.6<br>92.2 | 0.2305<br>[ 0.2000 ] | 115.3% | 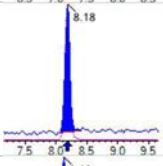 | 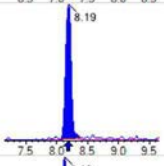 | |
| PFNA | ( 463.0 / 419.0 ) 58751<br>( 463.0 / 169.0 ) 13675 | ( 9.12 , 1.00 )<br>( 0.00 , N/A , 0.1) | 378.3<br>214.1 | 0.2328<br>91.2<br>96.8 | 0.1849<br>[ 0.2000 ] | 92.5% | 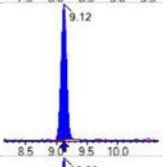 | 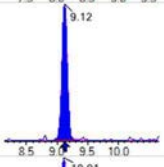 | |
| PFDA | ( 513.0 / 469.0 ) 74337<br>( 513.0 / 169.0 ) 9004 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , 0.4) | 922.3<br>339.6 | 0.1211<br>103.4<br>101.2 | 0.1971<br>[ 0.2000 ] | 98.5% | 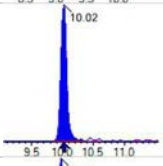 | 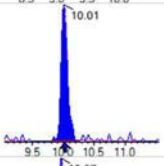 | |
| PFUnA | ( 563.0 / 519.0 ) 72105<br>( 563.0 / 169.0 ) 11313 | ( 10.88 , 1.00 )<br>( 0.00 , N/A , 0.3) | 456.1<br>146.6 | 0.1569<br>110.7<br>110.4 | 0.1942<br>[ 0.2000 ] | 97.1% | 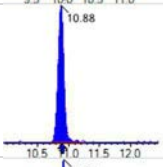 | 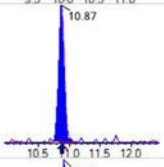 | |
| PFDoA | ( 613.0 / 569.0 ) 84587<br>( 613.0 / 169.0 ) 13835 | ( 11.71 , 1.00 )<br>( 0.00 , N/A , 0.5) | 445.0<br>150.7 | 0.1636<br>103.5<br>110.6 | 0.2030<br>[ 0.2000 ] | 101.5% | 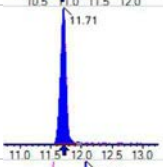 | 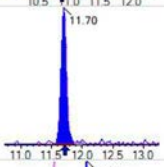 | |
| PFTrDA | ( 663.0 / 619.0 ) 78104<br>( 663.0 / 169.0 ) 21372 | ( 12.34 , 1.05 )<br>( N/A , -0.01 , -0.1) | 442.3<br>240.3 | 0.2736<br>106.3<br>105.7 | 0.1916<br>[ 0.2000 ] | 95.8% | 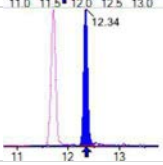 | 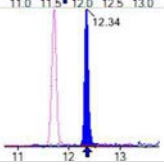 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 67242<br>( 713.0 / 169.0 ) 16772 | ( 12.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 428.4<br>139.6 | 0.2494<br>92.4<br>93.9 | 0.2227<br>[ 0.2000 ] | 111.3% | 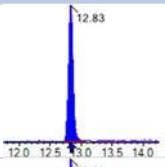 | 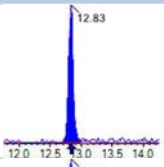 | |
| PFHxDA | ( 813.0 / 769.0 ) 38229<br>( 813.0 / 169.0 ) 9619 | ( 13.63 , 1.00 ) ( -0.01 , N/A , 0.1) | 240.5<br>70.1 | 0.2516<br>102.8<br>98.5 | 0.1934<br>[ 0.2000 ] | 96.7% | 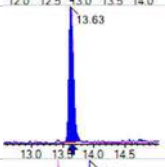 | 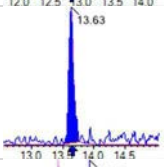 | |
| PFODA | ( 913.0 / 869.0 ) 20659<br>( 913.0 / 169.0 ) 7331 | ( 14.27 , 1.05 ) ( N/A , -0.01 , 0.1) | 112.8<br>42.0 | 0.3548<br>99.0<br>104.1 | 0.1671<br>[ 0.2000 ] | 83.5% | 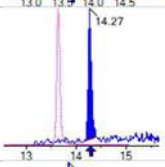 | 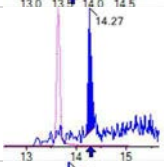 | |
| PFBS | ( 299.0 / 80.0 ) 78582<br>( 299.0 / 99.0 ) 60061 | ( 6.33 , 1.00 ) ( 0.00 , N/A , -0.1) | 403.0<br>379.2 | 0.7643<br>108.1<br>103.9 | 0.1568<br>[ 0.1769 ] | 88.6% | 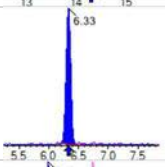 | 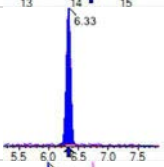 | |
| PFPeS | ( 349.0 / 80.0 ) 212573<br>( 349.0 / 99.0 ) 74217 | ( 7.57 , 0.88 ) ( N/A , 0.01 , 0.0) | 665.0<br>429.8 | 0.3491<br>97.1<br>99.1 | 0.1887<br>[ 0.1877 ] | 100.5% | 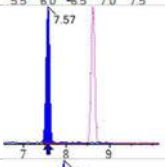 | 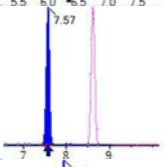 | |
| PFHxS | ( 399.0 / 80.0 ) 246587<br>( 399.0 / 99.0 ) 79371 | ( 8.61 , 1.00 ) ( 0.00 , N/A , 0.2) | 763.5<br>1883.3 | 0.3219<br>101.1<br>96.3 | 0.1884<br>[ 0.1822 ] | 103.4% | 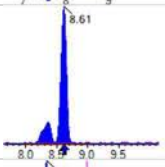 | 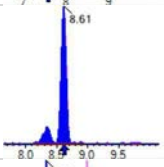 | |
| PFHpS | ( 449.0 / 80.0 ) 191516<br>( 449.0 / 99.0 ) 55727 | ( 9.58 , 0.92 ) ( N/A , 0.00 , 0.1) | 450.6<br>348.3 | 0.2910<br>110.0<br>109.9 | 0.1836<br>[ 0.1903 ] | 96.5% | 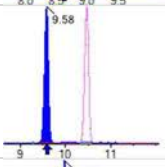 | 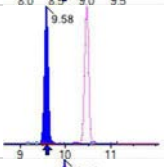 | |
| PFOS | ( 499.0 / 80.0 ) 201297<br>( 499.0 / 99.0 ) 46385 | ( 10.47 , 1.00 ) ( 0.00 , N/A , 0.3) | 529.6<br>1100.8 | 0.2304<br>98.6<br>96.0 | 0.2002<br>[ 0.1855 ] | 107.9% | 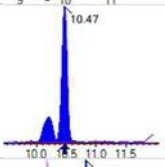 | 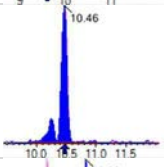 | |
| PFNS | ( 549.0 / 80.0 ) 174813<br>( 549.0 / 99.0 ) 49033 | ( 11.30 , 1.08 ) ( N/A , -0.01 , 0.0) | 591.5<br>366.1 | 0.2805<br>102.9<br>104.1 | 0.1857<br>[ 0.1920 ] | 96.7% | 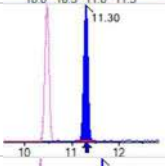 | 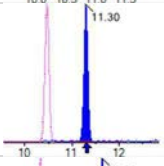 | |
| PFDS | ( 599.0 / 80.0 ) 220381<br>( 599.0 / 99.0 ) 53859 | ( 12.02 , 1.15 ) ( N/A , -0.01 , 0.1) | 489.3<br>241.2 | 0.2444<br>89.9<br>91.4 | 0.1917<br>[ 0.1926 ] | 99.5% | 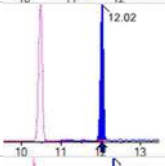 | 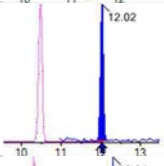 | |
| PFDoS | ( 699.0 / 80.0 ) 178143<br>( 699.0 / 99.0 ) 42559 | ( 12.94 , 1.24 ) ( N/A , -0.01 , 0.3) | 889.1<br>457.7 | 0.2389<br>102.3<br>104.3 | 0.1758<br>[ 0.1939 ] | 90.6% | 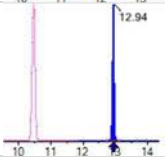 | 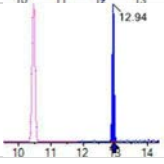 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 366291<br>( 327.0 / 81.0 ) 310480 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.2) | 3329.8<br>1169.7 | 0.8476<br>97.2<br>94.2 | 0.7303<br>[ 0.7476 ] | 97.7% | 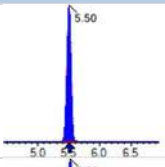 | 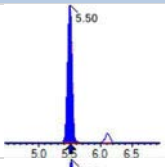 | |
| 6:2FTS | ( 427.0 / 407.0 ) 356855<br>( 427.0 / 81.0 ) 442825 | ( 7.62 , 1.00 ) ( -0.01 , N/A , 0.0) | 2925.4<br>1585.8 | 1.2409<br>98.9<br>93.7 | 0.7848<br>[ 0.7592 ] | 103.4% | 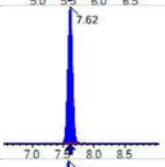 | 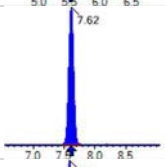 | |
| 8:2FTS | ( 527.0 / 507.0 ) 344588<br>( 527.0 / 81.0 ) 340687 | ( 9.39 , 1.00 ) ( -0.01 , N/A , -0.3) | 1179.1<br>913.7 | 0.9887<br>90.9<br>97.0 | 0.8281<br>[ 0.7666 ] | 108.0% | 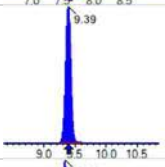 | 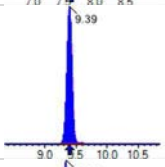 | |
| 10:2FTS | ( 627.0 / 607.0 ) 275498<br>( 627.0 / 81.0 ) 384880 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.0) | 958.8<br>604.0 | 1.3970<br>97.0<br>95.8 | 0.8139<br>[ 0.7729 ] | 105.3% | 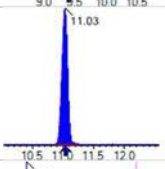 | 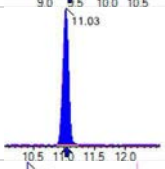 | |
| PFBSA | ( 297.9 / 78.0 ) 104872<br>( 297.9 / 278.0 ) 209 | ( 8.10 , 0.57 ) ( N/A , 0.01 , 0.9) | 705.8<br>11.4 | 0.0020<br>146.1<br>128.9 | 0.5371<br>[ 0.2000 ] | 268.6% | 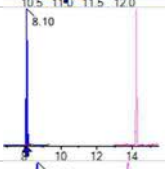 | 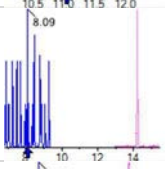 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 99713<br>( 397.9 / 378.0 ) 451 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.8) | 695.8<br>186.2 | 0.0045<br>110.8<br>108.1 | 0.3599<br>[ 0.2000 ] | 180.0% | 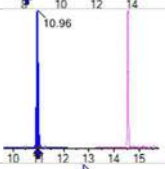 | 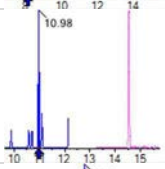 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 61645<br>( 498.0 / 478.0 ) 914 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.1) | 587.0<br>47.9 | 0.0148<br>105.6<br>99.6 | 0.2092<br>[ 0.2000 ] | 104.6% | 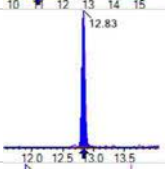 | 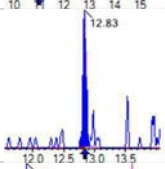 | |
| TFSI | ( 279.7 / 147.0 ) 402430<br>( 279.7 / 211.0 ) 39248 | ( 8.19 , 0.64 ) ( N/A , 0.01 , 0.1) | 52.0<br>29.8 | 0.0975<br>116.1<br>114.0 | 0.5187<br>[ 0.1959 ] | 264.8% | 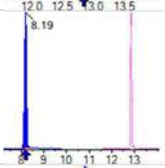 | 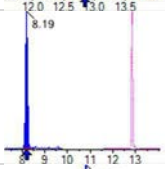 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 28666<br>( 512.0 / 169.0 ) 22860 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 2.3) | 347.2<br>172.7 | 0.7975<br>106.6<br>105.2 | 0.7620<br>[ 0.8000 ] | 95.3% | 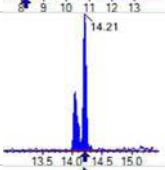 | 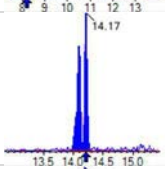 | |
| NEtFOSA | ( 526.0 / 219.0 ) 37681<br>( 526.0 / 169.0 ) 44376 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 1.1) | 490.0<br>358.9 | 1.1777<br>95.4<br>94.8 | 0.7464<br>[ 0.8000 ] | 93.3% | 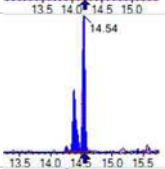 | 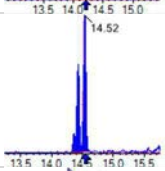 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 43060<br>( 570.0 / 483.0 ) 19458 | ( 10.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 2441.0<br>1316.4 | 0.4519<br>103.0<br>96.7 | 0.2019<br>[ 0.2000 ] | 101.0% | 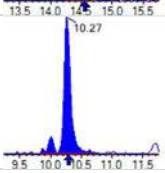 | 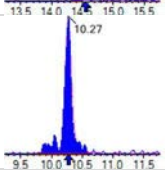 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 41991<br>( 584.0 / 526.0 ) 25379 | ( 10.80 , 1.00 ) ( 0.01 , N/A , -0.1) | 1840.4<br>477.0 | 0.6044<br>98.0<br>102.2 | 0.2014<br>[ 0.2000 ] | 100.7% | 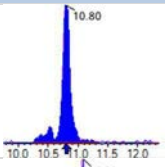 | 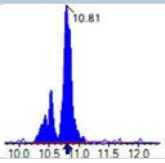 | |
| NMeFOSE | ( 616.0 / 59.0 ) 19531 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 120.3 | N/A<br>0.0<br>0.0 | 0.8275<br>[ 0.8000 ] | 103.4% | 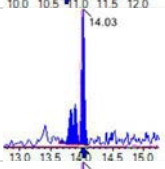 | | MI4 ABK 3/19/24 |
| NEtFOSE | ( 630.0 / 59.0 ) 16805 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 194.0 | N/A<br>0.0<br>0.0 | 0.8488<br>[ 0.8000 ] | 106.1% | 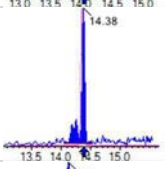 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 17556<br>( 285.0 / 185.0 ) 45622 | ( 6.49 , 1.00 ) ( -0.01 , N/A , -0.2) | 318.5<br>343.3 | 2.5987<br>94.0<br>98.5 | 0.2083<br>[ 0.2000 ] | 104.2% | 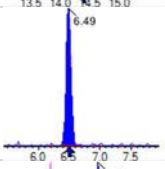 | 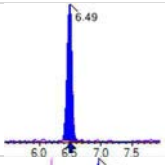 | |
| ADONA | ( 377.0 / 85.0 ) 187558<br>( 377.0 / 251.0 ) 16792 | ( 7.57 , 1.17 ) ( N/A , 0.01 , 0.3) | 1069.7<br>258.5 | 0.0895<br>87.8<br>85.6 | 0.1908<br>[ 0.1885 ] | 101.2% | 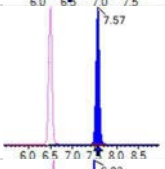 | 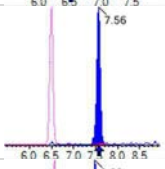 | |
| PFEESA | ( 315.0 / 135.0 ) 70701<br>( 315.0 / 83.0 ) 42524 | ( 6.93 , 1.15 ) ( N/A , 0.00 , 0.3) | 1032.8<br>132.1 | 0.6015<br>107.9<br>106.2 | 0.3238<br>[ 0.3570 ] | 90.7% | 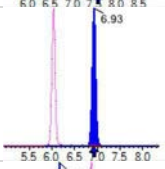 | 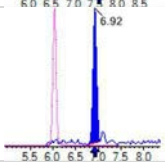 | |
| PFMPA | ( 229.0 / 85.0 ) 32517 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 885.8 | N/A<br>0.0<br>0.0 | 0.3829<br>[ 0.4000 ] | 95.7% | 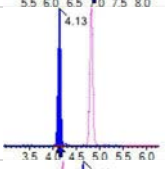 | | |
| PFMBA | ( 279.0 / 85.0 ) 92789 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 996.4 | N/A<br>0.0<br>0.0 | 0.4021<br>[ 0.4000 ] | 100.5% | 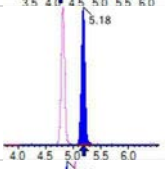 | | |
| NFDHA | ( 295.0 / 201.0 ) 42400<br>( 295.0 / 85.0 ) 43963 | ( 5.90 , 0.98 ) ( N/A , 0.00 , 0.1) | 602.8<br>527.8 | 1.0369<br>96.1<br>103.1 | 0.3735<br>[ 0.4000 ] | 93.4% | 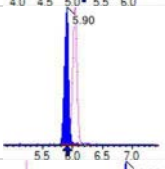 | 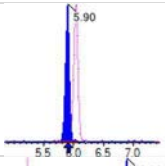 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 189086<br>( 533.0 / 353.0 ) 61335 | ( 11.11 , 1.71 ) ( N/A , -0.01 , -0.1) | 1542.4<br>626.6 | 0.3244<br>103.7<br>98.4 | 0.1781<br>[ 0.1867 ] | 95.4% | 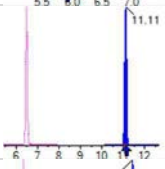 | 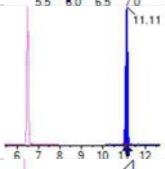 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 144744<br>( 633.0 / 453.0 ) 49400 | ( 12.43 , 1.91 ) ( N/A , -0.01 , 0.1) | 1583.3<br>527.4 | 0.3413<br>102.8<br>99.7 | 0.1773<br>[ 0.1886 ] | 94.0% | 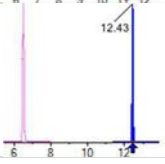 | 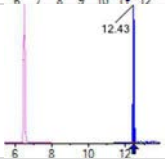 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 93257<br>( 461.0 / 381.2 ) 39675 | ( 9.51 , 0.91 )<br>( N/A , 0.00 , -0.1) | 1131.5<br>1153.8 | 0.4254<br>106.8<br>107.3 | 0.1644<br>[ 0.1848 ] | 89.0% | 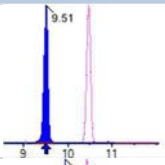 | 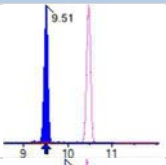 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 9500<br>( 241.0 / 117.0 ) 22984 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 428.3<br>218.0 | 2.4193<br>114.8<br>111.5 | 0.6241<br>[ 0.8000 ] | 78.0% | 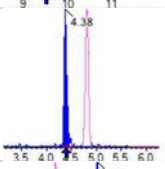 | 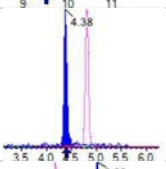 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 58331<br>( 341.0 / 217.0 ) 92000 | ( 6.93 , 1.15 )<br>( N/A , 0.00 , -0.1) | 465.2<br>337.3 | 1.5772<br>103.8<br>108.4 | 0.6917<br>[ 0.8000 ] | 86.5% | 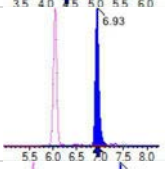 | 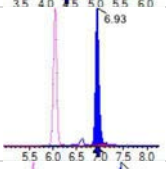 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 102736<br>( 441.0 / 337.0 ) 79818 | ( 9.32 , 1.54 )<br>( N/A , 0.00 , -0.3) | 4630.2<br>9780.9 | 0.7769<br>84.7<br>88.8 | 0.7424<br>[ 0.8000 ] | 92.8% | 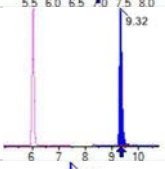 | 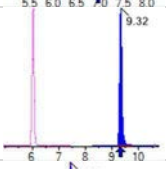 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 77737<br>( 357.2 / 243.0 ) 7324 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.0) | 500.7<br>119.3 | 0.0942<br>85.5<br>90.5 | 0.1973<br>[ 0.2000 ] | 98.7% | 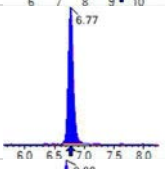 | 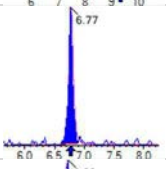 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 55869<br>( 457.2 / 343.0 ) 3299 | ( 8.80 , 1.00 )<br>( -0.01 , N/A , -1.2) | 309.1<br>99.8 | 0.0590<br>142.4<br>130.2 | 0.2134<br>[ 0.2000 ] | 106.7% | 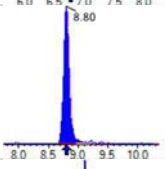 | 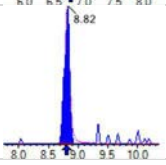 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 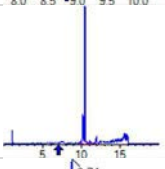 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 266106 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1322.8 | N/A | 1.1161<br>[ 1.0000 ] | 111.6%<br>{ 112.5% } | 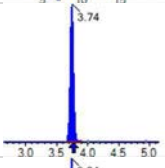 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125247 | ( 6.04 , N/A )<br>( N/A , 0.00 , N/A ) | 18864.0 | N/A | 0.9873<br>[ 1.0000 ] | 98.7%<br>{ 98.9% } | 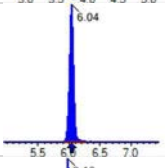 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 393560 | ( 8.18 , N/A )<br>( N/A , 0.00 , N/A ) | 2896.1 | N/A | 0.9956<br>[ 1.0000 ] | 99.6%<br>{ 103.7% } | 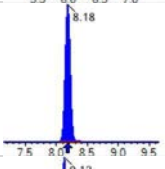 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 273424 | ( 9.12 , N/A )<br>( N/A , 0.00 , N/A ) | 836.6 | N/A | 0.9614<br>[ 1.0000 ] | 96.1%<br>{ 97.2% } | 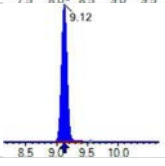 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 291119 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 6124.9 | N/A | 0.9969 [ 1.0000 ] | 99.7% { 100.6% } | 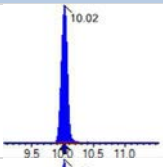 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 956213 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 5043.8 | N/A | 1.0076 [ 1.0000 ] | 100.8% { 102.4% } | 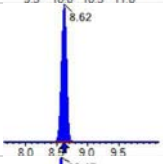 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 710285 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1860.1 | N/A | 0.9326 [ 1.0000 ] | 93.3% { 99.8% } | 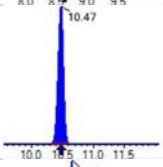 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2746738 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 45267.4 | N/A | 9.0354 [ 8.0000 ] | 112.9% { 122.7% } | 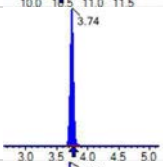 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1059490 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5029.5 | N/A | 4.5337 [ 4.0000 ] | 113.3% { 108.6% } | 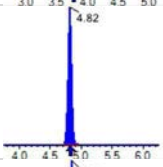 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 633013 | ( 6.04 , N/A ) ( N/A , 0.00 , N/A ) | 11970.6 | N/A | 2.2151 [ 2.0000 ] | 110.8% { 107.3% } | 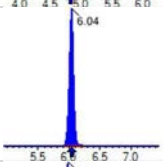 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 667842 | ( 7.18 , N/A ) ( N/A , 0.00 , N/A ) | 3589.3 | N/A | 2.1009 [ 2.0000 ] | 105.0% { 101.7% } | 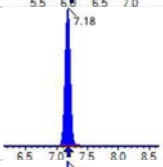 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 952414 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 3062.0 | N/A | 2.2586 [ 2.0000 ] | 112.9% { 110.5% } | 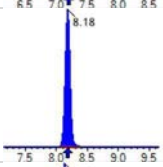 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 316088 | ( 9.12 , N/A ) ( N/A , 0.00 , N/A ) | 3291.8 | N/A | 1.1790 [ 1.0000 ] | 117.9% { 117.1% } | 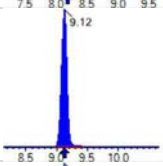 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 369193 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 1133.4 | N/A | 1.1316 [ 1.0000 ] | 113.2% { 114.8% } | 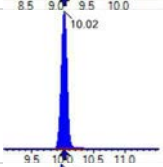 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 401492 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 977.1 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 107.9% } | 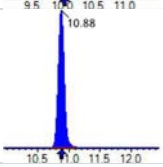 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MRL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414219 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1662.3 | N/A | 1.0597 [ 1.0000 ] | 106.0% { 111.1% } | 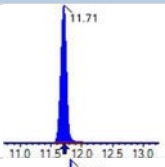 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 322418 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1183.9 | N/A | 0.9686 [ 1.0000 ] | 96.9% { 98.8% } | 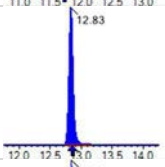 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 414443 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2139.2 | N/A | 1.4584 [ 2.0000 ] | 72.9% { 82.0% } | 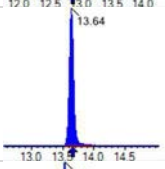 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1930202 | ( 6.33 , N/A ) ( N/A , 0.00 , N/A ) | 1250.6 | N/A | 2.2342 [ 2.0000 ] | 111.7% { 115.0% } | 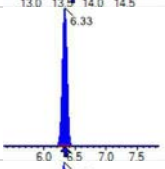 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1472271 | ( 8.62 , N/A ) ( N/A , 0.00 , N/A ) | 4411.7 | N/A | 2.1350 [ 2.0000 ] | 106.7% { 111.7% } | 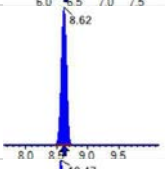 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1741364 | ( 10.47 , N/A ) ( N/A , -0.01 , N/A ) | 1617.1 | N/A | 2.2738 [ 2.0000 ] | 113.7% { 112.4% } | 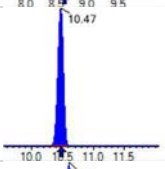 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 764426 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 94.6 | N/A | 5.1284 [ 4.0000 ] | 128.2% { 129.8% } | 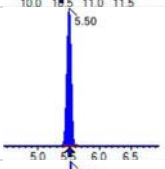 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2196524 | ( 7.62 , N/A ) ( N/A , 0.01 , N/A ) | 4700.6 | N/A | 4.9239 [ 4.0000 ] | 123.1% { 131.8% } | 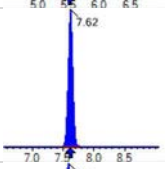 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1752697 | ( 9.40 , N/A ) ( N/A , 0.00 , N/A ) | 1467.3 | N/A | 5.0097 [ 4.0000 ] | 125.2% { 128.1% } | 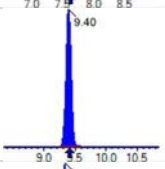 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3513510 | ( 11.02 , N/A ) ( N/A , -0.01 , N/A ) | 1541.8 | N/A | 9.6091 [ 8.0000 ] | 120.1% { 137.6% } | 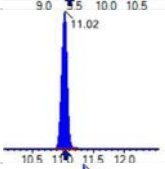 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 589287 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2026.6 | N/A | 0.8683 [ 2.0000 ] | 43.4% { 42.9% } | 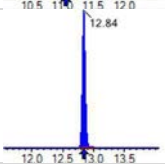 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (10)
Acquired: 2024/03/19 - 19:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 75773 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 734.7 | N/A | 0.5264 [ 2.0000 ] | 26.3% { 26.3% } | 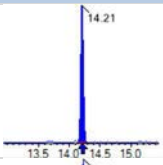 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 90154 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 902.2 | N/A | 0.5840 [ 2.0000 ] | 29.2% { 29.4% } | 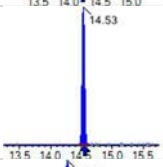 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 894404 | ( 10.27 , N/A ) ( N/A , 0.00 , N/A ) | 2227.9 | N/A | 4.5389 [ 4.0000 ] | 113.5% { 105.8% } | 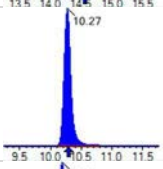 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 852515 | ( 10.79 , N/A ) ( N/A , -0.01 , N/A ) | 1690.4 | N/A | 4.7468 [ 4.0000 ] | 118.7% { 110.7% } | 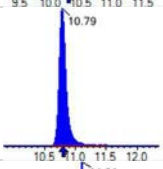 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 430335 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1306.0 | N/A | 6.6526 [ 20.0000 ] | 33.3% { 31.3% } | 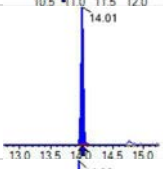 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 445703 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2245.5 | N/A | 6.7885 [ 20.0000 ] | 33.9% { 34.5% } | 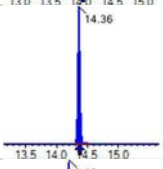 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1143193 | ( 6.49 , N/A ) ( N/A , 0.00 , N/A ) | 2127.6 | N/A | 8.7819 [ 8.0000 ] | 109.8% { 111.8% } | 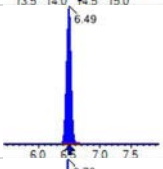 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 741014 | ( 6.78 , N/A ) ( N/A , 0.00 , N/A ) | 1107.2 | N/A | 2.3477 [ 2.0000 ] | 117.4% { 120.1% } | 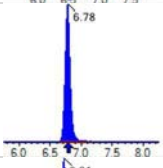 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 642102 | ( 8.81 , N/A ) ( N/A , 0.00 , N/A ) | 728.7 | N/A | 2.2347 [ 2.0000 ] | 111.7% { 116.1% } | 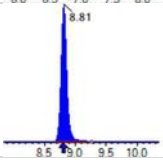 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MS2a | File ID:a | S2024-03-19B (13)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 20:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 15.5a | 0.18a | 1.4a | |
| PFPeAa | 8.23a | 0.057a | 0.70a | |
| PFHxAa | 4.17a | 0.048a | 0.35a | |
| PFHpAa | 4.11a | 0.036a | 0.35a | |
| PFOAa | 4.83a | 0.13a | 0.35a | MI4a |
| PFNAa | 3.66a | 0.072a | 0.35a | |
| PFDAa | 3.52a | 0.089a | 0.35a | |
| PFUnAa | 3.70a | 0.14a | 0.35a | |
| PFDoAa | 3.73a | 0.098a | 0.35a | |
| PFTrDAa | 3.76a | 0.18a | 0.35a | |
| PFTeDAa | 3.75a | 0.17a | 0.35a | |
| PFHxDAa | 3.72a | 0.18a | 0.35a | |
| PFODAa | 3.50a | 0.18a | 0.35a | |
| PFBSa | 4.06a | 0.032a | 0.35a | |
| PFPeSa | 3.71a | 0.055a | 0.35a | |
| PFHxSa | 3.90a | 0.028a | 0.35a | |
| PFHpSa | 3.89a | 0.045a | 0.35a | |
| PFOSa | 5.20a | 0.056a | 0.35a | |
| PFNSa | 3.77a | 0.11a | 0.35a | |
| PFDSa | 3.70a | 0.13a | 0.35a | |
| PFDoSa | 3.54a | 0.11a | 0.35a | |
| 4:2FTSa | 14.1a | 0.26a | 1.4a | |
| 6:2FTSa | 14.9a | 0.28a | 1.4a | |
| 8:2FTSa | 15.0a | 0.072a | 1.4a | |
| 10:2FTSa | 15.6a | 0.35a | 1.4a | |
| PFOSAa | 3.67a | 0.092a | 0.35a | |
| NMeFOSAa | 15.3a | 0.42a | 1.4a | |
| NEtFOSAa | 16.2a | 0.36a | 1.4a | |
| NMeFOSAAa | 3.60a | 0.093a | 0.35a | |
| NEtFOSAAa | 3.81a | 0.48a | 0.35a | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MS2a | File ID:a | S2024-03-19B (13)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 20:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 15.3a | 0.89a | 1.4a | |
| NEtFOSEa | 16.2a | 0.92a | 1.4a | |
| HFPO-DAa | 3.67a | 0.15a | 0.70a | |
| ADONAa | 3.85a | 0.11a | 0.70a | |
| PFEESAa | 6.39a | 0.096a | 0.70a | |
| PFMPAa | 8.03a | 0.047a | 0.70a | |
| PFMBAa | 7.14a | 0.080a | 0.70a | |
| NFDHAa | 6.64a | 0.26a | 0.70a | |
| 9Cl-PF3ONSa | 3.54a | 0.18a | 0.70a | |
| 11Cl-PF3OUDSa | 3.47a | 0.18a | 0.70a | |
| 3:3FTCAa | 13.1a | 0.51a | 1.4a | |
| 5:3FTCAa | 13.7a | 0.39a | 1.4a | |
| 7:3FTCAa | 13.2a | 0.49a | 1.4a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (13)
Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 211270<br>( 163.0 / 69.0 ) 6078 | ( 2.80 , 0.75 ) ( N/A , 0.01 , -0.1) | 790.4<br>326.9 | 0.0288<br>105.9<br>109.2 | 0.7927 | N/A | 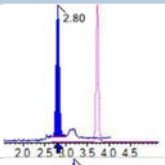 | 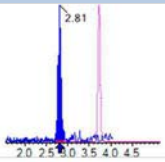 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 1244367 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 646.2 | N/A<br>0.0<br>0.0 | 4.4165 | N/A | 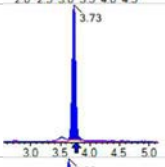 | | |
| PFPeA | ( 263.0 / 219.0 ) 582689<br>( 263.0 / 69.0 ) 7181 | ( 4.80 , 1.00 ) ( 0.00 , N/A , 0.1) | 2702.2<br>107.0 | 0.0123<br>103.2<br>111.1 | 2.3383 | N/A | 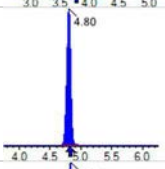 | 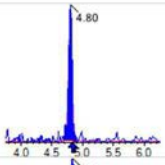 | |
| PFHxA | ( 313.0 / 269.0 ) 334793<br>( 313.0 / 119.0 ) 37681 | ( 6.02 , 1.00 ) ( 0.00 , N/A , -0.2) | 1170.8<br>433.0 | 0.1125<br>96.9<br>96.2 | 1.1841 | N/A | 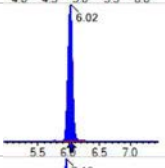 | 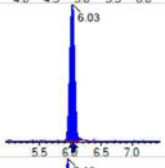 | |
| PFHpA | ( 363.0 / 319.0 ) 373003<br>( 363.0 / 169.0 ) 113923 | ( 7.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 999.5<br>787.1 | 0.3054<br>100.8<br>103.5 | 1.1689 | N/A | 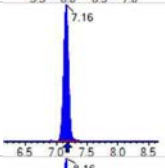 | 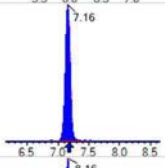 | |
| PFOA | ( 413.0 / 369.0 ) 602493<br>( 413.0 / 169.0 ) 226651 | ( 8.16 , 1.00 ) ( 0.00 , N/A , 0.0) | 421.9<br>352.4 | 0.3762<br>102.9<br>109.6 | 1.3727 | N/A | 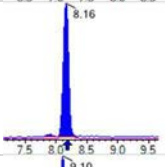 | 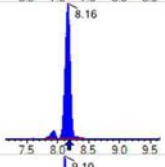 | MI4 ABK 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) 295022<br>( 463.0 / 169.0 ) 75065 | ( 9.10 , 1.00 ) ( 0.00 , N/A , -0.2) | 788.3<br>522.8 | 0.2544<br>99.7<br>105.8 | 1.0404 | N/A | 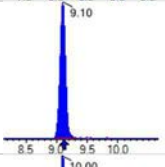 | 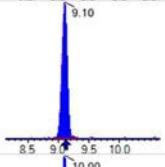 | |
| PFDA | ( 513.0 / 469.0 ) 303118<br>( 513.0 / 169.0 ) 46035 | ( 10.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 1413.6<br>20843.1 | 0.1519<br>129.6<br>126.9 | 1.0006 | N/A | 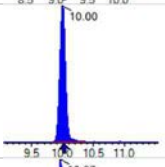 | 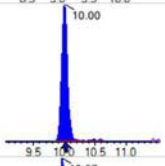 | |
| PFUnA | ( 563.0 / 519.0 ) 349830<br>( 563.0 / 169.0 ) 51351 | ( 10.87 , 1.00 ) ( 0.00 , N/A , -0.1) | 874.0<br>352.0 | 0.1468<br>103.6<br>103.3 | 1.0505 | N/A | 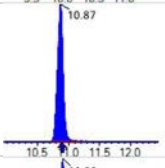 | 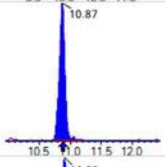 | |
| PFDoA | ( 613.0 / 569.0 ) 392726<br>( 613.0 / 169.0 ) 70136 | ( 11.69 , 1.00 ) ( 0.00 , N/A , 0.2) | 1211.3<br>523.2 | 0.1786<br>113.0<br>120.8 | 1.0594 | N/A | 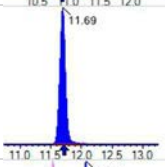 | 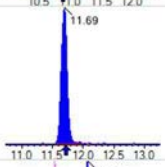 | |
| PFTrDA | ( 663.0 / 619.0 ) 387866<br>( 663.0 / 169.0 ) 103206 | ( 12.33 , 1.05 ) ( N/A , -0.01 , 0.1) | 1060.0<br>657.2 | 0.2661<br>103.4<br>102.7 | 1.0695 | N/A | 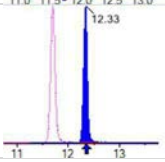 | 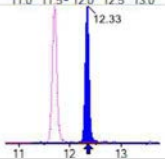 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MS2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 303033<br>( 713.0 / 169.0 ) 82066 | ( 12.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1025.5<br>551.6 | 0.2708<br>100.3<br>101.9 | 1.0652 | N/A | 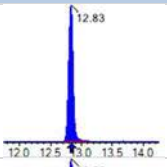 | 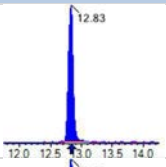 | |
| PFHxDA | ( 813.0 / 769.0 ) 222381<br>( 813.0 / 169.0 ) 54316 | ( 13.63 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1048.8<br>338.5 | 0.2442<br>99.8<br>95.7 | 1.0585 | N/A | 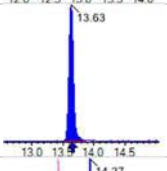 | 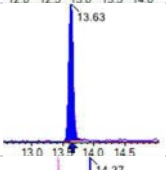 | |
| PFODA | ( 913.0 / 869.0 ) 130837<br>( 913.0 / 169.0 ) 44530 | ( 14.27 , 1.05 )<br>( N/A , -0.01 , -0.1) | 599.7<br>188.9 | 0.3404<br>95.0<br>99.9 | 0.9955 | N/A | 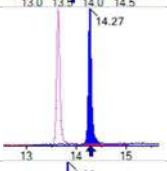 | 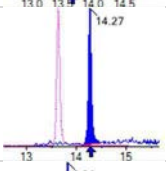 | |
| PFBS | ( 299.0 / 80.0 ) 525860<br>( 299.0 / 99.0 ) 383954 | ( 6.32 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1332.0<br>1421.5 | 0.7301<br>103.2<br>99.3 | 1.1528 | N/A | 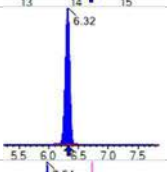 | 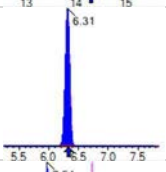 | |
| PFPeS | ( 349.0 / 80.0 ) 1162945<br>( 349.0 / 99.0 ) 377504 | ( 7.54 , 0.88 )<br>( N/A , -0.02 , 0.1) | 1042.4<br>1341.7 | 0.3246<br>90.3<br>92.2 | 1.0541 | N/A | 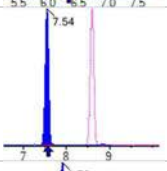 | 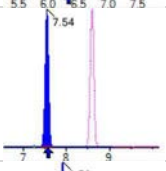 | |
| PFHxS | ( 399.0 / 80.0 ) 1420632<br>( 399.0 / 99.0 ) 466268 | ( 8.59 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1246.0<br>1272.0 | 0.3282<br>103.1<br>98.2 | 1.1086 | N/A | 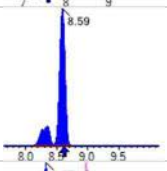 | 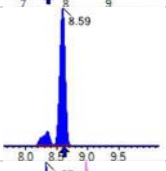 | |
| PFHpS | ( 449.0 / 80.0 ) 1035736<br>( 449.0 / 99.0 ) 279637 | ( 9.57 , 0.91 )<br>( N/A , -0.02 , -0.2) | 972.5<br>589.7 | 0.2700<br>102.0<br>102.0 | 1.1060 | N/A | 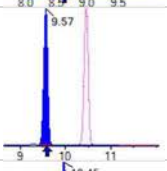 | 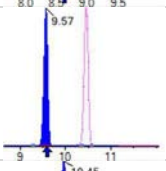 | |
| PFOS | ( 499.0 / 80.0 ) 1333728<br>( 499.0 / 99.0 ) 262619 | ( 10.45 , 1.00 )<br>( -0.01 , N/A , -0.4) | 673.2<br>1108.8 | 0.1969<br>84.2<br>82.0 | 1.4775 | N/A | 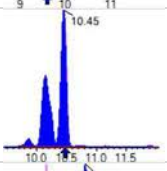 | 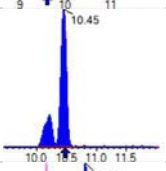 | |
| PFNS | ( 549.0 / 80.0 ) 904786<br>( 549.0 / 99.0 ) 239038 | ( 11.29 , 1.08 )<br>( N/A , -0.02 , 0.0) | 995.1<br>859.7 | 0.2642<br>96.9<br>98.1 | 1.0706 | N/A | 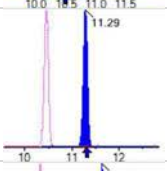 | 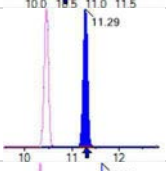 | |
| PFDS | ( 599.0 / 80.0 ) 1085165<br>( 599.0 / 99.0 ) 303572 | ( 12.01 , 1.15 )<br>( N/A , -0.01 , 0.1) | 1575.9<br>1119.9 | 0.2797<br>102.9<br>104.7 | 1.0515 | N/A | 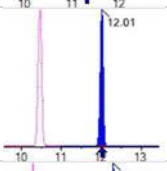 | 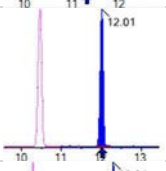 | |
| PFDoS | ( 699.0 / 80.0 ) 916690<br>( 699.0 / 99.0 ) 220151 | ( 12.94 , 1.24 )<br>( N/A , -0.01 , 0.0) | 2339.3<br>1530.1 | 0.2402<br>102.8<br>104.9 | 1.0076 | N/A | 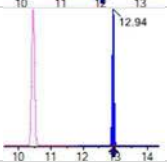 | 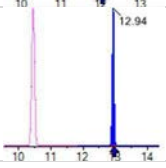 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (13)
Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1757080<br>( 327.0 / 81.0 ) 1612989 | ( 5.49 , 1.00 ) ( 0.00 , N/A , 0.1) | 3455.9<br>2313.3 | 0.9180<br>105.2<br>102.0 | 4.0020 | N/A | 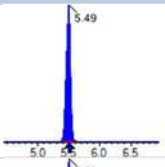 | 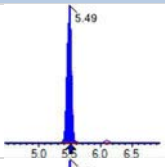 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1739314<br>( 427.0 / 81.0 ) 2182959 | ( 7.59 , 1.00 ) ( 0.00 , N/A , 0.1) | 5690.8<br>2630.5 | 1.2551<br>100.1<br>94.8 | 4.2250 | N/A | 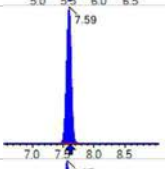 | 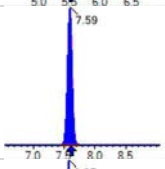 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1517799<br>( 527.0 / 81.0 ) 1625711 | ( 9.37 , 1.00 ) ( -0.01 , N/A , -0.2) | 1760.6<br>1356.6 | 1.0711<br>98.5<br>105.1 | 4.2597 | N/A | 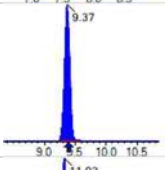 | 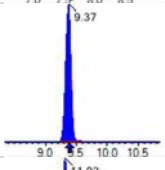 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1339937<br>( 627.0 / 81.0 ) 1855086 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.0) | 1179.7<br>1174.2 | 1.3845<br>96.2<br>94.9 | 4.4416 | N/A | 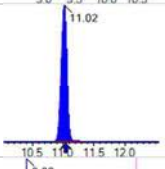 | 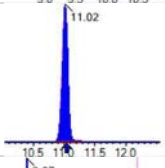 | |
| PFBSA | ( 297.9 / 78.0 ) 504368<br>( 297.9 / 278.0 ) 950 | ( 8.09 , 0.57 ) ( N/A , -0.01 , 0.9) | 1187.6<br>39.7 | 0.0019<br>137.8<br>121.6 | 2.1520 | N/A | 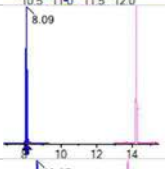 | 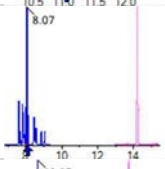 | |
| PFHxSA | ( 397.9 / 78.0 ) 550272<br>( 397.9 / 378.0 ) 2369 | ( 10.95 , 0.75 ) ( N/A , -0.01 , 0.4) | 909.7<br>86.5 | 0.0043<br>105.4<br>102.9 | 1.9484 | N/A | 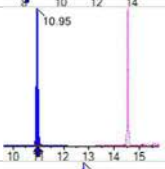 | 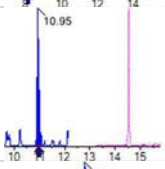 | |
| PFOSA | ( 498.0 / 78.0 ) 358640<br>( 498.0 / 478.0 ) 5390 | ( 12.83 , 1.00 ) ( -0.01 , N/A , -0.4) | 1064.5<br>177.4 | 0.0150<br>107.1<br>101.0 | 1.0429 | N/A | 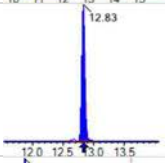 | 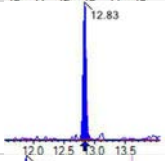 | |
| TFSI | ( 279.7 / 147.0 ) 1881695<br>( 279.7 / 211.0 ) 164886 | ( 8.17 , 0.64 ) ( N/A , -0.01 , 0.0) | 60.4<br>49.7 | 0.0876<br>104.3<br>102.4 | 2.0781 | N/A | 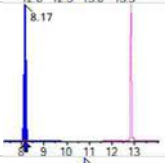 | 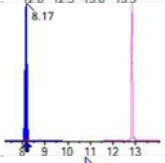 | |
| NMeFOSA | ( 512.0 / 219.0 ) 195817<br>( 512.0 / 169.0 ) 152364 | ( 14.20 , 1.00 ) ( 0.00 , N/A , 2.6) | 1290.5<br>652.5 | 0.7781<br>104.0<br>102.6 | 4.3366 | N/A | 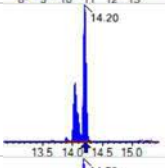 | 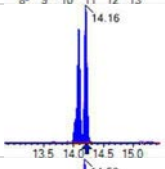 | |
| NEtFOSA | ( 526.0 / 219.0 ) 236523<br>( 526.0 / 169.0 ) 292853 | ( 14.53 , 1.00 ) ( 0.01 , N/A , 1.8) | 1587.6<br>1486.1 | 1.2382<br>100.3<br>99.7 | 4.5957 | N/A | 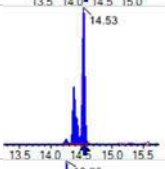 | 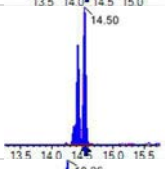 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 208129<br>( 570.0 / 483.0 ) 96884 | ( 10.26 , 1.00 ) ( 0.00 , N/A , 0.0) | 12734.3<br>1855.7 | 0.4655<br>106.2<br>99.6 | 1.0234 | N/A | 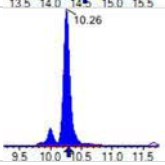 | 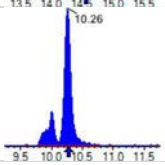 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (13)
Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 204864<br>( 584.0 / 526.0 ) 124687 | ( 10.79 , 1.00 ) ( 0.01 , N/A , 0.1) | 1067.5<br>462.7 | 0.6086<br>98.7<br>102.9 | 1.0824 | N/A | 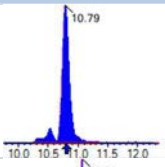 | 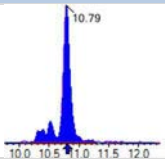 | |
| NMeFOSE | ( 616.0 / 59.0 ) 99184 | ( 14.02 , 1.00 ) ( 0.02 , N/A , 0.0) | 514.4 | N/A<br>0.0<br>0.0 | 4.3546 | N/A | 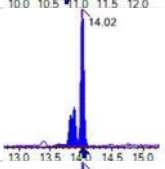 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 82556 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 763.1 | N/A<br>0.0<br>0.0 | 4.6126 | N/A | 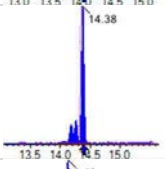 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78661<br>( 285.0 / 185.0 ) 223864 | ( 6.48 , 1.00 ) ( 0.00 , N/A , 0.1) | 1245.0<br>1080.0 | 2.8459<br>102.9<br>107.9 | 1.0443 | N/A | 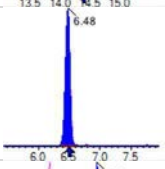 | 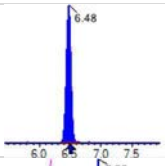 | |
| ADONA | ( 377.0 / 85.0 ) 960844<br>( 377.0 / 251.0 ) 100770 | ( 7.55 , 1.16 ) ( N/A , -0.02 , -0.2) | 1633.2<br>711.5 | 0.1049<br>102.9<br>100.3 | 1.0933 | N/A | 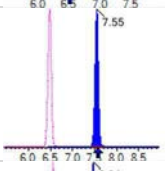 | 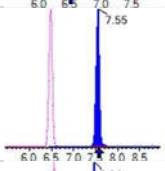 | |
| PFEESA | ( 315.0 / 135.0 ) 368600<br>( 315.0 / 83.0 ) 238404 | ( 6.91 , 1.15 ) ( N/A , -0.02 , 0.1) | 2099.5<br>682.7 | 0.6468<br>116.0<br>114.2 | 1.8154 | N/A | 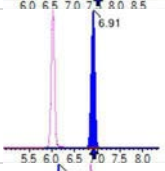 | 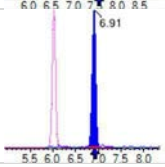 | |
| PFMPA | ( 229.0 / 85.0 ) 180461 | ( 4.11 , 0.86 ) ( N/A , -0.03 , 0.0) | 3348.4 | N/A<br>0.0<br>0.0 | 2.2821 | N/A | 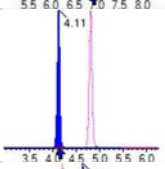 | | |
| PFMBA | ( 279.0 / 85.0 ) 436294 | ( 5.17 , 1.08 ) ( N/A , -0.02 , 0.0) | 2871.9 | N/A<br>0.0<br>0.0 | 2.0300 | N/A | 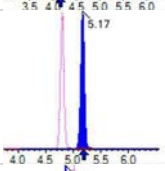 | | |
| NFDHA | ( 295.0 / 201.0 ) 199279<br>( 295.0 / 85.0 ) 222071 | ( 5.88 , 0.98 ) ( N/A , -0.02 , -0.1) | 1956.7<br>1506.3 | 1.1144<br>103.3<br>110.8 | 1.8879 | N/A | 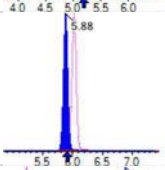 | 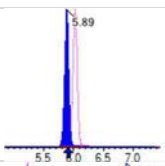 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 954898<br>( 533.0 / 353.0 ) 313014 | ( 11.10 , 1.71 ) ( N/A , -0.02 , 0.0) | 2613.6<br>1811.1 | 0.3278<br>104.8<br>99.5 | 1.0060 | N/A | 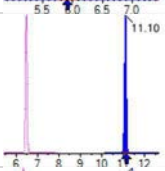 | 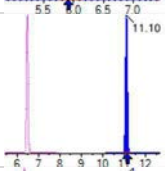 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 719165<br>( 633.0 / 453.0 ) 252328 | ( 12.43 , 1.92 ) ( N/A , -0.02 , 0.0) | 2535.3<br>1452.0 | 0.3509<br>105.6<br>102.5 | 0.9852 | N/A | 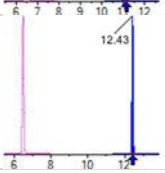 | 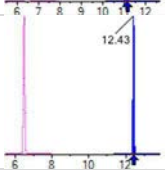 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MS2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 521933<br>( 461.0 / 381.2 ) 201707 | ( 9.48 , 0.91 )<br>( N/A , -0.02 , -0.3) | 2361.8<br>1462.4 | 0.3865<br>97.0<br>97.5 | 1.0249 | N/A | 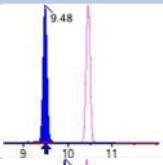 | 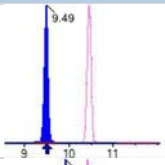 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 52828<br>( 241.0 / 117.0 ) 116837 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 890.1<br>1115.7 | 2.2116<br>105.0<br>101.9 | 3.7266 | N/A | 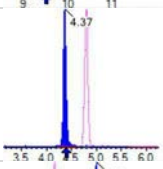 | 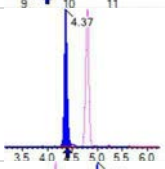 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 304972<br>( 341.0 / 217.0 ) 450594 | ( 6.92 , 1.15 )<br>( N/A , -0.01 , 0.1) | 989.5<br>757.1 | 1.4775<br>97.3<br>101.5 | 3.8894 | N/A | 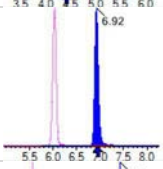 | 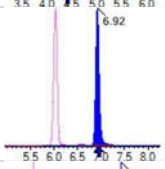 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 481468<br>( 441.0 / 337.0 ) 432621 | ( 9.30 , 1.54 )<br>( N/A , -0.02 , 0.0) | 3566.8<br>7528.8 | 0.8985<br>98.0<br>102.7 | 3.7418 | N/A | 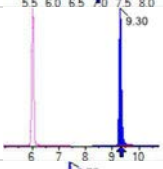 | 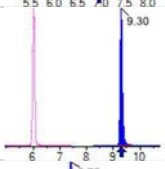 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 388582<br>( 357.2 / 243.0 ) 41625 | ( 6.75 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1290.9<br>299.9 | 0.1071<br>97.2<br>102.9 | 1.0309 | N/A | 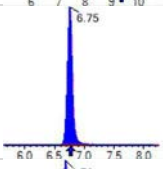 | 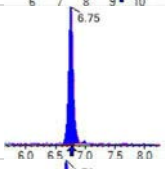 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 324671<br>( 457.2 / 343.0 ) 12970 | ( 8.79 , 1.00 )<br>( -0.01 , N/A , 0.3) | 826.0<br>183.9 | 0.0399<br>96.3<br>88.1 | 1.2110 | N/A | 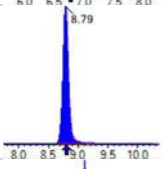 | 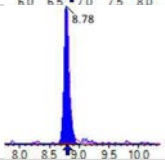 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 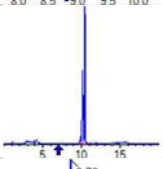 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 276468 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 1168.0 | N/A | 1.1595<br>[ 1.0000 ] | 116.0%<br>{ 116.9% } | 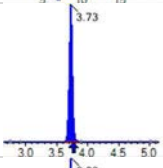 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126141 | ( 6.03 , N/A )<br>( N/A , -0.02 , N/A ) | 3846.6 | N/A | 0.9944<br>[ 1.0000 ] | 99.4%<br>{ 99.6% } | 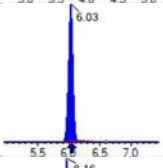 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367454 | ( 8.16 , N/A )<br>( N/A , -0.02 , N/A ) | 2995.8 | N/A | 0.9295<br>[ 1.0000 ] | 93.0%<br>{ 96.9% } | 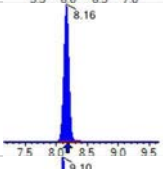 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270827 | ( 9.10 , N/A )<br>( N/A , -0.02 , N/A ) | 1050.5 | N/A | 0.9523<br>[ 1.0000 ] | 95.2%<br>{ 96.3% } | 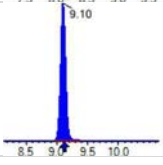 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (13)
Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 249194 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 2577.4 | N/A | 0.8533 [ 1.0000 ] | 85.3% { 86.1% } | 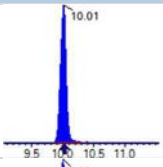 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 878430 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 4783.3 | N/A | 0.9256 [ 1.0000 ] | 92.6% { 94.1% } | 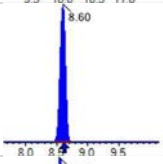 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 746483 | ( 10.46 , N/A ) ( N/A , -0.02 , N/A ) | 1573.1 | N/A | 0.9801 [ 1.0000 ] | 98.0% { 104.8% } | 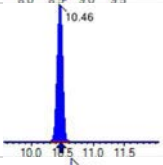 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2261209 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 35236.5 | N/A | 7.1595 [ 8.0000 ] | 89.5% { 101.0% } | 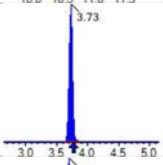 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 986675 | ( 4.80 , N/A ) ( N/A , -0.02 , N/A ) | 4959.1 | N/A | 4.1922 [ 4.0000 ] | 104.8% { 101.1% } | 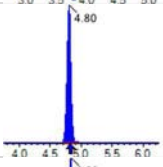 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 588579 | ( 6.03 , N/A ) ( N/A , -0.02 , N/A ) | 8474.0 | N/A | 2.0450 [ 2.0000 ] | 102.3% { 99.8% } | 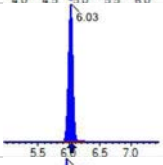 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 650383 | ( 7.16 , N/A ) ( N/A , -0.02 , N/A ) | 4538.6 | N/A | 2.0315 [ 2.0000 ] | 101.6% { 99.1% } | 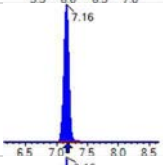 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 887688 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 3511.6 | N/A | 2.2546 [ 2.0000 ] | 112.7% { 103.0% } | 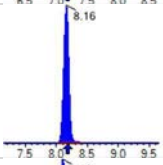 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 282142 | ( 9.10 , N/A ) ( N/A , -0.02 , N/A ) | 2028.8 | N/A | 1.0625 [ 1.0000 ] | 106.2% { 104.5% } | 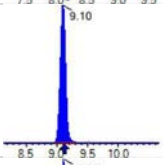 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 296469 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1308.9 | N/A | 1.0616 [ 1.0000 ] | 106.2% { 92.2% } | 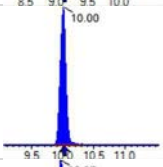 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 360043 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 947.2 | N/A | 1.0959 [ 1.0000 ] | 109.6% { 96.8% } | 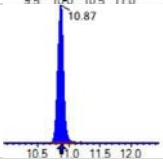 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MS2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368497 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1397.0 | N/A | 1.1014 [ 1.0000 ] | 110.1% { 98.8% } | 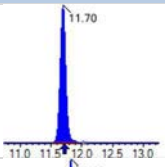  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 303744 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1316.2 | N/A | 1.0660 [ 1.0000 ] | 106.6% { 93.0% } | 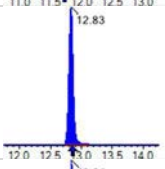  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 440524 | ( 13.64 , N/A ) ( N/A , -0.02 , N/A ) | 2169.8 | N/A | 1.8109 [ 2.0000 ] | 90.5% { 87.2% } | 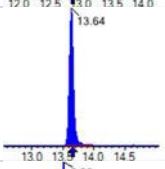  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1757079 | ( 6.32 , N/A ) ( N/A , -0.02 , N/A ) | 1115.5 | N/A | 2.2139 [ 2.0000 ] | 110.7% { 104.7% } | 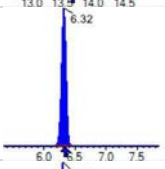  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1441584 | ( 8.60 , N/A ) ( N/A , -0.02 , N/A ) | 2906.9 | N/A | 2.2756 [ 2.0000 ] | 113.8% { 109.3% } | 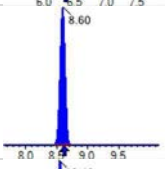  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1563082 | ( 10.46 , N/A ) ( N/A , -0.02 , N/A ) | 1332.9 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 100.9% } | 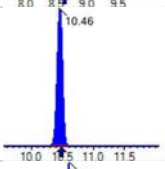  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 669178 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 87.6 | N/A | 4.8869 [ 4.0000 ] | 122.2% { 113.6% } | 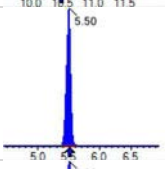  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1988553 | ( 7.60 , N/A ) ( N/A , -0.02 , N/A ) | 2597.9 | N/A | 4.8525 [ 4.0000 ] | 121.3% { 119.3% } | 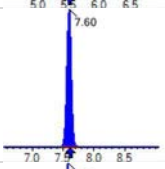  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1500769 | ( 9.38 , N/A ) ( N/A , -0.02 , N/A ) | 1365.2 | N/A | 4.6694 [ 4.0000 ] | 116.7% { 109.7% } | 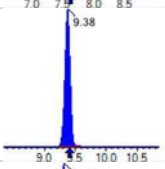  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3131261 | ( 11.01 , N/A ) ( N/A , -0.02 , N/A ) | 1224.5 | N/A | 9.3220 [ 8.0000 ] | 116.5% { 122.7% } | 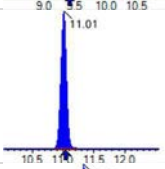  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 687746 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 2308.2 | N/A | 0.9642 [ 2.0000 ] | 48.2% { 50.1% } | 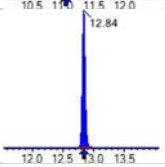  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (13)
Acquired: 2024/03/19 - 20:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 90954 | ( 14.20 , N/A ) ( N/A , -0.01 , N/A ) | 798.6 | N/A | 0.6012 [ 2.0000 ] | 30.1% { 31.6% } | 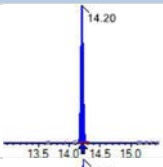  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 91908 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 765.1 | N/A | 0.5665 [ 2.0000 ] | 28.3% { 30.0% } | 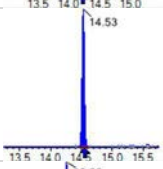  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 852905 | ( 10.26 , N/A ) ( N/A , -0.02 , N/A ) | 2143.0 | N/A | 4.1184 [ 4.0000 ] | 103.0% { 100.9% } | 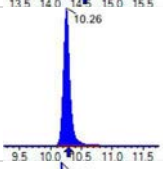  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 773980 | ( 10.78 , N/A ) ( N/A , -0.02 , N/A ) | 2259.8 | N/A | 4.1005 [ 4.0000 ] | 102.5% { 100.5% } | 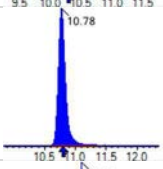  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 415287 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1075.6 | N/A | 6.1086 [ 20.0000 ] | 30.5% { 30.2% } | 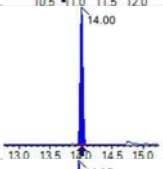  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 402893 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 2156.6 | N/A | 5.8389 [ 20.0000 ] | 29.2% { 31.2% } | 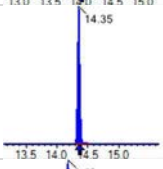  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1021924 | ( 6.48 , N/A ) ( N/A , -0.02 , N/A ) | 2329.1 | N/A | 7.7947 [ 8.0000 ] | 97.4% { 99.9% } | 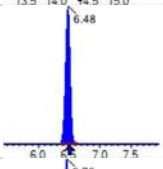  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 709085 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1067.1 | N/A | 2.6246 [ 2.0000 ] | 131.2% { 114.9% } | 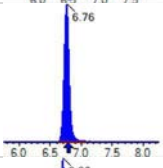  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 657407 | ( 8.80 , N/A ) ( N/A , -0.01 , N/A ) | 835.5 | N/A | 2.6729 [ 2.0000 ] | 133.6% { 118.8% } | 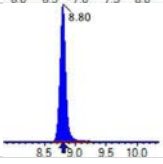  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MSD2a | File ID:a | S2024-03-19B (14)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 20:55a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.0a | 0.19a | 1.5a | |
| PFPeAa | 8.52a | 0.060a | 0.73a | |
| PFHxAa | 4.47a | 0.050a | 0.37a | |
| PFHpAa | 4.37a | 0.038a | 0.37a | |
| PFOAa | 5.17a | 0.14a | 0.37a | MI4a |
| PFNAa | 4.16a | 0.075a | 0.37a | |
| PFDAa | 3.81a | 0.093a | 0.37a | |
| PFUnAa | 3.94a | 0.15a | 0.37a | |
| PFDoAa | 3.93a | 0.10a | 0.37a | |
| PFTrDAa | 3.93a | 0.19a | 0.37a | |
| PFTeDAa | 4.23a | 0.18a | 0.37a | |
| PFHxDAa | 4.06a | 0.18a | 0.37a | |
| PFODAa | 3.51a | 0.18a | 0.37a | |
| PFBSa | 4.17a | 0.034a | 0.37a | |
| PFPeSa | 3.99a | 0.058a | 0.37a | |
| PFHxSa | 4.27a | 0.029a | 0.37a | |
| PFHpSa | 4.07a | 0.047a | 0.37a | |
| PFOSa | 5.07a | 0.058a | 0.37a | |
| PFNSa | 3.82a | 0.11a | 0.37a | |
| PFDSa | 3.62a | 0.14a | 0.37a | |
| PFDoSa | 3.37a | 0.11a | 0.37a | |
| 4:2FTSa | 15.3a | 0.27a | 1.5a | |
| 6:2FTSa | 16.0a | 0.29a | 1.5a | |
| 8:2FTSa | 16.1a | 0.075a | 1.5a | |
| 10:2FTSa | 13.7a | 0.37a | 1.5a | |
| PFOSAa | 4.40a | 0.096a | 0.37a | |
| NMeFOSAa | 15.9a | 0.43a | 1.5a | |
| NEtFOSAa | 14.9a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.99a | 0.097a | 0.37a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0103a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0200-MSD2a | File ID:a | S2024-03-19B (14)a |
| Sampled:a | | Prepared:a | 03/18/24 11:40a | Analyzed:a | 03/19/24 20:55a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0200a | Sequence:a | SD01003a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.4a | 0.93a | 1.5a | |
| NEtFOSEa | 16.4a | 0.96a | 1.5a | |
| HFPO-DAa | 3.85a | 0.16a | 0.73a | |
| ADONAa | 3.85a | 0.11a | 0.73a | |
| PFEESAa | 6.88a | 0.10a | 0.73a | |
| PFMPAa | 8.24a | 0.049a | 0.73a | |
| PFMBAa | 7.76a | 0.083a | 0.73a | |
| NFDHAa | 7.64a | 0.28a | 0.73a | |
| 9Cl-PF3ONSa | 3.71a | 0.19a | 0.73a | |
| 11Cl-PF3OUDSa | 3.56a | 0.19a | 0.73a | |
| 3:3FTCAa | 13.9a | 0.53a | 1.5a | |
| 5:3FTCAa | 14.3a | 0.41a | 1.5a | |
| 7:3FTCAa | 15.1a | 0.51a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (14)
Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 176419<br>( 163.0 / 69.0 ) 4946 | ( 2.82 , 0.75 ) ( N/A , 0.02 , 0.1) | 609.3<br>262.9 | 0.0280<br>103.2<br>106.4 | 0.6593 | N/A | 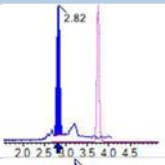 | 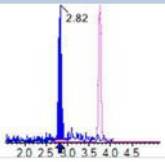 | MI1 ABK 3/19/24 |
| PFBA | ( 213.0 / 169.0 ) 1232767 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 641.3 | N/A<br>0.0<br>0.0 | 4.3577 | N/A | 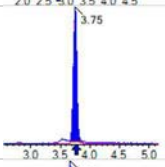 | | |
| PFPeA | ( 263.0 / 219.0 ) 577244<br>( 263.0 / 69.0 ) 7638 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 2282.2<br>105.1 | 0.0132<br>110.8<br>119.3 | 2.3209 | N/A | 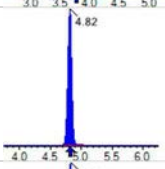 | 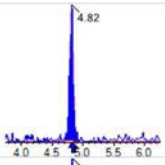 | |
| PFHxA | ( 313.0 / 269.0 ) 344197<br>( 313.0 / 119.0 ) 41305 | ( 6.03 , 1.00 ) ( 0.00 , N/A , 0.1) | 1363.3<br>420.7 | 0.1200<br>103.4<br>102.5 | 1.2190 | N/A | 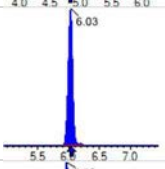 | 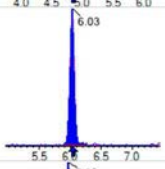 | |
| PFHpA | ( 363.0 / 319.0 ) 373667<br>( 363.0 / 169.0 ) 119072 | ( 7.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 1051.3<br>993.8 | 0.3187<br>105.1<br>107.9 | 1.1903 | N/A | 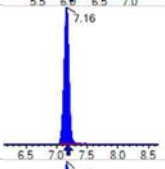 | 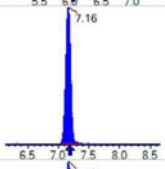 | |
| PFOA | ( 413.0 / 369.0 ) 595433<br>( 413.0 / 169.0 ) 225461 | ( 8.16 , 1.00 ) ( 0.00 , N/A , 0.0) | 406.5<br>595.3 | 0.3787<br>103.6<br>110.3 | 1.4084 | N/A | 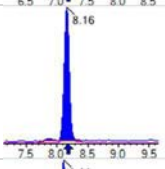 | 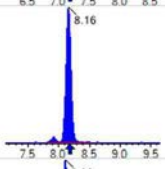 | MI4 ABK 3/19/24 |
| PFNA | ( 463.0 / 419.0 ) 321649<br>( 463.0 / 169.0 ) 79701 | ( 9.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 819.1<br>464.1 | 0.2478<br>97.1<br>103.0 | 1.1329 | N/A | 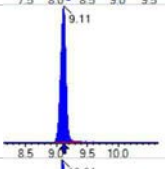 | 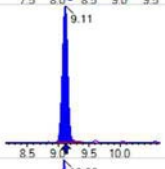 | |
| PFDA | ( 513.0 / 469.0 ) 298478<br>( 513.0 / 169.0 ) 36905 | ( 10.01 , 1.00 ) ( 0.00 , N/A , 0.3) | 1710.7<br>1139.7 | 0.1236<br>105.5<br>103.3 | 1.0389 | N/A | 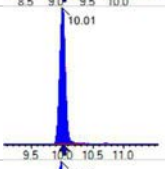 | 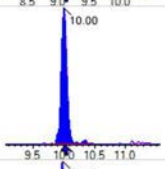 | |
| PFUnA | ( 563.0 / 519.0 ) 355499<br>( 563.0 / 169.0 ) 52690 | ( 10.87 , 1.00 ) ( -0.01 , N/A , 0.1) | 714.0<br>372.6 | 0.1482<br>104.6<br>104.3 | 1.0734 | N/A | 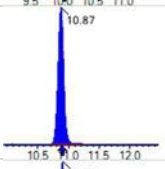 | 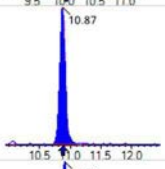 | |
| PFDoA | ( 613.0 / 569.0 ) 378351<br>( 613.0 / 169.0 ) 63607 | ( 11.70 , 1.00 ) ( 0.00 , N/A , -0.2) | 1062.9<br>509.3 | 0.1681<br>106.4<br>113.7 | 1.0694 | N/A | 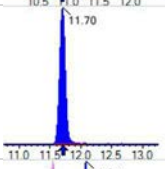 | 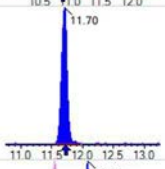 | |
| PFTrDA | ( 663.0 / 619.0 ) 370888<br>( 663.0 / 169.0 ) 97101 | ( 12.34 , 1.05 ) ( N/A , -0.01 , 0.1) | 1043.4<br>618.3 | 0.2618<br>101.7<br>101.1 | 1.0716 | N/A | 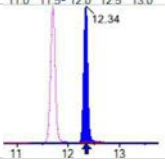 | 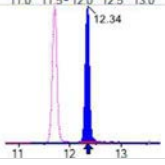 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: BDC0200-MSD2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 300256<br>( 713.0 / 169.0 ) 76641 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.2) | 995.2<br>534.0 | 0.2553<br>94.6<br>96.1 | 1.1526 | N/A | 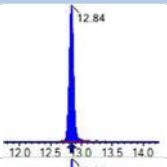 | 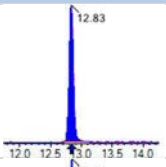 | |
| PFHxDA | ( 813.0 / 769.0 ) 237026<br>( 813.0 / 169.0 ) 60019 | ( 13.64 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1067.3<br>351.4 | 0.2532<br>103.5<br>99.2 | 1.1052 | N/A | 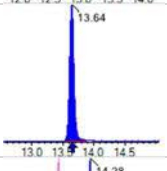 | 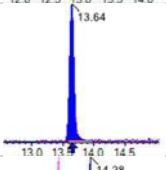 | |
| PFODA | ( 913.0 / 869.0 ) 128454<br>( 913.0 / 169.0 ) 45720 | ( 14.28 , 1.05 )<br>( N/A , 0.00 , -0.1) | 583.0<br>191.7 | 0.3559<br>99.3<br>104.4 | 0.9574 | N/A | 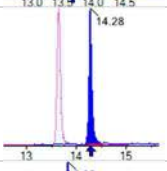 | 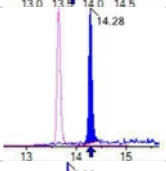 | |
| PFBS | ( 299.0 / 80.0 ) 508874<br>( 299.0 / 99.0 ) 365214 | ( 6.32 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1198.8<br>1388.6 | 0.7177<br>101.5<br>97.6 | 1.1359 | N/A | 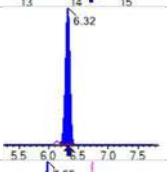 | 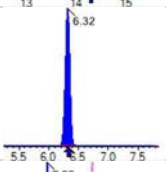 | |
| PFPeS | ( 349.0 / 80.0 ) 1127909<br>( 349.0 / 99.0 ) 401260 | ( 7.55 , 0.88 )<br>( N/A , -0.01 , -0.1) | 864.1<br>1175.9 | 0.3558<br>98.9<br>101.0 | 1.0859 | N/A | 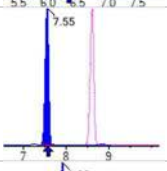 | 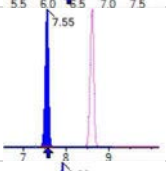 | |
| PFHxS | ( 399.0 / 80.0 ) 1404109<br>( 399.0 / 99.0 ) 454971 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1009.1<br>1194.4 | 0.3240<br>101.7<br>96.9 | 1.1638 | N/A | 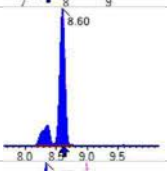 | 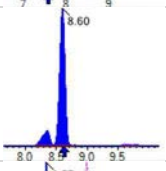 | |
| PFHpS | ( 449.0 / 80.0 ) 1077460<br>( 449.0 / 99.0 ) 288451 | ( 9.57 , 0.91 )<br>( N/A , -0.01 , -0.1) | 890.2<br>582.4 | 0.2677<br>101.2<br>101.1 | 1.1082 | N/A | 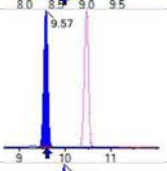 | 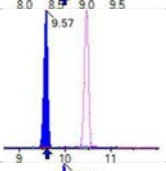 | |
| PFOS | ( 499.0 / 80.0 ) 1293302<br>( 499.0 / 99.0 ) 266029 | ( 10.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 484.3<br>814.8 | 0.2057<br>88.0<br>85.7 | 1.3800 | N/A | 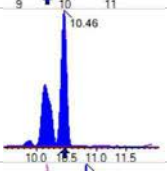 | 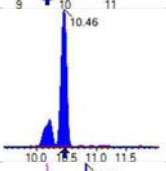 | |
| PFNS | ( 549.0 / 80.0 ) 912073<br>( 549.0 / 99.0 ) 246363 | ( 11.29 , 1.08 )<br>( N/A , -0.01 , 0.0) | 1100.0<br>1045.6 | 0.2701<br>99.1<br>100.3 | 1.0394 | N/A | 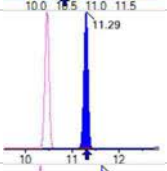 | 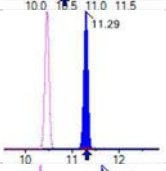 | |
| PFDS | ( 599.0 / 80.0 ) 1057600<br>( 599.0 / 99.0 ) 285579 | ( 12.02 , 1.15 )<br>( N/A , -0.01 , -0.1) | 1330.7<br>959.9 | 0.2700<br>99.3<br>101.0 | 0.9871 | N/A | 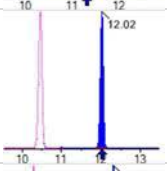 | 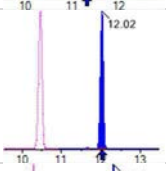 | |
| PFDoS | ( 699.0 / 80.0 ) 867706<br>( 699.0 / 99.0 ) 215555 | ( 12.94 , 1.24 )<br>( N/A , -0.01 , 0.1) | 2589.5<br>1298.2 | 0.2484<br>106.4<br>108.5 | 0.9186 | N/A | 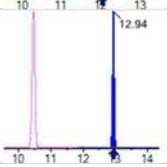 | 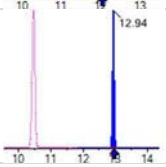 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MSD2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1801123<br>( 327.0 / 81.0 ) 1595022 | ( 5.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 4579.8<br>2277.1 | 0.8856<br>101.5<br>98.4 | 4.1621 | N/A | 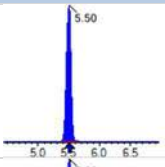 | 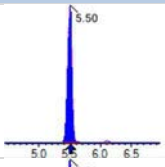 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1781826<br>( 427.0 / 81.0 ) 2217776 | ( 7.60 , 1.00 ) ( 0.00 , N/A , 0.4) | 4698.6<br>2439.8 | 1.2447<br>99.2<br>94.0 | 4.3554 | N/A | 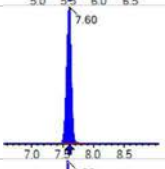 | 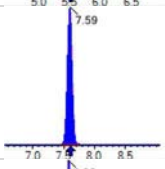 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1615938<br>( 527.0 / 81.0 ) 1781298 | ( 9.38 , 1.00 ) ( -0.01 , N/A , 0.0) | 2035.8<br>1501.6 | 1.1023<br>101.3<br>108.2 | 4.3742 | N/A | 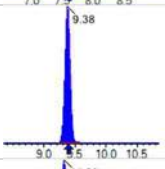 | 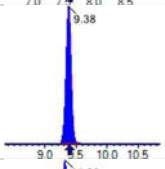 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1085542<br>( 627.0 / 81.0 ) 1513754 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.1) | 1833.9<br>995.2 | 1.3945<br>96.9<br>95.6 | 3.7445 | N/A | 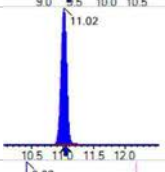 | 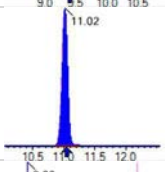 | |
| PFBSA | ( 297.9 / 78.0 ) 538486<br>( 297.9 / 278.0 ) 1005 | ( 8.09 , 0.57 ) ( N/A , 0.00 , 0.0) | 1082.7<br>71.9 | 0.0019<br>136.5<br>120.4 | 2.4133 | N/A | 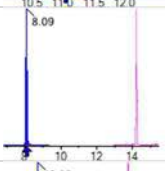 | 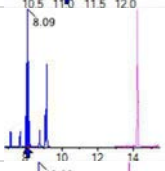 | |
| PFHxSA | ( 397.9 / 78.0 ) 618957<br>( 397.9 / 378.0 ) 2577 | ( 10.96 , 0.75 ) ( N/A , 0.00 , -0.2) | 1100.0<br>50.6 | 0.0042<br>101.9<br>99.5 | 2.1299 | N/A | 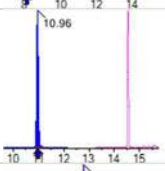 | 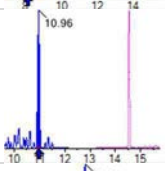 | |
| PFOSA | ( 498.0 / 78.0 ) 408194<br>( 498.0 / 478.0 ) 5657 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.3) | 1168.3<br>127.4 | 0.0139<br>98.8<br>93.1 | 1.1976 | N/A | 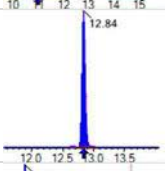 | 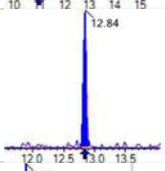 | |
| TFSI | ( 279.7 / 147.0 ) 1742192<br>( 279.7 / 211.0 ) 158966 | ( 8.17 , 0.64 ) ( N/A , -0.01 , 0.1) | 58.2<br>45.3 | 0.0912<br>108.6<br>106.6 | 1.9411 | N/A | 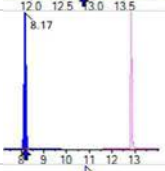 | 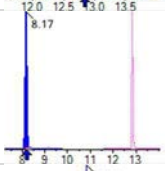 | |
| NMeFOSA | ( 512.0 / 219.0 ) 186801<br>( 512.0 / 169.0 ) 139974 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 1.8) | 1465.4<br>612.6 | 0.7493<br>100.1<br>98.8 | 4.3453 | N/A | 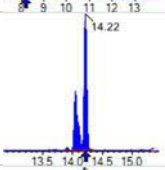 | 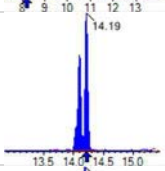 | |
| NEtFOSA | ( 526.0 / 219.0 ) 215539<br>( 526.0 / 169.0 ) 274927 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.1) | 1548.5<br>1233.1 | 1.2755<br>103.3<br>102.7 | 4.0702 | N/A | 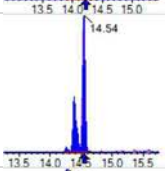 | 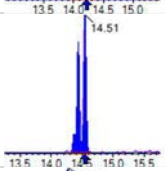 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 190582<br>( 570.0 / 483.0 ) 88632 | ( 10.26 , 1.00 ) ( 0.00 , N/A , 0.0) | 2880.6<br>1962.1 | 0.4651<br>106.1<br>99.5 | 1.0862 | N/A | 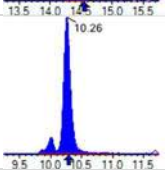 | 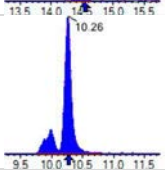 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (14)
Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 183913<br>( 584.0 / 526.0 ) 111659 | ( 10.79 , 1.00 )<br>( 0.01 , N/A , -0.3) | 1311.4<br>586.7 | 0.6071<br>98.5<br>102.7 | 1.0479 | N/A | 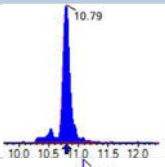 | 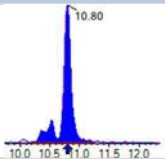 | |
| NMeFOSE | ( 616.0 / 59.0 ) 96102 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 530.4 | N/A<br>0.0<br>0.0 | 4.4655 | N/A | 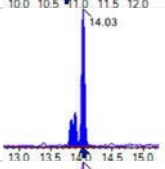 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 78716 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 647.8 | N/A<br>0.0<br>0.0 | 4.4623 | N/A | 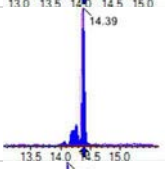 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 79523<br>( 285.0 / 185.0 ) 218350 | ( 6.47 , 1.00 )<br>( -0.01 , N/A , -0.4) | 801.2<br>907.9 | 2.7458<br>99.3<br>104.1 | 1.0478 | N/A | 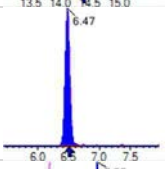 | 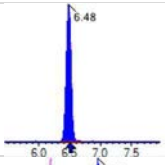 | |
| ADONA | ( 377.0 / 85.0 ) 928339<br>( 377.0 / 251.0 ) 91771 | ( 7.55 , 1.16 )<br>( N/A , -0.01 , 0.2) | 1593.6<br>457.1 | 0.0989<br>97.0<br>94.5 | 1.0485 | N/A | 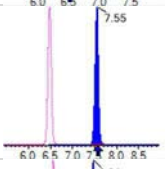 | 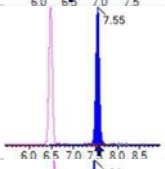 | |
| PFEESA | ( 315.0 / 135.0 ) 379801<br>( 315.0 / 83.0 ) 215593 | ( 6.91 , 1.15 )<br>( N/A , -0.01 , 0.1) | 2163.3<br>626.2 | 0.5676<br>101.8<br>100.3 | 1.8731 | N/A | 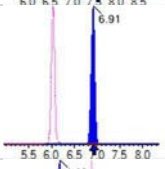 | 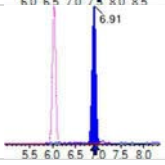 | |
| PFMPA | ( 229.0 / 85.0 ) 177240 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 2892.4 | N/A<br>0.0<br>0.0 | 2.2457 | N/A | 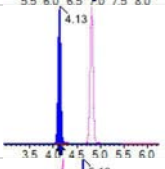 | | |
| PFMBA | ( 279.0 / 85.0 ) 453734 | ( 5.18 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3599.8 | N/A<br>0.0<br>0.0 | 2.1152 | N/A | 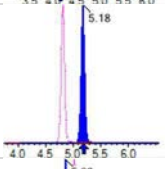 | | |
| NFDHA | ( 295.0 / 201.0 ) 219283<br>( 295.0 / 85.0 ) 240024 | ( 5.89 , 0.98 )<br>( N/A , -0.01 , 0.0) | 2557.2<br>1210.7 | 1.0946<br>101.4<br>108.9 | 2.0803 | N/A | 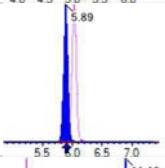 | 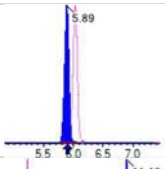 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 966424<br>( 533.0 / 353.0 ) 308368 | ( 11.10 , 1.71 )<br>( N/A , -0.02 , -0.1) | 2380.0<br>1396.7 | 0.3191<br>102.0<br>96.8 | 1.0106 | N/A | 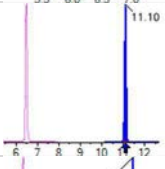 | 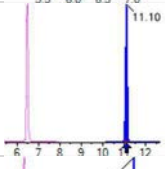 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 713025<br>( 633.0 / 453.0 ) 246717 | ( 12.44 , 1.92 )<br>( N/A , -0.01 , 0.1) | 2501.0<br>1628.9 | 0.3460<br>104.2<br>101.1 | 0.9695 | N/A | 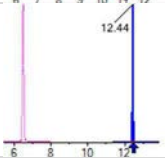 | 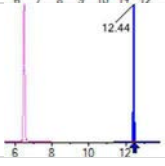 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (14)
Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 505568<br>( 461.0 / 381.2 ) 198506 | ( 9.49 , 0.91 ) ( N/A , -0.01 , 0.1) | 1490.4<br>1219.4 | 0.3926<br>98.5<br>99.0 | 0.9562 | N/A | 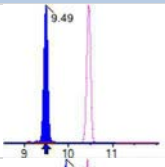 | 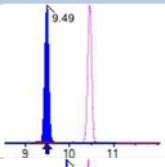 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 53426<br>( 241.0 / 117.0 ) 118197 | ( 4.39 , 0.91 ) ( N/A , -0.01 , 0.0) | 1160.6<br>1035.0 | 2.2124<br>105.0<br>102.0 | 3.7761 | N/A | 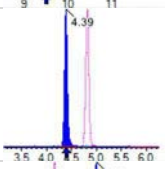 | 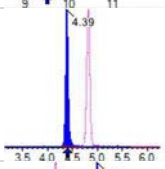 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 304093<br>( 341.0 / 217.0 ) 465044 | ( 6.92 , 1.15 ) ( N/A , -0.01 , 0.1) | 1263.1<br>801.2 | 1.5293<br>100.7<br>105.1 | 3.8836 | N/A | 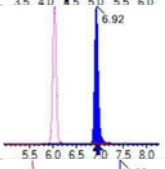 | 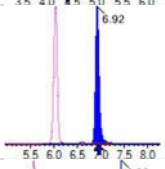 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 528469<br>( 441.0 / 337.0 ) 456651 | ( 9.30 , 1.54 ) ( N/A , -0.01 , 0.0) | 1871.4<br>4491.1 | 0.8641<br>94.2<br>98.8 | 4.1127 | N/A | 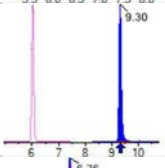 | 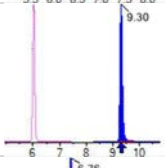 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 350968<br>( 357.2 / 243.0 ) 38951 | ( 6.76 , 1.00 ) ( -0.01 , N/A , -0.1) | 811.6<br>224.1 | 0.1110<br>100.7<br>106.6 | 0.9465 | N/A | 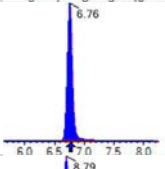 | 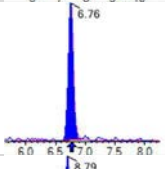 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 252963<br>( 457.2 / 343.0 ) 11822 | ( 8.79 , 1.00 ) ( -0.01 , N/A , -0.2) | 621.1<br>95.5 | 0.0467<br>112.7<br>103.1 | 1.0481 | N/A | 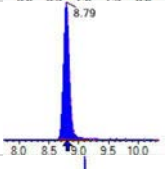 | 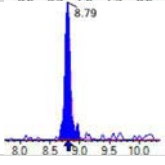 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 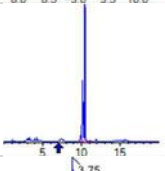 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 280544 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 1388.6 | N/A | 1.1766<br>[ 1.0000 ] | 117.7%<br>{ 118.6% } | 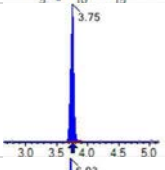 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124008 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 20517.5 | N/A | 0.9776<br>[ 1.0000 ] | 97.8%<br>{ 98.0% } | 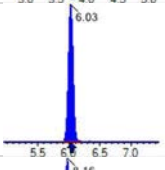 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 376605 | ( 8.16 , N/A ) ( N/A , -0.01 , N/A ) | 3108.9 | N/A | 0.9527<br>[ 1.0000 ] | 95.3%<br>{ 99.3% } | 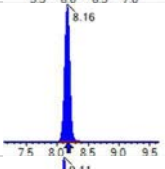 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 298220 | ( 9.11 , N/A ) ( N/A , -0.01 , N/A ) | 1187.4 | N/A | 1.0486<br>[ 1.0000 ] | 104.9%<br>{ 106.0% } | 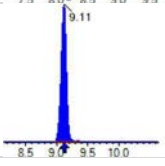 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0200-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19B (14)
Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 243774 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 2542.5 | N/A | 0.8348 [ 1.0000 ] | 83.5% { 84.3% } | 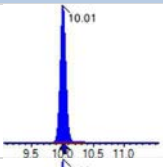 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 921251 | ( 8.60 , N/A ) ( N/A , -0.01 , N/A ) | 3723.6 | N/A | 0.9707 [ 1.0000 ] | 97.1% { 98.7% } | 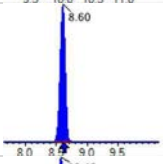 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 737511 | ( 10.46 , N/A ) ( N/A , -0.01 , N/A ) | 1350.4 | N/A | 0.9683 [ 1.0000 ] | 96.8% { 103.6% } | 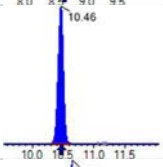 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2270340 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 43466.7 | N/A | 7.0840 [ 8.0000 ] | 88.5% { 101.4% } | 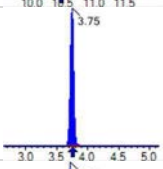 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 984766 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5802.2 | N/A | 4.2561 [ 4.0000 ] | 106.4% { 100.9% } | 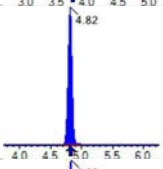 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 587766 | ( 6.03 , N/A ) ( N/A , -0.01 , N/A ) | 7985.6 | N/A | 2.0773 [ 2.0000 ] | 103.9% { 99.6% } | 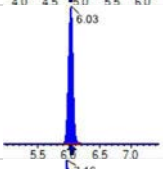 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 639798 | ( 7.16 , N/A ) ( N/A , -0.02 , N/A ) | 6546.2 | N/A | 2.0328 [ 2.0000 ] | 101.6% { 97.5% } | 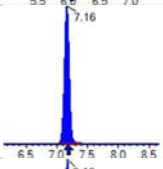 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 855429 | ( 8.16 , N/A ) ( N/A , -0.01 , N/A ) | 2831.9 | N/A | 2.1199 [ 2.0000 ] | 106.0% { 99.2% } | 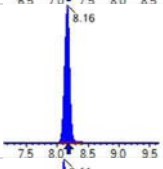 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 282477 | ( 9.11 , N/A ) ( N/A , -0.01 , N/A ) | 2018.0 | N/A | 0.9660 [ 1.0000 ] | 96.6% { 104.7% } | 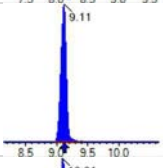 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 281186 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 917.2 | N/A | 1.0293 [ 1.0000 ] | 102.9% { 87.4% } | 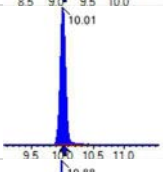 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 358064 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 840.6 | N/A | 1.1141 [ 1.0000 ] | 111.4% { 96.3% } | 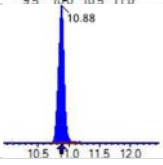 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MSD2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351681 | ( 11.70 , N/A ) ( N/A , -0.01 , N/A ) | 1296.7 | N/A | 1.0745 [ 1.0000 ] | 107.4% { 94.3% } | 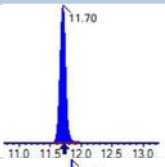  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 278162 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1230.5 | N/A | 0.9979 [ 1.0000 ] | 99.8% { 85.2% } | 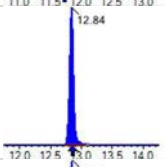  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 449678 | ( 13.65 , N/A ) ( N/A , -0.01 , N/A ) | 2195.6 | N/A | 1.8897 [ 2.0000 ] | 94.5% { 89.0% } | 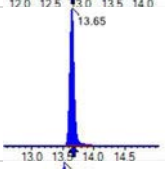  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1725687 | ( 6.32 , N/A ) ( N/A , -0.01 , N/A ) | 1310.3 | N/A | 2.0733 [ 2.0000 ] | 103.7% { 102.8% } | 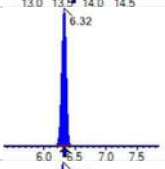  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1357235 | ( 8.60 , N/A ) ( N/A , -0.01 , N/A ) | 2498.4 | N/A | 2.0429 [ 2.0000 ] | 102.1% { 102.9% } | 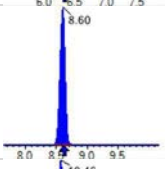  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1622858 | ( 10.46 , N/A ) ( N/A , -0.01 , N/A ) | 1435.8 | N/A | 2.0408 [ 2.0000 ] | 102.0% { 104.7% } | 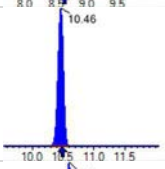  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 659558 | ( 5.50 , N/A ) ( N/A , -0.01 , N/A ) | 100.2 | N/A | 4.5928 [ 4.0000 ] | 114.8% { 112.0% } | 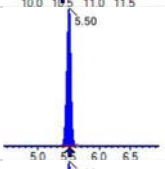  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1976181 | ( 7.60 , N/A ) ( N/A , -0.01 , N/A ) | 2540.2 | N/A | 4.5981 [ 4.0000 ] | 115.0% { 118.6% } | 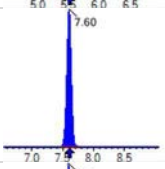  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1555963 | ( 9.39 , N/A ) ( N/A , -0.01 , N/A ) | 1248.4 | N/A | 4.6161 [ 4.0000 ] | 115.4% { 113.8% } | 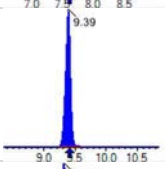  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3009057 | ( 11.01 , N/A ) ( N/A , -0.02 , N/A ) | 1481.8 | N/A | 8.5418 [ 8.0000 ] | 106.8% { 117.9% } | 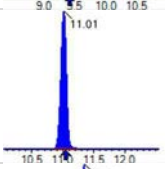  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 681701 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 2167.4 | N/A | 0.9674 [ 2.0000 ] | 48.4% { 49.6% } | 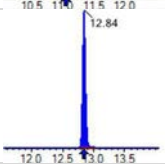  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0200-MSD2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 20:55

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 86593 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 801.6 | N/A | 0.5794 [ 2.0000 ] | 29.0% { 30.1% } | 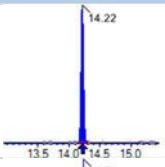  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 94569 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 837.9 | N/A | 0.5900 [ 2.0000 ] | 29.5% { 30.8% } | 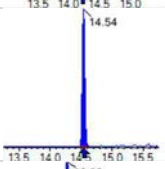  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 735836 | ( 10.26 , N/A ) ( N/A , -0.01 , N/A ) | 2266.1 | N/A | 3.5963 [ 4.0000 ] | 89.9% { 87.0% } | 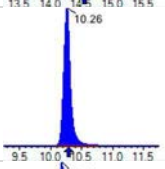  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 717667 | ( 10.78 , N/A ) ( N/A , -0.02 , N/A ) | 1633.6 | N/A | 3.8484 [ 4.0000 ] | 96.2% { 93.2% } | 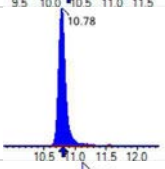  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 392392 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1279.5 | N/A | 5.8421 [ 20.0000 ] | 29.2% { 28.5% } | 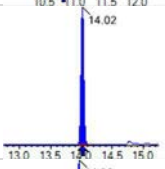  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 397092 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 1896.7 | N/A | 5.8248 [ 20.0000 ] | 29.1% { 30.8% } | 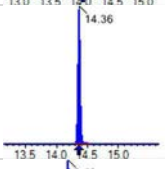  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1029590 | ( 6.48 , N/A ) ( N/A , -0.01 , N/A ) | 1727.4 | N/A | 7.9882 [ 8.0000 ] | 99.9% { 100.7% } | 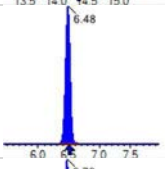  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 697577 | ( 6.76 , N/A ) ( N/A , -0.02 , N/A ) | 1111.7 | N/A | 2.6394 [ 2.0000 ] | 132.0% { 113.1% } | 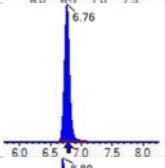  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 591812 | ( 8.80 , N/A ) ( N/A , -0.01 , N/A ) | 615.0 | N/A | 2.4597 [ 2.0000 ] | 123.0% { 107.0% } | 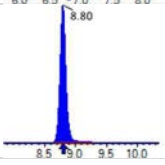  | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | PPL, LLC | Work Order: | 24C0103A |
| Client: | Tidewater, Inc. | Project: | JPL-GW Monitoring |
| Batch: | BDC0200A Batch Matrix: Water | Preparation: | EPA 1633A |

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-17-4- | 24C0103-01- | 03/18/24 11:40- | 540.10- | 2.00- |
| MW-17-3- | 24C0103-02- | 03/18/24 11:40- | 544.30- | 2.00- |
| DUP-3-031524- | 24C0103-03- | 03/18/24 11:40- | 543.10- | 2.00- |
| MW-17-2- | 24C0103-04- | 03/18/24 11:40- | 541.20- | 2.00- |
| MW-17-1- | 24C0103-05- | 03/18/24 11:40- | 541.30- | 2.00- |
| MW-11-3- | 24C0103-06- | 03/18/24 11:40- | 538.06- | 2.00- |
| MW-11-2- | 24C0103-07- | 03/18/24 11:40- | 553.13- | 2.00- |
| MW-11-1- | 24C0103-08- | 03/18/24 11:40- | 541.19- | 2.00- |
| EB-5-031524- | 24C0103-09- | 03/18/24 11:40- | 551.79- | 2.00- |
| FB-5-031524- | 24C0103-10- | 03/18/24 11:40- | 534.17- | 2.00- |
| Blank- | BDC0200-BLK1- | 03/18/24 11:40- | 500.00- | 2.00- |
| LCS- | BDC0200-BS1- | 03/18/24 11:40- | 500.00- | 2.00- |
| MRL Check- | BDC0200-MRL1- | 03/18/24 11:40- | 500.00- | 2.00- |
| MW-11-2- | BDC0200-MS2- | 03/18/24 11:40- | 568.51- | 2.00- |
| MW-11-2- | BDC0200-MSD2- | 03/18/24 11:40- | 544.87- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/19/2024 2:44 pm

BDC0200

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0094-01 A | MW-22-3 A | 558.196 | 45.593 | 7 | 3/18/2024 11:40:00AM | 512.603 | 2 | | 200 , 200 | |
| 24C0094-02 A | MW-22-2 A | 592.854 | 45.735 | 7 | 3/18/2024 11:40:00AM | 547.119 | 2 | | 200 , 200 | |
| 24C0094-03 A | MW-22-1 A | 588.583 | 45.864 | 7 | 3/18/2024 11:40:00AM | 542.719 | 2 | | 200 , 200 | |
| 24C0094-04 A | MW-3-4 A | 586.392 | 46.482 | 7 | 3/18/2024 11:40:00AM | 539.91 | 2 | | 200 , 200 | |
| 24C0094-05 A | MW-3-3 A | 590.893 | 45.289 | 7 | 3/18/2024 11:40:00AM | 545.604 | 2 | | 200 , 200 | |
| 24C0094-06 A | MW-3-2 A | 589.361 | 45.518 | 7 | 3/18/2024 11:40:00AM | 543.843 | 2 | | 200 , 200 | |
| 24C0094-07 A | MW-3-1 A | 596.414 | 45.624 | 7 | 3/18/2024 11:40:00AM | 550.79 | 2 | | 200 , 200 | |
| 24C0094-08 A | EB-4-031424 A | 584.271 | 45.049 | 7 | 3/18/2024 11:40:00AM | 539.222 | 2 | | 200 , 200 | |
| 24C0094-09 A | FB-4-031424 A | 569.301 | 45.997 | 7 | 3/18/2024 11:40:00AM | 523.304 | 2 | | 200 , 200 | |
| 24C0103-01 A | MW-17-4 A | 585.342 | 45.24 | 7 | 3/18/2024 11:40:00AM | 540.102 | 2 | | 200 , 200 | |
| 24C0103-02 A | MW-17-3 A | 589.669 | 45.374 | 7 | 3/18/2024 11:40:00AM | 544.295 | 2 | | 200 , 200 | |
| 24C0103-03 A | DUP-3-031524 A | 588.87 | 45.775 | 7 | 3/18/2024 11:40:00AM | 543.095 | 2 | | 200 , 200 | |
| 24C0103-04 A | MW-17-2 A | 586.792 | 45.596 | 7 | 3/18/2024 11:40:00AM | 541.196 | 2 | | 200 , 200 | |
| 24C0103-05 A | MW-17-1 A | 587.314 | 46.013 | 7 | 3/18/2024 11:40:00AM | 541.301 | 2 | | 200 , 200 | |
| 24C0103-06 A | MW-11-3 A | 584.017 | 45.961 | 7 | 3/18/2024 11:40:00AM | 538.056 | 2 | | 200 , 200 | |
| 24C0103-07 A | MW-11-2 A | 598.868 | 45.735 | 7 | 3/18/2024 11:40:00AM | 553.133 | 2 | | 200 , 200 | |
| 24C0103-08 A | MW-11-1 A | 587.1 | 45.913 | 7 | 3/18/2024 11:40:00AM | 541.187 | 2 | | 200 , 200 | |
| 24C0103-09 A | EB-5-031524 A | 597.345 | 45.556 | 7 | 3/18/2024 11:40:00AM | 551.789 | 2 | | 200 , 200 | |
| 24C0103-10 A | FB-5-031524 A | 579.476 | 45.303 | 7 | 3/18/2024 11:40:00AM | 534.173 | 2 | | 200 , 200 | |
| BDC0200-BLK1 | Blank | | | | 3/18/2024 11:40:00AM | 500 | 2 | | 200 , 200 | |
| BDC0200-BS1 | LCS | | | | 3/18/2024 11:40:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MRL1 | MRL Check | | | | 3/18/2024 11:40:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0200-MS1 | Matrix Spike [24C0094-06 | 581.102 | 45.024 | | 3/18/2024 11:40:00AM | 536.078 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MS2 | Matrix Spike [24C0103-07 | 613.842 | 45.335 | | 3/18/2024 11:40:00AM | 568.507 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD1 | Matrix Spike Dup [24C009 | 581.712 | 45.212 | | 3/18/2024 11:40:00AM | 536.5 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD2 | Matrix Spike Dup [24C010 | 589.963 | 45.094 | | 3/18/2024 11:40:00AM | 544.869 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0552 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0324 | 1633 EIS MIXB 20-80ng/mL |

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3/19/24



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/19/2024 2:44 pm

BDC0200

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0483 | Am. Ac. preservative | R021040 |
| 24B0661 | Reagent - 0.05MFA wash | 50009265 |
| 24C0303 | Reagent -0.3M Formic Acid | 50009265 |
| 24C0389 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |

Batch Comments:

Spiked By: KMY 3/18/24
Witness By: CFM
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23172102PB
Concentration: 3/19/24 11:09-11:35
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3/19/24



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/18/2024 10:50 am

BDC0200

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID (ID's Confirmed By: CFM) | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24C0094-01 | A | X MW-22-3 | A | 558.196 | 45.593 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-02 | A | X MW-22-2 | A | 592.854 | 45.735 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-03 | A | X MW-22-1 | A | 588.583 | 45.864 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-04 | A | X MW-3-4 | A | 586.352 | 46.482 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-05 | A | X MW-3-3 | A | 590.893 | 45.289 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-06 | A | X MW-3-2 | A | 589.361 | 45.518 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-07 | A | X MW-3-1 | A | 596.414 | 45.624 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-08 | A | X EB-4-031424 | A | 584.271 | 45.049 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0094-09 | A | X FB-4-031424 | A | 569.301 | 45.997 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-01 | A | X MW-17-4 | A | 585.342 | 45.240 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-02 | A | X MW-17-3 | A | 589.669 | 45.374 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-03 | A | X DUP-3-031524 | A | 588.870 | 45.775 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-04 | A | X MW-17-2 | A | 556.792 | 45.596 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-05 | A | X MW-17-1 | A | 587.314 | 46.013 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-06 | A | X MW-11-3 | A | 584.017 | 45.961 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-07 | A | X MW-11-2 | A | 598.868 | 45.735 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-08 | A | X MW-11-1 | A | 587.100 | 45.913 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-09 | A | X EB-5-031524 | A | 597.345 | 45.551 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| 24C0103-10 | A | X FB-5-031524 | A | 579.476 | 45.303 | 7 | 3/18/2024 10:48:00AM | 500 | 2 | | 200 , 200 | |
| BDC0200-BLK1 | | | Blank | | | 7 | 3/14/2024 7:18:00AM | 500 | 2 | | 200 , 200 | |
| BDC0200-BS1 | | | LCS | | | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MRL1 | | | MRL Check | | | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0200-MS1 | | X Matrix Spike [24C0094-06] | B | 581.102 | 45.024 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MS2 | | X Matrix Spike [24C0103-07] | B | 613.842 | 45.335 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD1 | | X Matrix Spike Dup [24C0094-06] | C | 581.712 | 45.212 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0200-MSD2 | | X Matrix Spike Dup [24C0103-07] | C | 589.963 | 45.094 | 7 | 3/14/2024 7:18:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0011 | PFAS - MIX 1633 10ng/mL rev1 |
| 24B0397 | 1633 MIX B 5C 10ng/mL |

24C0392 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0552 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0324 | 1633 EIS MIXB 20-80ng/mL |

24C0280 1633 EIS MIXB 20-80ng/mL

Kmy/CFM 11:40 — Spiking Witnessed By

03/18/24 — Date

CFM — Preparation Reviewed By

Date

Extracts Received By

Date



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/18/2024 10:50 am

BDC0200

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**
**Balances:** SCALE
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| | | 24A0483 |
| | AmAc | 24C0389 |
| | 1% | 24C0303 |
| | 0.3 M | 24CB0661 |
| | 0.05 FA | |

Batch Comments:

Spiked By:
Witness By:
pH Lot: 10BDH3431
Biotage Cartridge Lot: 2317210 2 PB
Concentration: 3/19/24 11:09 – 11:35
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





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# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00991A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00991-CAL1A | S2024-03-19A (1)A | 03/19/24 12:02A |
| Cal Standardl | SD00991-CAL2A | S2024-03-19A (2)A | 03/19/24 12:22A |
| Cal Standardl | SD00991-CAL3A | S2024-03-19A (3)A | 03/19/24 12:43A |
| Cal Standardl | SD00991-CAL4A | S2024-03-19A (4)A | 03/19/24 13:03A |
| Cal Standardl | SD00991-CAL5A | S2024-03-19A (5)A | 03/19/24 13:24A |
| Cal Standardl | SD00991-CAL6A | S2024-03-19A (6)A | 03/19/24 13:44A |
| Cal Standardl | SD00991-CAL7A | S2024-03-19A (7)A | 03/19/24 14:05A |
| Cal Standardl | SD00991-CAL8A | S2024-03-19A (8)A | 03/19/24 14:25A |
| Initial Cal Blankl | SD00991-ICB1A | S2024-03-19A (9)A | 03/19/24 14:46A |
| Secondary Cal Checkl | SD00991-SCV1A | S2024-03-19A (10)A | 03/19/24 15:06A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0103A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01003A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD01003-CCB1A | S2024-03-19B (1)A | 03/19/24 16:28A |
| Low Cal Checkl | SD01003-LCV1A | S2024-03-19B (2)A | 03/19/24 16:49A |
| Calibration Checkl | SD01003-CCV1A | S2024-03-19B (3)A | 03/19/24 17:09A |
| Performance Mixl | SD01003-PEM1A | S2024-03-19B (4)A | 03/19/24 17:30A |
| Performance Mixl | SD01003-PEM2A | S2024-03-19B (5)A | 03/19/24 17:51A |
| Calibration Blankl | SD01003-CCB2A | S2024-03-19B (6)A | 03/19/24 18:11A |
| Blankl | BDC0200-BLK1A | S2024-03-19B (8)A | 03/19/24 18:52A |
| LCSl | BDC0200-BS1A | S2024-03-19B (9)A | 03/19/24 19:13A |
| MRL Checkl | BDC0200-MRL1A | S2024-03-19B (10)A | 03/19/24 19:33A |
| MW-11-2l | BDC0200-MS2A | S2024-03-19B (13)A | 03/19/24 20:35A |
| MW-11-2l | BDC0200-MSD2A | S2024-03-19B (14)A | 03/19/24 20:55A |
| Calibration Checkl | SD01003-CCV2A | S2024-03-19B (24)A | 03/20/24 00:20A |
| Calibration Blankl | SD01003-CCB3A | S2024-03-19B (25)A | 03/20/24 00:41A |
| MW-17-4l | 24C0103-01A | S2024-03-19B (26)A | 03/20/24 01:01A |
| MW-17-3l | 24C0103-02A | S2024-03-19B (27)A | 03/20/24 01:22A |
| DUP-3-031524l | 24C0103-03A | S2024-03-19B (28)A | 03/20/24 01:42A |
| MW-17-2l | 24C0103-04A | S2024-03-19B (29)A | 03/20/24 02:03A |
| MW-17-1l | 24C0103-05A | S2024-03-19B (30)A | 03/20/24 02:24A |
| MW-11-3l | 24C0103-06A | S2024-03-19B (31)A | 03/20/24 02:44A |
| MW-11-2l | 24C0103-07A | S2024-03-19B (32)A | 03/20/24 03:05A |
| MW-11-1l | 24C0103-08A | S2024-03-19B (33)A | 03/20/24 03:25A |
| EB-5-031524l | 24C0103-09A | S2024-03-19B (34)A | 03/20/24 03:46A |
| FB-5-031524l | 24C0103-10A | S2024-03-19B (35)A | 03/20/24 04:06A |
| Calibration Checkl | SD01003-CCV3A | S2024-03-19B (36)A | 03/20/24 04:27A |
| Calibration Blankl | SD01003-CCB4A | S2024-03-19B (37)A | 03/20/24 04:47A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid

**LOT NUMBER:** FPrPA1020

**STRUCTURE:**

**CAS #:** 356-02-5

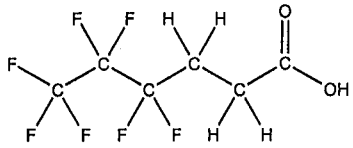

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

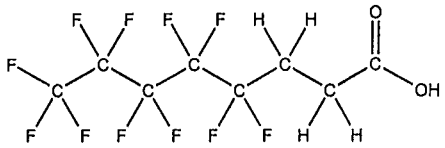

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

**21L0007L**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

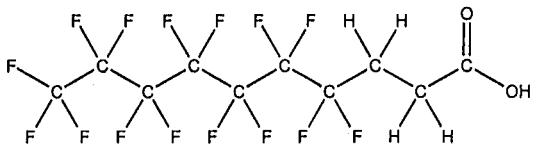

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_5F_{15}O_2$ | **MOLECULAR WEIGHT:** | 442.12 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | M3PFBA | **LOT NUMBER:** | M3PFBA0721 |
| **COMPOUND:** | Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | Not available |

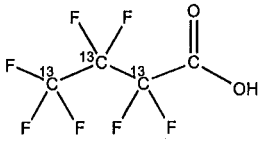

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

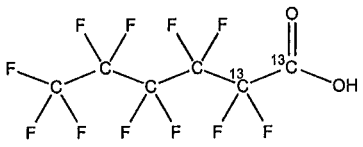

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_{11}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 10/04/2021
**EXPIRY DATE:** (mm/dd/yyyy) 10/04/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

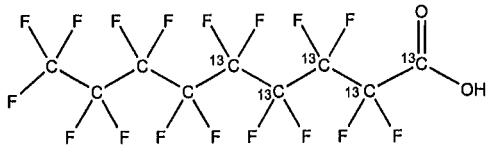

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

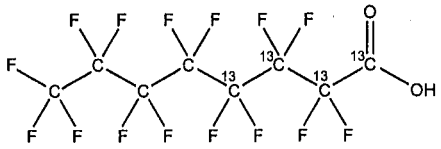

**MOLECULAR FORMULA:** $^{13}C_4{}^{12}C_4HF_{15}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 418.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 12/07/2021
**EXPIRY DATE:** (mm/dd/yyyy) 12/07/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

## 22A0120

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

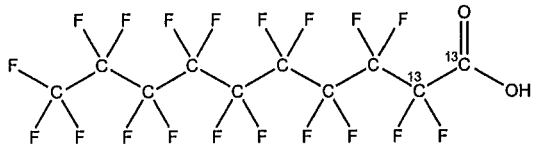

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOS **LOT NUMBER:** MPFOS0821

**COMPOUND:** Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate

**STRUCTURE:** **CAS #:** 960315-53-1

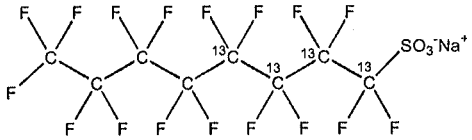

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

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**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 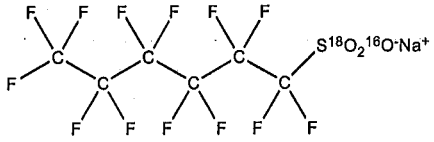 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |



**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

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**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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**EMD Millipore Corporation | 28820 Single Oak Dr., Temecula, CA 92590**

**Technical Support NA +1-800-221-1975 | email: www.millipore.com/techservices | www.calbiochem.com**

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

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DOCUMENTATION

# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

**23A0 220**

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

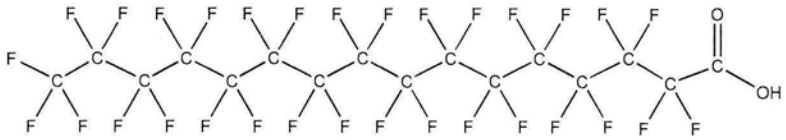

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

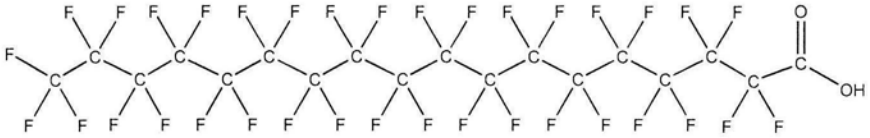

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

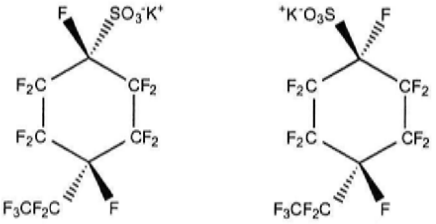


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}SO_3K$ |
| **MOLECULAR WEIGHT:** | 500.22 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (K salt)<br>46.2 ± 2.3 µg/mL (PFECHS acid)<br>46.1 ± 2.3 µg/mL (PFECHS anion) |
| **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% |
| **LAST TESTED:** (mm/dd/yyyy) | 03/28/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/28/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

**23C0155C**

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FBSA-I | **LOT NUMBER:** | FBSA0123I |
| **COMPOUND:** | Perfluoro-1-butanesulfonamide | | |
| **STRUCTURE:** | | **CAS #:** | 30334-69-1 |

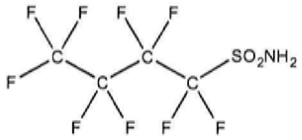

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**
**CAS #:** 41997-13-1

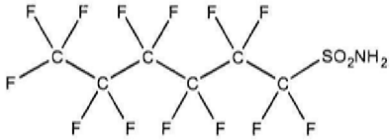

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctane-sulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
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**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| Formulated By: | Prashant Chauhan | 051723 DATE |
|---|---|---|
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4488& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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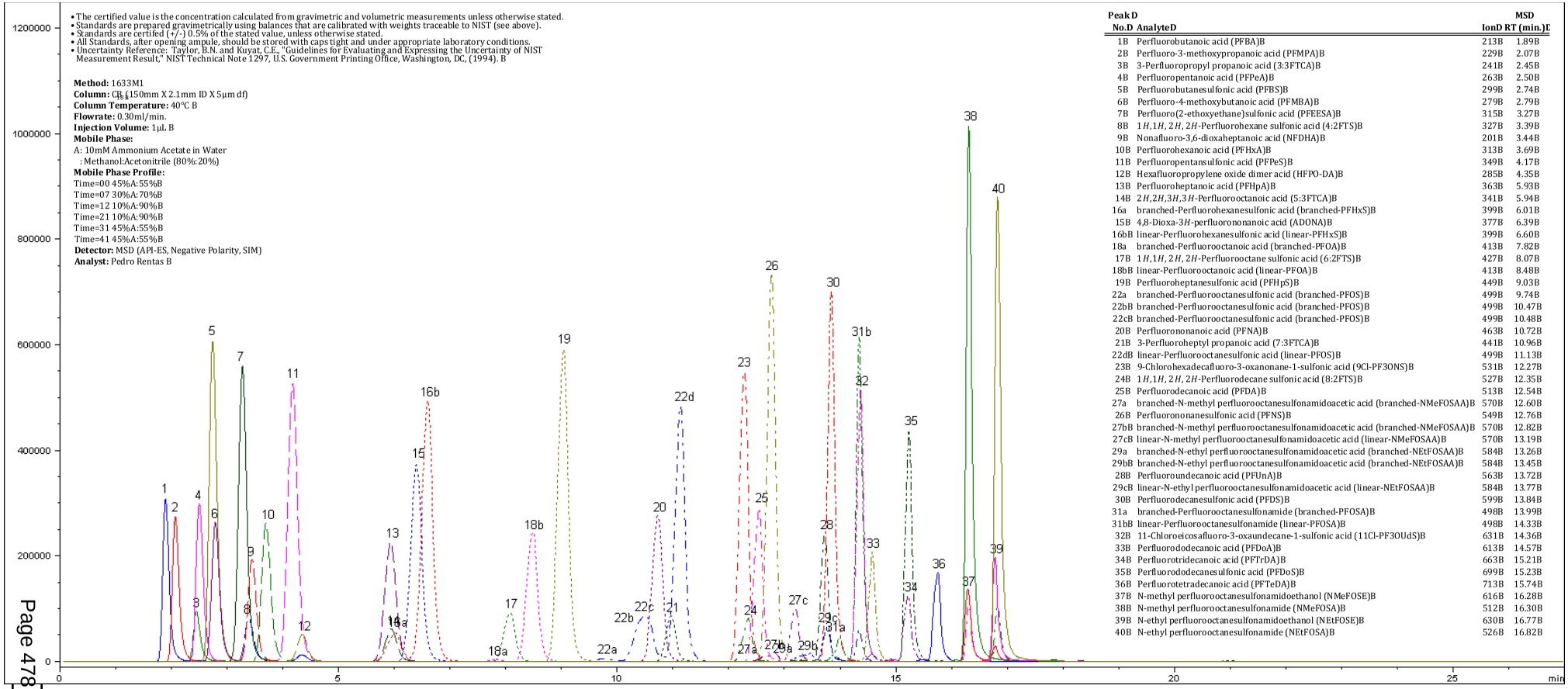


| Peak No. | Analyte | D | MSD Ion | D | RT (min.) | D |
|---|---|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B | 1.89 | B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B | 2.07 | B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B | 2.45 | B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B | 2.50 | B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B | 2.74 | B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B | 2.79 | B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B | 3.27 | B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B | 3.39 | B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B | 3.44 | B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B | 3.69 | B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B | 4.17 | B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B | 4.35 | B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B | 5.93 | B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B | 5.94 | B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B | 6.01 | B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B | 6.39 | B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B | 6.60 | B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B | 7.82 | B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B | 8.07 | B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B | 8.48 | B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B | 9.03 | B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 9.74 | B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.47 | B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.48 | B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B | 10.72 | B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B | 10.96 | B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B | 11.13 | B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B | 12.27 | B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B | 12.35 | B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B | 12.54 | B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.60 | B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B | 12.76 | B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.82 | B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B | 13.19 | B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.26 | B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.45 | B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B | 13.72 | B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B | 13.77 | B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B | 13.84 | B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B | 13.99 | B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B | 14.33 | B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B | 14.36 | B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B | 14.57 | B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B | 15.21 | B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B | 15.23 | B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B | 15.74 | B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B | 16.28 | B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B | 16.30 | B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B | 16.77 | B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B | 16.82 | B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

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USA

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

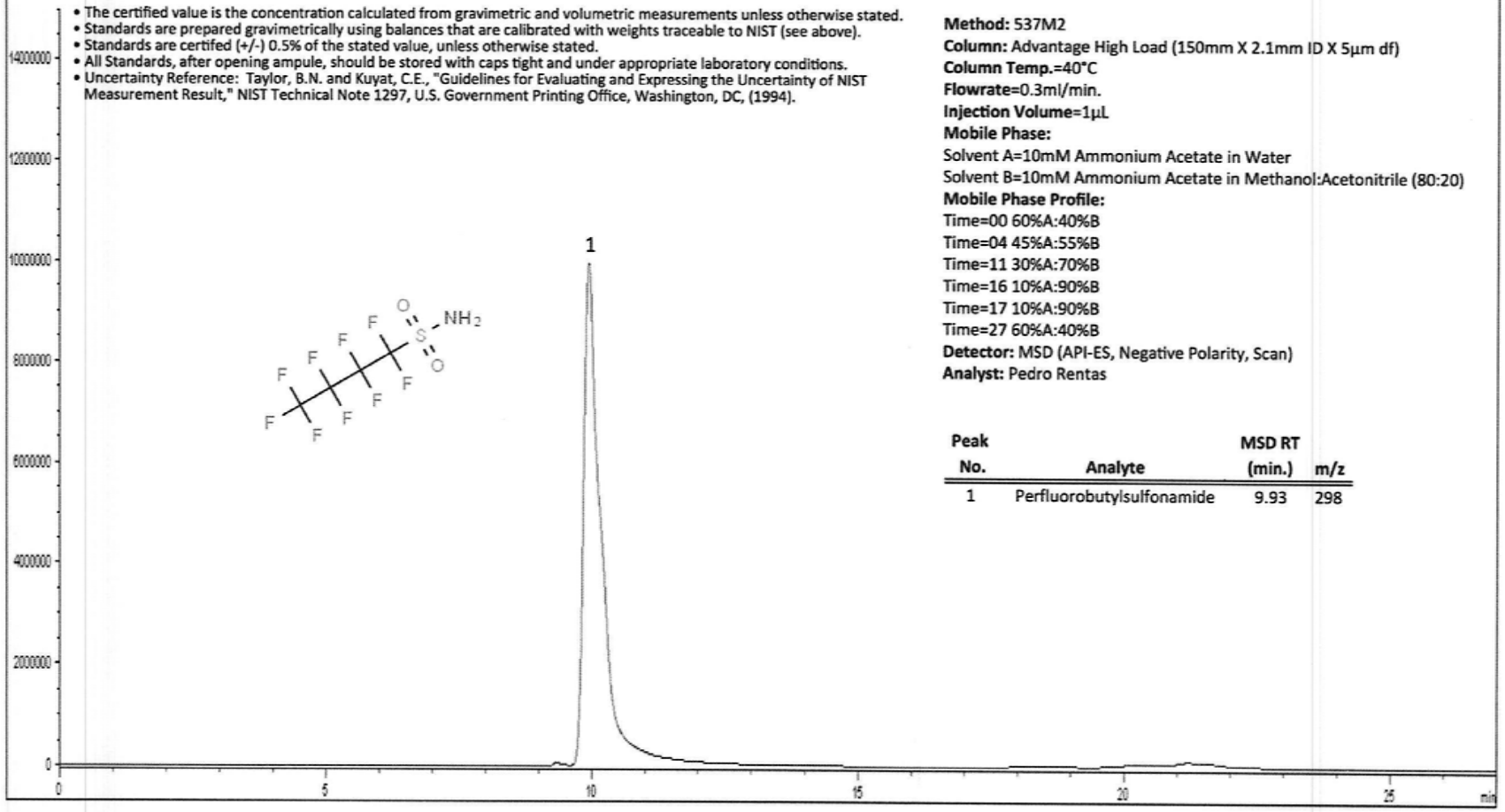


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 091125 | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 23060 | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Formulated By: | Benson Chan | 091120 DATE |
| Reviewed By: | Pedro L. Rentas | 091120 DATE |

| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A: PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

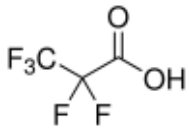


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0011B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0011** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

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QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

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Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

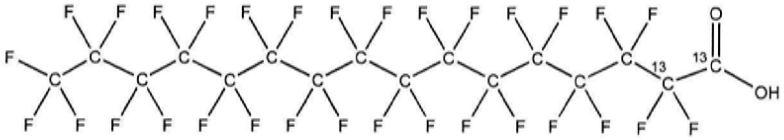

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

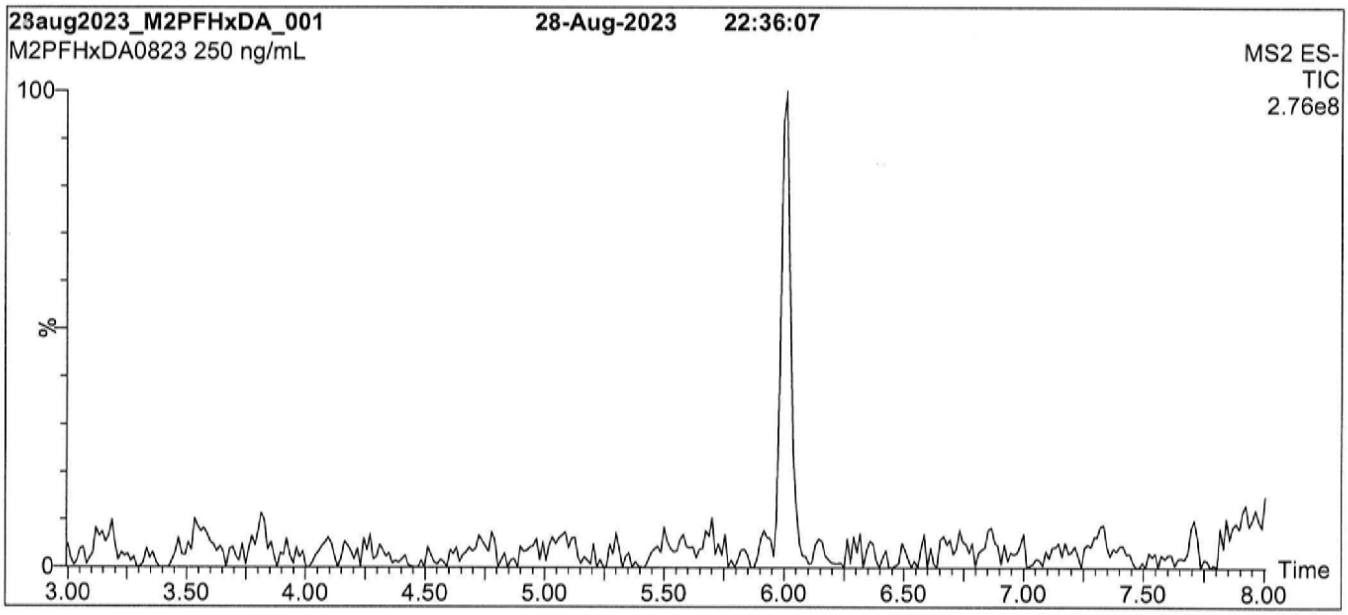


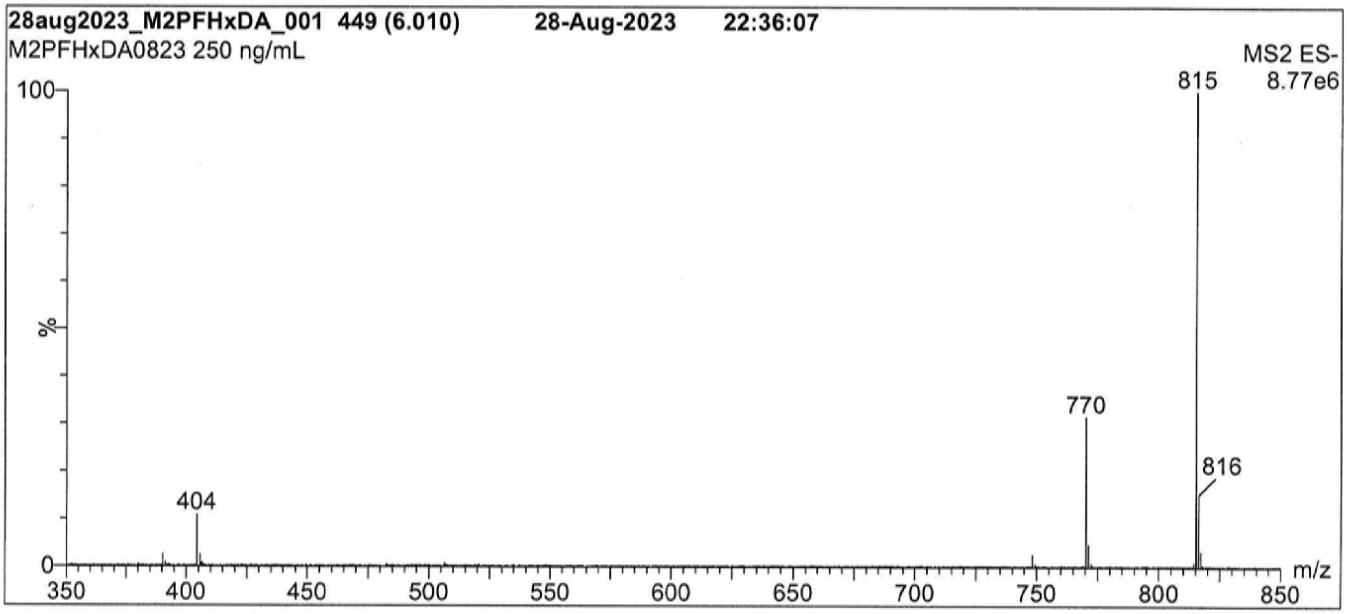


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

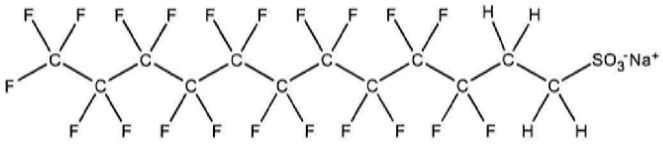


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{12}H_4F_{21}SO_3Na$ | **MOLECULAR WEIGHT:** | 650.18 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt) | **SOLVENT(S):** | Methanol |
| | 48.3 ± 2.4 µg/mL (10:2FTS acid) | | |
| | 48.2 ± 2.4 µg/mL (10:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 09/13/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 09/13/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

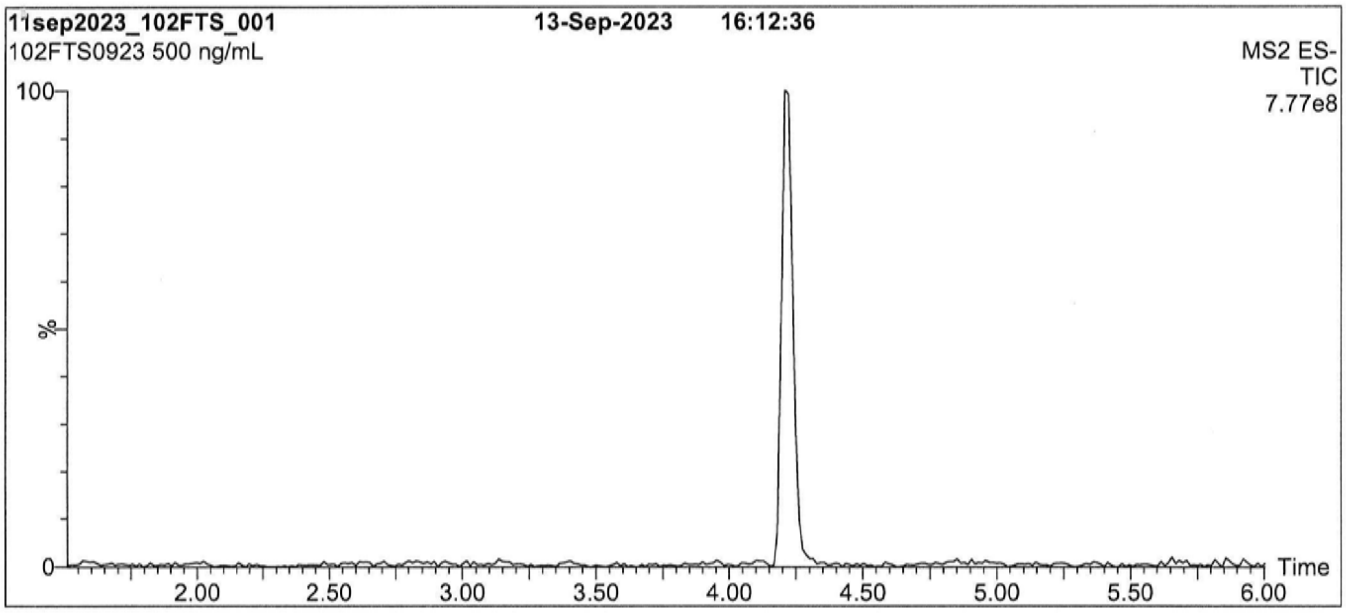


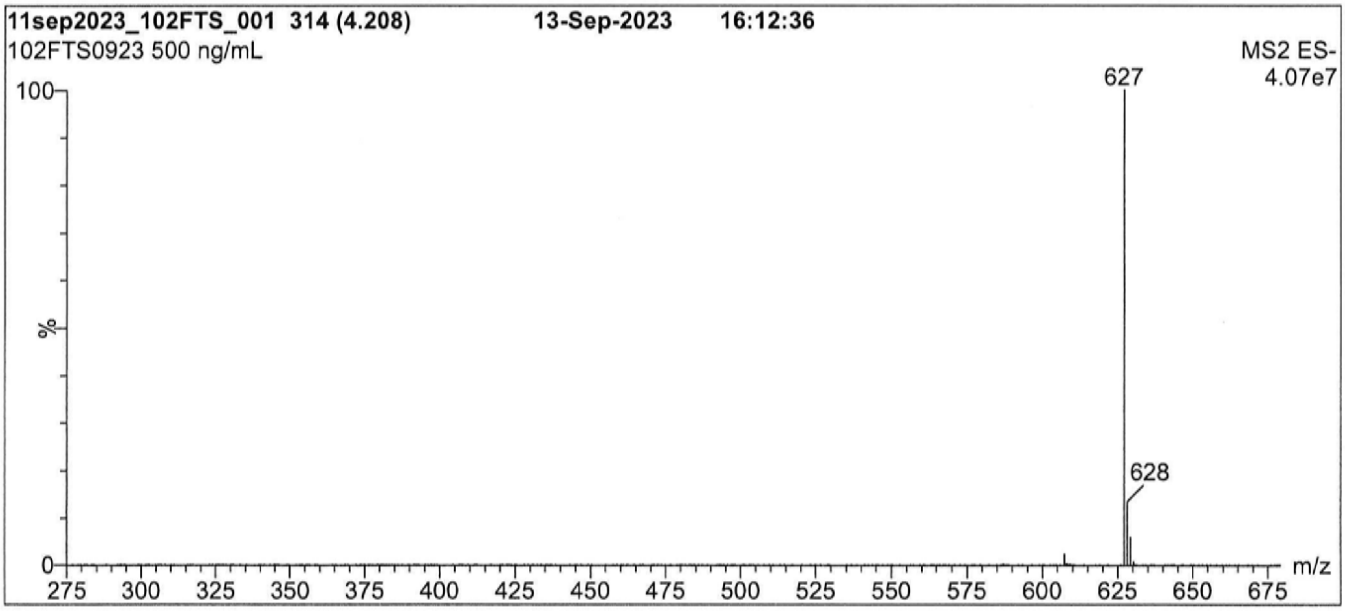


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

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Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

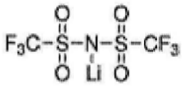

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

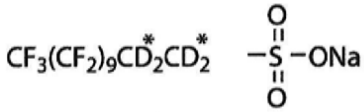

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

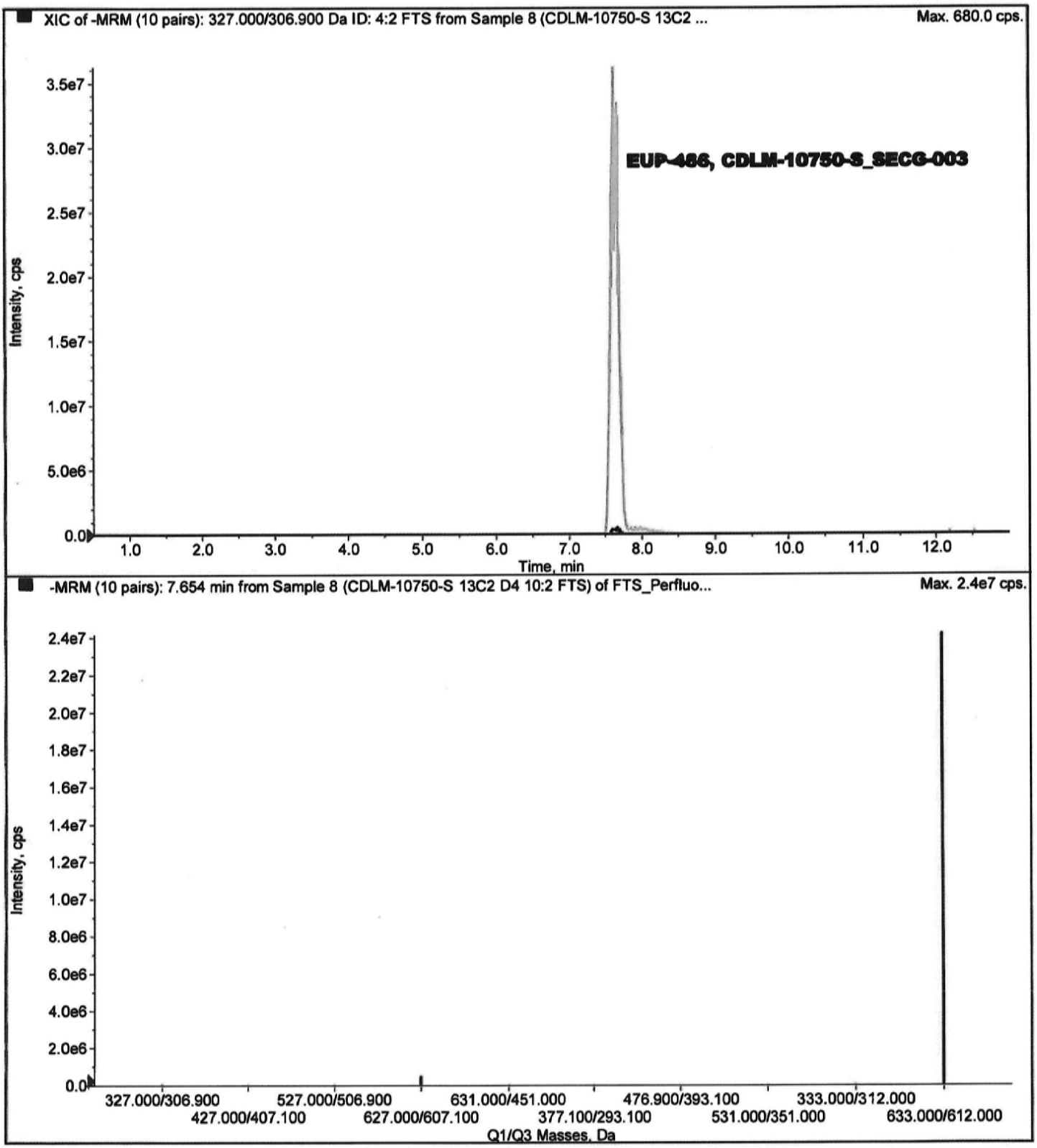

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID
(Isotopic Label & Enrichment Specification) (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥ 94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

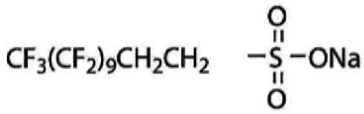

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FOUEA
**COMPOUND:** 2H-Perfluoro-2-decenoic acid

**LOT NUMBER:** FOUEA1123

**STRUCTURE:**

**CAS #:** 70887-84-2

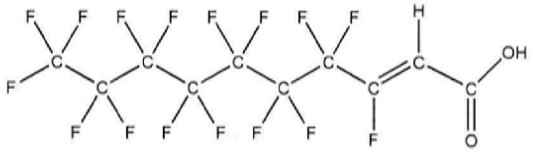

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

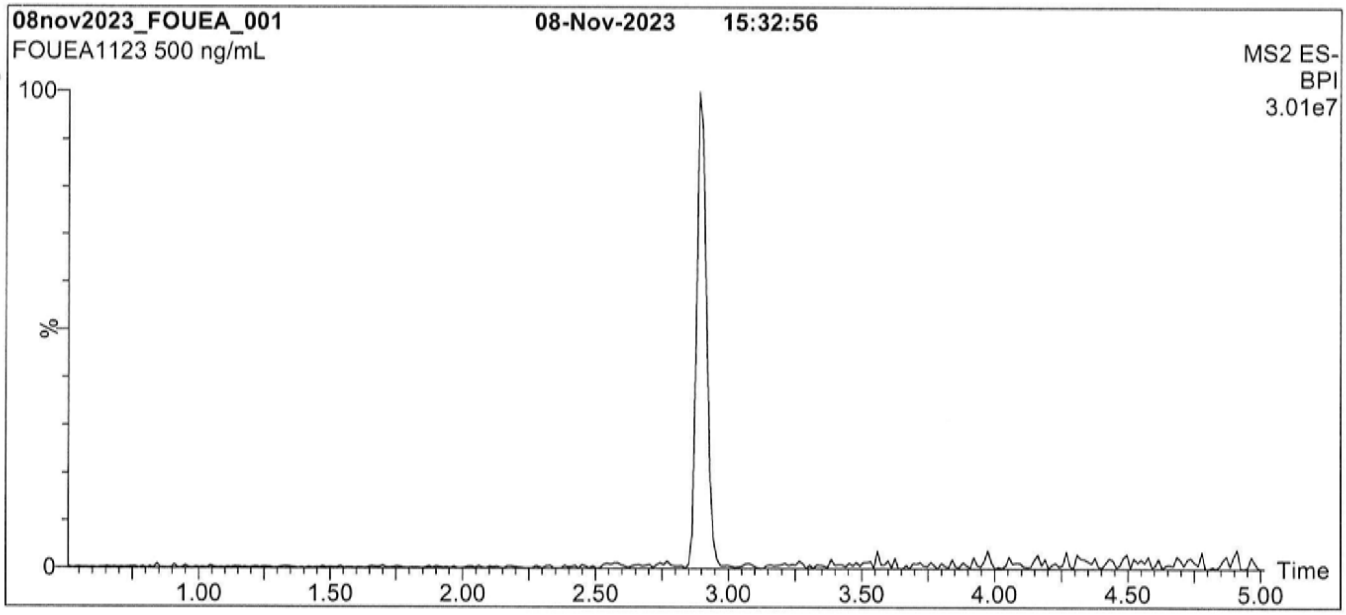


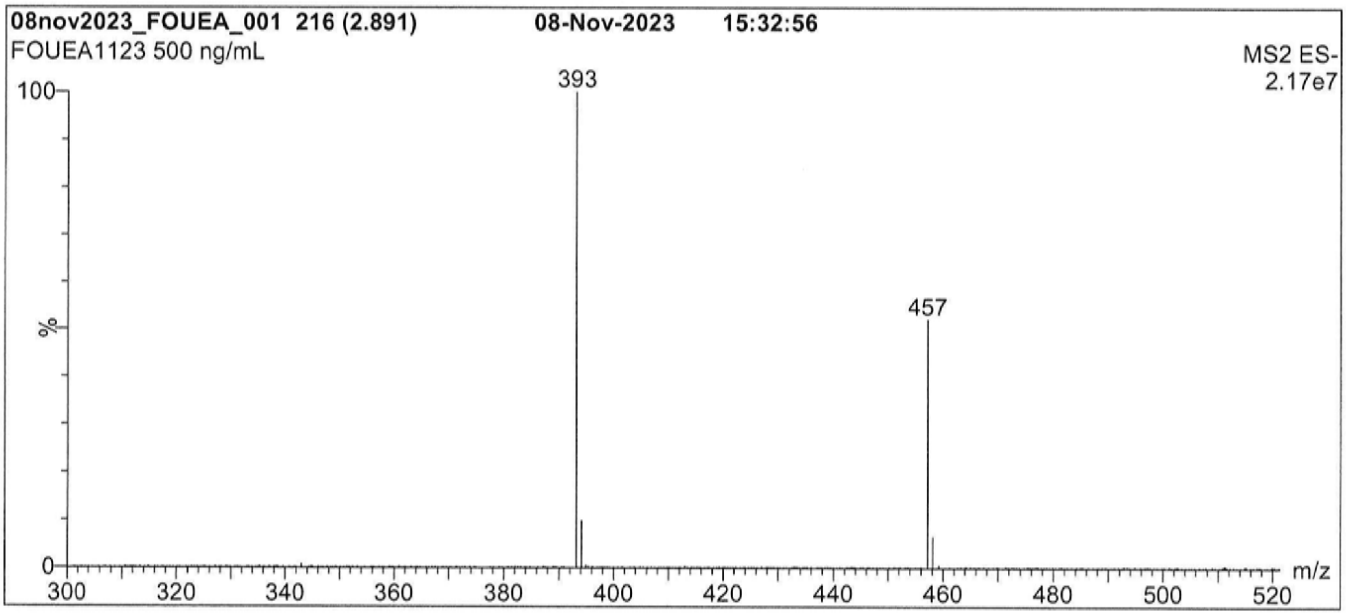


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

## 24B0292

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

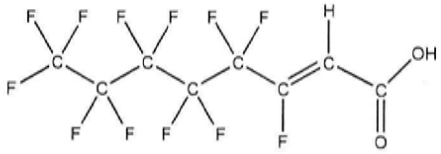

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

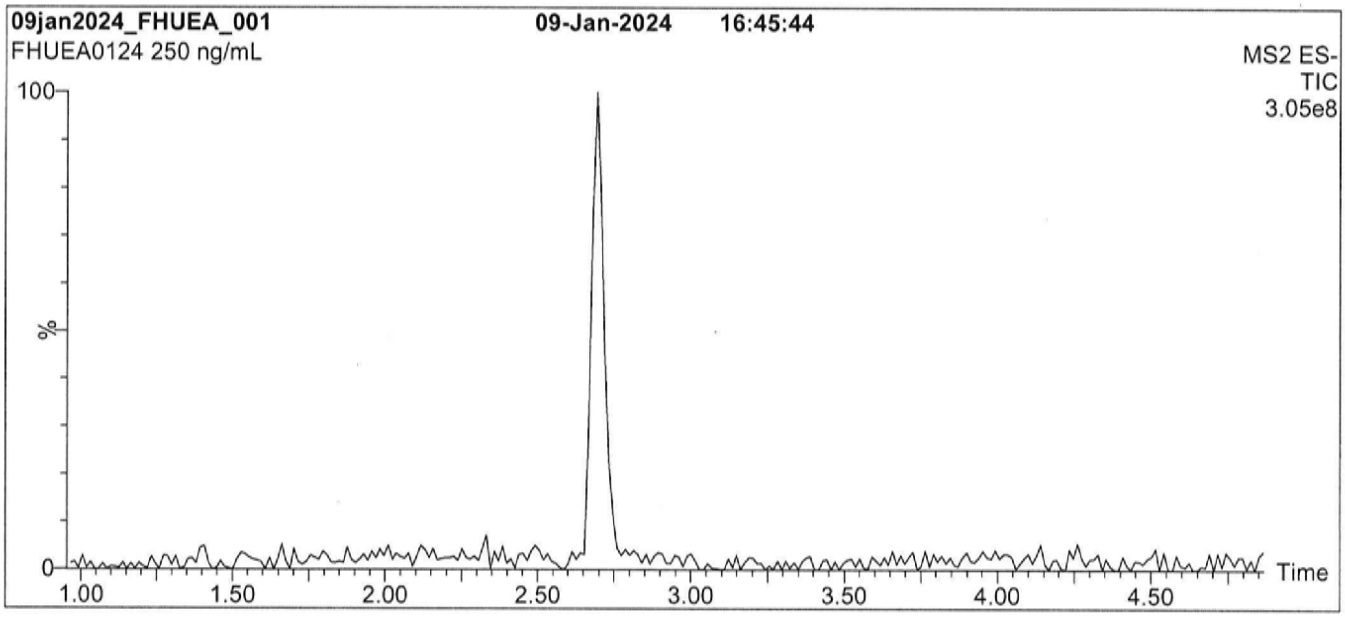


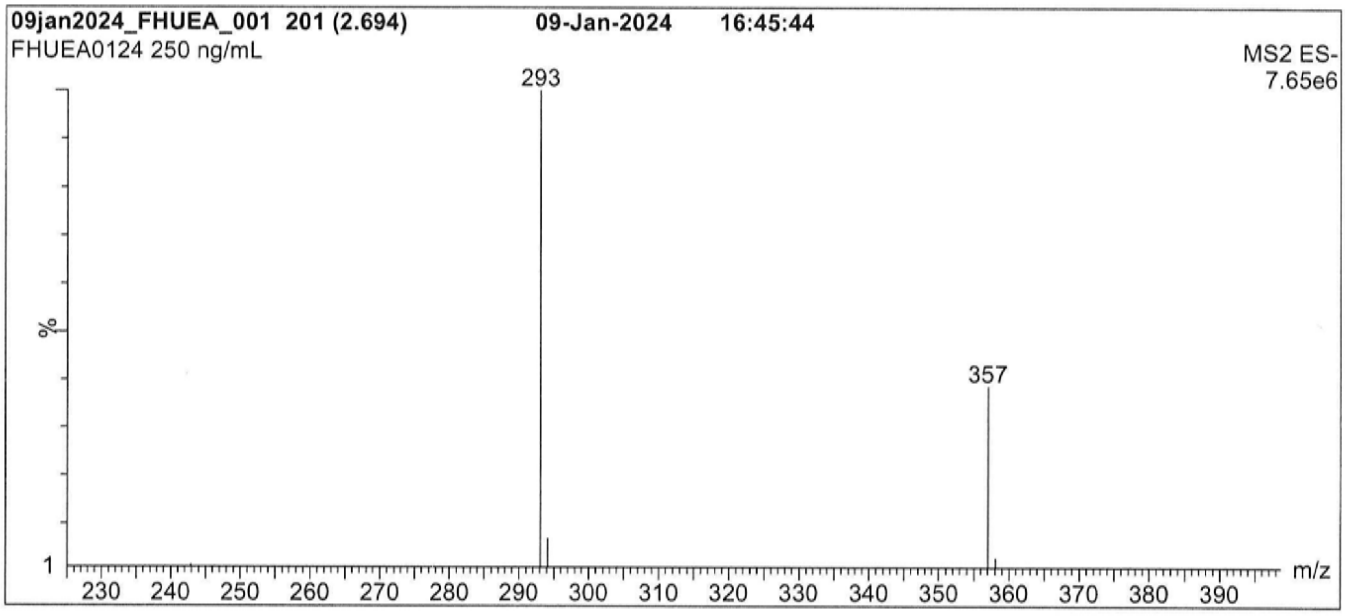


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

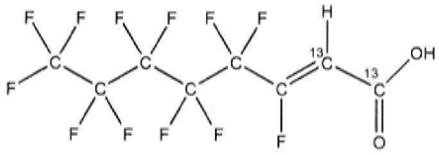

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

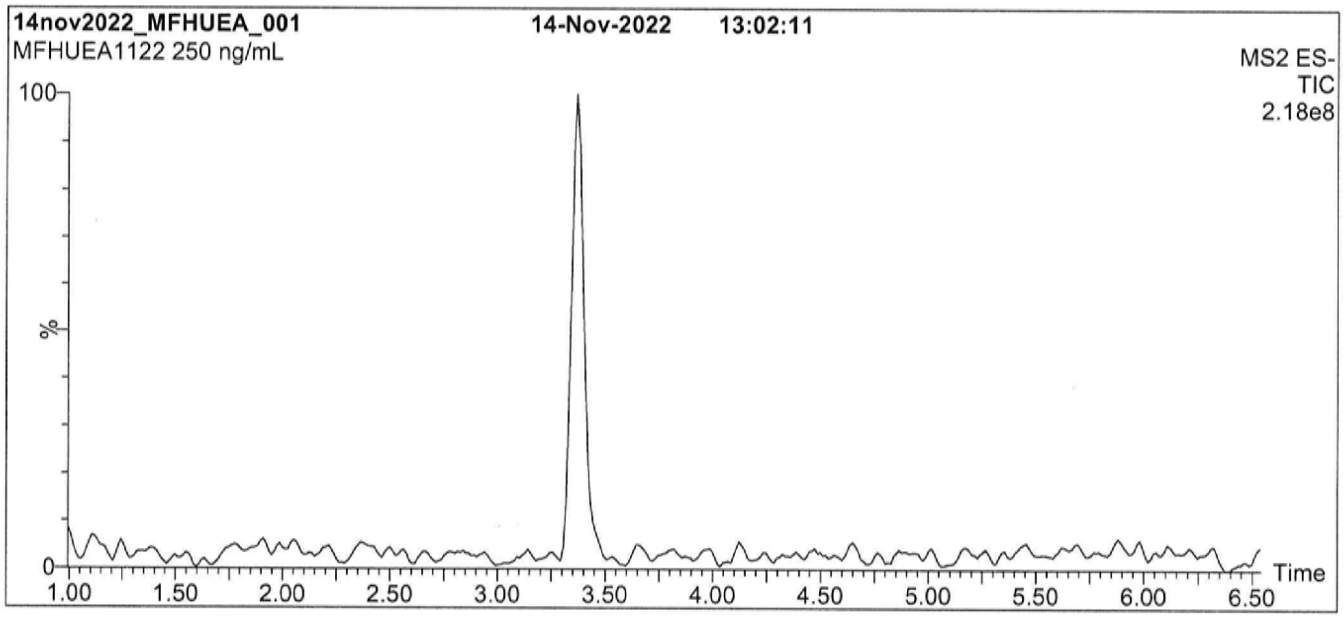


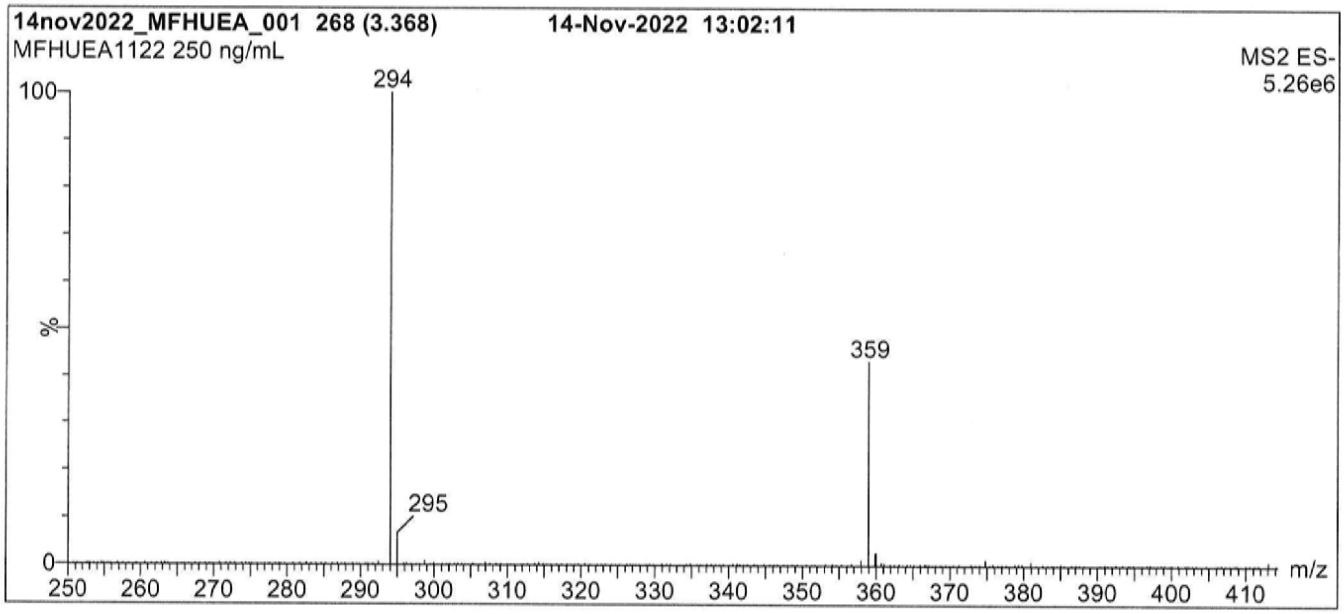


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

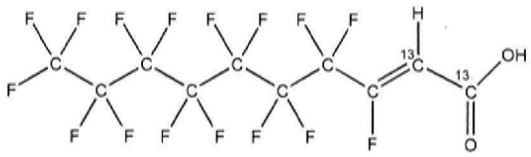

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

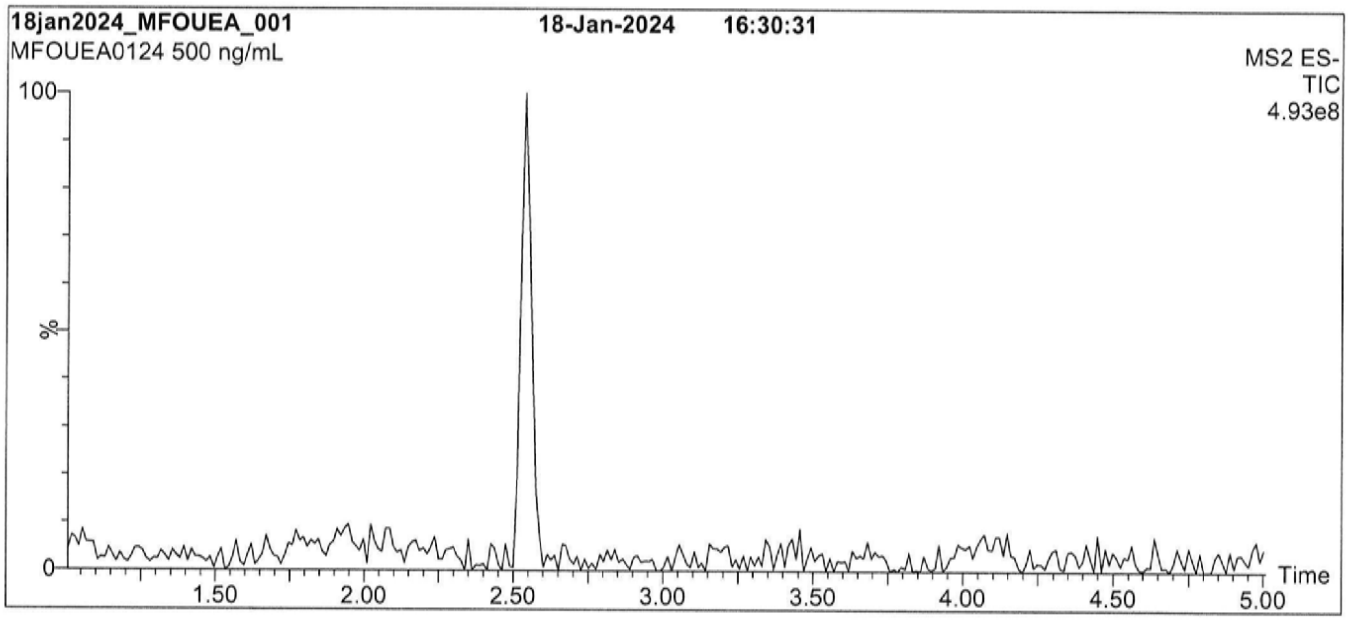


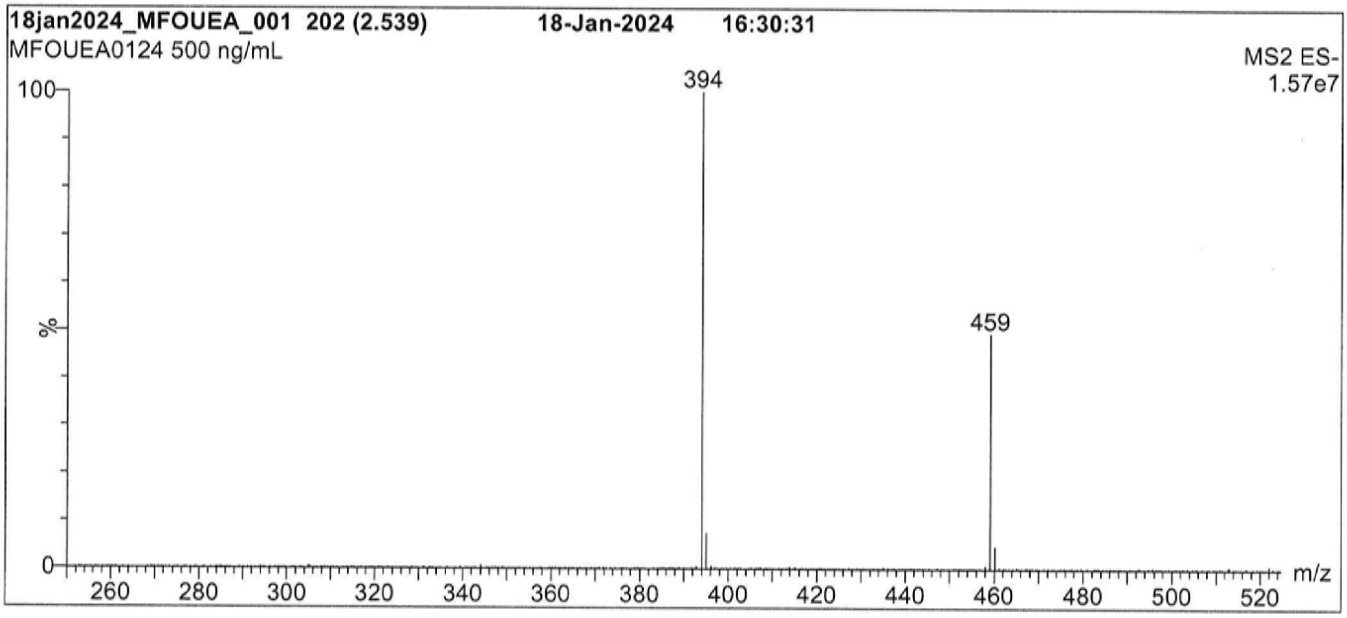


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0474B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

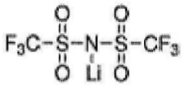

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# nalytical Standard RecordA

## 24C0322

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 09/11/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/15/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/15/2024 11:08 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.02s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.08s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.02s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0324

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/15/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/15/2024 11:44 by DAGs |
| Lot Number: | 64011s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24C0322s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0322s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24C0322s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24C0322s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0322s | 1633 EIS MIXB s 100-400ng/mLs | 03/15/2024s | In houses | 64211s | 09/11/2024s | 03/15/2024 11:08s | by DAGs | 1s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

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A METIRI GROUP COMPANY

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NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

April 01, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0110L

Enclosed are the results of analyses for samples received by our laboratory on 3/19/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

S C For Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

# Data Validatable Report

## Analysis Case Narrative

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL 's SOP. Abbreviated flags for technical t justification are provided as data qualifiers. t

## Samples in this Reportn

| Lab IDn | Sample | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0110-01o | MW-12-4o | Watero | 03/18/2024 09:00o | 03/19/2024o |
| 24C0110-02o | MW-12-3o | Watero | 03/18/2024 09:30o | 03/19/2024o |
| 24C0110-03o | MW-12-2o | Watero | 03/18/2024 09:50o | 03/19/2024o |
| 24C0110-04o | MW-12-1o | Watero | 03/18/2024 10:20o | 03/19/2024o |
| 24C0110-05o | DUP-4-031824o | Watero | 03/18/2024 10:30o | 03/19/2024o |
| 24C0110-06o | MW-18-4o | Watero | 03/18/2024 11:35o | 03/19/2024o |
| 24C0110-07o | MW-18-3o | Watero | 03/18/2024 11:55o | 03/19/2024o |
| 24C0110-08o | MW-18-2o | Watero | 03/18/2024 12:20o | 03/19/2024o |
| 24C0110-09o | MW-18-1o | Watero | 03/18/2024 13:00o | 03/19/2024o |
| 24C0110-10o | SB-2-031824o | Watero | 03/18/2024 13:05o | 03/19/2024o |
| 24C0110-11o | EB-6-031824o | Watero | 03/18/2024 13:10o | 03/19/2024o |
| 24C0110-12o | FB-6-031824o | Watero | 03/18/2024 13:15o | 03/19/2024o |

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| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 15:49o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0110-01t | | | |
| | 500mL Pt | 1t | |
| 24C0110-02t | | | |
| | 500mL Pt | 1t | |
| 24C0110-03t | | | |
| | 500mL Pt | 1t | |
| 24C0110-04t | | | |
| | 500mL Pt | 1t | |
| 24C0110-05t | | | |
| | 500mL Pt | 1t | |
| 24C0110-06t | | | |
| | 500mL Pt | 1t | |
| 24C0110-07t | | | |
| | 500mL Pt | 1t | |
| 24C0110-08t | | | |
| | 500mL Pt | 1t | |
| 24C0110-09t | | | |
| | 500mL Pt | 3t | |
| 24C0110-10t | | | |
| | 500mL Pt | 1t | |
| 24C0110-11t | | | |
| | 500mL Pt | 1t | |
| 24C0110-12t | | | |
| | 500mL Pt | 1t | |

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| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**a**

**Sample: aMW-12-4 a**

**24C0110-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.24o | Jo | 0.73o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.11o | Jo | 0.37o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | NDo | | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.34o | Jo | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | 0.099o | Jo | 0.37o | 0.093o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.37o | 0.057o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.071o | MI2, Jo | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.21o | MI1, Jo | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | MI4, o | 0.37o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *80.5%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *97.4%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-12-4 (Continued)a

**24C0110-01 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *96.8%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *94.8%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *100%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *92.1%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *96.1%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *83.8%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *82.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *77.9%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *77.6%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *97.6%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *96.5%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *87.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *117%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *104%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *107%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *89.8%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *66.2%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *21.3%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *20.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *85.8%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *88.2%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *43.3%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *44.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *93.0%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-12-3 a**

**24C0110-02 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 1.5o | | 1.4o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.58o | Jo | 0.72o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.37o | | 0.36o | 0.049o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.26o | Jo | 0.36o | 0.037o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.86o | MI4o | 0.36o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | | 0.36o | 0.073o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo | | 0.36o | 0.091o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 0.20o | MI6, Jo | 0.36o | 0.033o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | 0.068o | Jo | 0.36o | 0.056o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.32o | MI4, Jo | 0.36o | 0.028o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.85o | IR1o | 0.36o | 0.057o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.36o | 0.093o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.4o | 0.42o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.4o | 0.94o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.72o | 0.098o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.72o | 0.048o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.72o | 0.081o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *88.9%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-12-3 (Continued)a

**24C0110-02 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *111%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *99.4%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *108%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *96.7%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *91.0%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *82.0%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *79.2%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *111%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *110%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *122%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *115%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *118%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *111%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *89.8%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *32.8%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *27.9%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *95.9%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *97.4%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *66.5%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *66.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-12-2 a**

**24C0110-03 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 7.9o | | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 8.5o | | 0.73o | 0.060o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 8.0o | | 0.37o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 3.8o | | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 7.1o | MI4o | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | 0.56o | | 0.37o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo | MI2, o | 0.37o | 0.093o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 6.8o | | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | 0.16o | Jo | 0.37o | 0.057o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.64o | | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 1.4o | MI3o | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *90.3%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-12-2 (Continued)a

**24C0110-03 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *99.5%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *97.8%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *96.9%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *87.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *81.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *84.8%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *97.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *113%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *115%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *111%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *94.9%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *83.8%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *31.5%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *26.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *96.4%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *97.9%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *55.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *53.3%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-12-1 a**

**24C0110-04 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.41o | Jo | 0.75o | 0.061o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.44o | | 0.37o | 0.051o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.21o | Jo | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 1.4o | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | 0.37o | | 0.37o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | 1.1o | | 0.37o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 0.50o | | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.37o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.27o | MI2, Jo | 0.37o | 0.030o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 2.4o | MI3o | 0.37o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.37o | 0.12o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.077o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.39o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.37o | 0.099o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.98o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.75o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.75o | 0.12o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.75o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.75o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.75o | 0.085o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.75o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.75o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.75o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.54o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *92.8%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *109%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-12-1 (Continued)a

**24C0110-04 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *107%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *112%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *107%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *99.0%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *90.5%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *85.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *77.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *78.4%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *106%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *109%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *100%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *116%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *91.3%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *93.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *28.3%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *22.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *107%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *105%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *58.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *55.3%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-4-031824 a**

**24C0110-05 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.44o | Jo | 0.74o | 0.060o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.47o | | 0.37o | 0.051o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.27o | Jo | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 1.5o | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | 0.34o | Jo | 0.37o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | 0.83o | | 0.37o | 0.094o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 0.47o | | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.25o | Jo | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 2.0o | MI3o | 0.37o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | MI4, o | 0.37o | 0.096o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *91.0%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *107%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/01/2024 15:49 |

## Sample Results
**(Continued)**

### Sample: DUP-4-031824 (Continued)
**24C0110-05 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *105%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *101%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *102%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *100%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *97.4%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *85.1%* | | *30-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *79.0%* | | *10-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *80.0%* | | *10-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *76.8%* | | *20-150* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *104%* | | *40-135* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *108%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *99.4%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *115%* | | *40-200* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *103%* | | *40-200* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *112%* | | *40-300* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *87.6%* | | *20-150* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *92.3%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *30.3%* | | *10-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *25.7%* | | *10-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *94.4%* | | *40-170* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *97.3%* | | *25-135* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *61.7%* | | *10-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *60.2%* | | *10-130* | | | *03/21/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *101%* | | *40-130* | | | *03/21/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-18-4 a**

**24C0110-06 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.67o | Jo | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.56o | Jo | 0.73o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.32o | Jo | 0.37o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.17o | Jo | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.56o | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | 0.12o | Jo | 0.37o | 0.093o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 0.048o | MI6, Jo | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.37o | 0.057o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.19o | MI2, Jo | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.34o | MI1, Jo | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *93.3%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-18-4 (Continued)a

**24C0110-06 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *107%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *99.7%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.3%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *95.4%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *93.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *83.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *77.7%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *102%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *106%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *126%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *111%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *106%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *91.9%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *91.2%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *39.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *35.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *96.1%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *99.8%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *66.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *65.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-18-3 a**

**24C0110-07 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 2.3o | | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 1.4o | | 0.73o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 1.3o | | 0.36o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.85o | | 0.36o | 0.037o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 2.5o | MI5o | 0.36o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | 0.29o | Jo | 0.36o | 0.074o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo | | 0.36o | 0.092o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.36o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.36o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 2.8o | | 0.36o | 0.033o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | 0.13o | Jo | 0.36o | 0.057o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.57o | | 0.36o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | 0.048o | Jo | 0.36o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 2.1o | | 0.36o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.26o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.36o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | MI5, o | 0.36o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.73o | 0.099o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.50o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *83.9%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-18-3 (Continued)a

**24C0110-07 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *106%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *100%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *98.1%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *100%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *90.0%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *84.9%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *78.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *74.4%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *91.2%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *120%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *114%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *103%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *90.1%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *80.3%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *31.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *26.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *90.9%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *87.6%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *52.8%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *55.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-18-2 a**

**24C0110-08 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 0.30o MI2, Jo | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.15o Jo | 0.74o | 0.060o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.085o IR2, Jo | 0.37o | 0.051o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.066o Jo | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.39o | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | 0.37o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo MI2, o | 0.37o | 0.094o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 0.37o | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.29o Jo | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | 0.37o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.78o IR1o | 0.37o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | 0.37o | 0.096o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | 1.5o | 0.93o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *90.5%o* | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *104%o* | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-18-2 (Continued)a

**24C0110-08 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *100%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *98.5%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *86.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *81.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *80.3%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *106%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *116%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *97.2%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *106%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *87.8%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *89.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *35.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *34.3%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *97.8%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *97.1%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *60.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *59.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-18-1 a**

**24C0110-09 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 0.51o MI5, Jo | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.26o Jo | 0.74o | 0.060o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | 0.16o Jo | 0.37o | 0.051o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | 0.13o Jo | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.44o | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | 0.37o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | 0.095o MI2, Jo | 0.37o | 0.094o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | 0.19o Jo | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | 0.19o MI5, Jo | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.86o MI1o | 0.37o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | 0.37o | 0.097o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | 1.5o | 0.94o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *97.5%o* | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *102%o* | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-18-1 (Continued)a

**24C0110-09 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *107%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *94.6%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *98.6%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *96.6%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *88.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *83.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *77.9%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *109%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *108%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *110%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *100%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *101%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *101%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *81.4%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *28.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *25.4%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *101%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *98.3%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *53.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *48.9%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *96.4%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aSB-2-031824 a**

**24C0110-10 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.11o | Jo | 0.74o | 0.060o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | NDo | | 0.37o | 0.051o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | NDo | | 0.37o | 0.038o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.20o | Jo | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo | MI2, o | 0.37o | 0.094o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | NDo | | 0.37o | 0.029o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.071o | MI5, Jo | 0.37o | 0.059o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.37o | 0.096o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *104%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *98.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aSB-2-031824 (Continued)a

**24C0110-10 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *99.1%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *105%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *100%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *94.5%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *88.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *76.2%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *75.2%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *100%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *126%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *107%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *97.9%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *94.0%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *71.0%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *23.8%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *19.8%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *98.5%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *94.7%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *37.0%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *35.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *97.0%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-6-031824 a**

**24C0110-11 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.4o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | NDo | | 0.70o | 0.057o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | NDo | | 0.35o | 0.048o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | NDo | | 0.35o | 0.036o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.18o | Jo | 0.35o | 0.13o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | | 0.35o | 0.071o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo | MI2, o | 0.35o | 0.088o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.35o | 0.14o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.35o | 0.097o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.35o | 0.17o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.35o | 0.17o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.35o | 0.17o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | NDo | | 0.35o | 0.032o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.35o | 0.055o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | NDo | | 0.35o | 0.028o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.35o | 0.045o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.069o | MI2, Jo | 0.35o | 0.055o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.35o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.35o | 0.13o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.35o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.4o | 0.25o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.4o | 0.27o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.4o | 0.071o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.4o | 0.35o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.35o | 0.091o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.4o | 0.41o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.4o | 0.36o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.35o | 0.092o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.35o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.4o | 0.88o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.70o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.70o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.70o | 0.095o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.70o | 0.047o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.70o | 0.079o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.70o | 0.26o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.70o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.70o | 0.18o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.4o | 0.39o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.4o | 0.48o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *105%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *99.0%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aEB-6-031824 (Continued)a

**24C0110-11 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *100%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *98.8%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *111%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *105%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *107%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *90.0%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *82.7%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *100%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *123%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *106%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *105%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *89.5%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *83.7%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *26.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *21.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *106%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *103%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *60.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *55.1%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *97.0%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-6-031824 a**

**24C0110-12 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.6o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeAo | 0.14o | Jo | 0.78o | 0.063o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxAo | NDo | | 0.39o | 0.054o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpAo | NDo | | 0.39o | 0.040o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOAo | 0.17o | Jo | 0.39o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNAo | NDo | | 0.39o | 0.080o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDAo | NDo | | 0.39o | 0.099o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFUnAo | NDo | | 0.39o | 0.16o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoAo | NDo | | 0.39o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTrDAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFTeDAo | NDo | | 0.39o | 0.19o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxDAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFODAo | NDo | | 0.39o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFBSo | NDo | | 0.39o | 0.036o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFPeSo | NDo | | 0.39o | 0.061o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHxSo | NDo | | 0.39o | 0.031o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFHpSo | NDo | | 0.39o | 0.050o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSo | 0.067o | MI2, Jo | 0.39o | 0.062o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFNSo | NDo | | 0.39o | 0.12o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDSo | NDo | | 0.39o | 0.15o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFDoSo | NDo | | 0.39o | 0.12o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 4:2FTSo | NDo | | 1.6o | 0.28o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 6:2FTSo | NDo | | 1.6o | 0.31o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 8:2FTSo | NDo | | 1.6o | 0.080o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 10:2FTSo | NDo | | 1.6o | 0.39o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFOSAo | NDo | | 0.39o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAo | NDo | | 1.6o | 0.46o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAo | NDo | | 1.6o | 0.40o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSAAo | NDo | | 0.39o | 0.10o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSAAo | NDo | | 0.39o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NMeFOSEo | NDo | | 1.6o | 0.99o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NEtFOSEo | NDo | | 1.6o | 1.0o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| HFPO-DAo | NDo | | 0.78o | 0.17o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| ADONAo | NDo | | 0.78o | 0.12o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFEESAo | NDo | | 0.78o | 0.11o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMPAo | NDo | | 0.78o | 0.053o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| PFMBAo | NDo | | 0.78o | 0.089o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| NFDHAo | NDo | | 0.78o | 0.29o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 9Cl-PF3ONSo | NDo | | 0.78o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 11Cl-PF3OUDSo | NDo | | 0.78o | 0.20o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 3:3FTCAo | NDo | | 1.6o | 0.56o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 5:3FTCAo | NDo | | 1.6o | 0.43o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| 7:3FTCAo | NDo | | 1.6o | 0.54o | ng/Lo | 03/21/24o | 1o | EPA 1633o | BDC0268o |
| *Surrogate: 13C4-PFBAo* | *95.8%o* | | *5-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/01/2024 15:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aFB-6-031824 (Continued)a

**24C0110-12 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *102%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *103%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *99.6%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *97.2%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *91.9%o* | | *30-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *91.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *81.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *74.0%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *98.9%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *94.5%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *123%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *113%o* | | *40-200o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *108%o* | | *40-300o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *93.0%o* | | *20-150o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *74.6%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *19.9%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *16.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *102%o* | | *40-170o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *100%o* | | *25-135o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *63.6%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *60.7%o* | | *10-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/21/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49 |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0268 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0268-BLK1)u** | | | | | Prepared: 03/19/24 13:48 Analyzed: 03/21/24 15:39 | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/L | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/L | | | | | | |
| PFHxAo | 0.0603Jo | 0.40o | 0.055 | ng/L | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/L | | | | | | |
| PFOAo | 0.182Jo | 0.40o | 0.15 | ng/L | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/L | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/L | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/L | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/L | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/L | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/L | | | | | | |
| PFOSo | 0.0727JMI2, Jo | 0.40o | 0.064 | ng/L | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/L | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/L | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/L | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/L | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/L | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/L | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/L | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/L | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/L | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/L | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/L | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/L | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/L | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/L | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/L | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/L | | | | | | |
| *Surrogate: 13C4-PFBAo* | *33.1o* | | | *ng/Lo* | *32.0o* | | *103o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *111o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.57o* | | | *ng/Lo* | *8.00o* | | *107o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.13o* | | | *ng/Lo* | *8.00o* | | *102o* | *40-130o* | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0268-BLK1)u** | | | | | Prepared: 03/19/24 13:48 Analyzed: 03/21/24 15:39o | | | | | |
| *Surrogate: 13C8-PFOAo* | *8.36o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *4.28o* | | | *ng/Lo* | *4.00o* | | *107o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *4.47o* | | | *ng/Lo* | *4.00o* | | *112o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *4.10o* | | | *ng/Lo* | *4.00o* | | *102o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.78o* | | | *ng/Lo* | *4.00o* | | *94.6o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.28o* | | | *ng/Lo* | *4.00o* | | *81.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.60o* | | | *ng/Lo* | *8.00o* | | *82.5o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.22o* | | | *ng/Lo* | *8.00o* | | *103o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.50o* | | | *ng/Lo* | *8.00o* | | *106o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *8.46o* | | | *ng/Lo* | *8.00o* | | *106o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *21.3o* | | | *ng/Lo* | *16.0o* | | *133o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.6o* | | | *ng/Lo* | *16.0o* | | *122o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.0o* | | | *ng/Lo* | *16.0o* | | *113o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *33.3o* | | | *ng/Lo* | *32.0o* | | *104o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *7.10o* | | | *ng/Lo* | *8.00o* | | *88.8o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.58o* | | | *ng/Lo* | *8.00o* | | *32.2o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.22o* | | | *ng/Lo* | *8.00o* | | *27.8o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.1o* | | | *ng/Lo* | *16.0o* | | *107o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *15.9o* | | | *ng/Lo* | *16.0o* | | *99.5o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *58.6o* | | | *ng/Lo* | *80.0o* | | *73.2o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *54.6o* | | | *ng/Lo* | *80.0o* | | *68.3o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.0o* | | | *ng/Lo* | *32.0o* | | *100o* | *40-130o* | | |
| **LCS (BDC0268-BS1)u** | | | | | Prepared: 03/19/24 13:48 Analyzed: 03/21/24 16:00o | | | | | |
| PFBAo | 13.8o | | 0.21o | ng/Lo | 16.0o | | 86.5o | 70-140o | | |
| PFPeAo | 7.00o | | 0.065o | ng/Lo | 8.00o | | 87.5o | 65-135o | | |
| PFHxAo | 3.50o | | 0.055o | ng/Lo | 4.00o | | 87.5o | 70-145o | | |
| PFHpAo | 3.35o | | 0.041o | ng/Lo | 4.00o | | 83.8o | 70-150o | | |
| PFOAo | 3.67o | | 0.15o | ng/Lo | 4.00o | | 91.7o | 70-150o | | |
| PFNAo | 3.42o | | 0.082o | ng/Lo | 4.00o | | 85.5o | 70-150o | | |
| PFDAo | 3.39o | | 0.10o | ng/Lo | 4.00o | | 84.8o | 70-140o | | |
| PFUnAo | 3.50o | | 0.16o | ng/Lo | 4.00o | | 87.6o | 70-145o | | |
| PFDoAo | 3.36o | | 0.11o | ng/Lo | 4.00o | | 84.0o | 70-140o | | |
| PFTrDAo | 3.22o | | 0.20o | ng/Lo | 4.00o | | 80.6o | 65-140o | | |
| PFTeDAo | 3.75o | | 0.20o | ng/Lo | 4.00o | | 93.7o | 60-140o | | |
| PFHxDAo | 3.53o | | 0.20o | ng/Lo | 4.00o | | 88.2o | 40-150o | | |
| PFODAo | 2.92o | | 0.20o | ng/Lo | 4.00o | | 72.9o | 40-150o | | |
| PFBSo | 3.04o | | 0.037o | ng/Lo | 3.54o | | 85.9o | 60-145o | | |
| PFPeSo | 3.37o | | 0.063o | ng/Lo | 3.76o | | 89.6o | 65-140o | | |
| PFHxSo | 3.22o | | 0.032o | ng/Lo | 3.66o | | 88.1o | 65-145o | | |
| PFHpSo | 3.41o | | 0.051o | ng/Lo | 3.82o | | 89.3o | 70-150o | | |
| PFOSo | 3.38o | | 0.064o | ng/Lo | 3.72o | | 90.8o | 55-150o | | |
| PFNSo | 3.23o | | 0.12o | ng/Lo | 3.84o | | 84.0o | 65-145o | | |
| PFDSo | 3.16o | | 0.15o | ng/Lo | 3.86o | | 81.8o | 60-145o | | |
| PFDoSo | 2.91o | | 0.12o | ng/Lo | 3.88o | | 74.9o | 50-145o | | |
| 4:2FTSo | 13.1o | | 0.29o | ng/Lo | 15.0o | | 87.5o | 70-145o | | |
| 6:2FTSo | 13.8o | | 0.31o | ng/Lo | 15.2o | | 90.5o | 65-155o | | |
| 8:2FTSo | 14.7o | | 0.082o | ng/Lo | 15.4o | | 95.4o | 60-150o | | |
| 10:2FTSo | 16.7o | | 0.40o | ng/Lo | 15.4o | | 108o | 40-150o | | |
| PFOSAo | 3.37o | | 0.10o | ng/Lo | 4.00o | | 84.1o | 70-145o | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 15:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0268-BS1)u** | | | | | Prepared: 03/19/24 13:48 | | Analyzed: 03/21/24 16:00o | | | |
| NMeFOSAo | 14.4o | | 0.47o | ng/L | 16.0o | | 89.9 | 60-150 | | |
| NEtFOSAo | 13.6o | | 0.41o | ng/L | 16.0o | | 85.3 | 65-145 | | |
| NMeFOSAAo | 3.64o | | 0.11o | ng/L | 4.00o | | 90.9 | 50-140 | | |
| NEtFOSAAo | 3.50o | | 0.11o | ng/L | 4.00o | | 87.5 | 70-145 | | |
| NMeFOSEo | 14.0o | | 1.0o | ng/L | 16.0o | | 87.4 | 70-145 | | |
| NEtFOSEo | 14.2o | | 1.0o | ng/L | 16.0o | | 88.8 | 70-135 | | |
| HFPO-DAo | 3.76o | | 0.17o | ng/L | 4.00o | | 93.9 | 70-140 | | |
| ADONAo | 3.76o | | 0.12o | ng/L | 3.78o | | 99.5 | 65-145 | | |
| PFEESAo | 6.73o | | 0.11o | ng/L | 7.12o | | 94.5 | 70-140 | | |
| PFMPAo | 6.74o | | 0.054o | ng/L | 8.00o | | 84.3 | 55-140 | | |
| PFMBAo | 6.73o | | 0.091o | ng/L | 8.00o | | 84.1 | 60-150 | | |
| NFDHAo | 6.53o | | 0.30o | ng/L | 8.00o | | 81.6 | 50-150 | | |
| 9Cl-PF3ONSo | 3.44o | | 0.21o | ng/L | 3.74o | | 92.0 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.35o | | 0.21o | ng/L | 3.78o | | 88.6 | 55-160 | | |
| 3:3FTCAo | 12.5o | | 0.57o | ng/L | 16.0o | | 78.3 | 65-130 | | |
| 5:3FTCAo | 14.2o | | 0.44o | ng/L | 16.0o | | 89.0 | 70-135 | | |
| 7:3FTCAo | 14.5o | | 0.55o | ng/L | 16.0o | | 90.7 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *32.9o* | | | *ng/Lo* | *32.0o* | | *103* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *16.9o* | | | *ng/Lo* | *16.0o* | | *106* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *8.58o* | | | *ng/Lo* | *8.00o* | | *107* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.73o* | | | *ng/Lo* | *8.00o* | | *109* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.32o* | | | *ng/Lo* | *8.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.14o* | | | *ng/Lo* | *4.00o* | | *103* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.05o* | | | *ng/Lo* | *4.00o* | | *101* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *3.97o* | | | *ng/Lo* | *4.00o* | | *99.2* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.65o* | | | *ng/Lo* | *4.00o* | | *91.2* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.13o* | | | *ng/Lo* | *4.00o* | | *78.2* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.63o* | | | *ng/Lo* | *8.00o* | | *70.4* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *8.46o* | | | *ng/Lo* | *8.00o* | | *106* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.29o* | | | *ng/Lo* | *8.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.03o* | | | *ng/Lo* | *8.00o* | | *100* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *19.9o* | | | *ng/Lo* | *16.0o* | | *125* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *18.4o* | | | *ng/Lo* | *16.0o* | | *115* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.4o* | | | *ng/Lo* | *16.0o* | | *115* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *30.6o* | | | *ng/Lo* | *32.0o* | | *95.7* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *5.67o* | | | *ng/Lo* | *8.00o* | | *70.9* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.46o* | | | *ng/Lo* | *8.00o* | | *30.7* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *2.35o* | | | *ng/Lo* | *8.00o* | | *29.3* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *16.0o* | | | *ng/Lo* | *16.0o* | | *100* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *15.4o* | | | *ng/Lo* | *16.0o* | | *96.2* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *47.1o* | | | *ng/Lo* | *80.0o* | | *58.9* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *47.8o* | | | *ng/Lo* | *80.0o* | | *59.7* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *31.5o* | | | *ng/Lo* | *32.0o* | | *98.4* | *40-130* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0268-MRL1)u** | | | | | Prepared: 03/19/24 13:48 | | Analyzed: 03/21/24 16:20o | | | |
| PFBAo | 3.42o | | 0.21o | ng/Lo | 3.20o | | 107o | 70-140 | | |
| PFPeAo | 1.52o | | 0.065o | ng/Lo | 1.60o | | 95.1o | 65-135 | | |
| PFHxAo | 0.771o | | 0.055o | ng/Lo | 0.800o | | 96.4o | 70-145 | | |
| PFHpAo | 0.680o | | 0.041o | ng/Lo | 0.800o | | 84.9o | 70-150 | | |
| PFOAo | 0.986o | | 0.15o | ng/Lo | 0.800o | | 123o | 70-150 | | |
| PFNAo | 0.669o | | 0.082o | ng/Lo | 0.800o | | 83.7o | 70-150 | | |
| PFDAo | 0.805o | | 0.10o | ng/Lo | 0.800o | | 101o | 70-140 | | |
| PFUnAo | 0.730o | | 0.16o | ng/Lo | 0.800o | | 91.3o | 70-145 | | |
| PFDoAo | 0.708o | | 0.11o | ng/Lo | 0.800o | | 88.5o | 70-140 | | |
| PFTrDAo | 0.751o | | 0.20o | ng/Lo | 0.800o | | 93.8o | 65-140 | | |
| PFTeDAo | 0.731o | | 0.20o | ng/Lo | 0.800o | | 91.3o | 60-140 | | |
| PFHxDAo | 0.735o | | 0.20o | ng/Lo | 0.800o | | 91.9o | 40-150 | | |
| PFODAo | 0.606o | | 0.20o | ng/Lo | 0.800o | | 75.7o | 40-150 | | |
| PFBSo | 0.585o | | 0.037o | ng/Lo | 0.708o | | 82.6o | 60-145 | | |
| PFPeSo | 0.647o | | 0.063o | ng/Lo | 0.752o | | 86.1o | 65-140 | | |
| PFHxSo | 0.648o | | 0.032o | ng/Lo | 0.732o | | 88.5o | 65-145 | | |
| PFHpSo | 0.691o | | 0.051o | ng/Lo | 0.764o | | 90.4o | 70-150 | | |
| PFOSo | 0.728o | | 0.064o | ng/Lo | 0.744o | | 97.9o | 55-150 | | |
| PFNSo | 0.660o | | 0.12o | ng/Lo | 0.768o | | 86.0o | 65-145 | | |
| PFDSo | 0.714o | | 0.15o | ng/Lo | 0.772o | | 92.5o | 60-145 | | |
| PFDoSo | 0.615o | | 0.12o | ng/Lo | 0.776o | | 79.3o | 50-145 | | |
| 4:2FTSo | 2.60o | | 0.29o | ng/Lo | 3.00o | | 86.7o | 70-145 | | |
| 6:2FTSo | 2.73o | | 0.31o | ng/Lo | 3.04o | | 89.9o | 65-155 | | |
| 8:2FTSo | 2.96o | | 0.082o | ng/Lo | 3.07o | | 96.4o | 60-150 | | |
| 10:2FTSo | 3.25o | | 0.40o | ng/Lo | 3.09o | | 105o | 40-150 | | |
| PFOSAo | 0.732o | | 0.10o | ng/Lo | 0.800o | | 91.5o | 70-145 | | |
| NMeFOSAo | 2.99o | | 0.47o | ng/Lo | 3.20o | | 93.3o | 60-150 | | |
| NEtFOSAo | 2.82o | | 0.41o | ng/Lo | 3.20o | | 88.2o | 65-145 | | |
| NMeFOSAAo | 0.721o | | 0.11o | ng/Lo | 0.800o | | 90.1o | 50-140 | | |
| NEtFOSAAo | 0.669o | | 0.11o | ng/Lo | 0.800o | | 83.6o | 70-145 | | |
| NMeFOSEo | 3.03o | | 1.0o | ng/Lo | 3.20o | | 94.8o | 70-145 | | |
| NEtFOSEo | 2.80o | | 1.0o | ng/Lo | 3.20o | | 87.5o | 70-135 | | |
| HFPO-DAo | 0.789o[1]o | | 0.17o | ng/Lo | 0.800o | | 98.7o | 70-140 | | |
| ADONAo | 0.711o[1]o | | 0.12o | ng/Lo | 0.756o | | 94.1o | 65-145 | | |
| PFEESAo | 1.19o | | 0.11o | ng/Lo | 1.42o | | 83.8o | 70-140 | | |
| PFMPAo | 1.47o | | 0.054o | ng/Lo | 1.60o | | 91.7o | 55-140 | | |
| PFMBAo | 1.37o | | 0.091o | ng/Lo | 1.60o | | 85.6o | 60-150 | | |
| NFDHAo | 1.21o | | 0.30o | ng/Lo | 1.60o | | 75.5o | 50-150 | | |
| 9Cl-PF3ONSo | 0.697o[1]o | | 0.21o | ng/Lo | 0.748o | | 93.2o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.653o[1]o | | 0.21o | ng/Lo | 0.756o | | 86.4o | 55-160 | | |
| 3:3FTCAo | 2.68o | | 0.57o | ng/Lo | 3.20o | | 83.7o | 65-130 | | |
| 5:3FTCAo | 2.97o | | 0.44o | ng/Lo | 3.20o | | 92.7o | 70-135 | | |
| 7:3FTCAo | 3.05o | | 0.55o | ng/Lo | 3.20o | | 95.4o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *35.1o* | | | *ng/Lo* | *32.0o* | | *110o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *16.6o* | | | *ng/Lo* | *16.0o* | | *104o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.67o* | | | *ng/Lo* | *8.00o* | | *108o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *9.50o* | | | *ng/Lo* | *8.00o* | | *119o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *8.67o* | | | *ng/Lo* | *8.00o* | | *108o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.15o* | | | *ng/Lo* | *4.00o* | | *104o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.17o* | | | *ng/Lo* | *4.00o* | | *104o* | *40-130 o* | | |

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Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oJPL-GW Monitoringo
Project Number:oJPL-GW Monitoringo
Project Manager:oDavid Connero

Reported: 04/01/2024 15:49o

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0268-MRL1)u** | | | | | Prepared: 03/19/24 13:48 Analyzed: 03/21/24 16:20o | | | | | |
| *Surrogate: 13C7-PFUnAo* | *3.77o* | | | *ng/Lo* | *4.00o* | | *94.2o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.60o* | | | *ng/Lo* | *4.00o* | | *90.0o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.33o* | | | *ng/Lo* | *4.00o* | | *83.3o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.75o* | | | *ng/Lo* | *8.00o* | | *71.8o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.28o* | | | *ng/Lo* | *8.00o* | | *104o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.38o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *8.48o* | | | *ng/Lo* | *8.00o* | | *106o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *20.0o* | | | *ng/Lo* | *16.0o* | | *125o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.0o* | | | *ng/Lo* | *16.0o* | | *119o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *18.3o* | | | *ng/Lo* | *16.0o* | | *115o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *33.4o* | | | *ng/Lo* | *32.0o* | | *104o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *5.92o* | | | *ng/Lo* | *8.00o* | | *74.0o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.37o* | | | *ng/Lo* | *8.00o* | | *29.6o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.21o* | | | *ng/Lo* | *8.00o* | | *27.6o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *111o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *110o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *47.4o* | | | *ng/Lo* | *80.0o* | | *59.2o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *49.1o* | | | *ng/Lo* | *80.0o* | | *61.3o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.3o* | | | *ng/Lo* | *32.0o* | | *101o* | *40-130o* | | |
| **Matrix Spike (BDC0268-MS1)u** | **Source: 24C0110-09u** | | | | Prepared: 03/19/24 13:48 Analyzed: 03/21/24 16:41o | | | | | |
| PFBAo | 12.8o | | 0.20o | ng/Lo | 15.0o | 0.505o | 82.1o | 70-140o | | |
| PFPeAo | 6.67o | | 0.061o | ng/Lo | 7.50o | 0.261o | 85.4o | 65-135o | | |
| PFHxAo | 3.11o | | 0.052o | ng/Lo | 3.75o | 0.163o | 78.6o | 70-145o | | |
| PFHpAo | 3.24o | | 0.038o | ng/Lo | 3.75o | 0.133o | 82.7o | 70-150o | | |
| PFOAo | 3.68o | | 0.14o | ng/Lo | 3.75o | 0.440o | 86.4o | 70-150o | | |
| PFNAo | 3.13o | | 0.077o | ng/Lo | 3.75o | NDo | 83.5o | 70-150o | | |
| PFDAo | 3.10o | | 0.095o | ng/Lo | 3.75o | 0.0952o | 80.1o | 70-140o | | |
| PFUnAo | 3.13o | | 0.15o | ng/Lo | 3.75o | NDo | 83.4o | 70-145o | | |
| PFDoAo | 3.33o | | 0.10o | ng/Lo | 3.75o | NDo | 88.7o | 70-140o | | |
| PFTrDAo | 2.93o | | 0.19o | ng/Lo | 3.75o | NDo | 78.0o | 65-140o | | |
| PFTeDAo | 3.46o | | 0.19o | ng/Lo | 3.75o | NDo | 92.3o | 60-140o | | |
| PFHxDAo | 3.23o | | 0.19o | ng/Lo | 3.75o | NDo | 86.1o | 40-150o | | |
| PFODAo | 3.03o | | 0.19o | ng/Lo | 3.75o | NDo | 80.6o | 40-150o | | |
| PFBSo | 2.97o | | 0.034o | ng/Lo | 3.32o | 0.192o | 83.6o | 60-145o | | |
| PFPeSo | 3.00o | | 0.059o | ng/Lo | 3.53o | NDo | 85.0o | 65-140o | | |
| PFHxSo | 3.03o | | 0.030o | ng/Lo | 3.43o | 0.192o | 82.5o | 65-145o | | |
| PFHpSo | 3.19o | | 0.048o | ng/Lo | 3.58o | NDo | 89.1o | 70-150o | | |
| PFOSo | 3.98o | | 0.060o | ng/Lo | 3.49o | 0.861o | 89.5o | 55-150o | | |
| PFNSo | 2.89o | | 0.12o | ng/Lo | 3.60o | NDo | 80.2o | 65-145o | | |
| PFDSo | 2.63o | | 0.14o | ng/Lo | 3.62o | NDo | 72.7o | 60-145o | | |
| PFDoSo | 2.32o | | 0.12o | ng/Lo | 3.64o | NDo | 63.7o | 50-145o | | |
| 4:2FTSo | 11.9o | | 0.27o | ng/Lo | 14.1o | NDo | 84.8o | 70-145o | | |
| 6:2FTSo | 13.3o | | 0.29o | ng/Lo | 14.3o | NDo | 93.2o | 65-155o | | |
| 8:2FTSo | 13.8o | | 0.077o | ng/Lo | 14.4o | NDo | 96.0o | 60-150o | | |
| 10:2FTSo | 14.5o | | 0.38o | ng/Lo | 14.5o | NDo | 100o | 40-150o | | |
| PFOSAo | 3.37o | | 0.098o | ng/Lo | 3.75o | NDo | 89.9o | 70-145o | | |
| NMeFOSAo | 15.0o | | 0.44o | ng/Lo | 15.0o | NDo | 100o | 60-150o | | |
| NEtFOSAo | 13.6o | | 0.39o | ng/Lo | 15.0o | NDo | 90.4o | 65-145o | | |
| NMeFOSAAo | 3.17o | | 0.099o | ng/Lo | 3.75o | NDo | 84.6o | 50-140o | | |

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 15:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0268-MS1)u** | **Source: 24C0110-09** | | | | Prepared: 03/19/24 13:48 | | Analyzed: 03/21/24 16:41 | | | |
| NEtFOSAAo | 3.39o | | 0.11o | ng/L | 3.75o | NDo | 90.4 | 70-145 | | |
| NMeFOSEo | 13.2o | | 0.95o | ng/L | 15.0o | NDo | 88.2 | 70-145 | | |
| NEtFOSEo | 14.3o | | 0.98o | ng/L | 15.0o | NDo | 95.5 | 70-135 | | |
| HFPO-DAo | 3.24o | | 0.16o | ng/L | 3.75o | NDo | 86.3 | 70-140 | | |
| ADONAo | 3.22o | | 0.12o | ng/L | 3.55o | NDo | 90.9 | 65-145 | | |
| PFEESAo | 5.84o | | 0.10o | ng/L | 6.68o | NDo | 87.4 | 70-140 | | |
| PFMPAo | 6.89o | | 0.051o | ng/L | 7.50o | NDo | 91.9 | 55-140 | | |
| PFMBAo | 6.09o | | 0.085o | ng/L | 7.50o | NDo | 81.2 | 60-150 | | |
| NFDHAo | 6.06o | | 0.28o | ng/L | 7.50o | NDo | 80.7 | 50-150 | | |
| 9Cl-PF3ONSo | 2.92o | | 0.20o | ng/L | 3.51o | NDo | 83.3 | 70-155 | | |
| 11Cl-PF3OUDSo | 2.47o | | 0.19o | ng/L | 3.55o | NDo | 69.6 | 55-160 | | |
| 3:3FTCAo | 13.1o | | 0.54o | ng/L | 15.0o | NDo | 87.1 | 65-130 | | |
| 5:3FTCAo | 14.1o | | 0.42o | ng/L | 15.0o | NDo | 93.9 | 70-135 | | |
| 7:3FTCAo | 14.4o | | 0.52o | ng/L | 15.0o | NDo | 96.3 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *26.7o* | | | *ng/Lo* | *30.0o* | | *89.0* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *13.3o* | | | *ng/Lo* | *15.0o* | | *88.4* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *6.57o* | | | *ng/Lo* | *7.50o* | | *87.5* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *6.57o* | | | *ng/Lo* | *7.50o* | | *87.5* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.08o* | | | *ng/Lo* | *7.50o* | | *94.3* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.80o* | | | *ng/Lo* | *3.75o* | | *101* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.62o* | | | *ng/Lo* | *3.75o* | | *96.5* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *3.40o* | | | *ng/Lo* | *3.75o* | | *90.7* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *2.94o* | | | *ng/Lo* | *3.75o* | | *78.5* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *2.53o* | | | *ng/Lo* | *3.75o* | | *67.4* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.52o* | | | *ng/Lo* | *7.50o* | | *73.5* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *7.19o* | | | *ng/Lo* | *7.50o* | | *95.8* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *7.58o* | | | *ng/Lo* | *7.50o* | | *101* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *6.91o* | | | *ng/Lo* | *7.50o* | | *92.1* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *15.2o* | | | *ng/Lo* | *15.0o* | | *102* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *15.3o* | | | *ng/Lo* | *15.0o* | | *102* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *14.9o* | | | *ng/Lo* | *15.0o* | | *99.5* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *25.6o* | | | *ng/Lo* | *30.0o* | | *85.2* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *6.00o* | | | *ng/Lo* | *7.50o* | | *80.0* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.82o* | | | *ng/Lo* | *7.50o* | | *24.2* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.74o* | | | *ng/Lo* | *7.50o* | | *23.1* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.0o* | | | *ng/Lo* | *15.0o* | | *86.8* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *12.8o* | | | *ng/Lo* | *15.0o* | | *85.1* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *36.2o* | | | *ng/Lo* | *75.0o* | | *48.3* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *32.6o* | | | *ng/Lo* | *75.0o* | | *43.5* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *26.1o* | | | *ng/Lo* | *30.0o* | | *86.9* | *40-130* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0268-MSD1)u** | **Source: 24C0110-09u** | | | Prepared: 03/19/24 13:48 | Analyzed: 03/21/24 17:01o | | | | | |
| PFBAo | 12.7o | | 0.19o | ng/Lo | 14.9o | 0.505o | 82.2o | 70-140o | 0.713o | 30o |
| PFPeAo | 6.44o | | 0.060o | ng/Lo | 7.44o | 0.261o | 83.0o | 65-135o | 3.46o | 30o |
| PFHxAo | 3.27o | | 0.051o | ng/Lo | 3.72o | 0.163o | 83.5o | 70-145o | 5.01o | 30o |
| PFHpAo | 3.32o | | 0.038o | ng/Lo | 3.72o | 0.133o | 85.8o | 70-150o | 2.68o | 30o |
| PFOAo | 3.83o | | 0.14o | ng/Lo | 3.72o | 0.440o | 91.0o | 70-150o | 3.80o | 30o |
| PFNAo | 3.01o | | 0.076o | ng/Lo | 3.72o | NDo | 80.9o | 70-150o | 4.04o | 30o |
| PFDAo | 3.15o | | 0.094o | ng/Lo | 3.72o | 0.0952o | 82.2o | 70-140o | 1.74o | 30o |
| PFUnAo | 3.15o | | 0.15o | ng/Lo | 3.72o | NDo | 84.7o | 70-145o | 0.791o | 30o |
| PFDoAo | 3.32o | | 0.10o | ng/Lo | 3.72o | NDo | 89.3o | 70-140o | 0.208o | 30o |
| PFTrDAo | 3.13o | | 0.19o | ng/Lo | 3.72o | NDo | 84.1o | 65-140o | 6.64o | 30o |
| PFTeDAo | 3.16o | | 0.18o | ng/Lo | 3.72o | NDo | 85.0o | 60-140o | 9.02o | 30o |
| PFHxDAo | 3.39o | | 0.19o | ng/Lo | 3.72o | NDo | 91.2o | 40-150o | 4.91o | 30o |
| PFODAo | 3.07o | | 0.19o | ng/Lo | 3.72o | NDo | 82.4o | 40-150o | 1.33o | 30o |
| PFBSo | 2.84o | | 0.034o | ng/Lo | 3.29o | 0.192o | 80.3o | 60-145o | 4.52o | 30o |
| PFPeSo | 3.07o | | 0.058o | ng/Lo | 3.50o | NDo | 87.9o | 65-140o | 2.48o | 30o |
| PFHxSo | 3.01o | | 0.029o | ng/Lo | 3.40o | 0.192o | 82.6o | 65-145o | 0.650o | 30o |
| PFHpSo | 3.19o | | 0.048o | ng/Lo | 3.55o | NDo | 89.8o | 70-150o | 0.140o | 30o |
| PFOSo | 3.80o | | 0.059o | ng/Lo | 3.46o | 0.861o | 85.0o | 55-150o | 4.66o | 30o |
| PFNSo | 2.92o | | 0.11o | ng/Lo | 3.57o | NDo | 81.6o | 65-145o | 0.920o | 30o |
| PFDSo | 2.69o | | 0.14o | ng/Lo | 3.59o | NDo | 74.9o | 60-145o | 2.14o | 30o |
| PFDoSo | 2.43o | | 0.11o | ng/Lo | 3.61o | NDo | 67.4o | 50-145o | 4.75o | 30o |
| 4:2FTSo | 12.6o | | 0.27o | ng/Lo | 14.0o | NDo | 90.4o | 70-145o | 5.56o | 30o |
| 6:2FTSo | 14.6o | | 0.29o | ng/Lo | 14.1o | NDo | 103o | 65-155o | 9.65o | 30o |
| 8:2FTSo | 13.1o | | 0.076o | ng/Lo | 14.3o | NDo | 91.4o | 60-150o | 5.75o | 30o |
| 10:2FTSo | 15.4o | | 0.37o | ng/Lo | 14.4o | NDo | 107o | 40-150o | 5.96o | 30o |
| PFOSAo | 3.15o | | 0.097o | ng/Lo | 3.72o | NDo | 84.6o | 70-145o | 6.94o | 30o |
| NMeFOSAo | 13.7o | | 0.44o | ng/Lo | 14.9o | NDo | 91.7o | 60-150o | 9.57o | 30o |
| NEtFOSAo | 13.8o | | 0.38o | ng/Lo | 14.9o | NDo | 92.6o | 65-145o | 1.60o | 30o |
| NMeFOSAAo | 3.19o | | 0.098o | ng/Lo | 3.72o | NDo | 85.7o | 50-140o | 0.534o | 30o |
| NEtFOSAAo | 3.23o | | 0.11o | ng/Lo | 3.72o | NDo | 86.8o | 70-145o | 4.94o | 30o |
| NMeFOSEo | 13.6o | | 0.94o | ng/Lo | 14.9o | NDo | 91.4o | 70-145o | 2.75o | 30o |
| NEtFOSEo | 13.0o | | 0.97o | ng/Lo | 14.9o | NDo | 87.1o | 70-135o | 10.1o | 30o |
| HFPO-DAo | 3.08o | | 0.16o | ng/Lo | 3.72o | NDo | 82.8o | 70-140o | 5.00o | 30o |
| ADONAo | 3.04o | | 0.11o | ng/Lo | 3.52o | NDo | 86.6o | 65-145o | 5.73o | 30o |
| PFEESAo | 5.42o | | 0.10o | ng/Lo | 6.62o | NDo | 81.8o | 70-140o | 7.46o | 30o |
| PFMPAo | 6.84o | | 0.050o | ng/Lo | 7.44o | NDo | 91.9o | 55-140o | 0.811o | 30o |
| PFMBAo | 6.14o | | 0.084o | ng/Lo | 7.44o | NDo | 82.5o | 60-150o | 0.792o | 30o |
| NFDHAo | 6.06o | | 0.28o | ng/Lo | 7.44o | NDo | 81.5o | 50-150o | 0.118o | 30o |
| 9Cl-PF3ONSo | 2.84o | | 0.19o | ng/Lo | 3.48o | NDo | 81.5o | 70-155o | 3.01o | 30o |
| 11Cl-PF3OUDSo | 2.45o | | 0.19o | ng/Lo | 3.52o | NDo | 69.6o | 55-160o | 0.910o | 30o |
| 3:3FTCAo | 12.2o | | 0.53o | ng/Lo | 14.9o | NDo | 81.8o | 65-130o | 7.17o | 30o |
| 5:3FTCAo | 13.2o | | 0.41o | ng/Lo | 14.9o | NDo | 89.0o | 70-135o | 6.25o | 30o |
| 7:3FTCAo | 13.4o | | 0.51o | ng/Lo | 14.9o | NDo | 90.2o | 50-145o | 7.37o | 30o |
| *Surrogate: 13C4-PFBAo* | *26.2o* | | | *ng/Lo* | *29.8o* | | *88.1o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *13.8o* | | | *ng/Lo* | *14.9o* | | *92.9o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.03o* | | | *ng/Lo* | *7.44o* | | *94.4o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *6.88o* | | | *ng/Lo* | *7.44o* | | *92.4o* | *40-130o* | | |
| *Surrogate: 13C8-PFOAo* | *7.15o* | | | *ng/Lo* | *7.44o* | | *96.1o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *3.64o* | | | *ng/Lo* | *3.72o* | | *97.7o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *3.53o* | | | *ng/Lo* | *3.72o* | | *94.9o* | *40-130o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/01/2024 15:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0268-MSD1)u** | **Source: 24C0110-09u** | | | Prepared: 03/19/24 13:48 Analyzed: 03/21/24 17:01o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *3.39o* | | | *ng/Lo* | *3.72o* | | *91.2o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *2.97o* | | | *ng/Lo* | *3.72o* | | *79.7o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *2.73o* | | | *ng/Lo* | *3.72o* | | *73.5o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.51o* | | | *ng/Lo* | *7.44o* | | *74.1o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *7.36o* | | | *ng/Lo* | *7.44o* | | *98.9o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.32o* | | | *ng/Lo* | *7.44o* | | *98.4o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *7.03o* | | | *ng/Lo* | *7.44o* | | *94.4o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *14.3o* | | | *ng/Lo* | *14.9o* | | *96.2o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *13.2o* | | | *ng/Lo* | *14.9o* | | *88.6o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *15.4o* | | | *ng/Lo* | *14.9o* | | *104o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *25.6o* | | | *ng/Lo* | *29.8o* | | *86.0o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *5.91o* | | | *ng/Lo* | *7.44o* | | *79.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *1.94o* | | | *ng/Lo* | *7.44o* | | *26.1o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *1.49o* | | | *ng/Lo* | *7.44o* | | *20.1o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.2o* | | | *ng/Lo* | *14.9o* | | *88.6o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *13.7o* | | | *ng/Lo* | *14.9o* | | *92.0o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *31.6o* | | | *ng/Lo* | *74.4o* | | *42.5o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *33.1o* | | | *ng/Lo* | *74.4o* | | *44.5o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *28.0o* | | | *ng/Lo* | *29.8o* | | *94.1o* | *40-130o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/01/2024 15:49o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI3o | Manual integration, peaks split o |
| MI4o | Manual integration, peak unsplit o |
| MI5o | Manual integration, whole peak was not integrated o |
| MI6o | Manual integration, wrong peak integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0110** R

Printed: 04/01/2024 3:50 pmi

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

Date Received:i 03/19/2024 09:40 AMi
Date Due:i 04/02/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Jake Henigei

| Analysisa | Commentsa |
|---|---|

**24C0110-01 MW-12-4 [Water] Sampled 3/18/2024 9:00:00AMR**
1633i NASA Listi

**24C0110-02 MW-12-3 [Water] Sampled 3/18/2024 9:30:00AMR**
1633i NASA Listi

**24C0110-03 MW-12-2 [Water] Sampled 3/18/2024 9:50:00AMR**
1633i NASA Listi

**24C0110-04 MW-12-1 [Water] Sampled 3/18/2024 10:20:00AMR**
1633i NASA Listi

**24C0110-05 DUP-4-031824 [Water] Sampled 3/18/2024 10:30:00AMR**
1633i NASA Listi

**24C0110-06 MW-18-4 [Water] Sampled 3/18/2024 11:35:00AMR**
1633i NASA Listi

**24C0110-07 MW-18-3 [Water] Sampled 3/18/2024 11:55:00AMR**
1633i NASA Listi

**24C0110-08 MW-18-2 [Water] Sampled 3/18/2024 12:20:00PMR**
1633i NASA Listi

**24C0110-09 MW-18-1 [Water] Sampled 3/18/2024 1:00:00PMR**
***Sample Comments: MS.MSDR***
1633i NASA Listi

**24C0110-10 SB-2-031824 [Water] Sampled 3/18/2024 1:05:00PMR**
1633i NASA Listi

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0110** R

Printed: 04/01/2024 3:50 pmi

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

| Analysisa | Commentsa |
|---|---|

**24C0110-11 EB-6-031824 [Water] Sampled 3/18/2024 1:10:00PMR**
1633i NASA Listi

**24C0110-12 FB-6-031824 [Water] Sampled 3/18/2024 1:15:00PMR**
1633i NASA Listi

**24C0110C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **1.1°C**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yesi |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yesi |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yesi |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Noi |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yesi |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | Noi |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | Noi |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | Noi |

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

1 of 2

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: 626-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 | Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh2o.net | | Email: david.conner@tideh2o.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Think Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | Analysis Requested/Method Number: PFAS 1633 | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-12-4 | | 03/18/24 | 0900 | | 1 | X | | | X | Laboratory, please |
| MW-12-3 | | | 0930 | | 1 | X | | | X | select 2 SDGs |
| MW-12-2 | | | 0950 | | 1 | X | | | X | for level IV |
| MW-12-1 | | | 1020 | | 1 | X | | | X | Validation |
| DUP-4-031824 | | | 1030 | | 1 | X | | | X | |
| MW-18-4 | | | 1135 | | 1 | X | | | X | |
| MW-18-3 | | | 1155 | | 1 | X | | | X | |
| MW-18-2 | | | 1220 | | 1 | X | | | X | |
| MW-18-1 | | | 1300 | | 3 | X | | | X | MS/MSD |
| EB-2-031824 | | | 1305 | | 1 | X | | | X | |
| EB-6-031824 | | | 1310 | | 1 | X | | | X | |

Shuttle Temperature: IRB: 1.1°C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/18/24 | 1330 | Nicole Ponce | Nicole (Blaine Lab) | 3/19/24 | 1600 | FEDEX |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/20/24 | 940 | |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information

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APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: 626-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 | Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh20.net | | Email: david.conner@tideh20.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Thinh Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Matrix: Sed. | Matrix: Soil | Analysis Requested/Method Number: PFAS1633 | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|
| FB-6-031824 | | 03/18/24 | 1315 | | 1 | X | | | X | Laboratory, please select 2 SPGs for level IV Validation |

Shuttle Temperature: IRB: 1.1°C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/18/24 | 1330 | Nicole Pastic | Nicole Pastic (Battelle Tech) | 3/18/24 | 1600 | FEDEX 7755 8974 99 |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/19/24 | 940 | |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information



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Bürkle
seal-it
2636640
3/16
www.buerkle.de
seal-it 2636640

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

## MW-12-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-01- | File ID:- | S2024-03-21B (12)- |
| Sampled:- | 03/18/24 09:00- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 17:22- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.411 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.24- | 0.059- | 0.73- | J- |
| PFHxA- | 0.11- | 0.050- | 0.37- | J- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | 0.34- | 0.14- | 0.37- | J- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | 0.099- | 0.093- | 0.37- | J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.057- | 0.37- | U- |
| PFHxS- | 0.071- | 0.029- | 0.37- | MI2, J- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.21- | 0.058- | 0.37- | MI1, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | MI4, U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-12-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-01- | File ID:- | S2024-03-21B (12)- |
| Sampled:- | 03/18/24 09:00- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 17:22- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.411 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (12)
Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>49447<br>( 163.0 / 69.0 )<br>1612 | ( 2.83 , 0.75 )<br>( N/A , 0.03 , -0.1) | 343.2<br>88.8 | 0.0326<br>120.0<br>120.7 | 0.1696 | N/A | 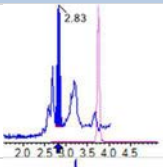 | 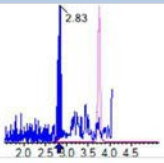 | MI1 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 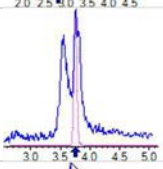 | | |
| PFPeA | ( 263.0 / 219.0 )<br>18139<br>( 263.0 / 69.0 )<br>163 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , 3.0) | 102.5<br>7.3 | 0.0090<br>75.5<br>70.0 | 0.0659 | N/A | 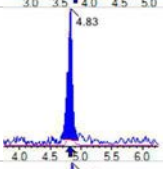 | 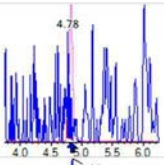 | |
| PFHxA | ( 313.0 / 269.0 )<br>9717<br>( 313.0 / 119.0 )<br>1187 | ( 6.05 , 1.00 )<br>( 0.00 , N/A , -0.2) | 64.0<br>11.9 | 0.1222<br>105.2<br>110.0 | 0.0306 | N/A | 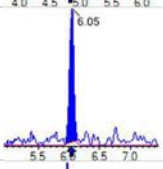 | 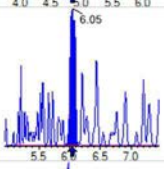 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 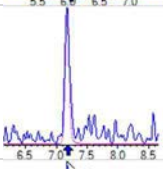 | 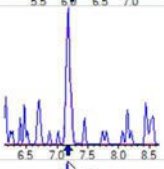 | |
| PFOA | ( 413.0 / 369.0 )<br>58170<br>( 413.0 / 169.0 )<br>19958 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.3) | 73.2<br>108.2 | 0.3431<br>93.9<br>100.1 | 0.0926 | N/A | 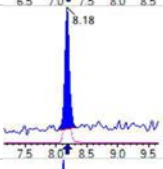 | 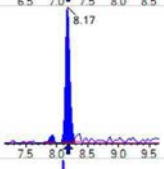 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 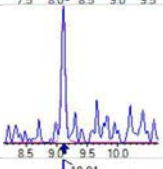 | 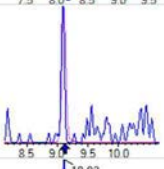 | |
| PFDA | ( 513.0 / 469.0 )<br>9729<br>( 513.0 / 169.0 )<br>1672 | ( 10.01 , 1.00 )<br>( 0.01 , N/A , -0.3) | 96.4<br>49.0 | 0.1718<br>146.6<br>140.4 | 0.0269 | N/A | 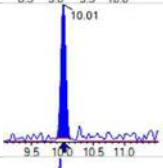 | 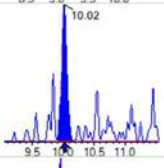 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 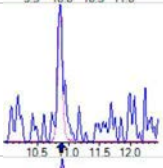 | 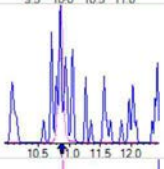 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 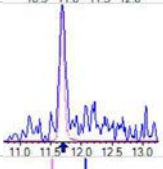 | 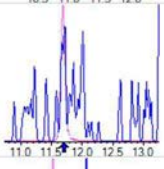 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 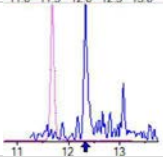 | 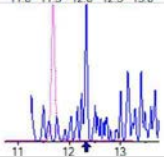 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-01 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 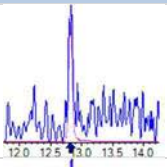 | 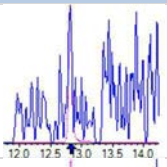 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 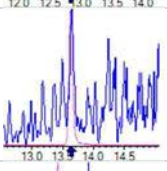 | 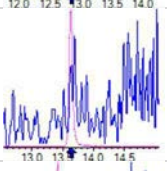 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 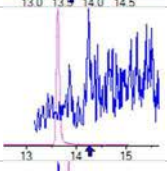 | 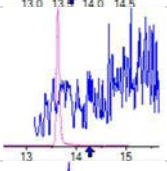 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 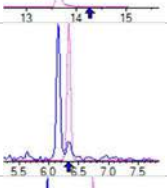 | 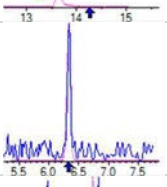 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 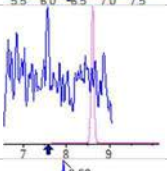 | 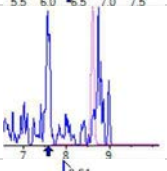 | |
| PFHxS | ( 399.0 / 80.0 )<br>26816<br>( 399.0 / 99.0 )<br>6490 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , -0.1) | 96.9<br>57.0 | 0.2420<br>76.0<br>76.3 | 0.0194 | N/A | 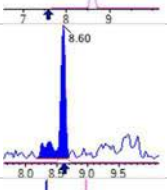 | 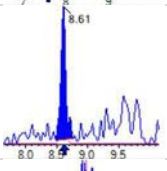 | MI2 DG 2024-03-22 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 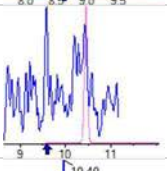 | 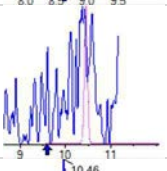 | |
| PFOS | ( 499.0 / 80.0 )<br>58832<br>( 499.0 / 99.0 )<br>12742 | ( 10.40 , 0.99 )<br>( -0.06 , N/A , -3.7) | 93.0<br>129.8 | 0.2166<br>92.7<br>94.5 | 0.0578 | N/A | 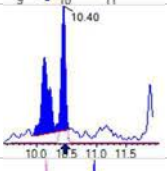 | 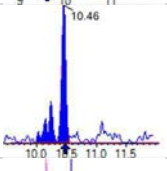 | MI1 DG 2024-03-22 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 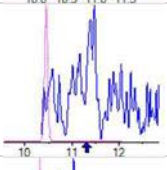 | 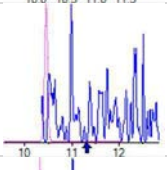 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 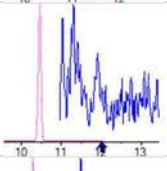 | 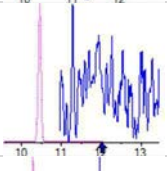 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 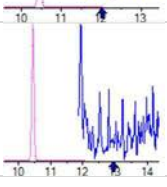 | 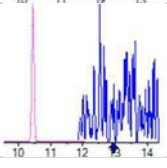 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (12)
Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 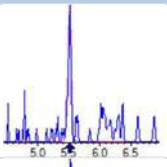 | 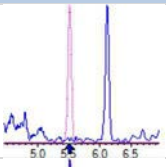 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 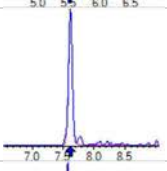 | 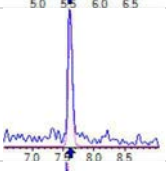 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 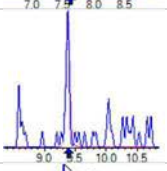 | 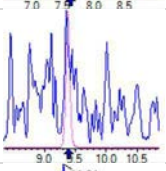 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17857<br>( 627.0 / 81.0 ) 26694 | ( 11.00 , 1.00 ) ( 0.00 , N/A , -0.1) | 218.6<br>73.0 | 1.4949<br>103.8<br>107.8 | 0.0603 | N/A | 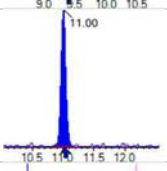 | 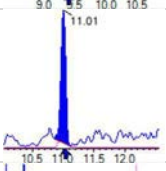 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 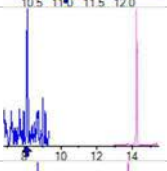 | 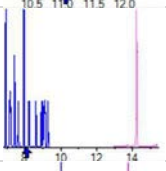 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 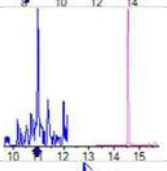 | 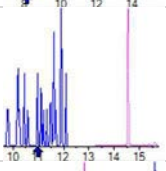 | |
| PFOSA | ( 498.0 / 78.0 ) 7968<br>( 498.0 / 478.0 ) 220 | ( 12.84 , 1.00 ) ( 0.00 , N/A , -0.4) | 64.5<br>12.1 | 0.0276<br>196.5<br>195.5 | 0.0135 | N/A | 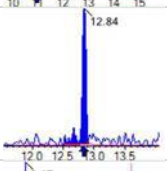 | 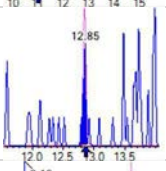 | MI4 ABK 3/21/24 |
| TFSI | ( 279.7 / 147.0 ) 36551<br>( 279.7 / 211.0 ) 3518 | ( 8.17 , 0.64 ) ( N/A , -0.02 , 0.6) | 29.9<br>11.4 | 0.0962<br>114.6<br>114.9 | 0.0236 | N/A | 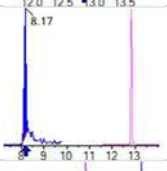 | 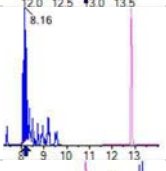 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 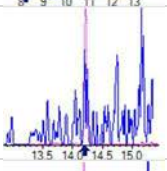 | 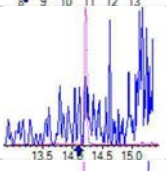 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 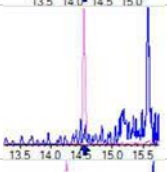 | 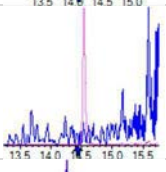 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 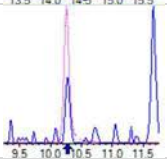 | 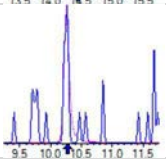 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-01 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 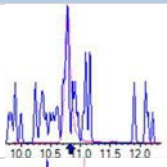 | 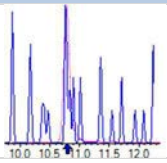 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 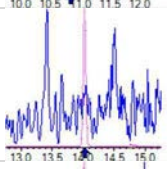 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 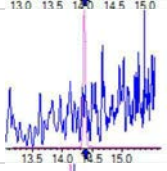 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 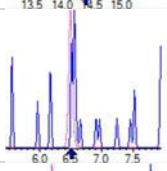 | 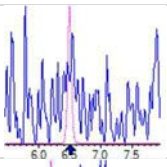 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 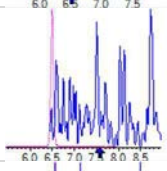 | 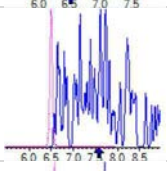 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 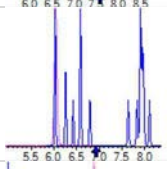 | 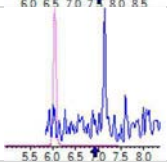 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 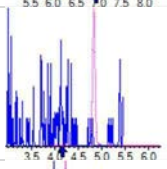 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 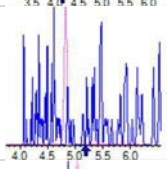 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 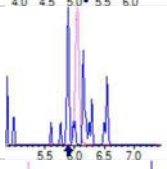 | 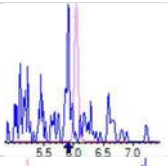 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 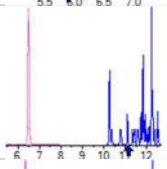 | 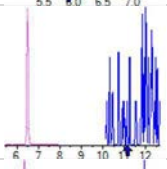 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 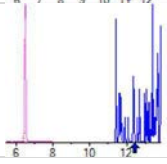 | 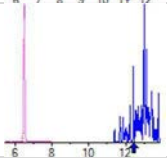 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-01 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 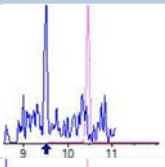 | 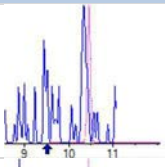 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 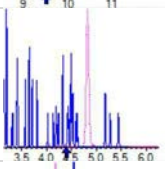 | 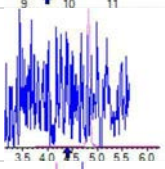 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 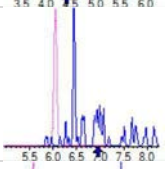 | 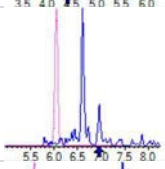 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 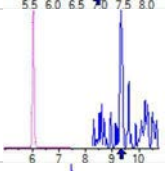 | 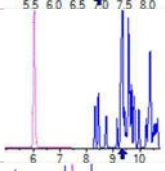 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 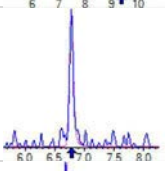 | 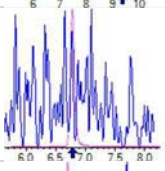 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 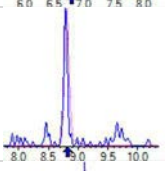 | 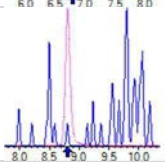 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 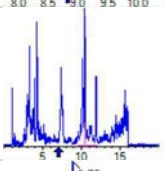 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 336312 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1606.8 | N/A | 1.4105<br>[ 1.0000 ] | 141.1%<br>{ 131.8% } | 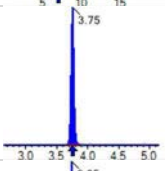 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 149849 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 7452.9 | N/A | 1.1813<br>[ 1.0000 ] | 118.1%<br>{ 122.9% } | 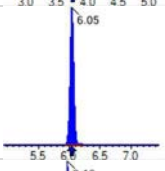 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 473925 | ( 8.18 , N/A )<br>( N/A , -0.02 , N/A ) | 4013.0 | N/A | 1.1988<br>[ 1.0000 ] | 119.9%<br>{ 119.6% } | 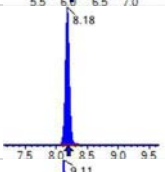 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 349712 | ( 9.11 , N/A )<br>( N/A , -0.03 , N/A ) | 1116.3 | N/A | 1.2296<br>[ 1.0000 ] | 123.0%<br>{ 126.2% } | 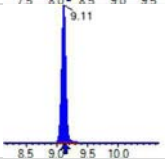 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (12)
Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 328132 | ( 10.01 , N/A ) ( N/A , -0.04 , N/A ) | 3073.9 | N/A | 1.1236 [ 1.0000 ] | 112.4% { 113.7% } | 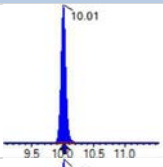 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1118735 | ( 8.61 , N/A ) ( N/A , -0.03 , N/A ) | 5297.0 | N/A | 1.1788 [ 1.0000 ] | 117.9% { 118.6% } | 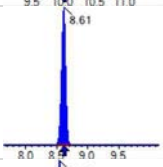 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 930777 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 1319.6 | N/A | 1.2221 [ 1.0000 ] | 122.2% { 122.4% } | 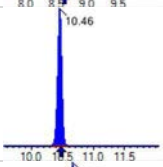 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2473020 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 38878.0 | N/A | 6.4368 [ 8.0000 ] | 80.5% { 113.3% } | 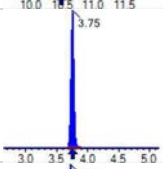 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1089341 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5930.6 | N/A | 3.8961 [ 4.0000 ] | 97.4% { 120.8% } | 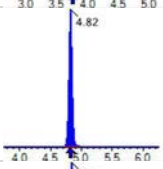 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 661739 | ( 6.04 , N/A ) ( N/A , -0.01 , N/A ) | 8948.2 | N/A | 1.9355 [ 2.0000 ] | 96.8% { 115.4% } | 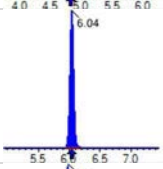 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 721363 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 4747.8 | N/A | 1.8967 [ 2.0000 ] | 94.8% { 117.2% } | 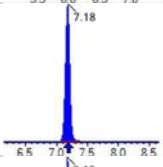 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1019137 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 2631.3 | N/A | 2.0070 [ 2.0000 ] | 100.3% { 126.5% } | 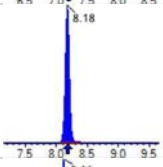 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 315815 | ( 9.11 , N/A ) ( N/A , -0.03 , N/A ) | 2003.7 | N/A | 0.9210 [ 1.0000 ] | 92.1% { 119.7% } | 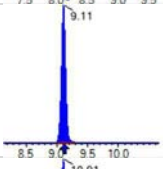 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 353564 | ( 10.01 , N/A ) ( N/A , -0.04 , N/A ) | 1462.2 | N/A | 0.9615 [ 1.0000 ] | 96.1% { 115.2% } | 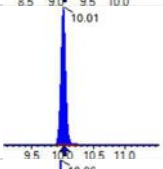 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 362538 | ( 10.86 , N/A ) ( N/A , -0.04 , N/A ) | 1166.0 | N/A | 0.8380 [ 1.0000 ] | 83.8% { 98.4% } | 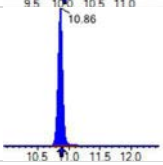 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-01 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 364444 | ( 11.69 , N/A ) ( N/A , -0.04 , N/A ) | 1533.3 | N/A | 0.8272 [ 1.0000 ] | 82.7% { 94.3% } | 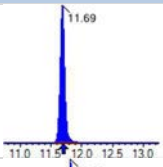 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 292294 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1444.5 | N/A | 0.7790 [ 1.0000 ] | 77.9% { 93.8% } | 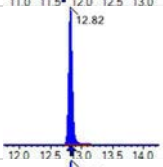 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 497296 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2599.3 | N/A | 1.5525 [ 2.0000 ] | 77.6% { 102.1% } | 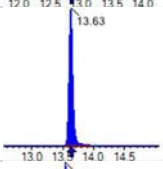 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1973957 | ( 6.34 , N/A ) ( N/A , -0.01 , N/A ) | 1127.8 | N/A | 1.9529 [ 2.0000 ] | 97.6% { 122.1% } | 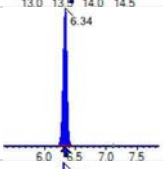 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1556964 | ( 8.61 , N/A ) ( N/A , -0.03 , N/A ) | 3678.2 | N/A | 1.9298 [ 2.0000 ] | 96.5% { 118.6% } | 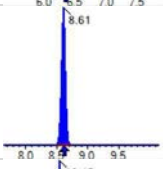 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1763972 | ( 10.45 , N/A ) ( N/A , -0.04 , N/A ) | 1320.2 | N/A | 1.7577 [ 2.0000 ] | 87.9% { 115.3% } | 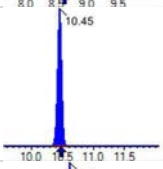 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 813031 | ( 5.51 , N/A ) ( N/A , -0.01 , N/A ) | 85.8 | N/A | 4.6621 [ 4.0000 ] | 116.6% { 131.3% } | 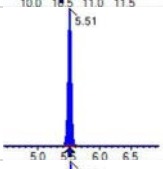 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2173238 | ( 7.62 , N/A ) ( N/A , -0.02 , N/A ) | 3782.3 | N/A | 4.1640 [ 4.0000 ] | 104.1% { 122.9% } | 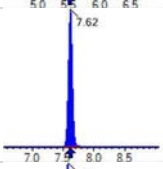 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1759652 | ( 9.38 , N/A ) ( N/A , -0.03 , N/A ) | 1704.8 | N/A | 4.2989 [ 4.0000 ] | 107.5% { 127.1% } | 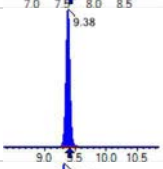 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3072051 | ( 11.00 , N/A ) ( N/A , -0.05 , N/A ) | 1487.8 | N/A | 7.1812 [ 8.0000 ] | 89.8% { 114.1% } | 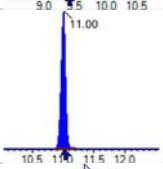 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1177332 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1744.1 | N/A | 1.3238 [ 2.0000 ] | 66.2% { 86.6% } | 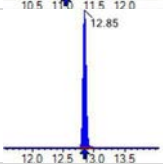 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-01 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 80400 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 775.6 | N/A | 0.4262 [ 2.0000 ] | 21.3% { 29.3% } | 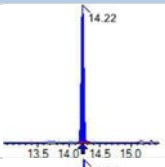 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 81895 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 909.3 | N/A | 0.4048 [ 2.0000 ] | 20.2% { 27.2% } | 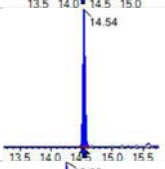 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 886567 | ( 10.26 , N/A ) ( N/A , -0.04 , N/A ) | 2372.8 | N/A | 3.4333 [ 4.0000 ] | 85.8% { 99.8% } | 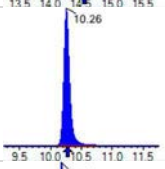 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 830745 | ( 10.78 , N/A ) ( N/A , -0.04 , N/A ) | 1929.3 | N/A | 3.5298 [ 4.0000 ] | 88.2% { 100.9% } | 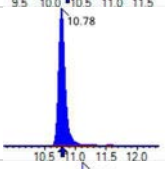 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 734393 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1550.5 | N/A | 8.6636 [ 20.0000 ] | 43.3% { 60.6% } | 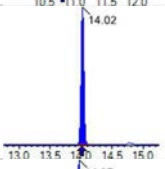 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 763432 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3485.5 | N/A | 8.8733 [ 20.0000 ] | 44.4% { 60.5% } | 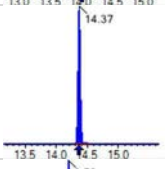 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1159141 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2060.8 | N/A | 7.4425 [ 8.0000 ] | 93.0% { 116.7% } | 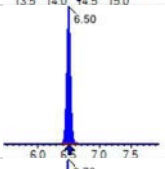 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 876965 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1352.3 | N/A | 2.4651 [ 2.0000 ] | 123.3% { 136.8% } | 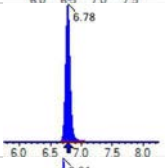 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 672090 | ( 8.81 , N/A ) ( N/A , -0.03 , N/A ) | 842.6 | N/A | 2.0752 [ 2.0000 ] | 103.8% { 114.2% } | 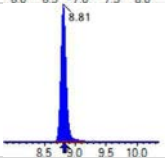 | | |

# ANALYSIS DATA SHEETL

MW-12-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-02- | File ID:- | S2024-03-21B (13)- |
| Sampled:- | 03/18/24 09:30- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 17:42- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 557.673 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 1.5- | 0.19- | 1.4- | |
| PFPeA- | 0.58- | 0.058- | 0.72- | J- |
| PFHxA- | 0.37- | 0.049- | 0.36- | |
| PFHpA- | 0.26- | 0.037- | 0.36- | J- |
| PFOA- | 0.86- | 0.14- | 0.36- | MI4- |
| PFNA- | ND- | 0.073- | 0.36- | U- |
| PFDA- | ND- | 0.091- | 0.36- | U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 0.20- | 0.033- | 0.36- | MI6, J- |
| PFPeS- | 0.068- | 0.056- | 0.36- | J- |
| PFHxS- | 0.32- | 0.028- | 0.36- | MI4, J- |
| PFHpS- | ND- | 0.046- | 0.36- | U- |
| PFOS- | 0.85- | 0.057- | 0.36- | IR1- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.093- | 0.36- | U- |
| NMeFOSA- | ND- | 0.42- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.095- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-12-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-02- | File ID:- | S2024-03-21B (13)- |
| Sampled:- | 03/18/24 09:30- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 17:42- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 557.673 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.94- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.098- | 0.72- | U- |
| PFMPA- | ND- | 0.048- | 0.72- | U- |
| PFMBA- | ND- | 0.081- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.18- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-02 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 45402<br>( 163.0 / 69.0 ) 1521 | ( 2.90 , 0.77 ) ( N/A , 0.11 , 0.2) | 405.1<br>75.5 | 0.0335<br>123.3<br>124.0 | 0.1487 | N/A | 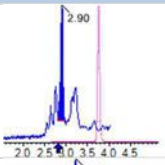 | 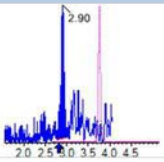 | MI6 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 ) 132834 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 108.8 | N/A<br>0.0<br>0.0 | 0.4117 | N/A | 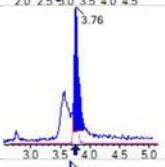 | | |
| PFPeA | ( 263.0 / 219.0 ) 46438<br>( 263.0 / 69.0 ) 531 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.9) | 272.7<br>17.4 | 0.0114<br>95.7<br>88.8 | 0.1608 | N/A | 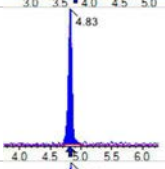 | 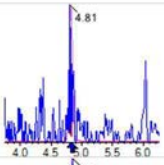 | |
| PFHxA | ( 313.0 / 269.0 ) 34232<br>( 313.0 / 119.0 ) 4150 | ( 6.03 , 1.00 ) ( 0.00 , N/A , -0.6) | 227.3<br>78.5 | 0.1212<br>104.4<br>109.2 | 0.1027 | N/A | 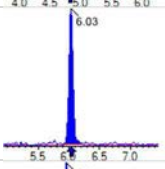 | 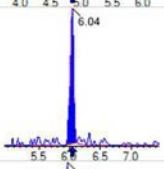 | |
| PFHpA | ( 363.0 / 319.0 ) 26474<br>( 363.0 / 169.0 ) 8075 | ( 7.16 , 1.00 ) ( 0.00 , N/A , -0.1) | 152.4<br>151.4 | 0.3050<br>100.6<br>104.0 | 0.0717 | N/A | 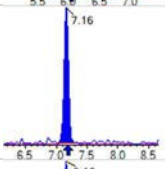 | 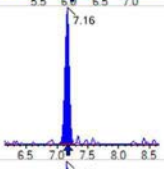 | |
| PFOA | ( 413.0 / 369.0 ) 134111<br>( 413.0 / 169.0 ) 50392 | ( 8.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 144.5<br>196.4 | 0.3757<br>102.8<br>109.6 | 0.2398 | N/A | 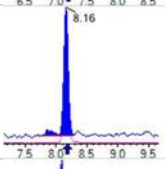 | 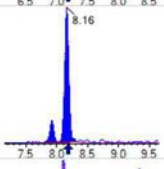 | MI4 ABK 3/21/24 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 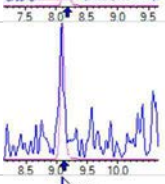 | 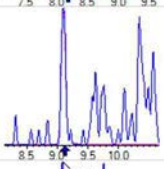 | |
| PFDA | ( 513.0 / 469.0 ) 8081<br>( 513.0 / 169.0 ) 1118 | ( 10.00 , 1.00 ) ( 0.00 , N/A , -0.1) | 78.4<br>18.3 | 0.1384<br>118.1<br>113.1 | 0.0206 | N/A | 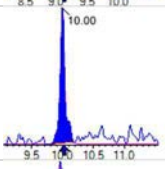 | 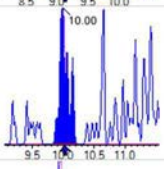 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 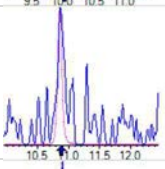 | 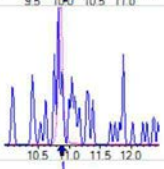 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 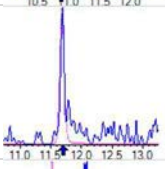 | 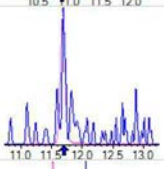 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 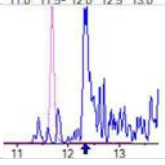 | 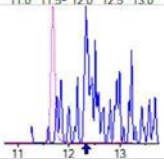 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-02 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 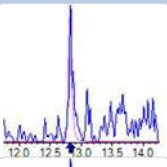 | 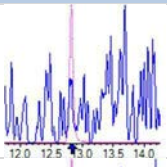 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 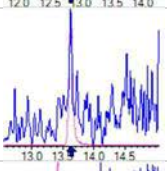 | 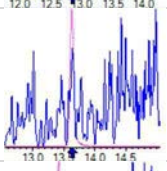 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 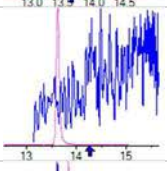 | 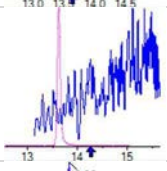 | |
| PFBS | ( 299.0 / 80.0 )<br>30914<br>( 299.0 / 99.0 )<br>24214 | ( 6.32 , 1.00 )<br>( -0.01 , N/A , -0.1) | 101.7<br>190.5 | 0.7833<br>110.8<br>103.8 | 0.0568 | N/A | 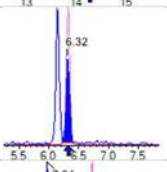 | 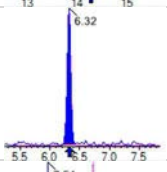 | MI6 ABK 3/21/24 |
| PFPeS | ( 349.0 / 80.0 )<br>24033<br>( 349.0 / 99.0 )<br>8458 | ( 7.54 , 0.88 )<br>( N/A , -0.04 , 0.3) | 61.9<br>77.0 | 0.3519<br>97.9<br>101.0 | 0.0189 | N/A | 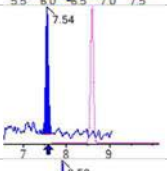 | 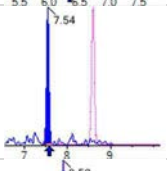 | |
| PFHxS | ( 399.0 / 80.0 )<br>129941<br>( 399.0 / 99.0 )<br>38283 | ( 8.59 , 1.00 )<br>( 0.00 , N/A , 0.3) | 310.4<br>275.1 | 0.2946<br>92.5<br>92.9 | 0.0881 | N/A | 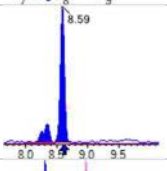 | 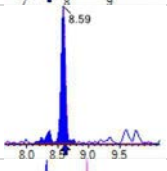 | MI4 ABK 3/21/24 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 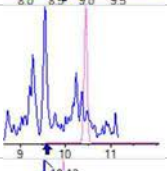 | 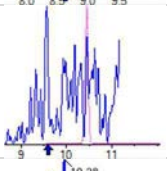 | |
| PFOS | ( 499.0 / 80.0 )<br>258956<br>( 499.0 / 99.0 )<br>27904 | ( 10.13 , 0.97 )<br>( -0.32 , N/A , -9.2) | 201.2<br>108.6 | 0.1078<br>46.1<br>47.0 | 0.2367 | N/A | 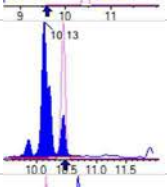 | 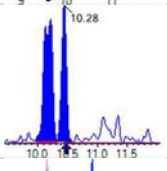 | IR1,MI3 ABK 3/21/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 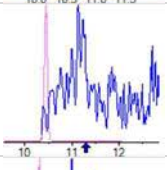 | 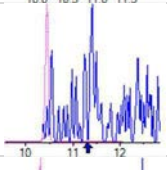 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 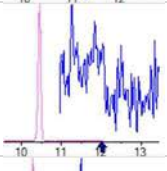 | 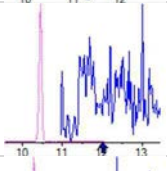 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 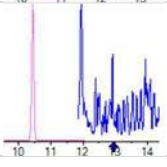 | 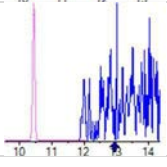 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-02 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 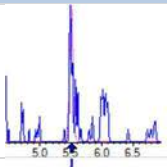 | 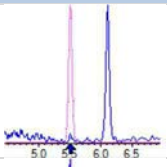 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 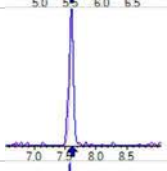 | 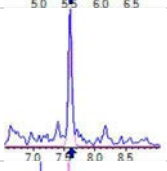 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 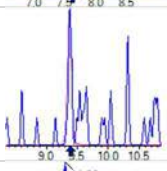 | 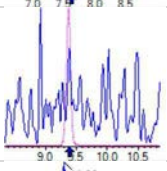 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17927<br>( 627.0 / 81.0 )<br>26494 | ( 11.00 , 1.00 )<br>( 0.00 , N/A , 0.0) | 302.9<br>64.9 | 1.4779<br>102.7<br>106.6 | 0.0522 | N/A | 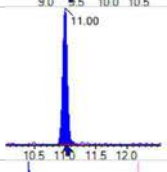 | 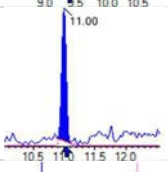 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 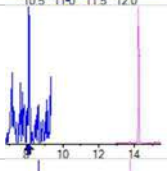 | 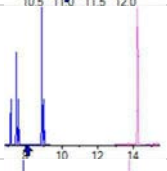 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 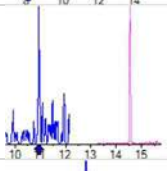 | 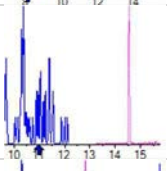 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 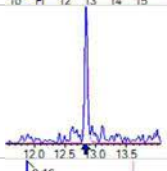 | 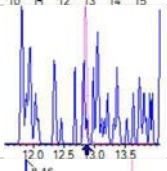 | |
| TFSI | ( 279.7 / 147.0 )<br>41836<br>( 279.7 / 211.0 )<br>3952 | ( 8.16 , 0.63 )<br>( N/A , -0.04 , 0.0) | 28.4<br>12.1 | 0.0945<br>112.5<br>112.8 | 0.0213 | N/A | 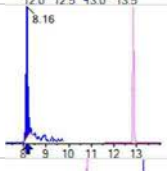 | 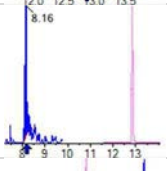 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 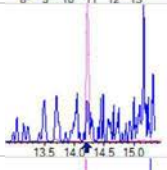 | 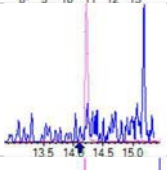 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 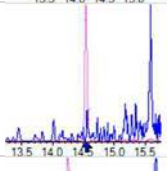 | 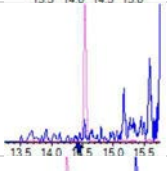 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 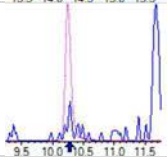 | 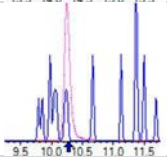 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (13)
Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 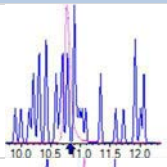 | 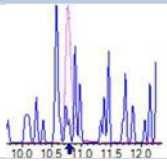 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 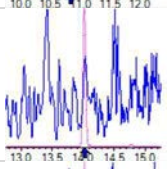 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 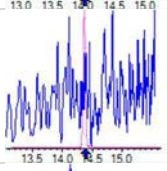 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 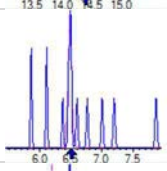 | 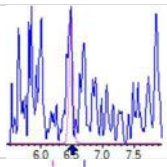 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 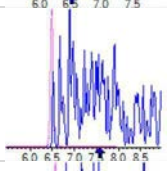 | 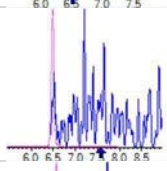 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 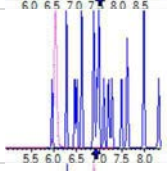 | 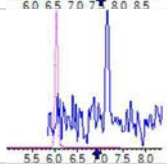 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 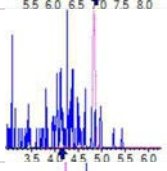 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 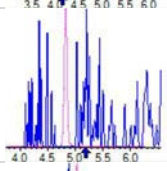 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 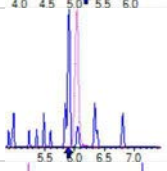 | 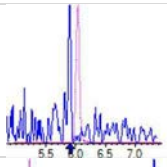 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 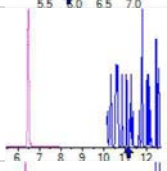 | 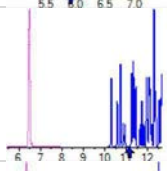 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 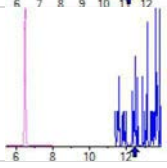 | 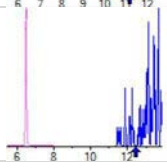 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-02 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 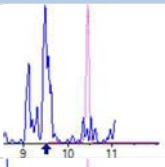 | 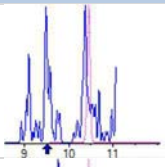 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 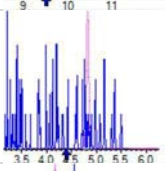 | 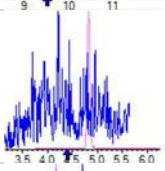 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 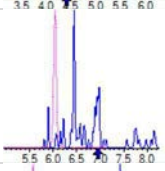 | 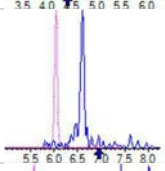 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 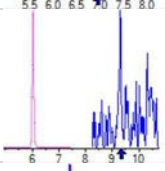 | 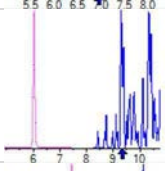 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 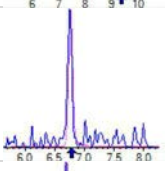 | 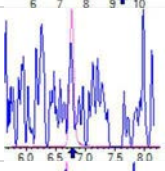 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 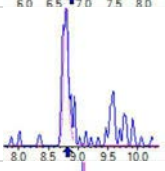 | 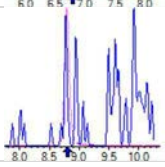 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 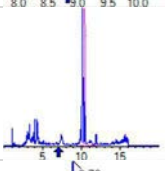 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 318611 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 1404.1 | N/A | 1.3363<br>[ 1.0000 ] | 133.6%<br>{ 124.9% } | 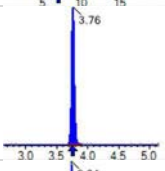 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 146357 | ( 6.04 , N/A )<br>( N/A , -0.02 , N/A ) | 25621.1 | N/A | 1.1537<br>[ 1.0000 ] | 115.4%<br>{ 120.0% } | 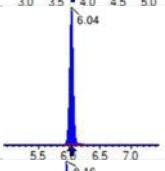 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 439681 | ( 8.16 , N/A )<br>( N/A , -0.04 , N/A ) | 3017.5 | N/A | 1.1122<br>[ 1.0000 ] | 111.2%<br>{ 111.0% } | 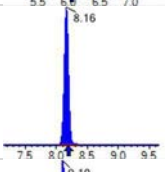 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 330632 | ( 9.10 , N/A )<br>( N/A , -0.04 , N/A ) | 1121.4 | N/A | 1.1625<br>[ 1.0000 ] | 116.3%<br>{ 119.3% } | 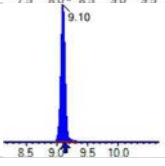 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (13)
Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 318205 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 4516.1 | N/A | 1.0896 [ 1.0000 ] | 109.0% { 110.3% } | 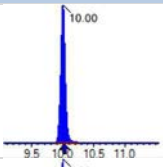 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1048331 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 4650.9 | N/A | 1.1046 [ 1.0000 ] | 110.5% { 111.1% } | 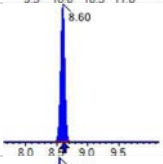 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 870575 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1368.9 | N/A | 1.1430 [ 1.0000 ] | 114.3% { 114.4% } | 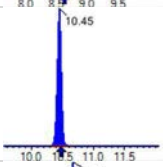 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2589665 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 48116.7 | N/A | 7.1149 [ 8.0000 ] | 88.9% { 118.6% } | 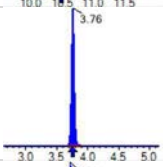 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1143569 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5315.6 | N/A | 4.1877 [ 4.0000 ] | 104.7% { 126.8% } | 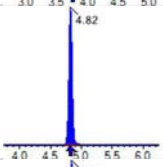 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 694042 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 8225.4 | N/A | 2.0784 [ 2.0000 ] | 103.9% { 121.0% } | 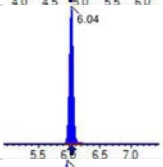 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 753047 | ( 7.16 , N/A ) ( N/A , -0.03 , N/A ) | 4832.6 | N/A | 2.0272 [ 2.0000 ] | 101.4% { 122.3% } | 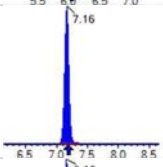 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1044270 | ( 8.16 , N/A ) ( N/A , -0.04 , N/A ) | 2303.5 | N/A | 2.2166 [ 2.0000 ] | 110.8% { 129.6% } | 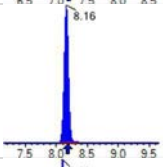 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 322229 | ( 9.10 , N/A ) ( N/A , -0.04 , N/A ) | 2412.0 | N/A | 0.9940 [ 1.0000 ] | 99.4% { 122.1% } | 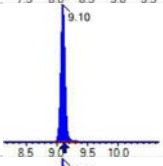 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 384775 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 1534.9 | N/A | 1.0790 [ 1.0000 ] | 107.9% { 125.4% } | 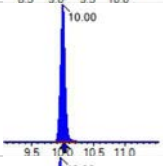 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 405822 | ( 10.86 , N/A ) ( N/A , -0.04 , N/A ) | 1240.7 | N/A | 0.9673 [ 1.0000 ] | 96.7% { 110.1% } | 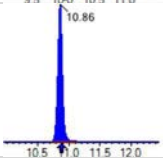 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-02 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388857 | ( 11.68 , N/A ) ( N/A , -0.04 , N/A ) | 1416.5 | N/A | 0.9101 [ 1.0000 ] | 91.0% { 100.6% } | 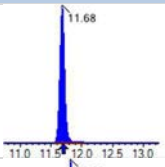 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 298430 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1382.3 | N/A | 0.8202 [ 1.0000 ] | 82.0% { 95.7% } | 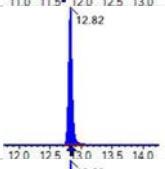 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 491943 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2340.7 | N/A | 1.5837 [ 2.0000 ] | 79.2% { 101.0% } | 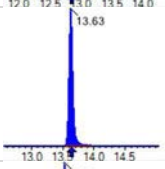 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2095189 | ( 6.32 , N/A ) ( N/A , -0.02 , N/A ) | 1580.1 | N/A | 2.2121 [ 2.0000 ] | 110.6% { 129.6% } | 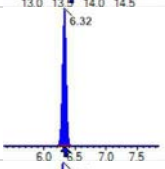 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1659793 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 3615.5 | N/A | 2.1954 [ 2.0000 ] | 109.8% { 126.4% } | 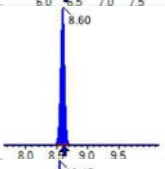 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1894646 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1375.1 | N/A | 2.0184 [ 2.0000 ] | 100.9% { 123.8% } | 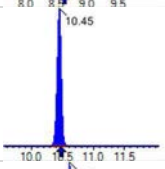 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 798339 | ( 5.51 , N/A ) ( N/A , -0.01 , N/A ) | 89.1 | N/A | 4.8852 [ 4.0000 ] | 122.1% { 128.9% } | 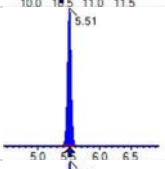 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2252062 | ( 7.61 , N/A ) ( N/A , -0.03 , N/A ) | 3122.8 | N/A | 4.6048 [ 4.0000 ] | 115.1% { 127.3% } | 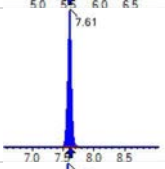 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1806601 | ( 9.38 , N/A ) ( N/A , -0.04 , N/A ) | 1569.3 | N/A | 4.7100 [ 4.0000 ] | 117.8% { 130.5% } | 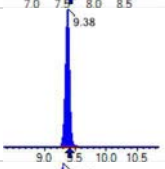 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3566056 | ( 11.00 , N/A ) ( N/A , -0.05 , N/A ) | 1631.4 | N/A | 8.8959 [ 8.0000 ] | 111.2% { 132.4% } | 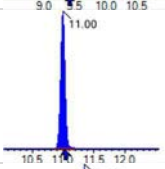 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1493424 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2444.1 | N/A | 1.7953 [ 2.0000 ] | 89.8% { 109.9% } | 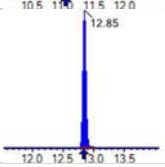 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-02 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 115668 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 721.2 | N/A | 0.6556 [ 2.0000 ] | 32.8% { 42.2% } | 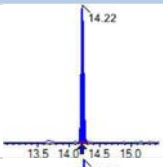 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 105707 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 780.5 | N/A | 0.5587 [ 2.0000 ] | 27.9% { 35.1% } | 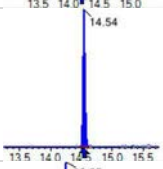 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 926080 | ( 10.25 , N/A ) ( N/A , -0.05 , N/A ) | 1943.8 | N/A | 3.8343 [ 4.0000 ] | 95.9% { 104.3% } | 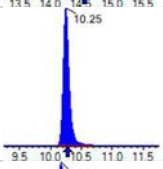 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 858056 | ( 10.77 , N/A ) ( N/A , -0.05 , N/A ) | 1936.2 | N/A | 3.8980 [ 4.0000 ] | 97.4% { 104.2% } | 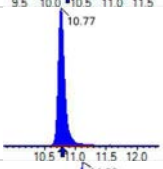 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1053793 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2129.2 | N/A | 13.2912 [ 20.0000 ] | 66.5% { 87.0% } | 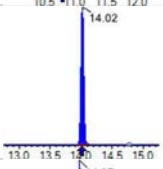 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1073800 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4444.0 | N/A | 13.3437 [ 20.0000 ] | 66.7% { 85.1% } | 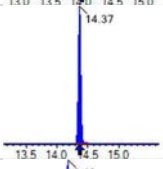 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1238150 | ( 6.49 , N/A ) ( N/A , -0.03 , N/A ) | 2627.2 | N/A | 8.1395 [ 8.0000 ] | 101.7% { 124.7% } | 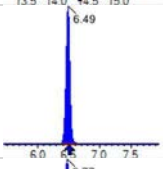 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 872167 | ( 6.77 , N/A ) ( N/A , -0.03 , N/A ) | 1842.8 | N/A | 2.5281 [ 2.0000 ] | 126.4% { 136.1% } | 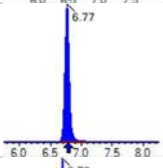 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 683852 | ( 8.79 , N/A ) ( N/A , -0.04 , N/A ) | 777.0 | N/A | 2.1774 [ 2.0000 ] | 108.9% { 116.2% } | 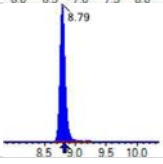 | | |

# ANALYSIS DATA SHEETL

## MW-12-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-03- | File ID:- | S2024-03-21B (14)- |
| Sampled:- | 03/18/24 09:50- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 18:03- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.633 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 7.9- | 0.19- | 1.5- | |
| PFPeA- | 8.5- | 0.060- | 0.73- | |
| PFHxA- | 8.0- | 0.050- | 0.37- | |
| PFHpA- | 3.8- | 0.038- | 0.37- | |
| PFOA- | 7.1- | 0.14- | 0.37- | MI4- |
| PFNA- | 0.56- | 0.075- | 0.37- | |
| PFDA- | ND- | 0.093- | 0.37- | MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 6.8- | 0.034- | 0.37- | |
| PFPeS- | 0.16- | 0.057- | 0.37- | J- |
| PFHxS- | 0.64- | 0.029- | 0.37- | |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 1.4- | 0.058- | 0.37- | MI3- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-12-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-03- | File ID:- | S2024-03-21B (14)- |
| Sampled:- | 03/18/24 09:50- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 18:03- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.633 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (14)
Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 180756<br>( 163.0 / 69.0 ) 5400 | ( 2.87 , 0.77 )<br>( N/A , 0.08 , -0.2) | 906.0<br>238.8 | 0.0299<br>110.0<br>110.6 | 0.6077 | N/A | 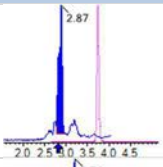 | 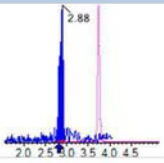 | MI3 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 ) 674010 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 616.2 | N/A<br>0.0<br>0.0 | 2.1435 | N/A | 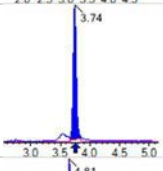 | | |
| PFPeA | ( 263.0 / 219.0 ) 632215<br>( 263.0 / 69.0 ) 7469 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2401.8<br>137.7 | 0.0118<br>98.9<br>91.8 | 2.3098 | N/A | 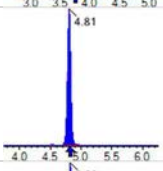 | 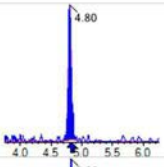 | |
| PFHxA | ( 313.0 / 269.0 ) 682204<br>( 313.0 / 119.0 ) 75836 | ( 6.02 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1605.9<br>841.2 | 0.1112<br>95.7<br>100.1 | 2.1714 | N/A | 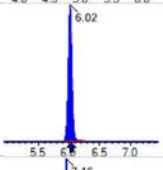 | 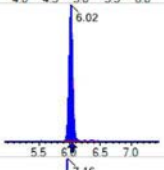 | |
| PFHpA | ( 363.0 / 319.0 ) 364449<br>( 363.0 / 169.0 ) 114302 | ( 7.16 , 1.00 )<br>( 0.00 , N/A , -0.1) | 962.7<br>743.2 | 0.3136<br>103.5<br>107.0 | 1.0424 | N/A | 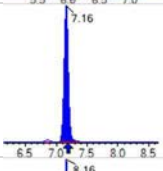 | 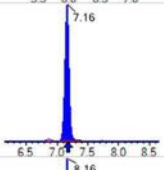 | |
| PFOA | ( 413.0 / 369.0 ) 921564<br>( 413.0 / 169.0 ) 339447 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.0) | 496.3<br>576.2 | 0.3683<br>100.8<br>107.4 | 1.9384 | N/A | 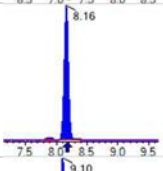 | 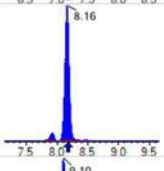 | MI4 ABK 3/21/24 |
| PFNA | ( 463.0 / 419.0 ) 47419<br>( 463.0 / 169.0 ) 13495 | ( 9.10 , 1.00 )<br>( 0.00 , N/A , 0.1) | 230.2<br>159.5 | 0.2846<br>111.5<br>107.0 | 0.1539 | N/A | 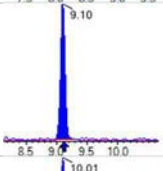 | 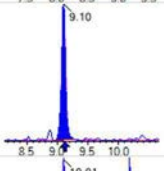 | |
| PFDA | ( 513.0 / 469.0 ) 6290<br>( 513.0 / 169.0 ) 725 | ( 10.01 , 1.00 )<br>( 0.01 , N/A , 0.1) | 65.2<br>47.3 | 0.1153<br>98.4<br>94.2 | 0.0174 | N/A | 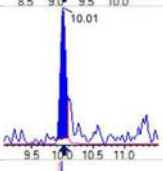 | 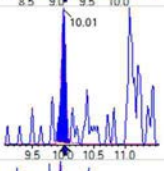 | MI2 DG 2024-03-22 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 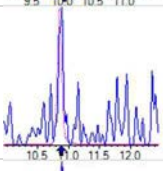 | 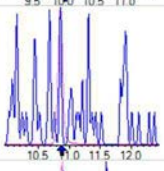 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 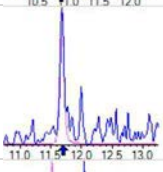 | 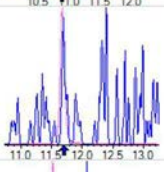 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 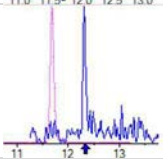 | 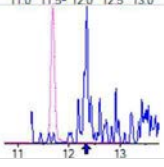 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-03 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 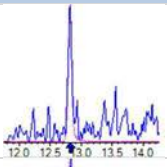 | 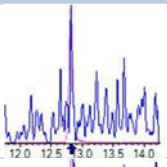 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 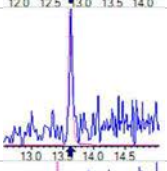 | 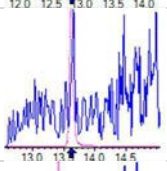 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 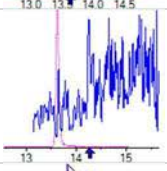 | 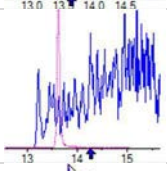 | |
| PFBS | ( 299.0 / 80.0 )<br>927804<br>( 299.0 / 99.0 )<br>665835 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1508.8<br>1827.5 | 0.7176<br>101.5<br>95.1 | 1.8430 | N/A | 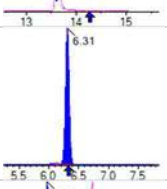 | 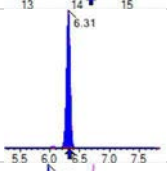 | |
| PFPeS | ( 349.0 / 80.0 )<br>50592<br>( 349.0 / 99.0 )<br>18616 | ( 7.54 , 0.88 )<br>( N/A , -0.04 , 0.0) | 108.6<br>111.4 | 0.3680<br>102.3<br>105.6 | 0.0427 | N/A | 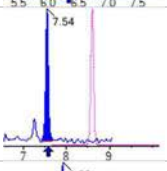 | 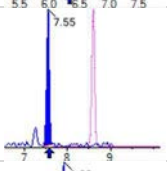 | |
| PFHxS | ( 399.0 / 80.0 )<br>240683<br>( 399.0 / 99.0 )<br>74639 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , 0.0) | 413.1<br>528.4 | 0.3101<br>97.4<br>97.8 | 0.1751 | N/A | 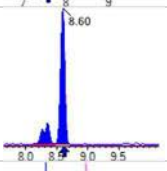 | 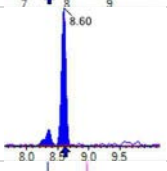 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 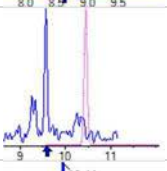 | 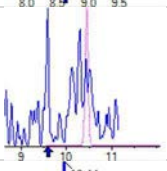 | |
| PFOS | ( 499.0 / 80.0 )<br>386235<br>( 499.0 / 99.0 )<br>81651 | ( 10.44 , 1.00 )<br>( 0.00 , N/A , 0.0) | 372.5<br>777.6 | 0.2114<br>90.4<br>92.2 | 0.3810 | N/A | 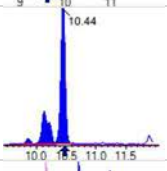 | 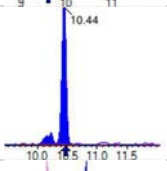 | MI3 ABK<br>3/21/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 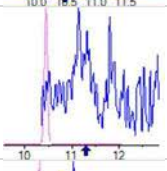 | 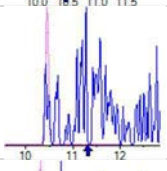 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 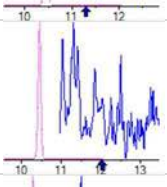 | 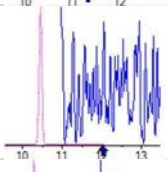 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 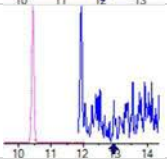 | 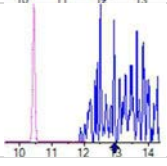 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (14)
Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 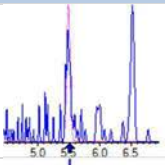 | 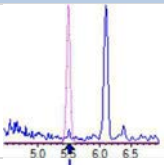 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 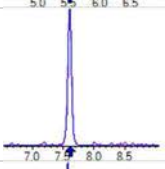 | 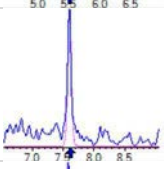 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 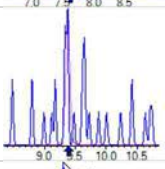 | 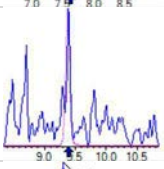 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19358<br>( 627.0 / 81.0 )<br>29315 | ( 11.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 261.9<br>84.6 | 1.5144<br>105.2<br>109.2 | 0.0669 | N/A | 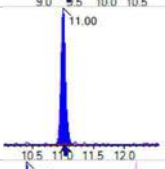 | 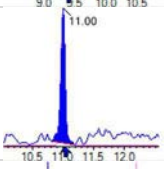 | |
| PFBSA | ( 297.9 / 78.0 )<br>45446<br>( 297.9 / 278.0 )<br>42 | ( 8.12 , 0.57 )<br>( N/A , -0.02 , 0.8) | 399.1<br>3.9 | 0.0009<br>67.2<br>69.3 | 0.1663 | N/A | 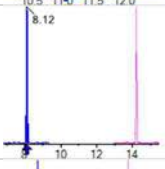 | 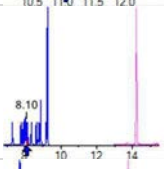 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 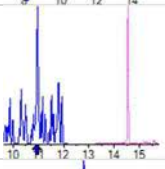 | 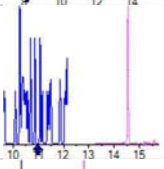 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 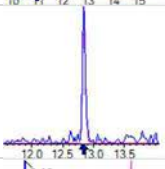 | 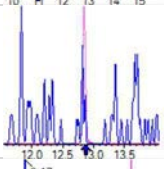 | |
| TFSI | ( 279.7 / 147.0 )<br>86893<br>( 279.7 / 211.0 )<br>7877 | ( 8.16 , 0.64 )<br>( N/A , -0.03 , -0.3) | 41.7<br>16.0 | 0.0906<br>107.9<br>108.2 | 0.0495 | N/A | 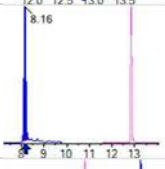 | 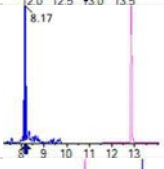 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 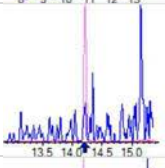 | 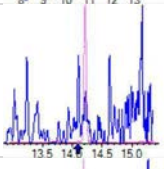 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 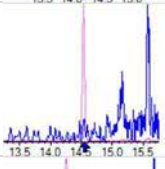 | 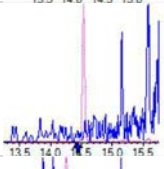 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 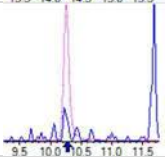 | 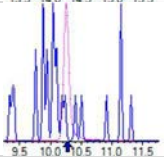 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (14)
Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 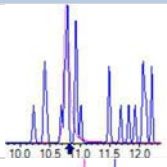 | 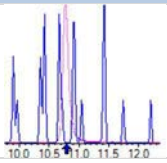 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 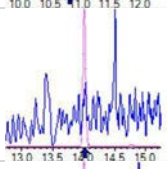 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 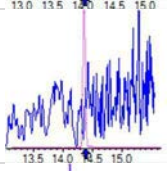 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 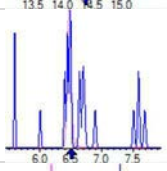 | 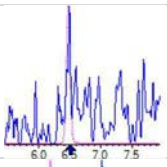 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 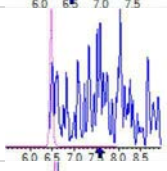 | 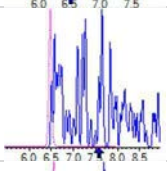 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 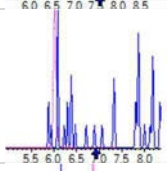 | 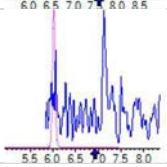 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 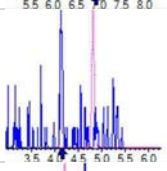 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 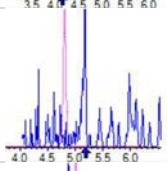 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 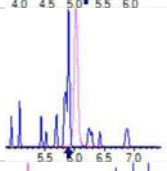 | 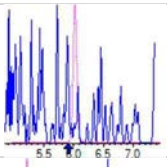 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 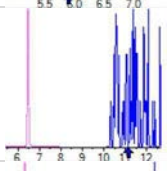 | 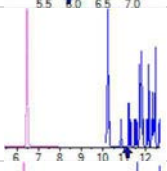 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 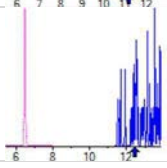 | 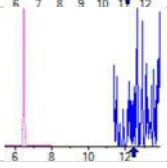 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-03 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 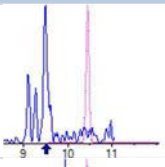 | 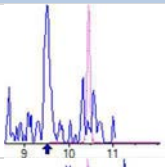 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 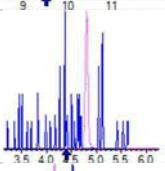 | 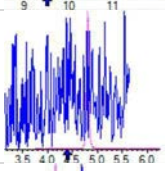 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 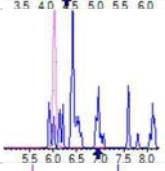 | 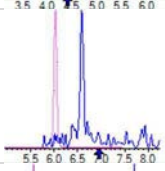 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 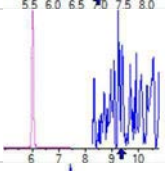 | 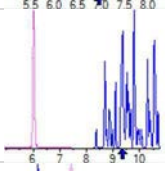 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 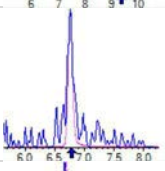 | 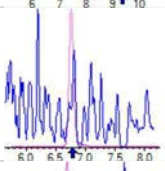 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 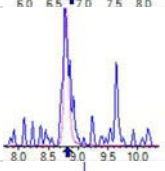 | 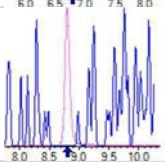 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 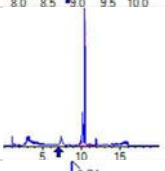 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 305659 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1549.2 | N/A | 1.2819<br>[ 1.0000 ] | 128.2%<br>{ 119.8% } | 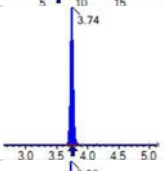 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 141102 | ( 6.02 , N/A )<br>( N/A , -0.03 , N/A ) | 5751.3 | N/A | 1.1123<br>[ 1.0000 ] | 111.2%<br>{ 115.7% } | 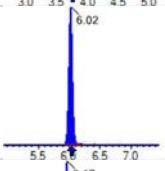 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 460532 | ( 8.17 , N/A )<br>( N/A , -0.03 , N/A ) | 4457.4 | N/A | 1.1650<br>[ 1.0000 ] | 116.5%<br>{ 116.2% } | 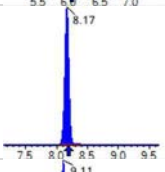 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 300257 | ( 9.11 , N/A )<br>( N/A , -0.04 , N/A ) | 1220.5 | N/A | 1.0557<br>[ 1.0000 ] | 105.6%<br>{ 108.3% } | 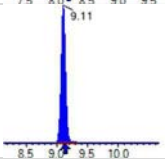 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (14)
Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 300575 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 3230.8 | N/A | 1.0293 [ 1.0000 ] | 102.9% { 104.2% } | 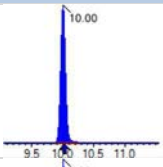 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1034023 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 5020.6 | N/A | 1.0896 [ 1.0000 ] | 109.0% { 109.6% } | 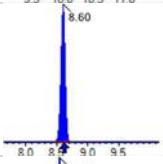 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 831766 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1280.6 | N/A | 1.0921 [ 1.0000 ] | 109.2% { 109.3% } | 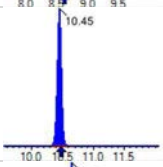 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2523574 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 34743.3 | N/A | 7.2271 [ 8.0000 ] | 90.3% { 115.6% } | 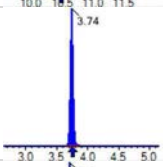 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1083738 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 6331.6 | N/A | 4.1164 [ 4.0000 ] | 102.9% { 120.2% } | 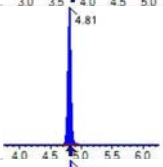 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 654010 | ( 6.02 , N/A ) ( N/A , -0.03 , N/A ) | 5679.8 | N/A | 2.0314 [ 2.0000 ] | 101.6% { 114.0% } | 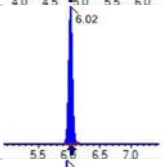 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 712565 | ( 7.16 , N/A ) ( N/A , -0.04 , N/A ) | 4656.0 | N/A | 1.9897 [ 2.0000 ] | 99.5% { 115.8% } | 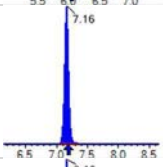 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 965549 | ( 8.16 , N/A ) ( N/A , -0.03 , N/A ) | 3795.6 | N/A | 1.9567 [ 2.0000 ] | 97.8% { 119.8% } | 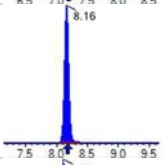 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 306494 | ( 9.10 , N/A ) ( N/A , -0.03 , N/A ) | 2121.3 | N/A | 1.0411 [ 1.0000 ] | 104.1% { 116.2% } | 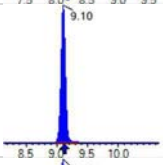 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 354292 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 1222.9 | N/A | 1.0518 [ 1.0000 ] | 105.2% { 115.4% } | 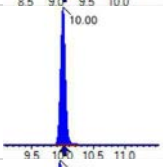 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 383922 | ( 10.86 , N/A ) ( N/A , -0.05 , N/A ) | 1070.0 | N/A | 0.9688 [ 1.0000 ] | 96.9% { 104.2% } | 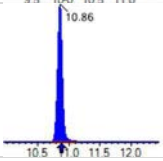 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-03 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 353368 | ( 11.68 , N/A ) ( N/A , -0.05 , N/A ) | 1259.8 | N/A | 0.8756 [ 1.0000 ] | 87.6% { 91.4% } | 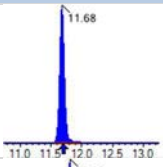 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 280671 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1262.0 | N/A | 0.8167 [ 1.0000 ] | 81.7% { 90.0% } | 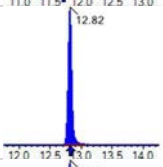 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 497445 | ( 13.62 , N/A ) ( N/A , -0.02 , N/A ) | 2138.3 | N/A | 1.6954 [ 2.0000 ] | 84.8% { 102.2% } | 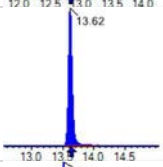 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1939183 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 1650.0 | N/A | 2.0757 [ 2.0000 ] | 103.8% { 120.0% } | 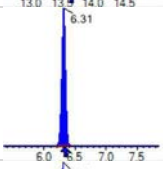 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1546482 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 3047.3 | N/A | 2.0739 [ 2.0000 ] | 103.7% { 117.8% } | 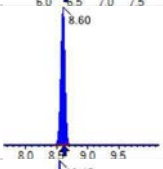 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1755605 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1302.9 | N/A | 1.9576 [ 2.0000 ] | 97.9% { 114.7% } | 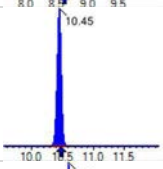 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 726252 | ( 5.49 , N/A ) ( N/A , -0.03 , N/A ) | 89.4 | N/A | 4.5056 [ 4.0000 ] | 112.6% { 117.3% } | 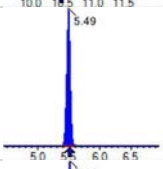 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2216580 | ( 7.60 , N/A ) ( N/A , -0.04 , N/A ) | 3111.9 | N/A | 4.5950 [ 4.0000 ] | 114.9% { 125.3% } | 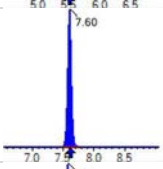 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1675097 | ( 9.38 , N/A ) ( N/A , -0.03 , N/A ) | 1636.1 | N/A | 4.4276 [ 4.0000 ] | 110.7% { 121.0% } | 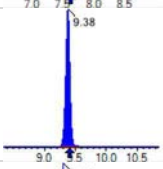 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3002107 | ( 11.00 , N/A ) ( N/A , -0.05 , N/A ) | 1514.3 | N/A | 7.5927 [ 8.0000 ] | 94.9% { 111.5% } | 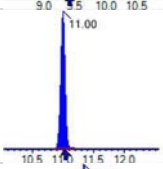 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1332502 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 2429.9 | N/A | 1.6766 [ 2.0000 ] | 83.8% { 98.0% } | 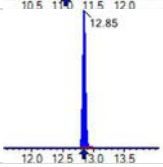 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (14)
Acquired: 2024/03/21 - 18:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 106048 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 889.7 | N/A | 0.6291 [ 2.0000 ] | 31.5% { 38.7% } | 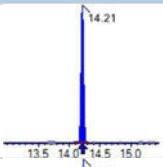 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 94430 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 915.6 | N/A | 0.5224 [ 2.0000 ] | 26.1% { 31.4% } | 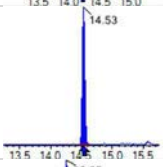 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 889356 | ( 10.25 , N/A ) ( N/A , -0.04 , N/A ) | 2427.7 | N/A | 3.8541 [ 4.0000 ] | 96.4% { 100.2% } | 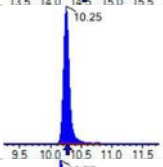 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 823487 | ( 10.77 , N/A ) ( N/A , -0.04 , N/A ) | 1701.8 | N/A | 3.9155 [ 4.0000 ] | 97.9% { 100.0% } | 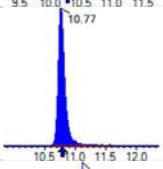 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 843319 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1662.4 | N/A | 11.1328 [ 20.0000 ] | 55.7% { 69.6% } | 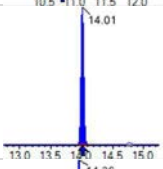 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 819308 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3224.5 | N/A | 10.6563 [ 20.0000 ] | 53.3% { 64.9% } | 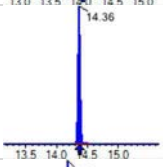 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1196004 | ( 6.47 , N/A ) ( N/A , -0.04 , N/A ) | 2859.7 | N/A | 8.1552 [ 8.0000 ] | 101.9% { 120.4% } | 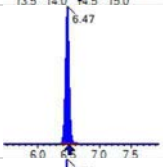 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 823797 | ( 6.76 , N/A ) ( N/A , -0.04 , N/A ) | 1379.2 | N/A | 2.5279 [ 2.0000 ] | 126.4% { 128.5% } | 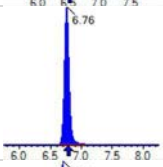 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640132 | ( 8.80 , N/A ) ( N/A , -0.03 , N/A ) | 891.6 | N/A | 2.1578 [ 2.0000 ] | 107.9% { 108.8% } | 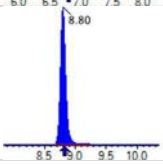 | | |

# ANALYSIS DATA SHEETL

## MW-12-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-04- | File ID:- | S2024-03-21B (15)- |
| Sampled:- | 03/18/24 10:20- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 18:23- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 535.314 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.41- | 0.061- | 0.75- | J- |
| PFHxA- | 0.44- | 0.051- | 0.37- | |
| PFHpA- | 0.21- | 0.038- | 0.37- | J- |
| PFOA- | 1.4- | 0.14- | 0.37- | |
| PFNA- | 0.37- | 0.076- | 0.37- | |
| PFDA- | 1.1- | 0.095- | 0.37- | |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 0.50- | 0.034- | 0.37- | |
| PFPeS- | ND- | 0.059- | 0.37- | U- |
| PFHxS- | 0.27- | 0.030- | 0.37- | MI2, J- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 2.4- | 0.059- | 0.37- | MI3- |
| PFNS- | ND- | 0.12- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.099- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-12-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-04- | File ID:- | S2024-03-21B (15)- |
| Sampled:- | 03/18/24 10:20- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 18:23- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 535.314 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.050- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (15)
Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>89075<br>( 163.0 / 69.0 )<br>2822 | ( 2.82 , 0.76 )<br>( N/A , 0.02 , 0.2) | 563.0<br>149.6 | 0.0317<br>116.6<br>117.3 | 0.2864 | N/A | 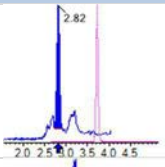 | 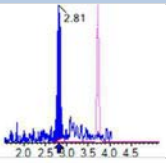 | MI3 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 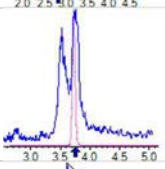 | | |
| PFPeA | ( 263.0 / 219.0 )<br>31026<br>( 263.0 / 69.0 )<br>545 | ( 4.78 , 1.00 )<br>( 0.00 , N/A , 0.4) | 195.1<br>9.6 | 0.0176<br>147.0<br>136.4 | 0.1102 | N/A | 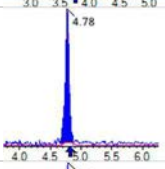 | 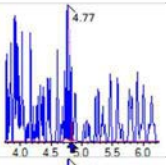 | |
| PFHxA | ( 313.0 / 269.0 )<br>38059<br>( 313.0 / 119.0 )<br>4903 | ( 5.98 , 1.00 )<br>( 0.00 , N/A , 0.3) | 232.7<br>90.0 | 0.1288<br>110.9<br>116.0 | 0.1190 | N/A | 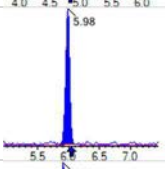 | 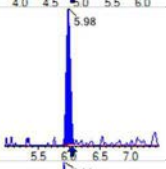 | |
| PFHpA | ( 363.0 / 319.0 )<br>21620<br>( 363.0 / 169.0 )<br>6985 | ( 7.11 , 1.00 )<br>( 0.00 , N/A , -0.4) | 127.5<br>110.7 | 0.3231<br>106.6<br>110.2 | 0.0569 | N/A | 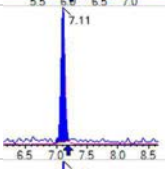 | 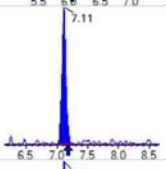 | |
| PFOA | ( 413.0 / 369.0 )<br>197171<br>( 413.0 / 169.0 )<br>75759 | ( 8.11 , 1.00 )<br>( 0.00 , N/A , 0.1) | 236.3<br>361.5 | 0.3842<br>105.1<br>112.0 | 0.3827 | N/A | 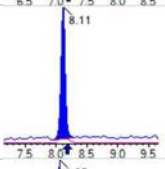 | 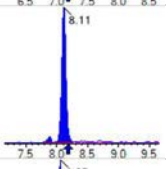 | |
| PFNA | ( 463.0 / 419.0 )<br>30903<br>( 463.0 / 169.0 )<br>7996 | ( 9.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 171.5<br>93.6 | 0.2587<br>101.4<br>97.3 | 0.0997 | N/A | 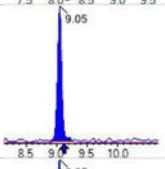 | 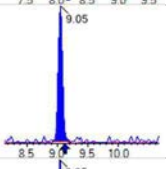 | |
| PFDA | ( 513.0 / 469.0 )<br>101314<br>( 513.0 / 169.0 )<br>12067 | ( 9.95 , 1.00 )<br>( 0.00 , N/A , 0.0) | 746.4<br>378.6 | 0.1191<br>101.6<br>97.3 | 0.2872 | N/A | 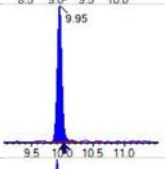 | 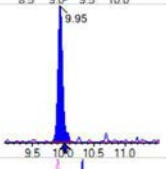 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 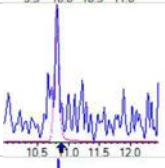 | 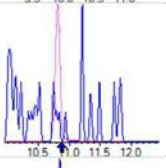 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 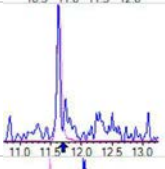 | 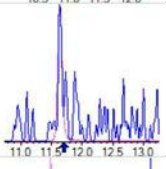 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 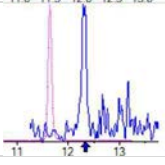 | 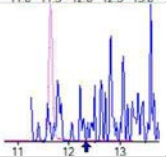 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-04 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 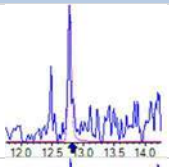 | 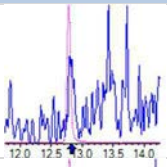 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 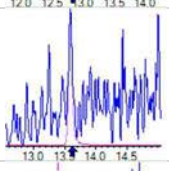 | 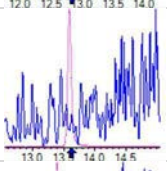 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 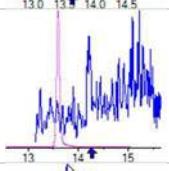 | 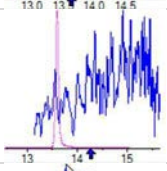 | |
| PFBS | ( 299.0 / 80.0 )<br>68095<br>( 299.0 / 99.0 )<br>49454 | ( 6.27 , 1.00 )<br>( 0.00 , N/A , 0.0) | 413.6<br>430.5 | 0.7263<br>102.7<br>96.2 | 0.1333 | N/A | 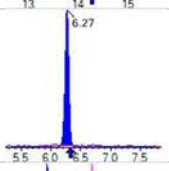 | 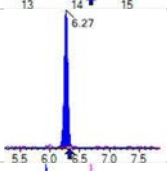 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 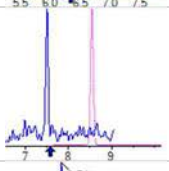 | 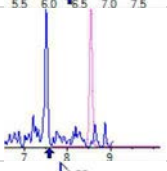 | |
| PFHxS | ( 399.0 / 80.0 )<br>102752<br>( 399.0 / 99.0 )<br>32368 | ( 8.54 , 1.00 )<br>( -0.01 , N/A , -0.3) | 333.2<br>203.2 | 0.3150<br>98.9<br>99.3 | 0.0733 | N/A | 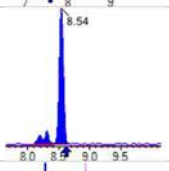 | 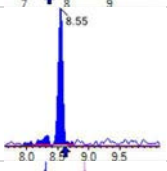 | MI2 DG 2024-03-22 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 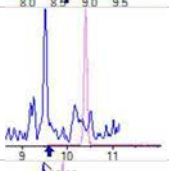 | 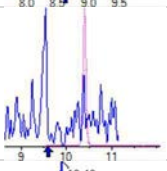 | |
| PFOS | ( 499.0 / 80.0 )<br>664567<br>( 499.0 / 99.0 )<br>112278 | ( 10.18 , 0.98 )<br>( -0.22 , N/A , -13.0) | 367.1<br>494.3 | 0.1689<br>72.3<br>73.7 | 0.6467 | N/A | 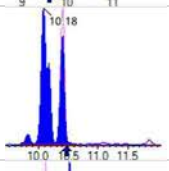 | 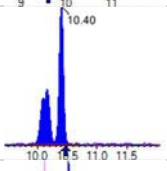 | MI3 ABK 3/21/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 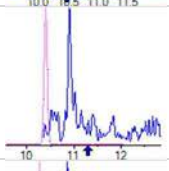 | 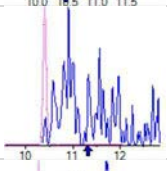 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 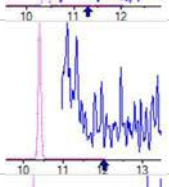 | 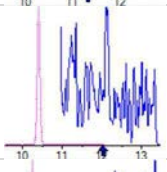 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 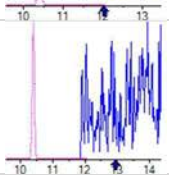 | 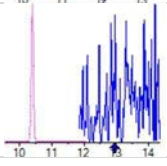 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (15)
Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 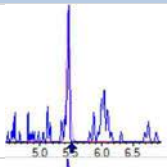 | 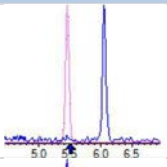 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 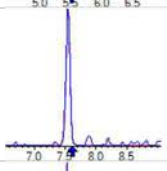 | 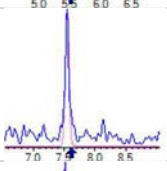 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 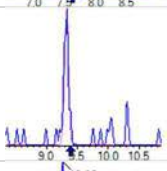 | 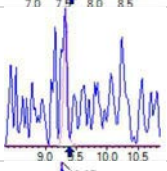 | |
| 10:2FTS | ( 627.0 / 607.0 ) 16165<br>( 627.0 / 81.0 ) 22145 | ( 10.96 , 1.00 ) ( 0.01 , N/A , -0.2) | 221.7<br>63.0 | 1.3700<br>95.2<br>98.8 | 0.0571 | N/A | 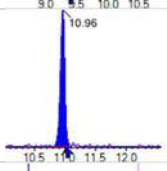 | 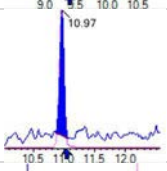 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 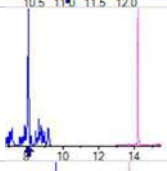 | 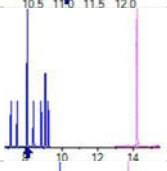 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 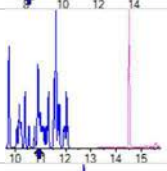 | 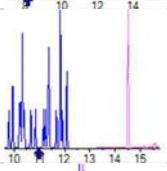 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 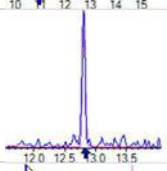 | 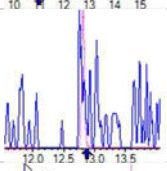 | |
| TFSI | ( 279.7 / 147.0 ) 43416<br>( 279.7 / 211.0 ) 3781 | ( 8.11 , 0.63 ) ( N/A , -0.08 , 1.0) | 26.2<br>13.4 | 0.0871<br>103.7<br>103.9 | 0.0235 | N/A | 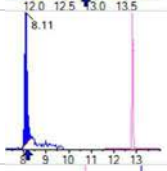 | 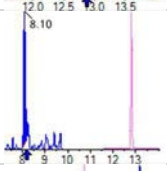 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 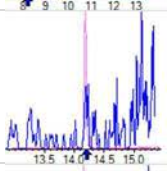 | 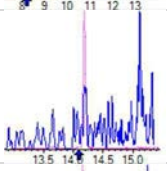 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 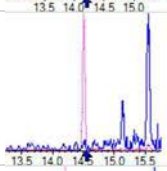 | 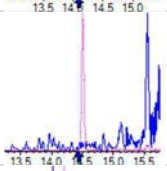 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 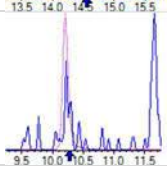 | 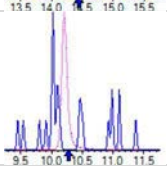 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-04 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 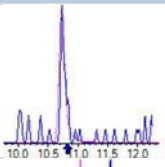 | 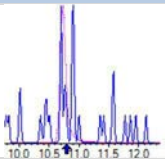 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 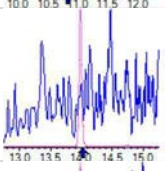 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 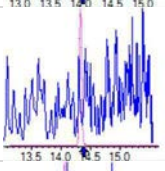 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 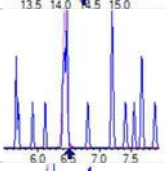 | 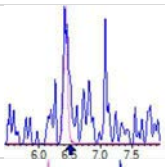 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 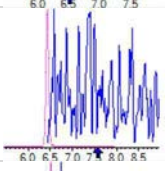 | 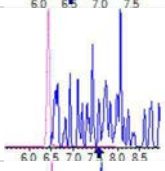 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 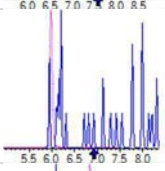 | 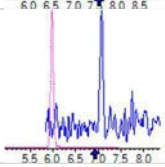 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 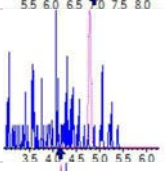 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 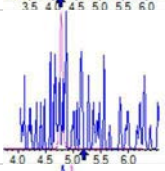 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 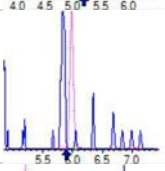 | 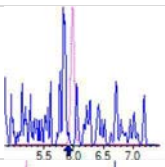 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 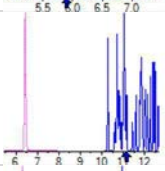 | 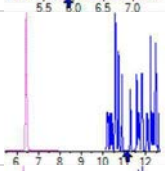 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 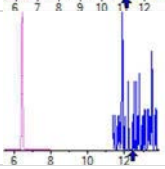 | 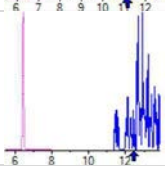 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-04 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 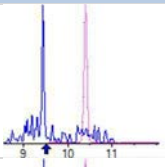 | 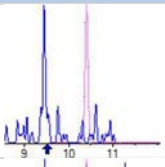 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 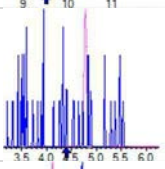 | 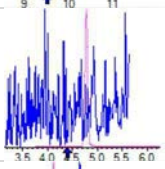 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 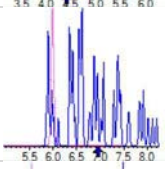 | 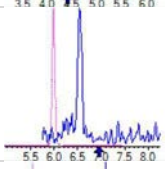 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 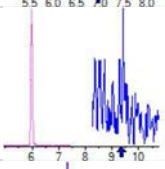 | 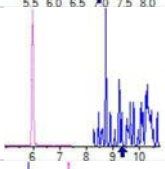 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 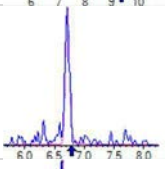 | 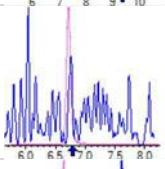 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 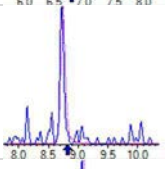 | 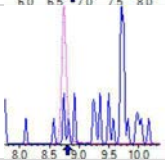 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 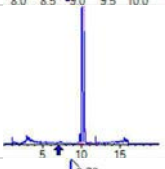 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 311006 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 1404.8 | N/A | 1.3044 [ 1.0000 ] | 130.4% { 121.9% } | 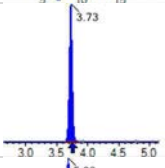 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 136579 | ( 5.98 , N/A ) ( N/A , -0.07 , N/A ) | 74910.5 | N/A | 1.0766 [ 1.0000 ] | 107.7% { 112.0% } | 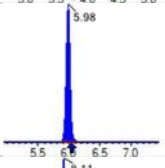 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 433110 | ( 8.11 , N/A ) ( N/A , -0.08 , N/A ) | 4100.5 | N/A | 1.0956 [ 1.0000 ] | 109.6% { 109.3% } | 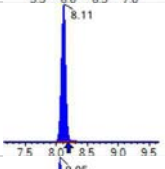 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 309551 | ( 9.05 , N/A ) ( N/A , -0.09 , N/A ) | 1238.2 | N/A | 1.0884 [ 1.0000 ] | 108.8% { 111.7% } | 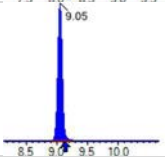 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (15)
Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 311171 | ( 9.95 , N/A ) ( N/A , -0.09 , N/A ) | 2701.1 | N/A | 1.0656 [ 1.0000 ] | 106.6% { 107.8% } | 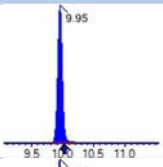 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1051724 | ( 8.55 , N/A ) ( N/A , -0.09 , N/A ) | 5519.2 | N/A | 1.1082 [ 1.0000 ] | 110.8% { 111.5% } | 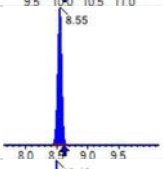 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 780880 | ( 10.40 , N/A ) ( N/A , -0.09 , N/A ) | 1656.0 | N/A | 1.0253 [ 1.0000 ] | 102.5% { 102.7% } | 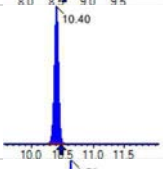 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2638356 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 48328.8 | N/A | 7.4259 [ 8.0000 ] | 92.8% { 120.9% } | 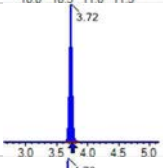 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1114756 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5660.8 | N/A | 4.3744 [ 4.0000 ] | 109.4% { 123.6% } | 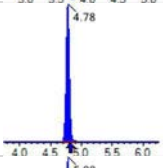 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 665848 | ( 5.98 , N/A ) ( N/A , -0.07 , N/A ) | 17350.9 | N/A | 2.1367 [ 2.0000 ] | 106.8% { 116.1% } | 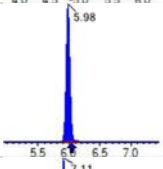 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 774059 | ( 7.11 , N/A ) ( N/A , -0.09 , N/A ) | 5091.2 | N/A | 2.2330 [ 2.0000 ] | 111.6% { 125.8% } | 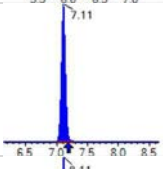 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 997387 | ( 8.11 , N/A ) ( N/A , -0.08 , N/A ) | 3962.0 | N/A | 2.1492 [ 2.0000 ] | 107.5% { 123.8% } | 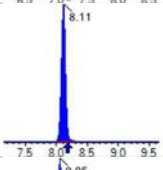 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 308497 | ( 9.05 , N/A ) ( N/A , -0.09 , N/A ) | 2721.6 | N/A | 1.0164 [ 1.0000 ] | 101.6% { 116.9% } | 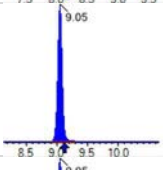 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 345193 | ( 9.95 , N/A ) ( N/A , -0.09 , N/A ) | 1288.8 | N/A | 0.9899 [ 1.0000 ] | 99.0% { 112.5% } | 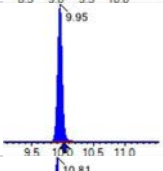 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 371350 | ( 10.81 , N/A ) ( N/A , -0.09 , N/A ) | 1159.0 | N/A | 0.9052 [ 1.0000 ] | 90.5% { 100.8% } | 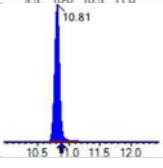 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0110-04 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 356653 | ( 11.64 , N/A ) ( N/A , -0.09 , N/A ) | 1306.5 | N/A | 0.8536 [ 1.0000 ] | 85.4% { 92.3% } | 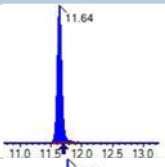 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 276070 | ( 12.78 , N/A ) ( N/A , -0.06 , N/A ) | 1082.6 | N/A | 0.7759 [ 1.0000 ] | 77.6% { 88.6% } | 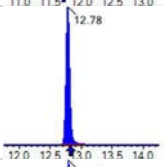 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 476231 | ( 13.59 , N/A ) ( N/A , -0.05 , N/A ) | 2206.6 | N/A | 1.5678 [ 2.0000 ] | 78.4% { 97.8% } | 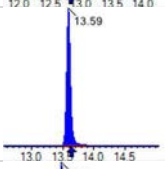 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1968303 | ( 6.27 , N/A ) ( N/A , -0.07 , N/A ) | 1685.5 | N/A | 2.0714 [ 2.0000 ] | 103.6% { 121.8% } | 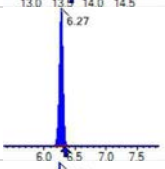 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1576767 | ( 8.55 , N/A ) ( N/A , -0.09 , N/A ) | 3378.0 | N/A | 2.0789 [ 2.0000 ] | 103.9% { 120.1% } | 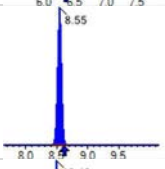 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1779503 | ( 10.40 , N/A ) ( N/A , -0.09 , N/A ) | 1506.3 | N/A | 2.1135 [ 2.0000 ] | 105.7% { 116.3% } | 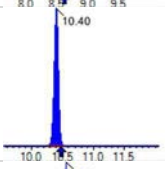 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 714379 | ( 5.46 , N/A ) ( N/A , -0.06 , N/A ) | 107.4 | N/A | 4.3574 [ 4.0000 ] | 108.9% { 115.4% } | 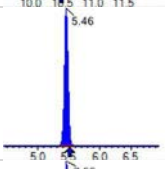 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1970083 | ( 7.55 , N/A ) ( N/A , -0.09 , N/A ) | 2112.5 | N/A | 4.0153 [ 4.0000 ] | 100.4% { 111.4% } | 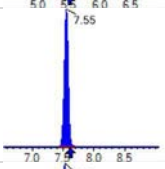 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1786960 | ( 9.33 , N/A ) ( N/A , -0.09 , N/A ) | 1884.0 | N/A | 4.6438 [ 4.0000 ] | 116.1% { 129.1% } | 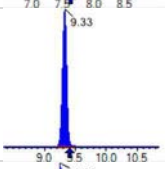 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2938502 | ( 10.96 , N/A ) ( N/A , -0.09 , N/A ) | 1465.1 | N/A | 7.3067 [ 8.0000 ] | 91.3% { 109.1% } | 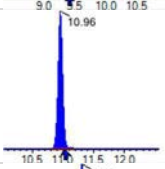 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1401168 | ( 12.81 , N/A ) ( N/A , -0.05 , N/A ) | 2062.2 | N/A | 1.8779 [ 2.0000 ] | 93.9% { 103.1% } | 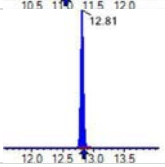 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-04 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 89604 | ( 14.18 , N/A ) ( N/A , -0.04 , N/A ) | 773.2 | N/A | 0.5662 [ 2.0000 ] | 28.3% { 32.7% } | 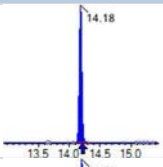  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 76006 | ( 14.50 , N/A ) ( N/A , -0.04 , N/A ) | 860.7 | N/A | 0.4479 [ 2.0000 ] | 22.4% { 25.3% } | 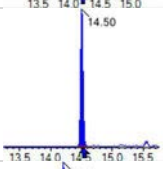  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 927014 | ( 10.21 , N/A ) ( N/A , -0.09 , N/A ) | 1902.3 | N/A | 4.2791 [ 4.0000 ] | 107.0% { 104.4% } | 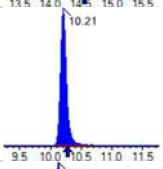  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 825546 | ( 10.73 , N/A ) ( N/A , -0.09 , N/A ) | 2094.5 | N/A | 4.1811 [ 4.0000 ] | 104.5% { 100.3% } | 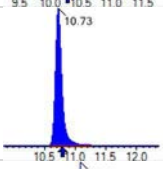  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 830906 | ( 13.98 , N/A ) ( N/A , -0.04 , N/A ) | 1532.9 | N/A | 11.6838 [ 20.0000 ] | 58.4% { 68.6% } | 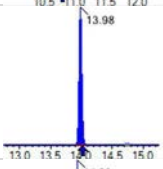  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 797964 | ( 14.33 , N/A ) ( N/A , -0.04 , N/A ) | 3425.8 | N/A | 11.0550 [ 20.0000 ] | 55.3% { 63.2% } | 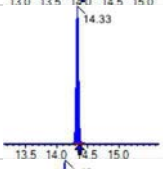  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1150443 | ( 6.43 , N/A ) ( N/A , -0.08 , N/A ) | 2525.2 | N/A | 8.1044 [ 8.0000 ] | 101.3% { 115.9% } | 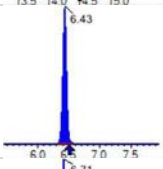  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 817123 | ( 6.71 , N/A ) ( N/A , -0.08 , N/A ) | 1360.2 | N/A | 2.4220 [ 2.0000 ] | 121.1% { 127.5% } | 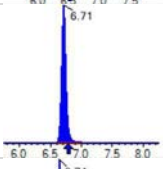  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 645717 | ( 8.74 , N/A ) ( N/A , -0.09 , N/A ) | 757.1 | N/A | 2.1025 [ 2.0000 ] | 105.1% { 109.7% } | 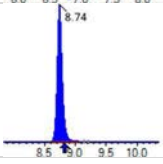  | | |

# ANALYSIS DATA SHEETL

## DUP-4-031824P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0110P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0110-05P | File ID: | S2024-03-21B (16)P |
| Sampled:P | 03/18/24 10:30P | repared:P | 03/19/24 13:48P | Analyzed: | 03/21/24 18:44P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 540.833 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0268P | Sequence:P | SD01019P | Calibration:P | 2412010P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| FBAP | NDP | 0.19P | 1.5 | UP |
| FPeAP | 0.44P | 0.060P | 0.74 | JP |
| FHxAP | 0.47P | 0.051P | 0.37 | |
| PFHpAP | 0.27P | 0.038P | 0.37 | JP |
| FOAP | 1.5P | 0.14P | 0.37 | |
| PFNAP | 0.34P | 0.076P | 0.37 | JP |
| FDAP | 0.83P | 0.094P | 0.37 | |
| PFUnAP | NDP | 0.15P | 0.37 | UP |
| FDoAP | NDP | 0.10P | 0.37 | UP |
| PFTrDAP | NDP | 0.19P | 0.37 | UP |
| PFTeDAP | NDP | 0.18P | 0.37 | UP |
| FHxDAP | NDP | 0.18P | 0.37 | UP |
| FODAP | NDP | 0.18P | 0.37 | UP |
| FBSP | 0.47P | 0.034P | 0.37 | |
| PFPeSP | NDP | 0.058P | 0.37 | UP |
| FHxSP | 0.25P | 0.029P | 0.37 | JP |
| FHpSP | NDP | 0.047P | 0.37 | UP |
| FOSP | 2.0P | 0.059P | 0.37 | MI3P |
| FNSP | NDP | 0.11P | 0.37 | UP |
| FDSP | NDP | 0.14P | 0.37 | UP |
| FDoSP | NDP | 0.11P | 0.37 | UP |
| 4:2FTSP | NDP | 0.27P | 1.5P | UP |
| 6:2FTSP | NDP | 0.29P | 1.5P | UP |
| 8:2FTSP | NDP | 0.076P | 1.5P | UP |
| 10:2FTSP | NDP | 0.37P | 1.5P | UP |
| FOSAP | NDP | 0.096P | 0.37 | MI4, UP |
| NMeFOSAP | NDP | 0.44P | 1.5P | UP |
| NEtFOSAP | NDP | 0.38P | 1.5P | UP |
| NMeFOSAAP | NDP | 0.098P | 0.37P | UP |
| NEtFOSAAP | NDP | 0.11P | 0.37P | UP |

# ANALYSIS DATA SHEETL

## DUP-4-031824P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0110P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0110-05P | File ID: | S2024-03-21B (16)P |
| Sampled:P | 03/18/24 10:30P | repared:P | 03/19/24 13:48P | Analyzed: | 03/21/24 18:44P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 540.833 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0268P | Sequence:P | SD01019 | Calibration:P | 2412010P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.94P | 1.5P | UP |
| NEtFOSEP | NDP | 0.97P | 1.5P | UP |
| HFPO-DAP | NDP | 0.16P | 0.74P | UP |
| ADONAP | NDP | 0.11P | 0.74P | UP |
| FEESAP | NDP | 0.10P | 0.74 | UP |
| PFMPAP | NDP | 0.050P | 0.74 | UP |
| FMBAP | NDP | 0.084P | 0.74 | UP |
| NFDHAP | NDP | 0.28P | 0.74P | UP |
| 9Cl-PF3ONSP | NDP | 0.19P | 0.74P | UP |
| 11Cl-PF3OUDSP | NDP | 0.19P | 0.74P | UP |
| 3:3FTCAP | NDP | 0.53P | 1.5P | UP |
| 5:3FTCAP | NDP | 0.41P | 1.5P | UP |
| 7:3FTCAP | NDP | 0.51P | 1.5P | UP |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-05 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 104707<br>( 163.0 / 69.0 ) 3030 | ( 2.90 , 0.77 )<br>( N/A , 0.11 , 0.1) | 907.3<br>220.8 | 0.0289<br>106.5<br>107.1 | 0.3277 | N/A | 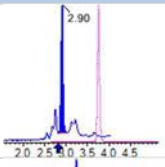 | 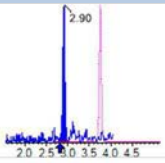 | MI6 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 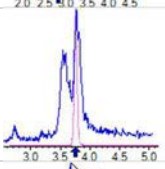 | | |
| PFPeA | ( 263.0 / 219.0 ) 35142<br>( 263.0 / 69.0 ) 550 | ( 4.83 , 1.00 )<br>( 0.00 , N/A , -0.8) | 205.5<br>7.7 | 0.0156<br>131.1<br>121.6 | 0.1200 | N/A | 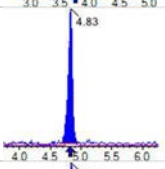 | 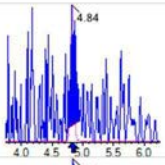 | |
| PFHxA | ( 313.0 / 269.0 ) 42126<br>( 313.0 / 119.0 ) 3563 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , -0.1) | 233.0<br>61.6 | 0.0846<br>72.8<br>76.1 | 0.1266 | N/A | 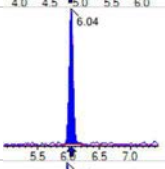 | 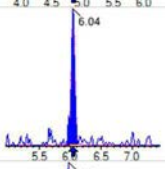 | |
| PFHpA | ( 363.0 / 319.0 ) 26939<br>( 363.0 / 169.0 ) 7151 | ( 7.17 , 1.00 )<br>( 0.00 , N/A , 0.4) | 102.6<br>130.1 | 0.2654<br>87.6<br>90.5 | 0.0734 | N/A | 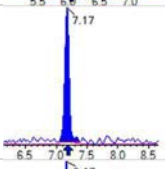 | 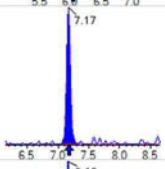 | |
| PFOA | ( 413.0 / 369.0 ) 210903<br>( 413.0 / 169.0 ) 77313 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.1) | 260.2<br>359.7 | 0.3666<br>100.3<br>106.9 | 0.4012 | N/A | 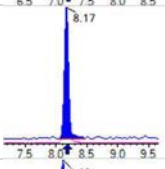 | 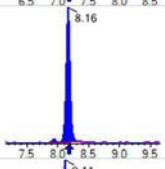 | |
| PFNA | ( 463.0 / 419.0 ) 29626<br>( 463.0 / 169.0 ) 8006 | ( 9.10 , 1.00 )<br>( 0.00 , N/A , -0.4) | 186.7<br>127.0 | 0.2702<br>105.9<br>101.6 | 0.0930 | N/A | 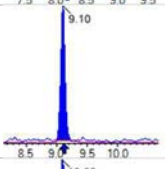 | 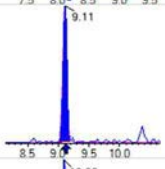 | |
| PFDA | ( 513.0 / 469.0 ) 81062<br>( 513.0 / 169.0 ) 8598 | ( 10.00 , 1.00 )<br>( 0.00 , N/A , 0.1) | 578.0<br>252.5 | 0.1061<br>90.5<br>86.6 | 0.2251 | N/A | 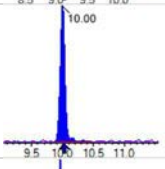 | 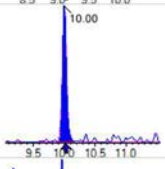 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 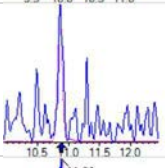 | 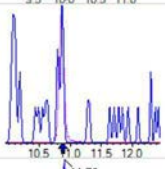 | |
| PFDoA | ( 613.0 / 569.0 ) 5237<br>( 613.0 / 169.0 ) 829 | ( 11.69 , 1.00 )<br>( 0.00 , N/A , -0.8) | 32.4<br>11.8 | 0.1583<br>100.2<br>106.1 | 0.0152 | N/A | 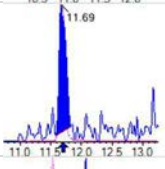 | 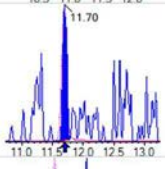 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 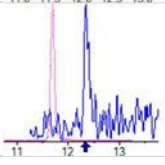 | 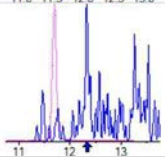 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-05 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 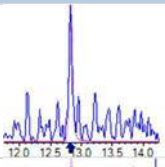 | 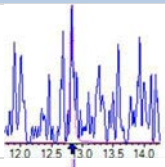 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 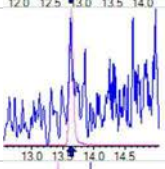 | 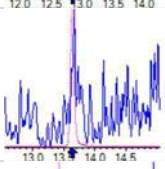 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 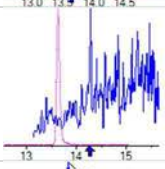 | 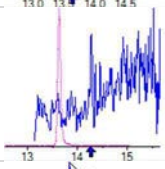 | |
| PFBS | ( 299.0 / 80.0 )<br>67180<br>( 299.0 / 99.0 )<br>50280 | ( 6.33 , 1.00 )<br>( -0.01 , N/A , -0.1) | 263.2<br>281.4 | 0.7484<br>105.8<br>99.2 | 0.1280 | N/A | 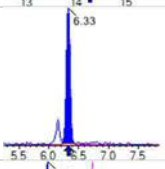 | 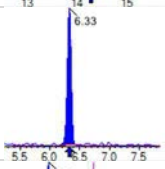 | |
| PFPeS | ( 349.0 / 80.0 )<br>13458<br>( 349.0 / 99.0 )<br>4239 | ( 7.55 , 0.88 )<br>( N/A , -0.03 , 0.0) | 42.4<br>37.0 | 0.3150<br>87.6<br>90.4 | 0.0105 | N/A | 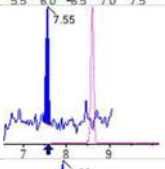 | 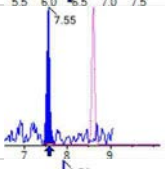 | |
| PFHxS | ( 399.0 / 80.0 )<br>100508<br>( 399.0 / 99.0 )<br>30830 | ( 8.60 , 1.00 )<br>( 0.00 , N/A , 0.2) | 212.8<br>143.5 | 0.3067<br>96.3<br>96.7 | 0.0676 | N/A | 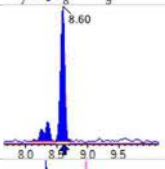 | 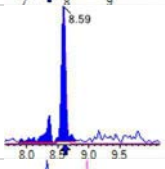 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 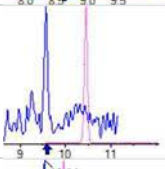 | 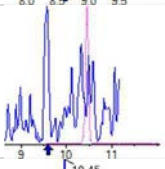 | |
| PFOS | ( 499.0 / 80.0 )<br>558191<br>( 499.0 / 99.0 )<br>88811 | ( 10.24 , 0.98 )<br>( -0.21 , N/A , -12.5) | 251.0<br>348.6 | 0.1591<br>68.1<br>69.4 | 0.5474 | N/A | 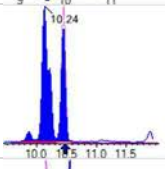 | 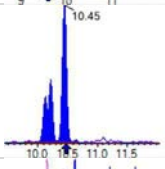 | MI3 ABK<br>3/21/24 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 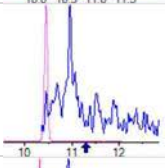 | 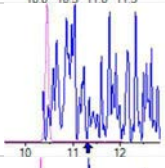 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 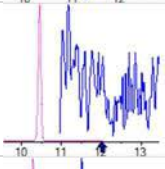 | 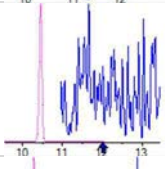 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 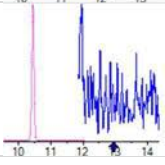 | 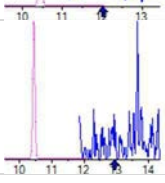 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-05 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 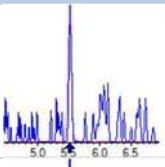 | 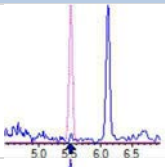 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 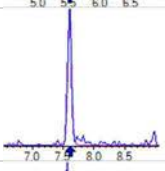 | 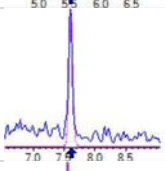 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 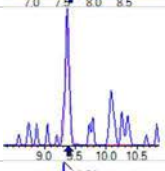 | 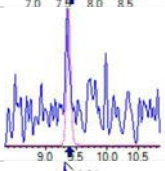 | |
| 10:2FTS | ( 627.0 / 607.0 ) 17278<br>( 627.0 / 81.0 ) 24855 | ( 11.01 , 1.00 ) ( 0.01 , N/A , -0.3) | 211.7<br>58.7 | 1.4385<br>99.9<br>103.8 | 0.0625 | N/A | 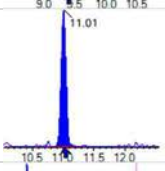 | 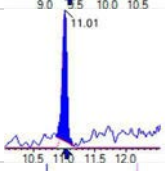 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 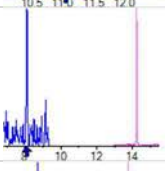 | 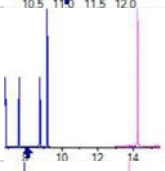 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 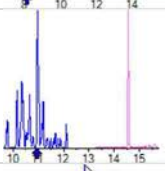 | 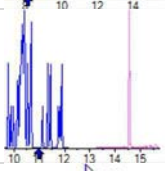 | |
| PFOSA | ( 498.0 / 78.0 ) 12788<br>( 498.0 / 478.0 ) 157 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.0) | 113.1<br>8.5 | 0.0123<br>87.7<br>87.2 | 0.0176 | N/A | 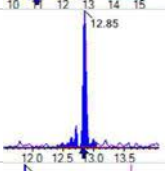 | 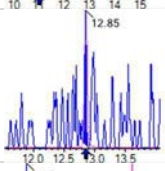 | MI4 ABK 3/21/24 |
| TFSI | ( 279.7 / 147.0 ) 34553<br>( 279.7 / 211.0 ) 2587 | ( 8.16 , 0.63 ) ( N/A , -0.04 , -0.7) | 26.5<br>12.7 | 0.0749<br>89.1<br>89.4 | 0.0181 | N/A | 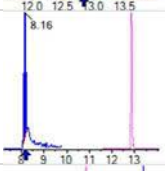 | 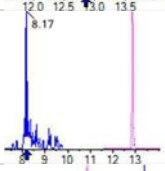 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 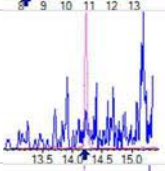 | 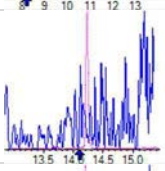 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 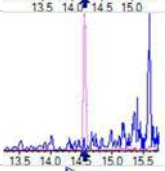 | 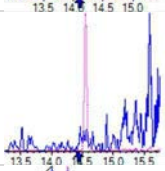 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 3801<br>( 570.0 / 483.0 ) 967 | ( 10.25 , 1.00 ) ( 0.00 , N/A , 8.6) | 419.3<br>26.4 | 0.2544<br>58.0<br>55.2 | 0.0185 | N/A | 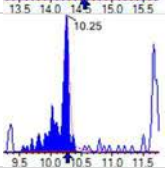 | 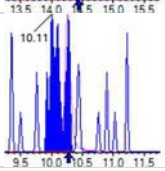 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (16)
Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>3153<br>( 584.0 / 526.0 )<br>2071 | ( 10.76 , 1.00 )<br>( -0.02 , N/A , 1.0) | 3118.7<br>46.7 | 0.6568<br>106.5<br>113.4 | 0.0159 | N/A | 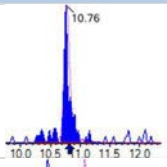 | 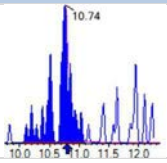 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 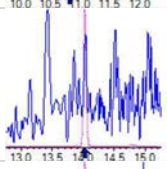 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 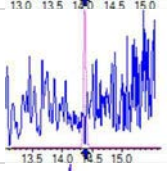 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 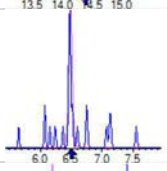 | 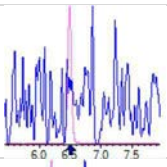 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 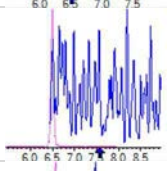 | 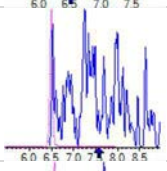 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 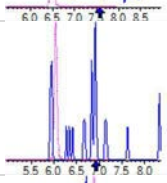 | 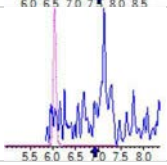 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 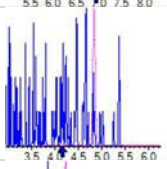 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 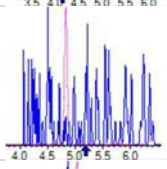 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 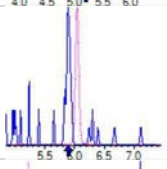 | 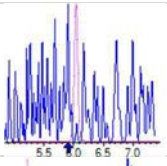 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 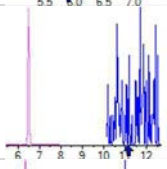 | 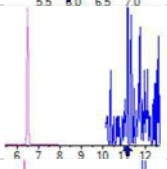 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 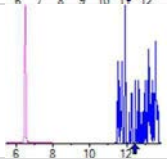 | 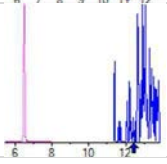 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-05 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 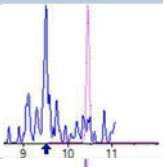 | 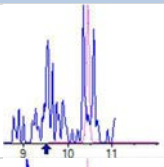 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 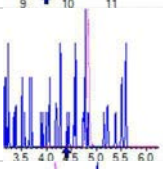 | 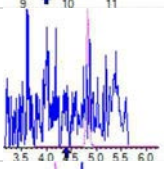 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 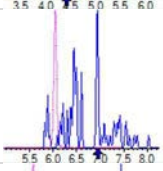 | 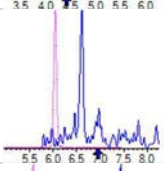 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 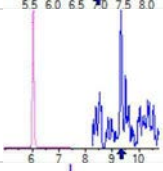 | 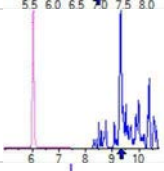 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 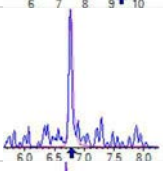 | 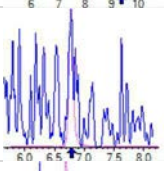 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 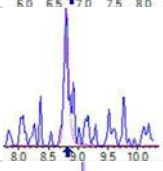 | 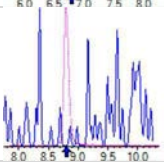 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 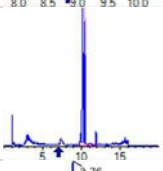 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 325913 | ( 3.76 , N/A )<br>( N/A , 0.01 , N/A ) | 1364.1 | N/A | 1.3669<br>[ 1.0000 ] | 136.7%<br>{ 127.8% } | 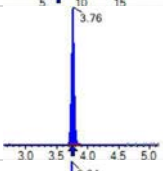 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145232 | ( 6.04 , N/A )<br>( N/A , -0.01 , N/A ) | 7045.9 | N/A | 1.1449<br>[ 1.0000 ] | 114.5%<br>{ 119.1% } | 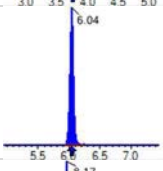 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 465685 | ( 8.17 , N/A )<br>( N/A , -0.03 , N/A ) | 4114.1 | N/A | 1.1780<br>[ 1.0000 ] | 117.8%<br>{ 117.5% } | 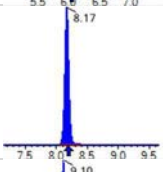 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 323181 | ( 9.10 , N/A )<br>( N/A , -0.04 , N/A ) | 1099.4 | N/A | 1.1363<br>[ 1.0000 ] | 113.6%<br>{ 116.6% } | 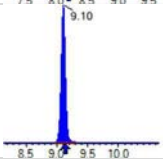 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (16)
Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 323067 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 3229.8 | N/A | 1.1063 [ 1.0000 ] | 110.6% { 112.0% } | 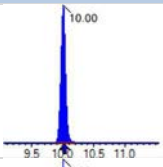 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1071190 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 4721.9 | N/A | 1.1287 [ 1.0000 ] | 112.9% { 113.6% } | 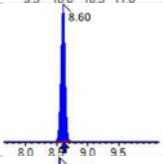 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 823841 | ( 10.45 , N/A ) ( N/A , -0.04 , N/A ) | 1138.2 | N/A | 1.0817 [ 1.0000 ] | 108.2% { 108.3% } | 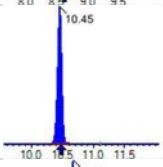 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2710733 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 44243.5 | N/A | 7.2807 [ 8.0000 ] | 91.0% { 124.2% } | 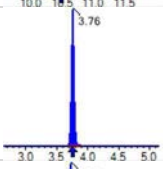 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1159477 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 6725.7 | N/A | 4.2788 [ 4.0000 ] | 107.0% { 128.6% } | 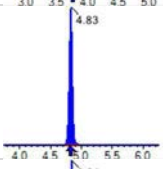 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 692768 | ( 6.04 , N/A ) ( N/A , -0.01 , N/A ) | 9604.4 | N/A | 2.0906 [ 2.0000 ] | 104.5% { 120.8% } | 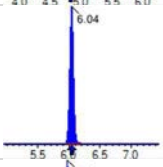 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 748160 | ( 7.17 , N/A ) ( N/A , -0.03 , N/A ) | 5492.6 | N/A | 2.0297 [ 2.0000 ] | 101.5% { 121.5% } | 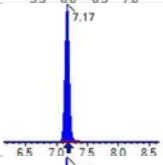 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1020691 | ( 8.17 , N/A ) ( N/A , -0.03 , N/A ) | 3491.8 | N/A | 2.0456 [ 2.0000 ] | 102.3% { 126.7% } | 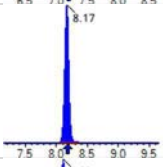 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 316936 | ( 9.10 , N/A ) ( N/A , -0.03 , N/A ) | 2266.4 | N/A | 1.0002 [ 1.0000 ] | 100.0% { 120.1% } | 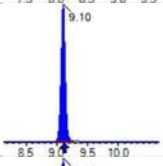 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 352486 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 1027.0 | N/A | 0.9736 [ 1.0000 ] | 97.4% { 114.9% } | 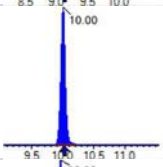 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 362326 | ( 10.86 , N/A ) ( N/A , -0.04 , N/A ) | 1122.8 | N/A | 0.8506 [ 1.0000 ] | 85.1% { 98.3% } | 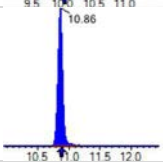 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-05 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 342520 | ( 11.69 , N/A ) ( N/A , -0.04 , N/A ) | 1348.1 | N/A | 0.7896 [ 1.0000 ] | 79.0% { 88.6% } | 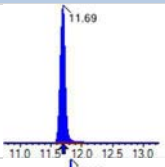 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295538 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1478.8 | N/A | 0.8000 [ 1.0000 ] | 80.0% { 94.8% } | 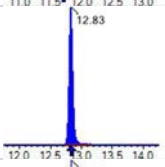 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 484110 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2290.7 | N/A | 1.5351 [ 2.0000 ] | 76.8% { 99.4% } | 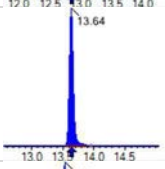 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2022114 | ( 6.33 , N/A ) ( N/A , -0.02 , N/A ) | 1251.7 | N/A | 2.0894 [ 2.0000 ] | 104.5% { 125.1% } | 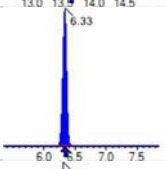 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1672467 | ( 8.60 , N/A ) ( N/A , -0.03 , N/A ) | 3535.2 | N/A | 2.1650 [ 2.0000 ] | 108.2% { 127.3% } | 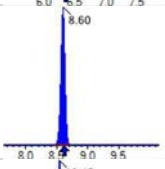 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1765669 | ( 10.45 , N/A ) ( N/A , -0.04 , N/A ) | 1334.3 | N/A | 1.9877 [ 2.0000 ] | 99.4% { 115.4% } | 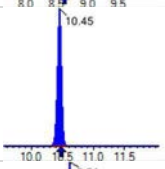 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 769539 | ( 5.51 , N/A ) ( N/A , -0.01 , N/A ) | 93.2 | N/A | 4.6085 [ 4.0000 ] | 115.2% { 124.3% } | 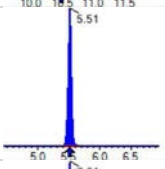 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2068859 | ( 7.61 , N/A ) ( N/A , -0.03 , N/A ) | 2160.3 | N/A | 4.1400 [ 4.0000 ] | 103.5% { 117.0% } | 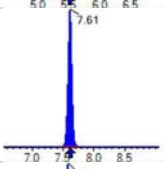 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1759756 | ( 9.38 , N/A ) ( N/A , -0.04 , N/A ) | 1285.3 | N/A | 4.4900 [ 4.0000 ] | 112.2% { 127.1% } | 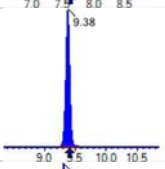 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2871511 | ( 11.00 , N/A ) ( N/A , -0.05 , N/A ) | 1525.7 | N/A | 7.0104 [ 8.0000 ] | 87.6% { 106.6% } | 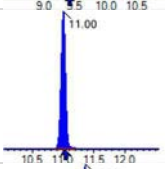 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1453367 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2900.7 | N/A | 1.8463 [ 2.0000 ] | 92.3% { 106.9% } | 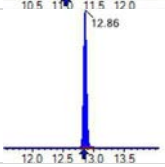 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-05 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 18:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 101328 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 896.0 | N/A | 0.6069 [ 2.0000 ] | 30.3% { 37.0% } | 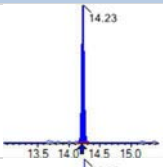 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 92197 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 711.8 | N/A | 0.5149 [ 2.0000 ] | 25.7% { 30.6% } | 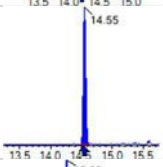 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863038 | ( 10.26 , N/A ) ( N/A , -0.04 , N/A ) | 2274.5 | N/A | 3.7760 [ 4.0000 ] | 94.4% { 97.2% } | 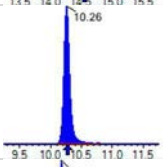 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 810336 | ( 10.78 , N/A ) ( N/A , -0.04 , N/A ) | 1972.9 | N/A | 3.8900 [ 4.0000 ] | 97.3% { 98.4% } | 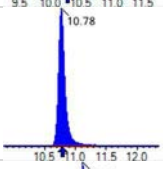 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 926521 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 1862.6 | N/A | 12.3489 [ 20.0000 ] | 61.7% { 76.5% } | 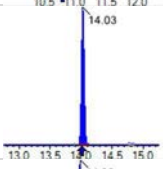 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 917059 | ( 14.38 , N/A ) ( N/A , 0.00 , N/A ) | 3855.5 | N/A | 12.0424 [ 20.0000 ] | 60.2% { 72.7% } | 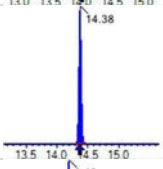 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1216344 | ( 6.49 , N/A ) ( N/A , -0.02 , N/A ) | 2584.4 | N/A | 8.0581 [ 8.0000 ] | 100.7% { 122.5% } | 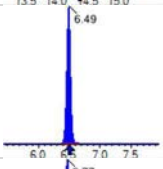 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 809354 | ( 6.77 , N/A ) ( N/A , -0.03 , N/A ) | 1501.0 | N/A | 2.3107 [ 2.0000 ] | 115.5% { 126.3% } | 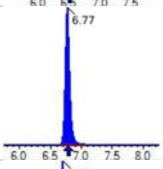 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 661544 | ( 8.80 , N/A ) ( N/A , -0.04 , N/A ) | 836.6 | N/A | 2.0747 [ 2.0000 ] | 103.7% { 112.4% } | 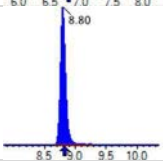 | | |

# ANALYSIS DATA SHEETL

MW-18-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-06- | File ID:- | S2024-03-21B (17)- |
| Sampled:- | 03/18/24 11:35- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 19:04- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.332 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.67- | 0.19- | 1.5- | J- |
| PFPeA- | 0.56- | 0.059- | 0.73- | J- |
| PFHxA- | 0.32- | 0.050- | 0.37- | J- |
| PFHpA- | 0.17- | 0.038- | 0.37- | J- |
| PFOA- | 0.56- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | 0.12- | 0.093- | 0.37- | J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 0.048- | 0.034- | 0.37- | MI6, J- |
| PFPeS- | ND- | 0.057- | 0.37- | U- |
| PFHxS- | 0.19- | 0.029- | 0.37- | MI2, J- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.34- | 0.058- | 0.37- | MI1, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-18-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-06- | File ID:- | S2024-03-21B (17)- |
| Sampled:- | 03/18/24 11:35- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 19:04- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.332 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (17)
Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 57100<br>( 163.0 / 69.0 ) 1338 | ( 2.86 , 0.76 ) ( N/A , 0.07 , -0.6) | 331.4<br>70.4 | 0.0234<br>86.3<br>86.8 | 0.1874 | N/A | 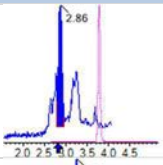 | 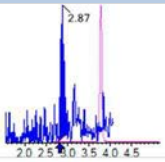 | MI2 DG 2024-03-22 |
| PFBA | ( 213.0 / 169.0 ) 58731 | ( 3.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 57.1 | N/A<br>0.0<br>0.0 | 0.1823 | N/A | 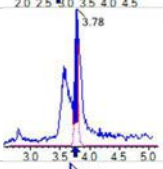 | | |
| PFPeA | ( 263.0 / 219.0 ) 41955<br>( 263.0 / 69.0 ) 210 | ( 4.82 , 1.00 ) ( 0.00 , N/A , -2.0) | 220.2<br>6.8 | 0.0050<br>42.0<br>38.9 | 0.1529 | N/A | 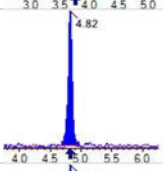 | 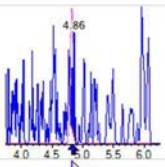 | |
| PFHxA | ( 313.0 / 269.0 ) 28739<br>( 313.0 / 119.0 ) 2546 | ( 6.02 , 1.00 ) ( 0.00 , N/A , -0.1) | 191.9<br>45.0 | 0.0886<br>76.3<br>79.8 | 0.0885 | N/A | 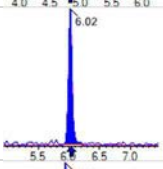 | 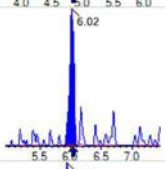 | |
| PFHpA | ( 363.0 / 319.0 ) 15903<br>( 363.0 / 169.0 ) 4018 | ( 7.14 , 1.00 ) ( -0.01 , N/A , 0.2) | 112.9<br>81.0 | 0.2527<br>83.4<br>86.2 | 0.0460 | N/A | 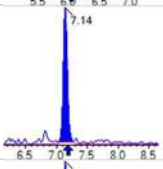 | 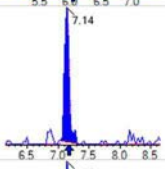 | |
| PFOA | ( 413.0 / 369.0 ) 87071<br>( 413.0 / 169.0 ) 34724 | ( 8.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 117.5<br>169.8 | 0.3988<br>109.1<br>116.3 | 0.1518 | N/A | 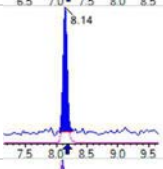 | 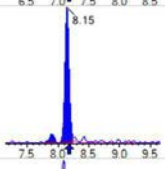 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 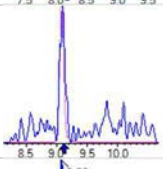 | 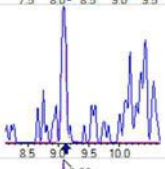 | |
| PFDA | ( 513.0 / 469.0 ) 11058<br>( 513.0 / 169.0 ) 1403 | ( 9.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 96.5<br>95.7 | 0.1268<br>108.2<br>103.6 | 0.0322 | N/A | 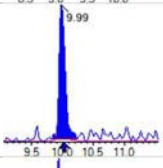 | 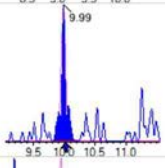 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 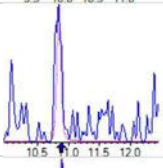 | 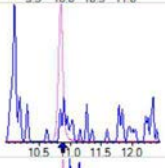 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 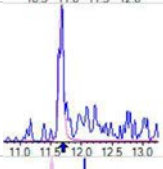 | 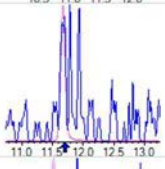 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 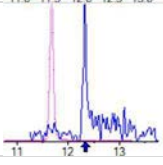 | 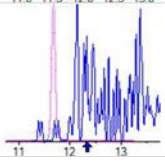 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (17)
Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 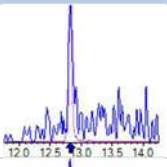 | 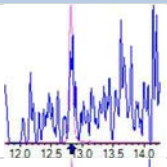 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 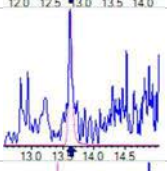 | 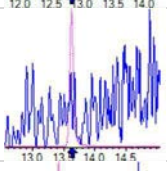 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 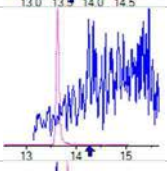 | 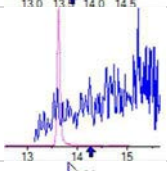 | |
| PFBS | ( 299.0 / 80.0 )<br>6564<br>( 299.0 / 99.0 )<br>5665 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , 0.4) | 30.9<br>42.5 | 0.8630<br>122.0<br>114.3 | 0.0132 | N/A | 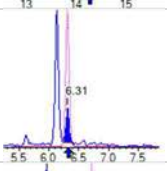 | 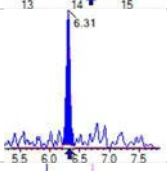 | MI6 DG 2024-03-22 |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 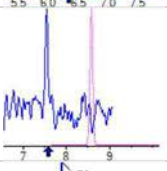 | 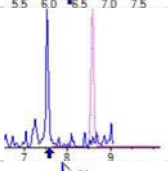 | |
| PFHxS | ( 399.0 / 80.0 )<br>70932<br>( 399.0 / 99.0 )<br>14777 | ( 8.58 , 1.00 )<br>( 0.00 , N/A , 0.1) | 163.5<br>130.1 | 0.2083<br>65.4<br>65.7 | 0.0508 | N/A | 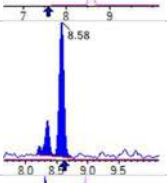 | 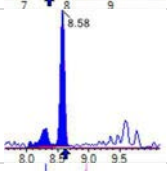 | MI2 DG 2024-03-22 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 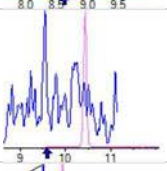 | 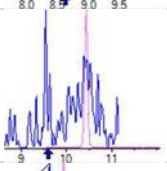 | |
| PFOS | ( 499.0 / 80.0 )<br>96629<br>( 499.0 / 99.0 )<br>15062 | ( 10.24 , 0.98 )<br>( -0.20 , N/A , -3.7) | 97.5<br>137.1 | 0.1559<br>66.7<br>68.0 | 0.0932 | N/A | 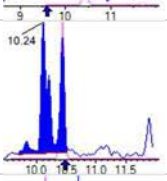 | 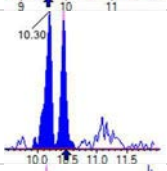 | MI1 DG 2024-03-22 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 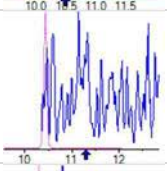 | 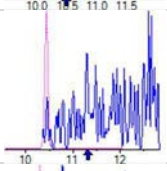 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 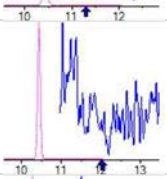 | 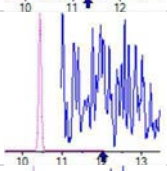 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 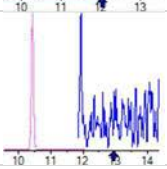 | 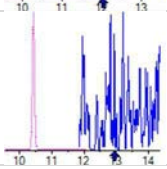 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-06 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 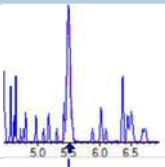 | 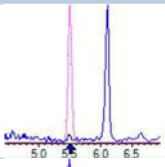 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 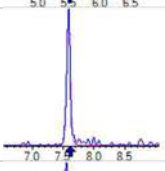 | 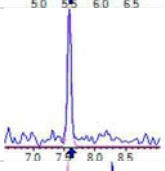 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 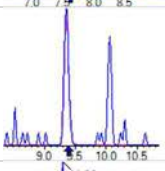 | 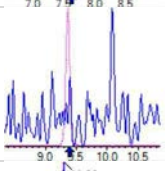 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14887<br>( 627.0 / 81.0 )<br>22140 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , -0.1) | 194.2<br>57.5 | 1.4872<br>103.3<br>107.3 | 0.0527 | N/A | 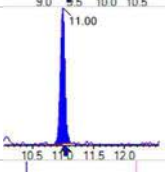 | 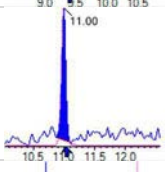 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 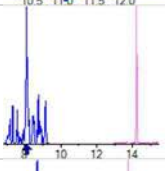 | 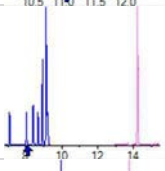 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 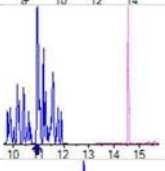 | 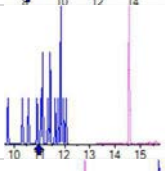 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 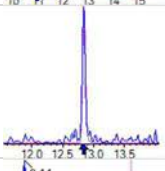 | 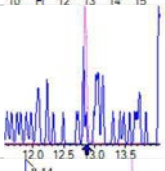 | |
| TFSI | ( 279.7 / 147.0 )<br>38110<br>( 279.7 / 211.0 )<br>2477 | ( 8.14 , 0.63 )<br>( N/A , -0.06 , -0.3) | 29.1<br>11.0 | 0.0650<br>77.4<br>77.6 | 0.0212 | N/A | 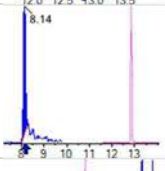 | 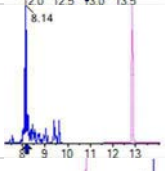 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 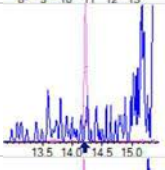 | 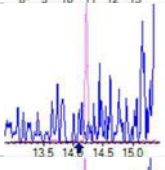 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 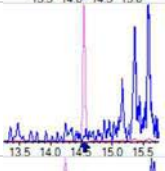 | 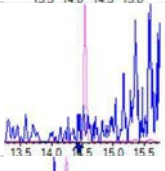 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 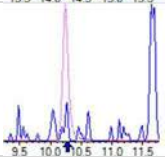 | 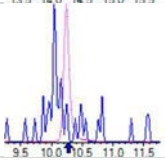 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-06 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 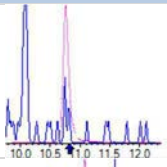 | 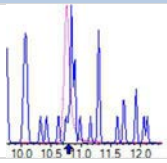 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 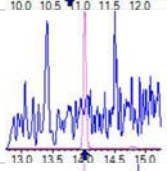 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 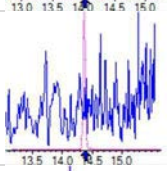 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 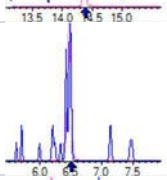 | 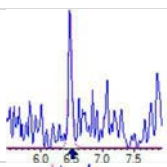 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 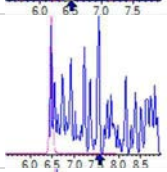 | 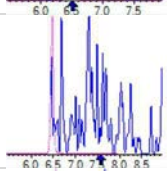 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 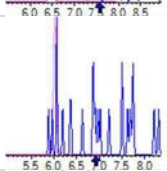 | 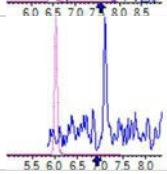 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 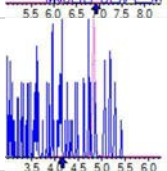 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 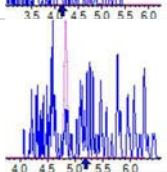 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 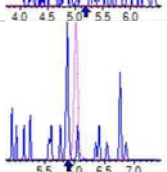 | 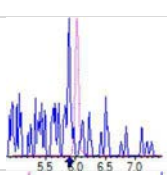 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 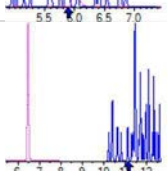 | 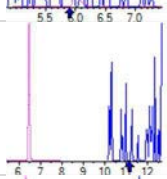 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 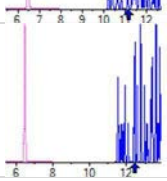 | 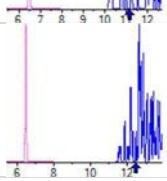 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (17)
Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 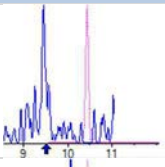 | 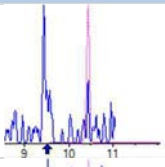 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 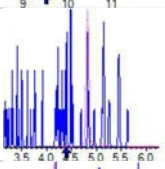 | 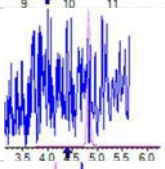 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 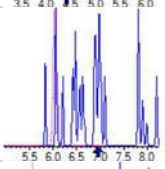 | 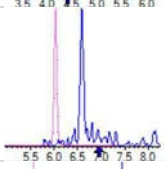 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 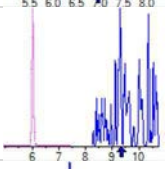 | 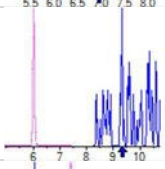 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 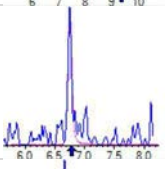 | 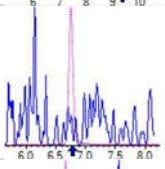 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 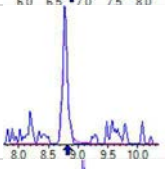 | 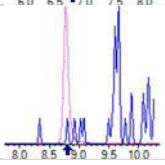 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 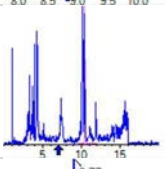 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 303031 | ( 3.77 , N/A ) ( N/A , 0.02 , N/A ) | 1520.6 | N/A | 1.2709 [ 1.0000 ] | 127.1% { 118.8% } | 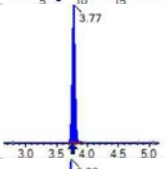 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 139070 | ( 6.03 , N/A ) ( N/A , -0.03 , N/A ) | 156719.3 | N/A | 1.0963 [ 1.0000 ] | 109.6% { 114.0% } | 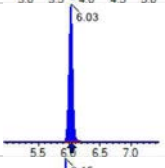 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 462672 | ( 8.15 , N/A ) ( N/A , -0.05 , N/A ) | 3720.3 | N/A | 1.1704 [ 1.0000 ] | 117.0% { 116.8% } | 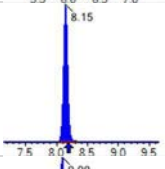 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 304225 | ( 9.09 , N/A ) ( N/A , -0.06 , N/A ) | 1080.5 | N/A | 1.0697 [ 1.0000 ] | 107.0% { 109.8% } | 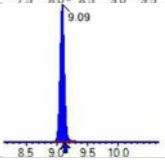 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (17)
Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 305373 | ( 9.99 , N/A ) ( N/A , -0.06 , N/A ) | 3675.0 | N/A | 1.0457 [ 1.0000 ] | 104.6% { 105.8% } | 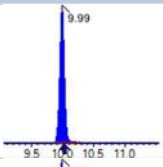 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1041501 | ( 8.58 , N/A ) ( N/A , -0.06 , N/A ) | 5675.5 | N/A | 1.0974 [ 1.0000 ] | 109.7% { 110.4% } | 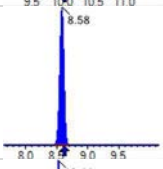 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 784696 | ( 10.44 , N/A ) ( N/A , -0.06 , N/A ) | 1533.6 | N/A | 1.0303 [ 1.0000 ] | 103.0% { 103.2% } | 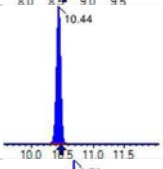 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2584821 | ( 3.78 , N/A ) ( N/A , 0.02 , N/A ) | 41221.2 | N/A | 7.4667 [ 8.0000 ] | 93.3% { 118.4% } | 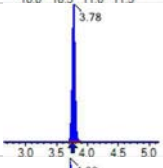 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1086559 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 6103.1 | N/A | 4.1874 [ 4.0000 ] | 104.7% { 120.5% } | 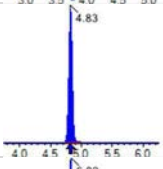 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 676136 | ( 6.02 , N/A ) ( N/A , -0.03 , N/A ) | 7686.4 | N/A | 2.1308 [ 2.0000 ] | 106.5% { 117.9% } | 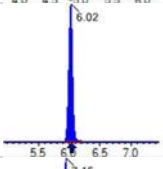 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 703857 | ( 7.15 , N/A ) ( N/A , -0.05 , N/A ) | 6505.5 | N/A | 1.9941 [ 2.0000 ] | 99.7% { 114.3% } | 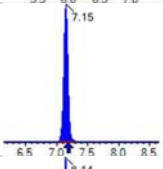 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1015320 | ( 8.14 , N/A ) ( N/A , -0.05 , N/A ) | 4054.4 | N/A | 2.0481 [ 2.0000 ] | 102.4% { 126.0% } | 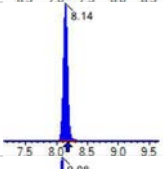 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 313794 | ( 9.08 , N/A ) ( N/A , -0.05 , N/A ) | 2624.6 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 118.9% } | 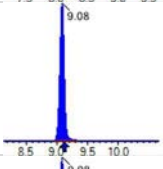 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336264 | ( 9.98 , N/A ) ( N/A , -0.06 , N/A ) | 1613.5 | N/A | 0.9826 [ 1.0000 ] | 98.3% { 109.6% } | 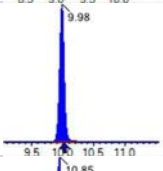 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 384194 | ( 10.85 , N/A ) ( N/A , -0.06 , N/A ) | 1058.0 | N/A | 0.9542 [ 1.0000 ] | 95.4% { 104.3% } | 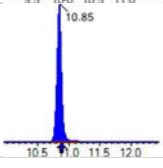 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-06 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382794 | ( 11.67 , N/A ) ( N/A , -0.05 , N/A ) | 1535.4 | N/A | 0.9336 [ 1.0000 ] | 93.4% { 99.1% } | 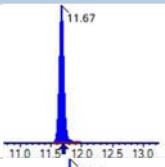 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 291911 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1393.2 | N/A | 0.8360 [ 1.0000 ] | 83.6% { 93.6% } | 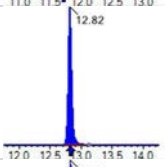 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 463230 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2012.4 | N/A | 1.5540 [ 2.0000 ] | 77.7% { 95.1% } | 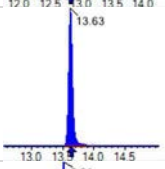 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1916124 | ( 6.31 , N/A ) ( N/A , -0.04 , N/A ) | 1413.8 | N/A | 2.0363 [ 2.0000 ] | 101.8% { 118.5% } | 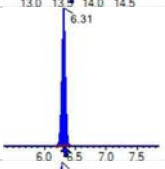 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1571060 | ( 8.58 , N/A ) ( N/A , -0.05 , N/A ) | 3034.3 | N/A | 2.0917 [ 2.0000 ] | 104.6% { 119.6% } | 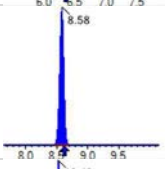 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1795820 | ( 10.43 , N/A ) ( N/A , -0.06 , N/A ) | 1721.2 | N/A | 2.1225 [ 2.0000 ] | 106.1% { 117.4% } | 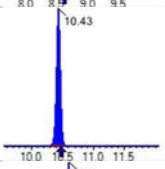 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 818503 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 95.9 | N/A | 5.0415 [ 4.0000 ] | 126.0% { 132.2% } | 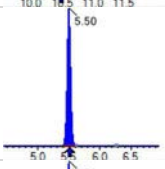 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2164975 | ( 7.59 , N/A ) ( N/A , -0.05 , N/A ) | 3036.7 | N/A | 4.4558 [ 4.0000 ] | 111.4% { 122.4% } | 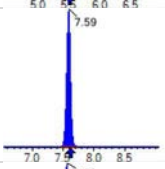 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1622791 | ( 9.36 , N/A ) ( N/A , -0.05 , N/A ) | 1517.5 | N/A | 4.2585 [ 4.0000 ] | 106.5% { 117.2% } | 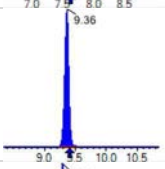 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2929381 | ( 10.99 , N/A ) ( N/A , -0.06 , N/A ) | 1561.6 | N/A | 7.3555 [ 8.0000 ] | 91.9% { 108.8% } | 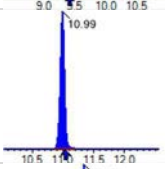 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1368179 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 3152.0 | N/A | 1.8248 [ 2.0000 ] | 91.2% { 100.7% } | 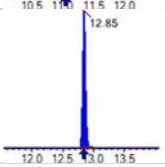 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0110-06 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 125955 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 934.4 | N/A | 0.7920 [ 2.0000 ] | 39.6% { 45.9% } | 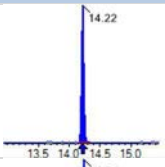 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 121533 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 1051.9 | N/A | 0.7126 [ 2.0000 ] | 35.6% { 40.4% } | 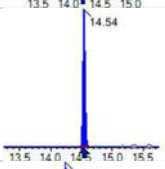 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 837249 | ( 10.24 , N/A ) ( N/A , -0.06 , N/A ) | 1927.0 | N/A | 3.8459 [ 4.0000 ] | 96.1% { 94.3% } | 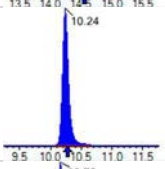 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 791963 | ( 10.76 , N/A ) ( N/A , -0.06 , N/A ) | 2059.5 | N/A | 3.9915 [ 4.0000 ] | 99.8% { 96.2% } | 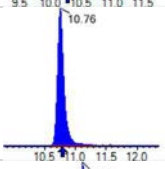 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 945532 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 1955.7 | N/A | 13.2309 [ 20.0000 ] | 66.2% { 78.1% } | 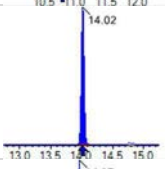 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 945175 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3621.7 | N/A | 13.0308 [ 20.0000 ] | 65.2% { 74.9% } | 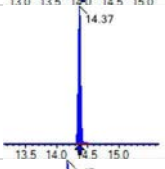 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1169756 | ( 6.47 , N/A ) ( N/A , -0.04 , N/A ) | 2615.9 | N/A | 8.0928 [ 8.0000 ] | 101.2% { 117.8% } | 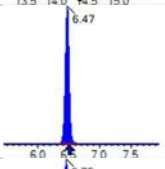 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 783993 | ( 6.75 , N/A ) ( N/A , -0.04 , N/A ) | 1759.2 | N/A | 2.3680 [ 2.0000 ] | 118.4% { 122.3% } | 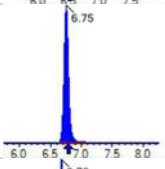 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 644554 | ( 8.78 , N/A ) ( N/A , -0.06 , N/A ) | 721.4 | N/A | 2.1385 [ 2.0000 ] | 106.9% { 109.6% } | 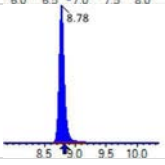 | | |

# ANALYSIS DATA SHEETL

## MW-18-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-07- | File ID:- | S2024-03-21B (18)- |
| Sampled:- | 03/18/24 11:55- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 19:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.541 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 2.3- | 0.19- | 1.5- | |
| PFPeA- | 1.4- | 0.059- | 0.73- | |
| PFHxA- | 1.3- | 0.050- | 0.36- | |
| PFHpA- | 0.85- | 0.037- | 0.36- | |
| PFOA- | 2.5- | 0.14- | 0.36- | MI5- |
| PFNA- | 0.29- | 0.074- | 0.36- | J- |
| PFDA- | ND- | 0.092- | 0.36- | U- |
| PFUnA- | ND- | 0.15- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.19- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 2.8- | 0.033- | 0.36- | |
| PFPeS- | 0.13- | 0.057- | 0.36- | J- |
| PFHxS- | 0.57- | 0.029- | 0.36- | |
| PFHpS- | 0.048- | 0.047- | 0.36- | J- |
| PFOS- | 2.1- | 0.058- | 0.36- | |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.36- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.36- | MI5, U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.096- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-18-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-07- | File ID:- | S2024-03-21B (18)- |
| Sampled:- | 03/18/24 11:55- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 19:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.541 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.95- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.099- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-07 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 100968<br>( 163.0 / 69.0 ) 2646 | ( 2.81 , 0.75 )<br>( N/A , 0.02 , -0.2) | 654.3<br>172.3 | 0.0262<br>96.5<br>97.0 | 0.3560 | N/A | 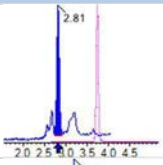 | 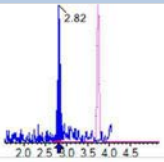 | MI2 DG 2024-03-22 |
| PFBA | ( 213.0 / 169.0 ) 192399 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 164.8 | N/A<br>0.0<br>0.0 | 0.6418 | N/A | 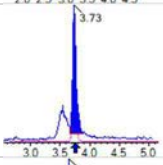 | | |
| PFPeA | ( 263.0 / 219.0 ) 104349<br>( 263.0 / 69.0 ) 1614 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , 0.9) | 649.1<br>39.6 | 0.0155<br>129.5<br>120.2 | 0.3875 | N/A | 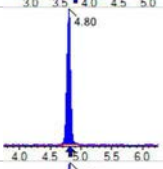 | 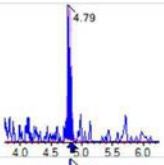 | |
| PFHxA | ( 313.0 / 269.0 ) 115229<br>( 313.0 / 119.0 ) 12835 | ( 6.01 , 1.00 )<br>( 0.00 , N/A , 0.1) | 666.1<br>221.0 | 0.1114<br>95.9<br>100.3 | 0.3643 | N/A | 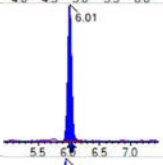 | 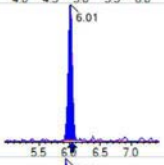 | |
| PFHpA | ( 363.0 / 319.0 ) 85140<br>( 363.0 / 169.0 ) 23903 | ( 7.15 , 1.00 )<br>( 0.00 , N/A , 0.3) | 347.4<br>397.3 | 0.2808<br>92.6<br>95.8 | 0.2345 | N/A | 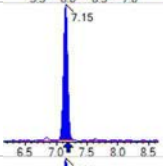 | 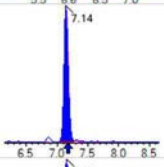 | |
| PFOA | ( 413.0 / 369.0 ) 344244<br>( 413.0 / 169.0 ) 124301 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 319.4<br>370.3 | 0.3611<br>98.8<br>105.3 | 0.6911 | N/A | 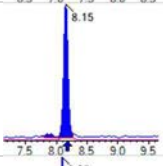 | 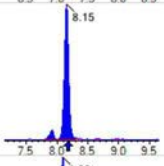 | MI5 DG 2024-03-22 |
| PFNA | ( 463.0 / 419.0 ) 25457<br>( 463.0 / 169.0 ) 5837 | ( 9.09 , 1.00 )<br>( 0.00 , N/A , 0.2) | 145.5<br>84.0 | 0.2293<br>89.8<br>86.2 | 0.0806 | N/A | 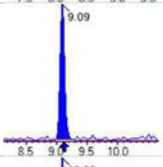 | 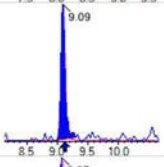 | |
| PFDA | ( 513.0 / 469.0 ) 7859<br>( 513.0 / 169.0 ) 1025 | ( 10.00 , 1.00 )<br>( 0.00 , N/A , 1.5) | 71.3<br>247.6 | 0.1304<br>111.3<br>106.5 | 0.0221 | N/A | 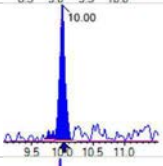 | 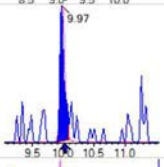 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 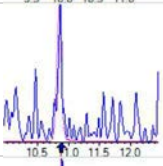 | 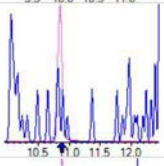 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 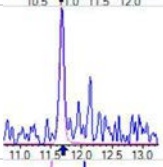 | 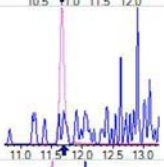 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 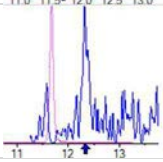 | 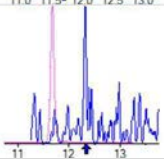 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (18)
Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 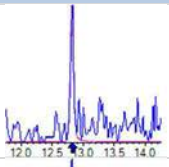 | 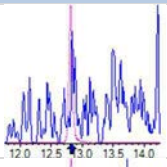 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 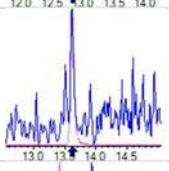 | 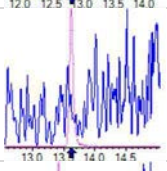 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 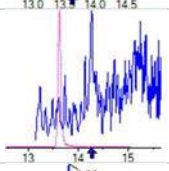 | 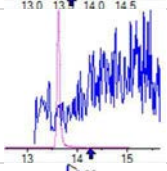 | |
| PFBS | ( 299.0 / 80.0 )<br>388533<br>( 299.0 / 99.0 )<br>281962 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.1) | 986.7<br>1334.4 | 0.7257<br>102.6<br>96.1 | 0.7797 | N/A | 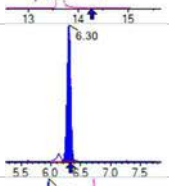 | 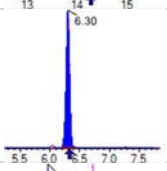 | |
| PFPeS | ( 349.0 / 80.0 )<br>41520<br>( 349.0 / 99.0 )<br>13949 | ( 7.54 , 0.88 )<br>( N/A , -0.04 , -0.2) | 93.6<br>86.8 | 0.3360<br>93.4<br>96.5 | 0.0353 | N/A | 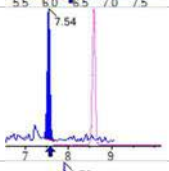 | 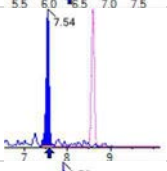 | |
| PFHxS | ( 399.0 / 80.0 )<br>215246<br>( 399.0 / 99.0 )<br>70265 | ( 8.59 , 1.00 )<br>( -0.01 , N/A , -0.1) | 452.9<br>494.3 | 0.3264<br>102.5<br>102.9 | 0.1576 | N/A | 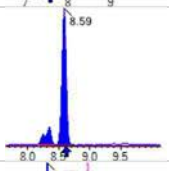 | 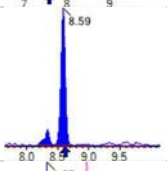 | |
| PFHpS | ( 449.0 / 80.0 )<br>13057<br>( 449.0 / 99.0 )<br>2069 | ( 9.55 , 0.91 )<br>( N/A , -0.05 , -1.0) | 42.4<br>16.7 | 0.1585<br>59.9<br>60.5 | 0.0132 | N/A | 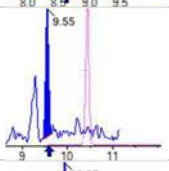 | 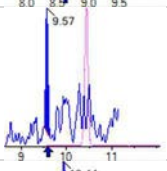 | |
| PFOS | ( 499.0 / 80.0 )<br>537695<br>( 499.0 / 99.0 )<br>94841 | ( 10.35 , 0.99 )<br>( -0.09 , N/A , -5.4) | 338.9<br>419.4 | 0.1764<br>75.5<br>76.9 | 0.5652 | N/A | 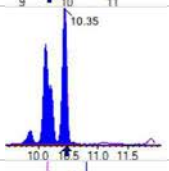 | 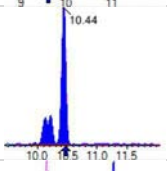 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 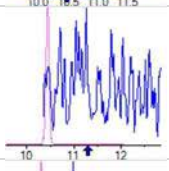 | 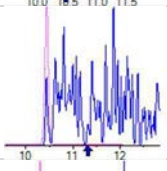 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 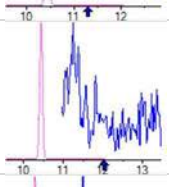 | 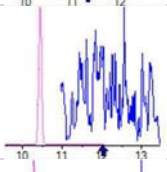 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 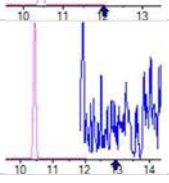 | 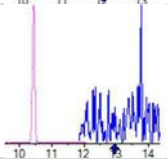 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (18)
Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 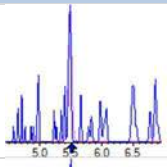 | 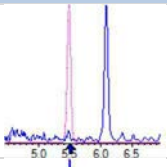 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 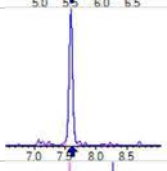 | 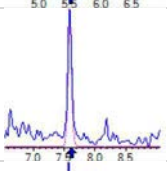 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 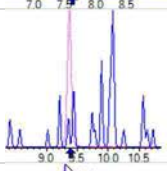 | 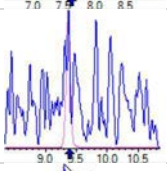 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14994<br>( 627.0 / 81.0 )<br>22001 | ( 10.99 , 1.00 )<br>( 0.00 , N/A , -0.3) | 225.8<br>53.8 | 1.4673<br>101.9<br>105.8 | 0.0550 | N/A | 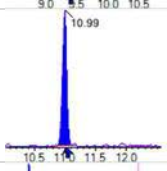 | 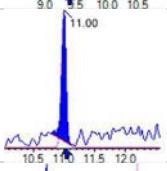 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 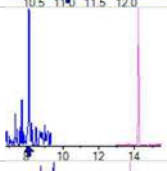 | 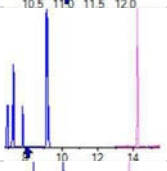 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 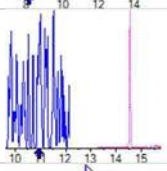 | 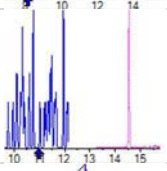 | |
| PFOSA | ( 498.0 / 78.0 )<br>11502<br>( 498.0 / 478.0 )<br>242 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , -1.3) | 142.7<br>12.8 | 0.0210<br>149.9<br>149.1 | 0.0179 | N/A | 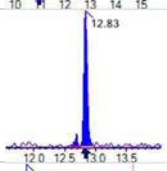 | 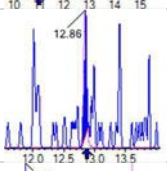 | MI5 DG<br>2024-03-22 |
| TFSI | ( 279.7 / 147.0 )<br>43967<br>( 279.7 / 211.0 )<br>4424 | ( 8.15 , 0.63 )<br>( N/A , -0.05 , 1.0) | 26.5<br>14.4 | 0.1006<br>119.8<br>120.1 | 0.0260 | N/A | 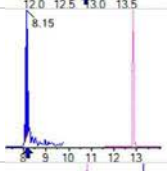 | 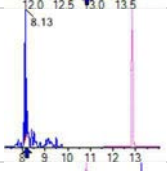 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 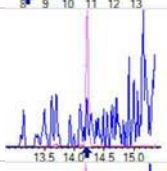 | 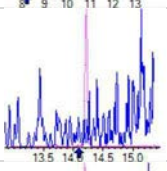 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 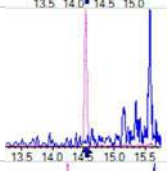 | 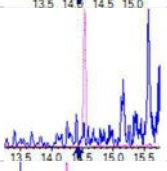 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 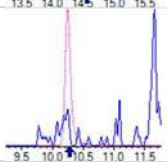 | 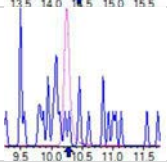 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (18)
Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 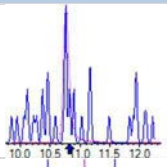 | 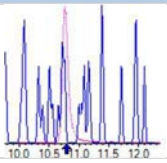 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 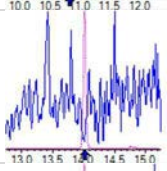 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 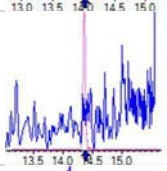 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 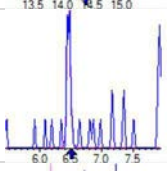 | 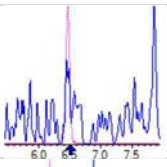 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 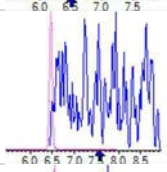 | 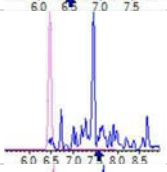 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 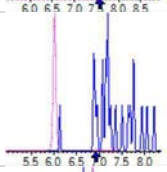 | 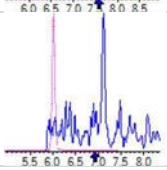 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 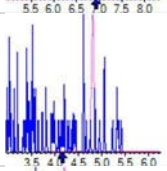 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 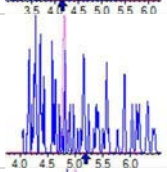 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 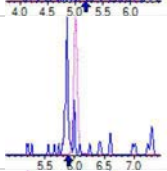 | 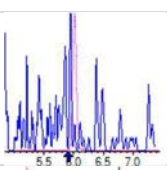 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 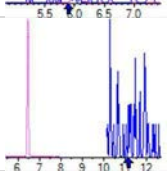 | 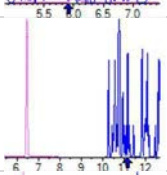 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 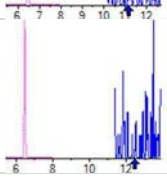 | 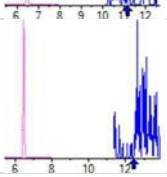 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (18)
Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10903<br>( 461.0 / 381.2 ) 3380 | ( 9.47 , 0.91 )<br>( N/A , -0.05 , 0.1) | 62.9<br>43.1 | 0.3100<br>77.8<br>77.2 | 0.0203 | N/A | 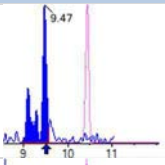 | 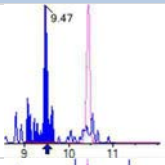 | MI5 DG 2024-03-22 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 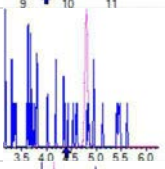 | 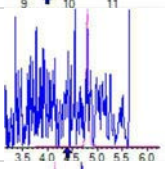 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 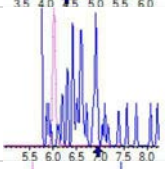 | 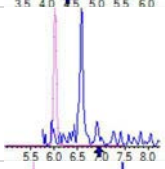 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 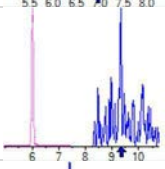 | 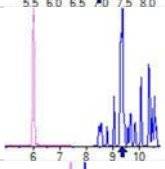 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 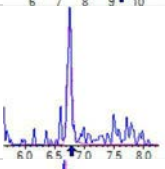 | 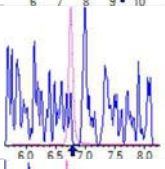 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 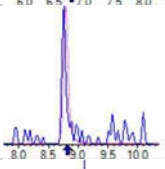 | 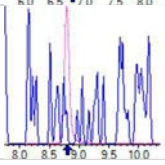 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 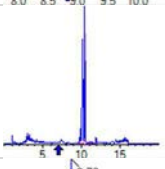 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 313930 | ( 3.73 , N/A )<br>( N/A , -0.02 , N/A ) | 1491.6 | N/A | 1.3166<br>[ 1.0000 ] | 131.7%<br>{ 123.1% } | 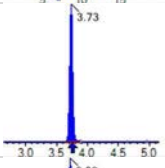 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 138049 | ( 6.02 , N/A )<br>( N/A , -0.04 , N/A ) | 22105.4 | N/A | 1.0882<br>[ 1.0000 ] | 108.8%<br>{ 113.2% } | 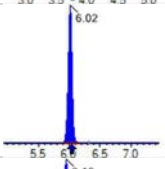 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 462736 | ( 8.16 , N/A )<br>( N/A , -0.04 , N/A ) | 4555.1 | N/A | 1.1705<br>[ 1.0000 ] | 117.1%<br>{ 116.8% } | 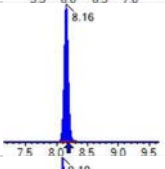 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 326684 | ( 9.10 , N/A )<br>( N/A , -0.04 , N/A ) | 890.3 | N/A | 1.1486<br>[ 1.0000 ] | 114.9%<br>{ 117.9% } | 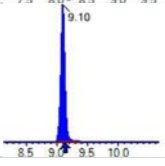 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (18)
Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 310466 | ( 9.99 , N/A ) ( N/A , -0.05 , N/A ) | 7454.2 | N/A | 1.0631 [ 1.0000 ] | 106.3% { 107.6% } | 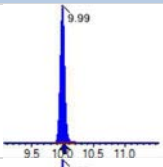 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1025457 | ( 8.59 , N/A ) ( N/A , -0.04 , N/A ) | 5003.0 | N/A | 1.0805 [ 1.0000 ] | 108.1% { 108.7% } | 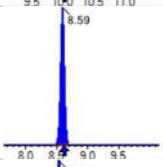 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 837474 | ( 10.44 , N/A ) ( N/A , -0.05 , N/A ) | 1422.2 | N/A | 1.0996 [ 1.0000 ] | 110.0% { 110.1% } | 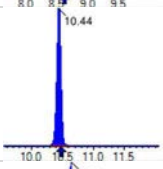 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2406037 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 38204.0 | N/A | 6.7090 [ 8.0000 ] | 83.9% { 110.2% } | 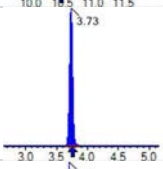 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1066231 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5887.6 | N/A | 4.1395 [ 4.0000 ] | 103.5% { 118.3% } | 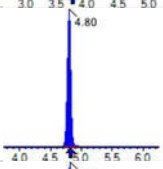 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 658406 | ( 6.01 , N/A ) ( N/A , -0.04 , N/A ) | 6136.3 | N/A | 2.0903 [ 2.0000 ] | 104.5% { 114.8% } | 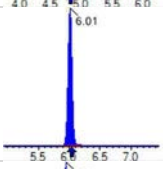 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 740096 | ( 7.15 , N/A ) ( N/A , -0.05 , N/A ) | 4685.4 | N/A | 2.1123 [ 2.0000 ] | 105.6% { 120.2% } | 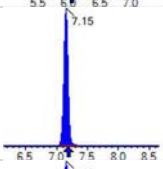 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 991158 | ( 8.16 , N/A ) ( N/A , -0.04 , N/A ) | 3543.1 | N/A | 1.9991 [ 2.0000 ] | 100.0% { 123.0% } | 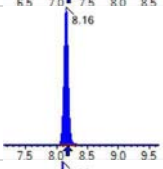 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 314249 | ( 9.09 , N/A ) ( N/A , -0.04 , N/A ) | 3029.1 | N/A | 0.9811 [ 1.0000 ] | 98.1% { 119.1% } | 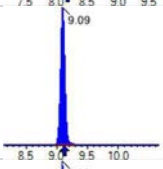 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348504 | ( 9.99 , N/A ) ( N/A , -0.05 , N/A ) | 1369.3 | N/A | 1.0017 [ 1.0000 ] | 100.2% { 113.6% } | 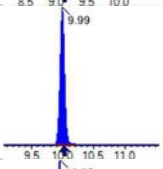 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 368380 | ( 10.85 , N/A ) ( N/A , -0.05 , N/A ) | 907.8 | N/A | 0.9000 [ 1.0000 ] | 90.0% { 100.0% } | 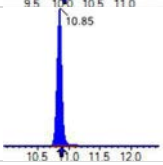 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-07 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 353978 | ( 11.67 , N/A ) ( N/A , -0.05 , N/A ) | 1469.4 | N/A | 0.8492 [ 1.0000 ] | 84.9% { 91.6% } | 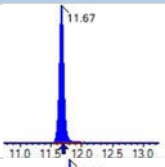 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 277435 | ( 12.81 , N/A ) ( N/A , -0.03 , N/A ) | 1411.2 | N/A | 0.7815 [ 1.0000 ] | 78.2% { 89.0% } | 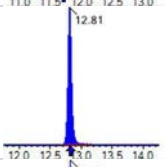 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 450959 | ( 13.62 , N/A ) ( N/A , -0.02 , N/A ) | 2096.7 | N/A | 1.4880 [ 2.0000 ] | 74.4% { 92.6% } | 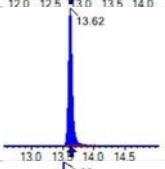 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1919513 | ( 6.30 , N/A ) ( N/A , -0.04 , N/A ) | 1246.8 | N/A | 2.0718 [ 2.0000 ] | 103.6% { 118.7% } | 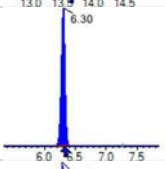 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1536257 | ( 8.59 , N/A ) ( N/A , -0.04 , N/A ) | 3875.1 | N/A | 2.0774 [ 2.0000 ] | 103.9% { 117.0% } | 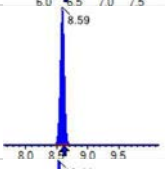 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1647234 | ( 10.44 , N/A ) ( N/A , -0.05 , N/A ) | 1391.0 | N/A | 1.8242 [ 2.0000 ] | 91.2% { 107.7% } | 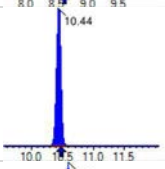 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 764829 | ( 5.49 , N/A ) ( N/A , -0.03 , N/A ) | 85.7 | N/A | 4.7846 [ 4.0000 ] | 119.6% { 123.5% } | 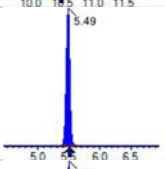 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2187853 | ( 7.59 , N/A ) ( N/A , -0.04 , N/A ) | 2485.6 | N/A | 4.5733 [ 4.0000 ] | 114.3% { 123.7% } | 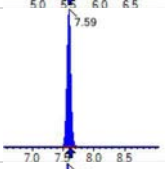 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1549770 | ( 9.37 , N/A ) ( N/A , -0.04 , N/A ) | 1741.4 | N/A | 4.1305 [ 4.0000 ] | 103.3% { 112.0% } | 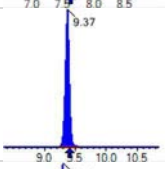 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2827324 | ( 10.99 , N/A ) ( N/A , -0.06 , N/A ) | 1821.3 | N/A | 7.2103 [ 8.0000 ] | 90.1% { 105.0% } | 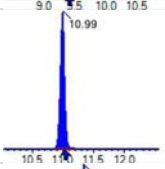 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1285655 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2939.3 | N/A | 1.6067 [ 2.0000 ] | 80.3% { 94.6% } | 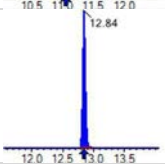 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0110-07 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 105773 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 722.5 | N/A | 0.6232 [ 2.0000 ] | 31.2% { 38.6% } | 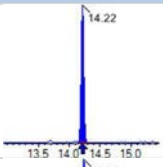 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 96863 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 770.5 | N/A | 0.5322 [ 2.0000 ] | 26.6% { 32.2% } | 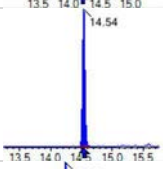 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 844392 | ( 10.25 , N/A ) ( N/A , -0.05 , N/A ) | 2668.9 | N/A | 3.6343 [ 4.0000 ] | 90.9% { 95.1% } | 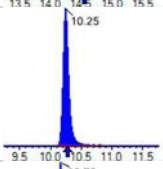 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 741800 | ( 10.76 , N/A ) ( N/A , -0.05 , N/A ) | 1668.4 | N/A | 3.5030 [ 4.0000 ] | 87.6% { 90.1% } | 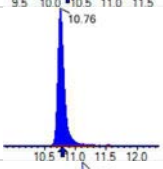 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 804785 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 1616.5 | N/A | 10.5517 [ 20.0000 ] | 52.8% { 66.5% } | 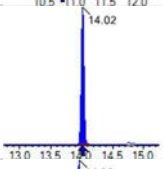 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 856959 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3355.4 | N/A | 11.0700 [ 20.0000 ] | 55.4% { 67.9% } | 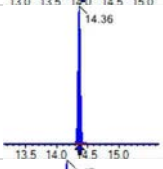 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1166481 | ( 6.47 , N/A ) ( N/A , -0.04 , N/A ) | 2147.1 | N/A | 8.1298 [ 8.0000 ] | 101.6% { 117.5% } | 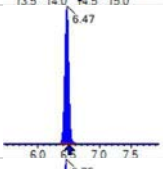 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 771744 | ( 6.75 , N/A ) ( N/A , -0.05 , N/A ) | 1365.4 | N/A | 2.2927 [ 2.0000 ] | 114.6% { 120.4% } | 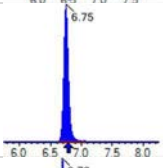 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 641032 | ( 8.79 , N/A ) ( N/A , -0.04 , N/A ) | 675.5 | N/A | 2.0919 [ 2.0000 ] | 104.6% { 109.0% } | 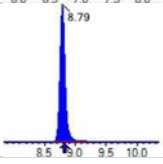 | | |

# ANALYSIS DATA SHEETL

## MW-18-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-08- | File ID:- | S2024-03-21B (19)- |
| Sampled:- | 03/18/24 12:20- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 19:45- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.447 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.30- | 0.19- | 1.5- | MI2, J- |
| PFPeA- | 0.15- | 0.060- | 0.74- | J- |
| PFHxA- | 0.085- | 0.051- | 0.37- | IR2, J- |
| PFHpA- | 0.066- | 0.038- | 0.37- | J- |
| PFOA- | 0.39- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 0.37- | 0.034- | 0.37- | |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | 0.29- | 0.029- | 0.37- | J- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.78- | 0.059- | 0.37- | IR1- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-18-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-08- | File ID:- | S2024-03-21B (19)- |
| Sampled:- | 03/18/24 12:20- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 19:45- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 541.447 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-08 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 94838<br>( 163.0 / 69.0 ) 2665 | ( 2.82 , 0.76 )<br>( N/A , 0.03 , 0.0) | 554.1<br>123.5 | 0.0281<br>103.5<br>104.0 | 0.3227 | N/A | 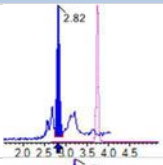 | 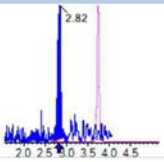 | |
| PFBA | ( 213.0 / 169.0 ) 25485 | ( 3.74 , 1.00 )<br>( 0.01 , N/A , 0.0) | 34.1 | N/A<br>0.0<br>0.0 | 0.0820 | N/A | 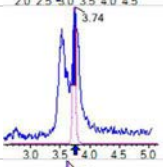 | | MI2 DG 2024-03-22 |
| PFPeA | ( 263.0 / 219.0 ) 11097<br>( 263.0 / 69.0 ) 97 | ( 4.78 , 1.00 )<br>( -0.02 , N/A , -2.3) | 47.3<br>4.8 | 0.0088<br>73.3<br>68.0 | 0.0419 | N/A | 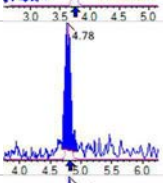 | 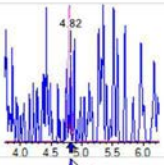 | |
| PFHxA | ( 313.0 / 269.0 ) 6842<br>( 313.0 / 119.0 ) 1425 | ( 6.01 , 1.00 )<br>( -0.01 , N/A , 0.3) | 59.5<br>28.2 | 0.2082<br>179.3<br>187.5 | 0.0230 | N/A | 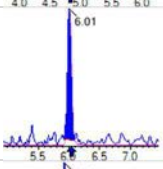 | 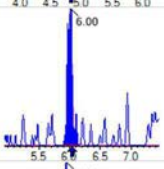 | IR2, |
| PFHpA | ( 363.0 / 319.0 ) 6179<br>( 363.0 / 169.0 ) 1212 | ( 7.13 , 1.00 )<br>( -0.01 , N/A , -0.8) | 49.3<br>26.6 | 0.1961<br>64.7<br>66.9 | 0.0178 | N/A | 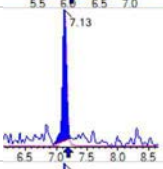 | 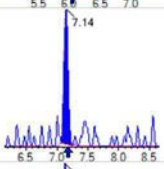 | |
| PFOA | ( 413.0 / 369.0 ) 61244<br>( 413.0 / 169.0 ) 26655 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , -0.1) | 85.0<br>112.0 | 0.4352<br>119.1<br>126.9 | 0.1061 | N/A | 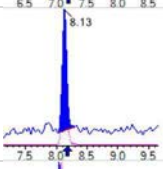 | 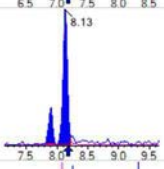 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 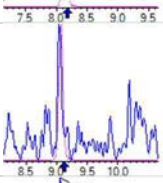 | 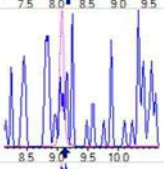 | |
| PFDA | ( 513.0 / 469.0 ) 5873<br>( 513.0 / 169.0 ) 446 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , -0.2) | 70.2<br>22.7 | 0.0759<br>64.8<br>62.0 | 0.0170 | N/A | 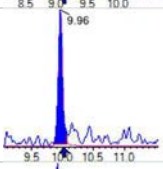 | 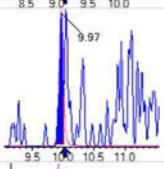 | MI2 DG 2024-03-22 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 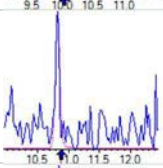 | 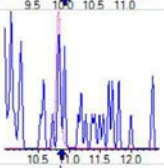 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 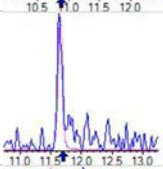 | 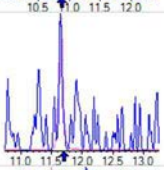 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 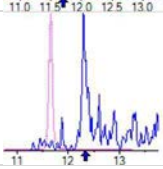 | 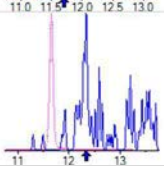 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0110-08 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 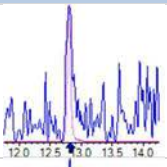 | 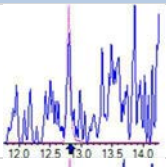 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 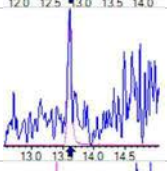 | 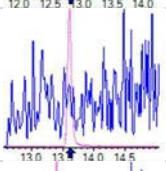 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 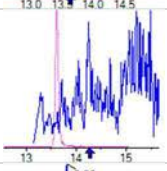 | 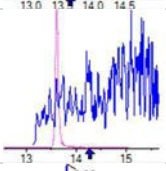 | |
| PFBS | ( 299.0 / 80.0 )<br>50240<br>( 299.0 / 99.0 )<br>36702 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , -0.1) | 206.7<br>264.5 | 0.7305<br>103.3<br>96.8 | 0.1007 | N/A | 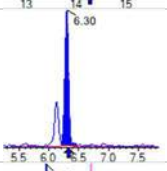 | 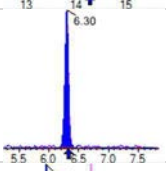 | |
| PFPeS | ( 349.0 / 80.0 )<br>16953<br>( 349.0 / 99.0 )<br>6650 | ( 7.52 , 0.88 )<br>( N/A , -0.06 , -0.2) | 51.2<br>53.7 | 0.3923<br>109.1<br>112.6 | 0.0148 | N/A | 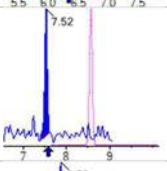 | 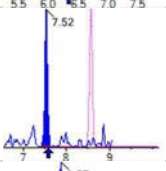 | |
| PFHxS | ( 399.0 / 80.0 )<br>103305<br>( 399.0 / 99.0 )<br>29752 | ( 8.56 , 1.00 )<br>( 0.00 , N/A , -0.1) | 319.7<br>248.0 | 0.2880<br>90.4<br>90.8 | 0.0777 | N/A | 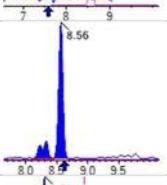 | 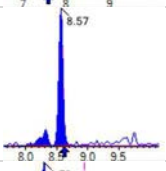 | |
| PFHpS | ( 449.0 / 80.0 )<br>11358<br>( 449.0 / 99.0 )<br>3238 | ( 9.53 , 0.92 )<br>( N/A , -0.07 , 0.4) | 43.4<br>19.0 | 0.2851<br>107.7<br>108.9 | 0.0107 | N/A | 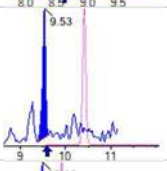 | 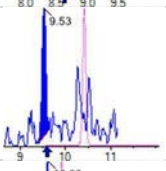 | |
| PFOS | ( 499.0 / 80.0 )<br>216177<br>( 499.0 / 99.0 )<br>23992 | ( 10.12 , 0.97 )<br>( -0.30 , N/A , -6.7) | 233.8<br>147.3 | 0.1110<br>47.5<br>48.4 | 0.2114 | N/A | 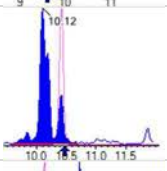 | 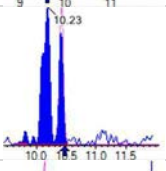 | IR1, |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 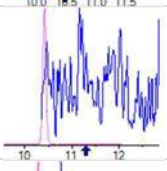 | 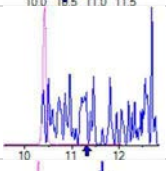 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 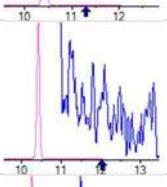 | 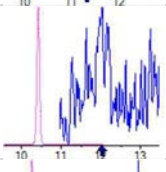 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 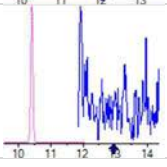 | 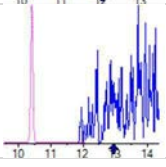 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-08 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 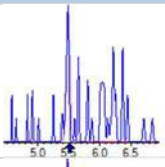 | 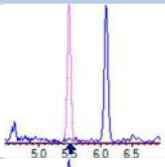 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 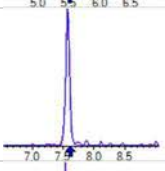 | 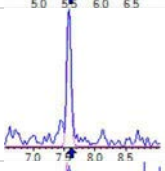 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 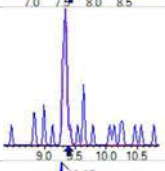 | 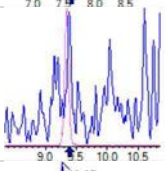 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16547<br>( 627.0 / 81.0 )<br>21014 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.3) | 294.7<br>55.3 | 1.2699<br>88.2<br>91.6 | 0.0627 | N/A | 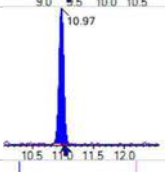 | 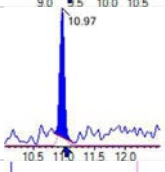 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 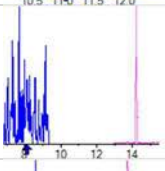 | 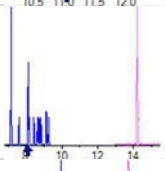 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 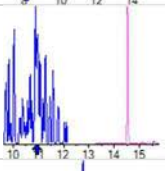 | 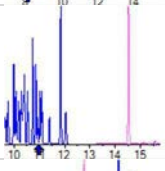 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 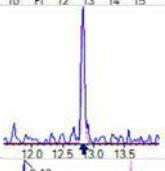 | 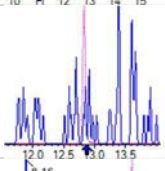 | |
| TFSI | ( 279.7 / 147.0 )<br>38039<br>( 279.7 / 211.0 )<br>2350 | ( 8.13 , 0.63 )<br>( N/A , -0.07 , -1.5) | 28.2<br>11.9 | 0.0618<br>73.5<br>73.7 | 0.0216 | N/A | 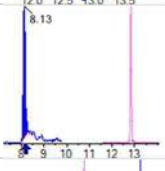 | 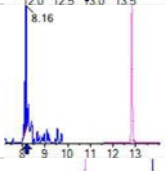 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 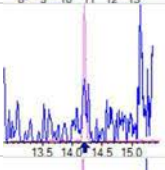 | 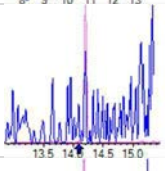 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 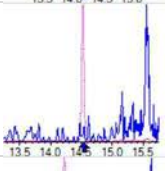 | 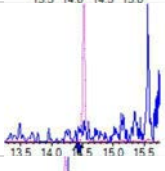 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 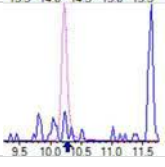 | 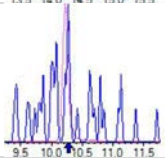 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (19)
Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 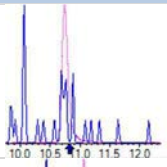 | 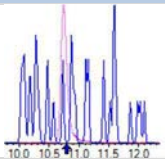 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 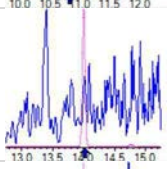 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 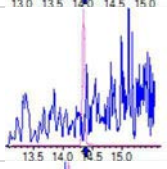 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 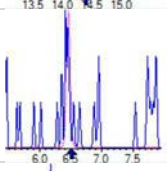 | 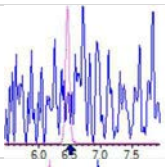 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 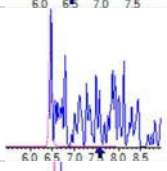 | 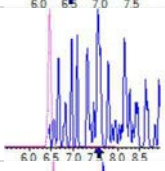 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 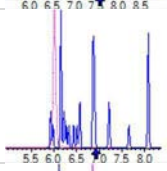 | 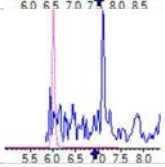 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 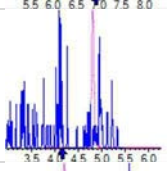 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 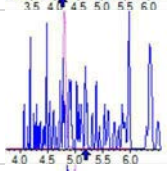 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 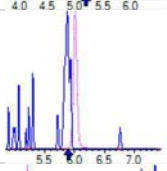 | 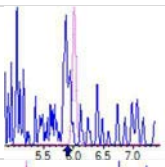 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 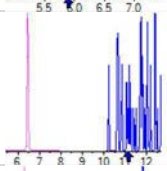 | 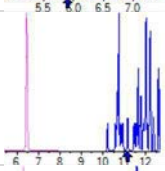 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 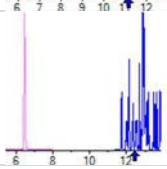 | 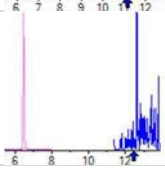 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-08 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 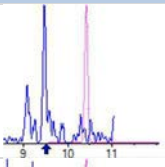 | 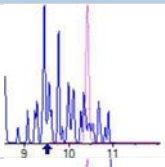 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 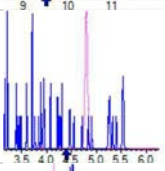 | 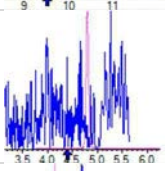 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 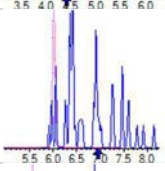 | 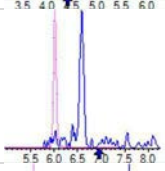 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 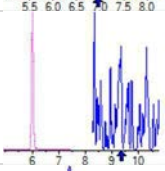 | 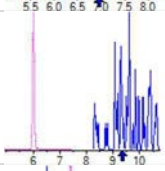 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 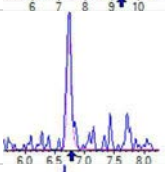 | 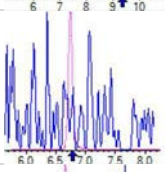 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 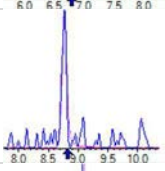 | 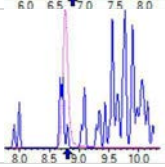 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 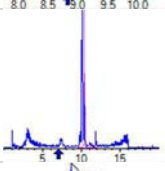 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 301522 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 1345.4 | N/A | 1.2646 [ 1.0000 ] | 126.5% { 118.2% } | 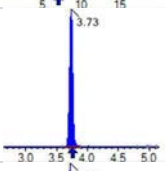 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 135499 | ( 6.02 , N/A ) ( N/A , -0.04 , N/A ) | 21560.0 | N/A | 1.0681 [ 1.0000 ] | 106.8% { 111.1% } | 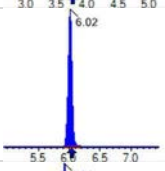 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 443239 | ( 8.14 , N/A ) ( N/A , -0.06 , N/A ) | 4079.7 | N/A | 1.1212 [ 1.0000 ] | 112.1% { 111.9% } | 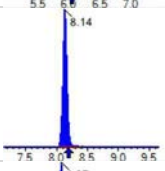 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 296631 | ( 9.07 , N/A ) ( N/A , -0.07 , N/A ) | 1070.2 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 107.0% } | 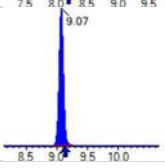 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (19)
Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294663 | ( 9.97 , N/A ) ( N/A , -0.08 , N/A ) | 12832.7 | N/A | 1.0090 [ 1.0000 ] | 100.9% { 102.1% } | 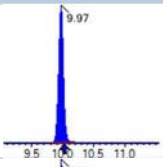 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1020001 | ( 8.57 , N/A ) ( N/A , -0.07 , N/A ) | 4737.9 | N/A | 1.0748 [ 1.0000 ] | 107.5% { 108.1% } | 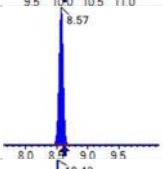 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 778128 | ( 10.42 , N/A ) ( N/A , -0.08 , N/A ) | 1335.9 | N/A | 1.0216 [ 1.0000 ] | 102.2% { 102.3% } | 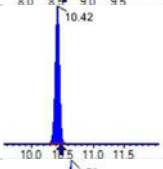 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2493150 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 39519.8 | N/A | 7.2380 [ 8.0000 ] | 90.5% { 114.2% } | 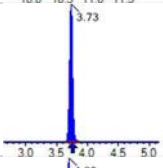 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1048578 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5322.1 | N/A | 4.1475 [ 4.0000 ] | 103.7% { 116.3% } | 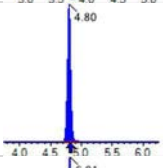 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 619608 | ( 6.01 , N/A ) ( N/A , -0.04 , N/A ) | 7128.5 | N/A | 2.0042 [ 2.0000 ] | 100.2% { 108.0% } | 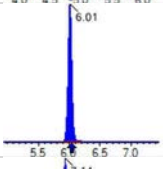 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 708910 | ( 7.14 , N/A ) ( N/A , -0.06 , N/A ) | 3938.2 | N/A | 2.0613 [ 2.0000 ] | 103.1% { 115.2% } | 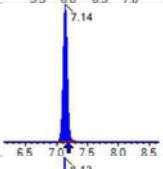 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 962713 | ( 8.13 , N/A ) ( N/A , -0.06 , N/A ) | 3037.0 | N/A | 2.0271 [ 2.0000 ] | 101.4% { 119.5% } | 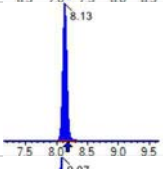 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 302307 | ( 9.07 , N/A ) ( N/A , -0.07 , N/A ) | 2682.3 | N/A | 1.0394 [ 1.0000 ] | 103.9% { 114.6% } | 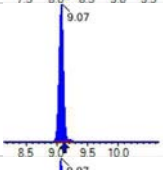 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 337147 | ( 9.97 , N/A ) ( N/A , -0.07 , N/A ) | 1791.2 | N/A | 1.0210 [ 1.0000 ] | 102.1% { 109.9% } | 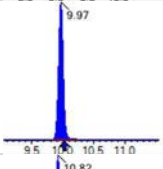 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 382734 | ( 10.82 , N/A ) ( N/A , -0.08 , N/A ) | 1273.5 | N/A | 0.9852 [ 1.0000 ] | 98.5% { 103.9% } | 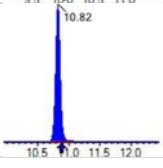 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-08 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 342955 | ( 11.65 , N/A ) ( N/A , -0.07 , N/A ) | 1002.1 | N/A | 0.8668 [ 1.0000 ] | 86.7% { 88.8% } | 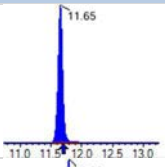 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 273171 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1177.5 | N/A | 0.8108 [ 1.0000 ] | 81.1% { 87.6% } | 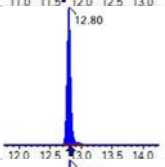 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 462142 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2131.8 | N/A | 1.6067 [ 2.0000 ] | 80.3% { 94.9% } | 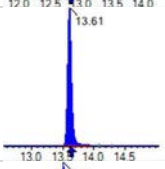 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1921093 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 1381.5 | N/A | 2.0846 [ 2.0000 ] | 104.2% { 118.8% } | 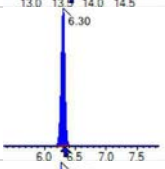 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1495530 | ( 8.57 , N/A ) ( N/A , -0.07 , N/A ) | 3423.4 | N/A | 2.0331 [ 2.0000 ] | 101.7% { 113.9% } | 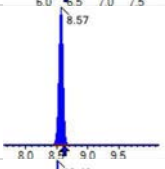 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1770807 | ( 10.42 , N/A ) ( N/A , -0.08 , N/A ) | 1455.8 | N/A | 2.1106 [ 2.0000 ] | 105.5% { 115.7% } | 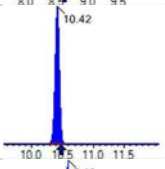 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 736022 | ( 5.49 , N/A ) ( N/A , -0.03 , N/A ) | 99.8 | N/A | 4.6290 [ 4.0000 ] | 115.7% { 118.8% } | 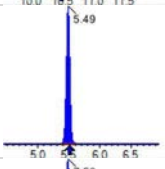 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1850252 | ( 7.58 , N/A ) ( N/A , -0.06 , N/A ) | 2326.1 | N/A | 3.8883 [ 4.0000 ] | 97.2% { 104.6% } | 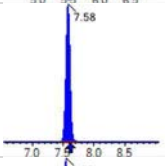 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1586693 | ( 9.35 , N/A ) ( N/A , -0.07 , N/A ) | 1346.9 | N/A | 4.2516 [ 4.0000 ] | 106.3% { 114.6% } | 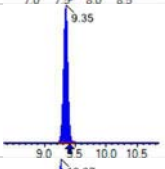 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2739916 | ( 10.97 , N/A ) ( N/A , -0.08 , N/A ) | 1555.2 | N/A | 7.0248 [ 8.0000 ] | 87.8% { 101.7% } | 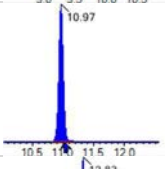 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1336152 | ( 12.83 , N/A ) ( N/A , -0.03 , N/A ) | 2857.1 | N/A | 1.7971 [ 2.0000 ] | 89.9% { 98.3% } | 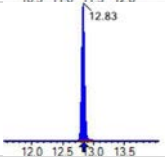 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-08 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 19:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 112151 | ( 14.20 , N/A ) ( N/A , -0.02 , N/A ) | 836.4 | N/A | 0.7112 [ 2.0000 ] | 35.6% { 40.9% } | 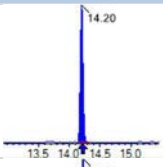 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 116049 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 920.6 | N/A | 0.6862 [ 2.0000 ] | 34.3% { 38.6% } | 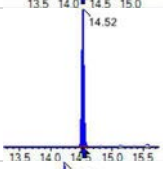 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 844776 | ( 10.22 , N/A ) ( N/A , -0.07 , N/A ) | 1877.5 | N/A | 3.9132 [ 4.0000 ] | 97.8% { 95.1% } | 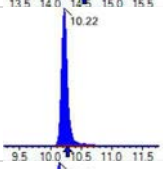 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 764234 | ( 10.74 , N/A ) ( N/A , -0.08 , N/A ) | 1710.8 | N/A | 3.8842 [ 4.0000 ] | 97.1% { 92.8% } | 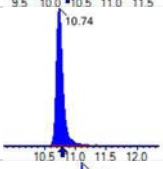 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 853067 | ( 14.00 , N/A ) ( N/A , -0.02 , N/A ) | 1782.7 | N/A | 12.0378 [ 20.0000 ] | 60.2% { 70.4% } | 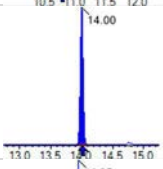 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 852175 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 2262.5 | N/A | 11.8478 [ 20.0000 ] | 59.2% { 67.5% } | 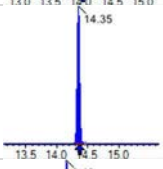 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1139634 | ( 6.46 , N/A ) ( N/A , -0.05 , N/A ) | 2170.8 | N/A | 8.0922 [ 8.0000 ] | 101.2% { 114.8% } | 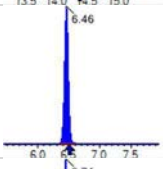 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 765910 | ( 6.74 , N/A ) ( N/A , -0.05 , N/A ) | 1646.9 | N/A | 2.3974 [ 2.0000 ] | 119.9% { 119.5% } | 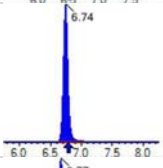 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 643223 | ( 8.77 , N/A ) ( N/A , -0.07 , N/A ) | 600.5 | N/A | 2.2117 [ 2.0000 ] | 110.6% { 109.3% } | 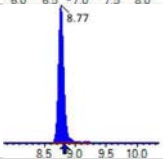 | | |

# ANALYSIS DATA SHEETL

MW-18-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-09- | File ID:- | S2024-03-21B (20)- |
| Sampled:- | 03/18/24 13:00- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 20:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 537.844 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.51- | 0.19- | 1.5- | MI5, J- |
| PFPeA- | 0.26- | 0.060- | 0.74- | J- |
| PFHxA- | 0.16- | 0.051- | 0.37- | J- |
| PFHpA- | 0.13- | 0.038- | 0.37- | J- |
| PFOA- | 0.44- | 0.14- | 0.37- | |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | 0.095- | 0.094- | 0.37- | MI2, J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 0.19- | 0.034- | 0.37- | J- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | 0.19- | 0.029- | 0.37- | MI5, J- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.86- | 0.059- | 0.37- | MI1- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-18-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-09- | File ID:- | S2024-03-21B (20)- |
| Sampled:- | 03/18/24 13:00- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 20:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 537.844 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 73516<br>( 163.0 / 69.0 ) 2368 | ( 2.88 , 0.77 )<br>( N/A , 0.08 , 0.0) | 553.7<br>138.8 | 0.0322<br>118.6<br>119.2 | 0.2503 | N/A | 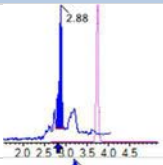 | 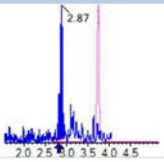 | MI2 DG 2024-03-22 |
| PFBA | ( 213.0 / 169.0 ) 42185 | ( 3.76 , 1.01 )<br>( 0.03 , N/A , 0.0) | 34.0 | N/A<br>0.0<br>0.0 | 0.1359 | N/A | 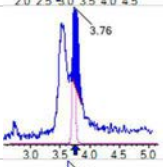 | | MI5 DG 2024-03-22 |
| PFPeA | ( 263.0 / 219.0 ) 17147<br>( 263.0 / 69.0 ) 328 | ( 4.79 , 1.00 )<br>( 0.00 , N/A , -0.4) | 104.4<br>9.3 | 0.0191<br>160.2<br>148.7 | 0.0703 | N/A | 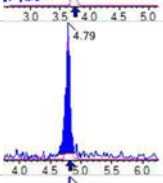 | 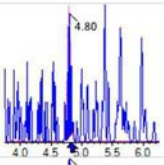 | |
| PFHxA | ( 313.0 / 269.0 ) 12998<br>( 313.0 / 119.0 ) 1591 | ( 6.00 , 1.00 )<br>( 0.00 , N/A , 0.8) | 86.2<br>32.9 | 0.1224<br>105.4<br>110.2 | 0.0438 | N/A | 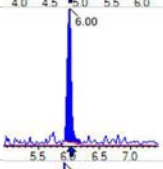 | 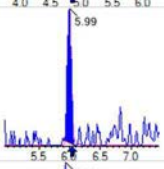 | |
| PFHpA | ( 363.0 / 319.0 ) 10640<br>( 363.0 / 169.0 ) 2510 | ( 7.13 , 1.00 )<br>( 0.00 , N/A , -0.4) | 60.6<br>39.6 | 0.2359<br>77.8<br>80.5 | 0.0356 | N/A | 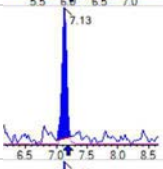 | 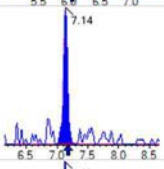 | |
| PFOA | ( 413.0 / 369.0 ) 60780<br>( 413.0 / 169.0 ) 27021 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.0) | 83.0<br>123.7 | 0.4446<br>121.6<br>129.6 | 0.1184 | N/A | 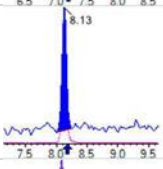 | 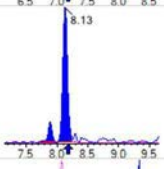 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 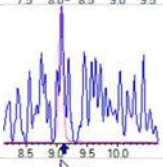 | 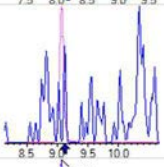 | |
| PFDA | ( 513.0 / 469.0 ) 8268<br>( 513.0 / 169.0 ) 1448 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , -0.5) | 78.6<br>57.8 | 0.1751<br>149.4<br>143.0 | 0.0256 | N/A | 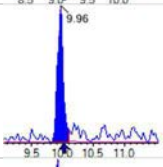 | 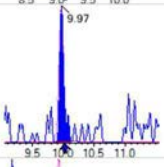 | MI2 DG 2024-03-22 |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 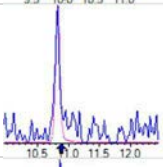 | 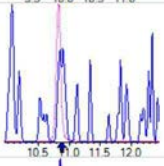 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 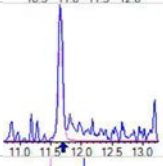 | 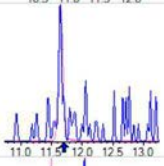 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 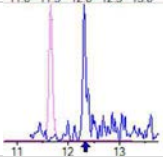 | 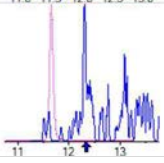 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 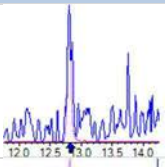 | 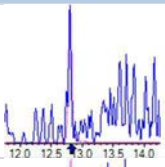 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 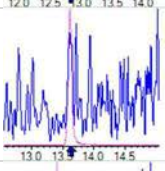 | 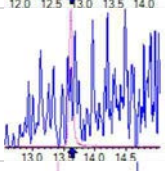 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 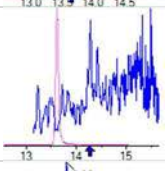 | 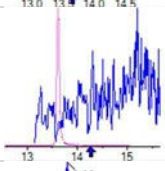 | |
| PFBS | ( 299.0 / 80.0 )<br>23242<br>( 299.0 / 99.0 )<br>18144 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 152.9<br>146.4 | 0.7807<br>110.4<br>103.4 | 0.0517 | N/A | 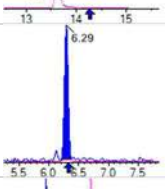 | 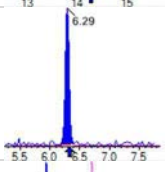 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 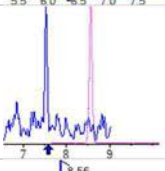 | 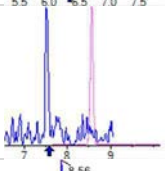 | |
| PFHxS | ( 399.0 / 80.0 )<br>66679<br>( 399.0 / 99.0 )<br>25194 | ( 8.56 , 1.00 )<br>( 0.00 , N/A , 0.3) | 244.8<br>171.9 | 0.3778<br>118.6<br>119.1 | 0.0517 | N/A | 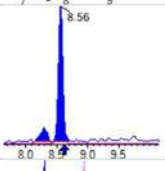 | 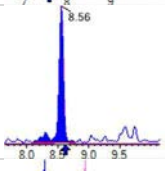 | MI5 DG 2024-03-22 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 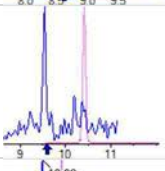 | 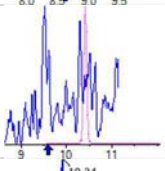 | |
| PFOS | ( 499.0 / 80.0 )<br>227995<br>( 499.0 / 99.0 )<br>32198 | ( 10.09 , 0.97 )<br>( -0.32 , N/A , -15.2) | 207.3<br>96.4 | 0.1412<br>60.4<br>61.6 | 0.2315 | N/A | 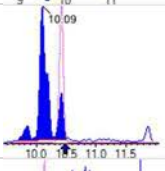 | 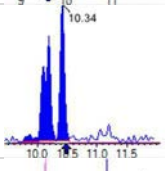 | MI1 DG 2024-03-22 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 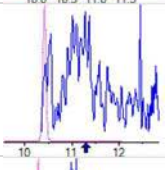 | 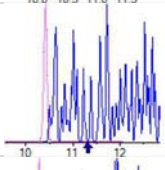 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 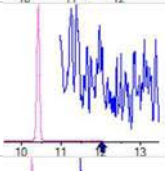 | 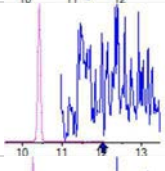 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 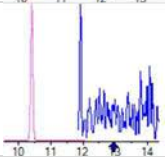 | 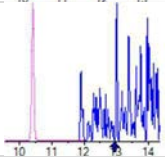 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (20)
Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 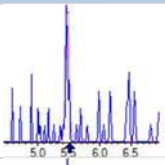 | 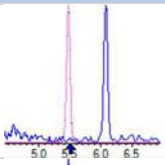 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 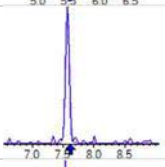 | 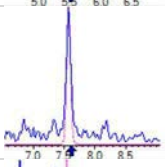 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 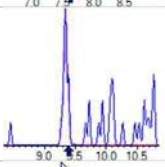 | 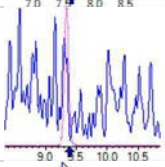 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14612<br>( 627.0 / 81.0 ) 24328 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.5) | 272.4<br>66.4 | 1.6650<br>115.7<br>120.1 | 0.0533 | N/A | 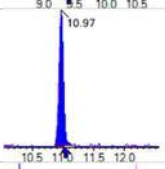 | 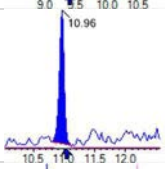 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 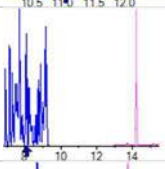 | 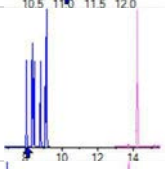 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 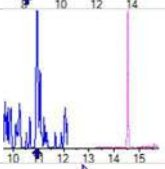 | 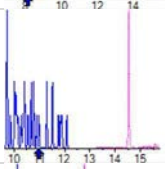 | |
| PFOSA | ( 498.0 / 78.0 ) 9293<br>( 498.0 / 478.0 ) 277 | ( 12.82 , 1.00 ) ( -0.01 , N/A , -1.6) | 122.2<br>7.0 | 0.0298<br>212.5<br>211.4 | 0.0163 | N/A | 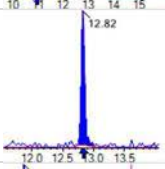 | 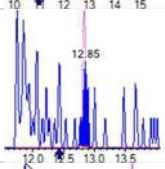 | |
| TFSI | ( 279.7 / 147.0 ) 35285<br>( 279.7 / 211.0 ) 4013 | ( 8.12 , 0.63 ) ( N/A , -0.07 , -0.2) | 27.2<br>14.4 | 0.1137<br>135.4<br>135.8 | 0.0235 | N/A | 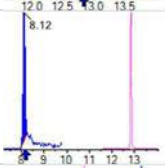 | 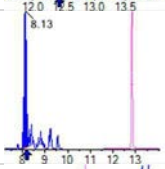 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 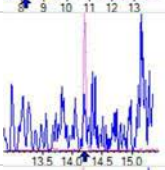 | 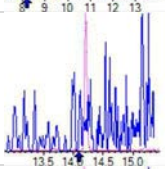 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 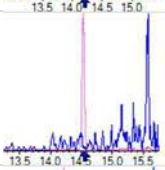 | 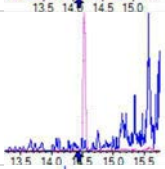 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 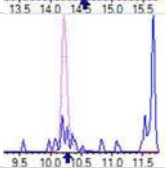 | 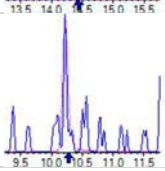 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 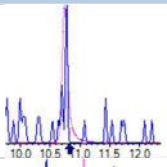 | 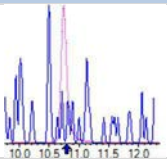 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 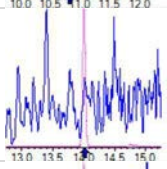 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 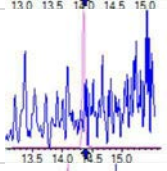 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 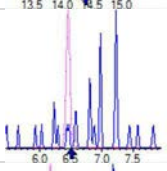 | 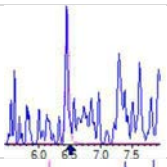 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 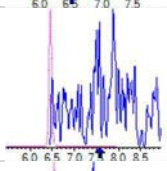 | 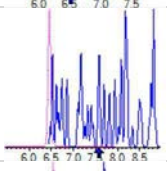 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 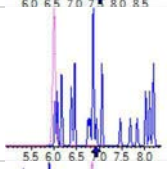 | 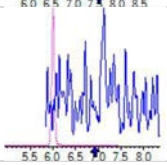 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 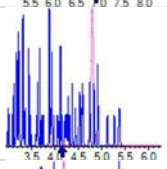 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 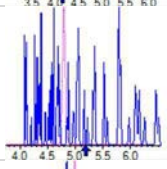 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 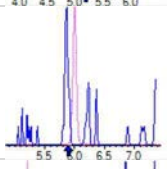 | 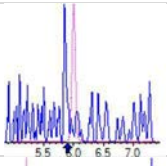 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 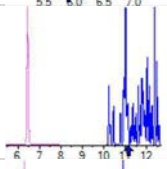 | 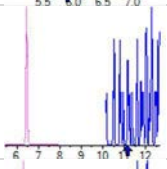 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 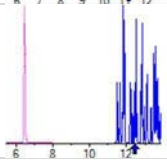 | 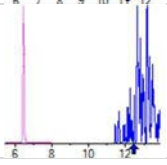 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 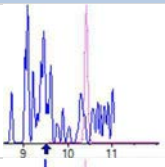 | 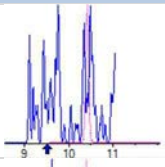 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 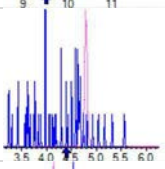 | 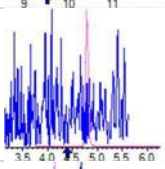 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 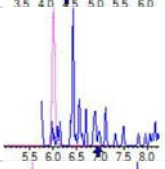 | 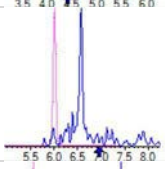 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 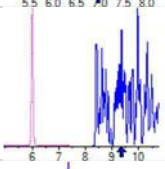 | 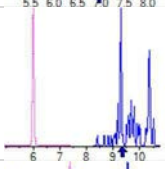 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 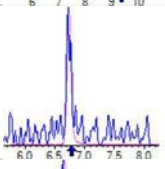 | 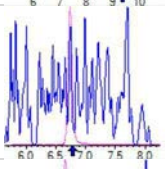 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 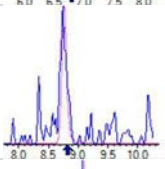 | 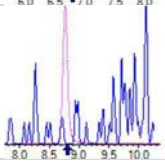 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 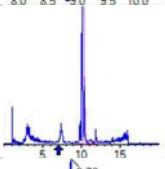 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 279530 | ( 3.73 , N/A )<br>( N/A , -0.02 , N/A ) | 1259.5 | N/A | 1.1724<br>[ 1.0000 ] | 117.2%<br>{ 109.6% } | 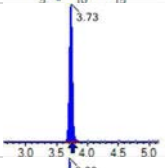 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 126723 | ( 6.00 , N/A )<br>( N/A , -0.05 , N/A ) | 163511.3 | N/A | 0.9990<br>[ 1.0000 ] | 99.9%<br>{ 103.9% } | 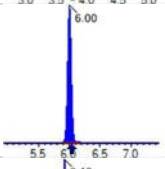 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 413458 | ( 8.13 , N/A )<br>( N/A , -0.07 , N/A ) | 2803.2 | N/A | 1.0459<br>[ 1.0000 ] | 104.6%<br>{ 104.3% } | 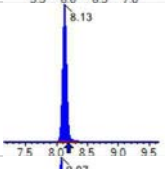 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277045 | ( 9.07 , N/A )<br>( N/A , -0.07 , N/A ) | 1055.1 | N/A | 0.9741<br>[ 1.0000 ] | 97.4%<br>{ 100.0% } | 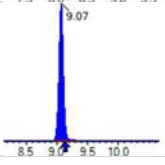 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 285370 | ( 9.97 , N/A ) ( N/A , -0.08 , N/A ) | 3027.7 | N/A | 0.9772 [ 1.0000 ] | 97.7% { 98.9% } | 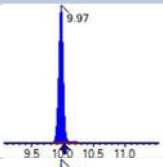 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 920699 | ( 8.57 , N/A ) ( N/A , -0.07 , N/A ) | 5144.5 | N/A | 0.9701 [ 1.0000 ] | 97.0% { 97.6% } | 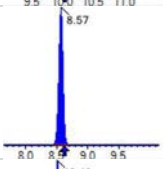 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 733835 | ( 10.42 , N/A ) ( N/A , -0.08 , N/A ) | 1278.3 | N/A | 0.9635 [ 1.0000 ] | 96.3% { 96.5% } | 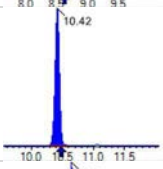 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2491963 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 35250.2 | N/A | 7.8037 [ 8.0000 ] | 97.5% { 114.2% } | 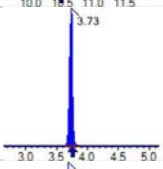 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 966049 | ( 4.79 , N/A ) ( N/A , -0.04 , N/A ) | 5434.3 | N/A | 4.0857 [ 4.0000 ] | 102.1% { 107.1% } | 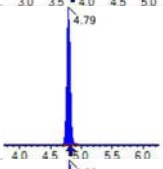 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 617315 | ( 6.00 , N/A ) ( N/A , -0.05 , N/A ) | 8588.3 | N/A | 2.1350 [ 2.0000 ] | 106.8% { 107.6% } | 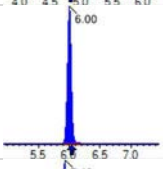 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 608384 | ( 7.13 , N/A ) ( N/A , -0.06 , N/A ) | 4663.1 | N/A | 1.8915 [ 2.0000 ] | 94.6% { 98.8% } | 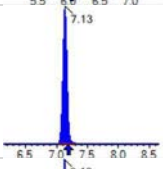 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 873523 | ( 8.13 , N/A ) ( N/A , -0.07 , N/A ) | 3536.6 | N/A | 1.9718 [ 2.0000 ] | 98.6% { 108.4% } | 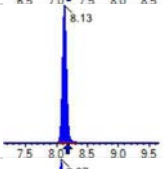 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 281757 | ( 9.07 , N/A ) ( N/A , -0.07 , N/A ) | 2569.7 | N/A | 1.0372 [ 1.0000 ] | 103.7% { 106.8% } | 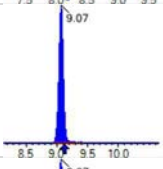 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316204 | ( 9.97 , N/A ) ( N/A , -0.07 , N/A ) | 1429.2 | N/A | 0.9887 [ 1.0000 ] | 98.9% { 103.0% } | 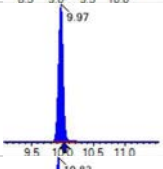 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363560 | ( 10.83 , N/A ) ( N/A , -0.08 , N/A ) | 1107.8 | N/A | 0.9663 [ 1.0000 ] | 96.6% { 98.7% } | 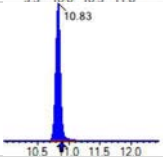 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 337700 | ( 11.65 , N/A ) ( N/A , -0.07 , N/A ) | 1448.4 | N/A | 0.8814 [ 1.0000 ] | 88.1% { 87.4% } | 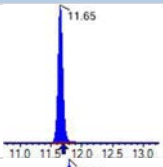 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 271985 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1289.7 | N/A | 0.8335 [ 1.0000 ] | 83.4% { 87.2% } | 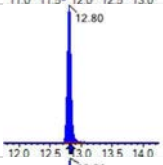 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 434073 | ( 13.61 , N/A ) ( N/A , -0.03 , N/A ) | 1874.0 | N/A | 1.5582 [ 2.0000 ] | 77.9% { 89.2% } | 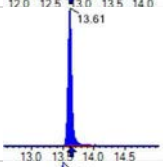 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1733210 | ( 6.29 , N/A ) ( N/A , -0.05 , N/A ) | 1347.5 | N/A | 2.0836 [ 2.0000 ] | 104.2% { 107.2% } | 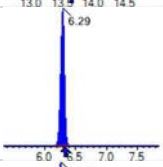 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1449676 | ( 8.56 , N/A ) ( N/A , -0.07 , N/A ) | 4057.5 | N/A | 2.1833 [ 2.0000 ] | 109.2% { 110.4% } | 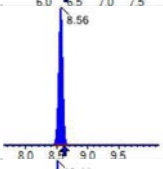 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1705380 | ( 10.41 , N/A ) ( N/A , -0.08 , N/A ) | 1468.2 | N/A | 2.1553 [ 2.0000 ] | 107.8% { 111.5% } | 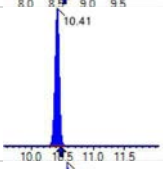 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 629737 | ( 5.47 , N/A ) ( N/A , -0.05 , N/A ) | 91.0 | N/A | 4.3877 [ 4.0000 ] | 109.7% { 101.7% } | 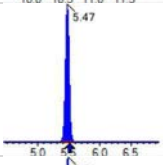 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1719146 | ( 7.58 , N/A ) ( N/A , -0.06 , N/A ) | 2468.5 | N/A | 4.0025 [ 4.0000 ] | 100.1% { 97.2% } | 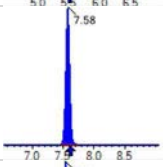 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1367004 | ( 9.34 , N/A ) ( N/A , -0.07 , N/A ) | 1502.8 | N/A | 4.0580 [ 4.0000 ] | 101.4% { 98.8% } | 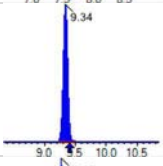 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2848090 | ( 10.97 , N/A ) ( N/A , -0.08 , N/A ) | 1789.2 | N/A | 8.0897 [ 8.0000 ] | 101.1% { 105.7% } | 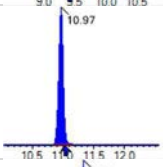 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1141378 | ( 12.83 , N/A ) ( N/A , -0.03 , N/A ) | 2456.9 | N/A | 1.6278 [ 2.0000 ] | 81.4% { 84.0% } | 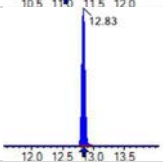 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0110-09 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 85364 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 712.9 | N/A | 0.5740 [ 2.0000 ] | 28.7% { 31.1% } | 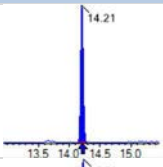 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 80869 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 783.5 | N/A | 0.5071 [ 2.0000 ] | 25.4% { 26.9% } | 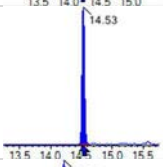 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 820315 | ( 10.22 , N/A ) ( N/A , -0.08 , N/A ) | 2301.1 | N/A | 4.0293 [ 4.0000 ] | 100.7% { 92.4% } | 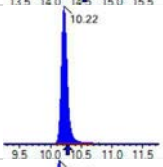 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 729678 | ( 10.74 , N/A ) ( N/A , -0.07 , N/A ) | 1845.9 | N/A | 3.9324 [ 4.0000 ] | 98.3% { 88.6% } | 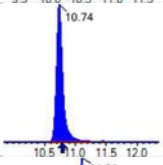 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 709270 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 1212.4 | N/A | 10.6128 [ 20.0000 ] | 53.1% { 58.6% } | 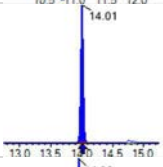 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 663282 | ( 14.36 , N/A ) ( N/A , -0.02 , N/A ) | 2821.1 | N/A | 9.7782 [ 20.0000 ] | 48.9% { 52.6% } | 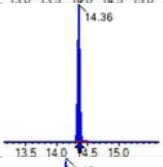 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1016129 | ( 6.45 , N/A ) ( N/A , -0.06 , N/A ) | 2435.6 | N/A | 7.7149 [ 8.0000 ] | 96.4% { 102.3% } | 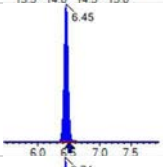 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 763245 | ( 6.74 , N/A ) ( N/A , -0.06 , N/A ) | 1401.5 | N/A | 2.4669 [ 2.0000 ] | 123.3% { 119.1% } | 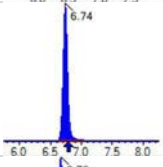 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 601986 | ( 8.76 , N/A ) ( N/A , -0.07 , N/A ) | 721.4 | N/A | 2.1373 [ 2.0000 ] | 106.9% { 102.3% } | 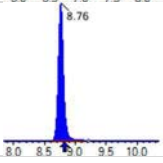 | | |

# ANALYSIS DATA SHEETL

SB-2-031824-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-10- | File ID:- | S2024-03-21B (21)- |
| Sampled:- | 03/18/24 13:05- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 20:26- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 539.858 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.11- | 0.060- | 0.74- | J- |
| PFHxA- | ND- | 0.051- | 0.37- | U- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | 0.20- | 0.14- | 0.37- | J- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | MI2, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | ND- | 0.029- | 0.37- | U- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.071- | 0.059- | 0.37- | MI5, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.096- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

SB-2-031824-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-10- | File ID:- | S2024-03-21B (21)- |
| Sampled:- | 03/18/24 13:05- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 20:26- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 539.858 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-10 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>33593<br>( 163.0 / 69.0 )<br>1134 | ( 2.80 , 0.76 )<br>( N/A , 0.01 , 0.6) | 230.9<br>84.8 | 0.0338<br>124.3<br>125.0 | 0.0997 | N/A | 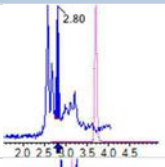 | 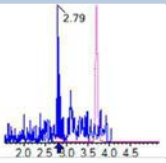 | MI2 DG 2024-03-22 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 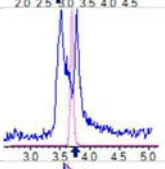 | | |
| PFPeA | ( 263.0 / 219.0 )<br>7971<br>( 263.0 / 69.0 )<br>245 | ( 4.73 , 0.99 )<br>( -0.05 , N/A , -2.3) | 49.3<br>9.0 | 0.0307<br>257.1<br>238.6 | 0.0297 | N/A | 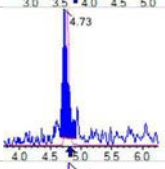 | 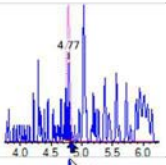 | |
| PFHxA | ( 313.0 / 269.0 )<br>4074<br>( 313.0 / 119.0 )<br>631 | ( 5.99 , 1.00 )<br>( 0.00 , N/A , -0.4) | 30.3<br>15.6 | 0.1548<br>133.3<br>139.4 | 0.0123 | N/A | 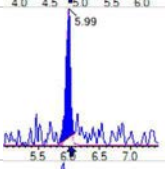 | 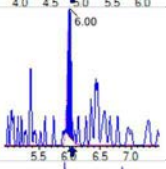 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 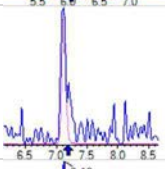 | 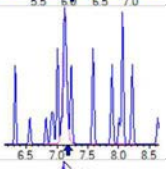 | |
| PFOA | ( 413.0 / 369.0 )<br>40467<br>( 413.0 / 169.0 )<br>14273 | ( 8.12 , 1.00 )<br>( 0.00 , N/A , 0.6) | 57.9<br>108.6 | 0.3527<br>96.5<br>102.9 | 0.0544 | N/A | 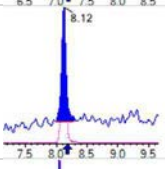 | 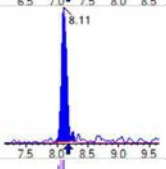 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 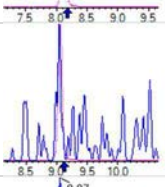 | 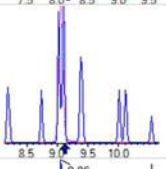 | |
| PFDA | ( 513.0 / 469.0 )<br>4619<br>( 513.0 / 169.0 )<br>701 | ( 9.97 , 1.00 )<br>( 0.01 , N/A , 0.8) | 48.0<br>91.0 | 0.1517<br>129.5<br>124.0 | 0.0121 | N/A | 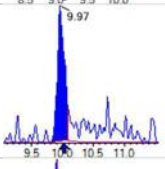 | 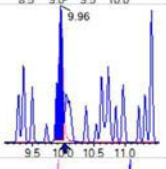 | MI2 DG 2024-03-22 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 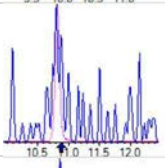 | 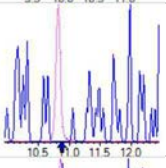 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 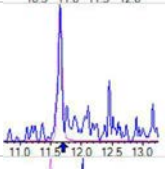 | 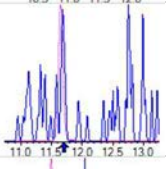 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 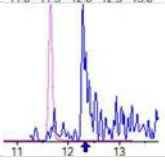 | 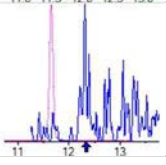 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (21)
Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 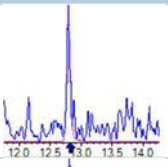 | 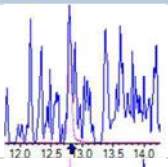 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 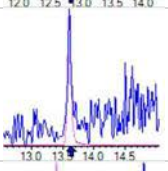 | 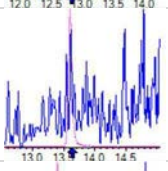 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 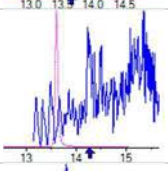 | 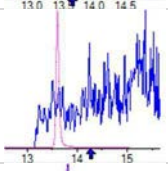 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 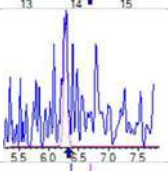 | 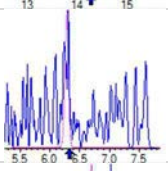 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 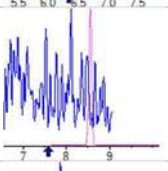 | 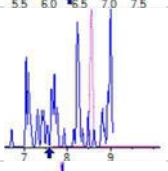 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 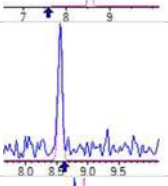 | 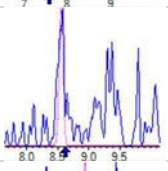 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 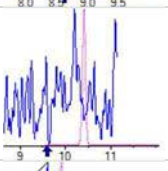 | 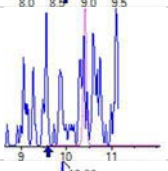 | |
| PFOS | ( 499.0 / 80.0 )<br>20678<br>( 499.0 / 99.0 )<br>5932 | ( 10.29 , 0.99 )<br>( -0.12 , N/A , -5.9) | 48.1<br>124.3 | 0.2869<br>122.7<br>125.1 | 0.0193 | N/A | 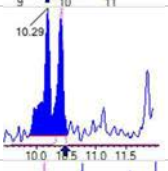 | 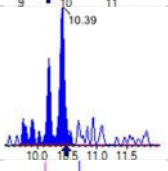 | MI5 DG<br>2024-03-22 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 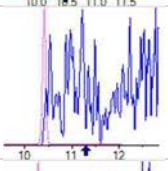 | 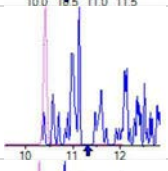 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 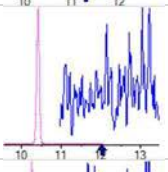 | 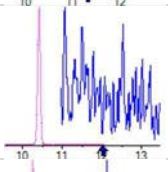 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 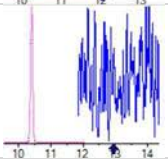 | 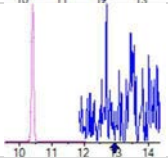 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (21)
Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 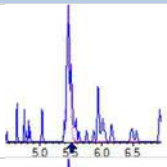 | 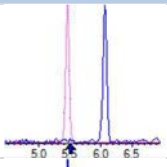 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 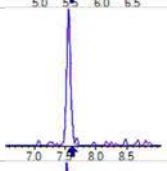 | 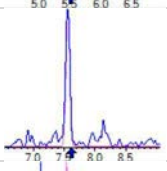 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 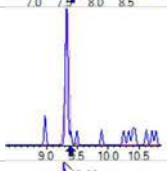 | 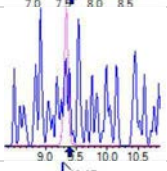 | |
| 10:2FTS | ( 627.0 / 607.0 ) 15193<br>( 627.0 / 81.0 ) 25657 | ( 10.98 , 1.00 ) ( 0.01 , N/A , 0.5) | 221.7<br>77.2 | 1.6887<br>117.3<br>121.8 | 0.0506 | N/A | 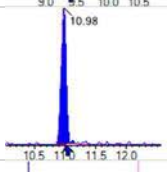 | 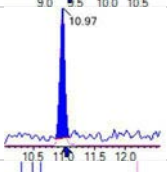 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 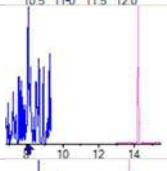 | 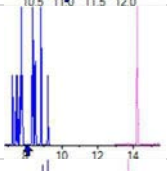 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 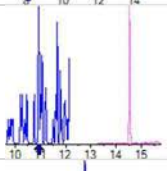 | 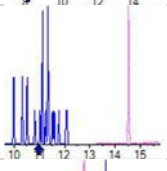 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 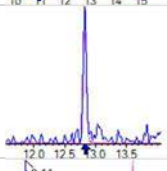 | 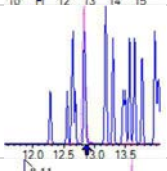 | |
| TFSI | ( 279.7 / 147.0 ) 43400<br>( 279.7 / 211.0 ) 3284 | ( 8.11 , 0.63 ) ( N/A , -0.09 , 0.1) | 27.6<br>13.6 | 0.0757<br>90.1<br>90.3 | 0.0284 | N/A | 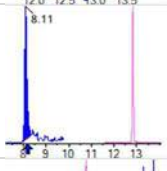 | 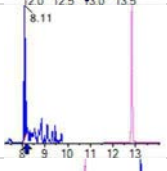 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 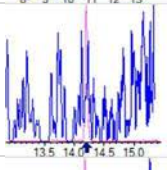 | 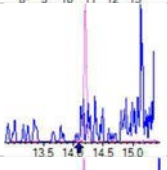 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 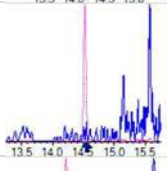 | 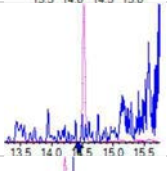 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 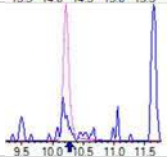 | 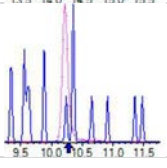 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (21)
Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 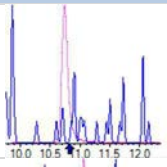 | 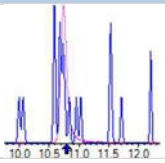 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 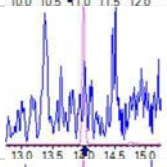 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 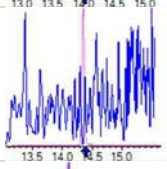 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 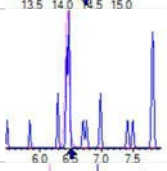 | 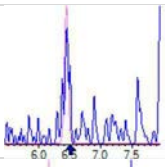 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 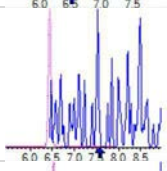 | 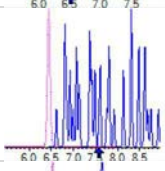 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 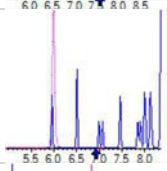 | 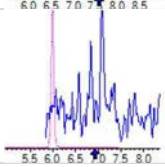 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 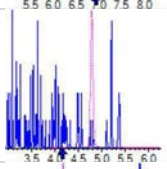 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 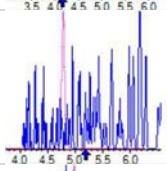 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 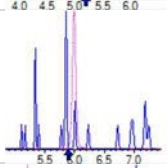 | 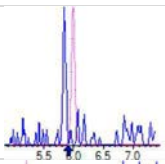 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 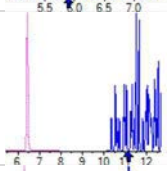 | 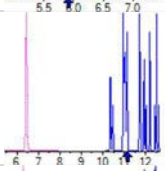 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 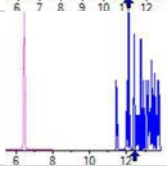 | 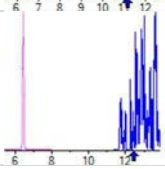 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (21)
Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 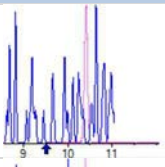 | 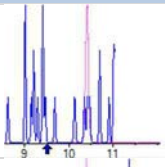 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 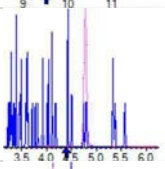 | 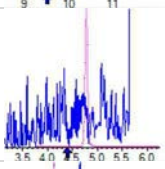 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 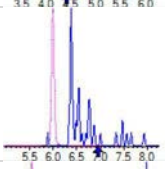 | 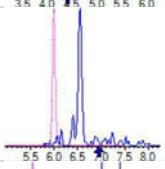 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 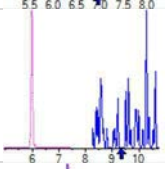 | 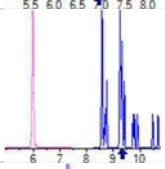 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 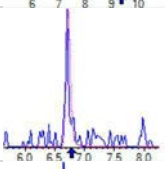 | 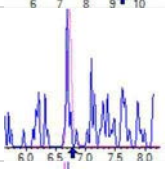 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 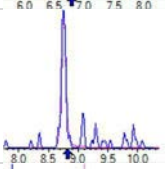 | 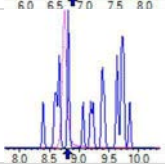 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 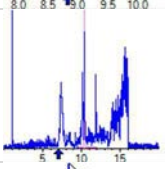 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>299682 | ( 3.70 , N/A )<br>( N/A , -0.06 , N/A ) | 1469.8 | N/A | 1.2569<br>[ 1.0000 ] | 125.7%<br>{ 117.5% } | 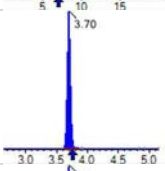 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>143786 | ( 5.99 , N/A )<br>( N/A , -0.06 , N/A ) | 11445.7 | N/A | 1.1335<br>[ 1.0000 ] | 113.3%<br>{ 117.9% } | 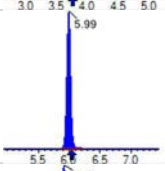 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>464993 | ( 8.12 , N/A )<br>( N/A , -0.08 , N/A ) | 3438.2 | N/A | 1.1763<br>[ 1.0000 ] | 117.6%<br>{ 117.3% } | 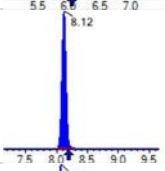 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>330238 | ( 9.06 , N/A )<br>( N/A , -0.08 , N/A ) | 1350.3 | N/A | 1.1611<br>[ 1.0000 ] | 116.1%<br>{ 119.2% } | 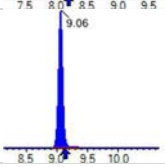 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-10 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 333196 | ( 9.96 , N/A ) ( N/A , -0.08 , N/A ) | 4769.4 | N/A | 1.1410 [ 1.0000 ] | 114.1% { 115.5% } | 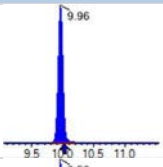 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1084347 | ( 8.56 , N/A ) ( N/A , -0.08 , N/A ) | 4677.8 | N/A | 1.1426 [ 1.0000 ] | 114.3% { 115.0% } | 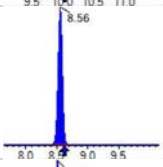 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 854867 | ( 10.41 , N/A ) ( N/A , -0.08 , N/A ) | 2003.8 | N/A | 1.1224 [ 1.0000 ] | 112.2% { 112.4% } | 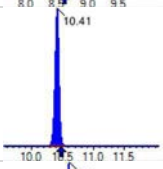 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2859257 | ( 3.70 , N/A ) ( N/A , -0.06 , N/A ) | 45263.1 | N/A | 8.3518 [ 8.0000 ] | 104.4% { 131.0% } | 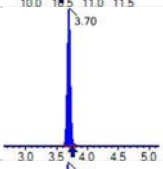 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1061069 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5816.3 | N/A | 3.9550 [ 4.0000 ] | 98.9% { 117.7% } | 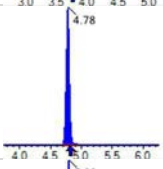 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 687247 | ( 5.99 , N/A ) ( N/A , -0.06 , N/A ) | 9012.0 | N/A | 2.0948 [ 2.0000 ] | 104.7% { 119.8% } | 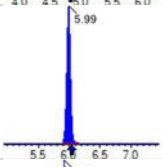 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 723055 | ( 7.12 , N/A ) ( N/A , -0.07 , N/A ) | 4955.9 | N/A | 1.9813 [ 2.0000 ] | 99.1% { 117.5% } | 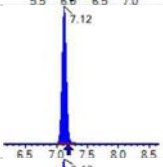 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1047917 | ( 8.12 , N/A ) ( N/A , -0.08 , N/A ) | 3510.5 | N/A | 2.1033 [ 2.0000 ] | 105.2% { 130.0% } | 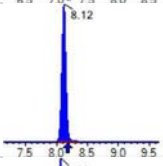 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 330524 | ( 9.06 , N/A ) ( N/A , -0.08 , N/A ) | 3178.5 | N/A | 1.0208 [ 1.0000 ] | 102.1% { 125.3% } | 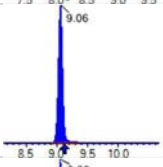 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 373246 | ( 9.96 , N/A ) ( N/A , -0.08 , N/A ) | 1034.4 | N/A | 0.9996 [ 1.0000 ] | 100.0% { 121.6% } | 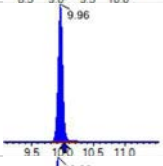 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 415324 | ( 10.82 , N/A ) ( N/A , -0.08 , N/A ) | 942.5 | N/A | 0.9454 [ 1.0000 ] | 94.5% { 112.7% } | 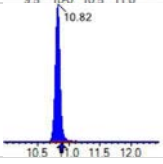 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-10 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 396727 | ( 11.65 , N/A ) ( N/A , -0.07 , N/A ) | 1314.3 | N/A | 0.8868 [ 1.0000 ] | 88.7% { 102.7% } | 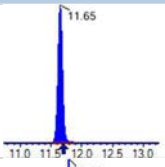 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 290224 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1678.0 | N/A | 0.7618 [ 1.0000 ] | 76.2% { 93.1% } | 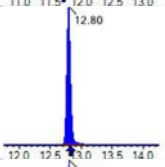 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 489364 | ( 13.60 , N/A ) ( N/A , -0.04 , N/A ) | 2146.0 | N/A | 1.5045 [ 2.0000 ] | 75.2% { 100.5% } | 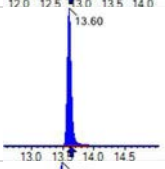 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1965348 | ( 6.28 , N/A ) ( N/A , -0.06 , N/A ) | 1486.5 | N/A | 2.0061 [ 2.0000 ] | 100.3% { 121.6% } | 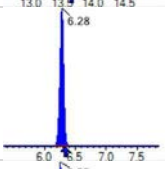 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1603304 | ( 8.55 , N/A ) ( N/A , -0.08 , N/A ) | 4105.8 | N/A | 2.0503 [ 2.0000 ] | 102.5% { 122.1% } | 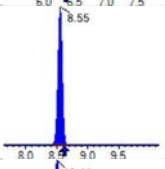 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1857356 | ( 10.41 , N/A ) ( N/A , -0.08 , N/A ) | 1804.9 | N/A | 2.0151 [ 2.0000 ] | 100.8% { 121.4% } | 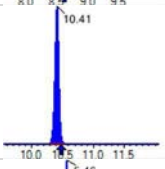 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 848695 | ( 5.46 , N/A ) ( N/A , -0.06 , N/A ) | 103.5 | N/A | 5.0209 [ 4.0000 ] | 125.5% { 137.0% } | 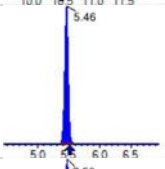 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2162992 | ( 7.56 , N/A ) ( N/A , -0.07 , N/A ) | 3656.5 | N/A | 4.2758 [ 4.0000 ] | 106.9% { 122.3% } | 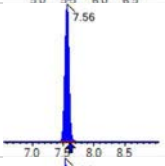 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1553468 | ( 9.34 , N/A ) ( N/A , -0.08 , N/A ) | 1452.0 | N/A | 3.9155 [ 4.0000 ] | 97.9% { 112.2% } | 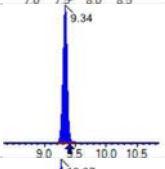 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3116783 | ( 10.97 , N/A ) ( N/A , -0.08 , N/A ) | 1702.8 | N/A | 7.5169 [ 8.0000 ] | 94.0% { 115.7% } | 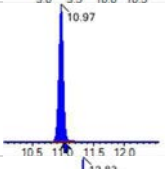 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1160604 | ( 12.83 , N/A ) ( N/A , -0.03 , N/A ) | 2312.3 | N/A | 1.4209 [ 2.0000 ] | 71.0% { 85.4% } | 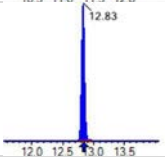 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (21)
Acquired: 2024/03/21 - 20:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 82578 | ( 14.20 , N/A ) ( N/A , -0.02 , N/A ) | 901.7 | N/A | 0.4767 [ 2.0000 ] | 23.8% { 30.1% } | 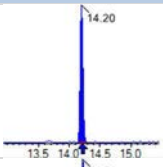  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 73571 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 740.0 | N/A | 0.3960 [ 2.0000 ] | 19.8% { 24.5% } | 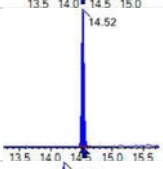  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 934634 | ( 10.22 , N/A ) ( N/A , -0.08 , N/A ) | 2341.9 | N/A | 3.9408 [ 4.0000 ] | 98.5% { 105.3% } | 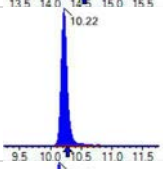  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 818984 | ( 10.74 , N/A ) ( N/A , -0.08 , N/A ) | 1981.9 | N/A | 3.7888 [ 4.0000 ] | 94.7% { 99.5% } | 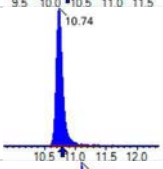  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 576714 | ( 14.00 , N/A ) ( N/A , -0.03 , N/A ) | 1493.3 | N/A | 7.4076 [ 20.0000 ] | 37.0% { 47.6% } | 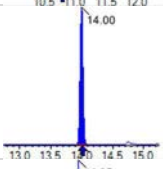  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 564107 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 2358.8 | N/A | 7.1388 [ 20.0000 ] | 35.7% { 44.7% } | 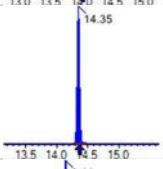  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1159445 | ( 6.44 , N/A ) ( N/A , -0.07 , N/A ) | 2333.8 | N/A | 7.7583 [ 8.0000 ] | 97.0% { 116.8% } | 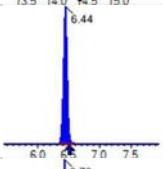  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 755843 | ( 6.73 , N/A ) ( N/A , -0.07 , N/A ) | 1331.0 | N/A | 2.0923 [ 2.0000 ] | 104.6% { 117.9% } | 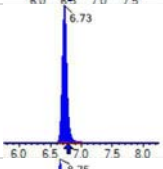  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 667347 | ( 8.75 , N/A ) ( N/A , -0.08 , N/A ) | 790.0 | N/A | 2.0293 [ 2.0000 ] | 101.5% { 113.4% } | 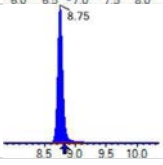  | | |

# ANALYSIS DATA SHEETL

EB-6-031824-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-11- | File ID:- | S2024-03-21B (24)- |
| Sampled:- | 03/18/24 13:10- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 21:28- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 574.694 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.18- | 1.4- | U- |
| PFPeA- | ND- | 0.057- | 0.70- | U- |
| PFHxA- | ND- | 0.048- | 0.35- | U- |
| PFHpA- | ND- | 0.036- | 0.35- | U- |
| PFOA- | 0.18- | 0.13- | 0.35- | J- |
| PFNA- | ND- | 0.071- | 0.35- | U- |
| PFDA- | ND- | 0.088- | 0.35- | MI2, U- |
| PFUnA- | ND- | 0.14- | 0.35- | U- |
| PFDoA- | ND- | 0.097- | 0.35- | U- |
| PFTrDA- | ND- | 0.18- | 0.35- | U- |
| PFTeDA- | ND- | 0.17- | 0.35- | U- |
| PFHxDA- | ND- | 0.17- | 0.35- | U- |
| PFODA- | ND- | 0.17- | 0.35- | U- |
| PFBS- | ND- | 0.032- | 0.35- | U- |
| PFPeS- | ND- | 0.055- | 0.35- | U- |
| PFHxS- | ND- | 0.028- | 0.35- | U- |
| PFHpS- | ND- | 0.045- | 0.35- | U- |
| PFOS- | 0.069- | 0.055- | 0.35- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.35- | U- |
| PFDS- | ND- | 0.13- | 0.35- | U- |
| PFDoS- | ND- | 0.11- | 0.35- | U- |
| 4:2FTS- | ND- | 0.25- | 1.4- | U- |
| 6:2FTS- | ND- | 0.27- | 1.4- | U- |
| 8:2FTS- | ND- | 0.071- | 1.4- | U- |
| 10:2FTS- | ND- | 0.35- | 1.4- | U- |
| PFOSA- | ND- | 0.091- | 0.35- | U- |
| NMeFOSA- | ND- | 0.41- | 1.4- | U- |
| NEtFOSA- | ND- | 0.36- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.092- | 0.35- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.35- | U- |

# ANALYSIS DATA SHEETL

EB-6-031824-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-11- | File ID:- | S2024-03-21B (24)- |
| Sampled:- | 03/18/24 13:10- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 21:28- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 574.694 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.88- | 1.4- | U- |
| NEtFOSE- | ND- | 0.91- | 1.4- | U- |
| HFPO-DA- | ND- | 0.15- | 0.70- | U- |
| ADONA- | ND- | 0.11- | 0.70- | U- |
| PFEESA- | ND- | 0.095- | 0.70- | U- |
| PFMPA- | ND- | 0.047- | 0.70- | U- |
| PFMBA- | ND- | 0.079- | 0.70- | U- |
| NFDHA- | ND- | 0.26- | 0.70- | U- |
| 9Cl-PF3ONS- | ND- | 0.18- | 0.70- | U- |
| 11Cl-PF3OUDS- | ND- | 0.18- | 0.70- | U- |
| 3:3FTCA- | ND- | 0.50- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.39- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.48- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (24)
Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>40644<br>( 163.0 / 69.0 )<br>1172 | ( 2.81 , 0.76 )<br>( N/A , 0.02 , -0.1) | 330.7<br>118.9 | 0.0288<br>106.1<br>106.7 | 0.1172 | N/A | 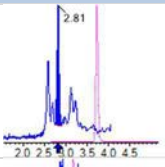 | 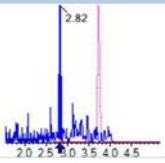 | MI1 DG 2024-03-22 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 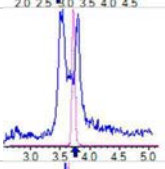 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 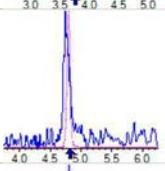 | 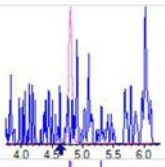 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 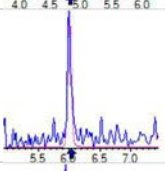 | 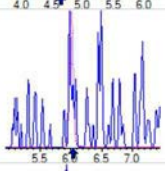 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 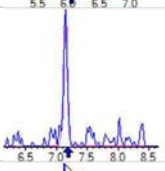 | 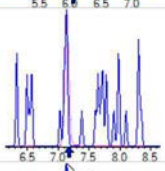 | |
| PFOA | ( 413.0 / 369.0 )<br>38449<br>( 413.0 / 169.0 )<br>14641 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , -0.1) | 66.2<br>105.5 | 0.3808<br>104.2<br>111.0 | 0.0521 | N/A | 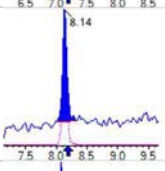 | 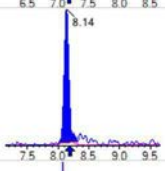 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 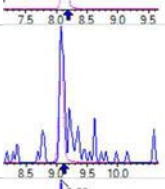 | 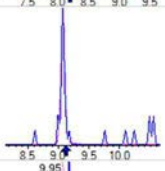 | |
| PFDA | ( 513.0 / 469.0 )<br>4998<br>( 513.0 / 169.0 )<br>643 | ( 9.98 , 1.00 )<br>( 0.01 , N/A , 1.7) | 65.4<br>31.9 | 0.1286<br>109.7<br>105.0 | 0.0130 | N/A | 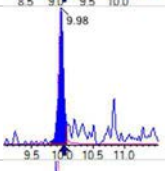 | 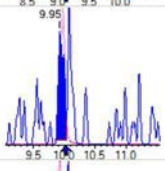 | MI2 DG 2024-03-22 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 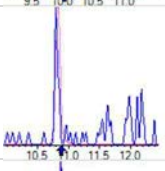 | 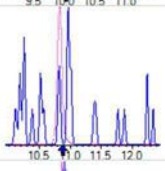 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 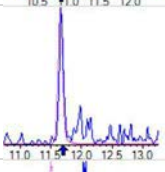 | 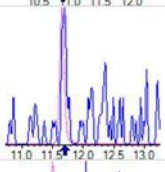 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 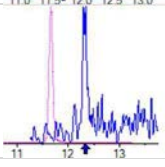 | 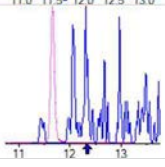 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (24)
Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 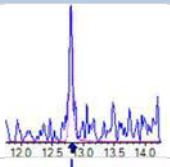 | 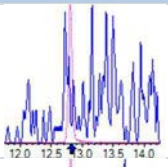 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 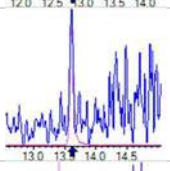 | 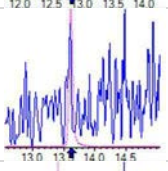 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 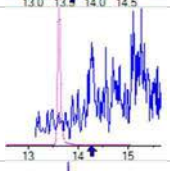 | 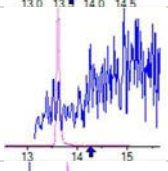 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 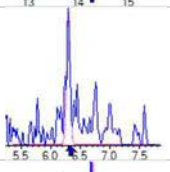 | 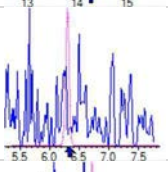 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 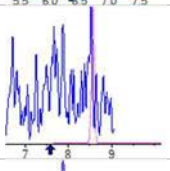 | 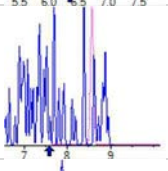 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 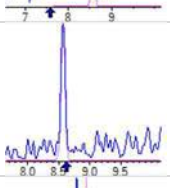 | 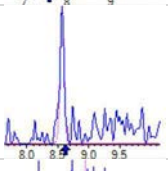 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 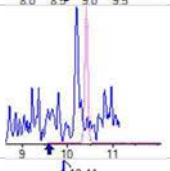 | 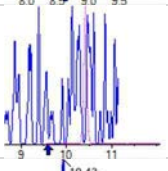 | |
| PFOS | ( 499.0 / 80.0 )<br>21384<br>( 499.0 / 99.0 )<br>5855 | ( 10.41 , 1.00 )<br>( -0.01 , N/A , -1.0) | 77.9<br>816.6 | 0.2738<br>117.1<br>119.5 | 0.0199 | N/A | 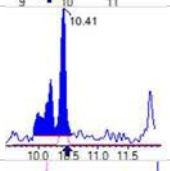 | 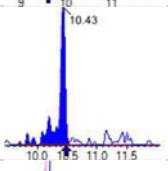 | MI2 DG<br>2024-03-22 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 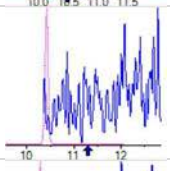 | 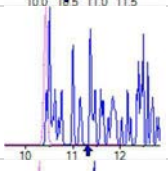 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 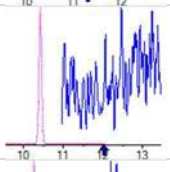 | 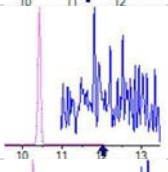 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 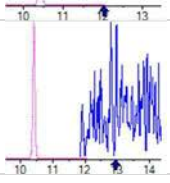 | 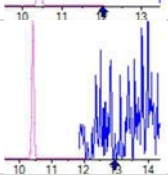 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (24)
Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 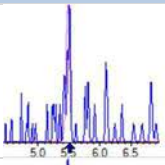 | 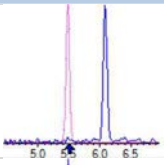 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 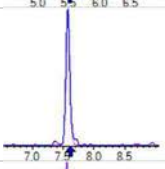 | 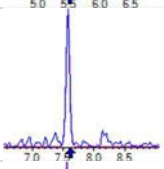 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 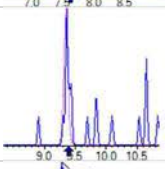 | 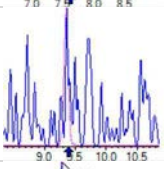 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16344<br>( 627.0 / 81.0 )<br>27587 | ( 10.98 , 1.00 )<br>( 0.01 , N/A , 0.1) | 291.5<br>71.7 | 1.6879<br>117.2<br>121.8 | 0.0567 | N/A | 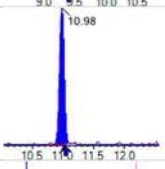 | 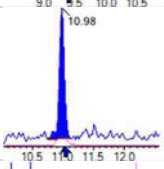 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 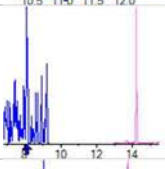 | 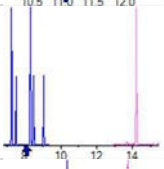 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 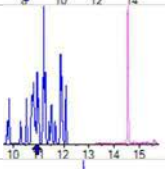 | 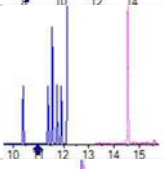 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 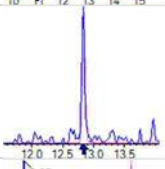 | 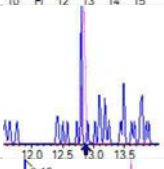 | |
| TFSI | ( 279.7 / 147.0 )<br>37249<br>( 279.7 / 211.0 )<br>2366 | ( 8.13 , 0.63 )<br>( N/A , -0.07 , -1.6) | 28.1<br>12.3 | 0.0635<br>75.6<br>75.8 | 0.0211 | N/A | 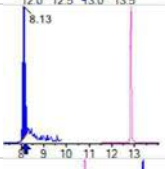 | 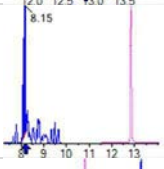 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 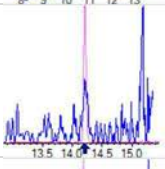 | 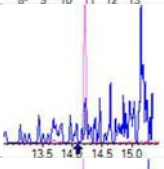 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 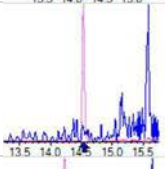 | 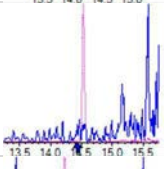 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 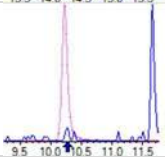 | 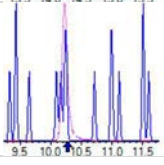 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (24)
Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 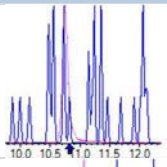 | 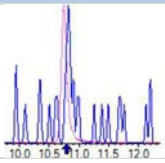 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 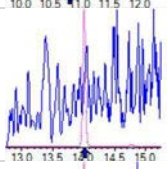 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 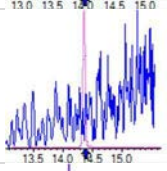 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 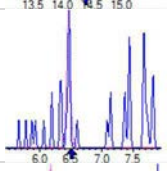 | 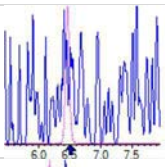 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 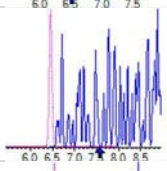 | 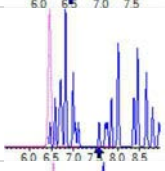 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 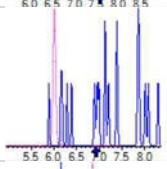 | 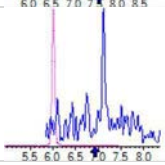 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 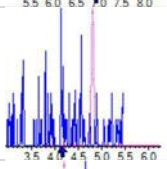 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 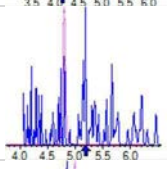 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 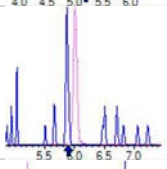 | 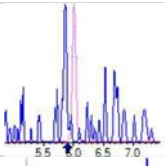 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 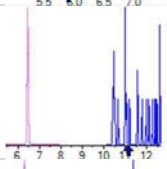 | 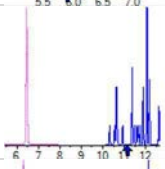 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 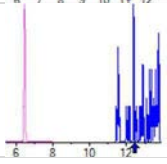 | 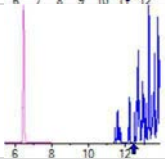 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-11 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 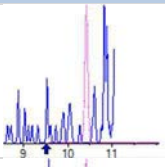 | 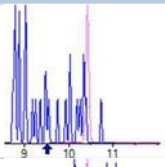 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 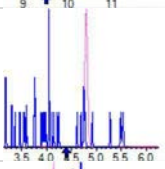 | 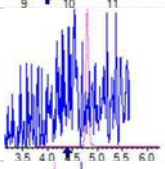 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 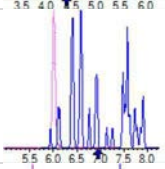 | 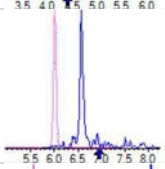 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 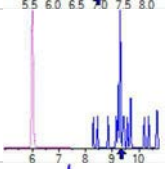 | 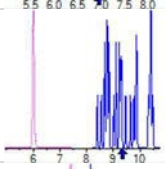 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 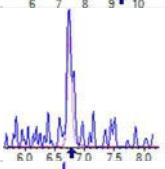 | 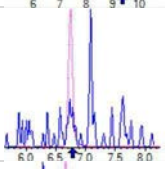 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 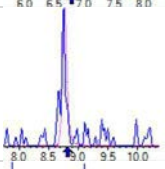 | 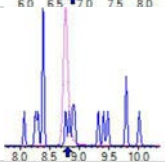 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 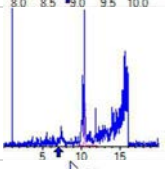 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 307032 | ( 3.72 , N/A )<br>( N/A , -0.03 , N/A ) | 1755.0 | N/A | 1.2877<br>[ 1.0000 ] | 128.8%<br>{ 120.4% } | 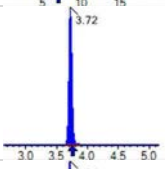 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 146314 | ( 6.01 , N/A )<br>( N/A , -0.04 , N/A ) | 23996.8 | N/A | 1.1534<br>[ 1.0000 ] | 115.3%<br>{ 120.0% } | 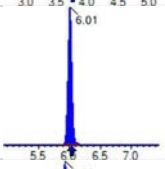 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 484467 | ( 8.14 , N/A )<br>( N/A , -0.06 , N/A ) | 4144.9 | N/A | 1.2255<br>[ 1.0000 ] | 122.6%<br>{ 122.3% } | 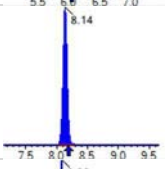 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 313327 | ( 9.08 , N/A )<br>( N/A , -0.07 , N/A ) | 1049.0 | N/A | 1.1017<br>[ 1.0000 ] | 110.2%<br>{ 113.1% } | 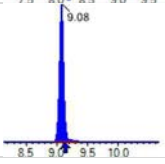 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (24)
Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 302078 | ( 9.97 , N/A ) ( N/A , -0.07 , N/A ) | 2739.9 | N/A | 1.0344 [ 1.0000 ] | 103.4% { 104.7% } | 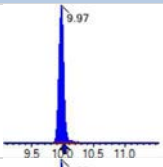 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1093194 | ( 8.57 , N/A ) ( N/A , -0.07 , N/A ) | 5289.3 | N/A | 1.1519 [ 1.0000 ] | 115.2% { 115.9% } | 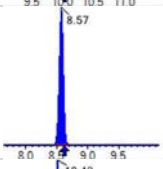 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 837040 | ( 10.42 , N/A ) ( N/A , -0.07 , N/A ) | 1926.2 | N/A | 1.0990 [ 1.0000 ] | 109.9% { 110.0% } | 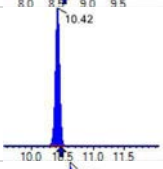 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2943013 | ( 3.72 , N/A ) ( N/A , -0.03 , N/A ) | 46571.5 | N/A | 8.3906 [ 8.0000 ] | 104.9% { 134.8% } | 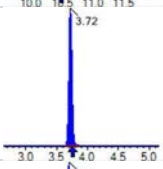 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1080937 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5374.3 | N/A | 3.9595 [ 4.0000 ] | 99.0% { 119.9% } | 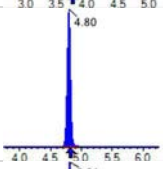 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 687163 | ( 6.01 , N/A ) ( N/A , -0.04 , N/A ) | 5565.9 | N/A | 2.0584 [ 2.0000 ] | 102.9% { 119.8% } | 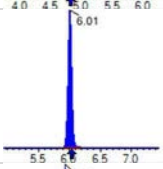 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 742411 | ( 7.14 , N/A ) ( N/A , -0.06 , N/A ) | 5472.5 | N/A | 1.9992 [ 2.0000 ] | 100.0% { 120.6% } | 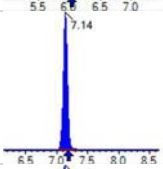 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1025427 | ( 8.14 , N/A ) ( N/A , -0.06 , N/A ) | 3447.5 | N/A | 1.9754 [ 2.0000 ] | 98.8% { 127.3% } | 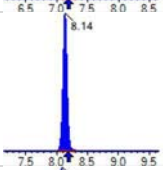 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 318360 | ( 9.07 , N/A ) ( N/A , -0.06 , N/A ) | 3135.5 | N/A | 1.0363 [ 1.0000 ] | 103.6% { 120.6% } | 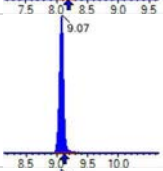 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 376667 | ( 9.97 , N/A ) ( N/A , -0.07 , N/A ) | 1398.7 | N/A | 1.1127 [ 1.0000 ] | 111.3% { 122.7% } | 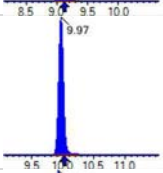 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 419534 | ( 10.83 , N/A ) ( N/A , -0.07 , N/A ) | 1049.7 | N/A | 1.0534 [ 1.0000 ] | 105.3% { 113.8% } | 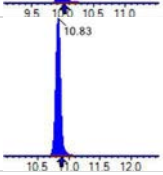 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-11 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 433862 | ( 11.66 , N/A ) ( N/A , -0.07 , N/A ) | 1357.0 | N/A | 1.0697 [ 1.0000 ] | 107.0% { 112.3% } | 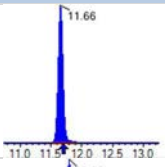 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310815 | ( 12.81 , N/A ) ( N/A , -0.04 , N/A ) | 1158.9 | N/A | 0.8999 [ 1.0000 ] | 90.0% { 99.7% } | 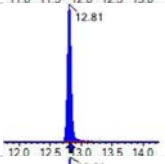 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 488023 | ( 13.61 , N/A ) ( N/A , -0.03 , N/A ) | 1990.3 | N/A | 1.6550 [ 2.0000 ] | 82.7% { 100.2% } | 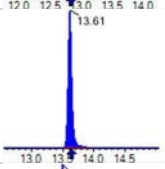 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1983712 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 1829.6 | N/A | 2.0084 [ 2.0000 ] | 100.4% { 122.7% } | 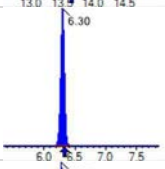 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1592122 | ( 8.57 , N/A ) ( N/A , -0.07 , N/A ) | 3244.8 | N/A | 2.0195 [ 2.0000 ] | 101.0% { 121.2% } | 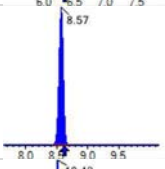 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1861991 | ( 10.42 , N/A ) ( N/A , -0.08 , N/A ) | 1702.0 | N/A | 2.0631 [ 2.0000 ] | 103.2% { 121.7% } | 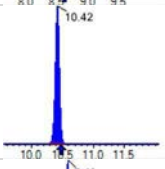 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 839058 | ( 5.48 , N/A ) ( N/A , -0.04 , N/A ) | 96.6 | N/A | 4.9237 [ 4.0000 ] | 123.1% { 135.5% } | 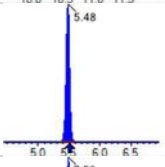 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2166517 | ( 7.58 , N/A ) ( N/A , -0.06 , N/A ) | 3863.1 | N/A | 4.2481 [ 4.0000 ] | 106.2% { 122.5% } | 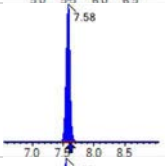 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1672544 | ( 9.35 , N/A ) ( N/A , -0.07 , N/A ) | 1190.7 | N/A | 4.1815 [ 4.0000 ] | 104.5% { 120.8% } | 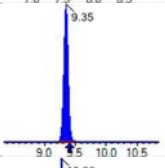 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2993525 | ( 10.98 , N/A ) ( N/A , -0.07 , N/A ) | 1251.2 | N/A | 7.1612 [ 8.0000 ] | 89.5% { 111.1% } | 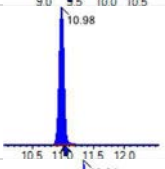 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1338316 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2498.0 | N/A | 1.6733 [ 2.0000 ] | 83.7% { 98.5% } | 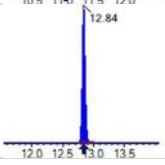 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-11
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (24)
Acquired: 2024/03/21 - 21:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 88677 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 731.3 | N/A | 0.5228 [ 2.0000 ] | 26.1% { 32.3% } | 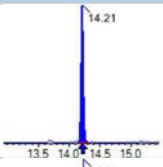 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 76709 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 742.6 | N/A | 0.4217 [ 2.0000 ] | 21.1% { 25.5% } | 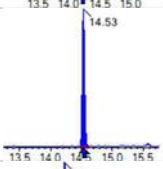 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 988764 | ( 10.23 , N/A ) ( N/A , -0.07 , N/A ) | 2173.1 | N/A | 4.2579 [ 4.0000 ] | 106.4% { 111.3% } | 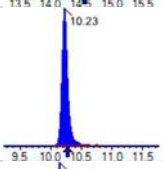 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 871729 | ( 10.75 , N/A ) ( N/A , -0.07 , N/A ) | 2115.6 | N/A | 4.1187 [ 4.0000 ] | 103.0% { 105.9% } | 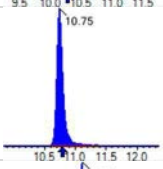 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 916565 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1991.0 | N/A | 12.0235 [ 20.0000 ] | 60.1% { 75.7% } | 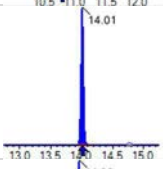 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 852554 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 1901.9 | N/A | 11.0188 [ 20.0000 ] | 55.1% { 67.6% } | 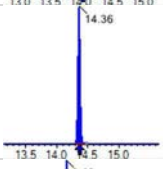 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1180030 | ( 6.46 , N/A ) ( N/A , -0.05 , N/A ) | 2430.4 | N/A | 7.7597 [ 8.0000 ] | 97.0% { 118.8% } | 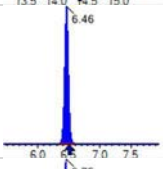 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 823685 | ( 6.75 , N/A ) ( N/A , -0.05 , N/A ) | 1784.4 | N/A | 2.5150 [ 2.0000 ] | 125.7% { 128.5% } | 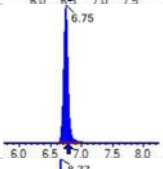 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 653172 | ( 8.77 , N/A ) ( N/A , -0.06 , N/A ) | 699.7 | N/A | 2.1908 [ 2.0000 ] | 109.5% { 111.0% } | 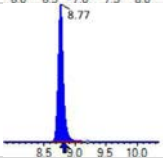 | | |

# ANALYSIS DATA SHEETL

FB-6-031824-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-12- | File ID:- | S2024-03-21B (25)- |
| Sampled:- | 03/18/24 13:15- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 21:48- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 512.57 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019- | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.6- | U- |
| PFPeA- | 0.14- | 0.063- | 0.78- | J- |
| PFHxA- | ND- | 0.054- | 0.39- | U- |
| PFHpA- | ND- | 0.040- | 0.39- | U- |
| PFOA- | 0.17- | 0.15- | 0.39- | J- |
| PFNA- | ND- | 0.080- | 0.39- | U- |
| PFDA- | ND- | 0.099- | 0.39- | U- |
| PFUnA- | ND- | 0.16- | 0.39- | U- |
| PFDoA- | ND- | 0.11- | 0.39- | U- |
| PFTrDA- | ND- | 0.20- | 0.39- | U- |
| PFTeDA- | ND- | 0.19- | 0.39- | U- |
| PFHxDA- | ND- | 0.20- | 0.39- | U- |
| PFODA- | ND- | 0.20- | 0.39- | U- |
| PFBS- | ND- | 0.036- | 0.39- | U- |
| PFPeS- | ND- | 0.061- | 0.39- | U- |
| PFHxS- | ND- | 0.031- | 0.39- | U- |
| PFHpS- | ND- | 0.050- | 0.39- | U- |
| PFOS- | 0.067- | 0.062- | 0.39- | MI2, J- |
| PFNS- | ND- | 0.12- | 0.39- | U- |
| PFDS- | ND- | 0.15- | 0.39- | U- |
| PFDoS- | ND- | 0.12- | 0.39- | U- |
| 4:2FTS- | ND- | 0.28- | 1.6- | U- |
| 6:2FTS- | ND- | 0.31- | 1.6- | U- |
| 8:2FTS- | ND- | 0.080- | 1.6- | U- |
| 10:2FTS- | ND- | 0.39- | 1.6- | U- |
| PFOSA- | ND- | 0.10- | 0.39- | U- |
| NMeFOSA- | ND- | 0.46- | 1.6- | U- |
| NEtFOSA- | ND- | 0.40- | 1.6- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.39- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.39- | U- |

# ANALYSIS DATA SHEETL

FB-6-031824-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0110-12- | File ID:- | S2024-03-21B (25)- |
| Sampled:- | 03/18/24 13:15- | Prepared:- | 03/19/24 13:48- | Analyzed:- | 03/21/24 21:48- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 512.57 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0268- | Sequence:- | SD01019 | Calibration:- | 2412010- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.99- | 1.6- | U- |
| NEtFOSE- | ND- | 1.0- | 1.6- | U- |
| HFPO-DA- | ND- | 0.17- | 0.78- | U- |
| ADONA- | ND- | 0.12- | 0.78- | U- |
| PFEESA- | ND- | 0.11- | 0.78- | U- |
| PFMPA- | ND- | 0.053- | 0.78- | U- |
| PFMBA- | ND- | 0.089- | 0.78- | U- |
| NFDHA- | ND- | 0.29- | 0.78- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.78- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.78- | U- |
| 3:3FTCA- | ND- | 0.56- | 1.6- | U- |
| 5:3FTCA- | ND- | 0.43- | 1.6- | U- |
| 7:3FTCA- | ND- | 0.54- | 1.6- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>31894<br>( 163.0 / 69.0 )<br>1438 | ( 2.80 , 0.76 )<br>( N/A , 0.01 , 0.3) | 244.9<br>92.7 | 0.0451<br>166.0<br>166.9 | 0.0976 | N/A | 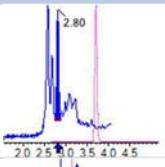 | 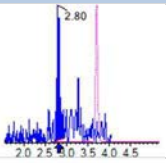 | MI2 DG 2024-03-22 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 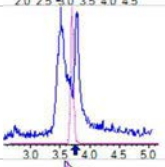 | | |
| PFPeA | ( 263.0 / 219.0 )<br>9725<br>( 263.0 / 69.0 )<br>92 | ( 4.75 , 0.99 )<br>( -0.03 , N/A , -2.0) | 42.8<br>7.1 | 0.0095<br>79.2<br>73.5 | 0.0362 | N/A | 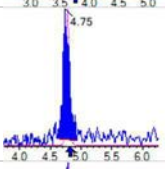 | 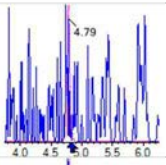 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 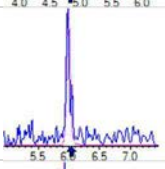 | 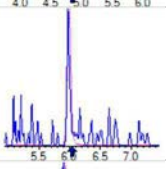 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 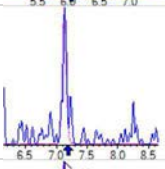 | 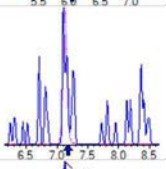 | |
| PFOA | ( 413.0 / 369.0 )<br>32985<br>( 413.0 / 169.0 )<br>13181 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.2) | 46.5<br>99.0 | 0.3996<br>109.3<br>116.5 | 0.0445 | N/A | 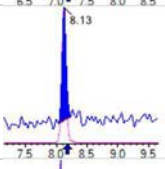 | 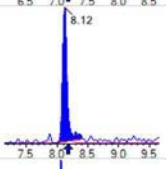 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 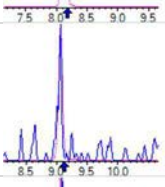 | 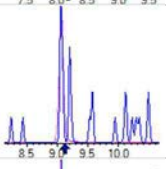 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 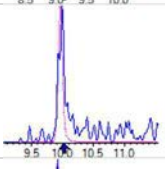 | 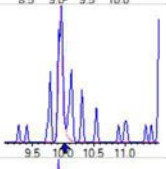 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 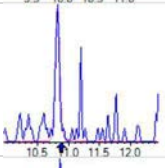 | 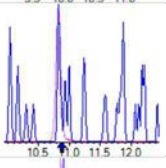 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 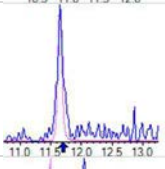 | 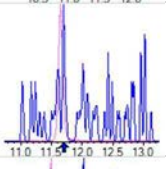 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 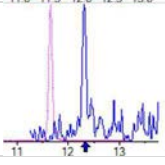 | 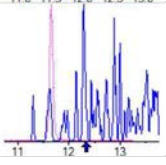 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 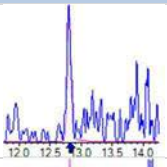 | 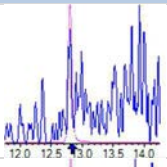 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 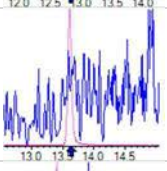 | 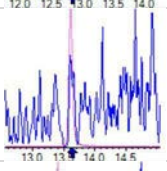 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 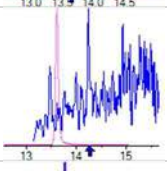 | 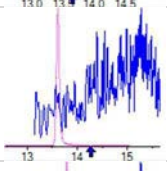 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 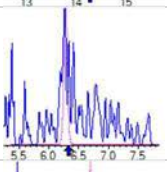 | 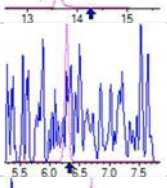 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 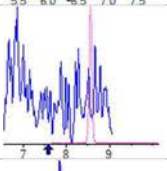 | 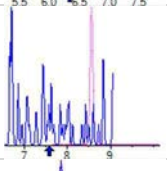 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 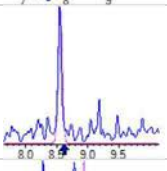 | 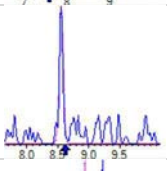 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 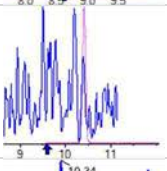 | 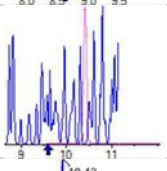 | |
| PFOS | ( 499.0 / 80.0 )<br>16646<br>( 499.0 / 99.0 )<br>4158 | ( 10.34 , 0.99 )<br>( -0.07 , N/A , -4.6) | 41.6<br>489.1 | 0.2498<br>106.9<br>109.0 | 0.0171 | N/A | 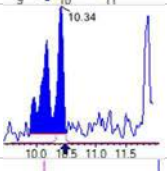 | 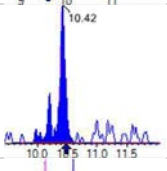 | MI2 DG<br>2024-03-22 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 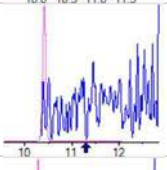 | 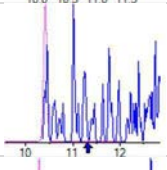 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 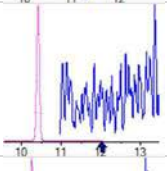 | 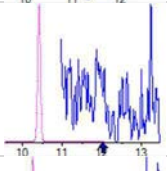 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 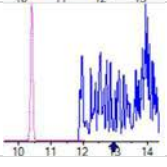 | 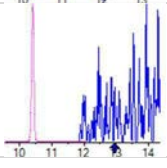 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 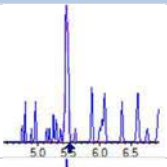 | 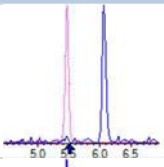 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 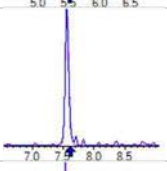 | 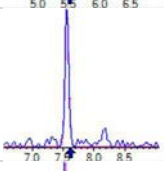 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 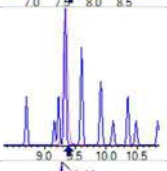 | 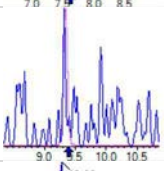 | |
| 10:2FTS | ( 627.0 / 607.0 ) 19871<br>( 627.0 / 81.0 ) 26136 | ( 10.98 , 1.00 ) ( 0.01 , N/A , 0.3) | 303.7<br>84.7 | 1.3153<br>91.4<br>94.9 | 0.0688 | N/A | 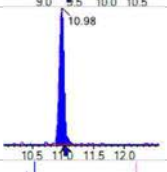 | 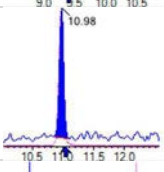 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 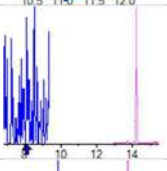 | 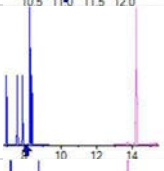 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 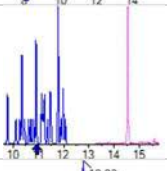 | 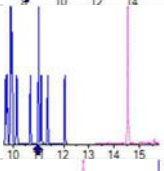 | |
| PFOSA | ( 498.0 / 78.0 ) 6872<br>( 498.0 / 478.0 ) 114 | ( 12.83 , 1.00 ) ( 0.00 , N/A , -0.3) | 103.2<br>8.2 | 0.0166<br>118.6<br>118.0 | 0.0117 | N/A | 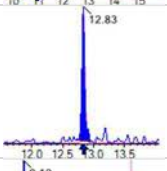 | 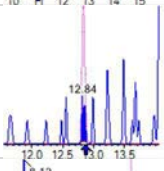 | |
| TFSI | ( 279.7 / 147.0 ) 40702<br>( 279.7 / 211.0 ) 2510 | ( 8.12 , 0.63 ) ( N/A , -0.08 , -0.3) | 29.1<br>11.8 | 0.0617<br>73.4<br>73.6 | 0.0262 | N/A | 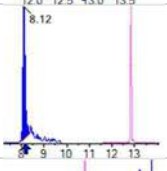 | 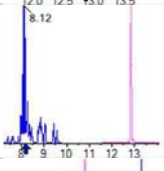 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 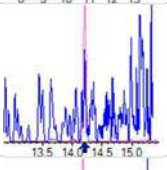 | 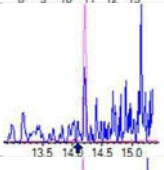 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 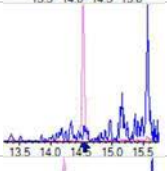 | 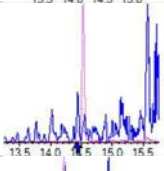 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 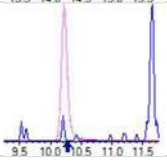 | 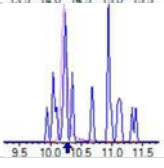 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 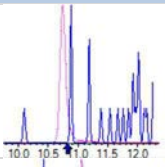 | 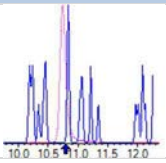 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 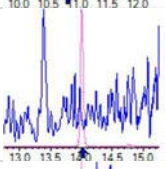 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 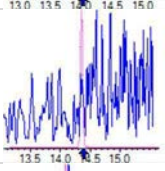 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 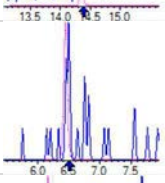 | 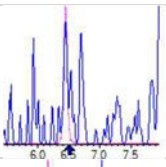 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 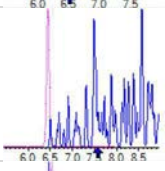 | 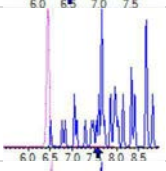 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 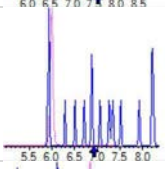 | 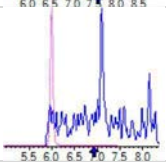 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 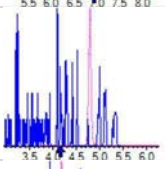 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 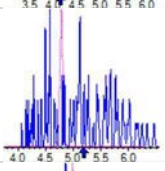 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 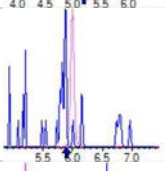 | 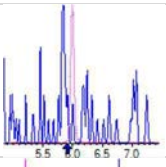 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 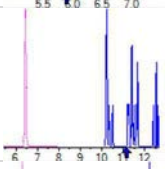 | 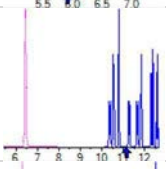 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 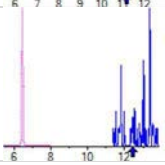 | 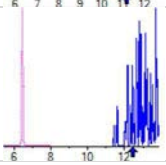 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 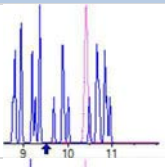 | 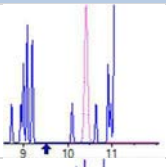 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 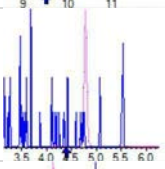 | 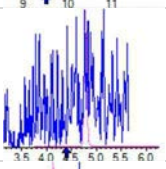 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 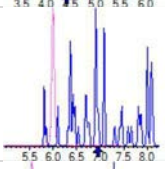 | 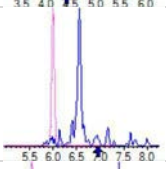 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 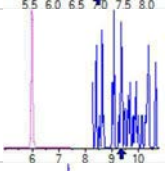 | 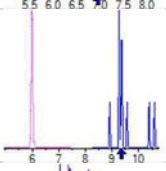 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 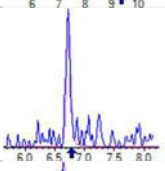 | 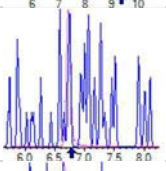 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 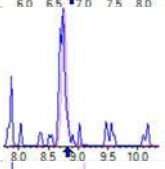 | 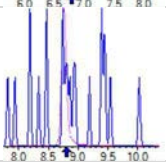 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 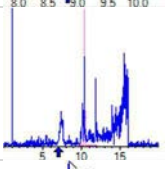 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 316480 | ( 3.70 , N/A ) ( N/A , -0.05 , N/A ) | 1563.4 | N/A | 1.3273 [ 1.0000 ] | 132.7% { 124.1% } | 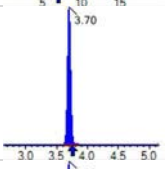 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 141422 | ( 6.00 , N/A ) ( N/A , -0.06 , N/A ) | 143426.9 | N/A | 1.1148 [ 1.0000 ] | 111.5% { 116.0% } | 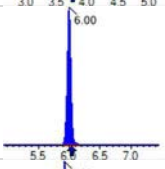 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 449497 | ( 8.13 , N/A ) ( N/A , -0.07 , N/A ) | 6827.9 | N/A | 1.1371 [ 1.0000 ] | 113.7% { 113.4% } | 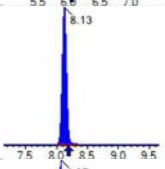 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 309930 | ( 9.07 , N/A ) ( N/A , -0.07 , N/A ) | 1219.5 | N/A | 1.0897 [ 1.0000 ] | 109.0% { 111.8% } | 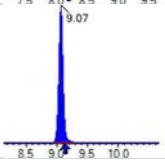 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 323178 | ( 9.97 , N/A ) ( N/A , -0.08 , N/A ) | 6857.3 | N/A | 1.1067 [ 1.0000 ] | 110.7% { 112.0% } | 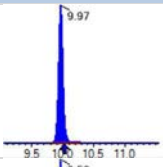 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1054572 | ( 8.56 , N/A ) ( N/A , -0.08 , N/A ) | 7162.2 | N/A | 1.1112 [ 1.0000 ] | 111.1% { 111.8% } | 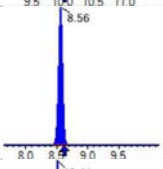 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 826583 | ( 10.41 , N/A ) ( N/A , -0.08 , N/A ) | 2029.7 | N/A | 1.0853 [ 1.0000 ] | 108.5% { 108.7% } | 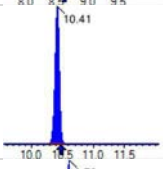 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2771423 | ( 3.70 , N/A ) ( N/A , -0.05 , N/A ) | 50655.4 | N/A | 7.6655 [ 8.0000 ] | 95.8% { 127.0% } | 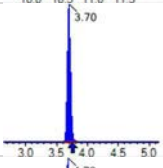 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1063117 | ( 4.78 , N/A ) ( N/A , -0.05 , N/A ) | 5878.6 | N/A | 4.0289 [ 4.0000 ] | 100.7% { 117.9% } | 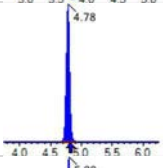 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 658410 | ( 5.99 , N/A ) ( N/A , -0.06 , N/A ) | 8385.9 | N/A | 2.0405 [ 2.0000 ] | 102.0% { 114.8% } | 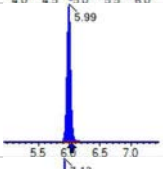 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 742911 | ( 7.13 , N/A ) ( N/A , -0.07 , N/A ) | 4683.1 | N/A | 2.0697 [ 2.0000 ] | 103.5% { 120.7% } | 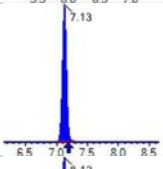 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 976051 | ( 8.12 , N/A ) ( N/A , -0.07 , N/A ) | 2672.9 | N/A | 2.0266 [ 2.0000 ] | 101.3% { 121.1% } | 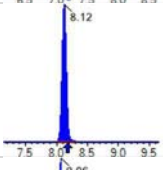 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 302600 | ( 9.06 , N/A ) ( N/A , -0.07 , N/A ) | 2838.4 | N/A | 0.9958 [ 1.0000 ] | 99.6% { 114.7% } | 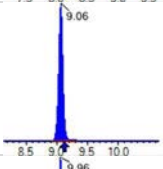 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 352160 | ( 9.96 , N/A ) ( N/A , -0.08 , N/A ) | 1372.2 | N/A | 0.9724 [ 1.0000 ] | 97.2% { 114.8% } | 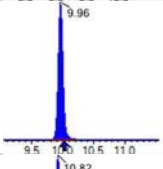 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 391637 | ( 10.82 , N/A ) ( N/A , -0.08 , N/A ) | 973.1 | N/A | 0.9191 [ 1.0000 ] | 91.9% { 106.3% } | 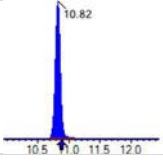 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0110-12 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 397540 | ( 11.65 , N/A ) ( N/A , -0.08 , N/A ) | 1539.7 | N/A | 0.9162 [ 1.0000 ] | 91.6% { 102.9% } | 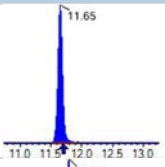 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 301525 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1227.7 | N/A | 0.8160 [ 1.0000 ] | 81.6% { 96.7% } | 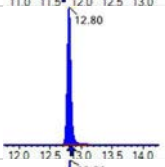 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 466940 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2447.8 | N/A | 1.4801 [ 2.0000 ] | 74.0% { 95.9% } | 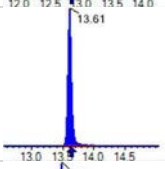 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1980605 | ( 6.28 , N/A ) ( N/A , -0.06 , N/A ) | 1284.2 | N/A | 2.0787 [ 2.0000 ] | 103.9% { 122.5% } | 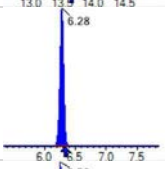 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1504092 | ( 8.56 , N/A ) ( N/A , -0.08 , N/A ) | 3954.2 | N/A | 1.9777 [ 2.0000 ] | 98.9% { 114.5% } | 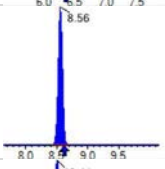 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1684705 | ( 10.41 , N/A ) ( N/A , -0.08 , N/A ) | 1750.1 | N/A | 1.8903 [ 2.0000 ] | 94.5% { 110.1% } | 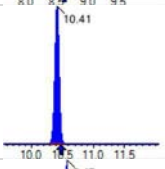 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 810716 | ( 5.47 , N/A ) ( N/A , -0.05 , N/A ) | 94.5 | N/A | 4.9316 [ 4.0000 ] | 123.3% { 130.9% } | 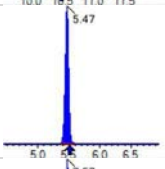 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2217307 | ( 7.57 , N/A ) ( N/A , -0.07 , N/A ) | 3939.7 | N/A | 4.5069 [ 4.0000 ] | 112.7% { 125.4% } | 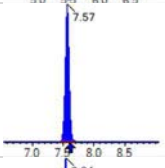 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1664233 | ( 9.34 , N/A ) ( N/A , -0.07 , N/A ) | 1642.6 | N/A | 4.3132 [ 4.0000 ] | 107.8% { 120.2% } | 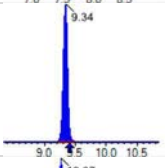 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2999822 | ( 10.97 , N/A ) ( N/A , -0.08 , N/A ) | 1408.0 | N/A | 7.4390 [ 8.0000 ] | 93.0% { 111.4% } | 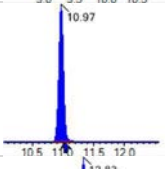 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1178251 | ( 12.83 , N/A ) ( N/A , -0.03 , N/A ) | 3262.9 | N/A | 1.4918 [ 2.0000 ] | 74.6% { 86.7% } | 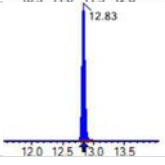 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0110-12
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (25)
Acquired: 2024/03/21 - 21:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 66693 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 570.9 | N/A | 0.3981 [ 2.0000 ] | 19.9% { 24.3% } | 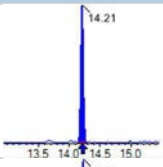 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 60099 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 618.3 | N/A | 0.3346 [ 2.0000 ] | 16.7% { 20.0% } | 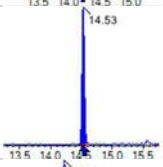 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 931403 | ( 10.22 , N/A ) ( N/A , -0.08 , N/A ) | 2528.4 | N/A | 4.0616 [ 4.0000 ] | 101.5% { 104.9% } | 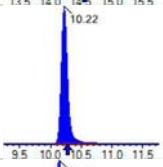 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 837474 | ( 10.74 , N/A ) ( N/A , -0.07 , N/A ) | 1865.7 | N/A | 4.0070 [ 4.0000 ] | 100.2% { 101.7% } | 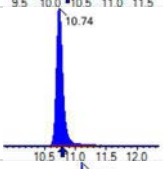 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 957240 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 1630.0 | N/A | 12.7160 [ 20.0000 ] | 63.6% { 79.1% } | 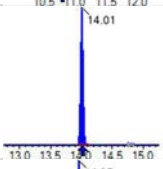 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 927023 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 3459.8 | N/A | 12.1329 [ 20.0000 ] | 60.7% { 73.5% } | 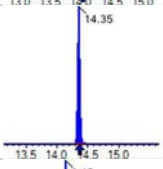 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1187327 | ( 6.45 , N/A ) ( N/A , -0.07 , N/A ) | 3053.1 | N/A | 8.0777 [ 8.0000 ] | 101.0% { 119.6% } | 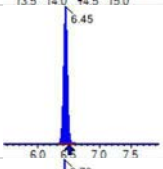 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 811402 | ( 6.73 , N/A ) ( N/A , -0.07 , N/A ) | 1326.3 | N/A | 2.3157 [ 2.0000 ] | 115.8% { 126.6% } | 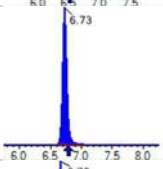 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 638873 | ( 8.76 , N/A ) ( N/A , -0.07 , N/A ) | 815.8 | N/A | 2.0029 [ 2.0000 ] | 100.1% { 108.6% } | 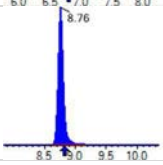 | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-12-4 (24C0110-01 ) ng/L** | Lab File ID: S2024-03-21B (12) | | | Analyzed: 03/21/24 17:22 |
| 13C4-PFBA | 29.3 | 80.5 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 97.4 | 40 - 130 | |
| 13C5-PFHXA | 7.32 | 96.8 | 40 - 130 | |
| 13C4-PFHPA | 7.32 | 94.8 | 40 - 130 | |
| 13C8-PFOA | 7.32 | 100 | 40 - 130 | |
| 13C9-PFNA | 3.66 | 92.1 | 40 - 130 | |
| 13C6-PFDA | 3.66 | 96.1 | 40 - 130 | |
| 13C7-PFUnA | 3.66 | 83.8 | 30 - 130 | |
| 13C2-PFDOA | 3.66 | 82.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.66 | 77.9 | 10 - 130 | |
| 13C2-PFHxDA | 7.32 | 77.6 | 20 - 150 | |
| 13C3-PFBS | 7.32 | 97.6 | 40 - 135 | |
| 13C3-PFHXS | 7.32 | 96.5 | 40 - 130 | |
| 13C8-PFOS | 7.32 | 87.9 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 117 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 104 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 107 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 89.8 | 20 - 150 | |
| 13C8-PFOSA | 7.32 | 66.2 | 40 - 130 | |
| D3-NMEFOSA | 7.32 | 21.3 | 10 - 130 | |
| D5-NETFOSA | 7.32 | 20.2 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 85.8 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 88.2 | 25 - 135 | |
| D7-NMEFOSE | 73.2 | 43.3 | 10 - 130 | |
| D9-NETFOSE | 73.2 | 44.4 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 93.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-12-3 (24C0110-02 ) ng/L** | Lab File ID: S2024-03-21B (13) | | | Analyzed: 03/21/24 17:42 |
| 13C4-PFBA | 28.7 | 88.9 | 5 - 130 | |
| 13C5-PFPEA | 14.3 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.17 | 104 | 40 - 130 | |
| 13C4-PFHPA | 7.17 | 101 | 40 - 130 | |
| 13C8-PFOA | 7.17 | 111 | 40 - 130 | |
| 13C9-PFNA | 3.59 | 99.4 | 40 - 130 | |
| 13C6-PFDA | 3.59 | 108 | 40 - 130 | |
| 13C7-PFUnA | 3.59 | 96.7 | 30 - 130 | |
| 13C2-PFDOA | 3.59 | 91.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.59 | 82.0 | 10 - 130 | |
| 13C2-PFHxDA | 7.17 | 79.2 | 20 - 150 | |
| 13C3-PFBS | 7.17 | 111 | 40 - 135 | |
| 13C3-PFHXS | 7.17 | 110 | 40 - 130 | |
| 13C8-PFOS | 7.17 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 14.3 | 122 | 40 - 200 | |
| 13C2-6:2FTS | 14.3 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.3 | 118 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.7 | 111 | 20 - 150 | |
| 13C8-PFOSA | 7.17 | 89.8 | 40 - 130 | |
| D3-NMEFOSA | 7.17 | 32.8 | 10 - 130 | |
| D5-NETFOSA | 7.17 | 27.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.3 | 95.9 | 40 - 170 | |
| D5-NETFOSAA | 14.3 | 97.4 | 25 - 135 | |
| D7-NMEFOSE | 71.7 | 66.5 | 10 - 130 | |
| D9-NETFOSE | 71.7 | 66.7 | 10 - 130 | |
| 13C3-HFPO-DA | 28.7 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-12-2 (24C0110-03 ) ng/L** | Lab File ID: S2024-03-21B (14) | | | Analyzed: 03/21/24 18:03 |
| 13C4-PFBA | 29.3 | 90.3 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 103 | 40 - 130 | |
| 13C5-PFHXA | 7.33 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.33 | 99.5 | 40 - 130 | |
| 13C8-PFOA | 7.33 | 97.8 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 105 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 96.9 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 87.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 81.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.33 | 84.8 | 20 - 150 | |
| 13C3-PFBS | 7.33 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.33 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.33 | 97.9 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 111 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 94.9 | 20 - 150 | |
| 13C8-PFOSA | 7.33 | 83.8 | 40 - 130 | |
| D3-NMEFOSA | 7.33 | 31.5 | 10 - 130 | |
| D5-NETFOSA | 7.33 | 26.1 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 96.4 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 97.9 | 25 - 135 | |
| D7-NMEFOSE | 73.3 | 55.7 | 10 - 130 | |
| D9-NETFOSE | 73.3 | 53.3 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-12-1 (24C0110-04 ) ng/L** | Lab File ID: S2024-03-21B (15) | | | Analyzed: 03/21/24 18:23 |
| 13C4-PFBA | 29.9 | 92.8 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 109 | 40 - 130 | |
| 13C5-PFHXA | 7.47 | 107 | 40 - 130 | |
| 13C4-PFHPA | 7.47 | 112 | 40 - 130 | |
| 13C8-PFOA | 7.47 | 107 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 99.0 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 90.5 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 85.4 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 77.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.47 | 78.4 | 20 - 150 | |
| 13C3-PFBS | 7.47 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.47 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.47 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 109 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 100 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 116 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.9 | 91.3 | 20 - 150 | |
| 13C8-PFOSA | 7.47 | 93.9 | 40 - 130 | |
| D3-NMEFOSA | 7.47 | 28.3 | 10 - 130 | |
| D5-NETFOSA | 7.47 | 22.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 107 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 105 | 25 - 135 | |
| D7-NMEFOSE | 74.7 | 58.4 | 10 - 130 | |
| D9-NETFOSE | 74.7 | 55.3 | 10 - 130 | |
| 13C3-HFPO-DA | 29.9 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-4-031824 (24C0110-05 ) ng/L** | Lab File ID: S2024-03-21B (16) | | | Analyzed: 03/21/24 18:44 |
| 13C4-PFBA | 29.6 | 91.0 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 107 | 40 - 130 | |
| 13C5-PFHXA | 7.40 | 105 | 40 - 130 | |
| 13C4-PFHPA | 7.40 | 101 | 40 - 130 | |
| 13C8-PFOA | 7.40 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 100 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 97.4 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 85.1 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 79.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 80.0 | 10 - 130 | |
| 13C2-PFHxDA | 7.40 | 76.8 | 20 - 150 | |
| 13C3-PFBS | 7.40 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.40 | 108 | 40 - 130 | |
| 13C8-PFOS | 7.40 | 99.4 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 115 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 103 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 112 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 87.6 | 20 - 150 | |
| 13C8-PFOSA | 7.40 | 92.3 | 40 - 130 | |
| D3-NMEFOSA | 7.40 | 30.3 | 10 - 130 | |
| D5-NETFOSA | 7.40 | 25.7 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 94.4 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 97.3 | 25 - 135 | |
| D7-NMEFOSE | 74.0 | 61.7 | 10 - 130 | |
| D9-NETFOSE | 74.0 | 60.2 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-18-4 (24C0110-06 ) ng/L** | Lab File ID: S2024-03-21B (17) | | | Analyzed: 03/21/24 19:04 |
| 13C4-PFBA | 29.3 | 93.3 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.32 | 107 | 40 - 130 | |
| 13C4-PFHPA | 7.32 | 99.7 | 40 - 130 | |
| 13C8-PFOA | 7.32 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.66 | 105 | 40 - 130 | |
| 13C6-PFDA | 3.66 | 98.3 | 40 - 130 | |
| 13C7-PFUnA | 3.66 | 95.4 | 30 - 130 | |
| 13C2-PFDOA | 3.66 | 93.4 | 10 - 130 | |
| 13C2-PFTEDA | 3.66 | 83.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.32 | 77.7 | 20 - 150 | |
| 13C3-PFBS | 7.32 | 102 | 40 - 135 | |
| 13C3-PFHXS | 7.32 | 105 | 40 - 130 | |
| 13C8-PFOS | 7.32 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 126 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 111 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 106 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 91.9 | 20 - 150 | |
| 13C8-PFOSA | 7.32 | 91.2 | 40 - 130 | |
| D3-NMEFOSA | 7.32 | 39.6 | 10 - 130 | |
| D5-NETFOSA | 7.32 | 35.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 96.1 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 99.8 | 25 - 135 | |
| D7-NMEFOSE | 73.2 | 66.2 | 10 - 130 | |
| D9-NETFOSE | 73.2 | 65.2 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-18-3 (24C0110-07 ) ng/L** | Lab File ID: S2024-03-21B (18) | | | Analyzed: 03/21/24 19:25 |
| 13C4-PFBA | 29.1 | 83.9 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 103 | 40 - 130 | |
| 13C5-PFHXA | 7.28 | 105 | 40 - 130 | |
| 13C4-PFHPA | 7.28 | 106 | 40 - 130 | |
| 13C8-PFOA | 7.28 | 100 | 40 - 130 | |
| 13C9-PFNA | 3.64 | 98.1 | 40 - 130 | |
| 13C6-PFDA | 3.64 | 100 | 40 - 130 | |
| 13C7-PFUnA | 3.64 | 90.0 | 30 - 130 | |
| 13C2-PFDOA | 3.64 | 84.9 | 10 - 130 | |
| 13C2-PFTEDA | 3.64 | 78.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.28 | 74.4 | 20 - 150 | |
| 13C3-PFBS | 7.28 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.28 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.28 | 91.2 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 120 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 114 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 103 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.1 | 90.1 | 20 - 150 | |
| 13C8-PFOSA | 7.28 | 80.3 | 40 - 130 | |
| D3-NMEFOSA | 7.28 | 31.2 | 10 - 130 | |
| D5-NETFOSA | 7.28 | 26.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 90.9 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 87.6 | 25 - 135 | |
| D7-NMEFOSE | 72.8 | 52.8 | 10 - 130 | |
| D9-NETFOSE | 72.8 | 55.4 | 10 - 130 | |
| 13C3-HFPO-DA | 29.1 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-18-2 (24C0110-08 ) ng/L** | Lab File ID: S2024-03-21B (19) | | | Analyzed: 03/21/24 19:45 |
| 13C4-PFBA | 29.6 | 90.5 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 104 | 40 - 130 | |
| 13C5-PFHXA | 7.39 | 100 | 40 - 130 | |
| 13C4-PFHPA | 7.39 | 103 | 40 - 130 | |
| 13C8-PFOA | 7.39 | 101 | 40 - 130 | |
| 13C9-PFNA | 3.69 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.69 | 102 | 40 - 130 | |
| 13C7-PFUnA | 3.69 | 98.5 | 30 - 130 | |
| 13C2-PFDOA | 3.69 | 86.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.69 | 81.1 | 10 - 130 | |
| 13C2-PFHxDA | 7.39 | 80.3 | 20 - 150 | |
| 13C3-PFBS | 7.39 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.39 | 102 | 40 - 130 | |
| 13C8-PFOS | 7.39 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 116 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 97.2 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 106 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 87.8 | 20 - 150 | |
| 13C8-PFOSA | 7.39 | 89.9 | 40 - 130 | |
| D3-NMEFOSA | 7.39 | 35.6 | 10 - 130 | |
| D5-NETFOSA | 7.39 | 34.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 97.8 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 97.1 | 25 - 135 | |
| D7-NMEFOSE | 73.9 | 60.2 | 10 - 130 | |
| D9-NETFOSE | 73.9 | 59.2 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-18-1 (24C0110-09 ) ng/L** | Lab File ID: S2024-03-21B (20) | | | Analyzed: 03/21/24 20:06 |
| 13C4-PFBA | 29.7 | 97.5 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 102 | 40 - 130 | |
| 13C5-PFHXA | 7.44 | 107 | 40 - 130 | |
| 13C4-PFHPA | 7.44 | 94.6 | 40 - 130 | |
| 13C8-PFOA | 7.44 | 98.6 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 98.9 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 96.6 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 88.1 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 83.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.44 | 77.9 | 20 - 150 | |
| 13C3-PFBS | 7.44 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.44 | 109 | 40 - 130 | |
| 13C8-PFOS | 7.44 | 108 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 110 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 100 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 101 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 101 | 20 - 150 | |
| 13C8-PFOSA | 7.44 | 81.4 | 40 - 130 | |
| D3-NMEFOSA | 7.44 | 28.7 | 10 - 130 | |
| D5-NETFOSA | 7.44 | 25.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 101 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 98.3 | 25 - 135 | |
| D7-NMEFOSE | 74.4 | 53.1 | 10 - 130 | |
| D9-NETFOSE | 74.4 | 48.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 96.4 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **SB-2-031824 (24C0110-10 ) ng/L** | Lab File ID: S2024-03-21B (21) | | | Analyzed: 03/21/24 20:26 |
| 13C4-PFBA | 29.6 | 104 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 98.9 | 40 - 130 | |
| 13C5-PFHXA | 7.41 | 105 | 40 - 130 | |
| 13C4-PFHPA | 7.41 | 99.1 | 40 - 130 | |
| 13C8-PFOA | 7.41 | 105 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 100 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 94.5 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 88.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 76.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.41 | 75.2 | 20 - 150 | |
| 13C3-PFBS | 7.41 | 100 | 40 - 135 | |
| 13C3-PFHXS | 7.41 | 103 | 40 - 130 | |
| 13C8-PFOS | 7.41 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 126 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 107 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 97.9 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 94.0 | 20 - 150 | |
| 13C8-PFOSA | 7.41 | 71.0 | 40 - 130 | |
| D3-NMEFOSA | 7.41 | 23.8 | 10 - 130 | |
| D5-NETFOSA | 7.41 | 19.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 98.5 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 94.7 | 25 - 135 | |
| D7-NMEFOSE | 74.1 | 37.0 | 10 - 130 | |
| D9-NETFOSE | 74.1 | 35.7 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 97.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-6-031824 (24C0110-11 ) ng/L** | Lab File ID: S2024-03-21B (24) | | | Analyzed: 03/21/24 21:28 |
| 13C4-PFBA | 27.8 | 105 | 5 - 130 | |
| 13C5-PFPEA | 13.9 | 99.0 | 40 - 130 | |
| 13C5-PFHXA | 6.96 | 103 | 40 - 130 | |
| 13C4-PFHPA | 6.96 | 100 | 40 - 130 | |
| 13C8-PFOA | 6.96 | 98.8 | 40 - 130 | |
| 13C9-PFNA | 3.48 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.48 | 111 | 40 - 130 | |
| 13C7-PFUnA | 3.48 | 105 | 30 - 130 | |
| 13C2-PFDOA | 3.48 | 107 | 10 - 130 | |
| 13C2-PFTEDA | 3.48 | 90.0 | 10 - 130 | |
| 13C2-PFHxDA | 6.96 | 82.7 | 20 - 150 | |
| 13C3-PFBS | 6.96 | 100 | 40 - 135 | |
| 13C3-PFHXS | 6.96 | 101 | 40 - 130 | |
| 13C8-PFOS | 6.96 | 103 | 40 - 130 | |
| 13C2-4:2FTS | 13.9 | 123 | 40 - 200 | |
| 13C2-6:2FTS | 13.9 | 106 | 40 - 200 | |
| 13C2-8:2FTS | 13.9 | 105 | 40 - 300 | |
| 13C2D4-10:2FTS | 27.8 | 89.5 | 20 - 150 | |
| 13C8-PFOSA | 6.96 | 83.7 | 40 - 130 | |
| D3-NMEFOSA | 6.96 | 26.1 | 10 - 130 | |
| D5-NETFOSA | 6.96 | 21.1 | 10 - 130 | |
| D3-NMEFOSAA | 13.9 | 106 | 40 - 170 | |
| D5-NETFOSAA | 13.9 | 103 | 25 - 135 | |
| D7-NMEFOSE | 69.6 | 60.1 | 10 - 130 | |
| D9-NETFOSE | 69.6 | 55.1 | 10 - 130 | |
| 13C3-HFPO-DA | 27.8 | 97.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-6-031824 (24C0110-12 ) ng/L** | Lab File ID: S2024-03-21B (25) | | | Analyzed: 03/21/24 21:48 |
| 13C4-PFBA | 31.2 | 95.8 | 5 - 130 | |
| 13C5-PFPEA | 15.6 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.80 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.80 | 103 | 40 - 130 | |
| 13C8-PFOA | 7.80 | 101 | 40 - 130 | |
| 13C9-PFNA | 3.90 | 99.6 | 40 - 130 | |
| 13C6-PFDA | 3.90 | 97.2 | 40 - 130 | |
| 13C7-PFUnA | 3.90 | 91.9 | 30 - 130 | |
| 13C2-PFDOA | 3.90 | 91.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.90 | 81.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.80 | 74.0 | 20 - 150 | |
| 13C3-PFBS | 7.80 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.80 | 98.9 | 40 - 130 | |
| 13C8-PFOS | 7.80 | 94.5 | 40 - 130 | |
| 13C2-4:2FTS | 15.6 | 123 | 40 - 200 | |
| 13C2-6:2FTS | 15.6 | 113 | 40 - 200 | |
| 13C2-8:2FTS | 15.6 | 108 | 40 - 300 | |
| 13C2D4-10:2FTS | 31.2 | 93.0 | 20 - 150 | |
| 13C8-PFOSA | 7.80 | 74.6 | 40 - 130 | |
| D3-NMEFOSA | 7.80 | 19.9 | 10 - 130 | |
| D5-NETFOSA | 7.80 | 16.7 | 10 - 130 | |
| D3-NMEFOSAA | 15.6 | 102 | 40 - 170 | |
| D5-NETFOSAA | 15.6 | 100 | 25 - 135 | |
| D7-NMEFOSE | 78.0 | 63.6 | 10 - 130 | |
| D9-NETFOSE | 78.0 | 60.7 | 10 - 130 | |
| 13C3-HFPO-DA | 31.2 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0268-BLK1 ) ng/L** | Lab File ID: S2024-03-21B (7) | | | Analyzed: 03/21/24 15:39 |
| 13C4-PFBA | 32.0 | 103 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 111 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 107 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 102 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 105 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 107 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 112 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 102 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 94.6 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 81.9 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 82.5 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 103 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 106 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 133 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 104 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 88.8 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 32.2 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 27.8 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 107 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 99.5 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 73.2 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 68.3 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0268-BS1 ) ng/L | Lab File ID: S2024-03-21B (8) | | | Analyzed: 03/21/24 16:00 |
| 13C4-PFBA | 32.0 | 103 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 106 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 107 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 109 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 104 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 103 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 101 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 99.2 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 91.2 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 78.2 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 70.4 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 106 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 104 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 100 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 125 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 95.7 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 70.9 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 30.7 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 29.3 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 100 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 96.2 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 58.9 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 59.7 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 98.4 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0268-MRL1 ) ng/L** | Lab File ID: S2024-03-21B (9) | | | Analyzed: 03/21/24 16:20 |
| 13C4-PFBA | 32.0 | 110 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 104 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 108 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 119 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 108 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 104 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 104 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 94.2 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 90.0 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 83.3 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 71.8 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 104 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 106 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 125 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 119 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 104 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 74.0 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 29.6 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 27.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 111 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 110 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 59.2 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 61.3 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0268-MS1) ng/L** | Lab File ID: S2024-03-21B (10) | | | Analyzed: 03/21/24 16:41 |
| 13C4-PFBA | 30.0 | 89.0 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 88.4 | 40 - 130 | |
| 13C5-PFHXA | 7.50 | 87.5 | 40 - 130 | |
| 13C4-PFHPA | 7.50 | 87.5 | 40 - 130 | |
| 13C8-PFOA | 7.50 | 94.3 | 40 - 130 | |
| 13C9-PFNA | 3.75 | 101 | 40 - 130 | |
| 13C6-PFDA | 3.75 | 96.5 | 40 - 130 | |
| 13C7-PFUnA | 3.75 | 90.7 | 30 - 130 | |
| 13C2-PFDOA | 3.75 | 78.5 | 10 - 130 | |
| 13C2-PFTEDA | 3.75 | 67.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.50 | 73.5 | 20 - 150 | |
| 13C3-PFBS | 7.50 | 95.8 | 40 - 135 | |
| 13C3-PFHXS | 7.50 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.50 | 92.1 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 102 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 102 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 99.5 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.0 | 85.2 | 20 - 150 | |
| 13C8-PFOSA | 7.50 | 80.0 | 40 - 130 | |
| D3-NMEFOSA | 7.50 | 24.2 | 10 - 130 | |
| D5-NETFOSA | 7.50 | 23.1 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 86.8 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 85.1 | 25 - 135 | |
| D7-NMEFOSE | 75.0 | 48.3 | 10 - 130 | |
| D9-NETFOSE | 75.0 | 43.5 | 10 - 130 | |
| 13C3-HFPO-DA | 30.0 | 86.9 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0110
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0268-MSD1 ) ng/L** | Lab File ID: S2024-03-21B (11) | | | Analyzed: 03/21/24 17:01 |
| 13C4-PFBA | 29.8 | 88.1 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 92.9 | 40 - 130 | |
| 13C5-PFHXA | 7.44 | 94.4 | 40 - 130 | |
| 13C4-PFHPA | 7.44 | 92.4 | 40 - 130 | |
| 13C8-PFOA | 7.44 | 96.1 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 97.7 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 94.9 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 91.2 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 79.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 73.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.44 | 74.1 | 20 - 150 | |
| 13C3-PFBS | 7.44 | 98.9 | 40 - 135 | |
| 13C3-PFHXS | 7.44 | 98.4 | 40 - 130 | |
| 13C8-PFOS | 7.44 | 94.4 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 96.2 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 88.6 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 104 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.8 | 86.0 | 20 - 150 | |
| 13C8-PFOSA | 7.44 | 79.4 | 40 - 130 | |
| D3-NMEFOSA | 7.44 | 26.1 | 10 - 130 | |
| D5-NETFOSA | 7.44 | 20.1 | 10 - 130 | |
| D3-NMEFOSAA | 14.9 | 88.6 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 92.0 | 25 - 135 | |
| D7-NMEFOSE | 74.4 | 42.5 | 10 - 130 | |
| D9-NETFOSE | 74.4 | 44.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.8 | 94.1 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0110T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0268-BLK1T Batch:T BDC0268T Prepared:T 03/19/2024 13:48/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0268-BS1T | S2024-03-21B (8)T | 16:00T |
| MRL CheckT | BDC0268-MRL1T | S2024-03-21B (9)T | 16:20T |
| Matrix SpikeT | BDC0268-MS1T | S2024-03-21B (10)T | 16:41T |
| Matrix Spike DupT | BDC0268-MSD1T | S2024-03-21B (11)T | 17:01T |
| MW-12-4T | 24C0110-01T | S2024-03-21B (12)T | 17:22T |
| MW-12-3T | 24C0110-02T | S2024-03-21B (13)T | 17:42T |
| MW-12-2T | 24C0110-03T | S2024-03-21B (14)T | 18:03T |
| MW-12-1T | 24C0110-04T | S2024-03-21B (15)T | 18:23T |
| DUP-4-031824T | 24C0110-05T | S2024-03-21B (16)T | 18:44T |
| MW-18-4T | 24C0110-06T | S2024-03-21B (17)T | 19:04T |
| MW-18-3T | 24C0110-07T | S2024-03-21B (18)T | 19:25T |
| MW-18-2T | 24C0110-08T | S2024-03-21B (19)T | 19:45T |
| MW-18-1T | 24C0110-09T | S2024-03-21B (20)T | 20:06T |
| SB-2-031824T | 24C0110-10T | S2024-03-21B (21)T | 20:26T |
| EB-6-031824T | 24C0110-11T | S2024-03-21B (24)T | 21:28T |
| FB-6-031824T | 24C0110-12T | S2024-03-21B (25)T | 21:48T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-BLK1a | File ID:a | S2024-03-21B (7)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 15:39a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | 0.0603a | 0.055a | 0.40a | Ja |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.182a | 0.15a | 0.40a | Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0727a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-BLK1a | File ID:a | S2024-03-21B (7)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 15:39a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0268A | Laboratory ID:A | BDC0268-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 13.8A | 86.5A | 70 - 140A |
| PFPeA | 8.00A | 7.00A | 87.5A | 65 - 135A |
| PFHxA | 4.00A | 3.50A | 87.5A | 70 - 145A |
| PFHpA | 4.00A | 3.35A | 83.8A | 70 - 150A |
| PFOA | 4.00A | 3.67A | 91.7A | 70 - 150A |
| PFNA | 4.00A | 3.42A | 85.5A | 70 - 150A |
| PFDA | 4.00A | 3.39A | 84.8A | 70 - 140A |
| PFUnA | 4.00A | 3.50A | 87.6A | 70 - 145A |
| PFDoA | 4.00A | 3.36A | 84.0A | 70 - 140A |
| PFTrDA | 4.00A | 3.22A | 80.6A | 65 - 140A |
| PFTeDA | 4.00A | 3.75A | 93.7A | 60 - 140A |
| PFHxDA | 4.00A | 3.53A | 88.2A | 40 - 150A |
| PFODA | 4.00A | 2.92A | 72.9A | 40 - 150A |
| PFBSA | 3.54A | 3.04A | 85.9A | 60 - 145A |
| PFPeSA | 3.76A | 3.37A | 89.6A | 65 - 140A |
| PFHxSA | 3.66A | 3.22A | 88.1A | 65 - 145A |
| PFHpSA | 3.82A | 3.41A | 89.3A | 70 - 150A |
| PFOSA | 3.72A | 3.38A | 90.8A | 55 - 150A |
| PFNSA | 3.84A | 3.23A | 84.0A | 65 - 145A |
| PFDSA | 3.86A | 3.16A | 81.8A | 60 - 145A |
| PFDoSA | 3.88A | 2.91A | 74.9A | 50 - 145A |
| 4:2FTSA | 15.0A | 13.1A | 87.5A | 70 - 145A |
| 6:2FTSA | 15.2A | 13.8A | 90.5A | 65 - 155A |
| 8:2FTSA | 15.4A | 14.7A | 95.4A | 60 - 150A |
| 10:2FTSA | 15.4A | 16.7A | 108A | 40 - 150A |
| PFOSA | 4.00A | 3.37A | 84.1A | 70 - 145A |
| NMeFOSA | 16.0A | 14.4A | 89.9A | 60 - 150A |
| NEtFOSA | 16.0A | 13.6A | 85.3A | 65 - 145A |
| NMeFOSA | 4.00A | 3.64A | 90.9A | 50 - 140A |
| NEtFOSA | 4.00A | 3.50A | 87.5A | 70 - 145A |
| NMeFOSEA | 16.0A | 14.0A | 87.4A | 70 - 145A |
| NEtFOSEA | 16.0A | 14.2A | 88.8A | 70 - 135A |
| HFPO-DA | 4.00A | 3.76A | 93.9 | 70 - 140A |
| DONA | 3.78A | 3.76A | 99.5A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0268A | Laboratory ID:A | BDC0268-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 6.73A | 94.5A | 70 - 140A |
| PFMPA | 8.00A | 6.74A | 84.3A | 55 - 140A |
| PFMBA | 8.00A | 6.73A | 84.1A | 60 - 150A |
| NFDHA | 8.00A | 6.53A | 81.6A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.44A | 92.0A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 3.35A | 88.6A | 55 - 160A |
| 3:3FTCA | 16.0A | 12.5A | 78.3A | 65 - 130A |
| 5:3FTCA | 16.0A | 14.2A | 89.0A | 70 - 135A |
| 7:3FTCA | 16.0A | 14.5A | 90.7A | 50 - 145A |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-18-1-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0268- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0268-MS1- |
| Column:- | | Sample Lab ID:- | 24C0110-09- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 15.0- | 0.505- | 12.8- | 82.1- | 70 - 140- |
| PFPeA- | 7.50- | 0.261- | 6.67- | 85.4- | 65 - 135- |
| PFHxA- | 3.75- | 0.163- | 3.11- | 78.6- | 70 - 145- |
| PFHpA- | 3.75- | 0.133- | 3.24- | 82.7- | 70 - 150- |
| PFOA- | 3.75- | 0.440- | 3.68- | 86.4- | 70 - 150- |
| PFNA- | 3.75- | ND- | 3.13- | 83.5- | 70 - 150- |
| PFDA- | 3.75- | 0.0952- | 3.10- | 80.1- | 70 - 140- |
| PFUnA- | 3.75- | ND- | 3.13- | 83.4- | 70 - 145- |
| PFDoA- | 3.75- | ND- | 3.33- | 88.7- | 70 - 140- |
| PFTrDA- | 3.75- | ND- | 2.93- | 78.0- | 65 - 140- |
| PFTeDA- | 3.75- | ND- | 3.46- | 92.3- | 60 - 140- |
| PFHxDA- | 3.75- | ND- | 3.23- | 86.1- | 40 - 150- |
| PFODA- | 3.75- | ND- | 3.03- | 80.6- | 40 - 150- |
| PFBS- | 3.32- | 0.192- | 2.97- | 83.6- | 60 - 145- |
| PFPeS- | 3.53- | ND- | 3.00- | 85.0- | 65 - 140- |
| PFHxS- | 3.43- | 0.192- | 3.03- | 82.5- | 65 - 145- |
| PFHpS- | 3.58- | ND- | 3.19- | 89.1- | 70 - 150- |
| PFOS- | 3.49- | 0.861- | 3.98- | 89.5- | 55 - 150- |
| PFNS- | 3.60- | ND- | 2.89- | 80.2- | 65 - 145- |
| PFDS- | 3.62- | ND- | 2.63- | 72.7- | 60 - 145- |
| PFDoS- | 3.64- | ND- | 2.32- | 63.7- | 50 - 145- |
| 4:2FTS- | 14.1- | ND- | 11.9- | 84.8- | 70 - 145- |
| 6:2FTS- | 14.3- | ND- | 13.3- | 93.2- | 65 - 155- |
| 8:2FTS- | 14.4- | ND- | 13.8- | 96.0- | 60 - 150- |
| 10:2FTS- | 14.5- | ND- | 14.5- | 100- | 40 - 150- |
| PFOSA- | 3.75- | ND- | 3.37- | 89.9- | 70 - 145- |
| NMeFOSA- | 15.0- | ND- | 15.0- | 100- | 60 - 150- |
| NEtFOSA- | 15.0- | ND- | 13.6- | 90.4- | 65 - 145- |
| NMeFOSAA- | 3.75- | ND- | 3.17- | 84.6- | 50 - 140- |
| NEtFOSAA- | 3.75- | ND- | 3.39- | 90.4- | 70 - 145- |
| NMeFOSE- | 15.0- | ND- | 13.2- | 88.2- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-18-1-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0268- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0268-MS1- |
| Column:- | | Sample Lab ID:- | 24C0110-09- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 15.0- | ND- | 14.3- | 95.5- | 70 - 135- |
| HFPO-DA- | 3.75- | ND- | 3.24- | 86.3- | 70 - 140- |
| ADONA- | 3.55- | ND- | 3.22- | 90.9- | 65 - 145- |
| PFEESA- | 6.68- | ND- | 5.84- | 87.4- | 70 - 140- |
| PFMPA- | 7.50- | ND- | 6.89- | 91.9- | 55 - 140- |
| PFMBA- | 7.50- | ND- | 6.09- | 81.2- | 60 - 150- |
| NFDHA- | 7.50- | ND- | 6.06- | 80.7- | 50 - 150- |
| 9Cl-PF3ONS- | 3.51- | ND- | 2.92- | 83.3- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.55- | ND- | 2.47- | 69.6- | 55 - 160- |
| 3:3FTCA- | 15.0- | ND- | 13.1- | 87.1- | 65 - 130- |
| 5:3FTCA- | 15.0- | ND- | 14.1- | 93.9- | 70 - 135- |
| 7:3FTCA- | 15.0- | ND- | 14.4- | 96.3- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-18-1-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0268- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0268-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0110-09- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.9- | 12.7- | 82.2- | 0.713- | 30- | 70 - 140- |
| PFPeA- | 7.44- | 6.44- | 83.0- | 3.46- | 30- | 65 - 135- |
| PFHxA- | 3.72- | 3.27- | 83.5- | 5.01- | 30- | 70 - 145- |
| PFHpA- | 3.72- | 3.32- | 85.8- | 2.68- | 30- | 70 - 150- |
| PFOA- | 3.72- | 3.83- | 91.0- | 3.80- | 30- | 70 - 150- |
| PFNA- | 3.72- | 3.01- | 80.9- | 4.04- | 30- | 70 - 150- |
| PFDA- | 3.72- | 3.15- | 82.2- | 1.74- | 30- | 70 - 140- |
| PFUnA- | 3.72- | 3.15- | 84.7- | 0.791- | 30- | 70 - 145- |
| PFDoA- | 3.72- | 3.32- | 89.3- | 0.208- | 30- | 70 - 140- |
| PFTrDA- | 3.72- | 3.13- | 84.1- | 6.64- | 30- | 65 - 140- |
| PFTeDA- | 3.72- | 3.16- | 85.0- | 9.02- | 30- | 60 - 140- |
| PFHxDA- | 3.72- | 3.39- | 91.2- | 4.91- | 30- | 40 - 150- |
| PFODA- | 3.72- | 3.07- | 82.4- | 1.33- | 30- | 40 - 150- |
| PFBS- | 3.29- | 2.84- | 80.3- | 4.52- | 30- | 60 - 145- |
| PFPeS- | 3.50- | 3.07- | 87.9- | 2.48- | 30- | 65 - 140- |
| PFHxS- | 3.40- | 3.01- | 82.6- | 0.650- | 30- | 65 - 145- |
| PFHpS- | 3.55- | 3.19- | 89.8- | 0.140- | 30- | 70 - 150- |
| PFOS- | 3.46- | 3.80- | 85.0- | 4.66- | 30- | 55 - 150- |
| PFNS- | 3.57- | 2.92- | 81.6- | 0.920- | 30- | 65 - 145- |
| PFDS- | 3.59- | 2.69- | 74.9- | 2.14- | 30- | 60 - 145- |
| PFDoS- | 3.61- | 2.43- | 67.4- | 4.75- | 30- | 50 - 145- |
| 4:2FTS- | 14.0- | 12.6- | 90.4- | 5.56- | 30- | 70 - 145- |
| 6:2FTS- | 14.1- | 14.6- | 103- | 9.65- | 30- | 65 - 155- |
| 8:2FTS- | 14.3- | 13.1- | 91.4- | 5.75- | 30- | 60 - 150- |
| 10:2FTS- | 14.4- | 15.4- | 107- | 5.96- | 30- | 40 - 150- |
| PFOSA- | 3.72- | 3.15- | 84.6- | 6.94- | 30- | 70 - 145- |
| NMeFOSA- | 14.9- | 13.7- | 91.7- | 9.57- | 30- | 60 - 150- |
| NEtFOSA- | 14.9- | 13.8- | 92.6- | 1.60- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-18-1-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0110- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0268- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0268-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0110-09- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.72- | 3.19- | 85.7- | 0.534- | 30- | 50 - 140- |
| NEtFOSAA- | 3.72- | 3.23- | 86.8- | 4.94- | 30- | 70 - 145- |
| NMeFOSE- | 14.9- | 13.6- | 91.4- | 2.75- | 30- | 70 - 145- |
| NEtFOSE- | 14.9- | 13.0- | 87.1- | 10.1- | 30- | 70 - 135- |
| HFPO-DA- | 3.72- | 3.08- | 82.8- | 5.00- | 30- | 70 - 140- |
| ADONA- | 3.52- | 3.04- | 86.6- | 5.73- | 30- | 65 - 145- |
| PFEESA- | 6.62- | 5.42- | 81.8- | 7.46- | 30- | 70 - 140- |
| PFMPA- | 7.44- | 6.84- | 91.9- | 0.811- | 30- | 55 - 140- |
| PFMBA- | 7.44- | 6.14- | 82.5- | 0.792- | 30- | 60 - 150- |
| NFDHA- | 7.44- | 6.06- | 81.5- | 0.118- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.48- | 2.84- | 81.5- | 3.01- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.52- | 2.45- | 69.6- | 0.910- | 30- | 55 - 160- |
| 3:3FTCA- | 14.9- | 12.2- | 81.8- | 7.17- | 30- | 65 - 130- |
| 5:3FTCA- | 14.9- | 13.2- | 89.0- | 6.25- | 30- | 70 - 135- |
| 7:3FTCA- | 14.9- | 13.4- | 90.2- | 7.37- | 30- | 50 - 145- |

# CALIBRATION SUMMARYL

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.23574 x (std. dev. = 0.01485) (weighting: None) | %RSE=6.3 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49841 x (std. dev. = 0.03017) (weighting: None) | %RSE=6.1 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.50512 x (std. dev. = 0.02794) (weighting: None) | %RSE=5.5 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.48038 x (std. dev. = 0.02636) (weighting: None) | %RSE=5.5 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49065 x (std. dev. = 0.03123) (weighting: None) | %RSE=6.4 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 9.99867e-4 x^2 + 0.48413 x + 0.01226 (r = 0.99905) (weighting: 1 / x) | %RSE=7.3 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00506 x (std. dev. = 0.07345) (weighting: None) | %RSE=7.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 1.02176 x (std. dev. = 0.07981) (weighting: None) | %RSE=7.8 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.92494 x (std. dev. = 0.04119) (weighting: None) | %RSE=4.5 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00604 x (std. dev. = 0.03628) (weighting: None) | %RSE=3.6 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.98412 x (std. dev. = 0.02772) (weighting: None) | %RSE=2.8 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93655 x (std. dev. = 0.03297) (weighting: None) | %RSE=3.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.47691 x (std. dev. = 0.01946) (weighting: None) | %RSE=4.1 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29836 x (std. dev. = 0.01281) (weighting: None) | %RSE=4.3 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8847 | y = 0.22968 x (std. dev. = 0.01218) (weighting: None) | %RSE=5.3 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9384 | y = 0.71812 x (std. dev. = 0.05325) (weighting: None) | %RSE=7.4 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.80977 x (std. dev. = 0.02624) (weighting: None) | %RSE=3.2 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9514 | y = 0.56999 x (std. dev. = 0.03426) (weighting: None) | %RSE=6.0 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9275 | y = 0.53562 x (std. dev. = 0.02668) (weighting: None) | %RSE=5.0 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9599 | y = 0.51901 x (std. dev. = 0.02103) (weighting: None) | %RSE=4.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9631 | y = 0.63587 x (std. dev. = 0.04565) (weighting: None) | %RSE=7.2 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9696 | y = 0.56432 x (std. dev. = 0.04069) (weighting: None) | %RSE=7.2 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9345 | y = 2.45261 x (std. dev. = 0.08690) (weighting: None) | %RSE=3.5 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.78588 x (std. dev. = 0.04847) (weighting: None) | %RSE=6.2 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9583 | y = 0.91008 x (std. dev. = 0.10404) (weighting: None) | %RSE=11.4 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9662 | y = 0.37234 x (std. dev. = 0.02276) (weighting: None) | %RSE=6.1 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 2.57679 x (std. dev. = 0.13834) (weighting: None) | %RSE=5.4 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.07289 x (std. dev. = 0.21947) (weighting: None) | %RSE=7.1 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.50001 x (std. dev. = 0.02156) (weighting: None) | %RSE=4.3 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9793 | y = 1.28942 x (std. dev. = 0.09531) (weighting: None) | %RSE=7.4 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.98582 x (std. dev. = 0.09760) (weighting: None) | %RSE=4.9 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.23988 x (std. dev. = 0.08781) (weighting: None) | %RSE=3.9 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23844 x (std. dev. = 0.01045) (weighting: None) | %RSE=4.4 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24455 x (std. dev. = 0.01542) (weighting: None) | %RSE=6.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21938 x (std. dev. = 0.01283) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.17769 x (std. dev. = 0.01004) (weighting: None) | %RSE=5.6 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07371 x (std. dev. = 0.00395) (weighting: None) | %RSE=5.4 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9427 | y = 0.81069 x (std. dev. = 0.04465) (weighting: None) | %RSE=5.5 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8925 | y = 0.61575 x (std. dev. = 0.03779) (weighting: None) | %RSE=6.1 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.16029 x (std. dev. = 0.01308) (weighting: None) | %RSE=8.2 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.43566 x (std. dev. = 0.03766) (weighting: None) | %RSE=8.6 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.35868 x (std. dev. = 0.02163) (weighting: None) | %RSE=6.0 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9333 | y = 0.86685 x (std. dev. = 0.02525) (weighting: None) | %RSE=2.9 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9432 | y = 0.67374 x (std. dev. = 0.02028) (weighting: None) | %RSE=3.0 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9239 | y = 0.30098 x (std. dev. = 0.02588) (weighting: None) | %RSE=8.6 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.05747 x (std. dev. = 0.00909) (weighting: None) | %RSE=15.8 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.53288 x (std. dev. = 0.02986) (weighting: None) | %RSE=5.6 |

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.87447 x (std. dev. = 0.07090) (weighting: None) | %RSE=8.1 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.53158 x (std. dev. = 0.01736) (weighting: None) | %RSE=3.3 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.40781 x (std. dev. = 0.04430) (weighting: None) | %RSE=10.9 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39365 x (std. dev. = 0.02523) (weighting: None) | %RSE=6.4 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 238433.9480 x | %RSD=15.9 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 126855.7219 x | %RSD=7.8 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 395316.5081 x | %RSD=6.4 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 284407.9695 x | %RSD=7.7 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 292026.6901 x | %RSD=5.1 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 949032.5442 x | %RSD=6.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 761641.2582 x | %RSD=6.3 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 9.1391 x | %RSD=3.3 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.4634 x | %RSD=11.5 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.5633 x | %RSD=6.5 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 5.0762 x | %RSD=7.1 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1429 x | %RSD=4.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9805 x | %RSD=6.0 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1207 x | %RSD=4.9 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3184 x | %RSD=5.0 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3427 x | %RSD=4.5 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1434 x | %RSD=5.5 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9523 x | %RSD=6.6 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.8070 x | %RSD=5.2 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4423 x | %RSD=5.2 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1564 x | %RSD=6.3 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.6235 x | %RSD=9.6 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.8661 x | %RSD=7.0 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.4635 x | %RSD=12.9 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.0591 x | %RSD=7.0 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 1.9110 x | %RSD=6.4 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4053 x | %RSD=5.6 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4347 x | %RSD=6.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.1097 x | %RSD=6.8 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.0114 x | %RSD=8.2 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8214 x | %RSD=7.4 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8487 x | %RSD=6.5 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 8.3148 x | %RSD=5.9 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1684 x | %RSD=4.0 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 1.9740 x | %RSD=5.2 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{ in curve standard mix}$$

$$\text{Result} \left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:ABK
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-19A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

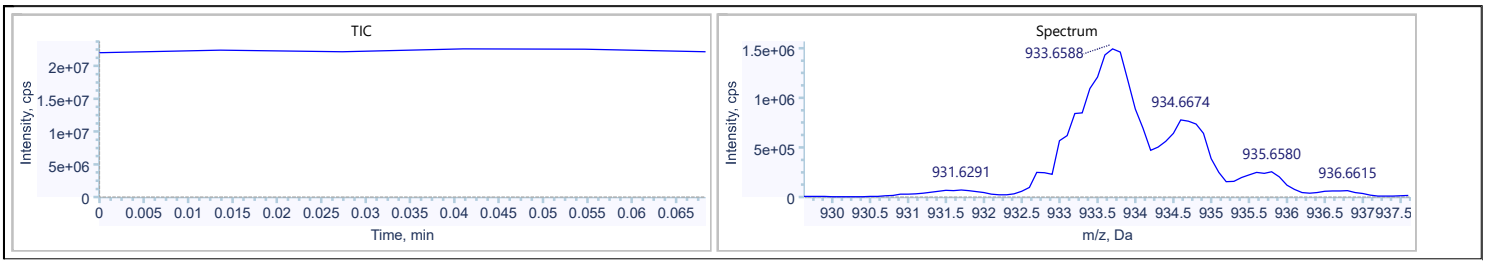


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

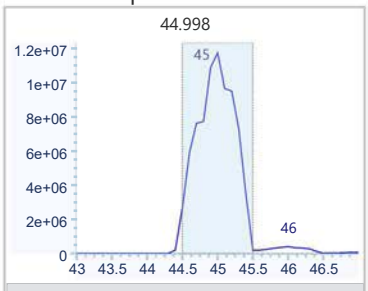


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

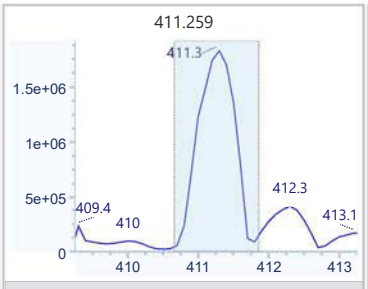


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

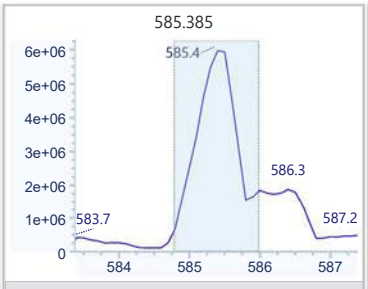


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

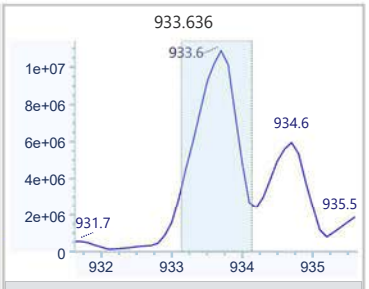


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

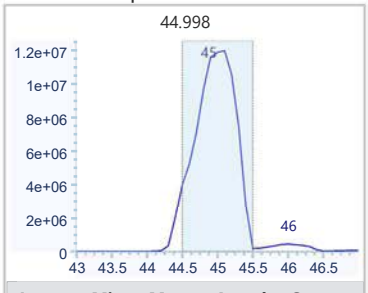


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

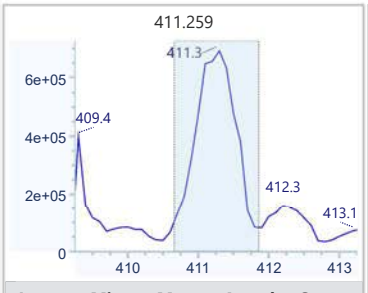


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

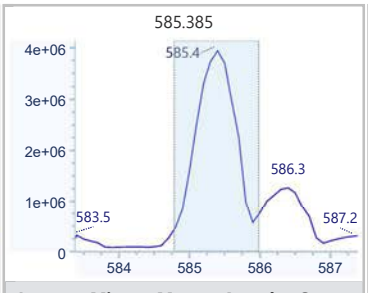


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

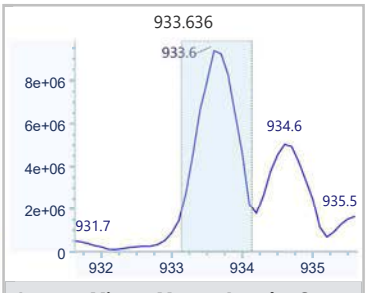


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

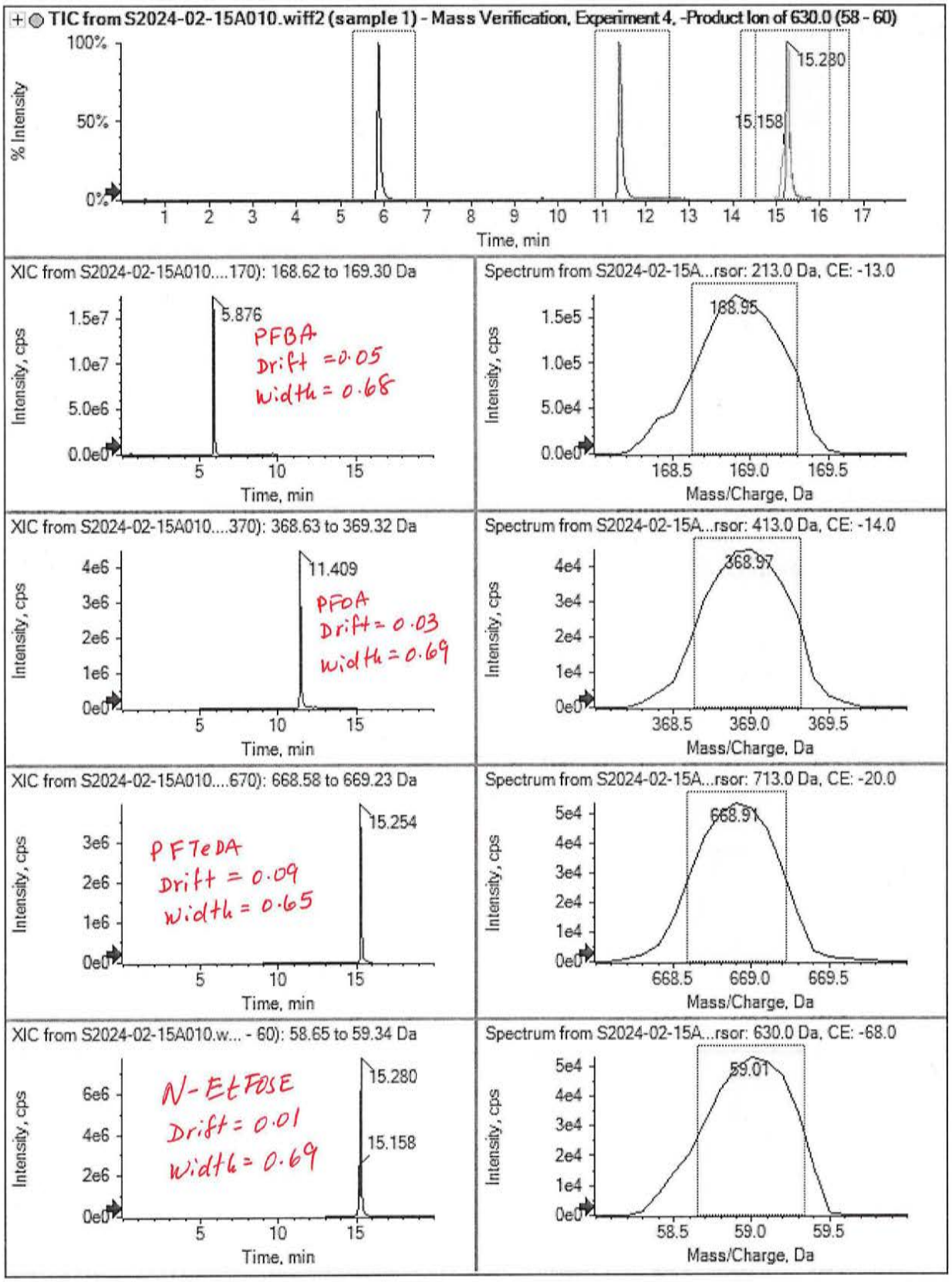

# EPA 1633A

Initial Calibration: SD00991 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 56754<br>( 163.0 / 69.0 ) 1270 | ( 2.79 , 0.74 ) ( N/A , 0.00 , -0.4) | 384.2<br>53.0 | 0.0224<br>82.4<br>82.4 | 0.1977 | N/A | 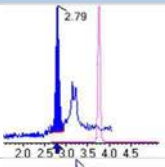 | 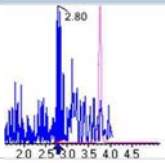 | |
| PFBA | ( 213.0 / 169.0 ) 136258 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 106.2 | N/A<br>0.0<br>0.0 | 0.4489 | N/A | 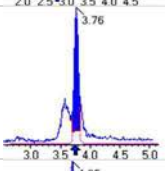 | | |
| PFPeA | ( 263.0 / 219.0 ) 51948<br>( 263.0 / 69.0 ) 452 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -1.2) | 324.2<br>10.2 | 0.0087<br>72.8<br>72.8 | 0.2066 | N/A | 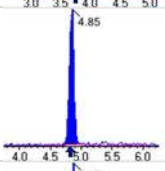 | 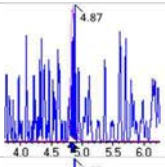 | |
| PFHxA | ( 313.0 / 269.0 ) 28303<br>( 313.0 / 119.0 ) 2598 | ( 6.07 , 1.00 ) ( 0.00 , N/A , -0.6) | 211.6<br>65.5 | 0.0918<br>79.1<br>79.1 | 0.1048 | N/A | 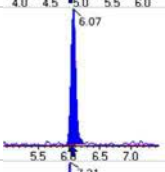 | 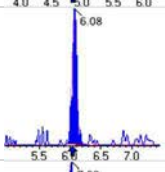 | |
| PFHpA | ( 363.0 / 319.0 ) 29431<br>( 363.0 / 169.0 ) 10099 | ( 7.21 , 1.00 ) ( 0.00 , N/A , -0.5) | 207.3<br>144.2 | 0.3431<br>113.2<br>113.2 | 0.0936 | N/A | 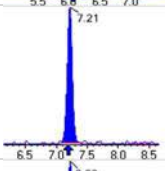 | 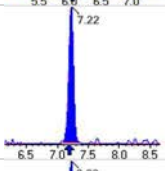 | |
| PFOA | ( 413.0 / 369.0 ) 52214<br>( 413.0 / 169.0 ) 20858 | ( 8.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 69.2<br>131.3 | 0.3995<br>109.3<br>109.3 | 0.0973 | N/A | 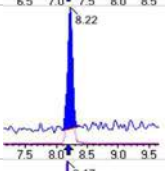 | 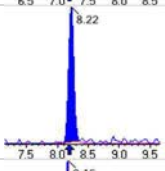 | |
| PFNA | ( 463.0 / 419.0 ) 24013<br>( 463.0 / 169.0 ) 7912 | ( 9.17 , 1.00 ) ( 0.01 , N/A , 0.5) | 245.2<br>151.2 | 0.3295<br>129.1<br>129.1 | 0.0870 | N/A | 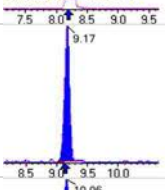 | 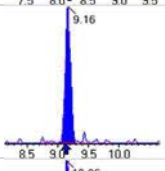 | |
| PFDA | ( 513.0 / 469.0 ) 38668<br>( 513.0 / 169.0 ) 3883 | ( 10.06 , 1.00 ) ( -0.01 , N/A , 0.0) | 462.4<br>300.3 | 0.1004<br>85.7<br>85.7 | 0.1143 | N/A | 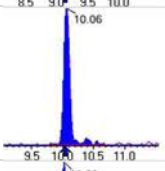 | 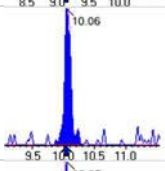 | |
| PFUnA | ( 563.0 / 519.0 ) 36147<br>( 563.0 / 169.0 ) 4589 | ( 10.93 , 1.00 ) ( 0.00 , N/A , -1.0) | 249.6<br>92.0 | 0.1270<br>89.6<br>89.6 | 0.0946 | N/A | 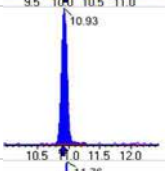 | 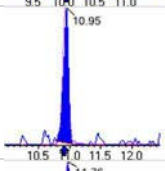 | |
| PFDoA | ( 613.0 / 569.0 ) 40420<br>( 613.0 / 169.0 ) 7186 | ( 11.76 , 1.00 ) ( 0.00 , N/A , -0.5) | 255.5<br>118.2 | 0.1778<br>112.5<br>112.5 | 0.0950 | N/A | 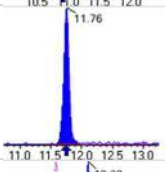 | 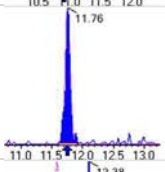 | |
| PFTrDA | ( 663.0 / 619.0 ) 40921<br>( 663.0 / 169.0 ) 9844 | ( 12.38 , 1.05 ) ( N/A , 0.01 , -0.1) | 299.5<br>147.5 | 0.2406<br>93.5<br>93.5 | 0.0984 | N/A | 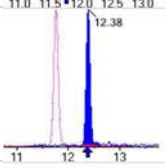 | 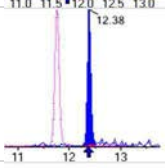 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30255<br>( 713.0 / 169.0 ) 9045 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 201.3<br>91.0 | 0.2990<br>110.8<br>110.8 | 0.0932 | N/A | 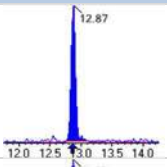 | 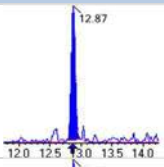 | |
| PFHxDA | ( 813.0 / 769.0 ) 27334<br>( 813.0 / 169.0 ) 7950 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.3) | 174.8<br>67.9 | 0.2908<br>118.9<br>118.9 | 0.1034 | N/A | 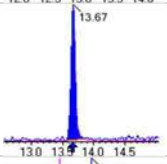 | 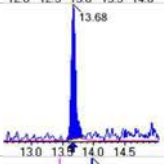 | |
| PFODA | ( 913.0 / 869.0 ) 15819<br>( 913.0 / 169.0 ) 6681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , -0.4) | 73.9<br>28.2 | 0.4223<br>117.9<br>117.9 | 0.0956 | N/A | 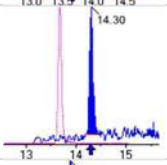 | 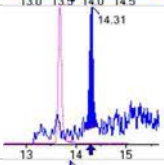 | |
| PFBS | ( 299.0 / 80.0 ) 35573<br>( 299.0 / 99.0 ) 26416 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.2) | 334.4<br>161.3 | 0.7426<br>105.0<br>105.0 | 0.0792 | N/A | 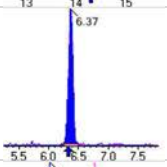 | 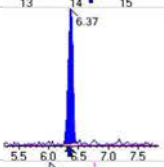 | |
| PFPeS | ( 349.0 / 80.0 ) 97489<br>( 349.0 / 99.0 ) 33196 | ( 7.61 , 0.88 )<br>( N/A , 0.02 , 0.1) | 355.9<br>243.8 | 0.3405<br>94.7<br>94.7 | 0.0909 | N/A | 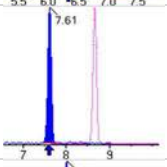 | 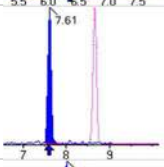 | |
| PFHxS | ( 399.0 / 80.0 ) 110405<br>( 399.0 / 99.0 ) 38767 | ( 8.66 , 1.00 )<br>( 0.00 , N/A , -0.1) | 482.8<br>534.8 | 0.3511<br>110.3<br>110.3 | 0.0887 | N/A | 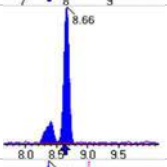 | 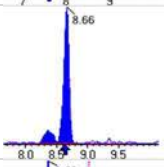 | |
| PFHpS | ( 449.0 / 80.0 ) 83548<br>( 449.0 / 99.0 ) 26287 | ( 9.63 , 0.92 )<br>( N/A , 0.02 , 0.3) | 322.3<br>244.1 | 0.3146<br>118.9<br>118.9 | 0.0858 | N/A | 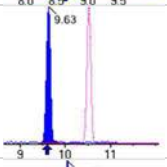 | 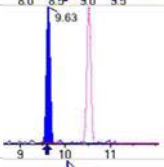 | |
| PFOS | ( 499.0 / 80.0 ) 87691<br>( 499.0 / 99.0 ) 22883 | ( 10.52 , 1.00 )<br>( 0.00 , N/A , 0.4) | 345.3<br>1768.7 | 0.2609<br>111.6<br>111.6 | 0.0934 | N/A | 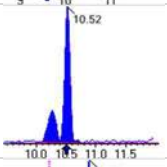 | 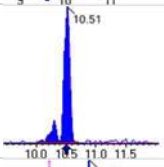 | |
| PFNS | ( 549.0 / 80.0 ) 83900<br>( 549.0 / 99.0 ) 23316 | ( 11.37 , 1.08 )<br>( N/A , 0.03 , 0.3) | 349.0<br>203.8 | 0.2779<br>102.0<br>102.0 | 0.0954 | N/A | 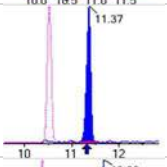 | 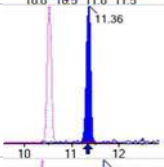 | |
| PFDS | ( 599.0 / 80.0 ) 108245<br>( 599.0 / 99.0 ) 28207 | ( 12.06 , 1.15 )<br>( N/A , 0.01 , -0.3) | 392.8<br>137.7 | 0.2606<br>95.8<br>95.8 | 0.1008 | N/A | 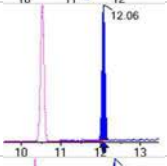 | 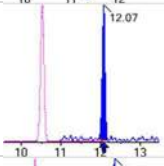 | |
| PFDoS | ( 699.0 / 80.0 ) 90182<br>( 699.0 / 99.0 ) 22019 | ( 12.98 , 1.23 )<br>( N/A , 0.01 , -0.1) | 480.9<br>258.2 | 0.2442<br>104.5<br>104.5 | 0.0953 | N/A | 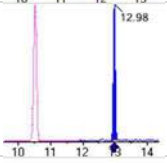 | 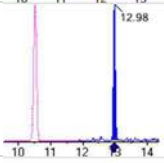 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 138266<br>( 327.0 / 81.0 ) 132939 | ( 5.53 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1481.0<br>723.3 | 0.9615<br>110.2<br>110.2 | 0.3493 | N/A | 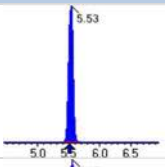 | 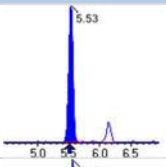 | |
| 6:2FTS | ( 427.0 / 407.0 ) 137083<br>( 427.0 / 81.0 ) 177481 | ( 7.65 , 1.00 )<br>( -0.01 , N/A , -0.3) | 1795.6<br>972.6 | 1.2947<br>103.2<br>103.2 | 0.3738 | N/A | 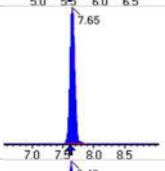 | 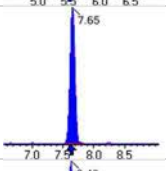 | |
| 8:2FTS | ( 527.0 / 507.0 ) 135114<br>( 527.0 / 81.0 ) 148723 | ( 9.43 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1178.6<br>706.0 | 1.1007<br>101.2<br>101.2 | 0.3727 | N/A | 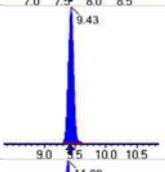 | 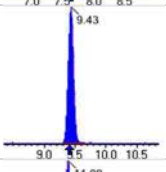 | |
| 10:2FTS | ( 627.0 / 607.0 ) 113285<br>( 627.0 / 81.0 ) 169067 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.0) | 776.4<br>354.6 | 1.4924<br>103.7<br>103.7 | 0.3842 | N/A | 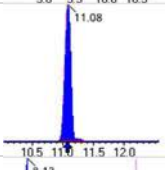 | 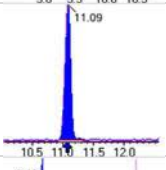 | |
| PFBSA | ( 297.9 / 78.0 ) 77257<br>( 297.9 / 278.0 ) 42 | ( 8.13 , 0.57 )<br>( N/A , 0.02 , 0.5) | 590.4<br>6.4 | 0.0005<br>39.4<br>39.4 | 0.0966 | N/A | 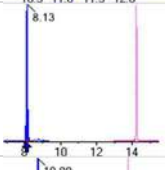 | 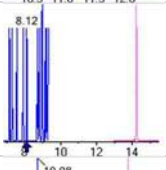 | |
| PFHxSA | ( 397.9 / 78.0 ) 102666<br>( 397.9 / 378.0 ) 421 | ( 10.99 , 0.76 )<br>( N/A , 0.02 , 0.9) | 582.4<br>24.9 | 0.0041<br>100.4<br>100.4 | 0.0979 | N/A | 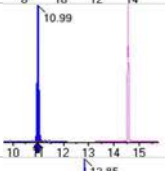 | 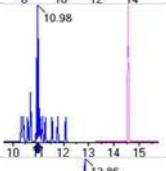 | |
| PFOSA | ( 498.0 / 78.0 ) 74467<br>( 498.0 / 478.0 ) 886 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , -0.5) | 606.2<br>33.7 | 0.0119<br>84.8<br>84.8 | 0.0950 | N/A | 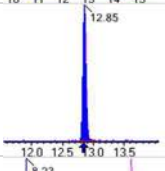 | 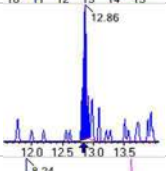 | |
| TFSI | ( 279.7 / 147.0 ) 175179<br>( 279.7 / 211.0 ) 15047 | ( 8.23 , 0.64 )<br>( N/A , 0.03 , -0.2) | 46.0<br>21.9 | 0.0859<br>102.2<br>102.2 | 0.0849 | N/A | 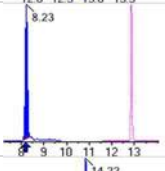 | 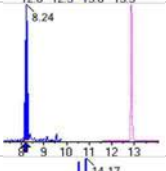 | |
| NMeFOSA | ( 512.0 / 219.0 ) 57698<br>( 512.0 / 169.0 ) 44722 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 560.7<br>223.4 | 0.7751<br>103.6<br>103.6 | 0.3745 | N/A | 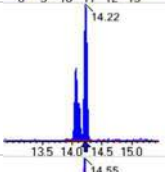 | 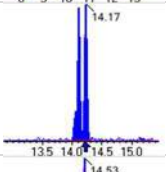 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72453<br>( 526.0 / 169.0 ) 88312 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.5) | 828.6<br>691.6 | 1.2189<br>98.7<br>98.7 | 0.3790 | N/A | 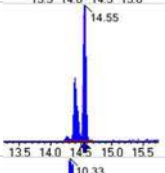 | 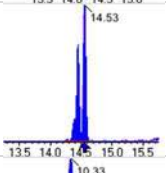 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 21494<br>( 570.0 / 483.0 ) 9989 | ( 10.33 , 1.00 )<br>( 0.01 , N/A , 0.1) | 69489.4<br>2801.3 | 0.4647<br>106.0<br>106.0 | 0.1015 | N/A | 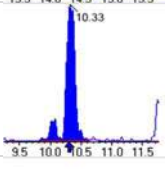 | 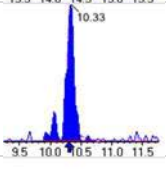 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 18396<br>( 584.0 / 526.0 ) 12082 | ( 10.86 , 1.00 ) ( 0.01 , N/A , 0.6) | 62964.4<br>389.2 | 0.6568<br>106.5<br>106.5 | 0.0917 | N/A | 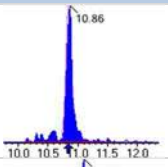 | 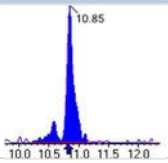 | |
| NMeFOSE | ( 616.0 / 59.0 ) 32728 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 202.5 | N/A<br>0.0<br>0.0 | 0.4046 | N/A | 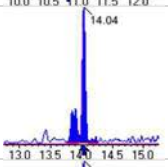 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 24283 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 263.9 | N/A<br>0.0<br>0.0 | 0.3613 | N/A | 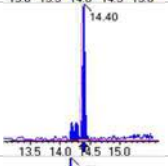 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 7677<br>( 285.0 / 185.0 ) 19134 | ( 6.53 , 1.00 ) ( 0.00 , N/A , -0.1) | 309.3<br>127.0 | 2.4924<br>90.1<br>90.1 | 0.1012 | N/A | 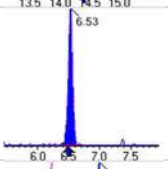 | 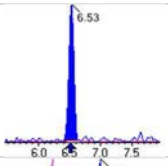 | |
| ADONA | ( 377.0 / 85.0 ) 86497<br>( 377.0 / 251.0 ) 6881 | ( 7.61 , 1.16 ) ( N/A , 0.02 , -0.1) | 669.7<br>111.4 | 0.0796<br>78.0<br>78.0 | 0.0977 | N/A | 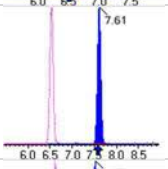 | 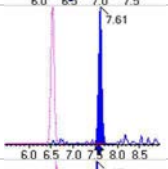 | |
| PFEESA | ( 315.0 / 135.0 ) 32797<br>( 315.0 / 83.0 ) 24495 | ( 6.97 , 1.15 ) ( N/A , 0.02 , -0.2) | 555.1<br>75.6 | 0.7469<br>134.0<br>134.0 | 0.1691 | N/A | 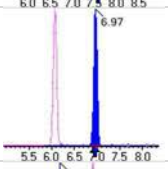 | 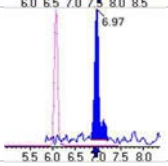 | |
| PFMPA | ( 229.0 / 85.0 ) 14437 | ( 4.15 , 0.86 ) ( N/A , 0.01 , 0.0) | 396.2 | N/A<br>0.0<br>0.0 | 0.1810 | N/A | 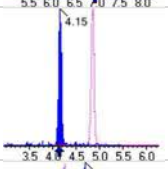 | | |
| PFMBA | ( 279.0 / 85.0 ) 38487 | ( 5.21 , 1.08 ) ( N/A , 0.00 , 0.0) | 415.6 | N/A<br>0.0<br>0.0 | 0.1775 | N/A | 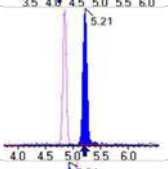 | | |
| NFDHA | ( 295.0 / 201.0 ) 19867<br>( 295.0 / 85.0 ) 19074 | ( 5.94 , 0.98 ) ( N/A , 0.02 , 0.4) | 825.6<br>224.5 | 0.9601<br>89.0<br>89.0 | 0.1970 | N/A | 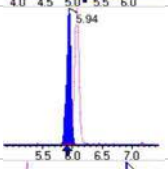 | 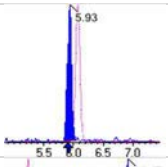 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86451<br>( 533.0 / 353.0 ) 30185 | ( 11.17 , 1.71 ) ( N/A , 0.02 , -0.2) | 1132.8<br>400.3 | 0.3492<br>111.6<br>111.6 | 0.0904 | N/A | 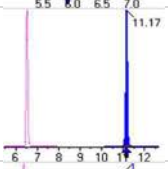 | 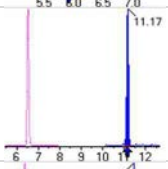 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 69462<br>( 633.0 / 453.0 ) 22673 | ( 12.48 , 1.91 ) ( N/A , 0.01 , -0.1) | 820.0<br>211.9 | 0.3264<br>98.3<br>98.3 | 0.0945 | N/A | 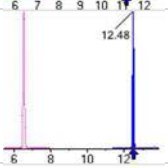 | 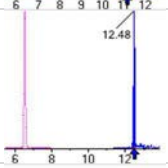 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 44635<br>( 461.0 / 381.2 ) 17189 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.6) | 466.0<br>312.6 | 0.3851<br>96.6<br>96.6 | 0.0843 | N/A | 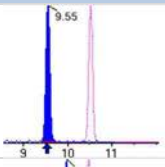 | 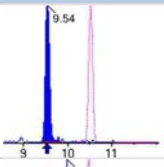 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 4575<br>( 241.0 / 117.0 ) 11441 | ( 4.41 , 0.91 ) ( N/A , 0.01 , -0.2) | 329.5<br>126.3 | 2.5007<br>118.7<br>118.7 | 0.3199 | N/A | 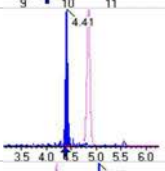 | 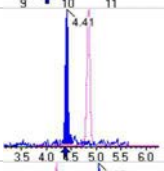 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 30417<br>( 341.0 / 217.0 ) 46943 | ( 6.97 , 1.15 ) ( N/A , 0.02 , 0.2) | 303.3<br>268.0 | 1.5433<br>101.6<br>101.6 | 0.4060 | N/A | 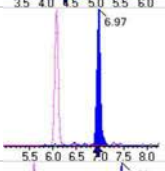 | 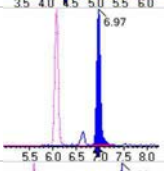 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54097<br>( 441.0 / 337.0 ) 44506 | ( 9.36 , 1.54 ) ( N/A , 0.02 , -0.2) | 24010.5<br>4188.6 | 0.8227<br>89.7<br>89.7 | 0.4401 | N/A | 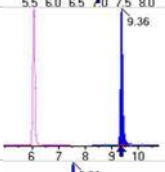 | 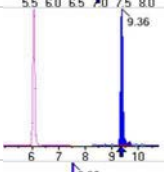 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 33721<br>( 357.2 / 243.0 ) 2710 | ( 6.81 , 1.00 ) ( 0.00 , N/A , 0.5) | 224.8<br>46.5 | 0.0804<br>72.9<br>72.9 | 0.0953 | N/A | 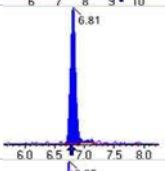 | 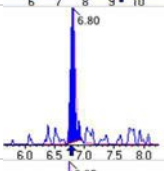 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 18228<br>( 457.2 / 343.0 ) 723 | ( 8.85 , 1.00 ) ( -0.01 , N/A , -0.3) | 328.9<br>66.3 | 0.0397<br>95.7<br>95.7 | 0.0750 | N/A | 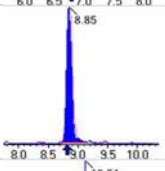 | 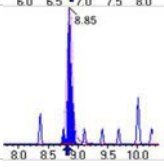 | |
| TDCA | ( 499.0 / 80.0 ) 62947 | ( 10.51 , 1.00 ) ( N/A , 0.02 , 0.0) | 745.7 | N/A<br>0.0<br>0.0 | 0.0984 | N/A | 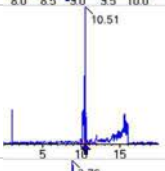 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269964 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 1513.6 | N/A | 1.1322<br>[ 1.0000 ] | 113.2%<br>{ 115.2% } | 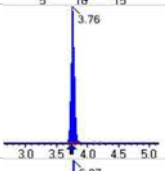 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111056 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 118187.6 | N/A | 0.8754<br>[ 1.0000 ] | 87.5%<br>{ 92.9% } | 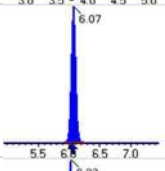 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 395428 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3733.5 | N/A | 1.0003<br>[ 1.0000 ] | 100.0%<br>{ 104.1% } | 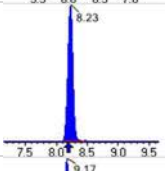 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 274681 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 866.2 | N/A | 0.9658<br>[ 1.0000 ] | 96.6%<br>{ 103.2% } | 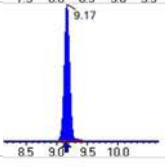 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (1)
Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 296205 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 4479.4 | N/A | 1.0143 [ 1.0000 ] | 101.4% { 110.6% } | 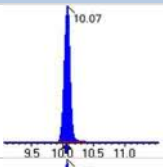 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 887857 | ( 8.67 , N/A ) ( N/A , 0.02 , N/A ) | 5438.8 | N/A | 0.9355 [ 1.0000 ] | 93.6% { 98.6% } | 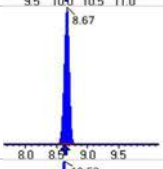 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 744274 | ( 10.53 , N/A ) ( N/A , 0.02 , N/A ) | 1977.9 | N/A | 0.9772 [ 1.0000 ] | 97.7% { 106.2% } | 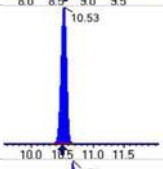 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2435804 | ( 3.76 , N/A ) ( N/A , 0.01 , N/A ) | 41491.6 | N/A | 7.8981 [ 8.0000 ] | 98.7% { 115.2% } | 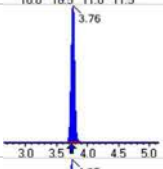 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 995379 | ( 4.85 , N/A ) ( N/A , 0.01 , N/A ) | 6790.9 | N/A | 4.8037 [ 4.0000 ] | 120.1% { 108.0% } | 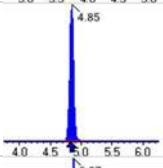 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 562315 | ( 6.07 , N/A ) ( N/A , 0.01 , N/A ) | 10449.6 | N/A | 2.2192 [ 2.0000 ] | 111.0% { 101.6% } | 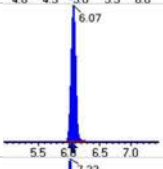 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 641086 | ( 7.22 , N/A ) ( N/A , 0.02 , N/A ) | 5851.9 | N/A | 2.2744 [ 2.0000 ] | 113.7% { 103.5% } | 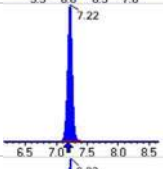 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 879761 | ( 8.23 , N/A ) ( N/A , 0.03 , N/A ) | 3170.1 | N/A | 2.0764 [ 2.0000 ] | 103.8% { 107.3% } | 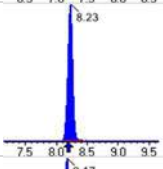 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274748 | ( 9.17 , N/A ) ( N/A , 0.02 , N/A ) | 3274.8 | N/A | 1.0201 [ 1.0000 ] | 102.0% { 104.6% } | 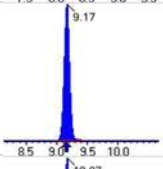 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 331041 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1094.7 | N/A | 0.9973 [ 1.0000 ] | 99.7% { 104.5% } | 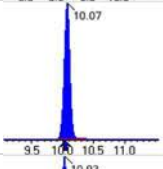 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412925 | ( 10.93 , N/A ) ( N/A , 0.02 , N/A ) | 1057.2 | N/A | 1.0573 [ 1.0000 ] | 105.7% { 114.3% } | 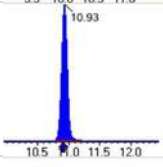 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 422727 | ( 11.76 , N/A ) ( N/A , 0.02 , N/A ) | 1235.8 | N/A | 1.0629 [ 1.0000 ] | 106.3% { 120.2% } | 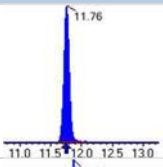  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 346712 | ( 12.88 , N/A ) ( N/A , 0.01 , N/A ) | 1297.7 | N/A | 1.0237 [ 1.0000 ] | 102.4% { 111.0% } | 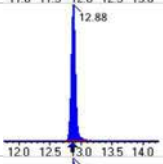  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554558 | ( 13.68 , N/A ) ( N/A , 0.01 , N/A ) | 2058.7 | N/A | 1.9179 [ 2.0000 ] | 95.9% { 107.5% } | 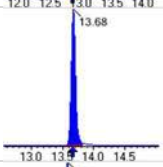  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1729492 | ( 6.37 , N/A ) ( N/A , 0.02 , N/A ) | 1031.7 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 108.6% } | 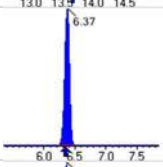  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400831 | ( 8.66 , N/A ) ( N/A , 0.03 , N/A ) | 3163.0 | N/A | 2.1878 [ 2.0000 ] | 109.4% { 109.4% } | 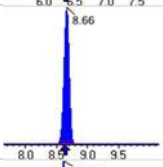  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1625759 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1645.8 | N/A | 2.0259 [ 2.0000 ] | 101.3% { 104.0% } | 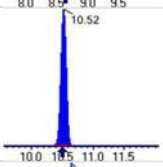  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 603279 | ( 5.54 , N/A ) ( N/A , 0.00 , N/A ) | 91.6 | N/A | 4.3589 [ 4.0000 ] | 109.0% { 114.9% } | 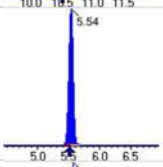  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1771435 | ( 7.66 , N/A ) ( N/A , 0.03 , N/A ) | 3327.3 | N/A | 4.2767 [ 4.0000 ] | 106.9% { 104.2% } | 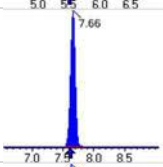  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1527095 | ( 9.44 , N/A ) ( N/A , 0.02 , N/A ) | 1433.7 | N/A | 4.7009 [ 4.0000 ] | 117.5% { 115.7% } | 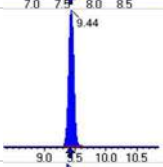  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3060105 | ( 11.07 , N/A ) ( N/A , 0.02 , N/A ) | 1576.9 | N/A | 9.0135 [ 8.0000 ] | 112.7% { 117.8% } | 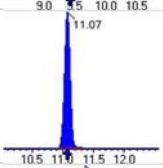  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1567982 | ( 12.86 , N/A ) ( N/A , 0.01 , N/A ) | 1673.5 | N/A | 2.2048 [ 2.0000 ] | 110.2% { 117.6% } | 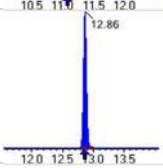  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 310360 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1785.9 | N/A | 2.0576 [ 2.0000 ] | 102.9% { 111.9% } | 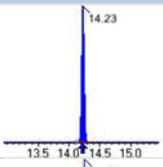  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 341394 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2508.3 | N/A | 2.1106 [ 2.0000 ] | 105.5% { 108.2% } | 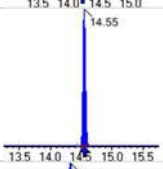  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 888303 | ( 10.32 , N/A ) ( N/A , 0.02 , N/A ) | 2741.2 | N/A | 4.3020 [ 4.0000 ] | 107.6% { 106.0% } | 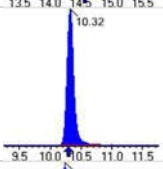  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 820340 | ( 10.84 , N/A ) ( N/A , 0.02 , N/A ) | 1993.4 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 108.5% } | 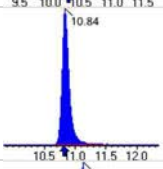  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1475020 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 21.7611 [ 20.0000 ] | 108.8% { 109.6% } | 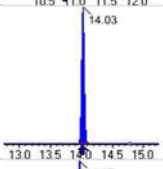  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1513000 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3678.2 | N/A | 21.9921 [ 20.0000 ] | 110.0% { 114.9% } | 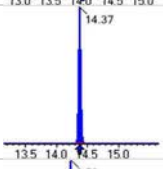  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1029123 | ( 6.53 , N/A ) ( N/A , 0.01 , N/A ) | 2714.8 | N/A | 8.9159 [ 8.0000 ] | 111.4% { 105.2% } | 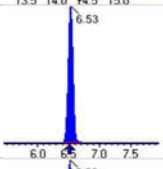  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 665466 | ( 6.82 , N/A ) ( N/A , 0.02 , N/A ) | 1425.6 | N/A | 2.0722 [ 2.0000 ] | 103.6% { 115.3% } | 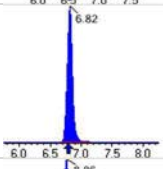  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 596324 | ( 8.86 , N/A ) ( N/A , 0.02 , N/A ) | 778.6 | N/A | 2.0397 [ 2.0000 ] | 102.0% { 111.0% } | 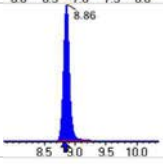  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 270243<br>( 163.0 / 69.0 ) 6407 | ( 2.78 , 0.74 ) ( N/A , 0.00 , -0.3) | 1728.8<br>290.1 | 0.0237<br>87.3<br>87.3 | 0.9507 | N/A | 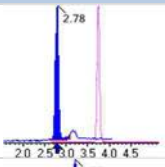 | 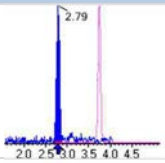 | |
| PFBA | ( 213.0 / 169.0 ) 601138 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 533.4 | N/A<br>0.0<br>0.0 | 2.0004 | N/A | 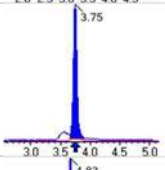 | | |
| PFPeA | ( 263.0 / 219.0 ) 236977<br>( 263.0 / 69.0 ) 2370 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.4) | 1167.2<br>40.3 | 0.0100<br>83.8<br>83.8 | 0.9417 | N/A | 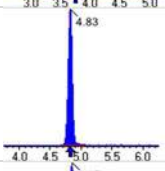 | 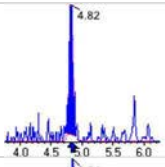 | |
| PFHxA | ( 313.0 / 269.0 ) 139970<br>( 313.0 / 119.0 ) 15702 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 805.1<br>325.5 | 0.1122<br>96.6<br>96.6 | 0.4869 | N/A | 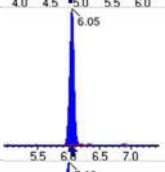 | 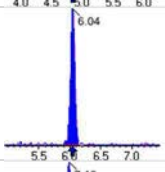 | |
| PFHpA | ( 363.0 / 319.0 ) 153182<br>( 363.0 / 169.0 ) 47571 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 795.4<br>513.0 | 0.3106<br>102.5<br>102.5 | 0.4856 | N/A | 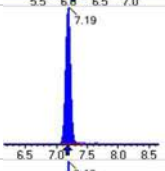 | 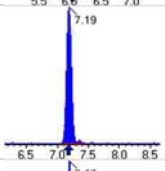 | |
| PFOA | ( 413.0 / 369.0 ) 219264<br>( 413.0 / 169.0 ) 76818 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 244.8<br>400.1 | 0.3503<br>95.8<br>95.8 | 0.5151 | N/A | 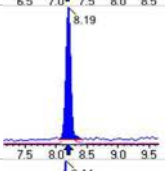 | 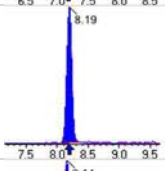 | |
| PFNA | ( 463.0 / 419.0 ) 137279<br>( 463.0 / 169.0 ) 33380 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 798.0<br>432.7 | 0.2432<br>95.2<br>95.2 | 0.5090 | N/A | 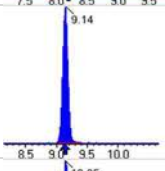 | 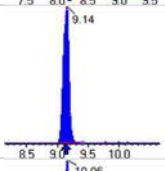 | |
| PFDA | ( 513.0 / 469.0 ) 168954<br>( 513.0 / 169.0 ) 20337 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.5) | 1427.3<br>879.5 | 0.1204<br>102.7<br>102.7 | 0.5207 | N/A | 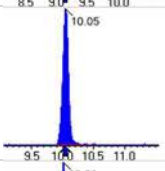 | 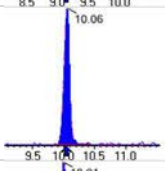 | |
| PFUnA | ( 563.0 / 519.0 ) 171379<br>( 563.0 / 169.0 ) 24402 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.3) | 762.3<br>223.0 | 0.1424<br>100.5<br>100.5 | 0.4723 | N/A | 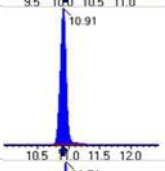 | 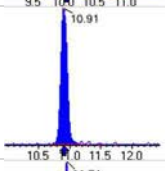 | |
| PFDoA | ( 613.0 / 569.0 ) 185419<br>( 613.0 / 169.0 ) 28647 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.1) | 650.7<br>310.6 | 0.1545<br>97.7<br>97.7 | 0.4817 | N/A | 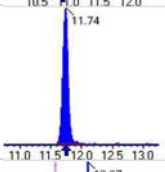 | 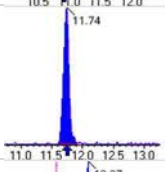 | |
| PFTrDA | ( 663.0 / 619.0 ) 187393<br>( 663.0 / 169.0 ) 51467 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.2) | 715.2<br>527.9 | 0.2746<br>106.7<br>106.7 | 0.4977 | N/A | 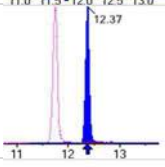 | 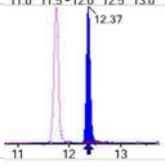 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 158224<br>( 713.0 / 169.0 ) 40722 | ( 12.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 963.7<br>336.5 | 0.2574<br>95.4<br>95.4 | 0.5074 | N/A | 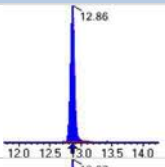 | 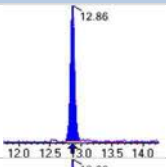 | |
| PFHxDA | ( 813.0 / 769.0 ) 137951<br>( 813.0 / 169.0 ) 33076 | ( 13.67 , 1.00 )<br>( -0.01 , N/A , 0.1) | 845.2<br>255.3 | 0.2398<br>98.0<br>98.0 | 0.5012 | N/A | 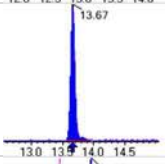 | 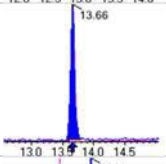 | |
| PFODA | ( 913.0 / 869.0 ) 87214<br>( 913.0 / 169.0 ) 26681 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 415.1<br>133.0 | 0.3059<br>85.4<br>85.4 | 0.5065 | N/A | 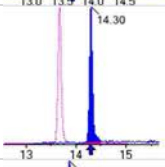 | 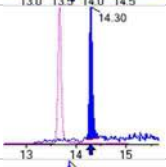 | |
| PFBS | ( 299.0 / 80.0 ) 198065<br>( 299.0 / 99.0 ) 132926 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1381.9<br>709.2 | 0.6711<br>94.9<br>94.9 | 0.4518 | N/A | 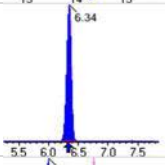 | 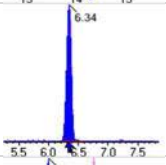 | |
| PFPeS | ( 349.0 / 80.0 ) 497722<br>( 349.0 / 99.0 ) 172204 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.0) | 1143.3<br>1025.2 | 0.3460<br>96.2<br>96.2 | 0.4717 | N/A | 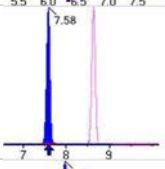 | 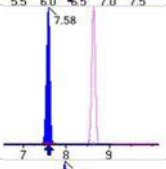 | |
| PFHxS | ( 399.0 / 80.0 ) 542542<br>( 399.0 / 99.0 ) 185937 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1189.0<br>1277.1 | 0.3427<br>107.6<br>107.6 | 0.4426 | N/A | 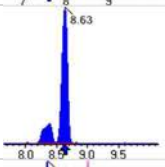 | 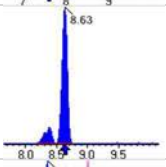 | |
| PFHpS | ( 449.0 / 80.0 ) 454824<br>( 449.0 / 99.0 ) 118403 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 980.7<br>650.1 | 0.2603<br>98.4<br>98.4 | 0.4757 | N/A | 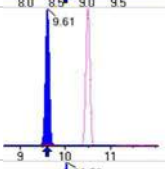 | 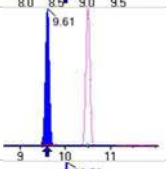 | |
| PFOS | ( 499.0 / 80.0 ) 424655<br>( 499.0 / 99.0 ) 97429 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.2) | 865.6<br>2087.7 | 0.2294<br>98.2<br>98.2 | 0.4608 | N/A | 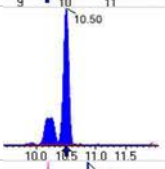 | 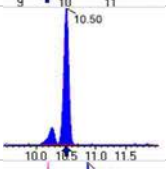 | |
| PFNS | ( 549.0 / 80.0 ) 419634<br>( 549.0 / 99.0 ) 115472 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 999.8<br>699.2 | 0.2752<br>101.0<br>101.0 | 0.4863 | N/A | 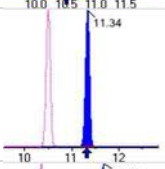 | 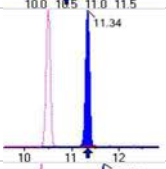 | |
| PFDS | ( 599.0 / 80.0 ) 531726<br>( 599.0 / 99.0 ) 138592 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 979.2<br>576.8 | 0.2606<br>95.9<br>95.9 | 0.5047 | N/A | 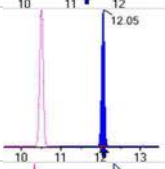 | 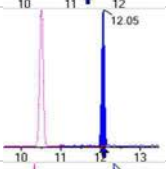 | |
| PFDoS | ( 699.0 / 80.0 ) 448366<br>( 699.0 / 99.0 ) 109465 | ( 12.97 , 1.23 )<br>( N/A , 0.00 , 0.0) | 1926.4<br>1068.2 | 0.2441<br>104.5<br>104.5 | 0.4827 | N/A | 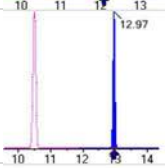 | 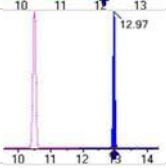 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 754240<br>( 327.0 / 81.0 ) 686574 | ( 5.51 , 1.00 )<br>( -0.01 , N/A , -0.2) | 3506.2<br>1884.3 | 0.9103<br>104.3<br>104.3 | 1.9200 | N/A | 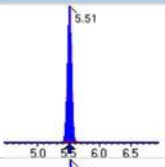 | 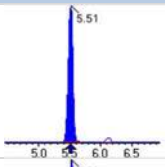 | |
| 6:2FTS | ( 427.0 / 407.0 ) 743646<br>( 427.0 / 81.0 ) 871699 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , 0.3) | 3382.5<br>2278.6 | 1.1722<br>93.5<br>93.5 | 1.9637 | N/A | 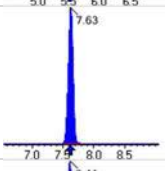 | 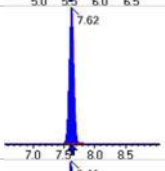 | |
| 8:2FTS | ( 527.0 / 507.0 ) 720596<br>( 527.0 / 81.0 ) 776814 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1864.9<br>1134.6 | 1.0780<br>99.1<br>99.1 | 2.0117 | N/A | 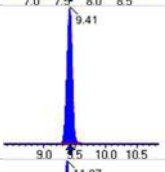 | 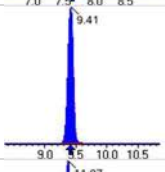 | |
| 10:2FTS | ( 627.0 / 607.0 ) 538928<br>( 627.0 / 81.0 ) 829622 | ( 11.07 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1479.4<br>1094.4 | 1.5394<br>106.9<br>106.9 | 1.8031 | N/A | 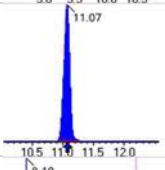 | 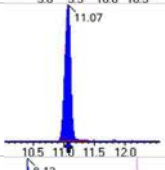 | |
| PFBSA | ( 297.9 / 78.0 ) 377825<br>( 297.9 / 278.0 ) 593 | ( 8.10 , 0.57 )<br>( N/A , -0.01 , -1.1) | 1359.0<br>35.1 | 0.0016<br>114.8<br>114.8 | 0.4989 | N/A | 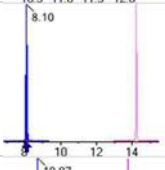 | 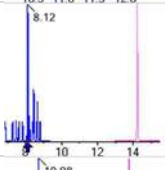 | |
| PFHxSA | ( 397.9 / 78.0 ) 506230<br>( 397.9 / 378.0 ) 2031 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , -0.3) | 1295.9<br>58.9 | 0.0040<br>98.2<br>98.2 | 0.5209 | N/A | 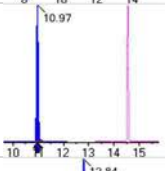 | 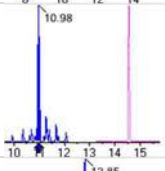 | |
| PFOSA | ( 498.0 / 78.0 ) 387069<br>( 498.0 / 478.0 ) 4980 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1381.2<br>211.1 | 0.0129<br>91.7<br>91.7 | 0.5254 | N/A | 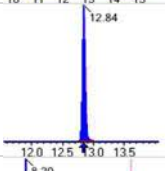 | 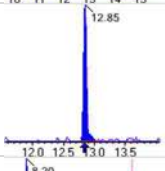 | |
| TFSI | ( 279.7 / 147.0 ) 914573<br>( 279.7 / 211.0 ) 73594 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.1) | 56.4<br>41.8 | 0.0805<br>95.8<br>95.8 | 0.4714 | N/A | 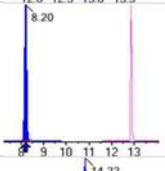 | 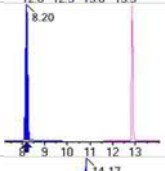 | |
| NMeFOSA | ( 512.0 / 219.0 ) 289760<br>( 512.0 / 169.0 ) 219586 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 1564.6<br>722.0 | 0.7578<br>101.3<br>101.3 | 1.9861 | N/A | 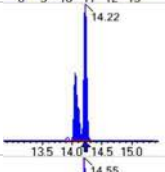 | 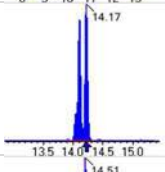 | |
| NEtFOSA | ( 526.0 / 219.0 ) 357885<br>( 526.0 / 169.0 ) 435343 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.2) | 2096.7<br>1693.7 | 1.2164<br>98.5<br>98.5 | 2.0207 | N/A | 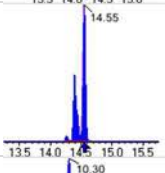 | 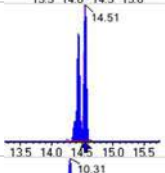 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 101165<br>( 570.0 / 483.0 ) 44729 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1433.8<br>321.8 | 0.4421<br>100.8<br>100.8 | 0.5077 | N/A | 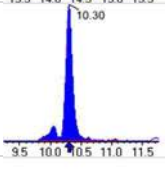 | 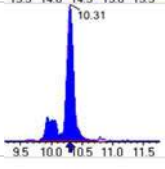 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 101975<br>( 584.0 / 526.0 ) 55503 | ( 10.84 , 1.00 ) ( 0.01 , N/A , -0.1) | 3375617.3<br>499.1 | 0.5443<br>88.3<br>88.3 | 0.5375 | N/A | 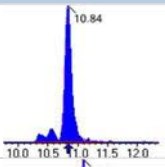 | 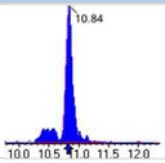 | |
| NMeFOSE | ( 616.0 / 59.0 ) 147340 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 760.5 | N/A<br>0.0<br>0.0 | 2.0427 | N/A | 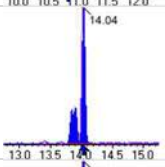 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 117168 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 956.6 | N/A<br>0.0<br>0.0 | 1.9790 | N/A | 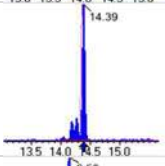 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 35584<br>( 285.0 / 185.0 ) 106028 | ( 6.50 , 1.00 ) ( -0.01 , N/A , -0.2) | 642.7<br>688.7 | 2.9796<br>107.7<br>107.7 | 0.4650 | N/A | 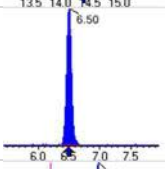 | 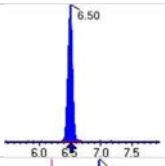 | |
| ADONA | ( 377.0 / 85.0 ) 413542<br>( 377.0 / 251.0 ) 38104 | ( 7.58 , 1.16 ) ( N/A , -0.01 , 0.1) | 1102.2<br>428.3 | 0.0921<br>90.4<br>90.4 | 0.4632 | N/A | 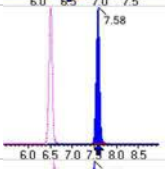 | 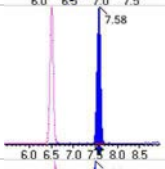 | |
| PFEESA | ( 315.0 / 135.0 ) 179792<br>( 315.0 / 83.0 ) 102089 | ( 6.94 , 1.15 ) ( N/A , -0.01 , 0.1) | 1604.0<br>254.7 | 0.5678<br>101.9<br>101.9 | 0.8709 | N/A | 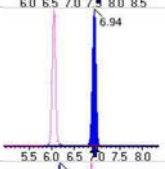 | 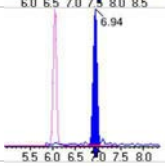 | |
| PFMPA | ( 229.0 / 85.0 ) 71647 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 1573.5 | N/A<br>0.0<br>0.0 | 0.8972 | N/A | 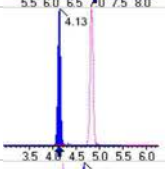 | | |
| PFMBA | ( 279.0 / 85.0 ) 202423 | ( 5.19 , 1.08 ) ( N/A , -0.02 , 0.0) | 1629.0 | N/A<br>0.0<br>0.0 | 0.9326 | N/A | 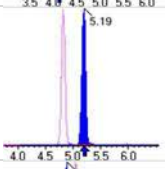 | | |
| NFDHA | ( 295.0 / 201.0 ) 108804<br>( 295.0 / 85.0 ) 115646 | ( 5.90 , 0.98 ) ( N/A , -0.02 , -0.2) | 2039.9<br>957.9 | 1.0629<br>98.5<br>98.5 | 1.0138 | N/A | 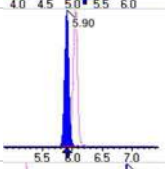 | 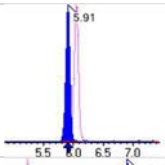 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 441071<br>( 533.0 / 353.0 ) 140189 | ( 11.15 , 1.71 ) ( N/A , 0.01 , 0.1) | 2047.3<br>1154.6 | 0.3178<br>101.6<br>101.6 | 0.4574 | N/A | 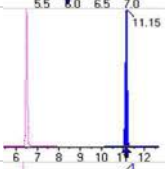 | 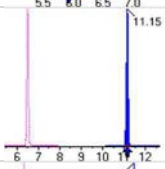 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 340892<br>( 633.0 / 453.0 ) 116659 | ( 12.46 , 1.92 ) ( N/A , 0.00 , -0.1) | 2111.2<br>1169.2 | 0.3422<br>103.0<br>103.0 | 0.4597 | N/A | 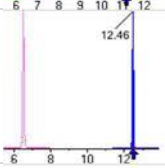 | 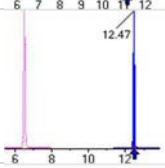 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 226835<br>( 461.0 / 381.2 ) 88383 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2081.7<br>1590.3 | 0.3896<br>97.8<br>97.8 | 0.4363 | N/A | 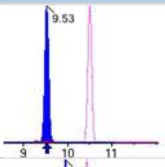 | 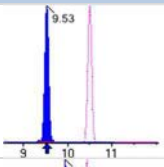 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 25450<br>( 241.0 / 117.0 ) 56322 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.0) | 836.2<br>518.4 | 2.2130<br>105.0<br>105.0 | 1.7777 | N/A | 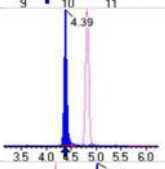 | 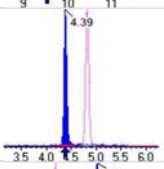 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 171905<br>( 341.0 / 217.0 ) 241610 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 759.6<br>653.2 | 1.4055<br>92.5<br>92.5 | 2.1563 | N/A | 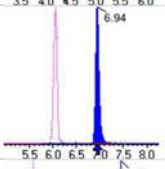 | 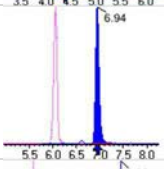 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 258113<br>( 441.0 / 337.0 ) 220700 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.1) | 3902.4<br>4652.4 | 0.8551<br>93.2<br>93.2 | 1.9730 | N/A | 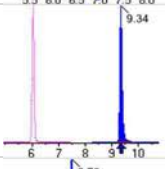 | 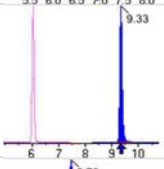 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172883<br>( 357.2 / 243.0 ) 19248 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 0.1) | 854.8<br>275.3 | 0.1113<br>101.0<br>101.0 | 0.4857 | N/A | 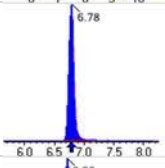 | 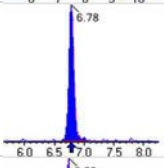 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 121222<br>( 457.2 / 343.0 ) 4083 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , -0.7) | 565.3<br>104.4 | 0.0337<br>81.2<br>81.2 | 0.5056 | N/A | 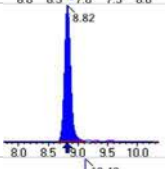 | 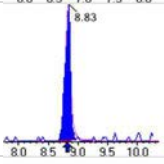 | |
| TDCA | ( 499.0 / 80.0 ) 308828 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 2696.4 | N/A<br>0.0<br>0.0 | 0.4916 | N/A | 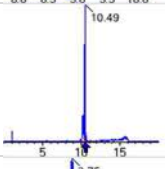 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261563 | ( 3.75 , N/A )<br>( N/A , -0.01 , N/A ) | 1100.3 | N/A | 1.0970<br>[ 1.0000 ] | 109.7%<br>{ 111.6% } | 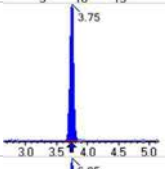 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125307 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 10148.5 | N/A | 0.9878<br>[ 1.0000 ] | 98.8%<br>{ 104.9% } | 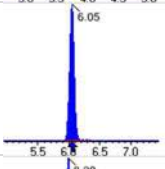 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390460 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 5378.3 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 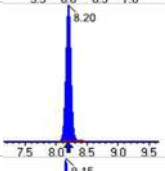 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278335 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 1109.0 | N/A | 0.9786<br>[ 1.0000 ] | 97.9%<br>{ 104.5% } | 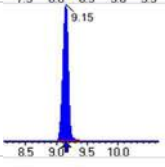 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307138 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6465.5 | N/A | 1.0517 [ 1.0000 ] | 105.2% { 114.7% } | 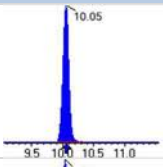 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 981307 | ( 8.64 , N/A ) ( N/A , -0.01 , N/A ) | 6565.2 | N/A | 1.0340 [ 1.0000 ] | 103.4% { 109.0% } | 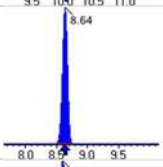 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 789235 | ( 10.51 , N/A ) ( N/A , 0.00 , N/A ) | 2423.5 | N/A | 1.0362 [ 1.0000 ] | 103.6% { 112.6% } | 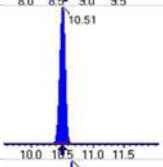 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2411767 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 38473.3 | N/A | 8.0713 [ 8.0000 ] | 100.9% { 114.0% } | 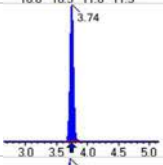 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 996419 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5316.2 | N/A | 4.2618 [ 4.0000 ] | 106.5% { 108.1% } | 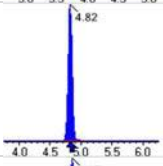 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 598415 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 7772.4 | N/A | 2.0930 [ 2.0000 ] | 104.7% { 108.1% } | 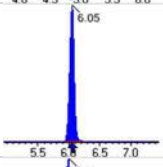 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 642898 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4139.3 | N/A | 2.0214 [ 2.0000 ] | 101.1% { 103.8% } | 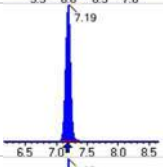 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 837262 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2865.2 | N/A | 2.0013 [ 2.0000 ] | 100.1% { 102.1% } | 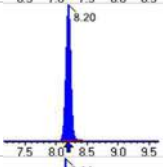 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 268319 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2813.0 | N/A | 0.9832 [ 1.0000 ] | 98.3% { 102.2% } | 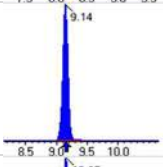 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 317534 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1393.5 | N/A | 0.9225 [ 1.0000 ] | 92.3% { 100.3% } | 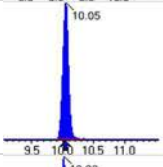 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392266 | ( 10.92 , N/A ) ( N/A , 0.00 , N/A ) | 889.3 | N/A | 0.9687 [ 1.0000 ] | 96.9% { 108.6% } | 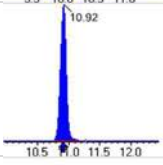 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL2 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 382608 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1180.8 | N/A | 0.9278 [ 1.0000 ] | 92.8% { 108.8% } | 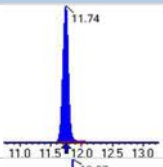  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 332937 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1583.7 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 106.5% } | 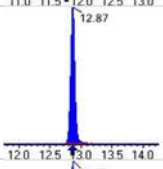  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577159 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2365.8 | N/A | 1.9250 [ 2.0000 ] | 96.3% { 111.8% } | 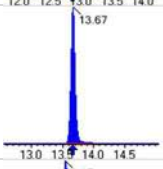  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1688757 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 883.0 | N/A | 1.9047 [ 2.0000 ] | 95.2% { 106.0% } | 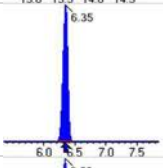  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1378939 | ( 8.63 , N/A ) ( N/A , 0.00 , N/A ) | 4407.3 | N/A | 1.9485 [ 2.0000 ] | 97.4% { 107.7% } | 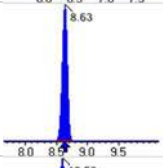  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1595802 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1706.0 | N/A | 1.8753 [ 2.0000 ] | 93.8% { 102.1% } | 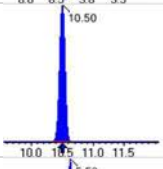  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 598745 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 79.8 | N/A | 3.9141 [ 4.0000 ] | 97.9% { 114.1% } | 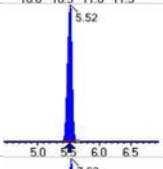  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1829265 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3435.0 | N/A | 3.9958 [ 4.0000 ] | 99.9% { 107.6% } | 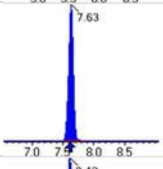  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1508713 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1476.9 | N/A | 4.2020 [ 4.0000 ] | 105.1% { 114.3% } | 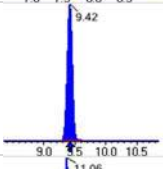  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3102262 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1234.2 | N/A | 8.2675 [ 8.0000 ] | 103.3% { 119.5% } | 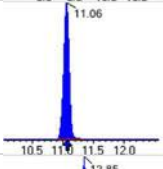  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1473534 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1630.0 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 110.5% } | 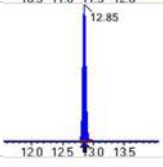  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (2)
Acquired: 2024/03/19 - 12:22

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 293876 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2091.2 | N/A | 1.8374 [ 2.0000 ] | 91.9% { 105.9% } | 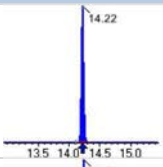  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316276 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2498.1 | N/A | 1.8439 [ 2.0000 ] | 92.2% { 100.3% } | 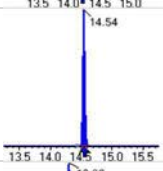  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 835724 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2699.7 | N/A | 3.8168 [ 4.0000 ] | 95.4% { 99.7% } | 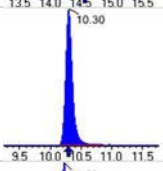  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 775814 | ( 10.83 , N/A ) ( N/A , 0.01 , N/A ) | 2136.8 | N/A | 3.8876 [ 4.0000 ] | 97.2% { 102.6% } | 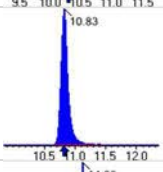  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1315136 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2600.8 | N/A | 18.2970 [ 20.0000 ] | 91.5% { 97.7% } | 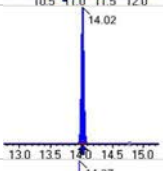  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1332738 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4801.6 | N/A | 18.2683 [ 20.0000 ] | 91.3% { 101.2% } | 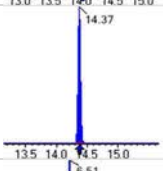  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1038084 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2605.4 | N/A | 7.9707 [ 8.0000 ] | 99.6% { 106.2% } | 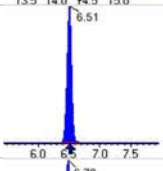  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 669550 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1235.7 | N/A | 2.0107 [ 2.0000 ] | 100.5% { 116.0% } | 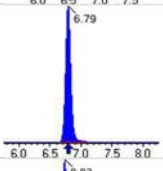  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 587942 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 696.3 | N/A | 1.9395 [ 2.0000 ] | 97.0% { 109.4% } | 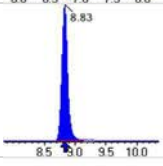  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 572081<br>( 163.0 / 69.0 ) 15453 | ( 2.78 , 0.74 ) ( N/A , -0.01 , -0.1) | 3331.6<br>685.8 | 0.0270<br>99.5<br>99.5 | 1.8766 | N/A | 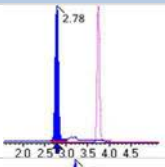 | 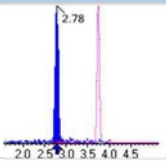 | |
| PFBA | ( 213.0 / 169.0 ) 1291256 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 977.6 | N/A<br>0.0<br>0.0 | 4.0067 | N/A | 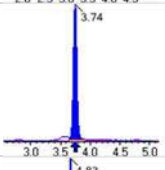 | | |
| PFPeA | ( 263.0 / 219.0 ) 515447<br>( 263.0 / 69.0 ) 5565 | ( 4.83 , 1.00 ) ( 0.00 , N/A , -0.6) | 2722.5<br>101.7 | 0.0108<br>90.4<br>90.4 | 1.9936 | N/A | 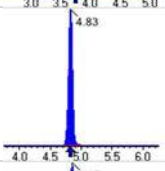 | 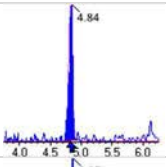 | |
| PFHxA | ( 313.0 / 269.0 ) 299582<br>( 313.0 / 119.0 ) 31742 | ( 6.05 , 1.00 ) ( 0.00 , N/A , -0.2) | 1493.9<br>435.1 | 0.1060<br>91.3<br>91.3 | 0.9811 | N/A | 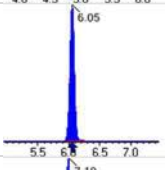 | 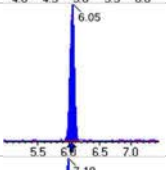 | |
| PFHpA | ( 363.0 / 319.0 ) 337151<br>( 363.0 / 169.0 ) 99321 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1122.0<br>1188.9 | 0.2946<br>97.2<br>97.2 | 1.0032 | N/A | 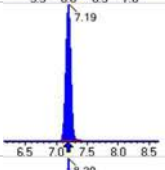 | 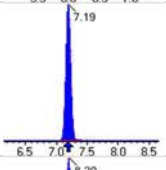 | |
| PFOA | ( 413.0 / 369.0 ) 460701<br>( 413.0 / 169.0 ) 156073 | ( 8.20 , 1.00 ) ( 0.00 , N/A , -0.2) | 411.7<br>644.7 | 0.3388<br>92.7<br>92.7 | 0.9980 | N/A | 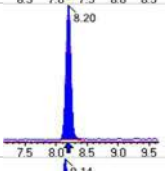 | 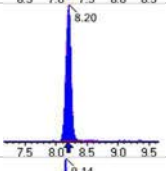 | |
| PFNA | ( 463.0 / 419.0 ) 295897<br>( 463.0 / 169.0 ) 74193 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 828.0<br>576.3 | 0.2507<br>98.2<br>98.2 | 0.9829 | N/A | 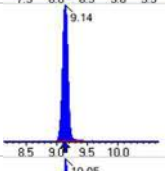 | 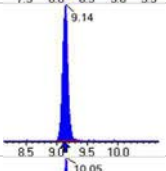 | |
| PFDA | ( 513.0 / 469.0 ) 352635<br>( 513.0 / 169.0 ) 43955 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.2) | 2404.3<br>865.6 | 0.1246<br>106.4<br>106.4 | 1.0071 | N/A | 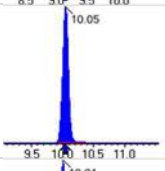 | 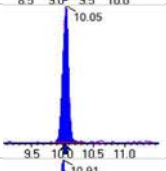 | |
| PFUnA | ( 563.0 / 519.0 ) 381432<br>( 563.0 / 169.0 ) 53955 | ( 10.91 , 1.00 ) ( 0.00 , N/A , -0.1) | 999.2<br>403.6 | 0.1415<br>99.8<br>99.8 | 1.0353 | N/A | 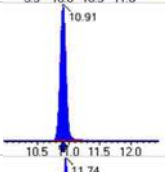 | 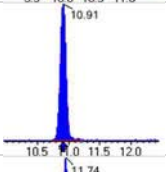 | |
| PFDoA | ( 613.0 / 569.0 ) 427017<br>( 613.0 / 169.0 ) 60201 | ( 11.74 , 1.00 ) ( 0.00 , N/A , -0.1) | 1103.2<br>515.1 | 0.1410<br>89.2<br>89.2 | 1.0255 | N/A | 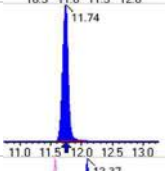 | 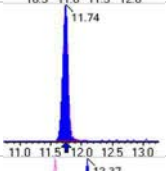 | |
| PFTrDA | ( 663.0 / 619.0 ) 399605<br>( 663.0 / 169.0 ) 106227 | ( 12.37 , 1.05 ) ( N/A , -0.01 , 0.0) | 1077.2<br>701.1 | 0.2658<br>103.3<br>103.3 | 0.9810 | N/A | 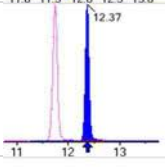 | 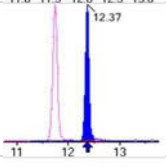 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (3)
Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 342493<br>( 713.0 / 169.0 ) 87584 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1309.5<br>476.1 | 0.2557<br>94.7<br>94.7 | 1.0520 | N/A | 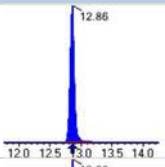 | 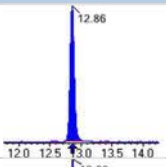 | |
| PFHxDA | ( 813.0 / 769.0 ) 295487<br>( 813.0 / 169.0 ) 71255 | ( 13.66 , 1.00 )<br>( -0.01 , N/A , -0.2) | 1293.3<br>536.6 | 0.2411<br>98.6<br>98.6 | 0.9920 | N/A | 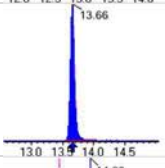 | 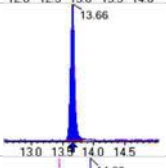 | |
| PFODA | ( 913.0 / 869.0 ) 188029<br>( 913.0 / 169.0 ) 59688 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , 0.2) | 765.7<br>286.7 | 0.3174<br>88.6<br>88.6 | 1.0090 | N/A | 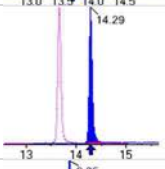 | 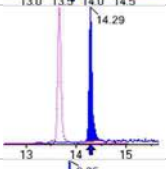 | |
| PFBS | ( 299.0 / 80.0 ) 407079<br>( 299.0 / 99.0 ) 304744 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2093.0<br>1197.3 | 0.7486<br>105.9<br>105.9 | 0.8714 | N/A | 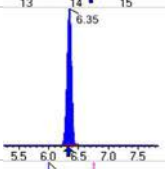 | 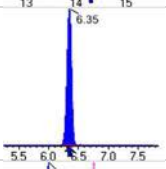 | |
| PFPeS | ( 349.0 / 80.0 ) 1109577<br>( 349.0 / 99.0 ) 395272 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.2) | 1653.8<br>1364.1 | 0.3562<br>99.1<br>99.1 | 1.0024 | N/A | 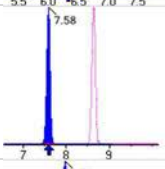 | 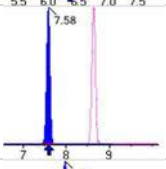 | |
| PFHxS | ( 399.0 / 80.0 ) 1171862<br>( 399.0 / 99.0 ) 378800 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1877.4<br>2472.1 | 0.3232<br>101.5<br>101.5 | 0.9114 | N/A | 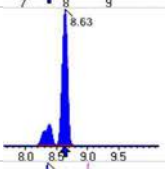 | 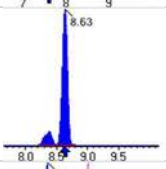 | |
| PFHpS | ( 449.0 / 80.0 ) 990486<br>( 449.0 / 99.0 ) 270859 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1237.4<br>959.9 | 0.2735<br>103.3<br>103.3 | 0.9914 | N/A | 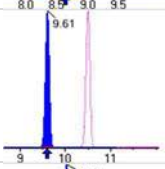 | 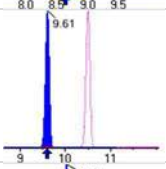 | |
| PFOS | ( 499.0 / 80.0 ) 915045<br>( 499.0 / 99.0 ) 214297 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1166.7<br>2416.7 | 0.2342<br>100.2<br>100.2 | 0.9501 | N/A | 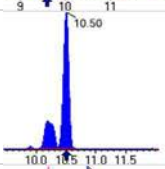 | 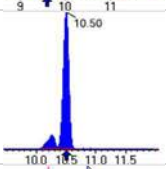 | |
| PFNS | ( 549.0 / 80.0 ) 896593<br>( 549.0 / 99.0 ) 249551 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1601.3<br>1206.4 | 0.2783<br>102.1<br>102.1 | 0.9943 | N/A | 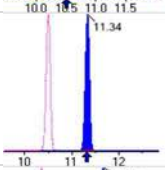 | 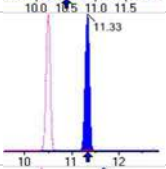 | |
| PFDS | ( 599.0 / 80.0 ) 1127572<br>( 599.0 / 99.0 ) 302383 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1436.2<br>916.8 | 0.2682<br>98.6<br>98.6 | 1.0241 | N/A | 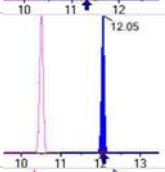 | 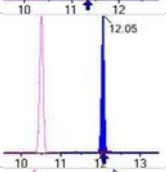 | |
| PFDoS | ( 699.0 / 80.0 ) 1018920<br>( 699.0 / 99.0 ) 244059 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.1) | 2808.2<br>1602.4 | 0.2395<br>102.5<br>102.5 | 1.0497 | N/A | 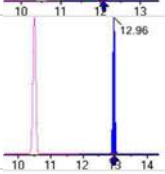 | 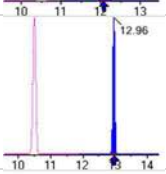 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1636735<br>( 327.0 / 81.0 ) 1473856 | ( 5.52 , 1.00 )<br>( -0.01 , N/A , -0.2) | 5204.7<br>2602.4 | 0.9005<br>103.2<br>103.2 | 3.7254 | N/A | 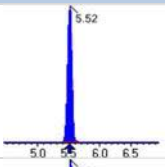 | 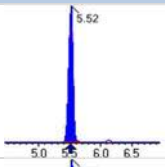 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1622158<br>( 427.0 / 81.0 ) 2083355 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4238.9<br>2696.5 | 1.2843<br>102.4<br>102.4 | 3.9122 | N/A | 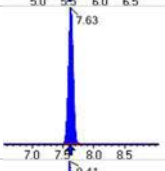 | 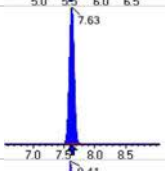 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1596229<br>( 527.0 / 81.0 ) 1699957 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1759.6<br>1660.8 | 1.0650<br>97.9<br>97.9 | 4.0286 | N/A | 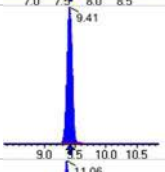 | 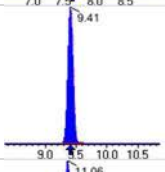 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1186863<br>( 627.0 / 81.0 ) 1648684 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1185.3<br>1102.0 | 1.3891<br>96.5<br>96.5 | 4.0027 | N/A | 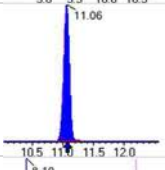 | 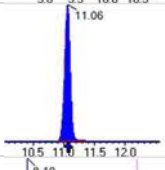 | |
| PFBSA | ( 297.9 / 78.0 ) 868869<br>( 297.9 / 278.0 ) 1723 | ( 8.10 , 0.57 )<br>( N/A , 0.00 , 0.3) | 1316.9<br>72.3 | 0.0020<br>145.1<br>145.1 | 1.0646 | N/A | 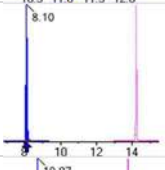 | 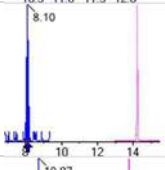 | |
| PFHxSA | ( 397.9 / 78.0 ) 1138067<br>( 397.9 / 378.0 ) 5913 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.2) | 1254.0<br>145.3 | 0.0052<br>127.2<br>127.2 | 1.0822 | N/A | 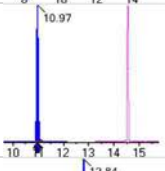 | 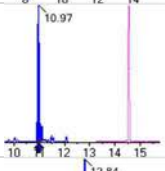 | |
| PFOSA | ( 498.0 / 78.0 ) 762063<br>( 498.0 / 478.0 ) 11669 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1669.7<br>330.8 | 0.0153<br>109.1<br>109.1 | 0.9531 | N/A | 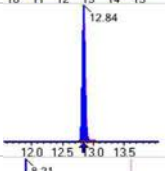 | 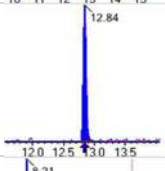 | |
| TFSI | ( 279.7 / 147.0 ) 1968069<br>( 279.7 / 211.0 ) 180774 | ( 8.21 , 0.64 )<br>( N/A , 0.00 , 0.0) | 64.3<br>58.0 | 0.0919<br>109.3<br>109.3 | 0.9348 | N/A | 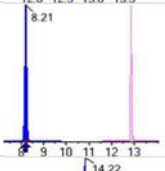 | 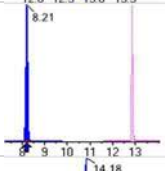 | |
| NMeFOSA | ( 512.0 / 219.0 ) 676418<br>( 512.0 / 169.0 ) 494118 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.5) | 2998.4<br>1222.2 | 0.7305<br>97.6<br>97.6 | 4.3018 | N/A | 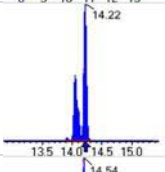 | 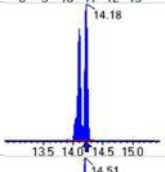 | |
| NEtFOSA | ( 526.0 / 219.0 ) 784152<br>( 526.0 / 169.0 ) 968317 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3542.8<br>2523.2 | 1.2349<br>100.0<br>100.0 | 4.0920 | N/A | 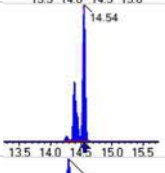 | 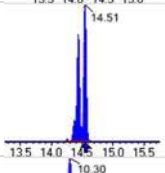 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 217987<br>( 570.0 / 483.0 ) 97828 | ( 10.30 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2749.9<br>7363.6 | 0.4488<br>102.3<br>102.3 | 1.0587 | N/A | 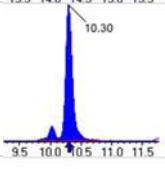 | 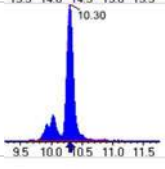 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 215279<br>( 584.0 / 526.0 ) 113495 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1923.7<br>570.6 | 0.5272<br>85.5<br>85.5 | 1.0388 | N/A | 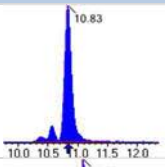 | 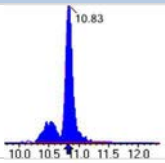 | |
| NMeFOSE | ( 616.0 / 59.0 ) 322501 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1109.7 | N/A<br>0.0<br>0.0 | 3.8876 | N/A | 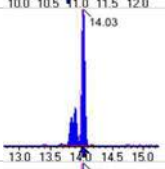 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 275023 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1504.4 | N/A<br>0.0<br>0.0 | 4.0518 | N/A | 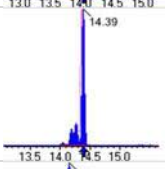 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78310<br>( 285.0 / 185.0 ) 225338 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1215.6<br>1094.8 | 2.8775<br>104.1<br>104.1 | 0.9672 | N/A | 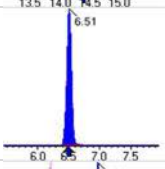 | 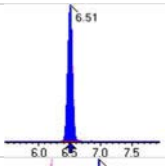 | |
| ADONA | ( 377.0 / 85.0 ) 925674<br>( 377.0 / 251.0 ) 94429 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.2) | 1684.4<br>863.1 | 0.1020<br>100.1<br>100.1 | 0.9800 | N/A | 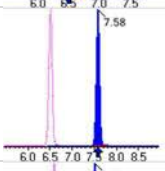 | 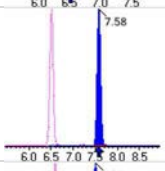 | |
| PFEESA | ( 315.0 / 135.0 ) 374674<br>( 315.0 / 83.0 ) 221014 | ( 6.94 , 1.15 )<br>( N/A , 0.00 , 0.2) | 1629.8<br>585.3 | 0.5899<br>105.8<br>105.8 | 1.7087 | N/A | 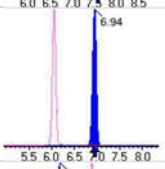 | 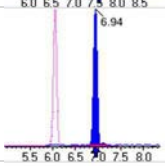 | |
| PFMPA | ( 229.0 / 85.0 ) 165620 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 2153.7 | N/A<br>0.0<br>0.0 | 2.0187 | N/A | 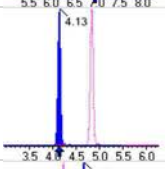 | | |
| PFMBA | ( 279.0 / 85.0 ) 459608 | ( 5.19 , 1.08 )<br>( N/A , -0.02 , 0.0) | 3304.8 | N/A<br>0.0<br>0.0 | 2.0611 | N/A | 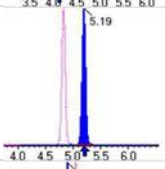 | | |
| NFDHA | ( 295.0 / 201.0 ) 233407<br>( 295.0 / 85.0 ) 232887 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.0) | 1871.1<br>1404.3 | 0.9978<br>92.5<br>92.5 | 2.0475 | N/A | 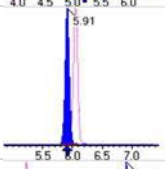 | 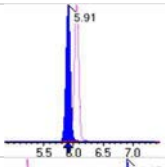 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 977169<br>( 533.0 / 353.0 ) 307774 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.0) | 2252.5<br>1904.5 | 0.3150<br>100.7<br>100.7 | 0.9578 | N/A | 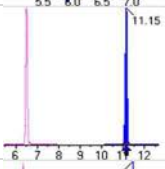 | 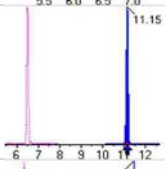 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 766742<br>( 633.0 / 453.0 ) 257032 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 3376.0<br>1473.6 | 0.3352<br>100.9<br>100.9 | 0.9772 | N/A | 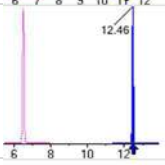 | 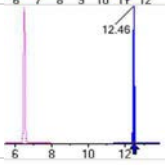 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 518904<br>( 461.0 / 381.2 ) 203061 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2559.7<br>2244.6 | 0.3913<br>98.2<br>98.2 | 0.9551 | N/A | 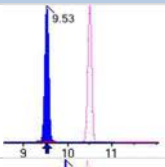 | 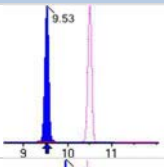 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 58421<br>( 241.0 / 117.0 ) 131714 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , 0.1) | 1288.6<br>1011.6 | 2.2545<br>107.0<br>107.0 | 3.9721 | N/A | 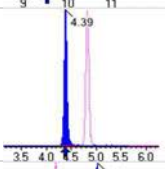 | 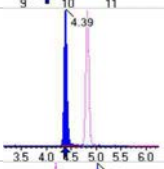 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 362070<br>( 341.0 / 217.0 ) 543142 | ( 6.95 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1018.7<br>864.9 | 1.5001<br>98.7<br>98.7 | 4.2758 | N/A | 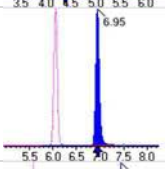 | 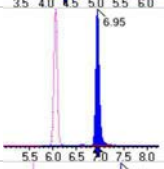 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 552565<br>( 441.0 / 337.0 ) 493299 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , -0.1) | 3905.8<br>9480.9 | 0.8927<br>97.3<br>97.3 | 3.9764 | N/A | 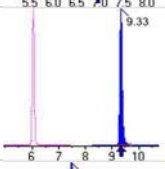 | 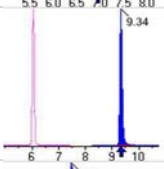 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 363940<br>( 357.2 / 243.0 ) 37601 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1173.5<br>370.6 | 0.1033<br>93.7<br>93.7 | 0.9982 | N/A | 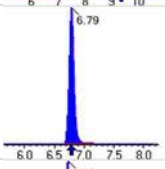 | 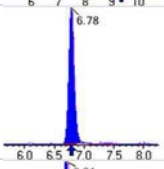 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 254977<br>( 457.2 / 343.0 ) 9972 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.6) | 714.0<br>141.1 | 0.0391<br>94.3<br>94.3 | 0.9768 | N/A | 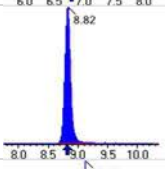 | 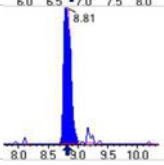 | |
| TDCA | ( 499.0 / 80.0 ) 680639 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 4167.6 | N/A<br>0.0<br>0.0 | 1.0368 | N/A | 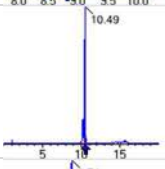 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284719 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 1250.4 | N/A | 1.1941<br>[ 1.0000 ] | 119.4%<br>{ 121.5% } | 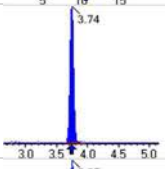 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 145345 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 124720.9 | N/A | 1.1457<br>[ 1.0000 ] | 114.6%<br>{ 121.6% } | 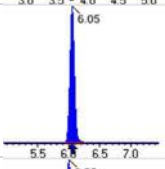 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 441486 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3424.8 | N/A | 1.1168<br>[ 1.0000 ] | 111.7%<br>{ 116.2% } | 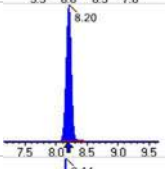 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 318843 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 964.0 | N/A | 1.1211<br>[ 1.0000 ] | 112.1%<br>{ 119.8% } | 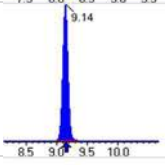 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 303537 | ( 10.05 , N/A ) ( N/A , 0.01 , N/A ) | 4251.2 | N/A | 1.0394 [ 1.0000 ] | 103.9% { 113.3% } | 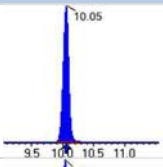 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056155 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 5014.7 | N/A | 1.1129 [ 1.0000 ] | 111.3% { 117.3% } | 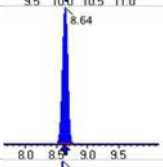 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 845268 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.3 | N/A | 1.1098 [ 1.0000 ] | 111.0% { 120.6% } | 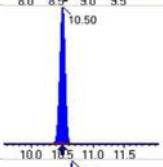 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2586413 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 42750.2 | N/A | 7.9518 [ 8.0000 ] | 99.4% { 122.3% } | 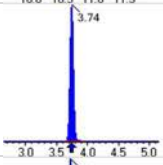 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1023700 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 5286.2 | N/A | 3.7748 [ 4.0000 ] | 94.4% { 111.1% } | 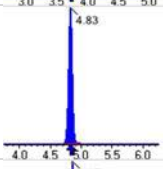 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 635630 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 14493.6 | N/A | 1.9167 [ 2.0000 ] | 95.8% { 114.9% } | 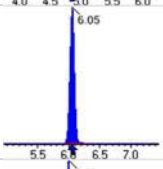 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 684966 | ( 7.19 , N/A ) ( N/A , 0.00 , N/A ) | 3794.1 | N/A | 1.8568 [ 2.0000 ] | 92.8% { 110.6% } | 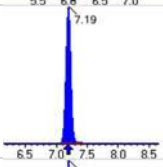 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 928103 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 3322.1 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 113.2% } | 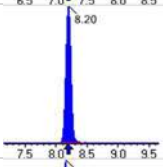 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299515 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2214.7 | N/A | 0.9581 [ 1.0000 ] | 95.8% { 114.0% } | 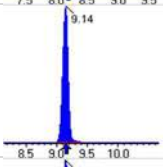 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342697 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1103.1 | N/A | 1.0075 [ 1.0000 ] | 100.7% { 108.2% } | 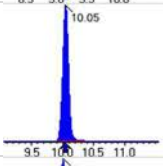 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 398315 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 933.5 | N/A | 0.9953 [ 1.0000 ] | 99.5% { 110.2% } | 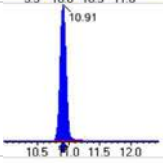 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413909 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1336.1 | N/A | 1.0156 [ 1.0000 ] | 101.6% { 117.7% } | 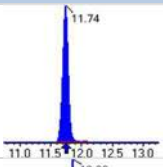  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 347613 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1409.1 | N/A | 1.0016 [ 1.0000 ] | 100.2% { 111.2% } | 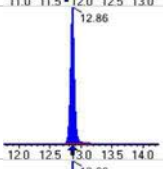  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 624611 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2743.3 | N/A | 2.1080 [ 2.0000 ] | 105.4% { 121.0% } | 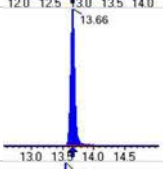  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1799397 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 935.1 | N/A | 1.8857 [ 2.0000 ] | 94.3% { 112.9% } | 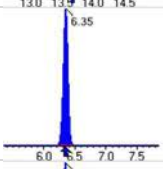  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1446436 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3951.6 | N/A | 1.8990 [ 2.0000 ] | 95.0% { 112.9% } | 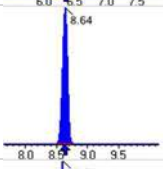  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1667685 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1621.2 | N/A | 1.8298 [ 2.0000 ] | 91.5% { 106.7% } | 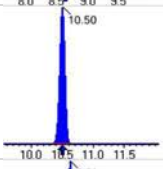  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 669628 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 86.3 | N/A | 4.0673 [ 4.0000 ] | 101.7% { 127.6% } | 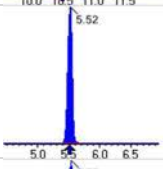  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2002935 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4006.0 | N/A | 4.0651 [ 4.0000 ] | 101.6% { 117.8% } | 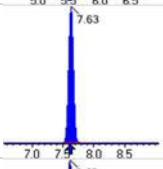  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1668856 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1752.0 | N/A | 4.3187 [ 4.0000 ] | 108.0% { 126.5% } | 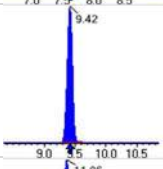  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3077655 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1620.4 | N/A | 7.6206 [ 8.0000 ] | 95.3% { 118.5% } | 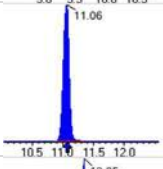  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1599050 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2792.1 | N/A | 1.9799 [ 2.0000 ] | 99.0% { 119.9% } | 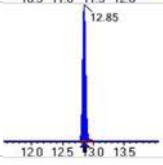  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL3 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 12:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 316727 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2067.3 | N/A | 1.8490 [ 2.0000 ] | 92.4% { 114.2% } | 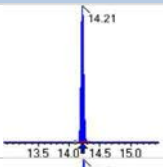 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 342216 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2475.5 | N/A | 1.8629 [ 2.0000 ] | 93.1% { 108.5% } | 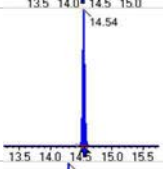 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 863550 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2856.7 | N/A | 3.6825 [ 4.0000 ] | 92.1% { 103.1% } | 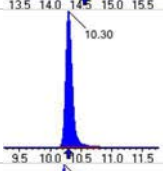 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 847460 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1855.6 | N/A | 3.9651 [ 4.0000 ] | 99.1% { 112.1% } | 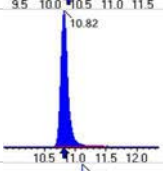 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1512548 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2500.9 | N/A | 19.6485 [ 20.0000 ] | 98.2% { 112.4% } | 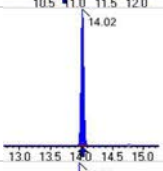 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1527927 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3992.3 | N/A | 19.5555 [ 20.0000 ] | 97.8% { 116.0% } | 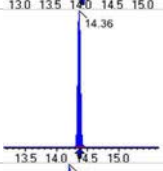 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1098397 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 1915.2 | N/A | 7.2711 [ 8.0000 ] | 90.9% { 112.3% } | 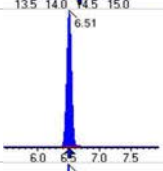 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 685864 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1284.4 | N/A | 2.0841 [ 2.0000 ] | 104.2% { 118.8% } | 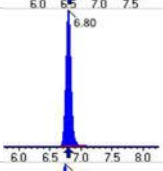 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640047 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 831.7 | N/A | 2.1364 [ 2.0000 ] | 106.8% { 119.1% } | 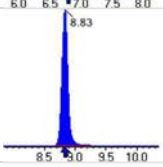 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1167070<br>( 163.0 / 69.0 ) 30804 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 6613.1<br>1428.5 | 0.0264<br>97.2<br>97.2 | 4.0742 | N/A | 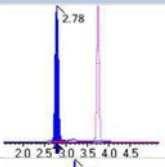 | 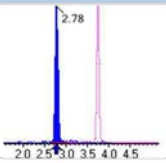 | |
| PFBA | ( 213.0 / 169.0 ) 2380850 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1790.8 | N/A<br>0.0<br>0.0 | 7.8622 | N/A | 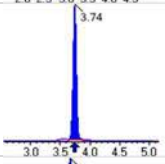 | | |
| PFPeA | ( 263.0 / 219.0 ) 982336<br>( 263.0 / 69.0 ) 11786 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , 0.4) | 3478.0<br>129.5 | 0.0120<br>100.5<br>100.5 | 3.9724 | N/A | 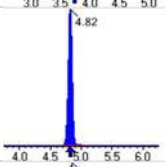 | 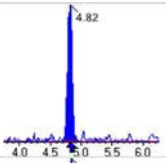 | |
| PFHxA | ( 313.0 / 269.0 ) 545073<br>( 313.0 / 119.0 ) 68593 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1809.3<br>693.8 | 0.1258<br>108.4<br>108.4 | 1.9499 | N/A | 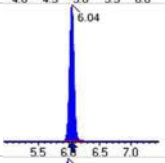 | 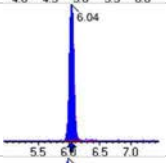 | |
| PFHpA | ( 363.0 / 319.0 ) 643126<br>( 363.0 / 169.0 ) 190819 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1661.0<br>1337.1 | 0.2967<br>97.9<br>97.9 | 2.1051 | N/A | 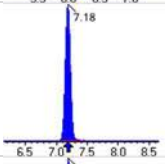 | 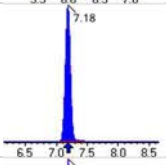 | |
| PFOA | ( 413.0 / 369.0 ) 872213<br>( 413.0 / 169.0 ) 301378 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , 0.1) | 570.6<br>871.9 | 0.3455<br>94.5<br>94.5 | 2.1989 | N/A | 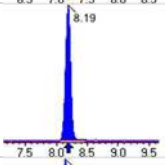 | 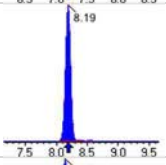 | |
| PFNA | ( 463.0 / 419.0 ) 567165<br>( 463.0 / 169.0 ) 151317 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1085.3<br>759.0 | 0.2668<br>104.5<br>104.5 | 2.0790 | N/A | 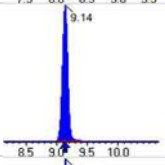 | 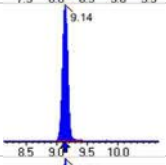 | |
| PFDA | ( 513.0 / 469.0 ) 636050<br>( 513.0 / 169.0 ) 72425 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , 0.3) | 2724.0<br>2618.5 | 0.1139<br>97.2<br>97.2 | 1.9766 | N/A | 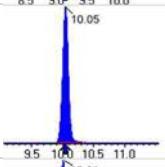 | 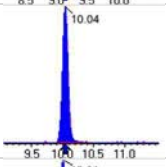 | |
| PFUnA | ( 563.0 / 519.0 ) 707227<br>( 563.0 / 169.0 ) 104233 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1094.1<br>630.7 | 0.1474<br>104.0<br>104.0 | 2.0313 | N/A | 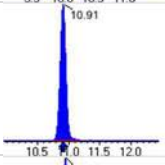 | 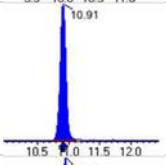 | |
| PFDoA | ( 613.0 / 569.0 ) 782512<br>( 613.0 / 169.0 ) 130444 | ( 11.74 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1319.2<br>723.5 | 0.1667<br>105.5<br>105.5 | 2.0593 | N/A | 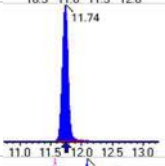 | 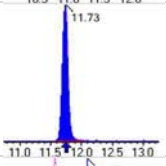 | |
| PFTrDA | ( 663.0 / 619.0 ) 789089<br>( 663.0 / 169.0 ) 212271 | ( 12.37 , 1.05 )<br>( N/A , 0.00 , 0.0) | 1336.2<br>873.5 | 0.2690<br>104.5<br>104.5 | 2.1228 | N/A | 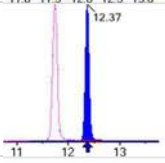 | 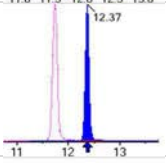 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 637286<br>( 713.0 / 169.0 ) 170472 | ( 12.86 , 1.00 ) ( 0.00 , N/A , 0.1) | 1613.6<br>792.6 | 0.2675<br>99.1<br>99.1 | 2.0366 | N/A | 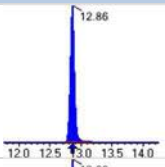 | 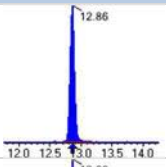 | |
| PFHxDA | ( 813.0 / 769.0 ) 562479<br>( 813.0 / 169.0 ) 139657 | ( 13.66 , 1.00 ) ( 0.00 , N/A , 0.1) | 1879.1<br>883.2 | 0.2483<br>101.5<br>101.5 | 2.0439 | N/A | 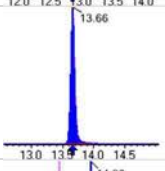 | 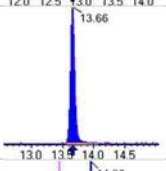 | |
| PFODA | ( 913.0 / 869.0 ) 345836<br>( 913.0 / 169.0 ) 120025 | ( 14.29 , 1.05 ) ( N/A , 0.00 , 0.1) | 1113.8<br>518.3 | 0.3471<br>96.9<br>96.9 | 2.0088 | N/A | 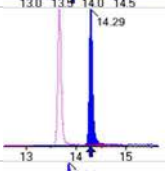 | 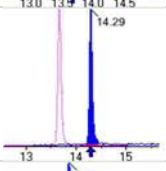 | |
| PFBS | ( 299.0 / 80.0 ) 807070<br>( 299.0 / 99.0 ) 599114 | ( 6.34 , 1.00 ) ( 0.00 , N/A , 0.1) | 2517.2<br>1691.5 | 0.7423<br>105.0<br>105.0 | 1.8154 | N/A | 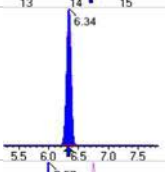 | 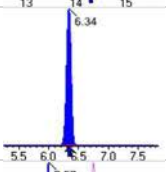 | |
| PFPeS | ( 349.0 / 80.0 ) 2047999<br>( 349.0 / 99.0 ) 717347 | ( 7.57 , 0.88 ) ( N/A , -0.01 , 0.0) | 2149.2<br>1871.5 | 0.3503<br>97.4<br>97.4 | 2.0232 | N/A | 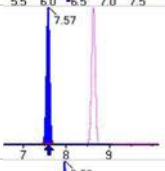 | 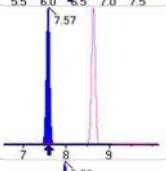 | |
| PFHxS | ( 399.0 / 80.0 ) 2275361<br>( 399.0 / 99.0 ) 716614 | ( 8.63 , 1.00 ) ( 0.00 , N/A , -0.3) | 2510.6<br>3505.7 | 0.3149<br>98.9<br>98.9 | 1.9353 | N/A | 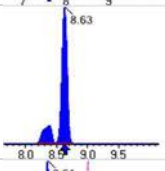 | 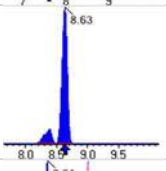 | |
| PFHpS | ( 449.0 / 80.0 ) 1804024<br>( 449.0 / 99.0 ) 504967 | ( 9.61 , 0.91 ) ( N/A , 0.00 , 0.1) | 1569.3<br>1421.3 | 0.2799<br>105.8<br>105.8 | 1.8460 | N/A | 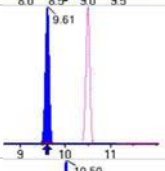 | 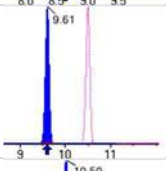 | |
| PFOS | ( 499.0 / 80.0 ) 1717687<br>( 499.0 / 99.0 ) 415698 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1681.3<br>3443.9 | 0.2420<br>103.5<br>103.5 | 1.8234 | N/A | 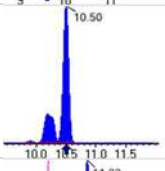 | 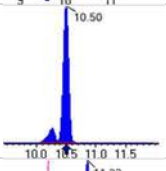 | |
| PFNS | ( 549.0 / 80.0 ) 1727422<br>( 549.0 / 99.0 ) 477926 | ( 11.33 , 1.08 ) ( N/A , 0.00 , 0.0) | 2123.3<br>1732.9 | 0.2767<br>101.5<br>101.5 | 1.9585 | N/A | 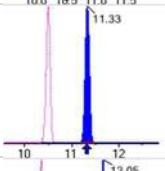 | 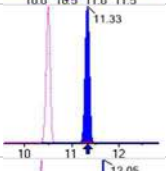 | |
| PFDS | ( 599.0 / 80.0 ) 2215571<br>( 599.0 / 99.0 ) 567898 | ( 12.05 , 1.15 ) ( N/A , 0.00 , 0.0) | 2083.6<br>1457.0 | 0.2563<br>94.3<br>94.3 | 2.0572 | N/A | 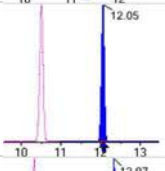 | 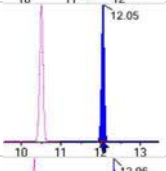 | |
| PFDoS | ( 699.0 / 80.0 ) 1929958<br>( 699.0 / 99.0 ) 452362 | ( 12.97 , 1.23 ) ( N/A , 0.00 , 0.2) | 3211.3<br>2064.4 | 0.2344<br>100.3<br>100.3 | 2.0327 | N/A | 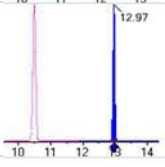 | 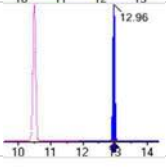 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3165018<br>( 327.0 / 81.0 ) 2801149 | ( 5.51 , 1.00 ) ( 0.00 , N/A , 0.1) | 5253.6<br>3183.2 | 0.8850<br>101.4<br>101.4 | 7.7285 | N/A | 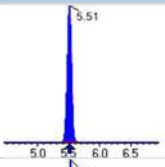 | 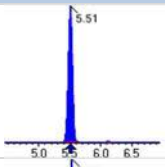 | |
| 6:2FTS | ( 427.0 / 407.0 ) 2962118<br>( 427.0 / 81.0 ) 3791569 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 4973.3<br>4315.3 | 1.2800<br>102.1<br>102.1 | 8.2415 | N/A | 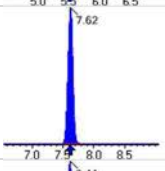 | 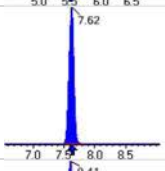 | |
| 8:2FTS | ( 527.0 / 507.0 ) 2967875<br>( 527.0 / 81.0 ) 3049271 | ( 9.41 , 1.00 ) ( -0.01 , N/A , 0.3) | 1388.1<br>1687.5 | 1.0274<br>94.5<br>94.5 | 9.3020 | N/A | 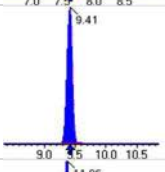 | 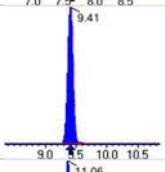 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2212496<br>( 627.0 / 81.0 ) 3256559 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1502.8<br>1201.7 | 1.4719<br>102.2<br>102.2 | 8.4769 | N/A | 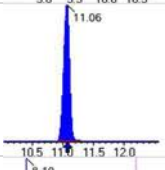 | 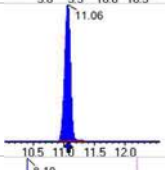 | |
| PFBSA | ( 297.9 / 78.0 ) 1506188<br>( 297.9 / 278.0 ) 2085 | ( 8.10 , 0.57 ) ( N/A , -0.01 , 0.1) | 1678.4<br>162.1 | 0.0014<br>101.3<br>101.3 | 1.8931 | N/A | 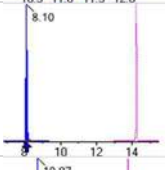 | 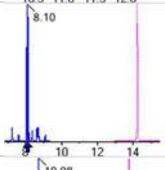 | |
| PFHxSA | ( 397.9 / 78.0 ) 2033326<br>( 397.9 / 378.0 ) 7799 | ( 10.97 , 0.75 ) ( N/A , 0.00 , -0.5) | 1288.8<br>260.0 | 0.0038<br>93.9<br>93.9 | 1.9498 | N/A | 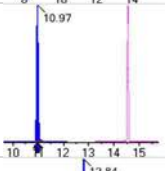 | 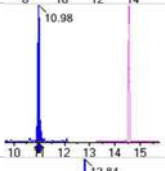 | |
| PFOSA | ( 498.0 / 78.0 ) 1456812<br>( 498.0 / 478.0 ) 21062 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.1) | 2311.6<br>609.7 | 0.0145<br>103.0<br>103.0 | 2.0599 | N/A | 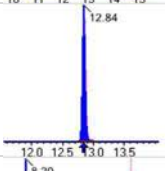 | 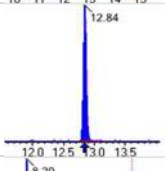 | |
| TFSI | ( 279.7 / 147.0 ) 3946578<br>( 279.7 / 211.0 ) 343736 | ( 8.20 , 0.64 ) ( N/A , -0.01 , -0.1) | 58.0<br>63.6 | 0.0871<br>103.7<br>103.7 | 2.1192 | N/A | 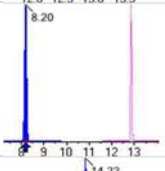 | 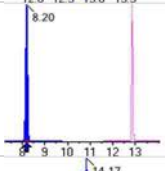 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1289595<br>( 512.0 / 169.0 ) 982667 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.8) | 2679.7<br>1218.1 | 0.7620<br>101.8<br>101.8 | 8.4131 | N/A | 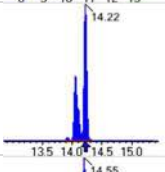 | 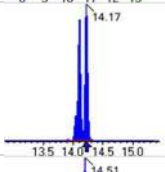 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1550489<br>( 526.0 / 169.0 ) 1954696 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.1) | 3681.3<br>2879.5 | 1.2607<br>102.1<br>102.1 | 8.1588 | N/A | 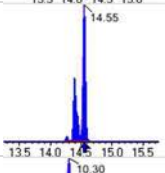 | 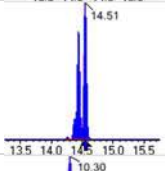 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 387312<br>( 570.0 / 483.0 ) 170497 | ( 10.30 , 1.00 ) ( 0.01 , N/A , 0.0) | 2659.6<br>1694.2 | 0.4402<br>100.4<br>100.4 | 2.0441 | N/A | 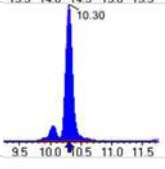 | 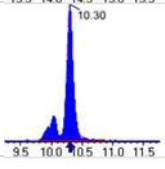 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 371840<br>( 584.0 / 526.0 ) 223765 | ( 10.83 , 1.00 ) ( 0.01 , N/A , 0.1) | 1679.5<br>567.2 | 0.6018<br>97.6<br>97.6 | 2.0307 | N/A | 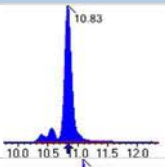 | 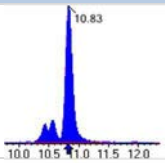 | |
| NMeFOSE | ( 616.0 / 59.0 ) 587826 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 1822.9 | N/A<br>0.0<br>0.0 | 8.0538 | N/A | 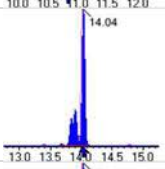 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 498830 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 2471.3 | N/A<br>0.0<br>0.0 | 8.3350 | N/A | 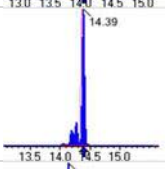 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 155250<br>( 285.0 / 185.0 ) 430625 | ( 6.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 1419.6<br>1605.4 | 2.7738<br>100.3<br>100.3 | 1.9504 | N/A | 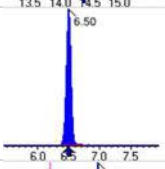 | 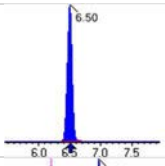 | |
| ADONA | ( 377.0 / 85.0 ) 1788880<br>( 377.0 / 251.0 ) 182995 | ( 7.57 , 1.17 ) ( N/A , -0.01 , 0.0) | 1568.4<br>1057.9 | 0.1023<br>100.4<br>100.4 | 1.9263 | N/A | 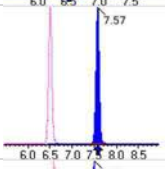 | 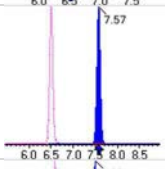 | |
| PFEESA | ( 315.0 / 135.0 ) 717362<br>( 315.0 / 83.0 ) 425934 | ( 6.93 , 1.15 ) ( N/A , -0.01 , -0.1) | 3571.8<br>934.1 | 0.5938<br>106.5<br>106.5 | 3.5735 | N/A | 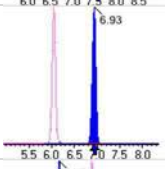 | 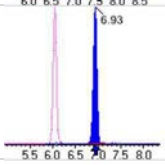 | |
| PFMPA | ( 229.0 / 85.0 ) 325814 | ( 4.13 , 0.86 ) ( N/A , -0.02 , 0.0) | 4750.1 | N/A<br>0.0<br>0.0 | 4.1520 | N/A | 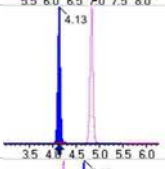 | | |
| PFMBA | ( 279.0 / 85.0 ) 859316 | ( 5.19 , 1.08 ) ( N/A , -0.02 , 0.0) | 4011.9 | N/A<br>0.0<br>0.0 | 4.0290 | N/A | 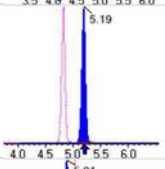 | | |
| NFDHA | ( 295.0 / 201.0 ) 433621<br>( 295.0 / 85.0 ) 453198 | ( 5.91 , 0.98 ) ( N/A , -0.02 , 0.0) | 2536.7<br>1960.5 | 1.0451<br>96.9<br>96.9 | 4.1550 | N/A | 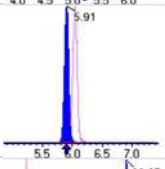 | 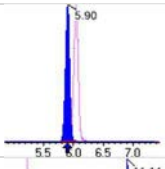 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1841173<br>( 533.0 / 353.0 ) 582312 | ( 11.15 , 1.71 ) ( N/A , 0.00 , 0.1) | 3390.1<br>2790.6 | 0.3163<br>101.1<br>101.1 | 1.8356 | N/A | 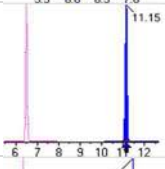 | 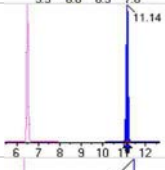 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1399623<br>( 633.0 / 453.0 ) 481280 | ( 12.46 , 1.92 ) ( N/A , 0.00 , 0.0) | 3352.1<br>2343.7 | 0.3439<br>103.5<br>103.5 | 1.8145 | N/A | 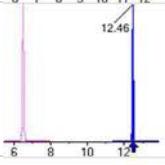 | 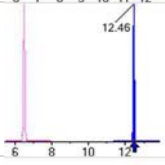 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 988702<br>( 461.0 / 381.2 ) 369799 | ( 9.52 , 0.91 ) ( N/A , 0.00 , 0.1) | 3569.1<br>2525.0 | 0.3740<br>93.9<br>93.9 | 1.8604 | N/A | 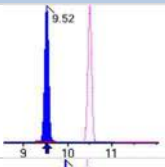 | 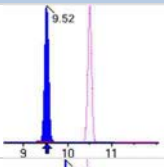 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 107582<br>( 241.0 / 117.0 ) 252826 | ( 4.38 , 0.91 ) ( N/A , -0.02 , 0.1) | 1855.3<br>1674.9 | 2.3501<br>111.5<br>111.5 | 7.6476 | N/A | 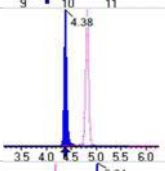 | 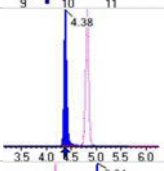 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 600676<br>( 341.0 / 217.0 ) 948229 | ( 6.94 , 1.15 ) ( N/A , -0.01 , 0.0) | 1068.2<br>1017.6 | 1.5786<br>103.9<br>103.9 | 7.7484 | N/A | 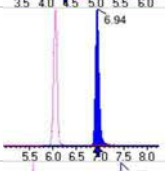 | 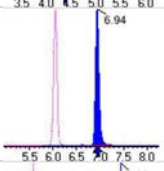 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 908795<br>( 441.0 / 337.0 ) 796144 | ( 9.33 , 1.54 ) ( N/A , 0.00 , 0.1) | 4807.8<br>10397.6 | 0.8760<br>95.5<br>95.5 | 7.1437 | N/A | 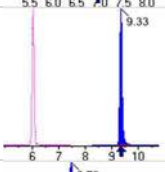 | 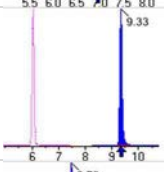 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 656805<br>( 357.2 / 243.0 ) 69587 | ( 6.78 , 1.00 ) ( -0.01 , N/A , -0.1) | 1423.9<br>609.7 | 0.1059<br>96.1<br>96.1 | 2.0942 | N/A | 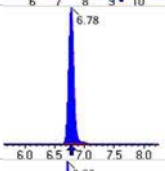 | 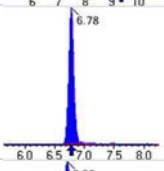 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 424616<br>( 457.2 / 343.0 ) 18607 | ( 8.82 , 1.00 ) ( -0.01 , N/A , 0.2) | 720.9<br>173.8 | 0.0438<br>105.7<br>105.7 | 2.0751 | N/A | 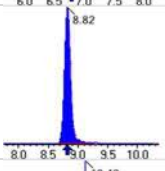 | 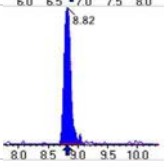 | |
| TDCA | ( 499.0 / 80.0 ) 1243423 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 9081.2 | N/A<br>0.0<br>0.0 | 1.9364 | N/A | 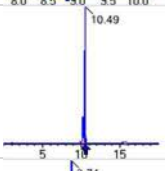 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256028 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1098.6 | N/A | 1.0738<br>[ 1.0000 ] | 107.4%<br>{ 109.3% } | 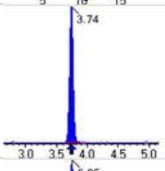 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 127760 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 116465.1 | N/A | 1.0071<br>[ 1.0000 ] | 100.7%<br>{ 106.9% } | 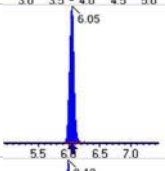 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 375777 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3449.1 | N/A | 0.9506<br>[ 1.0000 ] | 95.1%<br>{ 98.9% } | 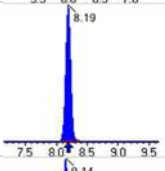 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 261656 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 1169.2 | N/A | 0.9200<br>[ 1.0000 ] | 92.0%<br>{ 98.3% } | 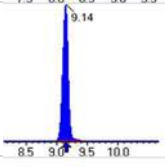 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273361 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 6361.8 | N/A | 0.9361 [ 1.0000 ] | 93.6% { 102.0% } | 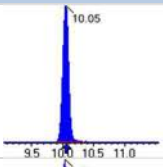  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 895978 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 6222.1 | N/A | 0.9441 [ 1.0000 ] | 94.4% { 99.5% } | 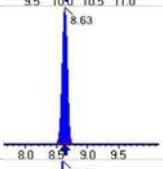  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715584 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2224.4 | N/A | 0.9395 [ 1.0000 ] | 94.0% { 102.1% } | 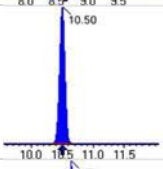  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2430274 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 40566.0 | N/A | 8.3091 [ 8.0000 ] | 103.9% { 114.9% } | 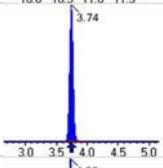  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979123 | ( 4.82 , N/A ) ( N/A , -0.02 , N/A ) | 5288.2 | N/A | 4.1074 [ 4.0000 ] | 102.7% { 106.2% } | 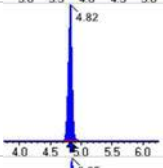  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 581916 | ( 6.05 , N/A ) ( N/A , -0.02 , N/A ) | 6715.1 | N/A | 1.9963 [ 2.0000 ] | 99.8% { 105.2% } | 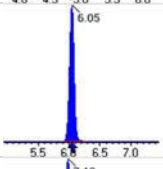  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 622669 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5519.9 | N/A | 1.9202 [ 2.0000 ] | 96.0% { 100.5% } | 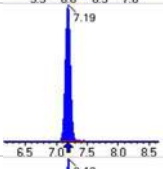  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806392 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2713.5 | N/A | 2.0028 [ 2.0000 ] | 100.1% { 98.4% } | 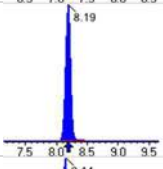  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 271437 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2533.1 | N/A | 1.0580 [ 1.0000 ] | 105.8% { 103.4% } | 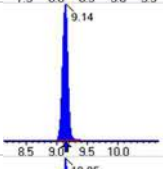  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314936 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1334.1 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 99.5% } | 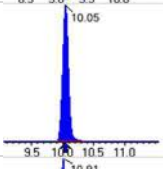  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376422 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 888.9 | N/A | 1.0444 [ 1.0000 ] | 104.4% { 104.2% } | 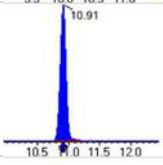  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL4 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 377714 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1130.3 | N/A | 1.0291 [ 1.0000 ] | 102.9% { 107.4% } | 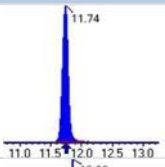 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334117 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1287.0 | N/A | 1.0689 [ 1.0000 ] | 106.9% { 106.9% } | 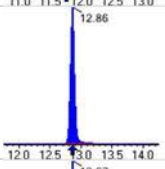 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577032 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2353.0 | N/A | 2.1624 [ 2.0000 ] | 108.1% { 111.8% } | 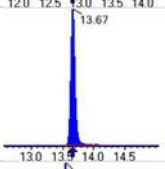 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1712494 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1082.5 | N/A | 2.1155 [ 2.0000 ] | 105.8% { 107.5% } | 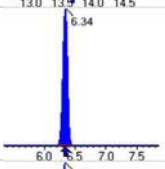 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1322704 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5231.9 | N/A | 2.0471 [ 2.0000 ] | 102.4% { 103.3% } | 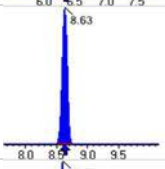 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1631255 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1422.0 | N/A | 2.1142 [ 2.0000 ] | 105.7% { 104.4% } | 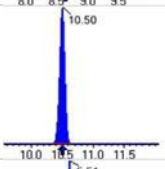 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 624175 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.1 | N/A | 4.4690 [ 4.0000 ] | 111.7% { 118.9% } | 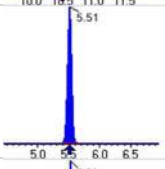 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1736153 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4394.5 | N/A | 4.1536 [ 4.0000 ] | 103.8% { 102.1% } | 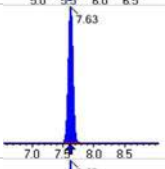 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1343832 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1566.8 | N/A | 4.0993 [ 4.0000 ] | 102.5% { 101.9% } | 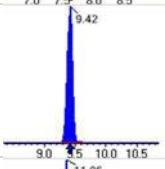 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2709064 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1402.5 | N/A | 7.9071 [ 8.0000 ] | 98.8% { 104.3% } | 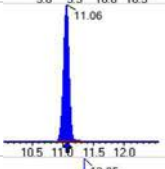 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1414425 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1760.1 | N/A | 2.0687 [ 2.0000 ] | 103.4% { 106.1% } | 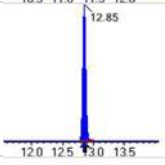 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (4)
Acquired: 2024/03/19 - 13:03

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 308758 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2279.8 | N/A | 2.1291 [ 2.0000 ] | 106.5% { 111.3% } | 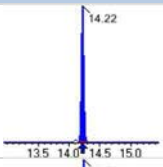  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339372 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2361.4 | N/A | 2.1822 [ 2.0000 ] | 109.1% { 107.6% } | 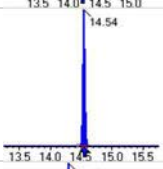  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 794659 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 1882.2 | N/A | 4.0028 [ 4.0000 ] | 100.1% { 94.8% } | 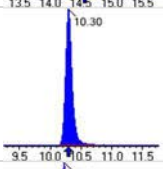  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 748744 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2202.1 | N/A | 4.1381 [ 4.0000 ] | 103.5% { 99.0% } | 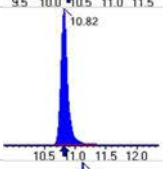  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1330777 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2545.4 | N/A | 20.4202 [ 20.0000 ] | 102.1% { 98.9% } | 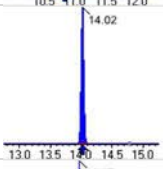  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347196 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3939.5 | N/A | 20.3672 [ 20.0000 ] | 101.8% { 102.3% } | 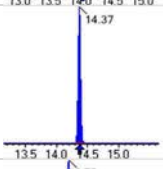  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1079864 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 1987.0 | N/A | 8.1322 [ 8.0000 ] | 101.7% { 110.4% } | 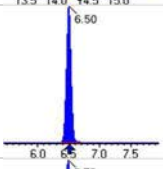  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 590008 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1397.6 | N/A | 1.9907 [ 2.0000 ] | 99.5% { 102.2% } | 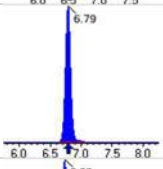  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 501757 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 686.7 | N/A | 1.8597 [ 2.0000 ] | 93.0% { 93.4% } | 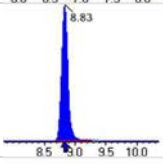  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2317898<br>( 163.0 / 69.0 ) 62952 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 13254.7<br>2982.2 | 0.0272<br>100.0<br>100.0 | 9.2970 | N/A | 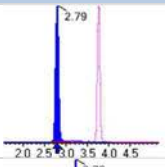 | 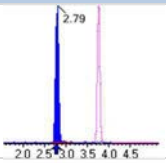 | |
| PFBA | ( 213.0 / 169.0 ) 4838830 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 3323.8 | N/A<br>0.0<br>0.0 | 18.3594 | N/A | 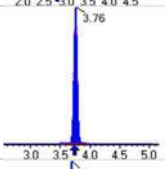 | | |
| PFPeA | ( 263.0 / 219.0 ) 2128919<br>( 263.0 / 69.0 ) 25420 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.1) | 5361.1<br>340.3 | 0.0119<br>100.0<br>100.0 | 9.1456 | N/A | 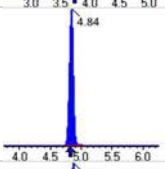 | 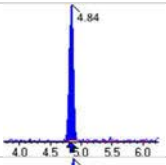 | |
| PFHxA | ( 313.0 / 269.0 ) 1219406<br>( 313.0 / 119.0 ) 141590 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2354.3<br>1418.0 | 0.1161<br>100.0<br>100.0 | 4.5868 | N/A | 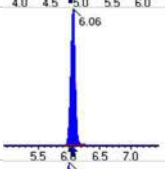 | 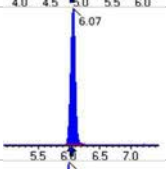 | |
| PFHpA | ( 363.0 / 319.0 ) 1387492<br>( 363.0 / 169.0 ) 420528 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 1776.8<br>1251.9 | 0.3031<br>100.0<br>100.0 | 4.5659 | N/A | 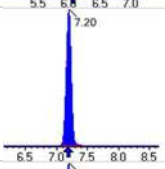 | 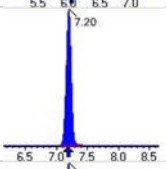 | |
| PFOA | ( 413.0 / 369.0 ) 1841616<br>( 413.0 / 169.0 ) 673207 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 773.3<br>1201.4 | 0.3656<br>100.0<br>100.0 | 4.5711 | N/A | 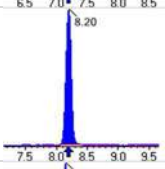 | 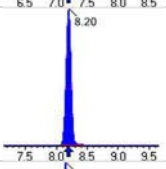 | |
| PFNA | ( 463.0 / 419.0 ) 1251905<br>( 463.0 / 169.0 ) 319604 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1250.5<br>1086.4 | 0.2553<br>100.0<br>100.0 | 4.7429 | N/A | 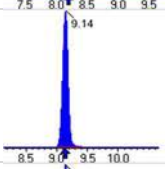 | 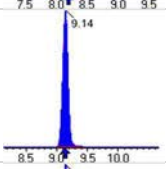 | |
| PFDA | ( 513.0 / 469.0 ) 1434654<br>( 513.0 / 169.0 ) 168105 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3306.9<br>1965.1 | 0.1172<br>100.0<br>100.0 | 4.4342 | N/A | 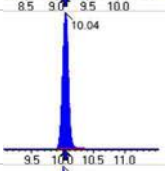 | 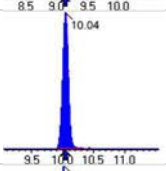 | |
| PFUnA | ( 563.0 / 519.0 ) 1605332<br>( 563.0 / 169.0 ) 227512 | ( 10.91 , 1.00 ) ( 0.00 , N/A , -0.2) | 1211.8<br>818.3 | 0.1417<br>100.0<br>100.0 | 4.8033 | N/A | 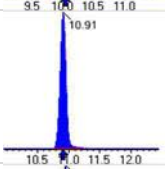 | 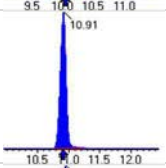 | |
| PFDoA | ( 613.0 / 569.0 ) 1716228<br>( 613.0 / 169.0 ) 271263 | ( 11.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1381.0<br>1036.4 | 0.1581<br>100.0<br>100.0 | 4.8505 | N/A | 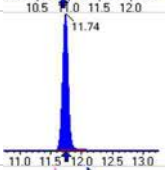 | 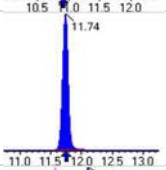 | |
| PFTrDA | ( 663.0 / 619.0 ) 1712256<br>( 663.0 / 169.0 ) 440712 | ( 12.37 , 1.05 ) ( N/A , 0.00 , -0.1) | 1318.3<br>1430.7 | 0.2574<br>100.0<br>100.0 | 4.9471 | N/A | 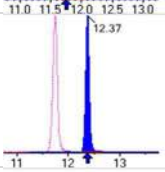 | 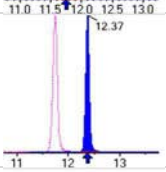 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1428181<br>( 713.0 / 169.0 ) 385493 | ( 12.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1791.2<br>1117.8 | 0.2699<br>100.0<br>100.0 | 4.8801 | N/A | 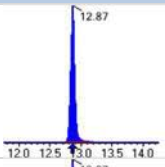 | 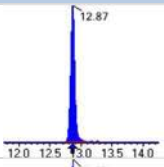 | |
| PFHxDA | ( 813.0 / 769.0 ) 1138852<br>( 813.0 / 169.0 ) 278641 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1735.3<br>1315.5 | 0.2447<br>100.0<br>100.0 | 4.6269 | N/A | 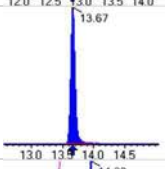 | 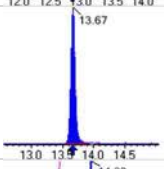 | |
| PFODA | ( 913.0 / 869.0 ) 731197<br>( 913.0 / 169.0 ) 261984 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1733.9<br>942.0 | 0.3583<br>100.0<br>100.0 | 4.7485 | N/A | 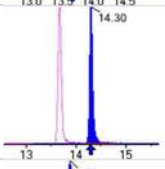 | 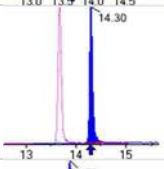 | |
| PFBS | ( 299.0 / 80.0 ) 1759688<br>( 299.0 / 99.0 ) 1244474 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4249.9<br>3308.4 | 0.7072<br>100.0<br>100.0 | 4.2546 | N/A | 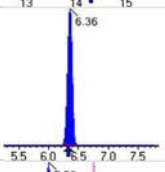 | 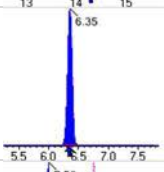 | |
| PFPeS | ( 349.0 / 80.0 ) 4474419<br>( 349.0 / 99.0 ) 1609058 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2447.9<br>2689.5 | 0.3596<br>100.0<br>100.0 | 4.5657 | N/A | 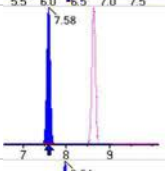 | 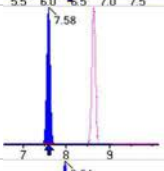 | |
| PFHxS | ( 399.0 / 80.0 ) 5007143<br>( 399.0 / 99.0 ) 1594633 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3769.6<br>5809.6 | 0.3185<br>100.0<br>100.0 | 4.3987 | N/A | 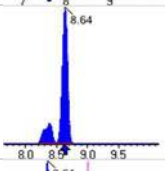 | 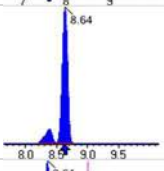 | |
| PFHpS | ( 449.0 / 80.0 ) 4180068<br>( 449.0 / 99.0 ) 1106181 | ( 9.61 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1994.9<br>1790.0 | 0.2646<br>100.0<br>100.0 | 4.4654 | N/A | 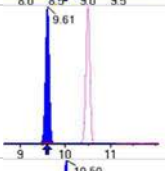 | 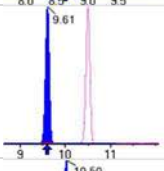 | |
| PFOS | ( 499.0 / 80.0 ) 3790499<br>( 499.0 / 99.0 ) 885961 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2368.6<br>8764.9 | 0.2337<br>100.0<br>100.0 | 4.2007 | N/A | 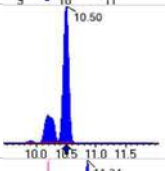 | 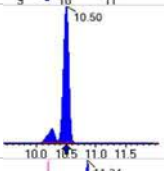 | |
| PFNS | ( 549.0 / 80.0 ) 3830828<br>( 549.0 / 99.0 ) 1044035 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2949.8<br>2999.3 | 0.2725<br>100.0<br>100.0 | 4.5343 | N/A | 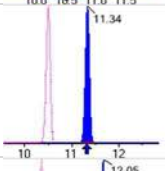 | 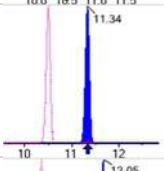 | |
| PFDS | ( 599.0 / 80.0 ) 4687891<br>( 599.0 / 99.0 ) 1274601 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , -0.1) | 2654.5<br>1953.7 | 0.2719<br>100.0<br>100.0 | 4.5442 | N/A | 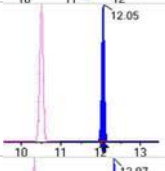 | 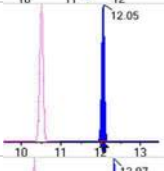 | |
| PFDoS | ( 699.0 / 80.0 ) 4217083<br>( 699.0 / 99.0 ) 985007 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3687.0<br>3177.3 | 0.2336<br>100.0<br>100.0 | 4.6370 | N/A | 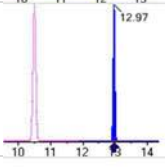 | 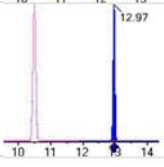 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6427716<br>( 327.0 / 81.0 ) 5608160 | ( 5.53 , 1.00 ) ( 0.00 , N/A , 0.0) | 4802.8<br>3822.4 | 0.8725<br>100.0<br>100.0 | 18.6621 | N/A | 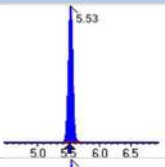 | 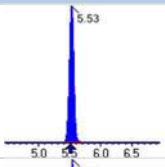 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6162619<br>( 427.0 / 81.0 ) 7728420 | ( 7.63 , 1.00 ) ( -0.01 , N/A , 0.0) | 4425.7<br>3867.2 | 1.2541<br>100.0<br>100.0 | 17.5116 | N/A | 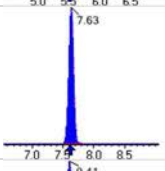 | 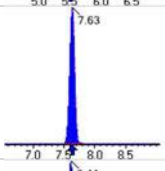 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5813599<br>( 527.0 / 81.0 ) 6323842 | ( 9.41 , 1.00 ) ( -0.01 , N/A , -0.2) | 1535.7<br>1692.5 | 1.0878<br>100.0<br>100.0 | 18.5585 | N/A | 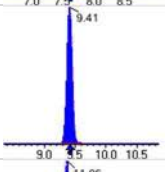 | 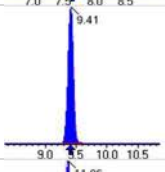 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4546994<br>( 627.0 / 81.0 ) 6545746 | ( 11.06 , 1.00 ) ( 0.00 , N/A , -0.1) | 1429.6<br>1779.0 | 1.4396<br>100.0<br>100.0 | 18.1733 | N/A | 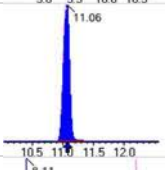 | 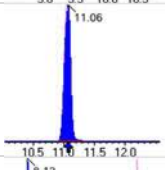 | |
| PFBSA | ( 297.9 / 78.0 ) 3784890<br>( 297.9 / 278.0 ) 5173 | ( 8.11 , 0.57 ) ( N/A , 0.00 , -0.7) | 2391.2<br>252.6 | 0.0014<br>100.0<br>100.0 | 5.2941 | N/A | 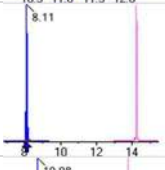 | 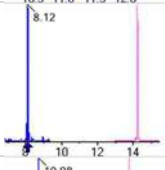 | |
| PFHxSA | ( 397.9 / 78.0 ) 4138663<br>( 397.9 / 378.0 ) 16909 | ( 10.98 , 0.75 ) ( N/A , 0.00 , 0.0) | 1475.0<br>328.4 | 0.0041<br>100.0<br>100.0 | 4.2697 | N/A | 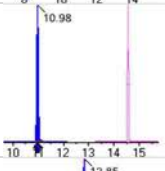 | 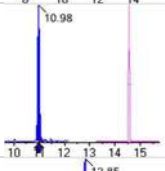 | |
| PFOSA | ( 498.0 / 78.0 ) 3268359<br>( 498.0 / 478.0 ) 45862 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.1) | 2465.7<br>1324.9 | 0.0140<br>100.0<br>100.0 | 4.9031 | N/A | 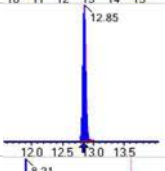 | 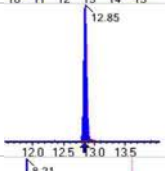 | |
| TFSI | ( 279.7 / 147.0 ) 8554250<br>( 279.7 / 211.0 ) 718623 | ( 8.21 , 0.64 ) ( N/A , 0.00 , 0.0) | 65.6<br>60.6 | 0.0840<br>100.0<br>100.0 | 4.8735 | N/A | 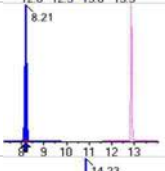 | 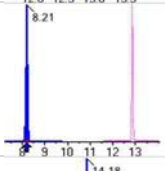 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2617190<br>( 512.0 / 169.0 ) 1958777 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 2.6) | 3160.0<br>1591.2 | 0.7484<br>100.0<br>100.0 | 19.0008 | N/A | 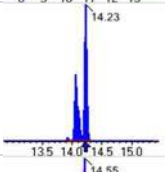 | 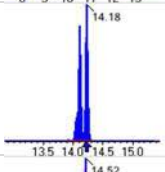 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3302859<br>( 526.0 / 169.0 ) 4077880 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 1.9) | 4176.5<br>3268.5 | 1.2347<br>100.0<br>100.0 | 18.6986 | N/A | 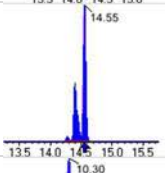 | 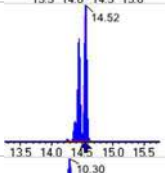 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 941372<br>( 570.0 / 483.0 ) 412806 | ( 10.30 , 1.00 ) ( 0.00 , N/A , 0.3) | 2558.8<br>1637.7 | 0.4385<br>100.0<br>100.0 | 4.7122 | N/A | 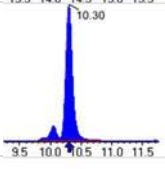 | 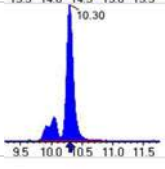 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 830082<br>( 584.0 / 526.0 ) 511873 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1802.1<br>671.1 | 0.6167<br>100.0<br>100.0 | 4.4891 | N/A | 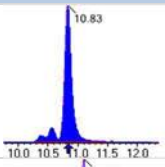 | 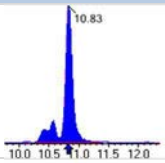 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1309209 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2267.5 | N/A<br>0.0<br>0.0 | 17.7400 | N/A | 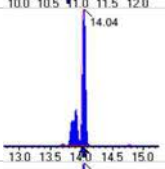 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1093975 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3642.1 | N/A<br>0.0<br>0.0 | 18.6997 | N/A | 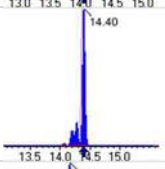 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 350291<br>( 285.0 / 185.0 ) 968672 | ( 6.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1900.4<br>2107.7 | 2.7653<br>100.0<br>100.0 | 4.8596 | N/A | 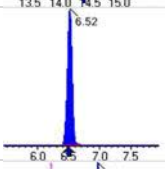 | 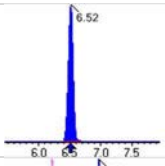 | |
| ADONA | ( 377.0 / 85.0 ) 3944718<br>( 377.0 / 251.0 ) 402093 | ( 7.59 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1901.3<br>1951.7 | 0.1019<br>100.0<br>100.0 | 4.6907 | N/A | 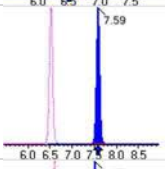 | 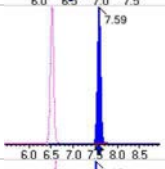 | |
| PFEESA | ( 315.0 / 135.0 ) 1573841<br>( 315.0 / 83.0 ) 877164 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 3219.1<br>1327.1 | 0.5573<br>100.0<br>100.0 | 8.2438 | N/A | 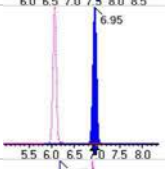 | 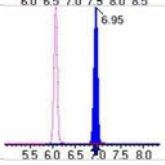 | |
| PFMPA | ( 229.0 / 85.0 ) 686112 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 5599.0 | N/A<br>0.0<br>0.0 | 9.2883 | N/A | 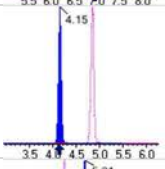 | | |
| PFMBA | ( 279.0 / 85.0 ) 1810024 | ( 5.21 , 1.08 )<br>( N/A , 0.00 , 0.0) | 5286.0 | N/A<br>0.0<br>0.0 | 9.0155 | N/A | 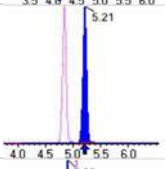 | | |
| NFDHA | ( 295.0 / 201.0 ) 855237<br>( 295.0 / 85.0 ) 922794 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3414.5<br>3145.8 | 1.0790<br>100.0<br>100.0 | 8.6171 | N/A | 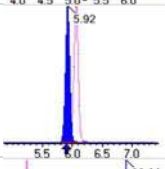 | 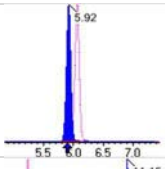 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4165488<br>( 533.0 / 353.0 ) 1303420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , -0.1) | 2574.2<br>3005.6 | 0.3129<br>100.0<br>100.0 | 4.5860 | N/A | 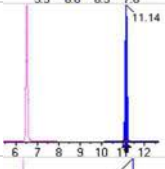 | 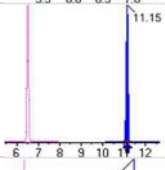 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3346515<br>( 633.0 / 453.0 ) 1111515 | ( 12.47 , 1.91 )<br>( N/A , 0.00 , -0.1) | 3618.9<br>2674.6 | 0.3321<br>100.0<br>100.0 | 4.7909 | N/A | 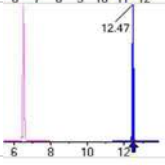 | 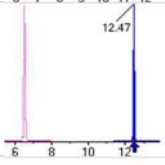 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2114337<br>( 461.0 / 381.2 ) 842629 | ( 9.53 , 0.91 )<br>( N/A , 0.00 , -0.1) | 2784.3<br>3053.0 | 0.3985<br>100.0<br>100.0 | 4.1534 | N/A | 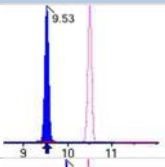 | 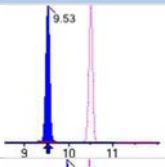 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 238302<br>( 241.0 / 117.0 ) 502064 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 2642.2<br>2673.1 | 2.1068<br>100.0<br>100.0 | 17.9956 | N/A | 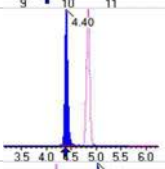 | 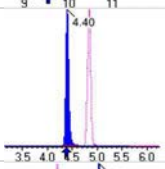 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1331676<br>( 341.0 / 217.0 ) 2023067 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , -0.1) | 1058.3<br>1362.0 | 1.5192<br>100.0<br>100.0 | 18.0626 | N/A | 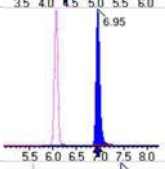 | 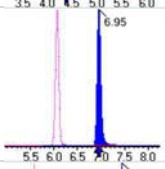 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2128903<br>( 441.0 / 337.0 ) 1952501 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , 0.0) | 4363.7<br>7659.6 | 0.9171<br>100.0<br>100.0 | 17.5963 | N/A | 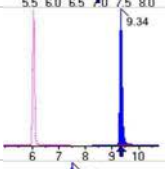 | 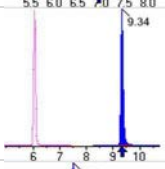 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1497038<br>( 357.2 / 243.0 ) 165062 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1712.0<br>900.3 | 0.1103<br>100.0<br>100.0 | 4.8782 | N/A | 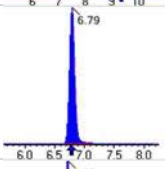 | 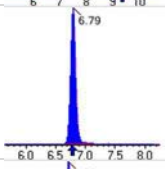 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1119562<br>( 457.2 / 343.0 ) 46429 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.1) | 781.1<br>326.6 | 0.0415<br>100.0<br>100.0 | 5.1103 | N/A | 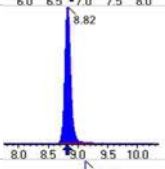 | 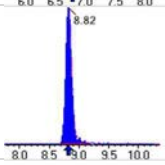 | |
| TDCA | ( 499.0 / 80.0 ) 2892255 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 15801.2 | N/A<br>0.0<br>0.0 | 4.7022 | N/A | 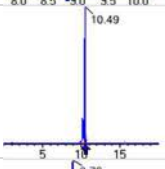 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 234275 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1105.2 | N/A | 0.9826<br>[ 1.0000 ] | 98.3%<br>{ 100.0% } | 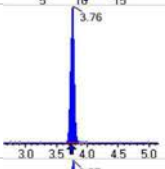 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119482 | ( 6.07 , N/A )<br>( N/A , 0.00 , N/A ) | 4024.8 | N/A | 0.9419<br>[ 1.0000 ] | 94.2%<br>{ 100.0% } | 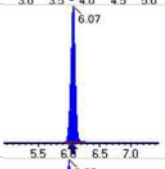 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 379944 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3214.4 | N/A | 0.9611<br>[ 1.0000 ] | 96.1%<br>{ 100.0% } | 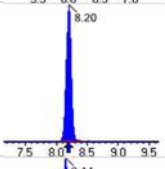 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 266244 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1068.8 | N/A | 0.9361<br>[ 1.0000 ] | 93.6%<br>{ 100.0% } | 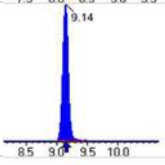 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 267877 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 4037.1 | N/A | 0.9173 [ 1.0000 ] | 91.7% { 100.0% } | 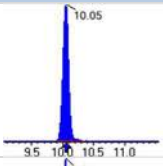  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 900173 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4526.5 | N/A | 0.9485 [ 1.0000 ] | 94.9% { 100.0% } | 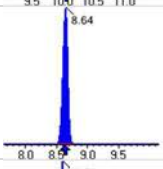  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 700749 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2461.4 | N/A | 0.9201 [ 1.0000 ] | 92.0% { 100.0% } | 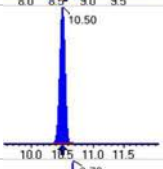  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115201 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 29283.2 | N/A | 7.9034 [ 8.0000 ] | 98.8% { 100.0% } | 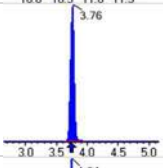  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 921682 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 5969.4 | N/A | 4.1343 [ 4.0000 ] | 103.4% { 100.0% } | 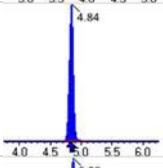  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 553414 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6046.0 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 100.0% } | 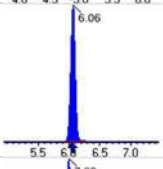  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 619345 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 4798.4 | N/A | 2.0423 [ 2.0000 ] | 102.1% { 100.0% } | 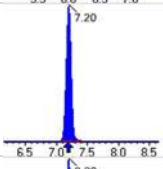  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 819908 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2642.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 100.0% } | 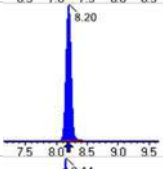  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 262623 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 3992.5 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 100.0% } | 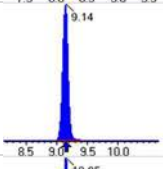  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316652 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 937.0 | N/A | 1.0548 [ 1.0000 ] | 105.5% { 100.0% } | 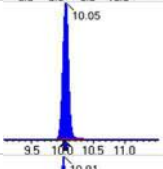  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 361334 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 805.5 | N/A | 1.0231 [ 1.0000 ] | 102.3% { 100.0% } | 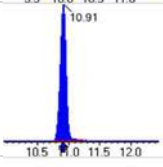  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL5 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351702 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1444.1 | N/A | 0.9778 [ 1.0000 ] | 97.8% { 100.0% } | 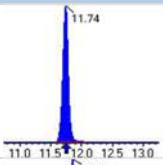 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 312483 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1264.0 | N/A | 1.0202 [ 1.0000 ] | 102.0% { 100.0% } | 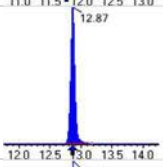 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 516108 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2242.9 | N/A | 1.9737 [ 2.0000 ] | 98.7% { 100.0% } | 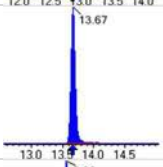 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1593184 | ( 6.36 , N/A ) ( N/A , 0.00 , N/A ) | 1038.1 | N/A | 1.9589 [ 2.0000 ] | 97.9% { 100.0% } | 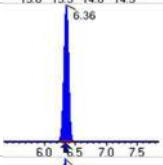 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1280605 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3673.4 | N/A | 1.9727 [ 2.0000 ] | 98.6% { 100.0% } | 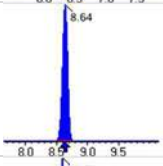 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1562530 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1579.3 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 100.0% } | 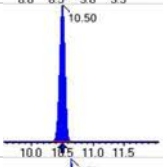 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524953 | ( 5.53 , N/A ) ( N/A , 0.00 , N/A ) | 86.3 | N/A | 3.7410 [ 4.0000 ] | 93.5% { 100.0% } | 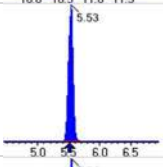 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1699930 | ( 7.64 , N/A ) ( N/A , 0.00 , N/A ) | 3997.9 | N/A | 4.0480 [ 4.0000 ] | 101.2% { 100.0% } | 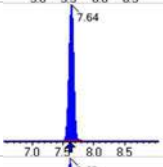 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1319404 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1220.6 | N/A | 4.0060 [ 4.0000 ] | 100.1% { 100.0% } | 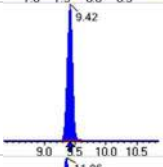 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2596951 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1243.7 | N/A | 7.5446 [ 8.0000 ] | 94.3% { 100.0% } | 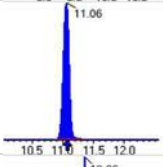 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1333164 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2944.9 | N/A | 1.9911 [ 2.0000 ] | 99.6% { 100.0% } | 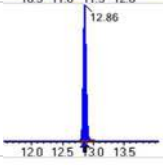 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (5)
Acquired: 2024/03/19 - 13:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 277449 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1901.8 | N/A | 1.9537 [ 2.0000 ] | 97.7% { 100.0% } | 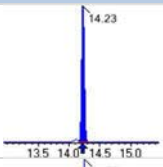  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315440 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2388.3 | N/A | 2.0713 [ 2.0000 ] | 103.6% { 100.0% } | 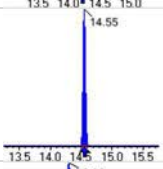  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 837819 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2395.5 | N/A | 4.3096 [ 4.0000 ] | 107.7% { 100.0% } | 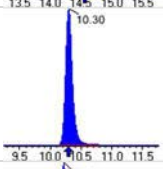  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 756123 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2001.2 | N/A | 4.2674 [ 4.0000 ] | 106.7% { 100.0% } | 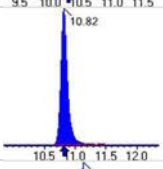  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1345588 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2202.6 | N/A | 21.0846 [ 20.0000 ] | 105.4% { 100.0% } | 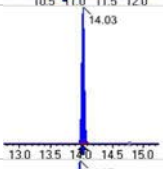  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316921 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4403.9 | N/A | 20.3309 [ 20.0000 ] | 101.7% { 100.0% } | 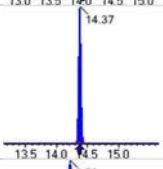  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 977892 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2111.7 | N/A | 7.8745 [ 8.0000 ] | 98.4% { 100.0% } | 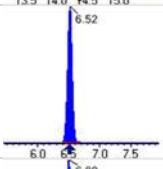  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 577314 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1093.1 | N/A | 1.9878 [ 2.0000 ] | 99.4% { 100.0% } | 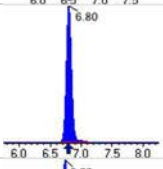  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 537205 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 658.4 | N/A | 2.0318 [ 2.0000 ] | 101.6% { 100.0% } | 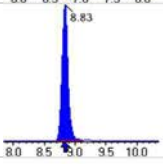  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 4976227<br>( 163.0 / 69.0 ) 132304 | ( 2.78 , 0.74 )<br>( N/A , -0.01 , 0.1) | 25558.3<br>5992.4 | 0.0266<br>97.9<br>97.9 | 19.9572 | N/A | 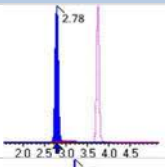 | 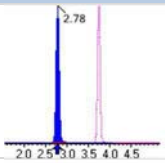 | |
| PFBA | ( 213.0 / 169.0 ) 10221233 | ( 3.74 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5237.8 | N/A<br>0.0<br>0.0 | 38.7767 | N/A | 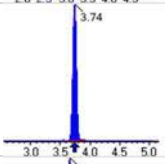 | | |
| PFPeA | ( 263.0 / 219.0 ) 4600759<br>( 263.0 / 69.0 ) 53659 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , -0.2) | 7458.7<br>673.0 | 0.0117<br>97.7<br>97.7 | 19.6841 | N/A | 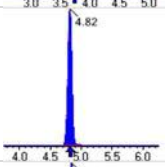 | 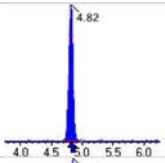 | |
| PFHxA | ( 313.0 / 269.0 ) 2674025<br>( 313.0 / 119.0 ) 304997 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , -0.2) | 3132.9<br>2330.2 | 0.1141<br>98.2<br>98.2 | 9.7037 | N/A | 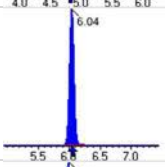 | 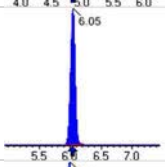 | |
| PFHpA | ( 363.0 / 319.0 ) 3133962<br>( 363.0 / 169.0 ) 979167 | ( 7.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1898.2<br>1646.0 | 0.3124<br>103.1<br>103.1 | 9.6945 | N/A | 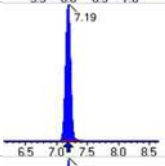 | 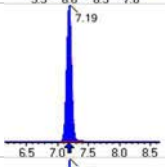 | |
| PFOA | ( 413.0 / 369.0 ) 4116055<br>( 413.0 / 169.0 ) 1484961 | ( 8.20 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1022.2<br>1403.5 | 0.3608<br>98.7<br>98.7 | 9.3377 | N/A | 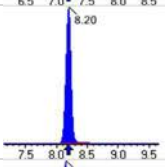 | 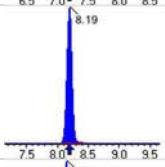 | |
| PFNA | ( 463.0 / 419.0 ) 2850976<br>( 463.0 / 169.0 ) 722819 | ( 9.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1530.8<br>1452.7 | 0.2535<br>99.3<br>99.3 | 9.7006 | N/A | 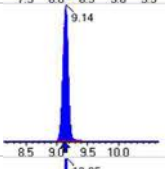 | 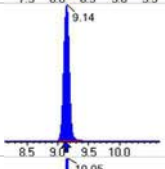 | |
| PFDA | ( 513.0 / 469.0 ) 3194205<br>( 513.0 / 169.0 ) 393804 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3654.4<br>3624.5 | 0.1233<br>105.2<br>105.2 | 9.1536 | N/A | 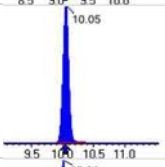 | 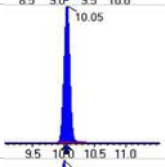 | |
| PFUnA | ( 563.0 / 519.0 ) 3630994<br>( 563.0 / 169.0 ) 527822 | ( 10.91 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1014.1<br>931.4 | 0.1454<br>102.6<br>102.6 | 9.9823 | N/A | 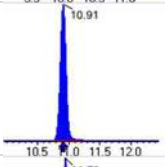 | 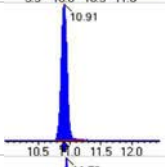 | |
| PFDoA | ( 613.0 / 569.0 ) 4033515<br>( 613.0 / 169.0 ) 625874 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1766.4<br>1315.4 | 0.1552<br>98.2<br>98.2 | 10.0099 | N/A | 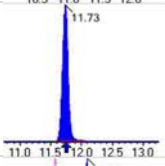 | 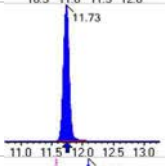 | |
| PFTrDA | ( 663.0 / 619.0 ) 3904086<br>( 663.0 / 169.0 ) 1037013 | ( 12.36 , 1.05 )<br>( N/A , -0.01 , -0.1) | 1403.0<br>1491.0 | 0.2656<br>103.2<br>103.2 | 9.9045 | N/A | 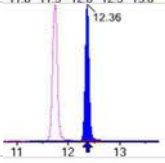 | 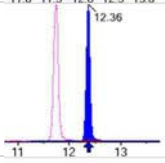 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3274865<br>( 713.0 / 169.0 ) 872542 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1863.1<br>1420.4 | 0.2664<br>98.7<br>98.7 | 10.0480 | N/A | 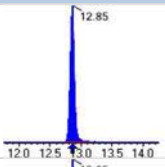 | 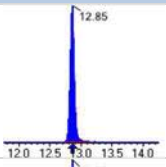 | |
| PFHxDA | ( 813.0 / 769.0 ) 2771994<br>( 813.0 / 169.0 ) 672443 | ( 13.65 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2671.6<br>1712.5 | 0.2426<br>99.1<br>99.1 | 9.5663 | N/A | 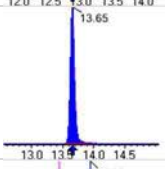 | 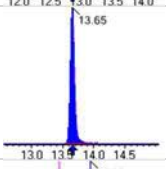 | |
| PFODA | ( 913.0 / 869.0 ) 1755825<br>( 913.0 / 169.0 ) 595303 | ( 14.29 , 1.05 )<br>( N/A , -0.01 , -0.1) | 2292.7<br>1524.1 | 0.3390<br>94.6<br>94.6 | 9.6858 | N/A | 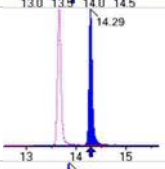 | 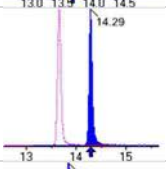 | |
| PFBS | ( 299.0 / 80.0 ) 3954355<br>( 299.0 / 99.0 ) 2802024 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3950.8<br>3555.4 | 0.7086<br>100.2<br>100.2 | 8.8614 | N/A | 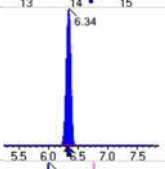 | 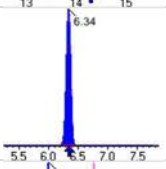 | |
| PFPeS | ( 349.0 / 80.0 ) 10113671<br>( 349.0 / 99.0 ) 3414890 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , 0.1) | 3006.5<br>2142.2 | 0.3377<br>93.9<br>93.9 | 9.7116 | N/A | 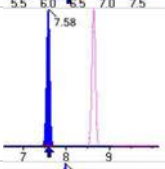 | 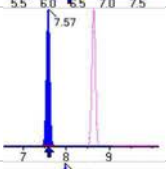 | |
| PFHxS | ( 399.0 / 80.0 ) 10933094<br>( 399.0 / 99.0 ) 3587030 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3851.3<br>3667.5 | 0.3281<br>103.0<br>103.0 | 9.0385 | N/A | 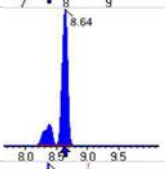 | 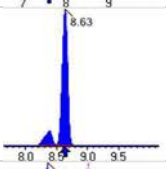 | |
| PFHpS | ( 449.0 / 80.0 ) 10182649<br>( 449.0 / 99.0 ) 2481015 | ( 9.61 , 0.92 )<br>( N/A , 0.00 , 0.1) | 2251.9<br>2141.8 | 0.2437<br>92.1<br>92.1 | 9.8391 | N/A | 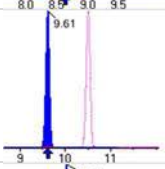 | 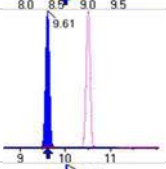 | |
| PFOS | ( 499.0 / 80.0 ) 8996676<br>( 499.0 / 99.0 ) 2052837 | ( 10.50 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3105.0<br>5613.8 | 0.2282<br>97.6<br>97.6 | 9.0184 | N/A | 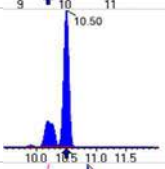 | 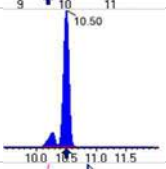 | |
| PFNS | ( 549.0 / 80.0 ) 8681127<br>( 549.0 / 99.0 ) 2337302 | ( 11.34 , 1.08 )<br>( N/A , 0.00 , 0.0) | 2556.4<br>2538.4 | 0.2692<br>98.8<br>98.8 | 9.2942 | N/A | 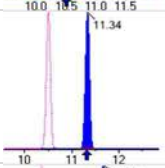 | 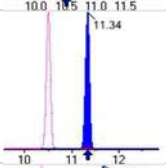 | |
| PFDS | ( 599.0 / 80.0 ) 10573938<br>( 599.0 / 99.0 ) 2638031 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3076.0<br>2562.7 | 0.2495<br>91.8<br>91.8 | 9.2712 | N/A | 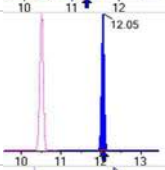 | 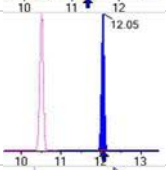 | |
| PFDoS | ( 699.0 / 80.0 ) 10115664<br>( 699.0 / 99.0 ) 2234349 | ( 12.96 , 1.23 )<br>( N/A , -0.01 , 0.0) | 4057.4<br>3770.2 | 0.2209<br>94.6<br>94.6 | 10.0609 | N/A | 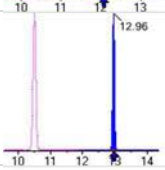 | 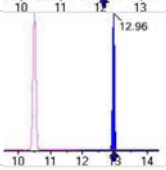 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12141384<br>( 327.0 / 81.0 ) 11228944 | ( 5.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5417.9<br>3453.7 | 0.9248<br>106.0<br>106.0 | 37.7355 | N/A | 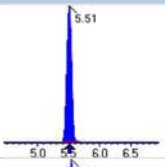 | 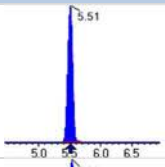 | |
| 6:2FTS | ( 427.0 / 407.0 ) 10900294<br>( 427.0 / 81.0 ) 14811616 | ( 7.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4185.7<br>4990.4 | 1.3588<br>108.4<br>108.4 | 35.7625 | N/A | 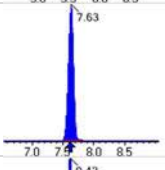 | 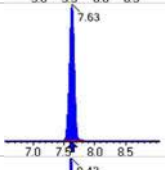 | |
| 8:2FTS | ( 527.0 / 507.0 ) 11942343<br>( 527.0 / 81.0 ) 12425264 | ( 9.42 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1621.8<br>1564.2 | 1.0404<br>95.6<br>95.6 | 35.7744 | N/A | 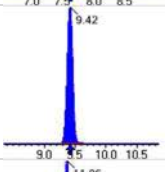 | 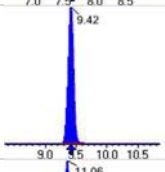 | |
| 10:2FTS | ( 627.0 / 607.0 ) 9925774<br>( 627.0 / 81.0 ) 13942585 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.4) | 1561.8<br>1571.2 | 1.4047<br>97.6<br>97.6 | 38.6373 | N/A | 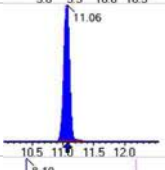 | 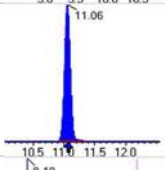 | |
| PFBSA | ( 297.9 / 78.0 ) 8323910<br>( 297.9 / 278.0 ) 11763 | ( 8.10 , 0.57 )<br>( N/A , 0.00 , 0.4) | 1757.1<br>273.7 | 0.0014<br>103.4<br>103.4 | 10.3645 | N/A | 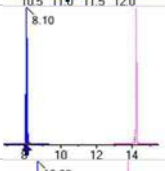 | 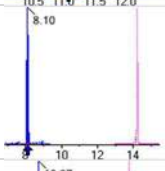 | |
| PFHxSA | ( 397.9 / 78.0 ) 10756836<br>( 397.9 / 378.0 ) 44787 | ( 10.98 , 0.76 )<br>( N/A , 0.00 , 0.1) | 1403.3<br>850.1 | 0.0042<br>101.9<br>101.9 | 10.4696 | N/A | 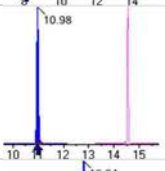 | 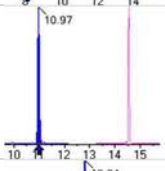 | |
| PFOSA | ( 498.0 / 78.0 ) 7435186<br>( 498.0 / 478.0 ) 96496 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2452.2<br>1261.2 | 0.0130<br>92.5<br>92.5 | 10.0824 | N/A | 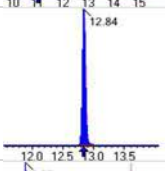 | 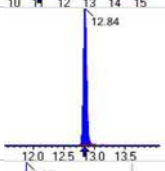 | |
| TFSI | ( 279.7 / 147.0 ) 19532191<br>( 279.7 / 211.0 ) 1661545 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , -0.1) | 66.5<br>62.7 | 0.0851<br>101.3<br>101.3 | 10.0587 | N/A | 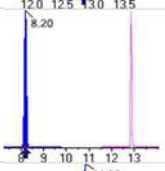 | 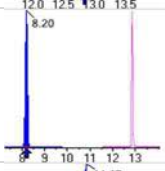 | |
| NMeFOSA | ( 512.0 / 219.0 ) 6233211<br>( 512.0 / 169.0 ) 4662319 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3243.4<br>1391.3 | 0.7480<br>99.9<br>99.9 | 40.2840 | N/A | 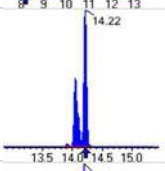 | 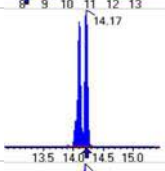 | |
| NEtFOSA | ( 526.0 / 219.0 ) 7427048<br>( 526.0 / 169.0 ) 9493854 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.0) | 4701.3<br>3802.9 | 1.2783<br>103.5<br>103.5 | 39.6683 | N/A | 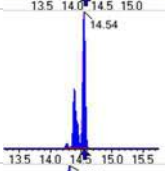 | 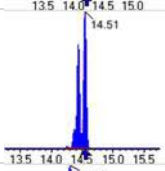 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1945852<br>( 570.0 / 483.0 ) 893329 | ( 10.31 , 1.00 )<br>( 0.00 , N/A , 0.2) | 3953.1<br>1913.0 | 0.4591<br>104.7<br>104.7 | 9.3754 | N/A | 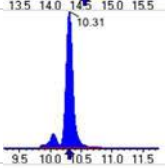 | 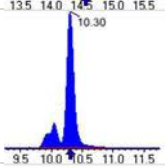 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1886130<br>( 584.0 / 526.0 ) 1111226 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1796.1<br>739.5 | 0.5892<br>95.5<br>95.5 | 9.8885 | N/A | 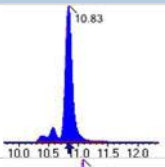 | 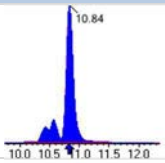 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3070058 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3573.3 | N/A<br>0.0<br>0.0 | 38.7608 | N/A | 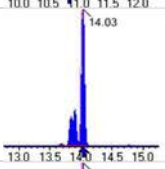 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2588455 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4718.1 | N/A<br>0.0<br>0.0 | 40.2337 | N/A | 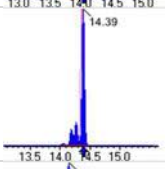 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 774472<br>( 285.0 / 185.0 ) 2152195 | ( 6.50 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1908.8<br>2139.2 | 2.7789<br>100.5<br>100.5 | 9.8848 | N/A | 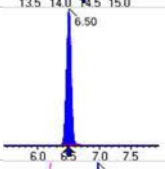 | 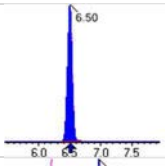 | |
| ADONA | ( 377.0 / 85.0 ) 8831827<br>( 377.0 / 251.0 ) 872179 | ( 7.58 , 1.17 )<br>( N/A , -0.01 , 0.2) | 2174.0<br>1762.1 | 0.0988<br>96.9<br>96.9 | 9.6620 | N/A | 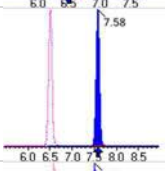 | 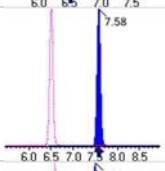 | |
| PFEESA | ( 315.0 / 135.0 ) 3656765<br>( 315.0 / 83.0 ) 1984703 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 3111.9<br>1767.9 | 0.5427<br>97.4<br>97.4 | 18.4785 | N/A | 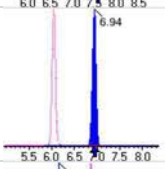 | 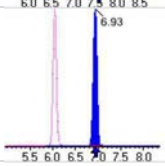 | |
| PFMPA | ( 229.0 / 85.0 ) 1521484 | ( 4.13 , 0.86 )<br>( N/A , -0.02 , 0.0) | 8416.3 | N/A<br>0.0<br>0.0 | 20.5135 | N/A | 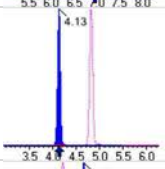 | | |
| PFMBA | ( 279.0 / 85.0 ) 4133561 | ( 5.19 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6193.2 | N/A<br>0.0<br>0.0 | 20.5050 | N/A | 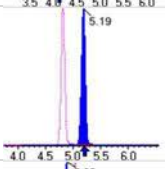 | | |
| NFDHA | ( 295.0 / 201.0 ) 2053635<br>( 295.0 / 85.0 ) 2216174 | ( 5.90 , 0.98 )<br>( N/A , -0.02 , -0.2) | 3475.3<br>2940.0 | 1.0791<br>100.0<br>100.0 | 19.9620 | N/A | 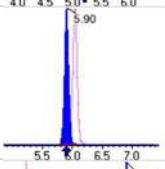 | 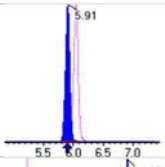 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 9136171<br>( 533.0 / 353.0 ) 2848253 | ( 11.15 , 1.71 )<br>( N/A , 0.00 , 0.1) | 2897.4<br>2497.0 | 0.3118<br>99.6<br>99.6 | 9.2537 | N/A | 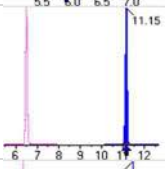 | 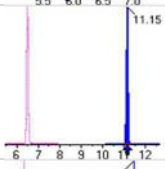 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 7304357<br>( 633.0 / 453.0 ) 2453189 | ( 12.46 , 1.92 )<br>( N/A , -0.01 , 0.1) | 3572.6<br>3729.2 | 0.3359<br>101.1<br>101.1 | 9.6204 | N/A | 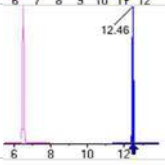 | 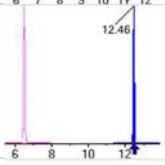 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 5039330<br>( 461.0 / 381.2 ) 1905718 | ( 9.53 , 0.91 )<br>( N/A , 0.01 , 0.3) | 3789.8<br>3403.6 | 0.3782<br>94.9<br>94.9 | 8.9542 | N/A | 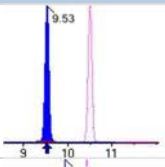 | 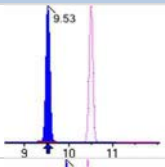 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 538629<br>( 241.0 / 117.0 ) 1253240 | ( 4.38 , 0.91 )<br>( N/A , -0.02 , -0.1) | 3197.1<br>4283.1 | 2.3267<br>110.4<br>110.4 | 40.5098 | N/A | 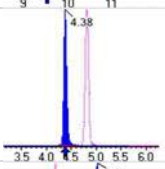 | 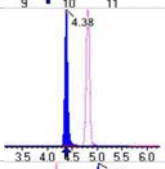 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 3029615<br>( 341.0 / 217.0 ) 4650574 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1393.7<br>1345.8 | 1.5350<br>101.0<br>101.0 | 39.6437 | N/A | 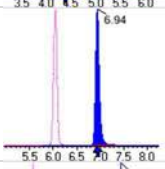 | 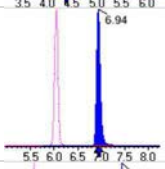 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5123403<br>( 441.0 / 337.0 ) 4460709 | ( 9.34 , 1.54 )<br>( N/A , 0.00 , -0.1) | 5551.5<br>5955.7 | 0.8707<br>94.9<br>94.9 | 40.8535 | N/A | 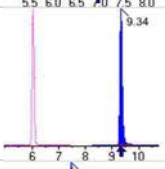 | 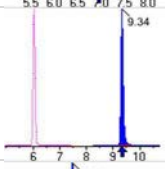 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3452949<br>( 357.2 / 243.0 ) 358650 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1773.4<br>994.0 | 0.1039<br>94.2<br>94.2 | 10.0613 | N/A | 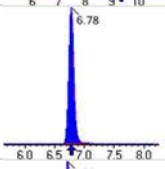 | 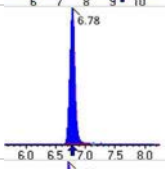 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2505275<br>( 457.2 / 343.0 ) 105248 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.2) | 860.7<br>599.2 | 0.0420<br>101.3<br>101.3 | 10.2092 | N/A | 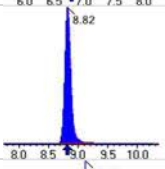 | 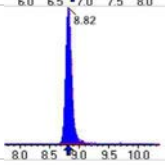 | |
| TDCA | ( 499.0 / 80.0 ) 6236770 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 25056.2 | N/A<br>0.0<br>0.0 | 9.1716 | N/A | 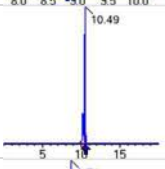 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 219824 | ( 3.74 , N/A )<br>( N/A , -0.02 , N/A ) | 996.6 | N/A | 0.9219<br>[ 1.0000 ] | 92.2%<br>{ 93.8% } | 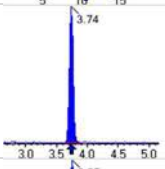 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124014 | ( 6.05 , N/A )<br>( N/A , -0.02 , N/A ) | 119243.9 | N/A | 0.9776<br>[ 1.0000 ] | 97.8%<br>{ 103.8% } | 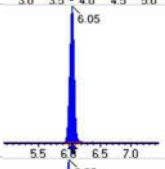 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 390461 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 3609.6 | N/A | 0.9877<br>[ 1.0000 ] | 98.8%<br>{ 102.8% } | 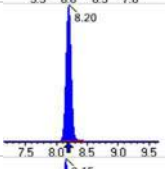 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 275253 | ( 9.15 , N/A )<br>( N/A , 0.00 , N/A ) | 905.3 | N/A | 0.9678<br>[ 1.0000 ] | 96.8%<br>{ 103.4% } | 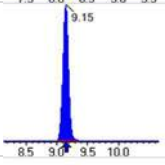 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286139 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 6661.6 | N/A | 0.9798 [ 1.0000 ] | 98.0% { 106.8% } | 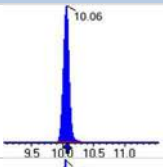 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 911912 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4728.4 | N/A | 0.9609 [ 1.0000 ] | 96.1% { 101.3% } | 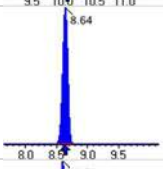 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727281 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2280.6 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 103.8% } | 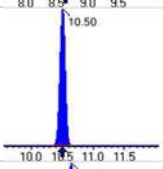 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2115448 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 30999.9 | N/A | 8.4239 [ 8.0000 ] | 105.3% { 100.0% } | 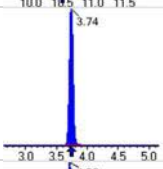 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 925445 | ( 4.82 , N/A ) ( N/A , -0.03 , N/A ) | 4720.5 | N/A | 3.9995 [ 4.0000 ] | 100.0% { 100.4% } | 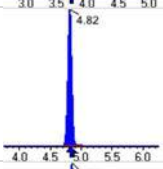 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 573646 | ( 6.04 , N/A ) ( N/A , -0.02 , N/A ) | 8004.1 | N/A | 2.0273 [ 2.0000 ] | 101.4% { 103.7% } | 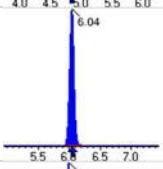 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 658863 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5435.3 | N/A | 2.0932 [ 2.0000 ] | 104.7% { 106.4% } | 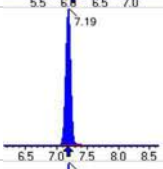 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 890902 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 2701.9 | N/A | 2.1295 [ 2.0000 ] | 106.5% { 108.7% } | 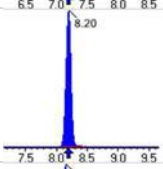 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292416 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2988.5 | N/A | 1.0835 [ 1.0000 ] | 108.3% { 111.3% } | 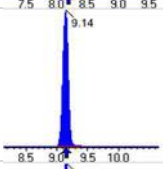 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341522 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1370.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 107.9% } | 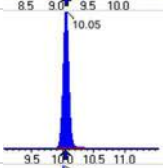 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 393261 | ( 10.91 , N/A ) ( N/A , 0.00 , N/A ) | 1047.7 | N/A | 1.0424 [ 1.0000 ] | 104.2% { 108.8% } | 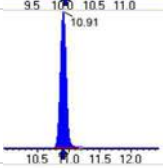 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL6 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 400532 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1477.9 | N/A | 1.0425 [ 1.0000 ] | 104.3% { 113.9% } | 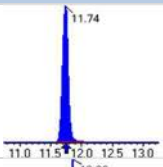  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348002 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1107.0 | N/A | 1.0636 [ 1.0000 ] | 106.4% { 111.4% } | 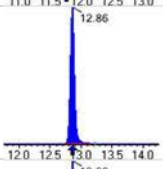  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607589 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2704.1 | N/A | 2.1752 [ 2.0000 ] | 108.8% { 117.7% } | 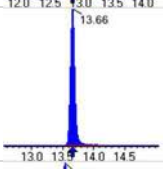  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1718936 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 1168.5 | N/A | 2.0863 [ 2.0000 ] | 104.3% { 107.9% } | 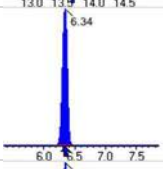  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1360815 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3521.2 | N/A | 2.0692 [ 2.0000 ] | 103.5% { 106.3% } | 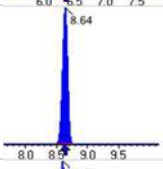  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1727455 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1864.4 | N/A | 2.2029 [ 2.0000 ] | 110.1% { 110.6% } | 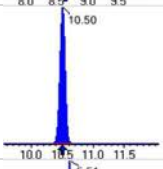  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 490391 | ( 5.51 , N/A ) ( N/A , -0.02 , N/A ) | 90.9 | N/A | 3.4497 [ 4.0000 ] | 86.2% { 93.4% } | 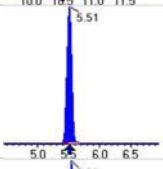  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1472319 | ( 7.63 , N/A ) ( N/A , 0.00 , N/A ) | 3472.6 | N/A | 3.4608 [ 4.0000 ] | 86.5% { 86.6% } | 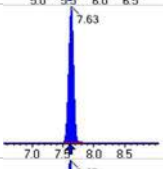  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1406025 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1127.1 | N/A | 4.2140 [ 4.0000 ] | 105.4% { 106.6% } | 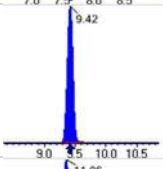  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2666437 | ( 11.06 , N/A ) ( N/A , 0.00 , N/A ) | 1321.4 | N/A | 7.6467 [ 8.0000 ] | 95.6% { 102.7% } | 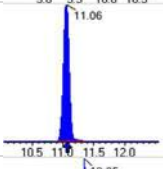  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1474856 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2149.7 | N/A | 2.1223 [ 2.0000 ] | 106.1% { 110.6% } | 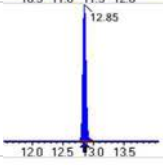  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (6)
Acquired: 2024/03/19 - 13:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 311674 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1807.7 | N/A | 2.1146 [ 2.0000 ] | 105.7% { 112.3% } | 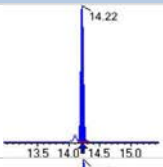  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334355 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2233.0 | N/A | 2.1154 [ 2.0000 ] | 105.8% { 106.0% } | 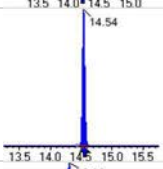  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 870435 | ( 10.30 , N/A ) ( N/A , 0.01 , N/A ) | 2098.7 | N/A | 4.3140 [ 4.0000 ] | 107.8% { 103.9% } | 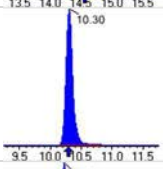  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 779965 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 2137.1 | N/A | 4.2413 [ 4.0000 ] | 106.0% { 103.2% } | 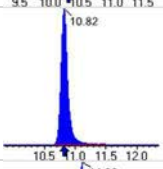  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1444142 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2682.5 | N/A | 21.8033 [ 20.0000 ] | 109.0% { 107.3% } | 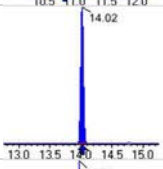  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1448227 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 4302.5 | N/A | 21.5424 [ 20.0000 ] | 107.7% { 110.0% } | 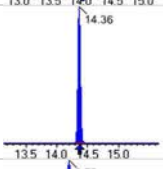  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1062925 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2462.9 | N/A | 8.2465 [ 8.0000 ] | 103.1% { 108.7% } | 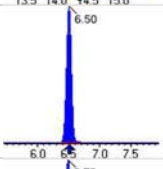  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 645613 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1154.9 | N/A | 2.0811 [ 2.0000 ] | 104.1% { 111.8% } | 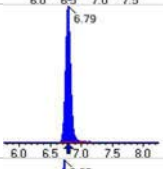  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 601731 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 832.3 | N/A | 2.1306 [ 2.0000 ] | 106.5% { 112.0% } | 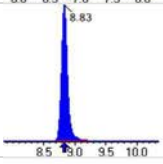  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 9647783<br>( 163.0 / 69.0 ) 248180 | ( 2.77 , 0.74 ) ( N/A , -0.02 , 0.0) | 43056.1<br>9147.9 | 0.0257<br>94.7<br>94.7 | 44.1686 | N/A | 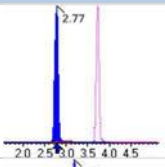 | 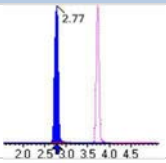 | |
| PFBA | ( 213.0 / 169.0 ) 19202801 | ( 3.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 7585.4 | N/A<br>0.0<br>0.0 | 83.1608 | N/A | 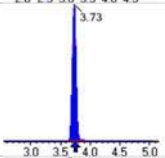 | | |
| PFPeA | ( 263.0 / 219.0 ) 9729713<br>( 263.0 / 69.0 ) 109623 | ( 4.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 6819.6<br>1166.1 | 0.0113<br>94.4<br>94.4 | 42.6830 | N/A | 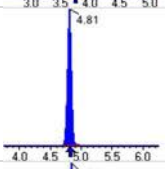 | 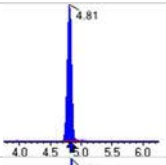 | |
| PFHxA | ( 313.0 / 269.0 ) 5855022<br>( 313.0 / 119.0 ) 657854 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3525.9<br>3080.6 | 0.1124<br>96.8<br>96.8 | 21.0786 | N/A | 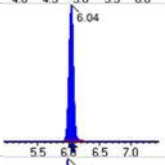 | 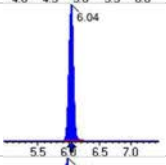 | |
| PFHpA | ( 363.0 / 319.0 ) 6773290<br>( 363.0 / 169.0 ) 1976592 | ( 7.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1787.9<br>1424.4 | 0.2918<br>96.3<br>96.3 | 21.3548 | N/A | 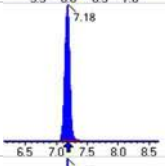 | 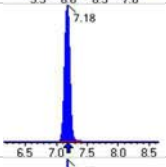 | |
| PFOA | ( 413.0 / 369.0 ) 8939778<br>( 413.0 / 169.0 ) 3151658 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1127.7<br>1395.0 | 0.3525<br>96.4<br>96.4 | 21.1396 | N/A | 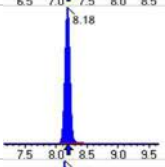 | 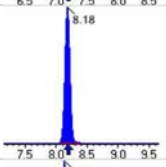 | |
| PFNA | ( 463.0 / 419.0 ) 6037894<br>( 463.0 / 169.0 ) 1493594 | ( 9.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1348.3<br>1184.5 | 0.2474<br>96.9<br>96.9 | 21.7350 | N/A | 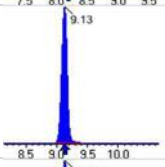 | 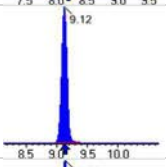 | |
| PFDA | ( 513.0 / 469.0 ) 6762404<br>( 513.0 / 169.0 ) 825163 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 4792.5<br>4492.2 | 0.1220<br>104.1<br>104.1 | 19.9979 | N/A | 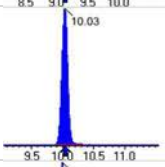 | 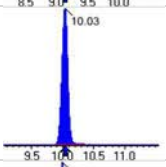 | |
| PFUnA | ( 563.0 / 519.0 ) 7387064<br>( 563.0 / 169.0 ) 1075499 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1049.6<br>1214.6 | 0.1456<br>102.7<br>102.7 | 20.9526 | N/A | 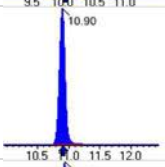 | 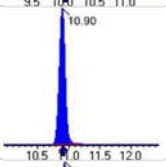 | |
| PFDoA | ( 613.0 / 569.0 ) 8414637<br>( 613.0 / 169.0 ) 1279847 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.1) | 1974.2<br>1748.5 | 0.1521<br>96.2<br>96.2 | 21.0663 | N/A | 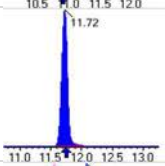 | 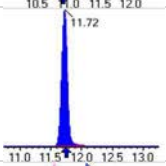 | |
| PFTrDA | ( 663.0 / 619.0 ) 7977805<br>( 663.0 / 169.0 ) 2091790 | ( 12.35 , 1.05 ) ( N/A , -0.02 , -0.1) | 1535.5<br>1229.9 | 0.2622<br>101.9<br>101.9 | 20.4176 | N/A | 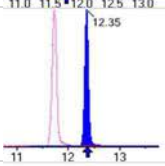 | 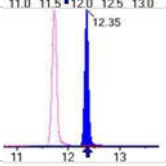 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6332836<br>( 713.0 / 169.0 ) 1709460 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1729.0<br>1376.3 | 0.2699<br>100.0<br>100.0 | 20.1993 | N/A | 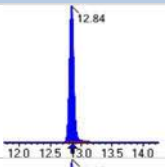 | 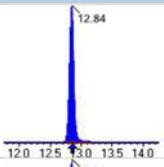 | |
| PFHxDA | ( 813.0 / 769.0 ) 5638902<br>( 813.0 / 169.0 ) 1397067 | ( 13.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2906.6<br>1972.3 | 0.2478<br>101.3<br>101.3 | 20.4809 | N/A | 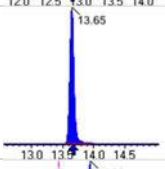 | 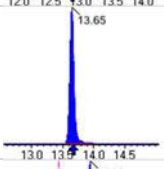 | |
| PFODA | ( 913.0 / 869.0 ) 3499803<br>( 913.0 / 169.0 ) 1172832 | ( 14.28 , 1.05 )<br>( N/A , -0.02 , 0.0) | 2345.2<br>1896.8 | 0.3351<br>93.5<br>93.5 | 20.3190 | N/A | 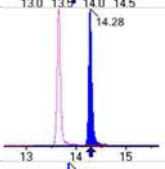 | 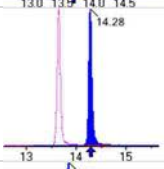 | |
| PFBS | ( 299.0 / 80.0 ) 8605541<br>( 299.0 / 99.0 ) 6210338 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3746.5<br>3688.7 | 0.7217<br>102.0<br>102.0 | 18.7196 | N/A | 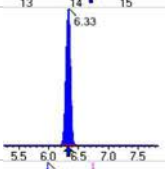 | 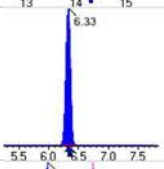 | |
| PFPeS | ( 349.0 / 80.0 ) 20173078<br>( 349.0 / 99.0 ) 6917231 | ( 7.56 , 0.88 )<br>( N/A , -0.02 , 0.0) | 3260.6<br>2666.4 | 0.3429<br>95.4<br>95.4 | 19.2674 | N/A | 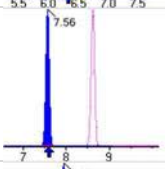 | 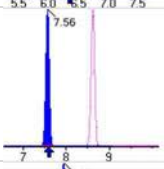 | |
| PFHxS | ( 399.0 / 80.0 ) 22725319<br>( 399.0 / 99.0 ) 7646781 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4713.5<br>6241.9 | 0.3365<br>105.7<br>105.7 | 18.6865 | N/A | 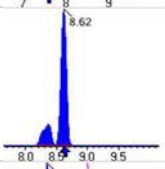 | 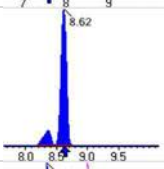 | |
| PFHpS | ( 449.0 / 80.0 ) 20274394<br>( 449.0 / 99.0 ) 5555187 | ( 9.59 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2318.9<br>2835.7 | 0.2740<br>103.5<br>103.5 | 20.6440 | N/A | 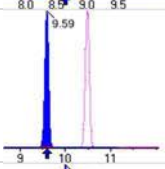 | 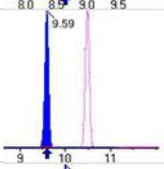 | |
| PFOS | ( 499.0 / 80.0 ) 18767964<br>( 499.0 / 99.0 ) 4295232 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3739.6<br>5295.9 | 0.2289<br>97.9<br>97.9 | 19.8251 | N/A | 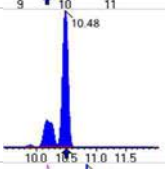 | 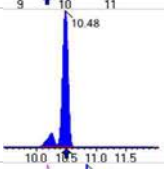 | |
| PFNS | ( 549.0 / 80.0 ) 18086906<br>( 549.0 / 99.0 ) 4780266 | ( 11.32 , 1.08 )<br>( N/A , -0.01 , 0.1) | 2954.4<br>3018.0 | 0.2643<br>97.0<br>97.0 | 20.4057 | N/A | 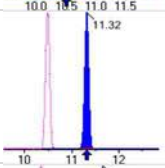 | 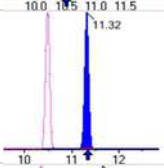 | |
| PFDS | ( 599.0 / 80.0 ) 20905375<br>( 599.0 / 99.0 ) 5646584 | ( 12.04 , 1.15 )<br>( N/A , -0.02 , 0.1) | 3970.4<br>3658.7 | 0.2701<br>99.3<br>99.3 | 19.3156 | N/A | 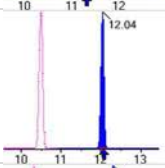 | 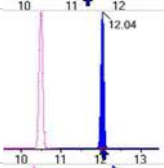 | |
| PFDoS | ( 699.0 / 80.0 ) 19306218<br>( 699.0 / 99.0 ) 4469745 | ( 12.95 , 1.23 )<br>( N/A , -0.02 , 0.0) | 4489.1<br>4098.7 | 0.2315<br>99.1<br>99.1 | 20.2345 | N/A | 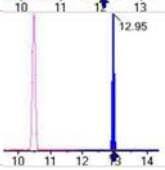 | 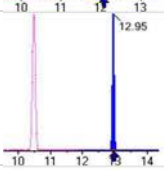 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 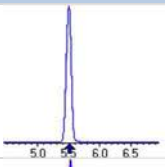 | 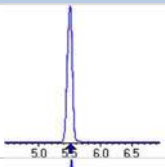 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 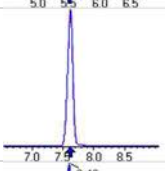 | 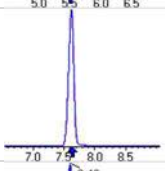 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>21815878<br>( 527.0 / 81.0 )<br>21959418 | ( 9.40 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1473.9<br>1574.1 | 1.0066<br>92.5<br>92.5 | 76.5421 | N/A | 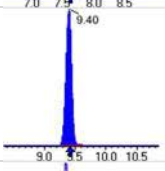 | 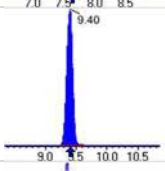 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 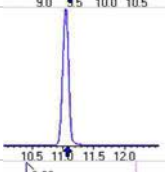 | 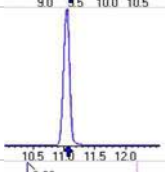 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>16725985<br>( 297.9 / 278.0 )<br>24255 | ( 8.09 , 0.57 )<br>( N/A , -0.02 , 0.2) | 1517.0<br>776.4 | 0.0015<br>106.1<br>106.1 | 20.2686 | N/A | 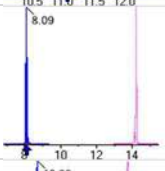 | 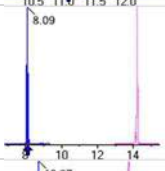 | |
| PFHxSA | ( 397.9 / 78.0 )<br>21492712<br>( 397.9 / 378.0 )<br>91450 | ( 10.96 , 0.75 )<br>( N/A , -0.01 , -0.1) | 1346.4<br>847.0 | 0.0043<br>104.1<br>104.1 | 20.9006 | N/A | 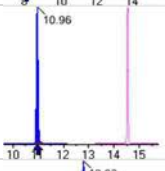 | 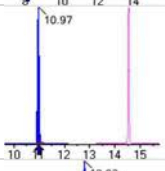 | |
| PFOSA | ( 498.0 / 78.0 )<br>14753844<br>( 498.0 / 478.0 )<br>214805 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3170.7<br>2253.7 | 0.0146<br>103.8<br>103.8 | 21.1703 | N/A | 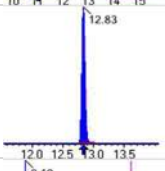 | 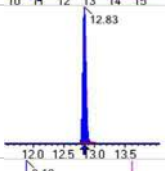 | |
| TFSI | ( 279.7 / 147.0 )<br>39395227<br>( 279.7 / 211.0 )<br>3549226 | ( 8.19 , 0.64 )<br>( N/A , -0.02 , 0.1) | 64.0<br>55.4 | 0.0901<br>107.2<br>107.2 | 21.4677 | N/A | 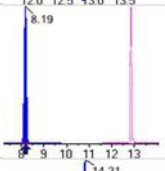 | 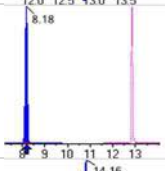 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>13014238<br>( 512.0 / 169.0 )<br>9825343 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3652.8<br>1356.9 | 0.7550<br>100.9<br>100.9 | 81.8558 | N/A | 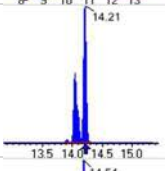 | 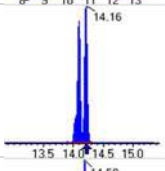 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>15594093<br>( 526.0 / 169.0 )<br>19500224 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 2.3) | 4569.2<br>3815.8 | 1.2505<br>101.3<br>101.3 | 83.2165 | N/A | 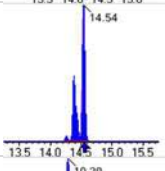 | 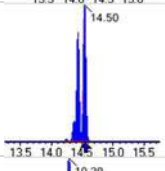 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>4070736<br>( 570.0 / 483.0 )<br>1893315 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3587.1<br>1948.3 | 0.4651<br>106.1<br>106.1 | 20.6918 | N/A | 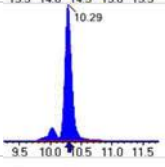 | 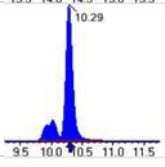 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 3731836<br>( 584.0 / 526.0 ) 2286417 | ( 10.81 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1729.9<br>773.9 | 0.6127<br>99.4<br>99.4 | 20.2888 | N/A | 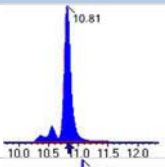 | 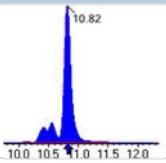 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6128623 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4554.8 | N/A<br>0.0<br>0.0 | 85.4742 | N/A | 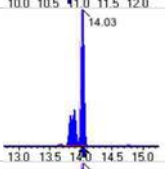 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5195417 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 7894.3 | N/A<br>0.0<br>0.0 | 85.6651 | N/A | 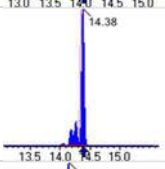 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1720793<br>( 285.0 / 185.0 ) 4583880 | ( 6.49 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2261.5<br>2416.9 | 2.6638<br>96.3<br>96.3 | 21.8580 | N/A | 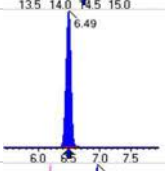 | 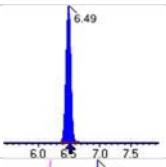 | |
| ADONA | ( 377.0 / 85.0 ) 17774690<br>( 377.0 / 251.0 ) 1760043 | ( 7.56 , 1.16 )<br>( N/A , -0.02 , -0.1) | 2163.5<br>2341.5 | 0.0990<br>97.1<br>97.1 | 19.3525 | N/A | 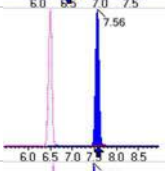 | 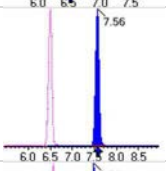 | |
| PFEESA | ( 315.0 / 135.0 ) 7875914<br>( 315.0 / 83.0 ) 4276233 | ( 6.92 , 1.15 )<br>( N/A , -0.02 , 0.0) | 3888.8<br>2934.4 | 0.5430<br>97.4<br>97.4 | 39.4834 | N/A | 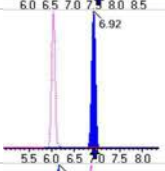 | 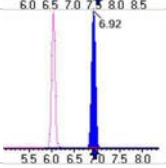 | |
| PFMPA | ( 229.0 / 85.0 ) 3131989 | ( 4.12 , 0.86 )<br>( N/A , -0.03 , 0.0) | 8390.9 | N/A<br>0.0<br>0.0 | 43.2975 | N/A | 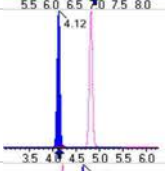 | | |
| PFMBA | ( 279.0 / 85.0 ) 8569933 | ( 5.18 , 1.08 )<br>( N/A , -0.03 , 0.0) | 6457.3 | N/A<br>0.0<br>0.0 | 43.5896 | N/A | 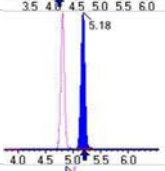 | | |
| NFDHA | ( 295.0 / 201.0 ) 4231075<br>( 295.0 / 85.0 ) 4662644 | ( 5.90 , 0.98 )<br>( N/A , -0.03 , 0.0) | 3412.8<br>4004.1 | 1.1020<br>102.1<br>102.1 | 40.8014 | N/A | 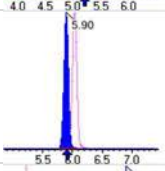 | 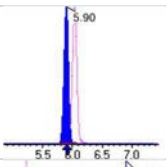 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19556832<br>( 533.0 / 353.0 ) 6135024 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.1) | 2536.0<br>3191.0 | 0.3137<br>100.3<br>100.3 | 19.7139 | N/A | 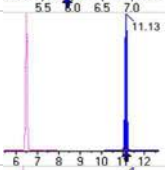 | 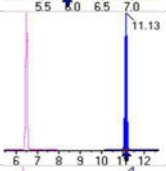 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14798782<br>( 633.0 / 453.0 ) 4988130 | ( 12.45 , 1.92 )<br>( N/A , -0.02 , 0.0) | 3882.5<br>3613.8 | 0.3371<br>101.5<br>101.5 | 19.3980 | N/A | 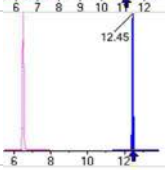 | 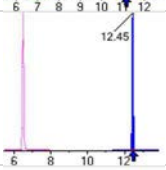 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10780581<br>( 461.0 / 381.2 ) 4171218 | ( 9.51 , 0.91 )<br>( N/A , -0.01 , 0.0) | 3973.4<br>5001.9 | 0.3869<br>97.1<br>97.1 | 20.1859 | N/A | 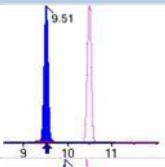 | 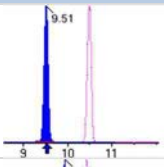 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1199816<br>( 241.0 / 117.0 ) 2599094 | ( 4.37 , 0.91 )<br>( N/A , -0.03 , 0.0) | 4619.1<br>5835.8 | 2.1662<br>102.8<br>102.8 | 92.5241 | N/A | 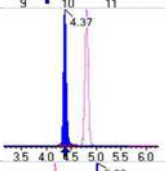 | 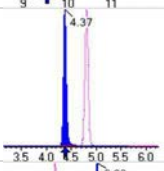 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 6037188<br>( 341.0 / 217.0 ) 9245366 | ( 6.93 , 1.15 )<br>( N/A , -0.02 , 0.1) | 1108.9<br>1195.3 | 1.5314<br>100.8<br>100.8 | 78.3727 | N/A | 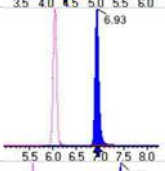 | 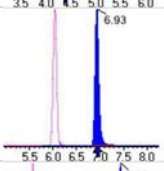 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10461798<br>( 441.0 / 337.0 ) 8986336 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 6894.1<br>7952.6 | 0.8590<br>93.7<br>93.7 | 82.7600 | N/A | 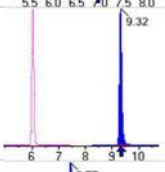 | 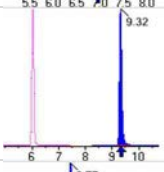 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6947700<br>( 357.2 / 243.0 ) 729149 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1649.6<br>1284.1 | 0.1049<br>95.2<br>95.2 | 20.7843 | N/A | 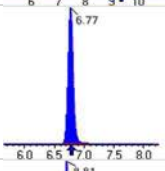 | 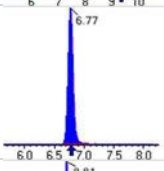 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5159787<br>( 457.2 / 343.0 ) 209477 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1021.2<br>820.8 | 0.0406<br>97.9<br>97.9 | 22.0825 | N/A | 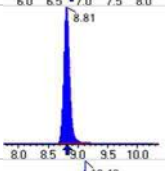 | 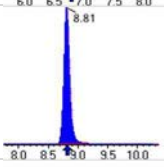 | |
| TDCA | ( 499.0 / 80.0 ) 14278125 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 61589.3 | N/A<br>0.0<br>0.0 | 22.1263 | N/A | 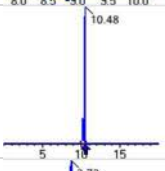 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 213815 | ( 3.73 , N/A )<br>( N/A , -0.03 , N/A ) | 908.6 | N/A | 0.8967<br>[ 1.0000 ] | 89.7%<br>{ 91.3% } | 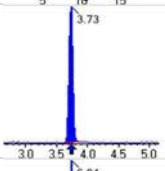 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130959 | ( 6.04 , N/A )<br>( N/A , -0.03 , N/A ) | 14399.3 | N/A | 1.0323<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 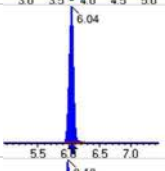 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 423217 | ( 8.18 , N/A )<br>( N/A , -0.02 , N/A ) | 3205.1 | N/A | 1.0706<br>[ 1.0000 ] | 107.1%<br>{ 111.4% } | 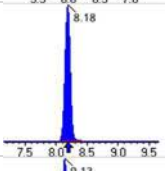 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 317274 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1199.3 | N/A | 1.1156<br>[ 1.0000 ] | 111.6%<br>{ 119.2% } | 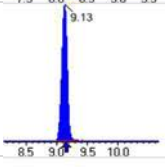 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 307005 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 6206.5 | N/A | 1.0513 [ 1.0000 ] | 105.1% { 114.6% } | 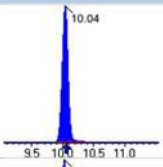 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1022285 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 4039.3 | N/A | 1.0772 [ 1.0000 ] | 107.7% { 113.6% } | 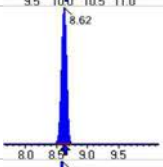 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 784809 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2679.6 | N/A | 1.0304 [ 1.0000 ] | 103.0% { 112.0% } | 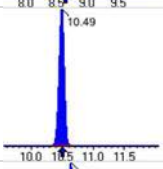 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1853173 | ( 3.73 , N/A ) ( N/A , -0.03 , N/A ) | 31229.1 | N/A | 7.5869 [ 8.0000 ] | 94.8% { 87.6% } | 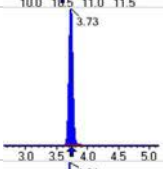 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 902569 | ( 4.81 , N/A ) ( N/A , -0.03 , N/A ) | 4796.3 | N/A | 3.6938 [ 4.0000 ] | 92.3% { 97.9% } | 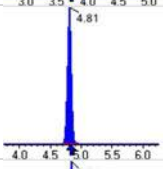 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 578230 | ( 6.04 , N/A ) ( N/A , -0.03 , N/A ) | 6570.9 | N/A | 1.9352 [ 2.0000 ] | 96.8% { 104.5% } | 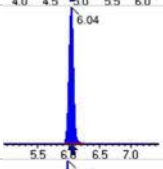 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 646447 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 5437.1 | N/A | 1.9449 [ 2.0000 ] | 97.2% { 104.4% } | 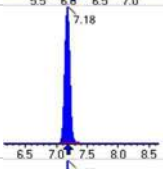 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 836012 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 2325.3 | N/A | 1.8436 [ 2.0000 ] | 92.2% { 102.0% } | 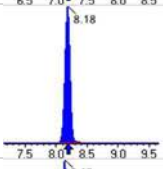 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276398 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2897.8 | N/A | 0.8885 [ 1.0000 ] | 88.8% { 105.2% } | 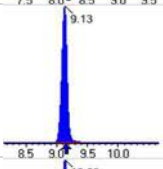 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 330952 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 920.3 | N/A | 0.9619 [ 1.0000 ] | 96.2% { 104.5% } | 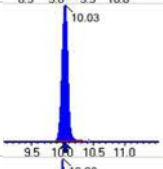 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 381172 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1015.8 | N/A | 0.9417 [ 1.0000 ] | 94.2% { 105.5% } | 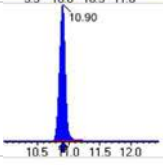 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL7 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 397037 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1215.8 | N/A | 0.9632 [ 1.0000 ] | 96.3% { 112.9% } | 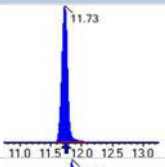 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 334756 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 1243.4 | N/A | 0.9536 [ 1.0000 ] | 95.4% { 107.1% } | 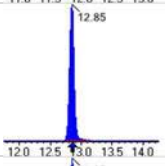 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 577308 | ( 13.65 , N/A ) ( N/A , -0.02 , N/A ) | 2610.4 | N/A | 1.9264 [ 2.0000 ] | 96.3% { 111.9% } | 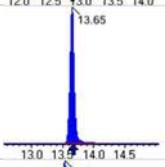 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1770797 | ( 6.33 , N/A ) ( N/A , -0.03 , N/A ) | 1012.2 | N/A | 1.9172 [ 2.0000 ] | 95.9% { 111.1% } | 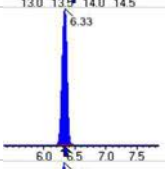 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1368143 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 5008.8 | N/A | 1.8558 [ 2.0000 ] | 92.8% { 106.8% } | 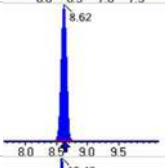 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1639289 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1716.2 | N/A | 1.9372 [ 2.0000 ] | 96.9% { 104.9% } | 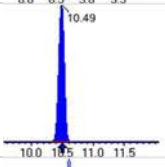 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 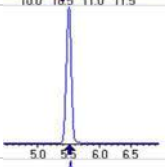 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 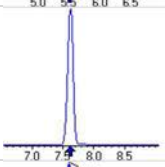 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1200464 | ( 9.40 , N/A ) ( N/A , -0.02 , N/A ) | 1165.9 | N/A | 3.2095 [ 4.0000 ] | 80.2% { 91.0% } | 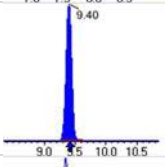 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 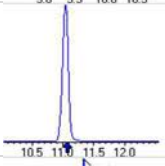 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1393797 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2113.9 | N/A | 1.8587 [ 2.0000 ] | 92.9% { 104.5% } | 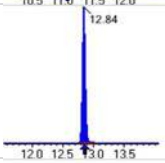 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (7)
Acquired: 2024/03/19 - 14:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 320251 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 1578.0 | N/A | 2.0135 [ 2.0000 ] | 100.7% { 115.4% } | 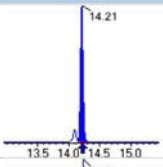 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 334646 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 2115.5 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 106.1% } | 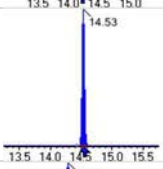 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825069 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2394.9 | N/A | 3.7894 [ 4.0000 ] | 94.7% { 98.5% } | 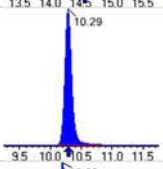 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 752141 | ( 10.80 , N/A ) ( N/A , -0.02 , N/A ) | 1637.7 | N/A | 3.7902 [ 4.0000 ] | 94.8% { 99.5% } | 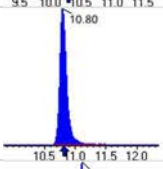 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1307327 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 2301.3 | N/A | 18.2909 [ 20.0000 ] | 91.5% { 97.2% } | 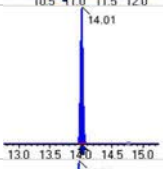 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365219 | ( 14.36 , N/A ) ( N/A , -0.02 , N/A ) | 4099.9 | N/A | 18.8191 [ 20.0000 ] | 94.1% { 103.7% } | 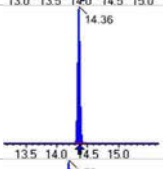 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1068027 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2447.7 | N/A | 7.8467 [ 8.0000 ] | 98.1% { 109.2% } | 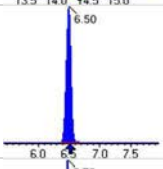 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 628842 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1472.0 | N/A | 1.8893 [ 2.0000 ] | 94.5% { 108.9% } | 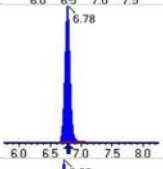 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 572954 | ( 8.82 , N/A ) ( N/A , -0.02 , N/A ) | 739.0 | N/A | 1.8909 [ 2.0000 ] | 94.5% { 106.7% } | 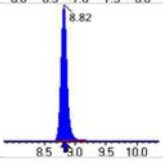 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 18974629<br>( 163.0 / 69.0 ) 488087 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.0) | 70690.9<br>13739.8 | 0.0257<br>94.7<br>94.7 | 107.2343 | N/A | 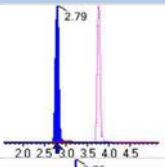 | 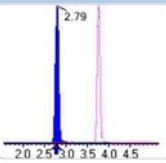 | |
| PFBA | ( 213.0 / 169.0 ) 36143718 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 6528.7 | N/A<br>0.0<br>0.0 | 193.2239 | N/A | 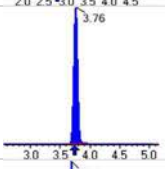 | | |
| PFPeA | ( 263.0 / 219.0 ) 21275073<br>( 263.0 / 69.0 ) 243959 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 7762.8<br>1933.6 | 0.0115<br>96.0<br>96.0 | 106.9360 | N/A | 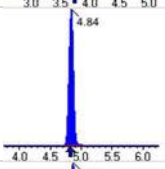 | 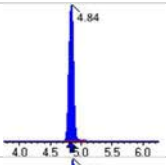 | |
| PFHxA | ( 313.0 / 269.0 ) 13819927<br>( 313.0 / 119.0 ) 1515042 | ( 6.06 , 1.00 ) ( 0.00 , N/A , -0.1) | 2643.2<br>2771.6 | 0.1096<br>94.4<br>94.4 | 54.0335 | N/A | 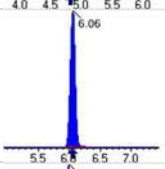 | 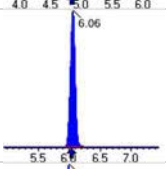 | |
| PFHpA | ( 363.0 / 319.0 ) 16363723<br>( 363.0 / 169.0 ) 4845368 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 2319.6<br>2179.9 | 0.2961<br>97.7<br>97.7 | 54.3504 | N/A | 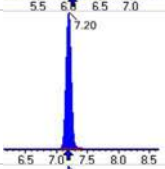 | 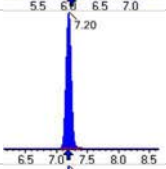 | |
| PFOA | ( 413.0 / 369.0 ) 20511400<br>( 413.0 / 169.0 ) 7143544 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 1200.9<br>1228.6 | 0.3483<br>95.3<br>95.3 | 49.7336 | N/A | 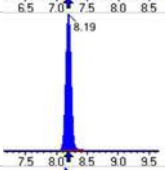 | 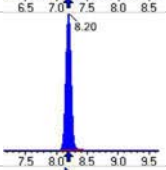 | |
| PFNA | ( 463.0 / 419.0 ) 15160237<br>( 463.0 / 169.0 ) 3759387 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1194.0<br>1234.6 | 0.2480<br>97.1<br>97.1 | 54.2235 | N/A | 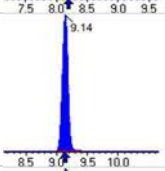 | 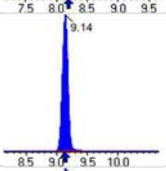 | |
| PFDA | ( 513.0 / 469.0 ) 16549921<br>( 513.0 / 169.0 ) 1960035 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 4733.0<br>3460.2 | 0.1184<br>101.1<br>101.1 | 50.8911 | N/A | 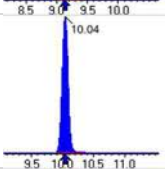 | 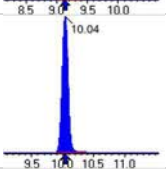 | |
| PFUnA | ( 563.0 / 519.0 ) 17529105<br>( 563.0 / 169.0 ) 2579837 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.1) | 1095.8<br>945.9 | 0.1472<br>103.8<br>103.8 | 52.5694 | N/A | 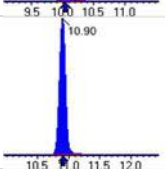 | 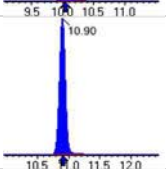 | |
| PFDoA | ( 613.0 / 569.0 ) 19672736<br>( 613.0 / 169.0 ) 2984947 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1817.3<br>1597.9 | 0.1517<br>96.0<br>96.0 | 50.3317 | N/A | 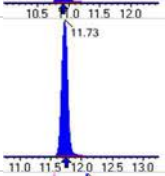 | 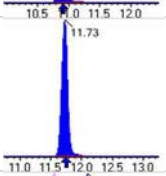 | |
| PFTrDA | ( 663.0 / 619.0 ) 18692956<br>( 663.0 / 169.0 ) 4857776 | ( 12.36 , 1.05 ) ( N/A , -0.01 , 0.0) | 1465.4<br>1395.6 | 0.2599<br>101.0<br>101.0 | 48.8903 | N/A | 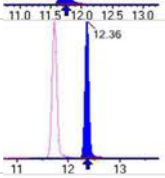 | 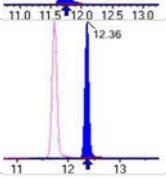 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 14422438<br>( 713.0 / 169.0 ) 3869832 | ( 12.85 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1604.9<br>1603.7 | 0.2683<br>99.4<br>99.4 | 49.6150 | N/A | 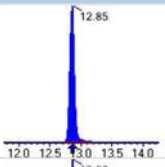 | 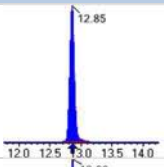 | |
| PFHxDA | ( 813.0 / 769.0 ) 12985593<br>( 813.0 / 169.0 ) 3309620 | ( 13.66 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3023.2<br>2100.0 | 0.2549<br>104.2<br>104.2 | 52.2078 | N/A | 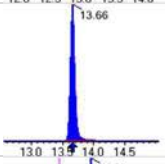 | 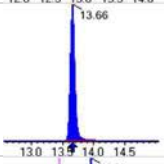 | |
| PFODA | ( 913.0 / 869.0 ) 8428626<br>( 913.0 / 169.0 ) 2699374 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 2761.4<br>2328.9 | 0.3203<br>89.4<br>89.4 | 54.1669 | N/A | 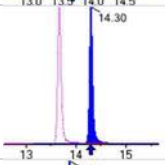 | 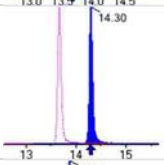 | |
| PFBS | ( 299.0 / 80.0 ) 20178278<br>( 299.0 / 99.0 ) 14705802 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4435.5<br>4419.2 | 0.7288<br>103.1<br>103.1 | 46.4917 | N/A | 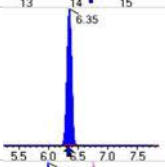 | 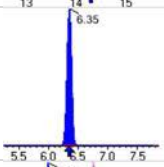 | |
| PFPeS | ( 349.0 / 80.0 ) 41380196<br>( 349.0 / 99.0 ) 14964570 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.1) | 2699.2<br>2609.5 | 0.3616<br>100.6<br>100.6 | 39.6330 | N/A | 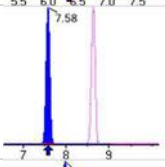 | 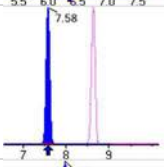 | |
| PFHxS | ( 399.0 / 80.0 ) 55723597<br>( 399.0 / 99.0 ) 18950635 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4944.5<br>6249.7 | 0.3401<br>106.8<br>106.8 | 45.9485 | N/A | 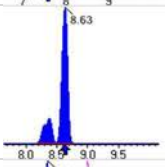 | 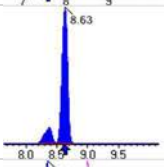 | |
| PFHpS | ( 449.0 / 80.0 ) 48346852<br>( 449.0 / 99.0 ) 13585169 | ( 9.60 , 0.92 )<br>( N/A , 0.00 , 0.0) | 2463.5<br>2621.1 | 0.2810<br>106.2<br>106.2 | 48.9228 | N/A | 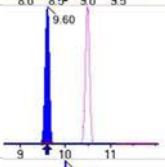 | 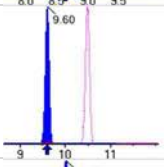 | |
| PFOS | ( 499.0 / 80.0 ) 46166280<br>( 499.0 / 99.0 ) 10682806 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , -0.3) | 3771.6<br>6407.9 | 0.2314<br>99.0<br>99.0 | 48.4641 | N/A | 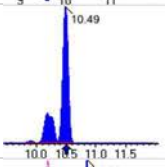 | 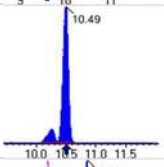 | |
| PFNS | ( 549.0 / 80.0 ) 41110649<br>( 549.0 / 99.0 ) 11520445 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , -0.1) | 2974.0<br>3168.7 | 0.2802<br>102.8<br>102.8 | 46.0934 | N/A | 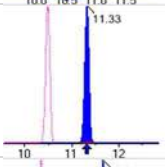 | 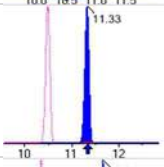 | |
| PFDS | ( 599.0 / 80.0 ) 45339968<br>( 599.0 / 99.0 ) 12673501 | ( 12.04 , 1.15 )<br>( N/A , -0.01 , 0.0) | 3051.7<br>3599.9 | 0.2795<br>102.8<br>102.8 | 41.6321 | N/A | 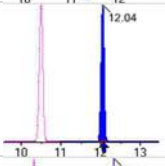 | 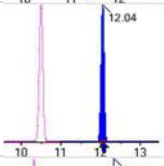 | |
| PFDoS | ( 699.0 / 80.0 ) 39685043<br>( 699.0 / 99.0 ) 9961357 | ( 12.96 , 1.24 )<br>( N/A , -0.01 , 0.0) | 3541.3<br>4746.4 | 0.2510<br>107.5<br>107.5 | 41.3351 | N/A | 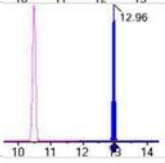 | 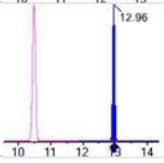 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 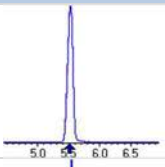 | 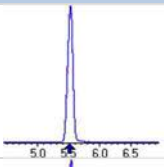 | NR, |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 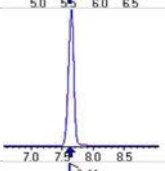 | 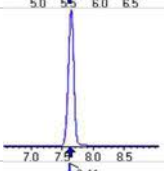 | NR, |
| 8:2FTS | ( 527.0 / 507.0 )<br>41238569<br>( 527.0 / 81.0 )<br>42183724 | ( 9.41 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1165.4<br>1290.5 | 1.0229<br>94.0<br>94.0 | 155.9708 | N/A | 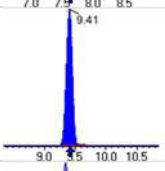 | 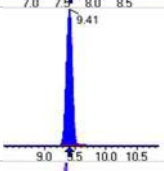 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 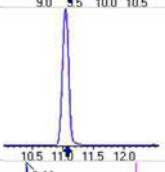 | 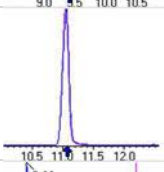 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>38451265<br>( 297.9 / 278.0 )<br>57954 | ( 8.11 , 0.57 )<br>( N/A , 0.00 , 0.0) | 1670.7<br>874.9 | 0.0015<br>110.3<br>110.3 | 45.8105 | N/A | 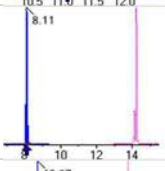 | 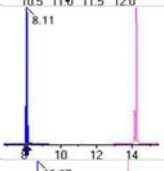 | |
| PFHxSA | ( 397.9 / 78.0 )<br>47457548<br>( 397.9 / 378.0 )<br>219987 | ( 10.97 , 0.75 )<br>( N/A , 0.00 , 0.0) | 1106.1<br>1093.7 | 0.0046<br>113.5<br>113.5 | 48.8276 | N/A | 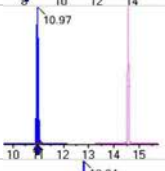 | 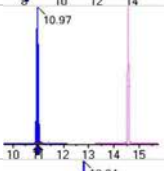 | |
| PFOSA | ( 498.0 / 78.0 )<br>33121164<br>( 498.0 / 478.0 )<br>519111 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2063.1<br>1533.3 | 0.0157<br>111.7<br>111.7 | 48.4514 | N/A | 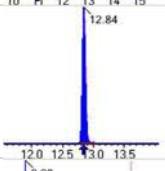 | 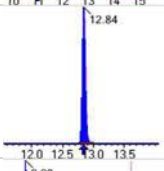 | |
| TFSI | ( 279.7 / 147.0 )<br>89551922<br>( 279.7 / 211.0 )<br>9318714 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.0) | 61.5<br>64.2 | 0.1041<br>123.9<br>123.9 | 49.7502 | N/A | 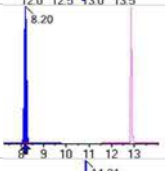 | 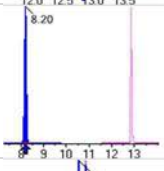 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>31158072<br>( 512.0 / 169.0 )<br>23786332 | ( 14.21 , 1.00 )<br>( -0.01 , N/A , 2.6) | 3423.3<br>1507.4 | 0.7634<br>102.0<br>102.0 | 192.6744 | N/A | 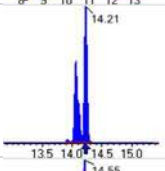 | 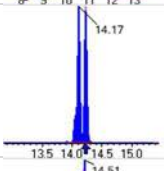 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>36572268<br>( 526.0 / 169.0 )<br>45187617 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.6) | 4357.1<br>3467.4 | 1.2356<br>100.1<br>100.1 | 206.4874 | N/A | 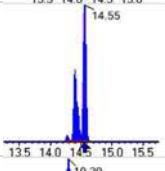 | 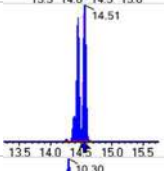 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>9584003<br>( 570.0 / 483.0 )<br>4353591 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , -0.1) | 3124.3<br>1697.0 | 0.4543<br>103.6<br>103.6 | 48.7309 | N/A | 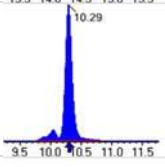 | 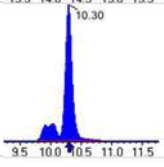 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8573256<br>( 584.0 / 526.0 ) 5089065 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1535.4<br>691.5 | 0.5936<br>96.3<br>96.3 | 52.6411 | N/A | 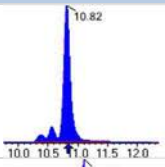 | 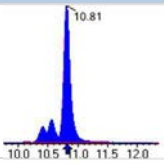 | |
| NMeFOSE | ( 616.0 / 59.0 ) 15619595 | ( 14.04 , 1.00 )<br>( 0.02 , N/A , 0.0) | 6843.3 | N/A<br>0.0<br>0.0 | 212.8361 | N/A | 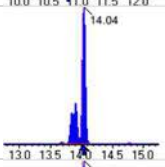 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 12847687 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 8204.0 | N/A<br>0.0<br>0.0 | 208.1601 | N/A | 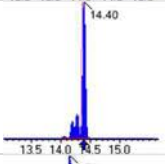 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4124497<br>( 285.0 / 185.0 ) 11215111 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2319.1<br>2629.5 | 2.7191<br>98.3<br>98.3 | 53.1094 | N/A | 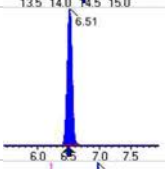 | 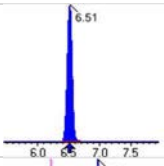 | |
| ADONA | ( 377.0 / 85.0 ) 37268440<br>( 377.0 / 251.0 ) 3924149 | ( 7.58 , 1.16 )<br>( N/A , 0.00 , 0.0) | 1824.1<br>1716.0 | 0.1053<br>103.3<br>103.3 | 41.1334 | N/A | 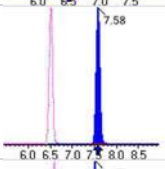 | 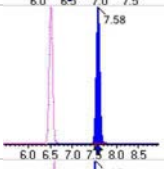 | |
| PFEESA | ( 315.0 / 135.0 ) 17270325<br>( 315.0 / 83.0 ) 9569584 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4689.4<br>2913.5 | 0.5541<br>99.4<br>99.4 | 94.0283 | N/A | 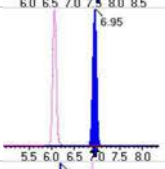 | 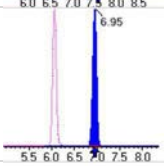 | |
| PFMPA | ( 229.0 / 85.0 ) 7031121 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 11838.0 | N/A<br>0.0<br>0.0 | 111.3690 | N/A | 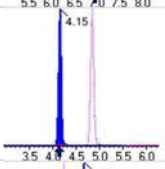 | | |
| PFMBA | ( 279.0 / 85.0 ) 19312765 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 5832.4 | N/A<br>0.0<br>0.0 | 112.5505 | N/A | 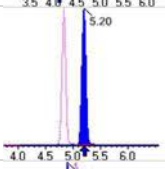 | | |
| NFDHA | ( 295.0 / 201.0 ) 10109374<br>( 295.0 / 85.0 ) 10024417 | ( 5.92 , 0.98 )<br>( N/A , 0.00 , 0.2) | 2773.1<br>3906.7 | 0.9916<br>91.9<br>91.9 | 105.8748 | N/A | 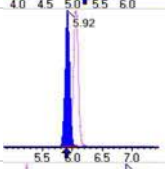 | 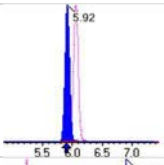 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 46137015<br>( 533.0 / 353.0 ) 15129295 | ( 11.13 , 1.71 )<br>( N/A , -0.01 , 0.0) | 2626.2<br>3001.4 | 0.3279<br>104.8<br>104.8 | 47.1457 | N/A | 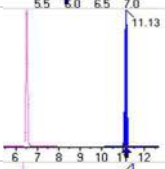 | 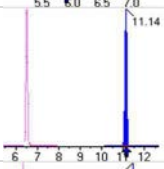 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 34117971<br>( 633.0 / 453.0 ) 11179213 | ( 12.46 , 1.91 )<br>( N/A , -0.01 , 0.0) | 4219.2<br>3394.1 | 0.3277<br>98.7<br>98.7 | 45.3348 | N/A | 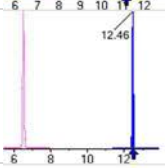 | 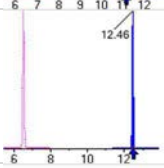 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 28343319<br>( 461.0 / 381.2 ) 10851018 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4228.4<br>5758.6 | 0.3828<br>96.1<br>96.1 | 52.7417 | N/A | 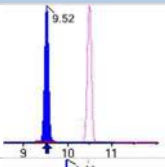 | 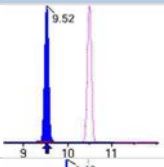 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2927372<br>( 241.0 / 117.0 ) 6626809 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4507.1<br>8408.0 | 2.2637<br>107.4<br>107.4 | 258.6519 | N/A | 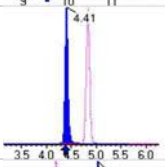 | 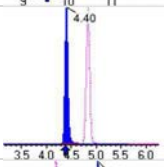 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 14119793<br>( 341.0 / 217.0 ) 20897347 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.1) | 1091.2<br>1008.4 | 1.4800<br>97.4<br>97.4 | 199.0686 | N/A | 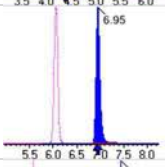 | 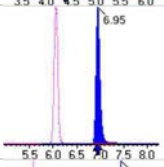 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 25389555<br>( 441.0 / 337.0 ) 22326814 | ( 9.33 , 1.54 )<br>( N/A , -0.01 , 0.1) | 7581.4<br>11370.4 | 0.8794<br>95.9<br>95.9 | 218.1292 | N/A | 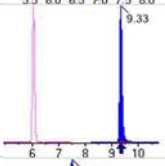 | 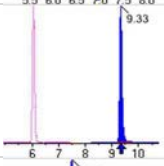 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 16158195<br>( 357.2 / 243.0 ) 1678319 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1736.3<br>1407.1 | 0.1039<br>94.2<br>94.2 | 50.4495 | N/A | 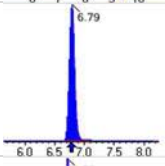 | 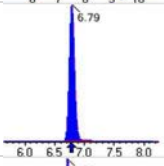 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 12612139<br>( 457.2 / 343.0 ) 508517 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 892.6<br>781.7 | 0.0403<br>97.2<br>97.2 | 53.8903 | N/A | 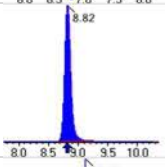 | 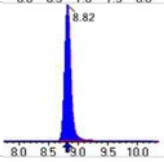 | |
| TDCA | ( 499.0 / 80.0 ) 34553361 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 58261.0 | N/A<br>0.0<br>0.0 | 53.2138 | N/A | 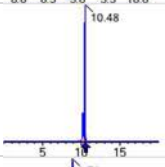 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 167285 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 708.8 | N/A | 0.7016<br>[ 1.0000 ] | 70.2%<br>{ 71.4% } | 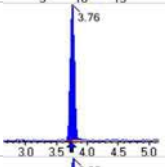 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 130924 | ( 6.06 , N/A )<br>( N/A , 0.00 , N/A ) | 6147.8 | N/A | 1.0321<br>[ 1.0000 ] | 103.2%<br>{ 109.6% } | 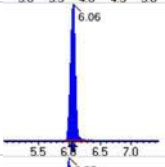 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 365760 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2442.2 | N/A | 0.9252<br>[ 1.0000 ] | 92.5%<br>{ 96.3% } | 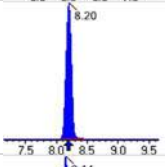 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282978 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 970.5 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 106.3% } | 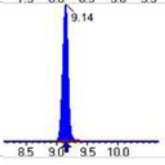 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294951 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 3067.1 | N/A | 1.0100 [ 1.0000 ] | 101.0% { 110.1% } | 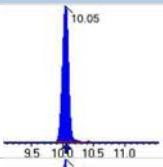 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 936593 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3290.6 | N/A | 0.9869 [ 1.0000 ] | 98.7% { 104.0% } | 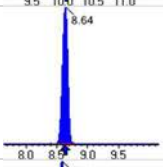 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785932 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2145.3 | N/A | 1.0319 [ 1.0000 ] | 103.2% { 112.2% } | 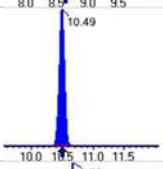 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1501211 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 26047.2 | N/A | 7.8555 [ 8.0000 ] | 98.2% { 71.0% } | 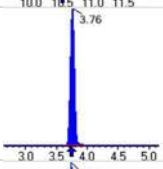 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 787740 | ( 4.84 , N/A ) ( N/A , 0.00 , N/A ) | 4786.2 | N/A | 3.2247 [ 4.0000 ] | 80.6% { 85.5% } | 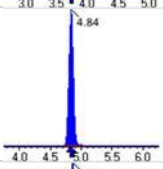 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 532422 | ( 6.06 , N/A ) ( N/A , 0.00 , N/A ) | 6348.1 | N/A | 1.7823 [ 2.0000 ] | 89.1% { 96.2% } | 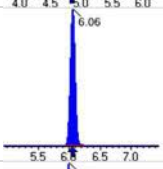 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613632 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 3886.1 | N/A | 1.8466 [ 2.0000 ] | 92.3% { 99.1% } | 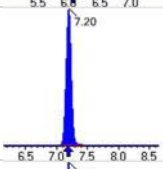 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 772186 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2358.8 | N/A | 1.9704 [ 2.0000 ] | 98.5% { 94.2% } | 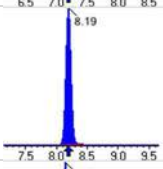 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 278181 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2465.4 | N/A | 1.0026 [ 1.0000 ] | 100.3% { 105.9% } | 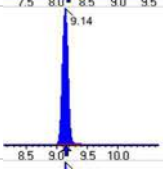 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 318276 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1070.1 | N/A | 0.9629 [ 1.0000 ] | 96.3% { 100.5% } | 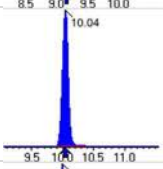 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 360507 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 905.9 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 99.8% } | 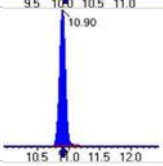 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-CAL8 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388515 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1338.0 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 110.5% } | 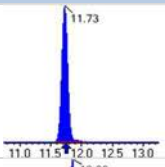 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 310379 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1125.7 | N/A | 0.9203 [ 1.0000 ] | 92.0% { 99.3% } | 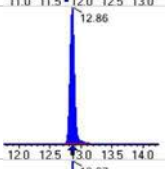 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 521541 | ( 13.67 , N/A ) ( N/A , -0.01 , N/A ) | 1978.3 | N/A | 1.8114 [ 2.0000 ] | 90.6% { 101.1% } | 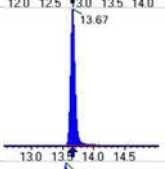 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1671847 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 1059.8 | N/A | 1.9757 [ 2.0000 ] | 98.8% { 104.9% } | 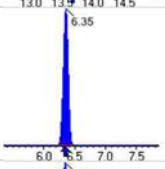 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1364325 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 3793.2 | N/A | 2.0199 [ 2.0000 ] | 101.0% { 106.5% } | 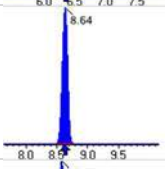 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1649524 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1301.1 | N/A | 1.9466 [ 2.0000 ] | 97.3% { 105.6% } | 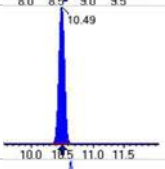 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 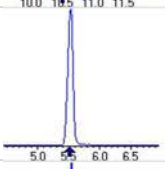 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 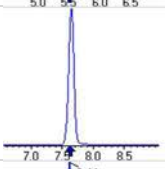 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1113619 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1147.4 | N/A | 3.2497 [ 4.0000 ] | 81.2% { 84.4% } | 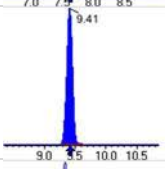 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 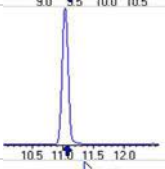 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1367165 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 1785.0 | N/A | 1.8206 [ 2.0000 ] | 91.0% { 102.6% } | 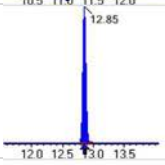 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (8)
Acquired: 2024/03/19 - 14:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 325737 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1453.6 | N/A | 2.0451 [ 2.0000 ] | 102.3% { 117.4% } | 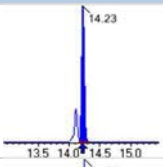  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 316296 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2128.6 | N/A | 1.8518 [ 2.0000 ] | 92.6% { 100.3% } | 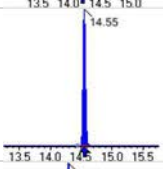  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 824817 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 1731.0 | N/A | 3.7828 [ 4.0000 ] | 94.6% { 98.4% } | 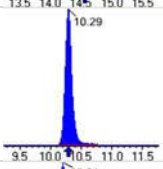  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 665968 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 1789.7 | N/A | 3.3512 [ 4.0000 ] | 83.8% { 88.1% } | 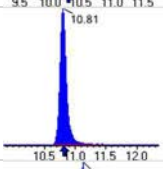  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1338076 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2515.8 | N/A | 18.6944 [ 20.0000 ] | 93.5% { 99.4% } | 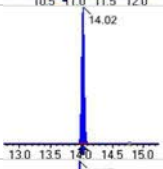  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1389356 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4052.7 | N/A | 19.1244 [ 20.0000 ] | 95.6% { 105.5% } | 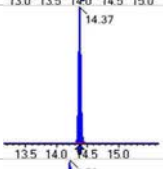  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1053570 | ( 6.52 , N/A ) ( N/A , 0.00 , N/A ) | 2170.3 | N/A | 7.7425 [ 8.0000 ] | 96.8% { 107.7% } | 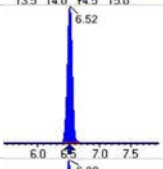  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 602520 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1431.9 | N/A | 1.8842 [ 2.0000 ] | 94.2% { 104.4% } | 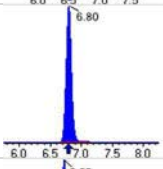  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 573873 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 871.6 | N/A | 1.9713 [ 2.0000 ] | 98.6% { 106.8% } | 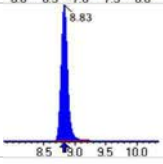  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0110L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.86L | -3.5L | 30.00L |
| PFPeAL | 4.00L | 3.91L | -2.3L | 30.00L |
| PFHxAL | 4.00L | 3.64L | -9.1L | 30.00L |
| PFHpAL | 4.00L | 3.53L | -11.6L | 30.00L |
| PFOAL | 4.00L | 3.36L | -16.0L | 30.00L |
| PFNAL | 4.00L | 3.77L | -5.7L | 30.00L |
| PFDAL | 4.00L | 3.78L | -5.6L | 30.00L |
| PFUnAL | 4.00L | 3.59L | -10.1L | 30.00L |
| PFDoAL | 4.00L | 3.31L | -17.2L | 30.00L |
| PFTrDAL | 4.00L | 3.40L | -15.1L | 30.00L |
| PFTeDAL | 4.00L | 4.12L | 2.9L | 30.00L |
| PFHxDAL | 4.00L | 3.10L | -22.5L | 30.00L |
| PFODAL | 4.00L | 3.04L | -24.1L | 30.00L |
| PFBSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFPeSL | 4.00L | 4.10L | 2.4L | 30.00L |
| PFHxSL | 4.00L | 3.93L | -1.8L | 30.00L |
| PFHpSL | 4.00L | 3.70L | -7.4L | 30.00L |
| PFOSL | 4.00L | 3.53L | -11.8L | 30.00L |
| PFNSL | 4.00L | 3.75L | -6.3L | 30.00L |
| PFDSL | 4.00L | 3.87L | -3.3L | 30.00L |
| PFDoSL | 4.00L | 3.66L | -8.4L | 30.00L |
| 4:2FTSL | 4.00L | 4.00L | -0.01L | 30.00L |
| 6:2FTSL | 4.00L | 3.91L | -2.2L | 30.00L |
| 8:2FTSL | 4.00L | 4.28L | 7.1L | 30.00L |
| 10:2FTSL | 3.86L | 3.98L | 3.1L | 30.00L |
| PFOSAL | 4.00L | 3.81L | -4.7L | 30.00L |
| NMeFOSAL | 4.00L | 3.34L | -16.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0110L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.59L | -10.4L | 30.00L |
| NMeFOSAAL | 4.00L | 3.74L | -6.4L | 30.00L |
| NEtFOSAAL | 4.00L | 3.49L | -12.8L | 30.00L |
| NMeFOSEL | 4.00L | 4.03L | 0.8L | 30.00L |
| NEtFOSEL | 4.00L | 4.57L | 14.3L | 30.00L |
| HFPO-DAL | 4.00L | 3.93L | -1.7L | 30.00L |
| ADONAL | 4.00L | 3.63L | -9.3L | 30.00L |
| PFEESAL | 4.00L | 3.30L | -17.6L | 30.00L |
| PFMPAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFMBAL | 4.00L | 3.42L | -14.4L | 30.00L |
| NFDHAL | 4.00L | 3.55L | -11.3L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.87L | -3.4L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 4.00L | 0.1L | 30.00L |
| 3:3FTCAL | 4.00L | 3.60L | -10.0L | 30.00L |
| 5:3FTCAL | 4.00L | 3.95L | -1.3L | 30.00L |
| 7:3FTCAL | 4.00L | 3.72L | -7.0L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.63L | 7.9L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.53L | 13.3L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.6L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.23L | 11.5L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.11L | 11.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.07L | 7.4L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.08L | 8.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.09L | 9.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.28L | 14.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.44L | 21.9L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.28L | 13.8L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0110L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2412010L

**Laboratory ID:C**SD00991-SCV1L

**Sequence:** SD00991L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.19L | 9.3L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 4.76L | 19.1L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.88L | 22.1L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 4.86L | 21.6L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 10.3L | 29.1L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.16L | 7.8L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.17L | 8.3L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.19L | 9.5L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.59L | 14.9L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D7-NMEFOSEL | 20.0L | 22.7L | 13.6L | 30.00L |
| D9-NETFOSEL | 20.0L | 22.3L | 11.7L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.74L | 9.3L | 30.00L |

* Values outside of QC limitsL

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A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 962397<br>( 163.0 / 69.0 ) 25274 | ( 2.80 , 0.74 ) ( N/A , 0.01 , 0.1) | 6782.6<br>1223.6 | 0.0263<br>96.7<br>96.7 | 3.3415 | N/A | 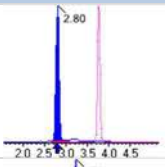 | 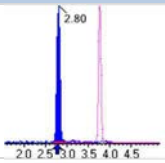 | |
| PFBA | ( 213.0 / 169.0 ) 1175661 | ( 3.76 , 1.00 ) ( 0.00 , N/A , 0.0) | 937.3 | N/A<br>0.0<br>0.0 | 3.8614 | N/A | 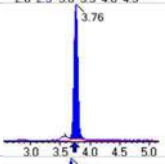 | | |
| PFPeA | ( 263.0 / 219.0 ) 978897<br>( 263.0 / 69.0 ) 10248 | ( 4.84 , 1.00 ) ( 0.00 , N/A , 0.0) | 3495.1<br>136.4 | 0.0105<br>87.7<br>87.7 | 3.9064 | N/A | 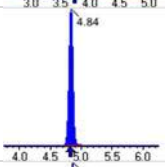 | 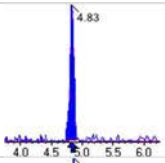 | |
| PFHxA | ( 313.0 / 269.0 ) 1080521<br>( 313.0 / 119.0 ) 119388 | ( 6.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.9<br>990.2 | 0.1105<br>95.2<br>95.2 | 3.6367 | N/A | 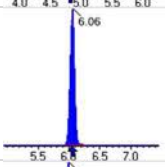 | 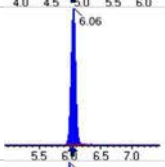 | |
| PFHpA | ( 363.0 / 319.0 ) 1143038<br>( 363.0 / 169.0 ) 356252 | ( 7.19 , 1.00 ) ( 0.00 , N/A , 0.1) | 1509.0<br>1329.3 | 0.3117<br>102.8<br>102.8 | 3.5350 | N/A | 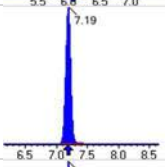 | 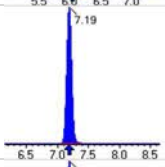 | |
| PFOA | ( 413.0 / 369.0 ) 1461316<br>( 413.0 / 169.0 ) 523450 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 588.7<br>754.1 | 0.3582<br>98.0<br>98.0 | 3.3594 | N/A | 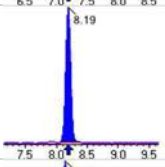 | 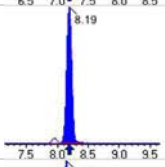 | |
| PFNA | ( 463.0 / 419.0 ) 1118591<br>( 463.0 / 169.0 ) 289643 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.2<br>983.5 | 0.2589<br>101.4<br>101.4 | 3.7732 | N/A | 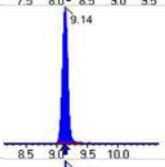 | 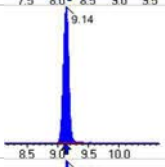 | |
| PFDA | ( 513.0 / 469.0 ) 1264134<br>( 513.0 / 169.0 ) 157234 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2953.9<br>1885.8 | 0.1244<br>106.1<br>106.1 | 3.7761 | N/A | 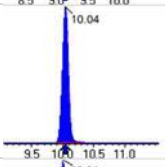 | 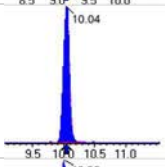 | |
| PFUnA | ( 563.0 / 519.0 ) 1294321<br>( 563.0 / 169.0 ) 184407 | ( 10.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 893.4<br>429.0 | 0.1425<br>100.5<br>100.5 | 3.5942 | N/A | 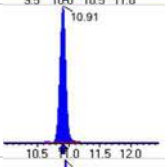 | 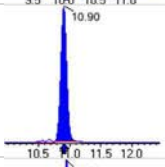 | |
| PFDoA | ( 613.0 / 569.0 ) 1365550<br>( 613.0 / 169.0 ) 224325 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1128.0<br>583.1 | 0.1643<br>103.9<br>103.9 | 3.3107 | N/A | 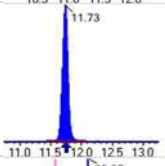 | 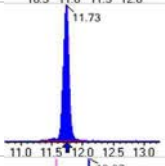 | |
| PFTrDA | ( 663.0 / 619.0 ) 1370908<br>( 663.0 / 169.0 ) 363516 | ( 12.37 , 1.05 ) ( N/A , 0.00 , 0.0) | 1167.0<br>776.2 | 0.2652<br>103.0<br>103.0 | 3.3977 | N/A | 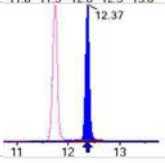 | 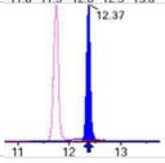 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1309098<br>( 713.0 / 169.0 ) 347062 | ( 12.86 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1509.2<br>784.5 | 0.2651<br>98.2<br>98.2 | 4.1165 | N/A | 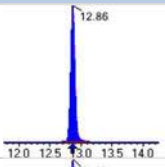 | 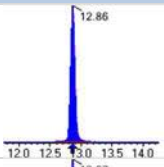 | |
| PFHxDA | ( 813.0 / 769.0 ) 897399<br>( 813.0 / 169.0 ) 229591 | ( 13.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1782.4<br>984.2 | 0.2558<br>104.6<br>104.6 | 3.0982 | N/A | 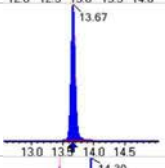 | 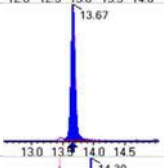 | |
| PFODA | ( 913.0 / 869.0 ) 550450<br>( 913.0 / 169.0 ) 180510 | ( 14.30 , 1.05 )<br>( N/A , 0.00 , 0.1) | 1511.9<br>649.4 | 0.3279<br>91.5<br>91.5 | 3.0377 | N/A | 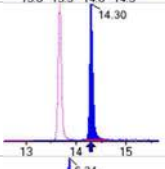 | 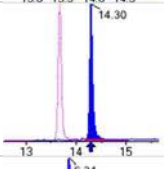 | |
| PFBS | ( 299.0 / 80.0 ) 1756089<br>( 299.0 / 99.0 ) 1281223 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3552.9<br>3591.0 | 0.7296<br>103.2<br>103.2 | 3.6666 | N/A | 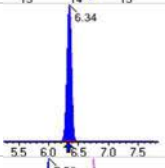 | 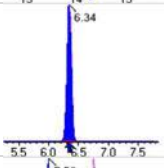 | |
| PFPeS | ( 349.0 / 80.0 ) 4305626<br>( 349.0 / 99.0 ) 1490386 | ( 7.58 , 0.88 )<br>( N/A , -0.01 , -0.1) | 2601.1<br>2414.4 | 0.3461<br>96.3<br>96.3 | 4.0953 | N/A | 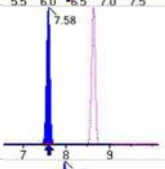 | 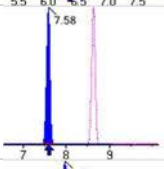 | |
| PFHxS | ( 399.0 / 80.0 ) 4796231<br>( 399.0 / 99.0 ) 1513608 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3672.2<br>5896.7 | 0.3156<br>99.1<br>99.1 | 3.9275 | N/A | 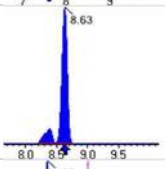 | 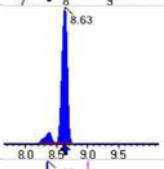 | |
| PFHpS | ( 449.0 / 80.0 ) 3732941<br>( 449.0 / 99.0 ) 1001282 | ( 9.60 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2007.8<br>1891.4 | 0.2682<br>101.4<br>101.4 | 3.7048 | N/A | 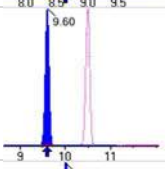 | 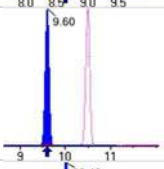 | |
| PFOS | ( 499.0 / 80.0 ) 3424865<br>( 499.0 / 99.0 ) 734477 | ( 10.49 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1720.3<br>3896.8 | 0.2145<br>91.8<br>91.8 | 3.5262 | N/A | 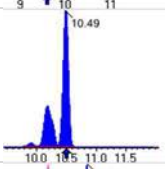 | 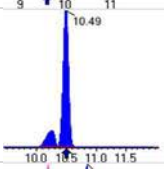 | |
| PFNS | ( 549.0 / 80.0 ) 3407348<br>( 549.0 / 99.0 ) 929910 | ( 11.33 , 1.08 )<br>( N/A , -0.01 , 0.0) | 2946.3<br>1937.3 | 0.2729<br>100.1<br>100.1 | 3.7468 | N/A | 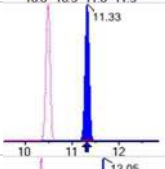 | 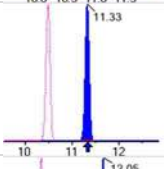 | |
| PFDS | ( 599.0 / 80.0 ) 4296316<br>( 599.0 / 99.0 ) 1123221 | ( 12.05 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3304.8<br>2395.7 | 0.2614<br>96.2<br>96.2 | 3.8691 | N/A | 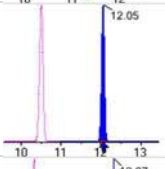 | 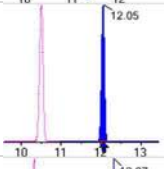 | |
| PFDoS | ( 699.0 / 80.0 ) 3586345<br>( 699.0 / 99.0 ) 846775 | ( 12.97 , 1.24 )<br>( N/A , 0.00 , 0.0) | 3630.7<br>2702.9 | 0.2361<br>101.1<br>101.1 | 3.6636 | N/A | 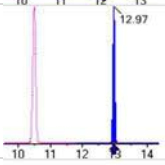 | 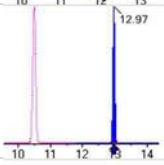 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1631620<br>( 327.0 / 81.0 ) 1506467 | ( 5.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 4752.9<br>2173.4 | 0.9233<br>105.8<br>105.8 | 3.9996 | N/A | 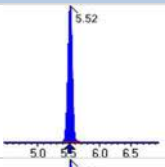 | 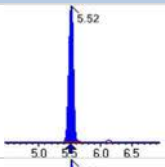 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1545553<br>( 427.0 / 81.0 ) 1968397 | ( 7.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 3426.6<br>2929.0 | 1.2736<br>101.6<br>101.6 | 3.9140 | N/A | 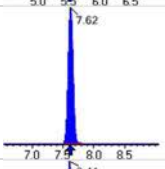 | 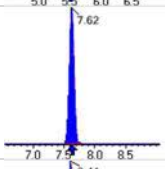 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1515669<br>( 527.0 / 81.0 ) 1596380 | ( 9.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 1461.7<br>1647.7 | 1.0533<br>96.8<br>96.8 | 4.2844 | N/A | 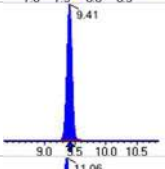 | 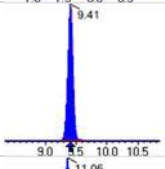 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1267274<br>( 627.0 / 81.0 ) 1749805 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 1302.1<br>1148.2 | 1.3808<br>95.9<br>95.9 | 3.9787 | N/A | 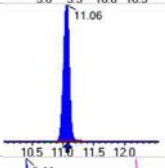 | 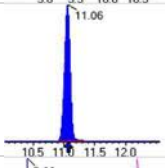 | |
| PFBSA | ( 297.9 / 78.0 ) 3621025<br>( 297.9 / 278.0 ) 4711 | ( 8.11 , 0.57 ) ( N/A , 0.00 , 0.2) | 1692.7<br>159.7 | 0.0013<br>95.2<br>95.2 | 4.4829 | N/A | 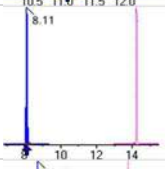 | 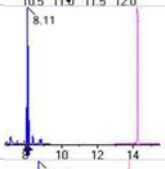 | |
| PFHxSA | ( 397.9 / 78.0 ) 4011801<br>( 397.9 / 378.0 ) 16835 | ( 10.98 , 0.75 ) ( N/A , 0.00 , 0.0) | 854.3<br>330.5 | 0.0042<br>102.7<br>102.7 | 3.8415 | N/A | 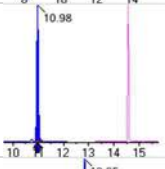 | 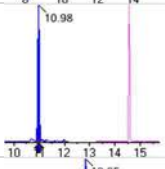 | |
| PFOSA | ( 498.0 / 78.0 ) 2805456<br>( 498.0 / 478.0 ) 40688 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.2) | 937.8<br>497.9 | 0.0145<br>103.4<br>103.4 | 3.8140 | N/A | 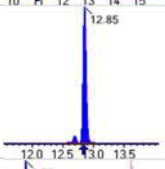 | 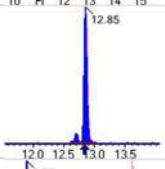 | MI5 DG 2024-03-19 |
| TFSI | ( 279.7 / 147.0 ) 7301953<br>( 279.7 / 211.0 ) 635631 | ( 8.20 , 0.64 ) ( N/A , -0.01 , 0.0) | 52.1<br>66.4 | 0.0870<br>103.6<br>103.6 | 3.7699 | N/A | 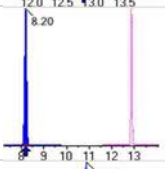 | 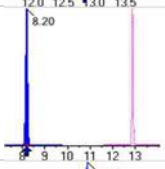 | |
| NMeFOSA | ( 512.0 / 219.0 ) 519804<br>( 512.0 / 169.0 ) 328008 | ( 14.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 5814.7<br>2023.3 | 0.6310<br>84.3<br>84.3 | 3.3402 | N/A | 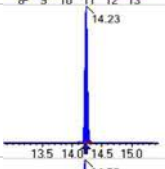 | 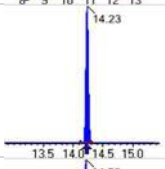 | |
| NEtFOSA | ( 526.0 / 219.0 ) 682268<br>( 526.0 / 169.0 ) 720469 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 0.0) | 6107.0<br>4732.1 | 1.0560<br>85.5<br>85.5 | 3.5850 | N/A | 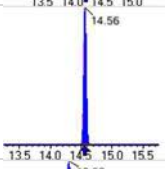 | 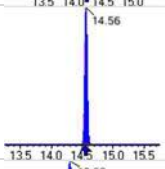 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 812540<br>( 570.0 / 483.0 ) 375737 | ( 10.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 2801.5<br>1944.1 | 0.4624<br>105.5<br>105.5 | 3.7449 | N/A | 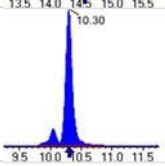 | 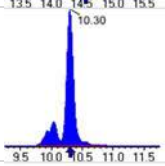 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 733069<br>( 584.0 / 526.0 ) 451026 | ( 10.83 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1461.0<br>814.2 | 0.6153<br>99.8<br>99.8 | 3.4878 | N/A | 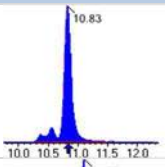 | 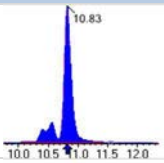 | |
| NMeFOSE | ( 616.0 / 59.0 ) 326625 | ( 14.05 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2612.6 | N/A<br>0.0<br>0.0 | 4.0313 | N/A | 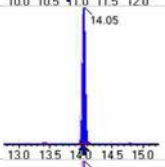 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 299443 | ( 14.40 , 1.00 )<br>( 0.02 , N/A , 0.0) | 4202.9 | N/A<br>0.0<br>0.0 | 4.5715 | N/A | 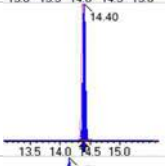 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 308973<br>( 285.0 / 185.0 ) 797962 | ( 6.51 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1326.1<br>2486.0 | 2.5826<br>93.4<br>93.4 | 3.9307 | N/A | 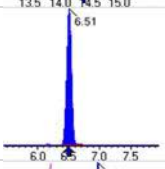 | 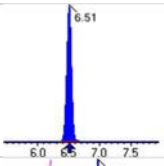 | |
| ADONA | ( 377.0 / 85.0 ) 3325389<br>( 377.0 / 251.0 ) 344342 | ( 7.58 , 1.16 )<br>( N/A , -0.01 , 0.0) | 1872.8<br>1723.5 | 0.1035<br>101.6<br>101.6 | 3.6262 | N/A | 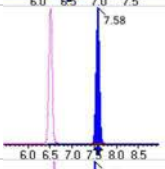 | 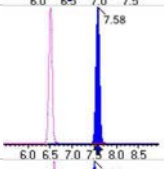 | |
| PFEESA | ( 315.0 / 135.0 ) 703088<br>( 315.0 / 83.0 ) 404699 | ( 6.94 , 1.15 )<br>( N/A , -0.01 , 0.1) | 2387.2<br>769.5 | 0.5756<br>103.3<br>103.3 | 3.2953 | N/A | 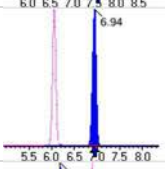 | 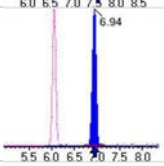 | |
| PFMPA | ( 229.0 / 85.0 ) 296369 | ( 4.15 , 0.86 )<br>( N/A , 0.00 , 0.0) | 3321.0 | N/A<br>0.0<br>0.0 | 3.7270 | N/A | 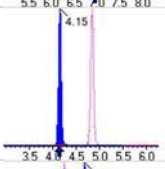 | | |
| PFMBA | ( 279.0 / 85.0 ) 739601 | ( 5.20 , 1.08 )<br>( N/A , -0.01 , 0.0) | 3653.3 | N/A<br>0.0<br>0.0 | 3.4221 | N/A | 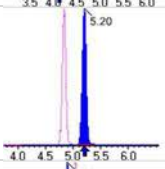 | | |
| NFDHA | ( 295.0 / 201.0 ) 393340<br>( 295.0 / 85.0 ) 422944 | ( 5.91 , 0.98 )<br>( N/A , -0.01 , 0.1) | 2490.4<br>1874.9 | 1.0753<br>99.7<br>99.7 | 3.5461 | N/A | 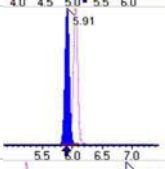 | 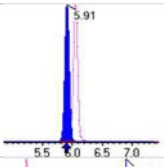 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3829034<br>( 533.0 / 353.0 ) 1211420 | ( 11.14 , 1.71 )<br>( N/A , 0.00 , 0.0) | 3048.6<br>2273.9 | 0.3164<br>101.1<br>101.1 | 3.8658 | N/A | 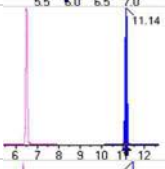 | 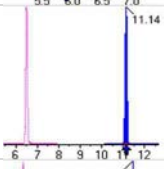 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3049840<br>( 633.0 / 453.0 ) 1009005 | ( 12.47 , 1.92 )<br>( N/A , 0.00 , 0.1) | 4050.8<br>2878.1 | 0.3308<br>99.6<br>99.6 | 4.0039 | N/A | 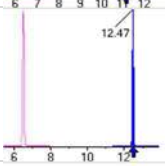 | 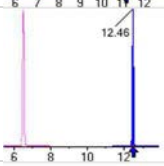 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1920262<br>( 461.0 / 381.2 ) 718117 | ( 9.52 , 0.91 )<br>( N/A , -0.01 , 0.0) | 2117.4<br>2583.3 | 0.3740<br>93.8<br>93.8 | 3.5045 | N/A | 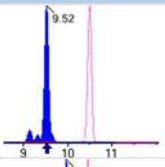 | 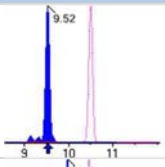 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 51311<br>( 241.0 / 117.0 ) 125661 | ( 4.40 , 0.91 )<br>( N/A , 0.00 , 0.0) | 1068.2<br>1017.9 | 2.4490<br>116.2<br>116.2 | 3.5994 | N/A | 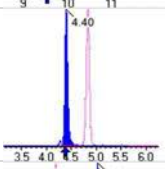 | 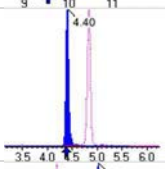 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 325323<br>( 341.0 / 217.0 ) 467661 | ( 6.95 , 1.15 )<br>( N/A , 0.00 , 0.2) | 983.3<br>713.5 | 1.4375<br>94.6<br>94.6 | 3.9483 | N/A | 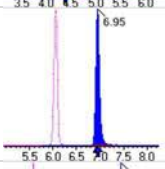 | 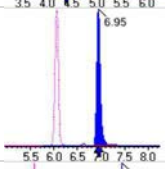 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 503088<br>( 441.0 / 337.0 ) 447992 | ( 9.33 , 1.54 )<br>( N/A , 0.00 , 0.1) | 2199.0<br>3436.5 | 0.8905<br>97.1<br>97.1 | 3.7207 | N/A | 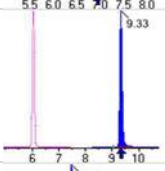 | 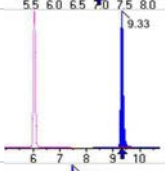 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1368915<br>( 357.2 / 243.0 ) 138696 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1462.3<br>919.1 | 0.1013<br>91.9<br>91.9 | 3.7993 | N/A | 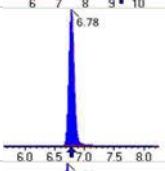 | 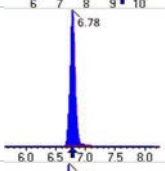 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1040258<br>( 457.2 / 343.0 ) 44906 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.0) | 751.1<br>400.9 | 0.0432<br>104.1<br>104.1 | 4.0322 | N/A | 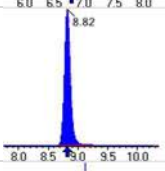 | 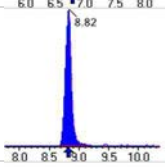 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 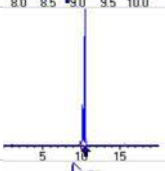 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 247846 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1075.6 | N/A | 1.0395<br>[ 1.0000 ] | 103.9%<br>{ 105.8% } | 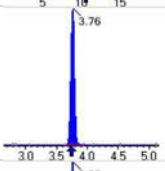 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117348 | ( 6.06 , N/A )<br>( N/A , -0.01 , N/A ) | 16220.9 | N/A | 0.9251<br>[ 1.0000 ] | 92.5%<br>{ 98.2% } | 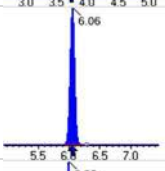 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370834 | ( 8.20 , N/A )<br>( N/A , -0.01 , N/A ) | 3643.5 | N/A | 0.9381<br>[ 1.0000 ] | 93.8%<br>{ 97.6% } | 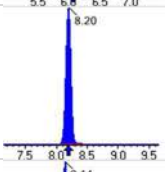 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270783 | ( 9.14 , N/A )<br>( N/A , -0.01 , N/A ) | 892.5 | N/A | 0.9521<br>[ 1.0000 ] | 95.2%<br>{ 101.7% } | 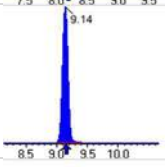 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272326 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 13544.9 | N/A | 0.9325 [ 1.0000 ] | 93.3% { 101.7% } | 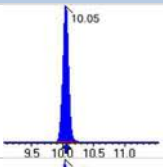 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 837221 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4279.8 | N/A | 0.8822 [ 1.0000 ] | 88.2% { 93.0% } | 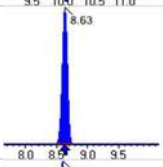 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713825 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2190.3 | N/A | 0.9372 [ 1.0000 ] | 93.7% { 101.9% } | 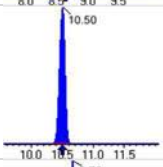 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2443491 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 41170.2 | N/A | 8.6301 [ 8.0000 ] | 107.9% { 115.5% } | 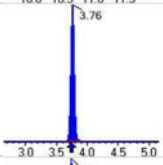 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 992188 | ( 4.84 , N/A ) ( N/A , -0.01 , N/A ) | 5611.5 | N/A | 4.5315 [ 4.0000 ] | 113.3% { 107.6% } | 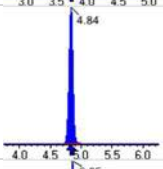 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 618494 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 6938.9 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 111.8% } | 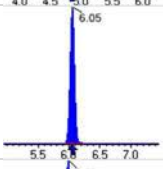 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 659031 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4583.8 | N/A | 2.2127 [ 2.0000 ] | 110.6% { 106.4% } | 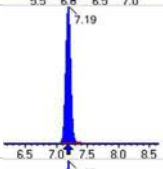 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 885699 | ( 8.19 , N/A ) ( N/A , 0.00 , N/A ) | 2803.9 | N/A | 2.2291 [ 2.0000 ] | 111.5% { 108.0% } | 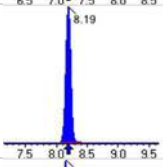 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 294966 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 2846.1 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 112.3% } | 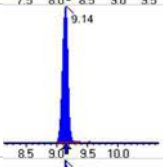 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 327639 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1335.9 | N/A | 1.0736 [ 1.0000 ] | 107.4% { 103.5% } | 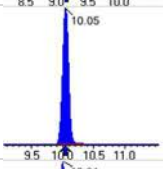 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389334 | ( 10.91 , N/A ) ( N/A , -0.01 , N/A ) | 1101.6 | N/A | 1.0844 [ 1.0000 ] | 108.4% { 107.7% } | 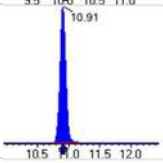 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-SCV1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 409989 | ( 11.74 , N/A ) ( N/A , 0.00 , N/A ) | 1223.9 | N/A | 1.1213 [ 1.0000 ] | 112.1% { 116.6% } | 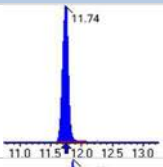  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 339554 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 1486.2 | N/A | 1.0905 [ 1.0000 ] | 109.0% { 108.7% } | 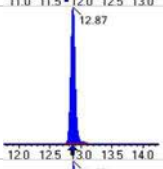  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607345 | ( 13.67 , N/A ) ( N/A , 0.00 , N/A ) | 2904.6 | N/A | 2.2847 [ 2.0000 ] | 114.2% { 117.7% } | 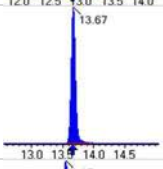  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1844891 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 1003.0 | N/A | 2.4390 [ 2.0000 ] | 121.9% { 115.8% } | 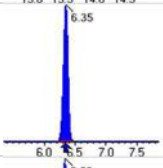  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373837 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4235.8 | N/A | 2.2754 [ 2.0000 ] | 113.8% { 107.3% } | 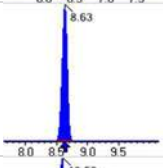  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1681874 | ( 10.50 , N/A ) ( N/A , -0.01 , N/A ) | 1417.8 | N/A | 2.1852 [ 2.0000 ] | 109.3% { 107.6% } | 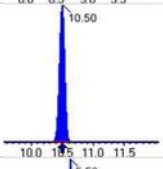  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 621764 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 98.3 | N/A | 4.7641 [ 4.0000 ] | 119.1% { 118.4% } | 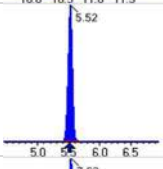  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1907472 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 3543.7 | N/A | 4.8837 [ 4.0000 ] | 122.1% { 112.2% } | 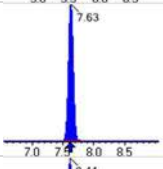  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490025 | ( 9.41 , N/A ) ( N/A , 0.00 , N/A ) | 1234.3 | N/A | 4.8642 [ 4.0000 ] | 121.6% { 112.9% } | 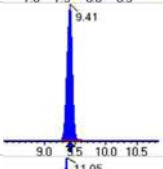  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3305966 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1721.4 | N/A | 10.3266 [ 8.0000 ] | 129.1% { 127.3% } | 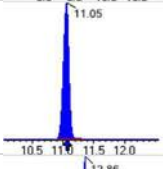  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1471109 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 1781.5 | N/A | 2.1569 [ 2.0000 ] | 107.8% { 110.3% } | 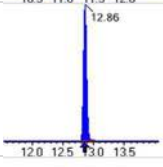  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (10)
Acquired: 2024/03/19 - 15:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 313468 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 2395.1 | N/A | 2.1669 [ 2.0000 ] | 108.3% { 113.0% } | 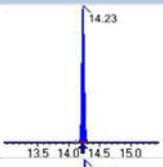  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 339856 | ( 14.55 , N/A ) ( N/A , 0.01 , N/A ) | 2214.0 | N/A | 2.1907 [ 2.0000 ] | 109.5% { 107.7% } | 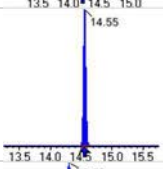  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 909945 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2882.7 | N/A | 4.5948 [ 4.0000 ] | 114.9% { 108.6% } | 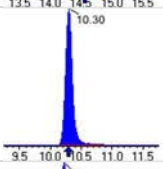  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 859454 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1808.0 | N/A | 4.7617 [ 4.0000 ] | 119.0% { 113.7% } | 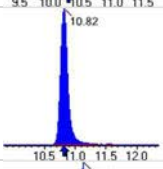  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1477259 | ( 14.03 , N/A ) ( N/A , 0.01 , N/A ) | 2309.5 | N/A | 22.7237 [ 20.0000 ] | 113.6% { 109.8% } | 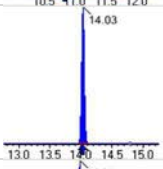  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1474480 | ( 14.38 , N/A ) ( N/A , 0.00 , N/A ) | 3886.4 | N/A | 22.3464 [ 20.0000 ] | 111.7% { 112.0% } | 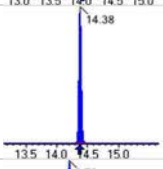  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1066376 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2035.6 | N/A | 8.7432 [ 8.0000 ] | 109.3% { 109.0% } | 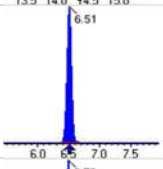  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677811 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1143.2 | N/A | 2.2957 [ 2.0000 ] | 114.8% { 117.4% } | 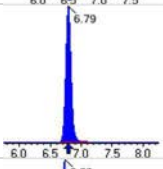  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 632603 | ( 8.83 , N/A ) ( N/A , -0.01 , N/A ) | 843.1 | N/A | 2.3536 [ 2.0000 ] | 117.7% { 117.8% } | 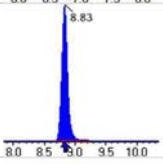  | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0110L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01019-LCV1L

**Sequence:W**SD01019L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.371L | -7.2L | 30.00L |
| PFPeAL | 0.200L | 0.223L | 11.5L | 30.00L |
| PFHxAL | 0.100L | 0.0929L | -7.1L | 30.00L |
| PFHpAL | 0.100L | 0.0961L | -3.9L | 30.00L |
| PFOAL | 0.100L | 0.0988L | -1.2L | 30.00L |
| PFNAL | 0.100L | 0.0950L | -5.0L | 30.00L |
| PFDAL | 0.100L | 0.111L | 11.1L | 30.00L |
| PFUnAL | 0.100L | 0.0978L | -2.2L | 30.00L |
| PFDoAL | 0.100L | 0.0949L | -5.1L | 30.00L |
| PFTrDAL | 0.100L | 0.0948L | -5.2L | 30.00L |
| PFTeDAL | 0.100L | 0.0934L | -6.6L | 30.00L |
| PFHxDAL | 0.100L | 0.101L | 1.1L | 30.00L |
| PFODAL | 0.100L | 0.0842L | -15.8L | 30.00L |
| PFBSL | 0.0885L | 0.0844L | -4.7L | 30.00L |
| PFPeSL | 0.0940L | 0.0878L | -6.6L | 30.00L |
| PFHxSL | 0.0915L | 0.0896L | -2.0L | 30.00L |
| PFHpSL | 0.0955L | 0.0855L | -10.5L | 30.00L |
| PFOSL | 0.0930L | 0.0913L | -1.8L | 30.00L |
| PFNSL | 0.0960L | 0.0946L | -1.5L | 30.00L |
| PFDSL | 0.0965L | 0.0901L | -6.6L | 30.00L |
| PFDoSL | 0.0970L | 0.0939L | -3.2L | 30.00L |
| 4:2FTSL | 0.375L | 0.379L | 1.1L | 30.00L |
| 6:2FTSL | 0.380L | 0.361L | -5.0L | 30.00L |
| 8:2FTSL | 0.384L | 0.378L | -1.7L | 30.00L |
| 10:2FTSL | 0.386L | 0.417L | 7.9L | 30.00L |
| PFOSAL | 0.100L | 0.0981L | -1.9L | 30.00L |
| NMeFOSAL | 0.400L | 0.407L | 1.6L | 30.00L |
| NEtFOSAL | 0.400L | 0.376L | -6.1L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0110L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2412010L

**Laboratory ID:W**SD01019-LCV1L

**Sequence:W**SD01019L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0949L | -5.1L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0910L | -9.0L | 30.00L |
| NMeFOSEL | 0.400L | 0.453L | 13.2L | 30.00L |
| NEtFOSEL | 0.400L | 0.416L | 4.0L | 30.00L |
| HFPO-DAL | 0.100L | 0.100L | 0.4L | 30.00L |
| ADONAL | 0.0945L | 0.0888L | -6.0L | 30.00L |
| PFEESAL | 0.178L | 0.158L | -11.2L | 30.00L |
| PFMPAL | 0.200L | 0.193L | -3.3L | 30.00L |
| PFMBAL | 0.200L | 0.165L | -17.3L | 30.00L |
| NFDHAL | 0.200L | 0.176L | -12.2L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0852L | -8.9L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0852L | -9.8L | 30.00L |
| 3:3FTCAL | 0.400L | 0.390L | -2.6L | 30.00L |
| 5:3FTCAL | 0.400L | 0.413L | 3.3L | 30.00L |
| 7:3FTCAL | 0.400L | 0.383L | -4.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (2)
Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 58987<br>( 163.0 / 69.0 ) 1272 | ( 2.80 , 0.75 )<br>( N/A , 0.00 , 0.5) | 388.8<br>63.3 | 0.0216<br>79.4<br>79.8 | 0.1889<br>[ 0.2000 ] | 94.5% | 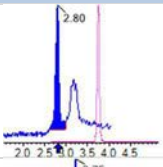 | 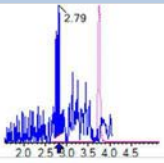 | |
| PFBA | ( 213.0 / 169.0 ) 122578 | ( 3.75 , 1.00 )<br>( 0.00 , N/A , 0.0) | 52.9 | N/A<br>0.0<br>0.0 | 0.3713<br>[ 0.4000 ] | 92.8% | 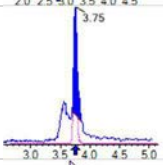 | | MI1 DG 2024-03-21 |
| PFPeA | ( 263.0 / 219.0 ) 61462<br>( 263.0 / 69.0 ) 739 | ( 4.82 , 1.00 )<br>( 0.00 , N/A , -0.2) | 410.4<br>17.7 | 0.0120<br>100.6<br>93.4 | 0.2230<br>[ 0.2000 ] | 111.5% | 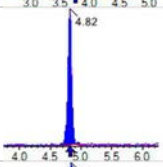 | 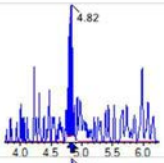 | |
| PFHxA | ( 313.0 / 269.0 ) 28954<br>( 313.0 / 119.0 ) 4139 | ( 6.04 , 1.00 )<br>( 0.00 , N/A , -0.1) | 174.5<br>87.4 | 0.1430<br>123.1<br>128.7 | 0.0929<br>[ 0.1000 ] | 92.9% | 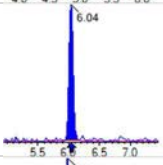 | 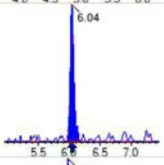 | |
| PFHpA | ( 363.0 / 319.0 ) 32373<br>( 363.0 / 169.0 ) 10440 | ( 7.18 , 1.00 )<br>( 0.00 , N/A , 0.1) | 279.0<br>159.9 | 0.3225<br>106.4<br>110.0 | 0.0961<br>[ 0.1000 ] | 96.1% | 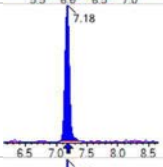 | 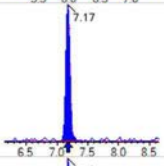 | |
| PFOA | ( 413.0 / 369.0 ) 56222<br>( 413.0 / 169.0 ) 20961 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , -0.1) | 75.1<br>122.1 | 0.3728<br>102.0<br>108.7 | 0.0988<br>[ 0.1000 ] | 98.8% | 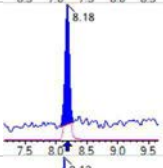 | 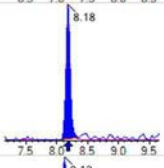 | |
| PFNA | ( 463.0 / 419.0 ) 28913<br>( 463.0 / 169.0 ) 6931 | ( 9.12 , 1.00 )<br>( 0.00 , N/A , 0.1) | 250.2<br>147.6 | 0.2397<br>93.9<br>90.1 | 0.0950<br>[ 0.1000 ] | 95.0% | 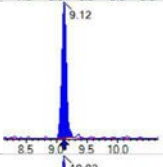 | 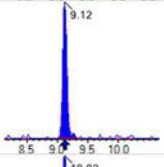 | |
| PFDA | ( 513.0 / 469.0 ) 38846<br>( 513.0 / 169.0 ) 3936 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , -0.1) | 462.8<br>520.0 | 0.1013<br>86.5<br>82.8 | 0.1111<br>[ 0.1000 ] | 111.1% | 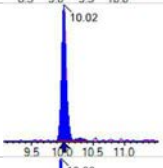 | 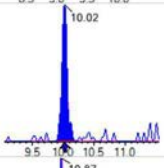 | |
| PFUnA | ( 563.0 / 519.0 ) 37557<br>( 563.0 / 169.0 ) 4971 | ( 10.88 , 1.00 )<br>( 0.00 , N/A , 0.5) | 439.9<br>107.3 | 0.1324<br>93.4<br>87.8 | 0.0978<br>[ 0.1000 ] | 97.8% | 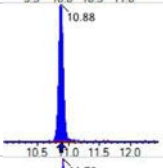 | 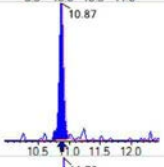 | |
| PFDoA | ( 613.0 / 569.0 ) 40454<br>( 613.0 / 169.0 ) 6331 | ( 11.70 , 1.00 )<br>( 0.00 , N/A , -0.1) | 283.7<br>99.6 | 0.1565<br>99.0<br>104.8 | 0.0949<br>[ 0.1000 ] | 94.9% | 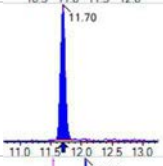 | 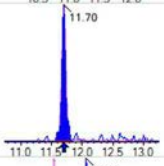 | |
| PFTrDA | ( 663.0 / 619.0 ) 39537<br>( 663.0 / 169.0 ) 9932 | ( 12.33 , 1.05 )<br>( N/A , -0.02 , 0.0) | 261.8<br>150.8 | 0.2512<br>97.6<br>94.8 | 0.0948<br>[ 0.1000 ] | 94.8% | 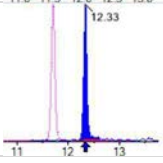 | 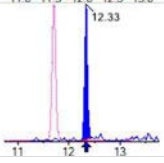 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-LCV1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30810<br>( 713.0 / 169.0 ) 8152 | ( 12.83 , 1.00 )<br>( 0.00 , N/A , -0.1) | 280.2<br>73.7 | 0.2646<br>98.0<br>99.7 | 0.0934<br>[ 0.1000 ] | 93.4% | 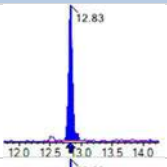 | 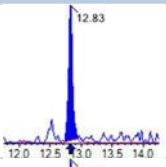 | |
| PFHxDA | ( 813.0 / 769.0 ) 26715<br>( 813.0 / 169.0 ) 7712 | ( 13.63 , 1.00 )<br>( 0.00 , N/A , 0.0) | 188.6<br>71.1 | 0.2887<br>118.0<br>113.6 | 0.1011<br>[ 0.1000 ] | 101.1% | 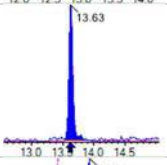 | 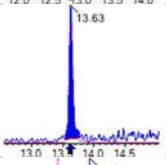 | |
| PFODA | ( 913.0 / 869.0 ) 13917<br>( 913.0 / 169.0 ) 5705 | ( 14.26 , 1.05 )<br>( N/A , -0.01 , 0.3) | 73.3<br>38.1 | 0.4099<br>114.4<br>120.2 | 0.0842<br>[ 0.1000 ] | 84.2% | 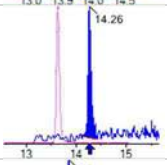 | 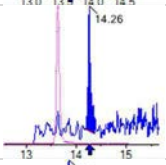 | |
| PFBS | ( 299.0 / 80.0 ) 41635<br>( 299.0 / 99.0 ) 30867 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 453.0<br>254.3 | 0.7414<br>104.8<br>98.2 | 0.0844<br>[ 0.0885 ] | 95.4% | 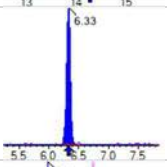 | 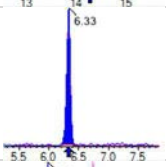 | |
| PFPeS | ( 349.0 / 80.0 ) 104717<br>( 349.0 / 99.0 ) 37726 | ( 7.56 , 0.88 )<br>( N/A , -0.02 , 0.0) | 390.4<br>459.4 | 0.3603<br>100.2<br>103.4 | 0.0878<br>[ 0.0938 ] | 93.6% | 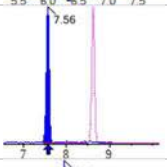 | 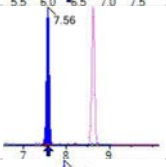 | |
| PFHxS | ( 399.0 / 80.0 ) 124190<br>( 399.0 / 99.0 ) 40489 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.2) | 609.5<br>619.1 | 0.3260<br>102.4<br>102.8 | 0.0896<br>[ 0.0911 ] | 98.4% | 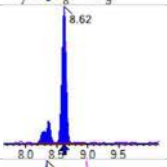 | 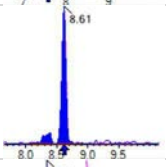 | |
| PFHpS | ( 449.0 / 80.0 ) 91578<br>( 449.0 / 99.0 ) 25197 | ( 9.58 , 0.92 )<br>( N/A , -0.02 , -0.1) | 346.3<br>324.1 | 0.2751<br>104.0<br>105.1 | 0.0855<br>[ 0.0951 ] | 89.9% | 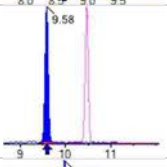 | 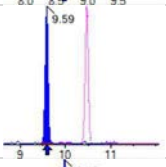 | |
| PFOS | ( 499.0 / 80.0 ) 94287<br>( 499.0 / 99.0 ) 22620 | ( 10.47 , 1.00 )<br>( 0.00 , N/A , -0.2) | 312.0<br>756.7 | 0.2399<br>102.6<br>104.7 | 0.0913<br>[ 0.0927 ] | 98.5% | 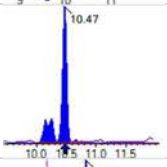 | 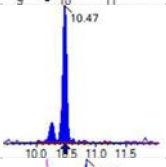 | |
| PFNS | ( 549.0 / 80.0 ) 91430<br>( 549.0 / 99.0 ) 24394 | ( 11.30 , 1.08 )<br>( N/A , -0.02 , -0.1) | 463.0<br>329.8 | 0.2668<br>97.9<br>96.4 | 0.0946<br>[ 0.0960 ] | 98.5% | 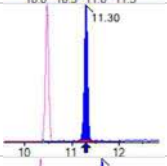 | 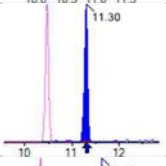 | |
| PFDS | ( 599.0 / 80.0 ) 106349<br>( 599.0 / 99.0 ) 27172 | ( 12.02 , 1.15 )<br>( N/A , -0.02 , 0.1) | 450.6<br>161.4 | 0.2555<br>94.0<br>102.0 | 0.0901<br>[ 0.0963 ] | 93.6% | 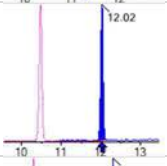 | 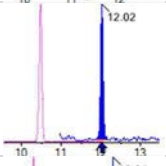 | |
| PFDoS | ( 699.0 / 80.0 ) 97674<br>( 699.0 / 99.0 ) 22163 | ( 12.94 , 1.24 )<br>( N/A , -0.01 , 0.0) | 485.4<br>254.8 | 0.2269<br>97.1<br>100.2 | 0.0939<br>[ 0.0970 ] | 96.8% | 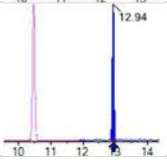 | 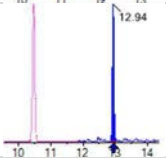 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (2)
Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 193625<br>( 327.0 / 81.0 ) 167552 | ( 5.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 2588.6<br>804.9 | 0.8653<br>99.2<br>95.8 | 0.3793<br>[ 0.3738 ] | 101.5% | 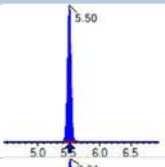 | 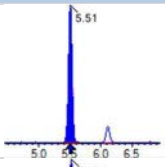 | |
| 6:2FTS | ( 427.0 / 407.0 ) 162958<br>( 427.0 / 81.0 ) 228378 | ( 7.61 , 1.00 ) ( -0.01 , N/A , -0.2) | 2549.3<br>1396.9 | 1.4015<br>111.8<br>115.3 | 0.3608<br>[ 0.3796 ] | 95.1% | 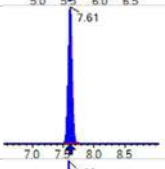 | 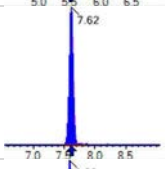 | |
| 8:2FTS | ( 527.0 / 507.0 ) 157308<br>( 527.0 / 81.0 ) 167993 | ( 9.39 , 1.00 ) ( -0.01 , N/A , 0.0) | 1218.7<br>793.2 | 1.0679<br>98.2<br>100.2 | 0.3776<br>[ 0.3833 ] | 98.5% | 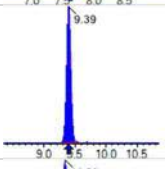 | 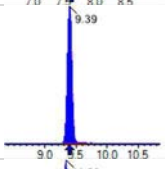 | |
| 10:2FTS | ( 627.0 / 607.0 ) 132771<br>( 627.0 / 81.0 ) 180461 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.1) | 939.7<br>359.4 | 1.3592<br>94.4<br>98.1 | 0.4165<br>[ 0.3865 ] | 107.8% | 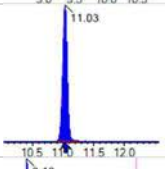 | 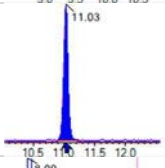 | |
| PFBSA | ( 297.9 / 78.0 ) 84059<br>( 297.9 / 278.0 ) 125 | ( 8.12 , 0.57 ) ( N/A , -0.02 , 1.5) | 462.0<br>23.9 | 0.0015<br>109.0<br>112.4 | 0.1020<br>[ 0.1000 ] | 102.0% | 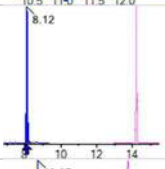 | 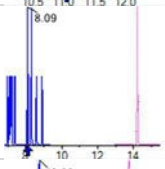 | |
| PFHxSA | ( 397.9 / 78.0 ) 102611<br>( 397.9 / 378.0 ) 360 | ( 10.97 , 0.76 ) ( N/A , -0.02 , -0.7) | 767.8<br>23.9 | 0.0035<br>85.9<br>83.9 | 0.0967<br>[ 0.1000 ] | 96.7% | 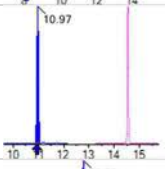 | 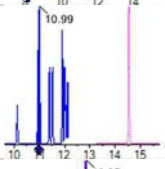 | |
| PFOSA | ( 498.0 / 78.0 ) 75335<br>( 498.0 / 478.0 ) 1113 | ( 12.83 , 1.00 ) ( -0.01 , N/A , -1.1) | 751.2<br>45.7 | 0.0148<br>105.3<br>104.8 | 0.0981<br>[ 0.1000 ] | 98.1% | 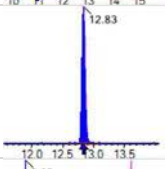 | 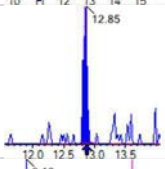 | |
| TFSI | ( 279.7 / 147.0 ) 188144<br>( 279.7 / 211.0 ) 16400 | ( 8.18 , 0.64 ) ( N/A , -0.02 , -0.5) | 49.8<br>22.5 | 0.0872<br>103.8<br>104.0 | 0.0931<br>[ 0.0979 ] | 95.0% | 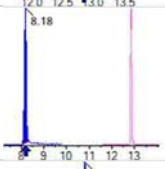 | 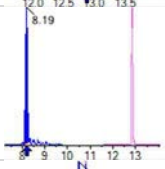 | |
| NMeFOSA | ( 512.0 / 219.0 ) 64569<br>( 512.0 / 169.0 ) 45331 | ( 14.21 , 1.00 ) ( 0.00 , N/A , 3.6) | 691.7<br>248.0 | 0.7020<br>93.8<br>95.5 | 0.4065<br>[ 0.4000 ] | 101.6% | 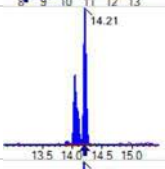 | 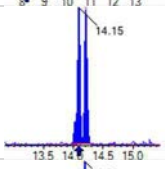 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72620<br>( 526.0 / 169.0 ) 89023 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.4) | 885.5<br>774.4 | 1.2259<br>99.3<br>97.0 | 0.3757<br>[ 0.4000 ] | 93.9% | 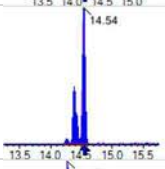 | 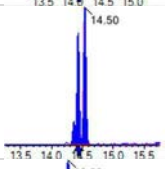 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 22532<br>( 570.0 / 483.0 ) 10333 | ( 10.27 , 1.00 ) ( -0.01 , N/A , -0.5) | 12381.9<br>460069.4 | 0.4586<br>104.6<br>99.5 | 0.0949<br>[ 0.1000 ] | 94.9% | 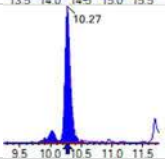 | 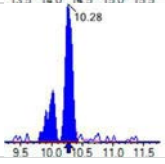 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (2)
Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 20641<br>( 584.0 / 526.0 ) 13002 | ( 10.81 , 1.00 ) ( 0.01 , N/A , 0.1) | 65597.1<br>352.5 | 0.6299<br>102.2<br>108.7 | 0.0910<br>[ 0.1000 ] | 91.0% | 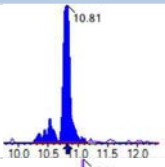 | 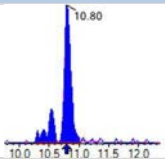 | MI2 DG 2024-03-21 |
| NMeFOSE | ( 616.0 / 59.0 ) 34036 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 197.0 | N/A<br>0.0<br>0.0 | 0.4526<br>[ 0.4000 ] | 113.2% | 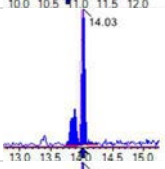 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 26412 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 261.9 | N/A<br>0.0<br>0.0 | 0.4162<br>[ 0.4000 ] | 104.0% | 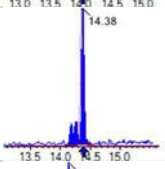 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 8318<br>( 285.0 / 185.0 ) 22783 | ( 6.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 231.6<br>195.9 | 2.7391<br>99.1<br>96.1 | 0.1004<br>[ 0.1000 ] | 100.4% | 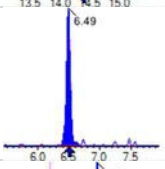 | 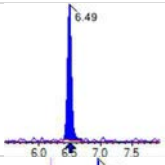 | |
| ADONA | ( 377.0 / 85.0 ) 85906<br>( 377.0 / 251.0 ) 10722 | ( 7.56 , 1.16 ) ( N/A , -0.02 , 0.1) | 764.1<br>180.2 | 0.1248<br>122.4<br>125.3 | 0.0888<br>[ 0.0943 ] | 94.2% | 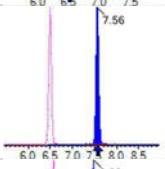 | 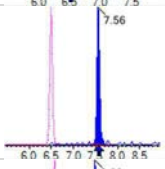 | |
| PFEESA | ( 315.0 / 135.0 ) 35396<br>( 315.0 / 83.0 ) 20691 | ( 6.92 , 1.15 ) ( N/A , -0.02 , -0.2) | 728.9<br>71.6 | 0.5846<br>104.9<br>101.4 | 0.1581<br>[ 0.1785 ] | 88.6% | 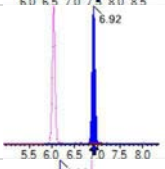 | 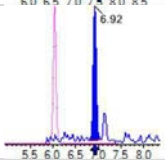 | |
| PFMPA | ( 229.0 / 85.0 ) 16916 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 521.4 | N/A<br>0.0<br>0.0 | 0.1934<br>[ 0.2000 ] | 96.7% | 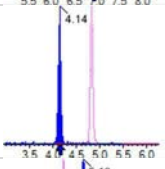 | | |
| PFMBA | ( 279.0 / 85.0 ) 39336 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 551.3 | N/A<br>0.0<br>0.0 | 0.1655<br>[ 0.2000 ] | 82.7% | 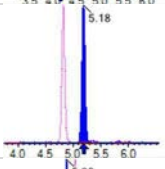 | | |
| NFDHA | ( 295.0 / 201.0 ) 20450<br>( 295.0 / 85.0 ) 19294 | ( 5.90 , 0.98 ) ( N/A , -0.01 , 0.2) | 923.9<br>266.9 | 0.9434<br>87.4<br>92.4 | 0.1757<br>[ 0.2000 ] | 87.8% | 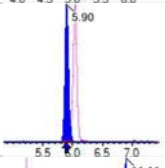 | 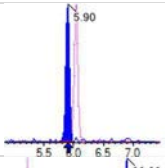 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 88974<br>( 533.0 / 353.0 ) 28570 | ( 11.11 , 1.71 ) ( N/A , -0.02 , 0.0) | 1687.2<br>482.0 | 0.3211<br>102.6<br>100.9 | 0.0852<br>[ 0.0933 ] | 91.3% | 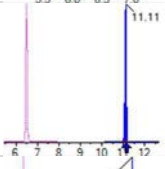 | 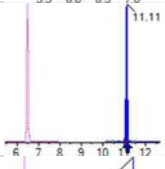 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 68434<br>( 633.0 / 453.0 ) 23683 | ( 12.43 , 1.91 ) ( N/A , -0.02 , 0.0) | 1091.6<br>303.7 | 0.3461<br>104.2<br>104.3 | 0.0852<br>[ 0.0943 ] | 90.3% | 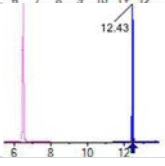 | 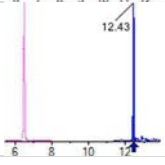 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (2)
Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 43211<br>( 461.0 / 381.2 ) 20013 | ( 9.50 , 0.91 ) ( N/A , -0.02 , -0.1) | 916.8<br>2215.6 | 0.4632<br>116.2<br>115.3 | 0.0742<br>[ 0.0924 ] | 80.3% | 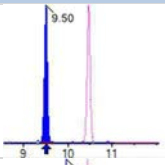 | 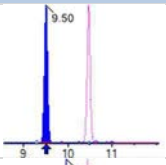 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 6109<br>( 241.0 / 117.0 ) 12805 | ( 4.40 , 0.91 ) ( N/A , -0.01 , 0.0) | 246.0<br>104.8 | 2.0960<br>99.5<br>94.4 | 0.3897<br>[ 0.4000 ] | 97.4% | 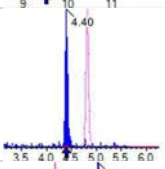 | 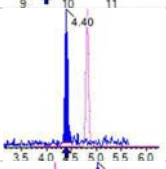 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 35746<br>( 341.0 / 217.0 ) 51434 | ( 6.96 , 1.15 ) ( N/A , -0.02 , 0.3) | 330.9<br>223.5 | 1.4389<br>94.7<br>96.0 | 0.4134<br>[ 0.4000 ] | 103.3% | 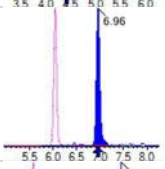 | 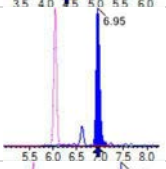 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54375<br>( 441.0 / 337.0 ) 54901 | ( 9.34 , 1.55 ) ( N/A , -0.02 , 0.1) | 3128.6<br>317457.6 | 1.0097<br>110.1<br>110.3 | 0.3832<br>[ 0.4000 ] | 95.8% | 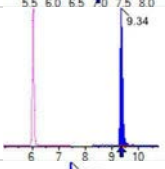 | 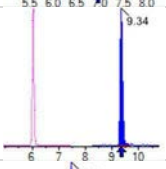 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 33251<br>( 357.2 / 243.0 ) 3542 | ( 6.77 , 1.00 ) ( -0.01 , N/A , -0.4) | 242.9<br>53.2 | 0.1065<br>96.6<br>101.0 | 0.0850<br>[ 0.1000 ] | 85.0% | 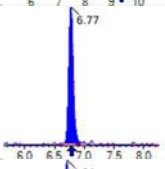 | 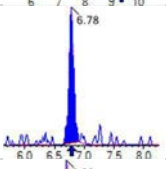 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24736<br>( 457.2 / 343.0 ) 1356 | ( 8.81 , 1.00 ) ( -0.01 , N/A , 0.5) | 224.3<br>224.3 | 0.0548<br>132.1<br>128.1 | 0.0927<br>[ 0.1000 ] | 92.7% | 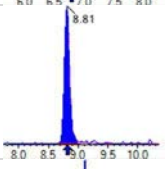 | 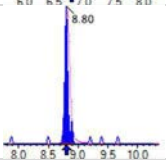 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 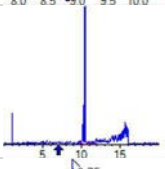 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 291071 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 1310.3 | N/A | 1.2208<br>[ 1.0000 ] | 122.1%<br>{ 114.1% } | 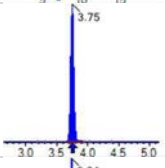 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 132724 | ( 6.04 , N/A ) ( N/A , -0.01 , N/A ) | 135759.8 | N/A | 1.0463<br>[ 1.0000 ] | 104.6%<br>{ 108.8% } | 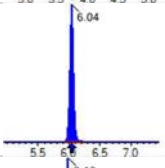 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 428237 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 4906.2 | N/A | 1.0833<br>[ 1.0000 ] | 108.3%<br>{ 108.1% } | 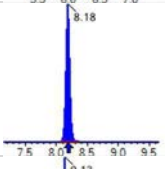 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 297660 | ( 9.13 , N/A ) ( N/A , -0.02 , N/A ) | 1078.4 | N/A | 1.0466<br>[ 1.0000 ] | 104.7%<br>{ 107.4% } | 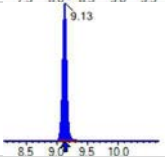 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (2)
Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 309939 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 15928.8 | N/A | 1.0613 [ 1.0000 ] | 106.1% { 107.4% } | 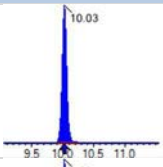 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1018003 | ( 8.62 , N/A ) ( N/A , -0.02 , N/A ) | 5488.4 | N/A | 1.0727 [ 1.0000 ] | 107.3% { 107.9% } | 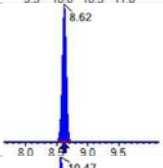 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 805178 | ( 10.47 , N/A ) ( N/A , -0.02 , N/A ) | 2015.7 | N/A | 1.0572 [ 1.0000 ] | 105.7% { 105.9% } | 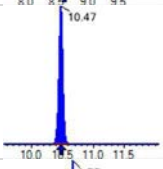 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2649120 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 29889.7 | N/A | 7.9669 [ 8.0000 ] | 99.6% { 121.4% } | 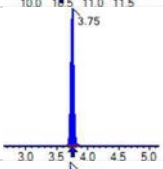 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1091253 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5976.0 | N/A | 4.4066 [ 4.0000 ] | 110.2% { 121.0% } | 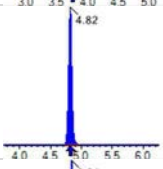 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 649088 | ( 6.04 , N/A ) ( N/A , -0.01 , N/A ) | 9498.9 | N/A | 2.1434 [ 2.0000 ] | 107.2% { 113.2% } | 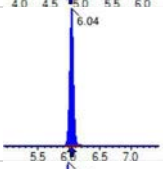 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 686547 | ( 7.18 , N/A ) ( N/A , -0.02 , N/A ) | 5602.3 | N/A | 2.0381 [ 2.0000 ] | 101.9% { 111.5% } | 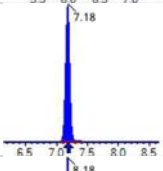 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 935748 | ( 8.18 , N/A ) ( N/A , -0.02 , N/A ) | 3376.7 | N/A | 2.0394 [ 2.0000 ] | 102.0% { 116.1% } | 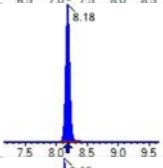 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 302837 | ( 9.12 , N/A ) ( N/A , -0.02 , N/A ) | 4468.3 | N/A | 1.0376 [ 1.0000 ] | 103.8% { 114.8% } | 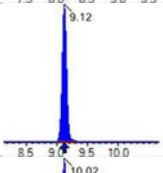 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342213 | ( 10.02 , N/A ) ( N/A , -0.02 , N/A ) | 959.6 | N/A | 0.9853 [ 1.0000 ] | 98.5% { 111.5% } | 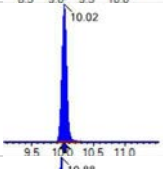 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 415162 | ( 10.88 , N/A ) ( N/A , -0.02 , N/A ) | 1059.8 | N/A | 1.0160 [ 1.0000 ] | 101.6% { 112.7% } | 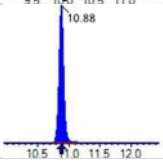 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-LCV1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 423767 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1495.9 | N/A | 1.0183 [ 1.0000 ] | 101.8% { 109.7% } | 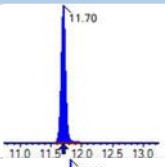  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 352164 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1494.7 | N/A | 0.9937 [ 1.0000 ] | 99.4% { 113.0% } | 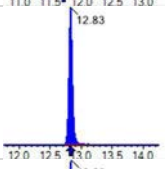  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554315 | ( 13.63 , N/A ) ( N/A , -0.01 , N/A ) | 2617.6 | N/A | 1.8321 [ 2.0000 ] | 91.6% { 113.8% } | 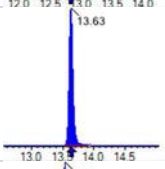  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1901047 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1387.0 | N/A | 2.0669 [ 2.0000 ] | 103.3% { 117.6% } | 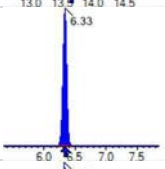  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1558741 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 3638.2 | N/A | 2.1232 [ 2.0000 ] | 106.2% { 118.7% } | 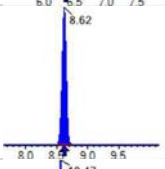  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1787621 | ( 10.47 , N/A ) ( N/A , -0.02 , N/A ) | 1758.9 | N/A | 2.0591 [ 2.0000 ] | 103.0% { 116.8% } | 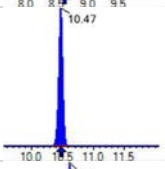  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 778109 | ( 5.51 , N/A ) ( N/A , -0.01 , N/A ) | 102.3 | N/A | 4.9033 [ 4.0000 ] | 122.6% { 125.6% } | 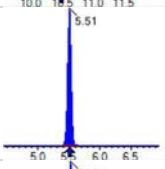  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2181498 | ( 7.62 , N/A ) ( N/A , -0.02 , N/A ) | 3785.7 | N/A | 4.5934 [ 4.0000 ] | 114.8% { 123.3% } | 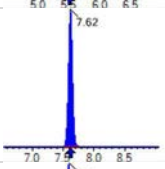  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1754638 | ( 9.40 , N/A ) ( N/A , -0.01 , N/A ) | 2185.1 | N/A | 4.7108 [ 4.0000 ] | 117.8% { 126.8% } | 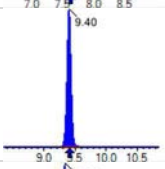  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3308464 | ( 11.03 , N/A ) ( N/A , -0.02 , N/A ) | 1585.4 | N/A | 8.4991 [ 8.0000 ] | 106.2% { 122.8% } | 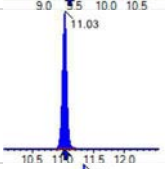  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1535471 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2364.5 | N/A | 1.9958 [ 2.0000 ] | 99.8% { 113.0% } | 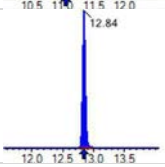  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (2)
Acquired: 2024/03/21 - 13:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 319922 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1832.8 | N/A | 1.9606 [ 2.0000 ] | 98.0% { 116.7% } | 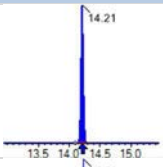  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 345184 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 2663.2 | N/A | 1.9726 [ 2.0000 ] | 98.6% { 114.7% } | 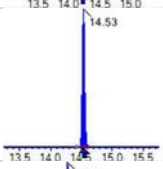  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 995631 | ( 10.28 , N/A ) ( N/A , -0.02 , N/A ) | 2118.3 | N/A | 4.4571 [ 4.0000 ] | 111.4% { 112.1% } | 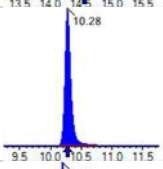  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 927506 | ( 10.80 , N/A ) ( N/A , -0.02 , N/A ) | 1741.7 | N/A | 4.5557 [ 4.0000 ] | 113.9% { 112.6% } | 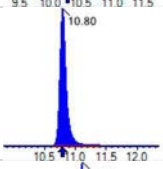  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1371074 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 2694.8 | N/A | 18.6975 [ 20.0000 ] | 93.5% { 113.2% } | 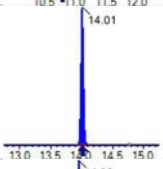  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1428575 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 4187.5 | N/A | 19.1943 [ 20.0000 ] | 96.0% { 113.2% } | 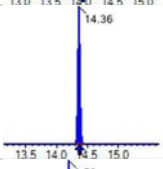  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1124377 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2415.6 | N/A | 8.1508 [ 8.0000 ] | 101.9% { 113.2% } | 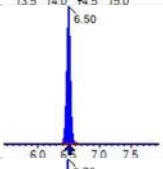  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 735684 | ( 6.78 , N/A ) ( N/A , -0.02 , N/A ) | 1208.1 | N/A | 2.1893 [ 2.0000 ] | 109.5% { 114.8% } | 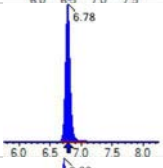  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 654231 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 873.4 | N/A | 2.1387 [ 2.0000 ] | 106.9% { 111.2% } | 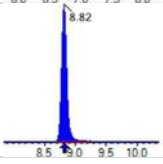  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV1A | PFBA | 20.0A | 18.5A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.00A | 90.0A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.40A | 88.0A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.89A | 97.8A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.88A | 97.6A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.95A | 98.9A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.75A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.52A | 90.4A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.62A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.63A | 92.6A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.34A | 86.9A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.97A | 79.3A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.01A | 90.7A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.52A | 96.1A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.32A | 94.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.65A | 97.4A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.39A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.55A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.76A | 98.8A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.99A | 103A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.6A | 93.7A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 19.0A | 100A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.9A | 103A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.1A | 104A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.90A | 98.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.3A | 96.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.8A | 94.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.57A | 91.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.44A | 88.7A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV1A | NMeFOSEA | 20.0A | 19.3A | 96.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 96.2A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.48A | 89.6A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.71A | 99.7A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.30A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.43A | 94.3A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.57A | 95.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 8.64A | 86.4A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.30A | 91.8A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.45A | 94.3A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.5A | 97.3A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.2A | 96.2A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2661438<br>( 163.0 / 69.0 ) 71878 | ( 2.79 , 0.74 ) ( N/A , 0.00 , 0.1) | 14445.1<br>2943.7 | 0.0270<br>99.4<br>100.0 | 10.3433<br>[ 10.0000 ] | 103.4% | 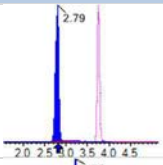 | 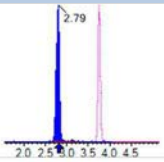 | |
| PFBA | ( 213.0 / 169.0 ) 5033432 | ( 3.75 , 1.00 ) ( 0.00 , N/A , 0.0) | 3405.2 | N/A<br>0.0<br>0.0 | 18.5045<br>[ 20.0000 ] | 92.5% | 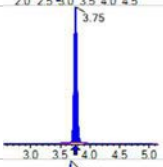 | | |
| PFPeA | ( 263.0 / 219.0 ) 2048934<br>( 263.0 / 69.0 ) 26361 | ( 4.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 6422.3<br>457.1 | 0.0129<br>107.7<br>100.0 | 8.9979<br>[ 10.0000 ] | 90.0% | 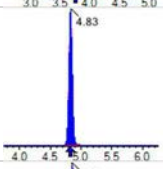 | 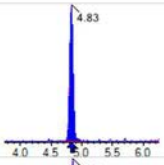 | |
| PFHxA | ( 313.0 / 269.0 ) 1211469<br>( 313.0 / 119.0 ) 134543 | ( 6.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 2674.3<br>1273.4 | 0.1111<br>95.6<br>100.0 | 4.3976<br>[ 5.0000 ] | 88.0% | 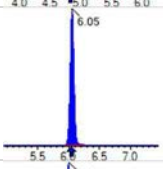 | 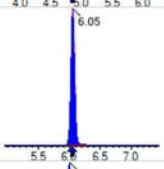 | |
| PFHpA | ( 363.0 / 319.0 ) 1476653<br>( 363.0 / 169.0 ) 432968 | ( 7.20 , 1.00 ) ( 0.00 , N/A , 0.0) | 1834.0<br>1612.1 | 0.2932<br>96.7<br>100.0 | 4.8893<br>[ 5.0000 ] | 97.8% | 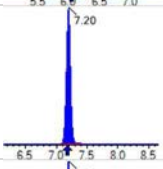 | 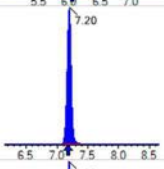 | |
| PFOA | ( 413.0 / 369.0 ) 1932729<br>( 413.0 / 169.0 ) 662778 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.1) | 888.9<br>1438.8 | 0.3429<br>93.8<br>100.0 | 4.8796<br>[ 5.0000 ] | 97.6% | 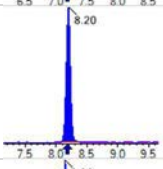 | 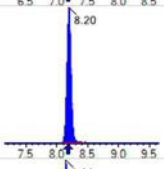 | |
| PFNA | ( 463.0 / 419.0 ) 1311998<br>( 463.0 / 169.0 ) 348889 | ( 9.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 1270.8<br>1235.6 | 0.2659<br>104.2<br>100.0 | 4.9471<br>[ 5.0000 ] | 98.9% | 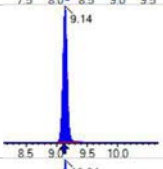 | 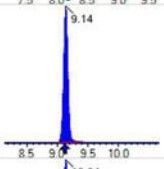 | |
| PFDA | ( 513.0 / 469.0 ) 1483267<br>( 513.0 / 169.0 ) 181575 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 3181.6<br>3205.1 | 0.1224<br>104.5<br>100.0 | 4.7303<br>[ 5.0000 ] | 94.6% | 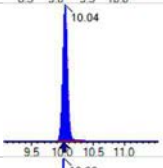 | 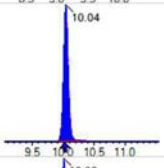 | |
| PFUnA | ( 563.0 / 519.0 ) 1617911<br>( 563.0 / 169.0 ) 243893 | ( 10.90 , 1.00 ) ( 0.00 , N/A , 0.2) | 1221.4<br>1004.8 | 0.1507<br>106.4<br>100.0 | 4.7466<br>[ 5.0000 ] | 94.9% | 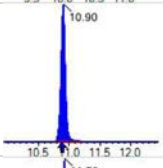 | 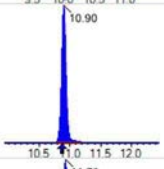 | |
| PFDoA | ( 613.0 / 569.0 ) 1756463<br>( 613.0 / 169.0 ) 262238 | ( 11.72 , 1.00 ) ( 0.00 , N/A , -0.1) | 1463.5<br>1028.1 | 0.1493<br>94.5<br>100.0 | 4.5183<br>[ 5.0000 ] | 90.4% | 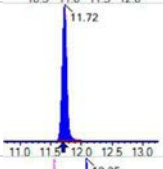 | 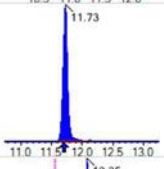 | |
| PFTrDA | ( 663.0 / 619.0 ) 1755788<br>( 663.0 / 169.0 ) 465303 | ( 12.35 , 1.05 ) ( N/A , 0.00 , 0.0) | 1315.5<br>1035.9 | 0.2650<br>103.0<br>100.0 | 4.6172<br>[ 5.0000 ] | 92.3% | 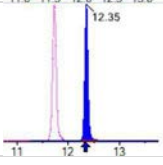 | 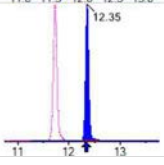 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1352488<br>( 713.0 / 169.0 ) 358823 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1535.0<br>1506.3 | 0.2653<br>98.3<br>100.0 | 4.6321<br>[ 5.0000 ] | 92.6% | 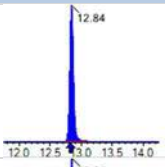 | 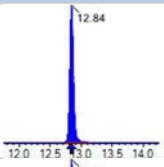 | |
| PFHxDA | ( 813.0 / 769.0 ) 1008715<br>( 813.0 / 169.0 ) 256296 | ( 13.64 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2211.2<br>1316.9 | 0.2541<br>103.8<br>100.0 | 4.3441<br>[ 5.0000 ] | 86.9% | 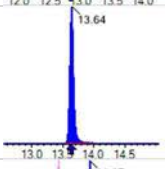 | 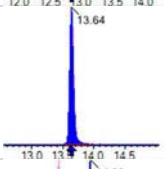 | |
| PFODA | ( 913.0 / 869.0 ) 576295<br>( 913.0 / 169.0 ) 196466 | ( 14.27 , 1.05 )<br>( N/A , 0.00 , -0.1) | 1559.5<br>772.0 | 0.3409<br>95.1<br>100.0 | 3.9672<br>[ 5.0000 ] | 79.3% | 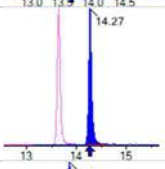 | 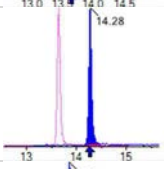 | |
| PFBS | ( 299.0 / 80.0 ) 1682978<br>( 299.0 / 99.0 ) 1270364 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4378.1<br>2908.2 | 0.7548<br>106.7<br>100.0 | 4.0101<br>[ 4.4237 ] | 90.7% | 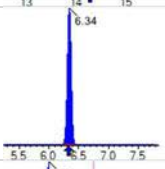 | 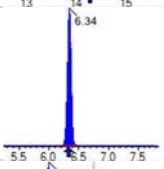 | |
| PFPeS | ( 349.0 / 80.0 ) 4538266<br>( 349.0 / 99.0 ) 1580637 | ( 7.58 , 0.88 )<br>( N/A , 0.00 , 0.0) | 2580.0<br>2843.4 | 0.3483<br>96.9<br>100.0 | 4.5155<br>[ 4.6919 ] | 96.2% | 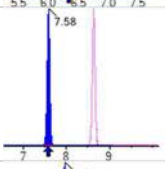 | 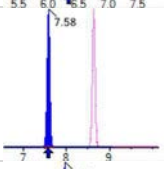 | |
| PFHxS | ( 399.0 / 80.0 ) 5037626<br>( 399.0 / 99.0 ) 1598026 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2888.1<br>4244.2 | 0.3172<br>99.6<br>100.0 | 4.3153<br>[ 4.5549 ] | 94.7% | 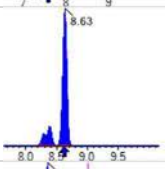 | 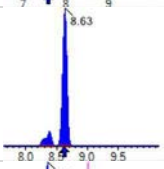 | |
| PFHpS | ( 449.0 / 80.0 ) 4266215<br>( 449.0 / 99.0 ) 1117180 | ( 9.60 , 0.91 )<br>( N/A , 0.00 , 0.1) | 2222.1<br>2159.0 | 0.2619<br>99.0<br>100.0 | 4.6538<br>[ 4.7570 ] | 97.8% | 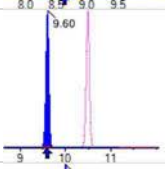 | 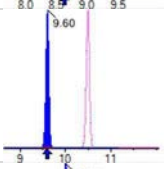 | |
| PFOS | ( 499.0 / 80.0 ) 3876759<br>( 499.0 / 99.0 ) 888648 | ( 10.49 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1838.2<br>3827.9 | 0.2292<br>98.1<br>100.0 | 4.3872<br>[ 4.6375 ] | 94.6% | 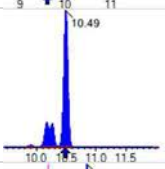 | 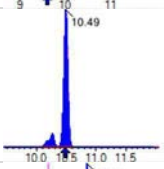 | |
| PFNS | ( 549.0 / 80.0 ) 3760488<br>( 549.0 / 99.0 ) 1040761 | ( 11.33 , 1.08 )<br>( N/A , 0.00 , 0.1) | 2628.4<br>2243.9 | 0.2768<br>101.6<br>100.0 | 4.5452<br>[ 4.7994 ] | 94.7% | 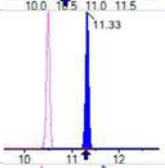 | 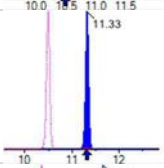 | |
| PFDS | ( 599.0 / 80.0 ) 4810259<br>( 599.0 / 99.0 ) 1205365 | ( 12.04 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3511.1<br>2345.0 | 0.2506<br>92.2<br>100.0 | 4.7615<br>[ 4.8155 ] | 98.9% | 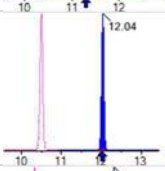 | 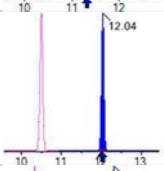 | |
| PFDoS | ( 699.0 / 80.0 ) 4441279<br>( 699.0 / 99.0 ) 1005544 | ( 12.95 , 1.23 )<br>( N/A , 0.00 , 0.0) | 5017.7<br>4257.5 | 0.2264<br>96.9<br>100.0 | 4.9868<br>[ 4.8478 ] | 102.9% | 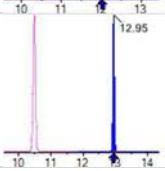 | 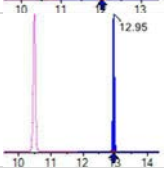 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7158081<br>( 327.0 / 81.0 ) 6464691 | ( 5.52 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5749.1<br>4024.3 | 0.9031<br>103.5<br>100.0 | 17.6163<br>[ 18.6906 ] | 94.3% | 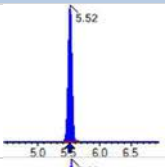 | 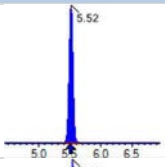 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6974677<br>( 427.0 / 81.0 ) 8478421 | ( 7.63 , 1.00 )<br>( -0.01 , N/A , -0.1) | 5133.8<br>3982.3 | 1.2156<br>96.9<br>100.0 | 19.0479<br>[ 18.9808 ] | 100.4% | 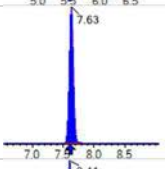 | 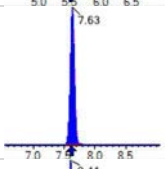 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6530745<br>( 527.0 / 81.0 ) 6957700 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1655.1<br>2060.0 | 1.0654<br>97.9<br>100.0 | 19.8717<br>[ 19.1658 ] | 103.7% | 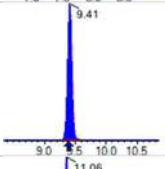 | 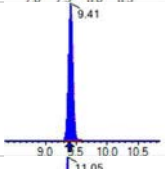 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5203016<br>( 627.0 / 81.0 ) 7212527 | ( 11.06 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1498.8<br>1394.9 | 1.3862<br>96.3<br>100.0 | 20.0517<br>[ 19.3236 ] | 103.8% | 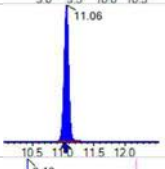 | 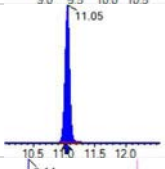 | |
| PFBSA | ( 297.9 / 78.0 ) 3359929<br>( 297.9 / 278.0 ) 4454 | ( 8.13 , 0.57 )<br>( N/A , 0.00 , -0.2) | 1328.2<br>126.7 | 0.0013<br>97.0<br>100.0 | 4.7564<br>[ 5.0000 ] | 95.1% | 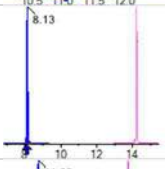 | 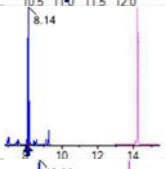 | |
| PFHxSA | ( 397.9 / 78.0 ) 4837334<br>( 397.9 / 378.0 ) 20247 | ( 11.00 , 0.76 )<br>( N/A , 0.00 , 0.3) | 1553.1<br>351.0 | 0.0042<br>102.4<br>100.0 | 5.2316<br>[ 5.0000 ] | 104.6% | 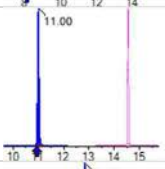 | 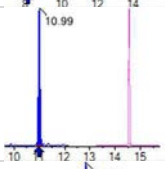 | |
| PFOSA | ( 498.0 / 78.0 ) 3330929<br>( 498.0 / 478.0 ) 46977 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3068.0<br>1043.5 | 0.0141<br>100.5<br>100.0 | 4.9016<br>[ 5.0000 ] | 98.0% | 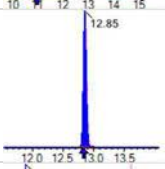 | 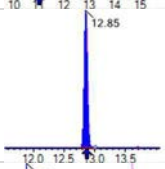 | |
| TFSI | ( 279.7 / 147.0 ) 9015725<br>( 279.7 / 211.0 ) 755349 | ( 8.20 , 0.64 )<br>( N/A , 0.00 , 0.2) | 55.9<br>43.6 | 0.0838<br>99.7<br>100.0 | 5.0384<br>[ 4.8967 ] | 102.9% | 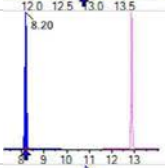 | 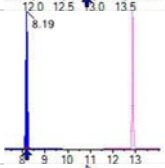 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2633329<br>( 512.0 / 169.0 ) 1935770 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.9) | 3741.0<br>1382.2 | 0.7351<br>98.2<br>100.0 | 19.3486<br>[ 20.0000 ] | 96.7% | 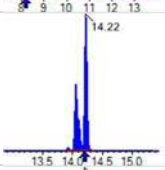 | 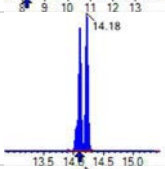 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3171976<br>( 526.0 / 169.0 ) 4008205 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4474.3<br>3909.8 | 1.2636<br>102.3<br>100.0 | 18.8253<br>[ 20.0000 ] | 94.1% | 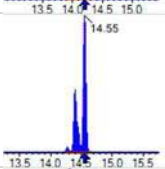 | 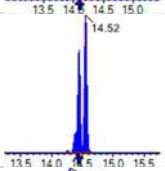 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 966867<br>( 570.0 / 483.0 ) 445583 | ( 10.30 , 1.00 )<br>( 0.01 , N/A , 0.2) | 4568.0<br>1884.8 | 0.4609<br>105.1<br>100.0 | 4.5664<br>[ 5.0000 ] | 91.3% | 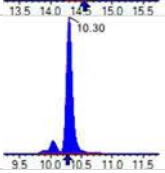 | 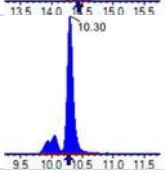 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 893361<br>( 584.0 / 526.0 ) 517670 | ( 10.83 , 1.00 ) ( 0.01 , N/A , 0.1) | 1605.7<br>794.3 | 0.5795<br>94.0<br>100.0 | 4.4366<br>[ 5.0000 ] | 88.7% | 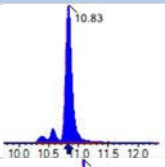 | 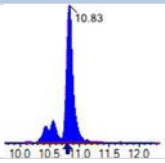 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1280556 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 2121.8 | N/A<br>0.0<br>0.0 | 19.2818<br>[ 20.0000 ] | 96.4% | 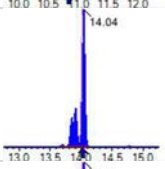 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1078643 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 4110.2 | N/A<br>0.0<br>0.0 | 19.2436<br>[ 20.0000 ] | 96.2% | 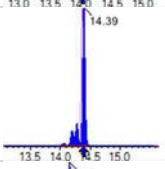 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 327843<br>( 285.0 / 185.0 ) 934281 | ( 6.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 1865.3<br>2027.2 | 2.8498<br>103.1<br>100.0 | 4.4791<br>[ 5.0000 ] | 89.6% | 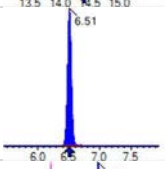 | 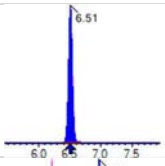 | |
| ADONA | ( 377.0 / 85.0 ) 4019232<br>( 377.0 / 251.0 ) 400270 | ( 7.58 , 1.16 ) ( N/A , 0.00 , 0.0) | 1860.4<br>1314.7 | 0.0996<br>97.7<br>100.0 | 4.7067<br>[ 4.7135 ] | 99.9% | 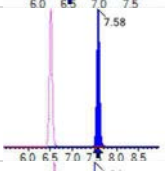 | 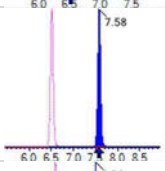 | |
| PFEESA | ( 315.0 / 135.0 ) 1641499<br>( 315.0 / 83.0 ) 946008 | ( 6.94 , 1.15 ) ( N/A , 0.00 , 0.0) | 3041.4<br>1383.4 | 0.5763<br>103.4<br>100.0 | 8.2975<br>[ 8.9246 ] | 93.0% | 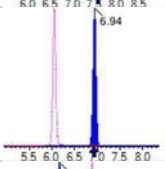 | 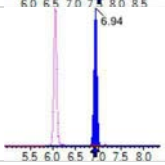 | |
| PFMPA | ( 229.0 / 85.0 ) 681498 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 5532.2 | N/A<br>0.0<br>0.0 | 9.4312<br>[ 10.0000 ] | 94.3% | 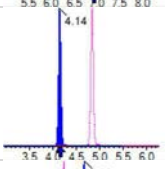 | | |
| PFMBA | ( 279.0 / 85.0 ) 1878831 | ( 5.20 , 1.08 ) ( N/A , 0.00 , 0.0) | 7088.1 | N/A<br>0.0<br>0.0 | 9.5665<br>[ 10.0000 ] | 95.7% | 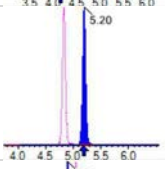 | | |
| NFDHA | ( 295.0 / 201.0 ) 888343<br>( 295.0 / 85.0 ) 906661 | ( 5.91 , 0.98 ) ( N/A , 0.00 , 0.1) | 2255.1<br>2470.9 | 1.0206<br>94.6<br>100.0 | 8.6377<br>[ 10.0000 ] | 86.4% | 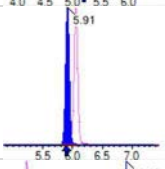 | 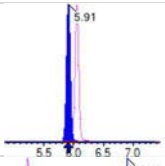 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3962842<br>( 533.0 / 353.0 ) 1261052 | ( 11.13 , 1.71 ) ( N/A , 0.00 , 0.0) | 3517.0<br>3554.6 | 0.3182<br>101.7<br>100.0 | 4.2966<br>[ 4.6663 ] | 92.1% | 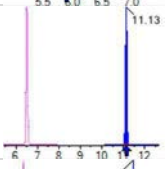 | 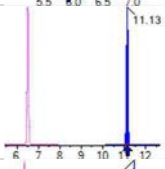 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3157444<br>( 633.0 / 453.0 ) 1047310 | ( 12.45 , 1.91 ) ( N/A , 0.00 , 0.0) | 5107.5<br>3707.1 | 0.3317<br>99.9<br>100.0 | 4.4515<br>[ 4.7160 ] | 94.4% | 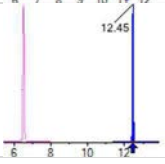 | 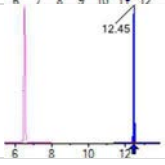 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2107310<br>( 461.0 / 381.2 ) 846221 | ( 9.52 , 0.91 )<br>( N/A , 0.00 , 0.0) | 4064.9<br>3773.2 | 0.4016<br>100.8<br>100.0 | 4.2272<br>[ 4.6193 ] | 91.5% | 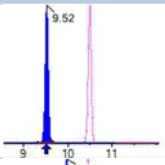 | 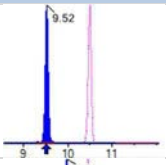 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 251930<br>( 241.0 / 117.0 ) 559511 | ( 4.41 , 0.91 )<br>( N/A , 0.00 , 0.1) | 3212.1<br>2910.9 | 2.2209<br>105.4<br>100.0 | 19.4482<br>[ 20.0000 ] | 97.2% | 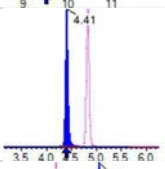 | 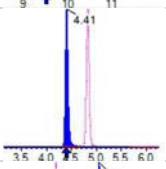 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1486219<br>( 341.0 / 217.0 ) 2227890 | ( 6.97 , 1.15 )<br>( N/A , 0.00 , 0.0) | 1365.2<br>1104.1 | 1.4990<br>98.7<br>100.0 | 19.4539<br>[ 20.0000 ] | 97.3% | 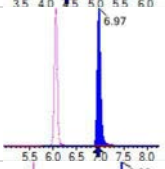 | 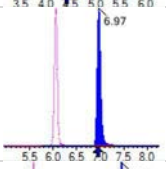 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2412861<br>( 441.0 / 337.0 ) 2209649 | ( 9.36 , 1.55 )<br>( N/A , 0.00 , 0.0) | 6261.6<br>8093.4 | 0.9158<br>99.9<br>100.0 | 19.2460<br>[ 20.0000 ] | 96.2% | 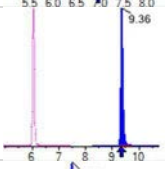 | 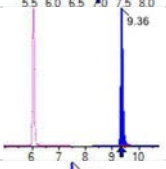 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1761183<br>( 357.2 / 243.0 ) 185778 | ( 6.79 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1666.7<br>924.2 | 0.1055<br>95.7<br>100.0 | 5.1697<br>[ 5.0000 ] | 103.4% | 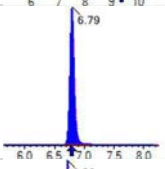 | 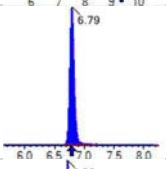 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1271667<br>( 457.2 / 343.0 ) 54420 | ( 8.82 , 1.00 )<br>( -0.01 , N/A , 0.1) | 750.4<br>576.0 | 0.0428<br>103.2<br>100.0 | 5.2999<br>[ 5.0000 ] | 106.0% | 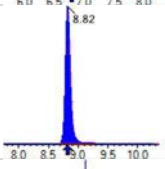 | 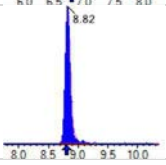 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 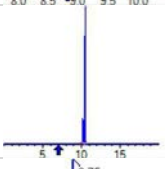 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 255102 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1352.0 | N/A | 1.0699<br>[ 1.0000 ] | 107.0%<br>{ 100.0% } | 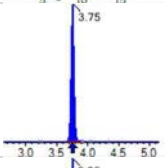 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 121945 | ( 6.06 , N/A )<br>( N/A , 0.00 , N/A ) | 5452.5 | N/A | 0.9613<br>[ 1.0000 ] | 96.1%<br>{ 100.0% } | 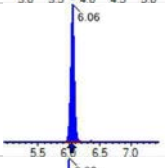 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 396262 | ( 8.20 , N/A )<br>( N/A , 0.00 , N/A ) | 5730.5 | N/A | 1.0024<br>[ 1.0000 ] | 100.2%<br>{ 100.0% } | 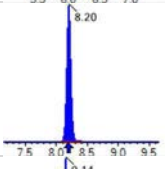 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277121 | ( 9.14 , N/A )<br>( N/A , 0.00 , N/A ) | 1097.3 | N/A | 0.9744<br>[ 1.0000 ] | 97.4%<br>{ 100.0% } | 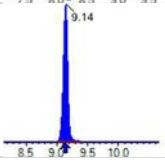 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 288546 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 5891.5 | N/A | 0.9881 [ 1.0000 ] | 98.8% { 100.0% } | 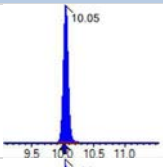  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 943236 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 5453.8 | N/A | 0.9939 [ 1.0000 ] | 99.4% { 100.0% } | 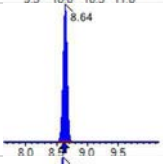  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 760677 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 2257.1 | N/A | 0.9987 [ 1.0000 ] | 99.9% { 100.0% } | 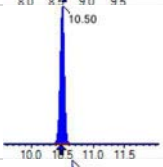  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2183020 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 30738.9 | N/A | 7.4908 [ 8.0000 ] | 93.6% { 100.0% } | 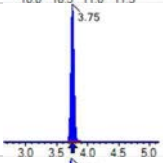  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 901617 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 4701.7 | N/A | 3.9626 [ 4.0000 ] | 99.1% { 100.0% } | 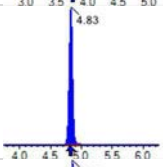  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 573466 | ( 6.05 , N/A ) ( N/A , 0.00 , N/A ) | 8214.8 | N/A | 2.0611 [ 2.0000 ] | 103.1% { 100.0% } | 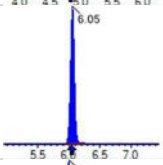  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 615542 | ( 7.20 , N/A ) ( N/A , 0.00 , N/A ) | 3790.3 | N/A | 1.9888 [ 2.0000 ] | 99.4% { 100.0% } | 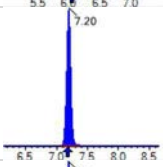  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 805836 | ( 8.20 , N/A ) ( N/A , 0.00 , N/A ) | 5119.8 | N/A | 1.8979 [ 2.0000 ] | 94.9% { 100.0% } | 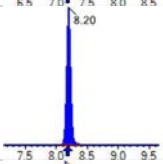  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 263873 | ( 9.14 , N/A ) ( N/A , 0.00 , N/A ) | 3357.6 | N/A | 0.9711 [ 1.0000 ] | 97.1% { 100.0% } | 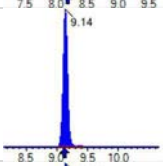  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 306888 | ( 10.04 , N/A ) ( N/A , 0.00 , N/A ) | 892.2 | N/A | 0.9491 [ 1.0000 ] | 94.9% { 100.0% } | 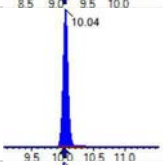  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 368515 | ( 10.90 , N/A ) ( N/A , 0.00 , N/A ) | 937.3 | N/A | 0.9687 [ 1.0000 ] | 96.9% { 100.0% } | 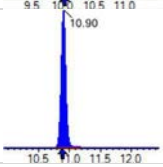  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 386410 | ( 11.73 , N/A ) ( N/A , 0.00 , N/A ) | 1396.0 | N/A | 0.9974 [ 1.0000 ] | 99.7% { 100.0% } | 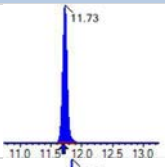 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 311761 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1399.4 | N/A | 0.9449 [ 1.0000 ] | 94.5% { 100.0% } | 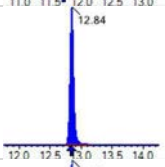 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 486889 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2428.0 | N/A | 1.7286 [ 2.0000 ] | 86.4% { 100.0% } | 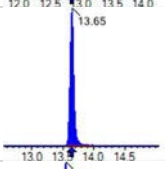 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1616649 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 1483.8 | N/A | 1.8970 [ 2.0000 ] | 94.9% { 100.0% } | 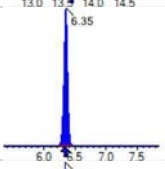 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1313312 | ( 8.64 , N/A ) ( N/A , 0.00 , N/A ) | 4454.9 | N/A | 1.9307 [ 2.0000 ] | 96.5% { 100.0% } | 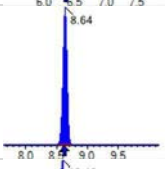 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1530147 | ( 10.49 , N/A ) ( N/A , 0.00 , N/A ) | 1597.2 | N/A | 1.8656 [ 2.0000 ] | 93.3% { 100.0% } | 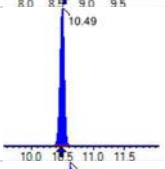 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 619308 | ( 5.52 , N/A ) ( N/A , 0.00 , N/A ) | 98.2 | N/A | 4.2120 [ 4.0000 ] | 105.3% { 100.0% } | 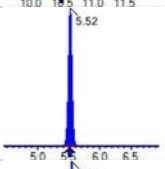 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1768753 | ( 7.64 , N/A ) ( N/A , 0.00 , N/A ) | 3393.7 | N/A | 4.0196 [ 4.0000 ] | 100.5% { 100.0% } | 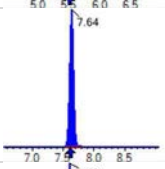 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1384218 | ( 9.42 , N/A ) ( N/A , 0.00 , N/A ) | 1471.0 | N/A | 4.0109 [ 4.0000 ] | 100.3% { 100.0% } | 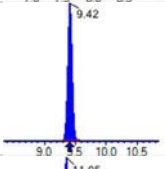 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2693257 | ( 11.05 , N/A ) ( N/A , 0.00 , N/A ) | 1806.9 | N/A | 7.4672 [ 8.0000 ] | 93.3% { 100.0% } | 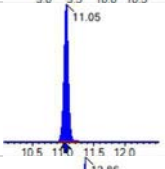 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1359099 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2229.6 | N/A | 1.8699 [ 2.0000 ] | 93.5% { 100.0% } | 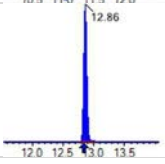 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (3)
Acquired: 2024/03/21 - 14:17

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 274142 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1891.5 | N/A | 1.7783 [ 2.0000 ] | 88.9% { 100.0% } | 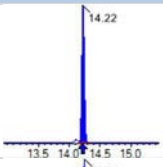  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 300901 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2329.8 | N/A | 1.8201 [ 2.0000 ] | 91.0% { 100.0% } | 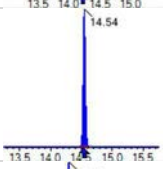  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 887996 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2331.4 | N/A | 4.2078 [ 4.0000 ] | 105.2% { 100.0% } | 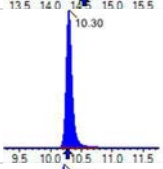  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 823399 | ( 10.82 , N/A ) ( N/A , 0.00 , N/A ) | 1922.9 | N/A | 4.2810 [ 4.0000 ] | 107.0% { 100.0% } | 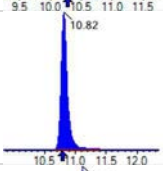  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1210898 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1604.8 | N/A | 17.4792 [ 20.0000 ] | 87.4% { 100.0% } | 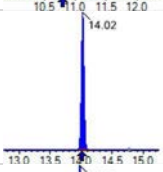  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1261765 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3318.2 | N/A | 17.9448 [ 20.0000 ] | 89.7% { 100.0% } | 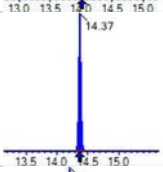  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 992985 | ( 6.51 , N/A ) ( N/A , 0.00 , N/A ) | 2271.1 | N/A | 7.8346 [ 8.0000 ] | 97.9% { 100.0% } | 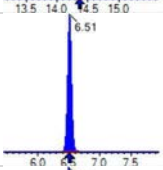  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 640876 | ( 6.80 , N/A ) ( N/A , 0.00 , N/A ) | 1680.2 | N/A | 2.0486 [ 2.0000 ] | 102.4% { 100.0% } | 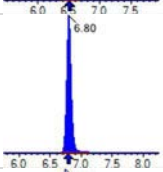  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 588356 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 728.2 | N/A | 2.0659 [ 2.0000 ] | 103.3% { 100.0% } | 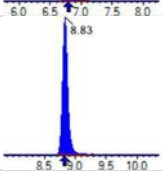  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV2A | PFBA | 20.0A | 18.1A | 90.6A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.47A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.37A | 87.4A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.62A | 92.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.48A | 89.7A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.62A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.77A | 95.4A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.63A | 92.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.79A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.75A | 95.0A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.51A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.53A | 70.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.90A | 88.3A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.58A | 97.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.09A | 89.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.56A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.39A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.55A | 94.8A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.75A | 98.5A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.64A | 95.7A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.9A | 101A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.5A | 97.4A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 20.5A | 107A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.9A | 108A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.57A | 91.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.9A | 94.6A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.28A | 85.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.71A | 94.2A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV2A | NMeFOSEA | 20.0A | 19.5A | 97.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 96.1A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.90A | 98.0A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.47A | 94.7A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.71A | 86.7A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.5A | 105A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.44A | 94.4A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 8.85A | 88.5A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.05A | 86.5A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.11A | 87.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.8A | 94.2A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.1A | 90.6A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.8A | 99.2A | ng/mLA | +/- 30.00%A |

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Chemist: DAG | Sample I.D.: SD01019-CCV2 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2566603<br>( 163.0 / 69.0 ) 71628 | ( 2.78 , 0.75 )<br>( N/A , -0.01 , 0.0) | 15387.2<br>3247.4 | 0.0279<br>102.8<br>103.3 | 9.9909<br>[ 10.0000 ] | 99.9% | 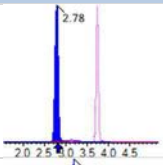 | 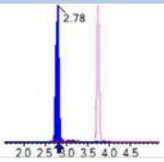 | |
| PFBA | ( 213.0 / 169.0 ) 4918749 | ( 3.73 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3219.5 | N/A<br>0.0<br>0.0 | 18.1121<br>[ 20.0000 ] | 90.6% | 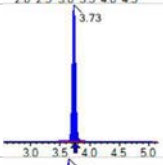 | | |
| PFPeA | ( 263.0 / 219.0 ) 2039742<br>( 263.0 / 69.0 ) 23979 | ( 4.80 , 1.00 )<br>( 0.00 , N/A , 0.0) | 5303.5<br>348.7 | 0.0118<br>98.5<br>91.4 | 9.4668<br>[ 10.0000 ] | 94.7% | 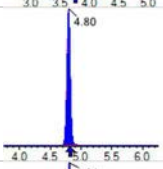 | 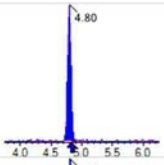 | |
| PFHxA | ( 313.0 / 269.0 ) 1191981<br>( 313.0 / 119.0 ) 135768 | ( 6.01 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2073.9<br>1273.0 | 0.1139<br>98.1<br>102.6 | 4.3714<br>[ 5.0000 ] | 87.4% | 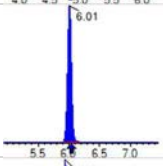 | 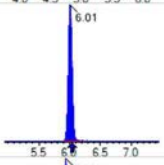 | |
| PFHpA | ( 363.0 / 319.0 ) 1381927<br>( 363.0 / 169.0 ) 430432 | ( 7.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1642.2<br>1266.4 | 0.3115<br>102.8<br>106.2 | 4.6846<br>[ 5.0000 ] | 93.7% | 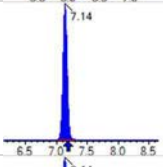 | 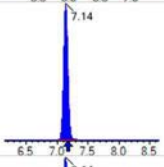 | |
| PFOA | ( 413.0 / 369.0 ) 1780159<br>( 413.0 / 169.0 ) 633721 | ( 8.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 870.6<br>1297.9 | 0.3560<br>97.4<br>103.8 | 4.6203<br>[ 5.0000 ] | 92.4% | 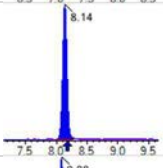 | 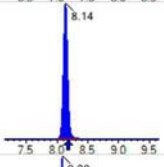 | |
| PFNA | ( 463.0 / 419.0 ) 1167668<br>( 463.0 / 169.0 ) 304308 | ( 9.08 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1216.9<br>1058.0 | 0.2606<br>102.1<br>98.0 | 4.4832<br>[ 5.0000 ] | 89.7% | 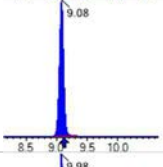 | 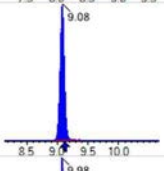 | |
| PFDA | ( 513.0 / 469.0 ) 1412708<br>( 513.0 / 169.0 ) 166718 | ( 9.98 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3322.6<br>2534.9 | 0.1180<br>100.7<br>96.4 | 4.6233<br>[ 5.0000 ] | 92.5% | 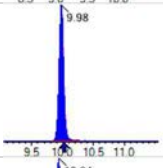 | 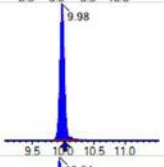 | |
| PFUnA | ( 563.0 / 519.0 ) 1565652<br>( 563.0 / 169.0 ) 239182 | ( 10.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1223.6<br>1038.1 | 0.1528<br>107.8<br>101.3 | 4.7676<br>[ 5.0000 ] | 95.4% | 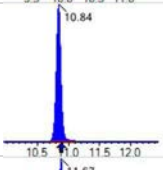 | 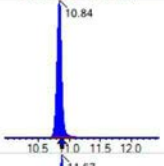 | |
| PFDoA | ( 613.0 / 569.0 ) 1730321<br>( 613.0 / 169.0 ) 266451 | ( 11.67 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1699.8<br>1127.1 | 0.1540<br>97.4<br>103.1 | 4.6314<br>[ 5.0000 ] | 92.6% | 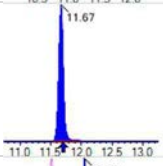 | 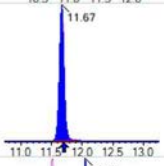 | |
| PFTrDA | ( 663.0 / 619.0 ) 1750681<br>( 663.0 / 169.0 ) 463404 | ( 12.32 , 1.06 )<br>( N/A , -0.04 , 0.1) | 1456.9<br>1054.7 | 0.2647<br>102.8<br>99.9 | 4.7902<br>[ 5.0000 ] | 95.8% | 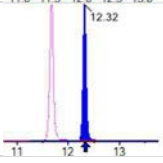 | 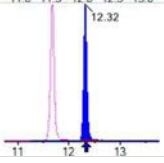 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (22)
Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1406229<br>( 713.0 / 169.0 ) 366834 | ( 12.82 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1661.9<br>1223.5 | 0.2609<br>96.6<br>98.3 | 4.7487<br>[ 5.0000 ] | 95.0% | 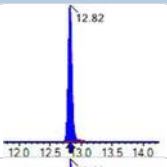 | 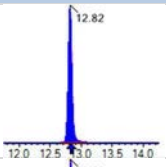 | |
| PFHxDA | ( 813.0 / 769.0 ) 1071215<br>( 813.0 / 169.0 ) 278056 | ( 13.62 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1890.0<br>1124.7 | 0.2596<br>106.1<br>102.2 | 4.5084<br>[ 5.0000 ] | 90.2% | 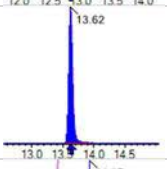 | 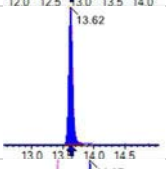 | |
| PFODA | ( 913.0 / 869.0 ) 525009<br>( 913.0 / 169.0 ) 186520 | ( 14.27 , 1.05 )<br>( N/A , -0.01 , 0.1) | 1330.7<br>625.4 | 0.3553<br>99.2<br>104.2 | 3.5320<br>[ 5.0000 ] | 70.6% | 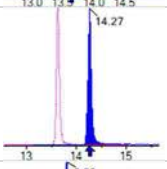 | 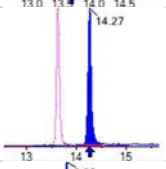 | |
| PFBS | ( 299.0 / 80.0 ) 1650930<br>( 299.0 / 99.0 ) 1208281 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3756.9<br>2584.2 | 0.7319<br>103.5<br>97.0 | 3.9020<br>[ 4.4237 ] | 88.2% | 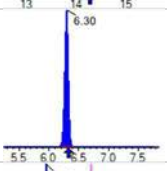 | 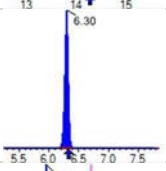 | |
| PFPeS | ( 349.0 / 80.0 ) 4437638<br>( 349.0 / 99.0 ) 1534719 | ( 7.52 , 0.88 )<br>( N/A , -0.06 , 0.1) | 2888.1<br>3913.3 | 0.3458<br>96.2<br>99.3 | 4.5755<br>[ 4.6919 ] | 97.5% | 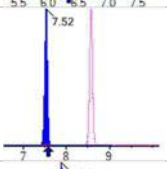 | 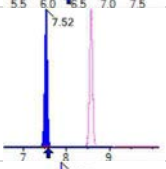 | |
| PFHxS | ( 399.0 / 80.0 ) 4603892<br>( 399.0 / 99.0 ) 1558304 | ( 8.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2711.1<br>4082.1 | 0.3385<br>106.3<br>106.7 | 4.0868<br>[ 4.5549 ] | 89.7% | 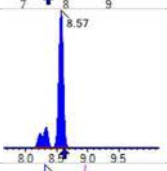 | 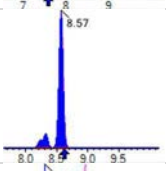 | |
| PFHpS | ( 449.0 / 80.0 ) 4035739<br>( 449.0 / 99.0 ) 1071427 | ( 9.54 , 0.91 )<br>( N/A , -0.06 , 0.0) | 1676.4<br>1953.9 | 0.2655<br>100.3<br>101.4 | 4.5638<br>[ 4.7570 ] | 95.9% | 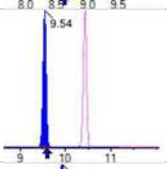 | 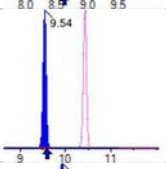 | |
| PFOS | ( 499.0 / 80.0 ) 3745072<br>( 499.0 / 99.0 ) 851648 | ( 10.43 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2038.0<br>4159.5 | 0.2274<br>97.3<br>99.2 | 4.3935<br>[ 4.6375 ] | 94.7% | 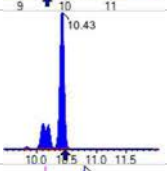 | 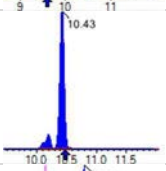 | |
| PFNS | ( 549.0 / 80.0 ) 3630809<br>( 549.0 / 99.0 ) 1019679 | ( 11.26 , 1.08 )<br>( N/A , -0.06 , 0.1) | 2450.9<br>2140.3 | 0.2808<br>103.0<br>101.5 | 4.5493<br>[ 4.7994 ] | 94.8% | 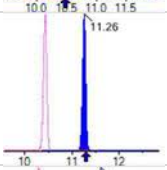 | 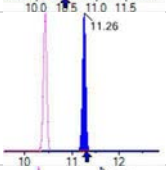 | |
| PFDS | ( 599.0 / 80.0 ) 4626889<br>( 599.0 / 99.0 ) 1224595 | ( 11.99 , 1.15 )<br>( N/A , -0.05 , -0.1) | 3325.3<br>2527.8 | 0.2647<br>97.3<br>105.6 | 4.7478<br>[ 4.8155 ] | 98.6% | 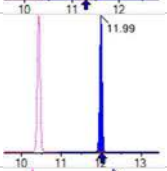 | 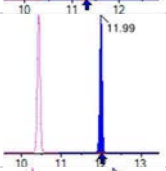 | |
| PFDoS | ( 699.0 / 80.0 ) 3989232<br>( 699.0 / 99.0 ) 932806 | ( 12.93 , 1.24 )<br>( N/A , -0.02 , 0.0) | 4528.8<br>3625.1 | 0.2338<br>100.1<br>103.3 | 4.6434<br>[ 4.8478 ] | 95.8% | 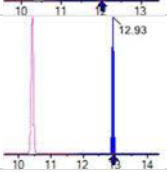 | 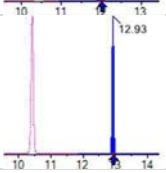 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (22)
Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6860355<br>( 327.0 / 81.0 ) 6010946 | ( 5.48 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4996.7<br>3508.7 | 0.8762<br>100.4<br>97.0 | 18.9419<br>[ 18.6906 ] | 101.3% | 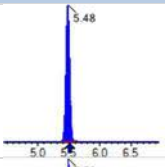 | 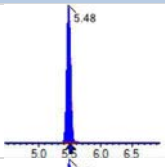 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6180999<br>( 427.0 / 81.0 ) 7908629 | ( 7.58 , 1.00 )<br>( 0.00 , N/A , 0.1) | 4121.9<br>4127.0 | 1.2795<br>102.0<br>105.3 | 18.5085<br>[ 18.9808 ] | 97.5% | 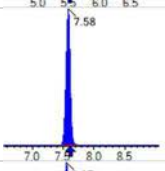 | 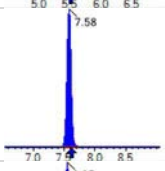 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6261299<br>( 527.0 / 81.0 ) 6536948 | ( 9.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1909.2<br>1954.4 | 1.0440<br>96.0<br>98.0 | 20.5229<br>[ 19.1658 ] | 107.1% | 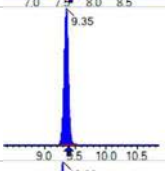 | 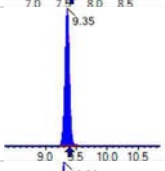 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5029574<br>( 627.0 / 81.0 ) 7171926 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1484.2<br>1431.2 | 1.4260<br>99.1<br>102.9 | 20.8975<br>[ 19.3236 ] | 108.1% | 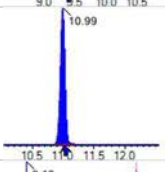 | 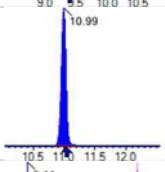 | |
| PFBSA | ( 297.9 / 78.0 ) 3176837<br>( 297.9 / 278.0 ) 5138 | ( 8.10 , 0.57 )<br>( N/A , -0.03 , -0.3) | 1409.8<br>191.5 | 0.0016<br>118.3<br>122.0 | 4.7772<br>[ 5.0000 ] | 95.5% | 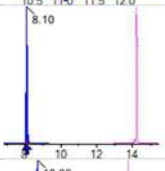 | 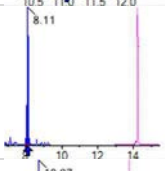 | |
| PFHxSA | ( 397.9 / 78.0 ) 4554552<br>( 397.9 / 378.0 ) 19359 | ( 10.96 , 0.75 )<br>( N/A , -0.04 , -0.3) | 1326.6<br>366.8 | 0.0043<br>104.0<br>101.6 | 5.2805<br>[ 5.0000 ] | 105.6% | 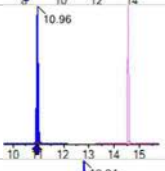 | 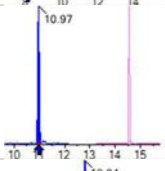 | |
| PFOSA | ( 498.0 / 78.0 ) 3026223<br>( 498.0 / 478.0 ) 43129 | ( 12.84 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2534.6<br>914.4 | 0.0143<br>101.6<br>101.1 | 4.5707<br>[ 5.0000 ] | 91.4% | 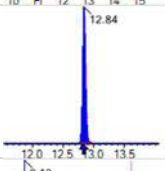 | 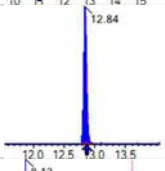 | |
| TFSI | ( 279.7 / 147.0 ) 8544956<br>( 279.7 / 211.0 ) 758193 | ( 8.13 , 0.63 )<br>( N/A , -0.06 , 0.0) | 65.5<br>54.2 | 0.0887<br>105.6<br>105.9 | 4.9013<br>[ 4.8967 ] | 100.1% | 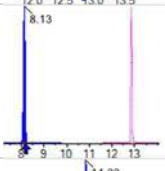 | 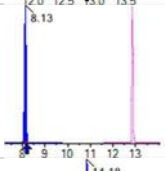 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2422092<br>( 512.0 / 169.0 ) 1814422 | ( 14.22 , 1.00 )<br>( 0.00 , N/A , 2.6) | 3662.0<br>1616.6 | 0.7491<br>100.1<br>101.9 | 18.9045<br>[ 20.0000 ] | 94.5% | 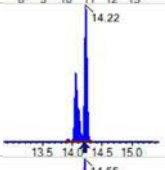 | 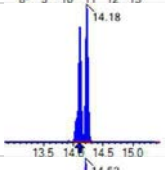 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2973289<br>( 526.0 / 169.0 ) 3733515 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 1.8) | 3950.4<br>3588.3 | 1.2557<br>101.7<br>99.4 | 18.9170<br>[ 20.0000 ] | 94.6% | 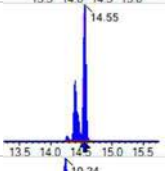 | 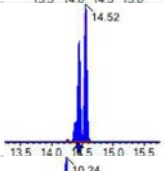 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 868233<br>( 570.0 / 483.0 ) 418417 | ( 10.24 , 1.00 )<br>( 0.01 , N/A , 0.1) | 2383.2<br>1851.0 | 0.4819<br>109.9<br>104.6 | 4.2842<br>[ 5.0000 ] | 85.7% | 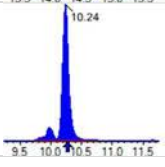 | 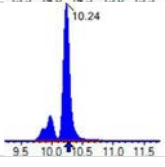 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (22)
Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 846653<br>( 584.0 / 526.0 ) 510267 | ( 10.77 , 1.00 ) ( 0.01 , N/A , -0.1) | 1692.5<br>740.7 | 0.6027<br>97.7<br>104.0 | 4.7082<br>[ 5.0000 ] | 94.2% | 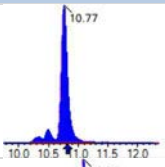 | 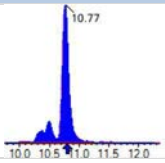 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1319442 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 2508.4 | N/A<br>0.0<br>0.0 | 19.5301<br>[ 20.0000 ] | 97.7% | 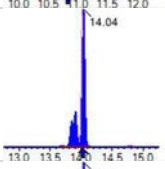 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1048167 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 3267.2 | N/A<br>0.0<br>0.0 | 19.2183<br>[ 20.0000 ] | 96.1% | 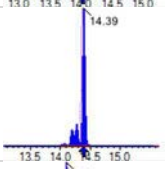 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 358095<br>( 285.0 / 185.0 ) 903918 | ( 6.46 , 1.00 ) ( 0.00 , N/A , 0.0) | 1858.3<br>2246.7 | 2.5242<br>91.3<br>88.6 | 4.8996<br>[ 5.0000 ] | 98.0% | 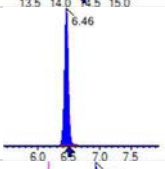 | 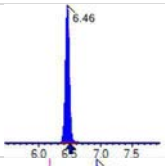 | |
| ADONA | ( 377.0 / 85.0 ) 3812691<br>( 377.0 / 251.0 ) 381519 | ( 7.53 , 1.17 ) ( N/A , -0.06 , 0.0) | 2286.5<br>1286.5 | 0.1001<br>98.2<br>100.5 | 4.4714<br>[ 4.7135 ] | 94.9% | 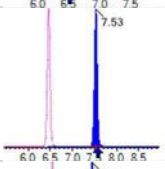 | 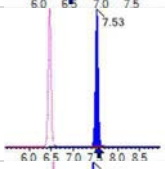 | |
| PFEESA | ( 315.0 / 135.0 ) 1510312<br>( 315.0 / 83.0 ) 902324 | ( 6.88 , 1.15 ) ( N/A , -0.06 , 0.0) | 3776.8<br>1900.2 | 0.5974<br>107.2<br>103.7 | 7.7129<br>[ 8.9246 ] | 86.4% | 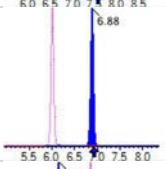 | 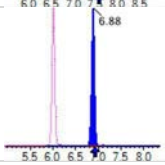 | |
| PFMPA | ( 229.0 / 85.0 ) 718399 | ( 4.11 , 0.86 ) ( N/A , -0.03 , 0.0) | 8041.0 | N/A<br>0.0<br>0.0 | 10.5070<br>[ 10.0000 ] | 105.1% | 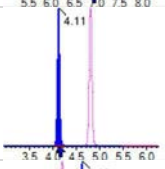 | | |
| PFMBA | ( 279.0 / 85.0 ) 1754430 | ( 5.16 , 1.08 ) ( N/A , -0.04 , 0.0) | 6272.2 | N/A<br>0.0<br>0.0 | 9.4409<br>[ 10.0000 ] | 94.4% | 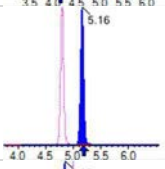 | | |
| NFDHA | ( 295.0 / 201.0 ) 901058<br>( 295.0 / 85.0 ) 966953 | ( 5.87 , 0.98 ) ( N/A , -0.04 , -0.1) | 3093.6<br>2904.8 | 1.0731<br>99.5<br>105.1 | 8.8515<br>[ 10.0000 ] | 88.5% | 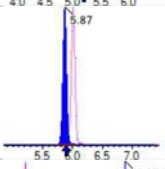 | 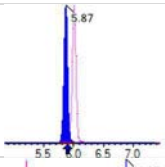 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3726326<br>( 533.0 / 353.0 ) 1190222 | ( 11.07 , 1.71 ) ( N/A , -0.06 , 0.0) | 2747.5<br>2716.1 | 0.3194<br>102.1<br>100.4 | 4.0460<br>[ 4.6663 ] | 86.7% | 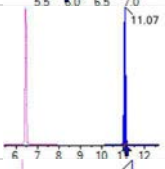 | 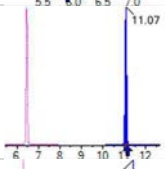 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2907476<br>( 633.0 / 453.0 ) 997435 | ( 12.42 , 1.92 ) ( N/A , -0.03 , 0.0) | 4811.3<br>3264.9 | 0.3431<br>103.3<br>103.4 | 4.1051<br>[ 4.7160 ] | 87.0% | 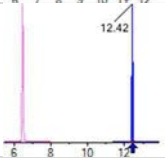 | 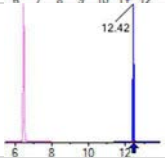 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (22)
Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1977146<br>( 461.0 / 381.2 ) 801992 | ( 9.46 , 0.91 )<br>( N/A , -0.06 , 0.0) | 3210.5<br>3380.0 | 0.4056<br>101.8<br>101.0 | 4.1115<br>[ 4.6193 ] | 89.0% | 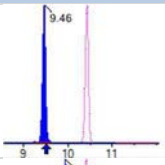 | 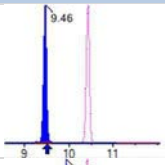 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 230917<br>( 241.0 / 117.0 ) 537602 | ( 4.38 , 0.91 )<br>( N/A , -0.03 , 0.0) | 2606.0<br>2636.2 | 2.3281<br>110.5<br>104.8 | 18.8394<br>[ 20.0000 ] | 94.2% | 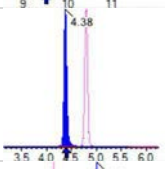 | 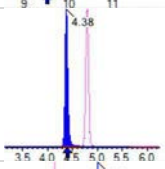 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1370754<br>( 341.0 / 217.0 ) 2053982 | ( 6.92 , 1.15 )<br>( N/A , -0.05 , 0.0) | 1284.5<br>1206.8 | 1.4984<br>98.6<br>100.0 | 18.1271<br>[ 20.0000 ] | 90.6% | 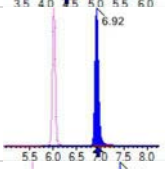 | 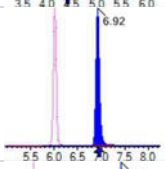 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2461876<br>( 441.0 / 337.0 ) 2196988 | ( 9.30 , 1.55 )<br>( N/A , -0.06 , 0.0) | 5762.9<br>6939.7 | 0.8924<br>97.3<br>97.4 | 19.8390<br>[ 20.0000 ] | 99.2% | 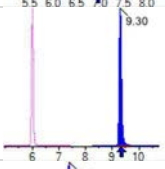 | 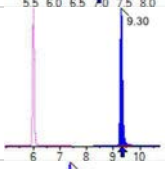 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1746664<br>( 357.2 / 243.0 ) 180142 | ( 6.74 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1391.6<br>990.0 | 0.1031<br>93.5<br>97.8 | 5.3199<br>[ 5.0000 ] | 106.4% | 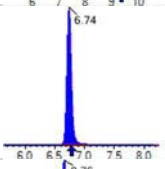 | 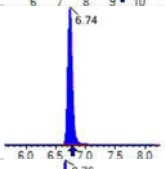 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1206890<br>( 457.2 / 343.0 ) 50482 | ( 8.76 , 1.00 )<br>( -0.01 , N/A , 0.0) | 828.6<br>454.3 | 0.0418<br>100.9<br>97.7 | 5.2204<br>[ 5.0000 ] | 104.4% | 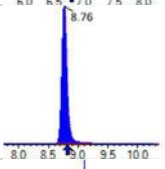 | 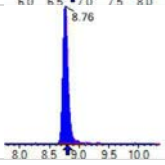 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 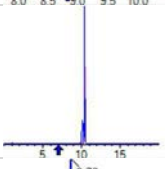 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 248497 | ( 3.73 , N/A )<br>( N/A , -0.02 , N/A ) | 1382.0 | N/A | 1.0422<br>[ 1.0000 ] | 104.2%<br>{ 97.4% } | 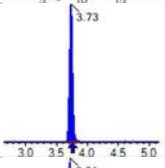 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 121275 | ( 6.01 , N/A )<br>( N/A , -0.04 , N/A ) | 934961.9 | N/A | 0.9560<br>[ 1.0000 ] | 95.6%<br>{ 99.5% } | 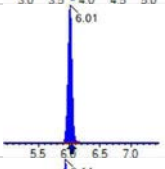 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 402608 | ( 8.14 , N/A )<br>( N/A , -0.06 , N/A ) | 4905.9 | N/A | 1.0184<br>[ 1.0000 ] | 101.8%<br>{ 101.6% } | 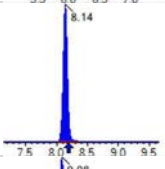 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 281521 | ( 9.08 , N/A )<br>( N/A , -0.06 , N/A ) | 1521.3 | N/A | 0.9898<br>[ 1.0000 ] | 99.0%<br>{ 101.6% } | 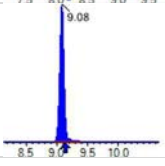 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (22)
Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274334 | ( 9.98 , N/A ) ( N/A , -0.06 , N/A ) | 25534.9 | N/A | 0.9394 [ 1.0000 ] | 93.9% { 95.1% } | 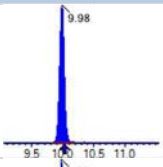 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 949586 | ( 8.57 , N/A ) ( N/A , -0.06 , N/A ) | 4510.8 | N/A | 1.0006 [ 1.0000 ] | 100.1% { 100.7% } | 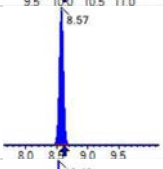 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 717368 | ( 10.43 , N/A ) ( N/A , -0.07 , N/A ) | 2099.7 | N/A | 0.9419 [ 1.0000 ] | 94.2% { 94.3% } | 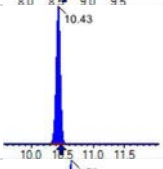 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2179489 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 33949.0 | N/A | 7.6775 [ 8.0000 ] | 96.0% { 99.8% } | 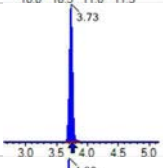 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 853120 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5488.2 | N/A | 3.7702 [ 4.0000 ] | 94.3% { 94.6% } | 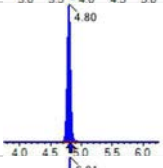 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 567626 | ( 6.01 , N/A ) ( N/A , -0.04 , N/A ) | 6850.6 | N/A | 2.0514 [ 2.0000 ] | 102.6% { 99.0% } | 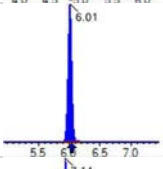 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 601225 | ( 7.14 , N/A ) ( N/A , -0.05 , N/A ) | 6015.4 | N/A | 1.9533 [ 2.0000 ] | 97.7% { 97.7% } | 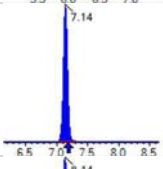 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 784064 | ( 8.14 , N/A ) ( N/A , -0.06 , N/A ) | 4700.1 | N/A | 1.8176 [ 2.0000 ] | 90.9% { 97.3% } | 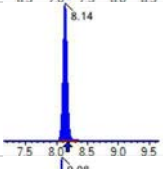 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 259143 | ( 9.08 , N/A ) ( N/A , -0.06 , N/A ) | 2335.9 | N/A | 0.9388 [ 1.0000 ] | 93.9% { 98.2% } | 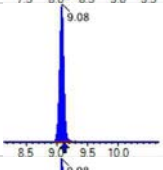 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 299057 | ( 9.98 , N/A ) ( N/A , -0.06 , N/A ) | 892.1 | N/A | 0.9728 [ 1.0000 ] | 97.3% { 97.4% } | 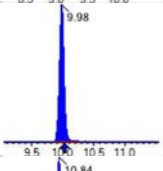 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 355042 | ( 10.84 , N/A ) ( N/A , -0.06 , N/A ) | 1274.9 | N/A | 0.9816 [ 1.0000 ] | 98.2% { 96.3% } | 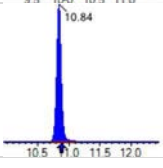 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV2 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 371366 | ( 11.67 , N/A ) ( N/A , -0.05 , N/A ) | 1564.6 | N/A | 1.0082 [ 1.0000 ] | 100.8% { 96.1% } | 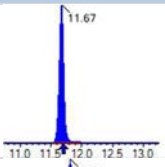  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 316187 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1496.9 | N/A | 1.0080 [ 1.0000 ] | 100.8% { 101.4% } | 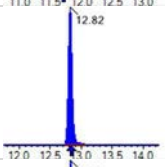  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 498214 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2702.2 | N/A | 1.8604 [ 2.0000 ] | 93.0% { 102.3% } | 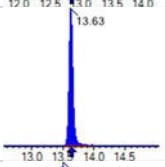  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1629792 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 1876.8 | N/A | 1.8996 [ 2.0000 ] | 95.0% { 100.8% } | 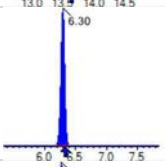  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1267340 | ( 8.57 , N/A ) ( N/A , -0.06 , N/A ) | 3972.8 | N/A | 1.8506 [ 2.0000 ] | 92.5% { 96.5% } | 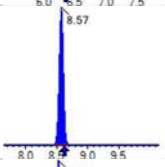  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1476051 | ( 10.43 , N/A ) ( N/A , -0.07 , N/A ) | 1534.1 | N/A | 1.9083 [ 2.0000 ] | 95.4% { 96.5% } | 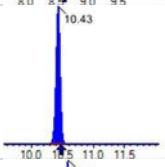  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 552010 | ( 5.48 , N/A ) ( N/A , -0.04 , N/A ) | 96.9 | N/A | 3.7292 [ 4.0000 ] | 93.2% { 89.1% } | 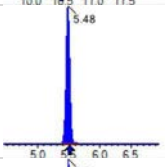  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1613166 | ( 7.58 , N/A ) ( N/A , -0.05 , N/A ) | 3345.6 | N/A | 3.6415 [ 4.0000 ] | 91.0% { 91.2% } | 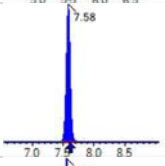  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1284996 | ( 9.36 , N/A ) ( N/A , -0.06 , N/A ) | 1278.7 | N/A | 3.6985 [ 4.0000 ] | 92.5% { 92.8% } | 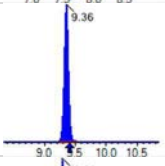  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2498106 | ( 10.99 , N/A ) ( N/A , -0.06 , N/A ) | 1267.6 | N/A | 6.8798 [ 8.0000 ] | 86.0% { 92.8% } | 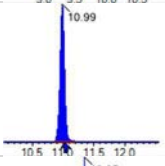  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1324157 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2151.3 | N/A | 1.9318 [ 2.0000 ] | 96.6% { 97.4% } | 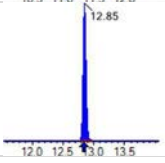  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV2 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 20:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 258074 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1784.8 | N/A | 1.7752 [ 2.0000 ] | 88.8% { 94.1% } | 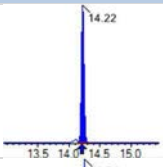 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 280686 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 2394.6 | N/A | 1.8004 [ 2.0000 ] | 90.0% { 93.3% } | 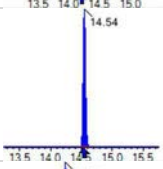 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 849936 | ( 10.24 , N/A ) ( N/A , -0.06 , N/A ) | 2129.7 | N/A | 4.2706 [ 4.0000 ] | 106.8% { 95.7% } | 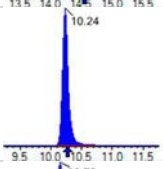 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 735338 | ( 10.76 , N/A ) ( N/A , -0.06 , N/A ) | 2045.8 | N/A | 4.0539 [ 4.0000 ] | 101.3% { 89.3% } | 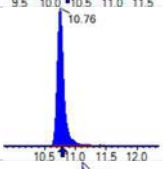 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1231808 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1700.0 | N/A | 18.8545 [ 20.0000 ] | 94.3% { 101.7% } | 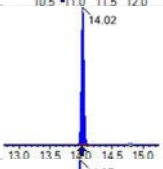 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1227728 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3708.8 | N/A | 18.5148 [ 20.0000 ] | 92.6% { 97.3% } | 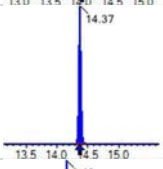 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 991530 | ( 6.46 , N/A ) ( N/A , -0.05 , N/A ) | 2581.2 | N/A | 7.8663 [ 8.0000 ] | 98.3% { 99.9% } | 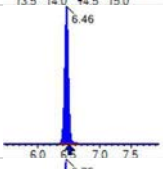 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 617651 | ( 6.75 , N/A ) ( N/A , -0.05 , N/A ) | 1270.0 | N/A | 2.0766 [ 2.0000 ] | 103.8% { 96.4% } | 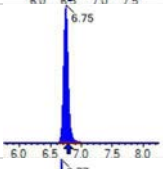 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 566897 | ( 8.77 , N/A ) ( N/A , -0.06 , N/A ) | 783.7 | N/A | 2.0937 [ 2.0000 ] | 104.7% { 96.4% } | 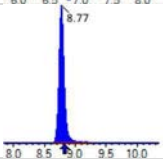 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV3A | PFBA | 20.0A | 17.9A | 89.5A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.34A | 93.4A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.81A | 96.3A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.58A | 91.6A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.94A | 98.7A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.64A | 92.8A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.54A | 90.9A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.97A | 99.3A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.82A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 5.02A | 100A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.98A | 99.5A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.50A | 89.9A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.54A | 70.7A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.89A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.46A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.09A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 5.05A | 106A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.46A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.84A | 101A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.98A | 103A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.26A | 108A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.3A | 97.2A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 21.4A | 113A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.5A | 96.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 22.3A | 116A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.65A | 93.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.7A | 93.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.1A | 90.4A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.61A | 92.2A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV3A | NMeFOSEA | 20.0A | 18.4A | 92.2A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 20.1A | 101A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.61A | 92.2A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 5.01A | 106A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.64A | 85.8A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.1A | 101A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.30A | 93.0A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.43A | 94.3A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.46A | 95.3A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.61A | 97.6A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.1A | 100A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.8A | 104A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 22.2A | 111A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (39)
Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2240640<br>( 163.0 / 69.0 ) 61062 | ( 2.77 , 0.75 )<br>( N/A , -0.02 , 0.1) | 16176.5<br>3163.3 | 0.0273<br>100.3<br>100.9 | 9.7225<br>[ 10.0000 ] | 97.2% | 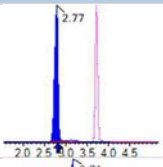 | 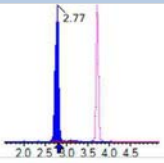 | |
| PFBA | ( 213.0 / 169.0 ) 4362811 | ( 3.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3089.6 | N/A<br>0.0<br>0.0 | 17.9077<br>[ 20.0000 ] | 89.5% | 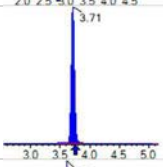 | | |
| PFPeA | ( 263.0 / 219.0 ) 1702338<br>( 263.0 / 69.0 ) 20197 | ( 4.77 , 1.00 )<br>( 0.00 , N/A , 0.1) | 7053.9<br>414.3 | 0.0119<br>99.4<br>92.2 | 9.3428<br>[ 10.0000 ] | 93.4% | 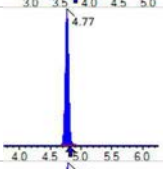 | 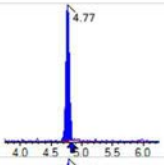 | |
| PFHxA | ( 313.0 / 269.0 ) 1057399<br>( 313.0 / 119.0 ) 119988 | ( 5.98 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2632.7<br>1259.0 | 0.1135<br>97.7<br>102.2 | 4.8143<br>[ 5.0000 ] | 96.3% | 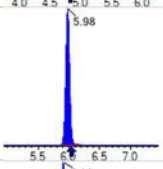 | 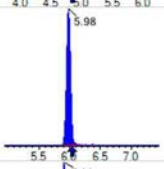 | |
| PFHpA | ( 363.0 / 319.0 ) 1155793<br>( 363.0 / 169.0 ) 369835 | ( 7.11 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1814.0<br>1236.9 | 0.3200<br>105.6<br>109.1 | 4.5814<br>[ 5.0000 ] | 91.6% | 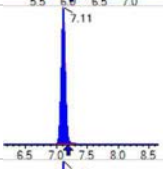 | 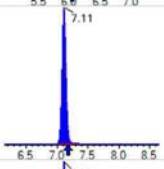 | |
| PFOA | ( 413.0 / 369.0 ) 1684438<br>( 413.0 / 169.0 ) 552357 | ( 8.11 , 1.00 )<br>( 0.00 , N/A , 0.1) | 848.3<br>1311.7 | 0.3279<br>89.7<br>95.6 | 4.9365<br>[ 5.0000 ] | 98.7% | 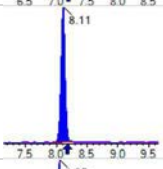 | 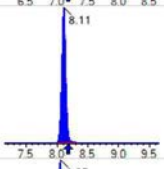 | |
| PFNA | ( 463.0 / 419.0 ) 984907<br>( 463.0 / 169.0 ) 259884 | ( 9.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1176.7<br>1092.6 | 0.2639<br>103.4<br>99.2 | 4.6384<br>[ 5.0000 ] | 92.8% | 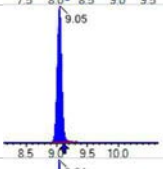 | 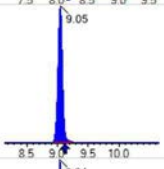 | |
| PFDA | ( 513.0 / 469.0 ) 1176594<br>( 513.0 / 169.0 ) 144843 | ( 9.94 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2881.2<br>1818.0 | 0.1231<br>105.1<br>100.6 | 4.5448<br>[ 5.0000 ] | 90.9% | 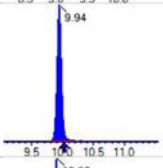 | 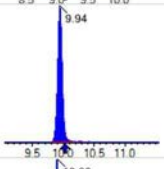 | |
| PFUnA | ( 563.0 / 519.0 ) 1366989<br>( 563.0 / 169.0 ) 198488 | ( 10.80 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1083.4<br>1132.2 | 0.1452<br>102.5<br>96.3 | 4.9662<br>[ 5.0000 ] | 99.3% | 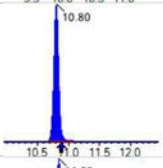 | 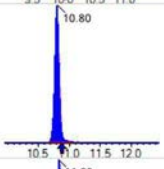 | |
| PFDoA | ( 613.0 / 569.0 ) 1513986<br>( 613.0 / 169.0 ) 224965 | ( 11.63 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1907.3<br>943.2 | 0.1486<br>94.0<br>99.5 | 4.8175<br>[ 5.0000 ] | 96.4% | 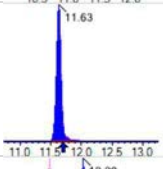 | 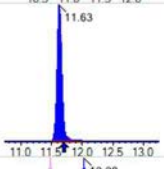 | |
| PFTrDA | ( 663.0 / 619.0 ) 1543368<br>( 663.0 / 169.0 ) 411837 | ( 12.29 , 1.06 )<br>( N/A , -0.06 , 0.0) | 1393.0<br>1312.6 | 0.2668<br>103.7<br>100.7 | 5.0204<br>[ 5.0000 ] | 100.4% | 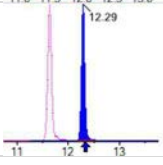 | 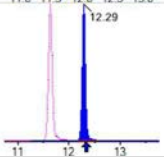 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (39)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1270440<br>( 713.0 / 169.0 ) 328460 | ( 12.79 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1750.6<br>1178.3 | 0.2585<br>95.8<br>97.4 | 4.9751<br>[ 5.0000 ] | 99.5% | 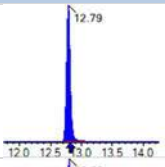 | 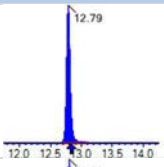 | |
| PFHxDA | ( 813.0 / 769.0 ) 913639<br>( 813.0 / 169.0 ) 235599 | ( 13.60 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1722.9<br>1070.4 | 0.2579<br>105.4<br>101.5 | 4.4961<br>[ 5.0000 ] | 89.9% | 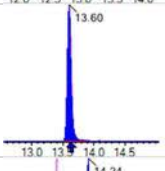 | 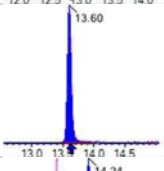 | |
| PFODA | ( 913.0 / 869.0 ) 449468<br>( 913.0 / 169.0 ) 151073 | ( 14.24 , 1.05 )<br>( N/A , -0.03 , 0.0) | 1123.3<br>509.3 | 0.3361<br>93.8<br>98.6 | 3.5356<br>[ 5.0000 ] | 70.7% | 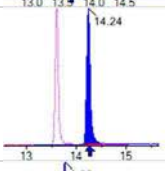 | 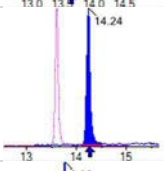 | |
| PFBS | ( 299.0 / 80.0 ) 1430415<br>( 299.0 / 99.0 ) 1047200 | ( 6.26 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4125.4<br>3421.8 | 0.7321<br>103.5<br>97.0 | 3.8939<br>[ 4.4237 ] | 88.0% | 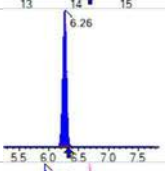 | 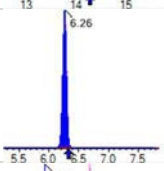 | |
| PFPeS | ( 349.0 / 80.0 ) 4011958<br>( 349.0 / 99.0 ) 1411596 | ( 7.49 , 0.88 )<br>( N/A , -0.09 , 0.1) | 2764.7<br>2511.1 | 0.3518<br>97.8<br>101.0 | 4.4608<br>[ 4.6919 ] | 95.1% | 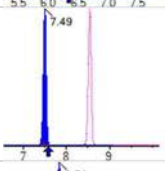 | 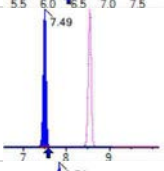 | |
| PFHxS | ( 399.0 / 80.0 ) 4273792<br>( 399.0 / 99.0 ) 1426826 | ( 8.54 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2695.4<br>3192.7 | 0.3339<br>104.8<br>105.2 | 4.0911<br>[ 4.5549 ] | 89.8% | 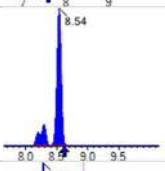 | 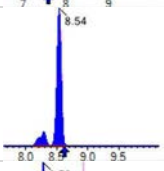 | |
| PFHpS | ( 449.0 / 80.0 ) 3714126<br>( 449.0 / 99.0 ) 948799 | ( 9.50 , 0.91 )<br>( N/A , -0.10 , 0.0) | 2188.5<br>3183.5 | 0.2555<br>96.5<br>97.6 | 5.0514<br>[ 4.7570 ] | 106.2% | 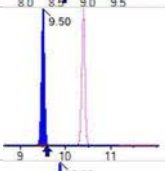 | 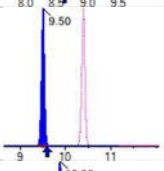 | |
| PFOS | ( 499.0 / 80.0 ) 3157873<br>( 499.0 / 99.0 ) 750445 | ( 10.39 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1983.2<br>4907.4 | 0.2376<br>101.7<br>103.7 | 4.4556<br>[ 4.6375 ] | 96.1% | 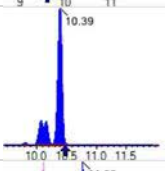 | 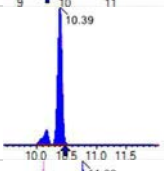 | |
| PFNS | ( 549.0 / 80.0 ) 3211459<br>( 549.0 / 99.0 ) 875436 | ( 11.22 , 1.08 )<br>( N/A , -0.10 , 0.0) | 2828.8<br>2238.6 | 0.2726<br>100.0<br>98.5 | 4.8395<br>[ 4.7994 ] | 100.8% | 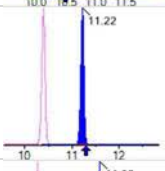 | 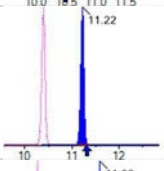 | |
| PFDS | ( 599.0 / 80.0 ) 4038665<br>( 599.0 / 99.0 ) 1067739 | ( 11.96 , 1.15 )<br>( N/A , -0.08 , 0.0) | 2469.0<br>1677.7 | 0.2644<br>97.2<br>105.5 | 4.9842<br>[ 4.8155 ] | 103.5% | 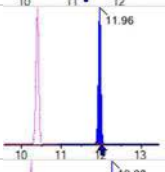 | 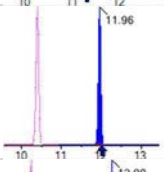 | |
| PFDoS | ( 699.0 / 80.0 ) 3754314<br>( 699.0 / 99.0 ) 879056 | ( 12.90 , 1.24 )<br>( N/A , -0.05 , 0.0) | 3346.3<br>2867.2 | 0.2341<br>100.2<br>103.4 | 5.2558<br>[ 4.8478 ] | 108.4% | 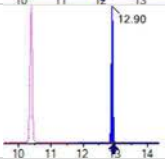 | 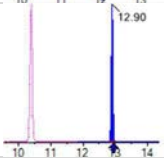 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (39)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5923403<br>( 327.0 / 81.0 ) 5473622 | ( 5.45 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5479.7<br>3637.9 | 0.9241<br>105.9<br>102.3 | 18.2667<br>[ 18.6906 ] | 97.7% | 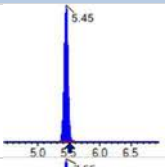 | 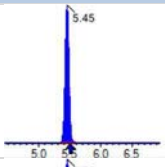 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5714112<br>( 427.0 / 81.0 ) 7610209 | ( 7.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 5493.9<br>4854.4 | 1.3318<br>106.2<br>109.6 | 21.4221<br>[ 18.9808 ] | 112.9% | 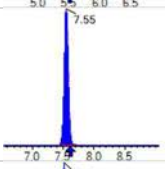 | 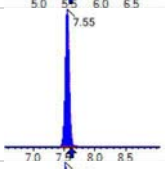 | |
| 8:2FTS | ( 527.0 / 507.0 ) 4921143<br>( 527.0 / 81.0 ) 5411415 | ( 9.32 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1639.5<br>1709.9 | 1.0996<br>101.1<br>103.2 | 18.5287<br>[ 19.1658 ] | 96.7% | 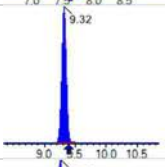 | 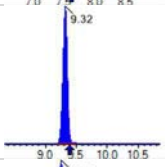 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4660055<br>( 627.0 / 81.0 ) 6396369 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1658.6<br>1415.4 | 1.3726<br>95.3<br>99.0 | 22.3021<br>[ 19.3236 ] | 115.4% | 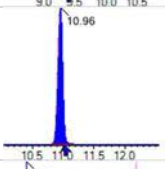 | 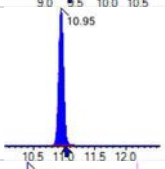 | |
| PFBSA | ( 297.9 / 78.0 ) 2570180<br>( 297.9 / 278.0 ) 3953 | ( 8.09 , 0.57 )<br>( N/A , -0.05 , -0.3) | 1620.7<br>393.8 | 0.0015<br>112.5<br>116.0 | 4.1457<br>[ 5.0000 ] | 82.9% | 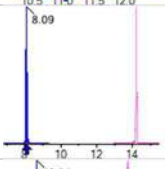 | 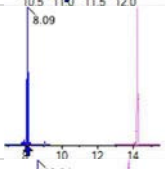 | |
| PFHxSA | ( 397.9 / 78.0 ) 3963786<br>( 397.9 / 378.0 ) 15898 | ( 10.94 , 0.75 )<br>( N/A , -0.06 , 0.0) | 1905.1<br>355.2 | 0.0040<br>98.2<br>95.8 | 4.9889<br>[ 5.0000 ] | 99.8% | 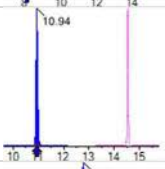 | 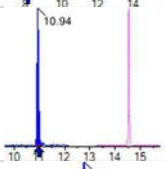 | |
| PFOSA | ( 498.0 / 78.0 ) 2761761<br>( 498.0 / 478.0 ) 38545 | ( 12.83 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2793.0<br>809.2 | 0.0140<br>99.5<br>99.0 | 4.6546<br>[ 5.0000 ] | 93.1% | 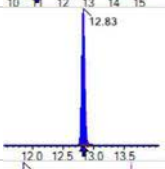 | 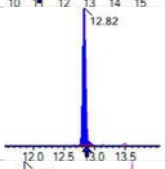 | |
| TFSI | ( 279.7 / 147.0 ) 6760978<br>( 279.7 / 211.0 ) 607200 | ( 8.10 , 0.63 )<br>( N/A , -0.10 , 0.0) | 56.1<br>52.5 | 0.0898<br>106.9<br>107.2 | 4.3274<br>[ 4.8967 ] | 88.4% | 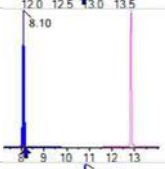 | 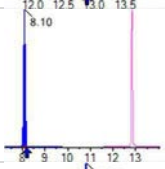 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2238645<br>( 512.0 / 169.0 ) 1662900 | ( 14.21 , 1.00 )<br>( 0.00 , N/A , 2.5) | 3079.4<br>1490.0 | 0.7428<br>99.3<br>101.0 | 18.7421<br>[ 20.0000 ] | 93.7% | 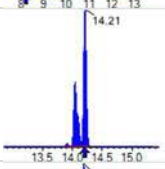 | 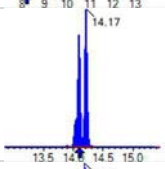 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2617573<br>( 526.0 / 169.0 ) 3308673 | ( 14.54 , 1.00 )<br>( 0.01 , N/A , 1.9) | 4269.8<br>3738.0 | 1.2640<br>102.4<br>100.0 | 18.0791<br>[ 20.0000 ] | 90.4% | 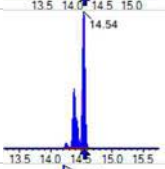 | 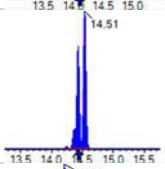 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 823452<br>( 570.0 / 483.0 ) 375009 | ( 10.21 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2277.1<br>1886.0 | 0.4554<br>103.9<br>98.8 | 4.6096<br>[ 5.0000 ] | 92.2% | 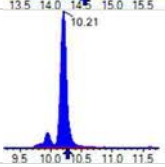 | 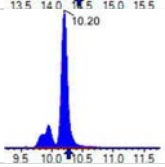 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (39)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 801932<br>( 584.0 / 526.0 ) 478346 | ( 10.73 , 1.00 ) ( 0.01 , N/A , 0.1) | 1789.8<br>718.8 | 0.5965<br>96.7<br>102.9 | 4.7593<br>[ 5.0000 ] | 95.2% | 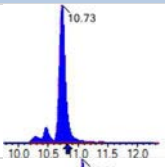 | 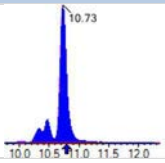 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1147573 | ( 14.03 , 1.00 ) ( 0.02 , N/A , 0.0) | 2423.3 | N/A<br>0.0<br>0.0 | 18.4364<br>[ 20.0000 ] | 92.2% | 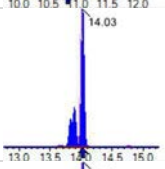 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 920788 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 3120.0 | N/A<br>0.0<br>0.0 | 20.1092<br>[ 20.0000 ] | 100.5% | 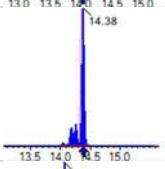 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 273932<br>( 285.0 / 185.0 ) 745882 | ( 6.43 , 1.00 ) ( 0.00 , N/A , 0.0) | 1756.0<br>1907.6 | 2.7229<br>98.5<br>95.5 | 4.6114<br>[ 5.0000 ] | 92.2% | 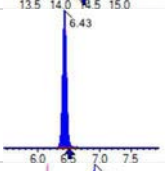 | 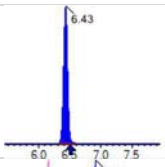 | |
| ADONA | ( 377.0 / 85.0 ) 3472373<br>( 377.0 / 251.0 ) 366325 | ( 7.50 , 1.17 ) ( N/A , -0.09 , 0.0) | 1997.3<br>1801.7 | 0.1055<br>103.5<br>105.9 | 5.0104<br>[ 4.7135 ] | 106.3% | 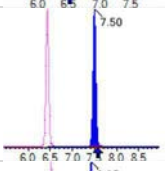 | 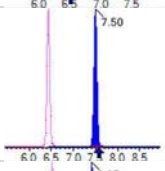 | |
| PFEESA | ( 315.0 / 135.0 ) 1204827<br>( 315.0 / 83.0 ) 762433 | ( 6.85 , 1.15 ) ( N/A , -0.09 , 0.1) | 4345.1<br>1365.2 | 0.6328<br>113.5<br>109.8 | 7.6386<br>[ 8.9246 ] | 85.6% | 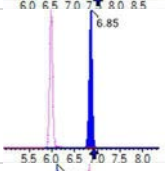 | 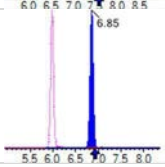 | |
| PFMPA | ( 229.0 / 85.0 ) 586375 | ( 4.09 , 0.86 ) ( N/A , -0.05 , 0.0) | 8553.1 | N/A<br>0.0<br>0.0 | 10.1414<br>[ 10.0000 ] | 101.4% | 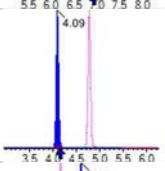 | | |
| PFMBA | ( 279.0 / 85.0 ) 1461404 | ( 5.13 , 1.08 ) ( N/A , -0.06 , 0.0) | 5709.0 | N/A<br>0.0<br>0.0 | 9.2994<br>[ 10.0000 ] | 93.0% | 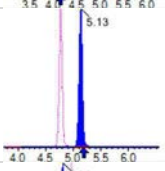 | | |
| NFDHA | ( 295.0 / 201.0 ) 773380<br>( 295.0 / 85.0 ) 826805 | ( 5.84 , 0.98 ) ( N/A , -0.07 , -0.1) | 2883.1<br>2989.4 | 1.0691<br>99.1<br>104.7 | 9.4318<br>[ 10.0000 ] | 94.3% | 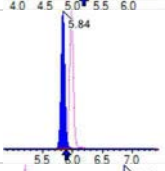 | 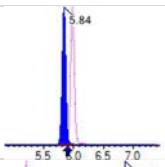 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3338528<br>( 533.0 / 353.0 ) 1052358 | ( 11.03 , 1.72 ) ( N/A , -0.10 , 0.0) | 3921.2<br>2433.6 | 0.3152<br>100.7<br>99.1 | 4.4600<br>[ 4.6663 ] | 95.6% | 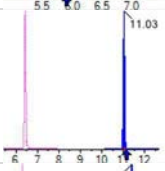 | 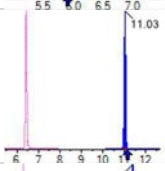 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2650967<br>( 633.0 / 453.0 ) 891530 | ( 12.39 , 1.93 ) ( N/A , -0.06 , 0.1) | 3101.8<br>2372.7 | 0.3363<br>101.3<br>101.4 | 4.6051<br>[ 4.7160 ] | 97.6% | 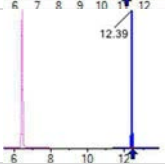 | 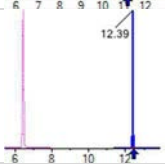 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (39)
Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1670035<br>( 461.0 / 381.2 ) 676778 | ( 9.42 , 0.91 )<br>( N/A , -0.10 , 0.0) | 4538.2<br>3254.6 | 0.4052<br>101.7<br>100.9 | 4.1768<br>[ 4.6193 ] | 90.4% | 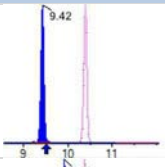 | 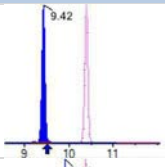 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 208018<br>( 241.0 / 117.0 ) 461646 | ( 4.36 , 0.91 )<br>( N/A , -0.05 , 0.2) | 2318.4<br>2731.6 | 2.2193<br>105.3<br>99.9 | 20.0687<br>[ 20.0000 ] | 100.3% | 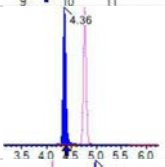 | 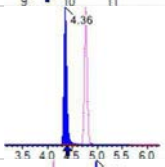 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1266006<br>( 341.0 / 217.0 ) 1870884 | ( 6.90 , 1.15 )<br>( N/A , -0.07 , 0.0) | 1226.3<br>1325.9 | 1.4778<br>97.3<br>98.6 | 20.7847<br>[ 20.0000 ] | 103.9% | 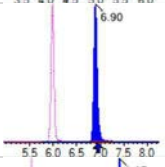 | 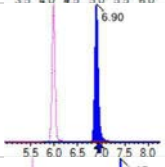 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2223435<br>( 441.0 / 337.0 ) 1906286 | ( 9.27 , 1.55 )<br>( N/A , -0.09 , 0.0) | 6372.3<br>9312.5 | 0.8574<br>93.5<br>93.6 | 22.2442<br>[ 20.0000 ] | 111.2% | 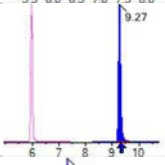 | 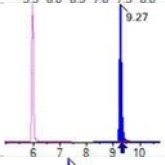 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1601725<br>( 357.2 / 243.0 ) 167529 | ( 6.71 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1322.1<br>926.7 | 0.1046<br>94.9<br>99.2 | 5.4826<br>[ 5.0000 ] | 109.7% | 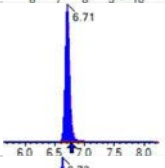 | 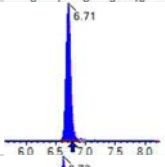 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1058025<br>( 457.2 / 343.0 ) 47059 | ( 8.73 , 1.00 )<br>( -0.01 , N/A , 0.1) | 922.0<br>462.6 | 0.0445<br>107.3<br>103.9 | 5.2524<br>[ 5.0000 ] | 105.0% | 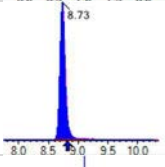 | 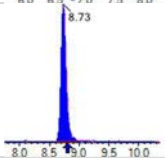 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 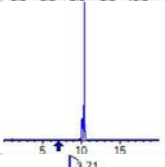 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 217030 | ( 3.71 , N/A )<br>( N/A , -0.04 , N/A ) | 1183.1 | N/A | 0.9102<br>[ 1.0000 ] | 91.0%<br>{ 85.1% } | 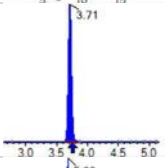 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 108151 | ( 5.98 , N/A )<br>( N/A , -0.07 , N/A ) | 12840.9 | N/A | 0.8526<br>[ 1.0000 ] | 85.3%<br>{ 88.7% } | 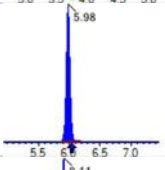 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 331997 | ( 8.11 , N/A )<br>( N/A , -0.09 , N/A ) | 4924.5 | N/A | 0.8398<br>[ 1.0000 ] | 84.0%<br>{ 83.8% } | 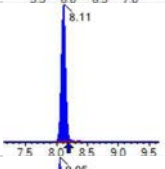 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 226761 | ( 9.05 , N/A )<br>( N/A , -0.09 , N/A ) | 1149.1 | N/A | 0.7973<br>[ 1.0000 ] | 79.7%<br>{ 81.8% } | 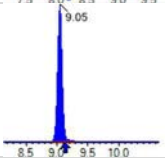 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (39)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 234305 | ( 9.95 , N/A ) ( N/A , -0.10 , N/A ) | 3122.1 | N/A | 0.8023 [ 1.0000 ] | 80.2% { 81.2% } | 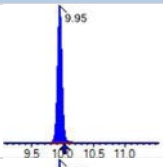 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 872215 | ( 8.54 , N/A ) ( N/A , -0.09 , N/A ) | 5116.2 | N/A | 0.9191 [ 1.0000 ] | 91.9% { 92.5% } | 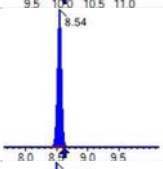 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 621037 | ( 10.39 , N/A ) ( N/A , -0.10 , N/A ) | 2062.2 | N/A | 0.8154 [ 1.0000 ] | 81.5% { 81.6% } | 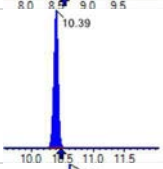 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1955220 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 34157.6 | N/A | 7.8861 [ 8.0000 ] | 98.6% { 89.6% } | 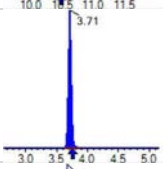 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 721443 | ( 4.77 , N/A ) ( N/A , -0.06 , N/A ) | 5883.2 | N/A | 3.5752 [ 4.0000 ] | 89.4% { 80.0% } | 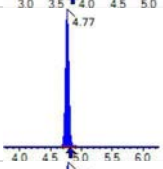 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 457217 | ( 5.98 , N/A ) ( N/A , -0.07 , N/A ) | 6293.0 | N/A | 1.8529 [ 2.0000 ] | 92.6% { 79.7% } | 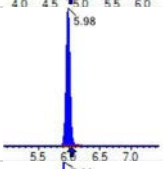 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 514169 | ( 7.11 , N/A ) ( N/A , -0.08 , N/A ) | 3568.5 | N/A | 1.8731 [ 2.0000 ] | 93.7% { 83.5% } | 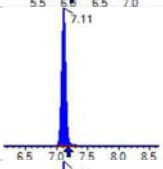 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 694173 | ( 8.11 , N/A ) ( N/A , -0.09 , N/A ) | 4073.4 | N/A | 1.9514 [ 2.0000 ] | 97.6% { 86.1% } | 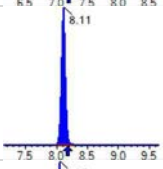 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 211268 | ( 9.05 , N/A ) ( N/A , -0.09 , N/A ) | 3016.0 | N/A | 0.9502 [ 1.0000 ] | 95.0% { 80.1% } | 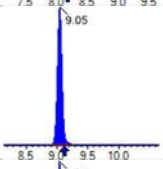 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 253373 | ( 9.94 , N/A ) ( N/A , -0.10 , N/A ) | 920.0 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 82.6% } | 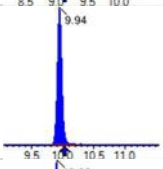 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 297599 | ( 10.80 , N/A ) ( N/A , -0.10 , N/A ) | 978.1 | N/A | 0.9634 [ 1.0000 ] | 96.3% { 80.8% } | 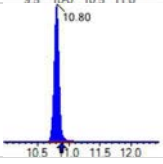 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (39)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 312379 | ( 11.63 , N/A ) ( N/A , -0.09 , N/A ) | 1494.9 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 80.8% } | 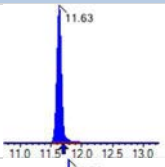 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 272657 | ( 12.79 , N/A ) ( N/A , -0.05 , N/A ) | 1499.7 | N/A | 1.0177 [ 1.0000 ] | 101.8% { 87.5% } | 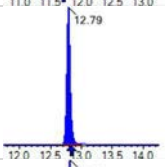 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 426089 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2279.2 | N/A | 1.8629 [ 2.0000 ] | 93.1% { 87.5% } | 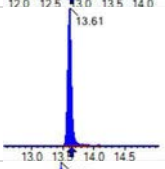 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1415020 | ( 6.27 , N/A ) ( N/A , -0.08 , N/A ) | 1365.3 | N/A | 1.7956 [ 2.0000 ] | 89.8% { 87.5% } | 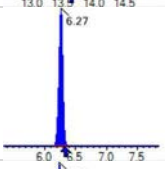 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1175243 | ( 8.54 , N/A ) ( N/A , -0.09 , N/A ) | 3490.4 | N/A | 1.8684 [ 2.0000 ] | 93.4% { 89.5% } | 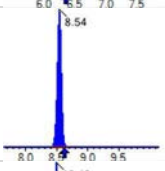 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1227284 | ( 10.40 , N/A ) ( N/A , -0.10 , N/A ) | 1487.4 | N/A | 1.8328 [ 2.0000 ] | 91.6% { 80.2% } | 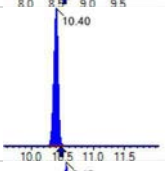 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 494236 | ( 5.45 , N/A ) ( N/A , -0.07 , N/A ) | 91.4 | N/A | 3.6350 [ 4.0000 ] | 90.9% { 79.8% } | 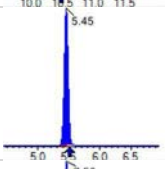 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1288481 | ( 7.56 , N/A ) ( N/A , -0.08 , N/A ) | 3743.9 | N/A | 3.1665 [ 4.0000 ] | 79.2% { 72.8% } | 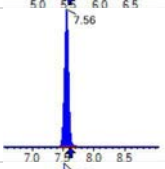 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1118657 | ( 9.32 , N/A ) ( N/A , -0.09 , N/A ) | 1499.8 | N/A | 3.5053 [ 4.0000 ] | 87.6% { 80.8% } | 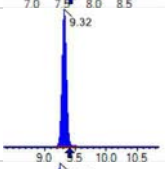 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2168799 | ( 10.95 , N/A ) ( N/A , -0.10 , N/A ) | 1678.2 | N/A | 6.5027 [ 8.0000 ] | 81.3% { 80.5% } | 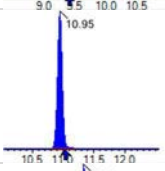 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1186664 | ( 12.83 , N/A ) ( N/A , -0.03 , N/A ) | 2960.4 | N/A | 1.9998 [ 2.0000 ] | 100.0% { 87.3% } | 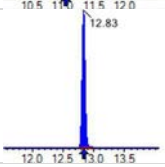 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (39)
Acquired: 2024/03/22 - 02:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 240595 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 1409.5 | N/A | 1.9116 [ 2.0000 ] | 95.6% { 87.8% } | 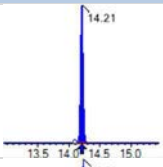  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 258557 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 2444.8 | N/A | 1.9157 [ 2.0000 ] | 95.8% { 85.9% } | 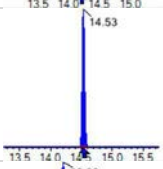  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 749194 | ( 10.20 , N/A ) ( N/A , -0.09 , N/A ) | 2194.0 | N/A | 4.3483 [ 4.0000 ] | 108.7% { 84.4% } | 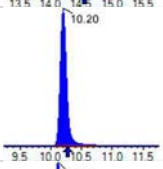  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 689006 | ( 10.72 , N/A ) ( N/A , -0.10 , N/A ) | 1980.7 | N/A | 4.3877 [ 4.0000 ] | 109.7% { 83.7% } | 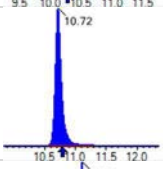  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1134905 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 2271.5 | N/A | 20.0658 [ 20.0000 ] | 100.3% { 93.7% } | 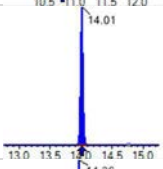  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1030747 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3192.8 | N/A | 17.9554 [ 20.0000 ] | 89.8% { 81.7% } | 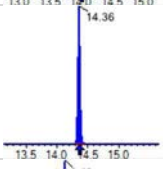  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 805885 | ( 6.43 , N/A ) ( N/A , -0.08 , N/A ) | 2338.4 | N/A | 7.1693 [ 8.0000 ] | 89.6% { 81.2% } | 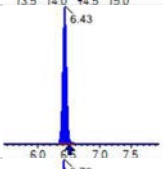  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 549587 | ( 6.72 , N/A ) ( N/A , -0.08 , N/A ) | 1492.4 | N/A | 2.1635 [ 2.0000 ] | 108.2% { 85.8% } | 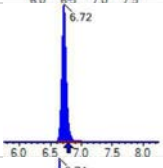  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 493940 | ( 8.74 , N/A ) ( N/A , -0.09 , N/A ) | 746.4 | N/A | 2.1359 [ 2.0000 ] | 106.8% { 84.0% } | 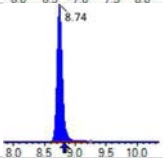  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV4A | PFBA | 20.0A | 17.4A | 87.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 8.77A | 87.7A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.60A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.84A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.92A | 98.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.63A | 92.7A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.42A | 88.3A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.92A | 98.3A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 5.04A | 101A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 5.18A | 104A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.58A | 91.6A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.53A | 70.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.84A | 86.8A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.52A | 96.2A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.35A | 95.0A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.68A | 97.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.28A | 92.0A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.69A | 97.8A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.70A | 97.6A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.08A | 105A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 19.0A | 101A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.1A | 95.0A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 19.1A | 99.6A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 20.3A | 105A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.49A | 89.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.5A | 97.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.43A | 88.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.74A | 94.9A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2412010A |
| Standard ID:A | 24C0420C | Sequence:A | SD01019A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01019-CCV4A | NMeFOSEA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.8A | 98.8A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.42A | 88.4A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 5.08A | 108A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 7.90A | 88.8A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.3A | 103A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.42A | 94.2A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.23A | 92.3A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.36A | 93.1A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.67A | 99.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.0A | 100A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.4A | 102A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 23.1A | 115A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (51)
Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2066815<br>( 163.0 / 69.0 ) 56248 | ( 2.76 , 0.75 )<br>( N/A , -0.03 , -0.1) | 15548.4<br>2906.3 | 0.0272<br>100.2<br>100.8 | 9.1676<br>[ 10.0000 ] | 91.7% | 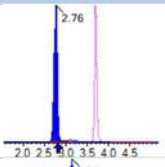 | 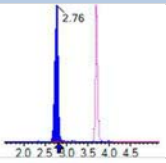 | |
| PFBA | ( 213.0 / 169.0 ) 4155984 | ( 3.70 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3297.2 | N/A<br>0.0<br>0.0 | 17.4380<br>[ 20.0000 ] | 87.2% | 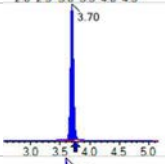 | | |
| PFPeA | ( 263.0 / 219.0 ) 1512794<br>( 263.0 / 69.0 ) 18419 | ( 4.76 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4831.0<br>383.5 | 0.0122<br>102.0<br>94.6 | 8.7737<br>[ 10.0000 ] | 87.7% | 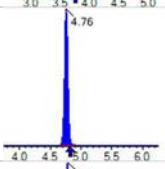 | 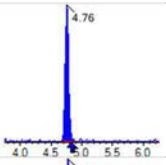 | |
| PFHxA | ( 313.0 / 269.0 ) 947922<br>( 313.0 / 119.0 ) 115786 | ( 5.98 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2623.3<br>1669.6 | 0.1221<br>105.2<br>110.0 | 4.5978<br>[ 5.0000 ] | 92.0% | 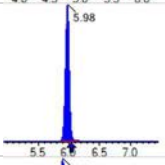 | 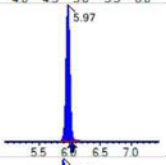 | |
| PFHpA | ( 363.0 / 319.0 ) 1212102<br>( 363.0 / 169.0 ) 344581 | ( 7.10 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1737.9<br>1269.7 | 0.2843<br>93.8<br>97.0 | 4.8436<br>[ 5.0000 ] | 96.9% | 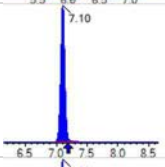 | 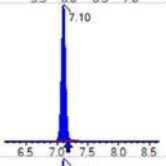 | |
| PFOA | ( 413.0 / 369.0 ) 1589818<br>( 413.0 / 169.0 ) 573786 | ( 8.10 , 1.00 )<br>( 0.00 , N/A , 0.0) | 932.1<br>1193.7 | 0.3609<br>98.7<br>105.2 | 4.9184<br>[ 5.0000 ] | 98.4% | 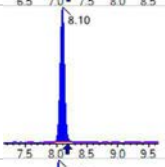 | 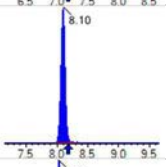 | |
| PFNA | ( 463.0 / 419.0 ) 916746<br>( 463.0 / 169.0 ) 237822 | ( 9.03 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1446.2<br>1010.4 | 0.2594<br>101.6<br>97.6 | 4.6328<br>[ 5.0000 ] | 92.7% | 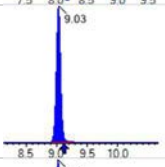 | 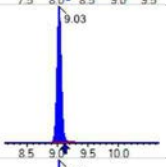 | |
| PFDA | ( 513.0 / 469.0 ) 1071724<br>( 513.0 / 169.0 ) 133383 | ( 9.93 , 1.00 )<br>( 0.00 , N/A , -0.2) | 2858.6<br>2736.1 | 0.1245<br>106.2<br>101.7 | 4.4158<br>[ 5.0000 ] | 88.3% | 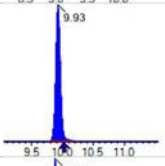 | 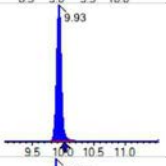 | |
| PFUnA | ( 563.0 / 519.0 ) 1264144<br>( 563.0 / 169.0 ) 181219 | ( 10.78 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1234.8<br>1017.0 | 0.1434<br>101.2<br>95.1 | 4.9159<br>[ 5.0000 ] | 98.3% | 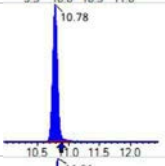 | 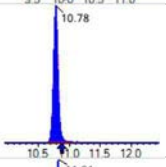 | |
| PFDoA | ( 613.0 / 569.0 ) 1480226<br>( 613.0 / 169.0 ) 220073 | ( 11.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1334.6<br>1119.4 | 0.1487<br>94.1<br>99.6 | 5.0444<br>[ 5.0000 ] | 100.9% | 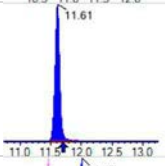 | 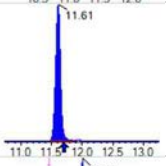 | |
| PFTrDA | ( 663.0 / 619.0 ) 1485891<br>( 663.0 / 169.0 ) 382379 | ( 12.27 , 1.06 )<br>( N/A , -0.09 , 0.0) | 1758.7<br>1223.9 | 0.2573<br>100.0<br>97.1 | 5.1765<br>[ 5.0000 ] | 103.5% | 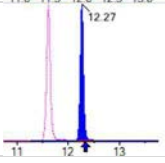 | 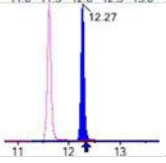 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (51)
Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1247674<br>( 713.0 / 169.0 ) 318930 | ( 12.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 1807.0<br>1185.1 | 0.2556<br>94.7<br>96.3 | 4.7605<br>[ 5.0000 ] | 95.2% | 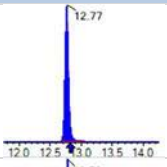 | 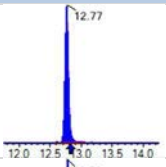 | |
| PFHxDA | ( 813.0 / 769.0 ) 832287<br>( 813.0 / 169.0 ) 211917 | ( 13.58 , 1.00 ) ( 0.00 , N/A , -0.1) | 2010.4<br>938.9 | 0.2546<br>104.1<br>100.2 | 4.5802<br>[ 5.0000 ] | 91.6% | 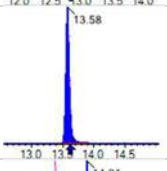 | 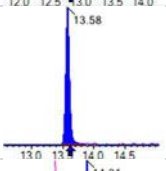 | |
| PFODA | ( 913.0 / 869.0 ) 401321<br>( 913.0 / 169.0 ) 131350 | ( 14.21 , 1.05 ) ( N/A , -0.06 , 0.3) | 1691.6<br>419.2 | 0.3273<br>91.3<br>96.0 | 3.5303<br>[ 5.0000 ] | 70.6% | 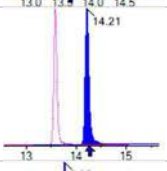 | 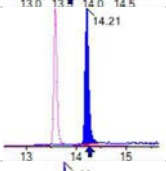 | MI5 DG 2024-03-22 |
| PFBS | ( 299.0 / 80.0 ) 1270703<br>( 299.0 / 99.0 ) 937797 | ( 6.26 , 1.00 ) ( 0.00 , N/A , 0.1) | 3550.1<br>3253.6 | 0.7380<br>104.4<br>97.8 | 3.8380<br>[ 4.4237 ] | 86.8% | 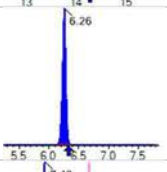 | 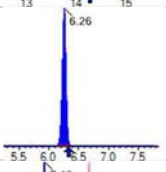 | |
| PFPeS | ( 349.0 / 80.0 ) 3841873<br>( 349.0 / 99.0 ) 1355863 | ( 7.48 , 0.88 ) ( N/A , -0.10 , 0.1) | 3143.8<br>3138.9 | 0.3529<br>98.1<br>101.3 | 4.5197<br>[ 4.6919 ] | 96.3% | 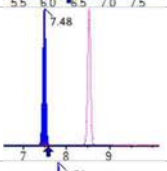 | 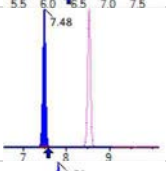 | |
| PFHxS | ( 399.0 / 80.0 ) 4293844<br>( 399.0 / 99.0 ) 1380155 | ( 8.52 , 1.00 ) ( 0.00 , N/A , 0.0) | 2744.9<br>4515.4 | 0.3214<br>100.9<br>101.3 | 4.3489<br>[ 4.5549 ] | 95.5% | 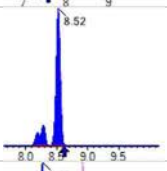 | 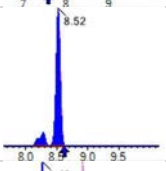 | |
| PFHpS | ( 449.0 / 80.0 ) 3457379<br>( 449.0 / 99.0 ) 920606 | ( 9.49 , 0.91 ) ( N/A , -0.11 , 0.1) | 2368.3<br>2148.0 | 0.2663<br>100.6<br>101.7 | 4.6816<br>[ 4.7570 ] | 98.4% | 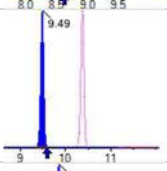 | 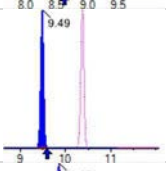 | |
| PFOS | ( 499.0 / 80.0 ) 3044039<br>( 499.0 / 99.0 ) 704192 | ( 10.37 , 1.00 ) ( 0.00 , N/A , -0.1) | 1580.2<br>5702.7 | 0.2313<br>99.0<br>100.9 | 4.2761<br>[ 4.6375 ] | 92.2% | 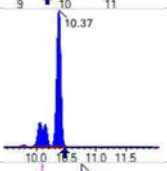 | 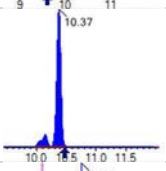 | |
| PFNS | ( 549.0 / 80.0 ) 3127402<br>( 549.0 / 99.0 ) 823741 | ( 11.20 , 1.08 ) ( N/A , -0.12 , 0.0) | 2951.5<br>2095.1 | 0.2634<br>96.6<br>95.2 | 4.6921<br>[ 4.7994 ] | 97.8% | 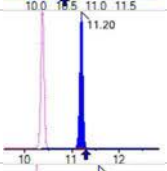 | 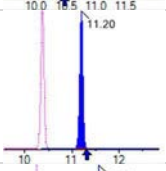 | |
| PFDS | ( 599.0 / 80.0 ) 3828813<br>( 599.0 / 99.0 ) 1021273 | ( 11.94 , 1.15 ) ( N/A , -0.10 , 0.0) | 3839.7<br>2711.2 | 0.2667<br>98.1<br>106.4 | 4.7045<br>[ 4.8155 ] | 97.7% | 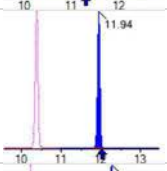 | 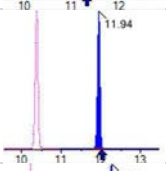 | |
| PFDoS | ( 699.0 / 80.0 ) 3643089<br>( 699.0 / 99.0 ) 867336 | ( 12.88 , 1.24 ) ( N/A , -0.07 , 0.0) | 5153.2<br>3373.4 | 0.2381<br>101.9<br>105.2 | 5.0776<br>[ 4.8478 ] | 104.7% | 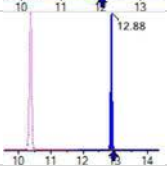 | 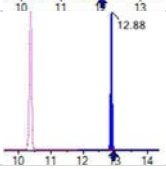 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (51)
Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5627628<br>( 327.0 / 81.0 ) 5068906 | ( 5.44 , 1.00 ) ( 0.00 , N/A , 0.1) | 5179.9<br>3506.0 | 0.9007<br>103.2<br>99.7 | 18.9733<br>[ 18.6906 ] | 101.5% | 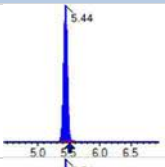 | 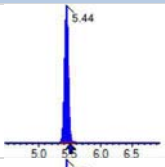 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5522650<br>( 427.0 / 81.0 ) 6875239 | ( 7.54 , 1.00 ) ( 0.00 , N/A , -0.1) | 4105.9<br>5241.3 | 1.2449<br>99.3<br>102.4 | 18.0586<br>[ 18.9808 ] | 95.1% | 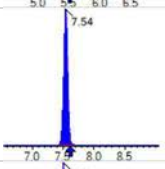 | 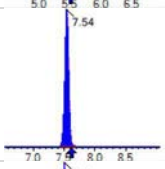 | |
| 8:2FTS | ( 527.0 / 507.0 ) 4997124<br>( 527.0 / 81.0 ) 5391453 | ( 9.31 , 1.00 ) ( -0.01 , N/A , 0.0) | 1722.7<br>1631.8 | 1.0789<br>99.2<br>101.3 | 19.1280<br>[ 19.1658 ] | 99.8% | 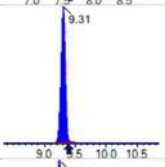 | 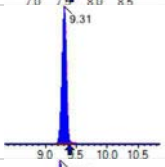 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4247759<br>( 627.0 / 81.0 ) 6108508 | ( 10.94 , 1.00 ) ( 0.01 , N/A , 0.2) | 1614.7<br>1310.3 | 1.4381<br>99.9<br>103.7 | 20.2853<br>[ 19.3236 ] | 105.0% | 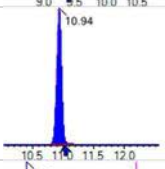 | 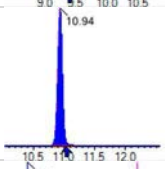 | |
| PFBSA | ( 297.9 / 78.0 ) 2338786<br>( 297.9 / 278.0 ) 3293 | ( 8.09 , 0.57 ) ( N/A , -0.05 , 0.4) | 2023.8<br>116.8 | 0.0014<br>103.0<br>106.2 | 4.2932<br>[ 5.0000 ] | 85.9% | 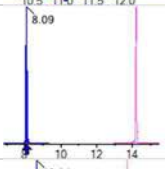 | 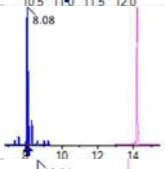 | |
| PFHxSA | ( 397.9 / 78.0 ) 3687610<br>( 397.9 / 378.0 ) 16222 | ( 10.94 , 0.75 ) ( N/A , -0.06 , 0.1) | 1397.6<br>377.4 | 0.0044<br>107.7<br>105.1 | 5.2631<br>[ 5.0000 ] | 105.3% | 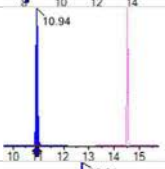 | 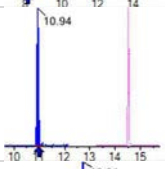 | |
| PFOSA | ( 498.0 / 78.0 ) 2633020<br>( 498.0 / 478.0 ) 36295 | ( 12.81 , 1.00 ) ( -0.01 , N/A , 0.1) | 2540.7<br>900.6 | 0.0138<br>98.2<br>97.7 | 4.4896<br>[ 5.0000 ] | 89.8% | 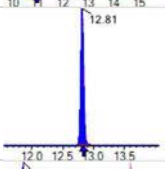 | 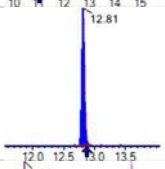 | |
| TFSI | ( 279.7 / 147.0 ) 6299592<br>( 279.7 / 211.0 ) 529481 | ( 8.08 , 0.63 ) ( N/A , -0.11 , -0.2) | 48.8<br>46.4 | 0.0841<br>100.1<br>100.3 | 4.0793<br>[ 4.8967 ] | 83.3% | 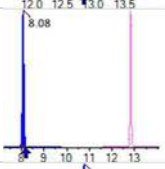 | 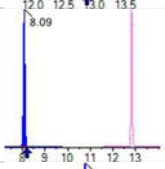 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2048092<br>( 512.0 / 169.0 ) 1506564 | ( 14.19 , 1.00 ) ( 0.00 , N/A , 3.0) | 3650.2<br>1702.2 | 0.7356<br>98.3<br>100.1 | 19.5136<br>[ 20.0000 ] | 97.6% | 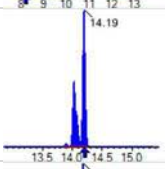 | 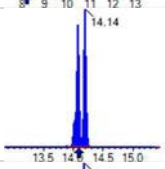 | |
| NEtFOSA | ( 526.0 / 219.0 ) 2412654<br>( 526.0 / 169.0 ) 2998608 | ( 14.52 , 1.00 ) ( 0.01 , N/A , 2.0) | 4066.6<br>3228.8 | 1.2429<br>100.7<br>98.4 | 18.8963<br>[ 20.0000 ] | 94.5% | 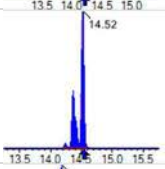 | 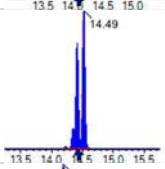 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 757564<br>( 570.0 / 483.0 ) 352276 | ( 10.18 , 1.00 ) ( 0.00 , N/A , -0.4) | 2517.4<br>1524.7 | 0.4650<br>106.0<br>100.9 | 4.4282<br>[ 5.0000 ] | 88.6% | 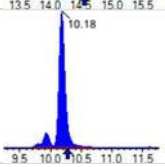 | 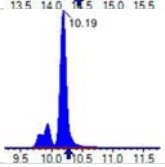 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCV4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (51)
Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 732824<br>( 584.0 / 526.0 ) 442643 | ( 10.71 , 1.00 ) ( 0.01 , N/A , -0.1) | 1863.6<br>776.3 | 0.6040<br>98.0<br>104.2 | 4.7427<br>[ 5.0000 ] | 94.9% | 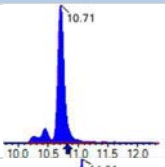 | 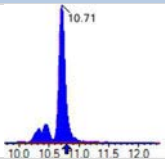 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1065144 | ( 14.01 , 1.00 ) ( 0.02 , N/A , 0.0) | 2390.6 | N/A<br>0.0<br>0.0 | 18.9039<br>[ 20.0000 ] | 94.5% | 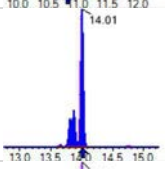 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 847477 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 3261.2 | N/A<br>0.0<br>0.0 | 19.7627<br>[ 20.0000 ] | 98.8% | 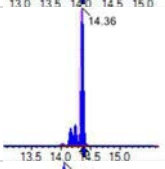 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 253151<br>( 285.0 / 185.0 ) 671367 | ( 6.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 1791.2<br>1970.2 | 2.6520<br>95.9<br>93.1 | 4.4217<br>[ 5.0000 ] | 88.4% | 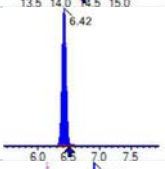 | 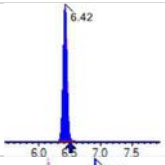 | |
| ADONA | ( 377.0 / 85.0 ) 3396218<br>( 377.0 / 251.0 ) 327879 | ( 7.49 , 1.17 ) ( N/A , -0.09 , 0.2) | 1768.0<br>1656.6 | 0.0965<br>94.7<br>96.9 | 5.0846<br>[ 4.7135 ] | 107.9% | 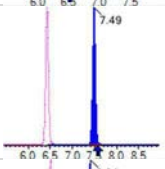 | 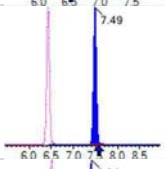 | |
| PFEESA | ( 315.0 / 135.0 ) 1169707<br>( 315.0 / 83.0 ) 718968 | ( 6.84 , 1.15 ) ( N/A , -0.10 , 0.0) | 3880.1<br>1715.4 | 0.6147<br>110.3<br>106.7 | 7.9006<br>[ 8.9246 ] | 88.5% | 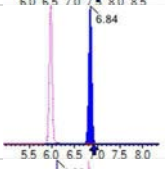 | 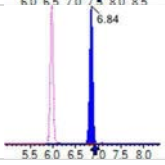 | |
| PFMPA | ( 229.0 / 85.0 ) 563208 | ( 4.08 , 0.86 ) ( N/A , -0.06 , 0.0) | 5832.8 | N/A<br>0.0<br>0.0 | 10.2934<br>[ 10.0000 ] | 102.9% | 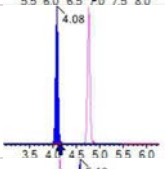 | | |
| PFMBA | ( 279.0 / 85.0 ) 1401343 | ( 5.12 , 1.08 ) ( N/A , -0.07 , 0.0) | 4749.0 | N/A<br>0.0<br>0.0 | 9.4232<br>[ 10.0000 ] | 94.2% | 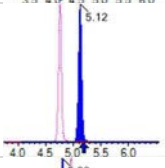 | | |
| NFDHA | ( 295.0 / 201.0 ) 710766<br>( 295.0 / 85.0 ) 770156 | ( 5.83 , 0.98 ) ( N/A , -0.08 , -0.1) | 2533.4<br>2711.1 | 1.0836<br>100.4<br>106.2 | 9.2346<br>[ 10.0000 ] | 92.3% | 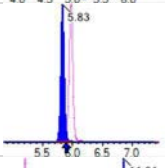 | 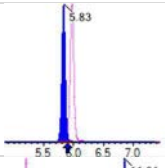 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3143443<br>( 533.0 / 353.0 ) 979796 | ( 11.01 , 1.71 ) ( N/A , -0.12 , 0.0) | 2662.8<br>1927.2 | 0.3117<br>99.6<br>97.9 | 4.3572<br>[ 4.6663 ] | 93.4% | 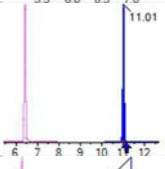 | 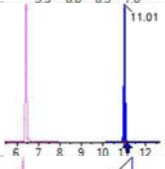 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2593548<br>( 633.0 / 453.0 ) 837312 | ( 12.37 , 1.92 ) ( N/A , -0.08 , 0.0) | 3403.0<br>1825.3 | 0.3228<br>97.2<br>97.3 | 4.6747<br>[ 4.7160 ] | 99.1% | 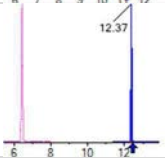 | 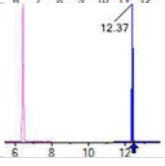 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV4 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (51)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1546610<br>( 461.0 / 381.2 ) 634845 | ( 9.41 , 0.91 )<br>( N/A , -0.11 , 0.0) | 3676.7<br>3894.8 | 0.4105<br>103.0<br>102.2 | 3.8511<br>[ 4.6193 ] | 83.4% | 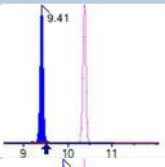 | 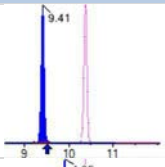 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 196623<br>( 241.0 / 117.0 ) 449026 | ( 4.34 , 0.91 )<br>( N/A , -0.06 , -0.2) | 2870.9<br>3173.7 | 2.2837<br>108.4<br>102.8 | 20.0458<br>[ 20.0000 ] | 100.2% | 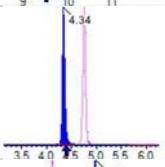 | 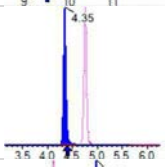 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1168037<br>( 341.0 / 217.0 ) 1745454 | ( 6.89 , 1.15 )<br>( N/A , -0.08 , 0.0) | 1282.6<br>1167.3 | 1.4943<br>98.4<br>99.7 | 20.4293<br>[ 20.0000 ] | 102.1% | 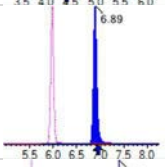 | 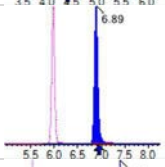 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2163474<br>( 441.0 / 337.0 ) 1847461 | ( 9.26 , 1.55 )<br>( N/A , -0.10 , 0.0) | 6837.0<br>9209.7 | 0.8539<br>93.1<br>93.2 | 23.0586<br>[ 20.0000 ] | 115.3% | 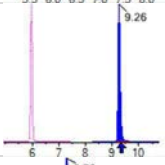 | 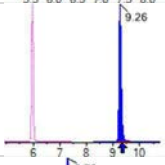 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1489480<br>( 357.2 / 243.0 ) 159150 | ( 6.70 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1225.1<br>1000.5 | 0.1068<br>96.9<br>101.3 | 5.0773<br>[ 5.0000 ] | 101.5% | 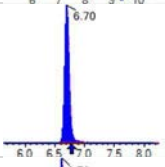 | 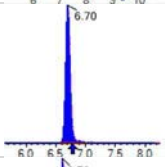 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1016818<br>( 457.2 / 343.0 ) 44158 | ( 8.72 , 1.00 )<br>( -0.01 , N/A , 0.2) | 838.0<br>539.3 | 0.0434<br>104.7<br>101.5 | 5.3202<br>[ 5.0000 ] | 106.4% | 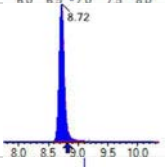 | 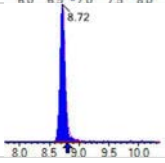 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 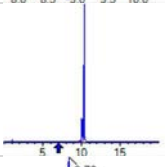 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 207515 | ( 3.70 , N/A )<br>( N/A , -0.06 , N/A ) | 1168.7 | N/A | 0.8703<br>[ 1.0000 ] | 87.0%<br>{ 81.3% } | 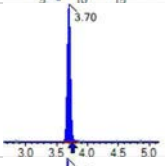 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 102665 | ( 5.98 , N/A )<br>( N/A , -0.08 , N/A ) | 6069.0 | N/A | 0.8093<br>[ 1.0000 ] | 80.9%<br>{ 84.2% } | 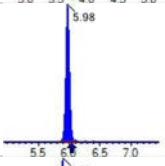 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 328615 | ( 8.10 , N/A )<br>( N/A , -0.10 , N/A ) | 8801.2 | N/A | 0.8313<br>[ 1.0000 ] | 83.1%<br>{ 82.9% } | 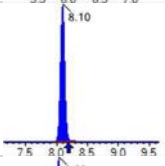 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 215109 | ( 9.03 , N/A )<br>( N/A , -0.11 , N/A ) | 1068.6 | N/A | 0.7563<br>[ 1.0000 ] | 75.6%<br>{ 77.6% } | 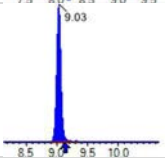 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV4 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (51)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 218616 | ( 9.93 , N/A ) ( N/A , -0.12 , N/A ) | 18286.2 | N/A | 0.7486 [ 1.0000 ] | 74.9% { 75.8% } | 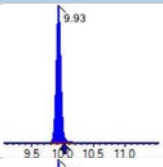 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 888211 | ( 8.53 , N/A ) ( N/A , -0.11 , N/A ) | 4887.5 | N/A | 0.9359 [ 1.0000 ] | 93.6% { 94.2% } | 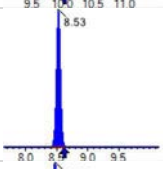 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 610392 | ( 10.38 , N/A ) ( N/A , -0.12 , N/A ) | 2281.1 | N/A | 0.8014 [ 1.0000 ] | 80.1% { 80.2% } | 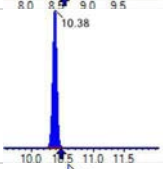 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1912698 | ( 3.70 , N/A ) ( N/A , -0.06 , N/A ) | 41055.1 | N/A | 8.0683 [ 8.0000 ] | 100.9% { 87.6% } | 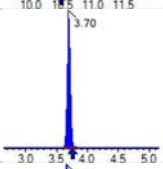 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 682705 | ( 4.76 , N/A ) ( N/A , -0.07 , N/A ) | 5461.3 | N/A | 3.5640 [ 4.0000 ] | 89.1% { 75.7% } | 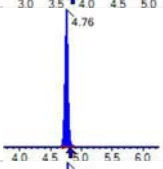 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 429175 | ( 5.97 , N/A ) ( N/A , -0.08 , N/A ) | 8184.9 | N/A | 1.8322 [ 2.0000 ] | 91.6% { 74.8% } | 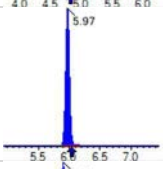 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 510030 | ( 7.11 , N/A ) ( N/A , -0.09 , N/A ) | 4750.2 | N/A | 1.9573 [ 2.0000 ] | 97.9% { 82.9% } | 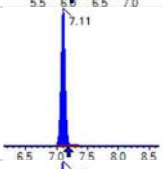 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 657603 | ( 8.10 , N/A ) ( N/A , -0.10 , N/A ) | 4239.8 | N/A | 1.8677 [ 2.0000 ] | 93.4% { 81.6% } | 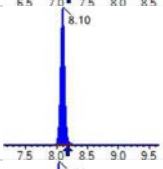 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 196885 | ( 9.03 , N/A ) ( N/A , -0.11 , N/A ) | 3434.4 | N/A | 0.9335 [ 1.0000 ] | 93.3% { 74.6% } | 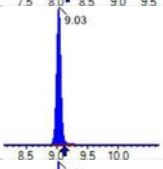 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 237532 | ( 9.93 , N/A ) ( N/A , -0.11 , N/A ) | 1240.6 | N/A | 0.9695 [ 1.0000 ] | 97.0% { 77.4% } | 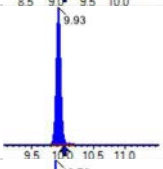 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 278021 | ( 10.78 , N/A ) ( N/A , -0.12 , N/A ) | 1043.1 | N/A | 0.9646 [ 1.0000 ] | 96.5% { 75.4% } | 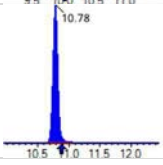 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV4 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (51)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 291677 | ( 11.61 , N/A ) ( N/A , -0.11 , N/A ) | 1099.8 | N/A | 0.9937 [ 1.0000 ] | 99.4% { 75.5% } | 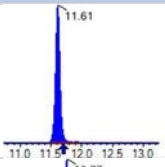 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 279843 | ( 12.77 , N/A ) ( N/A , -0.08 , N/A ) | 1680.3 | N/A | 1.1195 [ 1.0000 ] | 112.0% { 89.8% } | 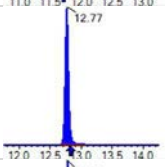 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 381020 | ( 13.58 , N/A ) ( N/A , -0.07 , N/A ) | 1686.4 | N/A | 1.7854 [ 2.0000 ] | 89.3% { 78.3% } | 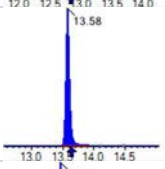 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1275334 | ( 6.26 , N/A ) ( N/A , -0.09 , N/A ) | 1644.4 | N/A | 1.5892 [ 2.0000 ] | 79.5% { 78.9% } | 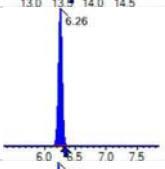 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1110759 | ( 8.53 , N/A ) ( N/A , -0.11 , N/A ) | 3405.3 | N/A | 1.7341 [ 2.0000 ] | 86.7% { 84.6% } | 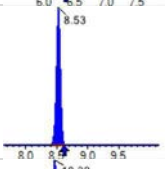 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1232702 | ( 10.38 , N/A ) ( N/A , -0.12 , N/A ) | 1668.6 | N/A | 1.8730 [ 2.0000 ] | 93.7% { 80.6% } | 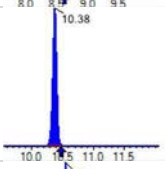 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 452071 | ( 5.44 , N/A ) ( N/A , -0.08 , N/A ) | 74.7 | N/A | 3.2650 [ 4.0000 ] | 81.6% { 73.0% } | 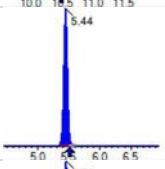 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1477248 | ( 7.55 , N/A ) ( N/A , -0.09 , N/A ) | 5156.4 | N/A | 3.5651 [ 4.0000 ] | 89.1% { 83.5% } | 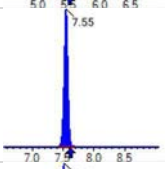 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1100340 | ( 9.31 , N/A ) ( N/A , -0.10 , N/A ) | 1490.6 | N/A | 3.3859 [ 4.0000 ] | 84.6% { 79.5% } | 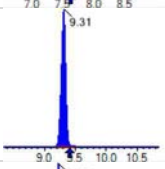 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2173466 | ( 10.93 , N/A ) ( N/A , -0.12 , N/A ) | 1582.9 | N/A | 6.3993 [ 8.0000 ] | 80.0% { 80.7% } | 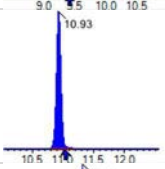 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1172917 | ( 12.82 , N/A ) ( N/A , -0.04 , N/A ) | 1963.9 | N/A | 2.0111 [ 2.0000 ] | 100.6% { 86.3% } | 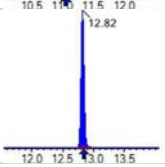 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCV4 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (51)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 06:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 211414 | ( 14.19 , N/A ) ( N/A , -0.03 , N/A ) | 1586.0 | N/A | 1.7091 [ 2.0000 ] | 85.5% { 77.1% } | 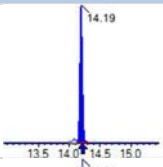  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 228010 | ( 14.51 , N/A ) ( N/A , -0.03 , N/A ) | 1903.2 | N/A | 1.7188 [ 2.0000 ] | 85.9% { 75.8% } | 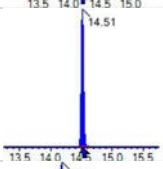  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 717475 | ( 10.18 , N/A ) ( N/A , -0.11 , N/A ) | 2691.0 | N/A | 4.2369 [ 4.0000 ] | 105.9% { 80.8% } | 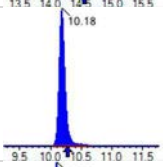  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 631836 | ( 10.70 , N/A ) ( N/A , -0.12 , N/A ) | 2729.9 | N/A | 4.0938 [ 4.0000 ] | 102.3% { 76.7% } | 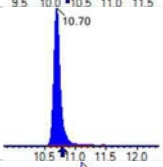  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1027339 | ( 13.99 , N/A ) ( N/A , -0.03 , N/A ) | 2073.8 | N/A | 18.4808 [ 20.0000 ] | 92.4% { 84.8% } | 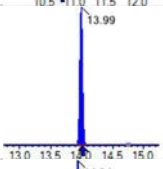  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 965310 | ( 14.34 , N/A ) ( N/A , -0.03 , N/A ) | 3003.7 | N/A | 17.1088 [ 20.0000 ] | 85.5% { 76.5% } | 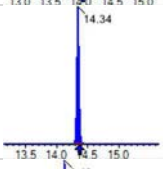  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 776699 | ( 6.43 , N/A ) ( N/A , -0.09 , N/A ) | 2696.2 | N/A | 7.2789 [ 8.0000 ] | 91.0% { 78.2% } | 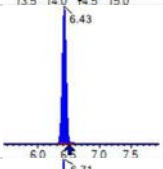  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 551875 | ( 6.71 , N/A ) ( N/A , -0.09 , N/A ) | 1432.4 | N/A | 2.3284 [ 2.0000 ] | 116.4% { 86.1% } | 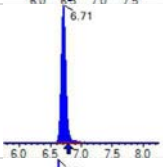  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 468654 | ( 8.73 , N/A ) ( N/A , -0.10 , N/A ) | 779.2 | N/A | 2.1720 [ 2.0000 ] | 108.6% { 79.7% } | 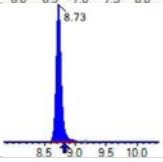  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD00991L
Calibration:N 2412010L

SDG:N 24C0110L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | PFBA0 | .0 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0180 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .01650 | ng/mL0 | .10 | U |
| | PFTrDA0 | .01630 | ng/mL0 | .10 | U |
| | PFTeDA0 | .02330 | ng/mL0 | .10 | U |
| | PFHxDA0 | .03360 | ng/mL0 | .10 | U |
| | PFODA0 | .03890 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .08510 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .02580 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .04090 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .08930 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 7.990 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.030 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.010 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.050 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.0 | ng/mL0 | | |
| | 13C6-PFDA | 0.9990 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9920 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.940 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.020 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.730 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.450 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.510 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.110 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.0 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.880 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.050 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.360 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.540 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD00991L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD0 991-ICB10 | D7-NMEFOSE0 | 21.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 20.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 7.740 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 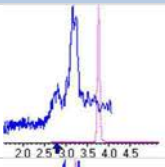 | 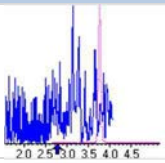 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 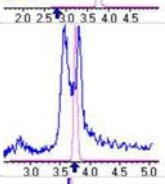 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 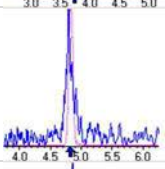 | 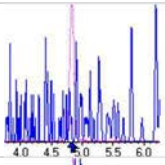 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 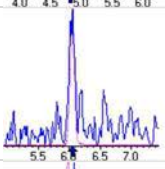 | 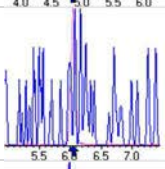 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 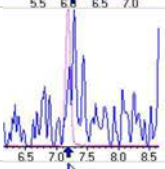 | 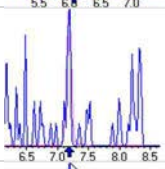 | |
| PFOA | ( 413.0 / 369.0 )<br>16821<br>( 413.0 / 169.0 )<br>7137 | ( 8.19 , 1.00 )<br>( 0.01 , N/A , 0.0) | 26.9<br>42.2 | 0.4243<br>116.1<br>116.1 | 0.0180 | N/A | 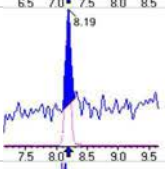 | 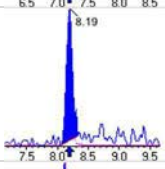 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 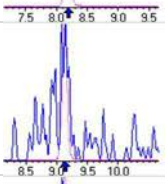 | 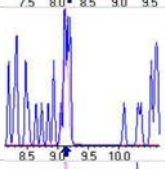 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 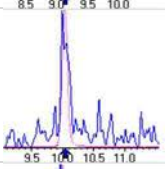 | 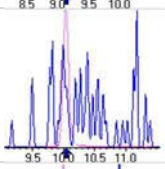 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 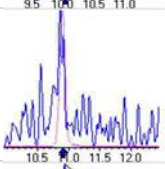 | 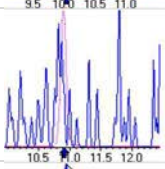 | |
| PFDoA | ( 613.0 / 569.0 )<br>6139<br>( 613.0 / 169.0 )<br>1421 | ( 11.73 , 1.00 )<br>( 0.00 , N/A , -0.2) | 31.7<br>19.2 | 0.2314<br>146.4<br>146.4 | 0.0165 | N/A | 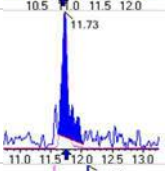 | 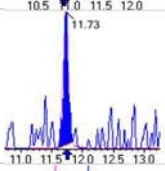 | |
| PFTrDA | ( 663.0 / 619.0 )<br>5903<br>( 663.0 / 169.0 )<br>N/A | ( 12.38 , 1.06 )<br>( N/A , 0.01 , #Value!) | 35.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0163 | N/A | 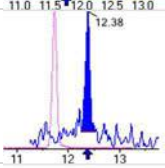 | 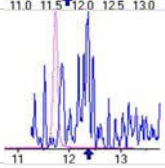 | IR1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 6942<br>( 713.0 / 169.0 ) N/A | ( 12.85 , 1.00 )<br>( -0.01 , N/A , #Value!) | 33.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0233 | N/A | 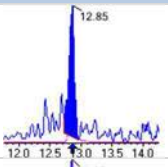 | 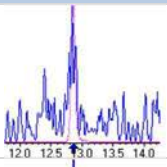 | IR1, |
| PFHxDA | ( 813.0 / 769.0 ) 8386<br>( 813.0 / 169.0 ) N/A | ( 13.65 , 1.00 )<br>( -0.01 , N/A , #Value!) | 40.4<br>N/A | N/A<br>0.0<br>0.0 | 0.0336 | N/A | 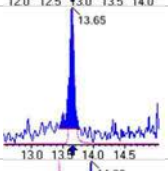 | 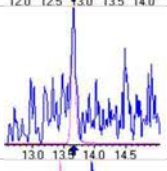 | IR1, |
| PFODA | ( 913.0 / 869.0 ) 6084<br>( 913.0 / 169.0 ) N/A | ( 14.29 , 1.05 )<br>( N/A , -0.01 , #Value!) | 34.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0389 | N/A | 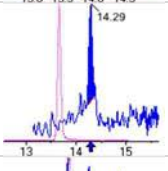 | 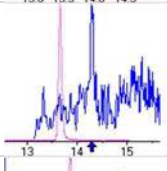 | IR1,MI1 DG 2024-03-19 |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 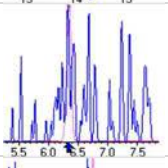 | 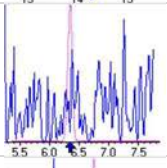 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 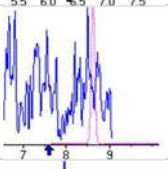 | 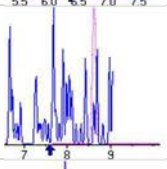 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 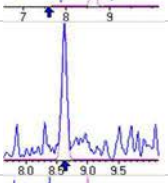 | 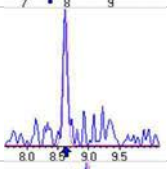 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 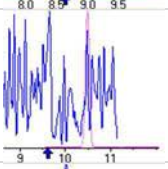 | 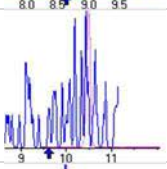 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 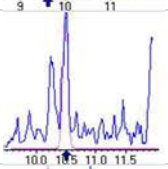 | 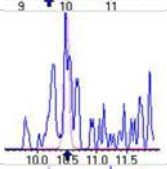 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 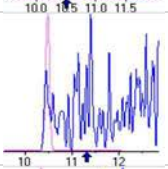 | 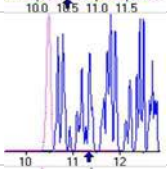 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 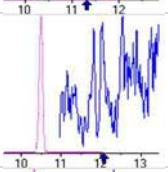 | 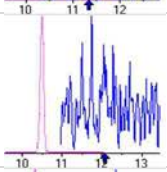 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 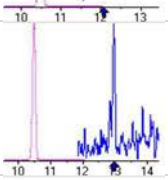 | 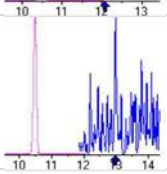 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 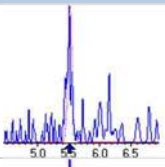 | 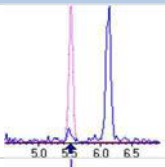 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 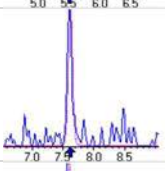 | 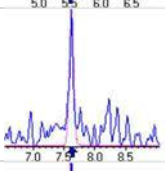 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 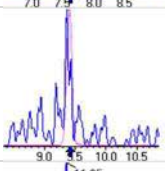 | 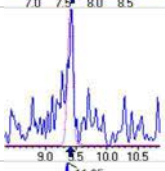 | |
| 10:2FTS | ( 627.0 / 607.0 ) 22276<br>( 627.0 / 81.0 ) 24748 | ( 11.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 88.3<br>58.0 | 1.1110<br>77.2<br>77.2 | 0.0851 | N/A | 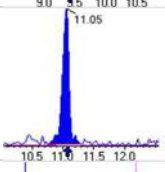 | 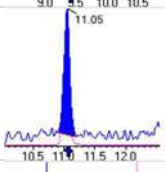 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 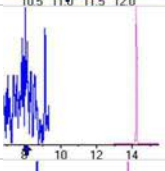 | 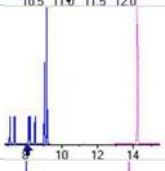 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 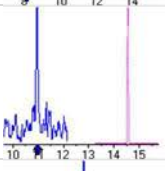 | 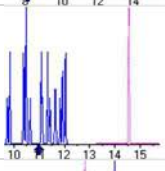 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 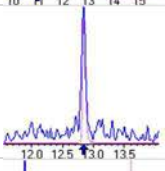 | 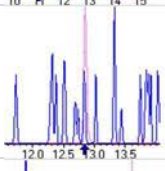 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 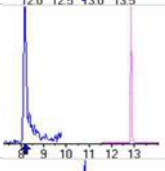 | 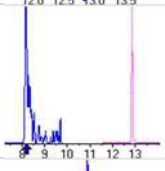 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 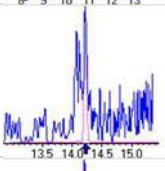 | 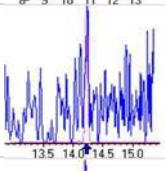 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 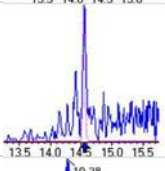 | 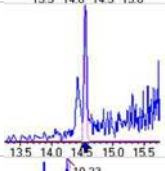 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5287<br>( 570.0 / 483.0 ) 1419 | ( 10.28 , 1.00 ) ( -0.01 , N/A , 2.9) | 55.9<br>17.5 | 0.2684<br>61.2<br>61.2 | 0.0258 | N/A | 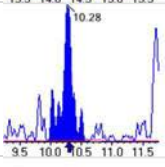 | 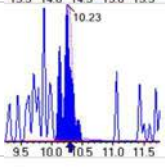 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 8150<br>( 584.0 / 526.0 ) 2179 | ( 10.82 , 1.00 )<br>( 0.01 , N/A , 2.1) | 98.9<br>33.1 | 0.2674<br>43.4<br>43.4 | 0.0409 | N/A | 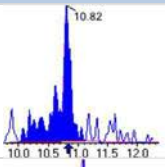 | 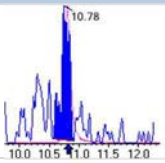 | IR1, |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 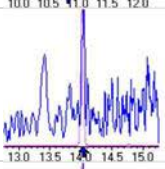 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 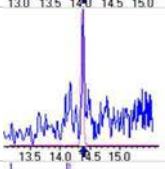 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 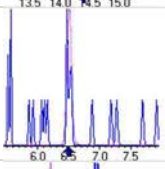 | 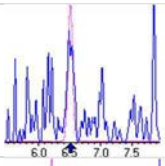 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 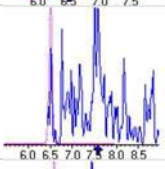 | 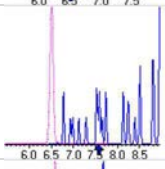 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 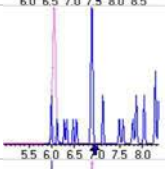 | 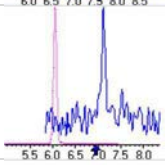 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 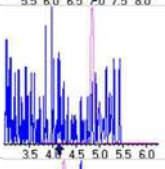 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 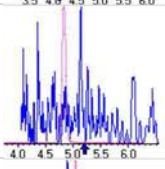 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 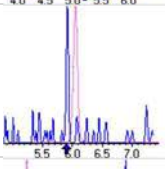 | 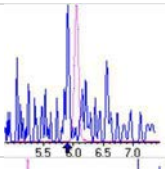 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 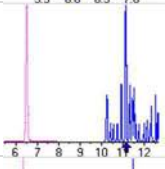 | 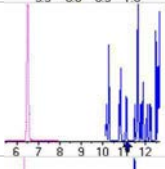 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 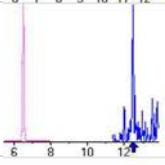 | 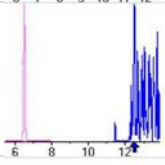 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 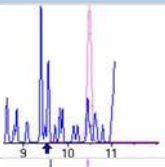 | 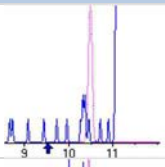 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 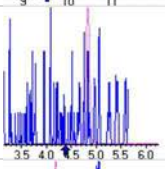 | 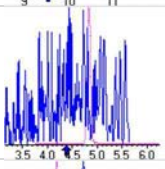 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 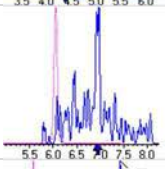 | 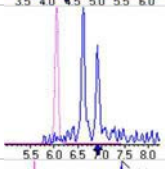 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>10942<br>( 441.0 / 337.0 )<br>9168 | ( 9.32 , 1.54 )<br>( N/A , -0.02 , 0.0) | 114.3<br>118.7 | 0.8378<br>91.3<br>91.3 | 0.0893 | N/A | 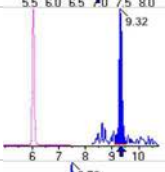 | 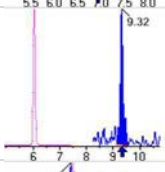 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4865<br>( 357.2 / 243.0 )<br>388 | ( 6.78 , 1.00 )<br>( -0.01 , N/A , 1.4) | 25.0<br>10.8 | 0.0797<br>72.3<br>72.3 | 0.0164 | N/A | 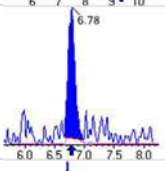 | 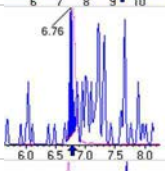 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 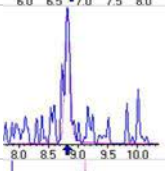 | 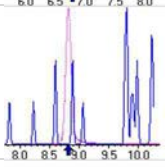 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 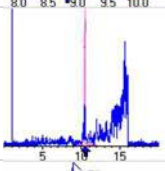 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>247666 | ( 3.76 , N/A )<br>( N/A , 0.00 , N/A ) | 1205.7 | N/A | 1.0387<br>[ 1.0000 ] | 103.9%<br>{ 105.7% } | 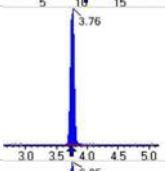 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>118801 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 67668.7 | N/A | 0.9365<br>[ 1.0000 ] | 93.7%<br>{ 99.4% } | 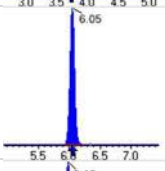 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>364915 | ( 8.19 , N/A )<br>( N/A , -0.02 , N/A ) | 6572.7 | N/A | 0.9231<br>[ 1.0000 ] | 92.3%<br>{ 96.0% } | 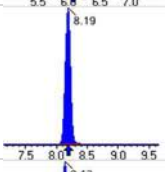 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>273094 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 870.1 | N/A | 0.9602<br>[ 1.0000 ] | 96.0%<br>{ 102.6% } | 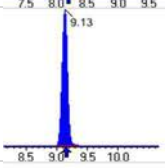 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277135 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 10730.3 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 103.5% } | 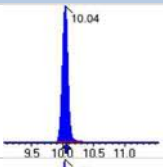 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 876072 | ( 8.63 , N/A ) ( N/A , -0.02 , N/A ) | 3965.9 | N/A | 0.9231 [ 1.0000 ] | 92.3% { 97.3% } | 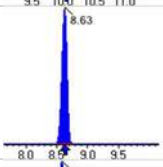 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 709520 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 2022.8 | N/A | 0.9316 [ 1.0000 ] | 93.2% { 101.3% } | 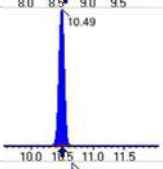 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2260276 | ( 3.76 , N/A ) ( N/A , 0.00 , N/A ) | 35338.6 | N/A | 7.9888 [ 8.0000 ] | 99.9% { 106.9% } | 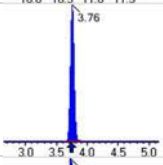 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 892559 | ( 4.83 , N/A ) ( N/A , -0.01 , N/A ) | 4410.8 | N/A | 4.0266 [ 4.0000 ] | 100.7% { 96.8% } | 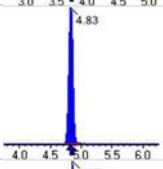 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560711 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 8995.9 | N/A | 2.0686 [ 2.0000 ] | 103.4% { 101.3% } | 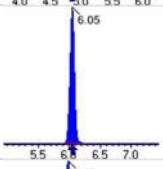 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 605194 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 4503.5 | N/A | 2.0071 [ 2.0000 ] | 100.4% { 97.7% } | 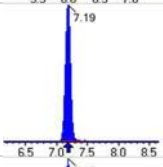 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 802821 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3104.8 | N/A | 2.0533 [ 2.0000 ] | 102.7% { 97.9% } | 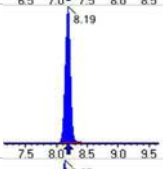 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 267971 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2951.0 | N/A | 1.0008 [ 1.0000 ] | 100.1% { 102.0% } | 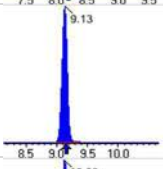 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 310319 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 918.4 | N/A | 0.9992 [ 1.0000 ] | 99.9% { 98.0% } | 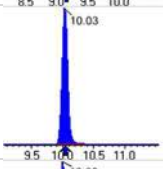 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 370129 | ( 10.90 , N/A ) ( N/A , -0.01 , N/A ) | 1009.3 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 102.4% } | 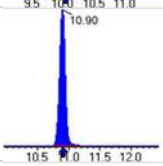 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: SD00991-ICB1 | Quant Method: 1633 - S2024-03-19A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-19A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368993 | ( 11.73 , N/A ) ( N/A , -0.01 , N/A ) | 1246.5 | N/A | 0.9916 [ 1.0000 ] | 99.2% { 104.9% } | 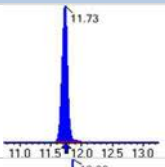  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318629 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 1132.2 | N/A | 1.0055 [ 1.0000 ] | 100.6% { 102.0% } | 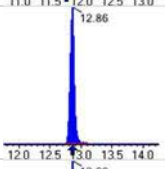  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 523684 | ( 13.66 , N/A ) ( N/A , -0.01 , N/A ) | 2356.1 | N/A | 1.9358 [ 2.0000 ] | 96.8% { 101.5% } | 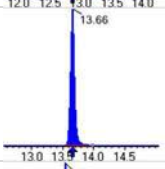  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570777 | ( 6.35 , N/A ) ( N/A , -0.01 , N/A ) | 921.3 | N/A | 1.9845 [ 2.0000 ] | 99.2% { 98.6% } | 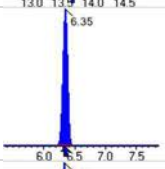  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1291658 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 4087.7 | N/A | 2.0444 [ 2.0000 ] | 102.2% { 100.9% } | 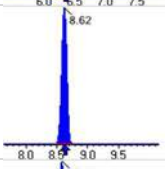  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1543909 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1768.0 | N/A | 2.0181 [ 2.0000 ] | 100.9% { 98.8% } | 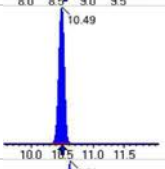  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 645670 | ( 5.52 , N/A ) ( N/A , -0.01 , N/A ) | 92.6 | N/A | 4.7279 [ 4.0000 ] | 118.2% { 123.0% } | 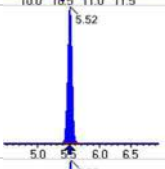  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1820502 | ( 7.62 , N/A ) ( N/A , -0.01 , N/A ) | 4674.4 | N/A | 4.4543 [ 4.0000 ] | 111.4% { 107.1% } | 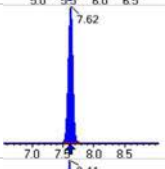  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1444855 | ( 9.41 , N/A ) ( N/A , -0.01 , N/A ) | 1529.9 | N/A | 4.5076 [ 4.0000 ] | 112.7% { 109.5% } | 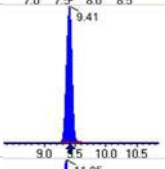  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2718422 | ( 11.05 , N/A ) ( N/A , -0.01 , N/A ) | 1222.5 | N/A | 8.1147 [ 8.0000 ] | 101.4% { 104.7% } | 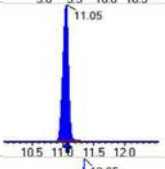  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1357608 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 2272.1 | N/A | 2.0025 [ 2.0000 ] | 100.1% { 101.8% } | 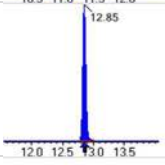  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD00991-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-19A
Path: S2024-03-19A (9)
Acquired: 2024/03/19 - 14:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 270641 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 1748.6 | N/A | 1.8822 [ 2.0000 ] | 94.1% { 97.5% } | 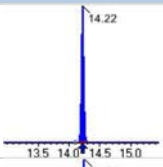  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 315933 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2465.7 | N/A | 2.0489 [ 2.0000 ] | 102.4% { 100.2% } | 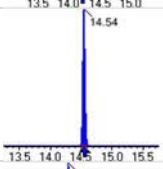  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 858949 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2747.6 | N/A | 4.3636 [ 4.0000 ] | 109.1% { 102.5% } | 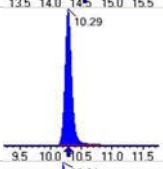  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 815282 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 2006.1 | N/A | 4.5444 [ 4.0000 ] | 113.6% { 107.8% } | 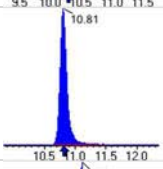  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1364206 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2290.3 | N/A | 21.1120 [ 20.0000 ] | 105.6% { 101.4% } | 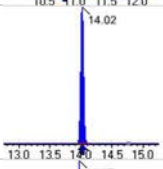  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1316295 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 4403.7 | N/A | 20.0701 [ 20.0000 ] | 100.4% { 100.0% } | 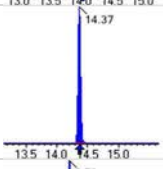  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 955791 | ( 6.51 , N/A ) ( N/A , -0.01 , N/A ) | 2026.1 | N/A | 7.7407 [ 8.0000 ] | 96.8% { 97.7% } | 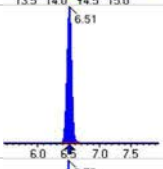  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559796 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1426.0 | N/A | 1.8631 [ 2.0000 ] | 93.2% { 97.0% } | 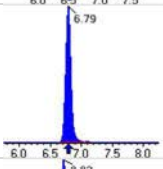  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 528642 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 671.7 | N/A | 1.9327 [ 2.0000 ] | 96.6% { 98.4% } | 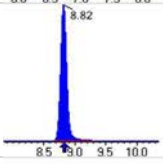  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01019L
Calibration:N 2412010L

SDG:N 24C0110L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB10 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .01050 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .06460 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB10 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.360 | ng/mL0 | | |
| | 13C5-PFPEA | 4.560 | ng/mL0 | | |
| | 13C5-PFHXA | 2.130 | ng/mL0 | | |
| | 13C4-PFHPA | 2.170 | ng/mL0 | | |
| | 13C8-PFOA | 2.170 | ng/mL0 | | |
| | 13C9-PFNA | 1.050 | ng/mL0 | | |
| | 13C6-PFDA | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA | 1.060 | ng/mL0 | | |
| | 13C2-PFDOA | 1.080 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.010 | ng/mL0 | | |
| | 13C2-PFHxDA | 2.020 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.160 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.140 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.090 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.030 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.740 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.760 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.830 | ng/mL0 | | |
| | 13C8-PFOSA | 2.140 | ng/mL0 | | |
| | D3-NMEFOSA | 2.020 | ng/mL0 | | |
| | D5-NETFOSA | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.870 | ng/mL0 | | |
| | D5-NETFOSAA | 4.790 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0110L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01019L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01019-CCB10 | D7-NMEFOSE0 | 19.40 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.20 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.540 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 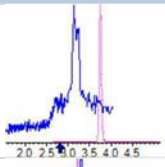 | 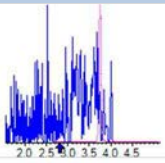 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 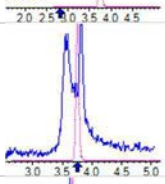 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 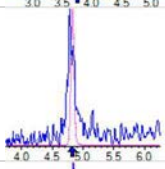 | 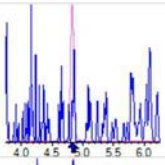 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 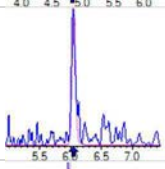 | 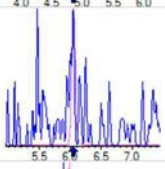 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 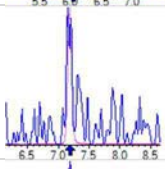 | 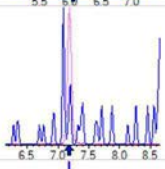 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 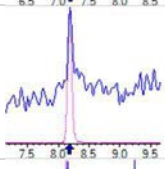 | 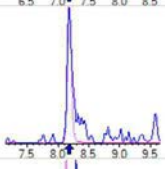 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 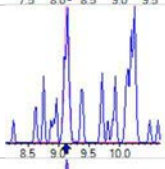 | 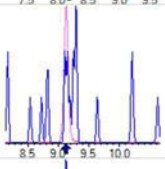 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 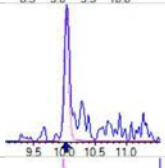 | 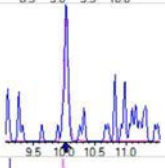 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 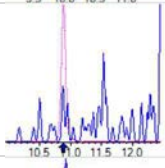 | 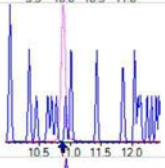 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 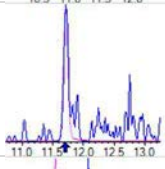 | 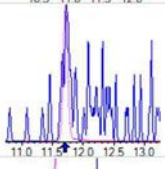 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 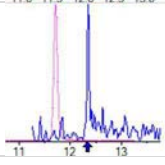 | 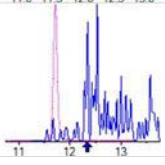 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 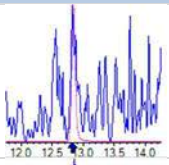 | 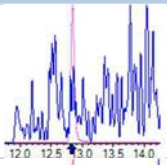 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 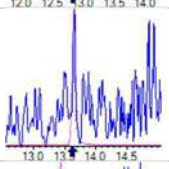 | 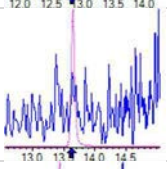 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 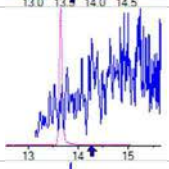 | 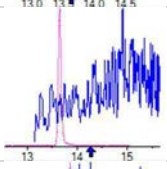 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 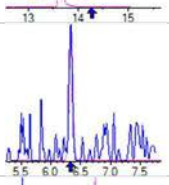 | 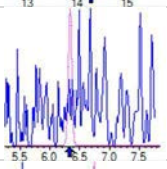 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 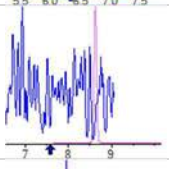 | 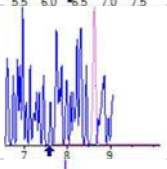 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 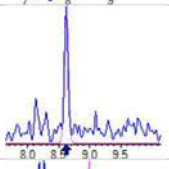 | 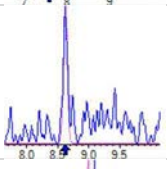 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 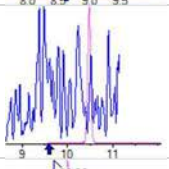 | 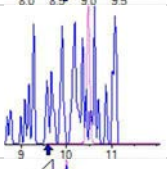 | |
| PFOS | ( 499.0 / 80.0 )<br>9803<br>( 499.0 / 99.0 )<br>2083 | ( 10.32 , 0.98 )<br>( -0.16 , N/A , -4.9) | 56.4<br>52.0 | 0.2125<br>90.9<br>92.7 | 0.0105 | N/A | 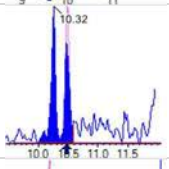 | 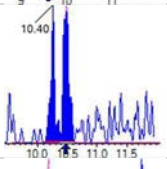 | MI2 DG<br>2024-03-21 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 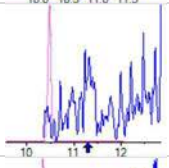 | 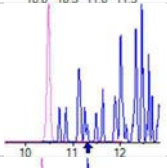 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 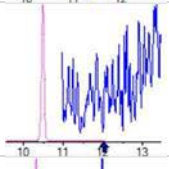 | 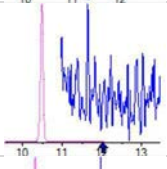 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 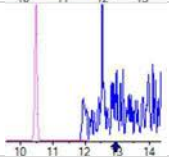 | 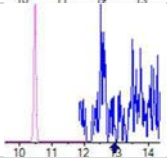 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 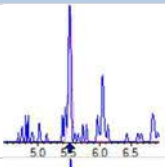 | 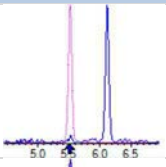 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 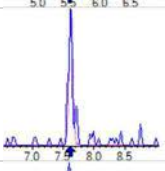 | 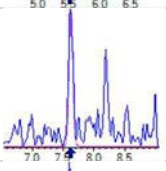 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 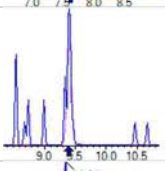 | 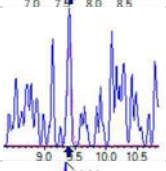 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20303<br>( 627.0 / 81.0 )<br>27107 | ( 11.04 , 1.00 )<br>( 0.01 , N/A , -0.2) | 365.0<br>72.0 | 1.3351<br>92.7<br>96.3 | 0.0646 | N/A | 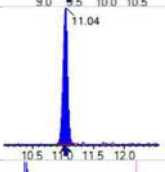 | 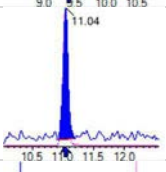 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 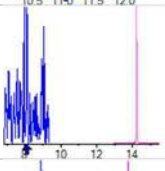 | 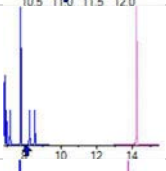 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 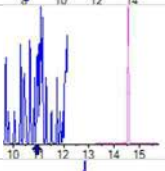 | 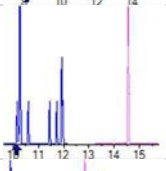 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 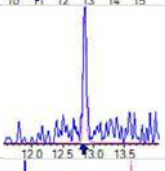 | 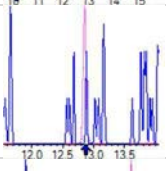 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 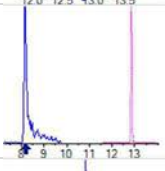 | 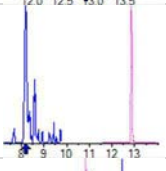 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 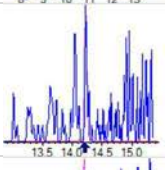 | 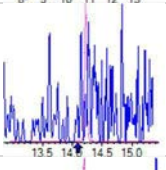 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 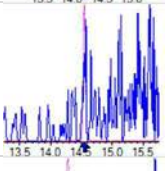 | 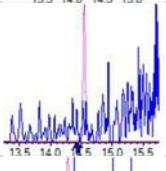 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 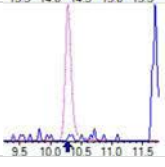 | 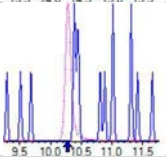 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 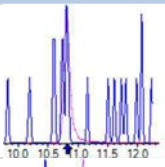 | 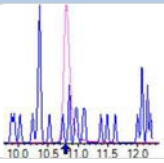 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 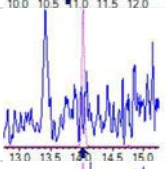 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 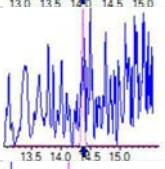 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 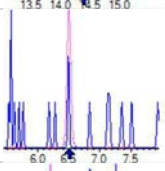 | 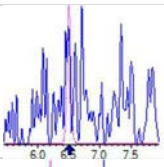 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 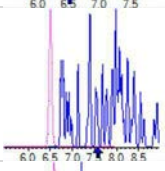 | 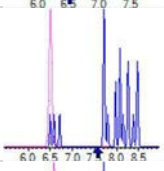 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 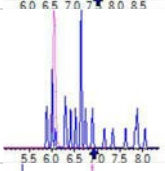 | 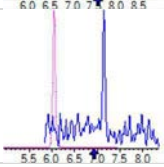 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 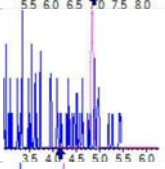 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 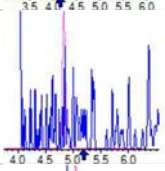 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 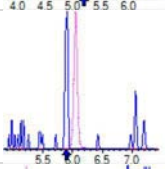 | 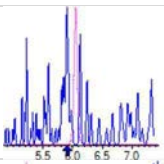 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 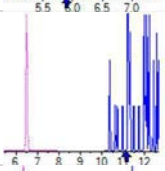 | 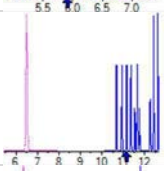 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 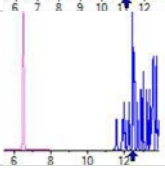 | 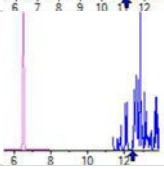 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 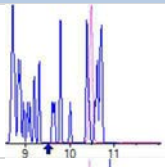 | 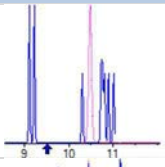 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 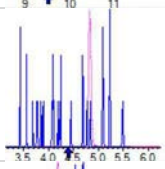 | 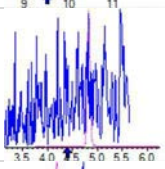 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 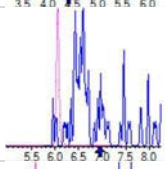 | 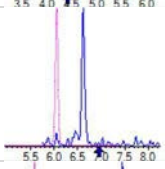 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 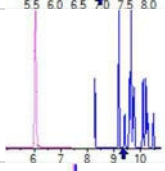 | 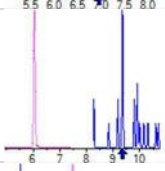 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 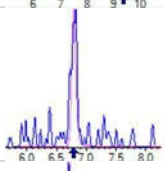 | 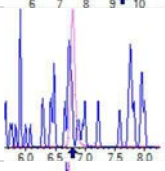 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 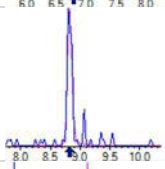 | 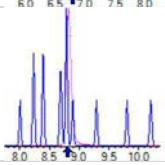 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 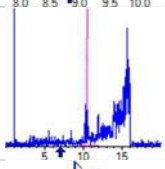 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>286508 | ( 3.75 , N/A )<br>( N/A , 0.00 , N/A ) | 1309.5 | N/A | 1.2016<br>[ 1.0000 ] | 120.2%<br>{ 112.3% } | 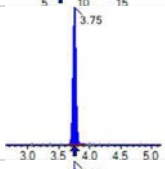 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>124786 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 15850.0 | N/A | 0.9837<br>[ 1.0000 ] | 98.4%<br>{ 102.3% } | 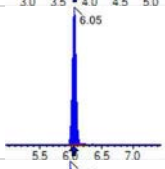 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>402466 | ( 8.19 , N/A )<br>( N/A , -0.01 , N/A ) | 3745.8 | N/A | 1.0181<br>[ 1.0000 ] | 101.8%<br>{ 101.6% } | 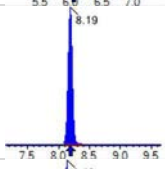 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>281564 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1035.3 | N/A | 0.9900<br>[ 1.0000 ] | 99.0%<br>{ 101.6% } | 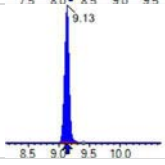 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 280831 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 7937.8 | N/A | 0.9617 [ 1.0000 ] | 96.2% { 97.3% } | 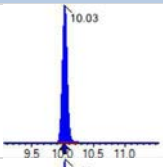 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 965997 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5386.6 | N/A | 1.0179 [ 1.0000 ] | 101.8% { 102.4% } | 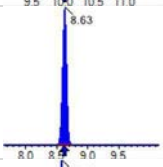 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 722088 | ( 10.48 , N/A ) ( N/A , -0.01 , N/A ) | 2402.9 | N/A | 0.9481 [ 1.0000 ] | 94.8% { 94.9% } | 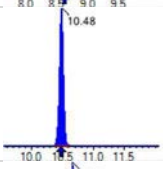 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2735116 | ( 3.75 , N/A ) ( N/A , 0.00 , N/A ) | 32302.9 | N/A | 8.3565 [ 8.0000 ] | 104.5% { 125.3% } | 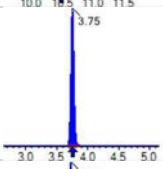 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1062506 | ( 4.83 , N/A ) ( N/A , 0.00 , N/A ) | 6790.6 | N/A | 4.5634 [ 4.0000 ] | 114.1% { 117.8% } | 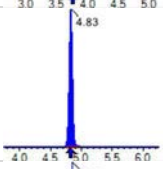 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 605486 | ( 6.05 , N/A ) ( N/A , 0.00 , N/A ) | 7636.9 | N/A | 2.1266 [ 2.0000 ] | 106.3% { 105.6% } | 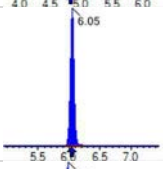 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 687855 | ( 7.19 , N/A ) ( N/A , -0.01 , N/A ) | 5560.7 | N/A | 2.1718 [ 2.0000 ] | 108.6% { 111.7% } | 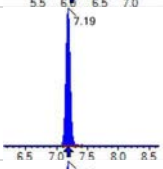 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 937084 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2727.1 | N/A | 2.1731 [ 2.0000 ] | 108.7% { 116.3% } | 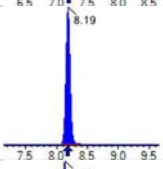 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 289492 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 2724.1 | N/A | 1.0486 [ 1.0000 ] | 104.9% { 109.7% } | 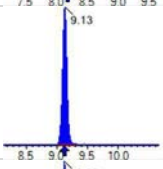 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 324096 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 1068.0 | N/A | 1.0298 [ 1.0000 ] | 103.0% { 105.6% } | 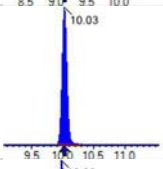 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 394318 | ( 10.89 , N/A ) ( N/A , -0.02 , N/A ) | 1145.6 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 107.0% } | 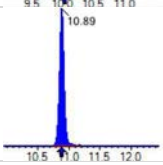 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 407393 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1321.3 | N/A | 1.0804 [ 1.0000 ] | 108.0% { 105.4% } | 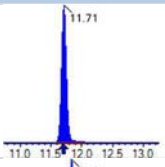 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 323435 | ( 12.84 , N/A ) ( N/A , 0.00 , N/A ) | 1318.0 | N/A | 1.0072 [ 1.0000 ] | 100.7% { 103.7% } | 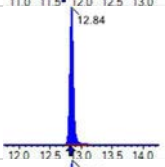 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 554142 | ( 13.65 , N/A ) ( N/A , 0.00 , N/A ) | 2322.4 | N/A | 2.0214 [ 2.0000 ] | 101.1% { 113.8% } | 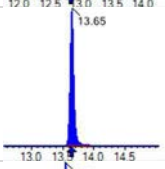 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1884111 | ( 6.34 , N/A ) ( N/A , -0.01 , N/A ) | 1455.4 | N/A | 2.1588 [ 2.0000 ] | 107.9% { 116.5% } | 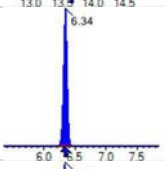 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1491024 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4361.2 | N/A | 2.1403 [ 2.0000 ] | 107.0% { 113.5% } | 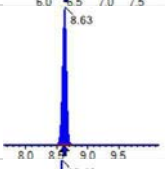 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1623814 | ( 10.48 , N/A ) ( N/A , -0.01 , N/A ) | 1690.2 | N/A | 2.0856 [ 2.0000 ] | 104.3% { 106.1% } | 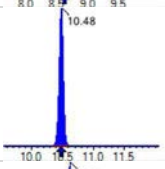 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 758097 | ( 5.52 , N/A ) ( N/A , 0.00 , N/A ) | 81.7 | N/A | 5.0344 [ 4.0000 ] | 125.9% { 122.4% } | 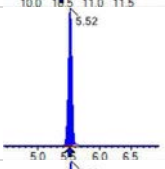 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2134943 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 4631.3 | N/A | 4.7374 [ 4.0000 ] | 118.4% { 120.7% } | 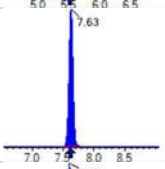 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1681697 | ( 9.40 , N/A ) ( N/A , -0.01 , N/A ) | 2165.5 | N/A | 4.7581 [ 4.0000 ] | 119.0% { 121.5% } | 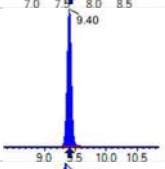 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3261540 | ( 11.03 , N/A ) ( N/A , -0.02 , N/A ) | 1364.5 | N/A | 8.8297 [ 8.0000 ] | 110.4% { 121.1% } | 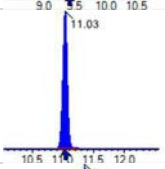 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1474554 | ( 12.86 , N/A ) ( N/A , -0.01 , N/A ) | 2668.7 | N/A | 2.1372 [ 2.0000 ] | 106.9% { 108.5% } | 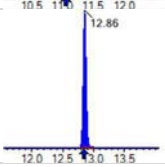 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (1)
Acquired: 2024/03/21 - 13:36

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 295657 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 1645.2 | N/A | 2.0204 [ 2.0000 ] | 101.0% { 107.8% } | 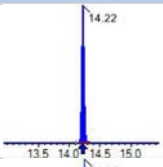  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 327318 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 2264.1 | N/A | 2.0857 [ 2.0000 ] | 104.3% { 108.8% } | 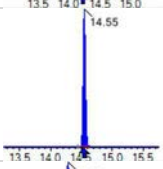  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 976603 | ( 10.28 , N/A ) ( N/A , -0.01 , N/A ) | 1832.9 | N/A | 4.8750 [ 4.0000 ] | 121.9% { 110.0% } | 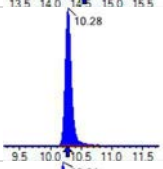  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 874701 | ( 10.81 , N/A ) ( N/A , -0.01 , N/A ) | 1850.0 | N/A | 4.7907 [ 4.0000 ] | 119.8% { 106.2% } | 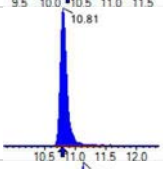  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1275368 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 2455.6 | N/A | 19.3937 [ 20.0000 ] | 97.0% { 105.3% } | 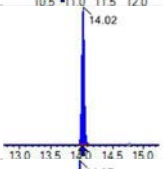  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1350816 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3886.5 | N/A | 20.2379 [ 20.0000 ] | 101.2% { 107.1% } | 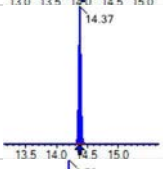  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1107937 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2466.2 | N/A | 8.5425 [ 8.0000 ] | 106.8% { 111.6% } | 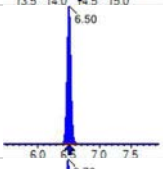  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 713623 | ( 6.79 , N/A ) ( N/A , -0.01 , N/A ) | 1242.0 | N/A | 2.3438 [ 2.0000 ] | 117.2% { 111.4% } | 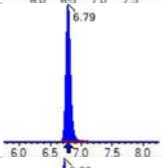  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 650087 | ( 8.82 , N/A ) ( N/A , -0.01 , N/A ) | 963.9 | N/A | 2.3454 [ 2.0000 ] | 117.3% { 110.5% } | 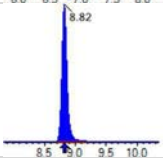  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB20 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .01050 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05550 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB20 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.740 | ng/mL0 | | |
| | 13C5-PFPEA | 4.50 | ng/mL0 | | |
| | 13C5-PFHXA | 2.310 | ng/mL0 | | |
| | 13C4-PFHPA | 2.310 | ng/mL0 | | |
| | 13C8-PFOA | 2.090 | ng/mL0 | | |
| | 13C9-PFNA | 1.040 | ng/mL0 | | |
| | 13C6-PFDA | 1.150 | ng/mL0 | | |
| | 13C7-PFUnA | 1.090 | ng/mL0 | | |
| | 13C2-PFDOA | 1.040 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.10 | ng/mL0 | | |
| | 13C2-PFHxDA | 2.170 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.030 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.080 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.030 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.820 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.980 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 9.150 | ng/mL0 | | |
| | 13C8-PFOSA | 2.130 | ng/mL0 | | |
| | D3-NMEFOSA | 1.950 | ng/mL0 | | |
| | D5-NETFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.430 | ng/mL0 | | |
| | D5-NETFOSAA | 4.710 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0110L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01019L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01019-CCB20 | D7-NMEFOSE0 | 19.50 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.10 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.730 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (6)
Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 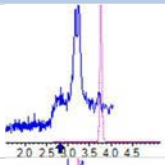 | 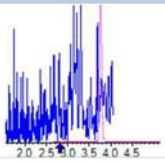 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 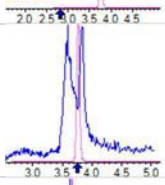 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 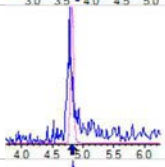 | 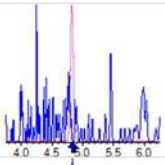 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 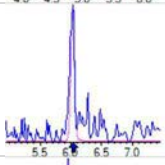 | 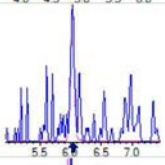 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 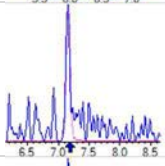 | 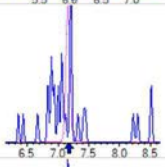 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 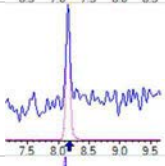 | 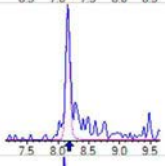 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 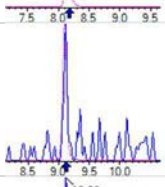 | 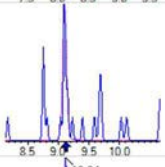 | |
| PFDA | ( 513.0 / 469.0 )<br>3956<br>( 513.0 / 169.0 )<br>1074 | ( 10.02 , 1.00 )<br>( 0.02 , N/A , -1.1) | 59.2<br>56.1 | 0.2716<br>231.8<br>221.8 | 0.0105 | N/A | 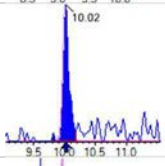 | 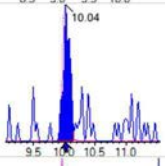 | IR2,MI2 DG 2024-03-21 |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 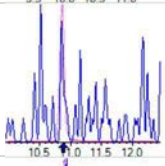 | 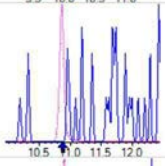 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 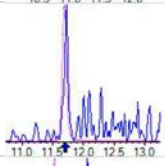 | 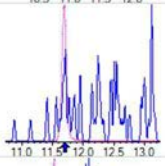 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 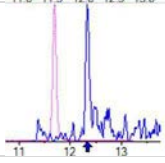 | 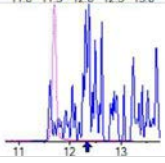 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (6)
Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 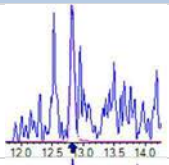 | 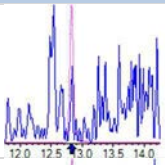 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 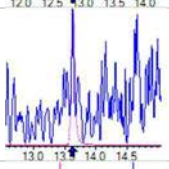 | 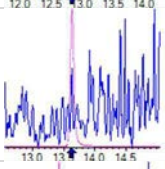 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 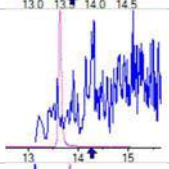 | 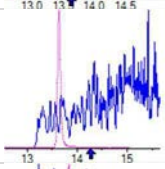 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 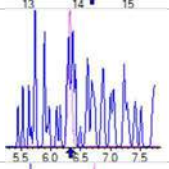 | 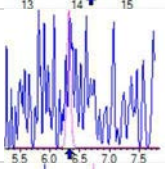 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 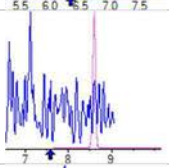 | 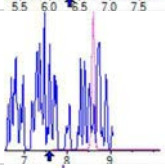 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 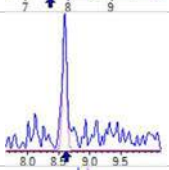 | 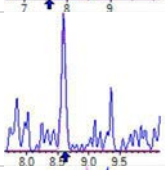 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 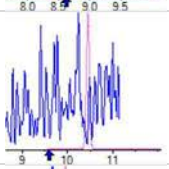 | 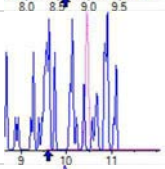 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 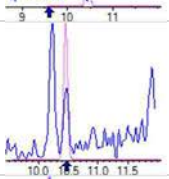 | 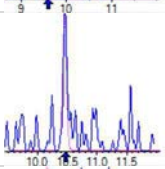 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 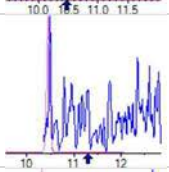 | 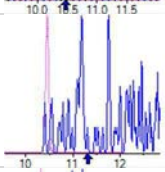 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 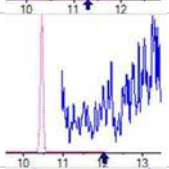 | 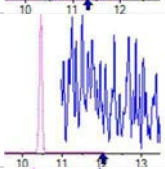 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 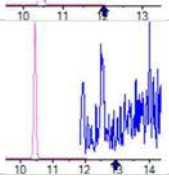 | 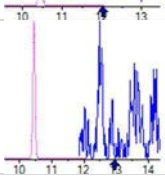 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (6)
Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 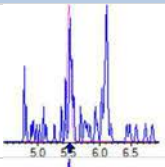 | 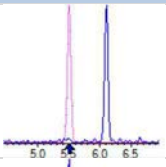 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 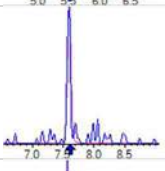 | 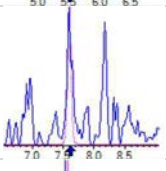 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 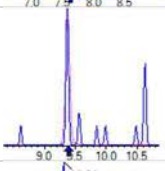 | 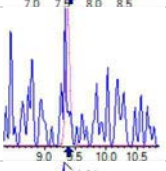 | |
| 10:2FTS | ( 627.0 / 607.0 ) 19126<br>( 627.0 / 81.0 ) 30656 | ( 11.01 , 1.00 ) ( 0.00 , N/A , -0.1) | 255.7<br>94.2 | 1.6028<br>111.3<br>115.6 | 0.0555 | N/A | 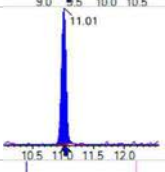 | 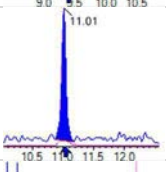 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 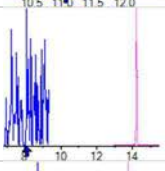 | 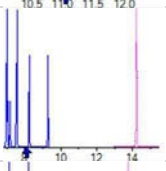 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 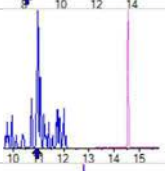 | 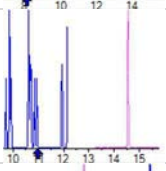 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 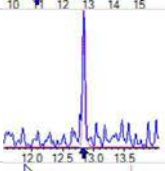 | 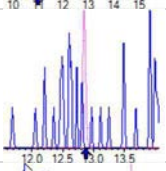 | |
| TFSI | ( 279.7 / 147.0 ) 35977<br>( 279.7 / 211.0 ) 2877 | ( 8.14 , 0.63 ) ( N/A , -0.05 , 0.8) | 29.9<br>11.8 | 0.0800<br>95.2<br>95.5 | 0.0169 | N/A | 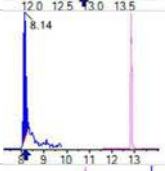 | 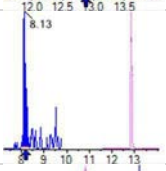 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 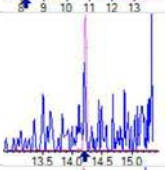 | 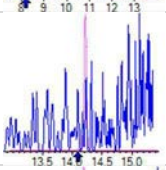 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 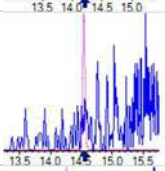 | 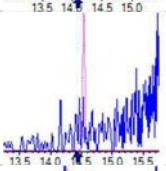 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 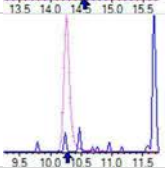 | 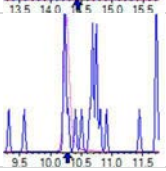 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (6)
Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 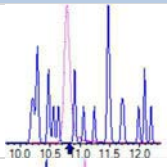 | 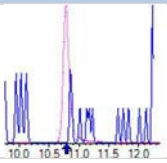 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 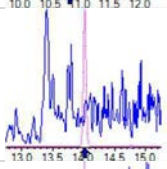 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 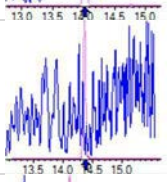 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 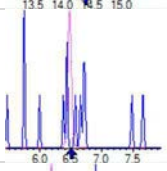 | 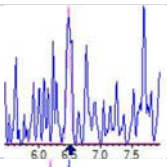 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 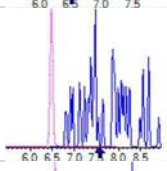 | 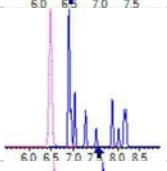 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 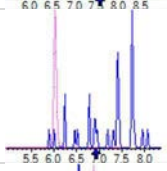 | 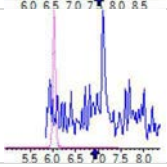 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 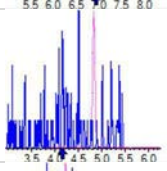 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 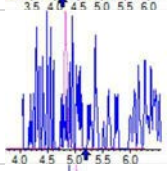 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 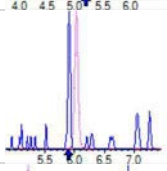 | 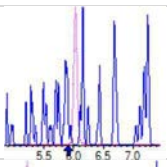 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 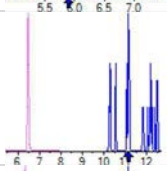 | 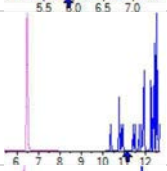 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 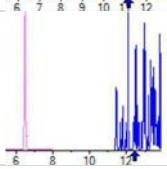 | 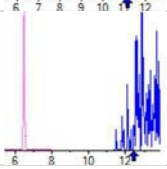 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB2 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 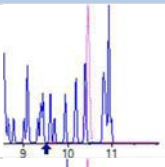 | 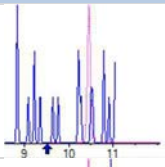 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 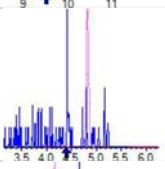 | 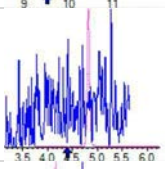 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 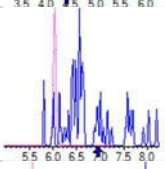 | 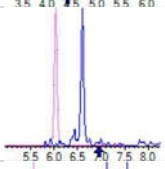 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 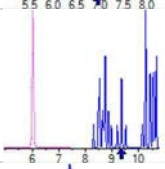 | 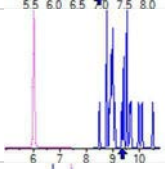 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 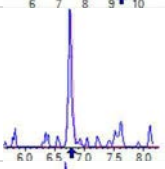 | 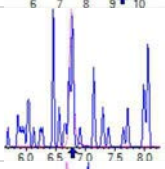 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 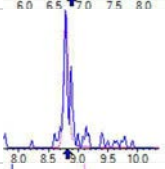 | 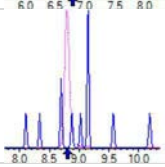 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 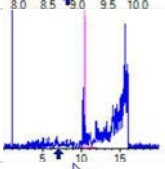 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 272874 | ( 3.77 , N/A )<br>( N/A , 0.01 , N/A ) | 1299.4 | N/A | 1.1444<br>[ 1.0000 ] | 114.4%<br>{ 107.0% } | 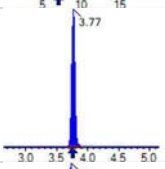 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 122386 | ( 6.03 , N/A )<br>( N/A , -0.03 , N/A ) | 12376.2 | N/A | 0.9648<br>[ 1.0000 ] | 96.5%<br>{ 100.4% } | 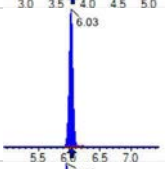 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 424975 | ( 8.16 , N/A )<br>( N/A , -0.04 , N/A ) | 3718.6 | N/A | 1.0750<br>[ 1.0000 ] | 107.5%<br>{ 107.2% } | 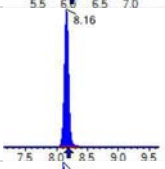 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 299715 | ( 9.10 , N/A )<br>( N/A , -0.04 , N/A ) | 1271.7 | N/A | 1.0538<br>[ 1.0000 ] | 105.4%<br>{ 108.2% } | 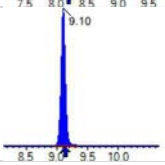 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (6)
Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286525 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 4506.2 | N/A | 0.9812 [ 1.0000 ] | 98.1% { 99.3% } | 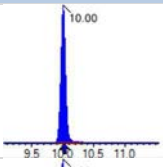 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1022185 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 4872.2 | N/A | 1.0771 [ 1.0000 ] | 107.7% { 108.4% } | 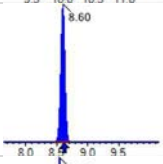 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 795260 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 2157.7 | N/A | 1.0441 [ 1.0000 ] | 104.4% { 104.5% } | 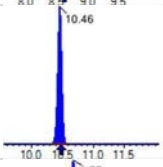 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2723974 | ( 3.77 , N/A ) ( N/A , 0.01 , N/A ) | 38747.1 | N/A | 8.7383 [ 8.0000 ] | 109.2% { 124.8% } | 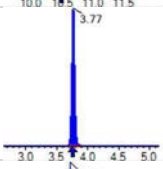 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1027418 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6009.6 | N/A | 4.4993 [ 4.0000 ] | 112.5% { 114.0% } | 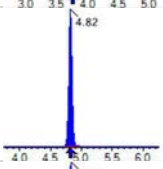 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 645540 | ( 6.03 , N/A ) ( N/A , -0.03 , N/A ) | 7830.1 | N/A | 2.3118 [ 2.0000 ] | 115.6% { 112.6% } | 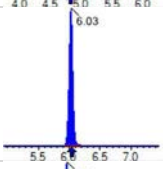 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 716583 | ( 7.16 , N/A ) ( N/A , -0.04 , N/A ) | 5995.9 | N/A | 2.3069 [ 2.0000 ] | 115.3% { 116.4% } | 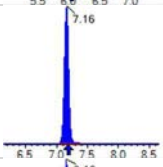 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 950781 | ( 8.16 , N/A ) ( N/A , -0.04 , N/A ) | 3419.4 | N/A | 2.0880 [ 2.0000 ] | 104.4% { 118.0% } | 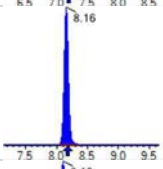 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 306935 | ( 9.10 , N/A ) ( N/A , -0.03 , N/A ) | 3379.4 | N/A | 1.0445 [ 1.0000 ] | 104.4% { 116.3% } | 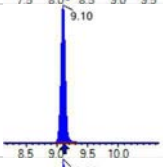 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 367747 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 1224.0 | N/A | 1.1453 [ 1.0000 ] | 114.5% { 119.8% } | 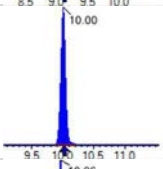 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412324 | ( 10.86 , N/A ) ( N/A , -0.04 , N/A ) | 1122.9 | N/A | 1.0915 [ 1.0000 ] | 109.1% { 111.9% } | 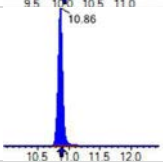 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB2 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 399502 | ( 11.69 , N/A ) ( N/A , -0.03 , N/A ) | 1672.5 | N/A | 1.0385 [ 1.0000 ] | 103.8% { 103.4% } | 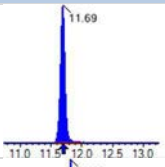  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 361655 | ( 12.83 , N/A ) ( N/A , -0.02 , N/A ) | 1397.9 | N/A | 1.1039 [ 1.0000 ] | 110.4% { 116.0% } | 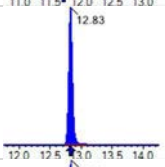  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 607363 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2497.2 | N/A | 2.1715 [ 2.0000 ] | 108.6% { 124.7% } | 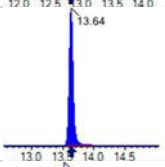  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1831561 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 1305.9 | N/A | 1.9832 [ 2.0000 ] | 99.2% { 113.3% } | 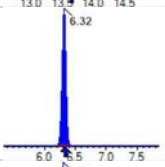  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1496504 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 4231.4 | N/A | 2.0301 [ 2.0000 ] | 101.5% { 113.9% } | 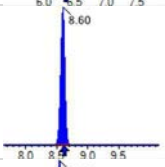  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1781682 | ( 10.45 , N/A ) ( N/A , -0.04 , N/A ) | 1634.9 | N/A | 2.0778 [ 2.0000 ] | 103.9% { 116.4% } | 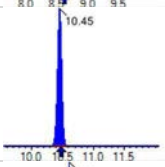  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 801118 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 104.5 | N/A | 5.0276 [ 4.0000 ] | 125.7% { 129.4% } | 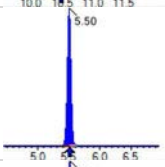  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2296954 | ( 7.60 , N/A ) ( N/A , -0.04 , N/A ) | 4938.6 | N/A | 4.8168 [ 4.0000 ] | 120.4% { 129.9% } | 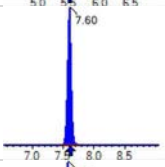  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1864164 | ( 9.38 , N/A ) ( N/A , -0.04 , N/A ) | 1392.5 | N/A | 4.9844 [ 4.0000 ] | 124.6% { 134.7% } | 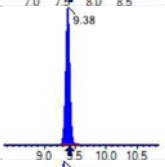  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3574685 | ( 11.01 , N/A ) ( N/A , -0.04 , N/A ) | 1764.4 | N/A | 9.1455 [ 8.0000 ] | 114.3% { 132.7% } | 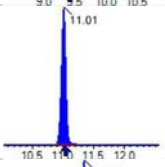  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1621504 | ( 12.85 , N/A ) ( N/A , -0.01 , N/A ) | 3386.0 | N/A | 2.1339 [ 2.0000 ] | 106.7% { 119.3% } | 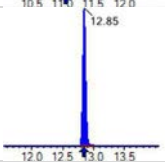  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (6)
Acquired: 2024/03/21 - 15:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 315075 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 2432.9 | N/A | 1.9550 [ 2.0000 ] | 97.7% { 114.9% } | 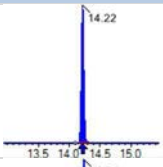 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 338389 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 2486.9 | N/A | 1.9579 [ 2.0000 ] | 97.9% { 112.5% } | 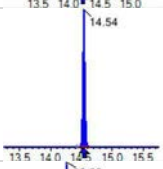 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 977273 | ( 10.26 , N/A ) ( N/A , -0.04 , N/A ) | 2459.9 | N/A | 4.4295 [ 4.0000 ] | 110.7% { 110.1% } | 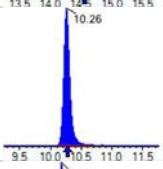 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 947295 | ( 10.78 , N/A ) ( N/A , -0.04 , N/A ) | 1714.4 | N/A | 4.7109 [ 4.0000 ] | 117.8% { 115.0% } | 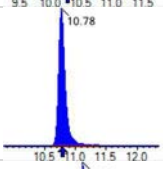 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1413625 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 2238.4 | N/A | 19.5182 [ 20.0000 ] | 97.6% { 116.7% } | 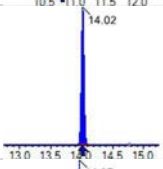 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1480418 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 3618.6 | N/A | 20.1389 [ 20.0000 ] | 100.7% { 117.3% } | 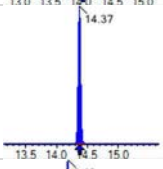 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1111094 | ( 6.48 , N/A ) ( N/A , -0.03 , N/A ) | 2695.5 | N/A | 8.7349 [ 8.0000 ] | 109.2% { 111.9% } | 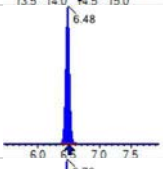 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 753075 | ( 6.76 , N/A ) ( N/A , -0.03 , N/A ) | 1404.6 | N/A | 2.4242 [ 2.0000 ] | 121.2% { 117.5% } | 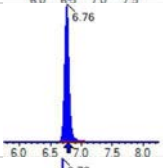 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 681593 | ( 8.79 , N/A ) ( N/A , -0.04 , N/A ) | 911.3 | N/A | 2.4102 [ 2.0000 ] | 120.5% { 115.8% } | 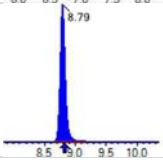 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB30 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB30 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.210 | ng/mL0 | | |
| | 13C5-PFPEA | 4.070 | ng/mL0 | | |
| | 13C5-PFHXA | 2.090 | ng/mL0 | | |
| | 13C4-PFHPA | 2.080 | ng/mL0 | | |
| | 13C8-PFOA | 2.180 | ng/mL0 | | |
| | 13C9-PFNA | 1.070 | ng/mL0 | | |
| | 13C6-PFDA | 1.060 | ng/mL0 | | |
| | 13C7-PFUnA | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.110 | ng/mL0 | | |
| | 13C2-PFHxDA | 2.110 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.130 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.160 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.950 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.730 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.460 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.30 | ng/mL0 | | |
| | 13C8-PFOSA | 2.170 | ng/mL0 | | |
| | D3-NMEFOSA | 2.020 | ng/mL0 | | |
| | D5-NETFOSA | 2.070 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.770 | ng/mL0 | | |
| | D5-NETFOSAA | 4.820 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0110L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01019L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01019-CCB30 | D7-NMEFOSE | 0 | 20.60 ng/mL | 0 | |
| | D9-NETFOSE | 0 | 20.70 ng/mL | 0 | |
| | 13C3-HFPO-DA | | 8.10 ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (23)
Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 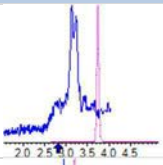 | 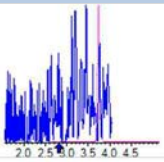 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 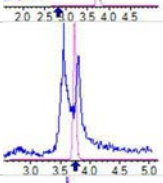 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 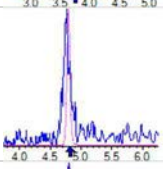 | 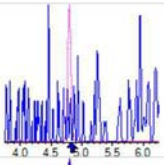 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 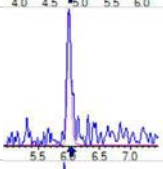 | 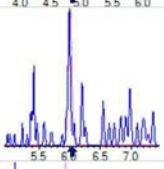 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 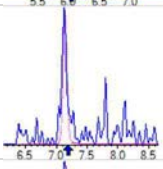 | 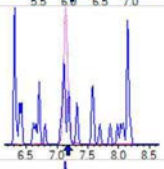 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 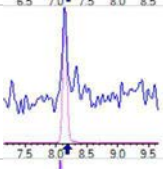 | 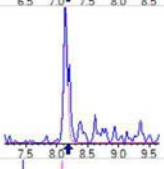 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 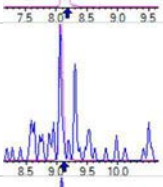 | 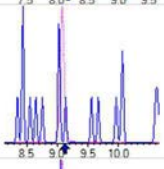 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 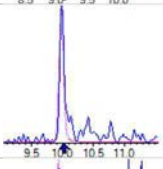 | 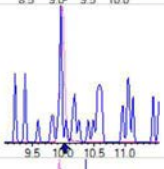 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 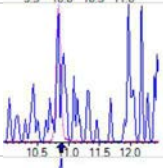 | 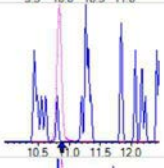 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 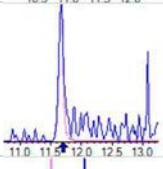 | 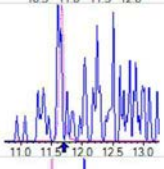 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 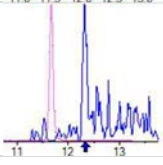 | 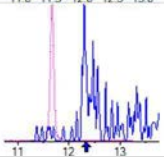 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (23)
Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 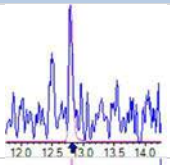 | 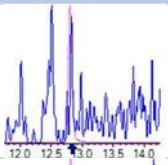 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 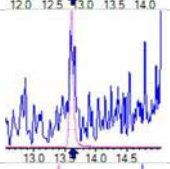 | 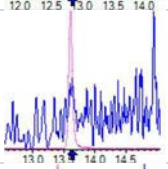 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 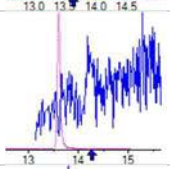 | 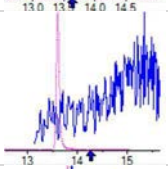 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 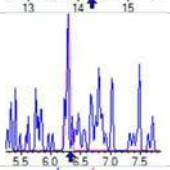 | 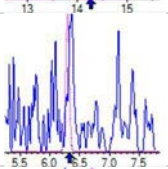 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 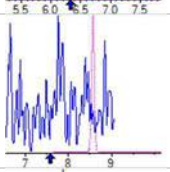 | 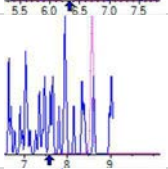 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 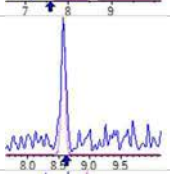 | 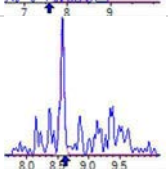 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 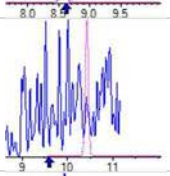 | 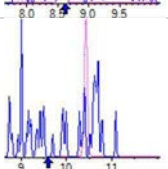 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 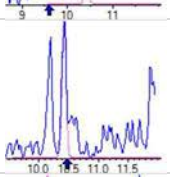 | 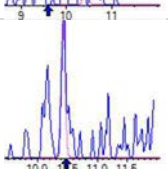 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 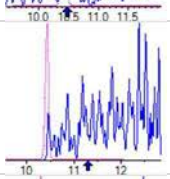 | 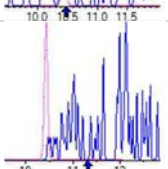 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 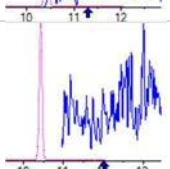 | 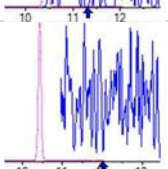 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 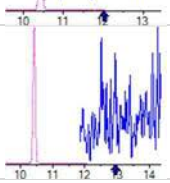 | 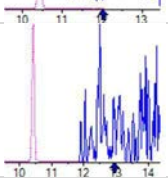 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (23)
Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 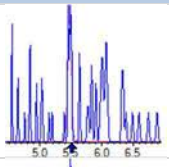 | 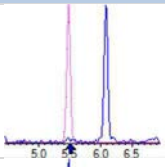 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 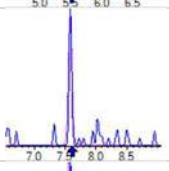 | 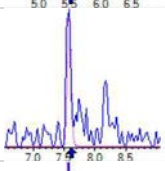 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 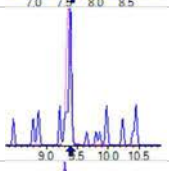 | 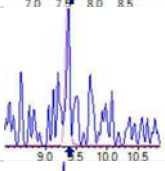 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 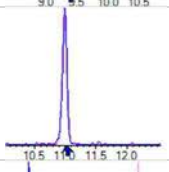 | 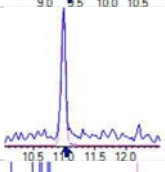 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 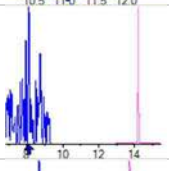 | 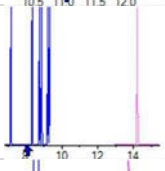 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 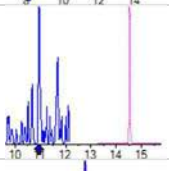 | 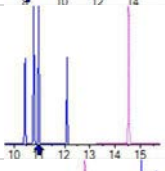 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 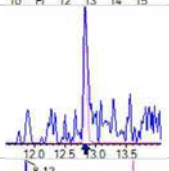 | 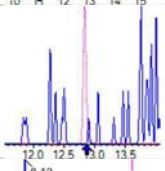 | |
| TFSI | ( 279.7 / 147.0 ) 30258<br>( 279.7 / 211.0 ) 3195 | ( 8.12 , 0.63 ) ( N/A , -0.08 , -0.3) | 21.4<br>15.1 | 0.1056<br>125.7<br>126.0 | 0.0156 | N/A | 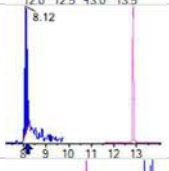 | 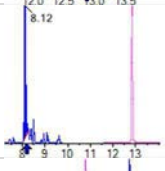 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 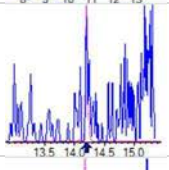 | 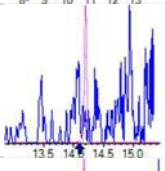 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 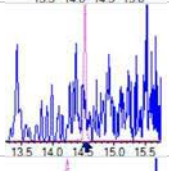 | 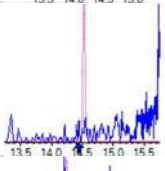 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 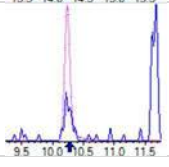 | 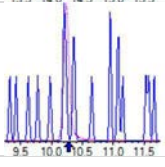 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (23)
Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 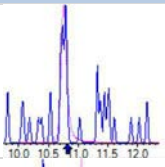 | 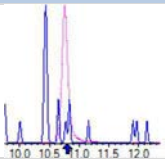 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 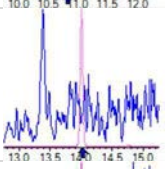 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 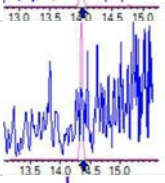 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 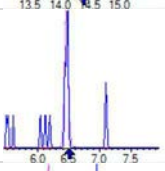 | 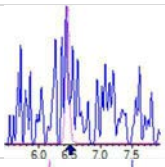 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 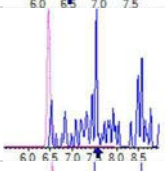 | 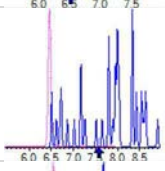 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 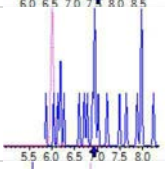 | 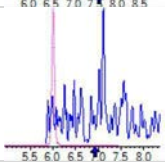 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 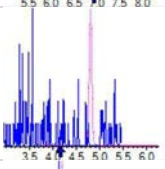 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 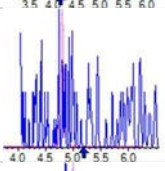 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 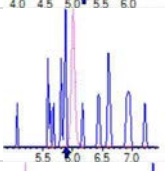 | 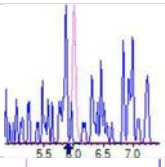 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 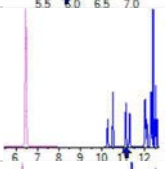 | 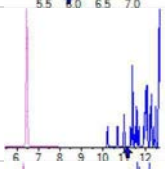 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 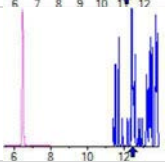 | 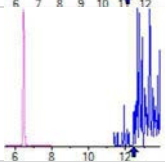 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 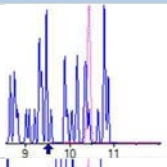 | 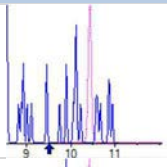 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 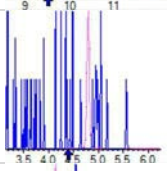 | 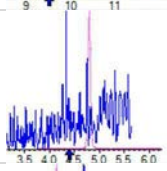 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 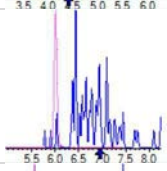 | 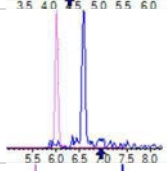 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 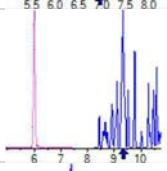 | 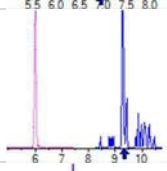 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 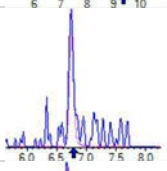 | 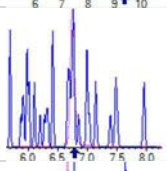 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 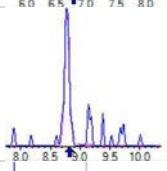 | 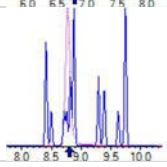 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 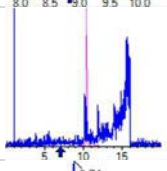 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>282341 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1499.0 | N/A | 1.1841<br>[ 1.0000 ] | 118.4%<br>{ 110.7% } | 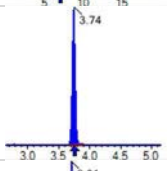 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>126514 | ( 6.01 , N/A )<br>( N/A , -0.05 , N/A ) | 21006.9 | N/A | 0.9973<br>[ 1.0000 ] | 99.7%<br>{ 103.7% } | 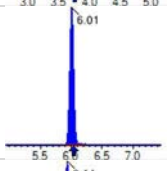 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>391127 | ( 8.14 , N/A )<br>( N/A , -0.06 , N/A ) | 3967.9 | N/A | 0.9894<br>[ 1.0000 ] | 98.9%<br>{ 98.7% } | 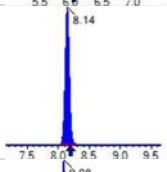 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>269045 | ( 9.08 , N/A )<br>( N/A , -0.06 , N/A ) | 972.8 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 97.1% } | 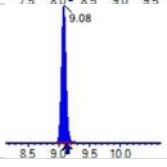 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (23)
Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 273970 | ( 9.98 , N/A ) ( N/A , -0.06 , N/A ) | 27612.8 | N/A | 0.9382 [ 1.0000 ] | 93.8% { 94.9% } | 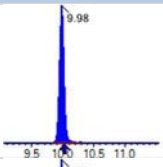 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 920008 | ( 8.58 , N/A ) ( N/A , -0.06 , N/A ) | 4233.9 | N/A | 0.9694 [ 1.0000 ] | 96.9% { 97.5% } | 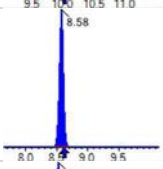 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 710547 | ( 10.43 , N/A ) ( N/A , -0.07 , N/A ) | 1998.5 | N/A | 0.9329 [ 1.0000 ] | 93.3% { 93.4% } | 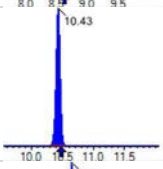 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2648455 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 44010.0 | N/A | 8.2112 [ 8.0000 ] | 102.6% { 121.3% } | 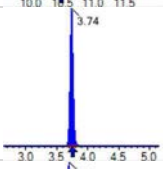 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 960606 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 5514.5 | N/A | 4.0694 [ 4.0000 ] | 101.7% { 106.5% } | 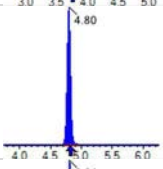 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 603468 | ( 6.01 , N/A ) ( N/A , -0.05 , N/A ) | 8772.9 | N/A | 2.0906 [ 2.0000 ] | 104.5% { 105.2% } | 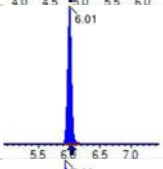 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 668891 | ( 7.14 , N/A ) ( N/A , -0.06 , N/A ) | 3663.0 | N/A | 2.0831 [ 2.0000 ] | 104.2% { 108.7% } | 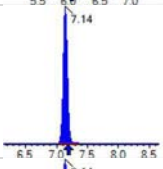 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 911827 | ( 8.14 , N/A ) ( N/A , -0.06 , N/A ) | 4842.9 | N/A | 2.1758 [ 2.0000 ] | 108.8% { 113.2% } | 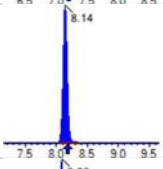 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283513 | ( 9.08 , N/A ) ( N/A , -0.06 , N/A ) | 2555.2 | N/A | 1.0747 [ 1.0000 ] | 107.5% { 107.4% } | 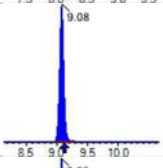 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 324718 | ( 9.98 , N/A ) ( N/A , -0.06 , N/A ) | 1354.8 | N/A | 1.0576 [ 1.0000 ] | 105.8% { 105.8% } | 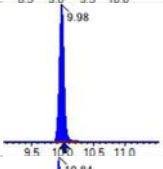 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 401004 | ( 10.84 , N/A ) ( N/A , -0.06 , N/A ) | 1102.1 | N/A | 1.1102 [ 1.0000 ] | 111.0% { 108.8% } | 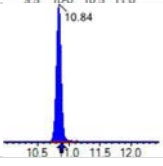 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB3 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 388469 | ( 11.67 , N/A ) ( N/A , -0.06 , N/A ) | 1306.8 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 100.5% } | 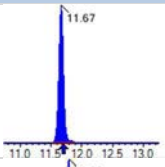 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 346208 | ( 12.80 , N/A ) ( N/A , -0.04 , N/A ) | 1160.6 | N/A | 1.1052 [ 1.0000 ] | 110.5% { 111.0% } | 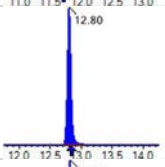 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 563420 | ( 13.61 , N/A ) ( N/A , -0.04 , N/A ) | 2414.0 | N/A | 2.1067 [ 2.0000 ] | 105.3% { 115.7% } | 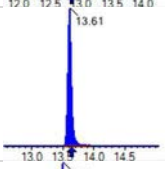 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1770770 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 1294.7 | N/A | 2.1303 [ 2.0000 ] | 106.5% { 109.5% } | 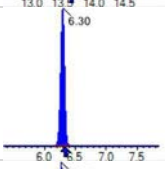 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1431670 | ( 8.57 , N/A ) ( N/A , -0.06 , N/A ) | 3454.1 | N/A | 2.1578 [ 2.0000 ] | 107.9% { 109.0% } | 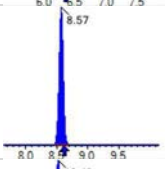 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1553067 | ( 10.43 , N/A ) ( N/A , -0.07 , N/A ) | 1821.3 | N/A | 2.0272 [ 2.0000 ] | 101.4% { 101.5% } | 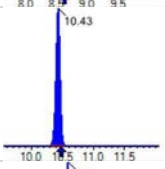 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 709440 | ( 5.48 , N/A ) ( N/A , -0.04 , N/A ) | 92.8 | N/A | 4.9468 [ 4.0000 ] | 123.7% { 114.6% } | 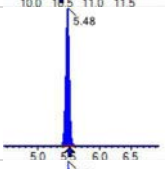 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2029545 | ( 7.58 , N/A ) ( N/A , -0.06 , N/A ) | 3829.9 | N/A | 4.7287 [ 4.0000 ] | 118.2% { 114.7% } | 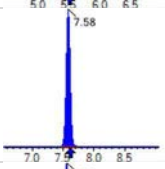 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1500928 | ( 9.36 , N/A ) ( N/A , -0.06 , N/A ) | 1789.5 | N/A | 4.4589 [ 4.0000 ] | 111.5% { 108.4% } | 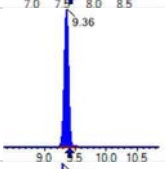 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2921059 | ( 10.99 , N/A ) ( N/A , -0.06 , N/A ) | 1662.6 | N/A | 8.3032 [ 8.0000 ] | 103.8% { 108.5% } | 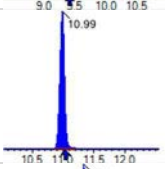 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1470579 | ( 12.84 , N/A ) ( N/A , -0.03 , N/A ) | 2771.6 | N/A | 2.1660 [ 2.0000 ] | 108.3% { 108.2% } | 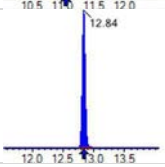 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (23)
Acquired: 2024/03/21 - 21:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 291381 | ( 14.20 , N/A ) ( N/A , -0.02 , N/A ) | 1597.6 | N/A | 2.0235 [ 2.0000 ] | 101.2% { 106.3% } | 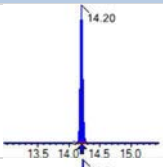  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 319462 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 2622.5 | N/A | 2.0687 [ 2.0000 ] | 103.4% { 106.2% } | 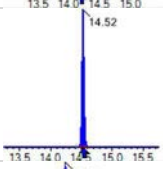  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 940779 | ( 10.24 , N/A ) ( N/A , -0.06 , N/A ) | 2635.1 | N/A | 4.7724 [ 4.0000 ] | 119.3% { 105.9% } | 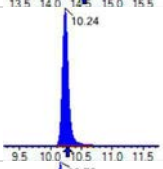  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 866407 | ( 10.76 , N/A ) ( N/A , -0.06 , N/A ) | 1943.6 | N/A | 4.8224 [ 4.0000 ] | 120.6% { 105.2% } | 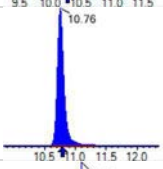  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1334305 | ( 14.00 , N/A ) ( N/A , -0.02 , N/A ) | 1928.3 | N/A | 20.6195 [ 20.0000 ] | 103.1% { 110.2% } | 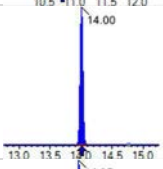  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1358891 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 4225.2 | N/A | 20.6896 [ 20.0000 ] | 103.4% { 107.7% } | 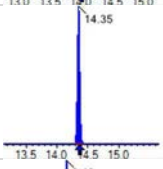  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1065651 | ( 6.46 , N/A ) ( N/A , -0.05 , N/A ) | 2118.7 | N/A | 8.1043 [ 8.0000 ] | 101.3% { 107.3% } | 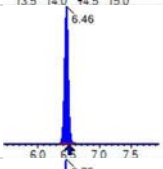  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 732306 | ( 6.75 , N/A ) ( N/A , -0.05 , N/A ) | 1436.3 | N/A | 2.4654 [ 2.0000 ] | 123.3% { 114.3% } | 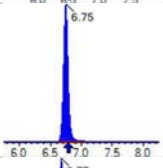  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 662231 | ( 8.77 , N/A ) ( N/A , -0.06 , N/A ) | 778.0 | N/A | 2.4490 [ 2.0000 ] | 122.5% { 112.6% } | 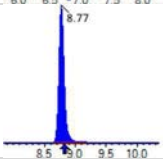  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB40 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB40 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.750 | ng/mL0 | | |
| | 13C5-PFPEA | 3.80 | ng/mL0 | | |
| | 13C5-PFHXA | 1.920 | ng/mL0 | | |
| | 13C4-PFHPA | 1.850 | ng/mL0 | | |
| | 13C8-PFOA | 2.230 | ng/mL0 | | |
| | 13C9-PFNA | 1.110 | ng/mL0 | | |
| | 13C6-PFDA | 1.070 | ng/mL0 | | |
| | 13C7-PFUnA | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA | 1.150 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.140 | ng/mL0 | | |
| | 13C2-PFHxDA | 2.050 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.010 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.150 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.070 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.530 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.630 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.710 | ng/mL0 | | |
| | 13C8-PFOSA | 2.190 | ng/mL0 | | |
| | D3-NMEFOSA | 1.990 | ng/mL0 | | |
| | D5-NETFOSA | 1.980 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.720 | ng/mL0 | | |
| | D5-NETFOSAA | 4.910 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0110L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01019L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | C |
|---|---|---|---|---|---|
| SD01019-CCB40 | D7-NMEFOSE | 21.0 | ng/mL | 0 | |
| | D9-NETFOSE | 18.80 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 7.250 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (40)
Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 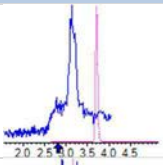 | 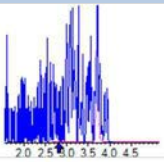 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 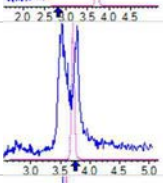 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 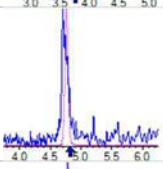 | 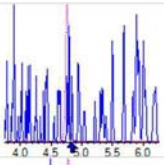 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 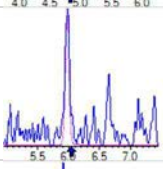 | 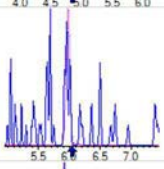 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 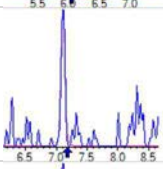 | 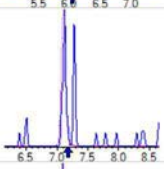 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 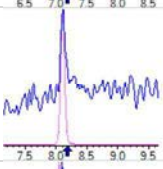 | 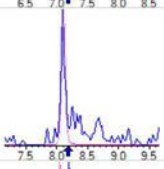 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 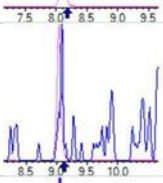 | 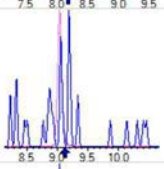 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 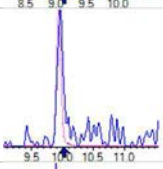 | 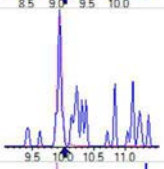 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 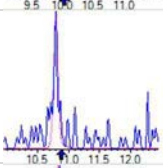 | 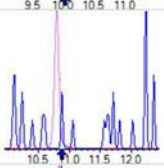 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 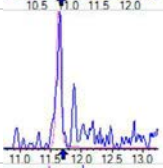 | 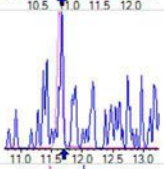 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 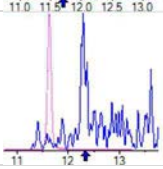 | 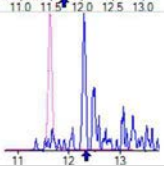 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (40)
Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 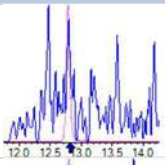 | 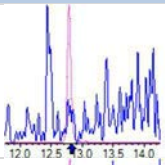 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 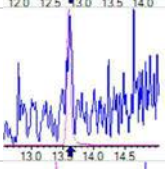 | 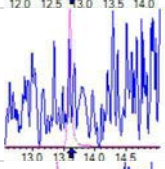 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 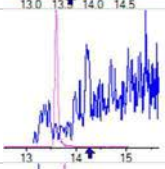 | 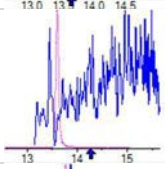 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 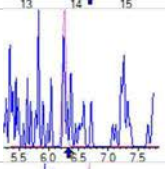 | 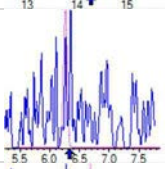 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 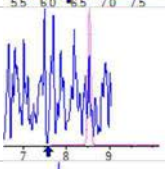 | 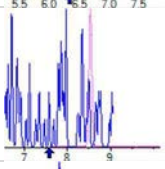 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 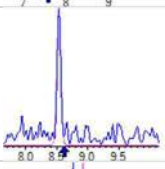 | 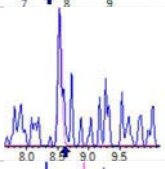 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 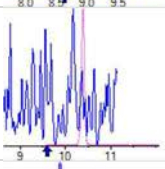 | 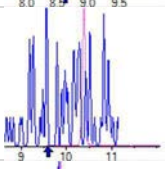 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 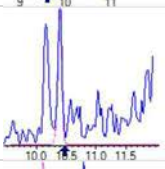 | 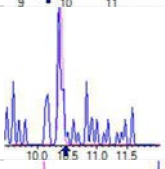 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 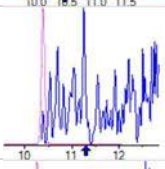 | 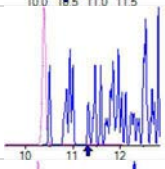 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 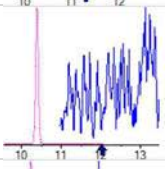 | 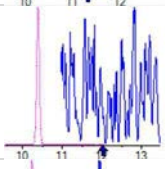 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 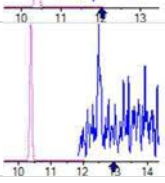 | 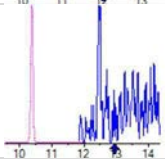 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB4 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (40)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 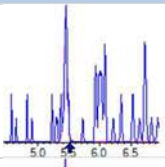 | 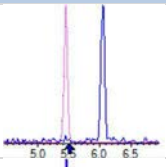 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 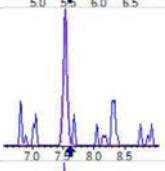 | 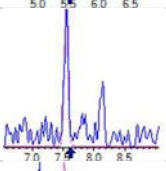 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 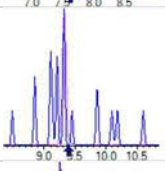 | 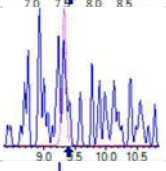 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 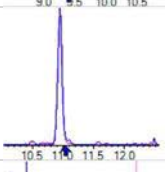 | 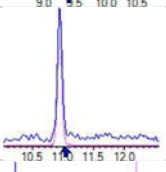 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 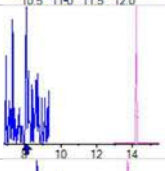 | 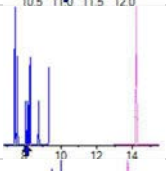 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 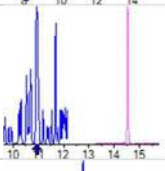 | 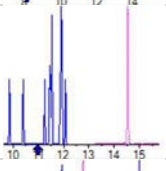 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 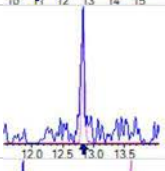 | 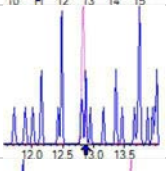 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 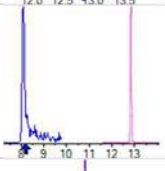 | 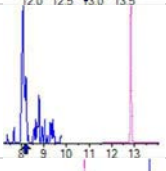 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 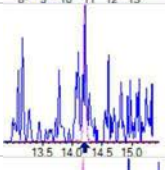 | 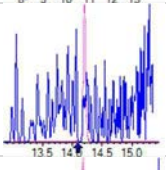 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 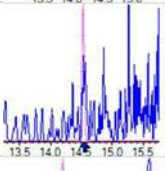 | 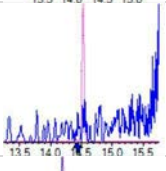 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 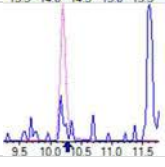 | 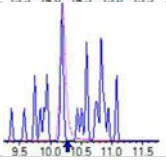 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (40)
Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 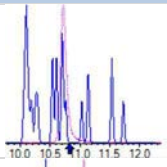 | 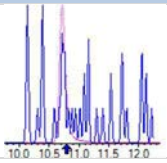 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 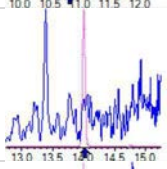 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 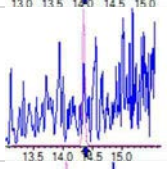 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 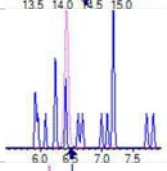 | 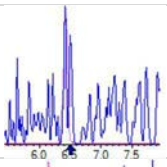 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 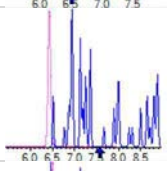 | 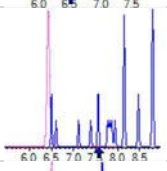 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 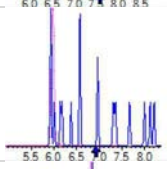 | 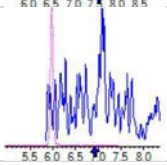 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 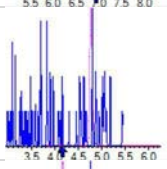 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 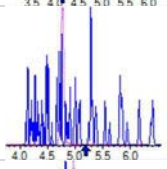 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 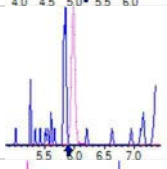 | 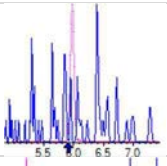 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 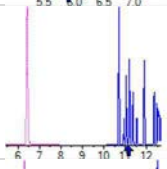 | 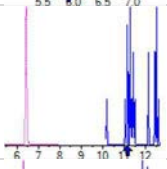 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 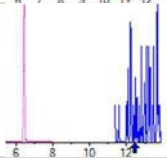 | 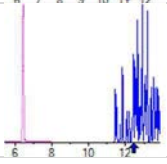 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (40)
Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 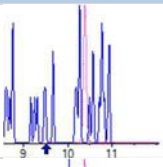 | 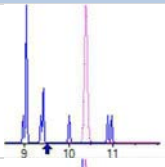 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 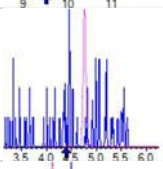 | 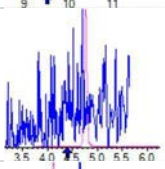 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 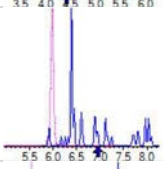 | 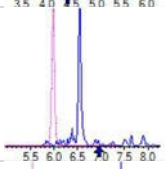 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 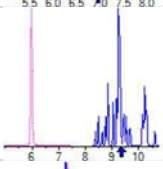 | 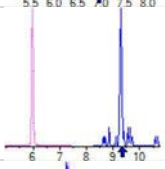 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 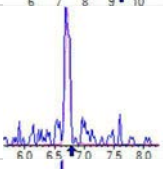 | 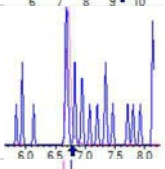 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 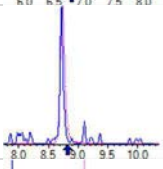 | 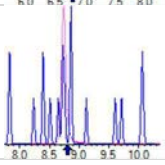 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 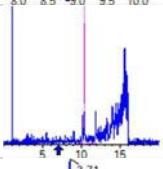 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>236232 | ( 3.71 , N/A )<br>( N/A , -0.04 , N/A ) | 1493.1 | N/A | 0.9908<br>[ 1.0000 ] | 99.1%<br>{ 92.6% } | 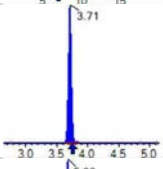 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>122061 | ( 5.98 , N/A )<br>( N/A , -0.08 , N/A ) | 12106.7 | N/A | 0.9622<br>[ 1.0000 ] | 96.2%<br>{ 100.1% } | 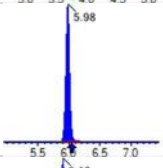 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>339922 | ( 8.10 , N/A )<br>( N/A , -0.09 , N/A ) | 3527.8 | N/A | 0.8599<br>[ 1.0000 ] | 86.0%<br>{ 85.8% } | 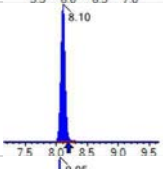 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>238398 | ( 9.05 , N/A )<br>( N/A , -0.09 , N/A ) | 944.0 | N/A | 0.8382<br>[ 1.0000 ] | 83.8%<br>{ 86.0% } | 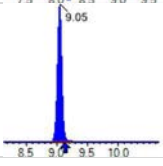 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (40)
Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 243937 | ( 9.94 , N/A ) ( N/A , -0.10 , N/A ) | 18011.7 | N/A | 0.8353 [ 1.0000 ] | 83.5% { 84.5% } | 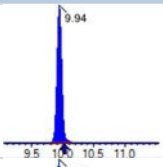 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 886692 | ( 8.54 , N/A ) ( N/A , -0.10 , N/A ) | 4748.2 | N/A | 0.9343 [ 1.0000 ] | 93.4% { 94.0% } | 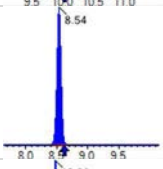 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 663678 | ( 10.39 , N/A ) ( N/A , -0.10 , N/A ) | 2172.6 | N/A | 0.8714 [ 1.0000 ] | 87.1% { 87.2% } | 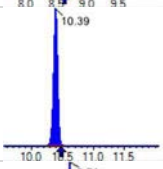 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2361821 | ( 3.71 , N/A ) ( N/A , -0.04 , N/A ) | 39116.3 | N/A | 8.7517 [ 8.0000 ] | 109.4% { 108.2% } | 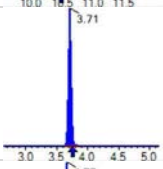 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 865633 | ( 4.77 , N/A ) ( N/A , -0.06 , N/A ) | 6367.5 | N/A | 3.8009 [ 4.0000 ] | 95.0% { 96.0% } | 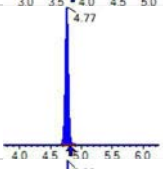 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 534053 | ( 5.98 , N/A ) ( N/A , -0.08 , N/A ) | 6925.2 | N/A | 1.9176 [ 2.0000 ] | 95.9% { 93.1% } | 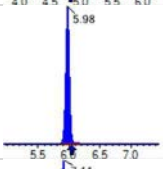 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 574008 | ( 7.11 , N/A ) ( N/A , -0.09 , N/A ) | 6536.4 | N/A | 1.8528 [ 2.0000 ] | 92.6% { 93.3% } | 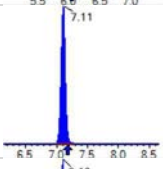 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 812834 | ( 8.10 , N/A ) ( N/A , -0.09 , N/A ) | 3207.4 | N/A | 2.2317 [ 2.0000 ] | 111.6% { 100.9% } | 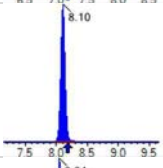 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 258408 | ( 9.04 , N/A ) ( N/A , -0.10 , N/A ) | 21877.2 | N/A | 1.1055 [ 1.0000 ] | 110.5% { 97.9% } | 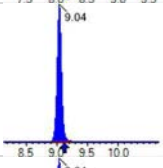 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 293825 | ( 9.94 , N/A ) ( N/A , -0.10 , N/A ) | 1124.4 | N/A | 1.0748 [ 1.0000 ] | 107.5% { 95.7% } | 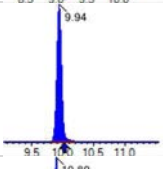 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 355837 | ( 10.80 , N/A ) ( N/A , -0.10 , N/A ) | 1319.1 | N/A | 1.1064 [ 1.0000 ] | 110.6% { 96.6% } | 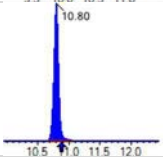 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB4 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (40)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 375335 | ( 11.63 , N/A ) ( N/A , -0.10 , N/A ) | 1629.7 | N/A | 1.1460 [ 1.0000 ] | 114.6% { 97.1% } | 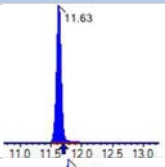  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318994 | ( 12.79 , N/A ) ( N/A , -0.06 , N/A ) | 1300.3 | N/A | 1.1437 [ 1.0000 ] | 114.4% { 102.3% } | 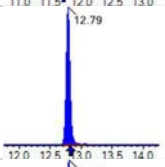  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 487616 | ( 13.60 , N/A ) ( N/A , -0.05 , N/A ) | 2279.1 | N/A | 2.0477 [ 2.0000 ] | 102.4% { 100.1% } | 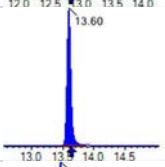  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1607581 | ( 6.26 , N/A ) ( N/A , -0.09 , N/A ) | 1418.2 | N/A | 2.0067 [ 2.0000 ] | 100.3% { 99.4% } | 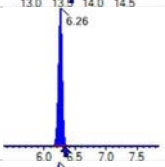  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1375635 | ( 8.53 , N/A ) ( N/A , -0.10 , N/A ) | 6784.6 | N/A | 2.1513 [ 2.0000 ] | 107.6% { 104.7% } | 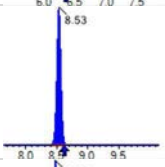  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1480638 | ( 10.39 , N/A ) ( N/A , -0.11 , N/A ) | 1461.3 | N/A | 2.0691 [ 2.0000 ] | 103.5% { 96.8% } | 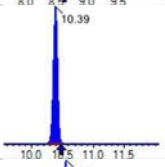  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 681604 | ( 5.45 , N/A ) ( N/A , -0.07 , N/A ) | 102.1 | N/A | 4.9312 [ 4.0000 ] | 123.3% { 110.1% } | 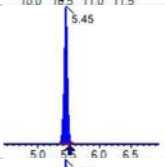  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1871814 | ( 7.55 , N/A ) ( N/A , -0.09 , N/A ) | 4807.7 | N/A | 4.5250 [ 4.0000 ] | 113.1% { 105.8% } | 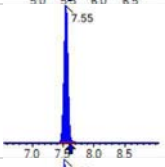  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1501525 | ( 9.32 , N/A ) ( N/A , -0.09 , N/A ) | 1739.1 | N/A | 4.6282 [ 4.0000 ] | 115.7% { 108.5% } | 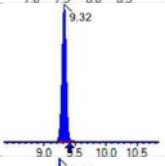  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2952253 | ( 10.94 , N/A ) ( N/A , -0.11 , N/A ) | 1605.0 | N/A | 8.7072 [ 8.0000 ] | 108.8% { 109.6% } | 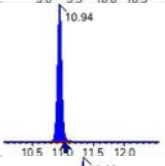  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1385742 | ( 12.83 , N/A ) ( N/A , -0.03 , N/A ) | 2205.5 | N/A | 2.1852 [ 2.0000 ] | 109.3% { 102.0% } | 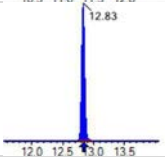  | | |

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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (40)
Acquired: 2024/03/22 - 02:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 268262 | ( 14.20 , N/A ) ( N/A , -0.02 , N/A ) | 1724.2 | N/A | 1.9945 [ 2.0000 ] | 99.7% { 97.9% } | 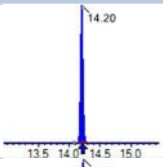  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 285118 | ( 14.52 , N/A ) ( N/A , -0.02 , N/A ) | 2443.5 | N/A | 1.9767 [ 2.0000 ] | 98.8% { 94.8% } | 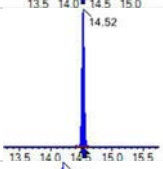  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 869483 | ( 10.20 , N/A ) ( N/A , -0.10 , N/A ) | 2539.2 | N/A | 4.7223 [ 4.0000 ] | 118.1% { 97.9% } | 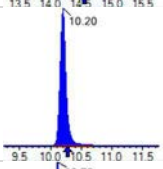  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 823488 | ( 10.72 , N/A ) ( N/A , -0.10 , N/A ) | 1814.9 | N/A | 4.9072 [ 4.0000 ] | 122.7% { 100.0% } | 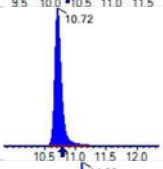  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1266869 | ( 14.00 , N/A ) ( N/A , -0.02 , N/A ) | 2041.8 | N/A | 20.9599 [ 20.0000 ] | 104.8% { 104.6% } | 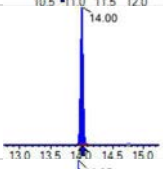  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1155914 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 3362.9 | N/A | 18.8421 [ 20.0000 ] | 94.2% { 91.6% } | 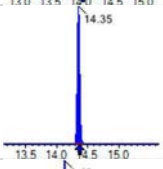  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 919663 | ( 6.43 , N/A ) ( N/A , -0.09 , N/A ) | 3021.7 | N/A | 7.2492 [ 8.0000 ] | 90.6% { 92.6% } | 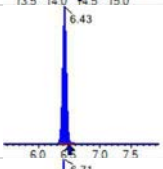  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 698148 | ( 6.71 , N/A ) ( N/A , -0.09 , N/A ) | 1420.1 | N/A | 2.6398 [ 2.0000 ] | 132.0% { 108.9% } | 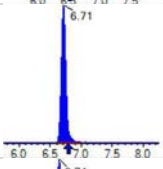  | | S2, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 593721 | ( 8.74 , N/A ) ( N/A , -0.09 , N/A ) | 830.5 | N/A | 2.4660 [ 2.0000 ] | 123.3% { 100.9% } | 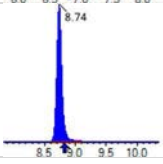  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB50 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0110L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01019L | Instrument:N | Saphira |
| Calibration:N | 2412010L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01019-CCB50 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.690 | ng/mL0 | | |
| | 13C5-PFPEA | 4.180 | ng/mL0 | | |
| | 13C5-PFHXA | 2.190 | ng/mL0 | | |
| | 13C4-PFHPA | 2.240 | ng/mL0 | | |
| | 13C8-PFOA | 2.170 | ng/mL0 | | |
| | 13C9-PFNA | 1.050 | ng/mL0 | | |
| | 13C6-PFDA | 1.120 | ng/mL0 | | |
| | 13C7-PFUnA | 1.160 | ng/mL0 | | |
| | 13C2-PFDOA | 1.170 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.270 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.980 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.850 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.10 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.810 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.610 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.180 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.670 | ng/mL0 | | |
| | 13C8-PFOSA | 2.240 | ng/mL0 | | |
| | D3-NMEFOSA | 1.910 | ng/mL0 | | |
| | D5-NETFOSA | 1.960 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.860 | ng/mL0 | | |
| | D5-NETFOSAA | 4.990 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0110L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01019L | Instrument: | Saphira |
| Calibration: | 2412010L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01019-CCB50 | D7-NMEFOSE0 | 21.60 | ng/mL | 0 | |
| | D9-NETFOSE0 | 19.20 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.380 | ng/mL | 0 | |

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Chemist: DAG | Sample I.D.: SD01019-CCB5 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (52)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 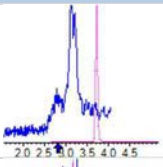 | 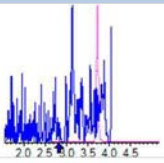 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 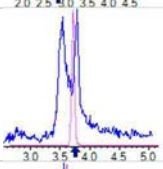 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 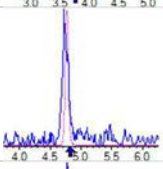 | 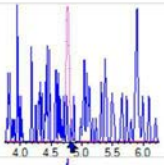 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 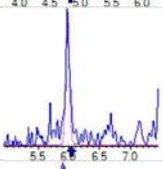 | 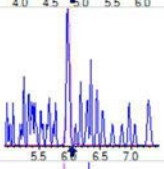 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 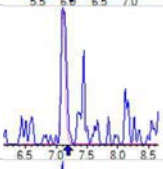 | 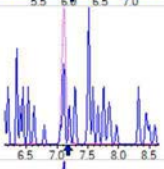 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 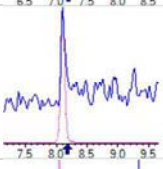 | 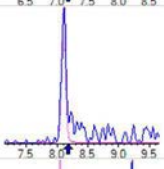 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 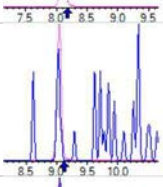 | 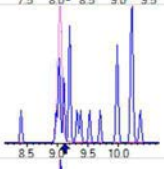 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 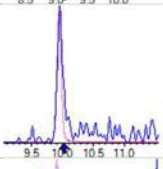 | 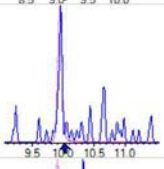 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 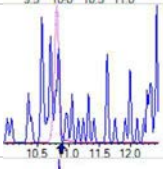 | 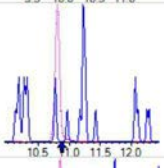 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 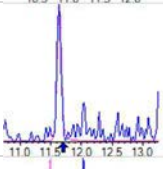 | 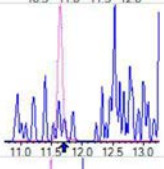 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 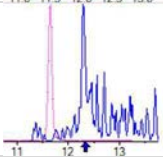 | 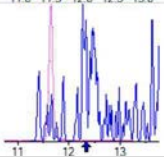 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (52)
Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 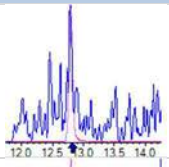 | 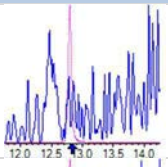 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 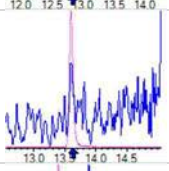 | 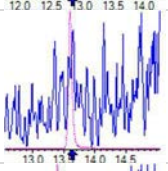 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 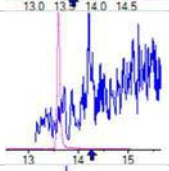 | 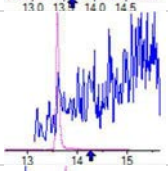 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 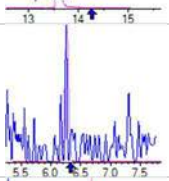 | 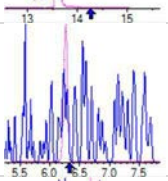 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 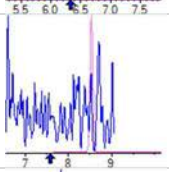 | 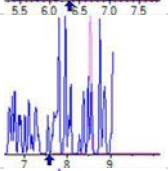 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 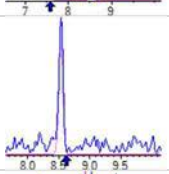 | 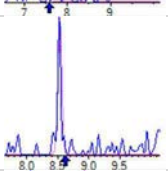 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 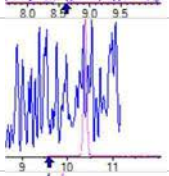 | 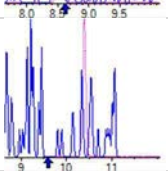 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 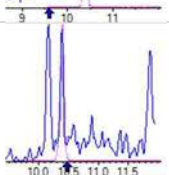 | 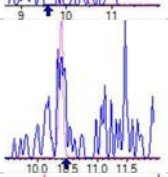 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 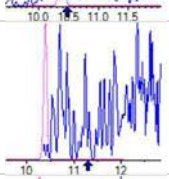 | 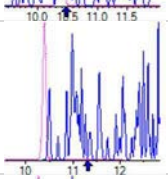 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 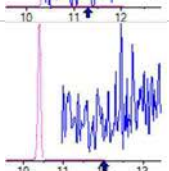 | 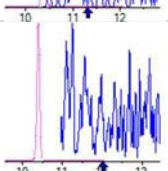 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 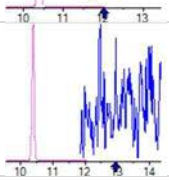 | 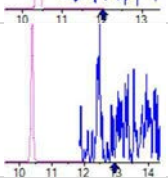 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (52)
Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 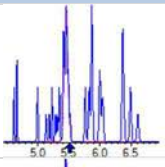 | 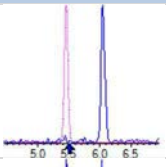 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 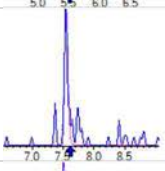 | 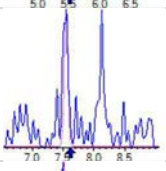 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 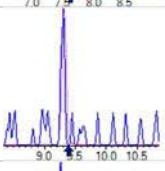 | 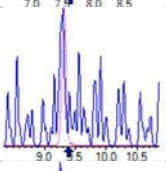 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 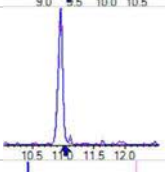 | 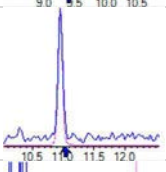 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 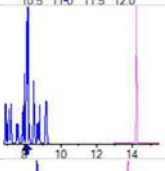 | 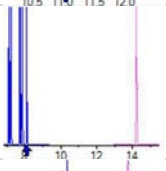 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 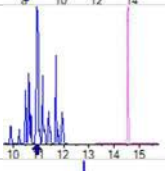 | 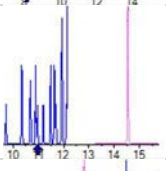 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 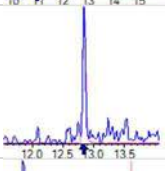 | 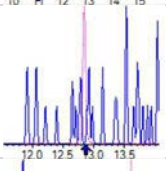 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 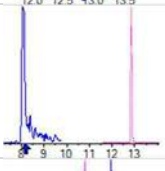 | 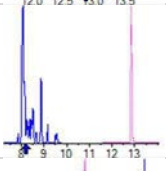 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 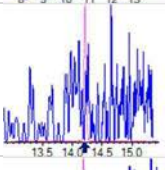 | 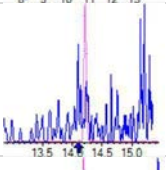 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 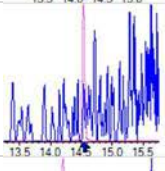 | 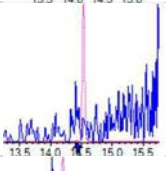 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 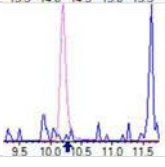 | 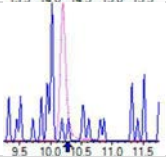 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (52)
Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 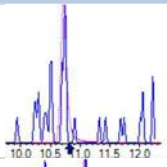 | 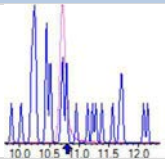 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 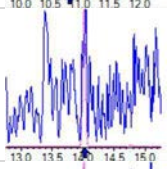 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 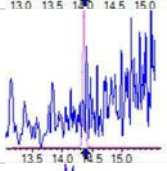 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 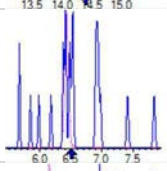 | 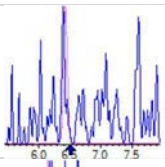 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 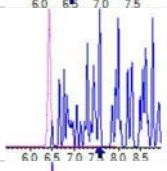 | 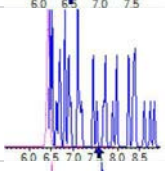 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 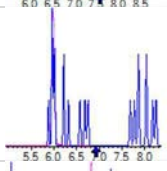 | 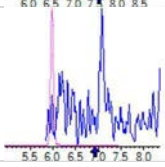 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 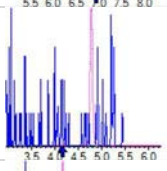 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 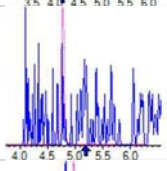 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 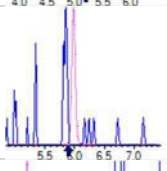 | 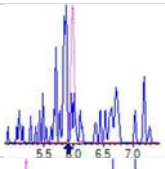 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 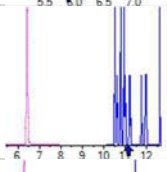 | 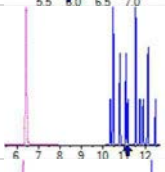 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 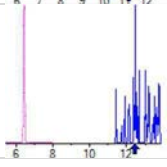 | 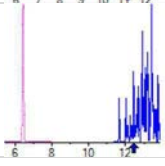 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (52)
Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 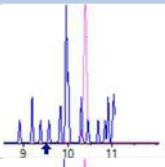 | 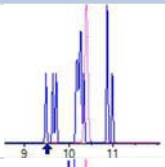 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 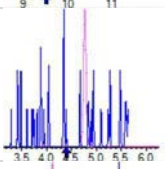 | 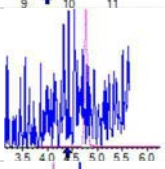 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 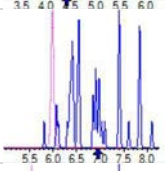 | 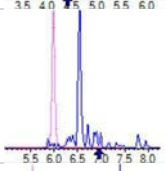 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 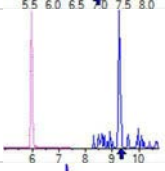 | 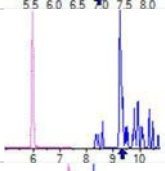 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 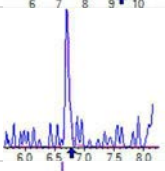 | 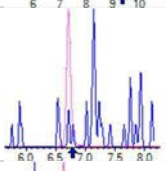 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 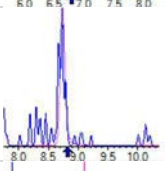 | 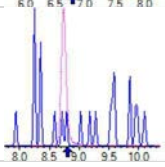 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 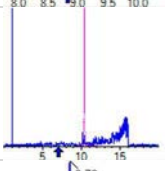 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>238367 | ( 3.72 , N/A )<br>( N/A , -0.04 , N/A ) | 1264.4 | N/A | 0.9997<br>[ 1.0000 ] | 100.0%<br>{ 93.4% } | 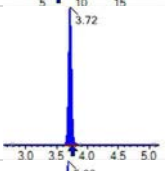 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>98314 | ( 5.98 , N/A )<br>( N/A , -0.08 , N/A ) | 5587.8 | N/A | 0.7750<br>[ 1.0000 ] | 77.5%<br>{ 80.6% } | 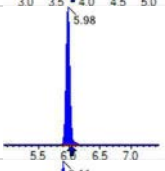 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>331923 | ( 8.11 , N/A )<br>( N/A , -0.09 , N/A ) | 6315.7 | N/A | 0.8396<br>[ 1.0000 ] | 84.0%<br>{ 83.8% } | 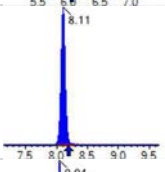 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>222268 | ( 9.04 , N/A )<br>( N/A , -0.10 , N/A ) | 1092.9 | N/A | 0.7815<br>[ 1.0000 ] | 78.2%<br>{ 80.2% } | 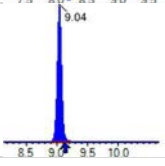 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (52)
Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 219383 | ( 9.94 , N/A ) ( N/A , -0.10 , N/A ) | 4722.7 | N/A | 0.7512 [ 1.0000 ] | 75.1% { 76.0% } | 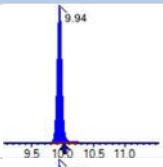 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 853997 | ( 8.54 , N/A ) ( N/A , -0.10 , N/A ) | 5739.2 | N/A | 0.8999 [ 1.0000 ] | 90.0% { 90.5% } | 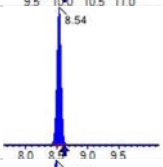 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 612152 | ( 10.39 , N/A ) ( N/A , -0.10 , N/A ) | 2531.2 | N/A | 0.8037 [ 1.0000 ] | 80.4% { 80.5% } | 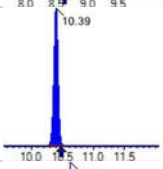 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2366505 | ( 3.72 , N/A ) ( N/A , -0.04 , N/A ) | 41465.8 | N/A | 8.6906 [ 8.0000 ] | 108.6% { 108.4% } | 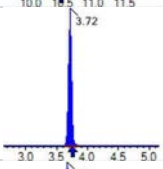 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 767564 | ( 4.77 , N/A ) ( N/A , -0.06 , N/A ) | 5034.6 | N/A | 4.1843 [ 4.0000 ] | 104.6% { 85.1% } | 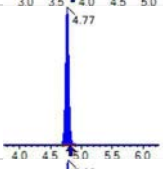 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 491868 | ( 5.98 , N/A ) ( N/A , -0.07 , N/A ) | 7746.7 | N/A | 2.1927 [ 2.0000 ] | 109.6% { 85.8% } | 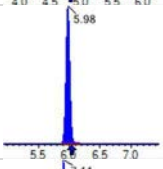 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 559384 | ( 7.11 , N/A ) ( N/A , -0.09 , N/A ) | 6627.2 | N/A | 2.2418 [ 2.0000 ] | 112.1% { 90.9% } | 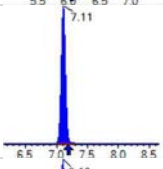 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 772225 | ( 8.10 , N/A ) ( N/A , -0.09 , N/A ) | 3078.1 | N/A | 2.1713 [ 2.0000 ] | 108.6% { 95.8% } | 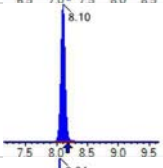 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 228830 | ( 9.04 , N/A ) ( N/A , -0.09 , N/A ) | 2791.0 | N/A | 1.0500 [ 1.0000 ] | 105.0% { 86.7% } | 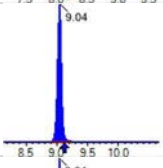 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 274300 | ( 9.94 , N/A ) ( N/A , -0.10 , N/A ) | 1032.9 | N/A | 1.1157 [ 1.0000 ] | 111.6% { 89.4% } | 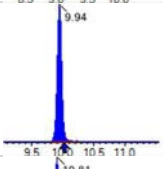 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 334927 | ( 10.81 , N/A ) ( N/A , -0.10 , N/A ) | 969.8 | N/A | 1.1579 [ 1.0000 ] | 115.8% { 90.9% } | 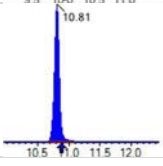 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-CCB5 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (52)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 345565 | ( 11.64 , N/A ) ( N/A , -0.08 , N/A ) | 1445.4 | N/A | 1.1732 [ 1.0000 ] | 117.3% { 89.4% } | 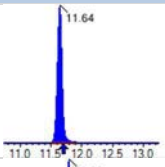  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318787 | ( 12.80 , N/A ) ( N/A , -0.05 , N/A ) | 1288.9 | N/A | 1.2708 [ 1.0000 ] | 127.1% { 102.3% } | 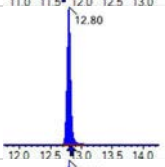  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 423781 | ( 13.60 , N/A ) ( N/A , -0.04 , N/A ) | 1744.0 | N/A | 1.9788 [ 2.0000 ] | 98.9% { 87.0% } | 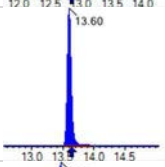  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1424911 | ( 6.27 , N/A ) ( N/A , -0.08 , N/A ) | 1751.7 | N/A | 1.8467 [ 2.0000 ] | 92.3% { 88.1% } | 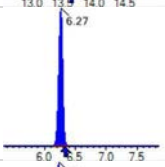  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1253754 | ( 8.53 , N/A ) ( N/A , -0.10 , N/A ) | 4459.8 | N/A | 2.0357 [ 2.0000 ] | 101.8% { 95.5% } | 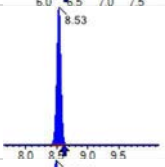  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1388015 | ( 10.39 , N/A ) ( N/A , -0.10 , N/A ) | 1837.5 | N/A | 2.1029 [ 2.0000 ] | 105.1% { 90.7% } | 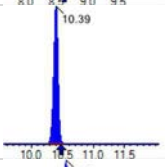  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 640858 | ( 5.45 , N/A ) ( N/A , -0.07 , N/A ) | 84.5 | N/A | 4.8140 [ 4.0000 ] | 120.3% { 103.5% } | 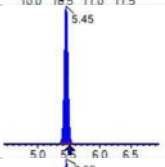  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1835000 | ( 7.55 , N/A ) ( N/A , -0.09 , N/A ) | 5316.2 | N/A | 4.6059 [ 4.0000 ] | 115.1% { 103.7% } | 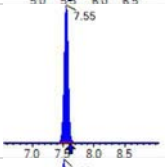  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1304771 | ( 9.32 , N/A ) ( N/A , -0.10 , N/A ) | 1329.1 | N/A | 4.1758 [ 4.0000 ] | 104.4% { 94.3% } | 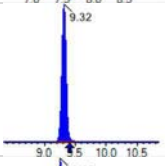  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2830150 | ( 10.95 , N/A ) ( N/A , -0.10 , N/A ) | 1880.9 | N/A | 8.6666 [ 8.0000 ] | 108.3% { 105.1% } | 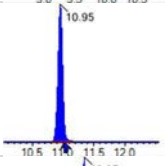  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1310751 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 2709.3 | N/A | 2.2409 [ 2.0000 ] | 112.0% { 96.4% } | 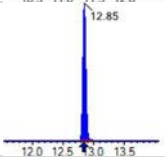  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-CCB5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (52)
Acquired: 2024/03/22 - 07:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 237195 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 2054.2 | N/A | 1.9120 [ 2.0000 ] | 95.6% { 86.5% } | 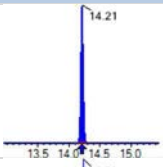  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 260311 | ( 14.53 , N/A ) ( N/A , -0.01 , N/A ) | 2155.1 | N/A | 1.9566 [ 2.0000 ] | 97.8% { 86.5% } | 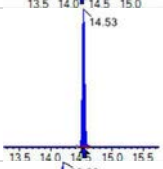  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 825167 | ( 10.20 , N/A ) ( N/A , -0.10 , N/A ) | 2451.5 | N/A | 4.8588 [ 4.0000 ] | 121.5% { 92.9% } | 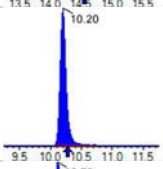  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 771742 | ( 10.72 , N/A ) ( N/A , -0.09 , N/A ) | 1852.8 | N/A | 4.9859 [ 4.0000 ] | 124.6% { 93.7% } | 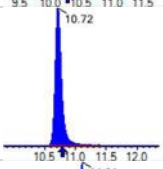  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1201505 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 2194.8 | N/A | 21.5517 [ 20.0000 ] | 107.8% { 99.2% } | 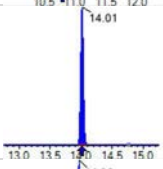  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1087683 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3345.0 | N/A | 19.2222 [ 20.0000 ] | 96.1% { 86.2% } | 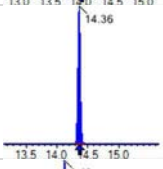  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 856536 | ( 6.43 , N/A ) ( N/A , -0.08 , N/A ) | 2133.3 | N/A | 8.3824 [ 8.0000 ] | 104.8% { 86.3% } | 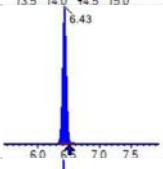  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 691514 | ( 6.71 , N/A ) ( N/A , -0.08 , N/A ) | 1880.2 | N/A | 2.9073 [ 2.0000 ] | 145.4% { 107.9% } | 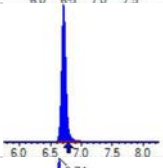 | | S2, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 567642 | ( 8.74 , N/A ) ( N/A , -0.09 , N/A ) | 1017.4 | N/A | 2.6215 [ 2.0000 ] | 131.1% { 96.5% } | 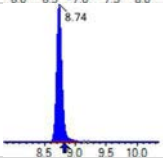  | | S2, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (4)
Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 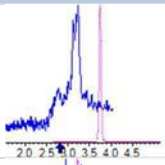 | 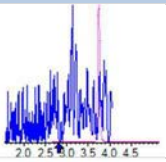 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 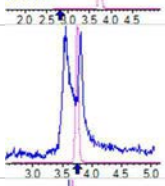 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 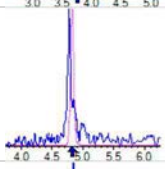 | 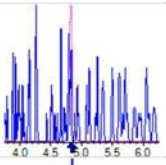 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 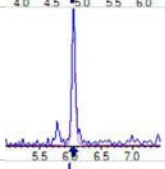 | 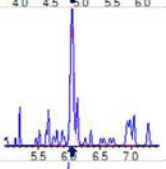 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 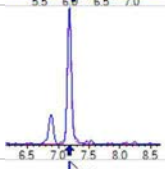 | 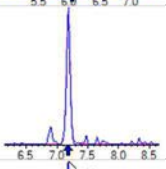 | |
| PFOA | ( 413.0 / 369.0 )<br>3271053<br>( 413.0 / 169.0 )<br>1302203 | ( 8.18 , 1.00 )<br>( 0.00 , N/A , 0.0) | 446.3<br>390.3 | 0.3981<br>108.9<br>116.1 | 7.7505 | N/A | 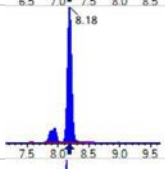 | 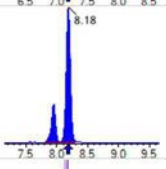 | MI5 DG 2024-03-21 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 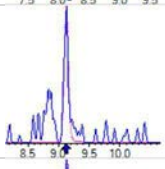 | 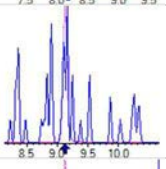 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 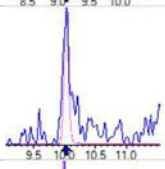 | 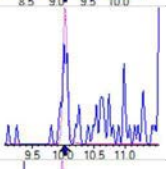 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 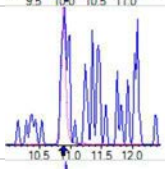 | 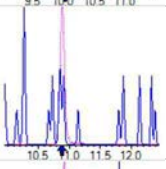 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 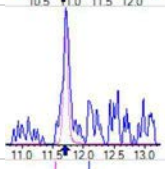 | 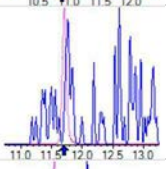 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 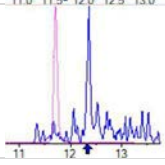 | 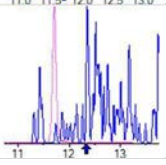 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-PEM1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 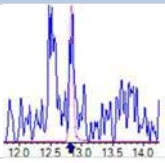 | 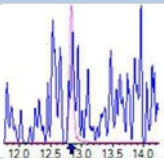 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 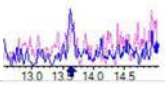 | 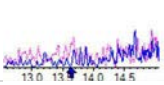 | NR, |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 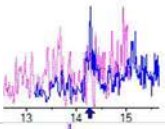 | 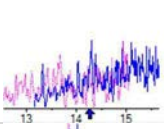 | NR, |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 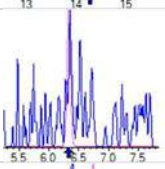 | 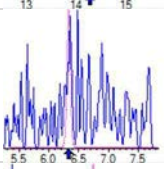 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 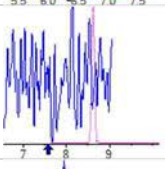 | 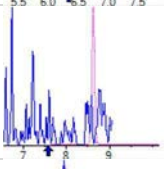 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 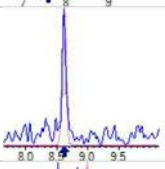 | 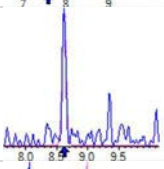 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 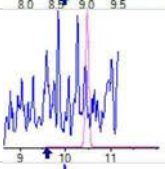 | 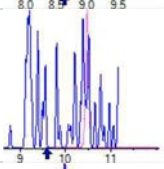 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 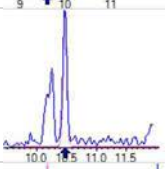 | 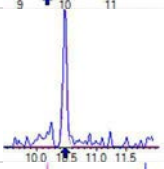 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 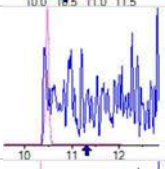 | 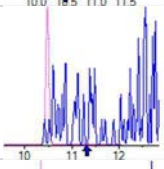 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 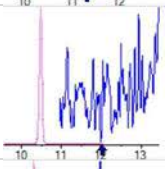 | 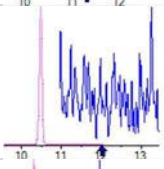 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 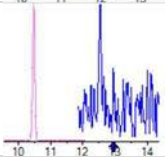 | 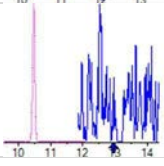 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (4)
Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 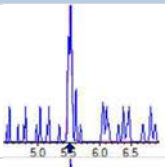 | 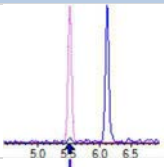 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 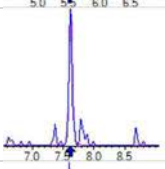 | 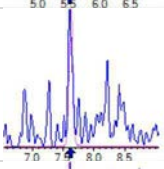 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 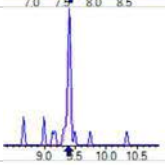 | 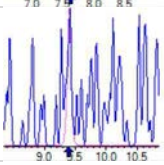 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 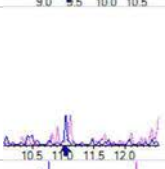 | 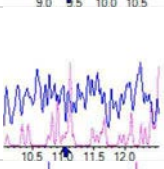 | NR, |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 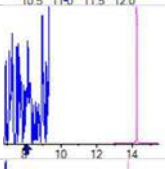 | 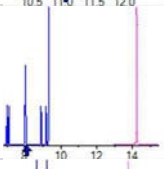 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 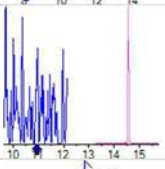 | 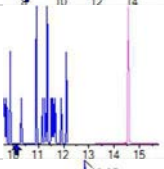 | |
| PFOSA | ( 498.0 / 78.0 )<br>7278998<br>( 498.0 / 478.0 )<br>106797 | ( 12.85 , 1.00 )<br>( -0.01 , N/A , 0.0) | 428.5<br>361.2 | 0.0147<br>104.6<br>104.0 | 9.4662 | N/A | 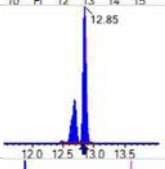 | 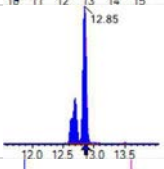 | MI5 DG<br>2024-03-21 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 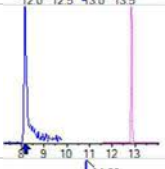 | 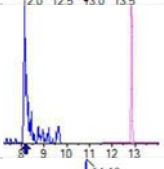 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1305287<br>( 512.0 / 169.0 )<br>970358 | ( 14.23 , 1.00 )<br>( 0.00 , N/A , 2.7) | 3061.7<br>1481.8 | 0.7434<br>99.3<br>101.1 | 8.6331 | N/A | 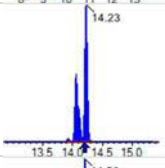 | 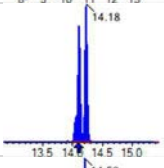 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>1509493<br>( 526.0 / 169.0 )<br>1918470 | ( 14.56 , 1.00 )<br>( 0.01 , N/A , 2.1) | 3829.2<br>3581.0 | 1.2709<br>102.9<br>100.6 | 8.0973 | N/A | 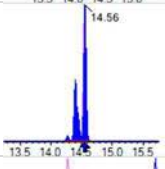 | 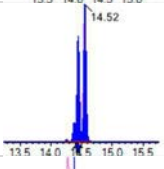 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 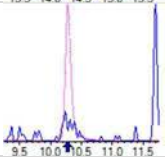 | 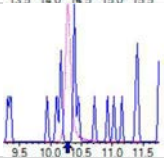 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (4)
Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 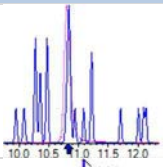 | 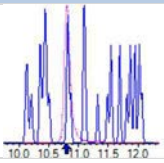 | |
| NMeFOSE | ( 616.0 / 59.0 ) 696840 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 1802.6 | N/A<br>0.0<br>0.0 | 9.8876 | N/A | 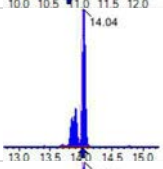 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 562406 | ( 14.40 , 1.00 ) ( 0.02 , N/A , 0.0) | 2339.5 | N/A<br>0.0<br>0.0 | 9.5633 | N/A | 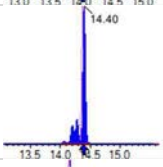 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 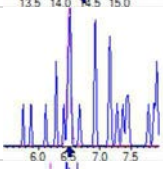 | 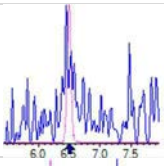 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 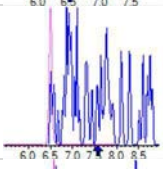 | 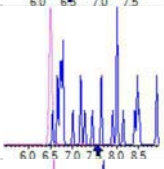 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 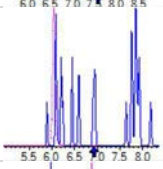 | 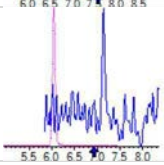 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 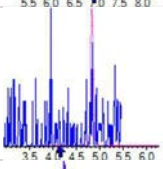 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 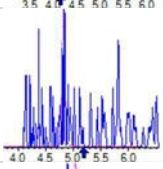 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 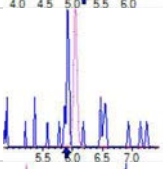 | 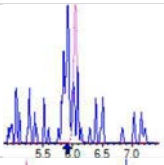 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 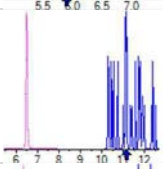 | 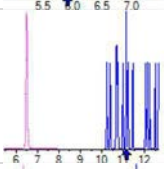 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 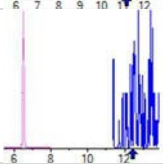 | 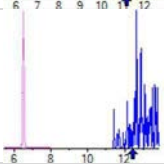 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (4)
Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 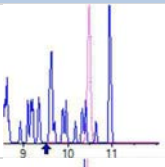 | 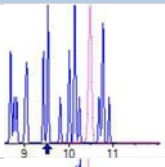 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 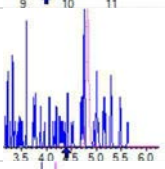 | 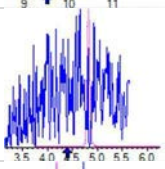 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 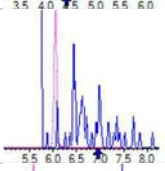 | 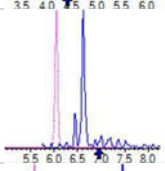 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 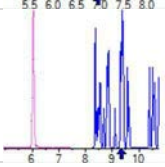 | 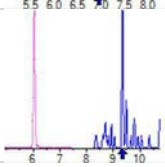 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 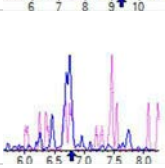 | 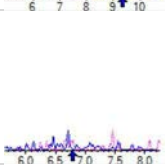 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 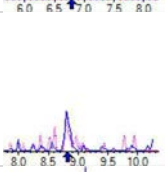 | 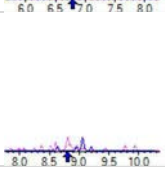 | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 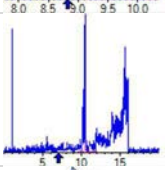 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 279125 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 1335.0 | N/A | 1.1707 [ 1.0000 ] | 117.1% { 109.4% } | 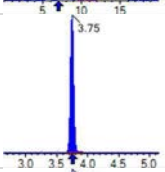 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 133287 | ( 6.05 , N/A ) ( N/A , -0.01 , N/A ) | 517096.4 | N/A | 1.0507 [ 1.0000 ] | 105.1% { 109.3% } | 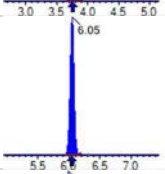 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 388308 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 3232.9 | N/A | 0.9823 [ 1.0000 ] | 98.2% { 98.0% } | 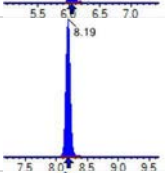 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 279664 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 1243.4 | N/A | 0.9833 [ 1.0000 ] | 98.3% { 100.9% } | 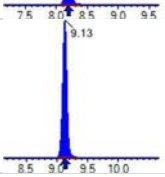 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-PEM1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286160 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 5345.5 | N/A | 0.9799 [ 1.0000 ] | 98.0% { 99.2% } | 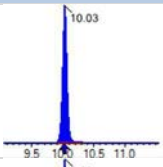 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 906259 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 5574.8 | N/A | 0.9549 [ 1.0000 ] | 95.5% { 96.1% } | 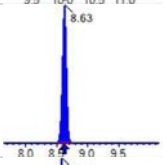 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 742593 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 2041.2 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 97.6% } | 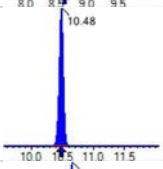 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2720270 | ( 3.75 , N/A ) ( N/A , -0.01 , N/A ) | 38390.8 | N/A | 8.5310 [ 8.0000 ] | 106.6% { 124.6% } | 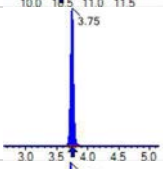 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1027728 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5548.1 | N/A | 4.1325 [ 4.0000 ] | 103.3% { 114.0% } | 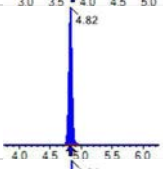 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 638173 | ( 6.04 , N/A ) ( N/A , -0.01 , N/A ) | 7558.3 | N/A | 2.0985 [ 2.0000 ] | 104.9% { 111.3% } | 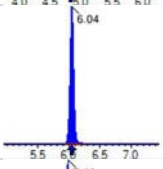 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 695356 | ( 7.18 , N/A ) ( N/A , -0.01 , N/A ) | 4110.3 | N/A | 2.0555 [ 2.0000 ] | 102.8% { 113.0% } | 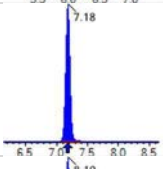 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 855274 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 4671.6 | N/A | 2.0557 [ 2.0000 ] | 102.8% { 106.1% } | 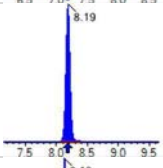 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 300628 | ( 9.13 , N/A ) ( N/A , -0.01 , N/A ) | 5390.8 | N/A | 1.0963 [ 1.0000 ] | 109.6% { 113.9% } | 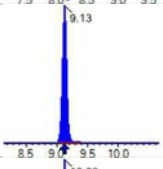 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 352319 | ( 10.03 , N/A ) ( N/A , -0.01 , N/A ) | 983.3 | N/A | 1.0986 [ 1.0000 ] | 109.9% { 114.8% } | 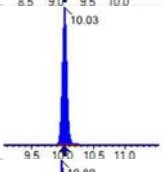 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 397884 | ( 10.89 , N/A ) ( N/A , -0.02 , N/A ) | 899.7 | N/A | 1.0546 [ 1.0000 ] | 105.5% { 108.0% } | 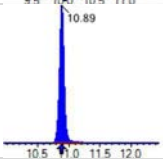 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-PEM1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 418929 | ( 11.71 , N/A ) ( N/A , -0.02 , N/A ) | 1399.2 | N/A | 1.0903 [ 1.0000 ] | 109.0% { 108.4% } | 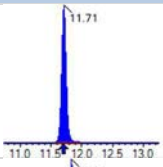 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 319500 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1313.4 | N/A | 0.9765 [ 1.0000 ] | 97.6% { 102.5% } | 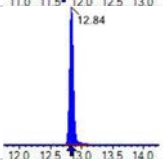 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1851668 | ( 6.34 , N/A ) ( N/A , -0.01 , N/A ) | 1327.0 | N/A | 2.2614 [ 2.0000 ] | 113.1% { 114.5% } | 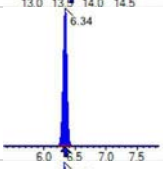 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440648 | ( 8.62 , N/A ) ( N/A , -0.01 , N/A ) | 4805.1 | N/A | 2.2043 [ 2.0000 ] | 110.2% { 109.7% } | 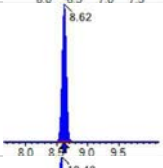 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1626755 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 1753.0 | N/A | 2.0317 [ 2.0000 ] | 101.6% { 106.3% } | 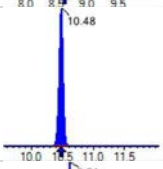 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 766822 | ( 5.51 , N/A ) ( N/A , -0.01 , N/A ) | 93.9 | N/A | 5.4280 [ 4.0000 ] | 135.7% { 123.8% } | 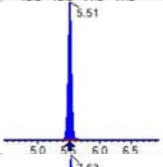 | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2006447 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 3967.5 | N/A | 4.7458 [ 4.0000 ] | 118.6% { 113.4% } | 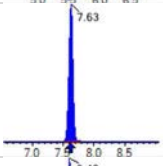 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1721190 | ( 9.40 , N/A ) ( N/A , -0.01 , N/A ) | 1801.4 | N/A | 5.1908 [ 4.0000 ] | 129.8% { 124.3% } | 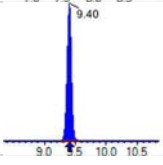 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1537856 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2855.7 | N/A | 2.1674 [ 2.0000 ] | 108.4% { 113.2% } | 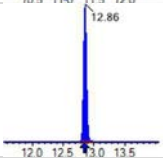 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01019-PEM1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 14:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 304550 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 1820.8 | N/A | 2.0237 [ 2.0000 ] | 101.2% { 111.1% } | 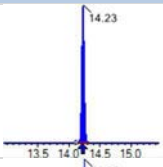  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 332909 | ( 14.55 , N/A ) ( N/A , 0.00 , N/A ) | 3055.5 | N/A | 2.0628 [ 2.0000 ] | 103.1% { 110.6% } | 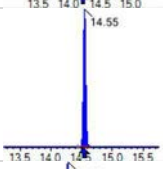  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 973019 | ( 10.28 , N/A ) ( N/A , -0.01 , N/A ) | 2071.1 | N/A | 4.7230 [ 4.0000 ] | 118.1% { 109.6% } | 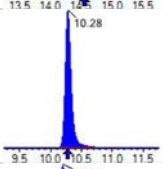  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 876565 | ( 10.80 , N/A ) ( N/A , -0.01 , N/A ) | 1684.3 | N/A | 4.6684 [ 4.0000 ] | 116.7% { 106.5% } | 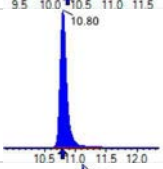  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1284989 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 2427.5 | N/A | 19.0004 [ 20.0000 ] | 95.0% { 106.1% } | 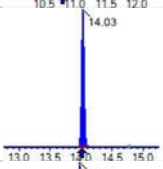  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1323811 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 4310.2 | N/A | 19.2857 [ 20.0000 ] | 96.4% { 104.9% } | 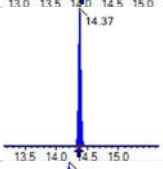  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1075974 | ( 6.50 , N/A ) ( N/A , -0.01 , N/A ) | 2558.8 | N/A | 7.7670 [ 8.0000 ] | 97.1% { 108.4% } | 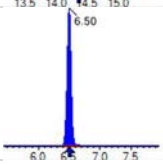  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 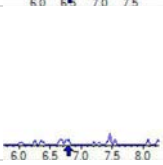 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 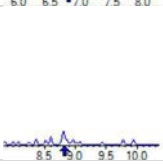 | | S1, |

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01019-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (5)
Acquired: 2024/03/21 - 14:58

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26864<br>( 499.0 / 99.0 ) N/A | ( 9.88 , 0.94 ) ( -0.59 , N/A , #Value!) | 10.5 | N/A<br>0.0<br>0.0 | 0.0269 | N/A | 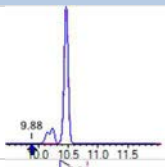 | 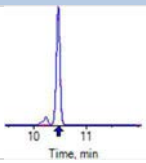 | |
| TDCA | ( 499.0 / 80.0 ) 8324296 | ( 7.01 , 0.67 ) ( N/A , #Value! , 0.0) | 25124.0 | N/A<br>0.0<br>0.0 | 12.2144 | N/A | 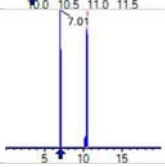 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.88 - 7.01 = 2.86 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-BLK1a | File ID:a | S2024-03-21B (7)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 15:39a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | 0.0603a | 0.055a | 0.40a | Ja |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.182a | 0.15a | 0.40a | Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0727a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-BLK1a | File ID:a | S2024-03-21B (7)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 15:39a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>42358<br>( 163.0 / 69.0 )<br>1209 | ( 2.81 , 0.75 )<br>( N/A , 0.02 , -0.4) | 266.2<br>92.1 | 0.0285<br>105.1<br>105.7 | 0.1207 | N/A | 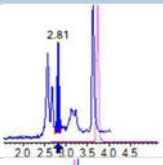 | 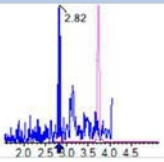 | MI2 DG 2024-03-21 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 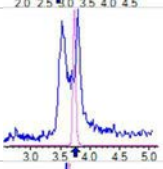 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 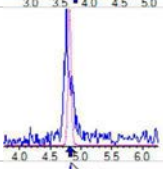 | 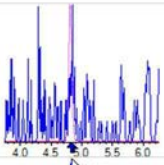 | |
| PFHxA | ( 313.0 / 269.0 )<br>5188<br>( 313.0 / 119.0 )<br>554 | ( 6.02 , 1.00 )<br>( -0.01 , N/A , -0.1) | 42.3<br>21.2 | 0.1067<br>91.9<br>96.1 | 0.0151 | N/A | 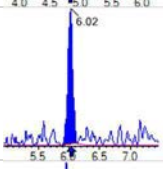 | 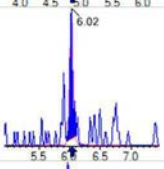 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 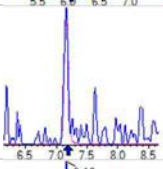 | 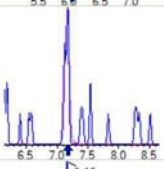 | |
| PFOA | ( 413.0 / 369.0 )<br>35689<br>( 413.0 / 169.0 )<br>10238 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.0) | 66.4<br>76.9 | 0.2869<br>78.5<br>83.7 | 0.0454 | N/A | 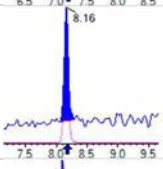 | 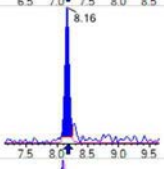 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 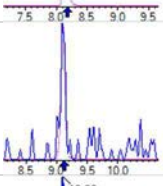 | 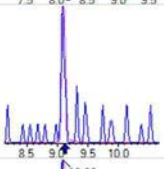 | |
| PFDA | ( 513.0 / 469.0 )<br>5849<br>( 513.0 / 169.0 )<br>808 | ( 10.00 , 1.00 )<br>( 0.00 , N/A , -0.1) | 57.9<br>858.8 | 0.1382<br>118.0<br>112.9 | 0.0140 | N/A | 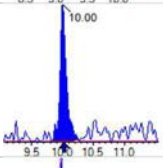 | 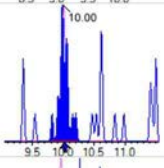 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 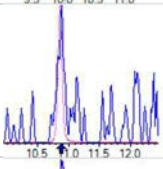 | 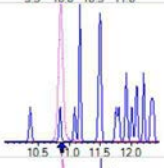 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 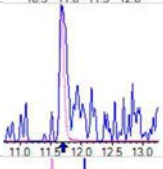 | 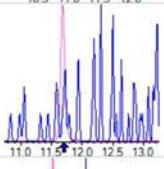 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 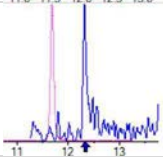 | 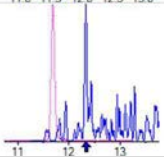 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 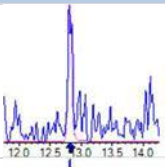 | 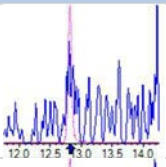 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 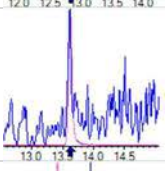 | 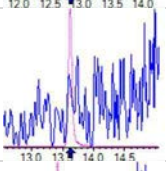 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 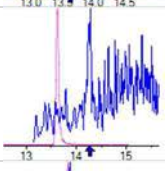 | 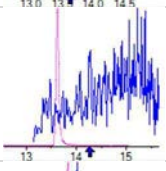 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 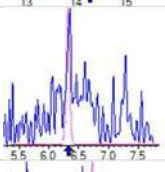 | 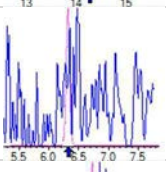 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 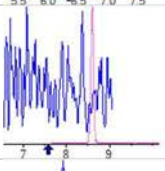 | 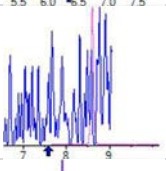 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 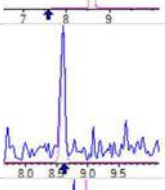 | 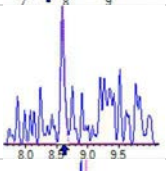 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 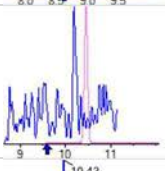 | 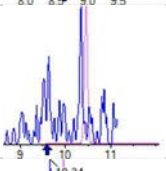 | |
| PFOS | ( 499.0 / 80.0 )<br>20470<br>( 499.0 / 99.0 )<br>3809 | ( 10.42 , 1.00 )<br>( -0.04 , N/A , 4.8) | 59.0<br>354.9 | 0.1861<br>79.6<br>81.2 | 0.0182 | N/A | 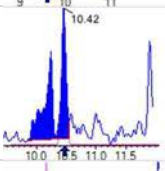 | 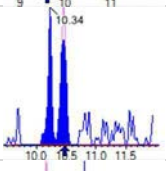 | MI2 DG<br>2024-03-21 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 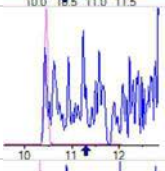 | 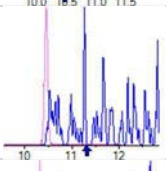 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 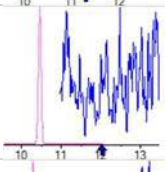 | 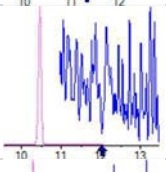 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 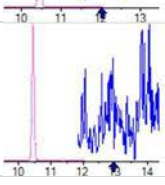 | 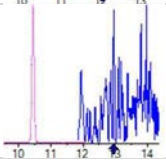 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 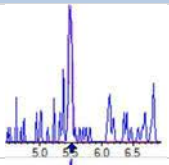 | 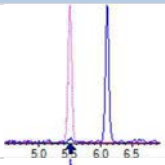 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 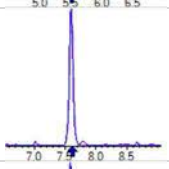 | 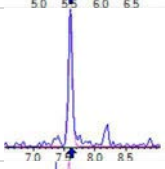 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 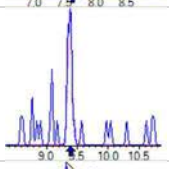 | 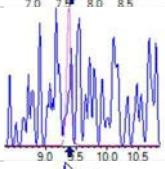 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18772<br>( 627.0 / 81.0 ) 32482 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.2) | 249.9<br>97.2 | 1.7303<br>120.2<br>124.8 | 0.0560 | N/A | 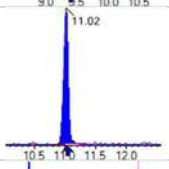 | 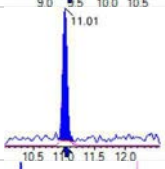 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 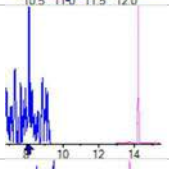 | 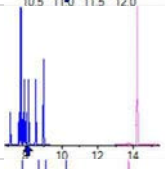 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 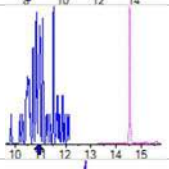 | 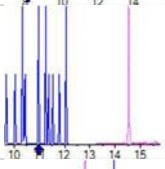 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 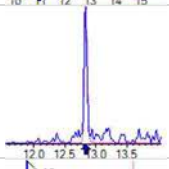 | 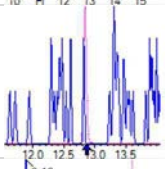 | |
| TFSI | ( 279.7 / 147.0 ) 43150<br>( 279.7 / 211.0 ) 3526 | ( 8.16 , 0.64 ) ( N/A , -0.04 , 0.2) | 28.7<br>12.8 | 0.0817<br>97.3<br>97.5 | 0.0226 | N/A | 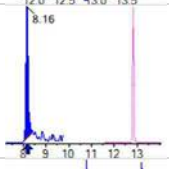 | 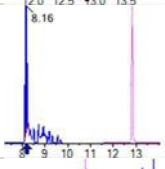 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 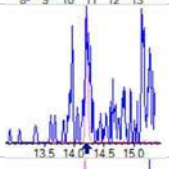 | 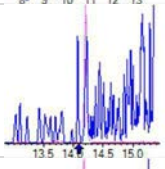 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 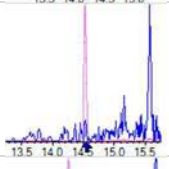 | 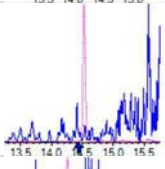 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 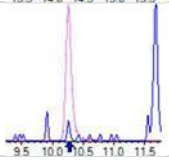 | 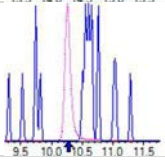 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 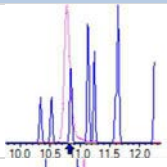 | 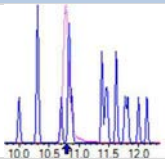 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 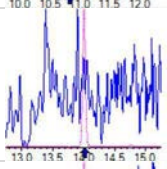 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 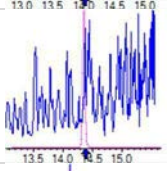 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 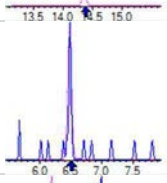 | 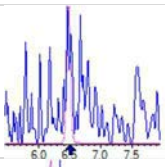 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 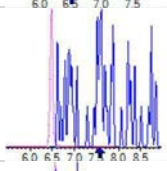 | 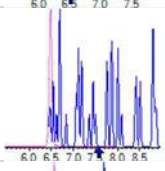 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 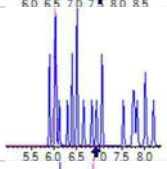 | 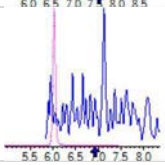 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 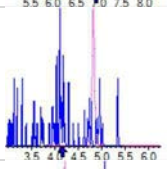 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 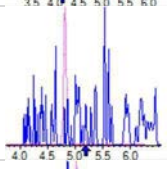 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 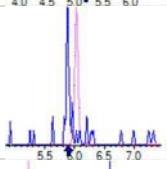 | 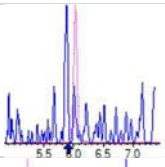 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 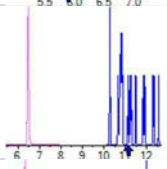 | 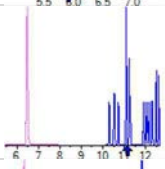 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 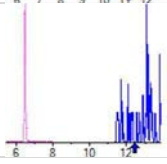 | 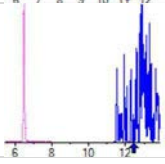 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 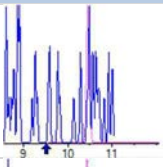 | 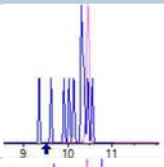 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 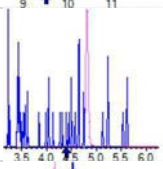 | 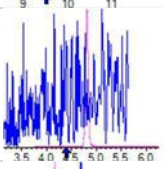 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 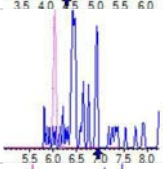 | 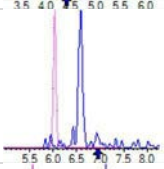 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 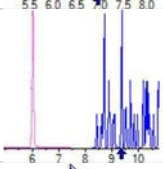 | 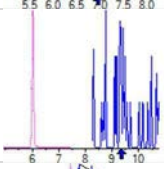 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>7316<br>( 357.2 / 243.0 )<br>1016 | ( 6.76 , 1.00 )<br>( 0.00 , N/A , -2.6) | 81.7<br>13.5 | 0.1388<br>125.9<br>131.6 | 0.0156 | N/A | 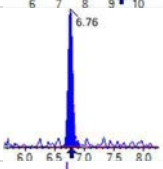 | 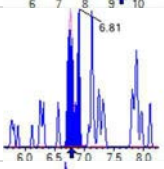 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 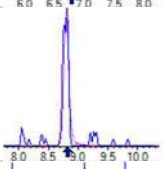 | 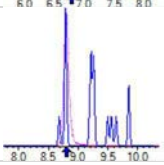 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 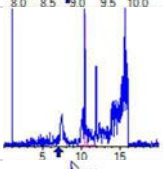 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>314785 | ( 3.73 , N/A )<br>( N/A , -0.02 , N/A ) | 1526.8 | N/A | 1.3202<br>[ 1.0000 ] | 132.0%<br>{ 123.4% } | 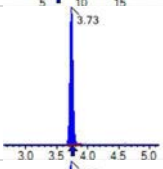 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>146491 | ( 6.03 , N/A )<br>( N/A , -0.03 , N/A ) | 6914.7 | N/A | 1.1548<br>[ 1.0000 ] | 115.5%<br>{ 120.1% } | 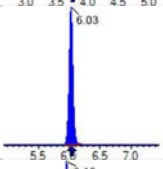 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>465283 | ( 8.16 , N/A )<br>( N/A , -0.03 , N/A ) | 7804.5 | N/A | 1.1770<br>[ 1.0000 ] | 117.7%<br>{ 117.4% } | 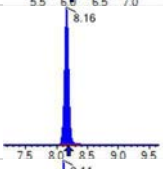 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>329298 | ( 9.11 , N/A )<br>( N/A , -0.03 , N/A ) | 1362.2 | N/A | 1.1578<br>[ 1.0000 ] | 115.8%<br>{ 118.8% } | 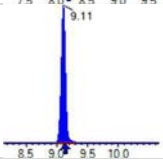 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 326026 | ( 10.01 , N/A ) ( N/A , -0.04 , N/A ) | 7118.0 | N/A | 1.1164 [ 1.0000 ] | 111.6% { 113.0% } | 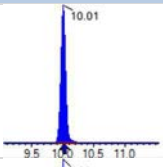 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1092912 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 6164.7 | N/A | 1.1516 [ 1.0000 ] | 115.2% { 115.9% } | 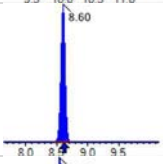 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 855483 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 2041.0 | N/A | 1.1232 [ 1.0000 ] | 112.3% { 112.5% } | 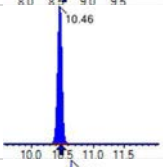 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2977058 | ( 3.73 , N/A ) ( N/A , -0.02 , N/A ) | 38243.4 | N/A | 8.2786 [ 8.0000 ] | 103.5% { 136.4% } | 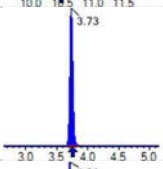 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1210232 | ( 4.81 , N/A ) ( N/A , -0.02 , N/A ) | 7139.7 | N/A | 4.4278 [ 4.0000 ] | 110.7% { 134.2% } | 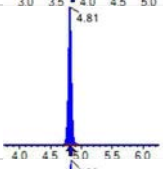 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 716507 | ( 6.03 , N/A ) ( N/A , -0.02 , N/A ) | 9050.7 | N/A | 2.1437 [ 2.0000 ] | 107.2% { 124.9% } | 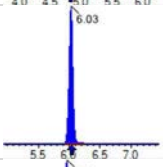 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 755271 | ( 7.16 , N/A ) ( N/A , -0.03 , N/A ) | 6298.9 | N/A | 2.0314 [ 2.0000 ] | 101.6% { 122.7% } | 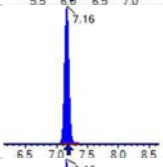 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1042362 | ( 8.16 , N/A ) ( N/A , -0.03 , N/A ) | 3974.8 | N/A | 2.0908 [ 2.0000 ] | 104.5% { 129.4% } | 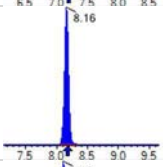 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 345119 | ( 9.10 , N/A ) ( N/A , -0.03 , N/A ) | 3483.5 | N/A | 1.0689 [ 1.0000 ] | 106.9% { 130.8% } | 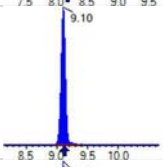 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 408187 | ( 10.00 , N/A ) ( N/A , -0.04 , N/A ) | 1041.2 | N/A | 1.1172 [ 1.0000 ] | 111.7% { 133.0% } | 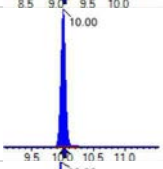 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 440107 | ( 10.86 , N/A ) ( N/A , -0.04 , N/A ) | 1327.1 | N/A | 1.0239 [ 1.0000 ] | 102.4% { 119.4% } | 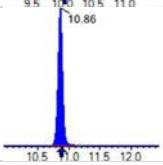 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-BLK1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414002 | ( 11.68 , N/A ) ( N/A , -0.04 , N/A ) | 1144.2 | N/A | 0.9458 [ 1.0000 ] | 94.6% { 107.1% } | 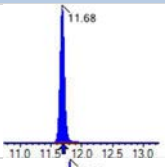  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305260 | ( 12.82 , N/A ) ( N/A , -0.03 , N/A ) | 1288.8 | N/A | 0.8189 [ 1.0000 ] | 81.9% { 97.9% } | 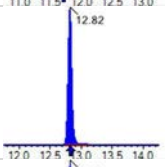  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 525300 | ( 13.62 , N/A ) ( N/A , -0.02 , N/A ) | 2858.6 | N/A | 1.6505 [ 2.0000 ] | 82.5% { 107.9% } | 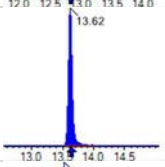  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2029464 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 1679.0 | N/A | 2.0553 [ 2.0000 ] | 102.8% { 125.5% } | 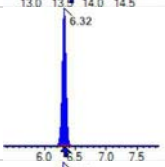  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1673974 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 3527.8 | N/A | 2.1239 [ 2.0000 ] | 106.2% { 127.5% } | 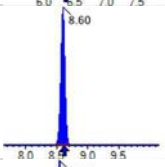  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1951133 | ( 10.45 , N/A ) ( N/A , -0.04 , N/A ) | 1718.8 | N/A | 2.1153 [ 2.0000 ] | 105.8% { 127.5% } | 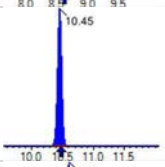  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 905314 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 102.0 | N/A | 5.3139 [ 4.0000 ] | 132.8% { 146.2% } | 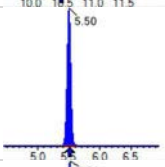  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2493064 | ( 7.61 , N/A ) ( N/A , -0.03 , N/A ) | 5116.8 | N/A | 4.8897 [ 4.0000 ] | 122.2% { 141.0% } | 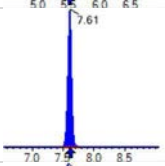  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1803705 | ( 9.38 , N/A ) ( N/A , -0.03 , N/A ) | 1444.7 | N/A | 4.5106 [ 4.0000 ] | 112.8% { 130.3% } | 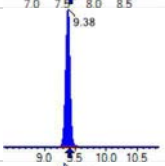  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3478150 | ( 11.01 , N/A ) ( N/A , -0.04 , N/A ) | 1301.6 | N/A | 8.3226 [ 8.0000 ] | 104.0% { 129.1% } | 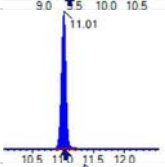  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1451467 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2729.4 | N/A | 1.7757 [ 2.0000 ] | 88.8% { 106.8% } | 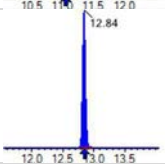  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (7)
Acquired: 2024/03/21 - 15:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 111714 | ( 14.21 , N/A ) ( N/A , -0.02 , N/A ) | 846.3 | N/A | 0.6444 [ 2.0000 ] | 32.2% { 40.8% } | 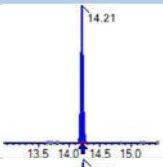 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 103276 | ( 14.53 , N/A ) ( N/A , -0.02 , N/A ) | 969.6 | N/A | 0.5555 [ 2.0000 ] | 27.8% { 34.3% } | 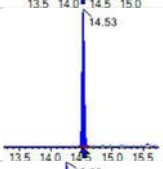 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1012731 | ( 10.26 , N/A ) ( N/A , -0.04 , N/A ) | 2241.7 | N/A | 4.2671 [ 4.0000 ] | 106.7% { 114.0% } | 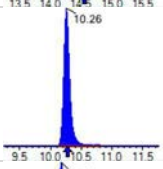 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 861301 | ( 10.78 , N/A ) ( N/A , -0.04 , N/A ) | 1942.1 | N/A | 3.9817 [ 4.0000 ] | 99.5% { 104.6% } | 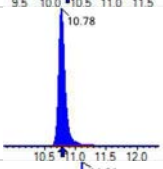 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1140992 | ( 14.01 , N/A ) ( N/A , -0.02 , N/A ) | 1959.8 | N/A | 14.6449 [ 20.0000 ] | 73.2% { 94.2% } | 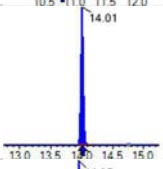 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1080321 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 3219.3 | N/A | 13.6616 [ 20.0000 ] | 68.3% { 85.6% } | 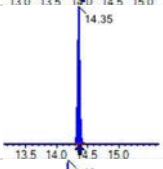 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1219367 | ( 6.48 , N/A ) ( N/A , -0.03 , N/A ) | 2532.7 | N/A | 8.0087 [ 8.0000 ] | 100.1% { 122.8% } | 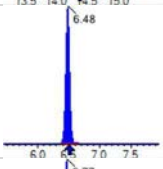 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 884519 | ( 6.77 , N/A ) ( N/A , -0.03 , N/A ) | 1344.3 | N/A | 2.5024 [ 2.0000 ] | 125.1% { 138.0% } | 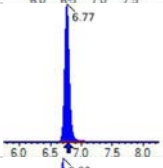 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 752877 | ( 8.80 , N/A ) ( N/A , -0.03 , N/A ) | 876.1 | N/A | 2.3397 [ 2.0000 ] | 117.0% { 128.0% } | 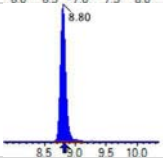 | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-BS1a | File ID:a | S2024-03-21B (8)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 16:00a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 13.8a | 0.21a | 1.6a | |
| PFPeAa | 7.00a | 0.065a | 0.80a | |
| PFHxAa | 3.50a | 0.055a | 0.40a | |
| PFHpAa | 3.35a | 0.041a | 0.40a | |
| PFOAa | 3.67a | 0.15a | 0.40a | |
| PFNAa | 3.42a | 0.082a | 0.40a | |
| PFDAa | 3.39a | 0.10a | 0.40a | |
| PFUnAa | 3.50a | 0.16a | 0.40a | |
| PFDoAa | 3.36a | 0.11a | 0.40a | |
| PFTrDAa | 3.22a | 0.20a | 0.40a | |
| PFTeDAa | 3.75a | 0.20a | 0.40a | |
| PFHxDAa | 3.53a | 0.20a | 0.40a | |
| PFODAa | 2.92a | 0.20a | 0.40a | |
| PFBSa | 3.04a | 0.037a | 0.40a | |
| PFPeSa | 3.37a | 0.063a | 0.40a | |
| PFHxSa | 3.22a | 0.032a | 0.40a | |
| PFHpSa | 3.41a | 0.051a | 0.40a | |
| PFOSa | 3.38a | 0.064a | 0.40a | |
| PFNSa | 3.23a | 0.12a | 0.40a | |
| PFDSa | 3.16a | 0.15a | 0.40a | |
| PFDoSa | 2.91a | 0.12a | 0.40a | |
| 4:2FTSa | 13.1a | 0.29a | 1.6a | |
| 6:2FTSa | 13.8a | 0.31a | 1.6a | |
| 8:2FTSa | 14.7a | 0.082a | 1.6a | |
| 10:2FTSa | 16.7a | 0.40a | 1.6a | |
| PFOSAa | 3.37a | 0.10a | 0.40a | |
| NMeFOSAa | 14.4a | 0.47a | 1.6a | |
| NEtFOSAa | 13.6a | 0.41a | 1.6a | |
| NMeFOSAAa | 3.64a | 0.11a | 0.40a | |
| NEtFOSAAa | 3.59a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-BS1a | File ID:a | S2024-03-21B (8)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 16:00a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 14.0a | 1.0a | 1.6a | |
| NEtFOSEa | 14.2a | 1.0a | 1.6a | |
| HFPO-DAa | 3.76a | 0.17a | 0.80a | |
| ADONAa | 3.76a | 0.12a | 0.80a | |
| PFEESAa | 6.73a | 0.11a | 0.80a | |
| PFMPAa | 6.74a | 0.054a | 0.80a | |
| PFMBAa | 6.73a | 0.091a | 0.80a | |
| NFDHAa | 6.53a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.44a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 3.35a | 0.21a | 0.80a | |
| 3:3FTCAa | 12.5a | 0.57a | 1.6a | |
| 5:3FTCAa | 14.2a | 0.44a | 1.6a | |
| 7:3FTCAa | 14.5a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (8)
Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 691448<br>( 163.0 / 69.0 ) 18358 | ( 2.82 , 0.75 ) ( N/A , 0.03 , 0.1) | 3900.4<br>1064.0 | 0.0266<br>97.8<br>98.3 | 1.9514<br>[ 2.0000 ] | 97.6% | 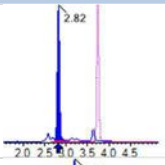 | 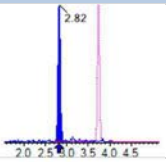 | |
| PFBA | ( 213.0 / 169.0 ) 1296586 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1102.1 | N/A<br>0.0<br>0.0 | 3.4614<br>[ 4.0000 ] | 86.5% | 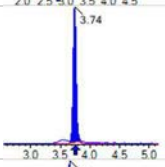 | | |
| PFPeA | ( 263.0 / 219.0 ) 536701<br>( 263.0 / 69.0 ) 5832 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.1) | 3121.6<br>102.6 | 0.0109<br>91.0<br>84.5 | 1.7501<br>[ 2.0000 ] | 87.5% | 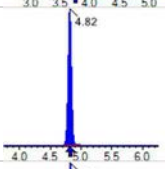 | 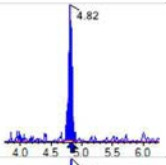 | |
| PFHxA | ( 313.0 / 269.0 ) 316745<br>( 313.0 / 119.0 ) 39520 | ( 6.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 1359.3<br>411.4 | 0.1248<br>107.5<br>112.3 | 0.8754<br>[ 1.0000 ] | 87.5% | 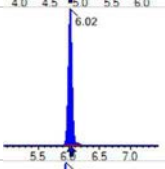 | 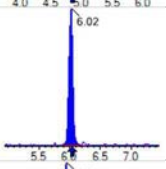 | |
| PFHpA | ( 363.0 / 319.0 ) 350723<br>( 363.0 / 169.0 ) 99598 | ( 7.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 1521.4<br>1083.1 | 0.2840<br>93.7<br>96.9 | 0.8383<br>[ 1.0000 ] | 83.8% | 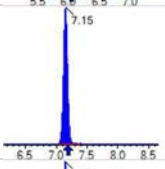 | 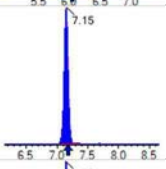 | |
| PFOA | ( 413.0 / 369.0 ) 517023<br>( 413.0 / 169.0 ) 179268 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.0) | 434.5<br>675.2 | 0.3467<br>94.9<br>101.1 | 0.9170<br>[ 1.0000 ] | 91.7% | 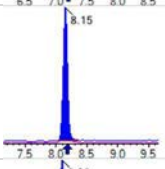 | 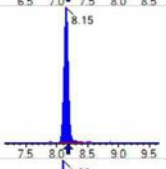 | |
| PFNA | ( 463.0 / 419.0 ) 309958<br>( 463.0 / 169.0 ) 78661 | ( 9.09 , 1.00 ) ( 0.00 , N/A , -0.2) | 1105.4<br>837.6 | 0.2538<br>99.4<br>95.4 | 0.8552<br>[ 1.0000 ] | 85.5% | 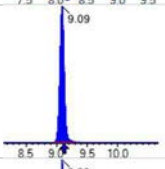 | 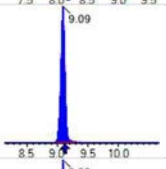 | |
| PFDA | ( 513.0 / 469.0 ) 347300<br>( 513.0 / 169.0 ) 42567 | ( 9.99 , 1.00 ) ( 0.00 , N/A , -0.1) | 2182.2<br>1455.1 | 0.1226<br>104.6<br>100.1 | 0.8478<br>[ 1.0000 ] | 84.8% | 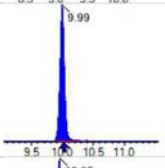 | 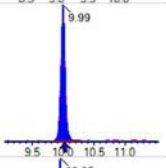 | |
| PFUnA | ( 563.0 / 519.0 ) 373721<br>( 563.0 / 169.0 ) 55783 | ( 10.85 , 1.00 ) ( 0.00 , N/A , 0.0) | 910.3<br>503.4 | 0.1493<br>105.3<br>99.0 | 0.8758<br>[ 1.0000 ] | 87.6% | 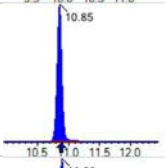 | 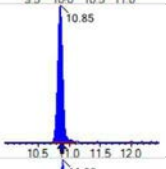 | |
| PFDoA | ( 613.0 / 569.0 ) 365458<br>( 613.0 / 169.0 ) 63339 | ( 11.68 , 1.00 ) ( 0.00 , N/A , 0.0) | 1108.8<br>507.7 | 0.1733<br>109.7<br>116.1 | 0.8403<br>[ 1.0000 ] | 84.0% | 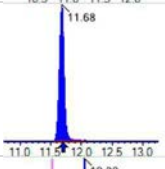 | 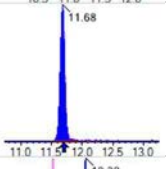 | |
| PFTrDA | ( 663.0 / 619.0 ) 342919<br>( 663.0 / 169.0 ) 98197 | ( 12.32 , 1.05 ) ( N/A , -0.03 , -0.1) | 1002.5<br>816.5 | 0.2864<br>111.3<br>108.1 | 0.8060<br>[ 1.0000 ] | 80.6% | 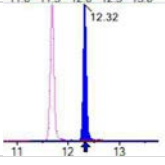 | 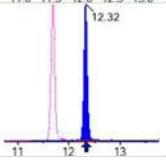 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (8)
Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 276844<br>( 713.0 / 169.0 ) 70566 | ( 12.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 1349.1<br>583.7 | 0.2549<br>94.4<br>96.1 | 0.9367<br>[ 1.0000 ] | 93.7% | 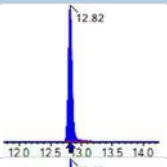 | 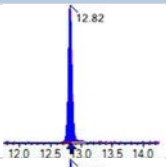 | |
| PFHxDA | ( 813.0 / 769.0 ) 204008<br>( 813.0 / 169.0 ) 51094 | ( 13.63 , 1.00 ) ( 0.00 , N/A , 0.0) | 1043.9<br>347.1 | 0.2504<br>102.4<br>98.6 | 0.8817<br>[ 1.0000 ] | 88.2% | 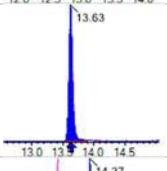 | 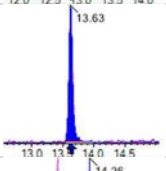 | |
| PFODA | ( 913.0 / 869.0 ) 105543<br>( 913.0 / 169.0 ) 34822 | ( 14.27 , 1.05 ) ( N/A , -0.01 , 0.2) | 534.3<br>163.9 | 0.3299<br>92.1<br>96.8 | 0.7291<br>[ 1.0000 ] | 72.9% | 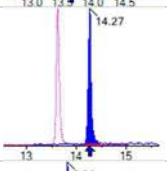 | 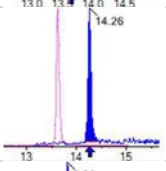 | |
| PFBS | ( 299.0 / 80.0 ) 431015<br>( 299.0 / 99.0 ) 320281 | ( 6.31 , 1.00 ) ( 0.00 , N/A , -0.1) | 1712.6<br>1519.3 | 0.7431<br>105.1<br>98.4 | 0.7604<br>[ 0.8847 ] | 85.9% | 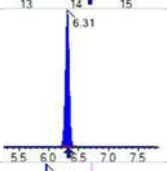 | 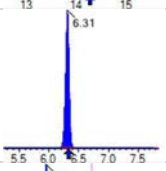 | |
| PFPeS | ( 349.0 / 80.0 ) 1101079<br>( 349.0 / 99.0 ) 388420 | ( 7.53 , 0.88 ) ( N/A , -0.05 , 0.0) | 1690.3<br>1648.6 | 0.3528<br>98.1<br>101.3 | 0.8425<br>[ 0.9384 ] | 89.8% | 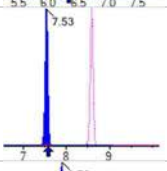 | 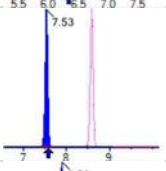 | |
| PFHxS | ( 399.0 / 80.0 ) 1223582<br>( 399.0 / 99.0 ) 405100 | ( 8.58 , 1.00 ) ( -0.01 , N/A , 0.0) | 1455.4<br>1635.3 | 0.3311<br>104.0<br>104.4 | 0.8060<br>[ 0.9110 ] | 88.5% | 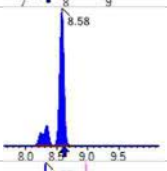 | 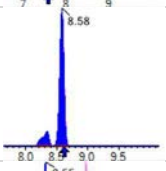 | |
| PFHpS | ( 449.0 / 80.0 ) 1031496<br>( 449.0 / 99.0 ) 274646 | ( 9.55 , 0.91 ) ( N/A , -0.05 , -0.1) | 1225.5<br>1064.4 | 0.2663<br>100.6<br>101.7 | 0.8525<br>[ 0.9514 ] | 89.6% | 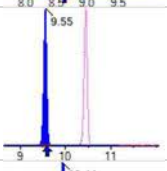 | 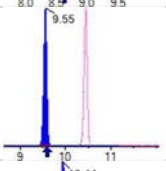 | |
| PFOS | ( 499.0 / 80.0 ) 984653<br>( 499.0 / 99.0 ) 216119 | ( 10.44 , 1.00 ) ( 0.00 , N/A , 0.1) | 1016.2<br>2829.9 | 0.2195<br>93.9<br>95.8 | 0.8442<br>[ 0.9275 ] | 91.0% | 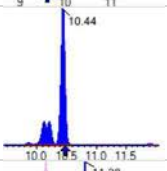 | 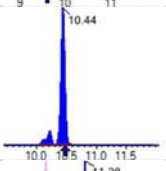 | |
| PFNS | ( 549.0 / 80.0 ) 881038<br>( 549.0 / 99.0 ) 242409 | ( 11.28 , 1.08 ) ( N/A , -0.05 , 0.0) | 1387.0<br>1318.3 | 0.2751<br>101.0<br>99.4 | 0.8068<br>[ 0.9599 ] | 84.1% | 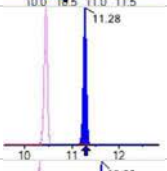 | 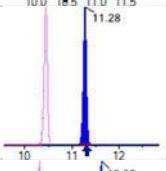 | |
| PFDS | ( 599.0 / 80.0 ) 1052271<br>( 599.0 / 99.0 ) 280540 | ( 12.00 , 1.15 ) ( N/A , -0.04 , 0.0) | 1523.8<br>821.6 | 0.2666<br>98.1<br>106.4 | 0.7891<br>[ 0.9631 ] | 81.9% | 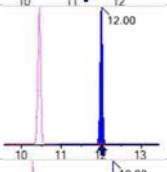 | 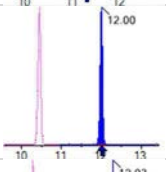 | |
| PFDoS | ( 699.0 / 80.0 ) 854165<br>( 699.0 / 99.0 ) 207536 | ( 12.93 , 1.24 ) ( N/A , -0.02 , 0.0) | 2960.7<br>1615.6 | 0.2430<br>104.0<br>107.3 | 0.7266<br>[ 0.9696 ] | 74.9% | 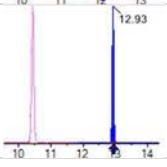 | 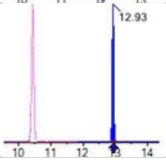 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-BS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1911113<br>( 327.0 / 81.0 ) 1712893 | ( 5.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 5219.0<br>3225.3 | 0.8963<br>102.7<br>99.2 | 3.2815<br>[ 3.7381 ] | 87.8% | 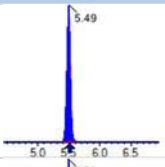 | 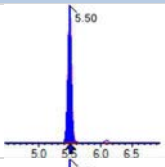 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1742549<br>( 427.0 / 81.0 ) 2363753 | ( 7.59 , 1.00 ) ( 0.00 , N/A , 0.0) | 4348.9<br>3037.3 | 1.3565<br>108.2<br>111.6 | 3.4389<br>[ 3.7962 ] | 90.6% | 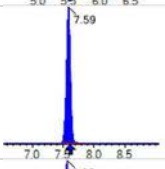 | 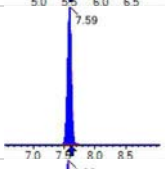 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1670007<br>( 527.0 / 81.0 ) 1791092 | ( 9.36 , 1.00 ) ( -0.01 , N/A , 0.0) | 1786.7<br>1513.4 | 1.0725<br>98.6<br>100.7 | 3.6642<br>[ 3.8332 ] | 95.6% | 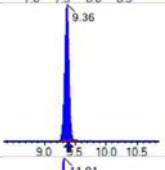 | 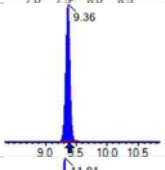 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1345523<br>( 627.0 / 81.0 ) 1967235 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.0) | 1433.3<br>1327.6 | 1.4621<br>101.6<br>105.5 | 4.1721<br>[ 3.8647 ] | 108.0% | 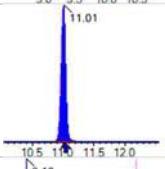 | 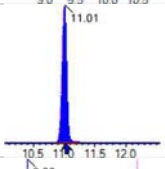 | |
| PFBSA | ( 297.9 / 78.0 ) 541332<br>( 297.9 / 278.0 ) 842 | ( 8.10 , 0.57 ) ( N/A , -0.04 , 0.3) | 1440.9<br>84.6 | 0.0016<br>113.8<br>117.3 | 1.8092<br>[ 1.0000 ] | 180.9% | 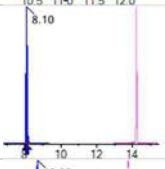 | 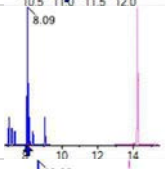 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 703639<br>( 397.9 / 378.0 ) 3986 | ( 10.96 , 0.75 ) ( N/A , -0.04 , 0.1) | 1448.0<br>132.3 | 0.0057<br>138.6<br>135.3 | 1.9244<br>[ 1.0000 ] | 192.4% | 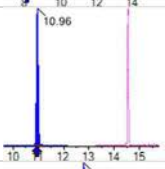 | 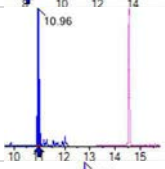 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 532029<br>( 498.0 / 478.0 ) 7652 | ( 12.83 , 1.00 ) ( -0.01 , N/A , 0.2) | 2022.9<br>258.7 | 0.0144<br>102.5<br>102.0 | 0.8413<br>[ 1.0000 ] | 84.1% | 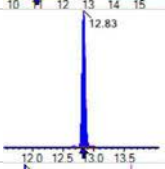 | 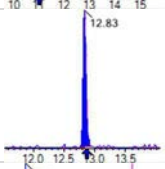 | |
| TFSI | ( 279.7 / 147.0 ) 2098090<br>( 279.7 / 211.0 ) 180319 | ( 8.16 , 0.64 ) ( N/A , -0.04 , 0.2) | 62.7<br>58.2 | 0.0859<br>102.3<br>102.6 | 1.2600<br>[ 0.9793 ] | 128.7% | 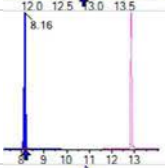 | 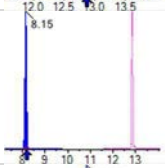 | |
| NMeFOSA | ( 512.0 / 219.0 ) 207354<br>( 512.0 / 169.0 ) 155118 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.5) | 1571.1<br>651.0 | 0.7481<br>100.0<br>101.8 | 3.5970<br>[ 4.0000 ] | 89.9% | 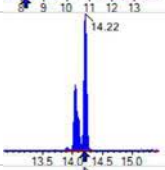 | 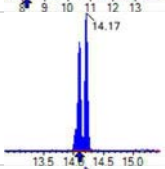 | |
| NEtFOSA | ( 526.0 / 219.0 ) 227318<br>( 526.0 / 169.0 ) 286164 | ( 14.54 , 1.00 ) ( 0.01 , N/A , 2.1) | 1889.7<br>1460.5 | 1.2589<br>102.0<br>99.6 | 3.4116<br>[ 4.0000 ] | 85.3% | 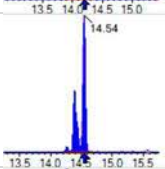 | 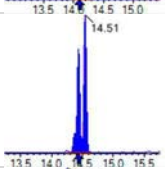 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 224904<br>( 570.0 / 483.0 ) 98232 | ( 10.25 , 1.00 ) ( 0.00 , N/A , -0.2) | 3201.3<br>22186.0 | 0.4368<br>99.6<br>94.8 | 0.9093<br>[ 1.0000 ] | 90.9% | 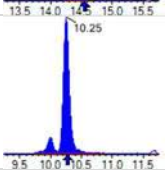 | 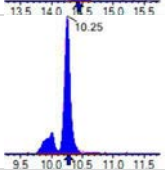 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (8)
Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 194282<br>( 584.0 / 526.0 ) 118166 | ( 10.78 , 1.00 )<br>( 0.01 , N/A , 0.2) | 1890.8<br>600.3 | 0.6082<br>98.6<br>105.0 | 0.8751<br>[ 1.0000 ] | 87.5% | 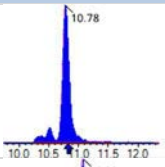 | 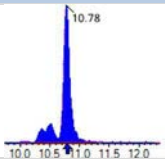 | |
| NMeFOSE | ( 616.0 / 59.0 ) 192027 | ( 14.03 , 1.00 )<br>( 0.02 , N/A , 0.0) | 770.9 | N/A<br>0.0<br>0.0 | 3.4979<br>[ 4.0000 ] | 87.4% | 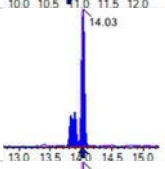 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 162510 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1156.5 | N/A<br>0.0<br>0.0 | 3.5524<br>[ 4.0000 ] | 88.8% | 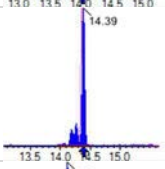 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 87268<br>( 285.0 / 185.0 ) 240929 | ( 6.47 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1516.9<br>1068.5 | 2.7608<br>99.8<br>96.9 | 0.9394<br>[ 1.0000 ] | 93.9% | 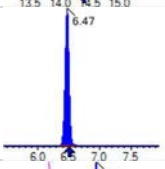 | 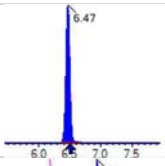 | |
| ADONA | ( 377.0 / 85.0 ) 1018644<br>( 377.0 / 251.0 ) 100085 | ( 7.54 , 1.16 )<br>( N/A , -0.05 , 0.2) | 2134.1<br>1047.3 | 0.0983<br>96.4<br>98.7 | 0.9399<br>[ 0.9427 ] | 99.7% | 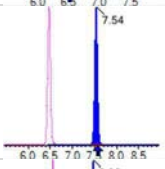 | 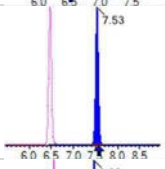 | |
| PFEESA | ( 315.0 / 135.0 ) 436952<br>( 315.0 / 83.0 ) 221338 | ( 6.90 , 1.15 )<br>( N/A , -0.04 , 0.2) | 2646.3<br>555.0 | 0.5065<br>90.9<br>87.9 | 1.6817<br>[ 1.7849 ] | 94.2% | 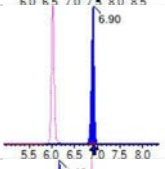 | 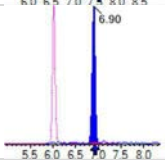 | |
| PFMPA | ( 229.0 / 85.0 ) 164090 | ( 4.13 , 0.86 )<br>( N/A , -0.01 , 0.0) | 3091.2 | N/A<br>0.0<br>0.0 | 1.6861<br>[ 2.0000 ] | 84.3% | 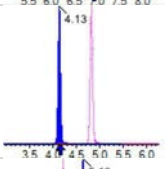 | | |
| PFMBA | ( 279.0 / 85.0 ) 444931 | ( 5.18 , 1.08 )<br>( N/A , -0.02 , 0.0) | 3846.6 | N/A<br>0.0<br>0.0 | 1.6822<br>[ 2.0000 ] | 84.1% | 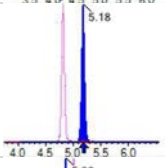 | | |
| NFDHA | ( 295.0 / 201.0 ) 220426<br>( 295.0 / 85.0 ) 207834 | ( 5.89 , 0.98 )<br>( N/A , -0.03 , 0.1) | 2865.7<br>1457.1 | 0.9429<br>87.4<br>92.4 | 1.6319<br>[ 2.0000 ] | 81.6% | 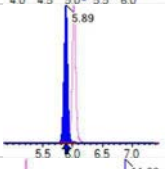 | 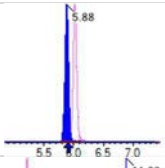 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1007238<br>( 533.0 / 353.0 ) 326726 | ( 11.09 , 1.71 )<br>( N/A , -0.05 , 0.0) | 2592.1<br>1672.5 | 0.3244<br>103.7<br>101.9 | 0.8605<br>[ 0.9333 ] | 92.2% | 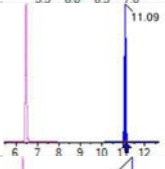 | 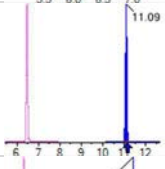 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 753681<br>( 633.0 / 453.0 ) 248623 | ( 12.42 , 1.92 )<br>( N/A , -0.03 , 0.0) | 2433.6<br>1341.4 | 0.3299<br>99.3<br>99.5 | 0.8372<br>[ 0.9432 ] | 88.8% | 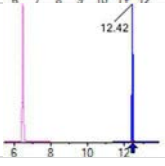 | 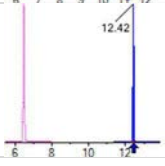 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-BS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 518914<br>( 461.0 / 381.2 ) 198906 | ( 9.47 , 0.91 )<br>( N/A , -0.05 , 0.2) | 3065.8<br>3428.5 | 0.3833<br>96.2<br>95.5 | 0.7886<br>[ 0.9239 ] | 85.4% | 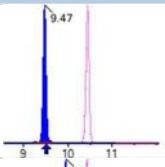 | 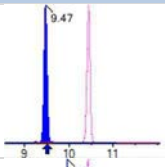 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 54637<br>( 241.0 / 117.0 ) 128440 | ( 4.39 , 0.91 )<br>( N/A , -0.01 , -0.1) | 1283.8<br>927.4 | 2.3508<br>111.6<br>105.8 | 3.1318<br>[ 4.0000 ] | 78.3% | 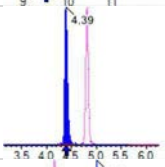 | 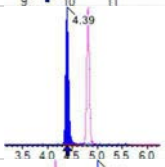 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 357355<br>( 341.0 / 217.0 ) 534631 | ( 6.93 , 1.15 )<br>( N/A , -0.05 , 0.1) | 1336.7<br>731.6 | 1.4961<br>98.5<br>99.8 | 3.5615<br>[ 4.0000 ] | 89.0% | 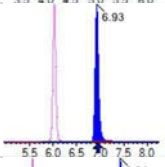 | 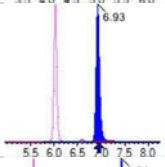 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 597411<br>( 441.0 / 337.0 ) 516137 | ( 9.31 , 1.55 )<br>( N/A , -0.05 , 0.0) | 4464.8<br>8578.8 | 0.8640<br>94.2<br>94.3 | 3.6282<br>[ 4.0000 ] | 90.7% | 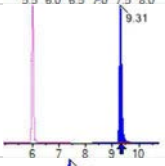 | 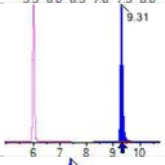 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 411770<br>( 357.2 / 243.0 ) 45117 | ( 6.74 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1549.1<br>485.2 | 0.1096<br>99.4<br>103.9 | 0.8965<br>[ 1.0000 ] | 89.6% | 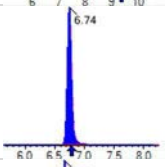 | 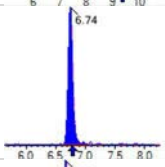 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 314773<br>( 457.2 / 343.0 ) 13476 | ( 8.77 , 1.00 )<br>( -0.01 , N/A , 0.1) | 690.5<br>236.8 | 0.0428<br>103.2<br>100.0 | 1.0337<br>[ 1.0000 ] | 103.4% | 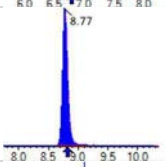 | 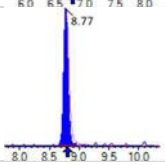 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 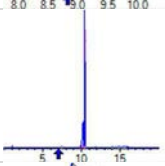 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 320099 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1436.4 | N/A | 1.3425<br>[ 1.0000 ] | 134.3%<br>{ 125.5% } | 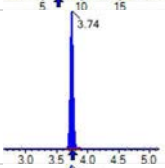 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 153965 | ( 6.02 , N/A )<br>( N/A , -0.03 , N/A ) | 5048.2 | N/A | 1.2137<br>[ 1.0000 ] | 121.4%<br>{ 126.3% } | 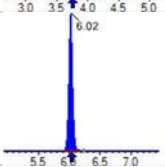 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 507542 | ( 8.15 , N/A )<br>( N/A , -0.05 , N/A ) | 4441.9 | N/A | 1.2839<br>[ 1.0000 ] | 128.4%<br>{ 128.1% } | 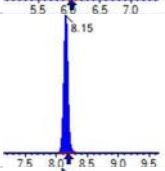 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 355458 | ( 9.09 , N/A )<br>( N/A , -0.05 , N/A ) | 1211.3 | N/A | 1.2498<br>[ 1.0000 ] | 125.0%<br>{ 128.3% } | 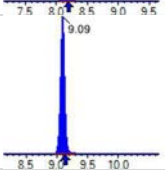 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (8)
Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 352928 | ( 10.00 , N/A ) ( N/A , -0.05 , N/A ) | 6446.0 | N/A | 1.2085 [ 1.0000 ] | 120.9% { 122.3% } | 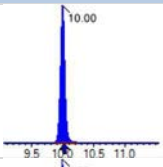 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1143053 | ( 8.59 , N/A ) ( N/A , -0.05 , N/A ) | 5135.8 | N/A | 1.2044 [ 1.0000 ] | 120.4% { 121.2% } | 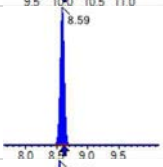 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 933122 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1929.8 | N/A | 1.2251 [ 1.0000 ] | 122.5% { 122.7% } | 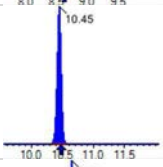 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 3006215 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 50397.8 | N/A | 8.2209 [ 8.0000 ] | 102.8% { 137.7% } | 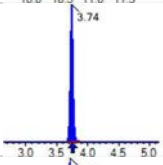 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1214253 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 5762.6 | N/A | 4.2268 [ 4.0000 ] | 105.7% { 134.7% } | 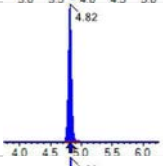 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 753173 | ( 6.02 , N/A ) ( N/A , -0.03 , N/A ) | 8298.1 | N/A | 2.1440 [ 2.0000 ] | 107.2% { 131.3% } | 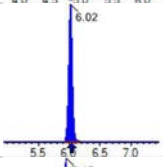 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 852700 | ( 7.15 , N/A ) ( N/A , -0.05 , N/A ) | 5980.4 | N/A | 2.1821 [ 2.0000 ] | 109.1% { 138.5% } | 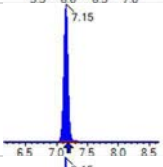 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1131277 | ( 8.15 , N/A ) ( N/A , -0.05 , N/A ) | 2777.7 | N/A | 2.0803 [ 2.0000 ] | 104.0% { 140.4% } | 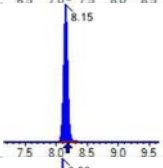 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 360635 | ( 9.09 , N/A ) ( N/A , -0.05 , N/A ) | 2599.2 | N/A | 1.0347 [ 1.0000 ] | 103.5% { 136.7% } | 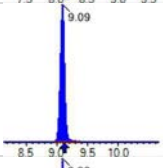 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 400928 | ( 9.99 , N/A ) ( N/A , -0.05 , N/A ) | 1144.2 | N/A | 1.0137 [ 1.0000 ] | 101.4% { 130.6% } | 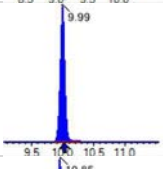 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 461371 | ( 10.85 , N/A ) ( N/A , -0.05 , N/A ) | 1138.3 | N/A | 0.9915 [ 1.0000 ] | 99.2% { 125.2% } | 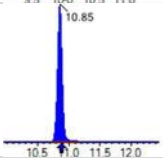 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-BS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 432309 | ( 11.68 , N/A ) ( N/A , -0.04 , N/A ) | 1347.1 | N/A | 0.9123 [ 1.0000 ] | 91.2% { 111.9% } | 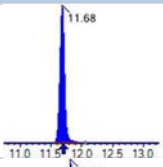 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 315590 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1322.2 | N/A | 0.7820 [ 1.0000 ] | 78.2% { 101.2% } | 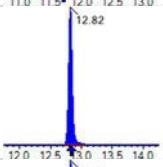 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 485154 | ( 13.63 , N/A ) ( N/A , -0.02 , N/A ) | 2169.8 | N/A | 1.4082 [ 2.0000 ] | 70.4% { 99.6% } | 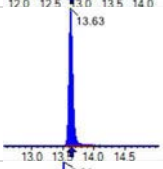 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2183355 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 1616.3 | N/A | 2.1141 [ 2.0000 ] | 105.7% { 135.1% } | 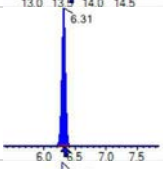 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1707764 | ( 8.59 , N/A ) ( N/A , -0.05 , N/A ) | 3503.3 | N/A | 2.0717 [ 2.0000 ] | 103.6% { 130.0% } | 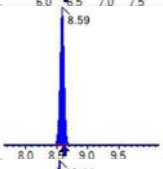 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 2019661 | ( 10.44 , N/A ) ( N/A , -0.05 , N/A ) | 1582.4 | N/A | 2.0074 [ 2.0000 ] | 100.4% { 132.0% } | 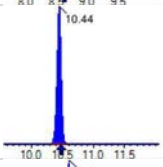 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 887640 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 109.0 | N/A | 4.9816 [ 4.0000 ] | 124.5% { 143.3% } | 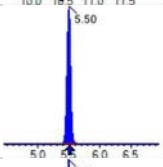 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2447726 | ( 7.59 , N/A ) ( N/A , -0.05 , N/A ) | 4868.9 | N/A | 4.5902 [ 4.0000 ] | 114.8% { 138.4% } | 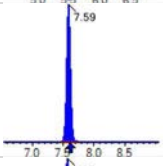 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1919634 | ( 9.37 , N/A ) ( N/A , -0.05 , N/A ) | 1612.1 | N/A | 4.5900 [ 4.0000 ] | 114.7% { 138.7% } | 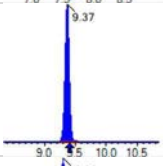 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3347430 | ( 11.00 , N/A ) ( N/A , -0.05 , N/A ) | 1383.7 | N/A | 7.6585 [ 8.0000 ] | 95.7% { 124.3% } | 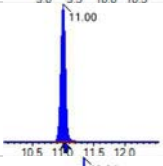 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1264680 | ( 12.84 , N/A ) ( N/A , -0.02 , N/A ) | 2176.3 | N/A | 1.4184 [ 2.0000 ] | 70.9% { 93.1% } | 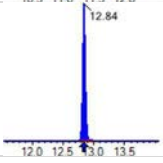 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (8)
Acquired: 2024/03/21 - 16:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 116115 | ( 14.21 , N/A ) ( N/A , -0.01 , N/A ) | 968.5 | N/A | 0.6140 [ 2.0000 ] | 30.7% { 42.4% } | 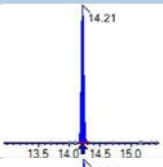 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 118990 | ( 14.54 , N/A ) ( N/A , -0.01 , N/A ) | 1165.7 | N/A | 0.5867 [ 2.0000 ] | 29.3% { 39.5% } | 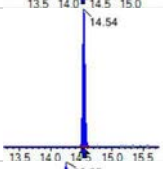 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1037257 | ( 10.25 , N/A ) ( N/A , -0.05 , N/A ) | 2385.6 | N/A | 4.0068 [ 4.0000 ] | 100.2% { 116.8% } | 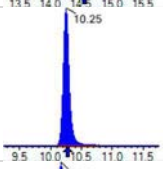 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 907802 | ( 10.77 , N/A ) ( N/A , -0.05 , N/A ) | 2177.9 | N/A | 3.8475 [ 4.0000 ] | 96.2% { 110.3% } | 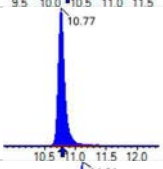 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1000960 | ( 14.01 , N/A ) ( N/A , -0.01 , N/A ) | 1731.5 | N/A | 11.7786 [ 20.0000 ] | 58.9% { 82.7% } | 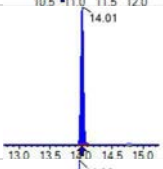 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1029790 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 3643.6 | N/A | 11.9391 [ 20.0000 ] | 59.7% { 81.6% } | 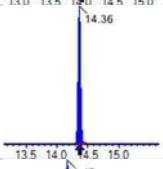 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1260225 | ( 6.47 , N/A ) ( N/A , -0.04 , N/A ) | 2361.9 | N/A | 7.8752 [ 8.0000 ] | 98.4% { 126.9% } | 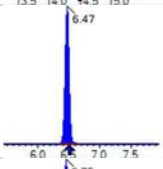 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 864096 | ( 6.75 , N/A ) ( N/A , -0.05 , N/A ) | 1178.4 | N/A | 2.2582 [ 2.0000 ] | 112.9% { 134.8% } | 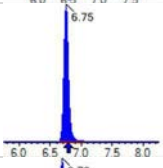 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 746718 | ( 8.79 , N/A ) ( N/A , -0.05 , N/A ) | 1004.7 | N/A | 2.1437 [ 2.0000 ] | 107.2% { 126.9% } | 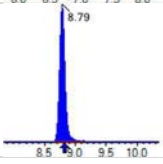 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-MRL1a | File ID:a | S2024-03-21B (9)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 16:20a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 3.42a | 0.21a | 1.6a | |
| PFPeAa | 1.52a | 0.065a | 0.80a | |
| PFHxAa | 0.771a | 0.055a | 0.40a | |
| PFHpAa | 0.680a | 0.041a | 0.40a | |
| PFOAa | 0.986a | 0.15a | 0.40a | |
| PFNAa | 0.669a | 0.082a | 0.40a | |
| PFDAa | 0.805a | 0.10a | 0.40a | |
| PFUnAa | 0.730a | 0.16a | 0.40a | |
| PFDoAa | 0.708a | 0.11a | 0.40a | |
| PFTrDAa | 0.751a | 0.20a | 0.40a | |
| PFTeDAa | 0.731a | 0.20a | 0.40a | |
| PFHxDAa | 0.735a | 0.20a | 0.40a | |
| PFODAa | 0.606a | 0.20a | 0.40a | |
| PFBSa | 0.585a | 0.037a | 0.40a | |
| PFPeSa | 0.647a | 0.063a | 0.40a | |
| PFHxSa | 0.648a | 0.032a | 0.40a | |
| PFHpSa | 0.691a | 0.051a | 0.40a | |
| PFOSa | 0.728a | 0.064a | 0.40a | |
| PFNSa | 0.660a | 0.12a | 0.40a | |
| PFDSa | 0.714a | 0.15a | 0.40a | |
| PFDoSa | 0.615a | 0.12a | 0.40a | |
| 4:2FTSa | 2.60a | 0.29a | 1.6a | |
| 6:2FTSa | 2.73a | 0.31a | 1.6a | |
| 8:2FTSa | 2.96a | 0.082a | 1.6a | |
| 10:2FTSa | 3.25a | 0.40a | 1.6a | |
| PFOSAa | 0.732a | 0.10a | 0.40a | |
| NMeFOSAa | 2.99a | 0.47a | 1.6a | |
| NEtFOSAa | 2.82a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.721a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-MRL1a | File ID:a | S2024-03-21B (9)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 16:20a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 3.03a | 1.0a | 1.6a | |
| NEtFOSEa | 2.80a | 1.0a | 1.6a | |
| HFPO-DAa | 0.789a | 0.17a | 0.80a | Ja |
| ADONAa | 0.711a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.19a | 0.11a | 0.80a | |
| PFMPAa | 1.47a | 0.054a | 0.80a | |
| PFMBAa | 1.37a | 0.091a | 0.80a | |
| NFDHAa | 1.21a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.697a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.653a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.68a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.97a | 0.44a | 1.6a | |
| 7:3FTCAa | 3.05a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 149827<br>( 163.0 / 69.0 ) 4367 | ( 2.82 , 0.75 ) ( N/A , 0.03 , 0.1) | 869.3<br>275.6 | 0.0291<br>107.3<br>107.9 | 0.4606<br>[ 0.4000 ] | 115.1% | 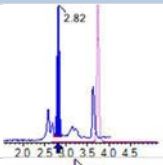 | 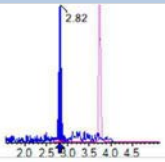 | MI3 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 ) 294364 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 258.6 | N/A<br>0.0<br>0.0 | 0.8560<br>[ 0.8000 ] | 107.0% | 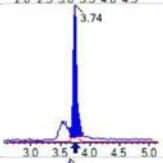 | | |
| PFPeA | ( 263.0 / 219.0 ) 102723<br>( 263.0 / 69.0 ) 1519 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.3) | 635.7<br>33.5 | 0.0148<br>123.9<br>115.0 | 0.3804<br>[ 0.4000 ] | 95.1% | 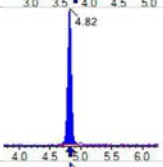 | 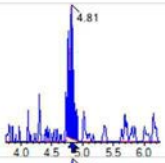 | |
| PFHxA | ( 313.0 / 269.0 ) 63210<br>( 313.0 / 119.0 ) 7882 | ( 6.02 , 1.00 ) ( 0.00 , N/A , -0.2) | 413.7<br>117.5 | 0.1247<br>107.4<br>112.3 | 0.1928<br>[ 0.2000 ] | 96.4% | 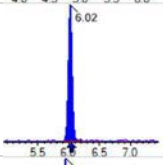 | 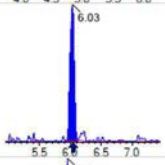 | |
| PFHpA | ( 363.0 / 319.0 ) 69335<br>( 363.0 / 169.0 ) 22318 | ( 7.15 , 1.00 ) ( -0.01 , N/A , -0.3) | 613.5<br>266.9 | 0.3219<br>106.2<br>109.8 | 0.1699<br>[ 0.2000 ] | 84.9% | 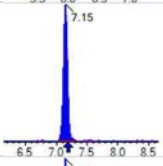 | 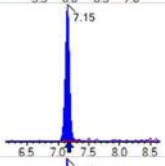 | |
| PFOA | ( 413.0 / 369.0 ) 135479<br>( 413.0 / 169.0 ) 44274 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 171.8<br>293.5 | 0.3268<br>89.4<br>95.3 | 0.2464<br>[ 0.2000 ] | 123.2% | 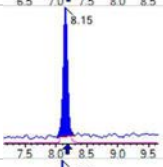 | 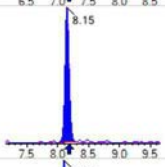 | |
| PFNA | ( 463.0 / 419.0 ) 56449<br>( 463.0 / 169.0 ) 14871 | ( 9.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 567.9<br>347.3 | 0.2634<br>103.2<br>99.1 | 0.1673<br>[ 0.2000 ] | 83.7% | 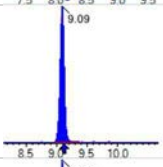 | 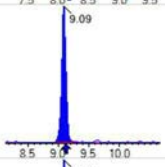 | |
| PFDA | ( 513.0 / 469.0 ) 80825<br>( 513.0 / 169.0 ) 9032 | ( 10.00 , 1.00 ) ( 0.00 , N/A , -0.1) | 759.1<br>508.3 | 0.1117<br>95.4<br>91.3 | 0.2011<br>[ 0.2000 ] | 100.6% | 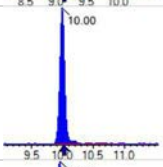 | 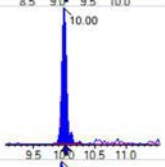 | |
| PFUnA | ( 563.0 / 519.0 ) 70647<br>( 563.0 / 169.0 ) 12063 | ( 10.86 , 1.00 ) ( 0.00 , N/A , 0.0) | 506.4<br>167.4 | 0.1708<br>120.5<br>113.3 | 0.1825<br>[ 0.2000 ] | 91.3% | 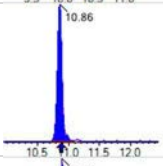 | 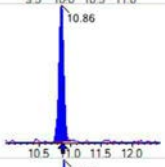 | |
| PFDoA | ( 613.0 / 569.0 ) 72488<br>( 613.0 / 169.0 ) 11914 | ( 11.68 , 1.00 ) ( 0.00 , N/A , -0.2) | 416.9<br>142.5 | 0.1644<br>104.0<br>110.1 | 0.1770<br>[ 0.2000 ] | 88.5% | 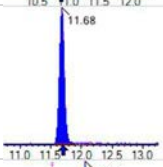 | 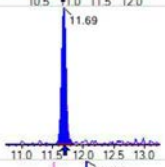 | |
| PFTrDA | ( 663.0 / 619.0 ) 75160<br>( 663.0 / 169.0 ) 19577 | ( 12.33 , 1.05 ) ( N/A , -0.02 , 0.4) | 549.4<br>275.5 | 0.2605<br>101.2<br>98.3 | 0.1877<br>[ 0.2000 ] | 93.8% | 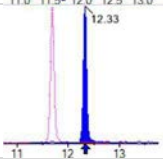 | 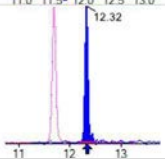 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 54881<br>( 713.0 / 169.0 ) 13541 | ( 12.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 456.1<br>154.9 | 0.2467<br>91.4<br>93.0 | 0.1827<br>[ 0.2000 ] | 91.3% | 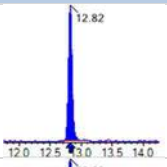 | 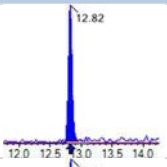 | |
| PFHxDA | ( 813.0 / 769.0 ) 41381<br>( 813.0 / 169.0 ) 9018 | ( 13.63 , 1.00 ) ( -0.01 , N/A , -0.2) | 245.7<br>75.7 | 0.2179<br>89.1<br>85.8 | 0.1837<br>[ 0.2000 ] | 91.9% | 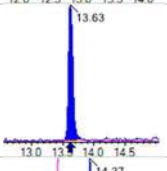 | 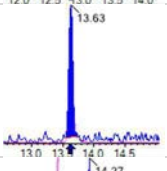 | |
| PFODA | ( 913.0 / 869.0 ) 21338<br>( 913.0 / 169.0 ) 6237 | ( 14.27 , 1.05 ) ( N/A , -0.01 , 0.3) | 91.3<br>44.6 | 0.2923<br>81.6<br>85.7 | 0.1514<br>[ 0.2000 ] | 75.7% | 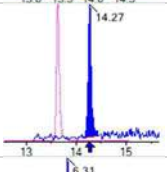 | 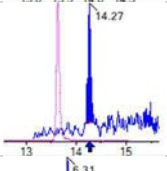 | |
| PFBS | ( 299.0 / 80.0 ) 74133<br>( 299.0 / 99.0 ) 57349 | ( 6.31 , 1.00 ) ( 0.00 , N/A , 0.1) | 526.4<br>460.7 | 0.7736<br>109.4<br>102.5 | 0.1462<br>[ 0.1769 ] | 82.6% | 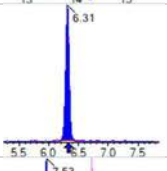 | 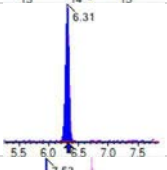 | |
| PFPeS | ( 349.0 / 80.0 ) 195471<br>( 349.0 / 99.0 ) 76706 | ( 7.53 , 0.88 ) ( N/A , -0.05 , 0.1) | 614.5<br>607.7 | 0.3924<br>109.1<br>112.7 | 0.1619<br>[ 0.1877 ] | 86.3% | 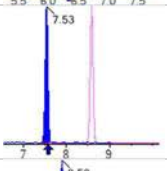 | 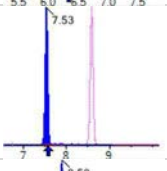 | |
| PFHxS | ( 399.0 / 80.0 ) 227265<br>( 399.0 / 99.0 ) 75181 | ( 8.58 , 1.00 ) ( 0.00 , N/A , 0.1) | 680.3<br>749.9 | 0.3308<br>103.9<br>104.3 | 0.1620<br>[ 0.1822 ] | 88.9% | 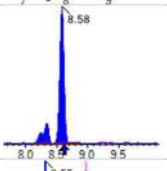 | 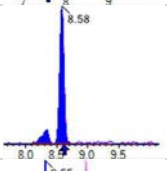 | |
| PFHpS | ( 449.0 / 80.0 ) 190921<br>( 449.0 / 99.0 ) 51512 | ( 9.55 , 0.91 ) ( N/A , -0.05 , 0.1) | 765.2<br>410.6 | 0.2698<br>102.0<br>103.0 | 0.1727<br>[ 0.1903 ] | 90.7% | 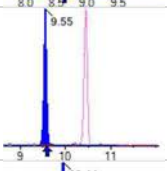 | 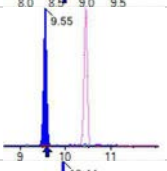 | |
| PFOS | ( 499.0 / 80.0 ) 193995<br>( 499.0 / 99.0 ) 42692 | ( 10.44 , 1.00 ) ( 0.00 , N/A , 0.0) | 425.3<br>1061.6 | 0.2201<br>94.2<br>96.0 | 0.1820<br>[ 0.1855 ] | 98.1% | 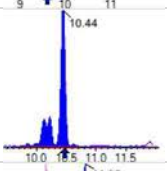 | 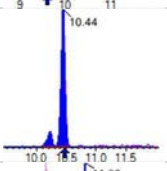 | |
| PFNS | ( 549.0 / 80.0 ) 164731<br>( 549.0 / 99.0 ) 42730 | ( 11.28 , 1.08 ) ( N/A , -0.04 , 0.2) | 516.0<br>351.4 | 0.2594<br>95.2<br>93.7 | 0.1651<br>[ 0.1920 ] | 86.0% | 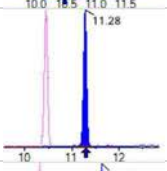 | 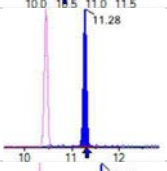 | |
| PFDS | ( 599.0 / 80.0 ) 217503<br>( 599.0 / 99.0 ) 52523 | ( 12.01 , 1.15 ) ( N/A , -0.03 , 0.1) | 584.2<br>335.1 | 0.2415<br>88.8<br>96.4 | 0.1785<br>[ 0.1926 ] | 92.7% | 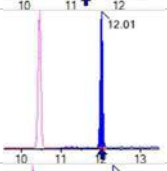 | 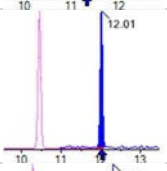 | |
| PFDoS | ( 699.0 / 80.0 ) 165236<br>( 699.0 / 99.0 ) 38295 | ( 12.93 , 1.24 ) ( N/A , -0.02 , 0.0) | 1184.3<br>485.6 | 0.2318<br>99.2<br>102.4 | 0.1538<br>[ 0.1939 ] | 79.3% | 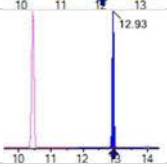 | 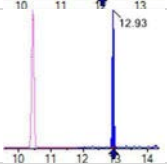 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 347955<br>( 327.0 / 81.0 ) 349592 | ( 5.49 , 1.00 ) ( 0.00 , N/A , 0.0) | 3535.1<br>1365.9 | 1.0047<br>115.2<br>111.2 | 0.6503<br>[ 0.7476 ] | 87.0% | 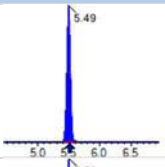 | 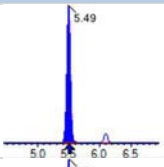 | |
| 6:2FTS | ( 427.0 / 407.0 ) 327808<br>( 427.0 / 81.0 ) 436093 | ( 7.59 , 1.00 ) ( 0.00 , N/A , 0.1) | 3156.1<br>1705.1 | 1.3303<br>106.1<br>109.4 | 0.6830<br>[ 0.7592 ] | 90.0% | 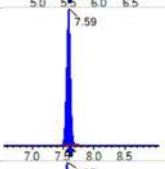 | 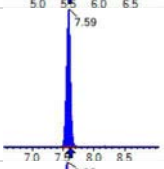 | |
| 8:2FTS | ( 527.0 / 507.0 ) 307714<br>( 527.0 / 81.0 ) 339136 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.2) | 1572.4<br>1086.7 | 1.1021<br>101.3<br>103.4 | 0.7402<br>[ 0.7666 ] | 96.6% | 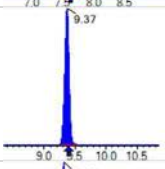 | 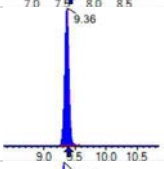 | |
| 10:2FTS | ( 627.0 / 607.0 ) 260462<br>( 627.0 / 81.0 ) 333511 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.0) | 1245.4<br>459.5 | 1.2805<br>88.9<br>92.4 | 0.8122<br>[ 0.7729 ] | 105.1% | 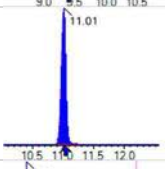 | 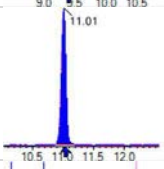 | |
| PFBSA | ( 297.9 / 78.0 ) 96474<br>( 297.9 / 278.0 ) 38 | ( 8.10 , 0.57 ) ( N/A , -0.03 , 1.4) | 619.0<br>13.3 | 0.0004<br>29.1<br>30.0 | 0.3864<br>[ 0.2000 ] | 193.2% | 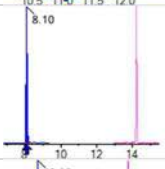 | 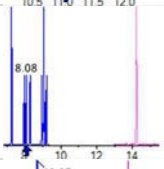 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 132131<br>( 397.9 / 378.0 ) 575 | ( 10.96 , 0.75 ) ( N/A , -0.04 , 0.8) | 823.5<br>34.0 | 0.0044<br>106.5<br>104.0 | 0.4442<br>[ 0.2000 ] | 222.1% | 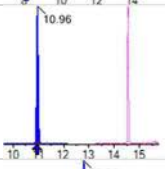 | 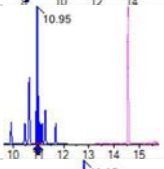 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 104575<br>( 498.0 / 478.0 ) 1920 | ( 12.84 , 1.00 ) ( -0.01 , N/A , -0.4) | 915.7<br>71.6 | 0.0184<br>130.8<br>130.2 | 0.1831<br>[ 0.2000 ] | 91.5% | 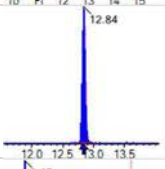 | 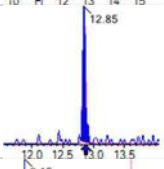 | |
| TFSI | ( 279.7 / 147.0 ) 369526<br>( 279.7 / 211.0 ) 30669 | ( 8.15 , 0.63 ) ( N/A , -0.04 , 0.3) | 51.7<br>29.8 | 0.0830<br>98.8<br>99.1 | 0.2457<br>[ 0.1959 ] | 125.4% | 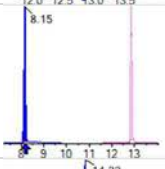 | 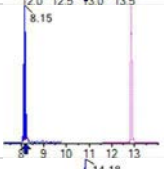 | |
| NMeFOSA | ( 512.0 / 219.0 ) 35911<br>( 512.0 / 169.0 ) 23538 | ( 14.22 , 1.00 ) ( 0.00 , N/A , 2.3) | 484.6<br>180.1 | 0.6554<br>87.6<br>89.2 | 0.7466<br>[ 0.8000 ] | 93.3% | 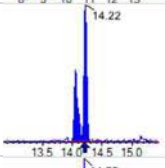 | 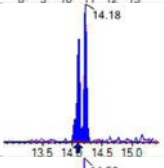 | |
| NEtFOSA | ( 526.0 / 219.0 ) 38252<br>( 526.0 / 169.0 ) 47034 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.6) | 462.1<br>376.3 | 1.2296<br>99.6<br>97.3 | 0.7057<br>[ 0.8000 ] | 88.2% | 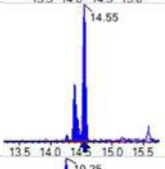 | 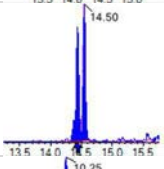 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 42640<br>( 570.0 / 483.0 ) 21066 | ( 10.25 , 1.00 ) ( 0.00 , N/A , 0.0) | 3737.4<br>1581108.3 | 0.4941<br>112.7<br>107.2 | 0.1802<br>[ 0.2000 ] | 90.1% | 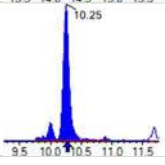 | 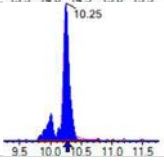 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 36849<br>( 584.0 / 526.0 ) 25059 | ( 10.78 , 1.00 ) ( 0.01 , N/A , 0.2) | 1450.8<br>459.2 | 0.6800<br>110.3<br>117.4 | 0.1672<br>[ 0.2000 ] | 83.6% | 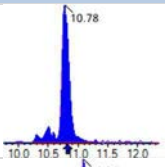 | 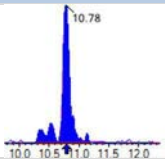 | |
| NMeFOSE | ( 616.0 / 59.0 ) 36239 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 224.8 | N/A<br>0.0<br>0.0 | 0.7585<br>[ 0.8000 ] | 94.8% | 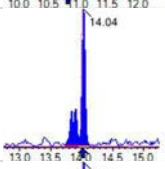 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 28475 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 296.4 | N/A<br>0.0<br>0.0 | 0.6999<br>[ 0.8000 ] | 87.5% | 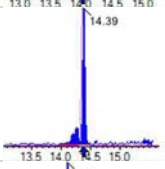 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 16865<br>( 285.0 / 185.0 ) 46765 | ( 6.48 , 1.00 ) ( 0.00 , N/A , 0.3) | 442.8<br>380.6 | 2.7729<br>100.3<br>97.3 | 0.1973<br>[ 0.2000 ] | 98.7% | 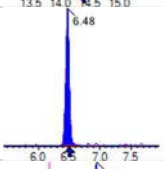 | 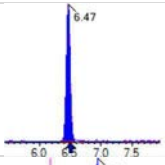 | |
| ADONA | ( 377.0 / 85.0 ) 177293<br>( 377.0 / 251.0 ) 18706 | ( 7.54 , 1.16 ) ( N/A , -0.05 , -0.1) | 1133.9<br>236.6 | 0.1055<br>103.5<br>105.9 | 0.1778<br>[ 0.1885 ] | 94.3% | 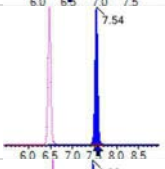 | 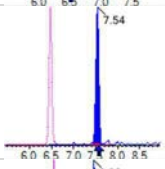 | |
| PFEESA | ( 315.0 / 135.0 ) 70262<br>( 315.0 / 83.0 ) 41995 | ( 6.90 , 1.15 ) ( N/A , -0.04 , 0.1) | 1152.4<br>171.3 | 0.5977<br>107.2<br>103.7 | 0.2984<br>[ 0.3570 ] | 83.6% | 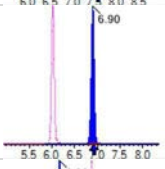 | 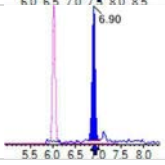 | |
| PFMPA | ( 229.0 / 85.0 ) 31439 | ( 4.14 , 0.86 ) ( N/A , 0.00 , 0.0) | 981.9 | N/A<br>0.0<br>0.0 | 0.3669<br>[ 0.4000 ] | 91.7% | 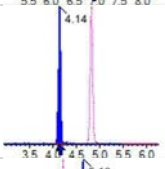 | | |
| PFMBA | ( 279.0 / 85.0 ) 79755 | ( 5.18 , 1.08 ) ( N/A , -0.02 , 0.0) | 1097.4 | N/A<br>0.0<br>0.0 | 0.3425<br>[ 0.4000 ] | 85.6% | 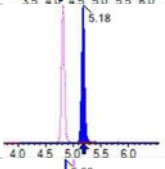 | | |
| NFDHA | ( 295.0 / 201.0 ) 36978<br>( 295.0 / 85.0 ) 41283 | ( 5.88 , 0.98 ) ( N/A , -0.03 , -0.1) | 1258.9<br>559.7 | 1.1164<br>103.5<br>109.4 | 0.3021<br>[ 0.4000 ] | 75.5% | 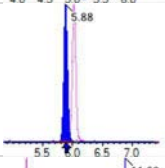 | 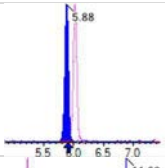 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 187731<br>( 533.0 / 353.0 ) 54410 | ( 11.09 , 1.71 ) ( N/A , -0.04 , 0.1) | 1364.2<br>891.7 | 0.2898<br>92.6<br>91.1 | 0.1743<br>[ 0.1867 ] | 93.4% | 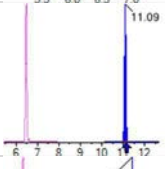 | 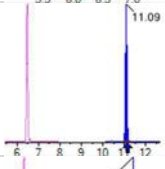 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 135235<br>( 633.0 / 453.0 ) 43547 | ( 12.42 , 1.92 ) ( N/A , -0.03 , -0.2) | 1295.8<br>432.4 | 0.3220<br>97.0<br>97.1 | 0.1633<br>[ 0.1886 ] | 86.6% | 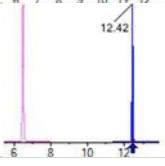 | 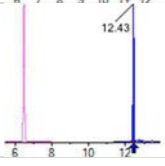 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 100981<br>( 461.0 / 381.2 ) 36940 | ( 9.47 , 0.91 ) ( N/A , -0.05 , 0.0) | 1336.5<br>1479.4 | 0.3658<br>91.8<br>91.1 | 0.1679<br>[ 0.1848 ] | 90.9% | 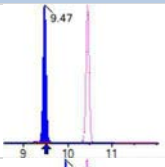 | 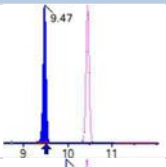 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 10286<br>( 241.0 / 117.0 ) 23839 | ( 4.39 , 0.91 ) ( N/A , -0.01 , -0.2) | 426.3<br>194.0 | 2.3177<br>110.0<br>104.4 | 0.6696<br>[ 0.8000 ] | 83.7% | 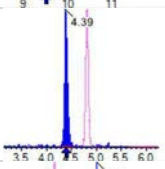 | 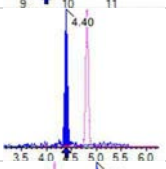 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 67420<br>( 341.0 / 217.0 ) 93436 | ( 6.93 , 1.15 ) ( N/A , -0.05 , 0.0) | 495.5<br>425.9 | 1.3859<br>91.2<br>92.5 | 0.7415<br>[ 0.8000 ] | 92.7% | 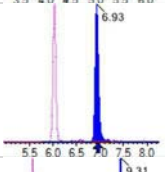 | 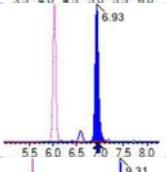 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 113827<br>( 441.0 / 337.0 ) 97381 | ( 9.31 , 1.55 ) ( N/A , -0.05 , 0.2) | 64871.3<br>42529.4 | 0.8555<br>93.3<br>93.4 | 0.7629<br>[ 0.8000 ] | 95.4% | 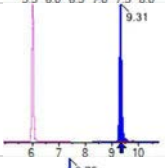 | 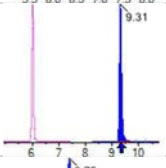 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 76281<br>( 357.2 / 243.0 ) 7663 | ( 6.75 , 1.00 ) ( -0.01 , N/A , 0.1) | 605.3<br>98.4 | 0.1005<br>91.1<br>95.2 | 0.1769<br>[ 0.2000 ] | 88.4% | 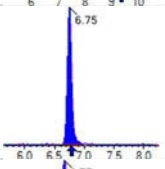 | 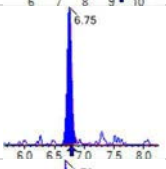 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 51557<br>( 457.2 / 343.0 ) 2214 | ( 8.77 , 1.00 ) ( -0.02 , N/A , -0.6) | 342.7<br>58.9 | 0.0429<br>103.5<br>100.3 | 0.1854<br>[ 0.2000 ] | 92.7% | 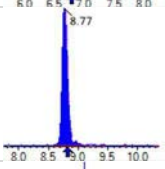 | 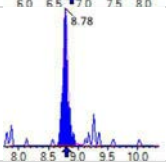 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 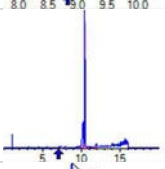 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 275546 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 1349.9 | N/A | 1.1557<br>[ 1.0000 ] | 115.6%<br>{ 108.0% } | 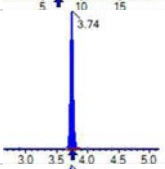 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 137993 | ( 6.03 , N/A ) ( N/A , -0.03 , N/A ) | 17236.3 | N/A | 1.0878<br>[ 1.0000 ] | 108.8%<br>{ 113.2% } | 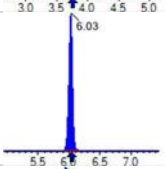 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 443528 | ( 8.15 , N/A ) ( N/A , -0.05 , N/A ) | 3717.0 | N/A | 1.1220<br>[ 1.0000 ] | 112.2%<br>{ 111.9% } | 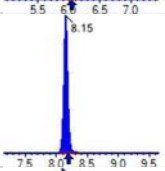 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 330095 | ( 9.09 , N/A ) ( N/A , -0.05 , N/A ) | 1063.1 | N/A | 1.1606<br>[ 1.0000 ] | 116.1%<br>{ 119.1% } | 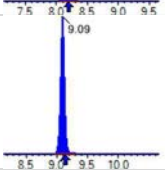 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 336742 | ( 10.00 , N/A ) ( N/A , -0.05 , N/A ) | 8736.7 | N/A | 1.1531 [ 1.0000 ] | 115.3% { 116.7% } | 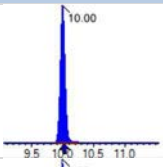 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1043968 | ( 8.59 , N/A ) ( N/A , -0.05 , N/A ) | 4570.9 | N/A | 1.1000 [ 1.0000 ] | 110.0% { 110.7% } | 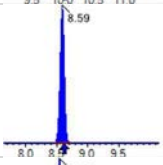 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 807689 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1854.1 | N/A | 1.0605 [ 1.0000 ] | 106.0% { 106.2% } | 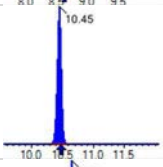 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2759930 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 51703.5 | N/A | 8.7678 [ 8.0000 ] | 109.6% { 126.4% } | 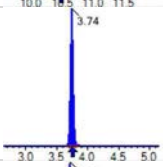 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1069100 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6585.2 | N/A | 4.1523 [ 4.0000 ] | 103.8% { 118.6% } | 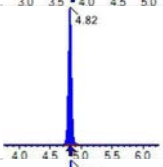 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 682501 | ( 6.02 , N/A ) ( N/A , -0.03 , N/A ) | 8964.8 | N/A | 2.1677 [ 2.0000 ] | 108.4% { 119.0% } | 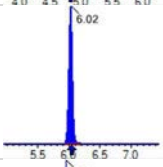 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 831758 | ( 7.15 , N/A ) ( N/A , -0.04 , N/A ) | 5948.1 | N/A | 2.3748 [ 2.0000 ] | 118.7% { 135.1% } | 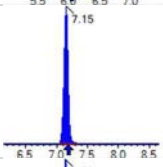 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1029491 | ( 8.15 , N/A ) ( N/A , -0.05 , N/A ) | 3175.4 | N/A | 2.1663 [ 2.0000 ] | 108.3% { 127.8% } | 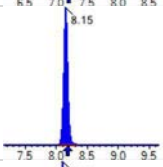 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 335632 | ( 9.09 , N/A ) ( N/A , -0.05 , N/A ) | 2666.2 | N/A | 1.0370 [ 1.0000 ] | 103.7% { 127.2% } | 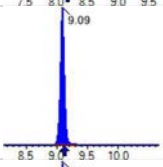 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 393296 | ( 10.00 , N/A ) ( N/A , -0.05 , N/A ) | 1229.8 | N/A | 1.0422 [ 1.0000 ] | 104.2% { 128.2% } | 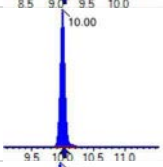 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 418445 | ( 10.86 , N/A ) ( N/A , -0.04 , N/A ) | 1148.6 | N/A | 0.9425 [ 1.0000 ] | 94.2% { 113.5% } | 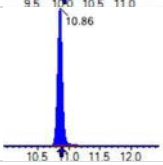 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MRL1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 406990 | ( 11.69 , N/A ) ( N/A , -0.04 , N/A ) | 1260.5 | N/A | 0.9002 [ 1.0000 ] | 90.0% { 105.3% } | 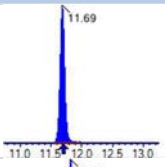  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 320755 | ( 12.82 , N/A ) ( N/A , -0.02 , N/A ) | 1284.7 | N/A | 0.8330 [ 1.0000 ] | 83.3% { 102.9% } | 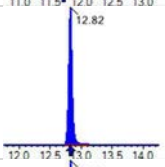  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472272 | ( 13.63 , N/A ) ( N/A , -0.01 , N/A ) | 2561.3 | N/A | 1.4367 [ 2.0000 ] | 71.8% { 97.0% } | 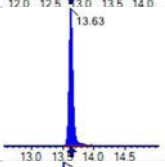  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1953191 | ( 6.31 , N/A ) ( N/A , -0.03 , N/A ) | 1252.1 | N/A | 2.0708 [ 2.0000 ] | 103.5% { 120.8% } | 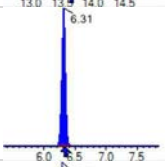  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1577929 | ( 8.59 , N/A ) ( N/A , -0.05 , N/A ) | 3540.5 | N/A | 2.0959 [ 2.0000 ] | 104.8% { 120.1% } | 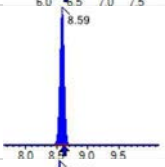  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1845611 | ( 10.45 , N/A ) ( N/A , -0.05 , N/A ) | 1622.5 | N/A | 2.1193 [ 2.0000 ] | 106.0% { 120.6% } | 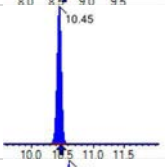  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 815469 | ( 5.50 , N/A ) ( N/A , -0.02 , N/A ) | 94.6 | N/A | 5.0109 [ 4.0000 ] | 125.3% { 131.7% } | 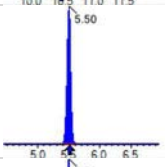  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2318519 | ( 7.59 , N/A ) ( N/A , -0.05 , N/A ) | 5517.0 | N/A | 4.7605 [ 4.0000 ] | 119.0% { 131.1% } | 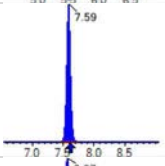  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1750969 | ( 9.37 , N/A ) ( N/A , -0.05 , N/A ) | 1682.6 | N/A | 4.5840 [ 4.0000 ] | 114.6% { 126.5% } | 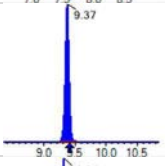  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3328644 | ( 11.01 , N/A ) ( N/A , -0.04 , N/A ) | 1458.8 | N/A | 8.3383 [ 8.0000 ] | 104.2% { 123.6% } | 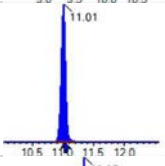  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1142331 | ( 12.85 , N/A ) ( N/A , -0.02 , N/A ) | 2914.8 | N/A | 1.4802 [ 2.0000 ] | 74.0% { 84.1% } | 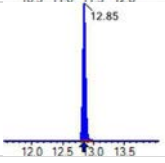  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (9)
Acquired: 2024/03/21 - 16:20

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 96889 | ( 14.22 , N/A ) ( N/A , -0.01 , N/A ) | 770.6 | N/A | 0.5919 [ 2.0000 ] | 29.6% { 35.3% } | 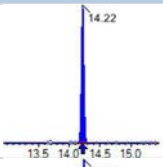 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 96791 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 1053.5 | N/A | 0.5514 [ 2.0000 ] | 27.6% { 32.2% } | 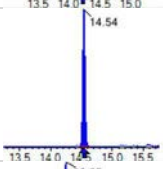 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 992226 | ( 10.25 , N/A ) ( N/A , -0.05 , N/A ) | 2700.9 | N/A | 4.4281 [ 4.0000 ] | 110.7% { 111.7% } | 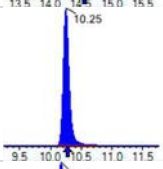 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 901197 | ( 10.77 , N/A ) ( N/A , -0.04 , N/A ) | 1613.9 | N/A | 4.4127 [ 4.0000 ] | 110.3% { 109.4% } | 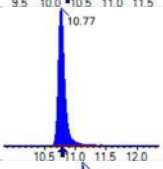 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 871103 | ( 14.02 , N/A ) ( N/A , -0.01 , N/A ) | 1932.0 | N/A | 11.8424 [ 20.0000 ] | 59.2% { 71.9% } | 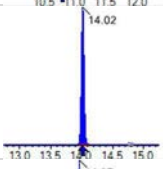 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 915798 | ( 14.37 , N/A ) ( N/A , -0.01 , N/A ) | 2860.9 | N/A | 12.2664 [ 20.0000 ] | 61.3% { 72.6% } | 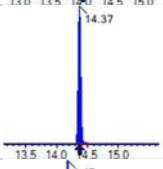 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1159563 | ( 6.47 , N/A ) ( N/A , -0.04 , N/A ) | 2916.8 | N/A | 8.0849 [ 8.0000 ] | 101.1% { 116.8% } | 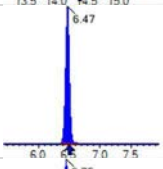 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 811404 | ( 6.75 , N/A ) ( N/A , -0.04 , N/A ) | 1529.4 | N/A | 2.2225 [ 2.0000 ] | 111.1% { 126.6% } | 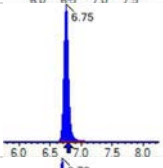 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 681873 | ( 8.79 , N/A ) ( N/A , -0.05 , N/A ) | 1047.0 | N/A | 2.0516 [ 2.0000 ] | 102.6% { 115.9% } | 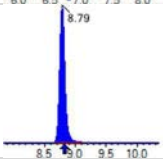 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-MS1a | File ID:a | S2024-03-21B (10)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 16:41a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 12.8a | 0.20a | 1.5a | |
| PFPeAa | 6.67a | 0.061a | 0.75a | |
| PFHxAa | 3.11a | 0.052a | 0.38a | |
| PFHpAa | 3.24a | 0.038a | 0.38a | |
| PFOAa | 3.68a | 0.14a | 0.38a | |
| PFNAa | 3.13a | 0.077a | 0.38a | |
| PFDAa | 3.10a | 0.095a | 0.38a | |
| PFUnAa | 3.13a | 0.15a | 0.38a | |
| PFDoAa | 3.33a | 0.10a | 0.38a | |
| PFTrDAa | 2.93a | 0.19a | 0.38a | |
| PFTeDAa | 3.46a | 0.19a | 0.38a | |
| PFHxDAa | 3.23a | 0.19a | 0.38a | |
| PFODAa | 3.03a | 0.19a | 0.38a | |
| PFBSa | 2.97a | 0.034a | 0.38a | |
| PFPeSa | 3.00a | 0.059a | 0.38a | |
| PFHxSa | 3.03a | 0.030a | 0.38a | |
| PFHpSa | 3.19a | 0.048a | 0.38a | |
| PFOSa | 3.98a | 0.060a | 0.38a | |
| PFNSa | 2.89a | 0.12a | 0.38a | |
| PFDSa | 2.63a | 0.14a | 0.38a | |
| PFDoSa | 2.32a | 0.12a | 0.38a | |
| 4:2FTSa | 11.9a | 0.27a | 1.5a | |
| 6:2FTSa | 13.3a | 0.29a | 1.5a | |
| 8:2FTSa | 13.8a | 0.077a | 1.5a | |
| 10:2FTSa | 14.5a | 0.38a | 1.5a | |
| PFOSAa | 3.37a | 0.098a | 0.38a | |
| NMeFOSAa | 15.0a | 0.44a | 1.5a | |
| NEtFOSAa | 13.6a | 0.39a | 1.5a | |
| NMeFOSAAa | 3.17a | 0.099a | 0.38a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-MS1a | File ID:a | S2024-03-21B (10)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 16:41a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 13.2a | 0.95a | 1.5a | |
| NEtFOSEa | 14.3a | 0.98a | 1.5a | |
| HFPO-DAa | 3.24a | 0.16a | 0.75a | |
| ADONAa | 3.22a | 0.12a | 0.75a | |
| PFEESAa | 5.84a | 0.10a | 0.75a | |
| PFMPAa | 6.89a | 0.051a | 0.75a | |
| PFMBAa | 6.09a | 0.085a | 0.75a | |
| NFDHAa | 6.06a | 0.28a | 0.75a | |
| 9Cl-PF3ONSa | 2.92a | 0.20a | 0.75a | |
| 11Cl-PF3OUDSa | 2.47a | 0.19a | 0.75a | |
| 3:3FTCAa | 13.1a | 0.54a | 1.5a | |
| 5:3FTCAa | 14.1a | 0.42a | 1.5a | |
| 7:3FTCAa | 14.4a | 0.52a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (10)
Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 215648<br>( 163.0 / 69.0 ) 6585 | ( 2.87 , 0.77 ) ( N/A , 0.08 , 0.2) | 1079.7<br>293.3 | 0.0305<br>112.4<br>113.1 | 0.6490 | N/A | 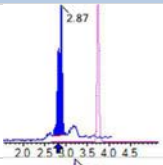 | 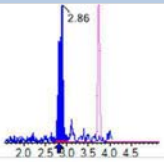 | MI3 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 ) 1201293 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1023.7 | N/A<br>0.0<br>0.0 | 3.4200 | N/A | 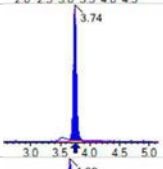 | | |
| PFPeA | ( 263.0 / 219.0 ) 511460<br>( 263.0 / 69.0 ) 5370 | ( 4.82 , 1.00 ) ( 0.00 , N/A , 0.0) | 2665.0<br>111.0 | 0.0105<br>87.9<br>81.6 | 1.7768 | N/A | 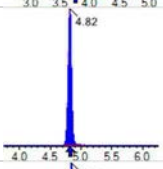 | 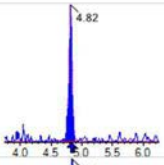 | |
| PFHxA | ( 313.0 / 269.0 ) 274943<br>( 313.0 / 119.0 ) 35371 | ( 6.04 , 1.00 ) ( 0.00 , N/A , 0.1) | 1317.4<br>541.2 | 0.1286<br>110.8<br>115.8 | 0.8294 | N/A | 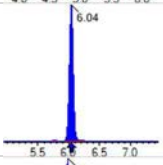 | 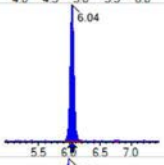 | |
| PFHpA | ( 363.0 / 319.0 ) 324943<br>( 363.0 / 169.0 ) 93219 | ( 7.18 , 1.00 ) ( 0.00 , N/A , -0.1) | 848.8<br>886.9 | 0.2869<br>94.7<br>97.8 | 0.8626 | N/A | 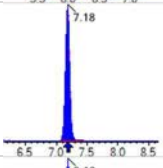 | 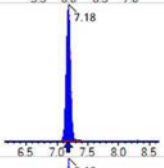 | |
| PFOA | ( 413.0 / 369.0 ) 509150<br>( 413.0 / 169.0 ) 188282 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 376.5<br>607.4 | 0.3698<br>101.2<br>107.8 | 0.9818 | N/A | 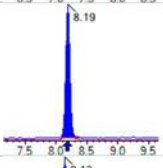 | 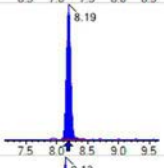 | |
| PFNA | ( 463.0 / 419.0 ) 297170<br>( 463.0 / 169.0 ) 75082 | ( 9.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 856.8<br>754.4 | 0.2527<br>99.0<br>95.0 | 0.8354 | N/A | 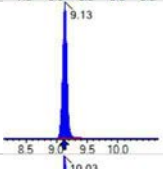 | 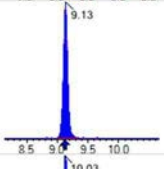 | |
| PFDA | ( 513.0 / 469.0 ) 327693<br>( 513.0 / 169.0 ) 38110 | ( 10.03 , 1.00 ) ( 0.00 , N/A , -0.1) | 1870.7<br>1466.9 | 0.1163<br>99.3<br>95.0 | 0.8262 | N/A | 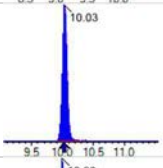 | 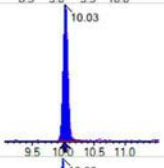 | |
| PFUnA | ( 563.0 / 519.0 ) 330854<br>( 563.0 / 169.0 ) 44444 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 794.4<br>409.0 | 0.1343<br>94.8<br>89.1 | 0.8337 | N/A | 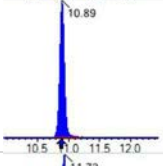 | 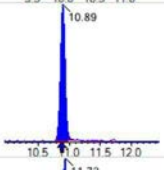 | |
| PFDoA | ( 613.0 / 569.0 ) 337533<br>( 613.0 / 169.0 ) 55508 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.0) | 948.3<br>490.8 | 0.1645<br>104.0<br>110.1 | 0.8870 | N/A | 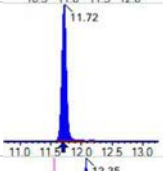 | 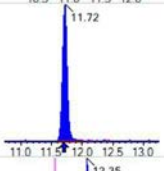 | |
| PFTrDA | ( 663.0 / 619.0 ) 290452<br>( 663.0 / 169.0 ) 76073 | ( 12.35 , 1.05 ) ( N/A , -0.01 , -0.2) | 984.5<br>675.8 | 0.2619<br>101.8<br>98.8 | 0.7803 | N/A | 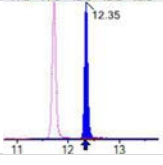 | 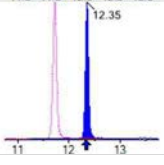 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 239104<br>( 713.0 / 169.0 ) 67158 | ( 12.84 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1147.3<br>583.3 | 0.2809<br>104.1<br>105.9 | 0.9228 | N/A | 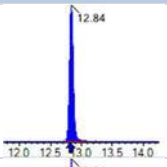 | 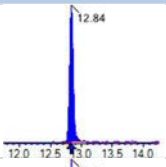 | |
| PFHxDA | ( 813.0 / 769.0 ) 211614<br>( 813.0 / 169.0 ) 51986 | ( 13.64 , 1.00 )<br>( -0.01 , N/A , -0.1) | 958.0<br>372.9 | 0.2457<br>100.4<br>96.7 | 0.8610 | N/A | 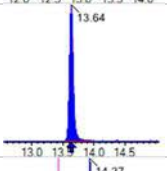 | 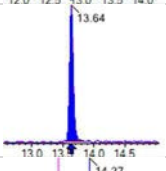 | |
| PFODA | ( 913.0 / 869.0 ) 124001<br>( 913.0 / 169.0 ) 39970 | ( 14.27 , 1.05 )<br>( N/A , 0.00 , 0.3) | 580.0<br>209.0 | 0.3223<br>90.0<br>94.6 | 0.8064 | N/A | 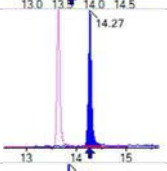 | 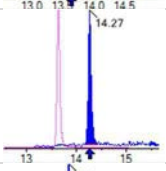 | |
| PFBS | ( 299.0 / 80.0 ) 412283<br>( 299.0 / 99.0 ) 289901 | ( 6.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1807.3<br>1330.1 | 0.7032<br>99.4<br>93.2 | 0.7910 | N/A | 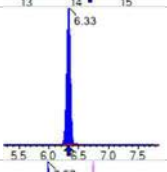 | 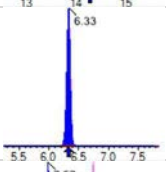 | |
| PFPeS | ( 349.0 / 80.0 ) 1033710<br>( 349.0 / 99.0 ) 372893 | ( 7.57 , 0.88 )<br>( N/A , -0.01 , 0.1) | 1225.2<br>1192.8 | 0.3607<br>100.3<br>103.6 | 0.7992 | N/A | 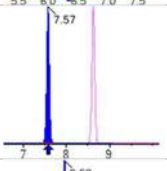 | 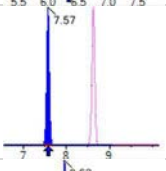 | |
| PFHxS | ( 399.0 / 80.0 ) 1211512<br>( 399.0 / 99.0 ) 401057 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1056.2<br>1257.0 | 0.3310<br>103.9<br>104.4 | 0.8064 | N/A | 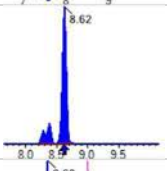 | 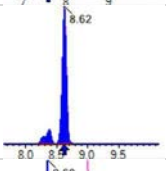 | |
| PFHpS | ( 449.0 / 80.0 ) 991248<br>( 449.0 / 99.0 ) 285119 | ( 9.60 , 0.91 )<br>( N/A , -0.01 , 0.0) | 1132.1<br>650.5 | 0.2876<br>108.7<br>109.8 | 0.8514 | N/A | 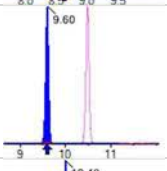 | 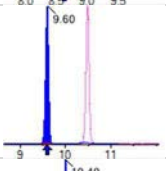 | |
| PFOS | ( 499.0 / 80.0 ) 1191608<br>( 499.0 / 99.0 ) 242447 | ( 10.48 , 1.00 )<br>( 0.00 , N/A , -0.1) | 689.3<br>1022.0 | 0.2035<br>87.0<br>88.8 | 1.0618 | N/A | 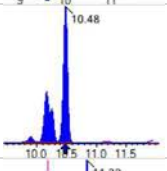 | 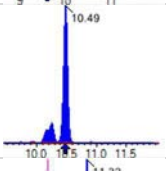 | |
| PFNS | ( 549.0 / 80.0 ) 809232<br>( 549.0 / 99.0 ) 218088 | ( 11.32 , 1.08 )<br>( N/A , -0.01 , 0.0) | 1643.1<br>1159.0 | 0.2695<br>98.9<br>97.4 | 0.7701 | N/A | 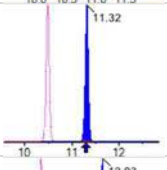 | 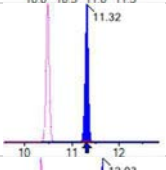 | |
| PFDS | ( 599.0 / 80.0 ) 900090<br>( 599.0 / 99.0 ) 235298 | ( 12.03 , 1.15 )<br>( N/A , -0.01 , 0.0) | 1013.9<br>776.7 | 0.2614<br>96.1<br>104.3 | 0.7015 | N/A | 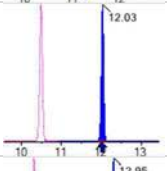 | 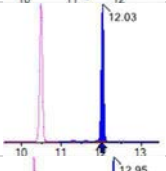 | |
| PFDoS | ( 699.0 / 80.0 ) 698875<br>( 699.0 / 99.0 ) 164503 | ( 12.95 , 1.23 )<br>( N/A , 0.00 , 0.0) | 1944.1<br>1362.7 | 0.2354<br>100.8<br>104.0 | 0.6179 | N/A | 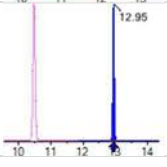 | 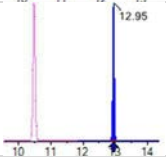 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (10)
Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1532623<br>( 327.0 / 81.0 ) 1435083 | ( 5.51 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5345.0<br>2112.8 | 0.9364<br>107.3<br>103.7 | 3.1811 | N/A | 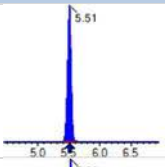 | 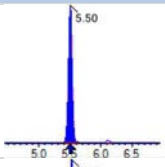 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1617452<br>( 427.0 / 81.0 ) 2019790 | ( 7.62 , 1.00 )<br>( -0.01 , N/A , -0.1) | 4550.7<br>2094.9 | 1.2487<br>99.6<br>102.7 | 3.5408 | N/A | 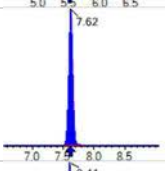 | 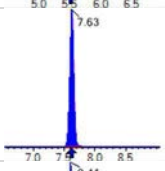 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1477904<br>( 527.0 / 81.0 ) 1602403 | ( 9.41 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1413.3<br>1338.0 | 1.0842<br>99.7<br>101.8 | 3.6875 | N/A | 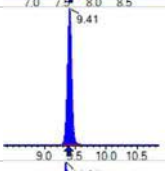 | 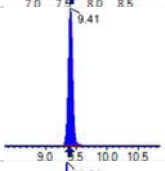 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1125160<br>( 627.0 / 81.0 ) 1573839 | ( 11.04 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1417.1<br>1000.9 | 1.3988<br>97.2<br>100.9 | 3.8618 | N/A | 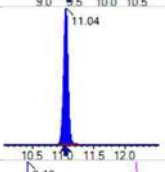 | 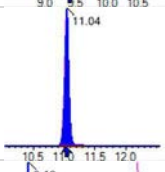 | |
| PFBSA | ( 297.9 / 78.0 ) 478683<br>( 297.9 / 278.0 ) 509 | ( 8.13 , 0.57 )<br>( N/A , 0.00 , 0.6) | 1379.8<br>35.1 | 0.0011<br>77.8<br>80.2 | 1.9329 | N/A | 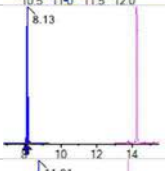 | 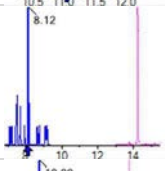 | |
| PFHxSA | ( 397.9 / 78.0 ) 768810<br>( 397.9 / 378.0 ) 3093 | ( 11.01 , 0.76 )<br>( N/A , 0.01 , 0.9) | 1470.1<br>127.0 | 0.0040<br>98.5<br>96.1 | 2.5437 | N/A | 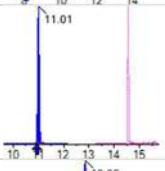 | 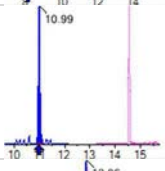 | |
| PFOSA | ( 498.0 / 78.0 ) 672071<br>( 498.0 / 478.0 ) 9326 | ( 12.86 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1769.1<br>264.3 | 0.0139<br>98.9<br>98.4 | 0.8988 | N/A | 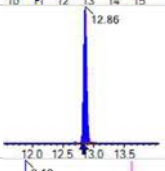 | 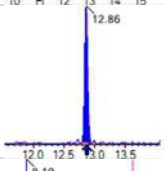 | |
| TFSI | ( 279.7 / 147.0 ) 1892501<br>( 279.7 / 211.0 ) 167341 | ( 8.19 , 0.64 )<br>( N/A , 0.00 , 0.1) | 51.5<br>39.5 | 0.0884<br>105.3<br>105.5 | 0.9612 | N/A | 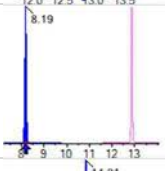 | 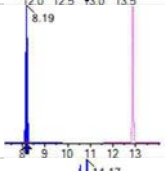 | |
| NMeFOSA | ( 512.0 / 219.0 ) 191064<br>( 512.0 / 169.0 ) 141130 | ( 14.21 , 1.00 )<br>( -0.02 , N/A , 2.2) | 1162.9<br>589.0 | 0.7387<br>98.7<br>100.5 | 4.0045 | N/A | 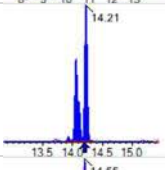 | 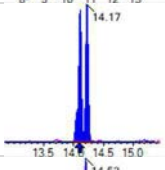 | |
| NEtFOSA | ( 526.0 / 219.0 ) 199088<br>( 526.0 / 169.0 ) 240361 | ( 14.55 , 1.00 )<br>( 0.01 , N/A , 2.0) | 1589.1<br>1268.6 | 1.2073<br>97.8<br>95.5 | 3.6147 | N/A | 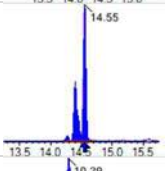 | 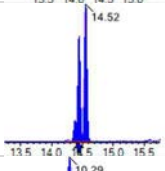 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 190034<br>( 570.0 / 483.0 ) 93705 | ( 10.29 , 1.00 )<br>( 0.00 , N/A , 0.1) | 7629.0<br>4446.7 | 0.4931<br>112.4<br>107.0 | 0.8456 | N/A | 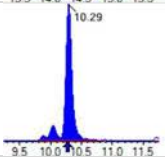 | 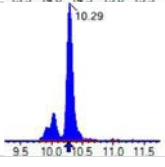 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (10)
Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 186229<br>( 584.0 / 526.0 ) 106827 | ( 10.82 , 1.00 ) ( 0.01 , N/A , -0.4) | 1295.2<br>531.6 | 0.5736<br>93.0<br>99.0 | 0.9041 | N/A | 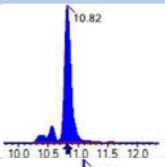 | 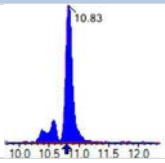 | |
| NMeFOSE | ( 616.0 / 59.0 ) 166525 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 729.5 | N/A<br>0.0<br>0.0 | 3.5283 | N/A | 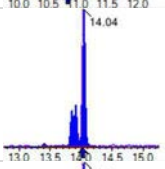 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 133507 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 989.7 | N/A<br>0.0<br>0.0 | 3.8217 | N/A | 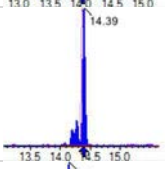 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 79434<br>( 285.0 / 185.0 ) 222099 | ( 6.49 , 1.00 ) ( 0.00 , N/A , 0.0) | 1157.6<br>1086.5 | 2.7960<br>101.1<br>98.1 | 0.8629 | N/A | 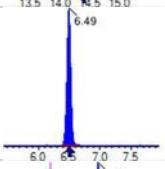 | 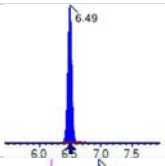 | |
| ADONA | ( 377.0 / 85.0 ) 922626<br>( 377.0 / 251.0 ) 92093 | ( 7.57 , 1.17 ) ( N/A , -0.01 , 0.0) | 1431.4<br>649.9 | 0.0998<br>97.9<br>100.2 | 0.8591 | N/A | 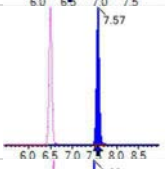 | 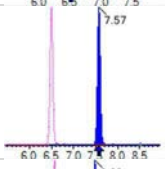 | |
| PFEESA | ( 315.0 / 135.0 ) 370330<br>( 315.0 / 83.0 ) 216781 | ( 6.93 , 1.15 ) ( N/A , -0.01 , -0.1) | 1880.0<br>693.1 | 0.5854<br>105.0<br>101.6 | 1.5556 | N/A | 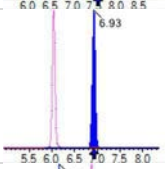 | 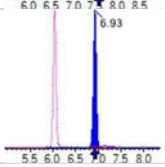 | |
| PFMPA | ( 229.0 / 85.0 ) 167855 | ( 4.13 , 0.86 ) ( N/A , -0.01 , 0.0) | 2786.4 | N/A<br>0.0<br>0.0 | 1.8376 | N/A | 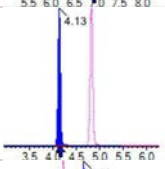 | | |
| PFMBA | ( 279.0 / 85.0 ) 403090 | ( 5.18 , 1.08 ) ( N/A , -0.01 , 0.0) | 3561.6 | N/A<br>0.0<br>0.0 | 1.6236 | N/A | 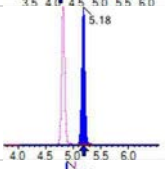 | | |
| NFDHA | ( 295.0 / 201.0 ) 199786<br>( 295.0 / 85.0 ) 198715 | ( 5.90 , 0.98 ) ( N/A , -0.01 , 0.1) | 2015.1<br>1373.3 | 0.9946<br>92.2<br>97.5 | 1.6143 | N/A | 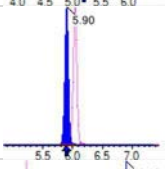 | 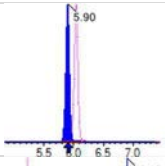 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 903827<br>( 533.0 / 353.0 ) 296616 | ( 11.13 , 1.71 ) ( N/A , -0.01 , 0.0) | 2536.5<br>1677.9 | 0.3282<br>104.9<br>103.1 | 0.7792 | N/A | 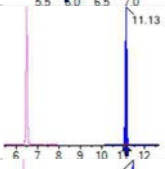 | 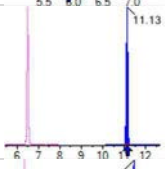 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 586742<br>( 633.0 / 453.0 ) 209785 | ( 12.45 , 1.92 ) ( N/A , 0.00 , 0.1) | 2297.4<br>1181.1 | 0.3575<br>107.6<br>107.8 | 0.6578 | N/A | 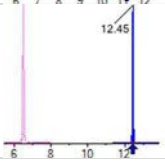 | 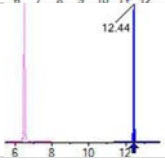 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 503360<br>( 461.0 / 381.2 ) 193485 | ( 9.51 , 0.91 )<br>( N/A , -0.01 , -0.1) | 1906.8<br>1699.7 | 0.3844<br>96.5<br>95.7 | 0.7950 | N/A | 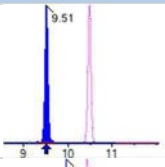 | 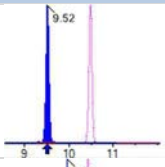 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 57074<br>( 241.0 / 117.0 ) 131416 | ( 4.40 , 0.91 )<br>( N/A , -0.01 , 0.2) | 1348.0<br>982.8 | 2.3026<br>109.3<br>103.7 | 3.4855 | N/A | 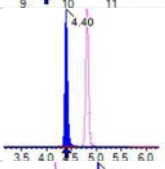 | 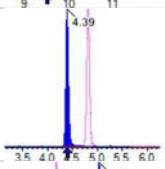 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 345340<br>( 341.0 / 217.0 ) 504683 | ( 6.96 , 1.15 )<br>( N/A , -0.01 , 0.1) | 1031.7<br>787.1 | 1.4614<br>96.2<br>97.5 | 3.7564 | N/A | 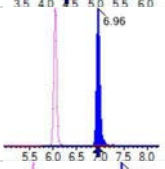 | 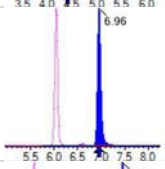 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 580987<br>( 441.0 / 337.0 ) 511796 | ( 9.35 , 1.55 )<br>( N/A , -0.01 , 0.0) | 2355.1<br>3646.6 | 0.8809<br>96.0<br>96.2 | 3.8510 | N/A | 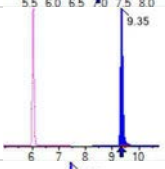 | 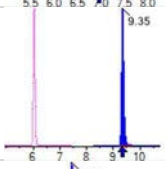 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 377508<br>( 357.2 / 243.0 ) 41666 | ( 6.77 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1198.5<br>248.0 | 0.1104<br>100.1<br>104.6 | 0.8332 | N/A | 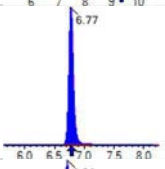 | 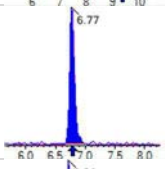 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 286226<br>( 457.2 / 343.0 ) 12811 | ( 8.81 , 1.00 )<br>( -0.01 , N/A , 0.1) | 828.3<br>187.8 | 0.0448<br>107.9<br>104.6 | 1.0068 | N/A | 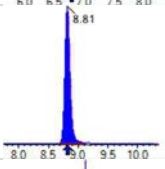 | 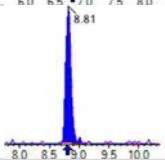 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 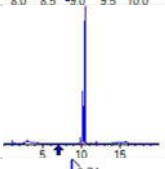 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 346492 | ( 3.74 , N/A )<br>( N/A , -0.01 , N/A ) | 1646.8 | N/A | 1.4532<br>[ 1.0000 ] | 145.3%<br>{ 135.8% } | 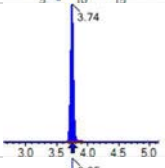 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 172810 | ( 6.05 , N/A )<br>( N/A , -0.01 , N/A ) | 29450.0 | N/A | 1.3623<br>[ 1.0000 ] | 136.2%<br>{ 141.7% } | 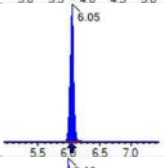 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 515640 | ( 8.19 , N/A )<br>( N/A , -0.01 , N/A ) | 3421.8 | N/A | 1.3044<br>[ 1.0000 ] | 130.4%<br>{ 130.1% } | 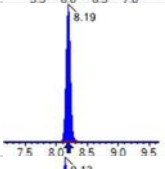 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 356590 | ( 9.13 , N/A )<br>( N/A , -0.01 , N/A ) | 1286.5 | N/A | 1.2538<br>[ 1.0000 ] | 125.4%<br>{ 128.7% } | 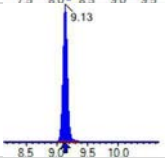 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (10)
Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 358920 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 3547.3 | N/A | 1.2291 [ 1.0000 ] | 122.9% { 124.4% } | 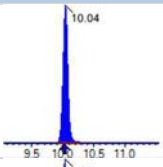 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1159732 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 4666.0 | N/A | 1.2220 [ 1.0000 ] | 122.2% { 123.0% } | 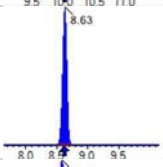 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 978042 | ( 10.49 , N/A ) ( N/A , 0.00 , N/A ) | 1770.1 | N/A | 1.2841 [ 1.0000 ] | 128.4% { 128.6% } | 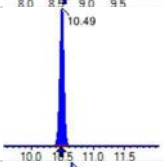 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2818964 | ( 3.74 , N/A ) ( N/A , -0.01 , N/A ) | 47441.6 | N/A | 7.1217 [ 8.0000 ] | 89.0% { 129.1% } | 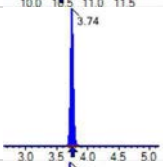 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1139720 | ( 4.82 , N/A ) ( N/A , -0.01 , N/A ) | 6544.3 | N/A | 3.5347 [ 4.0000 ] | 88.4% { 126.4% } | 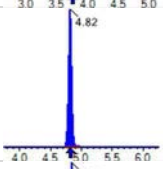 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 690094 | ( 6.04 , N/A ) ( N/A , -0.01 , N/A ) | 6841.6 | N/A | 1.7502 [ 2.0000 ] | 87.5% { 120.3% } | 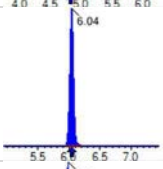 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 767771 | ( 7.18 , N/A ) ( N/A , -0.01 , N/A ) | 4385.3 | N/A | 1.7505 [ 2.0000 ] | 87.5% { 124.7% } | 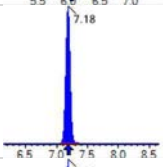 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1042204 | ( 8.19 , N/A ) ( N/A , -0.01 , N/A ) | 2685.7 | N/A | 1.8864 [ 2.0000 ] | 94.3% { 129.3% } | 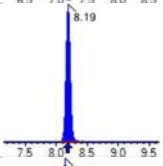 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 353936 | ( 9.13 , N/A ) ( N/A , 0.00 , N/A ) | 3058.0 | N/A | 1.0123 [ 1.0000 ] | 101.2% { 134.1% } | 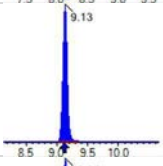 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 388164 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1055.8 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 126.5% } | 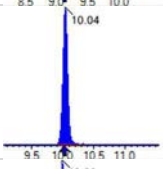 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 429067 | ( 10.89 , N/A ) ( N/A , -0.01 , N/A ) | 1176.5 | N/A | 0.9067 [ 1.0000 ] | 90.7% { 116.4% } | 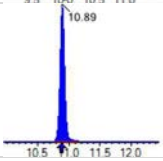 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 378235 | ( 11.72 , N/A ) ( N/A , -0.01 , N/A ) | 1672.1 | N/A | 0.7849 [ 1.0000 ] | 78.5% { 97.9% } | 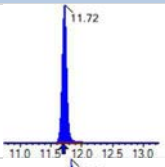 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 276655 | ( 12.84 , N/A ) ( N/A , -0.01 , N/A ) | 1295.6 | N/A | 0.6741 [ 1.0000 ] | 67.4% { 88.7% } | 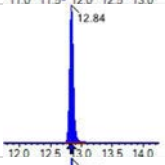 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 515378 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2654.6 | N/A | 1.4710 [ 2.0000 ] | 73.5% { 105.9% } | 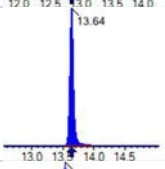 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2007832 | ( 6.33 , N/A ) ( N/A , -0.01 , N/A ) | 1427.1 | N/A | 1.9162 [ 2.0000 ] | 95.8% { 124.2% } | 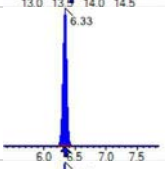 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1690089 | ( 8.63 , N/A ) ( N/A , -0.01 , N/A ) | 3961.8 | N/A | 2.0208 [ 2.0000 ] | 101.0% { 128.7% } | 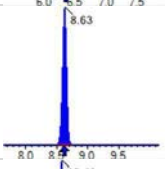 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1943394 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 1995.4 | N/A | 1.8429 [ 2.0000 ] | 92.1% { 127.0% } | 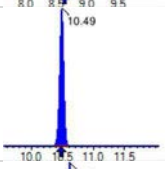 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 734324 | ( 5.51 , N/A ) ( N/A , -0.01 , N/A ) | 87.5 | N/A | 4.0619 [ 4.0000 ] | 101.5% { 118.6% } | 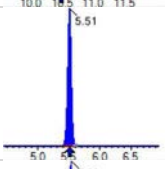 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2206614 | ( 7.63 , N/A ) ( N/A , -0.01 , N/A ) | 2797.5 | N/A | 4.0785 [ 4.0000 ] | 102.0% { 124.8% } | 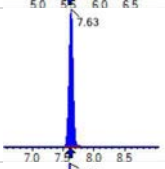 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1688082 | ( 9.41 , N/A ) ( N/A , 0.00 , N/A ) | 1183.4 | N/A | 3.9783 [ 4.0000 ] | 99.5% { 122.0% } | 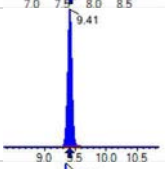 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3024135 | ( 11.04 , N/A ) ( N/A , -0.01 , N/A ) | 1484.3 | N/A | 6.8193 [ 8.0000 ] | 85.2% { 112.3% } | 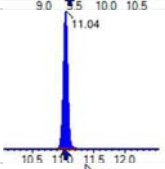 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1495486 | ( 12.87 , N/A ) ( N/A , 0.00 , N/A ) | 3451.2 | N/A | 1.6003 [ 2.0000 ] | 80.0% { 110.0% } | 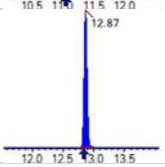 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MS1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 16:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 96106 | ( 14.23 , N/A ) ( N/A , 0.00 , N/A ) | 793.4 | N/A | 0.4849 [ 2.0000 ] | 24.2% { 35.1% } | 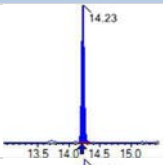 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 98358 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 717.4 | N/A | 0.4627 [ 2.0000 ] | 23.1% { 32.7% } | 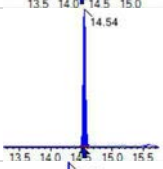 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 942498 | ( 10.29 , N/A ) ( N/A , 0.00 , N/A ) | 2005.4 | N/A | 3.4735 [ 4.0000 ] | 86.8% { 106.1% } | 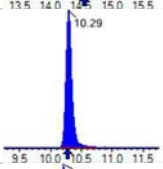 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 842296 | ( 10.81 , N/A ) ( N/A , 0.00 , N/A ) | 2102.8 | N/A | 3.4059 [ 4.0000 ] | 85.1% { 102.3% } | 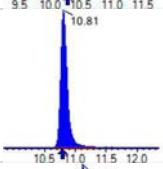 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 860541 | ( 14.03 , N/A ) ( N/A , 0.00 , N/A ) | 1841.1 | N/A | 9.6612 [ 20.0000 ] | 48.3% { 71.1% } | 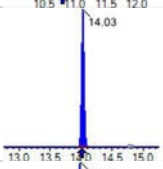 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 786375 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 2497.7 | N/A | 8.6983 [ 20.0000 ] | 43.5% { 62.3% } | 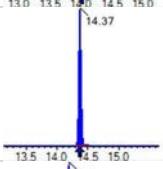 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1248803 | ( 6.50 , N/A ) ( N/A , -0.02 , N/A ) | 2229.5 | N/A | 6.9528 [ 8.0000 ] | 86.9% { 125.8% } | 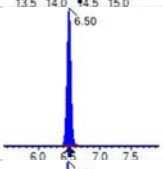 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 852306 | ( 6.78 , N/A ) ( N/A , -0.01 , N/A ) | 1829.7 | N/A | 2.1902 [ 2.0000 ] | 109.5% { 133.0% } | 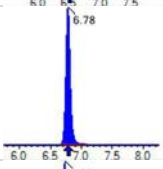 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 697082 | ( 8.83 , N/A ) ( N/A , 0.00 , N/A ) | 869.4 | N/A | 1.9678 [ 2.0000 ] | 98.4% { 118.5% } | 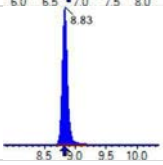 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-MSD1a | File ID:a | S2024-03-21B (11)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 17:01a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 12.7a | 0.19a | 1.5a | |
| PFPeAa | 6.44a | 0.060a | 0.74a | |
| PFHxAa | 3.27a | 0.051a | 0.37a | |
| PFHpAa | 3.32a | 0.038a | 0.37a | |
| PFOAa | 3.83a | 0.14a | 0.37a | |
| PFNAa | 3.01a | 0.076a | 0.37a | |
| PFDAa | 3.15a | 0.094a | 0.37a | |
| PFUnAa | 3.15a | 0.15a | 0.37a | |
| PFDoAa | 3.32a | 0.10a | 0.37a | |
| PFTrDAa | 3.13a | 0.19a | 0.37a | |
| PFTeDAa | 3.16a | 0.18a | 0.37a | |
| PFHxDAa | 3.39a | 0.19a | 0.37a | |
| PFODAa | 3.07a | 0.19a | 0.37a | |
| PFBSa | 2.84a | 0.034a | 0.37a | |
| PFPeSa | 3.07a | 0.058a | 0.37a | |
| PFHxSa | 3.01a | 0.029a | 0.37a | |
| PFHpSa | 3.19a | 0.048a | 0.37a | |
| PFOSa | 3.80a | 0.059a | 0.37a | |
| PFNSa | 2.92a | 0.11a | 0.37a | |
| PFDSa | 2.69a | 0.14a | 0.37a | |
| PFDoSa | 2.43a | 0.11a | 0.37a | |
| 4:2FTSa | 12.6a | 0.27a | 1.5a | |
| 6:2FTSa | 14.6a | 0.29a | 1.5a | |
| 8:2FTSa | 13.1a | 0.076a | 1.5a | |
| 10:2FTSa | 15.4a | 0.37a | 1.5a | |
| PFOSAa | 3.15a | 0.097a | 0.37a | |
| NMeFOSAa | 13.7a | 0.44a | 1.5a | |
| NEtFOSAa | 13.8a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.19a | 0.098a | 0.37a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0110a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0268-MSD1a | File ID:a | S2024-03-21B (11)a |
| Sampled:a | | Prepared:a | 03/19/24 13:48a | Analyzed:a | 03/21/24 17:01a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0268a | Sequence:a | SD01019a | Calibration:a | 2412010 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 13.6a | 0.94a | 1.5a | |
| NEtFOSEa | 13.0a | 0.97a | 1.5a | |
| HFPO-DAa | 3.08a | 0.16a | 0.74a | |
| ADONAa | 3.04a | 0.11a | 0.74a | |
| PFEESAa | 5.42a | 0.10a | 0.74a | |
| PFMPAa | 6.84a | 0.050a | 0.74a | |
| PFMBAa | 6.14a | 0.084a | 0.74a | |
| NFDHAa | 6.06a | 0.28a | 0.74a | |
| 9Cl-PF3ONSa | 2.84a | 0.19a | 0.74a | |
| 11Cl-PF3OUDSa | 2.45a | 0.19a | 0.74a | |
| 3:3FTCAa | 12.2a | 0.53a | 1.5a | |
| 5:3FTCAa | 13.2a | 0.41a | 1.5a | |
| 7:3FTCAa | 13.4a | 0.51a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (11)
Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 219766<br>( 163.0 / 69.0 ) 6075 | ( 2.88 , 0.77 ) ( N/A , 0.09 , 0.0) | 1555.1<br>376.5 | 0.0276<br>101.8<br>102.3 | 0.6852 | N/A | 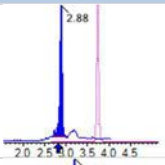 | 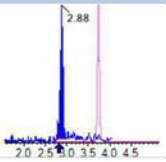 | MI3 ABK 3/21/24 |
| PFBA | ( 213.0 / 169.0 ) 1161041 | ( 3.74 , 1.00 ) ( 0.00 , N/A , 0.0) | 1005.8 | N/A<br>0.0<br>0.0 | 3.4241 | N/A | 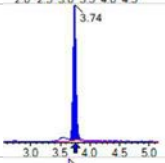 | | |
| PFPeA | ( 263.0 / 219.0 ) 498067<br>( 263.0 / 69.0 ) 5829 | ( 4.80 , 1.00 ) ( 0.00 , N/A , -0.3) | 2846.9<br>79.7 | 0.0117<br>98.0<br>91.0 | 1.7308 | N/A | 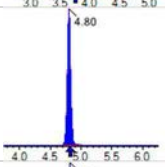 | 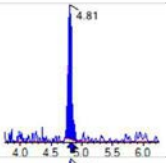 | |
| PFHxA | ( 313.0 / 269.0 ) 299315<br>( 313.0 / 119.0 ) 33224 | ( 6.02 , 1.00 ) ( 0.00 , N/A , 0.1) | 1205.8<br>451.2 | 0.1110<br>95.6<br>99.9 | 0.8792 | N/A | 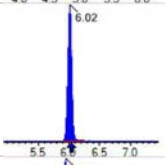 | 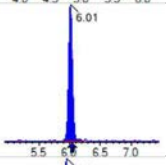 | |
| PFHpA | ( 363.0 / 319.0 ) 338158<br>( 363.0 / 169.0 ) 100110 | ( 7.15 , 1.00 ) ( 0.00 , N/A , 0.0) | 1002.2<br>856.9 | 0.2960<br>97.7<br>101.0 | 0.8934 | N/A | 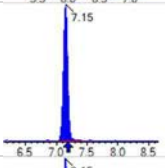 | 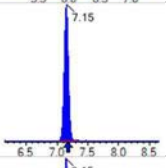 | |
| PFOA | ( 413.0 / 369.0 ) 532737<br>( 413.0 / 169.0 ) 173724 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.2) | 516.0<br>567.8 | 0.3261<br>89.2<br>95.1 | 1.0284 | N/A | 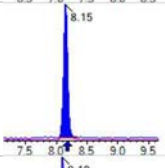 | 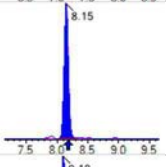 | |
| PFNA | ( 463.0 / 419.0 ) 270009<br>( 463.0 / 169.0 ) 70499 | ( 9.10 , 1.00 ) ( 0.00 , N/A , -0.1) | 747.5<br>541.4 | 0.2611<br>102.3<br>98.2 | 0.8090 | N/A | 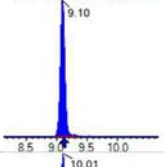 | 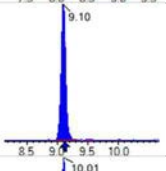 | |
| PFDA | ( 513.0 / 469.0 ) 321642<br>( 513.0 / 169.0 ) 34823 | ( 10.01 , 1.00 ) ( 0.00 , N/A , 0.1) | 1423.0<br>863.5 | 0.1083<br>92.4<br>88.4 | 0.8478 | N/A | 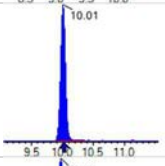 | 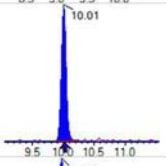 | |
| PFUnA | ( 563.0 / 519.0 ) 328993<br>( 563.0 / 169.0 ) 48320 | ( 10.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 1073.7<br>416.5 | 0.1469<br>103.6<br>97.4 | 0.8473 | N/A | 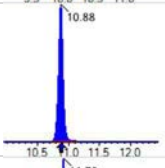 | 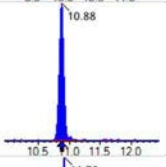 | |
| PFDoA | ( 613.0 / 569.0 ) 335632<br>( 613.0 / 169.0 ) 49676 | ( 11.70 , 1.00 ) ( 0.00 , N/A , -0.1) | 1071.6<br>526.6 | 0.1480<br>93.6<br>99.1 | 0.8926 | N/A | 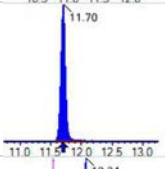 | 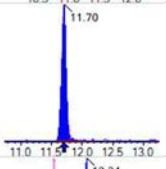 | |
| PFTrDA | ( 663.0 / 619.0 ) 309299<br>( 663.0 / 169.0 ) 84678 | ( 12.34 , 1.05 ) ( N/A , -0.01 , 0.0) | 1158.0<br>650.2 | 0.2738<br>106.4<br>103.3 | 0.8409 | N/A | 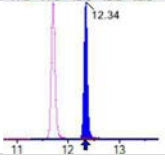 | 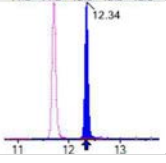 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MSD1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 233738<br>( 713.0 / 169.0 ) 65263 | ( 12.83 , 1.00 )<br>( 0.00 , N/A , -0.1) | 971.4<br>448.1 | 0.2792<br>103.4<br>105.2 | 0.8502 | N/A | 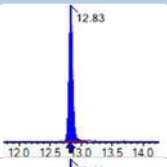 | 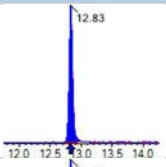 | |
| PFHxDA | ( 813.0 / 769.0 ) 219601<br>( 813.0 / 169.0 ) 51929 | ( 13.63 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1094.7<br>359.4 | 0.2365<br>96.6<br>93.1 | 0.9119 | N/A | 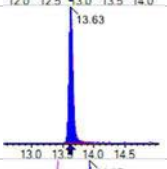 | 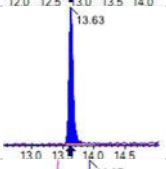 | |
| PFODA | ( 913.0 / 869.0 ) 124152<br>( 913.0 / 169.0 ) 39306 | ( 14.27 , 1.05 )<br>( N/A , -0.01 , 0.1) | 457.3<br>193.6 | 0.3166<br>88.4<br>92.9 | 0.8241 | N/A | 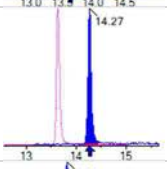 | 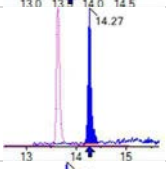 | |
| PFBS | ( 299.0 / 80.0 ) 415272<br>( 299.0 / 99.0 ) 301246 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1349.4<br>1298.9 | 0.7254<br>102.6<br>96.1 | 0.7623 | N/A | 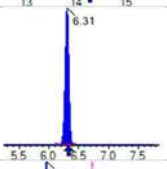 | 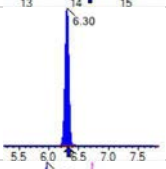 | |
| PFPeS | ( 349.0 / 80.0 ) 1052663<br>( 349.0 / 99.0 ) 372107 | ( 7.54 , 0.88 )<br>( N/A , -0.04 , 0.0) | 1574.4<br>1647.0 | 0.3535<br>98.3<br>101.5 | 0.8262 | N/A | 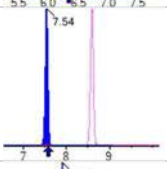 | 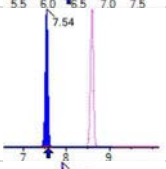 | |
| PFHxS | ( 399.0 / 80.0 ) 1195684<br>( 399.0 / 99.0 ) 383114 | ( 8.59 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1023.6<br>913.0 | 0.3204<br>100.6<br>101.0 | 0.8079 | N/A | 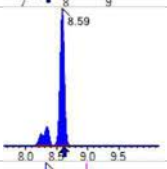 | 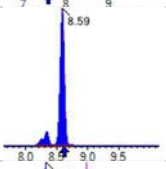 | |
| PFHpS | ( 449.0 / 80.0 ) 975051<br>( 449.0 / 99.0 ) 260137 | ( 9.57 , 0.91 )<br>( N/A , -0.04 , 0.0) | 1009.8<br>744.9 | 0.2668<br>100.8<br>101.9 | 0.8573 | N/A | 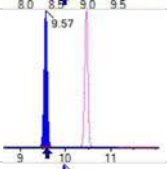 | 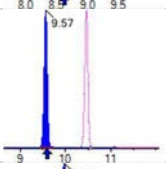 | |
| PFOS | ( 499.0 / 80.0 ) 1120304<br>( 499.0 / 99.0 ) 237151 | ( 10.46 , 1.00 )<br>( 0.00 , N/A , -0.1) | 559.7<br>1318.1 | 0.2117<br>90.6<br>92.3 | 1.0219 | N/A | 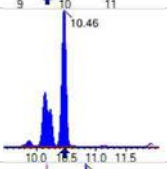 | 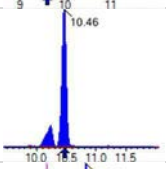 | |
| PFNS | ( 549.0 / 80.0 ) 804490<br>( 549.0 / 99.0 ) 208109 | ( 11.30 , 1.08 )<br>( N/A , -0.03 , -0.1) | 1309.5<br>1046.9 | 0.2587<br>94.9<br>93.5 | 0.7837 | N/A | 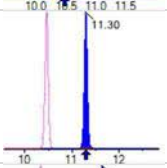 | 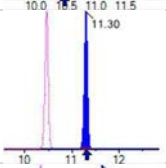 | |
| PFDS | ( 599.0 / 80.0 ) 905771<br>( 599.0 / 99.0 ) 245429 | ( 12.02 , 1.15 )<br>( N/A , -0.02 , 0.0) | 1166.5<br>668.7 | 0.2710<br>99.7<br>108.1 | 0.7227 | N/A | 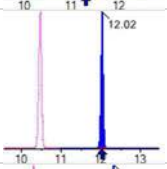 | 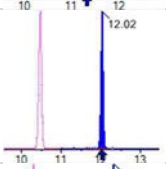 | |
| PFDoS | ( 699.0 / 80.0 ) 721880<br>( 699.0 / 99.0 ) 174693 | ( 12.94 , 1.24 )<br>( N/A , -0.01 , 0.0) | 2715.9<br>1620.3 | 0.2420<br>103.6<br>106.9 | 0.6533 | N/A | 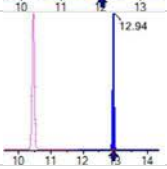 | 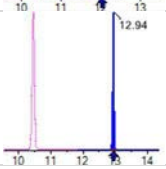 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (11)
Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1566041<br>( 327.0 / 81.0 ) 1391374 | ( 5.49 , 1.00 ) ( 0.00 , N/A , 0.0) | 5188.1<br>2433.7 | 0.8885<br>101.8<br>98.4 | 3.3910 | N/A | 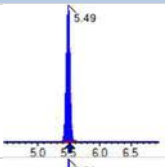 | 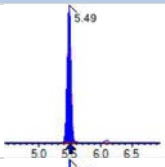 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1580360<br>( 427.0 / 81.0 ) 2034474 | ( 7.59 , 1.00 ) ( 0.00 , N/A , -0.1) | 5397.5<br>2736.2 | 1.2873<br>102.7<br>105.9 | 3.9323 | N/A | 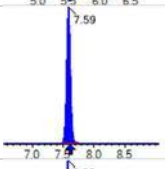 | 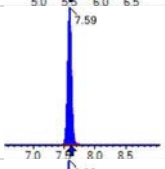 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1484314<br>( 527.0 / 81.0 ) 1538884 | ( 9.38 , 1.00 ) ( -0.01 , N/A , 0.0) | 1532.9<br>1382.5 | 1.0368<br>95.3<br>97.3 | 3.5104 | N/A | 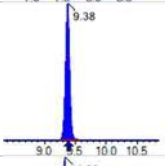 | 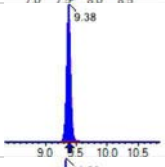 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1230068<br>( 627.0 / 81.0 ) 1655026 | ( 11.03 , 1.00 ) ( 0.00 , N/A , 0.1) | 1278.6<br>857.5 | 1.3455<br>93.5<br>97.1 | 4.1333 | N/A | 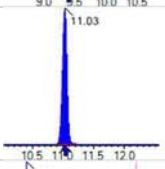 | 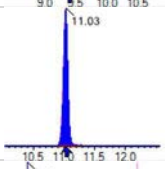 | |
| PFBSA | ( 297.9 / 78.0 ) 459182<br>( 297.9 / 278.0 ) 968 | ( 8.10 , 0.57 ) ( N/A , -0.03 , 0.0) | 1279.2<br>83.5 | 0.0021<br>154.2<br>159.0 | 1.8047 | N/A | 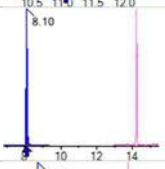 | 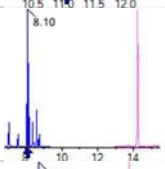 | |
| PFHxSA | ( 397.9 / 78.0 ) 661573<br>( 397.9 / 378.0 ) 2459 | ( 10.98 , 0.76 ) ( N/A , -0.02 , 0.5) | 1435.4<br>68.8 | 0.0037<br>91.0<br>88.8 | 2.6449 | N/A | 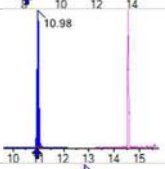 | 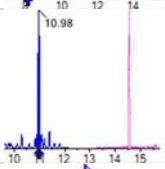 | |
| PFOSA | ( 498.0 / 78.0 ) 598131<br>( 498.0 / 478.0 ) 7521 | ( 12.85 , 1.00 ) ( -0.01 , N/A , 0.5) | 1336.2<br>214.5 | 0.0126<br>89.6<br>89.2 | 0.8455 | N/A | 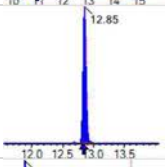 | 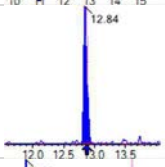 | |
| TFSI | ( 279.7 / 147.0 ) 1885330<br>( 279.7 / 211.0 ) 164595 | ( 8.16 , 0.63 ) ( N/A , -0.04 , 0.0) | 69.5<br>54.4 | 0.0873<br>103.9<br>104.2 | 1.0121 | N/A | 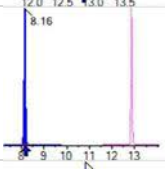 | 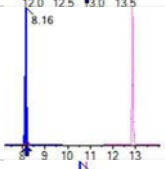 | |
| NMeFOSA | ( 512.0 / 219.0 ) 179871<br>( 512.0 / 169.0 ) 131918 | ( 14.22 , 1.00 ) ( -0.01 , N/A , 3.3) | 1218.9<br>546.6 | 0.7334<br>98.0<br>99.8 | 3.6694 | N/A | 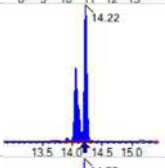 | 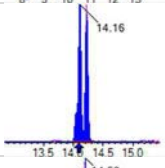 | |
| NEtFOSA | ( 526.0 / 219.0 ) 168822<br>( 526.0 / 169.0 ) 213595 | ( 14.55 , 1.00 ) ( 0.01 , N/A , 2.6) | 1272.0<br>1092.4 | 1.2652<br>102.5<br>100.1 | 3.7037 | N/A | 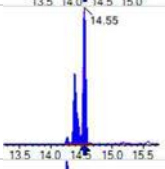 | 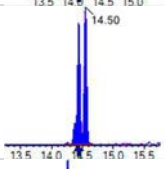 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 187306<br>( 570.0 / 483.0 ) 90084 | ( 10.27 , 1.00 ) ( 0.00 , N/A , 0.1) | 1626.2<br>5230596.2 | 0.4809<br>109.7<br>104.4 | 0.8573 | N/A | 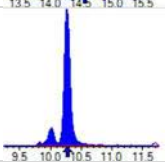 | 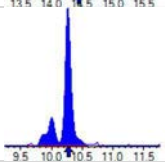 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (11)
Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 184051<br>( 584.0 / 526.0 ) 105739 | ( 10.80 , 1.00 ) ( 0.01 , N/A , 0.3) | 1284.6<br>547.1 | 0.5745<br>93.2<br>99.1 | 0.8678 | N/A | 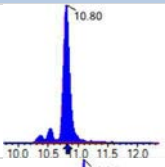 | 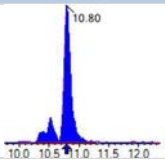 | |
| NMeFOSE | ( 616.0 / 59.0 ) 144714 | ( 14.04 , 1.00 ) ( 0.02 , N/A , 0.0) | 616.7 | N/A<br>0.0<br>0.0 | 3.6570 | N/A | 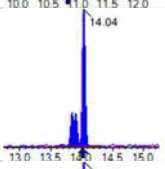 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 118676 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 946.0 | N/A<br>0.0<br>0.0 | 3.4833 | N/A | 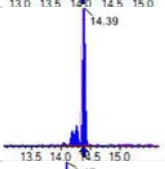 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 78481<br>( 285.0 / 185.0 ) 203179 | ( 6.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 1361.3<br>1022.1 | 2.5889<br>93.6<br>90.8 | 0.8277 | N/A | 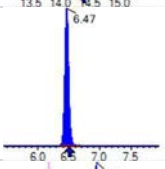 | 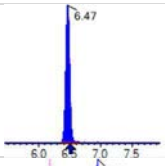 | |
| ADONA | ( 377.0 / 85.0 ) 904986<br>( 377.0 / 251.0 ) 93549 | ( 7.54 , 1.17 ) ( N/A , -0.05 , -0.1) | 1351.9<br>649.8 | 0.1034<br>101.4<br>103.8 | 0.8181 | N/A | 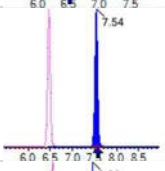 | 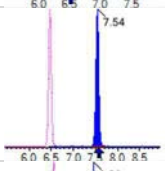 | |
| PFEESA | ( 315.0 / 135.0 ) 355892<br>( 315.0 / 83.0 ) 211750 | ( 6.89 , 1.15 ) ( N/A , -0.05 , 0.0) | 1570.5<br>628.2 | 0.5950<br>106.8<br>103.2 | 1.4558 | N/A | 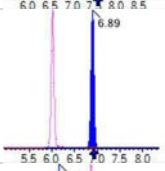 | 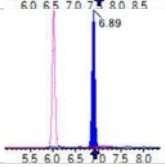 | |
| PFMPA | ( 229.0 / 85.0 ) 167852 | ( 4.12 , 0.86 ) ( N/A , -0.02 , 0.0) | 3274.2 | N/A<br>0.0<br>0.0 | 1.8381 | N/A | 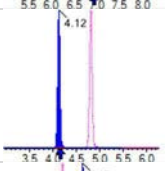 | | |
| PFMBA | ( 279.0 / 85.0 ) 409593 | ( 5.17 , 1.08 ) ( N/A , -0.03 , 0.0) | 3841.2 | N/A<br>0.0<br>0.0 | 1.6502 | N/A | 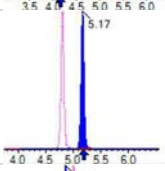 | | |
| NFDHA | ( 295.0 / 201.0 ) 207121<br>( 295.0 / 85.0 ) 208372 | ( 5.87 , 0.98 ) ( N/A , -0.04 , 0.0) | 2065.7<br>1317.5 | 1.0060<br>93.2<br>98.6 | 1.6297 | N/A | 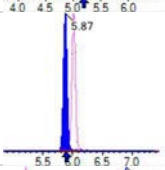 | 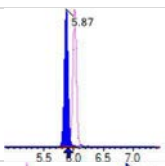 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 911025<br>( 533.0 / 353.0 ) 293661 | ( 11.11 , 1.72 ) ( N/A , -0.02 , 0.1) | 2539.9<br>1918.3 | 0.3223<br>103.0<br>101.3 | 0.7625 | N/A | 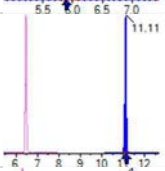 | 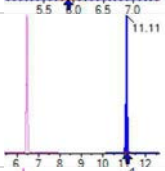 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 603936<br>( 633.0 / 453.0 ) 217112 | ( 12.44 , 1.92 ) ( N/A , -0.01 , 0.1) | 2765.8<br>1121.5 | 0.3595<br>108.2<br>108.4 | 0.6573 | N/A | 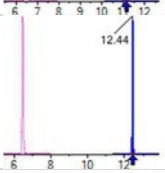 | 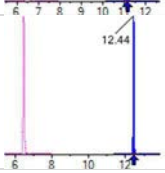 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (11)
Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 495960<br>( 461.0 / 381.2 ) 185464 | ( 9.48 , 0.91 ) ( N/A , -0.04 , 0.1) | 1919.6<br>1581.4 | 0.3739<br>93.8<br>93.1 | 0.8019 | N/A | 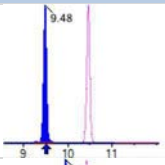 | 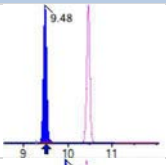 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 53557<br>( 241.0 / 117.0 ) 130276 | ( 4.38 , 0.91 ) ( N/A , -0.02 , 0.0) | 1527.1<br>1035.0 | 2.4325<br>115.5<br>109.5 | 3.2715 | N/A | 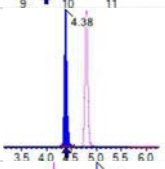 | 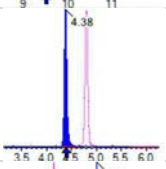 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 335915<br>( 341.0 / 217.0 ) 510915 | ( 6.92 , 1.15 ) ( N/A , -0.05 , 0.0) | 1073.1<br>727.7 | 1.5210<br>100.1<br>101.5 | 3.5582 | N/A | 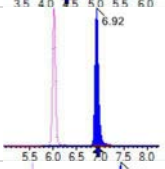 | 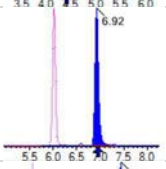 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 558863<br>( 441.0 / 337.0 ) 505704 | ( 9.32 , 1.55 ) ( N/A , -0.04 , -0.1) | 2131.9<br>2930.4 | 0.9049<br>98.7<br>98.8 | 3.6074 | N/A | 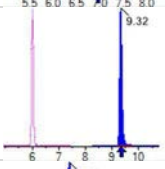 | 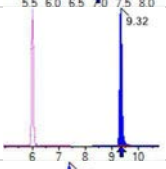 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 409796<br>( 357.2 / 243.0 ) 42704 | ( 6.74 , 1.00 ) ( -0.01 , N/A , 0.1) | 1492.2<br>266.2 | 0.1042<br>94.5<br>98.8 | 0.8677 | N/A | 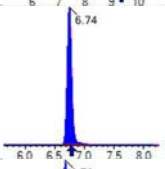 | 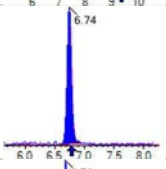 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 279737<br>( 457.2 / 343.0 ) 13978 | ( 8.78 , 1.00 ) ( -0.01 , N/A , -0.2) | 683.8<br>193.3 | 0.0500<br>120.5<br>116.8 | 1.0333 | N/A | 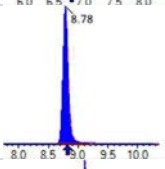 | 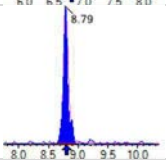 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 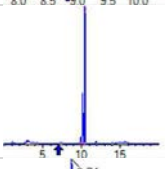 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 337922 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 1541.7 | N/A | 1.4173 [ 1.0000 ] | 141.7% { 132.5% } | 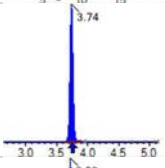 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 164419 | ( 6.02 , N/A ) ( N/A , -0.04 , N/A ) | 20246.0 | N/A | 1.2961 [ 1.0000 ] | 129.6% { 134.8% } | 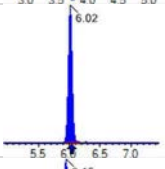 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 506022 | ( 8.15 , N/A ) ( N/A , -0.04 , N/A ) | 5366.3 | N/A | 1.2800 [ 1.0000 ] | 128.0% { 127.7% } | 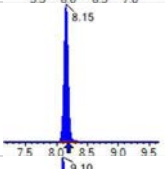 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 346493 | ( 9.10 , N/A ) ( N/A , -0.04 , N/A ) | 1174.0 | N/A | 1.2183 [ 1.0000 ] | 121.8% { 125.0% } | 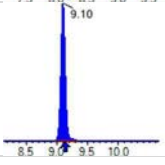 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0268-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm

Quant Method: 1633 - S2024-03-21B
Path: S2024-03-21B (11)
Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 349238 | ( 10.01 , N/A ) ( N/A , -0.03 , N/A ) | 3227.9 | N/A | 1.1959 [ 1.0000 ] | 119.6% { 121.0% } | 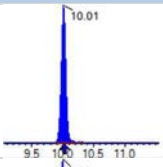 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1173584 | ( 8.60 , N/A ) ( N/A , -0.04 , N/A ) | 5261.0 | N/A | 1.2366 [ 1.0000 ] | 123.7% { 124.4% } | 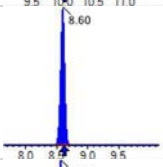 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 932299 | ( 10.46 , N/A ) ( N/A , -0.03 , N/A ) | 1705.7 | N/A | 1.2241 [ 1.0000 ] | 122.4% { 122.6% } | 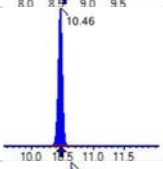 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2721227 | ( 3.74 , N/A ) ( N/A , -0.02 , N/A ) | 44558.4 | N/A | 7.0491 [ 8.0000 ] | 88.1% { 124.7% } | 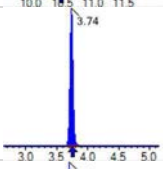 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1139433 | ( 4.80 , N/A ) ( N/A , -0.03 , N/A ) | 6234.4 | N/A | 3.7142 [ 4.0000 ] | 92.9% { 126.4% } | 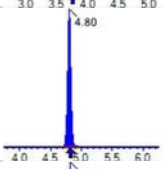 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 708649 | ( 6.02 , N/A ) ( N/A , -0.04 , N/A ) | 10285.4 | N/A | 1.8890 [ 2.0000 ] | 94.4% { 123.6% } | 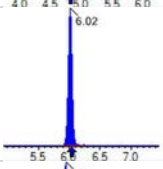 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 771429 | ( 7.15 , N/A ) ( N/A , -0.05 , N/A ) | 5297.8 | N/A | 1.8486 [ 2.0000 ] | 92.4% { 125.3% } | 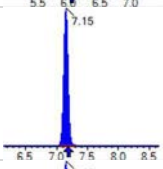 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 1042168 | ( 8.15 , N/A ) ( N/A , -0.04 , N/A ) | 3996.0 | N/A | 1.9222 [ 2.0000 ] | 96.1% { 129.3% } | 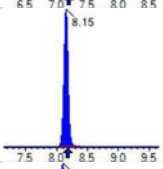 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 332063 | ( 9.10 , N/A ) ( N/A , -0.04 , N/A ) | 2658.3 | N/A | 0.9774 [ 1.0000 ] | 97.7% { 125.8% } | 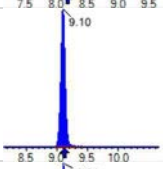 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 371297 | ( 10.01 , N/A ) ( N/A , -0.03 , N/A ) | 850.5 | N/A | 0.9487 [ 1.0000 ] | 94.9% { 121.0% } | 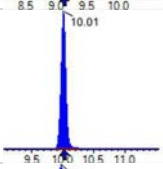 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 419777 | ( 10.88 , N/A ) ( N/A , -0.03 , N/A ) | 1219.4 | N/A | 0.9117 [ 1.0000 ] | 91.2% { 113.9% } | 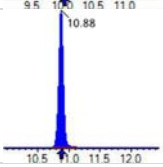 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MSD1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 373760 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1618.8 | N/A | 0.7971 [ 1.0000 ] | 79.7% { 96.7% } | 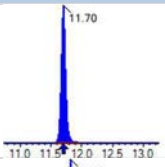 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 293539 | ( 12.83 , N/A ) ( N/A , -0.01 , N/A ) | 1380.9 | N/A | 0.7351 [ 1.0000 ] | 73.5% { 94.2% } | 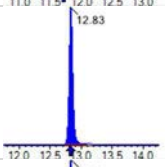 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 504946 | ( 13.64 , N/A ) ( N/A , -0.01 , N/A ) | 2311.8 | N/A | 1.4811 [ 2.0000 ] | 74.1% { 103.7% } | 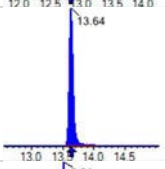 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 2098321 | ( 6.31 , N/A ) ( N/A , -0.04 , N/A ) | 1251.4 | N/A | 1.9789 [ 2.0000 ] | 98.9% { 129.8% } | 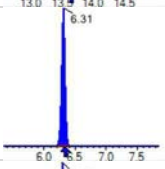 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1664940 | ( 8.59 , N/A ) ( N/A , -0.04 , N/A ) | 4523.6 | N/A | 1.9672 [ 2.0000 ] | 98.4% { 126.8% } | 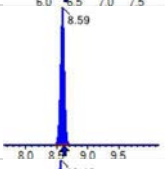 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1898419 | ( 10.46 , N/A ) ( N/A , -0.03 , N/A ) | 1510.4 | N/A | 1.8886 [ 2.0000 ] | 94.4% { 124.1% } | 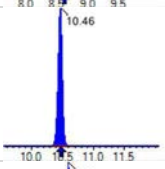 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 703881 | ( 5.49 , N/A ) ( N/A , -0.03 , N/A ) | 87.1 | N/A | 3.8475 [ 4.0000 ] | 96.2% { 113.7% } | 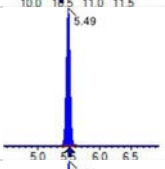 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1941349 | ( 7.59 , N/A ) ( N/A , -0.05 , N/A ) | 2623.7 | N/A | 3.5459 [ 4.0000 ] | 88.6% { 109.8% } | 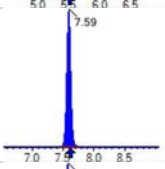 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1780929 | ( 9.38 , N/A ) ( N/A , -0.03 , N/A ) | 1730.8 | N/A | 4.1475 [ 4.0000 ] | 103.7% { 128.7% } | 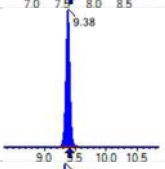 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3088903 | ( 11.03 , N/A ) ( N/A , -0.02 , N/A ) | 1597.9 | N/A | 6.8832 [ 8.0000 ] | 86.0% { 114.7% } | 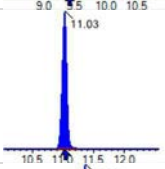 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1414815 | ( 12.86 , N/A ) ( N/A , 0.00 , N/A ) | 2418.7 | N/A | 1.5882 [ 2.0000 ] | 79.4% { 104.1% } | 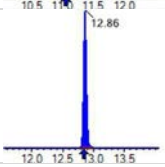 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0268-MSD1 | Quant Method: 1633 - S2024-03-21B
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-21B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-11.msm | Acquired: 2024/03/21 - 17:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 98740 | ( 14.22 , N/A ) ( N/A , 0.00 , N/A ) | 823.9 | N/A | 0.5226 [ 2.0000 ] | 26.1% { 36.0% } | 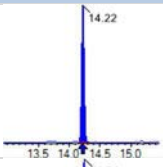  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 81400 | ( 14.54 , N/A ) ( N/A , 0.00 , N/A ) | 693.6 | N/A | 0.4017 [ 2.0000 ] | 20.1% { 27.1% } | 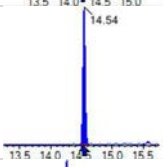  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 916345 | ( 10.27 , N/A ) ( N/A , -0.03 , N/A ) | 2733.4 | N/A | 3.5428 [ 4.0000 ] | 88.6% { 103.2% } | 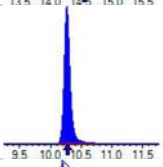 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 867313 | ( 10.79 , N/A ) ( N/A , -0.02 , N/A ) | 2311.5 | N/A | 3.6792 [ 4.0000 ] | 92.0% { 105.3% } | 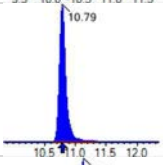  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 721510 | ( 14.02 , N/A ) ( N/A , 0.00 , N/A ) | 1561.4 | N/A | 8.4977 [ 20.0000 ] | 42.5% { 59.6% } | 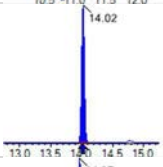  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 766927 | ( 14.37 , N/A ) ( N/A , 0.00 , N/A ) | 3044.1 | N/A | 8.8994 [ 20.0000 ] | 44.5% { 60.8% } | 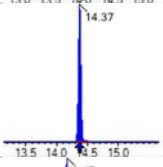  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 1286378 | ( 6.47 , N/A ) ( N/A , -0.04 , N/A ) | 2330.6 | N/A | 7.5276 [ 8.0000 ] | 94.1% { 129.5% } | 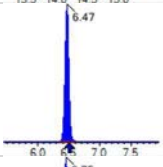  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 888434 | ( 6.75 , N/A ) ( N/A , -0.05 , N/A ) | 1127.8 | N/A | 2.3464 [ 2.0000 ] | 117.3% { 138.6% } | 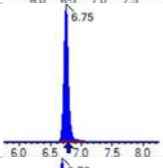  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 663835 | ( 8.79 , N/A ) ( N/A , -0.04 , N/A ) | 714.1 | N/A | 1.9259 [ 2.0000 ] | 96.3% { 112.8% } | 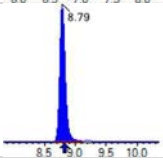  | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

Laboratory: PPL, LLC
Work Order: 24C0110A
Client: Tidewater, Inc.
Project: JPL-GW Monitoring
Batch: BDC0268 Batch Matrix: Water
Preparation: EPA 1633A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-12-4- | 24C0110-01- | 03/19/24 13:48- | 546.41- | 2.00- |
| MW-12-3- | 24C0110-02- | 03/19/24 13:48- | 557.67- | 2.00- |
| MW-12-2- | 24C0110-03- | 03/19/24 13:48- | 545.63- | 2.00- |
| MW-12-1- | 24C0110-04- | 03/19/24 13:48- | 535.31- | 2.00- |
| DUP-4-031824- | 24C0110-05- | 03/19/24 13:48- | 540.83- | 2.00- |
| MW-18-4- | 24C0110-06 | 03/19/24 13:48- | 546.33- | 2.00- |
| MW-18-3- | 24C0110-07- | 03/19/24 13:48- | 549.54- | 2.00- |
| MW-18-2- | 24C0110-08- | 03/19/24 13:48- | 541.45- | 2.00- |
| MW-18-1- | 24C0110-09- | 03/19/24 13:48- | 537.84- | 2.00- |
| SB-2-031824- | 24C0110-10- | 03/19/24 13:48- | 539.86 | 2.00- |
| EB-6-031824- | 24C0110-11- | 03/19/24 13:48- | 574.69- | 2.00- |
| FB-6-031824- | 24C0110-12- | 03/19/24 13:48- | 512.57- | 2.00- |
| Blank- | BDC0268-BLK1- | 03/19/24 13:48- | 500.00- | 2.00- |
| LCS- | BDC0268-BS1- | 03/19/24 13:48- | 500.00- | 2.00- |
| MRL Check- | BDC0268-MRL1- | 03/19/24 13:48- | 500.00- | 2.00- |
| MW-18-1- | BDC0268-MS1- | 03/19/24 13:48- | 533.08- | 2.00- |
| MW-18-1- | BDC0268-MSD1- | 03/19/24 13:48- | 537.55- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/21/2024 10:16 am

BDC0268

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0110-01 A | MW-12-4 F | 592.143 | 45.732 | 7 | 3/19/2024 1:48:00PM | 546.411 | 2 | | 200 , 200 | |
| 24C0110-02 A | MW-12-3 F | 602.794 | 45.121 | 7 | 3/19/2024 1:48:00PM | 557.673 | 2 | | 200 , 200 | |
| 24C0110-03 A | MW-12-2 F | 590.691 | 45.058 | 7 | 3/19/2024 1:48:00PM | 545.633 | 2 | | 200 , 200 | |
| 24C0110-04 A | MW-12-1 F | 581.284 | 45.97 | 7 | 3/19/2024 1:48:00PM | 535.314 | 2 | | 200 , 200 | |
| 24C0110-05 A | DUP-4-031824 F | 586.372 | 45.539 | 7 | 3/19/2024 1:48:00PM | 540.833 | 2 | | 200 , 200 | |
| 24C0110-06 A | MW-18-4 F | 592.143 | 45.811 | 7 | 3/19/2024 1:48:00PM | 546.332 | 2 | | 200 , 200 | |
| 24C0110-07 A | MW-18-3 F | 594.578 | 45.037 | 7 | 3/19/2024 1:48:00PM | 549.541 | 2 | | 200 , 200 | |
| 24C0110-08 A | MW-18-2 F | 586.873 | 45.426 | 7 | 3/19/2024 1:48:00PM | 541.447 | 2 | | 200 , 200 | |
| 24C0110-09 A | MW-18-1 F | 583.831 | 45.987 | 7 | 3/19/2024 1:48:00PM | 537.844 | 2 | | 200 , 200 | |
| 24C0110-10 A | SB-2-031824 F | 585.366 | 45.508 | 7 | 3/19/2024 1:48:00PM | 539.858 | 2 | | 200 , 200 | |
| 24C0110-11 A | EB-6-031824 F | 620.65 | 45.956 | 7 | 3/19/2024 1:48:00PM | 574.694 | 2 | | 200 , 200 | |
| 24C0110-12 A | FB-6-031824 F | 557.706 | 45.136 | 7 | 3/19/2024 1:48:00PM | 512.57 | 2 | | 200 , 200 | |
| BDC0268-BLK1 | Blank | | | | 3/19/2024 1:48:00PM | 500 | 2 | | 200 , 200 | |
| BDC0268-BS1 | LCS | | | | 3/19/2024 1:48:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0268-MRL1 | MRL Check | | | | 3/19/2024 1:48:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0268-MS1 | Matrix Spike [24C0110-09] | 579.06 | 45.979 | | 3/19/2024 1:48:00PM | 533.081 | 2 | 200 , 200 | 200 , 200 | |
| BDC0268-MSD1 | Matrix Spike Dup [24C0110-09] | 582.687 | 45.142 | | 3/19/2024 1:48:00PM | 537.545 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0390 | PFAS - MIX 1633 10ng/mL rev1 |
| 24C0392 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0553 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0423 | 1633 EIS MIXB 20-80ng/mL |

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/21/2024 10:16 am

BDC0268

(Continued)

**Matrix: Water**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:**

**Hotblock/Plate:**

**Sonic Horns:**

**Pipettes:**

**Water Baths:**

**Ovens:**

**Desiccator:**

**pH Probes:**

**Prepared using: PFAS - EPA 1633**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0482 | Am. Ac. preservative | R021040 |
| 24C0044 | Reagent - 0.05MFA wash | x |
| 24C0045 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |
| 24C0046 | Reagent -0.3M Formic Acid | 50009265 |

Batch Comments:

Spiked By: MNM2 3/19/24 13:48
Witness By: ABK1
pH Lot: 10BDH3431
Biotage Cartridge Lot: 24003101PB
Concentration: 3/21/24 08:38 - 09:10
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





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# PREPARATION BENCH SHEET
## PFAS

BDC0268

Prepared using: PFAS - EPA 1633

Matrix: Water

| Lab Number | Sample and Source ID | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ID's Confirmed By: mnm2 | | | | | | | | | | |
| 24C0110-01 A | MW-12-4 | F | 592.143 | 45.732 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-02 A | MW-12-3 | F | 602.794 | 45.123 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-03 A | MW-12-2 | F | 590.691 | 45.058 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-04 A | MW-12-1 | F | 581.284 | 45.970 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-05 A | DUP-4-031824 | F | 586.372 | 45.539 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-06 A | MW-18-4 | F | 592.143 | 45.811 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-07 A | MW-18-3 | F | 594.578 | 45.053 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-08 A | MW-18-2 | F | 586.873 | 45.426 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-09 A | MW-18-1 | F | 583.831 | 45.987 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-10 A | SB-2-031824 | F | 585.366 | 45.508 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-11 A | EB-6-031824 | F | 620.650 | 45.956 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| 24C0110-12 A | FB-6-031824 | F | 557.716 | 45.136 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0268-BLK1 | Blank | | | | 7 | 3/19/2024 12:48:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0268-BS1 | LCS | | | | 7 | 3/19/2024 12:48:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0268-MRL1 | MRL Check | | | | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| BDC0268-MS1 | Matrix Spike [24C0110-09] | B | 579.060 | 45.979 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |
| BDC0268-MSD1 | Matrix Spike Dup [24C0110-09] | C | 582.687 | 45.142 | 7 | 3/19/2024 12:48:00PM | 500 | 2 | | 200 , 200 | |

**Analyses**
1633

**Spiking Solution(s)**
~~24B0012~~
24C0392 ✓ PFAS - MIX 1633 10ng/mL rev1
1633 MIX B 5C 10ng/mL
24B0390

**Surrogate Solution(s)**
~~24B0552~~
~~24C0280~~ 1633 EIS MIXB 20-80ng/mL
24B0553
24C0423

13:48
mnm2 / abk1 03/19/24
Spiking Witnessed By Date

Preparation Reviewed By Date

PAF 3/21/24
Extracts Received By Date



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# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/19/2024 12:49 pm

BDC0268

(Continued)

**Matrix: Water**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** SCALE

**Hotblock/Plate:**

**Sonic Horns:**

**Pipettes:**

**Water Baths:**

**Ovens:**

**Desiccator:**

**pH Probes:**

**Prepared using: PFAS - EPA 1633**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| Am.Ac | | 24A0482 |
| AmOH | | 24AC0045 |
| FA 0.3 | | 24C00046 |
| FA 0.05 | | 24C00044 |

Batch Comments:

Spiked By:

Witness By:

pH Lot: 10BDH3431

Biotage Cartridge Lot: 24C03101PB

Concentration: 08:38, 09:10 03/21/24

IIS: 24B0645

Carbon Lot: 148517

_____ _____

Spiking Witnessed By Date

mnm2

Preparation Reviewed By Date

_____ _____

Extracts Received By Date



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# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD00991A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD00991-CAL1A | S2024-03-19A (1)A | 03/19/24 12:02A |
| Cal Standardl | SD00991-CAL2A | S2024-03-19A (2)A | 03/19/24 12:22A |
| Cal Standardl | SD00991-CAL3A | S2024-03-19A (3)A | 03/19/24 12:43A |
| Cal Standardl | SD00991-CAL4A | S2024-03-19A (4)A | 03/19/24 13:03A |
| Cal Standardl | SD00991-CAL5A | S2024-03-19A (5)A | 03/19/24 13:24A |
| Cal Standardl | SD00991-CAL6A | S2024-03-19A (6)A | 03/19/24 13:44A |
| Cal Standardl | SD00991-CAL7A | S2024-03-19A (7)A | 03/19/24 14:05A |
| Cal Standardl | SD00991-CAL8A | S2024-03-19A (8)A | 03/19/24 14:25A |
| Initial Cal Blankl | SD00991-ICB1A | S2024-03-19A (9)A | 03/19/24 14:46A |
| Secondary Cal Checkl | SD00991-SCV1A | S2024-03-19A (10)A | 03/19/24 15:06A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01019A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration BlankI | SD01019-CCB1A | S2024-03-21B (1)A | 03/21/24 13:36A |
| Low Cal CheckI | SD01019-LCV1A | S2024-03-21B (2)A | 03/21/24 13:57A |
| Calibration CheckI | SD01019-CCV1A | S2024-03-21B (3)A | 03/21/24 14:17A |
| Performance MixI | SD01019-PEM1A | S2024-03-21B (4)A | 03/21/24 14:38A |
| Performance MixI | SD01019-PEM2A | S2024-03-21B (5)A | 03/21/24 14:58A |
| Calibration BlankI | SD01019-CCB2A | S2024-03-21B (6)A | 03/21/24 15:19A |
| BlankI | BDC0268-BLK1A | S2024-03-21B (7)A | 03/21/24 15:39A |
| LCSI | BDC0268-BS1A | S2024-03-21B (8)A | 03/21/24 16:00A |
| MRL CheckI | BDC0268-MRL1A | S2024-03-21B (9)A | 03/21/24 16:20A |
| MW-18-1I | BDC0268-MS1A | S2024-03-21B (10)A | 03/21/24 16:41A |
| MW-18-1I | BDC0268-MSD1A | S2024-03-21B (11)A | 03/21/24 17:01A |
| MW-12-4I | 24C0110-01A | S2024-03-21B (12)A | 03/21/24 17:22A |
| MW-12-3I | 24C0110-02A | S2024-03-21B (13)A | 03/21/24 17:42A |
| MW-12-2I | 24C0110-03A | S2024-03-21B (14)A | 03/21/24 18:03A |
| MW-12-1I | 24C0110-04A | S2024-03-21B (15)A | 03/21/24 18:23A |
| DUP-4-031824I | 24C0110-05A | S2024-03-21B (16)A | 03/21/24 18:44A |
| MW-18-4I | 24C0110-06A | S2024-03-21B (17)A | 03/21/24 19:04A |
| MW-18-3I | 24C0110-07A | S2024-03-21B (18)A | 03/21/24 19:25A |
| MW-18-2I | 24C0110-08A | S2024-03-21B (19)A | 03/21/24 19:45A |
| MW-18-1I | 24C0110-09A | S2024-03-21B (20)A | 03/21/24 20:06A |
| SB-2-031824I | 24C0110-10A | S2024-03-21B (21)A | 03/21/24 20:26A |
| Calibration CheckI | SD01019-CCV2A | S2024-03-21B (22)A | 03/21/24 20:47A |
| Calibration BlankI | SD01019-CCB3A | S2024-03-21B (23)A | 03/21/24 21:07A |
| EB-6-031824I | 24C0110-11A | S2024-03-21B (24)A | 03/21/24 21:28A |
| FB-6-031824I | 24C0110-12A | S2024-03-21B (25)A | 03/21/24 21:48A |
| Calibration CheckI | SD01019-CCV3A | S2024-03-21B (39)A | 03/22/24 02:36A |
| Calibration BlankI | SD01019-CCB4A | S2024-03-21B (40)A | 03/22/24 02:56A |
| Calibration CheckI | SD01019-CCV4A | S2024-03-21B (51)A | 03/22/24 06:42A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0110A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01019A | Instrument:A | SaphiraA |
| Calibration: | 2412010A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD01019-CCB5A | S2024-03-21B (52) | 03/22/24 07:02 |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**
**CAS #:** 356-02-5

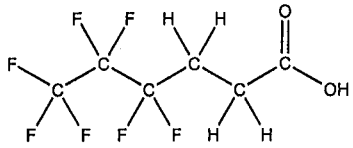


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

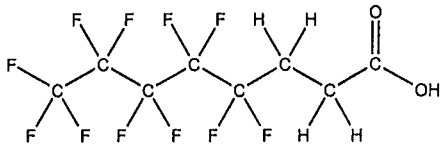

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

*Form#:27, Issued 2004-11-10*
*Revision#:8, Revised 2020-09-10*

# Analytical Standard Record

**21L0007L**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

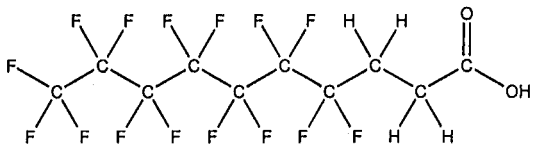

**MOLECULAR FORMULA:** $C_{10}H_5F_{15}O_2$
**MOLECULAR WEIGHT:** 442.12
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 11/12/2020
**EXPIRY DATE:** (mm/dd/yyyy) 11/12/2025
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

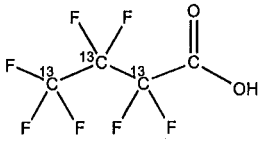

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

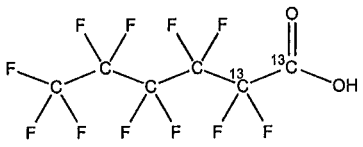

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_{11}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 10/04/2021
**EXPIRY DATE:** (mm/dd/yyyy) 10/04/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

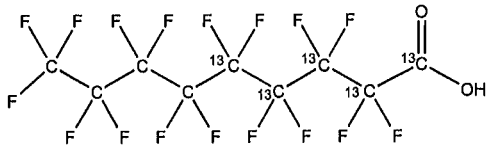

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

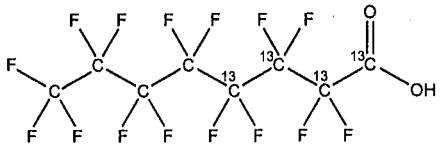

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4HF_{15}O_2$ | **MOLECULAR WEIGHT:** | 418.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/07/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/07/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

## 22A0120

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

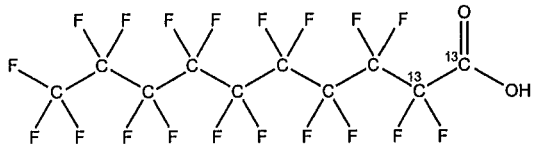

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

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# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOS **LOT NUMBER:** MPFOS0821

**COMPOUND:** Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate

**STRUCTURE:** **CAS #:** 960315-53-1

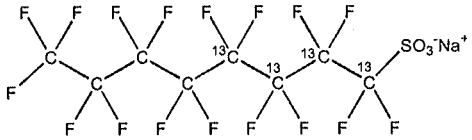

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

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**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 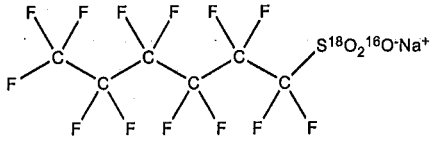 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

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**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

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# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

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DOCUMENTATION

# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_2CH_3$ | 73.8 |
| 2 | N-Ethylperfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CFSO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 0.1 |
| 3 | N-Ethylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 2.3 |
| 4 | N-Ethylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 2.6 |
| 5 | N-Ethylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 6.2 |
| 6 | N-Ethylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 14.8 |
| 7 | N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_2CH_3$ | 0.2 |

* Percent of total N-ethylperfluorooctanesulfonamide isomers only.
** Systematic Name: N-Ethylperfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

## 23A0 220

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

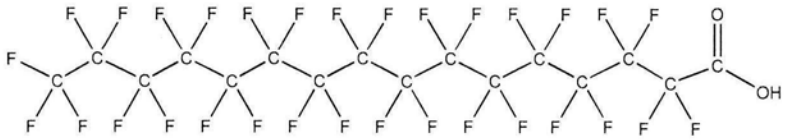

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

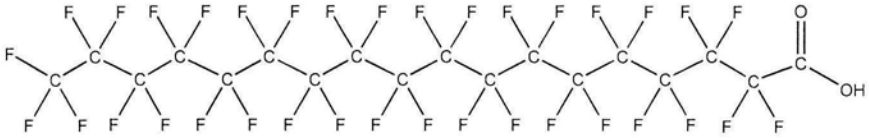

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

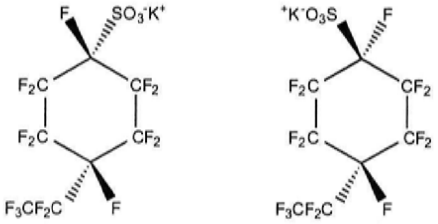


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}SO_3K$ |
| **MOLECULAR WEIGHT:** | 500.22 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (K salt) |
| | 46.2 ± 2.3 µg/mL (PFECHS acid) |
| | 46.1 ± 2.3 µg/mL (PFECHS anion) |
| **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% |
| **LAST TESTED:** (mm/dd/yyyy) | 03/28/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/28/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard RecordC

## 23C0155C

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FBSA-I
**COMPOUND:** Perfluoro-1-butanesulfonamide

**LOT NUMBER:** FBSA0123I

**STRUCTURE:**

**CAS #:** 30334-69-1

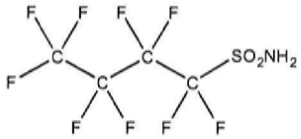

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**

**CAS #:** 41997-13-1

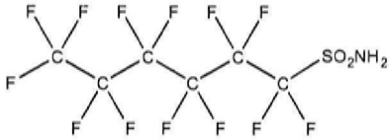

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctane-sulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
800-368-1131
www.absolutestandards.com

**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| | | |
|---|---|---|
| Formulated By: | Prashant Chauhan | 051723 DATE |
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4488& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Hodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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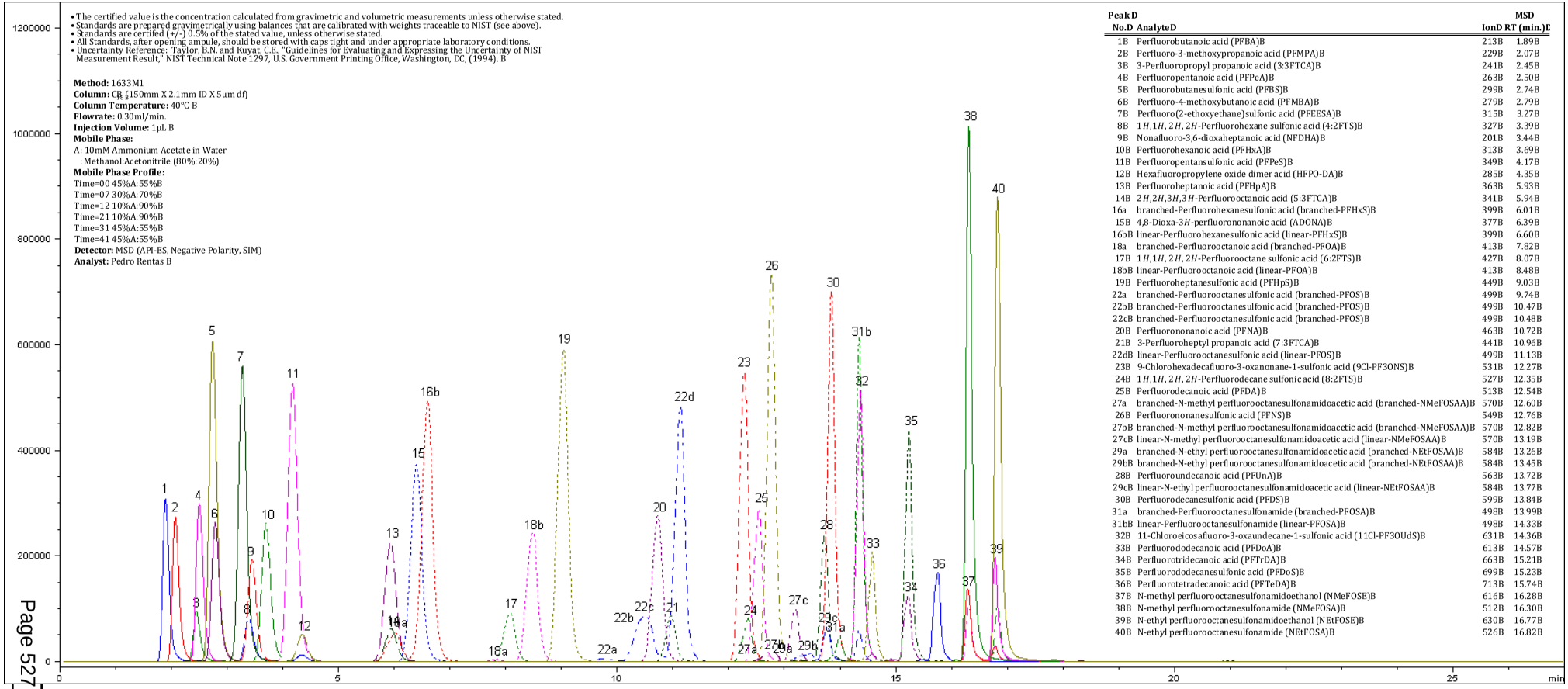


| Peak No. | D Analyte | D | MSD Ion | D | RT (min.) | D |
|---|---|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B | 1.89 | B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B | 2.07 | B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B | 2.45 | B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B | 2.50 | B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B | 2.74 | B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B | 2.79 | B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B | 3.27 | B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B | 3.39 | B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B | 3.44 | B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B | 3.69 | B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B | 4.17 | B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B | 4.35 | B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B | 5.93 | B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B | 5.94 | B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B | 6.01 | B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B | 6.39 | B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B | 6.60 | B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B | 7.82 | B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B | 8.07 | B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B | 8.48 | B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B | 9.03 | B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 9.74 | B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.47 | B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.48 | B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B | 10.72 | B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B | 10.96 | B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B | 11.13 | B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B | 12.27 | B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B | 12.35 | B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B | 12.54 | B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.60 | B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B | 12.76 | B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.82 | B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B | 13.19 | B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.26 | B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.45 | B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B | 13.72 | B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B | 13.77 | B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B | 13.84 | B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B | 13.99 | B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B | 14.33 | B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B | 14.36 | B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B | 14.57 | B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B | 15.21 | B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B | 15.23 | B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B | 15.74 | B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B | 16.28 | B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B | 16.30 | B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B | 16.77 | B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B | 16.82 | B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

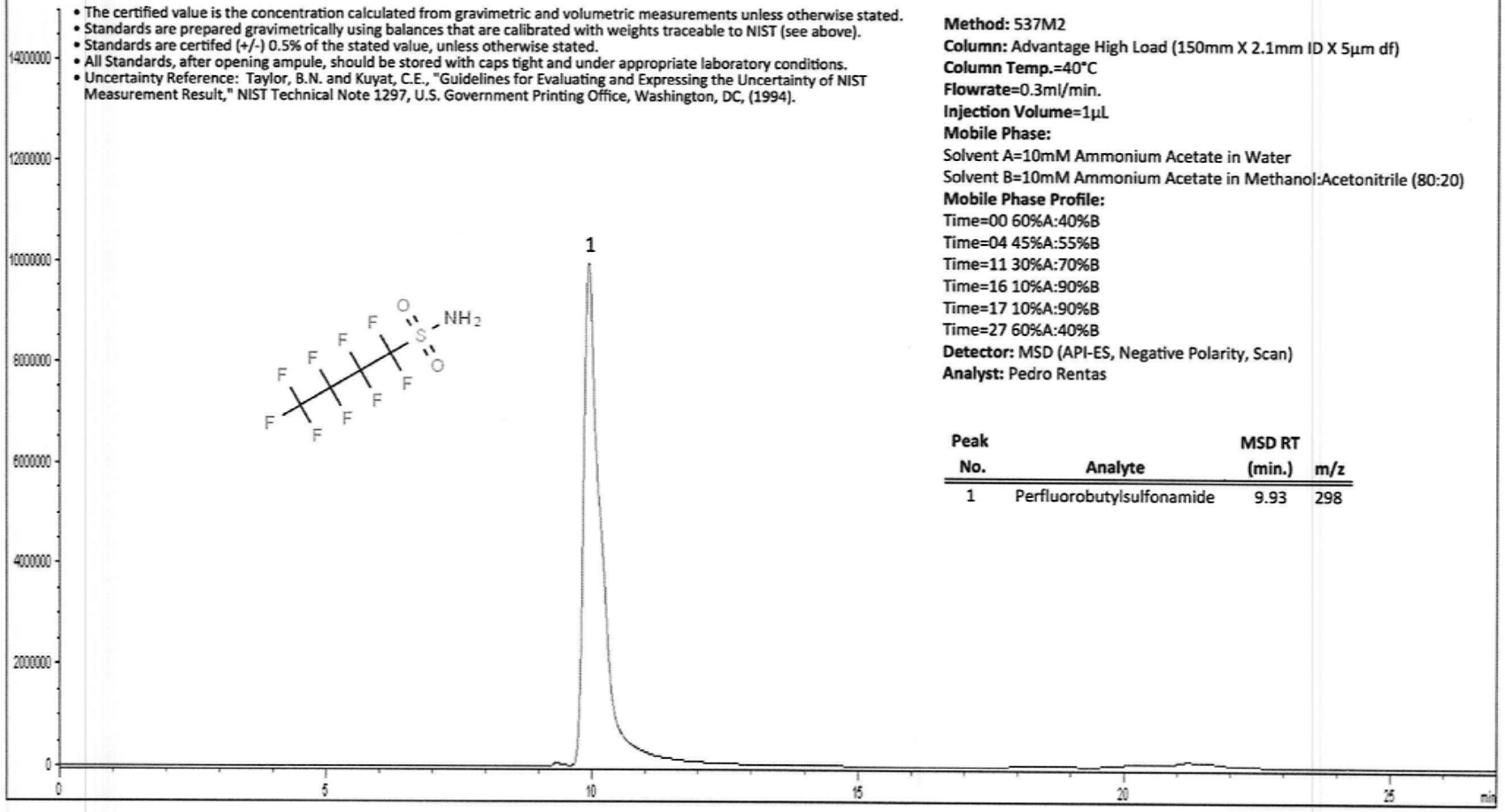


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | | Solvent: | Lot# |
|---|---|---|---|---|
| Expiration Date: | 091125 | | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | | |
| Nominal Concentration (µg/mL): | 1000 | | | |
| NIST Test ID#: | 23060 | 5E-05 | Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 | Flask Uncertainty | |

| | | |
|---|---|---|
| Formulated By: | Benson Chan | 091120 DATE |
| Reviewed By: | Pedro L. Rentas | 091120 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Formulated By: | Benson Chan | 101520 DATE |
| Reviewed By: | Pedro L. Rentas | 101520 DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A: PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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DOCUMENTATION

# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

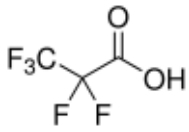


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

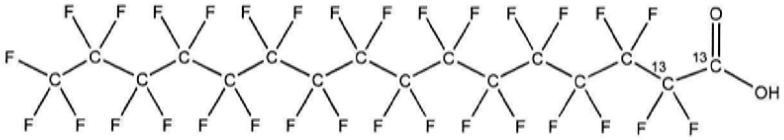

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

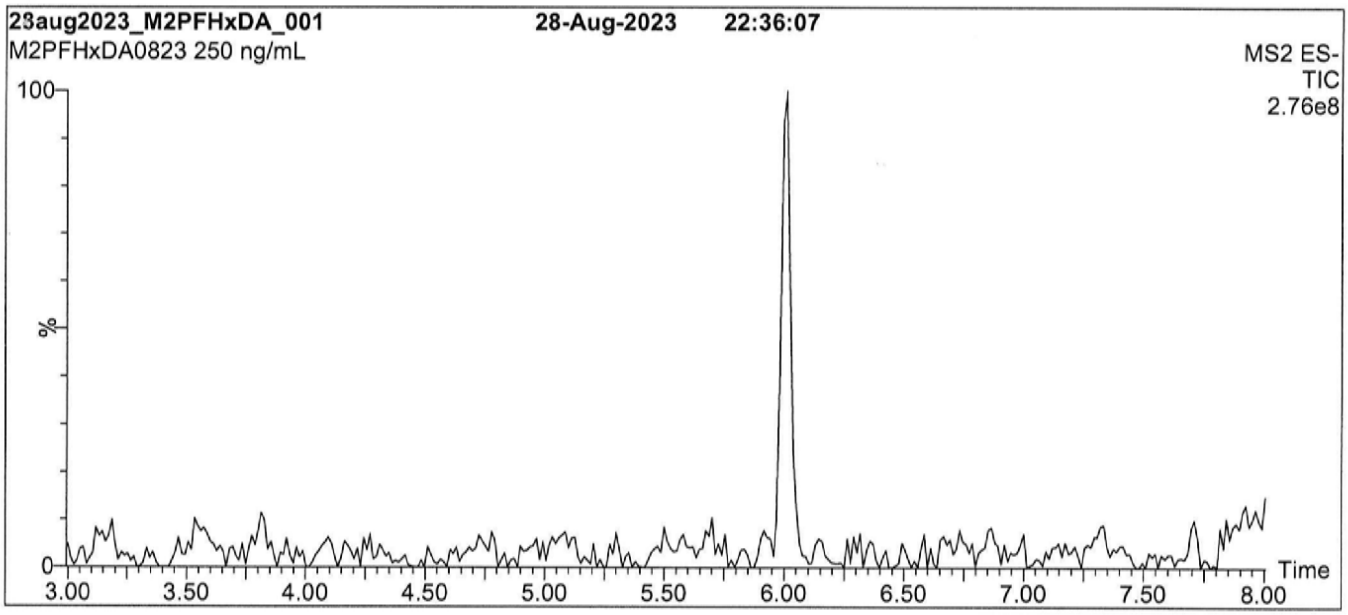


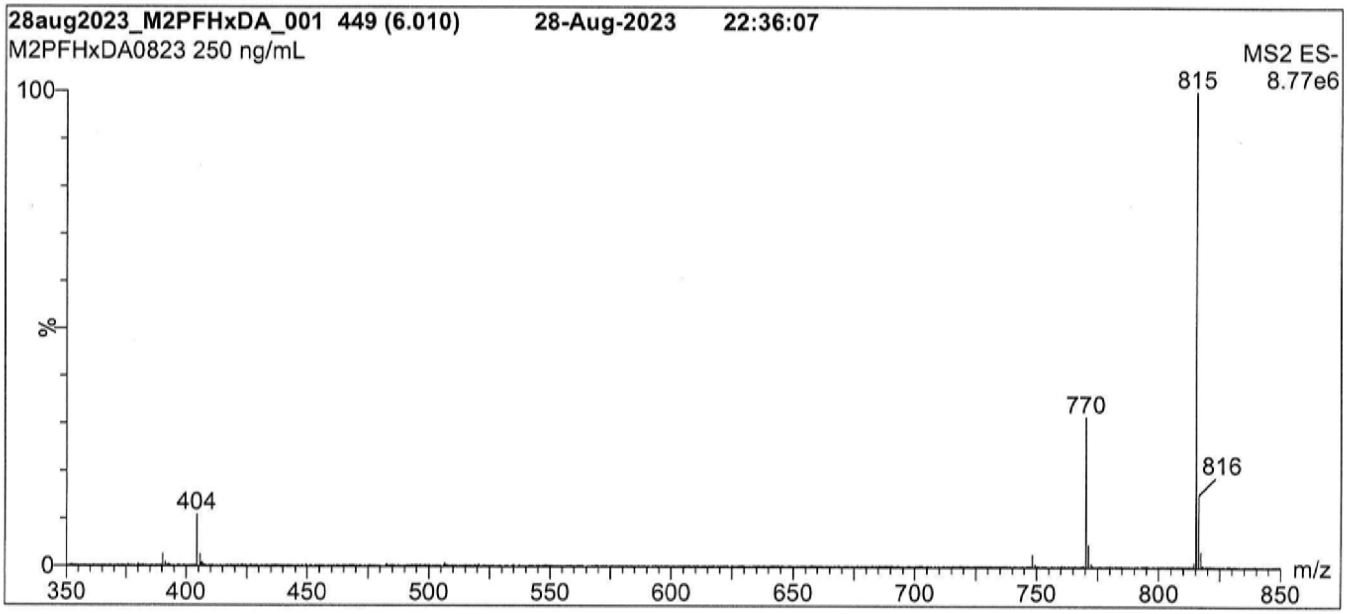


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

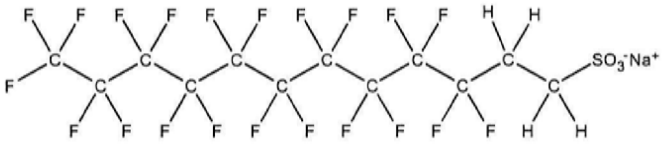


**MOLECULAR FORMULA:** $C_{12}H_4F_{21}SO_3Na$ **MOLECULAR WEIGHT:** 650.18

**CONCENTRATION:** 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
48.3 ± 2.4 µg/mL (10:2FTS acid)
48.2 ± 2.4 µg/mL (10:2FTS anion)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** (mm/dd/yyyy) 09/13/2023

**EXPIRY DATE:** (mm/dd/yyyy) 09/13/2028

**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

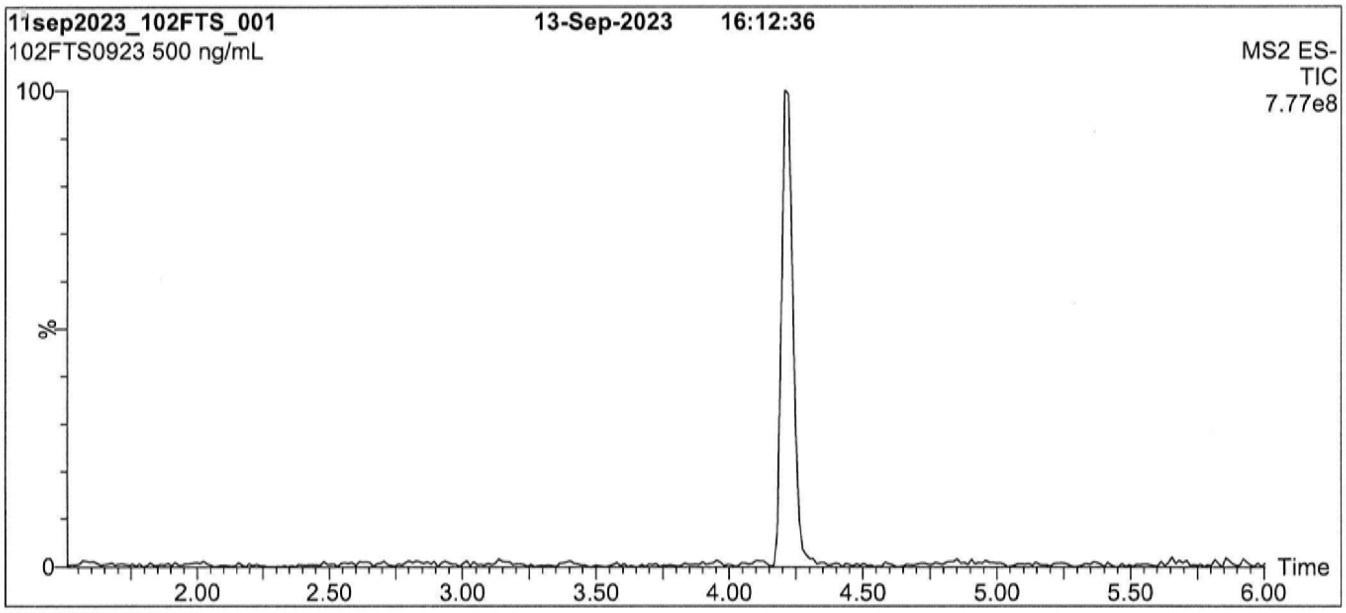


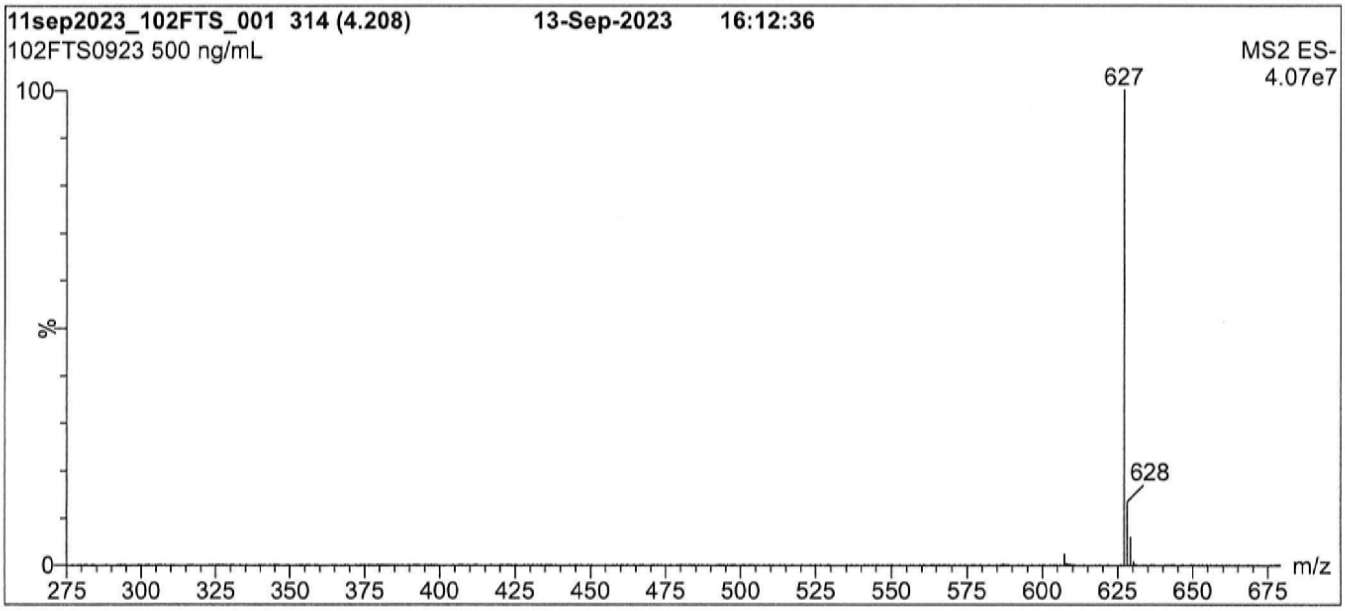


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

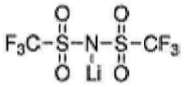

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification) 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

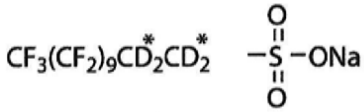

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

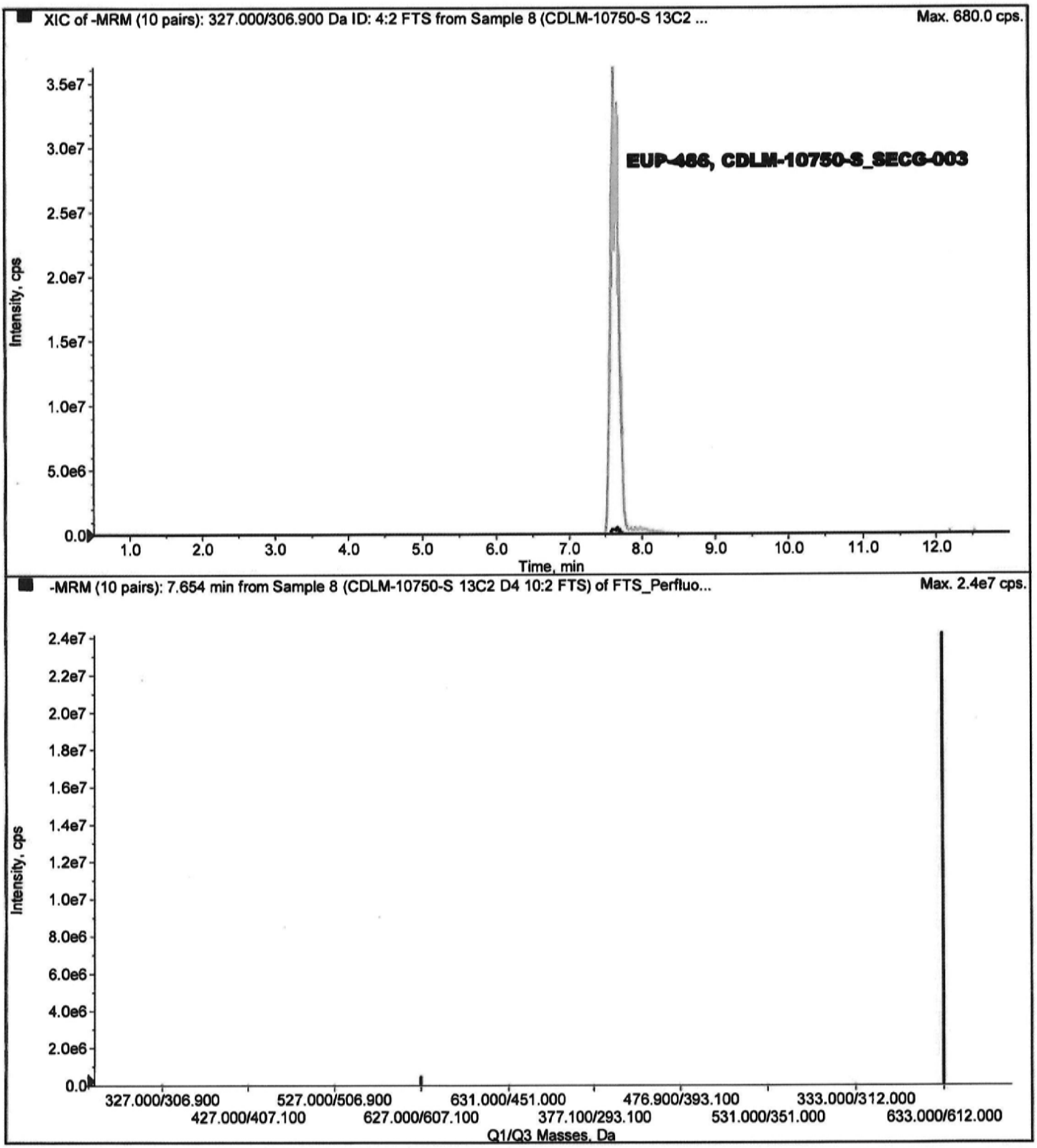

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

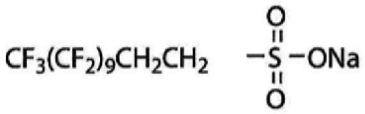

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FOUEA
**COMPOUND:** 2H-Perfluoro-2-decenoic acid

**LOT NUMBER:** FOUEA1123

**STRUCTURE:**

**CAS #:** 70887-84-2

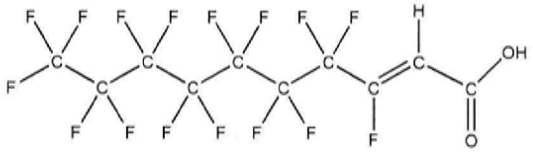

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

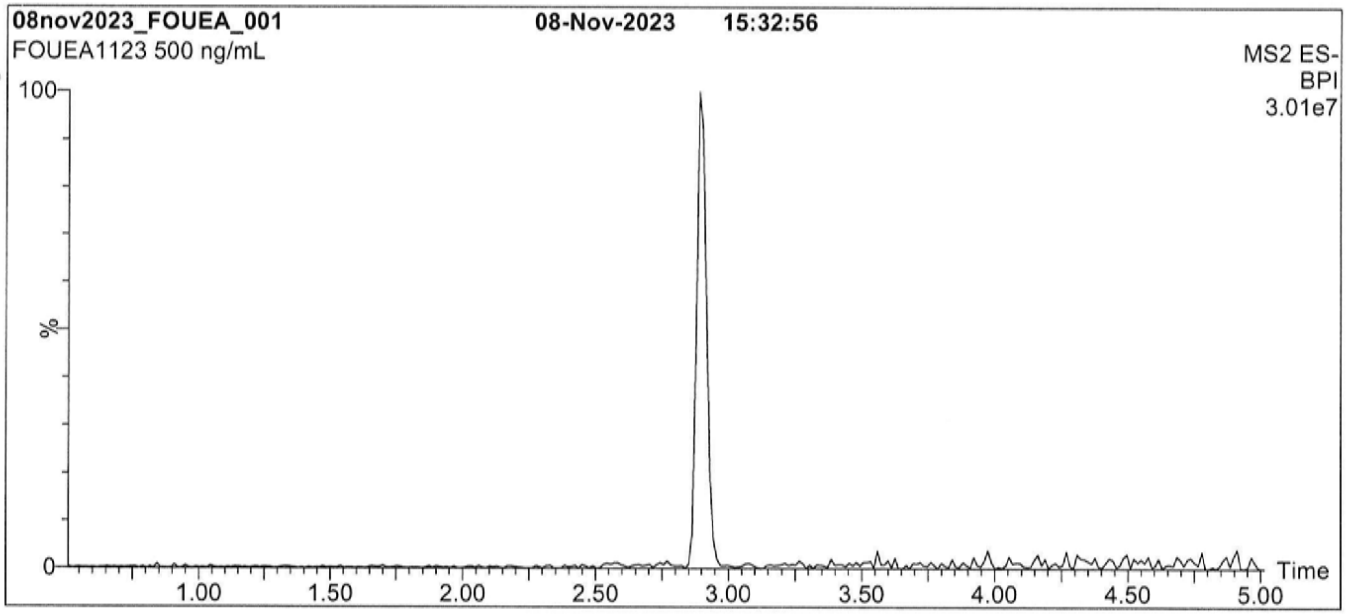


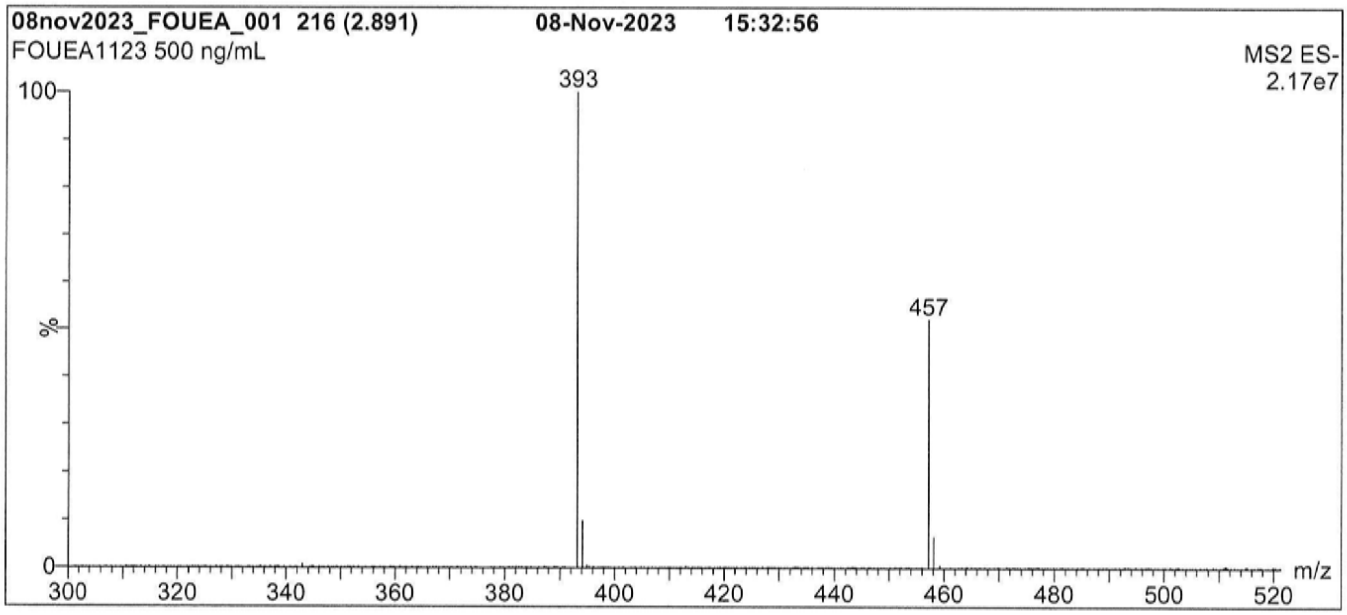


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

**24B0292**

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

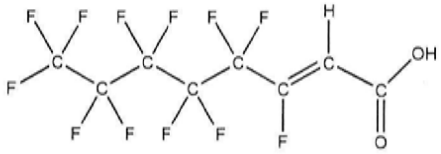

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

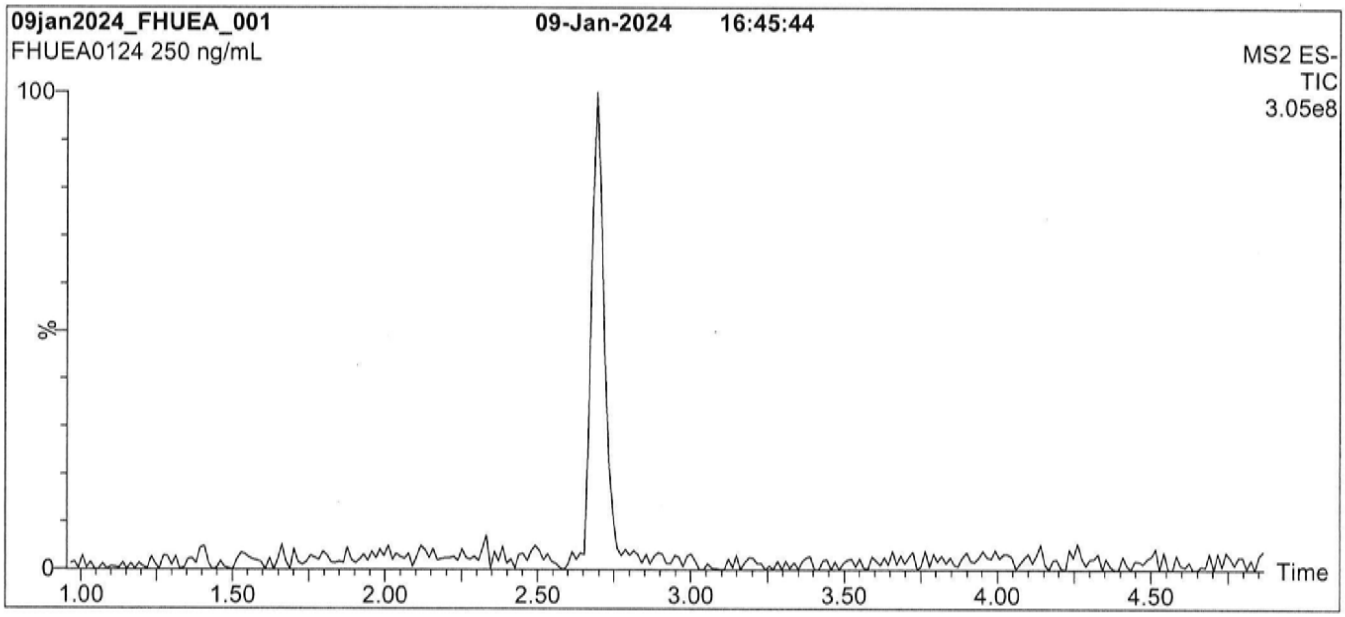


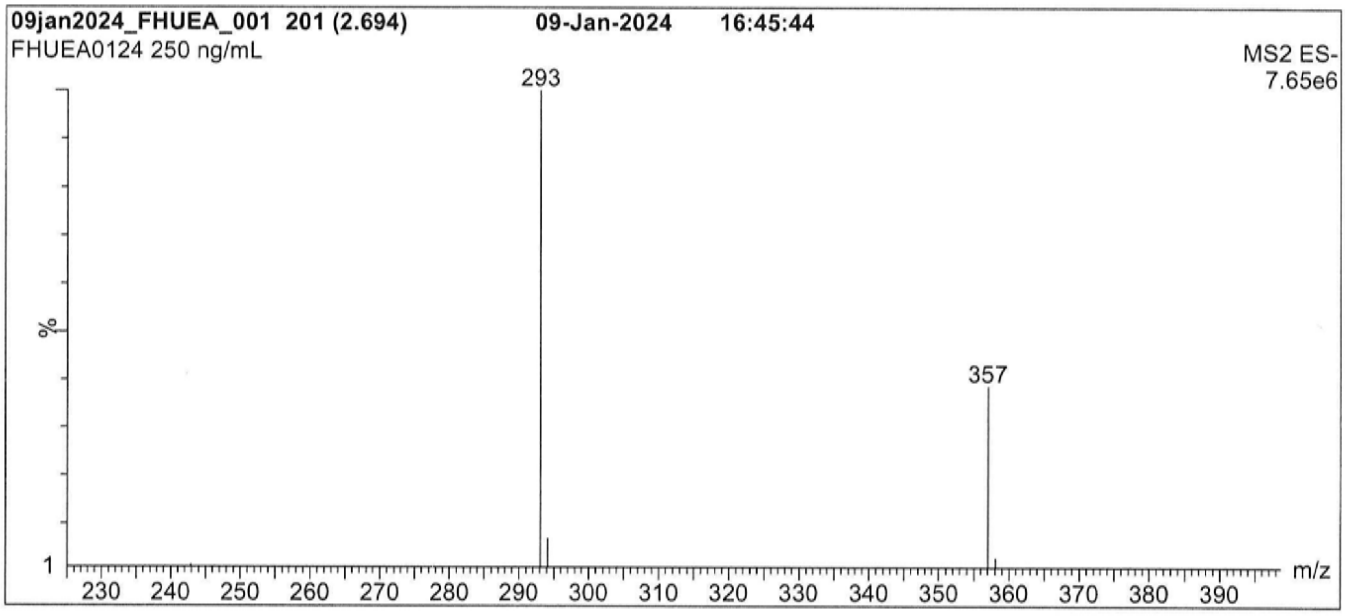


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

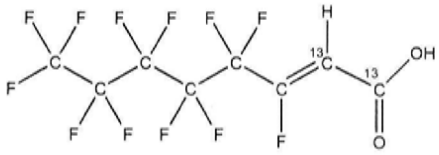

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

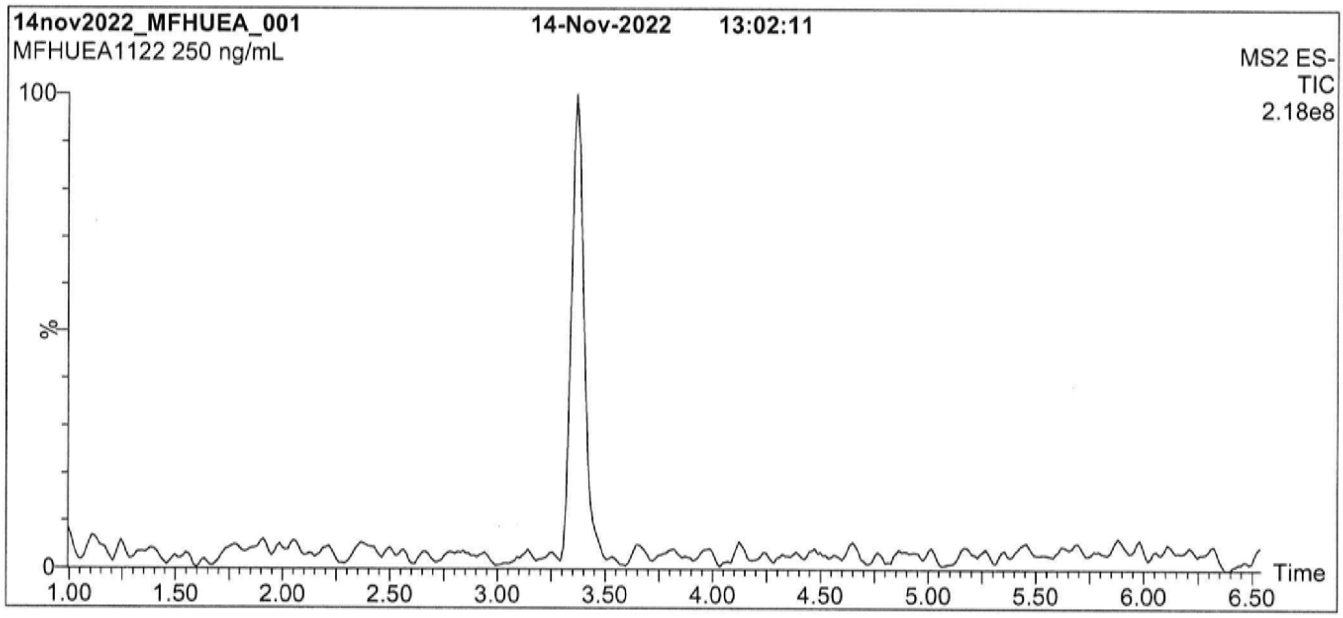


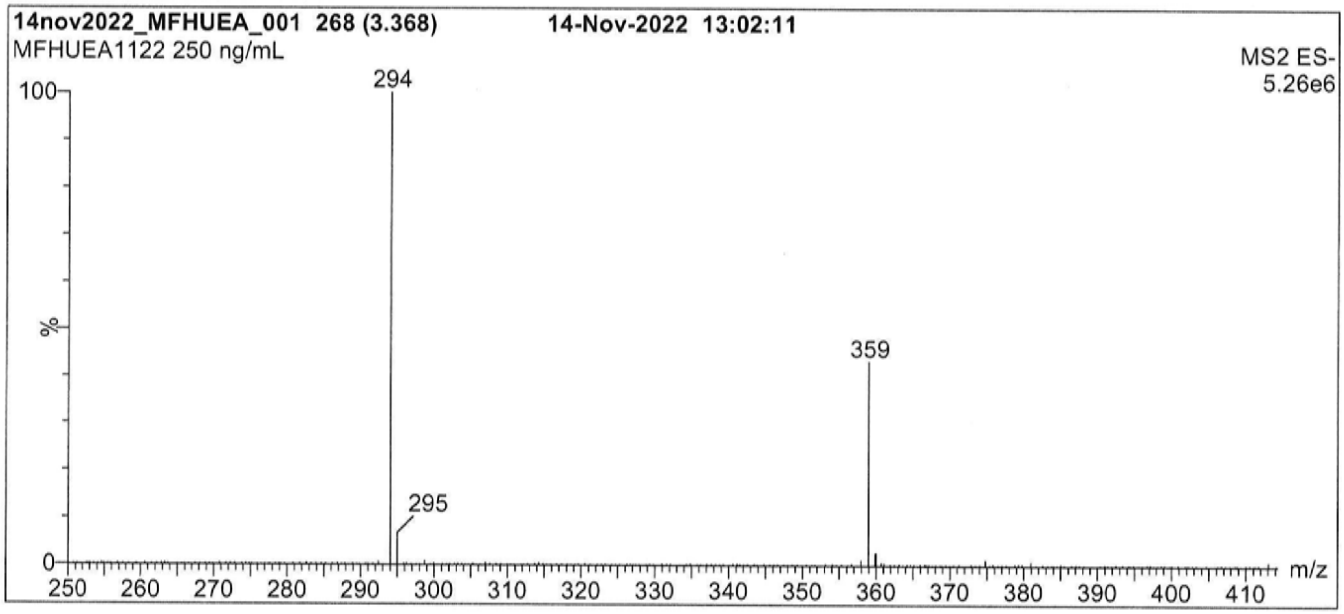


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

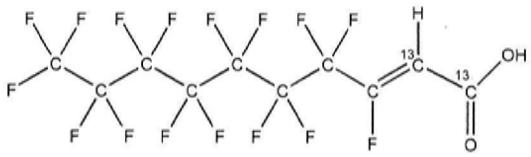

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

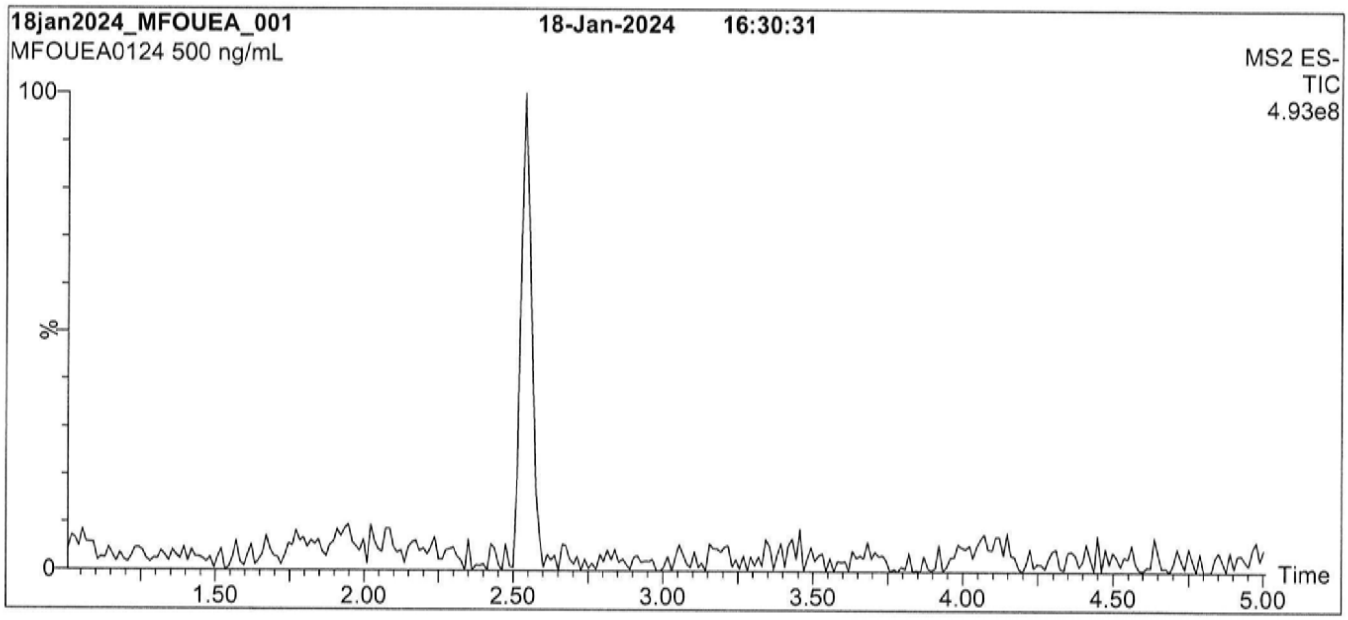


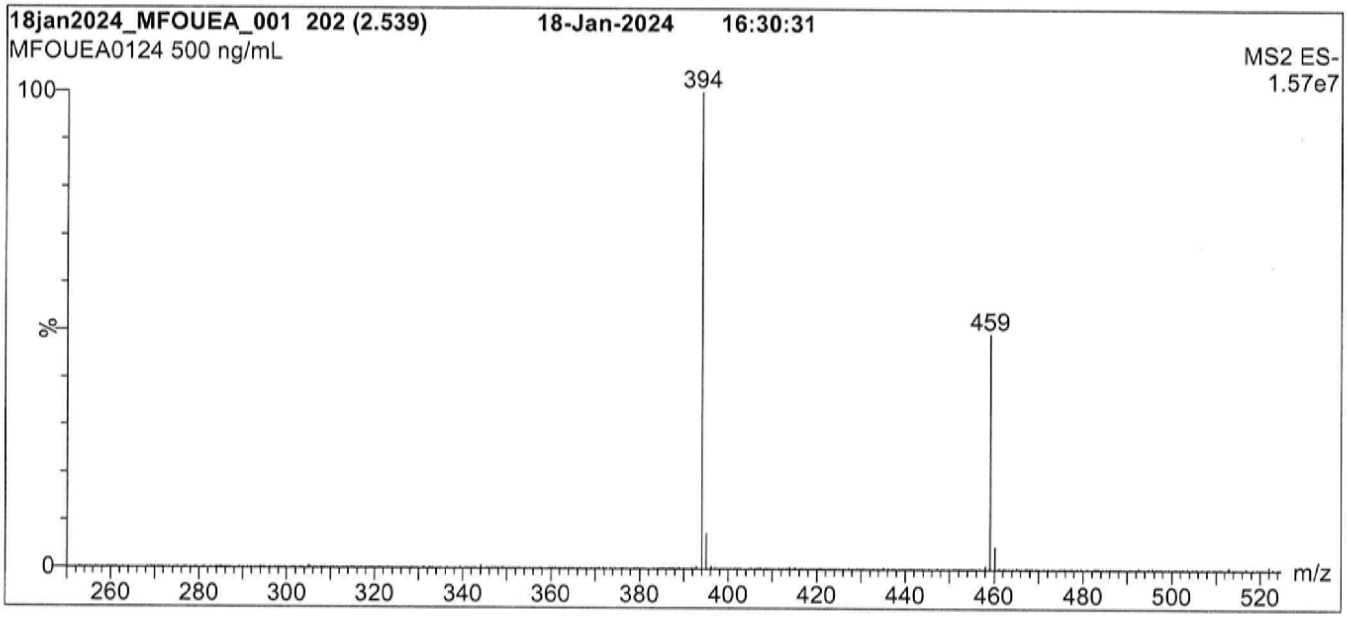


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0390

| | | | |
|---|---|---|---|
| Description: s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:13 by ABK |
| Lot Number: | 63264s | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.01s | ug/mLs |

# nalytical Standard RecordA

**24B0390**

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0291s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 11/11/2025s | 03/26/2024 15:12s | by ABK | 0.5s |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0474B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

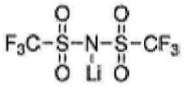

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

**24C0040**

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mL s | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSA s | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# nalytical Standard RecordA

## 24C0040

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mL s | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# nalytical Standard RecordA

**24C0040**

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# nalytical Standard RecordA

## 24C0392

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 03/18/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/18/2024 11:15 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.25s |

# nalytical Standard RecordA

## 24C0420

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# nalytical Standard RecordA

## 24C0420

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# nalytical Standard RecordA

**24C0420**

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# nalytical Standard RecordA

## 24C0423

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/19/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 13:17 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

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NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

April 05, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0121L

Enclosed are the results of analyses for samples received by our laboratory on 3/20/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

E O For Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

# Data Validatable Report

## Analysis Case Narrativen

n

**EPA 1633**: Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical t justification are provided as data qualifiers.t

The extracted internal standards 13C8-PFOSA, D3-NMEFOSA, and D5-NETFOSA recovered below the lower control limits in t sample 07 - DUP-5-031924.t

The extracted internal standards 13C8-PFOSA, D3-NMEFOSA, and D5-NETFOSA recovered below the lower control limits in t sample 09 - EB-7-031924.t

The extracted internal standards 13C8-PFOSA, D3-NMEFOSA, and D5-NETFOSA recovered below the lower control limits in t sample 10 - FB-7-031924.t

The analyte PFOA recovered above one half the LOQ in the BDC0337-BLK1. The associated samples have been flagged t appropriately. The extracted internal standard 13C8-PFOSA recovered below the lower control limit.t

## Samples in this Reportn

| Lab IDn | Sample n | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0121-01o | MW-20-4o | Watero | 03/19/2024 07:50o | 03/20/2024o |
| 24C0121-02o | MW-20-3o | Watero | 03/19/2024 08:25o | 03/20/2024o |
| 24C0121-03o | MW-20-2o | Watero | 03/19/2024 08:40o | 03/20/2024o |
| 24C0121-04o | MW-20-1o | Watero | 03/19/2024 09:05o | 03/20/2024o |
| 24C0121-05o | MW-6o | Watero | 03/19/2024 11:02o | 03/20/2024o |
| 24C0121-06o | MW-10o | Watero | 03/19/2024 12:05o | 03/20/2024o |
| 24C0121-07o | DUP-5-031924o | Watero | 03/19/2024 12:15o | 03/20/2024o |
| 24C0121-08o | MW-5o | Watero | 03/19/2024 13:17o | 03/20/2024o |
| 24C0121-09o | EB-7-031924o | Watero | 03/19/2024 13:25o | 03/20/2024o |
| 24C0121-10o | FB-7-031924o | Watero | 03/19/2024 13:30o | 03/20/2024o |

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0121-01t | | | |
| | 500mL Pt | 1t | |
| 24C0121-02t | | | |
| | 500mL Pt | 1t | |
| 24C0121-03t | | | |
| | 500mL Pt | 1t | |
| 24C0121-04t | | | |
| | 500mL Pt | 1t | |
| 24C0121-05t | | | |
| | 500mL Pt | 3t | |
| 24C0121-06t | | | |
| | 500mL Pt | 1t | |
| 24C0121-07t | | | |
| | 500mL Pt | 1t | |
| 24C0121-08t | | | |
| | 500mL Pt | 3t | |
| 24C0121-09t | | | |
| | 500mL Pt | 1t | |
| 24C0121-10t | | | |
| | 500mL Pt | 1t | |

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

a

**Sample: aMW-20-4 a**

**24C0121-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | | 0.73o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.088o | Jo | 0.37o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.081o | Jo | 0.37o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.70o | Bo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | 0.097o | IR2, Jo | 0.37o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | | 0.37o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | NDo | | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.34o | Jo | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *65.3%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Sample Results

**(Continued)**

### Sample: MW-20-4 (Continued)

**24C0121-01 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *111%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.6%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *94.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *94.0%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *97.1%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *105%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *78.3%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *47.8%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *90.8%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *97.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *96.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *112%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *114%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *105%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *94.6%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *86.8%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *67.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *66.0%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *73.3%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *100%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *61.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *57.0%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *103%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-20-3 a**

**24C0121-02 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 0.22o | Jo | 0.73o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.29o | Jo | 0.37o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.22o | Jo | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.95o | B, MI5o | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | IR1, o | 0.37o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 1.6o | IR1o | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.18o | Jo | 0.37o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.88o | MI5o | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | IR2, o | 0.37o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 1.0o | | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.5o | 0.93o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.73o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *91.3%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-20-3 (Continued)a

**24C0121-02 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *98.7%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *99.4%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *96.4%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *90.9%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *102%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *71.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *28.8%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *91.5%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *102%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *97.8%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *97.4%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *123%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *103%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *87.0%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *80.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *34.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *29.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *95.9%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *93.0%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *24.1%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *21.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-20-2 a**

**24C0121-03 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | NDo | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 0.86o | 0.73o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.72o | 0.37o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.53o | 0.37o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 1.7o B, MI5o | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | 0.37o | 0.37o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | 0.37o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 1.3o | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.30o Jo | 0.37o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 3.0o MI5o | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | 0.10o Jo | 0.37o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 9.4o | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | 1.5o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | 1.5o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | 1.5o | 0.93o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | 0.73o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | 0.73o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | 0.73o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | 0.73o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | 0.73o | 0.083o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | 0.73o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *79.4%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *117%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-20-2 (Continued)a

**24C0121-03 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *109%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *111%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *99.3%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.1%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *92.9%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *99.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *88.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *78.8%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *93.7%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *98.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *99.0%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *101%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *118%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *104%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *90.7%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *76.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *41.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *40.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *76.2%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *93.2%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *43.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *43.0%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-20-1 a**

**24C0121-04 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 0.81o | Jo | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 0.49o | Jo | 0.72o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.45o | | 0.36o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.22o | Jo | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.68o | Bo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | | 0.36o | 0.091o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 0.69o | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.17o | Jo | 0.36o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.58o | MI5o | 0.36o | 0.028o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.62o | MI5o | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | 0.13o | Jo | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.4o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.72o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.72o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *94.5%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *114%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Sample Results

**(Continued)**

### Sample: MW-20-1 (Continued)

**24C0121-04 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *97.4%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *108%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *94.5%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *97.2%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *101%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *96.5%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *77.5%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *92.9%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *94.8%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *114%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *122%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *106%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *85.4%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *83.5%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *45.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *46.0%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *74.3%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *99.6%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *43.1%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *40.3%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-6 a**

**24C0121-05 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 2.0o | 1.5o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 2.8o | 0.76o | 0.062o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 2.0o | 0.38o | 0.052o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.40o | 0.38o | 0.039o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.83o B, MI5o | 0.38o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | 0.38o | 0.078o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | 0.38o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | 0.38o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | 0.38o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 1.9o | 0.38o | 0.035o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.99o | 0.38o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 1.3o MI5o | 0.38o | 0.030o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | 0.38o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.23o MI2, Jo | 0.38o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | 0.38o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | 0.38o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | 0.38o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | 1.5o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | 1.5o | 0.30o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | 1.5o | 0.078o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | 0.38o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | 1.5o | 0.45o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | 0.38o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | 0.38o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | 1.5o | 0.99o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | 0.76o | 0.17o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | 0.76o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | 0.76o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | 0.76o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | 0.76o | 0.086o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | 0.76o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | 0.76o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | 0.76o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | 1.5o | 0.55o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | 1.5o | 0.42o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *93.7%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *110%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Sample Results
**(Continued)**

### Sample: MW-6 (Continued)
**24C0121-05 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *99.8%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *110%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *96.5%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *95.2%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *84.9%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *89.2%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *90.4%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *83.0%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *88.4%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *96.5%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *93.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *99.6%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *112%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *104%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *79.2%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *57.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *31.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *34.4%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *84.1%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *93.2%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *38.2%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *40.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *95.3%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-10 a**

**24C0121-06 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | | 0.72o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.074o | Jo | 0.36o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.14o | Jo | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.85o | Bo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | 0.26o | Jo | 0.36o | 0.092o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 0.81o | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.87o | MI5o | 0.36o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | 0.12o | Jo | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 13o | | 0.36o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.4o | 0.92o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.4o | 0.95o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.72o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.72o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *95.2%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *106%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-10 (Continued)a

**24C0121-06 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *91.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *98.8%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *95.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *96.1%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *88.3%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *92.2%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *90.3%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *90.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *73.4%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *81.9%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *91.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *97.7%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *90.4%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *110%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *103%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *92.1%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *72.0%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *23.7%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *20.2%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *91.1%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *95.5%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *22.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *20.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *92.0%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-5-031924 a**

**24C0121-07 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | | 0.74o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.083o | IR2, Jo | 0.37o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.13o | Jo | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.93o | Bo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | 0.23o | Jo | 0.37o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 0.76o | | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.058o | Jo | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.92o | MI5o | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | 0.12o | Jo | 0.37o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 14o | | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *73.4%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *102%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Sample Results
**(Continued)**

### Sample: DUP-5-031924 (Continued)
**24C0121-07 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *94.3%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *106%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *106%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *97.3%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *79.4%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *55.7%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *46.9%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *39.6%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *33.5%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *96.4%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *90.1%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *104%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *119%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *91.8%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *43.6%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *32.8%* | *S1* | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *5.45%* | *S1* | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *6.47%* | *S1* | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *78.5%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *63.4%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *13.2%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *14.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *89.2%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-5 a**

**24C0121-08 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 2.9o | | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | | 0.73o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.11o | Jo | 0.37o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.23o | Jo | 0.37o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 1.2o | Bo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.37o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | 0.094o | IR1, Jo | 0.37o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 3.0o | | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | | 0.37o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.51o | MI5o | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | | 0.37o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 5.4o | | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.73o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *88.7%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *110%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-5 (Continued)a

**24C0121-08 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *90.3%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *106%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *94.7%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *99.4%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *99.9%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *99.1%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *99.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *80.4%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *83.2%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *93.5%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *93.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *84.2%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *115%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *99.1%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *96.3%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *80.5%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *40.2%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *42.8%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *88.9%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *94.1%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *61.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *58.2%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *99.5%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-7-031924 a**

**24C0121-09 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | | 0.72o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | NDo | | 0.36o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.051o | Jo | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.93o | Bo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | | 0.36o | 0.091o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | NDo | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | NDo | | 0.36o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.27o | Jo | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.4o | 0.95o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.72o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.72o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *100%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *113%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Sample Results
**(Continued)**

### Sample: EB-7-031924 (Continued)
**24C0121-09 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *98.3%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *107%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *95.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *105%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *101%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *99.0%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *97.2%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *75.0%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *89.2%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *99.5%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *97.6%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *93.4%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *119%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *114%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *92.8%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *17.5%* | *S1* | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *4.63%* | *S1* | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *4.28%* | *S1* | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *97.8%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *101%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *10.4%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *12.2%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-7-031924 a**

**24C0121-10 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | NDo | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | 0.75o | 0.061o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | NDo | 0.37o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.048o Jo | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.29o B, Jo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | 0.37o | 0.077o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | NDo | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | NDo | 0.37o | 0.030o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.13o MI5, Jo | 0.37o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | 0.37o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | 0.37o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | 1.5o | 0.077o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | 0.37o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | 0.37o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | 1.5o | 0.95o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | 1.5o | 0.98o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | 0.75o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | 0.75o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | 0.75o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | 0.75o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | 0.75o | 0.085o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | 0.75o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | 0.75o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | 0.75o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | 1.5o | 0.54o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | 1.5o | 0.42o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | 1.5o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *98.7%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *105%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Sample Results
**(Continued)**

### Sample: FB-7-031924 (Continued)
**24C0121-10 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *95.1%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *106%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.7%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *99.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *94.7%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *89.6%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *80.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *68.2%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *88.6%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *99.4%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *93.6%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *107%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *125%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *114%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *96.9%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *14.1%* | *S1* | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *5.42%* | *S1* | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *5.93%* | *S1* | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *89.2%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *92.6%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *16.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *19.3%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0337 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0337-BLK1)u** | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 21:54o | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/Lo | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/Lo | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/Lo | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/Lo | | | | | | |
| PFOAo | 0.270 B, Jo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/Lo | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/Lo | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/Lo | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/Lo | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/Lo | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/Lo | | | | | | |
| PFOSo | 0.112 MI2, Jo | 0.40o | 0.064o | ng/Lo | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/Lo | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/Lo | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/Lo | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/Lo | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/Lo | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/Lo | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/Lo | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/Lo | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/Lo | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/Lo | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/Lo | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/Lo | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/Lo | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/Lo | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/Lo | | | | | | |
| *Surrogate: 13C4-PFBAo* | *30.8o* | | | *ng/Lo* | *32.0o* | | *96.3o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *14.6o* | | | *ng/Lo* | *16.0o* | | *91.4o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *6.96o* | | | *ng/Lo* | *8.00o* | | *87.0o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.45o* | | | *ng/Lo* | *8.00o* | | *93.2o* | *40-130o* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0337-BLK1)** | | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 21:54 | | | | | |
| *Surrogate: 13C8-PFOA* | *7.77* | | | | *ng/L* | *8.00* | | *97.1* | *40-130* | | |
| *Surrogate: 13C9-PFNA* | *4.11* | | | | *ng/L* | *4.00* | | *103* | *40-130* | | |
| *Surrogate: 13C6-PFDA* | *4.02* | | | | *ng/L* | *4.00* | | *101* | *40-130* | | |
| *Surrogate: 13C7-PFUnA* | *4.01* | | | | *ng/L* | *4.00* | | *100* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.75* | | | | *ng/L* | *4.00* | | *93.7* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.65* | | | | *ng/L* | *4.00* | | *91.1* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *6.16* | | | | *ng/L* | *8.00* | | *77.0* | *20-150* | | |
| *Surrogate: 13C3-PFBS* | *7.84* | | | | *ng/L* | *8.00* | | *98.0* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *8.14* | | | | *ng/L* | *8.00* | | *102* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *7.95* | | | | *ng/L* | *8.00* | | *99.4* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *20.9* | | | | *ng/L* | *16.0* | | *131* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *20.1* | | | | *ng/L* | *16.0* | | *125* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *18.7* | | | | *ng/L* | *16.0* | | *117* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *33.3* | | | | *ng/L* | *32.0* | | *104* | *20-150* | | |
| *Surrogate: 13C8-PFOSA* | *1.99* | *S1* | | | *ng/L* | *8.00* | | *24.9* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *0.818* | *MI5* | | | *ng/L* | *8.00* | | *10.2* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *0.848* | | | | *ng/L* | *8.00* | | *10.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *16.2* | | | | *ng/L* | *16.0* | | *101* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *16.0* | | | | *ng/L* | *16.0* | | *100* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *16.4* | | | | *ng/L* | *80.0* | | *20.5* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *20.1* | | | | *ng/L* | *80.0* | | *25.1* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *28.8* | | | | *ng/L* | *32.0* | | *89.9* | *40-130* | | |
| **LCS (BDC0337-BS1)** | | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 22:15 | | | | | |
| PFBA | 18.7 | | | 0.21 | ng/L | 16.0 | | 117 | 70-140 | | |
| PFPeA | 8.29 | | | 0.065 | ng/L | 8.00 | | 104 | 65-135 | | |
| PFHxA | 4.12 | | | 0.055 | ng/L | 4.00 | | 103 | 70-145 | | |
| PFHpA | 4.01 | | | 0.041 | ng/L | 4.00 | | 100 | 70-150 | | |
| PFOA | 4.35 | | | 0.15 | ng/L | 4.00 | | 109 | 70-150 | | |
| PFNA | 4.14 | | | 0.082 | ng/L | 4.00 | | 103 | 70-150 | | |
| PFDA | 4.11 | | | 0.10 | ng/L | 4.00 | | 103 | 70-140 | | |
| PFUnA | 4.13 | | | 0.16 | ng/L | 4.00 | | 103 | 70-145 | | |
| PFDoA | 4.21 | | | 0.11 | ng/L | 4.00 | | 105 | 70-140 | | |
| PFTrDA | 4.29 | | | 0.20 | ng/L | 4.00 | | 107 | 65-140 | | |
| PFTeDA | 4.11 | | | 0.20 | ng/L | 4.00 | | 103 | 60-140 | | |
| PFHxDA | 3.87 | | | 0.20 | ng/L | 4.00 | | 96.6 | 40-150 | | |
| PFODA | 3.34 | | | 0.20 | ng/L | 4.00 | | 83.6 | 40-150 | | |
| PFBS | 3.76 | | | 0.037 | ng/L | 3.54 | | 106 | 60-145 | | |
| PFPeS | 3.94 | | | 0.063 | ng/L | 3.76 | | 105 | 65-140 | | |
| PFHxS | 3.83 | *MI5* | | 0.032 | ng/L | 3.66 | | 105 | 65-145 | | |
| PFHpS | 4.11 | | | 0.051 | ng/L | 3.82 | | 108 | 70-150 | | |
| PFOS | 3.95 | | | 0.064 | ng/L | 3.72 | | 106 | 55-150 | | |
| PFNS | 4.15 | | | 0.12 | ng/L | 3.84 | | 108 | 65-145 | | |
| PFDS | 4.25 | | | 0.15 | ng/L | 3.86 | | 110 | 60-145 | | |
| PFDoS | 3.91 | | | 0.12 | ng/L | 3.88 | | 101 | 50-145 | | |
| 4:2FTS | 16.8 | | | 0.29 | ng/L | 15.0 | | 112 | 70-145 | | |
| 6:2FTS | 15.4 | | | 0.31 | ng/L | 15.2 | | 101 | 65-155 | | |
| 8:2FTS | 16.2 | | | 0.082 | ng/L | 15.4 | | 106 | 60-150 | | |
| 10:2FTS | 14.4 | | | 0.40 | ng/L | 15.4 | | 93.1 | 40-150 | | |
| PFOSA | 4.32 | | | 0.10 | ng/L | 4.00 | | 108 | 70-145 | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0337-BS1)u** | | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/28/24 22:15o | | | |
| NMeFOSAo | 17.6o | | 0.47o | ng/L | 16.0o | | 110 | 60-150 | | |
| NEtFOSAo | 17.0o | | 0.41o | ng/L | 16.0o | | 107 | 65-145 | | |
| NMeFOSAAo | 4.03o | | 0.11o | ng/L | 4.00o | | 101 | 50-140 | | |
| NEtFOSAAo | 4.39o | | 0.11o | ng/L | 4.00o | | 110 | 70-145 | | |
| NMeFOSEo | 16.0o | | 1.0o | ng/L | 16.0o | | 99.7 | 70-145 | | |
| NEtFOSEo | 17.7o | | 1.0o | ng/L | 16.0o | | 110 | 70-135 | | |
| HFPO-DAo | 3.76o | | 0.17o | ng/L | 4.00o | | 94.0 | 70-140 | | |
| ADONAo | 4.36o | | 0.12o | ng/L | 3.78o | | 115 | 65-145 | | |
| PFEESAo | 7.37o | | 0.11o | ng/L | 7.12o | | 103 | 70-140 | | |
| PFMPAo | 8.09o | | 0.054o | ng/L | 8.00o | | 101 | 55-140 | | |
| PFMBAo | 8.26o | | 0.091o | ng/L | 8.00o | | 103 | 60-150 | | |
| NFDHAo | 8.47o | | 0.30o | ng/L | 8.00o | | 106 | 50-150 | | |
| 9Cl-PF3ONSo | 4.06o | | 0.21o | ng/L | 3.74o | | 109 | 70-155 | | |
| 11Cl-PF3OUDSo | 4.09o | | 0.21o | ng/L | 3.78o | | 108 | 55-160 | | |
| 3:3FTCAo | 15.4o | | 0.57o | ng/L | 16.0o | | 96.4 | 65-130 | | |
| 5:3FTCAo | 16.3o | | 0.44o | ng/L | 16.0o | | 102 | 70-135 | | |
| 7:3FTCAo | 14.8o | | 0.55o | ng/L | 16.0o | | 92.8 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.6o* | | | *ng/Lo* | *32.0o* | | *105* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *110* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *8.19o* | | | *ng/Lo* | *8.00o* | | *102* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.58o* | | | *ng/Lo* | *8.00o* | | *107* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.85o* | | | *ng/Lo* | *8.00o* | | *111* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.33o* | | | *ng/Lo* | *4.00o* | | *108* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.16o* | | | *ng/Lo* | *4.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.03o* | | | *ng/Lo* | *4.00o* | | *101* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.96o* | | | *ng/Lo* | *4.00o* | | *99.1* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.92o* | | | *ng/Lo* | *4.00o* | | *98.0* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.69o* | | | *ng/Lo* | *8.00o* | | *83.6* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *8.23o* | | | *ng/Lo* | *8.00o* | | *103* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.50o* | | | *ng/Lo* | *8.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.69o* | | | *ng/Lo* | *8.00o* | | *109* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.0o* | | | *ng/Lo* | *16.0o* | | *113* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.3o* | | | *ng/Lo* | *16.0o* | | *127* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.6o* | | | *ng/Lo* | *16.0o* | | *123* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *36.0o* | | | *ng/Lo* | *32.0o* | | *112* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.94o* | | | *ng/Lo* | *8.00o* | | *49.3* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.78o* | | | *ng/Lo* | *8.00o* | | *22.3* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.72o* | | | *ng/Lo* | *8.00o* | | *21.5* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *110* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *17.4o* | | | *ng/Lo* | *16.0o* | | *109* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *18.9o* | | | *ng/Lo* | *80.0o* | | *23.6* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *16.0o* | | | *ng/Lo* | *80.0o* | | *20.0* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *31.5o* | | | *ng/Lo* | *32.0o* | | *98.6* | *40-130* | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0337-MRL1)u** | | | | | Prepared: 03/22/24 10:26 | Analyzed: 03/28/24 22:35o | | | | |
| PFBAo | 4.29o | | 0.21o | ng/Lo | 3.20o | | 134o | 70-140 | | |
| PFPeAo | 1.43o | | 0.065o | ng/Lo | 1.60o | | 89.2o | 65-135 | | |
| PFHxAo | 0.777o | | 0.055o | ng/Lo | 0.800o | | 97.2o | 70-145 | | |
| PFHpAo | 0.745o | | 0.041o | ng/Lo | 0.800o | | 93.1o | 70-150 | | |
| PFOAo | 1.03o | | 0.15o | ng/Lo | 0.800o | | 129o | 70-150 | | |
| PFNAo | 0.768o | | 0.082o | ng/Lo | 0.800o | | 96.0o | 70-150 | | |
| PFDAo | 0.792o | | 0.10o | ng/Lo | 0.800o | | 99.0o | 70-140 | | |
| PFUnAo | 0.757o | | 0.16o | ng/Lo | 0.800o | | 94.6o | 70-145 | | |
| PFDoAo | 0.743o | | 0.11o | ng/Lo | 0.800o | | 92.9o | 70-140 | | |
| PFTrDAo | 0.784o | | 0.20o | ng/Lo | 0.800o | | 98.0o | 65-140 | | |
| PFTeDAo | 0.713o | | 0.20o | ng/Lo | 0.800o | | 89.1o | 60-140 | | |
| PFHxDAo | 0.744o | | 0.20o | ng/Lo | 0.800o | | 92.9o | 40-150 | | |
| PFODAo | 0.671o | | 0.20o | ng/Lo | 0.800o | | 83.9o | 40-150 | | |
| PFBSo | 0.661o | | 0.037o | ng/Lo | 0.708o | | 93.4o | 60-145 | | |
| PFPeSo | 0.719o | | 0.063o | ng/Lo | 0.752o | | 95.6o | 65-140 | | |
| PFHxSo | 0.682oMI5o | | 0.032o | ng/Lo | 0.732o | | 93.1o | 65-145 | | |
| PFHpSo | 0.730o | | 0.051o | ng/Lo | 0.764o | | 95.5o | 70-150 | | |
| PFOSo | 0.821o | | 0.064o | ng/Lo | 0.744o | | 110o | 55-150 | | |
| PFNSo | 0.760o | | 0.12o | ng/Lo | 0.768o | | 99.0o | 65-145 | | |
| PFDSo | 0.772o | | 0.15o | ng/Lo | 0.772o | | 100o | 60-145 | | |
| PFDoSo | 0.739o | | 0.12o | ng/Lo | 0.776o | | 95.2o | 50-145 | | |
| 4:2FTSo | 2.83o | | 0.29o | ng/Lo | 3.00o | | 94.4o | 70-145 | | |
| 6:2FTSo | 3.01o | | 0.31o | ng/Lo | 3.04o | | 99.0o | 65-155 | | |
| 8:2FTSo | 2.91o | | 0.082o | ng/Lo | 3.07o | | 94.9o | 60-150 | | |
| 10:2FTSo | 3.13o | | 0.40o | ng/Lo | 3.09o | | 101o | 40-150 | | |
| PFOSAo | 0.639o | | 0.10o | ng/Lo | 0.800o | | 79.9o | 70-145 | | |
| NMeFOSAo | 2.00oMI5o | | 0.47o | ng/Lo | 3.20o | | 62.5o | 60-150 | | |
| NEtFOSAo | 2.19o | | 0.41o | ng/Lo | 3.20o | | 68.3o | 65-145 | | |
| NMeFOSAAo | 0.723o | | 0.11o | ng/Lo | 0.800o | | 90.4o | 50-140 | | |
| NEtFOSAAo | 0.746o | | 0.11o | ng/Lo | 0.800o | | 93.3o | 70-145 | | |
| NMeFOSEo | 2.82o | | 1.0o | ng/Lo | 3.20o | | 88.1o | 70-145 | | |
| NEtFOSEo | 2.40oMI5o | | 1.0o | ng/Lo | 3.20o | | 75.0o | 70-135 | | |
| HFPO-DAo | 0.689oJo | | 0.17o | ng/Lo | 0.800o | | 86.1o | 70-140 | | |
| ADONAo | 0.764oJo | | 0.12o | ng/Lo | 0.756o | | 101o | 65-145 | | |
| PFEESAo | 1.43o | | 0.11o | ng/Lo | 1.42o | | 100o | 70-140 | | |
| PFMPAo | 1.34o | | 0.054o | ng/Lo | 1.60o | | 83.5o | 55-140 | | |
| PFMBAo | 1.41o | | 0.091o | ng/Lo | 1.60o | | 88.2o | 60-150 | | |
| NFDHAo | 1.37o | | 0.30o | ng/Lo | 1.60o | | 85.4o | 50-150 | | |
| 9Cl-PF3ONSo | 0.692oJo | | 0.21o | ng/Lo | 0.748o | | 92.5o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.737oJo | | 0.21o | ng/Lo | 0.756o | | 97.5o | 55-160 | | |
| 3:3FTCAo | 2.66o | | 0.57o | ng/Lo | 3.20o | | 83.0o | 65-130 | | |
| 5:3FTCAo | 2.81o | | 0.44o | ng/Lo | 3.20o | | 87.9o | 70-135 | | |
| 7:3FTCAo | 2.69o | | 0.55o | ng/Lo | 3.20o | | 84.1o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *32.9o* | | | *ng/Lo* | *32.0o* | | *103o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *19.8o* | | | *ng/Lo* | *16.0o* | | *124o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.78o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.83o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *8.49o* | | | *ng/Lo* | *8.00o* | | *106o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.22o* | | | *ng/Lo* | *4.00o* | | *106o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.19o* | | | *ng/Lo* | *4.00o* | | *105o* | *40-130 o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0337-MRL1)u** | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 22:35o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *4.22o* | | | *ng/Lo* | *4.00o* | | *105o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *4.21o* | | | *ng/Lo* | *4.00o* | | *105o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.15o* | | | *ng/Lo* | *4.00o* | | *104o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.42o* | | | *ng/Lo* | *8.00o* | | *80.3o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.38o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.59o* | | | *ng/Lo* | *8.00o* | | *107o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *8.35o* | | | *ng/Lo* | *8.00o* | | *104o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *19.2o* | | | *ng/Lo* | *16.0o* | | *120o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.2o* | | | *ng/Lo* | *16.0o* | | *126o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.3o* | | | *ng/Lo* | *16.0o* | | *121o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *35.6o* | | | *ng/Lo* | *32.0o* | | *111o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *4.51o* | | | *ng/Lo* | *8.00o* | | *56.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.35o* | | | *ng/Lo* | *8.00o* | | *29.4o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.11o* | | | *ng/Lo* | *8.00o* | | *26.4o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.3o* | | | *ng/Lo* | *16.0o* | | *108o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *16.9o* | | | *ng/Lo* | *16.0o* | | *106o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *24.6o* | | | *ng/Lo* | *80.0o* | | *30.7o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *22.4o* | | | *ng/Lo* | *80.0o* | | *28.0o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *34.2o* | | | *ng/Lo* | *32.0o* | | *107o* | *40-130o* | | |
| **Matrix Spike (BDC0337-MS1)u** | **Source: 24C0121-05u** | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 22:56o | | | | | | |
| PFBAo | 15.8o | | 0.19o | ng/Lo | 14.4o | 2.05o | 95.6o | 70-140o | | |
| PFPeAo | 9.57o | | 0.059o | ng/Lo | 7.21o | 2.84o | 93.3o | 65-135o | | |
| PFHxAo | 6.13o | | 0.050o | ng/Lo | 3.61o | 1.96o | 116o | 70-145o | | |
| PFHpAo | 3.91o | | 0.037o | ng/Lo | 3.61o | 0.404o | 97.2o | 70-150o | | |
| PFOAo | 4.43oMI5o | | 0.14o | ng/Lo | 3.61o | 0.833o | 99.7o | 70-150o | | |
| PFNAo | 3.55o | | 0.074o | ng/Lo | 3.61o | NDo | 98.4o | 70-150o | | |
| PFDAo | 3.66o | | 0.091o | ng/Lo | 3.61o | NDo | 102o | 70-140o | | |
| PFUnAo | 3.70o | | 0.14o | ng/Lo | 3.61o | NDo | 103o | 70-145o | | |
| PFDoAo | 3.68o | | 0.10o | ng/Lo | 3.61o | NDo | 102o | 70-140o | | |
| PFTrDAo | 3.73o | | 0.18o | ng/Lo | 3.61o | NDo | 103o | 65-140o | | |
| PFTeDAo | 3.40o | | 0.18o | ng/Lo | 3.61o | NDo | 94.2o | 60-140o | | |
| PFHxDAo | 3.60o | | 0.18o | ng/Lo | 3.61o | NDo | 99.8o | 40-150o | | |
| PFODAo | 3.36o | | 0.18o | ng/Lo | 3.61o | NDo | 93.2o | 40-150o | | |
| PFBSo | 5.23o | | 0.033o | ng/Lo | 3.19o | 1.86o | 105o | 60-145o | | |
| PFPeSo | 4.25o | | 0.057o | ng/Lo | 3.39o | 0.993o | 96.0o | 65-140o | | |
| PFHxSo | 4.27oMI5o | | 0.029o | ng/Lo | 3.30o | 1.28o | 90.5o | 65-145o | | |
| PFHpSo | 3.52o | | 0.046o | ng/Lo | 3.44o | NDo | 102o | 70-150o | | |
| PFOSo | 3.61o | | 0.057o | ng/Lo | 3.35o | 0.234o | 101o | 55-150o | | |
| PFNSo | 3.51o | | 0.11o | ng/Lo | 3.46o | NDo | 101o | 65-145o | | |
| PFDSo | 3.55o | | 0.14o | ng/Lo | 3.48o | NDo | 102o | 60-145o | | |
| PFDoSo | 3.44o | | 0.11o | ng/Lo | 3.50o | NDo | 98.3o | 50-145o | | |
| 4:2FTSo | 12.4o | | 0.26o | ng/Lo | 13.5o | NDo | 92.0o | 70-145o | | |
| 6:2FTSo | 14.0o | | 0.28o | ng/Lo | 13.7o | NDo | 102o | 65-155o | | |
| 8:2FTSo | 13.2o | | 0.074o | ng/Lo | 13.8o | NDo | 95.0o | 60-150o | | |
| 10:2FTSo | 12.2o | | 0.36o | ng/Lo | 13.9o | NDo | 87.5o | 40-150o | | |
| PFOSAo | 3.68o | | 0.094o | ng/Lo | 3.61o | NDo | 102o | 70-145o | | |
| NMeFOSAo | 14.8o | | 0.43o | ng/Lo | 14.4o | NDo | 102o | 60-150o | | |
| NEtFOSAo | 13.8o | | 0.37o | ng/Lo | 14.4o | NDo | 95.5o | 65-145o | | |
| NMeFOSAAo | 3.68o | | 0.095o | ng/Lo | 3.61o | NDo | 102o | 50-140o | | |

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*No duplication of this report is allowed, except in its entirety.o*

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS1)u** | **Source: 24C0121-05** | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/28/24 22:56 | | | |
| NEtFOSAAo | 3.44o | | 0.10o | ng/L | 3.61o | NDo | 95.5 | 70-145 | | |
| NMeFOSEo | 13.9o | | 0.91o | ng/L | 14.4o | NDo | 96.2 | 70-145 | | |
| NEtFOSEo | 14.8o | | 0.94o | ng/L | 14.4o | NDo | 103 | 70-135 | | |
| HFPO-DAo | 3.60o | | 0.16o | ng/L | 3.61o | NDo | 99.9 | 70-140 | | |
| ADONAo | 3.79o | | 0.11o | ng/L | 3.41o | NDo | 111 | 65-145 | | |
| PFEESAo | 6.79o | | 0.098o | ng/L | 6.42o | NDo | 106 | 70-140 | | |
| PFMPAo | 6.61o | | 0.049o | ng/L | 7.21o | NDo | 91.7 | 55-140 | | |
| PFMBAo | 6.90o | | 0.082o | ng/L | 7.21o | NDo | 95.7 | 60-150 | | |
| NFDHAo | 7.93o | | 0.27o | ng/L | 7.21o | NDo | 110 | 50-150 | | |
| 9Cl-PF3ONSo | 3.48o | | 0.19o | ng/L | 3.37o | NDo | 103 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.74o | | 0.19o | ng/L | 3.41o | NDo | 110 | 55-160 | | |
| 3:3FTCAo | 12.5o | | 0.52o | ng/L | 14.4o | NDo | 86.9 | 65-130 | | |
| 5:3FTCAo | 16.5o | | 0.40o | ng/L | 14.4o | NDo | 114 | 70-135 | | |
| 7:3FTCAo | 16.9o | | 0.50o | ng/L | 14.4o | NDo | 117 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *26.6o* | | | *ng/Lo* | *28.8o* | | *92.2* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *15.4o* | | | *ng/Lo* | *14.4o* | | *107* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *6.26o* | | | *ng/Lo* | *7.21o* | | *86.8* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *7.09o* | | | *ng/Lo* | *7.21o* | | *98.3* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.37o* | | | *ng/Lo* | *7.21o* | | *102* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.51o* | | | *ng/Lo* | *3.61o* | | *97.4* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.53o* | | | *ng/Lo* | *3.61o* | | *97.9* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *3.62o* | | | *ng/Lo* | *3.61o* | | *100* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.51o* | | | *ng/Lo* | *3.61o* | | *97.3* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.60o* | | | *ng/Lo* | *3.61o* | | *99.8* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.99o* | | | *ng/Lo* | *7.21o* | | *83.0* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *6.61o* | | | *ng/Lo* | *7.21o* | | *91.6* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *7.40o* | | | *ng/Lo* | *7.21o* | | *103* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *7.09o* | | | *ng/Lo* | *7.21o* | | *98.3* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *15.9o* | | | *ng/Lo* | *14.4o* | | *110* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *16.4o* | | | *ng/Lo* | *14.4o* | | *114* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *16.5o* | | | *ng/Lo* | *14.4o* | | *115* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *32.2o* | | | *ng/Lo* | *28.8o* | | *112* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *5.88o* | | | *ng/Lo* | *7.21o* | | *81.6* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *3.69o* | | | *ng/Lo* | *7.21o* | | *51.2* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *3.94o* | | | *ng/Lo* | *7.21o* | | *54.7* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.9o* | | | *ng/Lo* | *14.4o* | | *96.5* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *14.5o* | | | *ng/Lo* | *14.4o* | | *100* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *50.9o* | | | *ng/Lo* | *72.1o* | | *70.6* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *48.0o* | | | *ng/Lo* | *72.1o* | | *66.6* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *26.6o* | | | *ng/Lo* | *28.8o* | | *92.2* | *40-130* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS2)u** | **Source: 24C0121-08u** | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/28/24 23:37o | | | |
| PFBAo | 16.0o | | 0.19o | ng/Lo | 14.6o | 2.90o | 90.0o | 70-140 | | |
| PFPeAo | 7.26o | | 0.059o | ng/Lo | 7.28o | NDo | 99.7o | 65-135 | | |
| PFHxAo | 3.98o | | 0.050o | ng/Lo | 3.64o | 0.106o | 106o | 70-145 | | |
| PFHpAo | 3.89o | | 0.037o | ng/Lo | 3.64o | 0.227o | 101o | 70-150 | | |
| PFOAo | 4.63o | | 0.14o | ng/Lo | 3.64o | 1.25o | 93.0o | 70-150 | | |
| PFNAo | 3.81o | | 0.075o | ng/Lo | 3.64o | NDo | 104o | 70-150 | | |
| PFDAo | 3.71o | | 0.092o | ng/Lo | 3.64o | 0.0936o | 99.2o | 70-140 | | |
| PFUnAo | 3.65o | | 0.15o | ng/Lo | 3.64o | NDo | 100o | 70-145 | | |
| PFDoAo | 3.67o | | 0.10o | ng/Lo | 3.64o | NDo | 101o | 70-140 | | |
| PFTrDAo | 3.72o | | 0.19o | ng/Lo | 3.64o | NDo | 102o | 65-140 | | |
| PFTeDAo | 3.64o | | 0.18o | ng/Lo | 3.64o | NDo | 99.9o | 60-140 | | |
| PFHxDAo | 3.68o | | 0.18o | ng/Lo | 3.64o | NDo | 101o | 40-150 | | |
| PFODAo | 3.16o | | 0.18o | ng/Lo | 3.64o | NDo | 86.8o | 40-150 | | |
| PFBSo | 5.97o | | 0.033o | ng/Lo | 3.22o | 2.98o | 92.7o | 60-145 | | |
| PFPeSo | 3.27o | | 0.057o | ng/Lo | 3.42o | NDo | 95.6o | 65-140 | | |
| PFHxSo | 3.69oMI5o | | 0.029 | ng/Lo | 3.33o | 0.512o | 95.3o | 65-145 | | |
| PFHpSo | 3.58o | | 0.047o | ng/Lo | 3.48o | NDo | 103o | 70-150 | | |
| PFOSo | 8.80o | | 0.058o | ng/Lo | 3.39o | 5.37o | 101o | 55-150 | | |
| PFNSo | 3.49o | | 0.11o | ng/Lo | 3.50o | NDo | 99.7o | 65-145 | | |
| PFDSo | 3.54o | | 0.14o | ng/Lo | 3.51o | NDo | 101o | 60-145 | | |
| PFDoSo | 3.41o | | 0.11o | ng/Lo | 3.53o | NDo | 96.5o | 50-145 | | |
| 4:2FTSo | 13.4o | | 0.26o | ng/Lo | 13.7o | NDo | 98.0o | 70-145 | | |
| 6:2FTSo | 13.0o | | 0.29o | ng/Lo | 13.8o | NDo | 93.8o | 65-155 | | |
| 8:2FTSo | 13.7o | | 0.075o | ng/Lo | 14.0o | NDo | 97.6o | 60-150 | | |
| 10:2FTSo | 13.6o | | 0.36o | ng/Lo | 14.1o | NDo | 96.5o | 40-150 | | |
| PFOSAo | 3.73o | | 0.095o | ng/Lo | 3.64o | NDo | 102o | 70-145 | | |
| NMeFOSAo | 15.0o | | 0.43o | ng/Lo | 14.6o | NDo | 103o | 60-150 | | |
| NEtFOSAo | 13.4o | | 0.38o | ng/Lo | 14.6o | NDo | 92.0o | 65-145 | | |
| NMeFOSAAo | 3.49o | | 0.096o | ng/Lo | 3.64o | NDo | 95.7o | 50-140 | | |
| NEtFOSAAo | 3.49o | | 0.10o | ng/Lo | 3.64o | NDo | 95.9o | 70-145 | | |
| NMeFOSEo | 12.7o | | 0.92o | ng/Lo | 14.6o | NDo | 87.5o | 70-145 | | |
| NEtFOSEo | 13.8o | | 0.95o | ng/Lo | 14.6o | NDo | 94.8o | 70-135 | | |
| HFPO-DAo | 3.14o | | 0.16o | ng/Lo | 3.64o | NDo | 86.3o | 70-140 | | |
| ADONAo | 3.91o | | 0.11o | ng/Lo | 3.44o | NDo | 114o | 65-145 | | |
| PFEESAo | 7.05o | | 0.099o | ng/Lo | 6.48o | NDo | 109o | 70-140 | | |
| PFMPAo | 7.11o | | 0.049o | ng/Lo | 7.28o | NDo | 97.6o | 55-140 | | |
| PFMBAo | 7.19o | | 0.083o | ng/Lo | 7.28o | NDo | 98.7o | 60-150 | | |
| NFDHAo | 6.75o | | 0.27o | ng/Lo | 7.28o | NDo | 92.6o | 50-150 | | |
| 9Cl-PF3ONSo | 3.52o | | 0.19o | ng/Lo | 3.41o | NDo | 103o | 70-155 | | |
| 11Cl-PF3OUDSo | 3.99o | | 0.19o | ng/Lo | 3.44o | NDo | 116o | 55-160 | | |
| 3:3FTCAo | 13.6o | | 0.52o | ng/Lo | 14.6o | NDo | 93.6o | 65-130 | | |
| 5:3FTCAo | 16.1o | | 0.40o | ng/Lo | 14.6o | NDo | 110o | 70-135 | | |
| 7:3FTCAo | 17.5o | | 0.50o | ng/Lo | 14.6o | NDo | 120o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *29.0o* | | | *ng/Lo* | *29.1o* | | *99.5o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *15.3o* | | | *ng/Lo* | *14.6o* | | *105o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *6.64o* | | | *ng/Lo* | *7.28o* | | *91.2o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.68o* | | | *ng/Lo* | *7.28o* | | *105o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *7.07o* | | | *ng/Lo* | *7.28o* | | *97.0o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *3.54o* | | | *ng/Lo* | *3.64o* | | *97.3o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *3.74o* | | | *ng/Lo* | *3.64o* | | *103o* | *40-130 o* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS2)u** | **Source: 24C0121-08u** | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 23:37o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *3.83o* | | | *ng/Lo* | *3.64o* | | *105o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.81o* | | | *ng/Lo* | *3.64o* | | *104o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.78o* | | | *ng/Lo* | *3.64o* | | *104o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.47o* | | | *ng/Lo* | *7.28o* | | *88.8o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *6.34o* | | | *ng/Lo* | *7.28o* | | *87.0o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.32o* | | | *ng/Lo* | *7.28o* | | *101o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *7.27o* | | | *ng/Lo* | *7.28o* | | *99.8o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *13.7o* | | | *ng/Lo* | *14.6o* | | *94.3o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *16.8o* | | | *ng/Lo* | *14.6o* | | *115o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *15.7o* | | | *ng/Lo* | *14.6o* | | *108o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *30.0o* | | | *ng/Lo* | *29.1o* | | *103o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *5.97o* | | | *ng/Lo* | *7.28o* | | *82.0o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.25o* | | | *ng/Lo* | *7.28o* | | *30.9o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.50o* | | | *ng/Lo* | *7.28o* | | *34.3o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *14.7o* | | | *ng/Lo* | *14.6o* | | *101o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *14.9o* | | | *ng/Lo* | *14.6o* | | *102o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *33.3o* | | | *ng/Lo* | *72.8o* | | *45.7o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *32.8o* | | | *ng/Lo* | *72.8o* | | *45.0o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *28.5o* | | | *ng/Lo* | *29.1o* | | *98.0o* | *40-130o* | | |
| **Matrix Spike Dup (BDC0337-MSD1)u** | **Source: 24C0121-05u** | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 23:16o | | | | | | |
| PFBAo | 16.1o | | 0.19o | ng/Lo | 14.5o | 2.05o | 96.7o | 70-140o | 1.73o | 30o |
| PFPeAo | 9.95o | | 0.059o | ng/Lo | 7.27o | 2.84o | 97.7o | 65-135o | 3.80o | 30o |
| PFHxAo | 5.45o | | 0.050o | ng/Lo | 3.64o | 1.96o | 95.9o | 70-145o | 11.8o | 30o |
| PFHpAo | 4.24o | | 0.037o | ng/Lo | 3.64o | 0.404o | 106o | 70-150o | 8.20o | 30o |
| PFOAo | 4.10oMI5o | | 0.14o | ng/Lo | 3.64o | 0.833o | 89.8o | 70-150o | 7.71o | 30o |
| PFNAo | 3.37o | | 0.074o | ng/Lo | 3.64o | NDo | 92.8o | 70-150o | 5.05o | 30o |
| PFDAo | 3.61o | | 0.092o | ng/Lo | 3.64o | NDo | 99.4o | 70-140o | 1.43o | 30o |
| PFUnAo | 3.61o | | 0.15o | ng/Lo | 3.64o | NDo | 99.2o | 70-145o | 2.62o | 30o |
| PFDoAo | 3.51o | | 0.10o | ng/Lo | 3.64o | NDo | 96.5o | 70-140o | 4.85o | 30o |
| PFTrDAo | 3.68o | | 0.19o | ng/Lo | 3.64o | NDo | 101o | 65-140o | 1.18o | 30o |
| PFTeDAo | 3.60o | | 0.18o | ng/Lo | 3.64o | NDo | 99.1o | 60-140o | 5.85o | 30o |
| PFHxDAo | 3.53o | | 0.18o | ng/Lo | 3.64o | NDo | 97.1o | 40-150o | 1.88o | 30o |
| PFODAo | 3.14o | | 0.18o | ng/Lo | 3.64o | NDo | 86.3o | 40-150o | 6.96o | 30o |
| PFBSo | 5.02o | | 0.033o | ng/Lo | 3.22o | 1.86o | 98.2o | 60-145o | 4.03o | 30o |
| PFPeSo | 4.44o | | 0.057o | ng/Lo | 3.42o | 0.993o | 101o | 65-140o | 4.55o | 30o |
| PFHxSo | 4.55oMI5o | | 0.029o | ng/Lo | 3.33o | 1.28o | 98.2o | 65-145o | 6.34o | 30o |
| PFHpSo | 3.65o | | 0.047o | ng/Lo | 3.47o | NDo | 105o | 70-150o | 3.47o | 30o |
| PFOSo | 3.69o | | 0.058o | ng/Lo | 3.38o | 0.234o | 102o | 55-150o | 1.95o | 30o |
| PFNSo | 3.74o | | 0.11o | ng/Lo | 3.49o | NDo | 107o | 65-145o | 6.56o | 30o |
| PFDSo | 3.55o | | 0.14o | ng/Lo | 3.51o | NDo | 101o | 60-145o | 0.159o | 30o |
| PFDoSo | 3.75o | | 0.11o | ng/Lo | 3.53o | NDo | 106o | 50-145o | 8.60o | 30o |
| 4:2FTSo | 14.0o | | 0.26o | ng/Lo | 13.6o | NDo | 103o | 70-145o | 11.9o | 30o |
| 6:2FTSo | 13.5o | | 0.29o | ng/Lo | 13.8o | NDo | 97.8o | 65-155o | 3.35o | 30o |
| 8:2FTSo | 13.8o | | 0.075o | ng/Lo | 14.0o | NDo | 99.0o | 60-150o | 4.94o | 30o |
| 10:2FTSo | 13.3o | | 0.36o | ng/Lo | 14.0o | NDo | 94.7o | 40-150o | 8.73o | 30o |
| PFOSAo | 3.94o | | 0.095o | ng/Lo | 3.64o | NDo | 108o | 70-145o | 6.87o | 30o |
| NMeFOSAo | 15.8o | | 0.43o | ng/Lo | 14.5o | NDo | 109o | 60-150o | 6.72o | 30o |
| NEtFOSAo | 15.4o | | 0.37o | ng/Lo | 14.5o | NDo | 106o | 65-145o | 10.9o | 30o |
| NMeFOSAAo | 3.41o | | 0.096o | ng/Lo | 3.64o | NDo | 93.8o | 50-140o | 7.71o | 30o |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD1)u** | **Source: 24C0121-05u** | | | Prepared: 03/22/24 10:26 | Analyzed: 03/28/24 23:16o | | | | | |
| NEtFOSAAo | 3.72o | | 0.10o | ng/Lo | 3.64o | NDo | 102o | 70-145o | 7.68o | 30o |
| NMeFOSEo | 15.1o | | 0.92o | ng/Lo | 14.5o | NDo | 104o | 70-145o | 8.82o | 30o |
| NEtFOSEo | 16.3o | | 0.95o | ng/Lo | 14.5o | NDo | 112o | 70-135o | 9.61o | 30o |
| HFPO-DAo | 3.72o | | 0.16o | ng/Lo | 3.64o | NDo | 102o | 70-140o | 3.32o | 30o |
| ADONAo | 3.90o | | 0.11o | ng/Lo | 3.44o | NDo | 113o | 65-145o | 2.66o | 30o |
| PFEESAo | 5.99o | | 0.099o | ng/Lo | 6.47o | NDo | 92.5o | 70-140o | 12.6o | 30o |
| PFMPAo | 7.18o | | 0.049o | ng/Lo | 7.27o | NDo | 98.8o | 55-140o | 8.27o | 30o |
| PFMBAo | 6.91o | | 0.082o | ng/Lo | 7.27o | NDo | 95.0o | 60-150o | 0.124o | 30o |
| NFDHAo | 6.64o | | 0.27o | ng/Lo | 7.27o | NDo | 91.3o | 50-150o | 17.7o | 30o |
| 9Cl-PF3ONSo | 3.72o | | 0.19o | ng/Lo | 3.40o | NDo | 109o | 70-155o | 6.69o | 30o |
| 11Cl-PF3OUDSo | 3.91o | | 0.19o | ng/Lo | 3.44o | NDo | 114o | 55-160o | 4.50o | 30o |
| 3:3FTCAo | 13.9o | | 0.52o | ng/Lo | 14.5o | NDo | 95.4o | 65-130o | 10.1o | 30o |
| 5:3FTCAo | 12.9o | | 0.40o | ng/Lo | 14.5o | NDo | 88.6o | 70-135o | 24.4o | 30o |
| 7:3FTCAo | 15.1o | | 0.50o | ng/Lo | 14.5o | NDo | 104o | 50-145o | 10.7o | 30o |
| *Surrogate: 13C4-PFBAo* | *27.0o* | | | *ng/Lo* | *29.1o* | | *92.9o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *14.8o* | | | *ng/Lo* | *14.5o* | | *101o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *7.62o* | | | *ng/Lo* | *7.27o* | | *105o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.12o* | | | *ng/Lo* | *7.27o* | | *98.0o* | *40-130o* | | |
| *Surrogate: 13C8-PFOAo* | *7.91o* | | | *ng/Lo* | *7.27o* | | *109o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *3.79o* | | | *ng/Lo* | *3.64o* | | *104o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *3.63o* | | | *ng/Lo* | *3.64o* | | *99.9o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *3.55o* | | | *ng/Lo* | *3.64o* | | *97.6o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.50o* | | | *ng/Lo* | *3.64o* | | *96.2o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.52o* | | | *ng/Lo* | *3.64o* | | *96.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *7.06o* | | | *ng/Lo* | *7.27o* | | *97.1o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *6.72o* | | | *ng/Lo* | *7.27o* | | *92.5o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.25o* | | | *ng/Lo* | *7.27o* | | *99.7o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *6.79o* | | | *ng/Lo* | *7.27o* | | *93.4o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *13.7o* | | | *ng/Lo* | *14.5o* | | *94.1o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *17.1o* | | | *ng/Lo* | *14.5o* | | *118o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *15.6o* | | | *ng/Lo* | *14.5o* | | *108o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *30.5o* | | | *ng/Lo* | *29.1o* | | *105o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *4.51o* | | | *ng/Lo* | *7.27o* | | *62.0o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.60o* | | | *ng/Lo* | *7.27o* | | *35.8o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.69o* | | | *ng/Lo* | *7.27o* | | *37.0o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *13.6o* | | | *ng/Lo* | *14.5o* | | *93.7o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *13.6o* | | | *ng/Lo* | *14.5o* | | *93.4o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *24.6o* | | | *ng/Lo* | *72.7o* | | *33.8o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *23.3o* | | | *ng/Lo* | *72.7o* | | *32.0o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *27.2o* | | | *ng/Lo* | *29.1o* | | *93.5o* | *40-130o* | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD2)u** | **Source: 24C0121-08u** | | | Prepared: 03/22/24 10:26 | Analyzed: 03/28/24 23:57o | | | | | |
| PFBAo | 15.2o | | 0.18o | ng/Lo | 14.1o | 2.90o | 87.4o | 70-140o | 5.29o | 30o |
| PFPeAo | 7.34o | | 0.057o | ng/Lo | 7.03o | NDo | 104o | 65-135o | 1.06o | 30o |
| PFHxAo | 3.89o | | 0.048o | ng/Lo | 3.51o | 0.106o | 108o | 70-145o | 2.35o | 30o |
| PFHpAo | 3.63o | | 0.036o | ng/Lo | 3.51o | 0.227o | 96.7o | 70-150o | 7.00o | 30o |
| PFOAo | 4.70o | | 0.13o | ng/Lo | 3.51o | 1.25o | 98.2o | 70-150o | 1.37o | 30o |
| PFNAo | 3.61o | | 0.072o | ng/Lo | 3.51o | NDo | 103o | 70-150o | 5.26o | 30o |
| PFDAo | 3.64o | | 0.089o | ng/Lo | 3.51o | 0.0936o | 101o | 70-140o | 1.69o | 30o |
| PFUnAo | 3.55o | | 0.14o | ng/Lo | 3.51o | NDo | 101o | 70-145o | 2.82o | 30o |
| PFDoAo | 3.56o | | 0.098o | ng/Lo | 3.51o | NDo | 101o | 70-140o | 2.84o | 30o |
| PFTrDAo | 3.75o | | 0.18o | ng/Lo | 3.51o | NDo | 107o | 65-140o | 0.879o | 30o |
| PFTeDAo | 3.69o | | 0.17o | ng/Lo | 3.51o | NDo | 105o | 60-140o | 1.37o | 30o |
| PFHxDAo | 3.84o | | 0.18o | ng/Lo | 3.51o | NDo | 109o | 40-150o | 4.31o | 30o |
| PFODAo | 3.48o | | 0.18o | ng/Lo | 3.51o | NDo | 99.1o | 40-150o | 9.68o | 30o |
| PFBSo | 6.05o | | 0.032o | ng/Lo | 3.11o | 2.98o | 98.8o | 60-145o | 1.42o | 30o |
| PFPeSo | 3.32o | | 0.055o | ng/Lo | 3.30o | NDo | 101o | 65-140o | 1.47o | 30o |
| PFHxSo | 3.59oMI5o | | 0.028o | ng/Lo | 3.22o | 0.512o | 95.7o | 65-145o | 2.66o | 30o |
| PFHpSo | 3.63o | | 0.045o | ng/Lo | 3.36o | NDo | 108o | 70-150o | 1.44o | 30o |
| PFOSo | 9.08o | | 0.056o | ng/Lo | 3.27o | 5.37o | 114o | 55-150o | 3.21o | 30o |
| PFNSo | 3.34o | | 0.11o | ng/Lo | 3.37o | NDo | 99.0o | 65-145o | 4.26o | 30o |
| PFDSo | 3.58o | | 0.13o | ng/Lo | 3.39o | NDo | 106o | 60-145o | 1.19o | 30o |
| PFDoSo | 3.72o | | 0.11o | ng/Lo | 3.41o | NDo | 109o | 50-145o | 8.84o | 30o |
| 4:2FTSo | 12.8o | | 0.26o | ng/Lo | 13.2o | NDo | 97.3o | 70-145o | 4.31o | 30o |
| 6:2FTSo | 12.9o | | 0.28o | ng/Lo | 13.4o | NDo | 96.4o | 65-155o | 0.864o | 30o |
| 8:2FTSo | 13.7o | | 0.072o | ng/Lo | 13.5o | NDo | 102o | 60-150o | 0.460o | 30o |
| 10:2FTSo | 15.0o | | 0.35o | ng/Lo | 13.6o | NDo | 111o | 40-150o | 10.4o | 30o |
| PFOSAo | 3.63o | | 0.091o | ng/Lo | 3.51o | NDo | 103o | 70-145o | 2.71o | 30o |
| NMeFOSAo | 15.9o | | 0.42o | ng/Lo | 14.1o | NDo | 113o | 60-150o | 6.09o | 30o |
| NEtFOSAo | 14.9o | | 0.36o | ng/Lo | 14.1o | NDo | 106o | 65-145o | 10.3o | 30o |
| NMeFOSAAo | 3.49o | | 0.093o | ng/Lo | 3.51o | NDo | 99.4o | 50-140o | 0.227o | 30o |
| NEtFOSAAo | 3.48o | | 0.10o | ng/Lo | 3.51o | NDo | 99.2o | 70-145o | 0.235o | 30o |
| NMeFOSEo | 14.4o | | 0.89o | ng/Lo | 14.1o | NDo | 102o | 70-145o | 12.0o | 30o |
| NEtFOSEo | 13.9o | | 0.92o | ng/Lo | 14.1o | NDo | 99.2o | 70-135o | 0.943o | 30o |
| HFPO-DAo | 3.25o | | 0.15o | ng/Lo | 3.51o | NDo | 92.6o | 70-140o | 3.54o | 30o |
| ADONAo | 3.73o | | 0.11o | ng/Lo | 3.32o | NDo | 112o | 65-145o | 4.89o | 30o |
| PFEESAo | 6.65o | | 0.096o | ng/Lo | 6.26o | NDo | 106o | 70-140o | 5.91o | 30o |
| PFMPAo | 8.00o | | 0.047o | ng/Lo | 7.03o | NDo | 114o | 55-140o | 11.7o | 30o |
| PFMBAo | 7.30o | | 0.080o | ng/Lo | 7.03o | NDo | 104o | 60-150o | 1.52o | 30o |
| NFDHAo | 8.54o | | 0.26o | ng/Lo | 7.03o | NDo | 122o | 50-150o | 23.5o | 30o |
| 9Cl-PF3ONSo | 3.30o | | 0.18o | ng/Lo | 3.29o | NDo | 100o | 70-155o | 6.54o | 30o |
| 11Cl-PF3OUDSo | 3.55o | | 0.18o | ng/Lo | 3.32o | NDo | 107o | 55-160o | 11.7o | 30o |
| 3:3FTCAo | 14.3o | | 0.51o | ng/Lo | 14.1o | NDo | 102o | 65-130o | 5.08o | 30o |
| 5:3FTCAo | 15.1o | | 0.39o | ng/Lo | 14.1o | NDo | 107o | 70-135o | 6.45o | 30o |
| 7:3FTCAo | 16.6o | | 0.49o | ng/Lo | 14.1o | NDo | 118o | 50-145o | 4.84o | 30o |
| *Surrogate: 13C4-PFBAo* | *29.4o* | | | *ng/Lo* | *28.1o* | | *104o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *15.4o* | | | *ng/Lo* | *14.1o* | | *110o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *6.61o* | | | *ng/Lo* | *7.03o* | | *94.1o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.08o* | | | *ng/Lo* | *7.03o* | | *115o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *6.99o* | | | *ng/Lo* | *7.03o* | | *99.5o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *3.58o* | | | *ng/Lo* | *3.51o* | | *102o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *3.42o* | | | *ng/Lo* | *3.51o* | | *97.4o* | *40-130 o* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 11:52 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD2)** | **Source: 24C0121-08** | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 23:57 | | | | | |
| *Surrogate: 13C7-PFUnA* | *3.60* | | | | *ng/L* | *3.51* | | *102* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.61* | | | | *ng/L* | *3.51* | | *103* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.52* | | | | *ng/L* | *3.51* | | *100* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *6.60* | | | | *ng/L* | *7.03* | | *93.9* | *20-150* | | |
| *Surrogate: 13C3-PFBS* | *6.76* | | | | *ng/L* | *7.03* | | *96.2* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *7.31* | | | | *ng/L* | *7.03* | | *104* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *7.10* | | | | *ng/L* | *7.03* | | *101* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *14.5* | | | | *ng/L* | *14.1* | | *103* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *16.9* | | | | *ng/L* | *14.1* | | *120* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *15.2* | | | | *ng/L* | *14.1* | | *108* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *26.9* | | | | *ng/L* | *28.1* | | *95.8* | *20-150* | | |
| *Surrogate: 13C8-PFOSA* | *5.55* | | | | *ng/L* | *7.03* | | *78.9* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *1.86* | | | | *ng/L* | *7.03* | | *26.5* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *1.87* | | | | *ng/L* | *7.03* | | *26.5* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *14.0* | | | | *ng/L* | *14.1* | | *99.8* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *14.8* | | | | *ng/L* | *14.1* | | *105* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *27.5* | | | | *ng/L* | *70.3* | | *39.1* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *28.3* | | | | *ng/L* | *70.3* | | *40.2* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *29.5* | | | | *ng/L* | *28.1* | | *105* | *40-130* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.*
*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 11:52o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| Bo | Blank contamination |
| IR1o | Ion ratio below the lower control limit o |
| IR2o | Ion ratio above the upper control limit o |
| Jo | Estimated value o |
| MI2o | Manual integration, non-target peak interference o |
| MI5o | Manual integration, whole peak was not integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limitso |
| RPDo | Relative Percent Differenceo |
| %RECo | Percent Recoveryo |
| Sourceo | Sample that was matrix spiked or duplicated.o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL).o

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*No duplication of this report is allowed, except in its entirety.o*

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0121** R

Printed: 04/05/2024 11:53 ami

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/20/2024 09:50 AMi
Date Due:i 04/03/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Terry Moreni

| Analysisa | Commentsa |
|---|---|

**24C0121-01 MW-20-4 [Water] Sampled 3/19/2024 7:50:00AMR**
1633 NASA Listi

**24C0121-02 MW-20-3 [Water] Sampled 3/19/2024 8:25:00AMR**
1633 NASA Listi

**24C0121-03 MW-20-2 [Water] Sampled 3/19/2024 8:40:00AMR**
1633 NASA Listi

**24C0121-04 MW-20-1 [Water] Sampled 3/19/2024 9:05:00AMR**
1633 NASA Listi

**24C0121-05 MW-6 [Water] Sampled 3/19/2024 11:02:00AMR**
***Sample Comments: MS.MSDR***
1633 NASA Listi

**24C0121-06 MW-10 [Water] Sampled 3/19/2024 12:05:00PMR**
1633 NASA Listi

**24C0121-07 DUP-5-031924 [Water] Sampled 3/19/2024 12:15:00PMR**
1633 NASA Listi

**24C0121-08 MW-5 [Water] Sampled 3/19/2024 1:17:00PMR**
***Sample Comments: MS.MSDR***
1633 NASA Listi

**24C0121-09 EB-7-031924 [Water] Sampled 3/19/2024 1:25:00PMR**
1633 NASA Listi

**24C0121-10 FB-7-031924 [Water] Sampled 3/19/2024 1:30:00PMR**
1633 NASA Listi

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0121** R

Printed: 04/05/2024 11:53 ami

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0121C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **2.4°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yesi |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yesi |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yesi |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yesi |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yesi |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | Noi |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | Noi |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | Noi |

24C0121

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

IRB 2.4

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: 626-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 | Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tidep20.net | | Email: david.conner@tidep20.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| SPL-GW Monitoring | Think Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | Analysis Requested/Method Number: 8745 1633 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-20-4 | | 03/19/24 | 0750 | | 1 | X | | | X | Laboratory, please |
| MW-20-3 | | | 0825 | | 1 | X | | | X | select Z&D's |
| MW-20-2 | | | 0840 | | 1 | X | | | X | for level IV |
| MW-20-1 | | | 0905 | | 1 | X | | | X | Validation |
| MW-6 | | | 1102 | | 3 | X | | | X | MS/MSD |
| MW-10 | | | 1205 | | 1 | X | | | X | |
| DUP-5-031924 | | | 1215 | | 1 | X | | | X | |
| MW-5 | | | 1317 | | 3 | X | | | X | MS/MSD |
| TB-7-031924 | | | 1325 | | 1 | X | | | X | |
| EB-7-031924 | | | 1330 | | 1 | X | | | X | |

Date Shipped:
Carrier:
Waybill No.:

Shuttle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 3/19/24 | 1500 | Ms Nicole Parks | Ms Nicole (Elaine Tech) | 1600 | 1600 | FEDEX 7756 0820 0490 |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/20/24 | 9:50 | Jerry Mann |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information

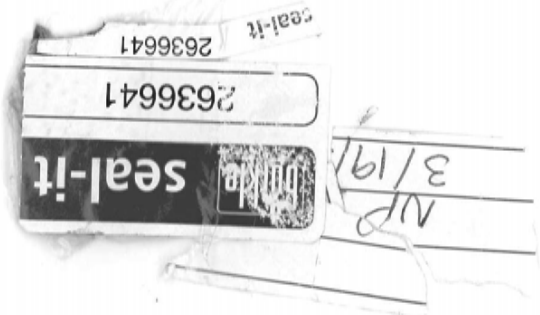
seal-it
2636641
2636641
3/19
IRB 2-4

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

## MW-20-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-01- | File ID:- | S2024-03-28B (18)- |
| Sampled:- | 03/19/24 07:50- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 01:40- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 547.386 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | ND- | 0.059- | 0.73- | U- |
| PFHxA- | 0.088- | 0.050- | 0.37- | J- |
| PFHpA- | 0.081- | 0.037- | 0.37- | J- |
| PFOA- | 0.70- | 0.14- | 0.37- | B- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | 0.097- | 0.093- | 0.37- | IR2, J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.057- | 0.37- | U- |
| PFHxS- | ND- | 0.029- | 0.37- | U- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.34- | 0.058- | 0.37- | J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-20-4-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-01- | File ID:- | S2024-03-28B (18)- |
| Sampled:- | 03/19/24 07:50- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 01:40- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 547.386 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (18)
Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>15654<br>( 163.0 / 69.0 )<br>465 | ( 2.42 , 0.70 )<br>( N/A , -0.03 , -0.1) | 104.7<br>46.6 | 0.0297<br>108.3<br>113.1 | 0.3740 | N/A | 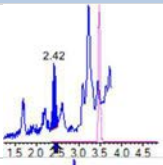 | 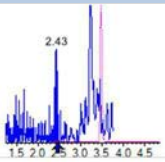 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 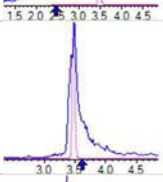 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 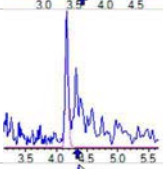 | 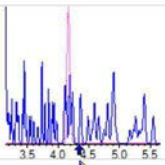 | |
| PFHxA | ( 313.0 / 269.0 )<br>4996<br>( 313.0 / 119.0 )<br>814 | ( 5.16 , 1.00 )<br>( 0.00 , N/A , 0.3) | 42.9<br>18.7 | 0.1630<br>146.5<br>137.5 | 0.0240 | N/A | 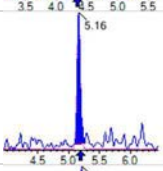 | 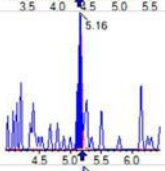 | |
| PFHpA | ( 363.0 / 319.0 )<br>5976<br>( 363.0 / 169.0 )<br>1763 | ( 6.31 , 1.00 )<br>( 0.01 , N/A , -0.1) | 65.2<br>63.4 | 0.2951<br>96.5<br>95.9 | 0.0220 | N/A | 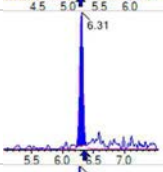 | 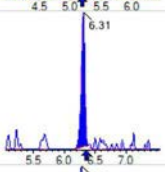 | |
| PFOA | ( 413.0 / 369.0 )<br>74084<br>( 413.0 / 169.0 )<br>23265 | ( 7.43 , 1.00 )<br>( 0.00 , N/A , 0.0) | 154.2<br>162.9 | 0.3140<br>87.9<br>88.5 | 0.1910 | N/A | 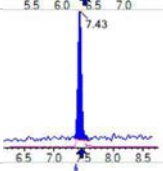 | 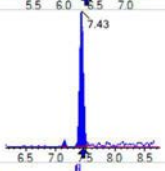 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 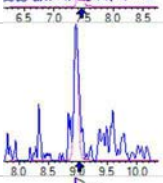 | 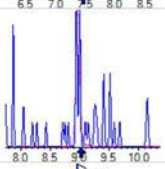 | |
| PFDA | ( 513.0 / 469.0 )<br>7599<br>( 513.0 / 169.0 )<br>1396 | ( 9.95 , 1.00 )<br>( -0.01 , N/A , -0.7) | 96.7<br>87.1 | 0.1837<br>154.2<br>150.8 | 0.0270 | N/A | 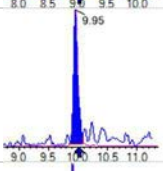 | 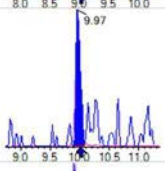 | IR2, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 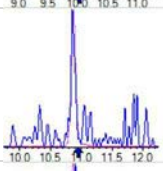 | 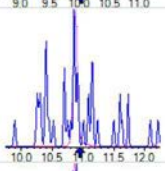 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 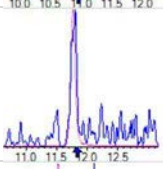 | 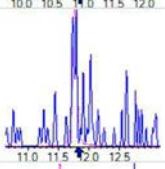 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 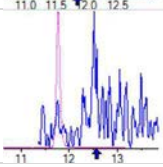 | 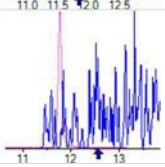 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (18)
Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 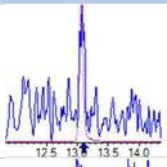 | 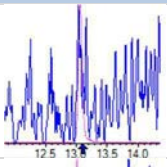 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 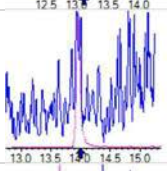 | 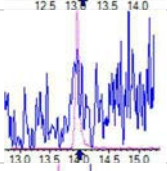 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 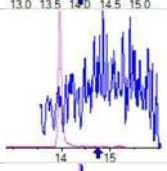 | 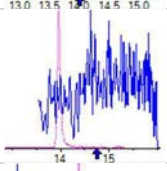 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 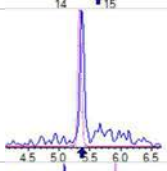 | 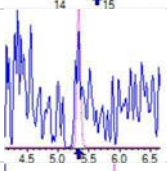 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 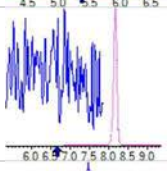 | 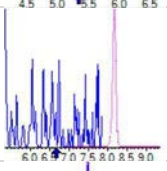 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 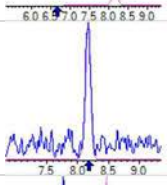 | 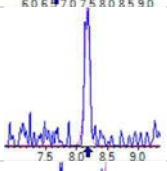 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 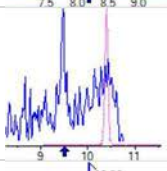 | 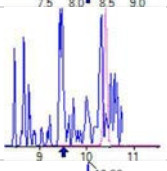 | |
| PFOS | ( 499.0 / 80.0 )<br>78550<br>( 499.0 / 99.0 )<br>17175 | ( 10.39 , 1.00 )<br>( -0.01 , N/A , -0.2) | 299.3<br>393.8 | 0.2187<br>94.6<br>95.4 | 0.0930 | N/A | 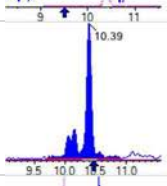 | 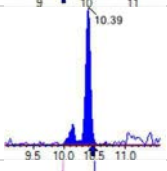 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 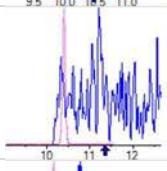 | 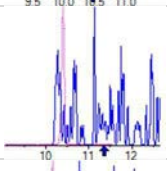 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 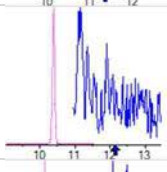 | 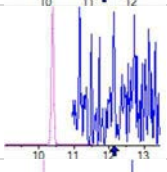 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 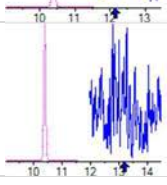 | 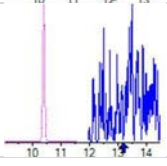 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (18)
Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 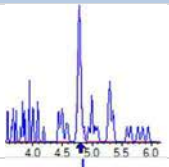 | 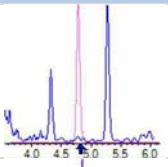 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 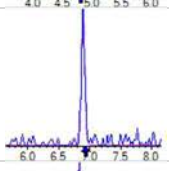 | 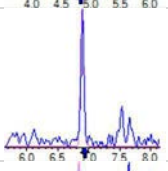 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 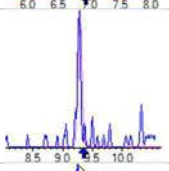 | 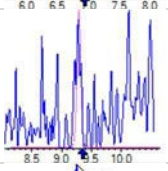 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15041<br>( 627.0 / 81.0 )<br>19979 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , -0.2) | 181.5<br>103.5 | 1.3283<br>92.4<br>91.7 | 0.0520 | N/A | 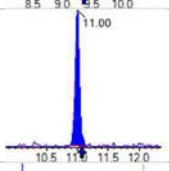 | 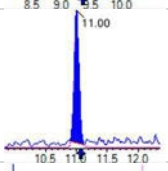 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 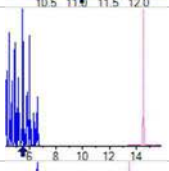 | 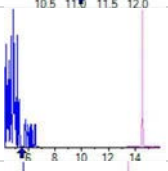 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 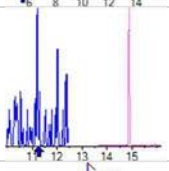 | 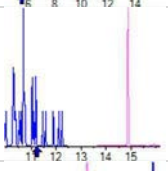 | |
| PFOSA | ( 498.0 / 78.0 )<br>9487<br>( 498.0 / 478.0 )<br>N/A | ( 13.27 , 1.00 )<br>( -0.01 , N/A , #Value!) | 109.1<br>N/A | N/A<br>0.0<br>0.0 | 0.0140 | N/A | 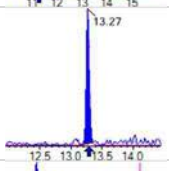 | 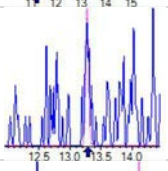 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 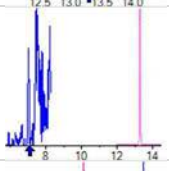 | 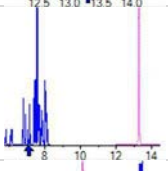 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 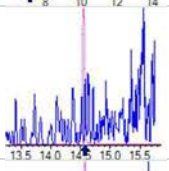 | 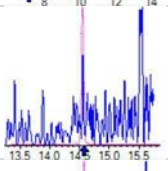 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 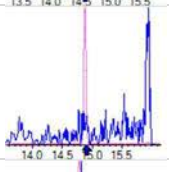 | 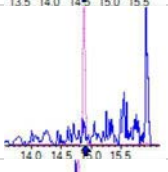 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 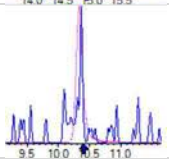 | 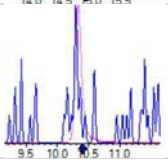 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (18)
Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 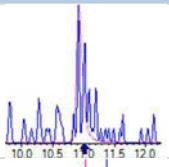 | 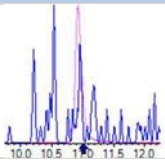 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 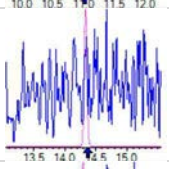 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 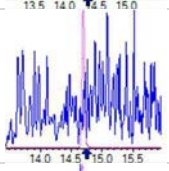 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 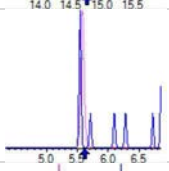 | 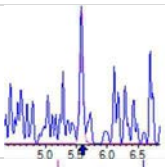 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 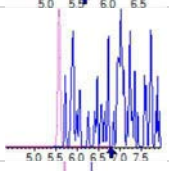 | 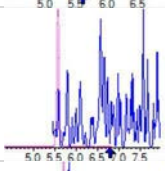 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 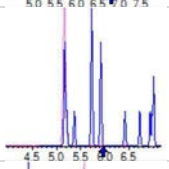 | 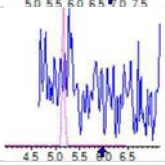 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 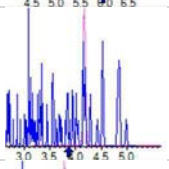 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 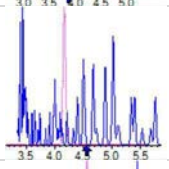 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 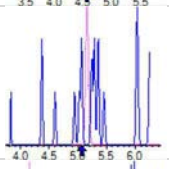 | 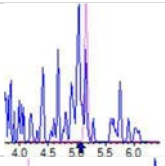 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 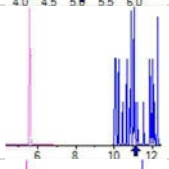 | 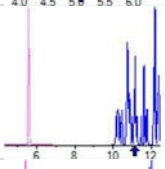 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 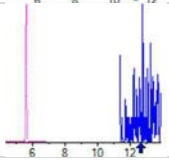 | 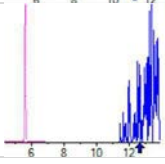 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 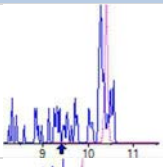 | 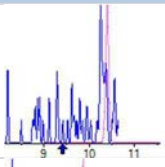 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 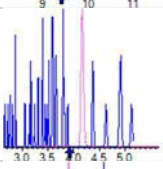 | 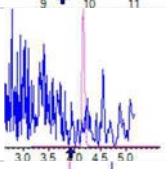 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 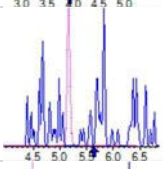 | 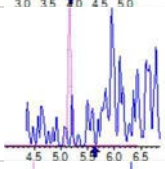 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 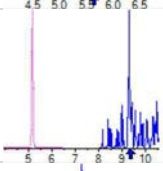 | 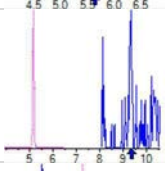 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 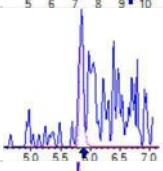 | 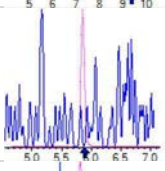 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 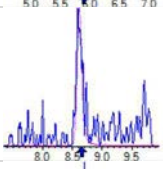 | 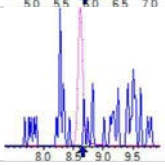 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 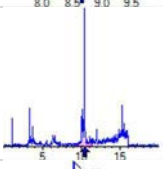 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 261878 | ( 3.47 , N/A )<br>( N/A , -0.13 , N/A ) | 2042.5 | N/A | 0.9280<br>[ 1.0000 ] | 92.8%<br>{ 99.0% } | 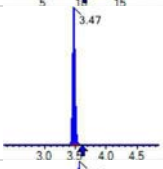 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 100623 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 16889.5 | N/A | 0.8520<br>[ 1.0000 ] | 85.2%<br>{ 86.9% } | 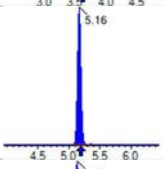 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 366597 | ( 7.43 , N/A )<br>( N/A , -0.04 , N/A ) | 5167.2 | N/A | 0.9440<br>[ 1.0000 ] | 94.5%<br>{ 101.6% } | 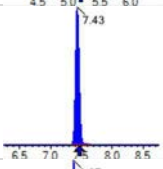 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 258941 | ( 8.97 , N/A )<br>( N/A , -0.05 , N/A ) | 1751.1 | N/A | 0.8860<br>[ 1.0000 ] | 88.6%<br>{ 92.9% } | 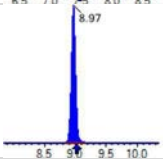 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 263461 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 7357.3 | N/A | 0.9190 [ 1.0000 ] | 91.9% { 95.4% } | 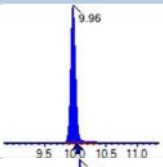 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 943306 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 6651.6 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 102.8% } | 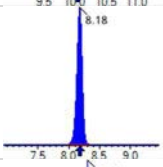 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 707749 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 2017.2 | N/A | 0.9020 [ 1.0000 ] | 90.2% { 91.8% } | 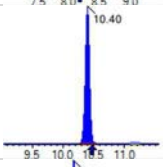 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1477713 | ( 3.47 , N/A ) ( N/A , -0.13 , N/A ) | 81129.1 | N/A | 5.2200 [ 8.0000 ] | 65.3% { 68.1% } | 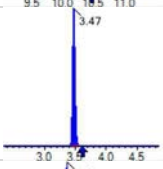 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 759266 | ( 4.17 , N/A ) ( N/A , -0.17 , N/A ) | 6811.9 | N/A | 4.1210 [ 4.0000 ] | 103.0% { 90.8% } | 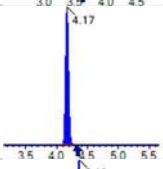 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 448822 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 10232.4 | N/A | 2.0390 [ 2.0000 ] | 101.9% { 93.4% } | 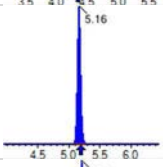 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 541684 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 5954.9 | N/A | 2.2160 [ 2.0000 ] | 110.8% { 98.8% } | 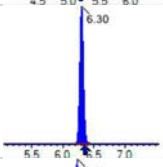 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 773739 | ( 7.43 , N/A ) ( N/A , -0.04 , N/A ) | 5589.2 | N/A | 1.9910 [ 2.0000 ] | 99.6% { 101.1% } | 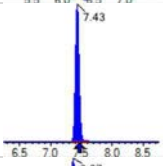 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 242600 | ( 8.97 , N/A ) ( N/A , -0.05 , N/A ) | 3721.9 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 90.0% } | 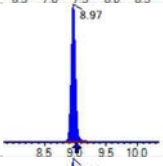 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 286090 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1595.6 | N/A | 0.9400 [ 1.0000 ] | 94.0% { 97.3% } | 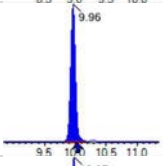 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 350422 | ( 10.87 , N/A ) ( N/A , -0.06 , N/A ) | 968.0 | N/A | 0.9710 [ 1.0000 ] | 97.1% { 94.9% } | 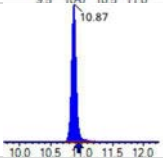 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0121-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 387524 | ( 11.77 , N/A ) ( N/A , -0.07 , N/A ) | 1609.3 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 106.8% } | 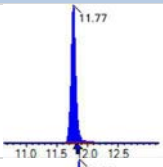 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 256913 | ( 13.06 , N/A ) ( N/A , -0.05 , N/A ) | 1014.3 | N/A | 0.7830 [ 1.0000 ] | 78.3% { 78.4% } | 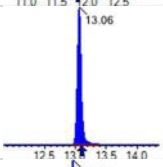 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 262453 | ( 13.97 , N/A ) ( N/A , -0.04 , N/A ) | 1429.2 | N/A | 0.9560 [ 2.0000 ] | 47.8% { 52.7% } | 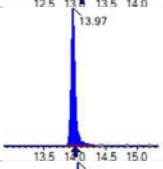 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1380155 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 819.2 | N/A | 1.8150 [ 2.0000 ] | 90.8% { 93.6% } | 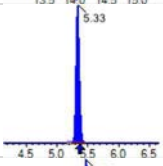 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1331775 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 4236.4 | N/A | 1.9570 [ 2.0000 ] | 97.9% { 102.3% } | 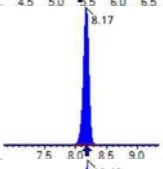 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1458954 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 1959.9 | N/A | 1.9380 [ 2.0000 ] | 96.9% { 101.0% } | 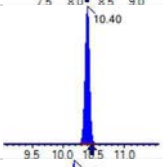 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 748620 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 82.7 | N/A | 4.4760 [ 4.0000 ] | 111.9% { 115.1% } | 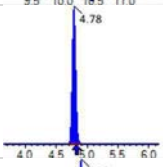 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1866314 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 5753.0 | N/A | 4.5420 [ 4.0000 ] | 113.5% { 106.0% } | 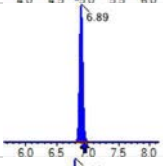 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1516406 | ( 9.29 , N/A ) ( N/A , -0.06 , N/A ) | 2047.1 | N/A | 4.2180 [ 4.0000 ] | 105.4% { 104.2% } | 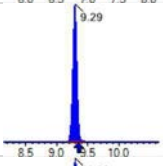 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2942291 | ( 11.00 , N/A ) ( N/A , -0.07 , N/A ) | 1857.0 | N/A | 7.5650 [ 8.0000 ] | 94.6% { 98.7% } | 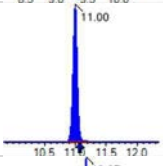 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1386908 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 3499.3 | N/A | 1.7350 [ 2.0000 ] | 86.8% { 89.0% } | 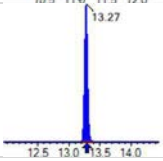 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (18)
Acquired: 2024/03/29 - 01:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 243876 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 2010.5 | N/A | 1.3570 [ 2.0000 ] | 67.8% { 67.0% } | 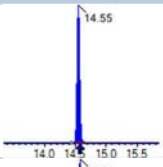 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 216958 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 1640.4 | N/A | 1.3210 [ 2.0000 ] | 66.0% { 63.0% } | 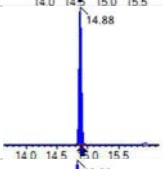 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 766082 | ( 10.33 , N/A ) ( N/A , -0.06 , N/A ) | 2918.8 | N/A | 2.9300 [ 4.0000 ] | 73.3% { 64.9% } | 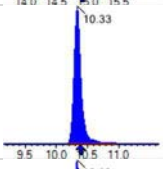 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 947291 | ( 10.93 , N/A ) ( N/A , -0.06 , N/A ) | 2465.5 | N/A | 4.0150 [ 4.0000 ] | 100.4% { 92.9% } | 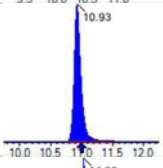 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 829963 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 2252.8 | N/A | 12.3610 [ 20.0000 ] | 61.8% { 62.4% } | 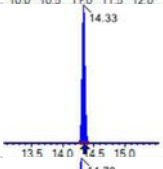 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 717462 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 2833.0 | N/A | 11.4100 [ 20.0000 ] | 57.0% { 57.3% } | 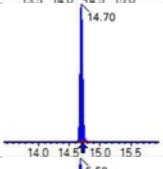 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 788695 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2422.9 | N/A | 8.2710 [ 8.0000 ] | 103.4% { 95.3% } | 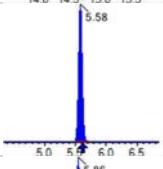 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 652327 | ( 5.86 , N/A ) ( N/A , -0.04 , N/A ) | 1870.0 | N/A | 2.2720 [ 2.0000 ] | 113.6% { 116.1% } | 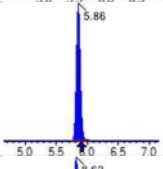 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 597515 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 1218.4 | N/A | 1.8470 [ 2.0000 ] | 92.4% { 89.2% } | 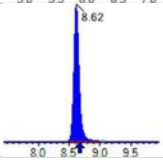 | | |

# ANALYSIS DATA SHEETL

MW-20-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-02- | File ID:- | S2024-03-28B (19)- |
| Sampled:- | 03/19/24 08:25- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 02:01- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.585 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.22- | 0.060- | 0.73- | J- |
| PFHxA- | 0.29- | 0.050- | 0.37- | J- |
| PFHpA- | 0.22- | 0.038- | 0.37- | J- |
| PFOA- | 0.95- | 0.14- | 0.37- | B, MI5- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | ND- | 0.093- | 0.37- | IR1, U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 1.6- | 0.034- | 0.37- | IR1- |
| PFPeS- | 0.18- | 0.057- | 0.37- | J- |
| PFHxS- | 0.88- | 0.029- | 0.37- | MI5- |
| PFHpS- | ND- | 0.047- | 0.37- | IR2, U- |
| PFOS- | 1.0- | 0.058- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-20-3-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-02- | File ID:- | S2024-03-28B (19)- |
| Sampled:- | 03/19/24 08:25- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 02:01- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 545.585 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>19186<br>( 163.0 / 69.0 )<br>615 | ( 2.40 , 0.71 )<br>( N/A , -0.06 , -0.8) | 144.6<br>79.4 | 0.0320<br>116.9<br>122.2 | 0.3440 | N/A | 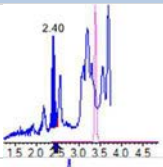 | 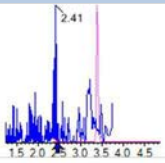 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 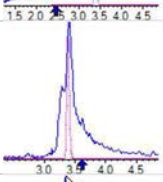 | | |
| PFPeA | ( 263.0 / 219.0 )<br>11184<br>( 263.0 / 69.0 )<br>103 | ( 4.15 , 1.00 )<br>( 0.00 , N/A , 0.8) | 55.0<br>4.8 | 0.0092<br>77.2<br>86.3 | 0.0600 | N/A | 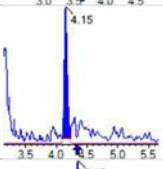 | 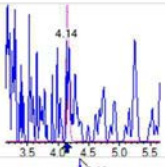 | |
| PFHxA | ( 313.0 / 269.0 )<br>15540<br>( 313.0 / 119.0 )<br>2389 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , -0.5) | 109.2<br>75.4 | 0.1537<br>138.2<br>129.7 | 0.0790 | N/A | 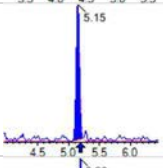 | 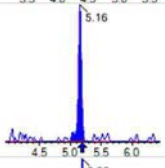 | |
| PFHpA | ( 363.0 / 319.0 )<br>15102<br>( 363.0 / 169.0 )<br>3738 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , 0.2) | 99.7<br>74.3 | 0.2475<br>81.0<br>80.4 | 0.0610 | N/A | 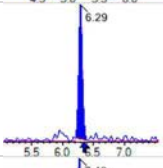 | 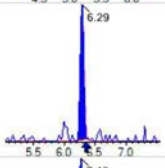 | |
| PFOA | ( 413.0 / 369.0 )<br>97343<br>( 413.0 / 169.0 )<br>37810 | ( 7.42 , 1.00 )<br>( 0.00 , N/A , 0.1) | 137.7<br>180.2 | 0.3884<br>108.7<br>109.5 | 0.2590 | N/A | 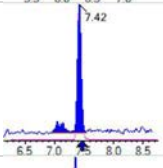 | 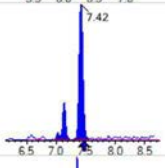 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 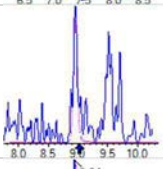 | 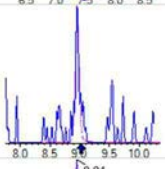 | |
| PFDA | ( 513.0 / 469.0 )<br>6507<br>( 513.0 / 169.0 )<br>369 | ( 9.94 , 1.00 )<br>( -0.01 , N/A , 0.0) | 74.1<br>671.5 | 0.0567<br>47.6<br>46.5 | 0.0230 | N/A | 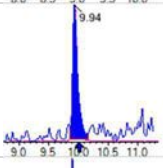 | 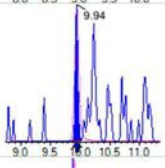 | IR1, |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 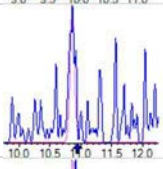 | 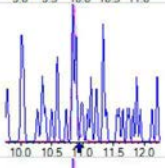 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 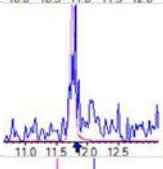 | 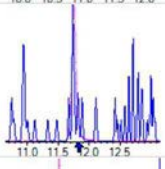 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 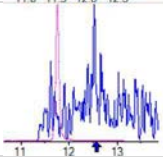 | 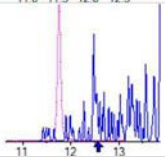 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (19)
Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 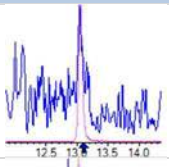 | 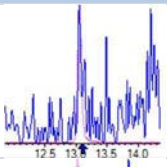 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 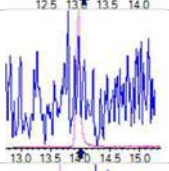 | 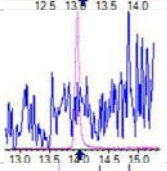 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 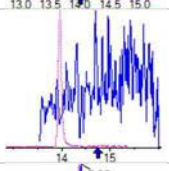 | 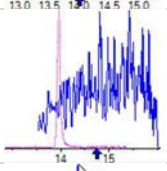 | |
| PFBS | ( 299.0 / 80.0 )<br>145537<br>( 299.0 / 99.0 )<br>20381 | ( 5.36 , 1.01 )<br>( 0.04 , N/A , 2.3) | 221.5<br>141.7 | 0.1400<br>18.9<br>18.6 | 0.4490 | N/A | 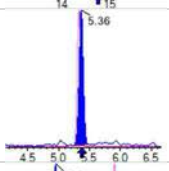 | 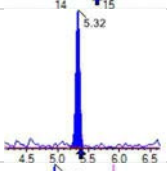 | IR1, |
| PFPeS | ( 349.0 / 80.0 )<br>45101<br>( 349.0 / 99.0 )<br>18186 | ( 6.62 , 0.81 )<br>( N/A , -0.05 , 0.0) | 97.5<br>157.5 | 0.4032<br>118.0<br>113.5 | 0.0480 | N/A | 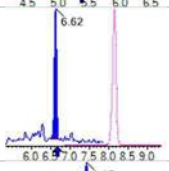 | 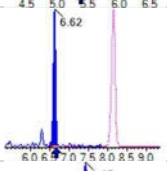 | |
| PFHxS | ( 399.0 / 80.0 )<br>277171<br>( 399.0 / 99.0 )<br>85441 | ( 8.15 , 1.00 )<br>( 0.00 , N/A , -0.1) | 508.0<br>881.0 | 0.3083<br>93.9<br>95.5 | 0.2410 | N/A | 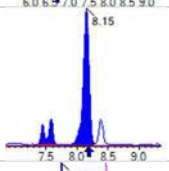 | 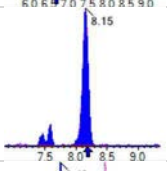 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>9394<br>( 449.0 / 99.0 )<br>3692 | ( 9.43 , 0.91 )<br>( N/A , -0.07 , 0.3) | 39.8<br>30.4 | 0.3930<br>150.6<br>151.5 | 0.0110 | N/A | 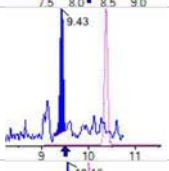 | 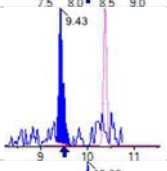 | IR2, |
| PFOS | ( 499.0 / 80.0 )<br>227014<br>( 499.0 / 99.0 )<br>37602 | ( 10.16 , 0.98 )<br>( -0.23 , N/A , -13.5) | 257.7<br>509.5 | 0.1656<br>71.7<br>72.3 | 0.2750 | N/A | 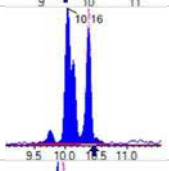 | 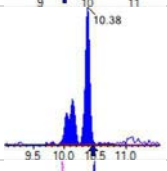 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 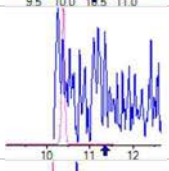 | 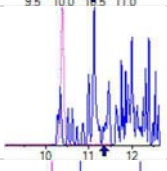 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 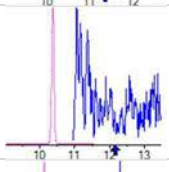 | 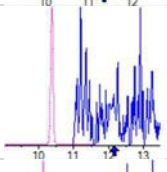 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 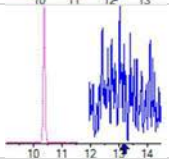 | 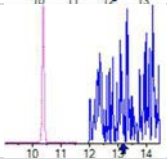 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (19)
Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 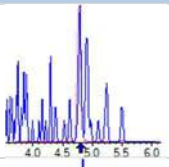 | 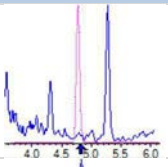 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 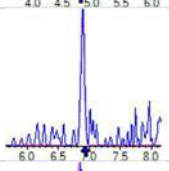 | 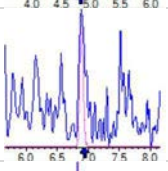 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 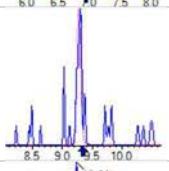 | 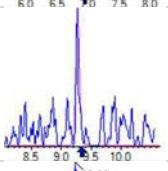 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14271<br>( 627.0 / 81.0 )<br>20743 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , 0.2) | 289.8<br>108.0 | 1.4535<br>101.1<br>100.3 | 0.0560 | N/A | 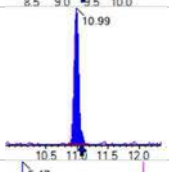 | 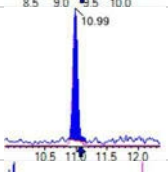 | |
| PFBSA | ( 297.9 / 78.0 )<br>11820<br>( 297.9 / 278.0 )<br>N/A | ( 5.47 , 0.38 )<br>( N/A , -0.05 , #Value!) | 123.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0650 | N/A | 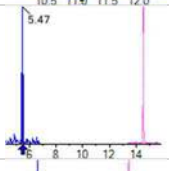 | 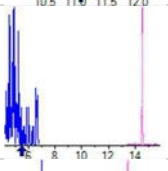 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 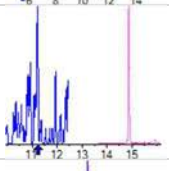 | 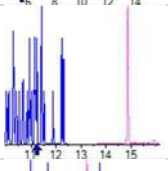 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 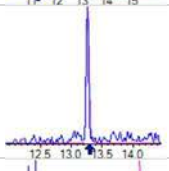 | 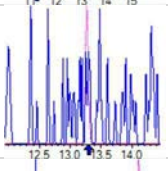 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 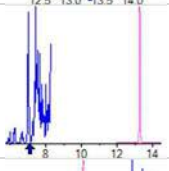 | 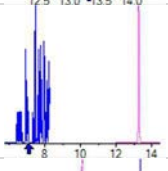 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 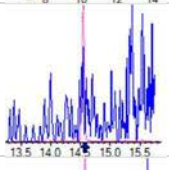 | 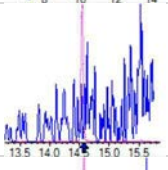 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 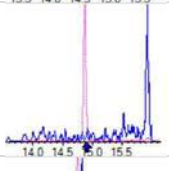 | 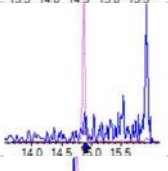 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 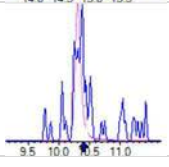 | 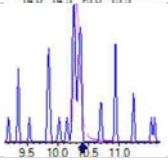 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (19)
Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 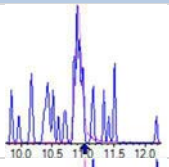 | 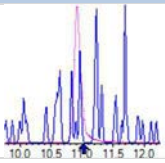 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 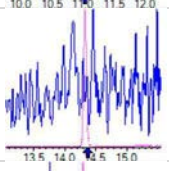 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 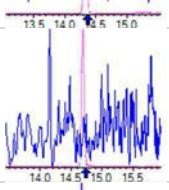 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 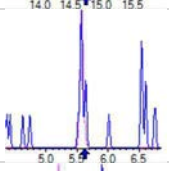 | 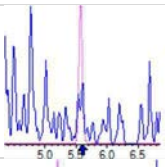 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 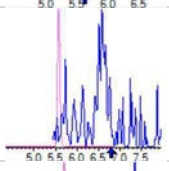 | 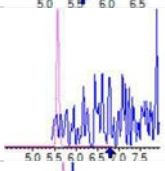 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 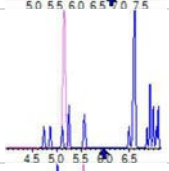 | 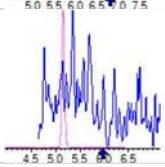 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 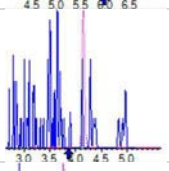 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 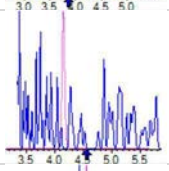 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 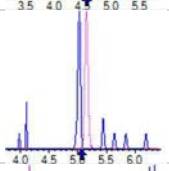 | 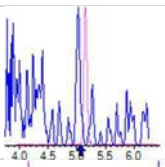 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 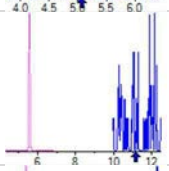 | 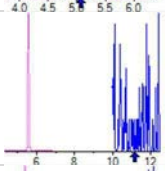 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 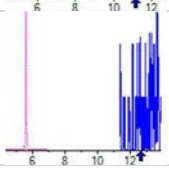 | 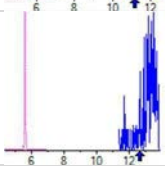 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (19)
Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 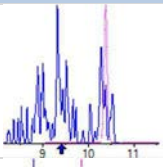 | 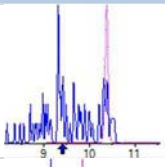 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 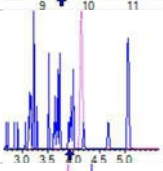 | 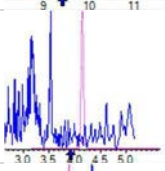 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 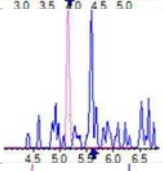 | 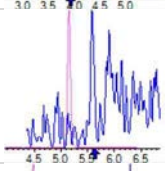 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 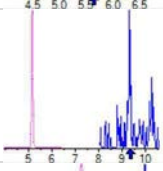 | 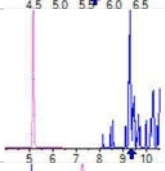 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 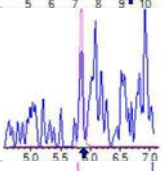 | 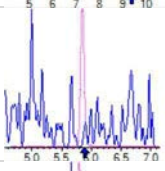 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 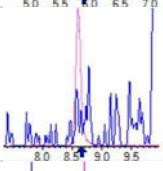 | 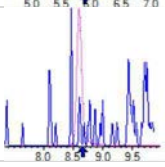 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 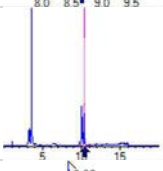 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 249621 | ( 3.39 , N/A )<br>( N/A , -0.22 , N/A ) | 1550.5 | N/A | 0.8840<br>[ 1.0000 ] | 88.4%<br>{ 94.4% } | 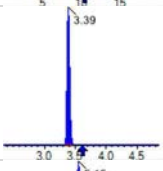 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 98623 | ( 5.15 , N/A )<br>( N/A , -0.04 , N/A ) | 971438.4 | N/A | 0.8350<br>[ 1.0000 ] | 83.5%<br>{ 85.2% } | 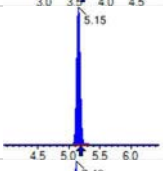 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 354870 | ( 7.42 , N/A )<br>( N/A , -0.05 , N/A ) | 7076.5 | N/A | 0.9140<br>[ 1.0000 ] | 91.4%<br>{ 98.3% } | 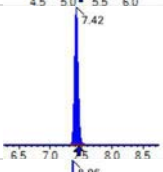 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 234156 | ( 8.96 , N/A )<br>( N/A , -0.07 , N/A ) | 1303.1 | N/A | 0.8020<br>[ 1.0000 ] | 80.2%<br>{ 84.0% } | 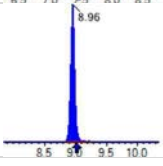 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 255368 | ( 9.95 , N/A ) ( N/A , -0.08 , N/A ) | 6653.4 | N/A | 0.8910 [ 1.0000 ] | 89.1% { 92.5% } | 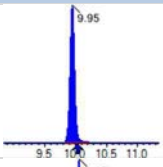 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 892782 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 6543.2 | N/A | 0.9090 [ 1.0000 ] | 90.9% { 97.3% } | 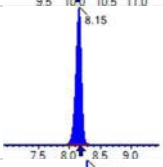 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 683659 | ( 10.38 , N/A ) ( N/A , -0.08 , N/A ) | 1855.1 | N/A | 0.8710 [ 1.0000 ] | 87.1% { 88.6% } | 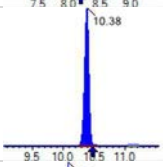 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1971250 | ( 3.39 , N/A ) ( N/A , -0.22 , N/A ) | 96409.4 | N/A | 7.3060 [ 8.0000 ] | 91.3% { 90.8% } | 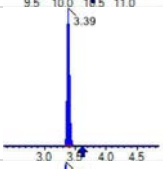 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 751480 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 5441.3 | N/A | 4.1620 [ 4.0000 ] | 104.0% { 89.8% } | 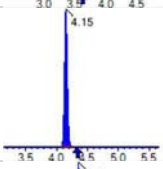 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 425916 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 11182.2 | N/A | 1.9740 [ 2.0000 ] | 98.7% { 88.6% } | 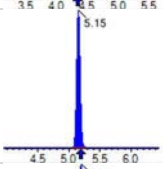 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 498284 | ( 6.29 , N/A ) ( N/A , -0.06 , N/A ) | 5378.1 | N/A | 2.0790 [ 2.0000 ] | 104.0% { 90.9% } | 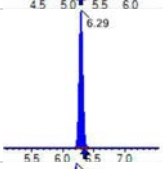 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 748029 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 5740.3 | N/A | 1.9890 [ 2.0000 ] | 99.4% { 97.7% } | 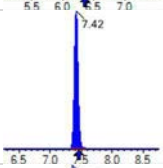 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 240074 | ( 8.96 , N/A ) ( N/A , -0.07 , N/A ) | 3659.0 | N/A | 1.0380 [ 1.0000 ] | 103.8% { 89.0% } | 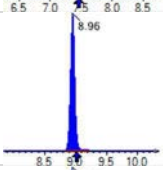 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 284516 | ( 9.95 , N/A ) ( N/A , -0.08 , N/A ) | 1409.3 | N/A | 0.9640 [ 1.0000 ] | 96.4% { 96.8% } | 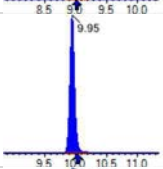 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 318261 | ( 10.86 , N/A ) ( N/A , -0.08 , N/A ) | 1301.9 | N/A | 0.9090 [ 1.0000 ] | 90.9% { 86.2% } | 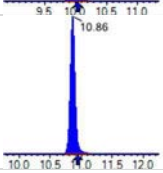 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 366280 | ( 11.76 , N/A ) ( N/A , -0.08 , N/A ) | 1382.8 | N/A | 1.0200 [ 1.0000 ] | 102.0% { 100.9% } | 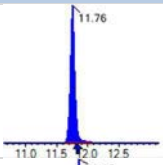 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 226885 | ( 13.05 , N/A ) ( N/A , -0.05 , N/A ) | 1173.5 | N/A | 0.7140 [ 1.0000 ] | 71.4% { 69.2% } | 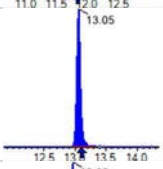 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 153245 | ( 13.96 , N/A ) ( N/A , -0.05 , N/A ) | 930.5 | N/A | 0.5760 [ 2.0000 ] | 28.8% { 30.8% } | 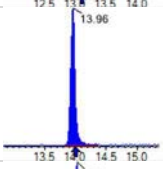 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1317306 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 505.2 | N/A | 1.8310 [ 2.0000 ] | 91.5% { 89.3% } | 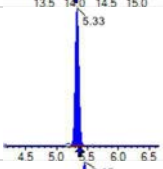 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1314907 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 3759.5 | N/A | 2.0420 [ 2.0000 ] | 102.1% { 101.0% } | 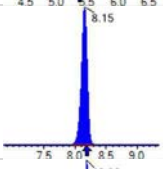 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1423001 | ( 10.38 , N/A ) ( N/A , -0.09 , N/A ) | 1685.4 | N/A | 1.9560 [ 2.0000 ] | 97.8% { 98.5% } | 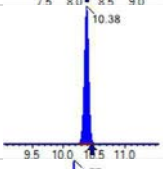 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 616978 | ( 4.77 , N/A ) ( N/A , -0.04 , N/A ) | 61.3 | N/A | 3.8970 [ 4.0000 ] | 97.4% { 94.8% } | 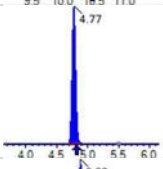 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1914273 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 4911.1 | N/A | 4.9220 [ 4.0000 ] | 123.1% { 108.8% } | 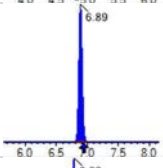 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1401694 | ( 9.28 , N/A ) ( N/A , -0.07 , N/A ) | 1986.8 | N/A | 4.1190 [ 4.0000 ] | 103.0% { 96.3% } | 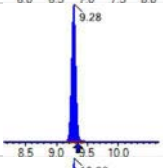 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2562957 | ( 10.98 , N/A ) ( N/A , -0.09 , N/A ) | 1440.9 | N/A | 6.9630 [ 8.0000 ] | 87.0% { 86.0% } | 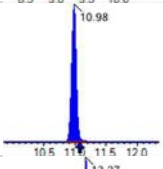 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1249274 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 3594.9 | N/A | 1.6180 [ 2.0000 ] | 80.9% { 80.2% } | 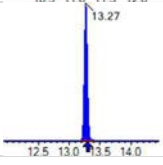 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:01

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 119679 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 1046.5 | N/A | 0.6890 [ 2.0000 ] | 34.5% { 32.9% } | 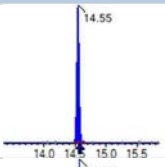 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 93207 | ( 14.87 , N/A ) ( N/A , -0.03 , N/A ) | 879.8 | N/A | 0.5870 [ 2.0000 ] | 29.4% { 27.1% } | 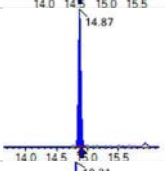 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 968712 | ( 10.31 , N/A ) ( N/A , -0.08 , N/A ) | 4563.2 | N/A | 3.8360 [ 4.0000 ] | 95.9% { 82.1% } | 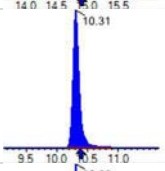 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 848253 | ( 10.92 , N/A ) ( N/A , -0.08 , N/A ) | 2309.1 | N/A | 3.7220 [ 4.0000 ] | 93.0% { 83.2% } | 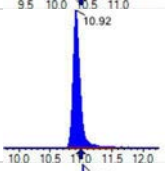 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 313068 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 1046.2 | N/A | 4.8270 [ 20.0000 ] | 24.1% { 23.6% } | 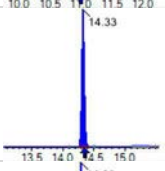 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 261489 | ( 14.69 , N/A ) ( N/A , -0.03 , N/A ) | 1599.0 | N/A | 4.3050 [ 20.0000 ] | 21.5% { 20.9% } | 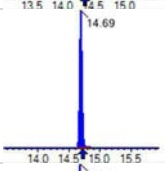 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 757425 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2687.3 | N/A | 8.1040 [ 8.0000 ] | 101.3% { 91.6% } | 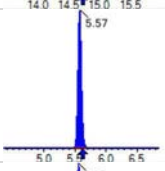 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 598578 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2151.6 | N/A | 2.1510 [ 2.0000 ] | 107.5% { 106.6% } | 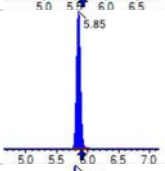 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 555253 | ( 8.60 , N/A ) ( N/A , -0.06 , N/A ) | 1044.5 | N/A | 1.7710 [ 2.0000 ] | 88.5% { 82.9% } | 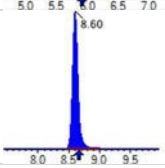 | | |

# ANALYSIS DATA SHEETL

## MW-20-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-03- | File ID:- | S2024-03-28B (20)- |
| Sampled:- | 03/19/24 08:40- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 02:21- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.747 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | 0.86- | 0.059- | 0.73- | |
| PFHxA- | 0.72- | 0.050- | 0.37- | |
| PFHpA- | 0.53- | 0.037- | 0.37- | |
| PFOA- | 1.7- | 0.14- | 0.37- | B, MI5- |
| PFNA- | 0.37- | 0.075- | 0.37- | |
| PFDA- | ND- | 0.093- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 1.3- | 0.034- | 0.37- | |
| PFPeS- | 0.30- | 0.057- | 0.37- | J- |
| PFHxS- | 3.0- | 0.029- | 0.37- | MI5- |
| PFHpS- | 0.10- | 0.047- | 0.37- | J- |
| PFOS- | 9.4- | 0.058- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-20-2-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-03- | File ID:- | S2024-03-28B (20)- |
| Sampled:- | 03/19/24 08:40- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 02:21- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.747 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (20)
Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 31332<br>( 163.0 / 69.0 ) 804 | ( 2.40 , 0.71 )<br>( N/A , -0.06 , 0.3) | 322.3<br>102.7 | 0.0257<br>93.7<br>97.9 | 0.6310 | N/A | 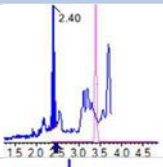 | 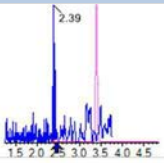 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 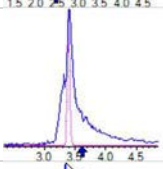 | | |
| PFPeA | ( 263.0 / 219.0 ) 50263<br>( 263.0 / 69.0 ) 676 | ( 4.15 , 1.00 )<br>( 0.00 , N/A , 0.4) | 220.5<br>10.3 | 0.0135<br>113.1<br>126.5 | 0.2350 | N/A | 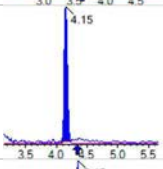 | 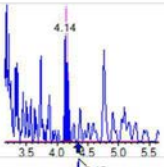 | |
| PFHxA | ( 313.0 / 269.0 ) 43823<br>( 313.0 / 119.0 ) 6034 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , 0.1) | 212.0<br>152.3 | 0.1377<br>123.8<br>116.2 | 0.1970 | N/A | 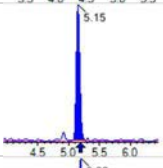 | 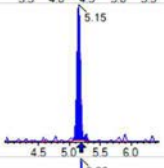 | |
| PFHpA | ( 363.0 / 319.0 ) 38891<br>( 363.0 / 169.0 ) 11503 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , 0.1) | 249.8<br>219.3 | 0.2958<br>96.8<br>96.1 | 0.1450 | N/A | 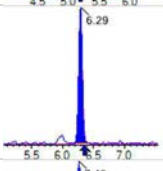 | 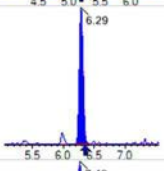 | |
| PFOA | ( 413.0 / 369.0 ) 176344<br>( 413.0 / 169.0 ) 70842 | ( 7.42 , 1.00 )<br>( 0.00 , N/A , 0.0) | 279.6<br>253.7 | 0.4017<br>112.4<br>113.3 | 0.4590 | N/A | 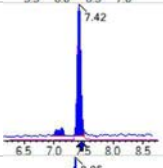 | 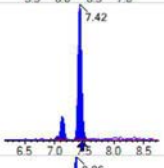 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 25974<br>( 463.0 / 169.0 ) 6905 | ( 8.95 , 1.00 )<br>( 0.00 , N/A , -0.1) | 208.3<br>122.4 | 0.2658<br>108.2<br>103.6 | 0.1020 | N/A | 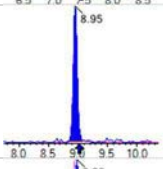 | 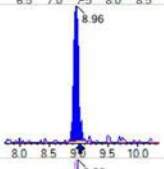 | |
| PFDA | ( 513.0 / 469.0 ) 3914<br>( 513.0 / 169.0 ) 694 | ( 9.96 , 1.00 )<br>( 0.02 , N/A , -1.0) | 44.7<br>87.5 | 0.1773<br>148.8<br>145.6 | 0.0130 | N/A | 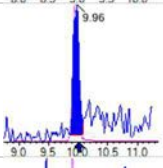 | 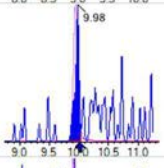 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 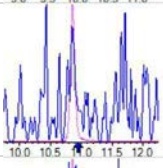 | 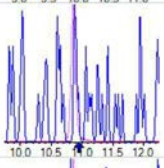 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 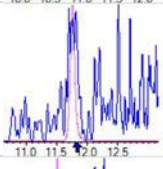 | 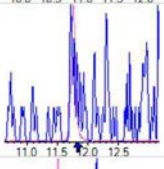 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 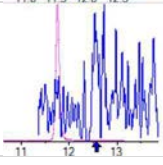 | 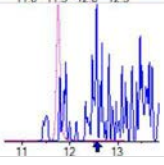 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (20)
Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 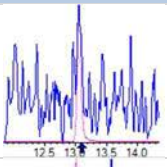 | 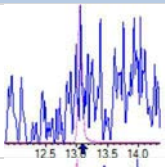 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 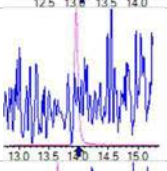 | 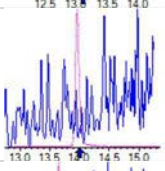 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 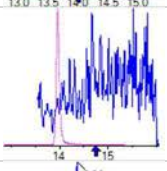 | 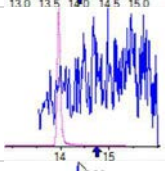 | |
| PFBS | ( 299.0 / 80.0 )<br>121684<br>( 299.0 / 99.0 )<br>79213 | ( 5.33 , 1.00 )<br>( 0.00 , N/A , 0.3) | 508.2<br>431.7 | 0.6510<br>87.9<br>86.3 | 0.3430 | N/A | 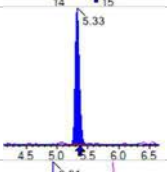 | 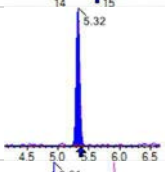 | |
| PFPeS | ( 349.0 / 80.0 )<br>80779<br>( 349.0 / 99.0 )<br>31500 | ( 6.61 , 0.81 )<br>( N/A , -0.06 , 0.2) | 267.6<br>250.3 | 0.3899<br>114.1<br>109.8 | 0.0830 | N/A | 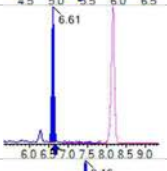 | 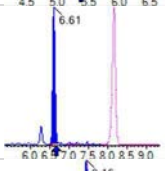 | |
| PFHxS | ( 399.0 / 80.0 )<br>987280<br>( 399.0 / 99.0 )<br>307134 | ( 8.16 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1959.8<br>2258.2 | 0.3111<br>94.8<br>96.4 | 0.8310 | N/A | 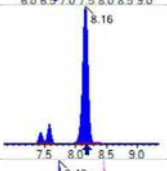 | 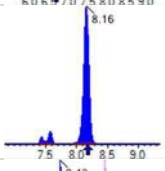 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>24995<br>( 449.0 / 99.0 )<br>6218 | ( 9.43 , 0.91 )<br>( N/A , -0.07 , 0.0) | 99.3<br>66.3 | 0.2488<br>95.4<br>95.9 | 0.0280 | N/A | 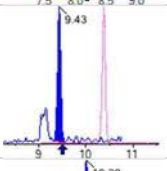 | 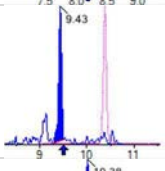 | |
| PFOS | ( 499.0 / 80.0 )<br>2270144<br>( 499.0 / 99.0 )<br>546177 | ( 10.38 , 1.00 )<br>( 0.00 , N/A , -0.1) | 2000.7<br>4119.3 | 0.2406<br>104.1<br>105.0 | 2.5820 | N/A | 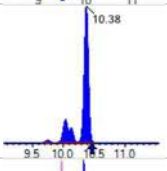 | 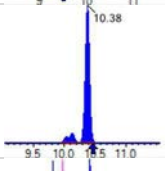 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 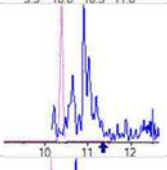 | 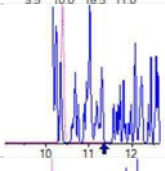 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 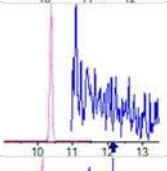 | 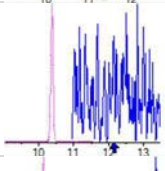 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 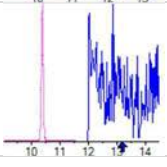 | 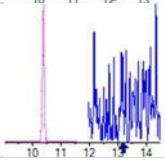 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (20)
Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 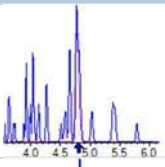 | 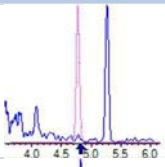 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 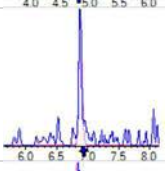 | 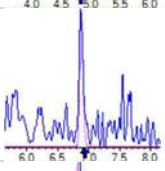 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 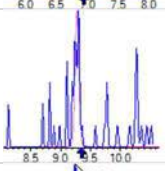 | 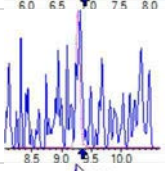 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16236<br>( 627.0 / 81.0 )<br>20627 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 191.6<br>91.3 | 1.2705<br>88.4<br>87.7 | 0.0570 | N/A | 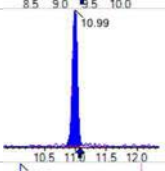 | 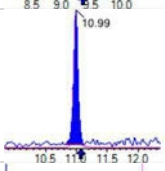 | |
| PFBSA | ( 297.9 / 78.0 )<br>12694<br>( 297.9 / 278.0 )<br>N/A | ( 5.47 , 0.38 )<br>( N/A , -0.06 , #Value!) | 165.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0550 | N/A | 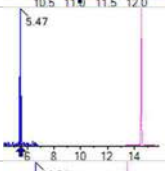 | 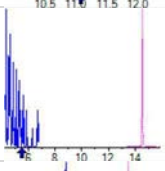 | |
| PFHxSA | ( 397.9 / 78.0 )<br>9521<br>( 397.9 / 378.0 )<br>N/A | ( 11.21 , 0.75 )<br>( N/A , -0.02 , #Value!) | 77.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0220 | N/A | 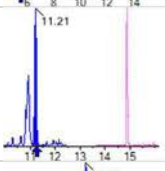 | 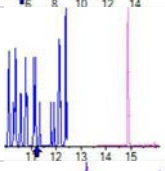 | |
| PFOSA | ( 498.0 / 78.0 )<br>9377<br>( 498.0 / 478.0 )<br>N/A | ( 13.27 , 1.00 )<br>( -0.01 , N/A , #Value!) | 112.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0160 | N/A | 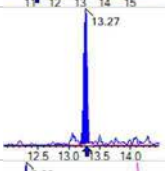 | 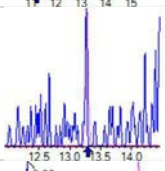 | |
| TFSI | ( 279.7 / 147.0 )<br>11627<br>( 279.7 / 211.0 )<br>1142 | ( 6.99 , 0.53 )<br>( N/A , -0.07 , -0.2) | 22.1<br>232481.1 | 0.0982<br>111.0<br>112.0 | 0.0110 | N/A | 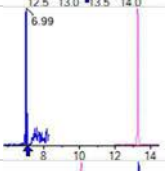 | 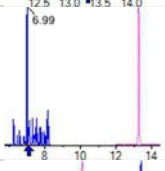 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 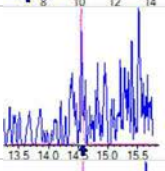 | 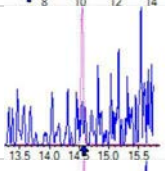 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 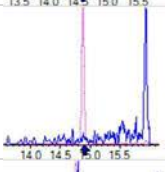 | 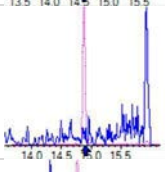 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 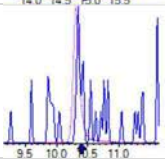 | 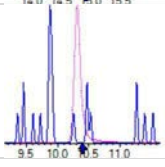 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (20)
Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 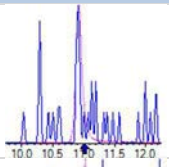 | 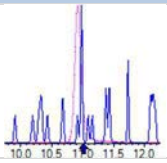 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 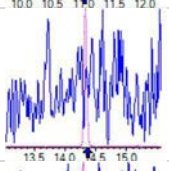 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 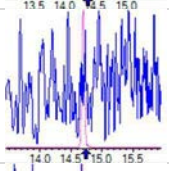 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 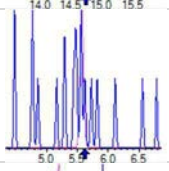 | 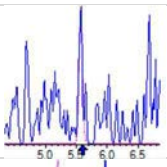 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 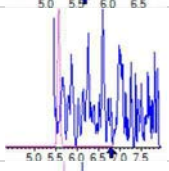 | 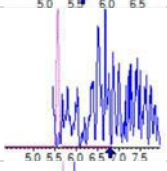 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 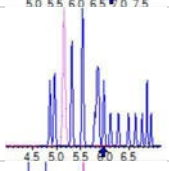 | 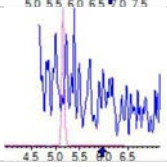 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 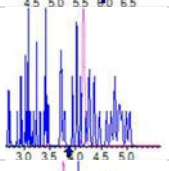 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 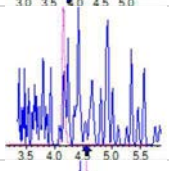 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 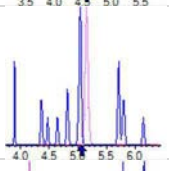 | 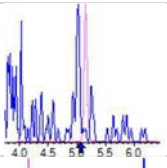 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 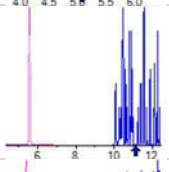 | 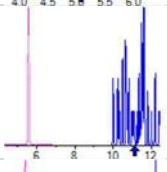 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 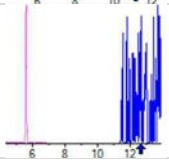 | 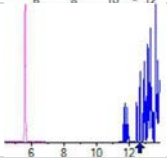 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (20)
Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 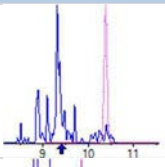 | 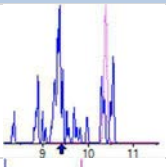 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 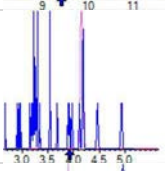 | 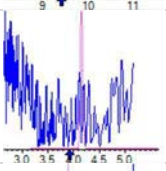 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 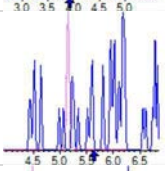 | 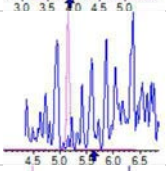 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 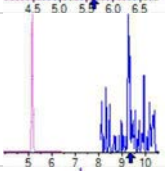 | 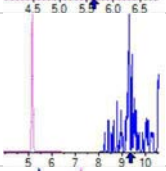 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 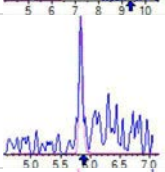 | 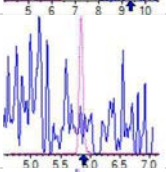 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 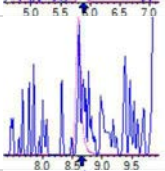 | 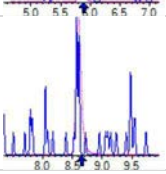 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 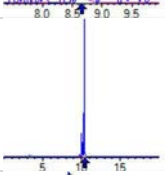 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 255710 | ( 3.39 , N/A ) ( N/A , -0.22 , N/A ) | 1995.3 | N/A | 0.9060 [ 1.0000 ] | 90.6% { 96.7% } | 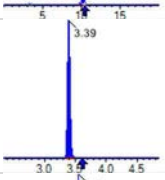 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 99919 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 740516.3 | N/A | 0.8460 [ 1.0000 ] | 84.6% { 86.3% } | 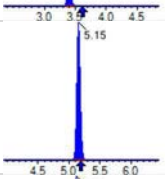 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 363653 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 7369.2 | N/A | 0.9370 [ 1.0000 ] | 93.7% { 100.7% } | 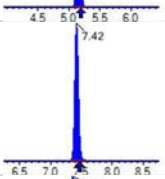 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 250745 | ( 8.96 , N/A ) ( N/A , -0.07 , N/A ) | 1274.6 | N/A | 0.8580 [ 1.0000 ] | 85.8% { 89.9% } | 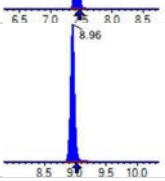 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-03 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 257539 | ( 9.95 , N/A ) ( N/A , -0.08 , N/A ) | 19361.1 | N/A | 0.8990 [ 1.0000 ] | 89.9% { 93.3% } | 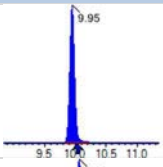 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 953885 | ( 8.16 , N/A ) ( N/A , -0.01 , N/A ) | 7850.7 | N/A | 0.9710 [ 1.0000 ] | 97.1% { 103.9% } | 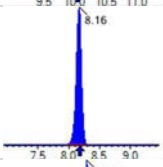 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 718687 | ( 10.38 , N/A ) ( N/A , -0.08 , N/A ) | 2029.3 | N/A | 0.9160 [ 1.0000 ] | 91.6% { 93.2% } | 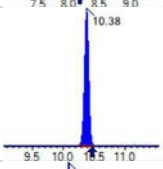 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1754911 | ( 3.39 , N/A ) ( N/A , -0.22 , N/A ) | 59304.2 | N/A | 6.3490 [ 8.0000 ] | 79.4% { 80.8% } | 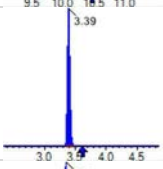 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 856643 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 4954.0 | N/A | 4.6830 [ 4.0000 ] | 117.1% { 102.4% } | 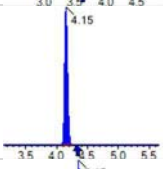 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 478633 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 12693.7 | N/A | 2.1900 [ 2.0000 ] | 109.5% { 99.6% } | 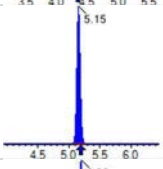 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 541381 | ( 6.29 , N/A ) ( N/A , -0.07 , N/A ) | 6725.7 | N/A | 2.2300 [ 2.0000 ] | 111.5% { 98.8% } | 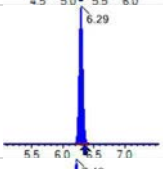 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 765295 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 5145.0 | N/A | 1.9860 [ 2.0000 ] | 99.3% { 100.0% } | 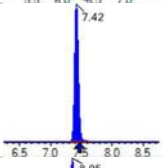 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 253773 | ( 8.95 , N/A ) ( N/A , -0.07 , N/A ) | 4149.7 | N/A | 1.0250 [ 1.0000 ] | 102.5% { 94.1% } | 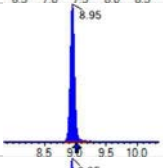 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 291881 | ( 9.95 , N/A ) ( N/A , -0.08 , N/A ) | 1580.9 | N/A | 0.9810 [ 1.0000 ] | 98.1% { 99.3% } | 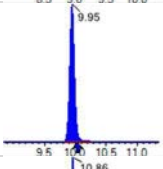 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 327744 | ( 10.86 , N/A ) ( N/A , -0.08 , N/A ) | 1143.0 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 88.7% } | 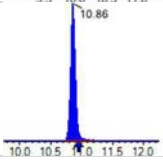 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-03 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 360538 | ( 11.76 , N/A ) ( N/A , -0.08 , N/A ) | 1275.3 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 99.4% } | 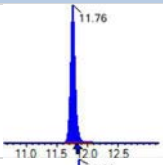 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 285106 | ( 13.06 , N/A ) ( N/A , -0.05 , N/A ) | 1473.3 | N/A | 0.8890 [ 1.0000 ] | 88.9% { 87.0% } | 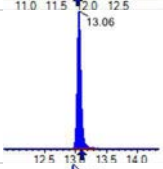 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 422699 | ( 13.96 , N/A ) ( N/A , -0.05 , N/A ) | 2085.9 | N/A | 1.5760 [ 2.0000 ] | 78.8% { 84.9% } | 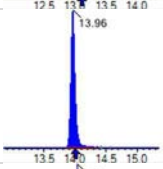 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1441318 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 421.8 | N/A | 1.8750 [ 2.0000 ] | 93.7% { 97.7% } | 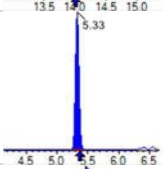 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1356891 | ( 8.16 , N/A ) ( N/A , -0.01 , N/A ) | 6105.4 | N/A | 1.9720 [ 2.0000 ] | 98.6% { 104.2% } | 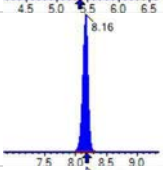 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1514645 | ( 10.38 , N/A ) ( N/A , -0.08 , N/A ) | 1782.0 | N/A | 1.9810 [ 2.0000 ] | 99.0% { 104.9% } | 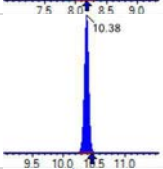 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 686435 | ( 4.78 , N/A ) ( N/A , -0.04 , N/A ) | 71.4 | N/A | 4.0580 [ 4.0000 ] | 101.5% { 105.5% } | 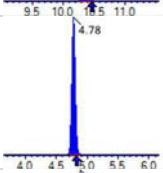 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1955744 | ( 6.88 , N/A ) ( N/A , -0.06 , N/A ) | 4766.1 | N/A | 4.7070 [ 4.0000 ] | 117.7% { 111.1% } | 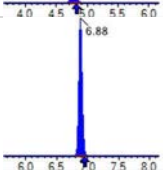 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1516853 | ( 9.27 , N/A ) ( N/A , -0.07 , N/A ) | 2057.1 | N/A | 4.1720 [ 4.0000 ] | 104.3% { 104.2% } | 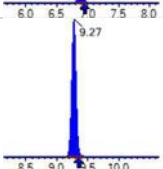 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2853323 | ( 10.99 , N/A ) ( N/A , -0.09 , N/A ) | 1730.9 | N/A | 7.2550 [ 8.0000 ] | 90.7% { 95.7% } | 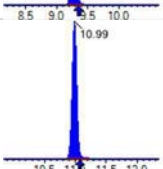 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1242907 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 2708.8 | N/A | 1.5310 [ 2.0000 ] | 76.6% { 79.8% } | 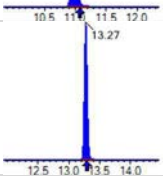 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (20)
Acquired: 2024/03/29 - 02:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 151164 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 1240.7 | N/A | 0.8280 [ 2.0000 ] | 41.4% { 41.5% } | 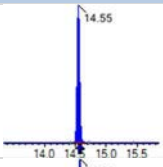 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 134684 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 1046.4 | N/A | 0.8070 [ 2.0000 ] | 40.4% { 39.1% } | 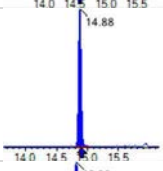 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 809403 | ( 10.32 , N/A ) ( N/A , -0.07 , N/A ) | 2286.1 | N/A | 3.0490 [ 4.0000 ] | 76.2% { 68.6% } | 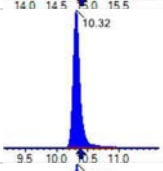 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 893567 | ( 10.92 , N/A ) ( N/A , -0.07 , N/A ) | 2064.4 | N/A | 3.7290 [ 4.0000 ] | 93.2% { 87.6% } | 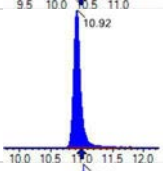 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 592543 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1655.2 | N/A | 8.6910 [ 20.0000 ] | 43.5% { 44.6% } | 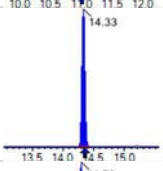 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 549383 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 2543.8 | N/A | 8.6040 [ 20.0000 ] | 43.0% { 43.9% } | 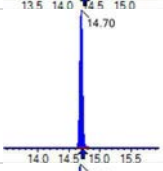 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 786590 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2285.2 | N/A | 8.3070 [ 8.0000 ] | 103.8% { 95.1% } | 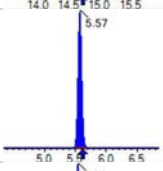 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 625528 | ( 5.84 , N/A ) ( N/A , -0.05 , N/A ) | 2460.0 | N/A | 2.2290 [ 2.0000 ] | 111.4% { 111.4% } | 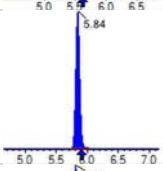 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 591320 | ( 8.60 , N/A ) ( N/A , -0.06 , N/A ) | 1044.1 | N/A | 1.8700 [ 2.0000 ] | 93.5% { 88.2% } | 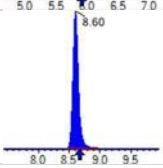 | | |

# ANALYSIS DATA SHEETL

MW-20-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-04- | File ID:- | S2024-03-28B (21)- |
| Sampled:- | 03/19/24 09:05- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 02:42- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 556.711 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.81- | 0.19- | 1.4- | J- |
| PFPeA- | 0.49- | 0.058- | 0.72- | J- |
| PFHxA- | 0.45- | 0.049- | 0.36- | |
| PFHpA- | 0.22- | 0.037- | 0.36- | J- |
| PFOA- | 0.68- | 0.14- | 0.36- | B- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | ND- | 0.091- | 0.36- | U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 0.69- | 0.033- | 0.36- | |
| PFPeS- | 0.17- | 0.056- | 0.36- | J- |
| PFHxS- | 0.58- | 0.028- | 0.36- | MI5- |
| PFHpS- | ND- | 0.046- | 0.36- | U- |
| PFOS- | 0.62- | 0.057- | 0.36- | MI5- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | 0.13- | 0.094- | 0.36- | J- |
| NMeFOSA- | ND- | 0.43- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.095- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-20-1-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-04- | File ID:- | S2024-03-28B (21)- |
| Sampled:- | 03/19/24 09:05- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 02:42- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 556.711 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.94- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.098- | 0.72- | U- |
| PFMPA- | ND- | 0.048- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>20349<br>( 163.0 / 69.0 )<br>791 | ( 2.40 , 0.71 )<br>( N/A , -0.06 , 0.6) | 160.1<br>73.7 | 0.0388<br>141.8<br>148.1 | 0.3620 | N/A | 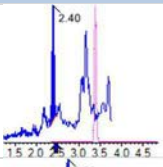 | 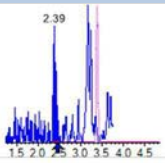 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>141520 | ( 3.39 , 1.00 )<br>( 0.01 , N/A , 0.0) | 94.1 | N/A<br>0.0<br>0.0 | 0.2260 | N/A | 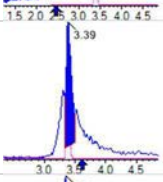 | | |
| PFPeA | ( 263.0 / 219.0 )<br>28441<br>( 263.0 / 69.0 )<br>276 | ( 4.15 , 1.00 )<br>( 0.00 , N/A , -1.4) | 185.5<br>10.1 | 0.0097<br>81.7<br>91.3 | 0.1360 | N/A | 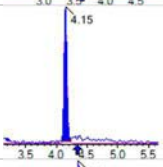 | 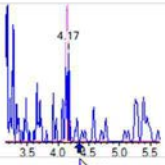 | |
| PFHxA | ( 313.0 / 269.0 )<br>24598<br>( 313.0 / 119.0 )<br>2394 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , 0.2) | 208.5<br>78.7 | 0.0973<br>87.5<br>82.1 | 0.1240 | N/A | 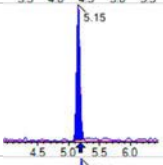 | 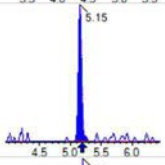 | |
| PFHpA | ( 363.0 / 319.0 )<br>15776<br>( 363.0 / 169.0 )<br>5014 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.2) | 121.8<br>123.7 | 0.3178<br>104.0<br>103.3 | 0.0610 | N/A | 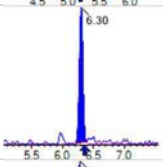 | 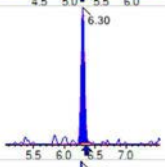 | |
| PFOA | ( 413.0 / 369.0 )<br>73214<br>( 413.0 / 169.0 )<br>28609 | ( 7.43 , 1.00 )<br>( 0.00 , N/A , 0.1) | 129.3<br>196.2 | 0.3908<br>109.3<br>110.2 | 0.1890 | N/A | 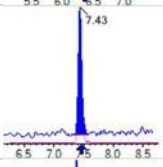 | 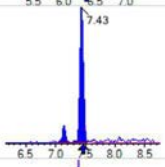 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 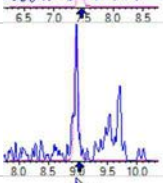 | 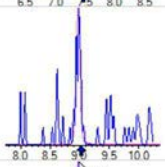 | |
| PFDA | ( 513.0 / 469.0 )<br>4541<br>( 513.0 / 169.0 )<br>791 | ( 9.98 , 1.00 )<br>( 0.02 , N/A , 0.5) | 57.0<br>110.0 | 0.1741<br>146.1<br>142.9 | 0.0170 | N/A | 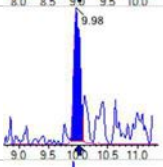 | 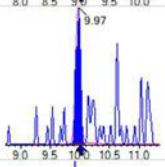 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 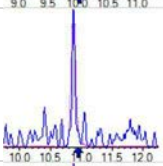 | 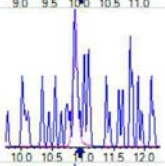 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 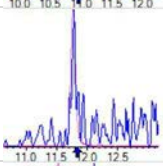 | 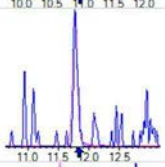 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 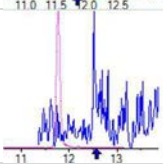 | 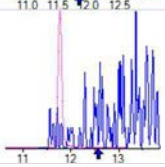 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 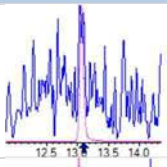 | 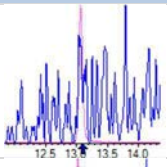 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 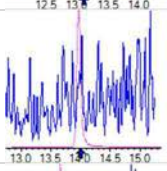 | 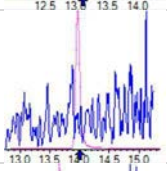 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 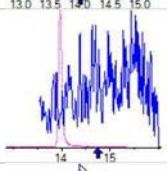 | 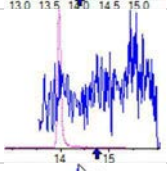 | |
| PFBS | ( 299.0 / 80.0 )<br>65386<br>( 299.0 / 99.0 )<br>48894 | ( 5.33 , 1.00 )<br>( 0.00 , N/A , 0.2) | 497.2<br>320.7 | 0.7478<br>101.0<br>99.1 | 0.1920 | N/A | 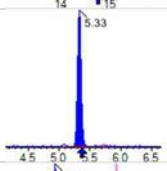 | 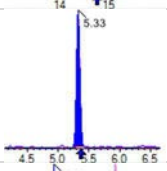 | |
| PFPeS | ( 349.0 / 80.0 )<br>45148<br>( 349.0 / 99.0 )<br>17023 | ( 6.62 , 0.81 )<br>( N/A , -0.05 , 0.3) | 207.1<br>187.8 | 0.3770<br>110.3<br>106.1 | 0.0470 | N/A | 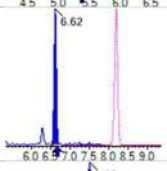 | 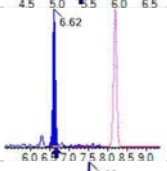 | |
| PFHxS | ( 399.0 / 80.0 )<br>190870<br>( 399.0 / 99.0 )<br>58623 | ( 8.19 , 1.00 )<br>( 0.00 , N/A , -0.2) | 962.9<br>1344.3 | 0.3071<br>93.6<br>95.1 | 0.1620 | N/A | 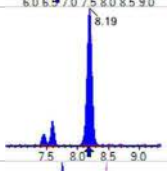 | 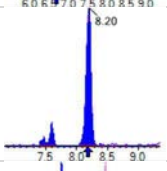 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 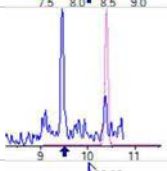 | 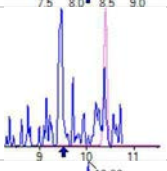 | |
| PFOS | ( 499.0 / 80.0 )<br>137278<br>( 499.0 / 99.0 )<br>25417 | ( 10.39 , 1.00 )<br>( -0.01 , N/A , -0.3) | 299.2<br>561.6 | 0.1852<br>80.1<br>80.8 | 0.1710 | N/A | 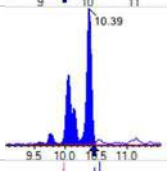 | 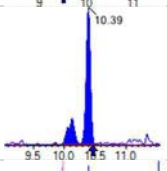 | MI5 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 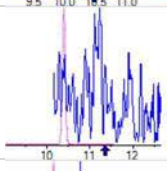 | 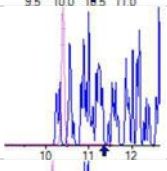 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 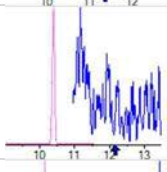 | 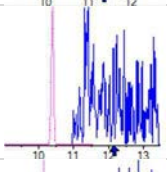 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 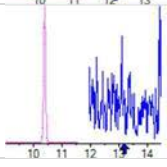 | 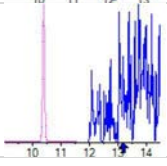 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 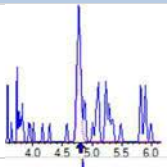 | 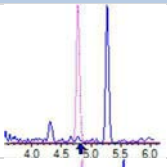 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 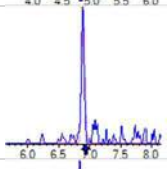 | 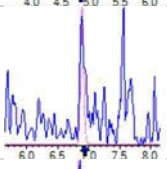 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 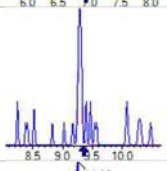 | 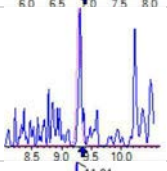 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>14958<br>( 627.0 / 81.0 )<br>22501 | ( 11.00 , 1.00 )<br>( 0.01 , N/A , -0.3) | 286.7<br>106.4 | 1.5042<br>104.6<br>103.8 | 0.0580 | N/A | 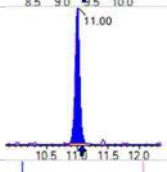 | 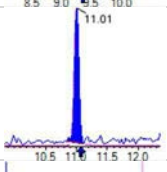 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 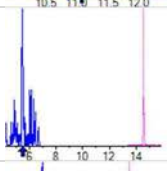 | 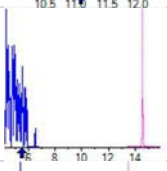 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 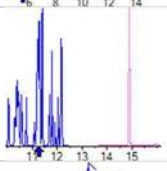 | 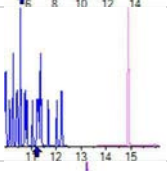 | |
| PFOSA | ( 498.0 / 78.0 )<br>22817<br>( 498.0 / 478.0 )<br>N/A | ( 13.28 , 1.00 )<br>( -0.01 , N/A , #Value!) | 267.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0360 | N/A | 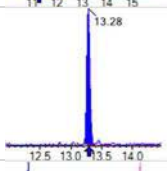 | 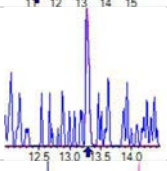 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 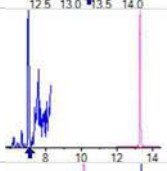 | 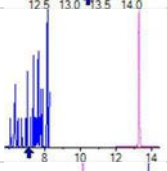 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 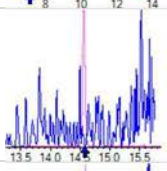 | 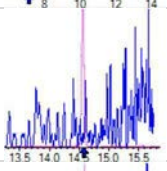 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 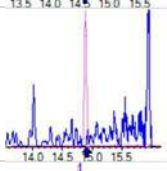 | 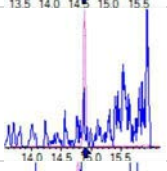 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 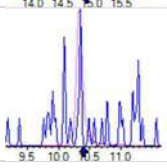 | 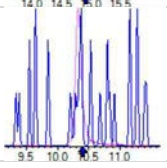 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 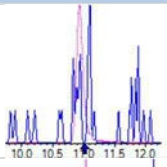 | 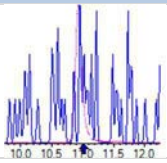 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 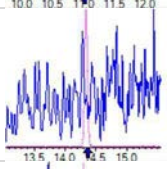 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 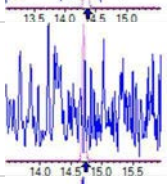 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 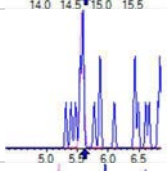 | 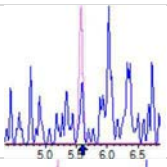 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 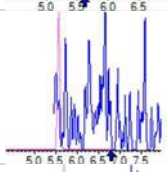 | 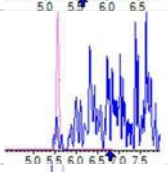 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 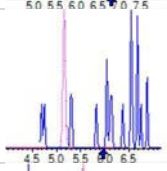 | 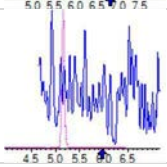 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 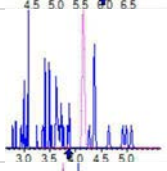 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 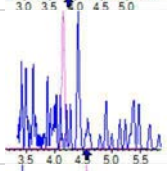 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 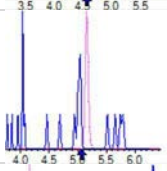 | 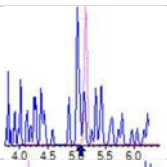 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 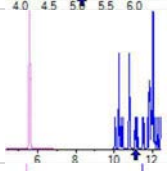 | 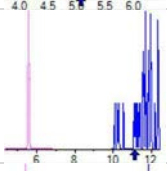 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 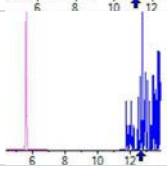 | 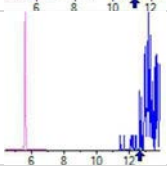 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 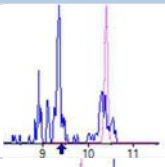 | 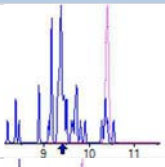 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 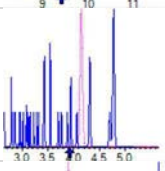 | 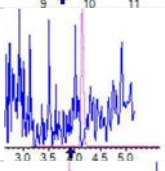 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 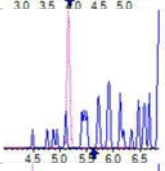 | 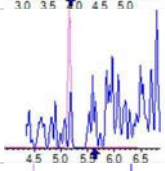 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 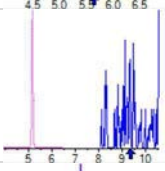 | 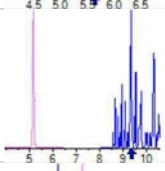 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 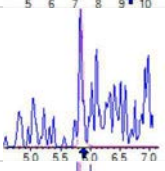 | 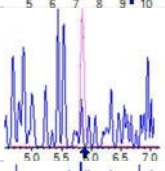 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 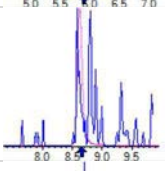 | 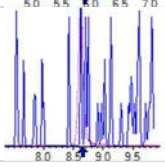 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 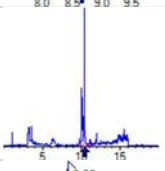 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>242815 | ( 3.38 , N/A )<br>( N/A , -0.23 , N/A ) | 1822.8 | N/A | 0.8600<br>[ 1.0000 ] | 86.0%<br>{ 91.8% } | 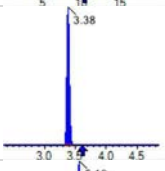 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>100341 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 10025.7 | N/A | 0.8500<br>[ 1.0000 ] | 85.0%<br>{ 86.7% } | 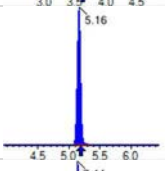 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>349724 | ( 7.44 , N/A )<br>( N/A , -0.03 , N/A ) | 8350.2 | N/A | 0.9010<br>[ 1.0000 ] | 90.1%<br>{ 96.9% } | 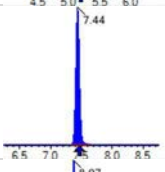 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>245726 | ( 8.97 , N/A )<br>( N/A , -0.05 , N/A ) | 1477.9 | N/A | 0.8410<br>[ 1.0000 ] | 84.1%<br>{ 88.1% } | 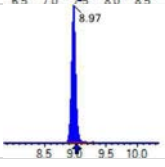 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 248675 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 5974.9 | N/A | 0.8680 [ 1.0000 ] | 86.8% { 90.1% } | 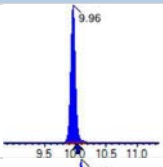 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 924889 | ( 8.20 , N/A ) ( N/A , 0.02 , N/A ) | 11362.2 | N/A | 0.9420 [ 1.0000 ] | 94.2% { 100.8% } | 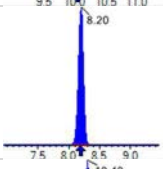 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 685002 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 1946.2 | N/A | 0.8730 [ 1.0000 ] | 87.3% { 88.8% } | 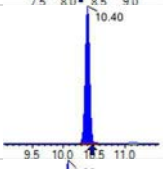 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1984258 | ( 3.38 , N/A ) ( N/A , -0.23 , N/A ) | 97428.1 | N/A | 7.5600 [ 8.0000 ] | 94.5% { 91.4% } | 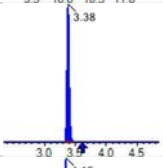 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 834910 | ( 4.15 , N/A ) ( N/A , -0.19 , N/A ) | 5317.1 | N/A | 4.5450 [ 4.0000 ] | 113.6% { 99.8% } | 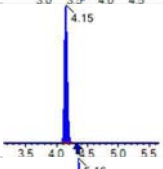 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 427594 | ( 5.16 , N/A ) ( N/A , -0.04 , N/A ) | 7407.5 | N/A | 1.9480 [ 2.0000 ] | 97.4% { 88.9% } | 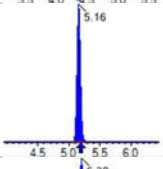 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 525565 | ( 6.30 , N/A ) ( N/A , -0.06 , N/A ) | 6446.6 | N/A | 2.1560 [ 2.0000 ] | 107.8% { 95.9% } | 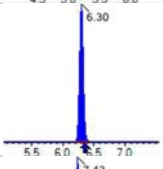 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 770807 | ( 7.43 , N/A ) ( N/A , -0.03 , N/A ) | 4742.7 | N/A | 2.0800 [ 2.0000 ] | 104.0% { 100.7% } | 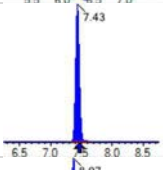 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 252508 | ( 8.97 , N/A ) ( N/A , -0.05 , N/A ) | 9013.9 | N/A | 1.0410 [ 1.0000 ] | 104.1% { 93.7% } | 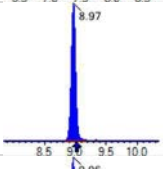 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 271618 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1484.7 | N/A | 0.9450 [ 1.0000 ] | 94.5% { 92.4% } | 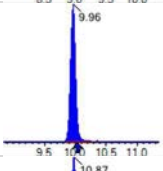 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 331395 | ( 10.87 , N/A ) ( N/A , -0.07 , N/A ) | 1074.2 | N/A | 0.9720 [ 1.0000 ] | 97.2% { 89.7% } | 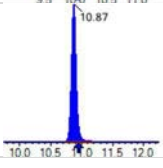 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-04 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 351354 | ( 11.77 , N/A ) ( N/A , -0.06 , N/A ) | 1314.0 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 96.8% } | 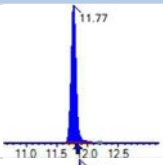 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 298584 | ( 13.07 , N/A ) ( N/A , -0.04 , N/A ) | 1171.9 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 91.1% } | 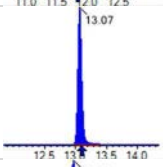 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 401524 | ( 13.97 , N/A ) ( N/A , -0.04 , N/A ) | 2022.7 | N/A | 1.5500 [ 2.0000 ] | 77.5% { 80.6% } | 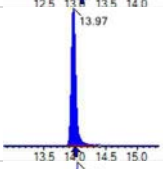 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1385834 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 1355.0 | N/A | 1.8590 [ 2.0000 ] | 92.9% { 94.0% } | 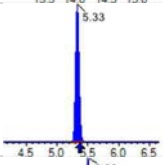 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1347231 | ( 8.20 , N/A ) ( N/A , 0.02 , N/A ) | 6469.3 | N/A | 2.0190 [ 2.0000 ] | 101.0% { 103.5% } | 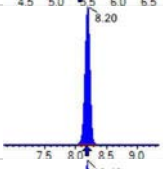 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1381524 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 1919.4 | N/A | 1.8960 [ 2.0000 ] | 94.8% { 95.6% } | 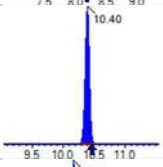 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 749400 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 56.1 | N/A | 4.5700 [ 4.0000 ] | 114.2% { 115.2% } | 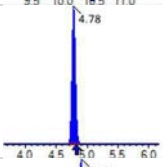 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1961494 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 6283.7 | N/A | 4.8690 [ 4.0000 ] | 121.7% { 111.5% } | 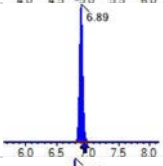 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1490892 | ( 9.29 , N/A ) ( N/A , -0.06 , N/A ) | 1758.4 | N/A | 4.2290 [ 4.0000 ] | 105.7% { 102.5% } | 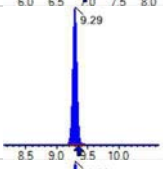 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2604638 | ( 11.00 , N/A ) ( N/A , -0.07 , N/A ) | 2088.6 | N/A | 6.8300 [ 8.0000 ] | 85.4% { 87.4% } | 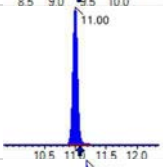 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1292240 | ( 13.29 , N/A ) ( N/A , -0.01 , N/A ) | 2956.0 | N/A | 1.6700 [ 2.0000 ] | 83.5% { 82.9% } | 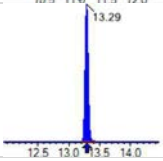 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (21)
Acquired: 2024/03/29 - 02:42

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 159488 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 1183.0 | N/A | 0.9170 [ 2.0000 ] | 45.8% { 43.8% } | 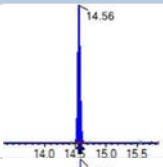 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 146239 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 1553.3 | N/A | 0.9200 [ 2.0000 ] | 46.0% { 42.5% } | 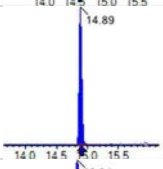 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 752141 | ( 10.34 , N/A ) ( N/A , -0.06 , N/A ) | 2644.3 | N/A | 2.9720 [ 4.0000 ] | 74.3% { 63.7% } | 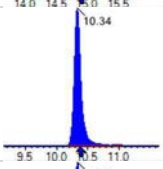 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 910282 | ( 10.93 , N/A ) ( N/A , -0.06 , N/A ) | 1991.6 | N/A | 3.9860 [ 4.0000 ] | 99.6% { 89.3% } | 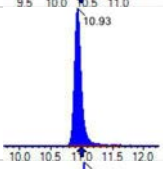 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 560674 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 1508.3 | N/A | 8.6280 [ 20.0000 ] | 43.1% { 42.2% } | 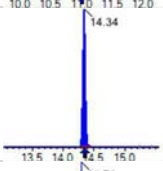 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 490601 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 2506.4 | N/A | 8.0610 [ 20.0000 ] | 40.3% { 39.2% } | 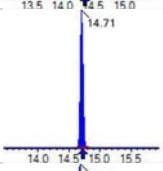 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 768558 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2097.2 | N/A | 8.0830 [ 8.0000 ] | 101.0% { 92.9% } | 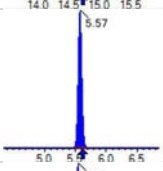 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 532819 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 1601.4 | N/A | 1.9660 [ 2.0000 ] | 98.3% { 94.9% } | 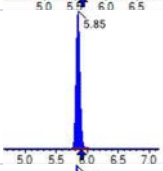 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 557727 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 1199.4 | N/A | 1.8270 [ 2.0000 ] | 91.3% { 83.2% } | 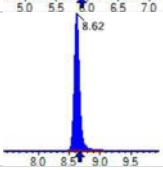 | | |

# ANALYSIS DATA SHEETL

MW-6-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-05- | File ID:- | S2024-03-28B (22)- |
| Sampled:- | 03/19/24 11:02- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 03:02- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 526.954 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 2.0- | 0.20- | 1.5- | |
| PFPeA- | 2.8- | 0.062- | 0.76- | |
| PFHxA- | 2.0- | 0.052- | 0.38- | |
| PFHpA- | 0.40- | 0.039- | 0.38- | |
| PFOA- | 0.83- | 0.14- | 0.38- | B, MI5- |
| PFNA- | ND- | 0.078- | 0.38- | U- |
| PFDA- | ND- | 0.096- | 0.38- | U- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | U- |
| PFBS- | 1.9- | 0.035- | 0.38- | |
| PFPeS- | 0.99- | 0.059- | 0.38- | |
| PFHxS- | 1.3- | 0.030- | 0.38- | MI5- |
| PFHpS- | ND- | 0.049- | 0.38- | U- |
| PFOS- | 0.23- | 0.060- | 0.38- | MI2, J- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.28- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.099- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

MW-6-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-05- | File ID:- | S2024-03-28B (22)- |
| Sampled:- | 03/19/24 11:02- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 03:02- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 526.954 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.96- | 1.5- | U- |
| NEtFOSE- | ND- | 0.99- | 1.5- | U- |
| HFPO-DA- | ND- | 0.17- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.051- | 0.76- | U- |
| PFMBA- | ND- | 0.086- | 0.76- | U- |
| NFDHA- | ND- | 0.29- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.55- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.53- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 31744<br>( 163.0 / 69.0 ) 910 | ( 2.35 , 0.69 )<br>( N/A , -0.11 , -0.1) | 174.7<br>107.4 | 0.0287<br>104.6<br>109.3 | 0.5480 | N/A | 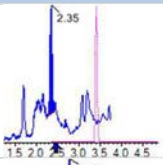 | 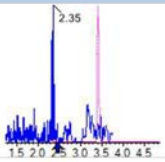 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) 225082 | ( 3.42 , 1.00 )<br>( 0.01 , N/A , 0.0) | 157.0 | N/A<br>0.0<br>0.0 | 0.5390 | N/A | 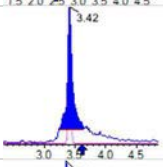 | | |
| PFPeA | ( 263.0 / 219.0 ) 155889<br>( 263.0 / 69.0 ) 2113 | ( 4.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 555.4<br>50.4 | 0.0136<br>113.9<br>127.4 | 0.7490 | N/A | 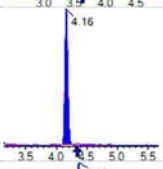 | 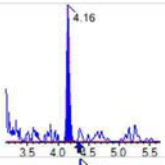 | |
| PFHxA | ( 313.0 / 269.0 ) 108700<br>( 313.0 / 119.0 ) 12488 | ( 5.16 , 1.00 )<br>( 0.00 , N/A , 0.2) | 429.5<br>242.4 | 0.1149<br>103.3<br>97.0 | 0.5170 | N/A | 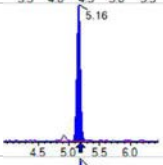 | 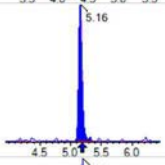 | |
| PFHpA | ( 363.0 / 319.0 ) 29303<br>( 363.0 / 169.0 ) 8841 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , -0.3) | 172.4<br>166.5 | 0.3017<br>98.7<br>98.0 | 0.1060 | N/A | 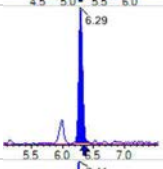 | 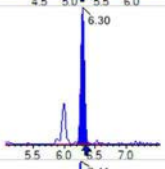 | |
| PFOA | ( 413.0 / 369.0 ) 86663<br>( 413.0 / 169.0 ) 29158 | ( 7.41 , 1.00 )<br>( 0.00 , N/A , 0.2) | 103.9<br>115.5 | 0.3365<br>94.1<br>94.9 | 0.2200 | N/A | 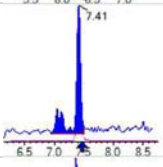 | 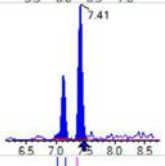 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 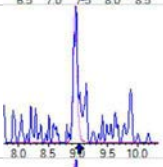 | 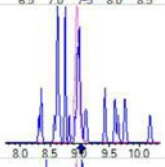 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 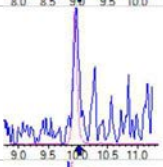 | 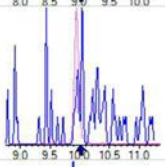 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 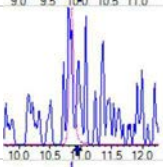 | 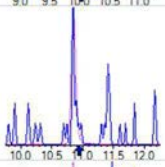 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 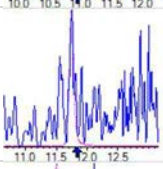 | 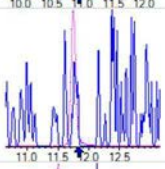 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 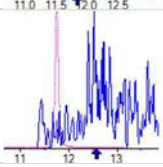 | 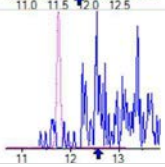 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 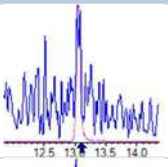 | 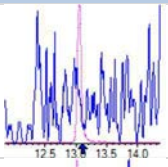 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 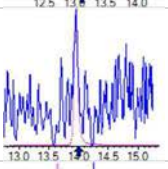 | 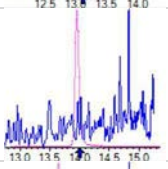 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 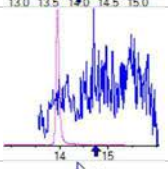 | 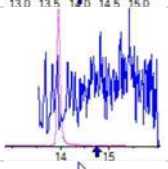 | |
| PFBS | ( 299.0 / 80.0 )<br>168075<br>( 299.0 / 99.0 )<br>128830 | ( 5.33 , 1.00 )<br>( 0.00 , N/A , 0.0) | 471.6<br>569.9 | 0.7665<br>103.5<br>101.6 | 0.4910 | N/A | 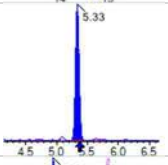 | 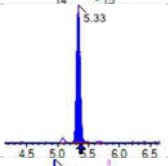 | |
| PFPeS | ( 349.0 / 80.0 )<br>255519<br>( 349.0 / 99.0 )<br>93931 | ( 6.62 , 0.82 )<br>( N/A , -0.06 , -0.1) | 511.7<br>518.8 | 0.3676<br>107.6<br>103.5 | 0.2620 | N/A | 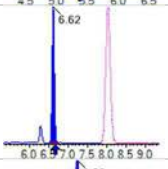 | 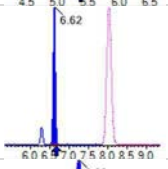 | |
| PFHxS | ( 399.0 / 80.0 )<br>402451<br>( 399.0 / 99.0 )<br>115413 | ( 8.03 , 1.00 )<br>( 0.00 , N/A , 0.0) | 528.8<br>743.5 | 0.2868<br>87.4<br>88.8 | 0.3380 | N/A | 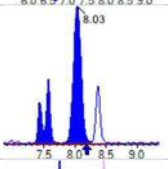 | 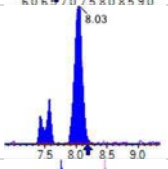 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 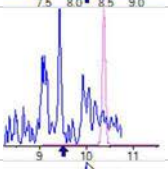 | 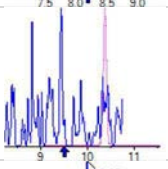 | |
| PFOS | ( 499.0 / 80.0 )<br>52677<br>( 499.0 / 99.0 )<br>12973 | ( 10.38 , 1.00 )<br>( 0.00 , N/A , 0.2) | 214.4<br>466.9 | 0.2463<br>106.6<br>107.5 | 0.0620 | N/A | 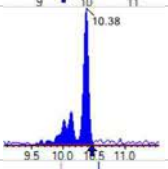 | 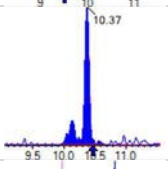 | MI2 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 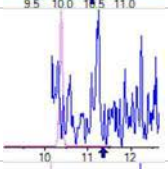 | 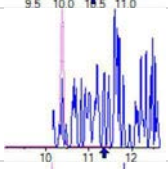 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 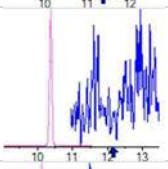 | 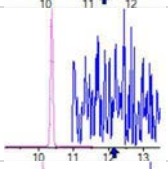 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 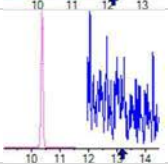 | 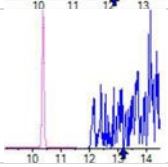 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 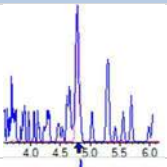 | 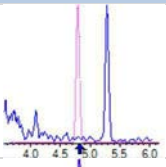 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 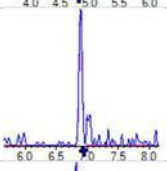 | 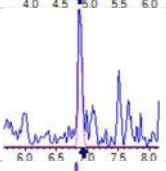 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 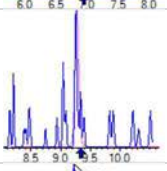 | 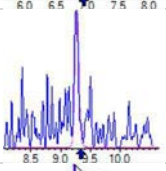 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14679<br>( 627.0 / 81.0 ) 21315 | ( 10.99 , 1.00 ) ( 0.01 , N/A , -0.2) | 206.8<br>93.1 | 1.4521<br>101.0<br>100.2 | 0.0580 | N/A | 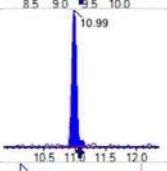 | 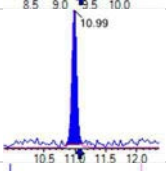 | |
| PFBSA | ( 297.9 / 78.0 ) 30137<br>( 297.9 / 278.0 ) N/A | ( 5.48 , 0.38 ) ( N/A , -0.05 , #Value!) | 286.9<br>N/A | N/A<br>0.0<br>0.0 | 0.1670 | N/A | 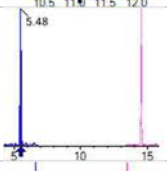 | 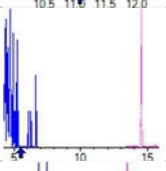 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 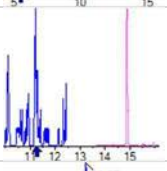 | 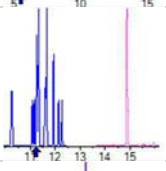 | |
| PFOSA | ( 498.0 / 78.0 ) 11050<br>( 498.0 / 478.0 ) N/A | ( 13.27 , 1.00 ) ( -0.01 , N/A , #Value!) | 118.9<br>N/A | N/A<br>0.0<br>0.0 | 0.0240 | N/A | 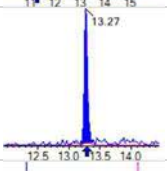 | 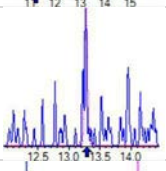 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 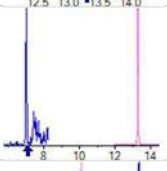 | 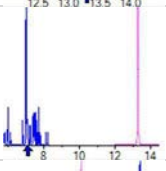 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 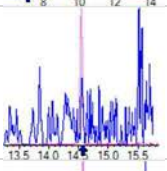 | 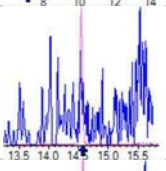 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 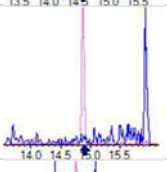 | 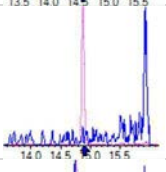 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 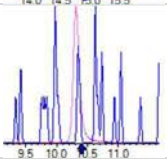 | 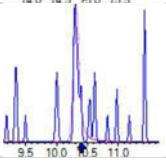 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 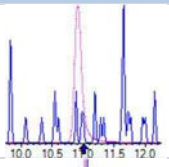 | 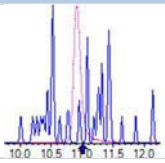 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 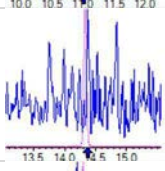 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 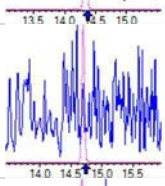 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 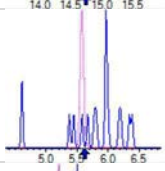 | 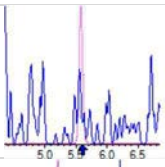 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 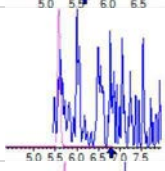 | 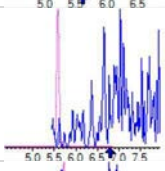 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 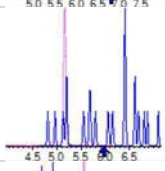 | 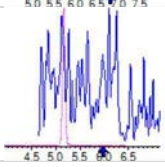 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 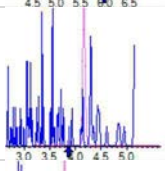 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 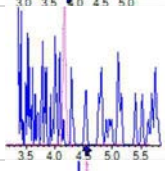 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 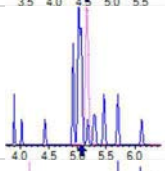 | 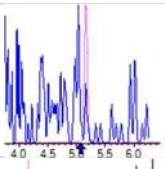 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 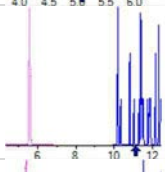 | 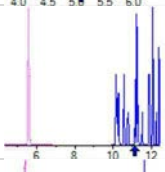 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 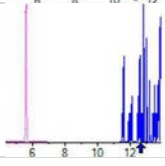 | 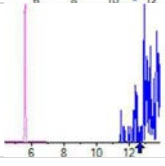 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 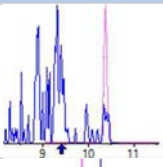 | 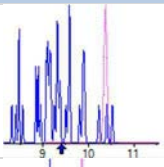 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 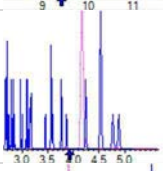 | 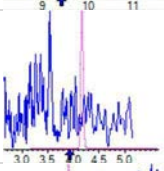 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 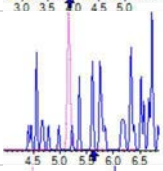 | 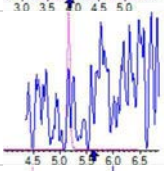 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 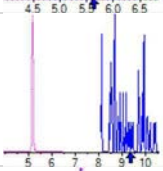 | 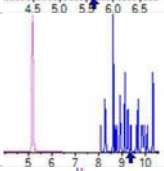 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 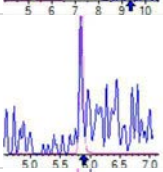 | 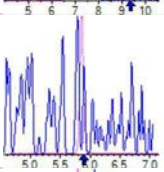 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 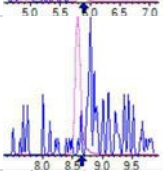 | 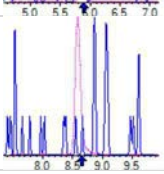 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 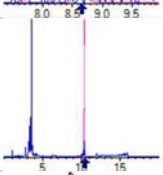 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 252673 | ( 3.41 , N/A )<br>( N/A , -0.20 , N/A ) | 1966.9 | N/A | 0.8950<br>[ 1.0000 ] | 89.5%<br>{ 95.6% } | 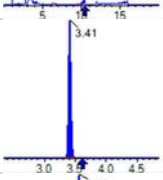 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 103846 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 792073.6 | N/A | 0.8800<br>[ 1.0000 ] | 88.0%<br>{ 89.7% } | 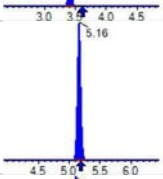 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 364932 | ( 7.41 , N/A )<br>( N/A , -0.06 , N/A ) | 6671.8 | N/A | 0.9400<br>[ 1.0000 ] | 94.0%<br>{ 101.1% } | 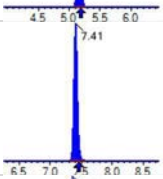 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 259028 | ( 8.95 , N/A )<br>( N/A , -0.07 , N/A ) | 1244.1 | N/A | 0.8870<br>[ 1.0000 ] | 88.7%<br>{ 92.9% } | 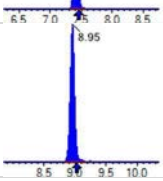 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 262536 | ( 9.94 , N/A ) ( N/A , -0.08 , N/A ) | 6905.2 | N/A | 0.9160 [ 1.0000 ] | 91.6% { 95.1% } | 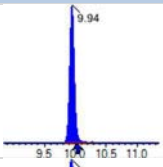 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 976772 | ( 8.04 , N/A ) ( N/A , -0.14 , N/A ) | 5779.6 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 106.4% } | 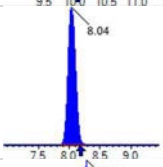 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 737066 | ( 10.38 , N/A ) ( N/A , -0.09 , N/A ) | 2156.7 | N/A | 0.9400 [ 1.0000 ] | 94.0% { 95.6% } | 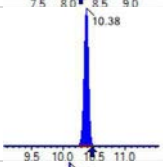 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2048048 | ( 3.41 , N/A ) ( N/A , -0.20 , N/A ) | 87470.8 | N/A | 7.4990 [ 8.0000 ] | 93.7% { 94.3% } | 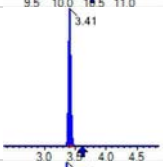 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 833426 | ( 4.16 , N/A ) ( N/A , -0.17 , N/A ) | 5217.8 | N/A | 4.3840 [ 4.0000 ] | 109.6% { 99.6% } | 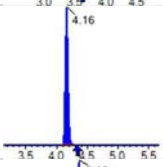 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 453326 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 21043.9 | N/A | 1.9950 [ 2.0000 ] | 99.8% { 94.3% } | 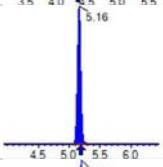 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 555210 | ( 6.30 , N/A ) ( N/A , -0.06 , N/A ) | 12365.6 | N/A | 2.2000 [ 2.0000 ] | 110.0% { 101.3% } | 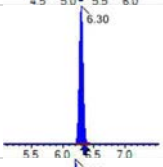 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 785973 | ( 7.41 , N/A ) ( N/A , -0.06 , N/A ) | 5255.3 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 102.7% } | 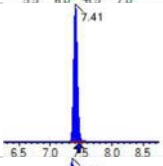 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 246747 | ( 8.95 , N/A ) ( N/A , -0.07 , N/A ) | 4415.3 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 91.5% } | 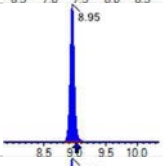 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 288721 | ( 9.94 , N/A ) ( N/A , -0.08 , N/A ) | 1290.3 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 98.2% } | 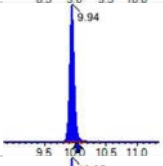 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 305346 | ( 10.85 , N/A ) ( N/A , -0.09 , N/A ) | 1083.6 | N/A | 0.8490 [ 1.0000 ] | 84.9% { 82.7% } | 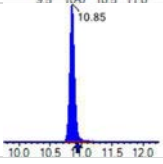 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 329307 | ( 11.75 , N/A ) ( N/A , -0.09 , N/A ) | 1568.4 | N/A | 0.8920 [ 1.0000 ] | 89.2% { 90.8% } | 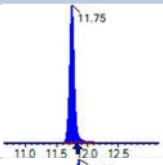 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 295551 | ( 13.05 , N/A ) ( N/A , -0.05 , N/A ) | 1261.4 | N/A | 0.9040 [ 1.0000 ] | 90.4% { 90.2% } | 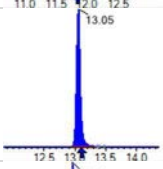 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 454136 | ( 13.95 , N/A ) ( N/A , -0.05 , N/A ) | 2455.8 | N/A | 1.6610 [ 2.0000 ] | 83.0% { 91.2% } | 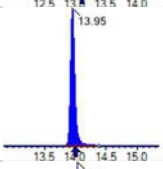 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1392303 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1348.6 | N/A | 1.7680 [ 2.0000 ] | 88.4% { 94.4% } | 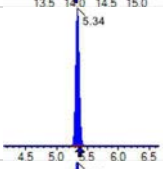 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1359760 | ( 8.03 , N/A ) ( N/A , -0.14 , N/A ) | 4864.4 | N/A | 1.9300 [ 2.0000 ] | 96.5% { 104.4% } | 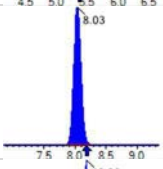 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1472810 | ( 10.38 , N/A ) ( N/A , -0.09 , N/A ) | 1804.9 | N/A | 1.8780 [ 2.0000 ] | 93.9% { 102.0% } | 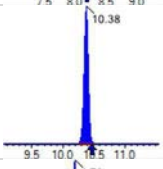 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 690191 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 63.5 | N/A | 3.9850 [ 4.0000 ] | 99.6% { 106.1% } | 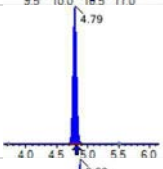 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1913195 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 4597.8 | N/A | 4.4970 [ 4.0000 ] | 112.4% { 108.7% } | 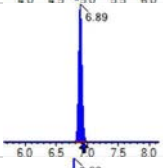 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1545716 | ( 9.28 , N/A ) ( N/A , -0.07 , N/A ) | 2387.0 | N/A | 4.1520 [ 4.0000 ] | 103.8% { 106.2% } | 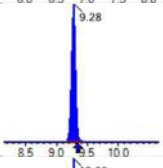 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2552360 | ( 10.98 , N/A ) ( N/A , -0.09 , N/A ) | 1396.2 | N/A | 6.3380 [ 8.0000 ] | 79.2% { 85.6% } | 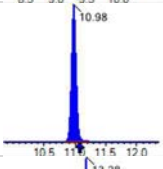 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 964161 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 2503.2 | N/A | 1.1580 [ 2.0000 ] | 57.9% { 61.9% } | 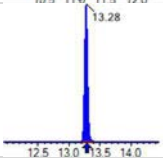 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (22)
Acquired: 2024/03/29 - 03:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 118824 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 926.3 | N/A | 0.6350 [ 2.0000 ] | 31.7% { 32.6% } | 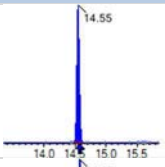 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 117629 | ( 14.87 , N/A ) ( N/A , -0.02 , N/A ) | 1042.0 | N/A | 0.6880 [ 2.0000 ] | 34.4% { 34.1% } | 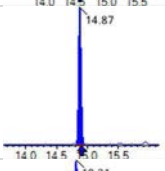 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 916312 | ( 10.31 , N/A ) ( N/A , -0.08 , N/A ) | 2426.3 | N/A | 3.3650 [ 4.0000 ] | 84.1% { 77.6% } | 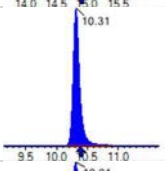 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 916167 | ( 10.91 , N/A ) ( N/A , -0.08 , N/A ) | 2174.3 | N/A | 3.7280 [ 4.0000 ] | 93.2% { 89.9% } | 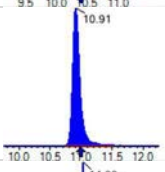 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 533669 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1517.2 | N/A | 7.6320 [ 20.0000 ] | 38.2% { 40.2% } | 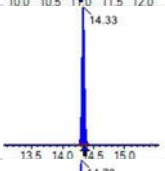 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 532729 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 2652.0 | N/A | 8.1350 [ 20.0000 ] | 40.7% { 42.6% } | 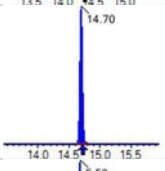 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 750661 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2438.6 | N/A | 7.6280 [ 8.0000 ] | 95.3% { 90.7% } | 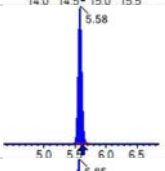 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 535701 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2098.0 | N/A | 1.8720 [ 2.0000 ] | 93.6% { 95.4% } | 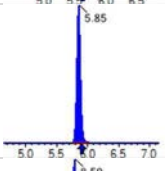 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 548966 | ( 8.59 , N/A ) ( N/A , -0.07 , N/A ) | 965.5 | N/A | 1.7030 [ 2.0000 ] | 85.2% { 81.9% } | 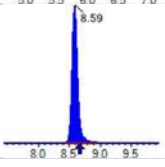 | | |

# ANALYSIS DATA SHEETL

MW-10-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-06- | File ID:- | S2024-03-28B (23)- |
| Sampled:- | 03/19/24 12:05- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 03:23- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 552.42 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.4- | U- |
| PFPeA- | ND- | 0.059- | 0.72- | U- |
| PFHxA- | 0.074- | 0.050- | 0.36- | J- |
| PFHpA- | 0.14- | 0.037- | 0.36- | J- |
| PFOA- | 0.85- | 0.14- | 0.36- | B- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | 0.26- | 0.092- | 0.36- | J- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 0.81- | 0.033- | 0.36- | |
| PFPeS- | ND- | 0.057- | 0.36- | U- |
| PFHxS- | 0.87- | 0.029- | 0.36- | MI5- |
| PFHpS- | 0.12- | 0.046- | 0.36- | J- |
| PFOS- | 13- | 0.058- | 0.36- | |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.094- | 0.36- | U- |
| NMeFOSA- | ND- | 0.43- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.096- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-10-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-06- | File ID:- | S2024-03-28B (23)- |
| Sampled:- | 03/19/24 12:05- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 03:23- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 552.42 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.4- | U- |
| NEtFOSE- | ND- | 0.95- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.099- | 0.72- | U- |
| PFMPA- | ND- | 0.049- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>44522<br>( 163.0 / 69.0 )<br>1185 | ( 2.41 , 0.71 )<br>( N/A , -0.05 , -0.2) | 407.7<br>110.1 | 0.0266<br>97.1<br>101.5 | 0.7510 | N/A | 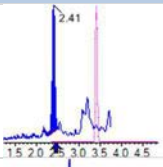 | 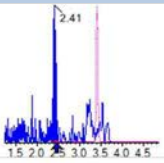 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 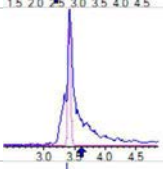 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 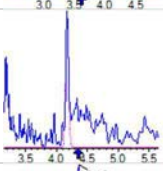 | 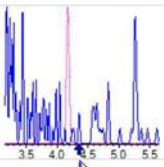 | |
| PFHxA | ( 313.0 / 269.0 )<br>3828<br>( 313.0 / 119.0 )<br>618 | ( 5.16 , 1.00 )<br>( 0.00 , N/A , -0.7) | 37.5<br>35.4 | 0.1613<br>145.0<br>136.1 | 0.0200 | N/A | 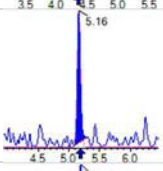 | 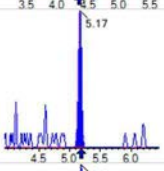 | |
| PFHpA | ( 363.0 / 319.0 )<br>9357<br>( 363.0 / 169.0 )<br>2434 | ( 6.29 , 1.00 )<br>( 0.00 , N/A , 0.0) | 59.7<br>62.0 | 0.2601<br>85.1<br>84.5 | 0.0390 | N/A | 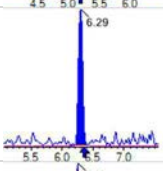 | 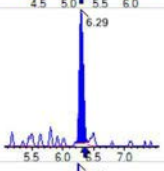 | |
| PFOA | ( 413.0 / 369.0 )<br>88875<br>( 413.0 / 169.0 )<br>33473 | ( 7.40 , 1.00 )<br>( 0.00 , N/A , 0.1) | 157.0<br>227.0 | 0.3766<br>105.4<br>106.2 | 0.2360 | N/A | 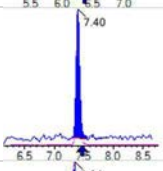 | 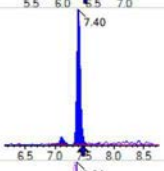 | |
| PFNA | ( 463.0 / 419.0 )<br>3380<br>( 463.0 / 169.0 )<br>692 | ( 8.94 , 1.00 )<br>( 0.01 , N/A , 0.5) | 38.0<br>17.6 | 0.2046<br>83.3<br>79.8 | 0.0140 | N/A | 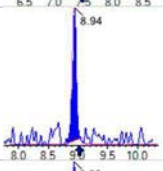 | 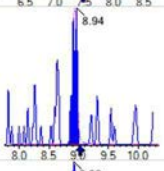 | |
| PFDA | ( 513.0 / 469.0 )<br>19409<br>( 513.0 / 169.0 )<br>1936 | ( 9.93 , 1.00 )<br>( 0.00 , N/A , 0.8) | 227.7<br>97.8 | 0.0998<br>83.7<br>81.9 | 0.0730 | N/A | 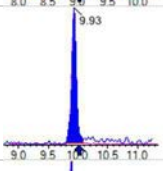 | 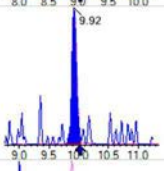 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 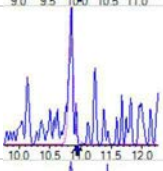 | 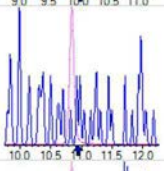 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 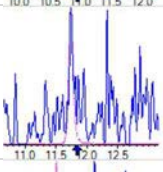 | 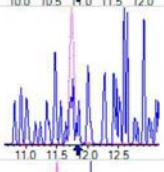 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 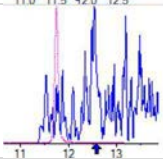 | 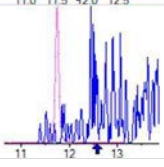 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 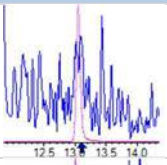 | 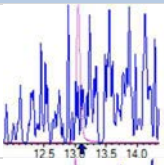 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 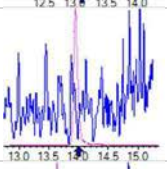 | 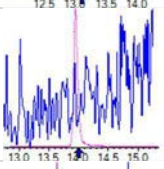 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 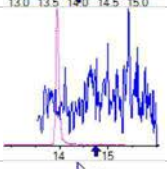 | 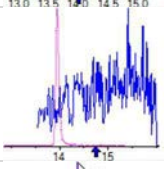 | |
| PFBS | ( 299.0 / 80.0 )<br>68447<br>( 299.0 / 99.0 )<br>48325 | ( 5.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 525.6<br>368.2 | 0.7060<br>95.3<br>93.6 | 0.2250 | N/A | 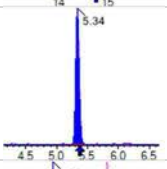 | 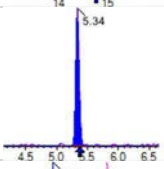 | |
| PFPeS | ( 349.0 / 80.0 )<br>11577<br>( 349.0 / 99.0 )<br>3323 | ( 6.61 , 0.82 )<br>( N/A , -0.06 , 0.4) | 91.6<br>27.4 | 0.2870<br>84.0<br>80.8 | 0.0130 | N/A | 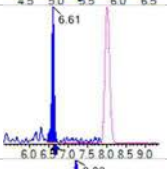 | 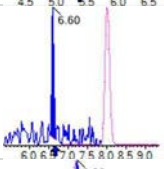 | |
| PFHxS | ( 399.0 / 80.0 )<br>261224<br>( 399.0 / 99.0 )<br>85294 | ( 8.02 , 1.00 )<br>( 0.00 , N/A , -0.2) | 1118.6<br>924.3 | 0.3265<br>99.5<br>101.1 | 0.2400 | N/A | 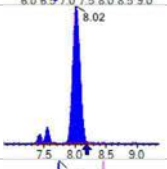 | 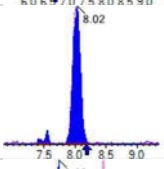 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>28051<br>( 449.0 / 99.0 )<br>7687 | ( 9.41 , 0.91 )<br>( N/A , -0.09 , -0.1) | 152.8<br>76.3 | 0.2740<br>105.0<br>105.6 | 0.0320 | N/A | 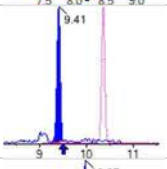 | 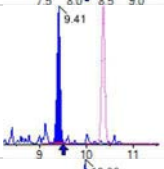 | |
| PFOS | ( 499.0 / 80.0 )<br>2906497<br>( 499.0 / 99.0 )<br>549088 | ( 10.27 , 0.99 )<br>( -0.10 , N/A , -5.8) | 1294.6<br>1954.8 | 0.1889<br>81.8<br>82.5 | 3.4570 | N/A | 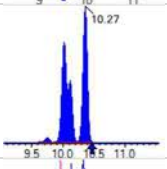 | 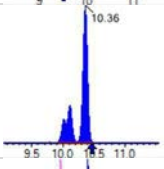 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 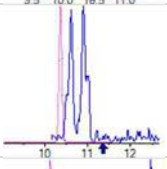 | 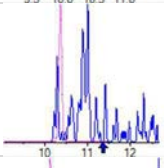 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 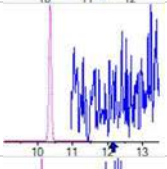 | 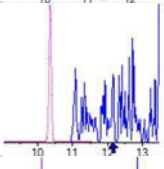 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 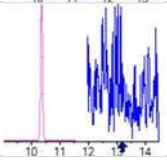 | 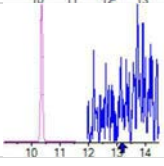 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 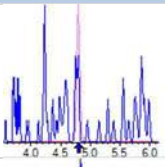 | 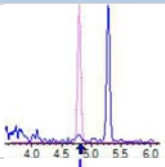 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 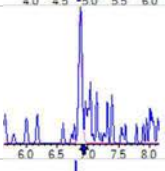 | 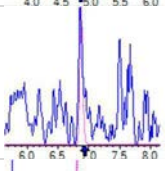 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 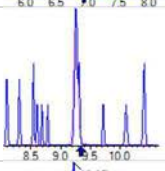 | 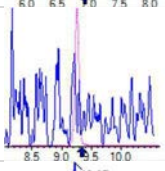 | |
| 10:2FTS | ( 627.0 / 607.0 ) 15084<br>( 627.0 / 81.0 ) 21864 | ( 10.97 , 1.00 ) ( 0.00 , N/A , -0.1) | 285.0<br>90.4 | 1.4495<br>100.8<br>100.0 | 0.0530 | N/A | 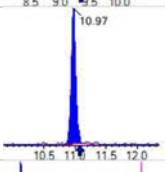 | 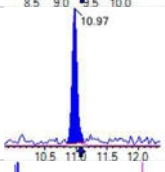 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 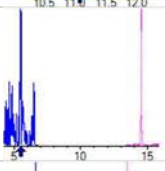 | 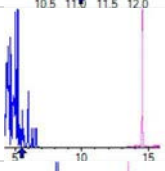 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 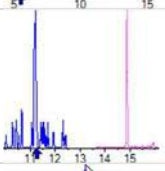 | 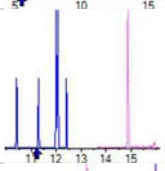 | |
| PFOSA | ( 498.0 / 78.0 ) 7697<br>( 498.0 / 478.0 ) N/A | ( 13.26 , 1.00 ) ( -0.01 , N/A , #Value!) | 86.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0140 | N/A | 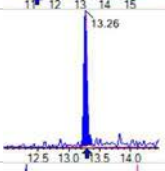 | 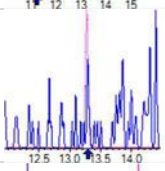 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 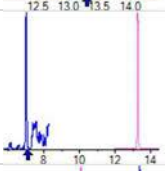 | 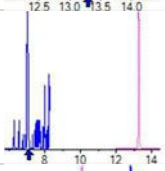 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 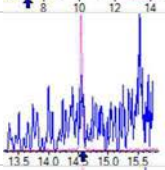 | 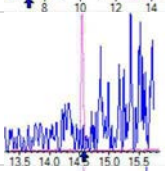 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 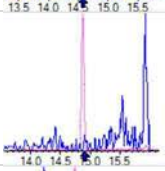 | 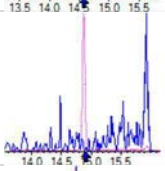 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 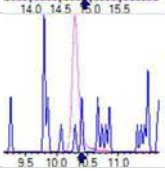 | 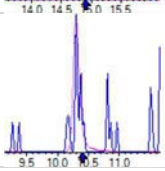 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 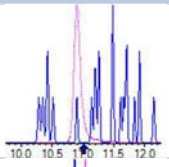 | 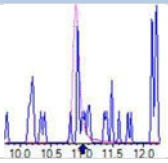 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 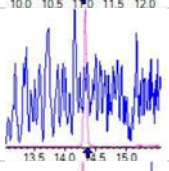 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 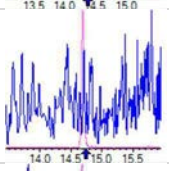 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 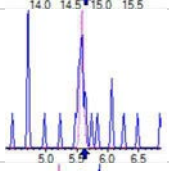 | 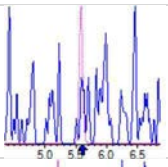 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 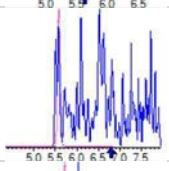 | 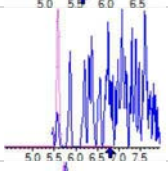 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 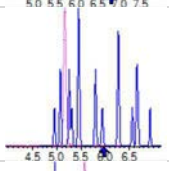 | 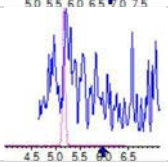 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 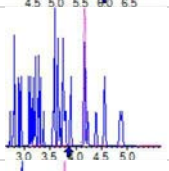 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 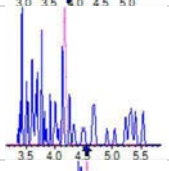 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 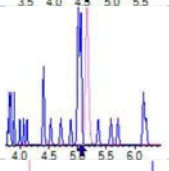 | 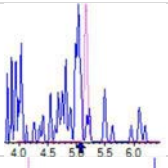 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 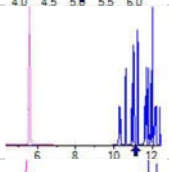 | 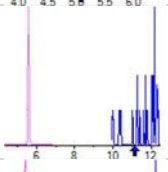 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 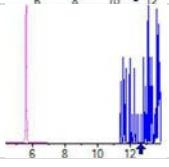 | 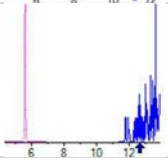 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 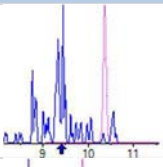 | 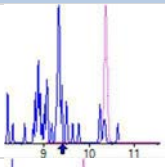 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 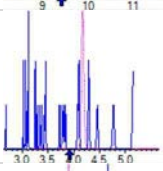 | 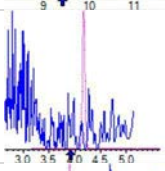 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 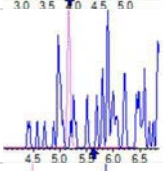 | 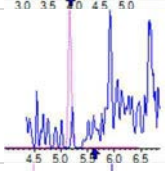 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 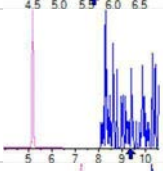 | 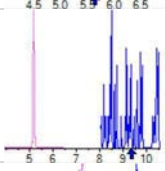 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 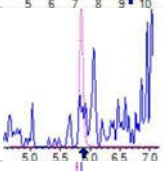 | 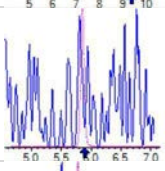 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 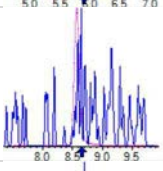 | 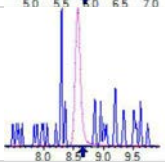 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 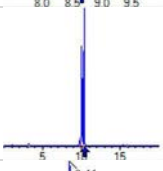 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 254568 | ( 3.41 , N/A ) ( N/A , -0.20 , N/A ) | 1896.8 | N/A | 0.9020 [ 1.0000 ] | 90.2% { 96.3% } | 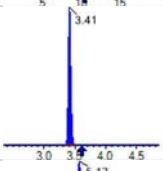 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 100599 | ( 5.17 , N/A ) ( N/A , -0.03 , N/A ) | 16874.1 | N/A | 0.8520 [ 1.0000 ] | 85.2% { 86.9% } | 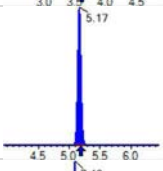 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 369397 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 7477.9 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 102.3% } | 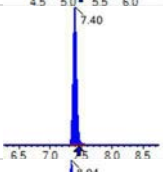 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 248114 | ( 8.94 , N/A ) ( N/A , -0.09 , N/A ) | 2303.9 | N/A | 0.8490 [ 1.0000 ] | 84.9% { 89.0% } | 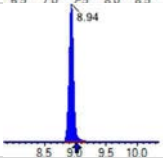 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 261800 | ( 9.93 , N/A ) ( N/A , -0.09 , N/A ) | 5676.4 | N/A | 0.9130 [ 1.0000 ] | 91.3% { 94.8% } | 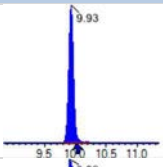 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 939064 | ( 8.02 , N/A ) ( N/A , -0.16 , N/A ) | 6937.9 | N/A | 0.9560 [ 1.0000 ] | 95.6% { 102.3% } | 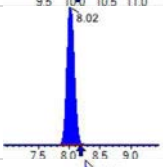 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 697212 | ( 10.37 , N/A ) ( N/A , -0.10 , N/A ) | 2241.5 | N/A | 0.8890 [ 1.0000 ] | 88.9% { 90.4% } | 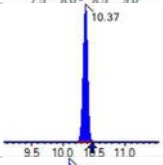 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2094760 | ( 3.41 , N/A ) ( N/A , -0.20 , N/A ) | 86178.6 | N/A | 7.6130 [ 8.0000 ] | 95.2% { 96.5% } | 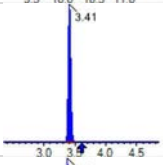 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 778298 | ( 4.17 , N/A ) ( N/A , -0.16 , N/A ) | 4764.4 | N/A | 4.2260 [ 4.0000 ] | 105.6% { 93.1% } | 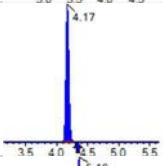 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 403287 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 7871.8 | N/A | 1.8320 [ 2.0000 ] | 91.6% { 83.9% } | 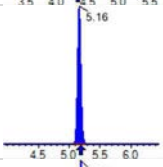 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 483077 | ( 6.29 , N/A ) ( N/A , -0.06 , N/A ) | 4410.2 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 88.1% } | 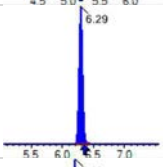 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 750996 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 5894.1 | N/A | 1.9180 [ 2.0000 ] | 95.9% { 98.1% } | 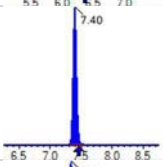 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235431 | ( 8.93 , N/A ) ( N/A , -0.09 , N/A ) | 4100.2 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 87.3% } | 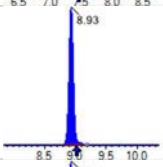 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 267184 | ( 9.93 , N/A ) ( N/A , -0.10 , N/A ) | 1166.2 | N/A | 0.8830 [ 1.0000 ] | 88.3% { 90.9% } | 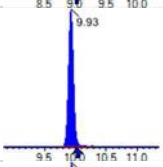 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 330927 | ( 10.84 , N/A ) ( N/A , -0.10 , N/A ) | 1068.0 | N/A | 0.9220 [ 1.0000 ] | 92.2% { 89.6% } | 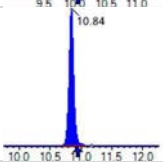 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-06 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 332153 | ( 11.74 , N/A ) ( N/A , -0.09 , N/A ) | 1281.0 | N/A | 0.9030 [ 1.0000 ] | 90.3% { 91.5% } | 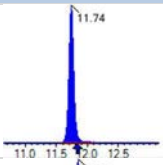 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 294981 | ( 13.05 , N/A ) ( N/A , -0.06 , N/A ) | 1144.8 | N/A | 0.9050 [ 1.0000 ] | 90.5% { 90.0% } | 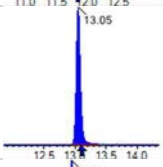 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 400247 | ( 13.95 , N/A ) ( N/A , -0.06 , N/A ) | 1751.9 | N/A | 1.4680 [ 2.0000 ] | 73.4% { 80.4% } | 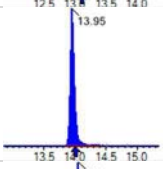 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1239595 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 2057.7 | N/A | 1.6380 [ 2.0000 ] | 81.9% { 84.0% } | 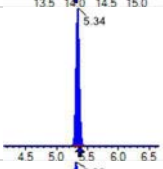 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1245129 | ( 8.02 , N/A ) ( N/A , -0.16 , N/A ) | 5876.8 | N/A | 1.8380 [ 2.0000 ] | 91.9% { 95.6% } | 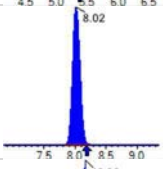 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1448722 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 1936.2 | N/A | 1.9530 [ 2.0000 ] | 97.7% { 100.3% } | 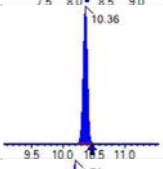 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 602081 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 74.6 | N/A | 3.6160 [ 4.0000 ] | 90.4% { 92.5% } | 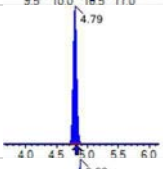 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1797749 | ( 6.88 , N/A ) ( N/A , -0.06 , N/A ) | 4826.9 | N/A | 4.3950 [ 4.0000 ] | 109.9% { 102.2% } | 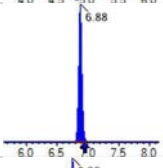 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1475166 | ( 9.26 , N/A ) ( N/A , -0.09 , N/A ) | 2009.2 | N/A | 4.1220 [ 4.0000 ] | 103.0% { 101.4% } | 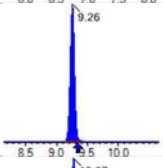 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2853778 | ( 10.97 , N/A ) ( N/A , -0.10 , N/A ) | 1589.7 | N/A | 7.3710 [ 8.0000 ] | 92.1% { 95.8% } | 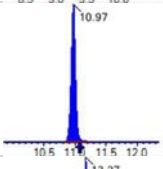 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1133339 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 3733.7 | N/A | 1.4390 [ 2.0000 ] | 72.0% { 72.7% } | 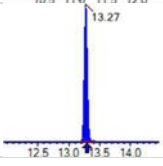 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (23)
Acquired: 2024/03/29 - 03:23

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 83959 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 750.7 | N/A | 0.4740 [ 2.0000 ] | 23.7% { 23.1% } | 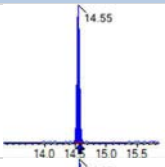 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 65261 | ( 14.87 , N/A ) ( N/A , -0.02 , N/A ) | 716.8 | N/A | 0.4030 [ 2.0000 ] | 20.2% { 18.9% } | 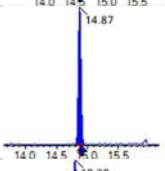 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 938996 | ( 10.30 , N/A ) ( N/A , -0.09 , N/A ) | 2310.0 | N/A | 3.6460 [ 4.0000 ] | 91.1% { 79.6% } | 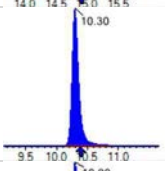 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 888041 | ( 10.90 , N/A ) ( N/A , -0.09 , N/A ) | 2140.4 | N/A | 3.8200 [ 4.0000 ] | 95.5% { 87.1% } | 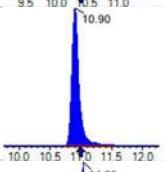 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 302828 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1144.5 | N/A | 4.5780 [ 20.0000 ] | 22.9% { 22.8% } | 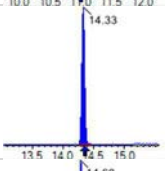 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 259218 | ( 14.69 , N/A ) ( N/A , -0.02 , N/A ) | 1463.4 | N/A | 4.1850 [ 20.0000 ] | 20.9% { 20.7% } | 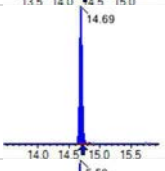 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 701813 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2856.6 | N/A | 7.3620 [ 8.0000 ] | 92.0% { 84.8% } | 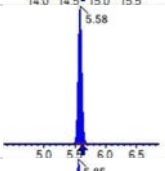 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 548659 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 3013.9 | N/A | 1.9230 [ 2.0000 ] | 96.2% { 97.7% } | 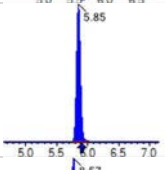 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 533784 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1264.7 | N/A | 1.6610 [ 2.0000 ] | 83.0% { 79.6% } | 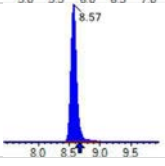 | | |

# ANALYSIS DATA SHEETL

## DUP-5-031924P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0121P |
| Client:P | Tidewater, Inc.P | | | roject: | JPL-GW MonitoringP |
| Matrix:P | Water | Laboratory ID:P | 24C0121-07P | File ID: | S2024-03-28B (24)P |
| Sampled:P | 03/19/24 12:15P | repared:P | 03/22/24 10:26 | Analyzed: | 03/29/24 03:43 |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 537.756 mL / 2 mLP | | | Instrument: | Saphira |
| Batch:P | BDC0337P | Sequence:P | SD01096 | Calibration:P | 2413019 |

| COMPOUNDL | CONC. (ng/L)L | MD | PQ | QL |
|---|---|---|---|---|
| FBAP | NDP | 0.19P | 1.5 | UP |
| FPeAP | NDP | 0.060P | 0.74 | UP |
| FHxAP | 0.083P | 0.051P | 0.37 | IR2, JP |
| FHpAP | 0.13P | 0.038P | 0.37 | JP |
| FOAP | 0.93P | 0.14P | 0.37 | BP |
| FNAP | NDP | 0.076P | 0.37 | UP |
| FDAP | 0.23P | 0.094P | 0.37 | JP |
| FUnAP | NDP | 0.15P | 0.37 | UP |
| FDoAP | NDP | 0.10P | 0.37 | UP |
| PFTrDAP | NDP | 0.19P | 0.37 | UP |
| PFTeDAP | NDP | 0.18P | 0.37 | UP |
| FHxDAP | NDP | 0.19P | 0.37 | UP |
| FODAP | NDP | 0.19P | 0.37 | UP |
| FBSP | 0.76P | 0.034P | 0.37 | |
| PFPeSP | 0.058P | 0.058P | 0.37 | JP |
| FHxSP | 0.92P | 0.029P | 0.37 | MI5P |
| FHpSP | 0.12P | 0.048P | 0.37 | JP |
| FOSP | 14P | 0.059P | 0.37 | |
| PFNSP | NDP | 0.11P | 0.37 | UP |
| FDSP | NDP | 0.14P | 0.37 | UP |
| FDoSP | NDP | 0.11P | 0.37 | UP |
| 4:2FTSP | NDP | 0.27P | 1.5P | UP |
| 6:2FTSP | NDP | 0.29P | 1.5P | UP |
| 8:2FTSP | NDP | 0.076P | 1.5P | UP |
| 10:2FTSP | NDP | 0.37P | 1.5P | UP |
| FOSAP | NDP | 0.097P | 0.37 | UP |
| NMeFOSAP | NDP | 0.44P | 1.5P | UP |
| NEtFOSAP | NDP | 0.38P | 1.5P | UP |
| NMeFOSAAP | NDP | 0.098P | 0.37P | UP |
| NEtFOSAAP | NDP | 0.11P | 0.37P | UP |

# ANALYSIS DATA SHEETL

## DUP-5-031924P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0121P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | Water | Laboratory ID:P | 24C0121-07P | File ID: | S2024-03-28B (24)P |
| Sampled:P | 03/19/24 12:15P | repared:P | 03/22/24 10:26P | Analyzed: | 03/29/24 03:43P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 537.756 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0337P | Sequence:P | SD01096P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.94P | 1.5P | UP |
| NEtFOSEP | NDP | 0.97P | 1.5P | UP |
| HFPO-DAP | NDP | 0.16P | 0.74P | UP |
| ADONAP | NDP | 0.11P | 0.74P | UP |
| FEESAP | NDP | 0.10P | 0.74 | UP |
| PFMPAP | NDP | 0.050P | 0.74 | UP |
| FMBAP | NDP | 0.084P | 0.74 | UP |
| NFDHAP | NDP | 0.28P | 0.74P | UP |
| 9Cl-PF3ONSP | NDP | 0.19P | 0.74P | UP |
| 11Cl-PF3OUDSP | NDP | 0.19P | 0.74P | UP |
| 3:3FTCAP | NDP | 0.53P | 1.5P | UP |
| 5:3FTCAP | NDP | 0.41P | 1.5P | UP |
| 7:3FTCAP | NDP | 0.51P | 1.5P | UP |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (24)
Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>24543<br>( 163.0 / 69.0 )<br>774 | ( 2.37 , 0.70 )<br>( N/A , -0.08 , 0.1) | 237.3<br>67.6 | 0.0315<br>115.1<br>120.2 | 0.5750 | N/A | 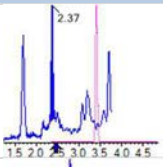 | 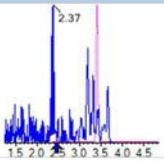 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 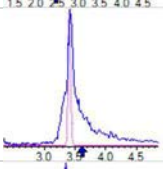 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 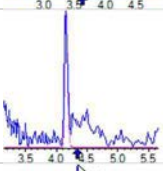 | 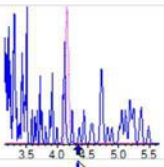 | |
| PFHxA | ( 313.0 / 269.0 )<br>4578<br>( 313.0 / 119.0 )<br>896 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , -0.1) | 38.2<br>18.5 | 0.1956<br>175.9<br>165.1 | 0.0220 | N/A | 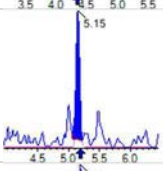 | 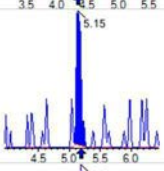 | IR2, |
| PFHpA | ( 363.0 / 319.0 )<br>9335<br>( 363.0 / 169.0 )<br>2186 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.3) | 88.8<br>46.9 | 0.2342<br>76.6<br>76.1 | 0.0340 | N/A | 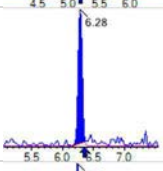 | 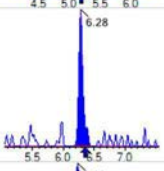 | |
| PFOA | ( 413.0 / 369.0 )<br>99657<br>( 413.0 / 169.0 )<br>36087 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , 0.3) | 186.4<br>174.6 | 0.3621<br>101.3<br>102.1 | 0.2500 | N/A | 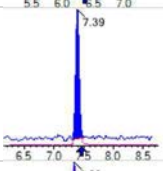 | 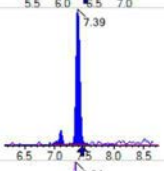 | |
| PFNA | ( 463.0 / 419.0 )<br>4463<br>( 463.0 / 169.0 )<br>742 | ( 8.93 , 1.00 )<br>( 0.00 , N/A , -0.5) | 45.3<br>20.3 | 0.1663<br>67.7<br>64.8 | 0.0190 | N/A | 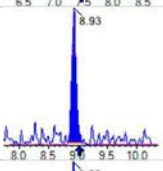 | 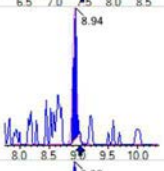 | |
| PFDA | ( 513.0 / 469.0 )<br>13962<br>( 513.0 / 169.0 )<br>1884 | ( 9.92 , 1.00 )<br>( 0.00 , N/A , 0.2) | 122.7<br>215.7 | 0.1349<br>113.2<br>110.8 | 0.0620 | N/A | 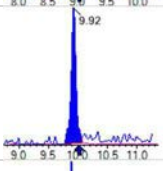 | 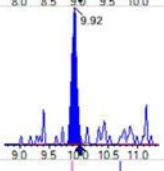 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 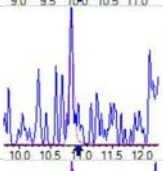 | 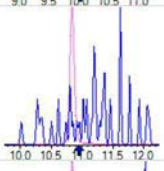 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 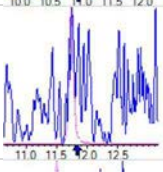 | 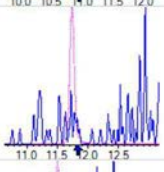 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 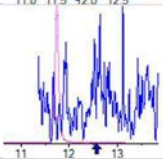 | 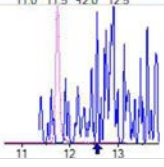 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (24)
Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 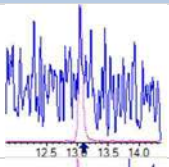 | 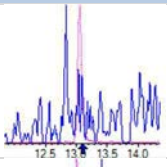 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 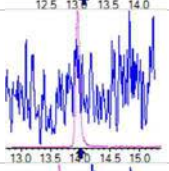 | 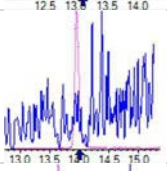 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 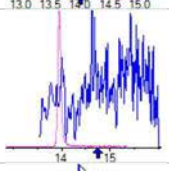 | 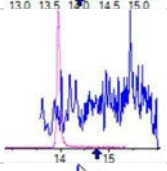 | |
| PFBS | ( 299.0 / 80.0 )<br>72038<br>( 299.0 / 99.0 )<br>51827 | ( 5.32 , 1.00 )<br>( -0.01 , N/A , -0.1) | 476.5<br>341.5 | 0.7194<br>97.1<br>95.4 | 0.2050 | N/A | 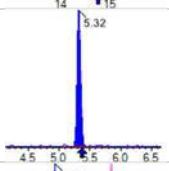 | 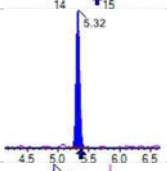 | |
| PFPeS | ( 349.0 / 80.0 )<br>15461<br>( 349.0 / 99.0 )<br>4396 | ( 6.60 , 0.82 )<br>( N/A , -0.07 , 0.1) | 99.0<br>69.6 | 0.2843<br>83.2<br>80.0 | 0.0160 | N/A | 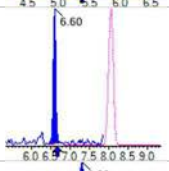 | 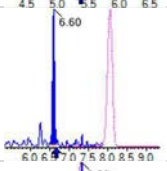 | |
| PFHxS | ( 399.0 / 80.0 )<br>298434<br>( 399.0 / 99.0 )<br>91377 | ( 8.06 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1106.0<br>953.0 | 0.3062<br>93.3<br>94.8 | 0.2470 | N/A | 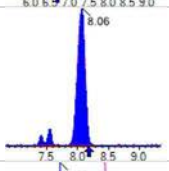 | 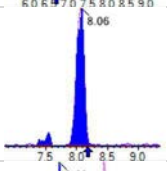 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>25596<br>( 449.0 / 99.0 )<br>7826 | ( 9.41 , 0.91 )<br>( N/A , -0.10 , -0.2) | 133.1<br>92.0 | 0.3057<br>117.2<br>117.8 | 0.0320 | N/A | 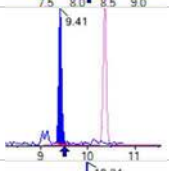 | 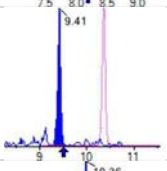 | |
| PFOS | ( 499.0 / 80.0 )<br>2845802<br>( 499.0 / 99.0 )<br>538292 | ( 10.24 , 0.99 )<br>( -0.12 , N/A , -7.3) | 1255.4<br>2495.8 | 0.1892<br>81.9<br>82.6 | 3.6370 | N/A | 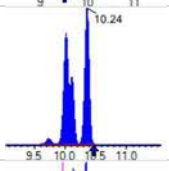 | 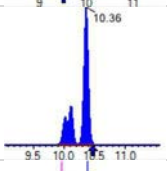 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 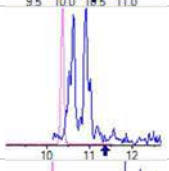 | 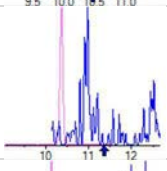 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 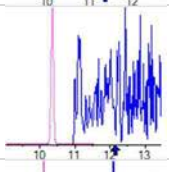 | 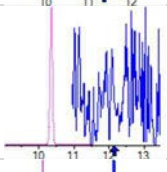 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 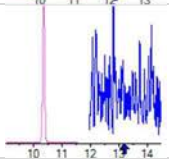 | 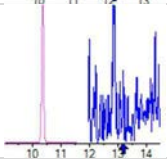 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (24)
Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 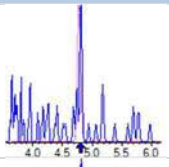 | 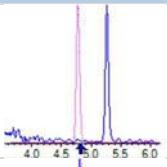 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 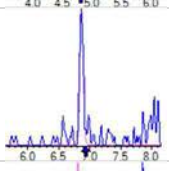 | 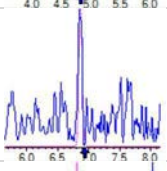 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 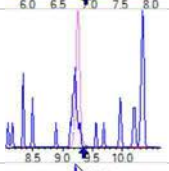 | 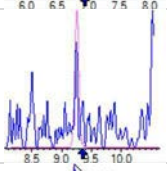 | |
| 10:2FTS | ( 627.0 / 607.0 ) 7056<br>( 627.0 / 81.0 ) 10869 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.0) | 103.9<br>44.0 | 1.5404<br>107.1<br>106.3 | 0.0540 | N/A | 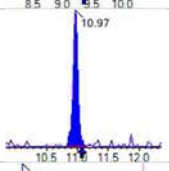 | 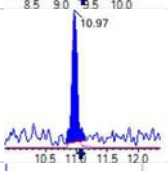 | |
| PFBSA | ( 297.9 / 78.0 ) 1232<br>( 297.9 / 278.0 ) N/A | ( 5.48 , 0.38 ) ( N/A , -0.05 , #Value!) | 17.7<br>N/A | N/A<br>0.0<br>0.0 | 0.0420 | N/A | 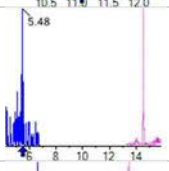 | 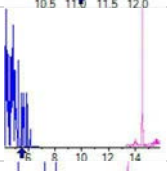 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 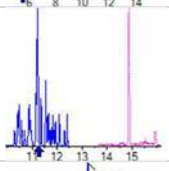 | 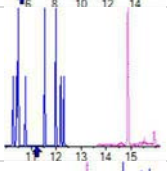 | |
| PFOSA | ( 498.0 / 78.0 ) 3892<br>( 498.0 / 478.0 ) N/A | ( 13.28 , 1.00 ) ( 0.00 , N/A , #Value!) | 42.5<br>N/A | N/A<br>0.0<br>0.0 | 0.0150 | N/A | 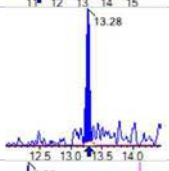 | 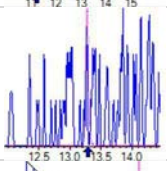 | |
| TFSI | ( 279.7 / 147.0 ) 8364<br>( 279.7 / 211.0 ) 556 | ( 6.98 , 0.53 ) ( N/A , -0.08 , 0.3) | 20.2<br>24.5 | 0.0665<br>75.1<br>75.8 | 0.0190 | N/A | 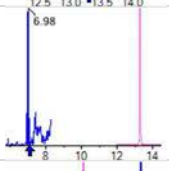 | 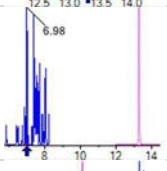 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 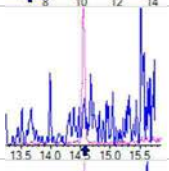 | 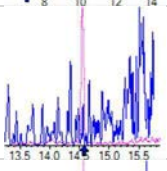 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 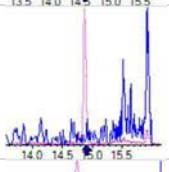 | 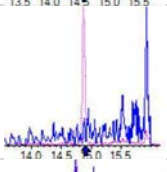 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 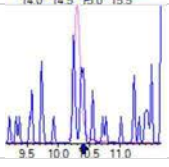 | 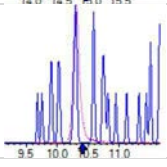 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-07 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 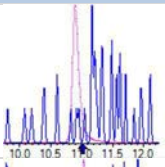 | 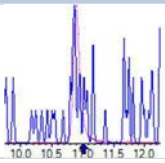 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 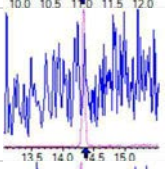 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 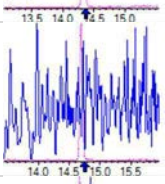 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 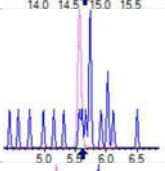 | 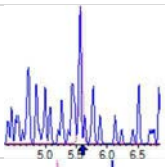 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 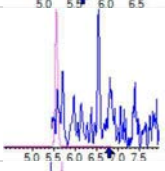 | 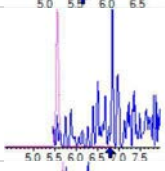 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 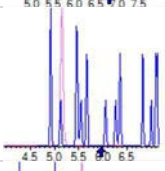 | 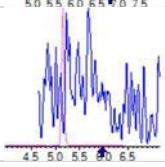 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 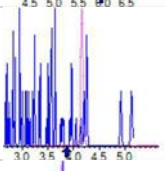 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 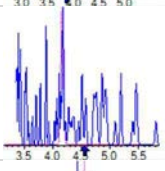 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 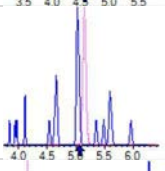 | 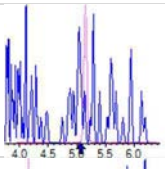 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 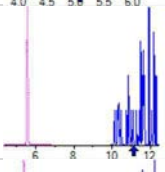 | 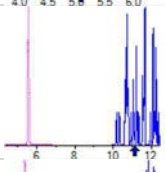 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 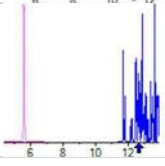 | 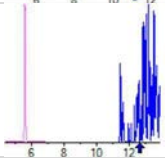 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-07 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 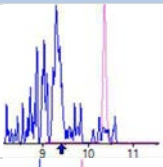 | 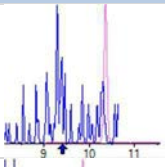 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 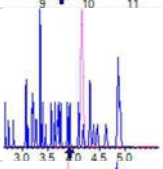 | 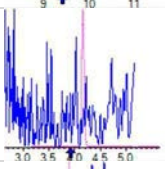 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 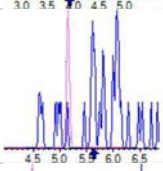 | 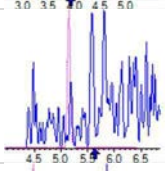 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 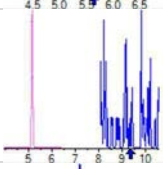 | 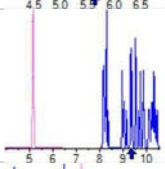 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 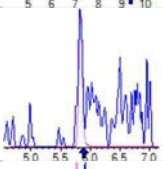 | 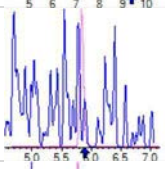 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 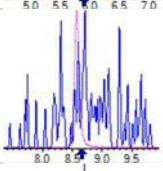 | 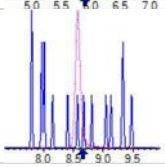 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 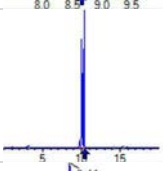 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 237924 | ( 3.41 , N/A )<br>( N/A , -0.20 , N/A ) | 1765.9 | N/A | 0.8430<br>[ 1.0000 ] | 84.3%<br>{ 90.0% } | 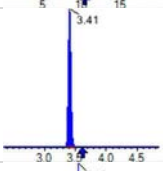 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106828 | ( 5.15 , N/A )<br>( N/A , -0.04 , N/A ) | 971028.3 | N/A | 0.9050<br>[ 1.0000 ] | 90.5%<br>{ 92.3% } | 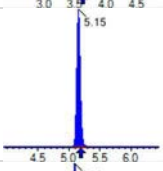 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 351797 | ( 7.39 , N/A )<br>( N/A , -0.08 , N/A ) | 6158.0 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 97.5% } | 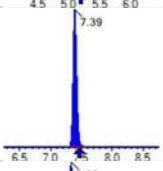 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 248954 | ( 8.93 , N/A )<br>( N/A , -0.09 , N/A ) | 1229.9 | N/A | 0.8520<br>[ 1.0000 ] | 85.2%<br>{ 89.3% } | 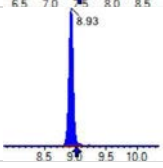 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-07 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (24)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 247299 | ( 9.93 , N/A ) ( N/A , -0.10 , N/A ) | 4854.7 | N/A | 0.8630 [ 1.0000 ] | 86.3% { 89.6% } | 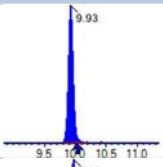 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 919131 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 4880.8 | N/A | 0.9360 [ 1.0000 ] | 93.6% { 100.1% } | 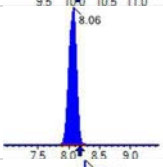 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 703392 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 3138.6 | N/A | 0.8970 [ 1.0000 ] | 89.7% { 91.2% } | 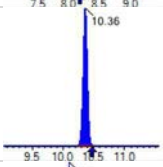 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1509349 | ( 3.41 , N/A ) ( N/A , -0.20 , N/A ) | 52232.0 | N/A | 5.8690 [ 8.0000 ] | 73.4% { 69.5% } | 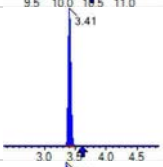 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 800228 | ( 4.16 , N/A ) ( N/A , -0.17 , N/A ) | 5028.7 | N/A | 4.0910 [ 4.0000 ] | 102.3% { 95.7% } | 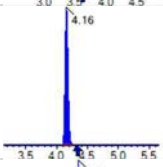 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 440887 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 10341.5 | N/A | 1.8860 [ 2.0000 ] | 94.3% { 91.7% } | 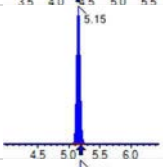 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 551722 | ( 6.28 , N/A ) ( N/A , -0.07 , N/A ) | 6401.8 | N/A | 2.1250 [ 2.0000 ] | 106.3% { 100.7% } | 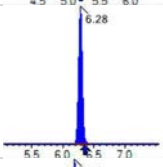 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 792562 | ( 7.39 , N/A ) ( N/A , -0.08 , N/A ) | 5215.0 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 103.5% } | 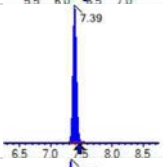 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 239053 | ( 8.93 , N/A ) ( N/A , -0.09 , N/A ) | 6857.5 | N/A | 0.9730 [ 1.0000 ] | 97.3% { 88.7% } | 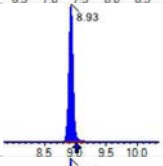 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 226911 | ( 9.93 , N/A ) ( N/A , -0.10 , N/A ) | 1155.9 | N/A | 0.7940 [ 1.0000 ] | 79.4% { 77.2% } | 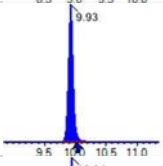 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 188848 | ( 10.84 , N/A ) ( N/A , -0.10 , N/A ) | 893.3 | N/A | 0.5570 [ 1.0000 ] | 55.7% { 51.1% } | 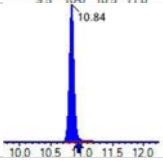 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (24)
Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 162886 | ( 11.74 , N/A ) ( N/A , -0.09 , N/A ) | 1012.2 | N/A | 0.4690 [ 1.0000 ] | 46.9% { 44.9% } | 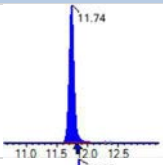 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 121836 | ( 13.05 , N/A ) ( N/A , -0.05 , N/A ) | 617.1 | N/A | 0.3960 [ 1.0000 ] | 39.6% { 37.2% } | 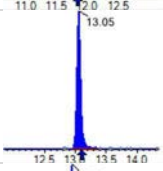 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 172391 | ( 13.95 , N/A ) ( N/A , -0.05 , N/A ) | 1170.2 | N/A | 0.6690 [ 2.0000 ] | 33.5% { 34.6% } | 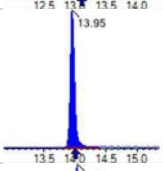 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1427952 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1293.4 | N/A | 1.9270 [ 2.0000 ] | 96.4% { 96.8% } | 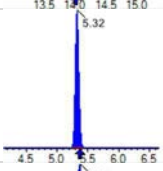 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1380397 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 5567.6 | N/A | 2.0820 [ 2.0000 ] | 104.1% { 106.0% } | 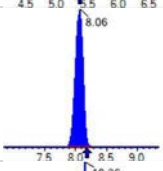 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1348105 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 2309.2 | N/A | 1.8010 [ 2.0000 ] | 90.1% { 93.3% } | 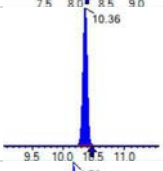 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 677929 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 69.7 | N/A | 4.1600 [ 4.0000 ] | 104.0% { 104.2% } | 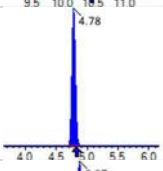 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1913746 | ( 6.87 , N/A ) ( N/A , -0.07 , N/A ) | 5385.1 | N/A | 4.7800 [ 4.0000 ] | 119.5% { 108.7% } | 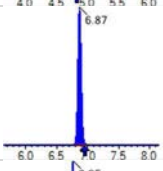 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1285653 | ( 9.25 , N/A ) ( N/A , -0.09 , N/A ) | 2067.8 | N/A | 3.6700 [ 4.0000 ] | 91.8% { 88.4% } | 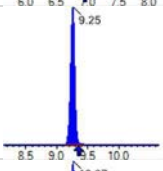 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 1322225 | ( 10.97 , N/A ) ( N/A , -0.11 , N/A ) | 1829.4 | N/A | 3.4890 [ 8.0000 ] | 43.6% { 44.4% } | 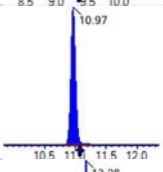 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 520530 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 2551.2 | N/A | 0.6550 [ 2.0000 ] | 32.8% { 33.4% } | 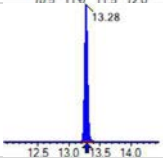 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (24)
Acquired: 2024/03/29 - 03:43

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 19457 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 157.9 | N/A | 0.1090 [ 2.0000 ] | 5.4% { 5.3% } | 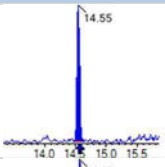  | | S1, |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 21134 | ( 14.87 , N/A ) ( N/A , -0.03 , N/A ) | 217.5 | N/A | 0.1290 [ 2.0000 ] | 6.5% { 6.1% } | 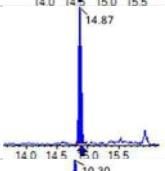  | | S1, |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 816109 | ( 10.30 , N/A ) ( N/A , -0.09 , N/A ) | 3278.6 | N/A | 3.1410 [ 4.0000 ] | 78.5% { 69.1% } | 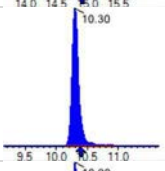  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 594316 | ( 10.90 , N/A ) ( N/A , -0.09 , N/A ) | 1852.7 | N/A | 2.5340 [ 4.0000 ] | 63.4% { 58.3% } | 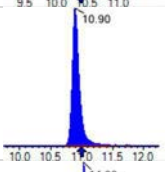  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 175692 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 636.8 | N/A | 2.6330 [ 20.0000 ] | 13.2% { 13.2% } | 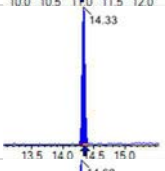  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 184110 | ( 14.69 , N/A ) ( N/A , -0.02 , N/A ) | 970.3 | N/A | 2.9460 [ 20.0000 ] | 14.7% { 14.7% } | 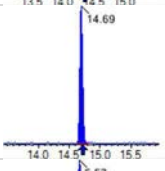  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 722017 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2205.5 | N/A | 7.1320 [ 8.0000 ] | 89.2% { 87.3% } | 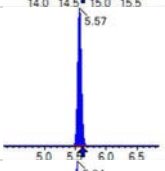  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 509998 | ( 5.84 , N/A ) ( N/A , -0.06 , N/A ) | 1611.1 | N/A | 1.8920 [ 2.0000 ] | 94.6% { 90.8% } | 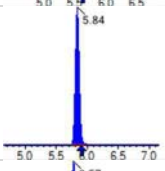  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 548931 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1113.1 | N/A | 1.8080 [ 2.0000 ] | 90.4% { 81.9% } | 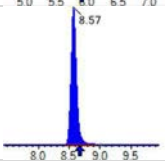  | | |

# ANALYSIS DATA SHEETL

MW-5-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-08- | File ID:- | S2024-03-28B (25)- |
| Sampled:- | 03/19/24 13:17- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 04:04- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 547.654 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 2.9- | 0.19- | 1.5- | |
| PFPeA- | ND- | 0.059- | 0.73- | U- |
| PFHxA- | 0.11- | 0.050- | 0.37- | J- |
| PFHpA- | 0.23- | 0.037- | 0.37- | J- |
| PFOA- | 1.2- | 0.14- | 0.37- | B- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | 0.094- | 0.093- | 0.37- | IR1, J- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | 3.0- | 0.034- | 0.37- | |
| PFPeS- | ND- | 0.057- | 0.37- | U- |
| PFHxS- | 0.51- | 0.029- | 0.37- | MI5- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 5.4- | 0.058- | 0.37- | |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-5-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-08- | File ID:- | S2024-03-28B (25)- |
| Sampled:- | 03/19/24 13:17- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 04:04- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 547.654 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (25)
Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 95311<br>( 163.0 / 69.0 ) 2398 | ( 2.41 , 0.70 )<br>( N/A , -0.05 , -0.1) | 878.5<br>181.0 | 0.0252<br>91.8<br>95.9 | 1.6750 | N/A | 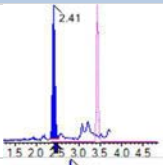 | 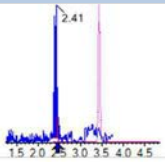 | |
| PFBA | ( 213.0 / 169.0 ) 284064 | ( 3.43 , 1.00 )<br>( 0.00 , N/A , 0.0) | 169.6 | N/A<br>0.0<br>0.0 | 0.7940 | N/A | 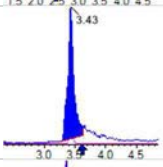 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 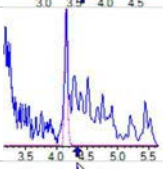 | 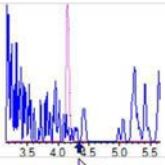 | |
| PFHxA | ( 313.0 / 269.0 ) 5203<br>( 313.0 / 119.0 ) 322 | ( 5.14 , 1.00 )<br>( 0.00 , N/A , 0.5) | 55.0<br>14.7 | 0.0619<br>55.6<br>52.2 | 0.0290 | N/A | 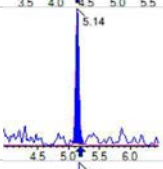 | 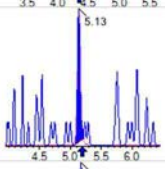 | |
| PFHpA | ( 363.0 / 319.0 ) 15526<br>( 363.0 / 169.0 ) 4159 | ( 6.26 , 1.00 )<br>( 0.00 , N/A , -0.1) | 124.0<br>141.5 | 0.2679<br>87.6<br>87.0 | 0.0620 | N/A | 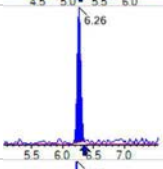 | 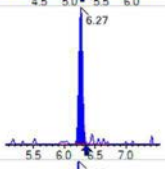 | |
| PFOA | ( 413.0 / 369.0 ) 126240<br>( 413.0 / 169.0 ) 44526 | ( 7.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 217.8<br>301.3 | 0.3527<br>98.7<br>99.4 | 0.3410 | N/A | 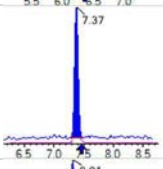 | 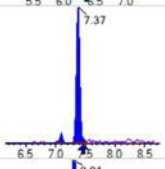 | |
| PFNA | ( 463.0 / 419.0 ) 4050<br>( 463.0 / 169.0 ) 1085 | ( 8.91 , 1.00 )<br>( 0.00 , N/A , 0.2) | 47.6<br>28.3 | 0.2680<br>109.1<br>104.5 | 0.0160 | N/A | 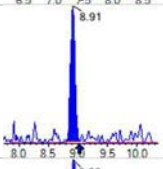 | 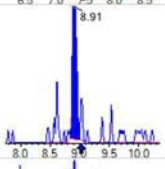 | |
| PFDA | ( 513.0 / 469.0 ) 7212<br>( 513.0 / 169.0 ) N/A | ( 9.92 , 1.00 )<br>( 0.01 , N/A , #Value!) | 58.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0260 | N/A | 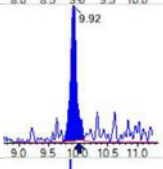 | 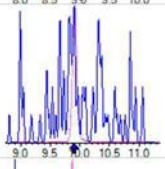 | IR1, |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 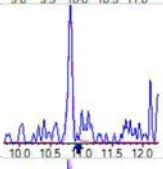 | 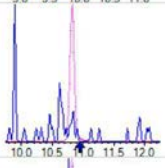 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 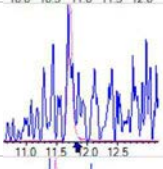 | 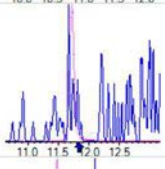 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 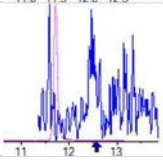 | 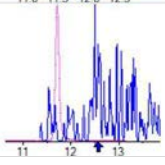 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-08 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 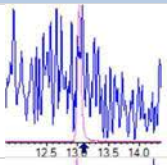 | 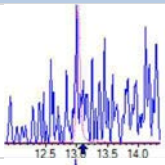 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 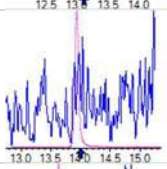 | 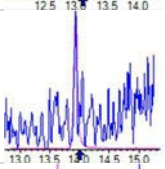 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 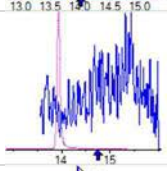 | 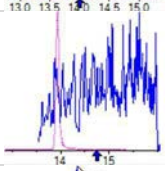 | |
| PFBS | ( 299.0 / 80.0 )<br>246308<br>( 299.0 / 99.0 )<br>175820 | ( 5.31 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1011.6<br>926.1 | 0.7138<br>96.4<br>94.6 | 0.8150 | N/A | 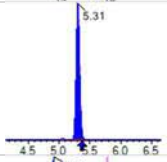 | 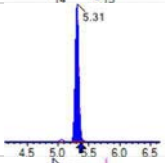 | |
| PFPeS | ( 349.0 / 80.0 )<br>12482<br>( 349.0 / 99.0 )<br>3546 | ( 6.58 , 0.82 )<br>( N/A , -0.09 , -0.3) | 114.4<br>49.5 | 0.2841<br>83.1<br>80.0 | 0.0140 | N/A | 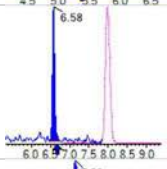 | 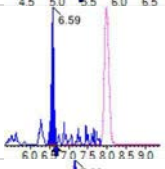 | |
| PFHxS | ( 399.0 / 80.0 )<br>151692<br>( 399.0 / 99.0 )<br>47673 | ( 7.98 , 1.00 )<br>( 0.00 , N/A , -0.1) | 869.8<br>922.9 | 0.3143<br>95.8<br>97.3 | 0.1400 | N/A | 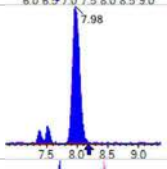 | 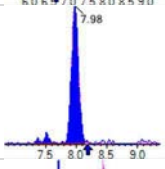 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 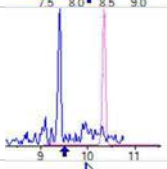 | 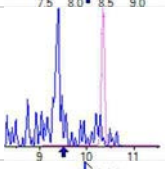 | |
| PFOS | ( 499.0 / 80.0 )<br>1207610<br>( 499.0 / 99.0 )<br>292496 | ( 10.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1919.6<br>3078.6 | 0.2422<br>104.8<br>105.7 | 1.4700 | N/A | 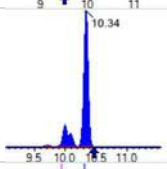 | 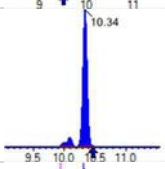 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 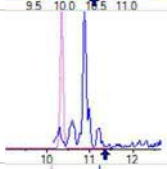 | 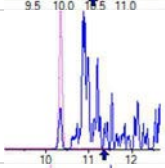 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 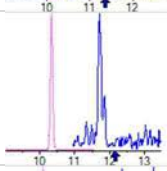 | 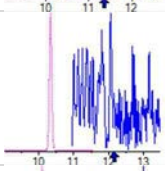 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 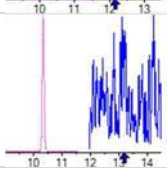 | 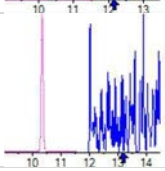 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (25)
Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 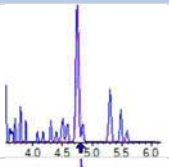 | 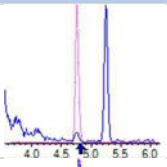 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 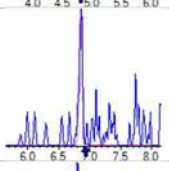 | 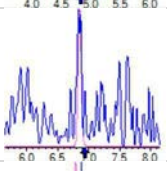 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 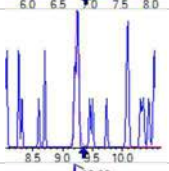 | 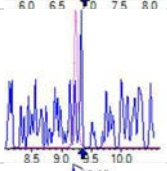 | |
| 10:2FTS | ( 627.0 / 607.0 ) 13786<br>( 627.0 / 81.0 ) 18241 | ( 10.96 , 1.00 ) ( 0.01 , N/A , 0.3) | 212.0<br>89.2 | 1.3231<br>92.0<br>91.3 | 0.0480 | N/A | 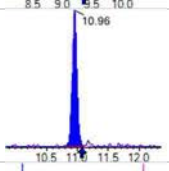 | 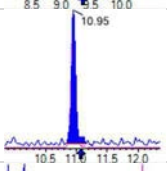 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 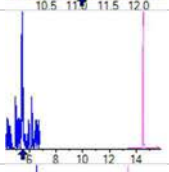 | 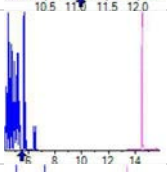 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 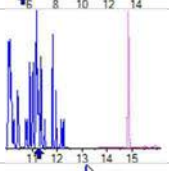 | 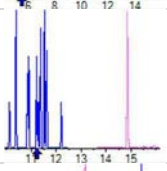 | |
| PFOSA | ( 498.0 / 78.0 ) 12685<br>( 498.0 / 478.0 ) N/A | ( 13.25 , 1.00 ) ( -0.01 , N/A , #Value!) | 139.2<br>N/A | N/A<br>0.0<br>0.0 | 0.0200 | N/A | 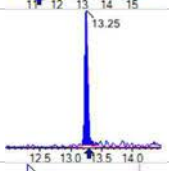 | 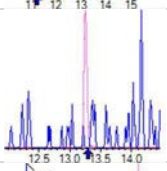 | |
| TFSI | ( 279.7 / 147.0 ) 24870<br>( 279.7 / 211.0 ) 2655 | ( 6.96 , 0.53 ) ( N/A , -0.10 , 0.3) | 30.8<br>109.6 | 0.1067<br>120.6<br>121.7 | 0.0230 | N/A | 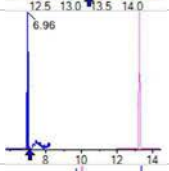 | 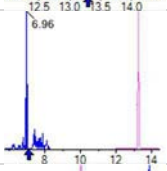 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 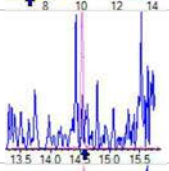 | 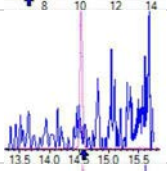 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 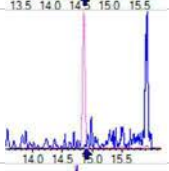 | 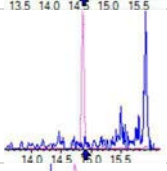 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 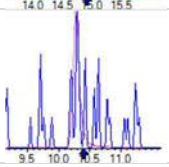 | 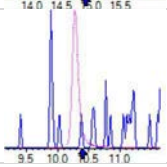 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-08 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 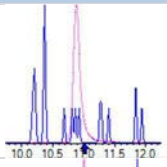 | 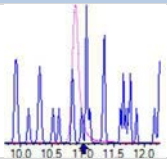 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 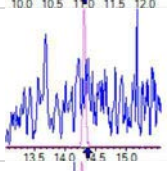 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 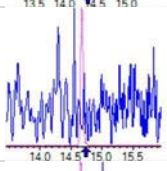 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 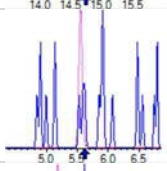 | 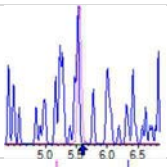 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 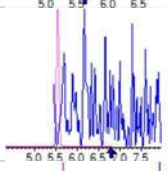 | 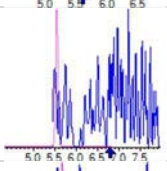 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 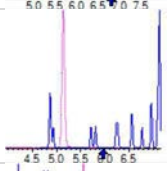 | 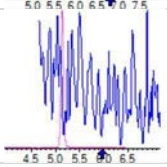 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 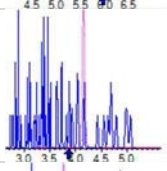 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 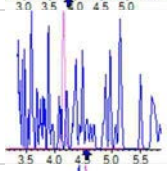 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 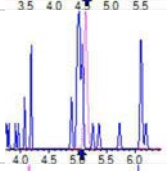 | 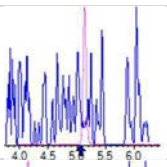 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 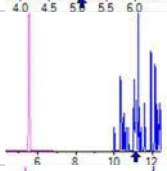 | 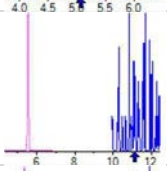 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 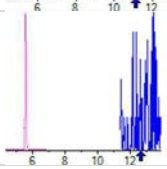 | 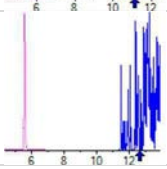 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-08 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 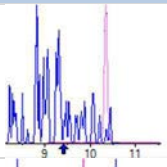 | 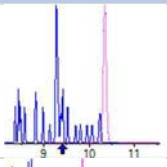 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 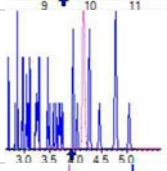 | 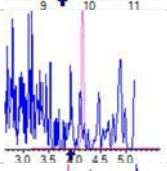 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 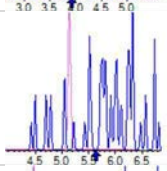 | 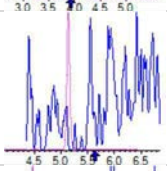 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 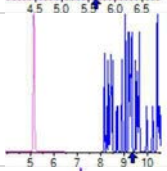 | 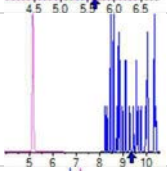 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 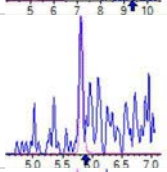 | 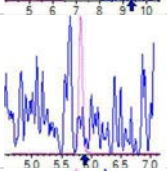 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 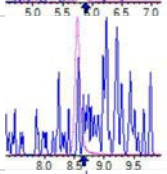 | 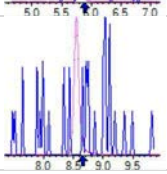 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 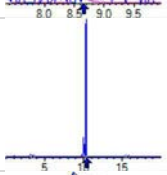 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 262229 | ( 3.43 , N/A )<br>( N/A , -0.18 , N/A ) | 1730.5 | N/A | 0.9290<br>[ 1.0000 ] | 92.9%<br>{ 99.2% } | 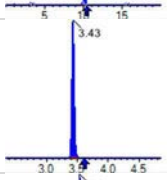 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 97442 | ( 5.14 , N/A )<br>( N/A , -0.05 , N/A ) | 85149.5 | N/A | 0.8250<br>[ 1.0000 ] | 82.5%<br>{ 84.2% } | 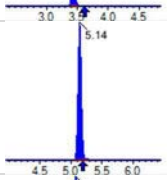 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367188 | ( 7.37 , N/A )<br>( N/A , -0.10 , N/A ) | 6036.4 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 101.7% } | 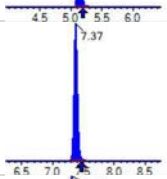 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 250331 | ( 8.92 , N/A )<br>( N/A , -0.11 , N/A ) | 1155.1 | N/A | 0.8570<br>[ 1.0000 ] | 85.7%<br>{ 89.8% } | 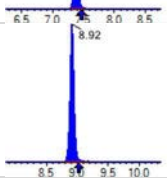 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-08 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (25)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 240383 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 8147.4 | N/A | 0.8390 [ 1.0000 ] | 83.9% { 87.1% } | 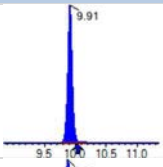 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 916462 | ( 7.98 , N/A ) ( N/A , -0.19 , N/A ) | 6687.6 | N/A | 0.9330 [ 1.0000 ] | 93.3% { 99.8% } | 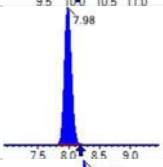 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 710754 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 3036.3 | N/A | 0.9060 [ 1.0000 ] | 90.6% { 92.2% } | 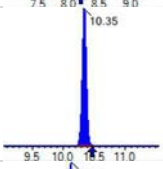 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2011466 | ( 3.43 , N/A ) ( N/A , -0.18 , N/A ) | 98844.3 | N/A | 7.0970 [ 8.0000 ] | 88.7% { 92.6% } | 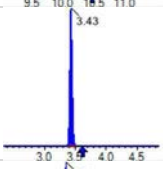 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 784082 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 6557.0 | N/A | 4.3950 [ 4.0000 ] | 109.9% { 93.7% } | 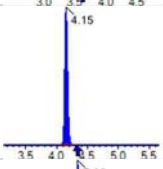 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 385174 | ( 5.14 , N/A ) ( N/A , -0.06 , N/A ) | 195757.3 | N/A | 1.8070 [ 2.0000 ] | 90.3% { 80.1% } | 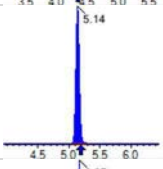 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 502926 | ( 6.27 , N/A ) ( N/A , -0.09 , N/A ) | 9400.4 | N/A | 2.1240 [ 2.0000 ] | 106.2% { 91.8% } | 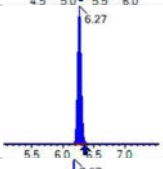 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 736991 | ( 7.37 , N/A ) ( N/A , -0.09 , N/A ) | 5270.9 | N/A | 1.8940 [ 2.0000 ] | 94.7% { 96.3% } | 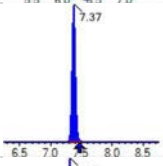 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 245632 | ( 8.92 , N/A ) ( N/A , -0.11 , N/A ) | 4427.9 | N/A | 0.9940 [ 1.0000 ] | 99.4% { 91.1% } | 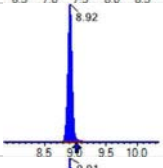 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 281604 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 1562.2 | N/A | 1.0140 [ 1.0000 ] | 101.4% { 95.8% } | 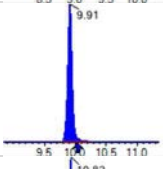 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 329171 | ( 10.82 , N/A ) ( N/A , -0.12 , N/A ) | 1154.1 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 89.1% } | 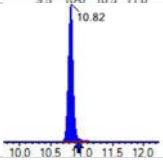 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (25)
Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 334920 | ( 11.72 , N/A ) ( N/A , -0.12 , N/A ) | 1564.1 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 92.3% } | 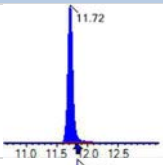 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 297896 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1289.7 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 90.9% } | 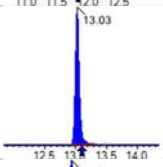 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 402505 | ( 13.94 , N/A ) ( N/A , -0.07 , N/A ) | 2109.8 | N/A | 1.6080 [ 2.0000 ] | 80.4% { 80.8% } | 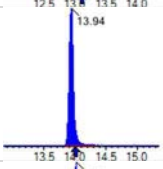 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1228628 | ( 5.31 , N/A ) ( N/A , -0.06 , N/A ) | 1758.5 | N/A | 1.6630 [ 2.0000 ] | 83.2% { 83.3% } | 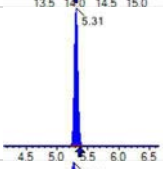 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1235820 | ( 7.98 , N/A ) ( N/A , -0.19 , N/A ) | 5248.9 | N/A | 1.8690 [ 2.0000 ] | 93.5% { 94.9% } | 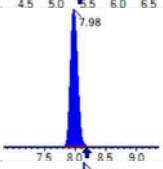 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1415472 | ( 10.34 , N/A ) ( N/A , -0.12 , N/A ) | 2547.2 | N/A | 1.8720 [ 2.0000 ] | 93.6% { 98.0% } | 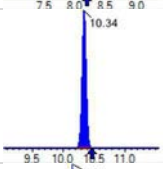 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 547331 | ( 4.76 , N/A ) ( N/A , -0.05 , N/A ) | 72.0 | N/A | 3.3680 [ 4.0000 ] | 84.2% { 84.1% } | 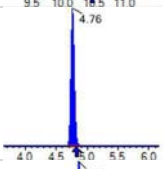 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1835459 | ( 6.85 , N/A ) ( N/A , -0.09 , N/A ) | 5641.1 | N/A | 4.5980 [ 4.0000 ] | 114.9% { 104.3% } | 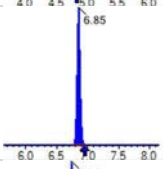 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1384649 | ( 9.24 , N/A ) ( N/A , -0.11 , N/A ) | 1787.3 | N/A | 3.9640 [ 4.0000 ] | 99.1% { 95.2% } | 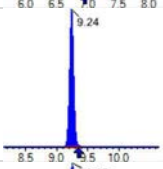 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2910931 | ( 10.95 , N/A ) ( N/A , -0.12 , N/A ) | 1498.0 | N/A | 7.7040 [ 8.0000 ] | 96.3% { 97.7% } | 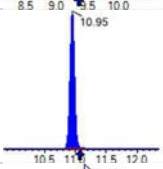 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1291668 | ( 13.25 , N/A ) ( N/A , -0.04 , N/A ) | 2911.1 | N/A | 1.6090 [ 2.0000 ] | 80.5% { 82.9% } | 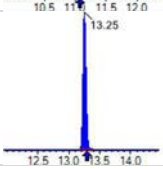 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (25)
Acquired: 2024/03/29 - 04:04

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 144954 | ( 14.53 , N/A ) ( N/A , -0.04 , N/A ) | 1115.2 | N/A | 0.8030 [ 2.0000 ] | 40.2% { 39.8% } | 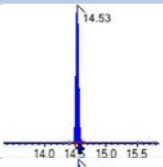 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 141094 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 1288.8 | N/A | 0.8550 [ 2.0000 ] | 42.8% { 41.0% } | 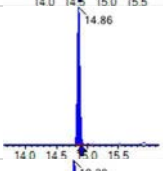 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 933738 | ( 10.28 , N/A ) ( N/A , -0.11 , N/A ) | 3192.8 | N/A | 3.5560 [ 4.0000 ] | 88.9% { 79.1% } | 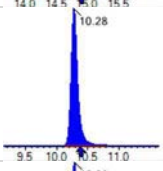 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 892221 | ( 10.88 , N/A ) ( N/A , -0.11 , N/A ) | 2317.6 | N/A | 3.7650 [ 4.0000 ] | 94.1% { 87.5% } | 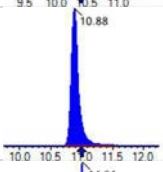 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 834376 | ( 14.31 , N/A ) ( N/A , -0.04 , N/A ) | 2111.1 | N/A | 12.3740 [ 20.0000 ] | 61.9% { 62.8% } | 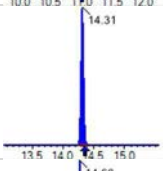 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 734657 | ( 14.68 , N/A ) ( N/A , -0.04 , N/A ) | 3291.1 | N/A | 11.6340 [ 20.0000 ] | 58.2% { 58.7% } | 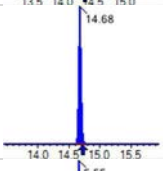 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 734968 | ( 5.55 , N/A ) ( N/A , -0.07 , N/A ) | 2440.5 | N/A | 7.9590 [ 8.0000 ] | 99.5% { 88.8% } | 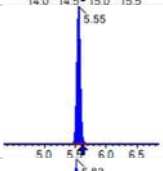 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 499748 | ( 5.82 , N/A ) ( N/A , -0.08 , N/A ) | 1645.5 | N/A | 1.9080 [ 2.0000 ] | 95.4% { 89.0% } | 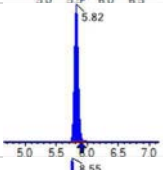 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 544237 | ( 8.55 , N/A ) ( N/A , -0.11 , N/A ) | 1166.4 | N/A | 1.8440 [ 2.0000 ] | 92.2% { 81.2% } | 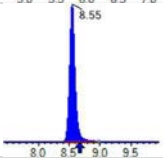 | | |

# ANALYSIS DATA SHEETL

EB-7-031924-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-09- | File ID:- | S2024-03-28B (26)- |
| Sampled:- | 03/19/24 13:25- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 04:24- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 553.705 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.4- | U- |
| PFPeA- | ND- | 0.059- | 0.72- | U- |
| PFHxA- | ND- | 0.050- | 0.36- | U- |
| PFHpA- | 0.051- | 0.037- | 0.36- | J- |
| PFOA- | 0.93- | 0.14- | 0.36- | B- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | ND- | 0.091- | 0.36- | U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | ND- | 0.033- | 0.36- | U- |
| PFPeS- | ND- | 0.057- | 0.36- | U- |
| PFHxS- | ND- | 0.029- | 0.36- | U- |
| PFHpS- | ND- | 0.046- | 0.36- | U- |
| PFOS- | 0.27- | 0.057- | 0.36- | J- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.094- | 0.36- | U- |
| NMeFOSA- | ND- | 0.43- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.096- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

EB-7-031924-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-09- | File ID:- | S2024-03-28B (26)- |
| Sampled:- | 03/19/24 13:25- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 04:24- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 553.705 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.95- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.098- | 0.72- | U- |
| PFMPA- | ND- | 0.049- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (26)
Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>17825<br>( 163.0 / 69.0 )<br>610 | ( 2.42 , 0.70 )<br>( N/A , -0.04 , 0.6) | 128.2<br>58.0 | 0.0342<br>124.9<br>130.5 | 0.2890 | N/A | 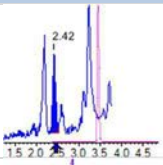 | 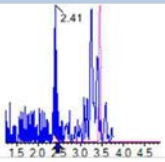 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 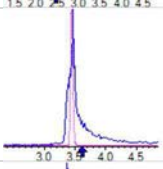 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 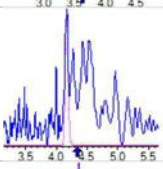 | 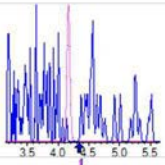 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 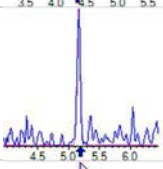 | 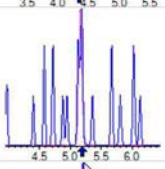 | |
| PFHpA | ( 363.0 / 319.0 )<br>3465<br>( 363.0 / 169.0 )<br>1196 | ( 6.28 , 1.00 )<br>( -0.01 , N/A , -1.4) | 43.9<br>33.2 | 0.3451<br>112.9<br>112.1 | 0.0140 | N/A | 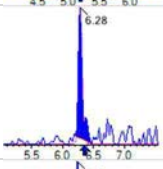 | 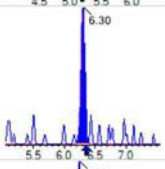 | |
| PFOA | ( 413.0 / 369.0 )<br>94675<br>( 413.0 / 169.0 )<br>32593 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , -0.1) | 174.3<br>254.8 | 0.3443<br>96.3<br>97.1 | 0.2560 | N/A | 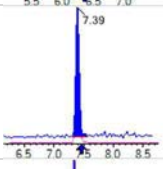 | 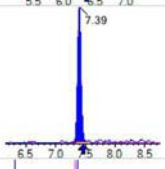 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 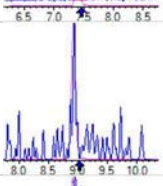 | 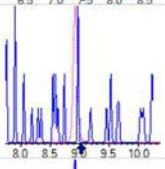 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 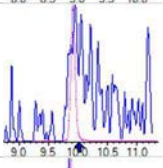 | 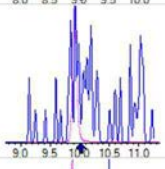 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 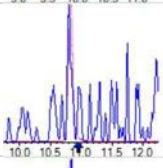 | 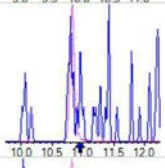 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 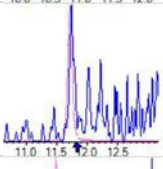 | 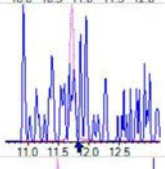 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 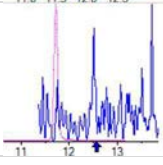 | 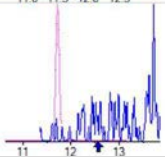 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (26)
Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 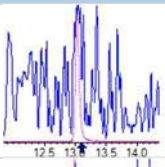 | 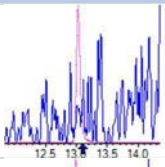 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 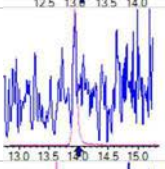 | 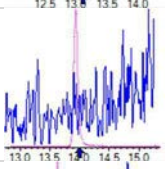 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 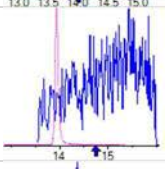 | 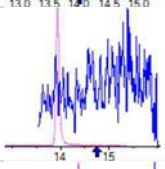 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 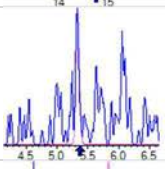 | 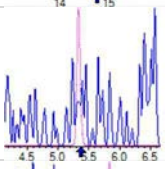 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 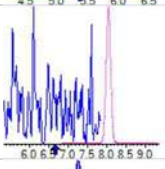 | 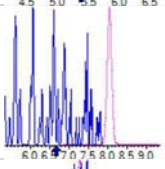 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 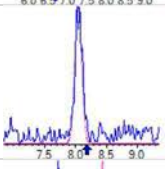 | 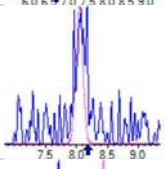 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 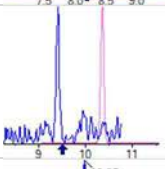 | 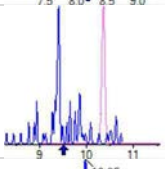 | |
| PFOS | ( 499.0 / 80.0 )<br>64540<br>( 499.0 / 99.0 )<br>16803 | ( 10.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 396.0<br>13172.9 | 0.2603<br>112.7<br>113.6 | 0.0750 | N/A | 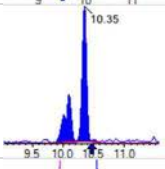 | 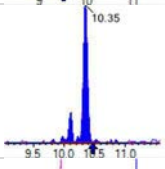 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 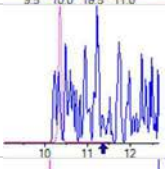 | 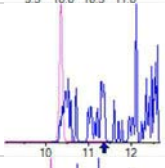 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 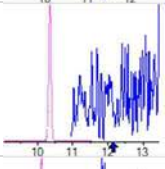 | 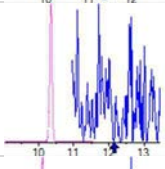 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 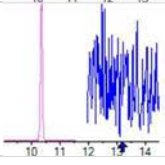 | 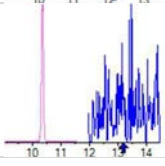 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (26)
Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 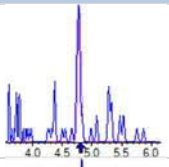 | 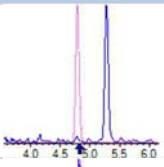 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 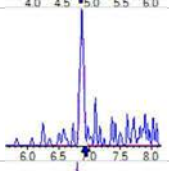 | 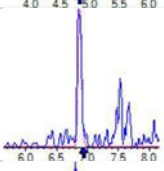 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 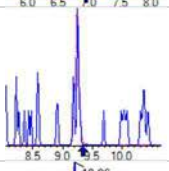 | 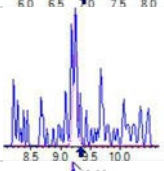 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18853<br>( 627.0 / 81.0 ) 25201 | ( 10.96 , 1.00 ) ( 0.01 , N/A , -0.1) | 268.0<br>127.3 | 1.3368<br>93.0<br>92.2 | 0.0660 | N/A | 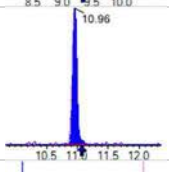 | 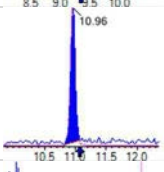 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 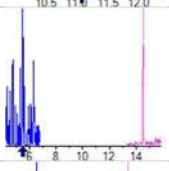 | 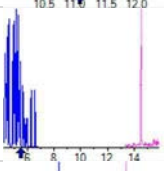 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 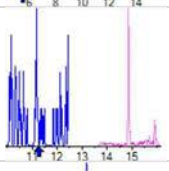 | 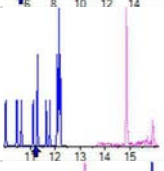 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 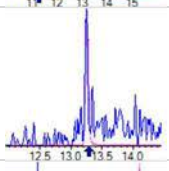 | 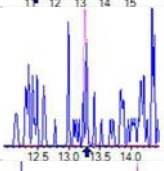 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 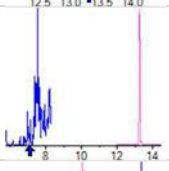 | 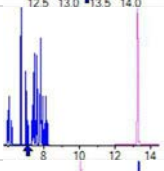 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 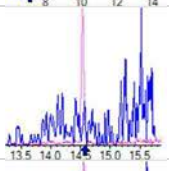 | 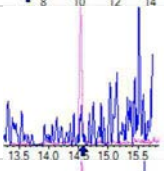 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 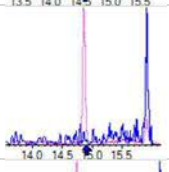 | 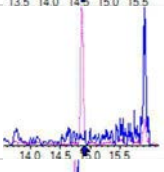 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 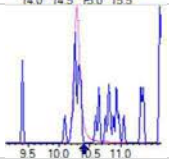 | 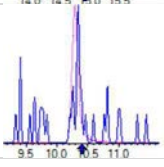 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (26)
Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 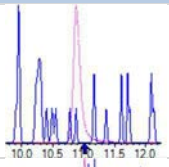 | 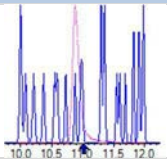 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 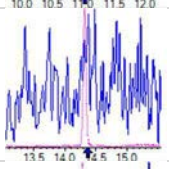 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 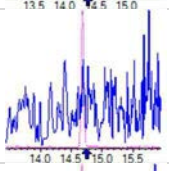 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 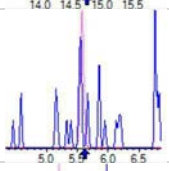 | 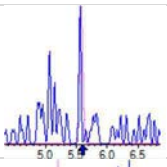 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 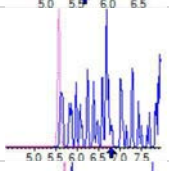 | 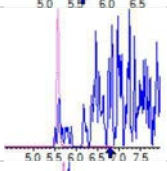 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 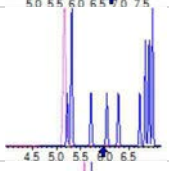 | 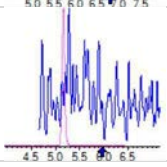 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 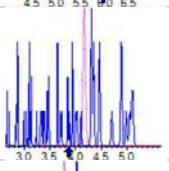 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 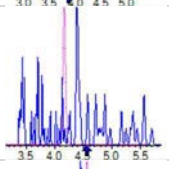 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 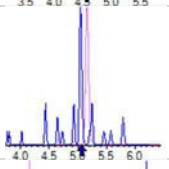 | 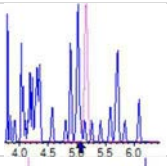 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 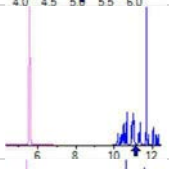 | 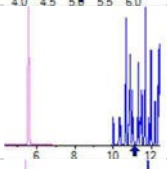 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 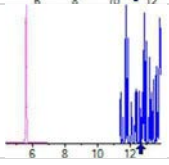 | 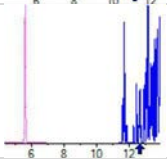 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (26)
Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 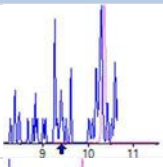 | 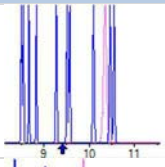 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 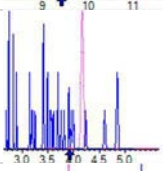 | 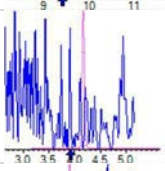 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 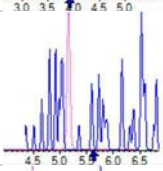 | 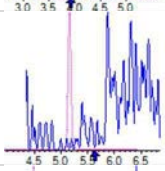 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 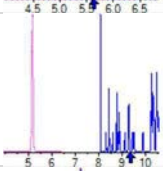 | 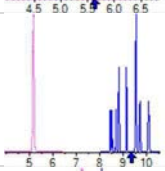 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 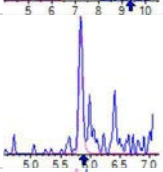 | 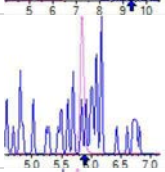 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 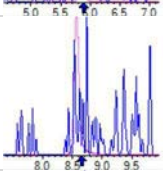 | 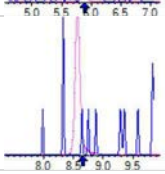 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 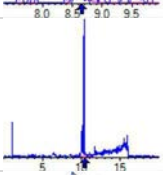 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 252460 | ( 3.45 , N/A )<br>( N/A , -0.16 , N/A ) | 2391.0 | N/A | 0.8940<br>[ 1.0000 ] | 89.4%<br>{ 95.5% } | 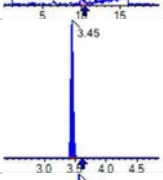 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 95498 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 870221.3 | N/A | 0.8090<br>[ 1.0000 ] | 80.9%<br>{ 82.5% } | 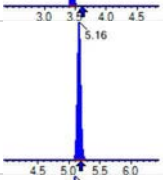 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 361977 | ( 7.40 , N/A )<br>( N/A , -0.07 , N/A ) | 5923.2 | N/A | 0.9330<br>[ 1.0000 ] | 93.3%<br>{ 100.3% } | 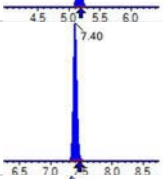 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 247615 | ( 8.93 , N/A )<br>( N/A , -0.10 , N/A ) | 1732.4 | N/A | 0.8480<br>[ 1.0000 ] | 84.8%<br>{ 88.8% } | 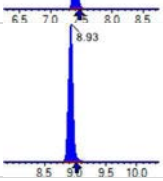 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-09 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (26)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 250586 | ( 9.92 , N/A ) ( N/A , -0.11 , N/A ) | 28531.7 | N/A | 0.8740 [ 1.0000 ] | 87.4% { 90.8% } | 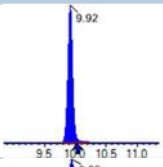 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 939519 | ( 8.05 , N/A ) ( N/A , -0.13 , N/A ) | 6489.5 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 102.4% } | 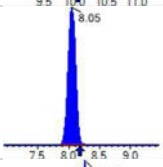 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 712091 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 3034.8 | N/A | 0.9080 [ 1.0000 ] | 90.8% { 92.3% } | 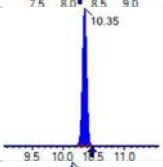 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2183117 | ( 3.45 , N/A ) ( N/A , -0.16 , N/A ) | 192150.7 | N/A | 8.0000 [ 8.0000 ] | 100.0% { 100.5% } | 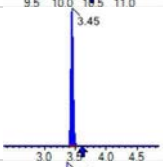 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 788496 | ( 4.17 , N/A ) ( N/A , -0.17 , N/A ) | 6039.1 | N/A | 4.5100 [ 4.0000 ] | 112.7% { 94.3% } | 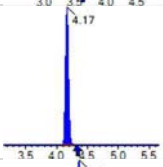 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 410870 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 11524.2 | N/A | 1.9670 [ 2.0000 ] | 98.3% { 85.5% } | 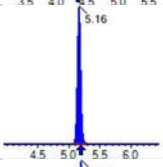 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 496521 | ( 6.29 , N/A ) ( N/A , -0.07 , N/A ) | 11249.7 | N/A | 2.1400 [ 2.0000 ] | 107.0% { 90.6% } | 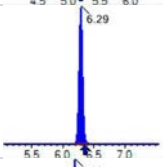 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 735490 | ( 7.39 , N/A ) ( N/A , -0.07 , N/A ) | 4861.6 | N/A | 1.9170 [ 2.0000 ] | 95.9% { 96.1% } | 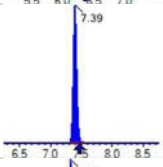 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 249209 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 4092.8 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 92.4% } | 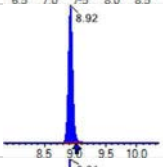 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 303153 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 1198.8 | N/A | 1.0470 [ 1.0000 ] | 104.7% { 103.1% } | 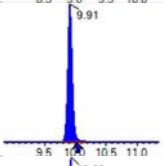 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 348455 | ( 10.83 , N/A ) ( N/A , -0.11 , N/A ) | 948.3 | N/A | 1.0150 [ 1.0000 ] | 101.5% { 94.3% } | 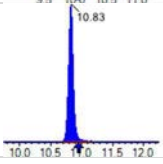 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-09 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (26)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 348623 | ( 11.72 , N/A ) ( N/A , -0.11 , N/A ) | 1366.1 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 96.1% } | 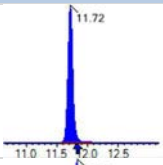 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 303114 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1280.1 | N/A | 0.9720 [ 1.0000 ] | 97.2% { 92.5% } | 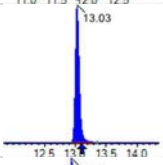 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 391638 | ( 13.94 , N/A ) ( N/A , -0.07 , N/A ) | 2149.6 | N/A | 1.5010 [ 2.0000 ] | 75.0% { 78.7% } | 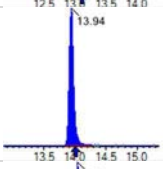 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1350963 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 1646.9 | N/A | 1.7840 [ 2.0000 ] | 89.2% { 91.6% } | 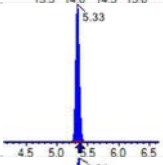 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1348191 | ( 8.04 , N/A ) ( N/A , -0.13 , N/A ) | 5207.6 | N/A | 1.9890 [ 2.0000 ] | 99.5% { 103.5% } | 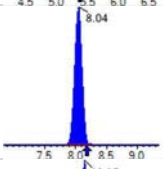 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1478299 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 3162.3 | N/A | 1.9510 [ 2.0000 ] | 97.6% { 102.3% } | 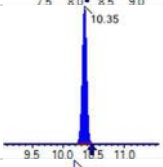 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 622634 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 58.7 | N/A | 3.7370 [ 4.0000 ] | 93.4% { 95.7% } | 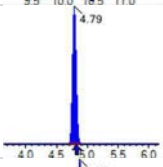 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1940664 | ( 6.87 , N/A ) ( N/A , -0.06 , N/A ) | 7290.6 | N/A | 4.7420 [ 4.0000 ] | 118.5% { 110.3% } | 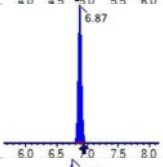 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1632517 | ( 9.25 , N/A ) ( N/A , -0.10 , N/A ) | 2186.5 | N/A | 4.5590 [ 4.0000 ] | 114.0% { 112.2% } | 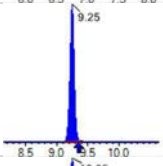 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2874753 | ( 10.95 , N/A ) ( N/A , -0.12 , N/A ) | 1889.6 | N/A | 7.4210 [ 8.0000 ] | 92.8% { 96.5% } | 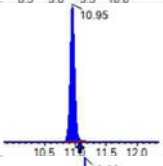 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 282240 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 1903.1 | N/A | 0.3510 [ 2.0000 ] | 17.5% { 18.1% } | 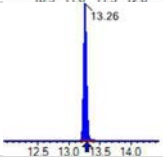 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-09
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (26)
Acquired: 2024/03/29 - 04:24

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 16757 | ( 14.53 , N/A ) ( N/A , -0.03 , N/A ) | 176.3 | N/A | 0.0930 [ 2.0000 ] | 4.6% { 4.6% } | 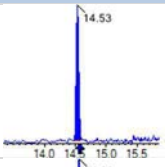 | | S1, |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 14150 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 178.8 | N/A | 0.0860 [ 2.0000 ] | 4.3% { 4.1% } | 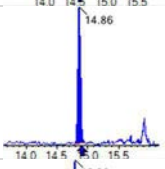 | | S1, |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1029453 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 2501.6 | N/A | 3.9140 [ 4.0000 ] | 97.8% { 87.2% } | 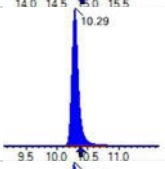 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 963336 | ( 10.89 , N/A ) ( N/A , -0.11 , N/A ) | 2025.5 | N/A | 4.0580 [ 4.0000 ] | 101.4% { 94.5% } | 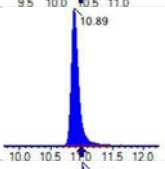 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 141061 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 652.8 | N/A | 2.0880 [ 20.0000 ] | 10.4% { 10.6% } | 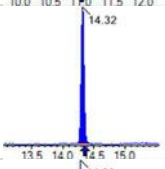 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 154831 | ( 14.68 , N/A ) ( N/A , -0.03 , N/A ) | 1137.0 | N/A | 2.4470 [ 20.0000 ] | 12.2% { 12.4% } | 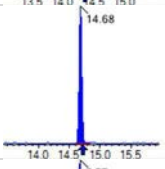 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 753611 | ( 5.57 , N/A ) ( N/A , -0.04 , N/A ) | 2492.3 | N/A | 8.3270 [ 8.0000 ] | 104.1% { 91.1% } | 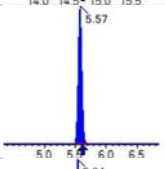 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 551367 | ( 5.84 , N/A ) ( N/A , -0.05 , N/A ) | 1998.3 | N/A | 2.0190 [ 2.0000 ] | 101.0% { 98.2% } | 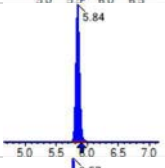 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 590020 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1095.3 | N/A | 1.9180 [ 2.0000 ] | 95.9% { 88.0% } | 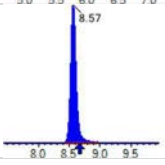 | | |

# ANALYSIS DATA SHEETL

## FB-7-031924-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-10- | File ID:- | S2024-03-28B (27)- |
| Sampled:- | 03/19/24 13:30- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 04:45- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 533.584 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | ND- | 0.061- | 0.75- | U- |
| PFHxA- | ND- | 0.051- | 0.37- | U- |
| PFHpA- | 0.048- | 0.038- | 0.37- | J- |
| PFOA- | 0.29- | 0.14- | 0.37- | B, J- |
| PFNA- | ND- | 0.077- | 0.37- | U- |
| PFDA- | ND- | 0.095- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.19- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.059- | 0.37- | U- |
| PFHxS- | ND- | 0.030- | 0.37- | U- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.13- | 0.060- | 0.37- | MI5, J- |
| PFNS- | ND- | 0.12- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.12- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.098- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.099- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

## FB-7-031924-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0121-10- | File ID:- | S2024-03-28B (27)- |
| Sampled:- | 03/19/24 13:30- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 04:45- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 533.584 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.051- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (27)
Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>13153<br>( 163.0 / 69.0 )<br>433 | ( 2.42 , 0.69 )<br>( N/A , -0.04 , -0.9) | 109.9<br>26.7 | 0.0329<br>120.1<br>125.5 | 0.1850 | N/A | 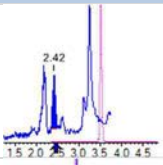 | 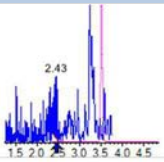 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 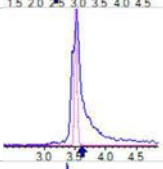 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 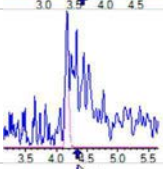 | 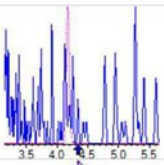 | |
| PFHxA | ( 313.0 / 269.0 )<br>2878<br>( 313.0 / 119.0 )<br>290 | ( 5.14 , 1.00 )<br>( 0.00 , N/A , 0.5) | 28.5<br>13.1 | 0.1007<br>90.6<br>85.0 | 0.0130 | N/A | 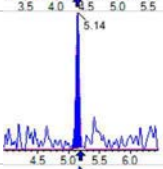 | 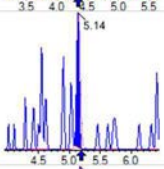 | |
| PFHpA | ( 363.0 / 319.0 )<br>3682<br>( 363.0 / 169.0 )<br>734 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.7) | 34.8<br>41.5 | 0.1992<br>65.2<br>64.7 | 0.0130 | N/A | 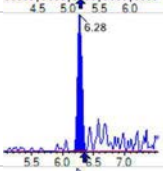 | 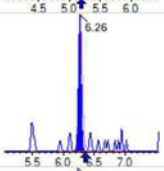 | |
| PFOA | ( 413.0 / 369.0 )<br>32220<br>( 413.0 / 169.0 )<br>12345 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , 0.1) | 80.3<br>103.5 | 0.3831<br>107.2<br>108.0 | 0.0760 | N/A | 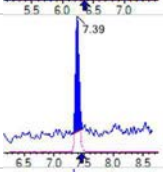 | 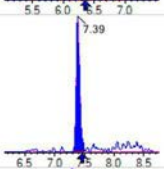 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 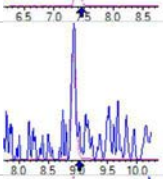 | 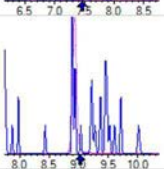 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 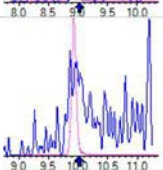 | 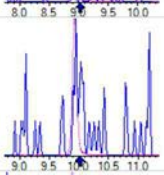 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 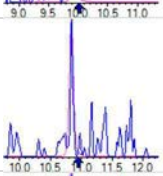 | 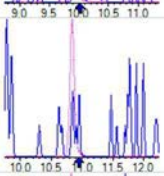 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 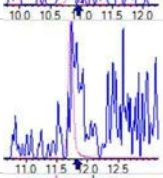 | 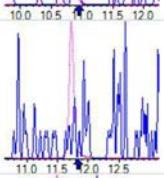 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 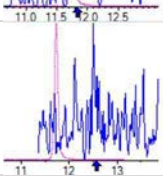 | 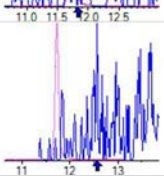 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (27)
Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 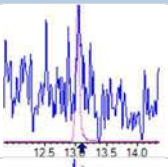 | 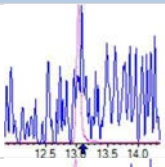 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 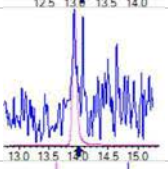 | 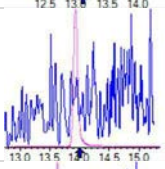 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 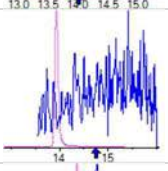 | 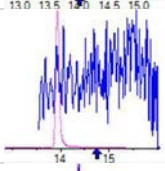 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 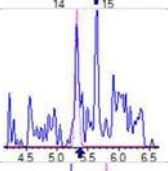 | 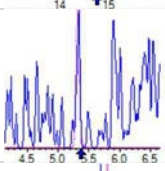 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 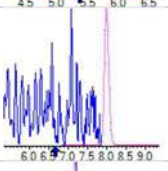 | 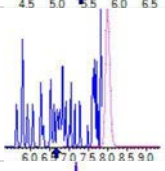 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 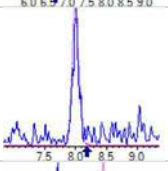 | 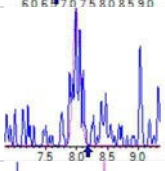 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 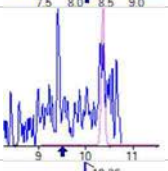 | 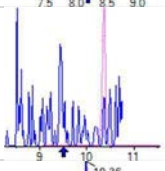 | |
| PFOS | ( 499.0 / 80.0 )<br>32298<br>( 499.0 / 99.0 )<br>6957 | ( 10.36 , 1.00 )<br>( 0.00 , N/A , 0.2) | 149.4<br>775.6 | 0.2154<br>93.2<br>94.0 | 0.0350 | N/A | 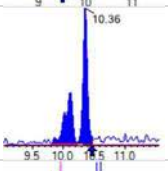 | 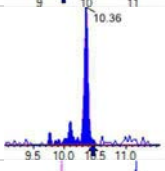 | MI5 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 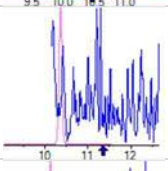 | 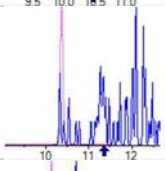 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 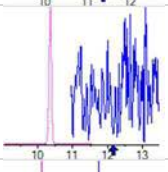 | 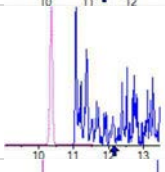 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 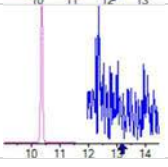 | 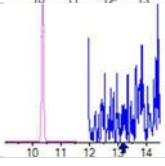 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (27)
Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 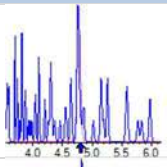 | 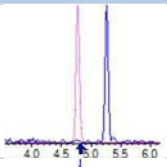 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 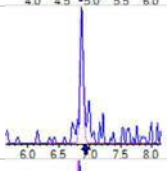 | 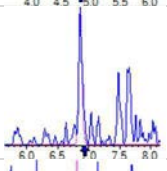 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 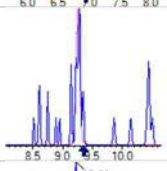 | 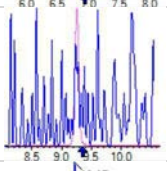 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16204<br>( 627.0 / 81.0 )<br>22757 | ( 10.98 , 1.00 )<br>( 0.01 , N/A , 0.3) | 264.1<br>95.1 | 1.4043<br>97.7<br>96.9 | 0.0510 | N/A | 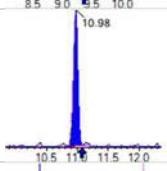 | 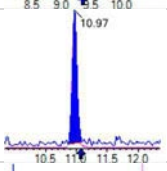 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 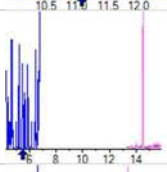 | 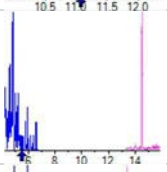 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 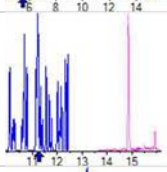 | 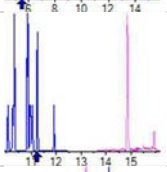 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 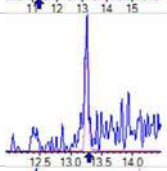 | 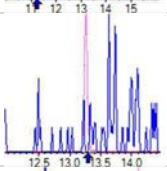 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 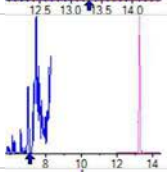 | 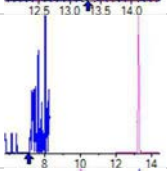 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 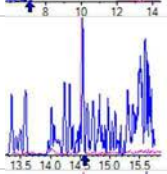 | 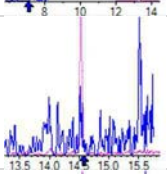 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 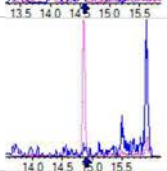 | 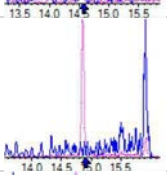 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 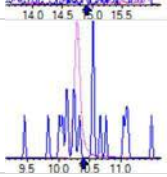 | 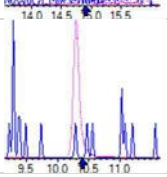 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (27)
Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 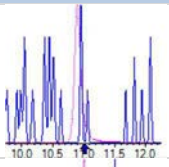 | 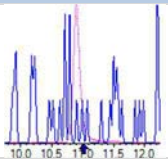 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 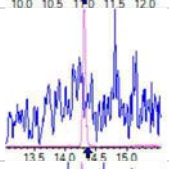 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 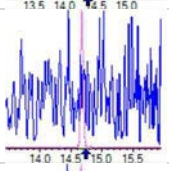 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 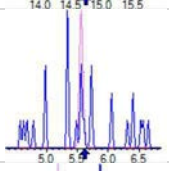 | 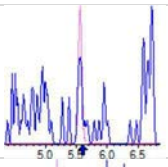 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 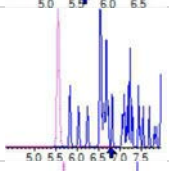 | 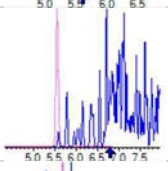 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 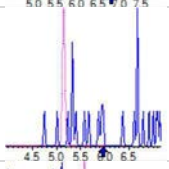 | 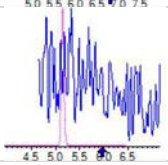 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 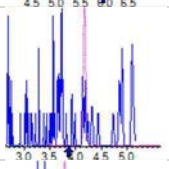 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 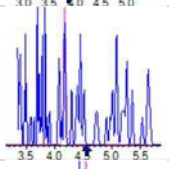 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 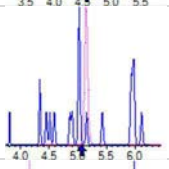 | 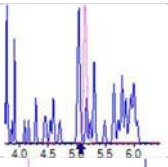 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 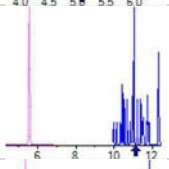 | 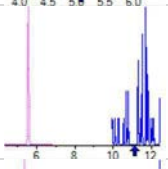 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 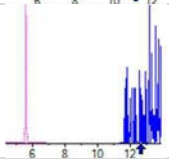 | 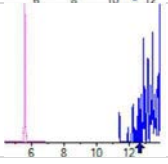 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (27)
Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 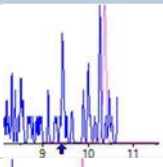 | 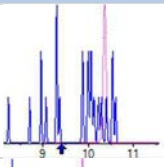 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 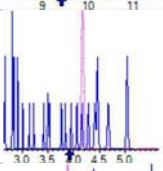 | 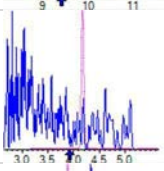 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 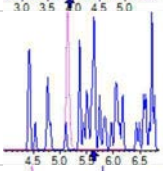 | 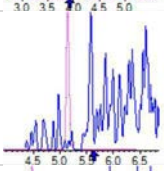 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 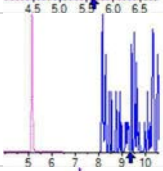 | 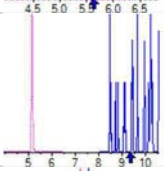 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 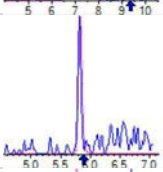 | 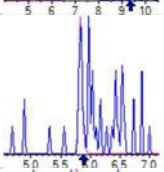 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 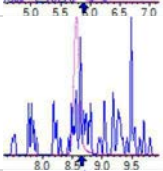 | 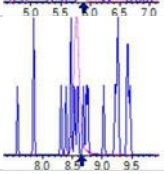 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 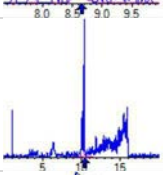 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 294491 | ( 3.51 , N/A ) ( N/A , -0.10 , N/A ) | 2071.3 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 111.4% } | 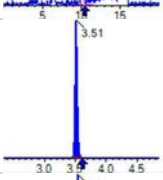 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 112144 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 12573.2 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 96.9% } | 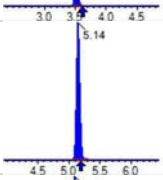 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 398985 | ( 7.39 , N/A ) ( N/A , -0.08 , N/A ) | 6280.2 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 110.5% } | 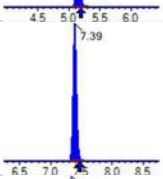 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277804 | ( 8.93 , N/A ) ( N/A , -0.09 , N/A ) | 1210.1 | N/A | 0.9510 [ 1.0000 ] | 95.1% { 99.6% } | 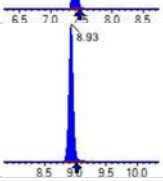 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-10 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 279987 | ( 9.93 , N/A ) ( N/A , -0.09 , N/A ) | 7335.7 | N/A | 0.9770 [ 1.0000 ] | 97.7% { 101.4% } | 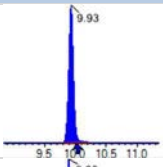 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 994192 | ( 8.00 , N/A ) ( N/A , -0.17 , N/A ) | 6735.9 | N/A | 1.0120 [ 1.0000 ] | 101.2% { 108.3% } | 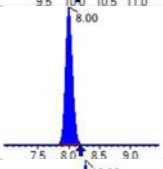 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 801904 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 3117.4 | N/A | 1.0220 [ 1.0000 ] | 102.2% { 104.0% } | 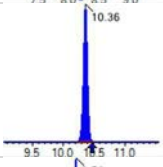 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2514332 | ( 3.51 , N/A ) ( N/A , -0.10 , N/A ) | 49375.0 | N/A | 7.8990 [ 8.0000 ] | 98.7% { 115.8% } | 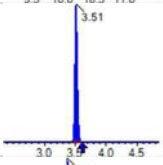 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 863335 | ( 4.17 , N/A ) ( N/A , -0.16 , N/A ) | 5863.3 | N/A | 4.2050 [ 4.0000 ] | 105.1% { 103.2% } | 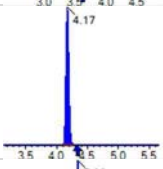 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 466692 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 9677.6 | N/A | 1.9020 [ 2.0000 ] | 95.1% { 97.1% } | 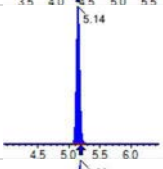 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 578285 | ( 6.28 , N/A ) ( N/A , -0.08 , N/A ) | 11579.3 | N/A | 2.1220 [ 2.0000 ] | 106.1% { 105.5% } | 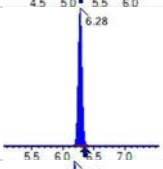 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 843224 | ( 7.39 , N/A ) ( N/A , -0.08 , N/A ) | 4635.6 | N/A | 1.9940 [ 2.0000 ] | 99.7% { 110.1% } | 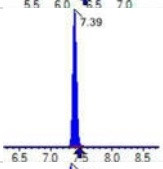 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 279423 | ( 8.93 , N/A ) ( N/A , -0.09 , N/A ) | 5294.5 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 103.6% } | 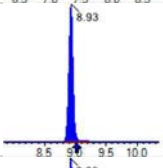 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 323088 | ( 9.93 , N/A ) ( N/A , -0.10 , N/A ) | 1682.8 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 109.9% } | 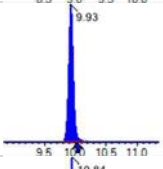 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363347 | ( 10.84 , N/A ) ( N/A , -0.10 , N/A ) | 1200.3 | N/A | 0.9470 [ 1.0000 ] | 94.7% { 98.4% } | 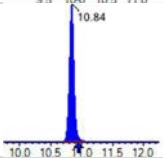 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0121-10
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (27)
Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 352595 | ( 11.73 , N/A ) ( N/A , -0.11 , N/A ) | 1336.2 | N/A | 0.8960 [ 1.0000 ] | 89.6% { 97.2% } | 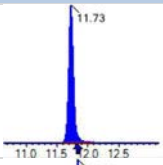 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 281377 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1199.9 | N/A | 0.8070 [ 1.0000 ] | 80.7% { 85.9% } | 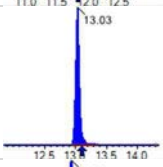 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 397894 | ( 13.93 , N/A ) ( N/A , -0.07 , N/A ) | 1820.0 | N/A | 1.3640 [ 2.0000 ] | 68.2% { 79.9% } | 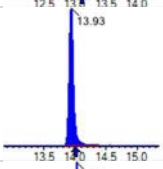 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1420795 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1564.4 | N/A | 1.7730 [ 2.0000 ] | 88.6% { 96.3% } | 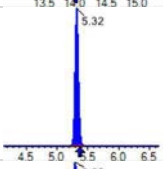 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1425802 | ( 8.00 , N/A ) ( N/A , -0.18 , N/A ) | 5690.3 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 109.5% } | 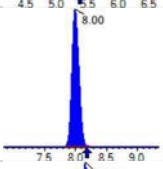 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1597348 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 2892.0 | N/A | 1.8720 [ 2.0000 ] | 93.6% { 110.6% } | 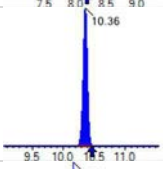 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 755858 | ( 4.78 , N/A ) ( N/A , -0.04 , N/A ) | 81.4 | N/A | 4.2880 [ 4.0000 ] | 107.2% { 116.2% } | 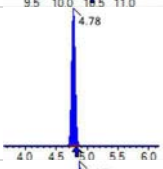 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2160573 | ( 6.87 , N/A ) ( N/A , -0.07 , N/A ) | 6940.6 | N/A | 4.9890 [ 4.0000 ] | 124.7% { 122.8% } | 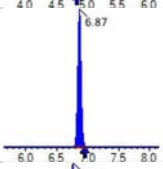 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1725677 | ( 9.26 , N/A ) ( N/A , -0.09 , N/A ) | 2524.1 | N/A | 4.5540 [ 4.0000 ] | 113.9% { 118.6% } | 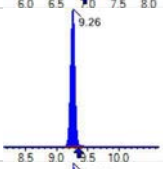 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3178920 | ( 10.97 , N/A ) ( N/A , -0.10 , N/A ) | 1504.1 | N/A | 7.7550 [ 8.0000 ] | 96.9% { 106.7% } | 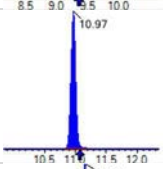 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 255427 | ( 13.26 , N/A ) ( N/A , -0.04 , N/A ) | 1693.6 | N/A | 0.2820 [ 2.0000 ] | 14.1% { 16.4% } | 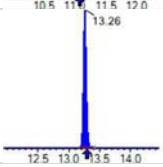 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0121-10 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (27)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 04:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 22086 | ( 14.53 , N/A ) ( N/A , -0.04 , N/A ) | 200.5 | N/A | 0.1080 [ 2.0000 ] | 5.4% { 6.1% } | 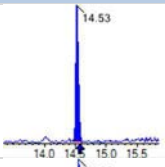 | | S1, |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 22059 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 225.5 | N/A | 0.1190 [ 2.0000 ] | 5.9% { 6.4% } | 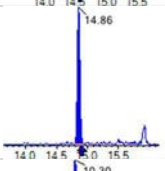 | | S1, |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1056767 | ( 10.30 , N/A ) ( N/A , -0.09 , N/A ) | 3162.8 | N/A | 3.5670 [ 4.0000 ] | 89.2% { 89.5% } | 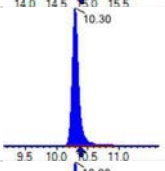 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 990720 | ( 10.90 , N/A ) ( N/A , -0.09 , N/A ) | 2119.7 | N/A | 3.7060 [ 4.0000 ] | 92.6% { 97.2% } | 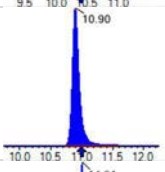 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 253851 | ( 14.31 , N/A ) ( N/A , -0.04 , N/A ) | 939.7 | N/A | 3.3370 [ 20.0000 ] | 16.7% { 19.1% } | 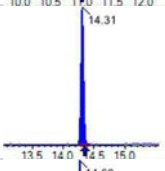 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 274987 | ( 14.68 , N/A ) ( N/A , -0.04 , N/A ) | 1578.6 | N/A | 3.8600 [ 20.0000 ] | 19.3% { 22.0% } | 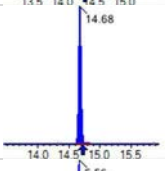 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 855620 | ( 5.56 , N/A ) ( N/A , -0.06 , N/A ) | 2231.5 | N/A | 8.0510 [ 8.0000 ] | 100.6% { 103.4% } | 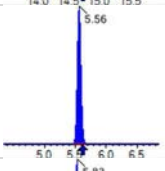 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 746122 | ( 5.83 , N/A ) ( N/A , -0.07 , N/A ) | 2913.5 | N/A | 2.4450 [ 2.0000 ] | 122.3% { 132.8% } | 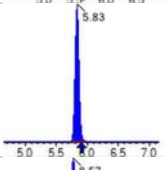 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 671944 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1207.2 | N/A | 1.9550 [ 2.0000 ] | 97.7% { 100.3% } | 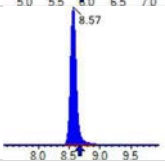 | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-20-4 (24C0121-01 ) ng/L** | Lab File ID: S2024-03-28B (18) | | | Analyzed: 03/29/24 01:40 |
| 13C4-PFBA | 29.2 | 65.3 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 103 | 40 - 130 | |
| 13C5-PFHXA | 7.31 | 102 | 40 - 130 | |
| 13C4-PFHPA | 7.31 | 111 | 40 - 130 | |
| 13C8-PFOA | 7.31 | 99.6 | 40 - 130 | |
| 13C9-PFNA | 3.65 | 94.9 | 40 - 130 | |
| 13C6-PFDA | 3.65 | 94.0 | 40 - 130 | |
| 13C7-PFUnA | 3.65 | 97.1 | 30 - 130 | |
| 13C2-PFDOA | 3.65 | 105 | 10 - 130 | |
| 13C2-PFTEDA | 3.65 | 78.3 | 10 - 130 | |
| 13C2-PFHxDA | 7.31 | 47.8 | 20 - 150 | |
| 13C3-PFBS | 7.31 | 90.8 | 40 - 135 | |
| 13C3-PFHXS | 7.31 | 97.9 | 40 - 130 | |
| 13C8-PFOS | 7.31 | 96.9 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 112 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 114 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 105 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.2 | 94.6 | 20 - 150 | |
| 13C8-PFOSA | 7.31 | 86.8 | 40 - 130 | |
| D3-NMEFOSA | 7.31 | 67.8 | 10 - 130 | |
| D5-NETFOSA | 7.31 | 66.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 73.3 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 100 | 25 - 135 | |
| D7-NMEFOSE | 73.1 | 61.8 | 10 - 130 | |
| D9-NETFOSE | 73.1 | 57.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.2 | 103 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-20-3 (24C0121-02 ) ng/L** | Lab File ID: S2024-03-28B (19) | | | Analyzed: 03/29/24 02:01 |
| 13C4-PFBA | 29.3 | 91.3 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 104 | 40 - 130 | |
| 13C5-PFHXA | 7.33 | 98.7 | 40 - 130 | |
| 13C4-PFHPA | 7.33 | 104 | 40 - 130 | |
| 13C8-PFOA | 7.33 | 99.4 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 96.4 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 90.9 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 102 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 71.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.33 | 28.8 | 20 - 150 | |
| 13C3-PFBS | 7.33 | 91.5 | 40 - 135 | |
| 13C3-PFHXS | 7.33 | 102 | 40 - 130 | |
| 13C8-PFOS | 7.33 | 97.8 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 97.4 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 123 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 103 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 87.0 | 20 - 150 | |
| 13C8-PFOSA | 7.33 | 80.9 | 40 - 130 | |
| D3-NMEFOSA | 7.33 | 34.5 | 10 - 130 | |
| D5-NETFOSA | 7.33 | 29.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 95.9 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 93.0 | 25 - 135 | |
| D7-NMEFOSE | 73.3 | 24.1 | 10 - 130 | |
| D9-NETFOSE | 73.3 | 21.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-20-2 (24C0121-03 ) ng/L** | Lab File ID: S2024-03-28B (20) | | | Analyzed: 03/29/24 02:21 |
| 13C4-PFBA | 29.3 | 79.4 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 117 | 40 - 130 | |
| 13C5-PFHXA | 7.32 | 109 | 40 - 130 | |
| 13C4-PFHPA | 7.32 | 111 | 40 - 130 | |
| 13C8-PFOA | 7.32 | 99.3 | 40 - 130 | |
| 13C9-PFNA | 3.66 | 103 | 40 - 130 | |
| 13C6-PFDA | 3.66 | 98.1 | 40 - 130 | |
| 13C7-PFUnA | 3.66 | 92.9 | 30 - 130 | |
| 13C2-PFDOA | 3.66 | 99.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.66 | 88.9 | 10 - 130 | |
| 13C2-PFHxDA | 7.32 | 78.8 | 20 - 150 | |
| 13C3-PFBS | 7.32 | 93.7 | 40 - 135 | |
| 13C3-PFHXS | 7.32 | 98.6 | 40 - 130 | |
| 13C8-PFOS | 7.32 | 99.0 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 101 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 118 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 104 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 90.7 | 20 - 150 | |
| 13C8-PFOSA | 7.32 | 76.6 | 40 - 130 | |
| D3-NMEFOSA | 7.32 | 41.4 | 10 - 130 | |
| D5-NETFOSA | 7.32 | 40.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 76.2 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 93.2 | 25 - 135 | |
| D7-NMEFOSE | 73.2 | 43.5 | 10 - 130 | |
| D9-NETFOSE | 73.2 | 43.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 104 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-20-1 (24C0121-04 ) ng/L** | Lab File ID: S2024-03-28B (21) | | | Analyzed: 03/29/24 02:42 |
| 13C4-PFBA | 28.7 | 94.5 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 114 | 40 - 130 | |
| 13C5-PFHXA | 7.19 | 97.4 | 40 - 130 | |
| 13C4-PFHPA | 7.19 | 108 | 40 - 130 | |
| 13C8-PFOA | 7.19 | 104 | 40 - 130 | |
| 13C9-PFNA | 3.59 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.59 | 94.5 | 40 - 130 | |
| 13C7-PFUnA | 3.59 | 97.2 | 30 - 130 | |
| 13C2-PFDOA | 3.59 | 101 | 10 - 130 | |
| 13C2-PFTEDA | 3.59 | 96.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.19 | 77.5 | 20 - 150 | |
| 13C3-PFBS | 7.19 | 92.9 | 40 - 135 | |
| 13C3-PFHXS | 7.19 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.19 | 94.8 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 114 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 106 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.7 | 85.4 | 20 - 150 | |
| 13C8-PFOSA | 7.19 | 83.5 | 40 - 130 | |
| D3-NMEFOSA | 7.19 | 45.8 | 10 - 130 | |
| D5-NETFOSA | 7.19 | 46.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 74.3 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 99.6 | 25 - 135 | |
| D7-NMEFOSE | 71.9 | 43.1 | 10 - 130 | |
| D9-NETFOSE | 71.9 | 40.3 | 10 - 130 | |
| 13C3-HFPO-DA | 28.7 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-6 (24C0121-05) ng/L** | Lab File ID: S2024-03-28B (22) | | | Analyzed: 03/29/24 03:02 |
| 13C4-PFBA | 30.4 | 93.7 | 5 - 130 | |
| 13C5-PFPEA | 15.2 | 110 | 40 - 130 | |
| 13C5-PFHXA | 7.59 | 99.8 | 40 - 130 | |
| 13C4-PFHPA | 7.59 | 110 | 40 - 130 | |
| 13C8-PFOA | 7.59 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.80 | 96.5 | 40 - 130 | |
| 13C6-PFDA | 3.80 | 95.2 | 40 - 130 | |
| 13C7-PFUnA | 3.80 | 84.9 | 30 - 130 | |
| 13C2-PFDOA | 3.80 | 89.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.80 | 90.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.59 | 83.0 | 20 - 150 | |
| 13C3-PFBS | 7.59 | 88.4 | 40 - 135 | |
| 13C3-PFHXS | 7.59 | 96.5 | 40 - 130 | |
| 13C8-PFOS | 7.59 | 93.9 | 40 - 130 | |
| 13C2-4:2FTS | 15.2 | 99.6 | 40 - 200 | |
| 13C2-6:2FTS | 15.2 | 112 | 40 - 200 | |
| 13C2-8:2FTS | 15.2 | 104 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.4 | 79.2 | 20 - 150 | |
| 13C8-PFOSA | 7.59 | 57.9 | 40 - 130 | |
| D3-NMEFOSA | 7.59 | 31.7 | 10 - 130 | |
| D5-NETFOSA | 7.59 | 34.4 | 10 - 130 | |
| D3-NMEFOSAA | 15.2 | 84.1 | 40 - 170 | |
| D5-NETFOSAA | 15.2 | 93.2 | 25 - 135 | |
| D7-NMEFOSE | 75.9 | 38.2 | 10 - 130 | |
| D9-NETFOSE | 75.9 | 40.7 | 10 - 130 | |
| 13C3-HFPO-DA | 30.4 | 95.3 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-10 (24C0121-06 ) ng/L** | Lab File ID: S2024-03-28B (23) | | | Analyzed: 03/29/24 03:23 |
| 13C4-PFBA | 29.0 | 95.2 | 5 - 130 | |
| 13C5-PFPEA | 14.5 | 106 | 40 - 130 | |
| 13C5-PFHXA | 7.24 | 91.6 | 40 - 130 | |
| 13C4-PFHPA | 7.24 | 98.8 | 40 - 130 | |
| 13C8-PFOA | 7.24 | 95.9 | 40 - 130 | |
| 13C9-PFNA | 3.62 | 96.1 | 40 - 130 | |
| 13C6-PFDA | 3.62 | 88.3 | 40 - 130 | |
| 13C7-PFUnA | 3.62 | 92.2 | 30 - 130 | |
| 13C2-PFDOA | 3.62 | 90.3 | 10 - 130 | |
| 13C2-PFTEDA | 3.62 | 90.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.24 | 73.4 | 20 - 150 | |
| 13C3-PFBS | 7.24 | 81.9 | 40 - 135 | |
| 13C3-PFHXS | 7.24 | 91.9 | 40 - 130 | |
| 13C8-PFOS | 7.24 | 97.7 | 40 - 130 | |
| 13C2-4:2FTS | 14.5 | 90.4 | 40 - 200 | |
| 13C2-6:2FTS | 14.5 | 110 | 40 - 200 | |
| 13C2-8:2FTS | 14.5 | 103 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.0 | 92.1 | 20 - 150 | |
| 13C8-PFOSA | 7.24 | 72.0 | 40 - 130 | |
| D3-NMEFOSA | 7.24 | 23.7 | 10 - 130 | |
| D5-NETFOSA | 7.24 | 20.2 | 10 - 130 | |
| D3-NMEFOSAA | 14.5 | 91.1 | 40 - 170 | |
| D5-NETFOSAA | 14.5 | 95.5 | 25 - 135 | |
| D7-NMEFOSE | 72.4 | 22.9 | 10 - 130 | |
| D9-NETFOSE | 72.4 | 20.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.0 | 92.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-5-031924 (24C0121-07 ) ng/L** | Lab File ID: S2024-03-28B (24) | | | Analyzed: 03/29/24 03:43 |
| 13C4-PFBA | 29.8 | 73.4 | 5 - 130 | |
| 13C5-PFPEA | 14.9 | 102 | 40 - 130 | |
| 13C5-PFHXA | 7.44 | 94.3 | 40 - 130 | |
| 13C4-PFHPA | 7.44 | 106 | 40 - 130 | |
| 13C8-PFOA | 7.44 | 106 | 40 - 130 | |
| 13C9-PFNA | 3.72 | 97.3 | 40 - 130 | |
| 13C6-PFDA | 3.72 | 79.4 | 40 - 130 | |
| 13C7-PFUnA | 3.72 | 55.7 | 30 - 130 | |
| 13C2-PFDOA | 3.72 | 46.9 | 10 - 130 | |
| 13C2-PFTEDA | 3.72 | 39.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.44 | 33.5 | 20 - 150 | |
| 13C3-PFBS | 7.44 | 96.4 | 40 - 135 | |
| 13C3-PFHXS | 7.44 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.44 | 90.1 | 40 - 130 | |
| 13C2-4:2FTS | 14.9 | 104 | 40 - 200 | |
| 13C2-6:2FTS | 14.9 | 119 | 40 - 200 | |
| 13C2-8:2FTS | 14.9 | 91.8 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.8 | 43.6 | 20 - 150 | |
| 13C8-PFOSA | 7.44 | 32.8 | 40 - 130 | *R |
| D3-NMEFOSA | 7.44 | 5.45 | 10 - 130 | *R |
| D5-NETFOSA | 7.44 | 6.47 | 10 - 130 | *R |
| D3-NMEFOSAA | 14.9 | 78.5 | 40 - 170 | |
| D5-NETFOSAA | 14.9 | 63.4 | 25 - 135 | |
| D7-NMEFOSE | 74.4 | 13.2 | 10 - 130 | |
| D9-NETFOSE | 74.4 | 14.7 | 10 - 130 | |
| 13C3-HFPO-DA | 29.8 | 89.2 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-5 (24C0121-08 ) ng/L** | Lab File ID: S2024-03-28B (25) | | | Analyzed: 03/29/24 04:04 |
| 13C4-PFBA | 29.2 | 88.7 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 110 | 40 - 130 | |
| 13C5-PFHXA | 7.30 | 90.3 | 40 - 130 | |
| 13C4-PFHPA | 7.30 | 106 | 40 - 130 | |
| 13C8-PFOA | 7.30 | 94.7 | 40 - 130 | |
| 13C9-PFNA | 3.65 | 99.4 | 40 - 130 | |
| 13C6-PFDA | 3.65 | 101 | 40 - 130 | |
| 13C7-PFUnA | 3.65 | 99.9 | 30 - 130 | |
| 13C2-PFDOA | 3.65 | 99.1 | 10 - 130 | |
| 13C2-PFTEDA | 3.65 | 99.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.30 | 80.4 | 20 - 150 | |
| 13C3-PFBS | 7.30 | 83.2 | 40 - 135 | |
| 13C3-PFHXS | 7.30 | 93.5 | 40 - 130 | |
| 13C8-PFOS | 7.30 | 93.6 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 84.2 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 99.1 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.2 | 96.3 | 20 - 150 | |
| 13C8-PFOSA | 7.30 | 80.5 | 40 - 130 | |
| D3-NMEFOSA | 7.30 | 40.2 | 10 - 130 | |
| D5-NETFOSA | 7.30 | 42.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 88.9 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 94.1 | 25 - 135 | |
| D7-NMEFOSE | 73.0 | 61.9 | 10 - 130 | |
| D9-NETFOSE | 73.0 | 58.2 | 10 - 130 | |
| 13C3-HFPO-DA | 29.2 | 99.5 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-7-031924 (24C0121-09 ) ng/L** | Lab File ID: S2024-03-28B (26) | | | Analyzed: 03/29/24 04:24 |
| 13C4-PFBA | 28.9 | 100 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 113 | 40 - 130 | |
| 13C5-PFHXA | 7.22 | 98.3 | 40 - 130 | |
| 13C4-PFHPA | 7.22 | 107 | 40 - 130 | |
| 13C8-PFOA | 7.22 | 95.9 | 40 - 130 | |
| 13C9-PFNA | 3.61 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.61 | 105 | 40 - 130 | |
| 13C7-PFUnA | 3.61 | 101 | 30 - 130 | |
| 13C2-PFDOA | 3.61 | 99.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.61 | 97.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.22 | 75.0 | 20 - 150 | |
| 13C3-PFBS | 7.22 | 89.2 | 40 - 135 | |
| 13C3-PFHXS | 7.22 | 99.5 | 40 - 130 | |
| 13C8-PFOS | 7.22 | 97.6 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 93.4 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 119 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 114 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.9 | 92.8 | 20 - 150 | |
| 13C8-PFOSA | 7.22 | 17.5 | 40 - 130 | *R |
| D3-NMEFOSA | 7.22 | 4.63 | 10 - 130 | *R |
| D5-NETFOSA | 7.22 | 4.28 | 10 - 130 | *R |
| D3-NMEFOSAA | 14.4 | 97.8 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 101 | 25 - 135 | |
| D7-NMEFOSE | 72.2 | 10.4 | 10 - 130 | |
| D9-NETFOSE | 72.2 | 12.2 | 10 - 130 | |
| 13C3-HFPO-DA | 28.9 | 104 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| FB-7-031924 (24C0121-10 ) ng/L | Lab File ID: S2024-03-28B (27) | | | Analyzed: 03/29/24 04:45 |
| 13C4-PFBA | 30.0 | 98.7 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.50 | 95.1 | 40 - 130 | |
| 13C4-PFHPA | 7.50 | 106 | 40 - 130 | |
| 13C8-PFOA | 7.50 | 99.7 | 40 - 130 | |
| 13C9-PFNA | 3.75 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.75 | 99.9 | 40 - 130 | |
| 13C7-PFUnA | 3.75 | 94.7 | 30 - 130 | |
| 13C2-PFDOA | 3.75 | 89.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.75 | 80.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.50 | 68.2 | 20 - 150 | |
| 13C3-PFBS | 7.50 | 88.6 | 40 - 135 | |
| 13C3-PFHXS | 7.50 | 99.4 | 40 - 130 | |
| 13C8-PFOS | 7.50 | 93.6 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 107 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 125 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 114 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.0 | 96.9 | 20 - 150 | |
| 13C8-PFOSA | 7.50 | 14.1 | 40 - 130 | *R |
| D3-NMEFOSA | 7.50 | 5.42 | 10 - 130 | *R |
| D5-NETFOSA | 7.50 | 5.93 | 10 - 130 | *R |
| D3-NMEFOSAA | 15.0 | 89.2 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 92.6 | 25 - 135 | |
| D7-NMEFOSE | 75.0 | 16.7 | 10 - 130 | |
| D9-NETFOSE | 75.0 | 19.3 | 10 - 130 | |
| 13C3-HFPO-DA | 30.0 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0337-BLK1 ) ng/L** | Lab File ID: S2024-03-28B (7) | | | Analyzed: 03/28/24 21:54 |
| 13C4-PFBA | 32.0 | 96.3 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 91.4 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 87.0 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 93.2 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 97.1 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 103 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 101 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 100 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 93.7 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 91.1 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 77.0 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 98.0 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 102 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 99.4 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 131 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 125 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 117 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 104 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 24.9 | 40 - 130 | *R |
| D3-NMEFOSA | 8.00 | 10.2 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 10.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 101 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 100 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 20.5 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 25.1 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 89.9 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0337-BS1 ) ng/L | Lab File ID: S2024-03-28B (8) | | | Analyzed: 03/28/24 22:15 |
| 13C4-PFBA | 32.0 | 105 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 110 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 102 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 111 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 108 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 104 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 101 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 99.1 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 98.0 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 83.6 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 103 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 106 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 109 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 127 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 112 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 49.3 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 22.3 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 21.5 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 110 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 109 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 23.6 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 20.0 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 98.6 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0337-MRL1 ) ng/L** | Lab File ID: S2024-03-28B (9) | | | Analyzed: 03/28/24 22:35 |
| 13C4-PFBA | 32.0 | 103 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 124 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 110 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 110 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 106 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 106 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 105 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 105 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 105 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 104 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 80.3 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 105 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 120 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 126 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 121 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 111 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 56.4 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 29.4 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 26.4 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 108 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 106 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 30.7 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 28.0 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 107 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS1) ng/L** | Lab File ID: S2024-03-28B (10) | | | Analyzed: 03/28/24 22:56 |
| 13C4-PFBA | 28.8 | 92.2 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 107 | 40 - 130 | |
| 13C5-PFHXA | 7.21 | 86.8 | 40 - 130 | |
| 13C4-PFHPA | 7.21 | 98.3 | 40 - 130 | |
| 13C8-PFOA | 7.21 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.61 | 97.4 | 40 - 130 | |
| 13C6-PFDA | 3.61 | 97.9 | 40 - 130 | |
| 13C7-PFUnA | 3.61 | 100 | 30 - 130 | |
| 13C2-PFDOA | 3.61 | 97.3 | 10 - 130 | |
| 13C2-PFTEDA | 3.61 | 99.8 | 10 - 130 | |
| 13C2-PFHxDA | 7.21 | 83.0 | 20 - 150 | |
| 13C3-PFBS | 7.21 | 91.6 | 40 - 135 | |
| 13C3-PFHXS | 7.21 | 103 | 40 - 130 | |
| 13C8-PFOS | 7.21 | 98.3 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 110 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 114 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 112 | 20 - 150 | |
| 13C8-PFOSA | 7.21 | 81.6 | 40 - 130 | |
| D3-NMEFOSA | 7.21 | 51.2 | 10 - 130 | |
| D5-NETFOSA | 7.21 | 54.7 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 96.5 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 100 | 25 - 135 | |
| D7-NMEFOSE | 72.1 | 70.6 | 10 - 130 | |
| D9-NETFOSE | 72.1 | 66.6 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 92.2 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS2 ) ng/L** | Lab File ID: S2024-03-28B (12) | | | Analyzed: 03/28/24 23:37 |
| 13C4-PFBA | 29.1 | 99.5 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 105 | 40 - 130 | |
| 13C5-PFHXA | 7.28 | 91.2 | 40 - 130 | |
| 13C4-PFHPA | 7.28 | 105 | 40 - 130 | |
| 13C8-PFOA | 7.28 | 97.0 | 40 - 130 | |
| 13C9-PFNA | 3.64 | 97.3 | 40 - 130 | |
| 13C6-PFDA | 3.64 | 103 | 40 - 130 | |
| 13C7-PFUnA | 3.64 | 105 | 30 - 130 | |
| 13C2-PFDOA | 3.64 | 104 | 10 - 130 | |
| 13C2-PFTEDA | 3.64 | 104 | 10 - 130 | |
| 13C2-PFHxDA | 7.28 | 88.8 | 20 - 150 | |
| 13C3-PFBS | 7.28 | 87.0 | 40 - 135 | |
| 13C3-PFHXS | 7.28 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.28 | 99.8 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 94.3 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 115 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 108 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.1 | 103 | 20 - 150 | |
| 13C8-PFOSA | 7.28 | 82.0 | 40 - 130 | |
| D3-NMEFOSA | 7.28 | 30.9 | 10 - 130 | |
| D5-NETFOSA | 7.28 | 34.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 101 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 102 | 25 - 135 | |
| D7-NMEFOSE | 72.8 | 45.7 | 10 - 130 | |
| D9-NETFOSE | 72.8 | 45.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.1 | 98.0 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD1 ) ng/L** | Lab File ID: S2024-03-28B (11) | | | Analyzed: 03/28/24 23:16 |
| 13C4-PFBA | 29.1 | 92.9 | 5 - 130 | |
| 13C5-PFPEA | 14.5 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.27 | 105 | 40 - 130 | |
| 13C4-PFHPA | 7.27 | 98.0 | 40 - 130 | |
| 13C8-PFOA | 7.27 | 109 | 40 - 130 | |
| 13C9-PFNA | 3.64 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.64 | 99.9 | 40 - 130 | |
| 13C7-PFUnA | 3.64 | 97.6 | 30 - 130 | |
| 13C2-PFDOA | 3.64 | 96.2 | 10 - 130 | |
| 13C2-PFTEDA | 3.64 | 96.9 | 10 - 130 | |
| 13C2-PFHxDA | 7.27 | 97.1 | 20 - 150 | |
| 13C3-PFBS | 7.27 | 92.5 | 40 - 135 | |
| 13C3-PFHXS | 7.27 | 99.7 | 40 - 130 | |
| 13C8-PFOS | 7.27 | 93.4 | 40 - 130 | |
| 13C2-4:2FTS | 14.5 | 94.1 | 40 - 200 | |
| 13C2-6:2FTS | 14.5 | 118 | 40 - 200 | |
| 13C2-8:2FTS | 14.5 | 108 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.1 | 105 | 20 - 150 | |
| 13C8-PFOSA | 7.27 | 62.0 | 40 - 130 | |
| D3-NMEFOSA | 7.27 | 35.8 | 10 - 130 | |
| D5-NETFOSA | 7.27 | 37.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.5 | 93.7 | 40 - 170 | |
| D5-NETFOSAA | 14.5 | 93.4 | 25 - 135 | |
| D7-NMEFOSE | 72.7 | 33.8 | 10 - 130 | |
| D9-NETFOSE | 72.7 | 32.0 | 10 - 130 | |
| 13C3-HFPO-DA | 29.1 | 93.5 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0121
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD2 ) ng/L** | Lab File ID: S2024-03-28B (13) | | | Analyzed: 03/28/24 23:57 |
| 13C4-PFBA | 28.1 | 104 | 5 - 130 | |
| 13C5-PFPEA | 14.1 | 110 | 40 - 130 | |
| 13C5-PFHXA | 7.03 | 94.1 | 40 - 130 | |
| 13C4-PFHPA | 7.03 | 115 | 40 - 130 | |
| 13C8-PFOA | 7.03 | 99.5 | 40 - 130 | |
| 13C9-PFNA | 3.51 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.51 | 97.4 | 40 - 130 | |
| 13C7-PFUnA | 3.51 | 102 | 30 - 130 | |
| 13C2-PFDOA | 3.51 | 103 | 10 - 130 | |
| 13C2-PFTEDA | 3.51 | 100 | 10 - 130 | |
| 13C2-PFHxDA | 7.03 | 93.9 | 20 - 150 | |
| 13C3-PFBS | 7.03 | 96.2 | 40 - 135 | |
| 13C3-PFHXS | 7.03 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.03 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 14.1 | 103 | 40 - 200 | |
| 13C2-6:2FTS | 14.1 | 120 | 40 - 200 | |
| 13C2-8:2FTS | 14.1 | 108 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.1 | 95.8 | 20 - 150 | |
| 13C8-PFOSA | 7.03 | 78.9 | 40 - 130 | |
| D3-NMEFOSA | 7.03 | 26.5 | 10 - 130 | |
| D5-NETFOSA | 7.03 | 26.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.1 | 99.8 | 40 - 170 | |
| D5-NETFOSAA | 14.1 | 105 | 25 - 135 | |
| D7-NMEFOSE | 70.3 | 39.1 | 10 - 130 | |
| D9-NETFOSE | 70.3 | 40.2 | 10 - 130 | |
| 13C3-HFPO-DA | 28.1 | 105 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0121T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0337-BLK1T Batch:T BDC0337T Prepared:T 03/22/2024 10:26/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0337-BS1T | S2024-03-28B (8)T | 22:15T |
| MRL CheckT | BDC0337-MRL1T | S2024-03-28B (9)T | 22:35T |
| Matrix SpikeT | BDC0337-MS1T | S2024-03-28B (10)T | 22:56T |
| Matrix Spike DupT | BDC0337-MSD1T | S2024-03-28B (11)T | 23:16T |
| Matrix SpikeT | BDC0337-MS2T | S2024-03-28B (12)T | 23:37T |
| Matrix Spike DupT | BDC0337-MSD2T | S2024-03-28B (13)T | 23:57T |
| MW-20-4T | 24C0121-01T | S2024-03-28B (18)T | 01:40T |
| MW-20-3T | 24C0121-02T | S2024-03-28B (19)T | 02:01T |
| MW-20-2T | 24C0121-03T | S2024-03-28B (20)T | 02:21T |
| MW-20-1T | 24C0121-04T | S2024-03-28B (21)T | 02:42T |
| MW-6T | 24C0121-05T | S2024-03-28B (22)T | 03:02T |
| MW-10T | 24C0121-06T | S2024-03-28B (23)T | 03:23T |
| DUP-5-031924T | 24C0121-07T | S2024-03-28B (24)T | 03:43T |
| MW-5T | 24C0121-08T | S2024-03-28B (25)T | 04:04T |
| EB-7-031924T | 24C0121-09T | S2024-03-28B (26)T | 04:24T |
| FB-7-031924T | 24C0121-10T | S2024-03-28B (27)T | 04:45T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.270a | 0.15a | 0.40a | B, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.112a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0337A | Laboratory ID:A | BDC0337-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 18.7A | 117A | 70 - 140A |
| PFPeA | 8.00A | 8.29A | 104A | 65 - 135A |
| PFHxA | 4.00A | 4.12A | 103A | 70 - 145A |
| PFHpA | 4.00A | 4.01A | 100A | 70 - 150A |
| PFOA | 4.00A | 4.35A | 109A | 70 - 150A |
| PFNA | 4.00A | 4.14A | 103A | 70 - 150A |
| PFDA | 4.00A | 4.11A | 103A | 70 - 140A |
| PFUnA | 4.00A | 4.13A | 103A | 70 - 145A |
| PFDoA | 4.00A | 4.21A | 105A | 70 - 140A |
| PFTrDA | 4.00A | 4.29A | 107A | 65 - 140A |
| PFTeDA | 4.00A | 4.11A | 103A | 60 - 140A |
| PFHxDA | 4.00A | 3.87A | 96.6A | 40 - 150A |
| PFODA | 4.00A | 3.34A | 83.6A | 40 - 150A |
| PFBSA | 3.54A | 3.76A | 106A | 60 - 145A |
| PFPeSA | 3.76A | 3.94A | 105A | 65 - 140A |
| PFHxSA | 3.66A | 3.83A | 105A | 65 - 145A |
| PFHpSA | 3.82A | 4.11A | 108A | 70 - 150A |
| PFOSA | 3.72A | 3.95A | 106A | 55 - 150A |
| PFNSA | 3.84A | 4.15A | 108A | 65 - 145A |
| PFDSA | 3.86A | 4.25A | 110A | 60 - 145A |
| PFDoSA | 3.88A | 3.91A | 101A | 50 - 145A |
| 4:2FTSA | 15.0A | 16.8A | 112A | 70 - 145A |
| 6:2FTSA | 15.2A | 15.4A | 101A | 65 - 155A |
| 8:2FTSA | 15.4A | 16.2A | 106A | 60 - 150A |
| 10:2FTSA | 15.4A | 14.4A | 93.1A | 40 - 150A |
| PFOSA | 4.00A | 4.32A | 108A | 70 - 145A |
| NMeFOSA | 16.0A | 17.6A | 110A | 60 - 150A |
| NEtFOSA | 16.0A | 17.0A | 107A | 65 - 145A |
| NMeFOSA | 4.00A | 4.03A | 101A | 50 - 140A |
| NEtFOSA | 4.00A | 4.39A | 110A | 70 - 145A |
| NMeFOSEA | 16.0A | 16.0A | 99.7A | 70 - 145A |
| NEtFOSEA | 16.0A | 17.7A | 110A | 70 - 135A |
| HFPO-DA | 4.00A | 3.76A | 94.0 | 70 - 140A |
| DONA | 3.78A | 4.36A | 115A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0337A | Laboratory ID:A | BDC0337-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.37A | 103A | 70 - 140A |
| PFMPA | 8.00A | 8.09A | 101A | 55 - 140A |
| PFMBA | 8.00A | 8.26A | 103A | 60 - 150A |
| NFDHA | 8.00A | 8.47A | 106A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 4.06A | 109A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 4.09A | 108A | 55 - 160A |
| 3:3FTCA | 16.0A | 15.4A | 96.4A | 65 - 130A |
| 5:3FTCA | 16.0A | 16.3A | 102A | 70 - 135A |
| 7:3FTCA | 16.0A | 14.8A | 92.8A | 50 - 145A |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-6-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS1- |
| Column:- | | Sample Lab ID:- | 24C0121-05- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 14.4- | 2.05- | 15.8- | 95.6- | 70 - 140- |
| PFPeA- | 7.21- | 2.84- | 9.57- | 93.3- | 65 - 135- |
| PFHxA- | 3.61- | 1.96- | 6.13- | 116- | 70 - 145- |
| PFHpA- | 3.61- | 0.404- | 3.91- | 97.2- | 70 - 150- |
| PFOA- | 3.61- | 0.833- | 4.43- | 99.7- | 70 - 150- |
| PFNA- | 3.61- | ND- | 3.55- | 98.4- | 70 - 150- |
| PFDA- | 3.61- | ND- | 3.66- | 102- | 70 - 140- |
| PFUnA- | 3.61- | ND- | 3.70- | 103- | 70 - 145- |
| PFDoA- | 3.61- | ND- | 3.68- | 102- | 70 - 140- |
| PFTrDA- | 3.61- | ND- | 3.73- | 103- | 65 - 140- |
| PFTeDA- | 3.61- | ND- | 3.40- | 94.2- | 60 - 140- |
| PFHxDA- | 3.61- | ND- | 3.60- | 99.8- | 40 - 150- |
| PFODA- | 3.61- | ND- | 3.36- | 93.2- | 40 - 150- |
| PFBS- | 3.19- | 1.86- | 5.23- | 105- | 60 - 145- |
| PFPeS- | 3.39- | 0.993- | 4.25- | 96.0- | 65 - 140- |
| PFHxS- | 3.30- | 1.28- | 4.27- | 90.5- | 65 - 145- |
| PFHpS- | 3.44- | ND- | 3.52- | 102- | 70 - 150- |
| PFOS- | 3.35- | 0.234- | 3.61- | 101- | 55 - 150- |
| PFNS- | 3.46- | ND- | 3.51- | 101- | 65 - 145- |
| PFDS- | 3.48- | ND- | 3.55- | 102- | 60 - 145- |
| PFDoS- | 3.50- | ND- | 3.44- | 98.3- | 50 - 145- |
| 4:2FTS- | 13.5- | ND- | 12.4- | 92.0- | 70 - 145- |
| 6:2FTS- | 13.7- | ND- | 14.0- | 102- | 65 - 155- |
| 8:2FTS- | 13.8- | ND- | 13.2- | 95.0- | 60 - 150- |
| 10:2FTS- | 13.9- | ND- | 12.2- | 87.5- | 40 - 150- |
| PFOSA- | 3.61- | ND- | 3.68- | 102- | 70 - 145- |
| NMeFOSA- | 14.4- | ND- | 14.8- | 102- | 60 - 150- |
| NEtFOSA- | 14.4- | ND- | 13.8- | 95.5- | 65 - 145- |
| NMeFOSAA- | 3.61- | ND- | 3.68- | 102- | 50 - 140- |
| NEtFOSAA- | 3.61- | ND- | 3.44- | 95.5- | 70 - 145- |
| NMeFOSE- | 14.4- | ND- | 13.9- | 96.2- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-6-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS1- |
| Column:- | | Sample Lab ID:- | 24C0121-05- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 14.4- | ND- | 14.8- | 103- | 70 - 135- |
| HFPO-DA- | 3.61- | ND- | 3.60- | 99.9- | 70 - 140- |
| ADONA- | 3.41- | ND- | 3.79- | 111- | 65 - 145- |
| PFEESA- | 6.42- | ND- | 6.79- | 106- | 70 - 140- |
| PFMPA- | 7.21- | ND- | 6.61- | 91.7- | 55 - 140- |
| PFMBA- | 7.21- | ND- | 6.90- | 95.7- | 60 - 150- |
| NFDHA- | 7.21- | ND- | 7.93- | 110- | 50 - 150- |
| 9Cl-PF3ONS- | 3.37- | ND- | 3.48- | 103- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.41- | ND- | 3.74- | 110- | 55 - 160- |
| 3:3FTCA- | 14.4- | ND- | 12.5- | 86.9- | 65 - 130- |
| 5:3FTCA- | 14.4- | ND- | 16.5- | 114- | 70 - 135- |
| 7:3FTCA- | 14.4- | ND- | 16.9- | 117- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-6-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0121-05- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.5- | 16.1- | 96.7- | 1.73- | 30- | 70 - 140- |
| PFPeA- | 7.27- | 9.95- | 97.7- | 3.80- | 30- | 65 - 135- |
| PFHxA- | 3.64- | 5.45- | 95.9- | 11.8- | 30- | 70 - 145- |
| PFHpA- | 3.64- | 4.24- | 106- | 8.20- | 30- | 70 - 150- |
| PFOA- | 3.64- | 4.10- | 89.8- | 7.71- | 30- | 70 - 150- |
| PFNA- | 3.64- | 3.37- | 92.8- | 5.05- | 30- | 70 - 150- |
| PFDA- | 3.64- | 3.61- | 99.4- | 1.43- | 30- | 70 - 140- |
| PFUnA- | 3.64- | 3.61- | 99.2- | 2.62- | 30- | 70 - 145- |
| PFDoA- | 3.64- | 3.51- | 96.5- | 4.85- | 30- | 70 - 140- |
| PFTrDA- | 3.64- | 3.68- | 101- | 1.18- | 30- | 65 - 140- |
| PFTeDA- | 3.64- | 3.60- | 99.1- | 5.85- | 30- | 60 - 140- |
| PFHxDA- | 3.64- | 3.53- | 97.1- | 1.88- | 30- | 40 - 150- |
| PFODA- | 3.64- | 3.14- | 86.3- | 6.96- | 30- | 40 - 150- |
| PFBS- | 3.22- | 5.02- | 98.2- | 4.03- | 30- | 60 - 145- |
| PFPeS- | 3.42- | 4.44- | 101- | 4.55- | 30- | 65 - 140- |
| PFHxS- | 3.33- | 4.55- | 98.2- | 6.34- | 30- | 65 - 145- |
| PFHpS- | 3.47- | 3.65- | 105- | 3.47- | 30- | 70 - 150- |
| PFOS- | 3.38- | 3.69- | 102- | 1.95- | 30- | 55 - 150- |
| PFNS- | 3.49- | 3.74- | 107- | 6.56- | 30- | 65 - 145- |
| PFDS- | 3.51- | 3.55- | 101- | 0.159- | 30- | 60 - 145- |
| PFDoS- | 3.53- | 3.75- | 106- | 8.60- | 30- | 50 - 145- |
| 4:2FTS- | 13.6- | 14.0- | 103- | 11.9- | 30- | 70 - 145- |
| 6:2FTS- | 13.8- | 13.5- | 97.8- | 3.35- | 30- | 65 - 155- |
| 8:2FTS- | 14.0- | 13.8- | 99.0- | 4.94- | 30- | 60 - 150- |
| 10:2FTS- | 14.0- | 13.3- | 94.7- | 8.73- | 30- | 40 - 150- |
| PFOSA- | 3.64- | 3.94- | 108- | 6.87- | 30- | 70 - 145- |
| NMeFOSA- | 14.5- | 15.8- | 109- | 6.72- | 30- | 60 - 150- |
| NEtFOSA- | 14.5- | 15.4- | 106- | 10.9- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-6-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD1- |
| Column:- | | Sample Lab ID:- | 24C0121-05- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.64- | 3.41- | 93.8- | 7.71- | 30- | 50 - 140- |
| NEtFOSAA- | 3.64- | 3.72- | 102- | 7.68- | 30- | 70 - 145- |
| NMeFOSE- | 14.5- | 15.1- | 104- | 8.82- | 30- | 70 - 145- |
| NEtFOSE- | 14.5- | 16.3- | 112- | 9.61- | 30- | 70 - 135- |
| HFPO-DA- | 3.64- | 3.72- | 102- | 3.32- | 30- | 70 - 140- |
| ADONA- | 3.44- | 3.90- | 113- | 2.66- | 30- | 65 - 145- |
| PFEESA- | 6.47- | 5.99- | 92.5- | 12.6- | 30- | 70 - 140- |
| PFMPA- | 7.27- | 7.18- | 98.8- | 8.27- | 30- | 55 - 140- |
| PFMBA- | 7.27- | 6.91- | 95.0- | 0.124- | 30- | 60 - 150- |
| NFDHA- | 7.27- | 6.64- | 91.3- | 17.7- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.40- | 3.72- | 109- | 6.69- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.44- | 3.91- | 114- | 4.50- | 30- | 55 - 160- |
| 3:3FTCA- | 14.5- | 13.9- | 95.4- | 10.1- | 30- | 65 - 130- |
| 5:3FTCA- | 14.5- | 12.9- | 88.6- | 24.4- | 30- | 70 - 135- |
| 7:3FTCA- | 14.5- | 15.1- | 104- | 10.7- | 30- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-5-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS2- |
| Column:- | | Sample Lab ID:- | 24C0121-08- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-5-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS2- |
| Column:- | | Sample Lab ID:- | 24C0121-08- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 14.6- | 2.90- | 16.0- | 90.0- | 70 - 140- |
| PFPeA- | 7.28- | ND- | 7.26- | 99.7- | 65 - 135- |
| PFHxA- | 3.64- | 0.106- | 3.98- | 106- | 70 - 145- |
| PFHpA- | 3.64- | 0.227- | 3.89- | 101- | 70 - 150- |
| PFOA- | 3.64- | 1.25- | 4.63- | 93.0- | 70 - 150- |
| PFNA- | 3.64- | ND- | 3.81- | 104- | 70 - 150- |
| PFDA- | 3.64- | 0.0936- | 3.71- | 99.2- | 70 - 140- |
| PFUnA- | 3.64- | ND- | 3.65- | 100- | 70 - 145- |
| PFDoA- | 3.64- | ND- | 3.67- | 101- | 70 - 140- |
| PFTrDA- | 3.64- | ND- | 3.72- | 102- | 65 - 140- |
| PFTeDA- | 3.64- | ND- | 3.64- | 99.9- | 60 - 140- |
| PFHxDA- | 3.64- | ND- | 3.68- | 101- | 40 - 150- |
| PFODA- | 3.64- | ND- | 3.16- | 86.8- | 40 - 150- |
| PFBS- | 3.22- | 2.98- | 5.97- | 92.7- | 60 - 145- |
| PFPeS- | 3.42- | ND- | 3.27- | 95.6- | 65 - 140- |
| PFHxS- | 3.33- | 0.512- | 3.69- | 95.3- | 65 - 145- |
| PFHpS- | 3.48- | ND- | 3.58- | 103- | 70 - 150- |
| PFOS- | 3.39- | 5.37- | 8.80- | 101- | 55 - 150- |
| PFNS- | 3.50- | ND- | 3.49- | 99.7- | 65 - 145- |
| PFDS- | 3.51- | ND- | 3.54- | 101- | 60 - 145- |
| PFDoS- | 3.53- | ND- | 3.41- | 96.5- | 50 - 145- |
| 4:2FTS- | 13.7- | ND- | 13.4- | 98.0- | 70 - 145- |
| 6:2FTS- | 13.8- | ND- | 13.0- | 93.8- | 65 - 155- |
| 8:2FTS- | 14.0- | ND- | 13.7- | 97.6- | 60 - 150- |
| 10:2FTS- | 14.1- | ND- | 13.6- | 96.5- | 40 - 150- |
| PFOSA- | 3.64- | ND- | 3.73- | 102- | 70 - 145- |
| NMeFOSA- | 14.6- | ND- | 15.0- | 103- | 60 - 150- |
| NEtFOSA- | 14.6- | ND- | 13.4- | 92.0- | 65 - 145- |
| NMeFOSAA- | 3.64- | ND- | 3.49- | 95.7- | 50 - 140- |
| NEtFOSAA- | 3.64- | ND- | 3.49- | 95.9- | 70 - 145- |
| NMeFOSE- | 14.6- | ND- | 12.7- | 87.5- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-5-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS2- |
| Column:- | | Sample Lab ID:- | 24C0121-08- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 14.6- | ND- | 13.8- | 94.8- | 70 - 135- |
| HFPO-DA- | 3.64- | ND- | 3.14- | 86.3- | 70 - 140- |
| ADONA- | 3.44- | ND- | 3.91- | 114- | 65 - 145- |
| PFEESA- | 6.48- | ND- | 7.05- | 109- | 70 - 140- |
| PFMPA- | 7.28- | ND- | 7.11- | 97.6- | 55 - 140- |
| PFMBA- | 7.28- | ND- | 7.19- | 98.7- | 60 - 150- |
| NFDHA- | 7.28- | ND- | 6.75- | 92.6- | 50 - 150- |
| 9Cl-PF3ONS- | 3.41- | ND- | 3.52- | 103- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.44- | ND- | 3.99- | 116- | 55 - 160- |
| 3:3FTCA- | 14.6- | ND- | 13.6- | 93.6- | 65 - 130- |
| 5:3FTCA- | 14.6- | ND- | 16.1- | 110- | 70 - 135- |
| 7:3FTCA- | 14.6- | ND- | 17.5- | 120- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-5-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD2- |
| Column:- | | Sample Lab ID:- | 24C0121-08- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.1- | 15.2- | 87.4- | 5.29- | 30- | 70 - 140- |
| PFPeA- | 7.03- | 7.34- | 104- | 1.06- | 30- | 65 - 135- |
| PFHxA- | 3.51- | 3.89- | 108- | 2.35- | 30- | 70 - 145- |
| PFHpA- | 3.51- | 3.63- | 96.7- | 7.00- | 30- | 70 - 150- |
| PFOA- | 3.51- | 4.70- | 98.2- | 1.37- | 30- | 70 - 150- |
| PFNA- | 3.51- | 3.61- | 103- | 5.26- | 30- | 70 - 150- |
| PFDA- | 3.51- | 3.64- | 101- | 1.69- | 30- | 70 - 140- |
| PFUnA- | 3.51- | 3.55- | 101- | 2.82- | 30- | 70 - 145- |
| PFDoA- | 3.51- | 3.56- | 101- | 2.84- | 30- | 70 - 140- |
| PFTrDA- | 3.51- | 3.75- | 107- | 0.879- | 30- | 65 - 140- |
| PFTeDA- | 3.51- | 3.69- | 105- | 1.37- | 30- | 60 - 140- |
| PFHxDA- | 3.51- | 3.84- | 109- | 4.31- | 30- | 40 - 150- |
| PFODA- | 3.51- | 3.48- | 99.1- | 9.68- | 30- | 40 - 150- |
| PFBS- | 3.11- | 6.05- | 98.8- | 1.42- | 30- | 60 - 145- |
| PFPeS- | 3.30- | 3.32- | 101- | 1.47- | 30- | 65 - 140- |
| PFHxS- | 3.22- | 3.59- | 95.7- | 2.66- | 30- | 65 - 145- |
| PFHpS- | 3.36- | 3.63- | 108- | 1.44- | 30- | 70 - 150- |
| PFOS- | 3.27- | 9.08- | 114- | 3.21- | 30- | 55 - 150- |
| PFNS- | 3.37- | 3.34- | 99.0- | 4.26- | 30- | 65 - 145- |
| PFDS- | 3.39- | 3.58- | 106- | 1.19- | 30- | 60 - 145- |
| PFDoS- | 3.41- | 3.72- | 109- | 8.84- | 30- | 50 - 145- |
| 4:2FTS- | 13.2- | 12.8- | 97.3- | 4.31- | 30- | 70 - 145- |
| 6:2FTS- | 13.4- | 12.9- | 96.4- | 0.864- | 30- | 65 - 155- |
| 8:2FTS- | 13.5- | 13.7- | 102- | 0.460- | 30- | 60 - 150- |
| 10:2FTS- | 13.6- | 15.0- | 111- | 10.4- | 30- | 40 - 150- |
| PFOSA- | 3.51- | 3.63- | 103- | 2.71- | 30- | 70 - 145- |
| NMeFOSA- | 14.1- | 15.9- | 113- | 6.09- | 30- | 60 - 150- |
| NEtFOSA- | 14.1- | 14.9- | 106- | 10.3- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-5-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0121- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD2- |
| Column:- | | Sample Lab ID:- | 24C0121-08- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.51- | 3.49- | 99.4- | 0.227- | 30- | 50 - 140- |
| NEtFOSAA- | 3.51- | 3.48- | 99.2- | 0.235- | 30- | 70 - 145- |
| NMeFOSE- | 14.1- | 14.4- | 102- | 12.0- | 30- | 70 - 145- |
| NEtFOSE- | 14.1- | 13.9- | 99.2- | 0.943- | 30- | 70 - 135- |
| HFPO-DA- | 3.51- | 3.25- | 92.6- | 3.54- | 30- | 70 - 140- |
| ADONA- | 3.32- | 3.73- | 112- | 4.89- | 30- | 65 - 145- |
| PFEESA- | 6.26- | 6.65- | 106- | 5.91- | 30- | 70 - 140- |
| PFMPA- | 7.03- | 8.00- | 114- | 11.7- | 30- | 55 - 140- |
| PFMBA- | 7.03- | 7.30- | 104- | 1.52- | 30- | 60 - 150- |
| NFDHA- | 7.03- | 8.54- | 122- | 23.5- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.29- | 3.30- | 100- | 6.54- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.32- | 3.55- | 107- | 11.7- | 30- | 55 - 160- |
| 3:3FTCA- | 14.1- | 14.3- | 102- | 5.08- | 30- | 65 - 130- |
| 5:3FTCA- | 14.1- | 15.1- | 107- | 6.45- | 30- | 70 - 135- |
| 7:3FTCA- | 14.1- | 16.6- | 118- | 4.84- | 30- | 50 - 145- |

# CALIBRATION SUMMARYL

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.05658 x (std. dev. = 0.00942) (weighting: None) | %RSE=16.7 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49263 x + 0.04347 (r = 0.99956) (weighting: 1 / x) | %RSE=3.6 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.49922 x (std. dev. = 0.03294) (weighting: None) | %RSE=6.6 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.46396 x (std. dev. = 0.03593) (weighting: None) | %RSE=7.7 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49610 x (std. dev. = 0.02906) (weighting: None) | %RSE=5.9 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 0.50211 x (std. dev. = 0.02926) (weighting: None) | %RSE=5.8 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00481 x (std. dev. = 0.04365) (weighting: None) | %RSE=4.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 0.99868 x (std. dev. = 0.05189) (weighting: None) | %RSE=5.2 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.90803 x (std. dev. = 0.09985) (weighting: None) | %RSE=11.0 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00351 x (std. dev. = 0.04887) (weighting: None) | %RSE=4.9 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.97570 x (std. dev. = 0.06326) (weighting: None) | %RSE=6.5 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93380 x (std. dev. = 0.04173) (weighting: None) | %RSE=4.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.46845 x (std. dev. = 0.01773) (weighting: None) | %RSE=3.8 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29669 x (std. dev. = 0.02397) (weighting: None) | %RSE=8.1 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8850 | y = 0.21756 x (std. dev. = 0.01699) (weighting: None) | %RSE=7.8 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9380 | y = 0.67420 x (std. dev. = 0.04128) (weighting: None) | %RSE=6.1 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.79781 x (std. dev. = 0.03897) (weighting: None) | %RSE=4.9 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9510 | y = 0.56824 x (std. dev. = 0.02975) (weighting: None) | %RSE=5.2 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9270 | y = 0.53833 x (std. dev. = 0.02074) (weighting: None) | %RSE=3.9 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9600 | y = 0.50782 x (std. dev. = 0.02565) (weighting: None) | %RSE=5.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9630 | y = 0.62281 x (std. dev. = 0.06711) (weighting: None) | %RSE=10.8 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9700 | y = 0.60668 x (std. dev. = 0.06243) (weighting: None) | %RSE=10.3 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9350 | y = 2.46725 x (std. dev. = 0.12108) (weighting: None) | %RSE=4.9 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.80558 x (std. dev. = 0.03512) (weighting: None) | %RSE=4.4 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9580 | y = 0.94263 x (std. dev. = 0.08100) (weighting: None) | %RSE=8.6 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9660 | y = 0.38362 x (std. dev. = 0.01374) (weighting: None) | %RSE=3.6 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 1.51739 x (std. dev. = 0.05746) (weighting: None) | %RSE=3.8 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.14702 x (std. dev. = 0.20606) (weighting: None) | %RSE=6.5 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.48379 x (std. dev. = 0.02055) (weighting: None) | %RSE=4.2 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9790 | y = 0.82771 x (std. dev. = 0.07132) (weighting: None) | %RSE=8.6 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.77759 x (std. dev. = 0.09332) (weighting: None) | %RSE=5.3 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.26554 x (std. dev. = 0.11465) (weighting: None) | %RSE=5.1 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23062 x (std. dev. = 0.00868) (weighting: None) | %RSE=3.8 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24252 x (std. dev. = 0.01770) (weighting: None) | %RSE=7.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21652 x (std. dev. = 0.01255) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.19052 x (std. dev. = 0.00900) (weighting: None) | %RSE=4.7 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07339 x (std. dev. = 0.00821) (weighting: None) | %RSE=11.2 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9430 | y = 0.91250 x (std. dev. = 0.06385) (weighting: None) | %RSE=7.0 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8920 | y = 0.60249 x (std. dev. = 0.04382) (weighting: None) | %RSE=7.3 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.18354 x (std. dev. = 0.01098) (weighting: None) | %RSE=6.0 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.41347 x (std. dev. = 0.02750) (weighting: None) | %RSE=6.7 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.32946 x (std. dev. = 0.02348) (weighting: None) | %RSE=7.1 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9330 | y = 1.00360 x (std. dev. = 0.08363) (weighting: None) | %RSE=8.3 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9430 | y = 0.78829 x (std. dev. = 0.06163) (weighting: None) | %RSE=7.8 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9240 | y = 0.28779 x (std. dev. = 0.02105) (weighting: None) | %RSE=7.3 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.08571 x (std. dev. = 0.00689) (weighting: None) | %RSE=8.0 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.50491 x (std. dev. = 0.04227) (weighting: None) | %RSE=8.4 |

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 1.07269 x (std. dev. = 0.08355) (weighting: None) | %RSE=7.8 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.52579 x (std. dev. = 0.03797) (weighting: None) | %RSE=7.2 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.41328 x (std. dev. = 0.03407) (weighting: None) | %RSE=8.2 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39167 x (std. dev. = 0.01908) (weighting: None) | %RSE=4.9 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 282245.7148 x | %RSD=11.5 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 118063.2838 x | %RSD=5.1 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 388138.8961 x | %RSD=6.9 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 292133.7888 x | %RSD=5.1 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 286626.9039 x | %RSD=5.3 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 982139.5047 x | %RSD=5.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 784514.6312 x | %RSD=5.9 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 8.6472 x | %RSD=4.0 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.3234 x | %RSD=11.0 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.3755 x | %RSD=6.7 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.8597 x | %RSD=6.3 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1197 x | %RSD=6.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9873 x | %RSD=3.1 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1555 x | %RSD=5.6 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3704 x | %RSD=8.7 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4057 x | %RSD=5.1 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.2448 x | %RSD=7.2 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.0831 x | %RSD=4.7 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.6121 x | %RSD=5.9 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4428 x | %RSD=4.6 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1278 x | %RSD=3.4 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.7093 x | %RSD=12.3 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.7424 x | %RSD=13.8 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.5245 x | %RSD=13.7 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.2984 x | %RSD=7.8 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.2589 x | %RSD=6.5 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.5079 x | %RSD=5.8 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4642 x | %RSD=8.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.4776 x | %RSD=9.4 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.3336 x | %RSD=11.5 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8973 x | %RSD=7.9 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.7769 x | %RSD=7.9 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 7.5812 x | %RSD=6.7 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1795 x | %RSD=10.3 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.4555 x | %RSD=5.9 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{in curve standard mix}$$

$$\text{Result } \left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

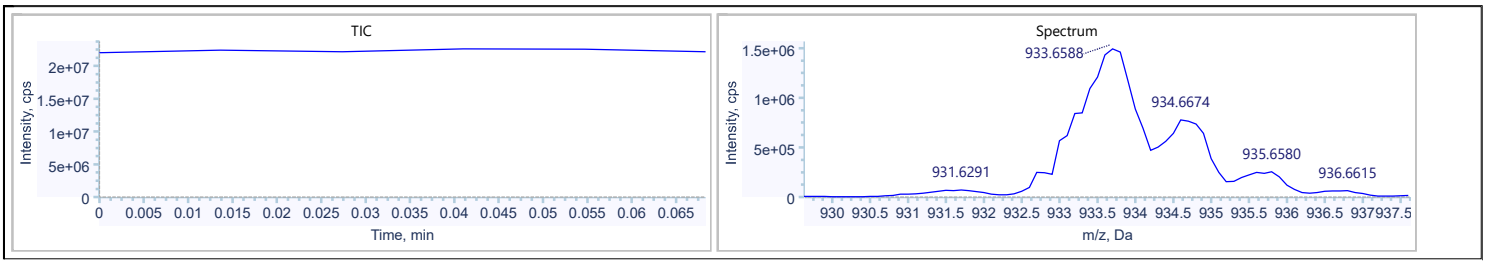


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

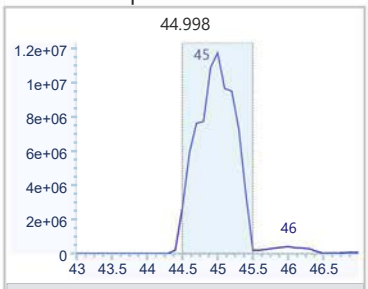


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

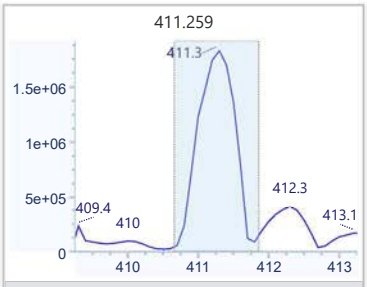


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

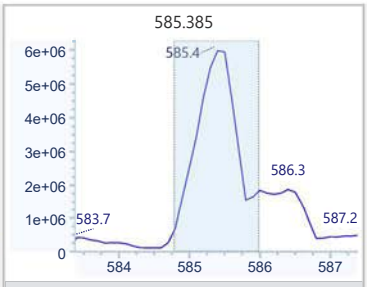


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

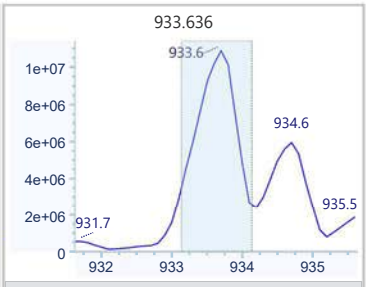


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

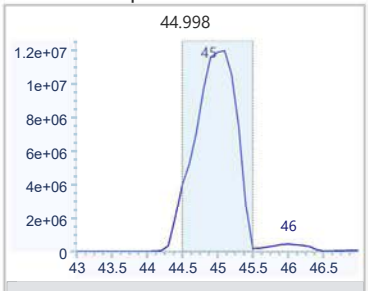


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

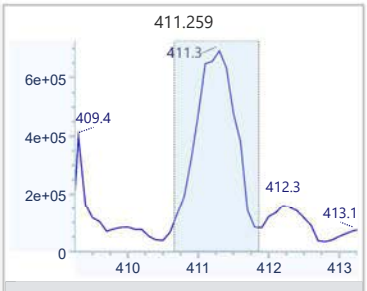


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

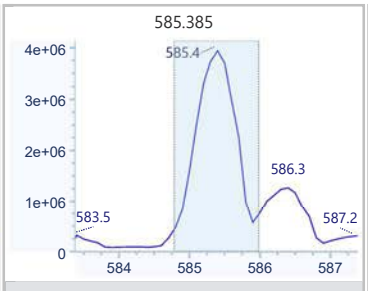


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

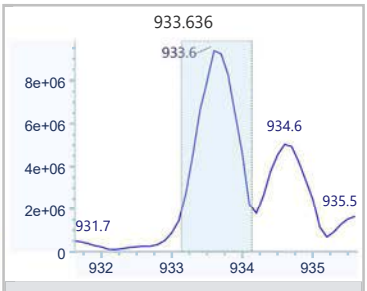


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

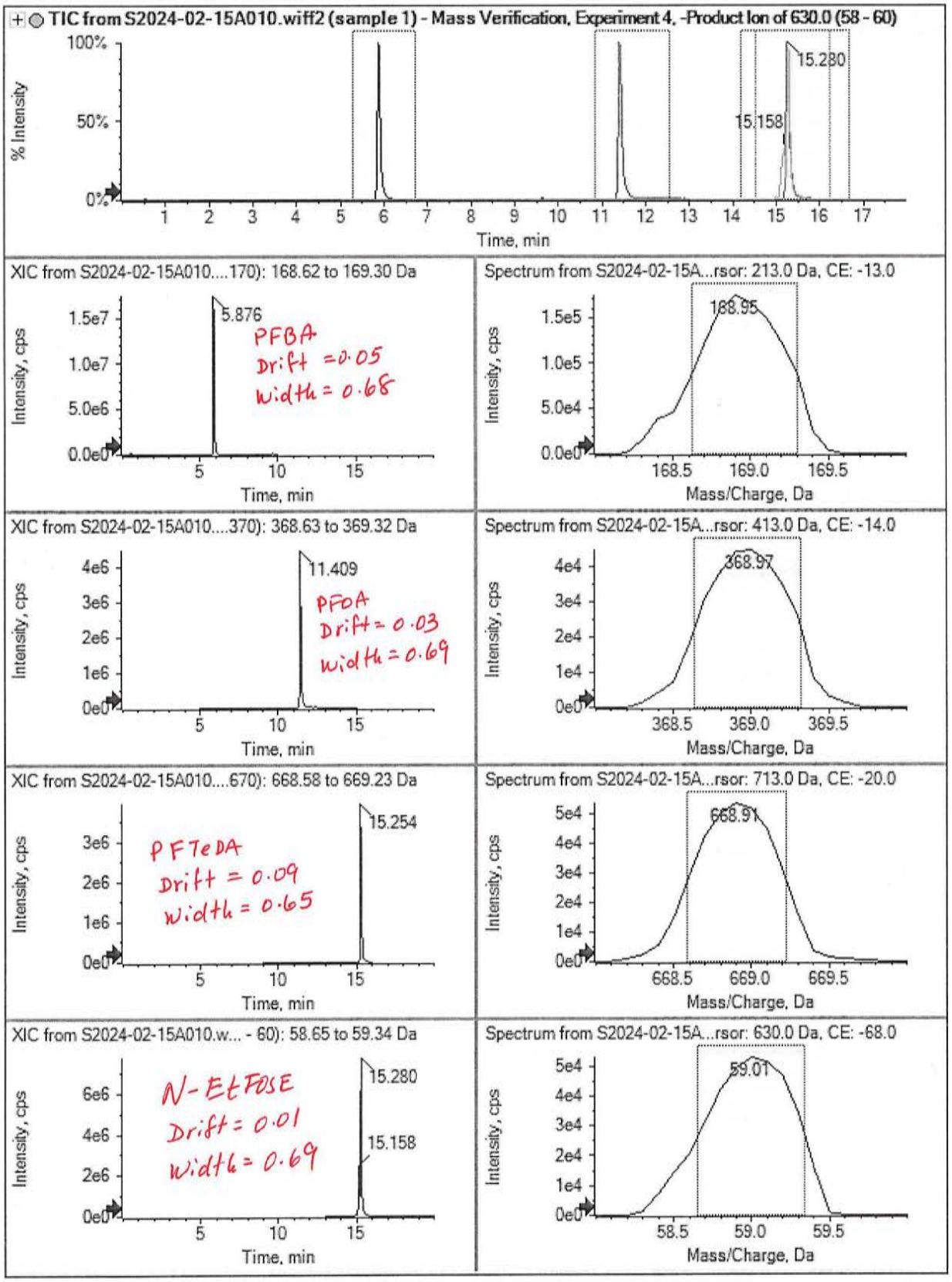

# EPA 1633A

Initial Calibration: SD01148 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 11424<br>( 163.0 / 69.0 ) 513 | ( 2.49 , 0.68 )<br>( N/A , -0.01 , 1.9) | 50.8<br>48.2 | 0.0449<br>164.0<br>164.0 | 0.1520 | N/A | 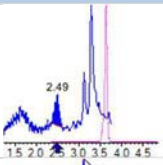 | 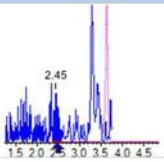 | |
| PFBA | ( 213.0 / 169.0 ) 244062 | ( 3.64 , 1.00 )<br>( 0.01 , N/A , 0.0) | 171.8 | N/A<br>0.0<br>0.0 | 0.3920 | N/A | 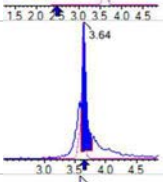 | | |
| PFPeA | ( 263.0 / 219.0 ) 47108<br>( 263.0 / 69.0 ) 481 | ( 4.39 , 1.00 )<br>( 0.00 , N/A , -0.6) | 249.8<br>14.0 | 0.0102<br>85.9<br>85.9 | 0.2050 | N/A | 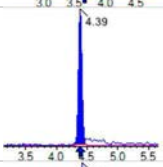 | 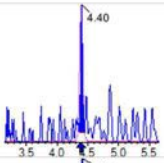 | |
| PFHxA | ( 313.0 / 269.0 ) 21432<br>( 313.0 / 119.0 ) 2635 | ( 5.22 , 1.00 )<br>( 0.00 , N/A , 0.5) | 165.4<br>89.5 | 0.1229<br>110.5<br>110.5 | 0.0850 | N/A | 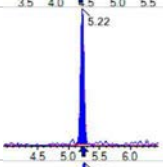 | 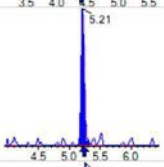 | |
| PFHpA | ( 363.0 / 319.0 ) 28749<br>( 363.0 / 169.0 ) 8589 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , -0.1) | 286.3<br>191.0 | 0.2988<br>97.8<br>97.8 | 0.0950 | N/A | 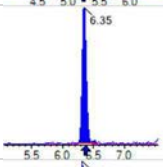 | 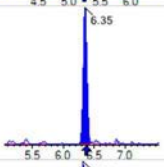 | |
| PFOA | ( 413.0 / 369.0 ) 47012<br>( 413.0 / 169.0 ) 15577 | ( 7.47 , 1.00 )<br>( 0.00 , N/A , -0.1) | 106.9<br>124.3 | 0.3313<br>92.7<br>92.7 | 0.1100 | N/A | 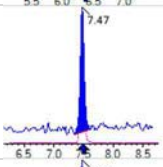 | 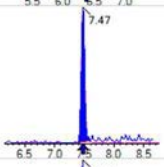 | |
| PFNA | ( 463.0 / 419.0 ) 29466<br>( 463.0 / 169.0 ) 6868 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , -0.1) | 332.1<br>154.1 | 0.2331<br>94.9<br>94.9 | 0.1000 | N/A | 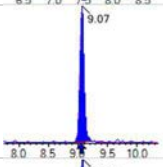 | 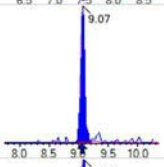 | |
| PFDA | ( 513.0 / 469.0 ) 35328<br>( 513.0 / 169.0 ) 2624 | ( 10.07 , 1.00 )<br>( 0.00 , N/A , -0.6) | 303.6<br>363874.1 | 0.0743<br>62.3<br>62.3 | 0.1020 | N/A | 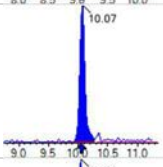 | 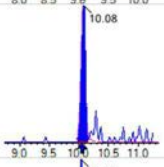 | |
| PFUnA | ( 563.0 / 519.0 ) 30872<br>( 563.0 / 169.0 ) 5510 | ( 10.99 , 1.00 )<br>( 0.00 , N/A , 0.4) | 303.8<br>133.6 | 0.1785<br>115.3<br>115.3 | 0.0820 | N/A | 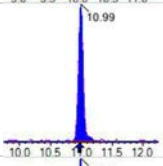 | 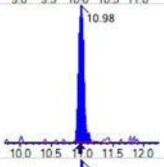 | |
| PFDoA | ( 613.0 / 569.0 ) 39355<br>( 613.0 / 169.0 ) 5791 | ( 11.89 , 1.00 )<br>( 0.00 , N/A , -0.3) | 220.9<br>74.1 | 0.1472<br>96.9<br>96.9 | 0.0950 | N/A | 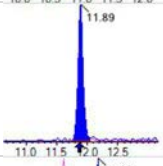 | 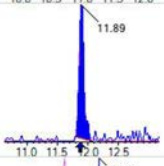 | |
| PFTrDA | ( 663.0 / 619.0 ) 36629<br>( 663.0 / 169.0 ) 9543 | ( 12.60 , 1.06 )<br>( N/A , 0.01 , 0.0) | 249.0<br>136.1 | 0.2605<br>96.8<br>96.8 | 0.0910 | N/A | 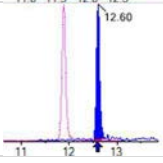 | 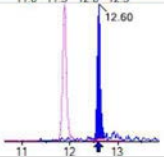 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 33810<br>( 713.0 / 169.0 ) 8418 | ( 13.14 , 1.00 ) ( -0.01 , N/A , -0.4) | 204.5<br>85.3 | 0.2490<br>91.7<br>91.7 | 0.0990 | N/A | 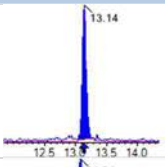 | 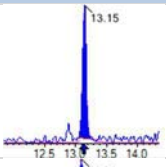 | |
| PFHxDA | ( 813.0 / 769.0 ) 27570<br>( 813.0 / 169.0 ) 7349 | ( 14.04 , 1.00 ) ( 0.00 , N/A , -0.5) | 175.8<br>49.0 | 0.2666<br>101.9<br>101.9 | 0.0990 | N/A | 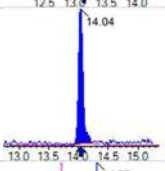 | 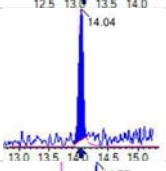 | |
| PFODA | ( 913.0 / 869.0 ) 15390<br>( 913.0 / 169.0 ) 5052 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.0) | 76.1<br>29.2 | 0.3282<br>104.7<br>104.7 | 0.0880 | N/A | 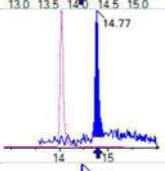 | 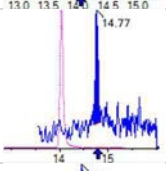 | |
| PFBS | ( 299.0 / 80.0 ) 30767<br>( 299.0 / 99.0 ) 21524 | ( 5.40 , 1.00 ) ( 0.00 , N/A , 0.2) | 429.2<br>168.7 | 0.6996<br>94.4<br>94.4 | 0.0770 | N/A | 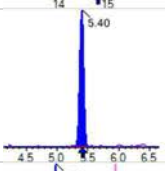 | 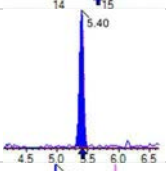 | |
| PFPeS | ( 349.0 / 80.0 ) 95828<br>( 349.0 / 99.0 ) 33243 | ( 6.68 , 0.81 ) ( N/A , -0.01 , 0.0) | 599.9<br>525.5 | 0.3469<br>101.5<br>101.5 | 0.0930 | N/A | 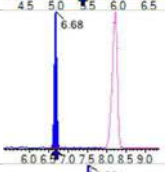 | 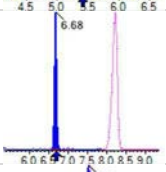 | |
| PFHxS | ( 399.0 / 80.0 ) 110599<br>( 399.0 / 99.0 ) 35884 | ( 8.22 , 1.00 ) ( 0.00 , N/A , 0.7) | 583.8<br>1059.5 | 0.3244<br>98.9<br>98.9 | 0.0880 | N/A | 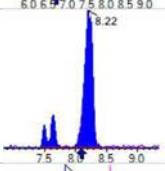 | 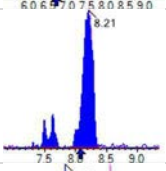 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 87755<br>( 449.0 / 99.0 ) 24540 | ( 9.56 , 0.91 ) ( N/A , 0.02 , 0.2) | 562.3<br>294.7 | 0.2796<br>107.2<br>107.2 | 0.0870 | N/A | 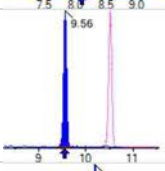 | 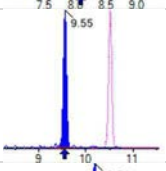 | |
| PFOS | ( 499.0 / 80.0 ) 93324<br>( 499.0 / 99.0 ) 21599 | ( 10.52 , 1.00 ) ( 0.00 , N/A , 0.1) | 466.3<br>718.8 | 0.2314<br>100.2<br>100.2 | 0.0960 | N/A | 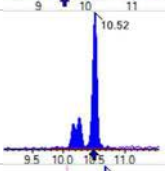 | 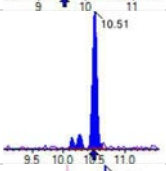 | |
| PFNS | ( 549.0 / 80.0 ) 79220<br>( 549.0 / 99.0 ) 23878 | ( 11.40 , 1.08 ) ( N/A , 0.02 , -0.1) | 457.0<br>238.4 | 0.3014<br>112.5<br>112.5 | 0.0890 | N/A | 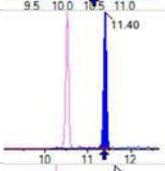 | 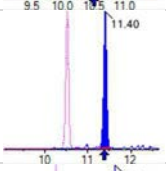 | |
| PFDS | ( 599.0 / 80.0 ) 101122<br>( 599.0 / 99.0 ) 27831 | ( 12.20 , 1.16 ) ( N/A , 0.01 , 0.0) | 650.8<br>191.7 | 0.2752<br>108.1<br>108.1 | 0.0930 | N/A | 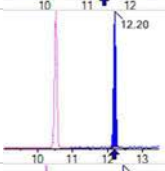 | 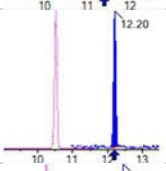 | |
| PFDoS | ( 699.0 / 80.0 ) 102038<br>( 699.0 / 99.0 ) 24044 | ( 13.20 , 1.26 ) ( N/A , 0.00 , -0.1) | 719.1<br>269.5 | 0.2356<br>105.4<br>105.4 | 0.0970 | N/A | 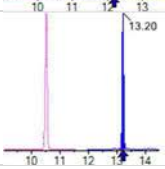 | 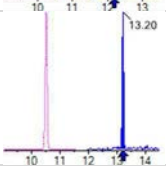 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 179225<br>( 327.0 / 81.0 ) 151427 | ( 4.85 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1812.8<br>582.9 | 0.8449<br>99.0<br>99.0 | 0.3630 | N/A | 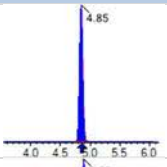 | 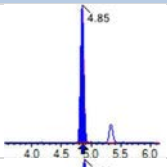 | |
| 6:2FTS | ( 427.0 / 407.0 ) 138066<br>( 427.0 / 81.0 ) 181781 | ( 6.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2052.8<br>1492.7 | 1.3166<br>102.1<br>102.1 | 0.3540 | N/A | 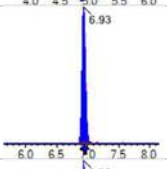 | 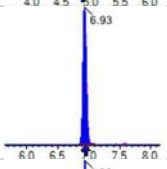 | |
| 8:2FTS | ( 527.0 / 507.0 ) 148936<br>( 527.0 / 81.0 ) 154914 | ( 9.38 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1697.0<br>1003.9 | 1.0401<br>94.2<br>94.2 | 0.3610 | N/A | 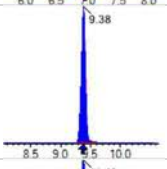 | 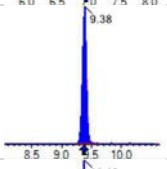 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119836<br>( 627.0 / 81.0 ) 174439 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.2) | 800.4<br>423.0 | 1.4556<br>101.2<br>101.2 | 0.3590 | N/A | 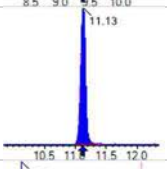 | 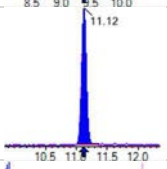 | |
| PFBSA | ( 297.9 / 78.0 ) 59293<br>( 297.9 / 278.0 ) 218 | ( 5.55 , 0.38 )<br>( N/A , 0.00 , -8.5) | 436.4<br>4.1 | 0.0037<br>283.6<br>283.6 | 0.0990 | N/A | 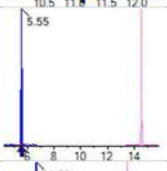 | 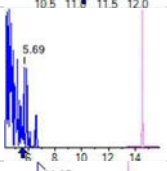 | |
| PFHxSA | ( 397.9 / 78.0 ) 115672<br>( 397.9 / 378.0 ) 314 | ( 11.23 , 0.75 )<br>( N/A , 0.00 , -1.0) | 957.5<br>40.0 | 0.0027<br>67.1<br>67.1 | 0.0980 | N/A | 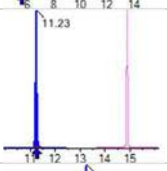 | 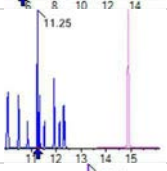 | |
| PFOSA | ( 498.0 / 78.0 ) 83077<br>( 498.0 / 478.0 ) 1224 | ( 13.28 , 1.00 )<br>( -0.01 , N/A , -0.9) | 783.8<br>28.3 | 0.0147<br>100.2<br>100.2 | 0.0980 | N/A | 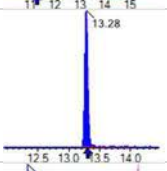 | 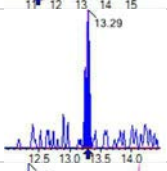 | |
| TFSI | ( 279.7 / 147.0 ) 117672<br>( 279.7 / 211.0 ) 11787 | ( 7.09 , 0.53 )<br>( N/A , 0.01 , 0.0) | 50.1<br>658.9 | 0.1002<br>113.2<br>113.2 | 0.0790 | N/A | 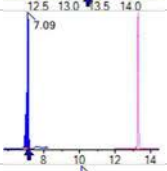 | 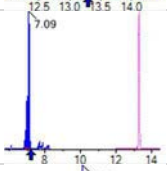 | |
| NMeFOSA | ( 512.0 / 219.0 ) 67741<br>( 512.0 / 169.0 ) 52839 | ( 14.56 , 1.00 )<br>( 0.00 , N/A , 1.3) | 832.1<br>344.5 | 0.7800<br>101.8<br>101.8 | 0.3840 | N/A | 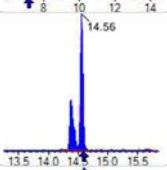 | 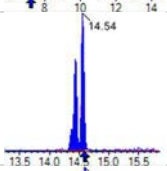 | |
| NEtFOSA | ( 526.0 / 219.0 ) 79393<br>( 526.0 / 169.0 ) 99627 | ( 14.89 , 1.00 )<br>( 0.01 , N/A , 1.7) | 803.6<br>795.8 | 1.2549<br>100.4<br>100.4 | 0.3730 | N/A | 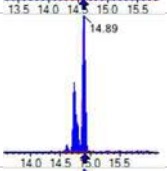 | 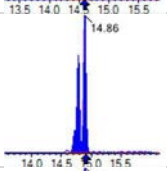 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 27875<br>( 570.0 / 483.0 ) 13190 | ( 10.44 , 1.00 )<br>( 0.01 , N/A , 0.1) | 439.1<br>93119.3 | 0.4732<br>102.0<br>102.0 | 0.0990 | N/A | 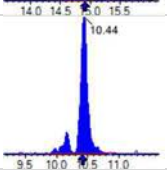 | 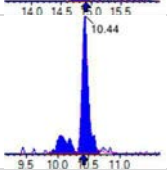 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 24693<br>( 584.0 / 526.0 ) 15199 | ( 11.04 , 1.00 ) ( 0.00 , N/A , -0.7) | 1791.1<br>276.3 | 0.6155<br>102.6<br>102.6 | 0.0920 | N/A | 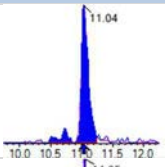 | 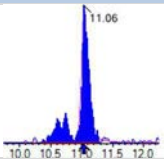 | MI5 DG 2024-03-29 |
| NMeFOSE | ( 616.0 / 59.0 ) 33653 | ( 14.35 , 1.00 ) ( 0.02 , N/A , 0.0) | 186.6 | N/A<br>0.0<br>0.0 | 0.4040 | N/A | 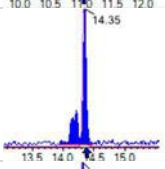 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 26710 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 222.3 | N/A<br>0.0<br>0.0 | 0.3890 | N/A | 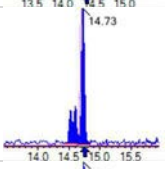 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 5426<br>( 285.0 / 185.0 ) 16307 | ( 5.64 , 1.00 ) ( 0.00 , N/A , -0.1) | 221.6<br>196.1 | 3.0053<br>107.0<br>107.0 | 0.0760 | N/A | 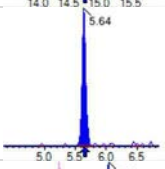 | 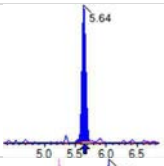 | |
| ADONA | ( 377.0 / 85.0 ) 79219<br>( 377.0 / 251.0 ) 6946 | ( 6.79 , 1.20 ) ( N/A , -0.01 , 0.0) | 955.1<br>83.6 | 0.0877<br>83.6<br>83.6 | 0.0850 | N/A | 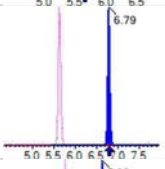 | 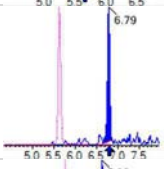 | |
| PFEESA | ( 315.0 / 135.0 ) 33896<br>( 315.0 / 83.0 ) 21770 | ( 5.98 , 1.15 ) ( N/A , -0.02 , 0.1) | 640.5<br>110.2 | 0.6423<br>100.1<br>100.1 | 0.1850 | N/A | 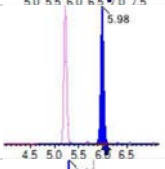 | 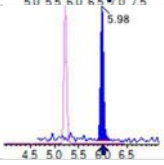 | |
| PFMPA | ( 229.0 / 85.0 ) 16056 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 513.9 | N/A<br>0.0<br>0.0 | 0.1900 | N/A | 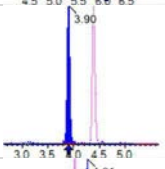 | | |
| PFMBA | ( 279.0 / 85.0 ) 36236 | ( 4.61 , 1.05 ) ( N/A , 0.00 , 0.0) | 411.6 | N/A<br>0.0<br>0.0 | 0.1900 | N/A | 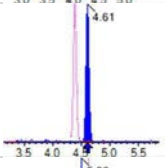 | | |
| NFDHA | ( 295.0 / 201.0 ) 18745<br>( 295.0 / 85.0 ) 17618 | ( 5.09 , 0.98 ) ( N/A , -0.01 , 0.3) | 942.2<br>271.5 | 0.9399<br>94.5<br>94.5 | 0.2090 | N/A | 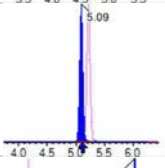 | 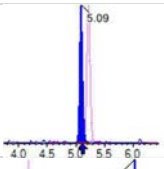 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86161<br>( 533.0 / 353.0 ) 26940 | ( 11.20 , 1.99 ) ( N/A , 0.02 , 0.1) | 937.2<br>514.1 | 0.3127<br>98.1<br>98.1 | 0.0830 | N/A | 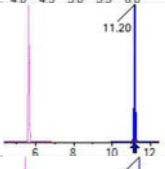 | 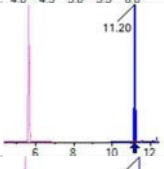 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 66326<br>( 633.0 / 453.0 ) 23901 | ( 12.66 , 2.25 ) ( N/A , 0.01 , 0.2) | 975.7<br>319.4 | 0.3604<br>106.2<br>106.2 | 0.0820 | N/A | 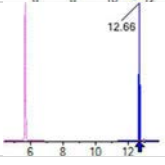 | 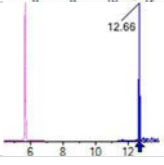 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 43851<br>( 461.0 / 381.2 ) 15851 | ( 9.46 , 0.90 )<br>( N/A , 0.02 , 0.1) | 2157.0<br>908.5 | 0.3615<br>93.6<br>93.6 | 0.0840 | N/A | 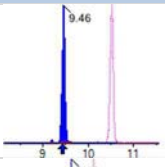 | 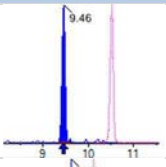 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 8726<br>( 241.0 / 117.0 ) 18815 | ( 3.96 , 0.90 )<br>( N/A , -0.01 , 0.0) | 412.1<br>133.0 | 2.1562<br>98.2<br>98.2 | 0.4410 | N/A | 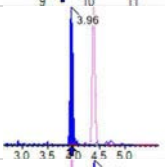 | 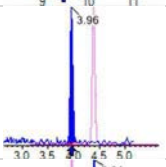 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 28555<br>( 341.0 / 217.0 ) 37510 | ( 5.64 , 1.08 )<br>( N/A , -0.02 , 0.1) | 552.1<br>219.2 | 1.3136<br>85.8<br>85.8 | 0.4160 | N/A | 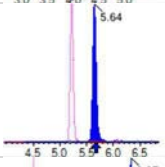 | 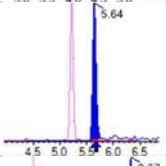 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 57118<br>( 441.0 / 337.0 ) 46760 | ( 9.37 , 1.80 )<br>( N/A , 0.04 , 0.1) | 769.6<br>2363120.9 | 0.8187<br>95.8<br>95.8 | 0.3920 | N/A | 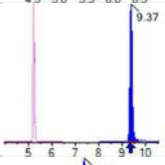 | 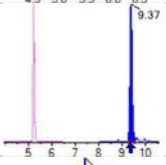 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 29520<br>( 357.2 / 243.0 ) 3301 | ( 5.89 , 1.00 )<br>( -0.01 , N/A , -0.7) | 246.8<br>51.9 | 0.1118<br>104.3<br>104.3 | 0.0840 | N/A | 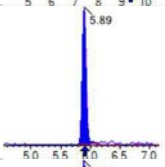 | 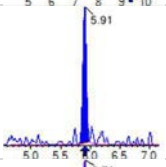 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24816<br>( 457.2 / 343.0 ) 1129 | ( 8.69 , 1.00 )<br>( -0.01 , N/A , -1.3) | 260.9<br>16441.3 | 0.0455<br>101.4<br>101.4 | 0.0810 | N/A | 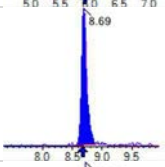 | 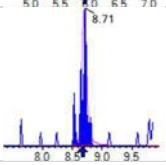 | |
| TDCA | ( 499.0 / 80.0 ) 62286 | ( 10.51 , 1.00 )<br>( N/A , 0.02 , 0.0) | 932.4 | N/A<br>0.0<br>0.0 | 0.0950 | N/A | 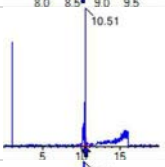 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 297658 | ( 3.63 , N/A )<br>( N/A , -0.02 , N/A ) | 1635.1 | N/A | 1.0550<br>[ 1.0000 ] | 105.5%<br>{ 107.4% } | 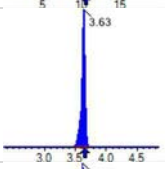 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 114374 | ( 5.22 , N/A )<br>( N/A , -0.02 , N/A ) | 670228.8 | N/A | 0.9690<br>[ 1.0000 ] | 96.9%<br>{ 99.4% } | 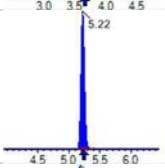 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378250 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 5267.8 | N/A | 0.9750<br>[ 1.0000 ] | 97.5%<br>{ 96.4% } | 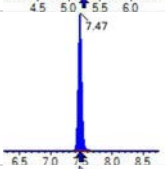 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 297288 | ( 9.07 , N/A )<br>( N/A , 0.02 , N/A ) | 1494.8 | N/A | 1.0180<br>[ 1.0000 ] | 101.8%<br>{ 102.3% } | 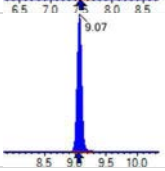 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281405 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 24158.5 | N/A | 0.9820 [ 1.0000 ] | 98.2% { 103.4% } | 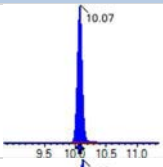 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 967713 | ( 8.22 , N/A ) ( N/A , 0.13 , N/A ) | 9229.8 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 101.7% } | 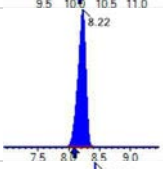 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 751287 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 3115.8 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 101.6% } | 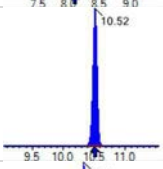 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2658506 | ( 3.63 , N/A ) ( N/A , -0.02 , N/A ) | 322733.7 | N/A | 8.2630 [ 8.0000 ] | 103.3% { 109.0% } | 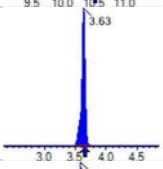 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 922775 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 5673.3 | N/A | 4.4070 [ 4.0000 ] | 110.2% { 99.8% } | 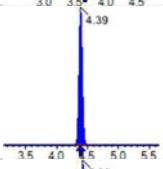 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 543980 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 7572.4 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 101.6% } | 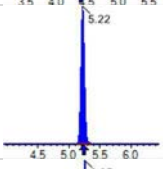 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 610145 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 6550.2 | N/A | 2.1950 [ 2.0000 ] | 109.8% { 107.0% } | 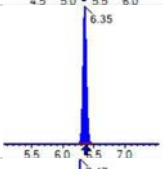 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 852451 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5309.5 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 112.6% } | 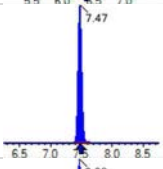 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292129 | ( 9.06 , N/A ) ( N/A , 0.02 , N/A ) | 4367.0 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 102.9% } | 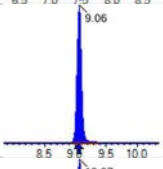 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348347 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1671.8 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 103.5% } | 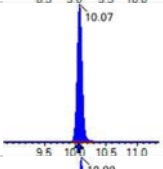 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412449 | ( 10.99 , N/A ) ( N/A , 0.02 , N/A ) | 1234.6 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 105.2% } | 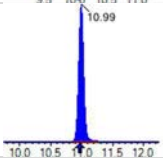 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413551 | ( 11.89 , N/A ) ( N/A , 0.02 , N/A ) | 1443.6 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 103.6% } | 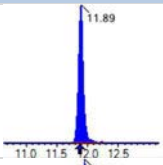 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 364139 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1250.0 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 100.5% } | 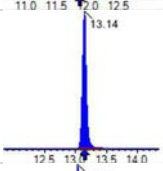 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 591883 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2281.7 | N/A | 2.0190 [ 2.0000 ] | 101.0% { 103.6% } | 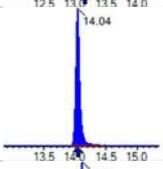 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1619455 | ( 5.40 , N/A ) ( N/A , -0.01 , N/A ) | 2095.4 | N/A | 2.0760 [ 2.0000 ] | 103.8% { 101.9% } | 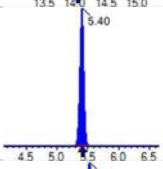 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440662 | ( 8.22 , N/A ) ( N/A , 0.13 , N/A ) | 5874.9 | N/A | 2.0640 [ 2.0000 ] | 103.2% { 104.9% } | 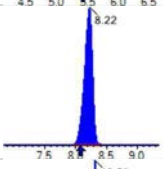 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1682588 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1902.6 | N/A | 2.1050 [ 2.0000 ] | 105.3% { 107.5% } | 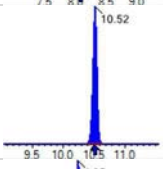 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 747900 | ( 4.85 , N/A ) ( N/A , -0.01 , N/A ) | 64.6 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 107.2% } | 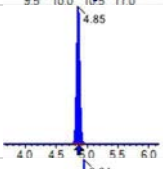 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1840115 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 6568.9 | N/A | 4.3650 [ 4.0000 ] | 109.1% { 110.9% } | 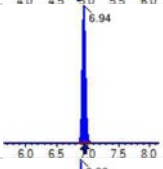 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1679015 | ( 9.39 , N/A ) ( N/A , 0.02 , N/A ) | 2075.8 | N/A | 4.5520 [ 4.0000 ] | 113.8% { 113.6% } | 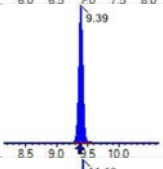 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3361452 | ( 11.12 , N/A ) ( N/A , 0.02 , N/A ) | 1949.2 | N/A | 8.4250 [ 8.0000 ] | 105.3% { 118.1% } | 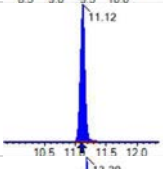 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1755121 | ( 13.29 , N/A ) ( N/A , -0.02 , N/A ) | 3216.8 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 104.3% } | 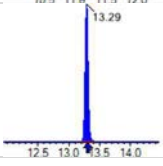 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 396518 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2692.0 | N/A | 2.0780 [ 2.0000 ] | 103.9% { 107.0% } | 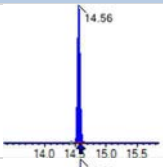  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 376281 | ( 14.88 , N/A ) ( N/A , -0.03 , N/A ) | 2584.8 | N/A | 2.1580 [ 2.0000 ] | 107.9% { 105.8% } | 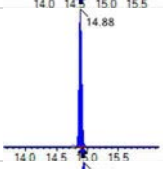  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1222822 | ( 10.44 , N/A ) ( N/A , 0.02 , N/A ) | 3931.4 | N/A | 4.4060 [ 4.0000 ] | 110.2% { 105.5% } | 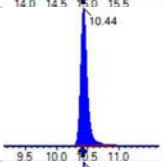  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1100790 | ( 11.04 , N/A ) ( N/A , 0.02 , N/A ) | 3251.6 | N/A | 4.3950 [ 4.0000 ] | 109.9% { 106.5% } | 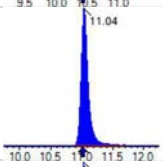  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1538473 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2676.2 | N/A | 21.5860 [ 20.0000 ] | 107.9% { 108.4% } | 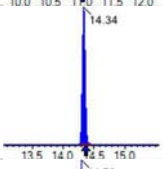  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1440884 | ( 14.70 , N/A ) ( N/A , -0.03 , N/A ) | 5136.3 | N/A | 21.5870 [ 20.0000 ] | 107.9% { 107.9% } | 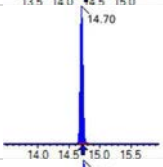  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 968447 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2880.8 | N/A | 8.9350 [ 8.0000 ] | 111.7% { 107.2% } | 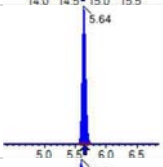  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 666361 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 1584.8 | N/A | 2.1730 [ 2.0000 ] | 108.6% { 117.4% } | 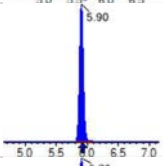  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 744188 | ( 8.70 , N/A ) ( N/A , 0.03 , N/A ) | 1145.3 | N/A | 2.1540 [ 2.0000 ] | 107.7% { 113.8% } | 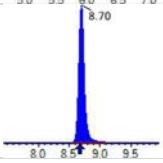  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 71130<br>( 163.0 / 69.0 ) 2043 | ( 2.49 , 0.68 ) ( N/A , 0.00 , -1.0) | 192.9<br>54.7 | 0.0287<br>104.8<br>104.8 | 0.8600 | N/A | 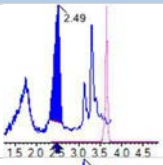 | 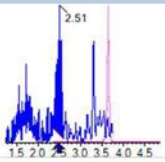 | |
| PFBA | ( 213.0 / 169.0 ) 852236 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 622.3 | N/A<br>0.0<br>0.0 | 2.0150 | N/A | 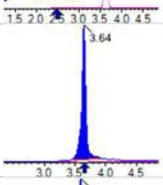 | | |
| PFPeA | ( 263.0 / 219.0 ) 233658<br>( 263.0 / 69.0 ) 1847 | ( 4.39 , 1.00 ) ( 0.00 , N/A , 0.7) | 1204.4<br>30.0 | 0.0079<br>66.4<br>66.4 | 1.0080 | N/A | 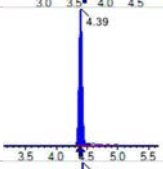 | 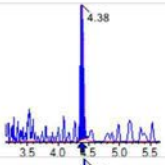 | |
| PFHxA | ( 313.0 / 269.0 ) 120459<br>( 313.0 / 119.0 ) 15334 | ( 5.23 , 1.00 ) ( 0.00 , N/A , 0.1) | 699.9<br>446.4 | 0.1273<br>114.4<br>114.4 | 0.4900 | N/A | 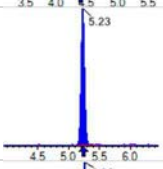 | 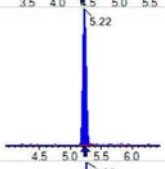 | |
| PFHpA | ( 363.0 / 319.0 ) 144823<br>( 363.0 / 169.0 ) 44324 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.1) | 873.2<br>621.4 | 0.3061<br>100.1<br>100.1 | 0.4970 | N/A | 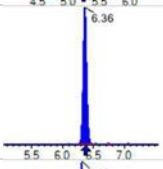 | 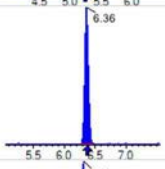 | |
| PFOA | ( 413.0 / 369.0 ) 201655<br>( 413.0 / 169.0 ) 72410 | ( 7.46 , 1.00 ) ( 0.00 , N/A , 0.0) | 312.9<br>520.1 | 0.3591<br>100.5<br>100.5 | 0.4550 | N/A | 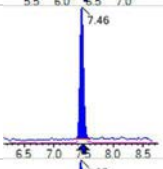 | 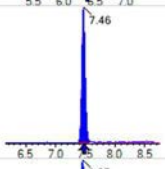 | |
| PFNA | ( 463.0 / 419.0 ) 142582<br>( 463.0 / 169.0 ) 34136 | ( 9.05 , 1.00 ) ( 0.00 , N/A , 0.0) | 994.2<br>492.6 | 0.2394<br>97.5<br>97.5 | 0.4980 | N/A | 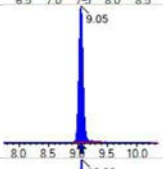 | 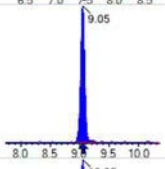 | |
| PFDA | ( 513.0 / 469.0 ) 173070<br>( 513.0 / 169.0 ) 20337 | ( 10.06 , 1.00 ) ( 0.00 , N/A , 0.1) | 1742.8<br>100786.3 | 0.1175<br>98.6<br>98.6 | 0.5010 | N/A | 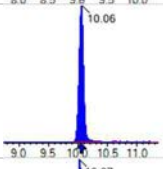 | 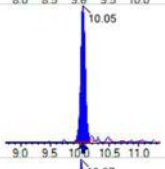 | |
| PFUnA | ( 563.0 / 519.0 ) 181180<br>( 563.0 / 169.0 ) 23660 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.3) | 814.5<br>326.2 | 0.1306<br>84.3<br>84.3 | 0.4790 | N/A | 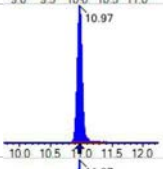 | 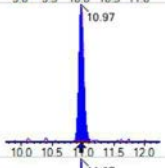 | |
| PFDoA | ( 613.0 / 569.0 ) 200523<br>( 613.0 / 169.0 ) 29402 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 764.3<br>384.0 | 0.1466<br>96.5<br>96.5 | 0.4790 | N/A | 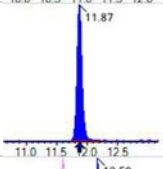 | 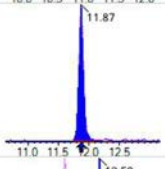 | |
| PFTrDA | ( 663.0 / 619.0 ) 192911<br>( 663.0 / 169.0 ) 52830 | ( 12.59 , 1.06 ) ( N/A , 0.00 , -0.1) | 825.5<br>436.7 | 0.2739<br>101.7<br>101.7 | 0.4740 | N/A | 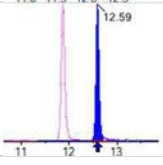 | 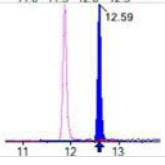 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 165100<br>( 713.0 / 169.0 ) 45935 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.4) | 650.2<br>289.7 | 0.2782<br>102.5<br>102.5 | 0.5140 | N/A | 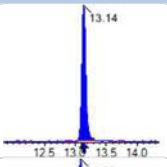 | 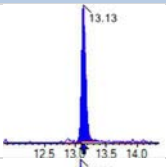 | |
| PFHxDA | ( 813.0 / 769.0 ) 140221<br>( 813.0 / 169.0 ) 36682 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.2) | 649.4<br>245.5 | 0.2616<br>100.0<br>100.0 | 0.5090 | N/A | 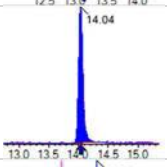 | 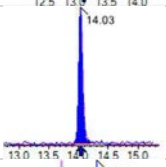 | |
| PFODA | ( 913.0 / 869.0 ) 86338<br>( 913.0 / 169.0 ) 29199 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.1) | 347.5<br>142.5 | 0.3382<br>107.9<br>107.9 | 0.4940 | N/A | 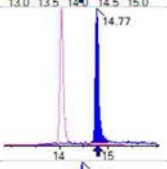 | 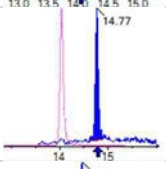 | |
| PFBS | ( 299.0 / 80.0 ) 174035<br>( 299.0 / 99.0 ) 131818 | ( 5.40 , 1.00 ) ( -0.01 , N/A , 0.0) | 1419.0<br>726.5 | 0.7574<br>102.3<br>102.3 | 0.4380 | N/A | 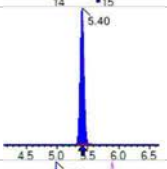 | 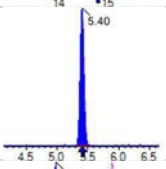 | |
| PFPeS | ( 349.0 / 80.0 ) 499313<br>( 349.0 / 99.0 ) 174428 | ( 6.69 , 0.82 ) ( N/A , -0.01 , 0.1) | 1718.1<br>1396.7 | 0.3493<br>102.2<br>102.2 | 0.4820 | N/A | 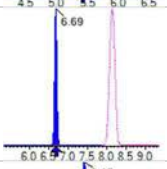 | 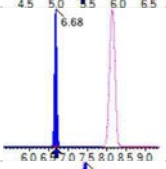 | |
| PFHxS | ( 399.0 / 80.0 ) 565570<br>( 399.0 / 99.0 ) 186087 | ( 8.15 , 1.00 ) ( 0.01 , N/A , 0.3) | 1490.6<br>1304.6 | 0.3290<br>100.3<br>100.3 | 0.4480 | N/A | 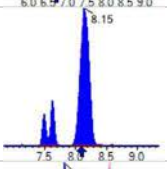 | 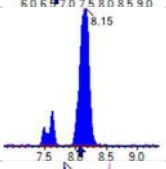 | |
| PFHpS | ( 449.0 / 80.0 ) 471503<br>( 449.0 / 99.0 ) 136814 | ( 9.54 , 0.91 ) ( N/A , 0.01 , 0.0) | 1680.6<br>1249.8 | 0.2902<br>111.2<br>111.2 | 0.4750 | N/A | 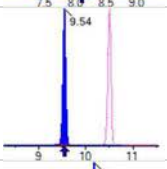 | 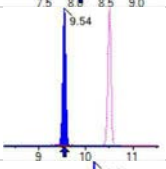 | |
| PFOS | ( 499.0 / 80.0 ) 444392<br>( 499.0 / 99.0 ) 96575 | ( 10.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 1103.0<br>2945.2 | 0.2173<br>94.1<br>94.1 | 0.4600 | N/A | 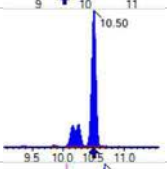 | 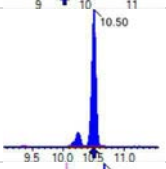 | |
| PFNS | ( 549.0 / 80.0 ) 431530<br>( 549.0 / 99.0 ) 121653 | ( 11.39 , 1.08 ) ( N/A , 0.00 , 0.2) | 1458.1<br>972.5 | 0.2819<br>105.2<br>105.2 | 0.4900 | N/A | 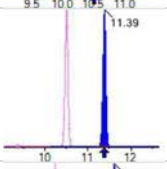 | 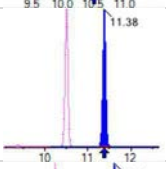 | |
| PFDS | ( 599.0 / 80.0 ) 534969<br>( 599.0 / 99.0 ) 135685 | ( 12.19 , 1.16 ) ( N/A , 0.00 , 0.1) | 1714.8<br>678.7 | 0.2536<br>99.6<br>99.6 | 0.4970 | N/A | 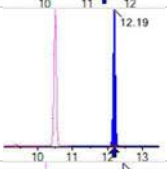 | 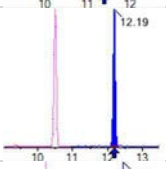 | |
| PFDoS | ( 699.0 / 80.0 ) 513457<br>( 699.0 / 99.0 ) 116280 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 2043.6<br>1130.8 | 0.2265<br>101.3<br>101.3 | 0.4930 | N/A | 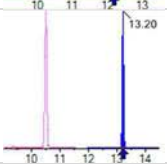 | 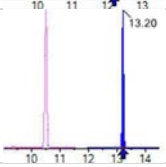 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 959487<br>( 327.0 / 81.0 ) 866625 | ( 4.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 4587.5<br>2183.1 | 0.9032<br>105.9<br>105.9 | 1.9420 | N/A | 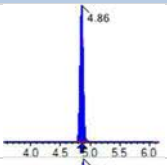 | 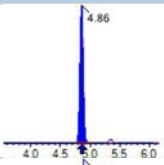 | |
| 6:2FTS | ( 427.0 / 407.0 ) 773348<br>( 427.0 / 81.0 ) 1003546 | ( 6.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 4664.5<br>4127.3 | 1.2977<br>100.6<br>100.6 | 1.9730 | N/A | 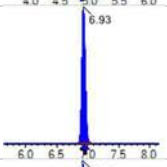 | 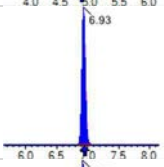 | |
| 8:2FTS | ( 527.0 / 507.0 ) 781918<br>( 527.0 / 81.0 ) 851272 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2204.0<br>2423.7 | 1.0887<br>98.6<br>98.6 | 2.1520 | N/A | 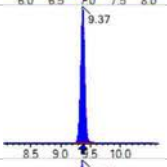 | 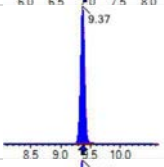 | |
| 10:2FTS | ( 627.0 / 607.0 ) 685080<br>( 627.0 / 81.0 ) 988519 | ( 11.11 , 1.00 ) ( 0.01 , N/A , 0.1) | 1504.9<br>1440.5 | 1.4429<br>100.4<br>100.4 | 1.9730 | N/A | 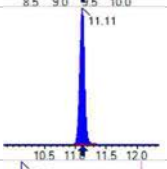 | 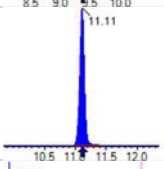 | |
| PFBSA | ( 297.9 / 78.0 ) 300472<br>( 297.9 / 278.0 ) 345 | ( 5.56 , 0.38 ) ( N/A , 0.00 , 0.9) | 931.0<br>6.5 | 0.0011<br>88.6<br>88.6 | 0.5350 | N/A | 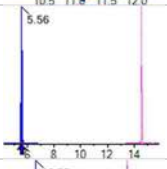 | 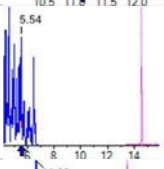 | |
| PFHxSA | ( 397.9 / 78.0 ) 583051<br>( 397.9 / 378.0 ) 2436 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.3) | 1594.8<br>109.4 | 0.0042<br>103.4<br>103.4 | 0.5050 | N/A | 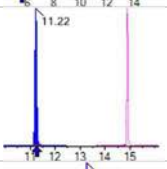 | 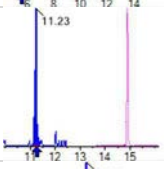 | |
| PFOSA | ( 498.0 / 78.0 ) 425048<br>( 498.0 / 478.0 ) 4917 | ( 13.28 , 1.00 ) ( -0.01 , N/A , 0.3) | 2164.9<br>122.6 | 0.0116<br>78.7<br>78.7 | 0.4940 | N/A | 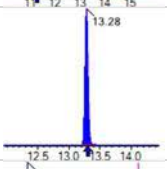 | 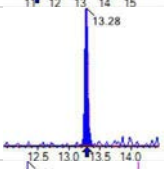 | |
| TFSI | ( 279.7 / 147.0 ) 737122<br>( 279.7 / 211.0 ) 70195 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.2) | 69.9<br>57592.6 | 0.0952<br>107.6<br>107.6 | 0.4910 | N/A | 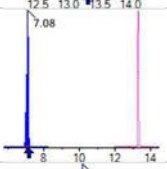 | 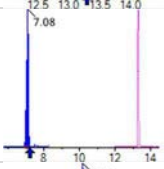 | |
| NMeFOSA | ( 512.0 / 219.0 ) 346231<br>( 512.0 / 169.0 ) 263582 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 1.3) | 1889.1<br>1004.9 | 0.7613<br>99.3<br>99.3 | 2.1060 | N/A | 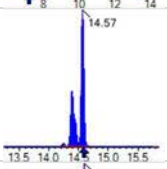 | 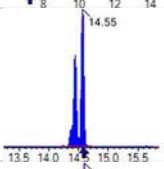 | |
| NEtFOSA | ( 526.0 / 219.0 ) 405095<br>( 526.0 / 169.0 ) 492466 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 1.7) | 2086.8<br>1956.4 | 1.2157<br>97.2<br>97.2 | 1.9510 | N/A | 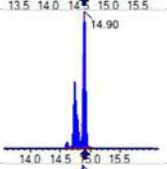 | 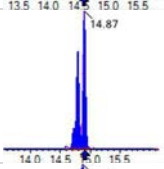 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 136672<br>( 570.0 / 483.0 ) 66727 | ( 10.42 , 1.00 ) ( 0.01 , N/A , 0.1) | 10906.3<br>5311.6 | 0.4882<br>105.2<br>105.2 | 0.5080 | N/A | 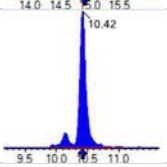 | 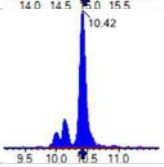 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 126811<br>( 584.0 / 526.0 ) 79788 | ( 11.04 , 1.00 ) ( 0.01 , N/A , -0.4) | 20295.9<br>508.6 | 0.6292<br>104.9<br>104.9 | 0.4870 | N/A | 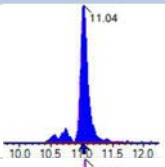 | 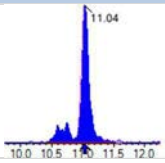 | |
| NMeFOSE | ( 616.0 / 59.0 ) 154569 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 692.5 | N/A<br>0.0<br>0.0 | 1.9760 | N/A | 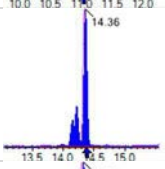 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 128541 | ( 14.74 , 1.00 ) ( 0.03 , N/A , 0.0) | 919.8 | N/A<br>0.0<br>0.0 | 2.0030 | N/A | 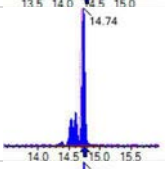 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 33046<br>( 285.0 / 185.0 ) 90444 | ( 5.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 1125.8<br>634.4 | 2.7369<br>97.5<br>97.5 | 0.4780 | N/A | 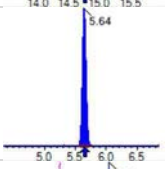 | 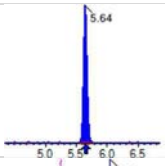 | |
| ADONA | ( 377.0 / 85.0 ) 413299<br>( 377.0 / 251.0 ) 43822 | ( 6.79 , 1.20 ) ( N/A , -0.01 , -0.2) | 2490.1<br>495.7 | 0.1060<br>101.1<br>101.1 | 0.4530 | N/A | 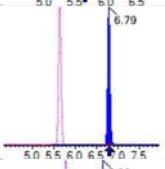 | 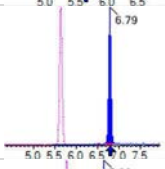 | |
| PFEESA | ( 315.0 / 135.0 ) 158771<br>( 315.0 / 83.0 ) 95912 | ( 5.99 , 1.15 ) ( N/A , -0.01 , -0.1) | 2285.3<br>270.2 | 0.6041<br>94.1<br>94.1 | 0.8870 | N/A | 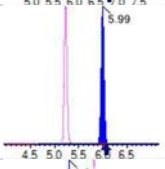 | 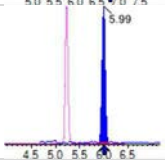 | |
| PFMPA | ( 229.0 / 85.0 ) 86584 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 2108.8 | N/A<br>0.0<br>0.0 | 1.0160 | N/A | 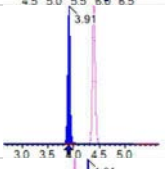 | | |
| PFMBA | ( 279.0 / 85.0 ) 186380 | ( 4.61 , 1.05 ) ( N/A , 0.01 , 0.0) | 1673.3 | N/A<br>0.0<br>0.0 | 0.9700 | N/A | 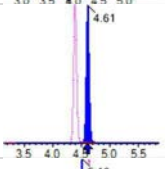 | | |
| NFDHA | ( 295.0 / 201.0 ) 93370<br>( 295.0 / 85.0 ) 98548 | ( 5.10 , 0.98 ) ( N/A , 0.00 , 0.0) | 1641.9<br>1235.3 | 1.0555<br>106.1<br>106.1 | 1.0690 | N/A | 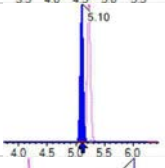 | 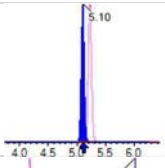 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 425787<br>( 533.0 / 353.0 ) 146975 | ( 11.18 , 1.98 ) ( N/A , 0.01 , 0.0) | 2558.3<br>1153.7 | 0.3452<br>108.3<br>108.3 | 0.4200 | N/A | 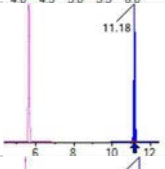 | 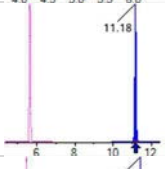 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 358272<br>( 633.0 / 453.0 ) 122752 | ( 12.65 , 2.24 ) ( N/A , 0.00 , 0.0) | 2472.0<br>1032.6 | 0.3426<br>101.0<br>101.0 | 0.4550 | N/A | 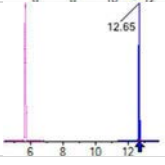 | 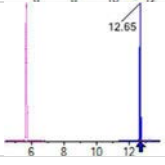 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 229740<br>( 461.0 / 381.2 ) 87792 | ( 9.44 , 0.90 ) ( N/A , 0.01 , 0.1) | 2312.9<br>11707.1 | 0.3821<br>98.9<br>98.9 | 0.4430 | N/A | 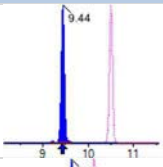 | 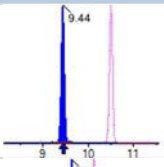 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 43054<br>( 241.0 / 117.0 ) 91972 | ( 3.96 , 0.90 ) ( N/A , 0.00 , -0.2) | 1829.7<br>660.2 | 2.1362<br>97.3<br>97.3 | 2.1630 | N/A | 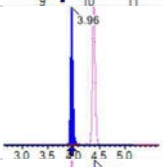 | 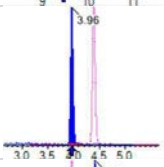 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 142287<br>( 341.0 / 217.0 ) 210281 | ( 5.65 , 1.08 ) ( N/A , -0.01 , -0.2) | 1171.9<br>849.1 | 1.4779<br>96.5<br>96.5 | 2.1260 | N/A | 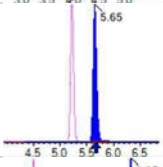 | 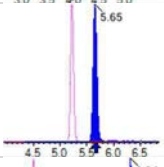 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 296746<br>( 441.0 / 337.0 ) 252083 | ( 9.35 , 1.79 ) ( N/A , 0.02 , 0.2) | 5942.8<br>13250392.4 | 0.8495<br>99.4<br>99.4 | 2.0870 | N/A | 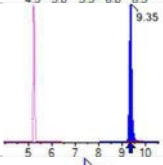 | 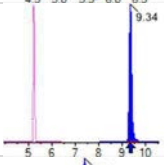 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172769<br>( 357.2 / 243.0 ) 18678 | ( 5.90 , 1.00 ) ( -0.01 , N/A , 0.0) | 727.9<br>299.5 | 0.1081<br>100.8<br>100.8 | 0.4850 | N/A | 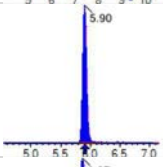 | 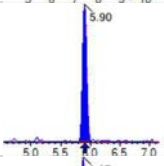 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 151786<br>( 457.2 / 343.0 ) 6616 | ( 8.67 , 1.00 ) ( -0.01 , N/A , -0.3) | 677.9<br>179.5 | 0.0436<br>97.1<br>97.1 | 0.4980 | N/A | 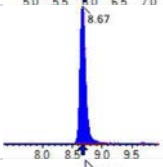 | 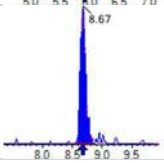 | |
| TDCA | ( 499.0 / 80.0 ) 318331 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 2136.4 | N/A<br>0.0<br>0.0 | 0.4890 | N/A | 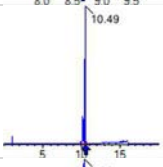 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 323037 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 1649.4 | N/A | 1.1450<br>[ 1.0000 ] | 114.5%<br>{ 116.6% } | 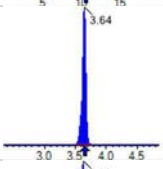 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119925 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 5368.4 | N/A | 1.0160<br>[ 1.0000 ] | 101.6%<br>{ 104.2% } | 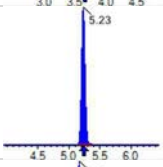 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 410964 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 6719.2 | N/A | 1.0590<br>[ 1.0000 ] | 105.9%<br>{ 104.7% } | 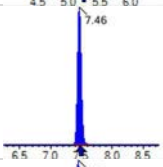 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 298322 | ( 9.05 , N/A ) ( N/A , 0.01 , N/A ) | 1523.3 | N/A | 1.0210<br>[ 1.0000 ] | 102.1%<br>{ 102.7% } | 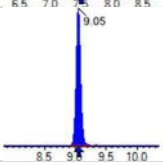 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 309296 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 24599.9 | N/A | 1.0790 [ 1.0000 ] | 107.9% { 113.6% } | 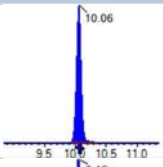  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1020358 | ( 8.15 , N/A ) ( N/A , 0.06 , N/A ) | 5835.6 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 107.3% } | 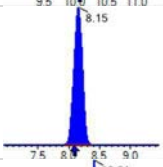  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 799049 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 3335.3 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 108.0% } | 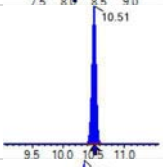  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2922788 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 109727.0 | N/A | 8.3710 [ 8.0000 ] | 104.6% { 119.8% } | 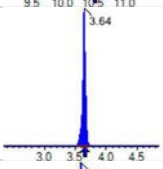  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 928942 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 6120.6 | N/A | 4.2310 [ 4.0000 ] | 105.8% { 100.4% } | 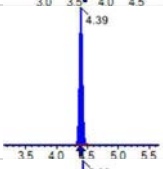  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 530264 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 11749.4 | N/A | 2.0210 [ 2.0000 ] | 101.1% { 99.1% } | 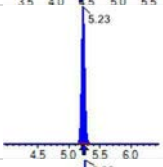  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 586880 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 5180.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 102.9% } | 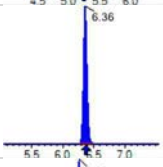  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 883058 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5945.6 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 116.7% } | 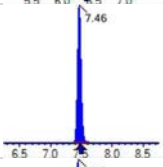  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 285138 | ( 9.05 , N/A ) ( N/A , 0.01 , N/A ) | 6659.2 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 100.4% } | 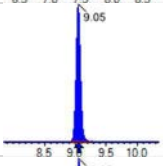  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 345915 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1675.8 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 102.8% } | 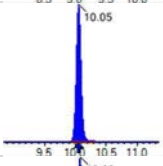  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 416572 | ( 10.98 , N/A ) ( N/A , 0.00 , N/A ) | 1014.3 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 106.3% } | 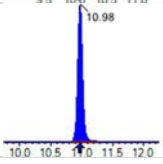  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 416908 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1379.0 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 104.5% } | 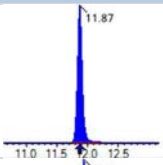 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 344034 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1219.6 | N/A | 0.8940 [ 1.0000 ] | 89.4% { 95.0% } | 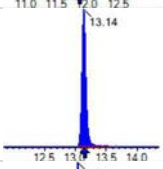 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 588510 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2798.2 | N/A | 1.8270 [ 2.0000 ] | 91.3% { 103.0% } | 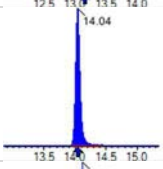 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1615177 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1232.5 | N/A | 1.9640 [ 2.0000 ] | 98.2% { 101.6% } | 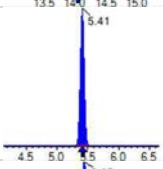 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1442698 | ( 8.15 , N/A ) ( N/A , 0.06 , N/A ) | 5802.0 | N/A | 1.9600 [ 2.0000 ] | 98.0% { 105.0% } | 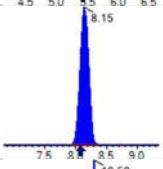 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1663183 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1522.1 | N/A | 1.9560 [ 2.0000 ] | 97.8% { 106.2% } | 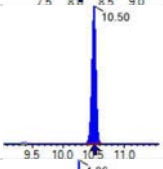 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 748709 | ( 4.86 , N/A ) ( N/A , 0.00 , N/A ) | 53.9 | N/A | 4.1380 [ 4.0000 ] | 103.5% { 107.3% } | 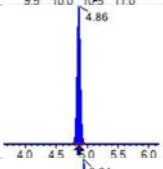 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1847080 | ( 6.94 , N/A ) ( N/A , -0.02 , N/A ) | 5883.5 | N/A | 4.1560 [ 4.0000 ] | 103.9% { 111.3% } | 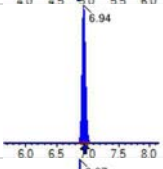 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1477518 | ( 9.37 , N/A ) ( N/A , 0.01 , N/A ) | 1686.1 | N/A | 3.7990 [ 4.0000 ] | 95.0% { 99.9% } | 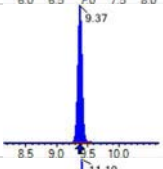 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3497358 | ( 11.10 , N/A ) ( N/A , 0.01 , N/A ) | 1518.5 | N/A | 8.3130 [ 8.0000 ] | 103.9% { 122.8% } | 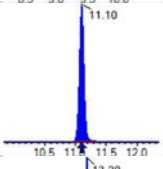 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1777416 | ( 13.29 , N/A ) ( N/A , -0.02 , N/A ) | 3787.0 | N/A | 1.9690 [ 2.0000 ] | 98.5% { 105.6% } | 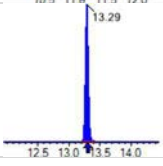 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 369985 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2420.3 | N/A | 1.8230 [ 2.0000 ] | 91.2% { 99.8% } | 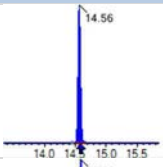 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 366514 | ( 14.89 , N/A ) ( N/A , -0.02 , N/A ) | 2737.2 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 103.0% } | 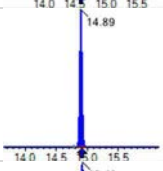 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1166984 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 3991.0 | N/A | 3.9540 [ 4.0000 ] | 98.8% { 100.7% } | 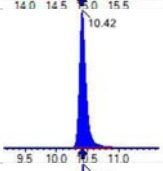 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1074413 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 2790.3 | N/A | 4.0330 [ 4.0000 ] | 100.8% { 104.0% } | 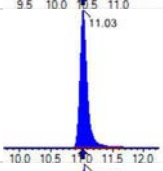 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1445300 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 3088.3 | N/A | 19.0660 [ 20.0000 ] | 95.3% { 101.8% } | 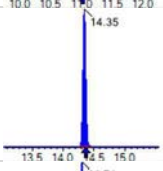 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347446 | ( 14.71 , N/A ) ( N/A , -0.02 , N/A ) | 4435.6 | N/A | 18.9800 [ 20.0000 ] | 94.9% { 100.9% } | 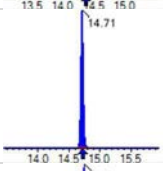 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 941627 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2470.3 | N/A | 8.2850 [ 8.0000 ] | 103.6% { 104.2% } | 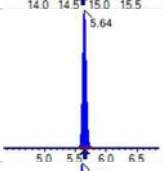 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677271 | ( 5.91 , N/A ) ( N/A , -0.01 , N/A ) | 1607.3 | N/A | 2.0090 [ 2.0000 ] | 100.5% { 119.3% } | 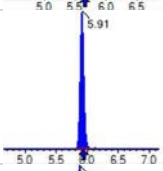 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 737759 | ( 8.68 , N/A ) ( N/A , 0.01 , N/A ) | 1148.4 | N/A | 1.9430 [ 2.0000 ] | 97.1% { 112.8% } | 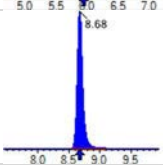 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 145514<br>( 163.0 / 69.0 ) 3863 | ( 2.49 , 0.68 ) ( N/A , 0.00 , 1.1) | 298.1<br>82.3 | 0.0265<br>96.9<br>96.9 | 2.0040 | N/A | 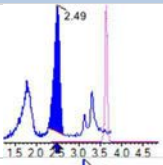 | 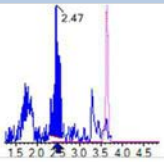 | |
| PFBA | ( 213.0 / 169.0 ) 1425799 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 999.9 | N/A<br>0.0<br>0.0 | 4.1580 | N/A | 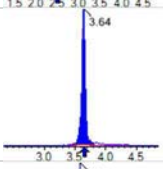 | | |
| PFPeA | ( 263.0 / 219.0 ) 476899<br>( 263.0 / 69.0 ) 6696 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1860.7<br>144.3 | 0.0140<br>118.0<br>118.0 | 2.1100 | N/A | 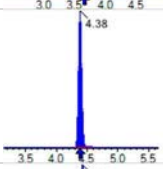 | 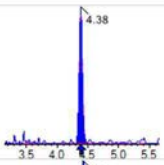 | |
| PFHxA | ( 313.0 / 269.0 ) 259371<br>( 313.0 / 119.0 ) 28876 | ( 5.22 , 1.00 ) ( 0.00 , N/A , 0.2) | 1291.2<br>581.9 | 0.1113<br>100.1<br>100.1 | 1.0520 | N/A | 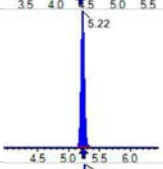 | 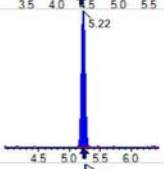 | |
| PFHpA | ( 363.0 / 319.0 ) 308156<br>( 363.0 / 169.0 ) 95195 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.1) | 1306.5<br>1624.2 | 0.3089<br>101.1<br>101.1 | 1.0480 | N/A | 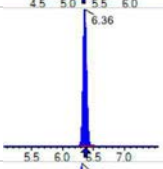 | 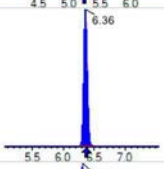 | |
| PFOA | ( 413.0 / 369.0 ) 423798<br>( 413.0 / 169.0 ) 150375 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 634.0<br>871.9 | 0.3548<br>99.3<br>99.3 | 0.9610 | N/A | 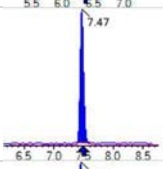 | 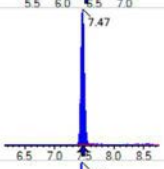 | |
| PFNA | ( 463.0 / 419.0 ) 290147<br>( 463.0 / 169.0 ) 75359 | ( 9.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 1122.7<br>716.3 | 0.2597<br>105.7<br>105.7 | 0.9470 | N/A | 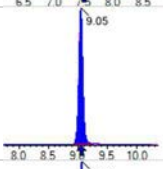 | 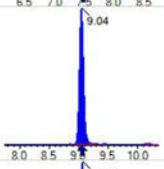 | |
| PFDA | ( 513.0 / 469.0 ) 341989<br>( 513.0 / 169.0 ) 40754 | ( 10.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2229.9<br>1987.1 | 0.1192<br>100.0<br>100.0 | 1.0380 | N/A | 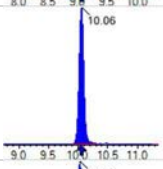 | 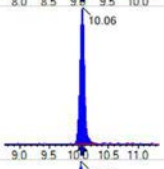 | |
| PFUnA | ( 563.0 / 519.0 ) 387879<br>( 563.0 / 169.0 ) 50654 | ( 10.98 , 1.00 ) ( 0.00 , N/A , 0.0) | 1226.3<br>445.3 | 0.1306<br>84.3<br>84.3 | 1.0320 | N/A | 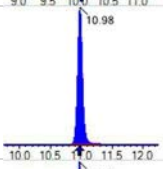 | 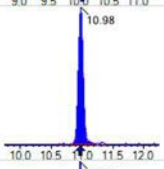 | |
| PFDoA | ( 613.0 / 569.0 ) 435851<br>( 613.0 / 169.0 ) 64674 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1108.5<br>481.9 | 0.1484<br>97.7<br>97.7 | 1.0430 | N/A | 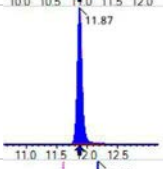 | 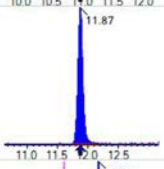 | |
| PFTrDA | ( 663.0 / 619.0 ) 421756<br>( 663.0 / 169.0 ) 104133 | ( 12.60 , 1.06 ) ( N/A , 0.00 , 0.0) | 1178.9<br>677.4 | 0.2469<br>91.7<br>91.7 | 1.0380 | N/A | 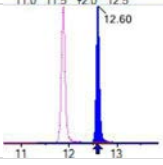 | 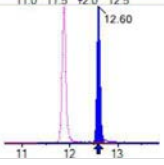 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 350549<br>( 713.0 / 169.0 ) 92196 | ( 13.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 1165.3<br>556.7 | 0.2630<br>96.9<br>96.9 | 1.0270 | N/A | 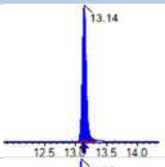 | 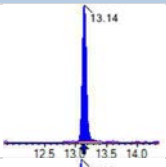 | |
| PFHxDA | ( 813.0 / 769.0 ) 273645<br>( 813.0 / 169.0 ) 71604 | ( 14.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 1080.5<br>482.6 | 0.2617<br>100.0<br>100.0 | 0.9290 | N/A | 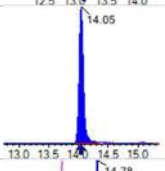 | 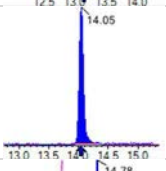 | |
| PFODA | ( 913.0 / 869.0 ) 199547<br>( 913.0 / 169.0 ) 57993 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.3) | 619.5<br>240.4 | 0.2906<br>92.7<br>92.7 | 1.0700 | N/A | 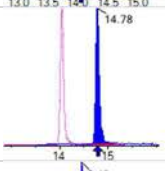 | 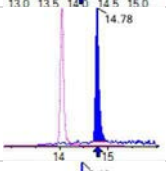 | |
| PFBS | ( 299.0 / 80.0 ) 376594<br>( 299.0 / 99.0 ) 275015 | ( 5.40 , 1.00 ) ( 0.00 , N/A , -0.1) | 1997.1<br>1158.3 | 0.7303<br>98.6<br>98.6 | 0.9530 | N/A | 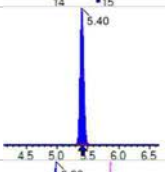 | 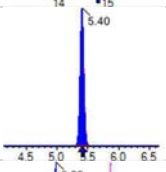 | |
| PFPeS | ( 349.0 / 80.0 ) 1027089<br>( 349.0 / 99.0 ) 355133 | ( 6.68 , 0.83 ) ( N/A , -0.01 , 0.0) | 2004.8<br>1922.2 | 0.3458<br>101.2<br>101.2 | 0.9670 | N/A | 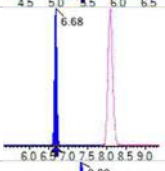 | 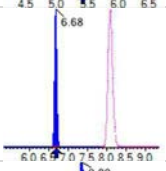 | |
| PFHxS | ( 399.0 / 80.0 ) 1175433<br>( 399.0 / 99.0 ) 378742 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.0) | 2231.6<br>2489.3 | 0.3222<br>98.2<br>98.2 | 0.9080 | N/A | 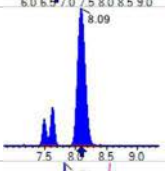 | 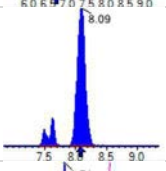 | |
| PFHpS | ( 449.0 / 80.0 ) 997685<br>( 449.0 / 99.0 ) 264661 | ( 9.54 , 0.91 ) ( N/A , 0.01 , 0.0) | 2687.4<br>2093.3 | 0.2653<br>101.7<br>101.7 | 0.9600 | N/A | 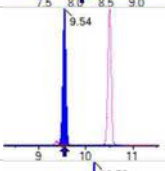 | 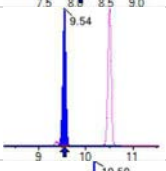 | |
| PFOS | ( 499.0 / 80.0 ) 908024<br>( 499.0 / 99.0 ) 210627 | ( 10.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 1780.4<br>2945.9 | 0.2320<br>100.4<br>100.4 | 0.9000 | N/A | 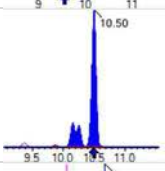 | 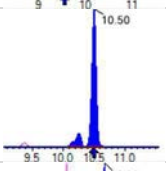 | |
| PFNS | ( 549.0 / 80.0 ) 909278<br>( 549.0 / 99.0 ) 249520 | ( 11.39 , 1.08 ) ( N/A , 0.01 , 0.1) | 2172.1<br>1187.4 | 0.2744<br>102.4<br>102.4 | 0.9880 | N/A | 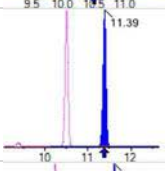 | 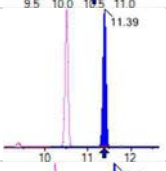 | |
| PFDS | ( 599.0 / 80.0 ) 1168204<br>( 599.0 / 99.0 ) 296179 | ( 12.19 , 1.16 ) ( N/A , 0.01 , -0.1) | 2510.7<br>1223.7 | 0.2535<br>99.6<br>99.6 | 1.0390 | N/A | 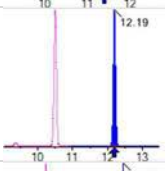 | 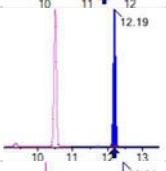 | |
| PFDoS | ( 699.0 / 80.0 ) 1112363<br>( 699.0 / 99.0 ) 254718 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.0) | 2874.9<br>1923.8 | 0.2290<br>102.5<br>102.5 | 1.0220 | N/A | 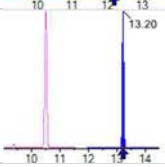 | 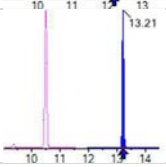 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1902835<br>( 327.0 / 81.0 ) 1699760 | ( 4.85 , 1.00 ) ( 0.00 , N/A , 0.0) | 3617.0<br>3087.8 | 0.8933<br>104.7<br>104.7 | 3.7550 | N/A | 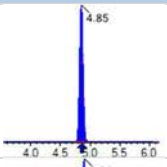 | 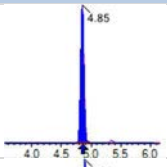 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1562397<br>( 427.0 / 81.0 ) 2137487 | ( 6.94 , 1.00 ) ( 0.00 , N/A , 0.2) | 5404.1<br>4640.0 | 1.3681<br>106.1<br>106.1 | 3.7380 | N/A | 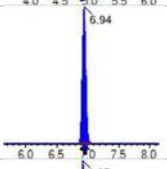 | 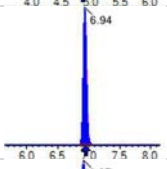 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1685864<br>( 527.0 / 81.0 ) 1749456 | ( 9.37 , 1.00 ) ( -0.01 , N/A , 0.1) | 3003.5<br>3022.9 | 1.0377<br>94.0<br>94.0 | 3.9330 | N/A | 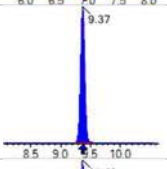 | 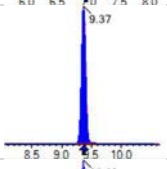 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1406760<br>( 627.0 / 81.0 ) 1987463 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.1) | 1478.3<br>1746.3 | 1.4128<br>98.3<br>98.3 | 3.9320 | N/A | 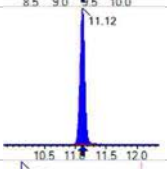 | 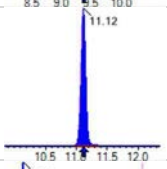 | |
| PFBSA | ( 297.9 / 78.0 ) 613429<br>( 297.9 / 278.0 ) 1175 | ( 5.55 , 0.38 ) ( N/A , -0.01 , -1.9) | 1321.9<br>11.3 | 0.0019<br>147.9<br>147.9 | 0.9760 | N/A | 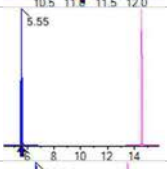 | 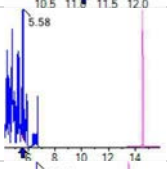 | |
| PFHxSA | ( 397.9 / 78.0 ) 1246780<br>( 397.9 / 378.0 ) 3972 | ( 11.23 , 0.75 ) ( N/A , -0.01 , 0.2) | 1831.4<br>168.1 | 0.0032<br>78.9<br>78.9 | 1.0580 | N/A | 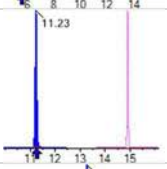 | 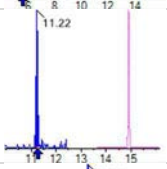 | |
| PFOSA | ( 498.0 / 78.0 ) 936174<br>( 498.0 / 478.0 ) 13937 | ( 13.29 , 1.00 ) ( -0.01 , N/A , 0.0) | 2398.2<br>342.3 | 0.0149<br>101.3<br>101.3 | 1.0440 | N/A | 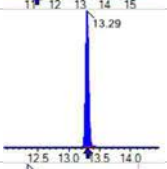 | 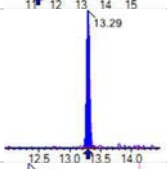 | |
| TFSI | ( 279.7 / 147.0 ) 1495168<br>( 279.7 / 211.0 ) 133745 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.2) | 86.1<br>2322.9 | 0.0895<br>101.1<br>101.1 | 0.9550 | N/A | 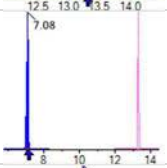 | 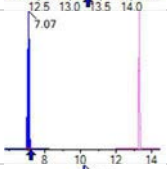 | |
| NMeFOSA | ( 512.0 / 219.0 ) 757556<br>( 512.0 / 169.0 ) 575082 | ( 14.58 , 1.00 ) ( 0.00 , N/A , 1.2) | 3001.3<br>1365.0 | 0.7591<br>99.0<br>99.0 | 4.1160 | N/A | 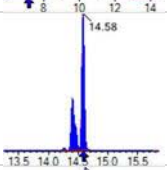 | 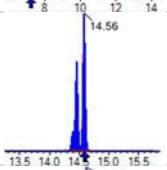 | |
| NEtFOSA | ( 526.0 / 219.0 ) 848996<br>( 526.0 / 169.0 ) 1092083 | ( 14.91 , 1.00 ) ( 0.01 , N/A , 2.2) | 3155.5<br>2671.5 | 1.2863<br>102.9<br>102.9 | 4.0050 | N/A | 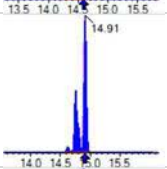 | 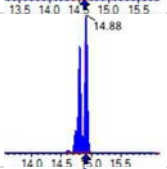 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 295170<br>( 570.0 / 483.0 ) 135509 | ( 10.43 , 1.00 ) ( 0.00 , N/A , -0.1) | 15553.3<br>2463.7 | 0.4591<br>98.9<br>98.9 | 1.0520 | N/A | 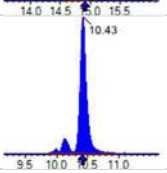 | 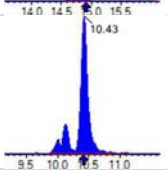 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 278378<br>( 584.0 / 526.0 ) 162542 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.3) | 1771.5<br>526.6 | 0.5839<br>97.3<br>97.3 | 1.0500 | N/A | 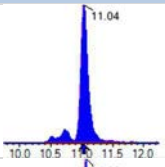 | 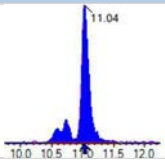 | |
| NMeFOSE | ( 616.0 / 59.0 ) 339675 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 1402.9 | N/A<br>0.0<br>0.0 | 3.9500 | N/A | 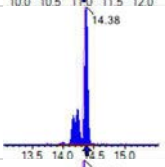 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 281541 | ( 14.75 , 1.00 ) ( 0.02 , N/A , 0.0) | 1360.0 | N/A<br>0.0<br>0.0 | 3.9800 | N/A | 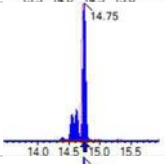 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 70438<br>( 285.0 / 185.0 ) 185220 | ( 5.64 , 1.00 ) ( -0.01 , N/A , 0.0) | 1210.6<br>1237.0 | 2.6295<br>93.7<br>93.7 | 1.0390 | N/A | 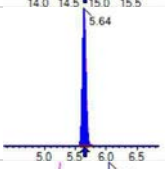 | 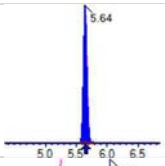 | |
| ADONA | ( 377.0 / 85.0 ) 859878<br>( 377.0 / 251.0 ) 91610 | ( 6.79 , 1.20 ) ( N/A , -0.01 , -0.1) | 2767.7<br>764.9 | 0.1065<br>101.6<br>101.6 | 0.9620 | N/A | 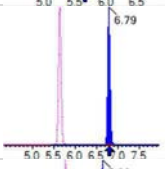 | 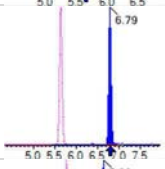 | |
| PFEESA | ( 315.0 / 135.0 ) 323289<br>( 315.0 / 83.0 ) 195259 | ( 5.99 , 1.15 ) ( N/A , -0.01 , 0.0) | 2106.9<br>569.7 | 0.6040<br>94.1<br>94.1 | 1.8020 | N/A | 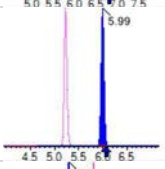 | 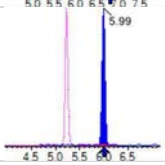 | |
| PFMPA | ( 229.0 / 85.0 ) 175871 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 5066.9 | N/A<br>0.0<br>0.0 | 2.1160 | N/A | 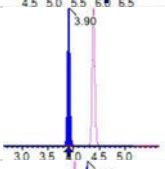 | | |
| PFMBA | ( 279.0 / 85.0 ) 352957 | ( 4.60 , 1.05 ) ( N/A , 0.00 , 0.0) | 2717.3 | N/A<br>0.0<br>0.0 | 1.8850 | N/A | 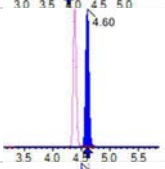 | | |
| NFDHA | ( 295.0 / 201.0 ) 177168<br>( 295.0 / 85.0 ) 181976 | ( 5.10 , 0.98 ) ( N/A , -0.01 , 0.2) | 3407.4<br>1396.4 | 1.0271<br>103.3<br>103.3 | 2.0230 | N/A | 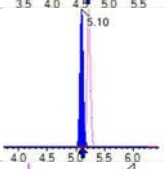 | 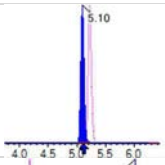 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 921016<br>( 533.0 / 353.0 ) 292103 | ( 11.18 , 1.98 ) ( N/A , 0.01 , 0.1) | 3301.2<br>2335.6 | 0.3172<br>99.5<br>99.5 | 0.9270 | N/A | 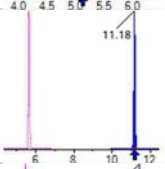 | 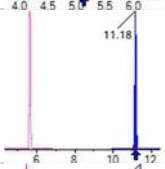 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 767652<br>( 633.0 / 453.0 ) 260925 | ( 12.66 , 2.24 ) ( N/A , 0.01 , 0.0) | 3575.1<br>2371.9 | 0.3399<br>100.2<br>100.2 | 0.9950 | N/A | 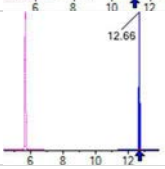 | 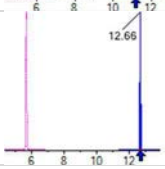 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 467142<br>( 461.0 / 381.2 ) 182220 | ( 9.44 , 0.90 ) ( N/A , 0.01 , 0.2) | 3706.9<br>3376.2 | 0.3901<br>101.0<br>101.0 | 0.8620 | N/A | 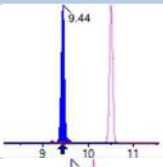 | 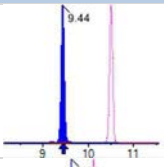 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 78844<br>( 241.0 / 117.0 ) 192973 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.0) | 1916.4<br>1101.3 | 2.4475<br>111.5<br>111.5 | 4.0630 | N/A | 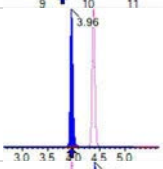 | 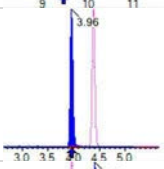 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 269659<br>( 341.0 / 217.0 ) 438937 | ( 5.65 , 1.08 ) ( N/A , -0.01 , 0.1) | 1425.7<br>1009.2 | 1.6277<br>106.3<br>106.3 | 4.0180 | N/A | 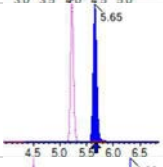 | 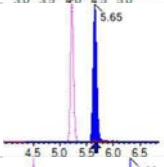 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 599610<br>( 441.0 / 337.0 ) 538412 | ( 9.33 , 1.79 ) ( N/A , 0.00 , 0.1) | 10806.0<br>11527.9 | 0.8979<br>105.1<br>105.1 | 4.2060 | N/A | 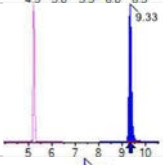 | 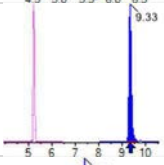 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 359955<br>( 357.2 / 243.0 ) 38813 | ( 5.90 , 1.00 ) ( -0.01 , N/A , 0.0) | 1073.6<br>490.0 | 0.1078<br>100.6<br>100.6 | 1.0040 | N/A | 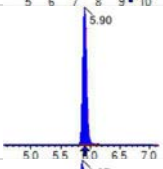 | 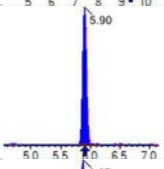 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 314580<br>( 457.2 / 343.0 ) 11976 | ( 8.67 , 1.00 ) ( 0.00 , N/A , 0.0) | 970.9<br>284.9 | 0.0381<br>84.8<br>84.8 | 1.0180 | N/A | 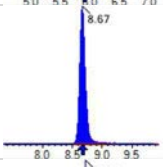 | 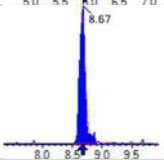 | |
| TDCA | ( 499.0 / 80.0 ) 662831 | ( 10.49 , 1.00 ) ( N/A , 0.01 , 0.0) | 5021.6 | N/A<br>0.0<br>0.0 | 0.9730 | N/A | 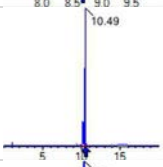 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 314166 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 1805.0 | N/A | 1.1130 [ 1.0000 ] | 111.3% { 113.4% } | 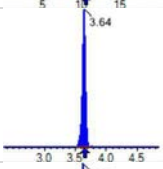 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125606 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 15935526.7 | N/A | 1.0640 [ 1.0000 ] | 106.4% { 109.2% } | 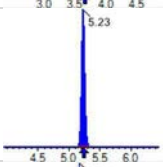 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 424058 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5688.3 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 108.0% } | 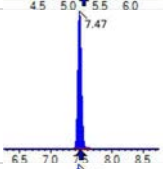 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 311748 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 1913.2 | N/A | 1.0670 [ 1.0000 ] | 106.7% { 107.3% } | 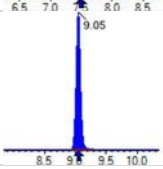 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 300394 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 5494.7 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 110.4% } | 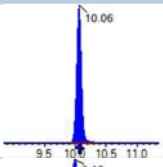 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056354 | ( 8.10 , N/A ) ( N/A , 0.00 , N/A ) | 7602.5 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 111.0% } | 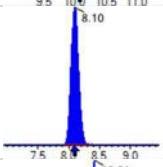 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 828067 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 2686.0 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 111.9% } | 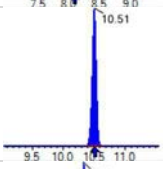 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2566437 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 134366.8 | N/A | 7.5580 [ 8.0000 ] | 94.5% { 105.2% } | 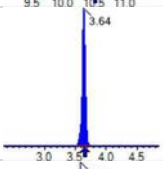 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 905587 | ( 4.38 , N/A ) ( N/A , 0.00 , N/A ) | 5048.4 | N/A | 3.9380 [ 4.0000 ] | 98.4% { 97.9% } | 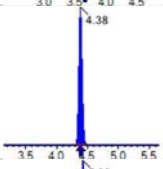 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 531649 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 57010.9 | N/A | 1.9350 [ 2.0000 ] | 96.7% { 99.3% } | 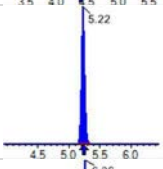 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 592663 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 6270.5 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 103.9% } | 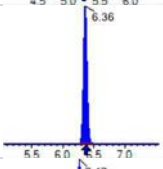 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 878219 | ( 7.47 , N/A ) ( N/A , -0.01 , N/A ) | 7252.7 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 116.0% } | 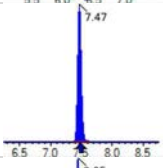 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 304768 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 5045.9 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 107.3% } | 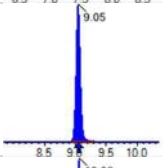 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 329781 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 1797.9 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 98.0% } | 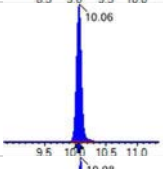 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 413773 | ( 10.98 , N/A ) ( N/A , 0.01 , N/A ) | 1043.0 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 105.5% } | 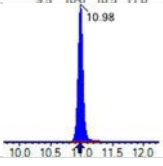 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 416497 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1405.5 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 104.4% } | 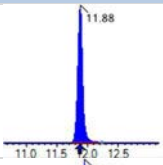  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 365648 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1378.9 | N/A | 0.9780 [ 1.0000 ] | 97.8% { 100.9% } | 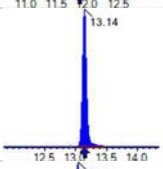  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 628692 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2983.9 | N/A | 2.0090 [ 2.0000 ] | 100.5% { 110.0% } | 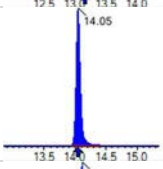  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1607606 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1368.2 | N/A | 1.8880 [ 2.0000 ] | 94.4% { 101.2% } | 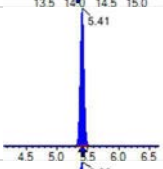  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1477903 | ( 8.09 , N/A ) ( N/A , 0.01 , N/A ) | 5393.3 | N/A | 1.9390 [ 2.0000 ] | 97.0% { 107.6% } | 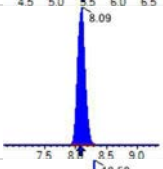  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1739176 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1505.4 | N/A | 1.9740 [ 2.0000 ] | 98.7% { 111.1% } | 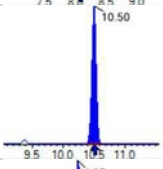  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 767667 | ( 4.85 , N/A ) ( N/A , -0.01 , N/A ) | 64.2 | N/A | 4.0980 [ 4.0000 ] | 102.5% { 110.0% } | 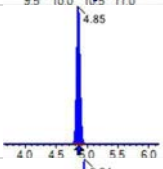  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1969693 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 6493.7 | N/A | 4.2810 [ 4.0000 ] | 107.0% { 118.7% } | 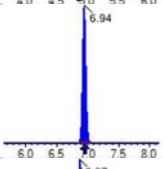  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1742876 | ( 9.37 , N/A ) ( N/A , 0.01 , N/A ) | 2037.4 | N/A | 4.3290 [ 4.0000 ] | 108.2% { 117.9% } | 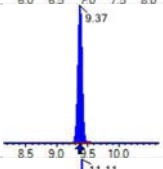  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3604522 | ( 11.11 , N/A ) ( N/A , 0.01 , N/A ) | 1564.9 | N/A | 8.2760 [ 8.0000 ] | 103.5% { 126.6% } | 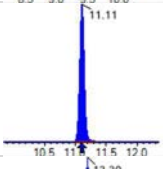  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1853258 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3817.1 | N/A | 1.9820 [ 2.0000 ] | 99.1% { 110.1% } | 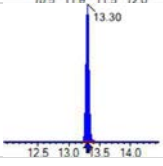  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 414163 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 2724.4 | N/A | 1.9700 [ 2.0000 ] | 98.5% { 111.7% } | 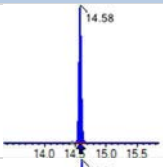  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 374296 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2901.4 | N/A | 1.9470 [ 2.0000 ] | 97.4% { 105.2% } | 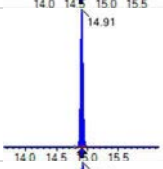  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1216766 | ( 10.42 , N/A ) ( N/A , 0.01 , N/A ) | 3570.8 | N/A | 3.9780 [ 4.0000 ] | 99.4% { 105.0% } | 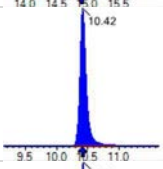  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1093128 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 2431.9 | N/A | 3.9600 [ 4.0000 ] | 99.0% { 105.8% } | 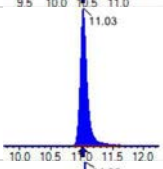  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1588712 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3552.1 | N/A | 20.2240 [ 20.0000 ] | 101.1% { 111.9% } | 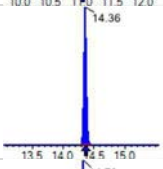  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1485051 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 4971.9 | N/A | 20.1850 [ 20.0000 ] | 100.9% { 111.2% } | 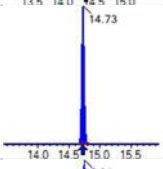  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 923542 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2227.0 | N/A | 7.7590 [ 8.0000 ] | 97.0% { 102.2% } | 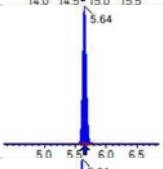  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 682194 | ( 5.91 , N/A ) ( N/A , -0.01 , N/A ) | 1763.2 | N/A | 2.0840 [ 2.0000 ] | 104.2% { 120.2% } | 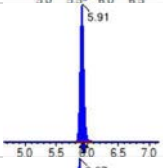  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 747738 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1167.0 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 114.3% } | 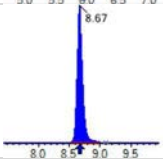  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 280958<br>( 163.0 / 69.0 ) 8406 | ( 2.49 , 0.68 ) ( N/A , 0.00 , -0.6) | 509.8<br>111.0 | 0.0299<br>109.2<br>109.2 | 4.1210 | N/A | 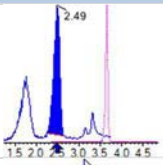 | 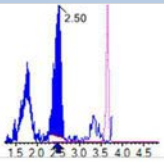 | |
| PFBA | ( 213.0 / 169.0 ) 2546709 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 1671.4 | N/A<br>0.0<br>0.0 | 8.2280 | N/A | 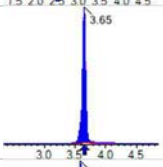 | | |
| PFPeA | ( 263.0 / 219.0 ) 859484<br>( 263.0 / 69.0 ) 10121 | ( 4.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 2509.6<br>171.5 | 0.0118<br>99.0<br>99.0 | 3.9160 | N/A | 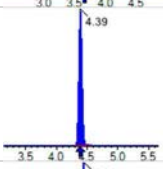 | 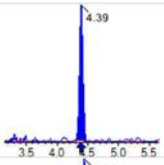 | |
| PFHxA | ( 313.0 / 269.0 ) 477184<br>( 313.0 / 119.0 ) 58579 | ( 5.24 , 1.00 ) ( 0.00 , N/A , 0.1) | 1609.0<br>802.0 | 0.1228<br>110.4<br>110.4 | 2.0720 | N/A | 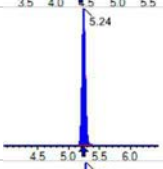 | 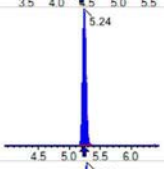 | |
| PFHpA | ( 363.0 / 319.0 ) 561132<br>( 363.0 / 169.0 ) 174177 | ( 6.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1684.5<br>1767.2 | 0.3104<br>101.6<br>101.6 | 1.9210 | N/A | 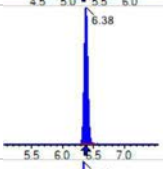 | 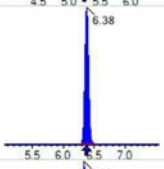 | |
| PFOA | ( 413.0 / 369.0 ) 818445<br>( 413.0 / 169.0 ) 299700 | ( 7.49 , 1.00 ) ( 0.00 , N/A , 0.1) | 834.7<br>1378.5 | 0.3662<br>102.4<br>102.4 | 2.0250 | N/A | 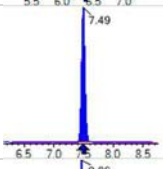 | 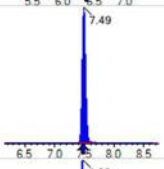 | |
| PFNA | ( 463.0 / 419.0 ) 586380<br>( 463.0 / 169.0 ) 148433 | ( 9.06 , 1.00 ) ( 0.00 , N/A , -0.2) | 1740.8<br>1612.6 | 0.2531<br>103.0<br>103.0 | 2.1240 | N/A | 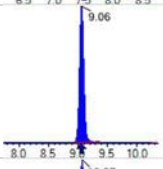 | 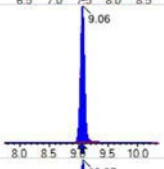 | |
| PFDA | ( 513.0 / 469.0 ) 666543<br>( 513.0 / 169.0 ) 80690 | ( 10.07 , 1.00 ) ( 0.00 , N/A , 0.0) | 3136.9<br>5619.1 | 0.1211<br>101.6<br>101.6 | 2.0720 | N/A | 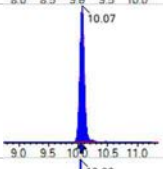 | 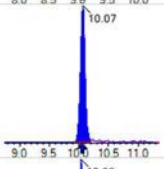 | |
| PFUnA | ( 563.0 / 519.0 ) 742182<br>( 563.0 / 169.0 ) 113773 | ( 10.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 1155.6<br>848.9 | 0.1533<br>99.0<br>99.0 | 2.0030 | N/A | 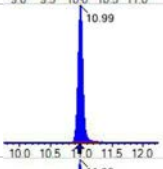 | 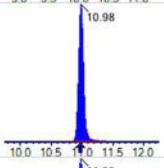 | |
| PFDoA | ( 613.0 / 569.0 ) 847736<br>( 613.0 / 169.0 ) 129433 | ( 11.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 1362.0<br>801.0 | 0.1527<br>100.5<br>100.5 | 2.0770 | N/A | 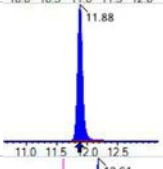 | 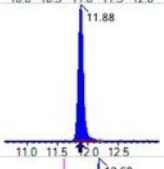 | |
| PFTrDA | ( 663.0 / 619.0 ) 850384<br>( 663.0 / 169.0 ) 217072 | ( 12.61 , 1.06 ) ( N/A , 0.01 , 0.0) | 1342.5<br>919.6 | 0.2553<br>94.8<br>94.8 | 2.1430 | N/A | 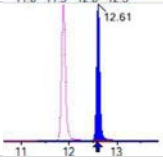 | 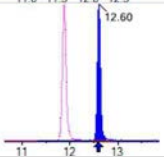 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 692145<br>( 713.0 / 169.0 ) 182569 | ( 13.15 , 1.00 ) ( 0.00 , N/A , 0.0) | 1403.5<br>850.8 | 0.2638<br>97.2<br>97.2 | 1.9780 | N/A | 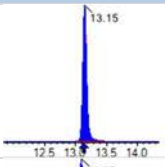 | 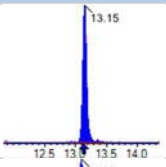 | |
| PFHxDA | ( 813.0 / 769.0 ) 566500<br>( 813.0 / 169.0 ) 153346 | ( 14.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 1407.9<br>696.7 | 0.2707<br>103.5<br>103.5 | 1.9940 | N/A | 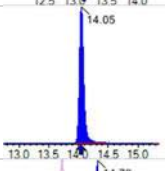 | 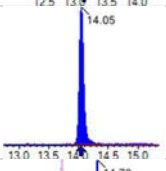 | |
| PFODA | ( 913.0 / 869.0 ) 386961<br>( 913.0 / 169.0 ) 117391 | ( 14.78 , 1.05 ) ( N/A , 0.01 , 0.0) | 1224.2<br>477.9 | 0.3034<br>96.8<br>96.8 | 2.1500 | N/A | 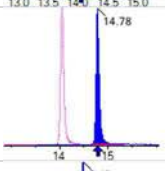 | 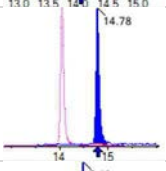 | |
| PFBS | ( 299.0 / 80.0 ) 679819<br>( 299.0 / 99.0 ) 506378 | ( 5.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 2729.6<br>1826.6 | 0.7449<br>100.6<br>100.6 | 1.7600 | N/A | 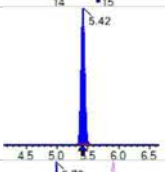 | 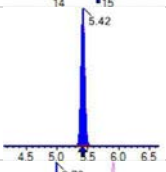 | |
| PFPeS | ( 349.0 / 80.0 ) 1932428<br>( 349.0 / 99.0 ) 672651 | ( 6.70 , 0.82 ) ( N/A , 0.01 , -0.1) | 3746.3<br>3772.4 | 0.3481<br>101.9<br>101.9 | 1.9670 | N/A | 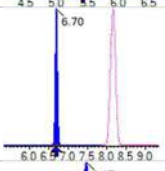 | 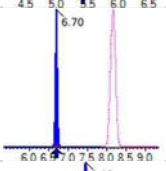 | |
| PFHxS | ( 399.0 / 80.0 ) 2208377<br>( 399.0 / 99.0 ) 729906 | ( 8.17 , 1.00 ) ( 0.00 , N/A , 0.2) | 2663.2<br>2994.9 | 0.3305<br>100.7<br>100.7 | 1.8440 | N/A | 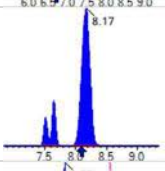 | 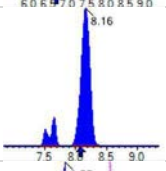 | |
| PFHpS | ( 449.0 / 80.0 ) 1978707<br>( 449.0 / 99.0 ) 521853 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.1) | 2956.0<br>2403.5 | 0.2637<br>101.1<br>101.1 | 2.0790 | N/A | 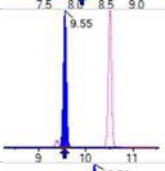 | 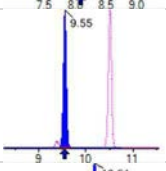 | |
| PFOS | ( 499.0 / 80.0 ) 1809820<br>( 499.0 / 99.0 ) 429080 | ( 10.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 2557.0<br>6203.8 | 0.2371<br>102.6<br>102.6 | 1.9570 | N/A | 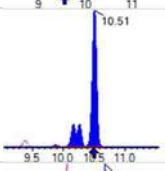 | 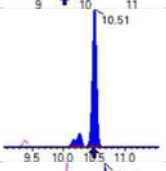 | |
| PFNS | ( 549.0 / 80.0 ) 1711402<br>( 549.0 / 99.0 ) 479185 | ( 11.39 , 1.08 ) ( N/A , 0.01 , -0.1) | 2257.9<br>1855.6 | 0.2800<br>104.5<br>104.5 | 2.0300 | N/A | 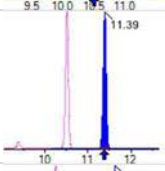 | 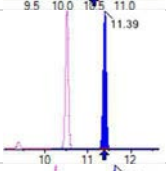 | |
| PFDS | ( 599.0 / 80.0 ) 2303005<br>( 599.0 / 99.0 ) 605086 | ( 12.20 , 1.16 ) ( N/A , 0.01 , 0.1) | 3615.0<br>2237.4 | 0.2627<br>103.2<br>103.2 | 2.2350 | N/A | 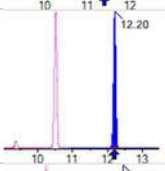 | 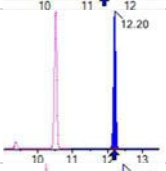 | |
| PFDoS | ( 699.0 / 80.0 ) 2188537<br>( 699.0 / 99.0 ) 513707 | ( 13.21 , 1.26 ) ( N/A , 0.01 , 0.1) | 4641.7<br>3226.0 | 0.2347<br>105.0<br>105.0 | 2.1950 | N/A | 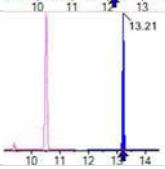 | 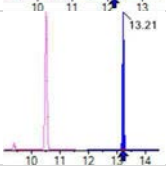 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3326281<br>( 327.0 / 81.0 ) 3107523 | ( 4.87 , 1.00 ) ( 0.00 , N/A , 0.2) | 5254.9<br>3844.4 | 0.9342<br>109.5<br>109.5 | 7.2450 | N/A | 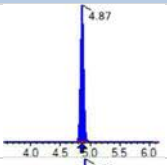 | 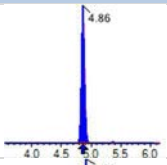 | |
| 6:2FTS | ( 427.0 / 407.0 ) 3086997<br>( 427.0 / 81.0 ) 3757029 | ( 6.96 , 1.00 ) ( 0.00 , N/A , 0.1) | 5270.6<br>7414.4 | 1.2171<br>94.4<br>94.4 | 8.0350 | N/A | 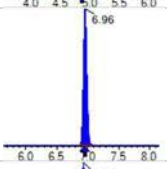 | 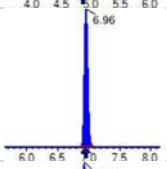 | |
| 8:2FTS | ( 527.0 / 507.0 ) 3242856<br>( 527.0 / 81.0 ) 3257495 | ( 9.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3507.6<br>2613.9 | 1.0045<br>91.0<br>91.0 | 8.3810 | N/A | 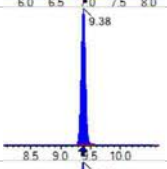 | 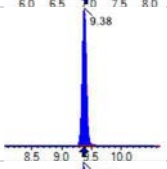 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2562664<br>( 627.0 / 81.0 ) 3719670 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.3) | 1499.1<br>1492.2 | 1.4515<br>101.0<br>101.0 | 7.9260 | N/A | 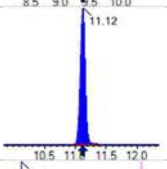 | 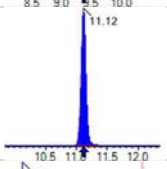 | |
| PFBSA | ( 297.9 / 78.0 ) 1212729<br>( 297.9 / 278.0 ) 1709 | ( 5.57 , 0.38 ) ( N/A , 0.01 , -0.2) | 1379.5<br>16.7 | 0.0014<br>108.8<br>108.8 | 1.9740 | N/A | 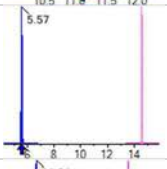 | 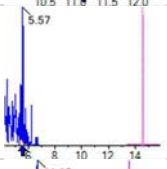 | |
| PFHxSA | ( 397.9 / 78.0 ) 2487712<br>( 397.9 / 378.0 ) 9746 | ( 11.24 , 0.75 ) ( N/A , 0.01 , -0.3) | 2093.3<br>373.8 | 0.0039<br>97.0<br>97.0 | 2.0930 | N/A | 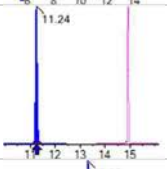 | 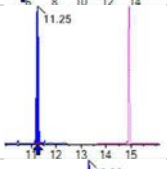 | |
| PFOSA | ( 498.0 / 78.0 ) 1799808<br>( 498.0 / 478.0 ) 24039 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.1) | 2681.0<br>450.1 | 0.0134<br>90.8<br>90.8 | 2.0330 | N/A | 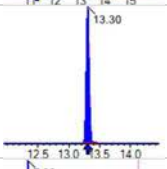 | 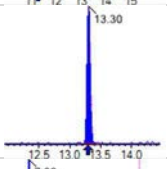 | |
| TFSI | ( 279.7 / 147.0 ) 3051709<br>( 279.7 / 211.0 ) 267670 | ( 7.09 , 0.53 ) ( N/A , 0.01 , 0.0) | 83.5<br>166407.7 | 0.0877<br>99.1<br>99.1 | 1.9730 | N/A | 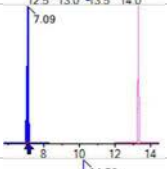 | 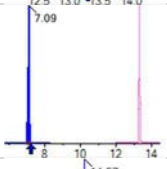 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1496986<br>( 512.0 / 169.0 ) 1143838 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 1.4) | 3969.6<br>1905.8 | 0.7641<br>99.7<br>99.7 | 8.3200 | N/A | 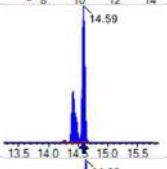 | 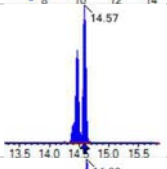 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1759136<br>( 526.0 / 169.0 ) 2199535 | ( 14.93 , 1.00 ) ( 0.01 , N/A , 2.1) | 3999.2<br>3622.7 | 1.2503<br>100.0<br>100.0 | 8.2220 | N/A | 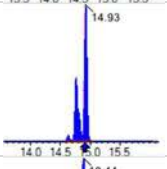 | 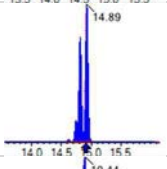 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 538209<br>( 570.0 / 483.0 ) 263265 | ( 10.44 , 1.00 ) ( 0.01 , N/A , 0.1) | 641.0<br>2844.9 | 0.4891<br>105.4<br>105.4 | 1.9660 | N/A | 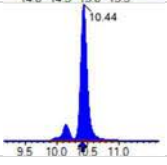 | 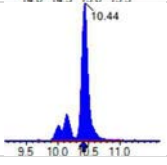 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 536778<br>( 584.0 / 526.0 ) 318100 | ( 11.05 , 1.00 ) ( 0.01 , N/A , 0.0) | 2328.7<br>645.1 | 0.5926<br>98.8<br>98.8 | 2.0570 | N/A | 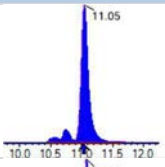 | 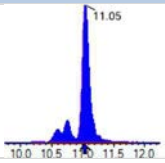 | |
| NMeFOSE | ( 616.0 / 59.0 ) 695855 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 1783.3 | N/A<br>0.0<br>0.0 | 8.3670 | N/A | 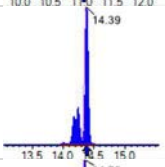 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 572559 | ( 14.76 , 1.00 ) ( 0.02 , N/A , 0.0) | 2146.3 | N/A<br>0.0<br>0.0 | 8.2890 | N/A | 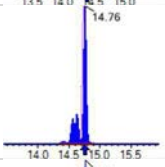 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 140562<br>( 285.0 / 185.0 ) 367785 | ( 5.66 , 1.00 ) ( 0.00 , N/A , 0.2) | 1874.9<br>1550.0 | 2.6165<br>93.2<br>93.2 | 2.1710 | N/A | 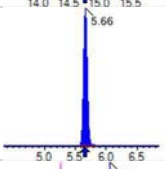 | 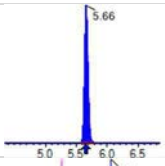 | |
| ADONA | ( 377.0 / 85.0 ) 1652515<br>( 377.0 / 251.0 ) 171701 | ( 6.81 , 1.20 ) ( N/A , 0.01 , 0.1) | 2811.0<br>1192.7 | 0.1039<br>99.1<br>99.1 | 1.9360 | N/A | 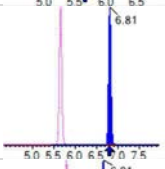 | 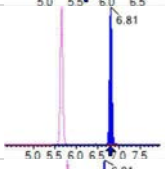 | |
| PFEESA | ( 315.0 / 135.0 ) 620578<br>( 315.0 / 83.0 ) 386374 | ( 6.01 , 1.15 ) ( N/A , 0.01 , 0.0) | 3273.2<br>978.1 | 0.6226<br>97.0<br>97.0 | 3.7040 | N/A | 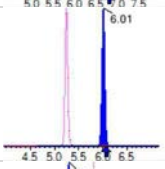 | 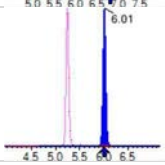 | |
| PFMPA | ( 229.0 / 85.0 ) 326561 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 4533.8 | N/A<br>0.0<br>0.0 | 4.0470 | N/A | 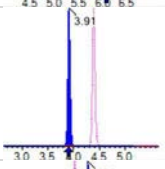 | | |
| PFMBA | ( 279.0 / 85.0 ) 792058 | ( 4.61 , 1.05 ) ( N/A , 0.01 , 0.0) | 4157.4 | N/A<br>0.0<br>0.0 | 4.3580 | N/A | 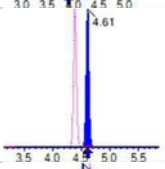 | | |
| NFDHA | ( 295.0 / 201.0 ) 359159<br>( 295.0 / 85.0 ) 356401 | ( 5.12 , 0.98 ) ( N/A , 0.01 , 0.1) | 3656.1<br>2166.3 | 0.9923<br>99.8<br>99.8 | 4.3920 | N/A | 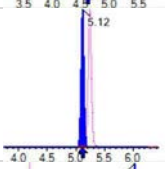 | 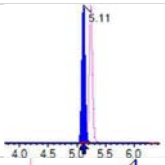 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1848172<br>( 533.0 / 353.0 ) 593017 | ( 11.19 , 1.98 ) ( N/A , 0.01 , 0.1) | 2707.6<br>2895.5 | 0.3209<br>100.6<br>100.6 | 1.9480 | N/A | 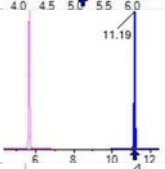 | 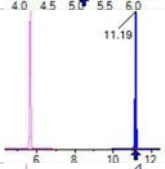 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1503185<br>( 633.0 / 453.0 ) 520004 | ( 12.66 , 2.24 ) ( N/A , 0.01 , -0.1) | 3930.2<br>2908.8 | 0.3459<br>102.0<br>102.0 | 2.0390 | N/A | 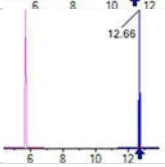 | 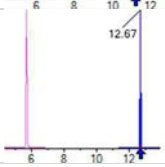 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 959824<br>( 461.0 / 381.2 ) 360156 | ( 9.45 , 0.90 )<br>( N/A , 0.02 , 0.0) | 3688.7<br>3416.3 | 0.3752<br>97.1<br>97.1 | 1.9330 | N/A | 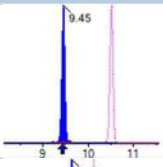 | 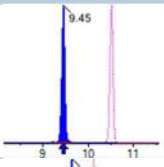 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 159682<br>( 241.0 / 117.0 ) 376621 | ( 3.96 , 0.90 )<br>( N/A , 0.00 , -0.1) | 3883.4<br>1867.5 | 2.3586<br>107.4<br>107.4 | 8.4760 | N/A | 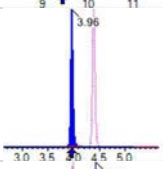 | 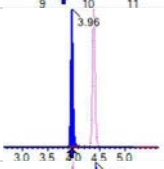 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 567194<br>( 341.0 / 217.0 ) 811951 | ( 5.67 , 1.08 )<br>( N/A , 0.01 , 0.0) | 1208.1<br>1531.4 | 1.4315<br>93.5<br>93.5 | 9.0520 | N/A | 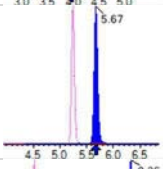 | 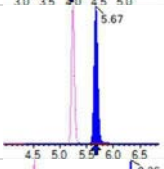 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 1200723<br>( 441.0 / 337.0 ) 1029784 | ( 9.36 , 1.79 )<br>( N/A , 0.03 , 0.1) | 12481.8<br>18357.4 | 0.8576<br>100.4<br>100.4 | 9.0200 | N/A | 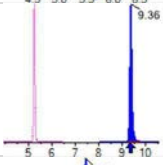 | 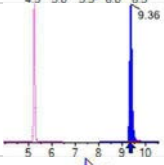 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 726637<br>( 357.2 / 243.0 ) 75689 | ( 5.92 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1778.6<br>780.8 | 0.1042<br>97.1<br>97.1 | 2.0210 | N/A | 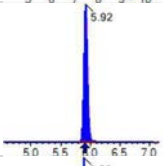 | 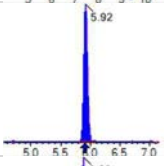 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 636763<br>( 457.2 / 343.0 ) 28293 | ( 8.69 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1082.7<br>577.7 | 0.0444<br>99.0<br>99.0 | 2.1580 | N/A | 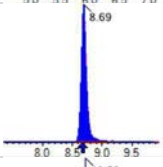 | 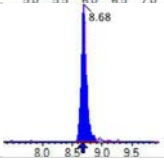 | |
| TDCA | ( 499.0 / 80.0 ) 1350109 | ( 10.50 , 1.00 )<br>( N/A , 0.01 , 0.0) | 7643.2 | N/A<br>0.0<br>0.0 | 2.1630 | N/A | 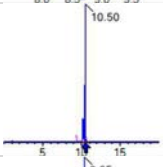 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 281337 | ( 3.65 , N/A )<br>( N/A , 0.00 , N/A ) | 1641.3 | N/A | 0.9970<br>[ 1.0000 ] | 99.7%<br>{ 101.5% } | 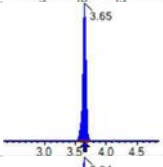 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116609 | ( 5.24 , N/A )<br>( N/A , 0.01 , N/A ) | 98172.4 | N/A | 0.9880<br>[ 1.0000 ] | 98.8%<br>{ 101.3% } | 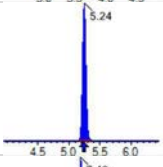 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 349325 | ( 7.49 , N/A )<br>( N/A , 0.02 , N/A ) | 5480.7 | N/A | 0.9000<br>[ 1.0000 ] | 90.0%<br>{ 89.0% } | 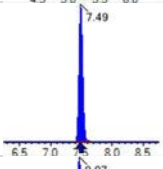 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 279583 | ( 9.07 , N/A )<br>( N/A , 0.02 , N/A ) | 1800.3 | N/A | 0.9570<br>[ 1.0000 ] | 95.7%<br>{ 96.2% } | 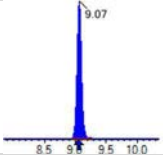 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277934 | ( 10.07 , N/A ) ( N/A , 0.01 , N/A ) | 7820.3 | N/A | 0.9700 [ 1.0000 ] | 97.0% { 102.1% } | 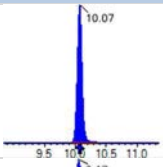 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 921598 | ( 8.17 , N/A ) ( N/A , 0.08 , N/A ) | 6069.8 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 96.9% } | 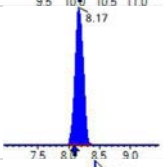 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727296 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 4541.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 98.3% } | 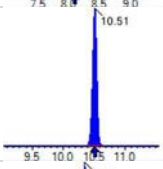 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2409864 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1244067.1 | N/A | 7.9250 [ 8.0000 ] | 99.1% { 98.8% } | 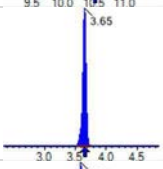 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 879194 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 4687.2 | N/A | 4.1180 [ 4.0000 ] | 103.0% { 95.1% } | 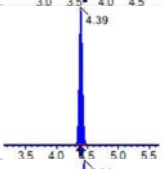 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 496392 | ( 5.24 , N/A ) ( N/A , 0.01 , N/A ) | 19023.4 | N/A | 1.9460 [ 2.0000 ] | 97.3% { 92.8% } | 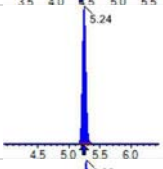 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588735 | ( 6.38 , N/A ) ( N/A , 0.01 , N/A ) | 8845.4 | N/A | 2.0780 [ 2.0000 ] | 103.9% { 103.2% } | 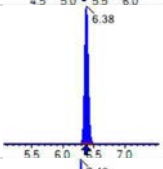 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 805049 | ( 7.49 , N/A ) ( N/A , 0.02 , N/A ) | 4914.9 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 106.3% } | 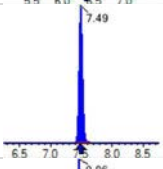 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274761 | ( 9.06 , N/A ) ( N/A , 0.02 , N/A ) | 14442.9 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 96.8% } | 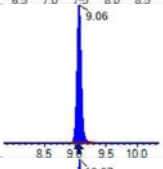 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 322055 | ( 10.07 , N/A ) ( N/A , 0.01 , N/A ) | 1215.9 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 95.7% } | 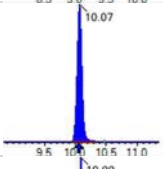 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 408049 | ( 10.99 , N/A ) ( N/A , 0.01 , N/A ) | 1180.8 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 104.1% } | 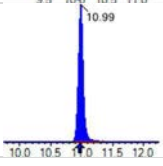 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 406674 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1723.4 | N/A | 1.0410 [ 1.0000 ] | 104.1% { 101.9% } | 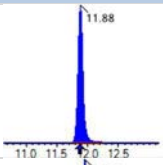 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 374749 | ( 13.15 , N/A ) ( N/A , 0.01 , N/A ) | 1407.1 | N/A | 1.0830 [ 1.0000 ] | 108.3% { 103.5% } | 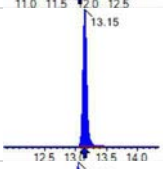 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 606541 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2628.9 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 106.1% } | 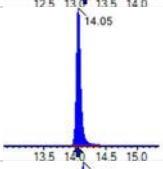 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570870 | ( 5.42 , N/A ) ( N/A , 0.01 , N/A ) | 1648.8 | N/A | 2.1150 [ 2.0000 ] | 105.7% { 98.9% } | 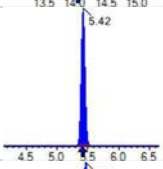 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1367635 | ( 8.17 , N/A ) ( N/A , 0.08 , N/A ) | 6748.2 | N/A | 2.0570 [ 2.0000 ] | 102.9% { 99.6% } | 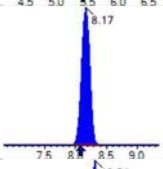 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1593623 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 1775.1 | N/A | 2.0600 [ 2.0000 ] | 103.0% { 101.8% } | 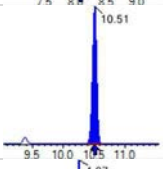 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 695640 | ( 4.87 , N/A ) ( N/A , 0.00 , N/A ) | 55.1 | N/A | 4.2570 [ 4.0000 ] | 106.4% { 99.7% } | 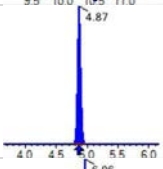 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1810422 | ( 6.96 , N/A ) ( N/A , 0.01 , N/A ) | 5914.3 | N/A | 4.5100 [ 4.0000 ] | 112.7% { 109.1% } | 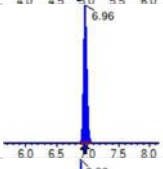 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1573483 | ( 9.39 , N/A ) ( N/A , 0.02 , N/A ) | 1754.7 | N/A | 4.4800 [ 4.0000 ] | 112.0% { 106.4% } | 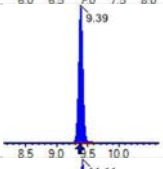 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3257337 | ( 11.11 , N/A ) ( N/A , 0.01 , N/A ) | 1329.6 | N/A | 8.5720 [ 8.0000 ] | 107.2% { 114.4% } | 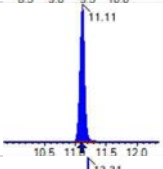 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1830002 | ( 13.31 , N/A ) ( N/A , 0.01 , N/A ) | 3678.9 | N/A | 2.2280 [ 2.0000 ] | 111.4% { 108.7% } | 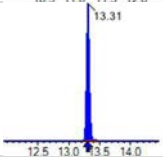 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 404855 | ( 14.59 , N/A ) ( N/A , 0.01 , N/A ) | 2501.8 | N/A | 2.1920 [ 2.0000 ] | 109.6% { 109.2% } | 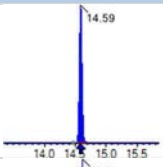  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 377740 | ( 14.92 , N/A ) ( N/A , 0.01 , N/A ) | 3109.7 | N/A | 2.2380 [ 2.0000 ] | 111.9% { 106.2% } | 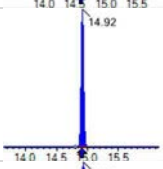  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1186780 | ( 10.43 , N/A ) ( N/A , 0.02 , N/A ) | 3797.4 | N/A | 4.4170 [ 4.0000 ] | 110.4% { 102.4% } | 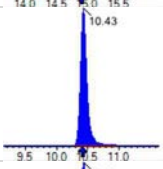  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1075995 | ( 11.03 , N/A ) ( N/A , 0.01 , N/A ) | 2702.0 | N/A | 4.4380 [ 4.0000 ] | 110.9% { 104.1% } | 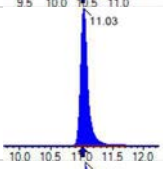  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1536412 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3118.3 | N/A | 22.2680 [ 20.0000 ] | 111.3% { 108.2% } | 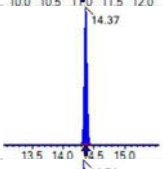  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1450205 | ( 14.74 , N/A ) ( N/A , 0.01 , N/A ) | 3666.0 | N/A | 22.4430 [ 20.0000 ] | 112.2% { 108.6% } | 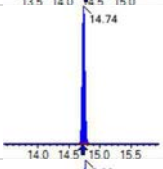  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 882027 | ( 5.66 , N/A ) ( N/A , 0.01 , N/A ) | 2659.6 | N/A | 7.9820 [ 8.0000 ] | 99.8% { 97.6% } | 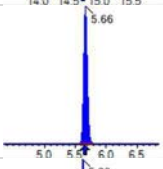  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 683769 | ( 5.93 , N/A ) ( N/A , 0.01 , N/A ) | 1953.6 | N/A | 2.2580 [ 2.0000 ] | 112.9% { 120.5% } | 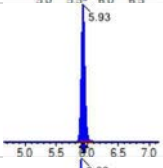  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 713849 | ( 8.69 , N/A ) ( N/A , 0.02 , N/A ) | 1146.8 | N/A | 2.0920 [ 2.0000 ] | 104.6% { 109.2% } | 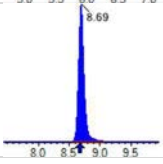  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 648060<br>( 163.0 / 69.0 ) 17761 | ( 2.49 , 0.68 ) ( N/A , 0.00 , -0.1) | 647.4<br>165.2 | 0.0274<br>100.0<br>100.0 | 9.3920 | N/A | 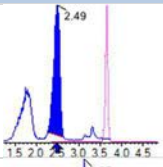 | 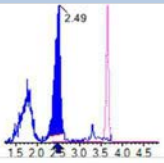 | |
| PFBA | ( 213.0 / 169.0 ) 5789052 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 2315.7 | N/A<br>0.0<br>0.0 | 18.9200 | N/A | 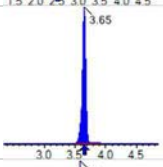 | | |
| PFPeA | ( 263.0 / 219.0 ) 2023232<br>( 263.0 / 69.0 ) 24077 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3977.7<br>333.5 | 0.0119<br>100.0<br>100.0 | 8.7630 | N/A | 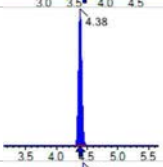 | 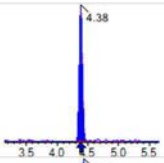 | |
| PFHxA | ( 313.0 / 269.0 ) 1179163<br>( 313.0 / 119.0 ) 131159 | ( 5.23 , 1.00 ) ( 0.00 , N/A , 0.1) | 2359.8<br>1537.5 | 0.1112<br>100.0<br>100.0 | 4.7490 | N/A | 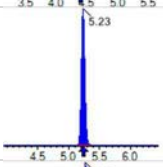 | 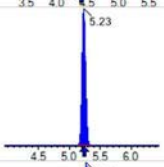 | |
| PFHpA | ( 363.0 / 319.0 ) 1309433<br>( 363.0 / 169.0 ) 400217 | ( 6.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2319.8<br>2574.5 | 0.3056<br>100.0<br>100.0 | 4.6280 | N/A | 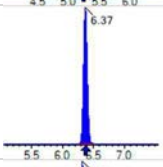 | 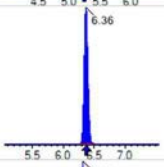 | |
| PFOA | ( 413.0 / 369.0 ) 1854014<br>( 413.0 / 169.0 ) 662712 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.1) | 1197.6<br>1955.5 | 0.3574<br>100.0<br>100.0 | 4.8780 | N/A | 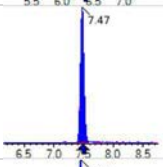 | 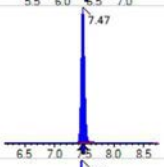 | |
| PFNA | ( 463.0 / 419.0 ) 1353850<br>( 463.0 / 169.0 ) 332596 | ( 9.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 1987.3<br>2018.4 | 0.2457<br>100.0<br>100.0 | 4.7450 | N/A | 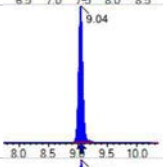 | 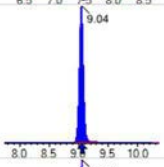 | |
| PFDA | ( 513.0 / 469.0 ) 1479091<br>( 513.0 / 169.0 ) 176256 | ( 10.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 5273.1<br>5077.9 | 0.1192<br>100.0<br>100.0 | 4.4010 | N/A | 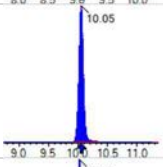 | 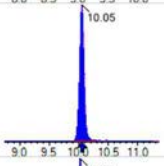 | |
| PFUnA | ( 563.0 / 519.0 ) 1611191<br>( 563.0 / 169.0 ) 249482 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 1315.7<br>968.6 | 0.1548<br>100.0<br>100.0 | 4.5260 | N/A | 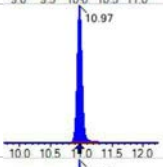 | 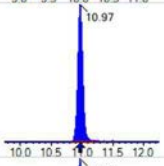 | |
| PFDoA | ( 613.0 / 569.0 ) 1860735<br>( 613.0 / 169.0 ) 282596 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1995.1<br>1191.8 | 0.1519<br>100.0<br>100.0 | 4.6460 | N/A | 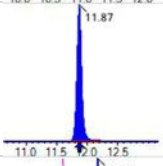 | 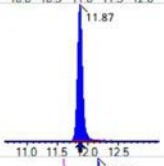 | |
| PFTrDA | ( 663.0 / 619.0 ) 1794665<br>( 663.0 / 169.0 ) 483150 | ( 12.59 , 1.06 ) ( N/A , 0.00 , 0.0) | 1559.0<br>1527.5 | 0.2692<br>100.0<br>100.0 | 4.6090 | N/A | 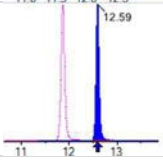 | 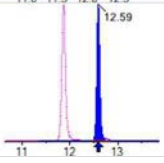 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1535133<br>( 713.0 / 169.0 ) 416590 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1795.5<br>1402.7 | 0.2714<br>100.0<br>100.0 | 4.5380 | N/A | 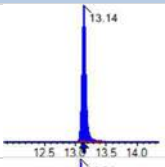 | 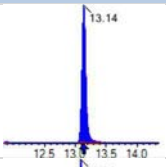 | |
| PFHxDA | ( 813.0 / 769.0 ) 1293413<br>( 813.0 / 169.0 ) 338356 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2411.3<br>1216.4 | 0.2616<br>100.0<br>100.0 | 4.8300 | N/A | 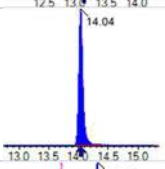 | 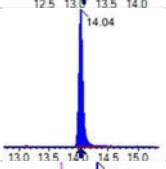 | |
| PFODA | ( 913.0 / 869.0 ) 791549<br>( 913.0 / 169.0 ) 248125 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.1) | 1706.2<br>923.3 | 0.3135<br>100.0<br>100.0 | 4.6680 | N/A | 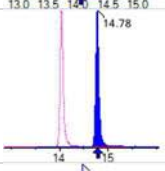 | 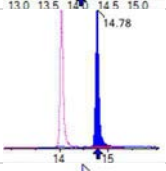 | |
| PFBS | ( 299.0 / 80.0 ) 1642161<br>( 299.0 / 99.0 ) 1216344 | ( 5.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 3254.9<br>2633.5 | 0.7407<br>100.0<br>100.0 | 4.2030 | N/A | 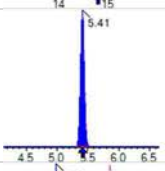 | 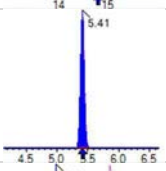 | |
| PFPeS | ( 349.0 / 80.0 ) 4665382<br>( 349.0 / 99.0 ) 1594131 | ( 6.69 , 0.83 ) ( N/A , 0.00 , 0.0) | 4734.1<br>4227.4 | 0.3417<br>100.0<br>100.0 | 4.7280 | N/A | 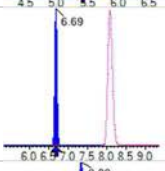 | 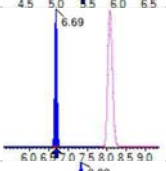 | |
| PFHxS | ( 399.0 / 80.0 ) 5100879<br>( 399.0 / 99.0 ) 1674005 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 3944.0<br>4430.5 | 0.3282<br>100.0<br>100.0 | 4.2410 | N/A | 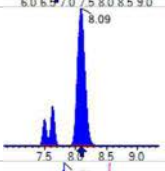 | 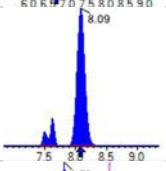 | |
| PFHpS | ( 449.0 / 80.0 ) 4334193<br>( 449.0 / 99.0 ) 1130788 | ( 9.53 , 0.91 ) ( N/A , 0.00 , 0.0) | 3315.1<br>2729.4 | 0.2609<br>100.0<br>100.0 | 4.6350 | N/A | 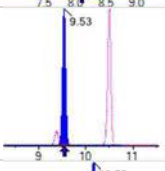 | 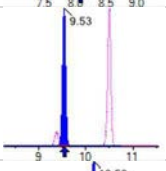 | |
| PFOS | ( 499.0 / 80.0 ) 3995293<br>( 499.0 / 99.0 ) 923153 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 2972.9<br>6712.8 | 0.2311<br>100.0<br>100.0 | 4.3970 | N/A | 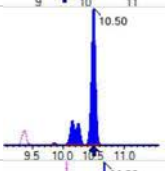 | 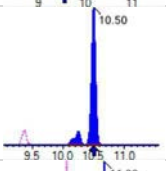 | |
| PFNS | ( 549.0 / 80.0 ) 3955021<br>( 549.0 / 99.0 ) 1059805 | ( 11.38 , 1.08 ) ( N/A , 0.00 , 0.1) | 3219.3<br>2629.2 | 0.2680<br>100.0<br>100.0 | 4.7750 | N/A | 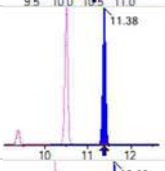 | 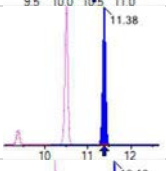 | |
| PFDS | ( 599.0 / 80.0 ) 4924068<br>( 599.0 / 99.0 ) 1254008 | ( 12.19 , 1.16 ) ( N/A , 0.00 , -0.1) | 4145.2<br>2834.2 | 0.2547<br>100.0<br>100.0 | 4.8640 | N/A | 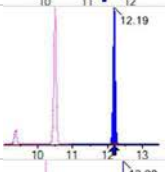 | 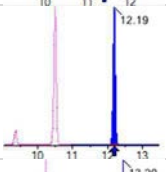 | |
| PFDoS | ( 699.0 / 80.0 ) 4865689<br>( 699.0 / 99.0 ) 1087465 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 4270.0<br>4361.8 | 0.2235<br>100.0<br>100.0 | 4.9670 | N/A | 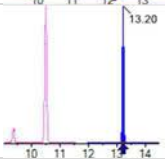 | 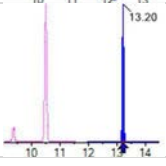 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 8113263<br>( 327.0 / 81.0 ) 6922214 | ( 4.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 6947.9<br>4823.6 | 0.8532<br>100.0<br>100.0 | 17.6170 | N/A | 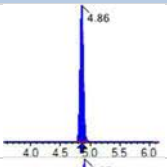 | 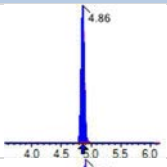 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6620628<br>( 427.0 / 81.0 ) 8538390 | ( 6.95 , 1.00 ) ( 0.00 , N/A , 0.1) | 6990.3<br>6415.9 | 1.2897<br>100.0<br>100.0 | 18.8080 | N/A | 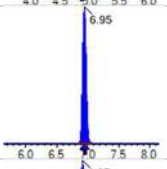 | 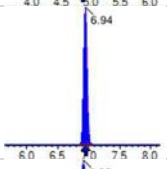 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6241512<br>( 527.0 / 81.0 ) 6888385 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2492.0<br>2311.5 | 1.1036<br>100.0<br>100.0 | 17.1660 | N/A | 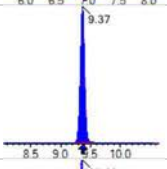 | 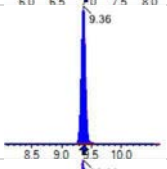 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5477078<br>( 627.0 / 81.0 ) 7874345 | ( 11.11 , 1.00 ) ( 0.01 , N/A , -0.1) | 1483.9<br>1444.8 | 1.4377<br>100.0<br>100.0 | 19.3810 | N/A | 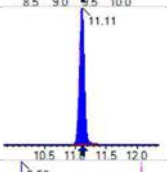 | 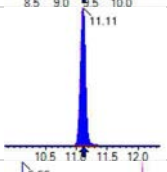 | |
| PFBSA | ( 297.9 / 78.0 ) 2862047<br>( 297.9 / 278.0 ) 3705 | ( 5.56 , 0.38 ) ( N/A , 0.00 , 0.5) | 1632.7<br>27.9 | 0.0013<br>100.0<br>100.0 | 5.0880 | N/A | 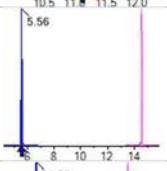 | 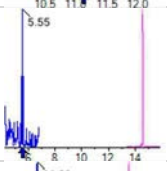 | |
| PFHxSA | ( 397.9 / 78.0 ) 4800431<br>( 397.9 / 378.0 ) 19388 | ( 11.23 , 0.75 ) ( N/A , 0.00 , 0.1) | 1988.9<br>467.6 | 0.0040<br>100.0<br>100.0 | 4.2890 | N/A | 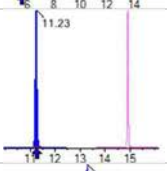 | 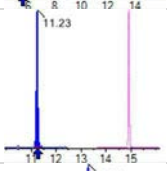 | |
| PFOSA | ( 498.0 / 78.0 ) 3805705<br>( 498.0 / 478.0 ) 55953 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.0) | 4258.8<br>1038.5 | 0.0147<br>100.0<br>100.0 | 4.6730 | N/A | 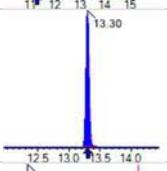 | 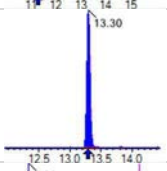 | |
| TFSI | ( 279.7 / 147.0 ) 7048670<br>( 279.7 / 211.0 ) 623738 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.0) | 84.5<br>31300821.4 | 0.0885<br>100.0<br>100.0 | 4.9550 | N/A | 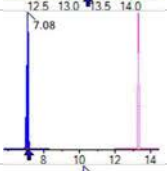 | 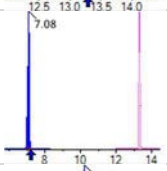 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3092097<br>( 512.0 / 169.0 ) 2370255 | ( 14.58 , 1.00 ) ( 0.00 , N/A , 1.3) | 4390.7<br>1754.1 | 0.7666<br>100.0<br>100.0 | 18.7700 | N/A | 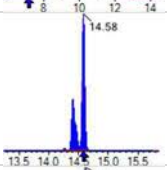 | 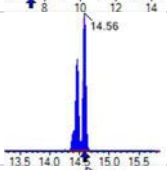 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3779125<br>( 526.0 / 169.0 ) 4725110 | ( 14.92 , 1.00 ) ( 0.01 , N/A , 2.1) | 4338.1<br>3548.5 | 1.2503<br>100.0<br>100.0 | 18.7590 | N/A | 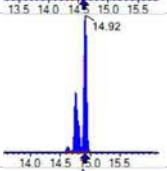 | 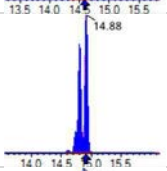 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1240421<br>( 570.0 / 483.0 ) 575595 | ( 10.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 126950.6<br>2371.8 | 0.4640<br>100.0<br>100.0 | 4.6410 | N/A | 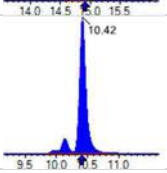 | 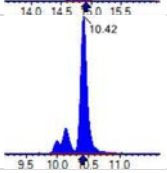 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1148920<br>( 584.0 / 526.0 ) 689225 | ( 11.04 , 1.00 )<br>( 0.01 , N/A , 0.2) | 2247.1<br>757.4 | 0.5999<br>100.0<br>100.0 | 4.5840 | N/A | 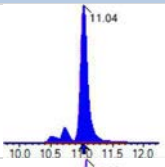 | 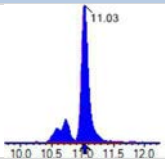 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1364930 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2308.1 | N/A<br>0.0<br>0.0 | 17.7610 | N/A | 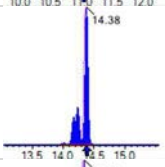 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1171484 | ( 14.75 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3474.5 | N/A<br>0.0<br>0.0 | 18.4200 | N/A | 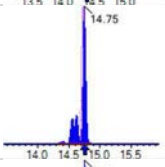 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 311130<br>( 285.0 / 185.0 ) 873489 | ( 5.65 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2042.5<br>2466.0 | 2.8075<br>100.0<br>100.0 | 4.6930 | N/A | 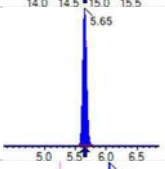 | 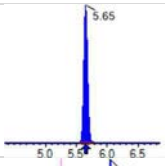 | |
| ADONA | ( 377.0 / 85.0 ) 3823329<br>( 377.0 / 251.0 ) 400996 | ( 6.80 , 1.20 )<br>( N/A , 0.00 , 0.0) | 3270.0<br>1761.6 | 0.1049<br>100.0<br>100.0 | 4.3730 | N/A | 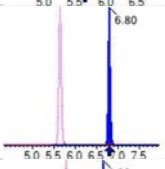 | 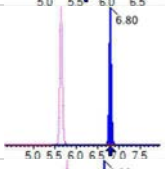 | |
| PFEESA | ( 315.0 / 135.0 ) 1367203<br>( 315.0 / 83.0 ) 877540 | ( 6.00 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4177.8<br>1585.5 | 0.6419<br>100.0<br>100.0 | 7.5680 | N/A | 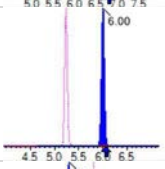 | 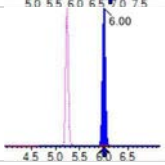 | |
| PFMPA | ( 229.0 / 85.0 ) 779251 | ( 3.91 , 0.89 )<br>( N/A , 0.00 , 0.0) | 10808.5 | N/A<br>0.0<br>0.0 | 9.1810 | N/A | 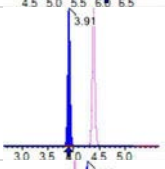 | | |
| PFMBA | ( 279.0 / 85.0 ) 1760365 | ( 4.60 , 1.05 )<br>( N/A , 0.00 , 0.0) | 7506.8 | N/A<br>0.0<br>0.0 | 9.2060 | N/A | 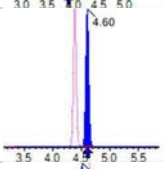 | | |
| NFDHA | ( 295.0 / 201.0 ) 787938<br>( 295.0 / 85.0 ) 783543 | ( 5.11 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3610.1<br>3074.7 | 0.9944<br>100.0<br>100.0 | 8.9370 | N/A | 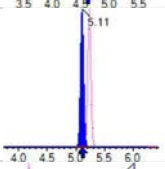 | 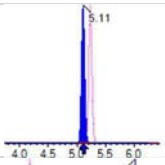 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4263457<br>( 533.0 / 353.0 ) 1359493 | ( 11.18 , 1.98 )<br>( N/A , 0.00 , 0.1) | 3140.1<br>2523.7 | 0.3189<br>100.0<br>100.0 | 4.3890 | N/A | 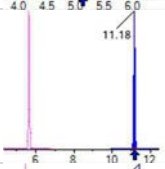 | 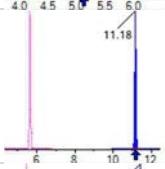 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3409140<br>( 633.0 / 453.0 ) 1156654 | ( 12.66 , 2.24 )<br>( N/A , 0.00 , 0.0) | 4579.0<br>3687.7 | 0.3393<br>100.0<br>100.0 | 4.5160 | N/A | 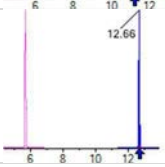 | 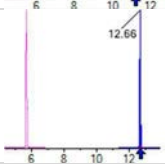 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL5 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2199689<br>( 461.0 / 381.2 ) 849612 | ( 9.44 , 0.90 )<br>( N/A , 0.00 , 0.0) | 4673.7<br>4472.4 | 0.3862<br>100.0<br>100.0 | 4.5110 | N/A | 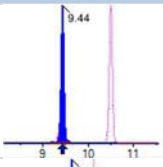 | 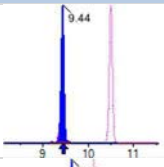 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 352296<br>( 241.0 / 117.0 ) 773362 | ( 3.96 , 0.90 )<br>( N/A , 0.00 , 0.0) | 5949.6<br>3763.1 | 2.1952<br>100.0<br>100.0 | 17.7760 | N/A | 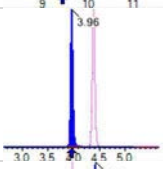 | 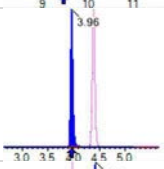 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1147153<br>( 341.0 / 217.0 ) 1756394 | ( 5.66 , 1.08 )<br>( N/A , 0.00 , -0.1) | 1554.9<br>1526.0 | 1.5311<br>100.0<br>100.0 | 16.9810 | N/A | 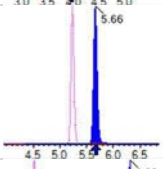 | 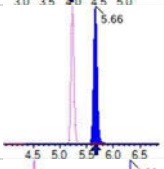 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2500654<br>( 441.0 / 337.0 ) 2136156 | ( 9.33 , 1.78 )<br>( N/A , 0.00 , 0.0) | 10903.9<br>26038.4 | 0.8542<br>100.0<br>100.0 | 17.4230 | N/A | 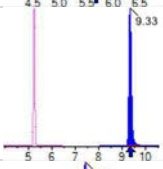 | 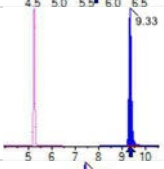 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1558737<br>( 357.2 / 243.0 ) 167151 | ( 5.91 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2124.2<br>1192.1 | 0.1072<br>100.0<br>100.0 | 5.2230 | N/A | 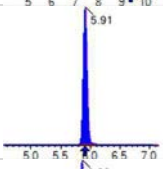 | 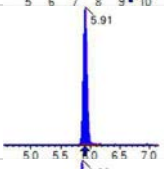 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1383033<br>( 457.2 / 343.0 ) 62067 | ( 8.66 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1425.5<br>639.8 | 0.0449<br>100.0<br>100.0 | 5.1180 | N/A | 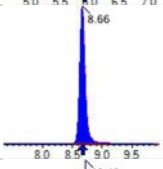 | 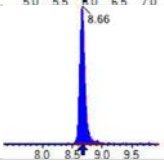 | |
| TDCA | ( 499.0 / 80.0 ) 2925200 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 23057.3 | N/A<br>0.0<br>0.0 | 4.7710 | N/A | 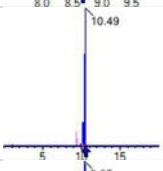 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277139 | ( 3.65 , N/A )<br>( N/A , 0.00 , N/A ) | 1362.3 | N/A | 0.9820<br>[ 1.0000 ] | 98.2%<br>{ 100.0% } | 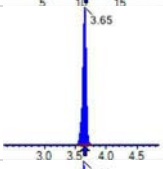 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 115060 | ( 5.23 , N/A )<br>( N/A , 0.00 , N/A ) | 18847.2 | N/A | 0.9750<br>[ 1.0000 ] | 97.5%<br>{ 100.0% } | 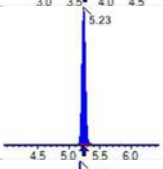 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 392520 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 6469.4 | N/A | 1.0110<br>[ 1.0000 ] | 101.1%<br>{ 100.0% } | 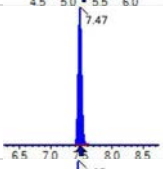 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 290614 | ( 9.05 , N/A )<br>( N/A , 0.00 , N/A ) | 1640.6 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 100.0% } | 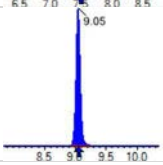 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL5 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272171 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 157007.7 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 100.0% } | 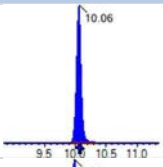  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 951286 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5836.5 | N/A | 0.9690 [ 1.0000 ] | 96.9% { 100.0% } | 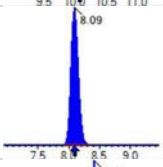  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 739718 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 4014.2 | N/A | 0.9430 [ 1.0000 ] | 94.3% { 100.0% } | 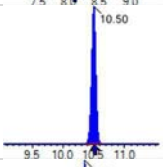  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2438938 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 72163.7 | N/A | 8.1420 [ 8.0000 ] | 101.8% { 100.0% } | 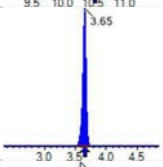  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 924925 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 5250.5 | N/A | 4.3910 [ 4.0000 ] | 109.8% { 100.0% } | 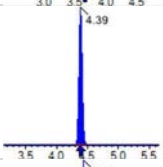  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 535186 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 32203.4 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 100.0% } | 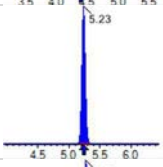  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 570287 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 12603.7 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 100.0% } | 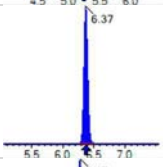  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 756985 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5516.4 | N/A | 1.8200 [ 2.0000 ] | 91.0% { 100.0% } | 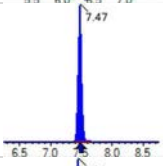  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283961 | ( 9.04 , N/A ) ( N/A , 0.00 , N/A ) | 6387.3 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 100.0% } | 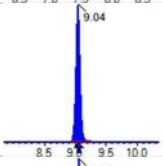  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336539 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1510.2 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 100.0% } | 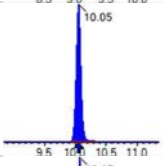  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392051 | ( 10.97 , N/A ) ( N/A , 0.00 , N/A ) | 1050.8 | N/A | 1.0510 [ 1.0000 ] | 105.1% { 100.0% } | 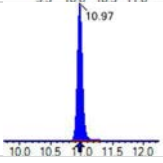  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL5 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 399094 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1546.0 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 100.0% } | 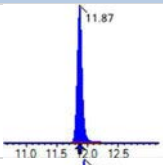 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362241 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1334.8 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 100.0% } | 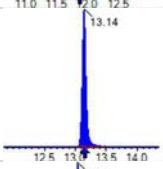 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 571585 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2545.5 | N/A | 2.0160 [ 2.0000 ] | 100.8% { 100.0% } | 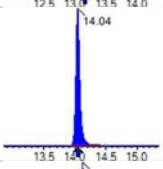 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1588988 | ( 5.41 , N/A ) ( N/A , 0.00 , N/A ) | 2162.0 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 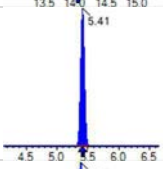 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373382 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5719.9 | N/A | 2.0010 [ 2.0000 ] | 100.1% { 100.0% } | 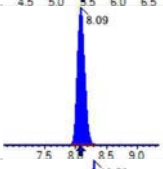 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1565551 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1057.0 | N/A | 1.9890 [ 2.0000 ] | 99.5% { 100.0% } | 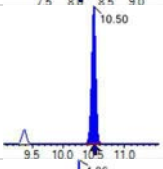 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 697760 | ( 4.86 , N/A ) ( N/A , 0.00 , N/A ) | 58.7 | N/A | 4.1370 [ 4.0000 ] | 103.4% { 100.0% } | 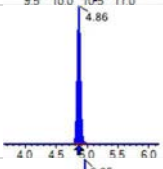 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1658824 | ( 6.95 , N/A ) ( N/A , 0.00 , N/A ) | 5866.7 | N/A | 4.0030 [ 4.0000 ] | 100.1% { 100.0% } | 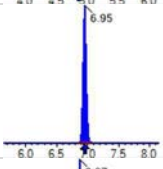 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1478563 | ( 9.37 , N/A ) ( N/A , 0.00 , N/A ) | 3104.3 | N/A | 4.0780 [ 4.0000 ] | 102.0% { 100.0% } | 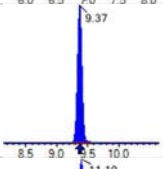 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2847020 | ( 11.10 , N/A ) ( N/A , 0.00 , N/A ) | 1774.9 | N/A | 7.2590 [ 8.0000 ] | 90.7% { 100.0% } | 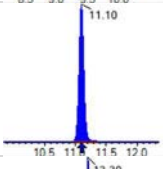 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1683304 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3070.2 | N/A | 2.0150 [ 2.0000 ] | 100.7% { 100.0% } | 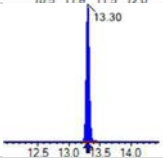 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 370692 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 2352.3 | N/A | 1.9730 [ 2.0000 ] | 98.7% { 100.0% } | 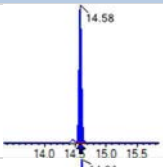  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 355689 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2645.7 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 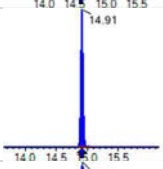  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1158891 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 3684.2 | N/A | 4.2410 [ 4.0000 ] | 106.0% { 100.0% } | 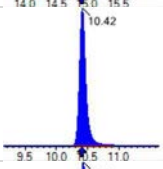  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1033424 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 3055.1 | N/A | 4.1900 [ 4.0000 ] | 104.8% { 100.0% } | 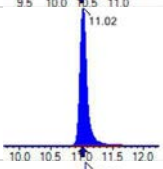  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1419770 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3426.4 | N/A | 20.2320 [ 20.0000 ] | 101.2% { 100.0% } | 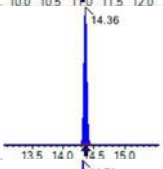  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1335269 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 5403.2 | N/A | 20.3170 [ 20.0000 ] | 101.6% { 100.0% } | 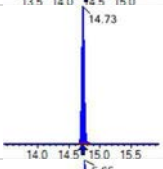  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 903308 | ( 5.65 , N/A ) ( N/A , 0.00 , N/A ) | 2350.3 | N/A | 8.2840 [ 8.0000 ] | 103.6% { 100.0% } | 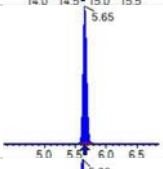  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 567556 | ( 5.92 , N/A ) ( N/A , 0.00 , N/A ) | 2313.3 | N/A | 1.9140 [ 2.0000 ] | 95.7% { 100.0% } | 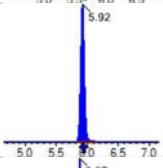  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 653909 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1282.2 | N/A | 1.9570 [ 2.0000 ] | 97.8% { 100.0% } | 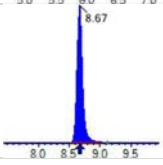  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1410776<br>( 163.0 / 69.0 ) 39371 | ( 2.48 , 0.68 ) ( N/A , -0.01 , 0.2) | 1403.2<br>319.4 | 0.0279<br>101.8<br>101.8 | 23.6740 | N/A | 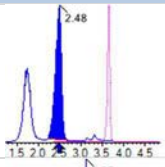 | 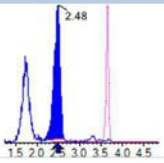 | |
| PFBA | ( 213.0 / 169.0 ) 10236281 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 2879.9 | N/A<br>0.0<br>0.0 | 39.1070 | N/A | 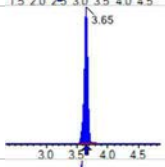 | | |
| PFPeA | ( 263.0 / 219.0 ) 4048261<br>( 263.0 / 69.0 ) 46489 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 5627.7<br>547.2 | 0.0115<br>96.5<br>96.5 | 18.8630 | N/A | 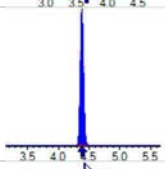 | 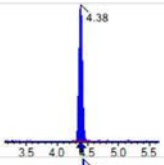 | |
| PFHxA | ( 313.0 / 269.0 ) 2339879<br>( 313.0 / 119.0 ) 278107 | ( 5.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 2343.3<br>1828.3 | 0.1189<br>106.9<br>106.9 | 9.8390 | N/A | 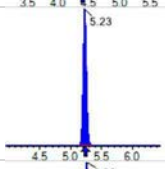 | 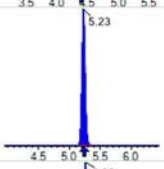 | |
| PFHpA | ( 363.0 / 319.0 ) 2699056<br>( 363.0 / 169.0 ) 836355 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.0) | 2955.7<br>2567.7 | 0.3099<br>101.4<br>101.4 | 9.9190 | N/A | 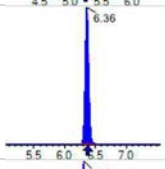 | 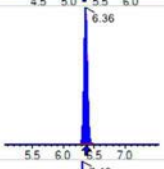 | |
| PFOA | ( 413.0 / 369.0 ) 3931616<br>( 413.0 / 169.0 ) 1422616 | ( 7.46 , 1.00 ) ( 0.00 , N/A , 0.1) | 2035.7<br>2247.3 | 0.3618<br>101.2<br>101.2 | 9.7280 | N/A | 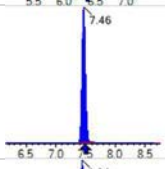 | 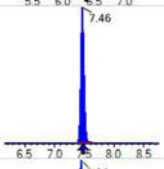 | |
| PFNA | ( 463.0 / 419.0 ) 2766583<br>( 463.0 / 169.0 ) 693602 | ( 9.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2439.9<br>2100.0 | 0.2507<br>102.1<br>102.1 | 9.6980 | N/A | 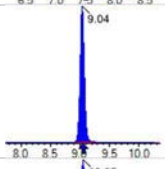 | 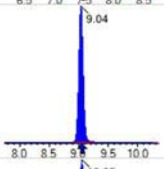 | |
| PFDA | ( 513.0 / 469.0 ) 3151937<br>( 513.0 / 169.0 ) 374125 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 6041.9<br>3869.6 | 0.1187<br>99.6<br>99.6 | 9.8040 | N/A | 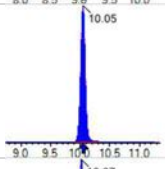 | 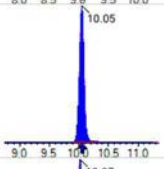 | |
| PFUnA | ( 563.0 / 519.0 ) 3513685<br>( 563.0 / 169.0 ) 520449 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 1519.2<br>1154.2 | 0.1481<br>95.7<br>95.7 | 9.9360 | N/A | 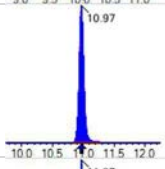 | 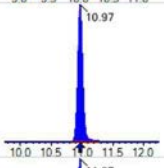 | |
| PFDoA | ( 613.0 / 569.0 ) 3919525<br>( 613.0 / 169.0 ) 592934 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 2119.3<br>1738.8 | 0.1513<br>99.6<br>99.6 | 9.9560 | N/A | 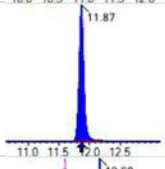 | 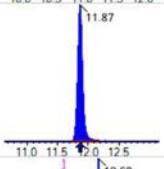 | |
| PFTrDA | ( 663.0 / 619.0 ) 4001296<br>( 663.0 / 169.0 ) 1042973 | ( 12.60 , 1.06 ) ( N/A , 0.00 , 0.0) | 1852.5<br>1696.7 | 0.2607<br>96.8<br>96.8 | 10.4540 | N/A | 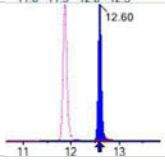 | 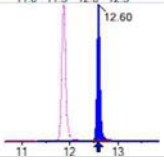 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3255016<br>( 713.0 / 169.0 ) 874433 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 2053.0<br>1430.2 | 0.2686<br>99.0<br>99.0 | 9.9300 | N/A | 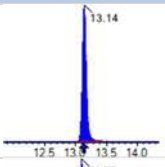 | 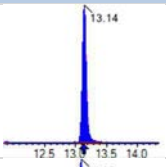 | |
| PFHxDA | ( 813.0 / 769.0 ) 2833744<br>( 813.0 / 169.0 ) 723213 | ( 14.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 2117.6<br>1323.6 | 0.2552<br>97.6<br>97.6 | 10.2560 | N/A | 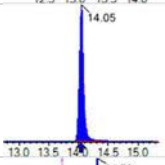 | 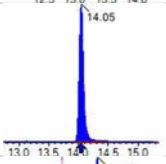 | |
| PFODA | ( 913.0 / 869.0 ) 1612349<br>( 913.0 / 169.0 ) 538911 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.0) | 2225.2<br>1483.9 | 0.3342<br>106.6<br>106.6 | 9.2140 | N/A | 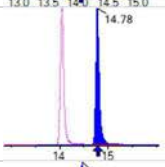 | 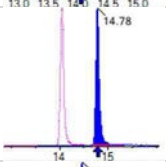 | |
| PFBS | ( 299.0 / 80.0 ) 3230446<br>( 299.0 / 99.0 ) 2480147 | ( 5.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 4578.2<br>3619.1 | 0.7677<br>103.7<br>103.7 | 8.3490 | N/A | 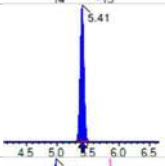 | 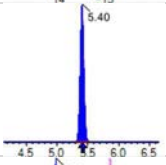 | |
| PFPeS | ( 349.0 / 80.0 ) 9433675<br>( 349.0 / 99.0 ) 3278192 | ( 6.68 , 0.83 ) ( N/A , -0.01 , 0.0) | 3596.1<br>3202.3 | 0.3475<br>101.7<br>101.7 | 9.3820 | N/A | 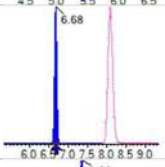 | 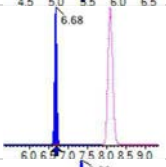 | |
| PFHxS | ( 399.0 / 80.0 ) 10963120<br>( 399.0 / 99.0 ) 3556590 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 4134.1<br>7330.4 | 0.3244<br>98.9<br>98.9 | 8.9450 | N/A | 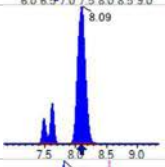 | 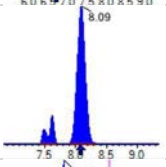 | |
| PFHpS | ( 449.0 / 80.0 ) 9554510<br>( 449.0 / 99.0 ) 2565679 | ( 9.53 , 0.91 ) ( N/A , -0.01 , 0.0) | 3632.9<br>3833.5 | 0.2685<br>102.9<br>102.9 | 9.6130 | N/A | 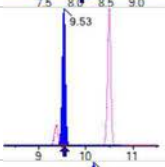 | 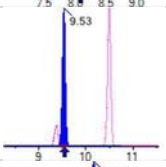 | |
| PFOS | ( 499.0 / 80.0 ) 8612719<br>( 499.0 / 99.0 ) 1969372 | ( 10.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 3701.4<br>26412.4 | 0.2287<br>99.0<br>99.0 | 8.9170 | N/A | 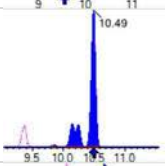 | 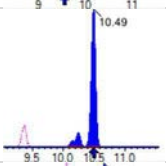 | |
| PFNS | ( 549.0 / 80.0 ) 8536984<br>( 549.0 / 99.0 ) 2272578 | ( 11.38 , 1.08 ) ( N/A , 0.00 , 0.1) | 3435.6<br>3070.7 | 0.2662<br>99.3<br>99.3 | 9.6960 | N/A | 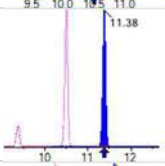 | 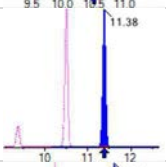 | |
| PFDS | ( 599.0 / 80.0 ) 10328374<br>( 599.0 / 99.0 ) 2646854 | ( 12.19 , 1.16 ) ( N/A , 0.00 , -0.1) | 3070.9<br>3125.1 | 0.2563<br>100.6<br>100.6 | 9.5970 | N/A | 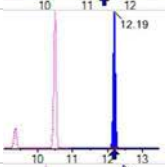 | 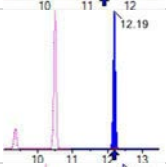 | |
| PFDoS | ( 699.0 / 80.0 ) 10304526<br>( 699.0 / 99.0 ) 2358315 | ( 13.21 , 1.26 ) ( N/A , 0.00 , 0.0) | 3708.6<br>3908.4 | 0.2289<br>102.4<br>102.4 | 9.8960 | N/A | 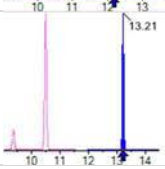 | 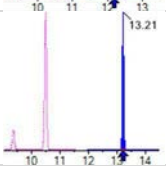 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12826412<br>( 327.0 / 81.0 ) 12040727 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -0.1) | 5557.6<br>3826.0 | 0.9387<br>110.0<br>110.0 | 40.1350 | N/A | 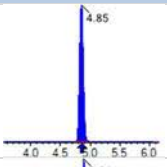 | 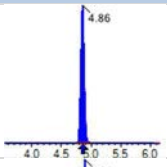 | |
| 6:2FTS | ( 427.0 / 407.0 ) 12451942<br>( 427.0 / 81.0 ) 14327020 | ( 6.94 , 1.00 ) ( 0.00 , N/A , 0.0) | 6527.5<br>6891.6 | 1.1506<br>89.2<br>89.2 | 38.8800 | N/A | 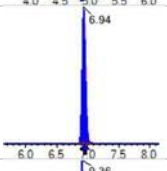 | 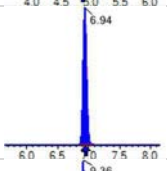 | |
| 8:2FTS | ( 527.0 / 507.0 ) 12302014<br>( 527.0 / 81.0 ) 12387553 | ( 9.36 , 1.00 ) ( 0.00 , N/A , -0.1) | 2416.2<br>2406.2 | 1.0070<br>91.2<br>91.2 | 38.1390 | N/A | 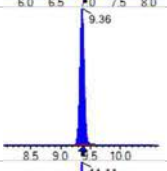 | 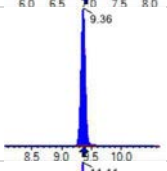 | |
| 10:2FTS | ( 627.0 / 607.0 ) 10300136<br>( 627.0 / 81.0 ) 14674308 | ( 11.11 , 1.00 ) ( 0.01 , N/A , -0.1) | 1307.6<br>1434.9 | 1.4247<br>99.1<br>99.1 | 38.7910 | N/A | 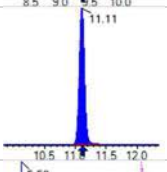 | 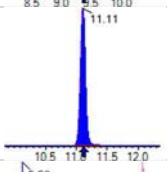 | |
| PFBSA | ( 297.9 / 78.0 ) 5932998<br>( 297.9 / 278.0 ) 7823 | ( 5.56 , 0.38 ) ( N/A , 0.00 , -0.3) | 2373.4<br>92.2 | 0.0013<br>101.9<br>101.9 | 9.9660 | N/A | 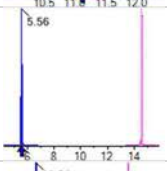 | 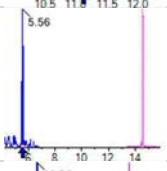 | |
| PFHxSA | ( 397.9 / 78.0 ) 11374028<br>( 397.9 / 378.0 ) 46692 | ( 11.24 , 0.75 ) ( N/A , 0.00 , -0.2) | 1944.2<br>771.6 | 0.0041<br>101.6<br>101.6 | 9.8990 | N/A | 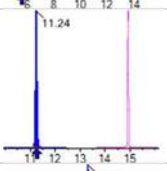 | 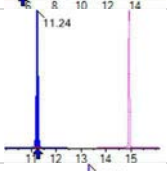 | |
| PFOSA | ( 498.0 / 78.0 ) 8608641<br>( 498.0 / 478.0 ) 121621 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.1) | 3522.9<br>1461.7 | 0.0141<br>96.1<br>96.1 | 10.0630 | N/A | 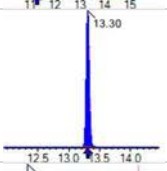 | 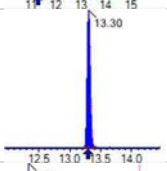 | |
| TFSI | ( 279.7 / 147.0 ) 15108526<br>( 279.7 / 211.0 ) 1326403 | ( 7.07 , 0.53 ) ( N/A , -0.01 , 0.0) | 95.8<br>4726.2 | 0.0878<br>99.2<br>99.2 | 10.1090 | N/A | 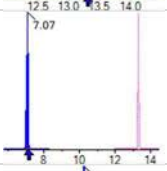 | 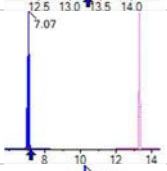 | |
| NMeFOSA | ( 512.0 / 219.0 ) 7108106<br>( 512.0 / 169.0 ) 5412014 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 1.7) | 4566.0<br>1799.3 | 0.7614<br>99.3<br>99.3 | 40.7690 | N/A | 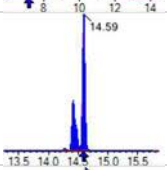 | 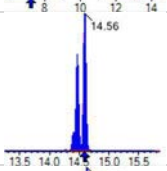 | |
| NEtFOSA | ( 526.0 / 219.0 ) 8272563<br>( 526.0 / 169.0 ) 10357876 | ( 14.93 , 1.00 ) ( 0.01 , N/A , 2.2) | 5059.7<br>3979.7 | 1.2521<br>100.1<br>100.1 | 40.0030 | N/A | 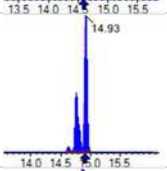 | 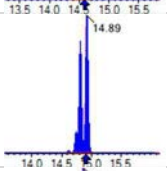 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 2561023<br>( 570.0 / 483.0 ) 1207080 | ( 10.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 9045.2<br>1777.3 | 0.4713<br>101.6<br>101.6 | 9.8500 | N/A | 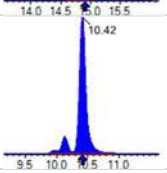 | 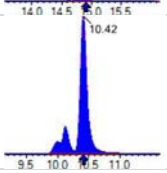 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 2363676<br>( 584.0 / 526.0 ) 1403055 | ( 11.03 , 1.00 ) ( 0.01 , N/A , -0.1) | 2001.8<br>758.0 | 0.5936<br>99.0<br>99.0 | 9.8330 | N/A | 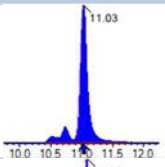 | 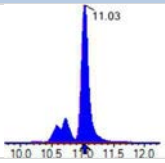 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3082333 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 3738.6 | N/A<br>0.0<br>0.0 | 38.5190 | N/A | 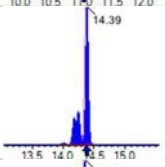 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2512991 | ( 14.76 , 1.00 ) ( 0.03 , N/A , 0.0) | 4539.0 | N/A<br>0.0<br>0.0 | 38.6480 | N/A | 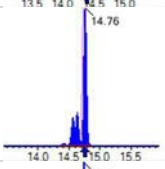 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 642376<br>( 285.0 / 185.0 ) 1708527 | ( 5.64 , 1.00 ) ( 0.00 , N/A , 0.1) | 2067.0<br>3090.7 | 2.6597<br>94.7<br>94.7 | 10.4470 | N/A | 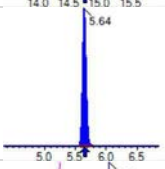 | 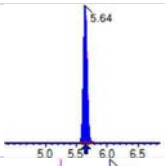 | |
| ADONA | ( 377.0 / 85.0 ) 8184355<br>( 377.0 / 251.0 ) 838218 | ( 6.79 , 1.20 ) ( N/A , -0.01 , 0.0) | 3547.3<br>2209.7 | 0.1024<br>97.7<br>97.7 | 10.0920 | N/A | 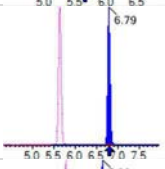 | 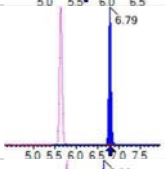 | |
| PFEESA | ( 315.0 / 135.0 ) 2948130<br>( 315.0 / 83.0 ) 1807357 | ( 5.99 , 1.15 ) ( N/A , -0.01 , -0.1) | 3424.7<br>2942.5 | 0.6131<br>95.5<br>95.5 | 17.0400 | N/A | 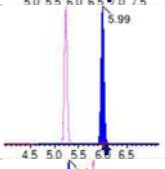 | 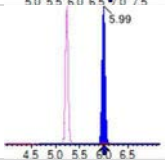 | |
| PFMPA | ( 229.0 / 85.0 ) 1499132 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 10379.5 | N/A<br>0.0<br>0.0 | 19.0000 | N/A | 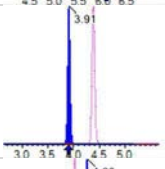 | | |
| PFMBA | ( 279.0 / 85.0 ) 3509087 | ( 4.60 , 1.05 ) ( N/A , -0.01 , 0.0) | 5279.9 | N/A<br>0.0<br>0.0 | 19.7420 | N/A | 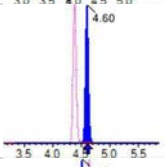 | | |
| NFDHA | ( 295.0 / 201.0 ) 1654782<br>( 295.0 / 85.0 ) 1488098 | ( 5.10 , 0.98 ) ( N/A , 0.00 , 0.0) | 4255.9<br>3811.0 | 0.8993<br>90.4<br>90.4 | 19.5980 | N/A | 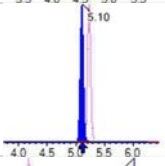 | 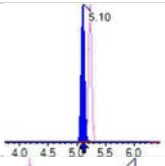 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 8935681<br>( 533.0 / 353.0 ) 2744055 | ( 11.18 , 1.98 ) ( N/A , 0.00 , 0.1) | 2592.7<br>3173.5 | 0.3071<br>96.3<br>96.3 | 9.9180 | N/A | 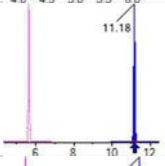 | 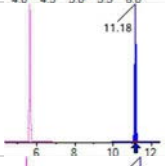 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 6852342<br>( 633.0 / 453.0 ) 2268398 | ( 12.66 , 2.24 ) ( N/A , 0.00 , 0.1) | 4354.9<br>4055.9 | 0.3310<br>97.6<br>97.6 | 9.7860 | N/A | 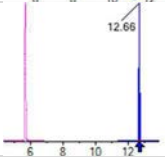 | 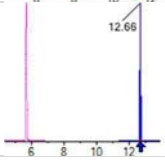 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 4706891<br>( 461.0 / 381.2 ) 1798113 | ( 9.43 , 0.90 ) ( N/A , -0.01 , 0.0) | 5200.7<br>5755.6 | 0.3820<br>98.9<br>98.9 | 9.0800 | N/A | 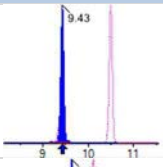 | 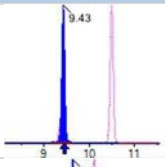 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 660291<br>( 241.0 / 117.0 ) 1572648 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.1) | 7042.7<br>5484.0 | 2.3817<br>108.5<br>108.5 | 35.8410 | N/A | 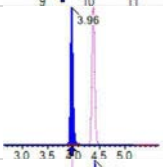 | 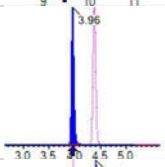 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 2477767<br>( 341.0 / 217.0 ) 3891348 | ( 5.66 , 1.08 ) ( N/A , 0.00 , 0.1) | 2053.6<br>2000.1 | 1.5705<br>102.6<br>102.6 | 38.2960 | N/A | 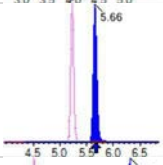 | 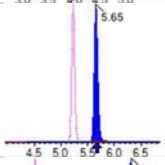 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5141269<br>( 441.0 / 337.0 ) 4590024 | ( 9.33 , 1.78 ) ( N/A , 0.00 , 0.1) | 14794.4<br>16877.7 | 0.8928<br>104.5<br>104.5 | 37.4030 | N/A | 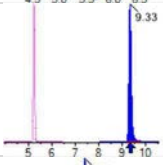 | 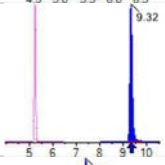 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3279006<br>( 357.2 / 243.0 ) 353637 | ( 5.91 , 1.00 ) ( -0.01 , N/A , 0.0) | 2632.7<br>1790.3 | 0.1078<br>100.6<br>100.6 | 10.0310 | N/A | 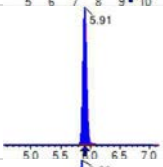 | 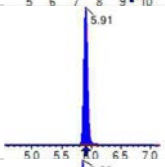 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2860820<br>( 457.2 / 343.0 ) 125837 | ( 8.66 , 1.00 ) ( -0.01 , N/A , 0.1) | 1481.4<br>938.9 | 0.0440<br>98.0<br>98.0 | 9.9810 | N/A | 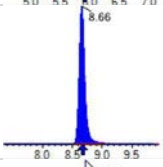 | 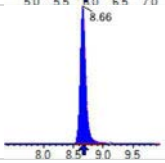 | |
| TDCA | ( 499.0 / 80.0 ) 6469918 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 43110.0 | N/A<br>0.0<br>0.0 | 9.9260 | N/A | 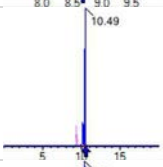 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238901 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1298.3 | N/A | 0.8460<br>[ 1.0000 ] | 84.6%<br>{ 86.2% } | 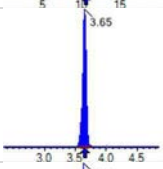 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 110377 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 116220.5 | N/A | 0.9350<br>[ 1.0000 ] | 93.5%<br>{ 95.9% } | 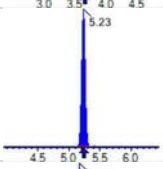 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367272 | ( 7.47 , N/A ) ( N/A , -0.01 , N/A ) | 6296.2 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 93.6% } | 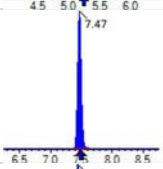 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 267925 | ( 9.04 , N/A ) ( N/A , -0.01 , N/A ) | 1602.2 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 92.2% } | 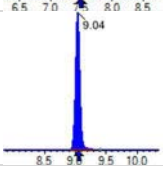 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL6 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266253 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 7915.3 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 97.8% } | 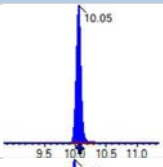 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 906781 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5459.0 | N/A | 0.9230 [ 1.0000 ] | 92.3% { 95.3% } | 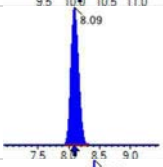 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 757166 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 3989.1 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 102.4% } | 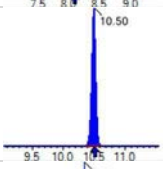 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2106359 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 117705.5 | N/A | 8.1570 [ 8.0000 ] | 102.0% { 86.4% } | 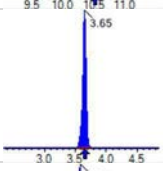 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 859769 | ( 4.38 , N/A ) ( N/A , -0.01 , N/A ) | 7061.2 | N/A | 4.2550 [ 4.0000 ] | 106.4% { 93.0% } | 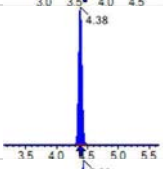 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 512563 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 9789.5 | N/A | 2.1230 [ 2.0000 ] | 106.1% { 95.8% } | 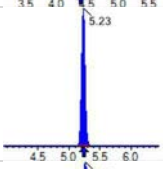 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 548495 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 8960.0 | N/A | 2.0450 [ 2.0000 ] | 102.3% { 96.2% } | 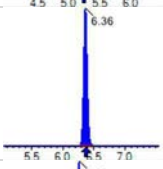 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 804930 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5914.7 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 106.3% } | 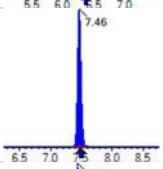 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283915 | ( 9.04 , N/A ) ( N/A , -0.01 , N/A ) | 9552.5 | N/A | 1.0730 [ 1.0000 ] | 107.3% { 100.0% } | 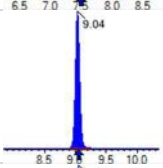 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321929 | ( 10.05 , N/A ) ( N/A , -0.01 , N/A ) | 1251.4 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 95.7% } | 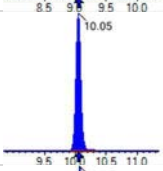 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389467 | ( 10.97 , N/A ) ( N/A , 0.00 , N/A ) | 1198.0 | N/A | 1.0670 [ 1.0000 ] | 106.7% { 99.3% } | 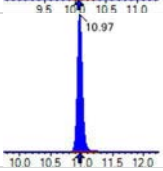 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392293 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1474.6 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 98.3% } | 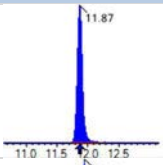 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 351047 | ( 13.15 , N/A ) ( N/A , 0.00 , N/A ) | 1512.8 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 96.9% } | 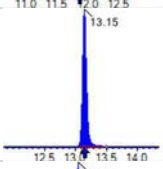 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 589796 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2357.7 | N/A | 2.1270 [ 2.0000 ] | 106.3% { 103.2% } | 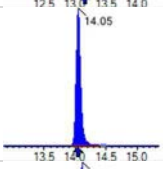 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1573417 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1278.0 | N/A | 2.1530 [ 2.0000 ] | 107.6% { 99.0% } | 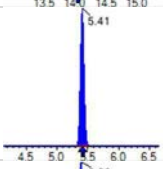 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1399479 | ( 8.09 , N/A ) ( N/A , 0.01 , N/A ) | 5713.0 | N/A | 2.1390 [ 2.0000 ] | 107.0% { 101.9% } | 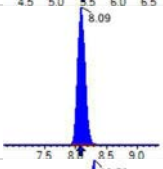 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1664184 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 914.0 | N/A | 2.0660 [ 2.0000 ] | 103.3% { 106.3% } | 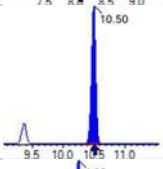 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 484195 | ( 4.86 , N/A ) ( N/A , -0.01 , N/A ) | 73.1 | N/A | 3.0110 [ 4.0000 ] | 75.3% { 69.4% } | 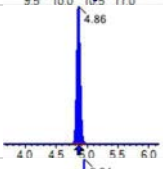 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1509185 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 5300.1 | N/A | 3.8210 [ 4.0000 ] | 95.5% { 91.0% } | 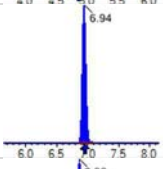 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1311671 | ( 9.36 , N/A ) ( N/A , -0.01 , N/A ) | 1896.3 | N/A | 3.7950 [ 4.0000 ] | 94.9% { 88.7% } | 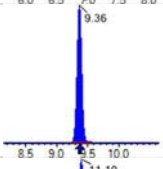 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2675016 | ( 11.10 , N/A ) ( N/A , 0.00 , N/A ) | 1367.6 | N/A | 7.1550 [ 8.0000 ] | 89.4% { 94.0% } | 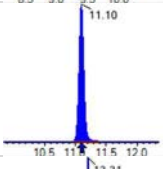 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1768293 | ( 13.31 , N/A ) ( N/A , 0.01 , N/A ) | 3201.2 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 105.0% } | 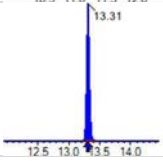 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 392329 | ( 14.59 , N/A ) ( N/A , 0.01 , N/A ) | 2195.6 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 105.8% } | 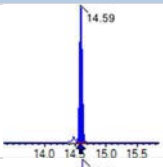  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 365125 | ( 14.92 , N/A ) ( N/A , 0.01 , N/A ) | 2483.7 | N/A | 2.0770 [ 2.0000 ] | 103.9% { 102.7% } | 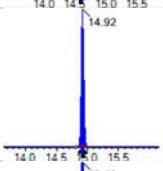  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1127383 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2830.7 | N/A | 4.0310 [ 4.0000 ] | 100.8% { 97.3% } | 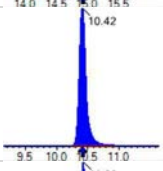  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 991205 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 2493.6 | N/A | 3.9270 [ 4.0000 ] | 98.2% { 95.9% } | 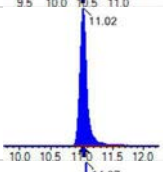  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1478328 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3364.6 | N/A | 20.5810 [ 20.0000 ] | 102.9% { 104.1% } | 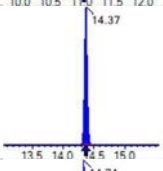  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365169 | ( 14.74 , N/A ) ( N/A , 0.01 , N/A ) | 4529.3 | N/A | 20.2930 [ 20.0000 ] | 101.5% { 102.2% } | 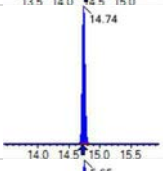  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 837808 | ( 5.65 , N/A ) ( N/A , -0.01 , N/A ) | 3014.0 | N/A | 8.0100 [ 8.0000 ] | 100.1% { 92.7% } | 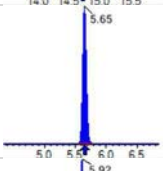  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 621730 | ( 5.92 , N/A ) ( N/A , -0.01 , N/A ) | 2463.3 | N/A | 2.1430 [ 2.0000 ] | 107.1% { 109.5% } | 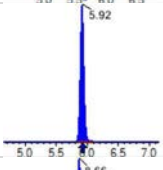  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 693525 | ( 8.66 , N/A ) ( N/A , -0.01 , N/A ) | 1087.6 | N/A | 2.1220 [ 2.0000 ] | 106.1% { 106.1% } | 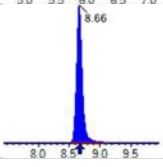  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2767895<br>( 163.0 / 69.0 ) 73153 | ( 2.48 , 0.68 ) ( N/A , -0.01 , 0.0) | 1529.3<br>428.2 | 0.0264<br>96.4<br>96.4 | 49.0070 | N/A | 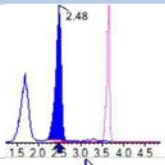 | 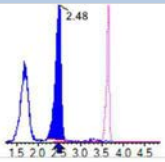 | |
| PFBA | ( 213.0 / 169.0 ) 20144386 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 2896.1 | N/A<br>0.0<br>0.0 | 81.5800 | N/A | 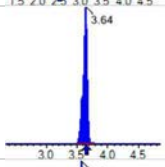 | | |
| PFPeA | ( 263.0 / 219.0 ) 8191769<br>( 263.0 / 69.0 ) 95115 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 6544.5<br>1379.7 | 0.0116<br>97.6<br>97.6 | 41.3530 | N/A | 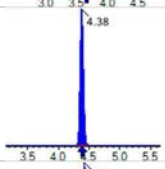 | 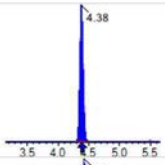 | |
| PFHxA | ( 313.0 / 269.0 ) 5108899<br>( 313.0 / 119.0 ) 581861 | ( 5.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 3270.0<br>2394.0 | 0.1139<br>102.4<br>102.4 | 21.8930 | N/A | 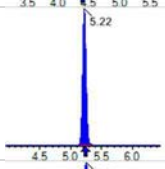 | 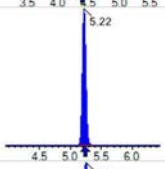 | |
| PFHpA | ( 363.0 / 319.0 ) 6040424<br>( 363.0 / 169.0 ) 1767960 | ( 6.35 , 1.00 ) ( 0.00 , N/A , 0.0) | 3112.7<br>2804.9 | 0.2927<br>95.8<br>95.8 | 22.1490 | N/A | 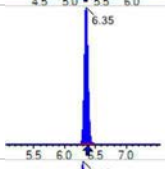 | 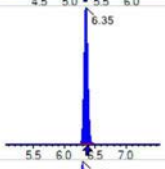 | |
| PFOA | ( 413.0 / 369.0 ) 8578956<br>( 413.0 / 169.0 ) 3122595 | ( 7.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 2081.6<br>2560.7 | 0.3640<br>101.8<br>101.8 | 21.0010 | N/A | 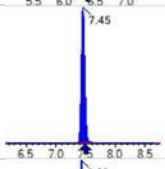 | 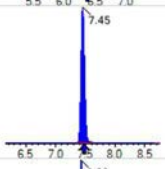 | |
| PFNA | ( 463.0 / 419.0 ) 6159981<br>( 463.0 / 169.0 ) 1566898 | ( 9.03 , 1.00 ) ( 0.00 , N/A , 0.1) | 2350.7<br>1871.3 | 0.2544<br>103.5<br>103.5 | 20.4370 | N/A | 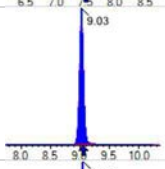 | 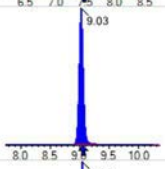 | |
| PFDA | ( 513.0 / 469.0 ) 6822175<br>( 513.0 / 169.0 ) 793094 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 9930.9<br>4899.1 | 0.1163<br>97.6<br>97.6 | 20.4840 | N/A | 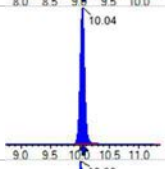 | 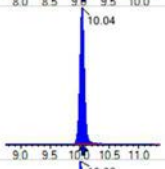 | |
| PFUnA | ( 563.0 / 519.0 ) 7699348<br>( 563.0 / 169.0 ) 1073513 | ( 10.96 , 1.00 ) ( 0.00 , N/A , 0.0) | 1361.8<br>1146.0 | 0.1394<br>90.0<br>90.0 | 22.3440 | N/A | 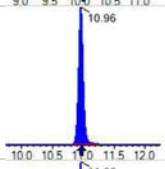 | 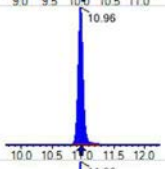 | |
| PFDoA | ( 613.0 / 569.0 ) 8517622<br>( 613.0 / 169.0 ) 1268183 | ( 11.86 , 1.00 ) ( 0.00 , N/A , 0.0) | 2070.7<br>1670.2 | 0.1489<br>98.0<br>98.0 | 21.0020 | N/A | 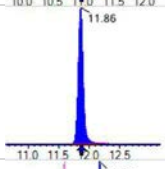 | 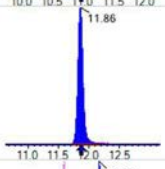 | |
| PFTrDA | ( 663.0 / 619.0 ) 8350718<br>( 663.0 / 169.0 ) 2094467 | ( 12.59 , 1.06 ) ( N/A , -0.01 , 0.0) | 1909.3<br>1721.2 | 0.2508<br>93.2<br>93.2 | 21.1770 | N/A | 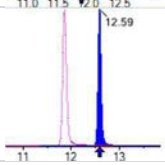 | 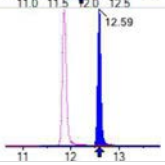 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 7009272<br>( 713.0 / 169.0 ) 1839944 | ( 13.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1809.0<br>1449.9 | 0.2625<br>96.7<br>96.7 | 21.2270 | N/A | 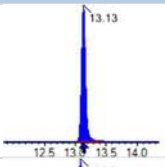 | 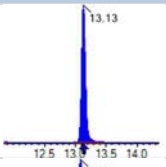 | |
| PFHxDA | ( 813.0 / 769.0 ) 6046764<br>( 813.0 / 169.0 ) 1462750 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.3<br>1729.1 | 0.2419<br>92.5<br>92.5 | 20.9780 | N/A | 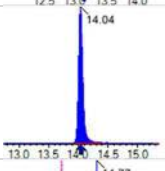 | 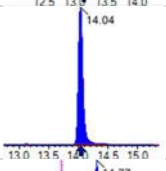 | |
| PFODA | ( 913.0 / 869.0 ) 3872356<br>( 913.0 / 169.0 ) 1207475 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.0) | 2776.6<br>2020.6 | 0.3118<br>99.5<br>99.5 | 21.2120 | N/A | 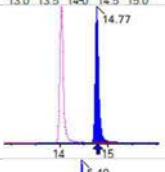 | 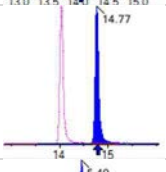 | |
| PFBS | ( 299.0 / 80.0 ) 7383443<br>( 299.0 / 99.0 ) 5403141 | ( 5.40 , 1.00 ) ( 0.00 , N/A , 0.0) | 3012.4<br>2867.8 | 0.7318<br>98.8<br>98.8 | 19.0010 | N/A | 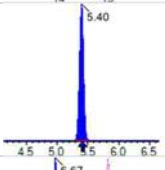 | 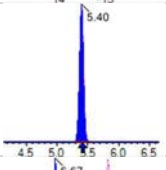 | |
| PFPeS | ( 349.0 / 80.0 ) 19547962<br>( 349.0 / 99.0 ) 7036099 | ( 6.67 , 0.83 ) ( N/A , -0.02 , 0.1) | 4291.5<br>4836.8 | 0.3599<br>105.3<br>105.3 | 19.5690 | N/A | 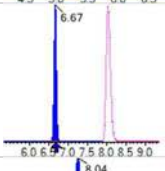 | 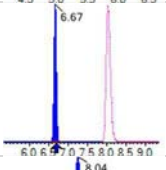 | |
| PFHxS | ( 399.0 / 80.0 ) 24130124<br>( 399.0 / 99.0 ) 7650869 | ( 8.04 , 1.00 ) ( 0.00 , N/A , 0.2) | 4657.0<br>5151.5 | 0.3171<br>96.6<br>96.6 | 19.8170 | N/A | 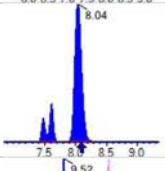 | 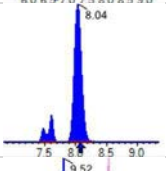 | |
| PFHpS | ( 449.0 / 80.0 ) 20405149<br>( 449.0 / 99.0 ) 5670578 | ( 9.52 , 0.91 ) ( N/A , -0.01 , 0.1) | 3021.0<br>2990.5 | 0.2779<br>106.5<br>106.5 | 19.7430 | N/A | 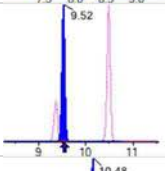 | 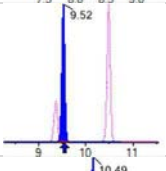 | |
| PFOS | ( 499.0 / 80.0 ) 18765848<br>( 499.0 / 99.0 ) 4259440 | ( 10.48 , 1.00 ) ( 0.00 , N/A , 0.0) | 4643.5<br>13759.1 | 0.2270<br>98.2<br>98.2 | 18.6830 | N/A | 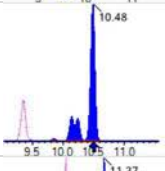 | 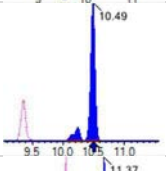 | |
| PFNS | ( 549.0 / 80.0 ) 18249823<br>( 549.0 / 99.0 ) 5058160 | ( 11.37 , 1.08 ) ( N/A , -0.01 , 0.0) | 3632.1<br>3729.3 | 0.2772<br>103.4<br>103.4 | 19.9340 | N/A | 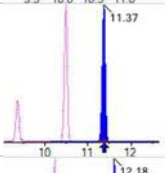 | 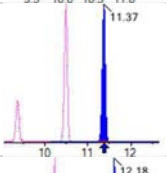 | |
| PFDS | ( 599.0 / 80.0 ) 20950812<br>( 599.0 / 99.0 ) 5699792 | ( 12.18 , 1.16 ) ( N/A , -0.01 , 0.0) | 4312.8<br>3759.2 | 0.2721<br>106.8<br>106.8 | 18.7220 | N/A | 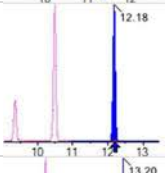 | 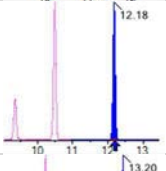 | |
| PFDoS | ( 699.0 / 80.0 ) 20566724<br>( 699.0 / 99.0 ) 5039727 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 4646.2<br>5764.7 | 0.2450<br>109.6<br>109.6 | 18.9940 | N/A | 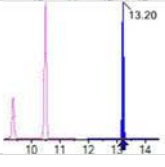 | 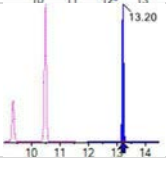 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 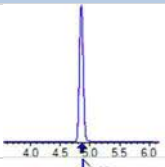 | 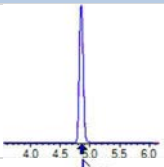 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) 20512887<br>( 427.0 / 81.0 ) 25142299 | ( 6.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 6835.6<br>6457.3 | 1.2257<br>95.0<br>95.0 | 73.7280 | N/A | 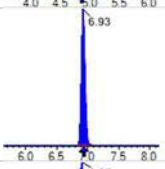 | 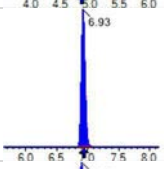 | |
| 8:2FTS | ( 527.0 / 507.0 ) 20737387<br>( 527.0 / 81.0 ) 22196144 | ( 9.35 , 1.00 ) ( -0.01 , N/A , 0.1) | 2027.1<br>2088.8 | 1.0703<br>97.0<br>97.0 | 71.0010 | N/A | 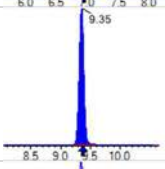 | 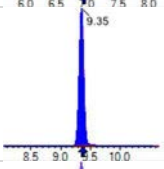 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 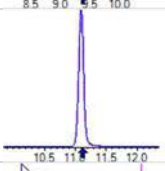 | 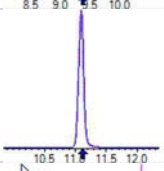 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 12524701<br>( 297.9 / 278.0 ) 17127 | ( 5.55 , 0.38 ) ( N/A , -0.01 , 0.3) | 1280.6<br>148.2 | 0.0014<br>105.6<br>105.6 | 20.4740 | N/A | 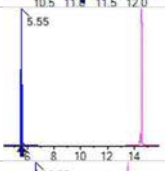 | 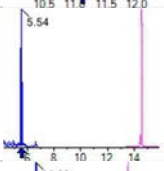 | |
| PFHxSA | ( 397.9 / 78.0 ) 24114997<br>( 397.9 / 378.0 ) 100173 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.2) | 1968.6<br>1032.9 | 0.0042<br>102.9<br>102.9 | 21.1720 | N/A | 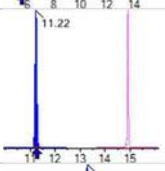 | 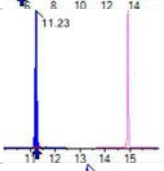 | |
| PFOSA | ( 498.0 / 78.0 ) 18038492<br>( 498.0 / 478.0 ) 256040 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.0) | 3155.8<br>2047.1 | 0.0142<br>96.5<br>96.5 | 21.3150 | N/A | 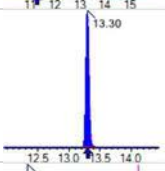 | 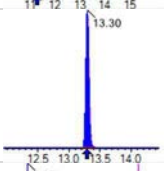 | |
| TFSI | ( 279.7 / 147.0 ) 31918008<br>( 279.7 / 211.0 ) 2902274 | ( 7.07 , 0.53 ) ( N/A , -0.01 , 0.0) | 103.5<br>5242.1 | 0.0909<br>102.8<br>102.8 | 21.5900 | N/A | 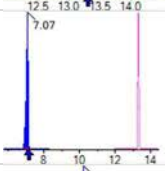 | 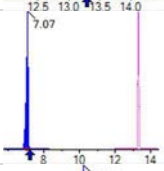 | |
| NMeFOSA | ( 512.0 / 219.0 ) 14921604<br>( 512.0 / 169.0 ) 11712804 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 2.0) | 4959.6<br>1712.0 | 0.7850<br>102.4<br>102.4 | 83.2870 | N/A | 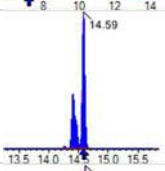 | 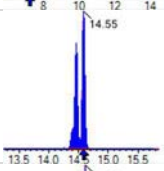 | |
| NEtFOSA | ( 526.0 / 219.0 ) 17338797<br>( 526.0 / 169.0 ) 21713888 | ( 14.92 , 1.00 ) ( 0.01 , N/A , 2.5) | 5472.5<br>3992.7 | 1.2523<br>100.2<br>100.2 | 84.5840 | N/A | 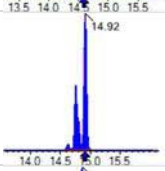 | 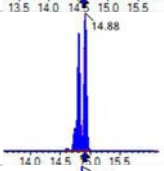 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5429378<br>( 570.0 / 483.0 ) 2544481 | ( 10.41 , 1.00 ) ( 0.01 , N/A , 0.1) | 9339.1<br>1721.1 | 0.4687<br>101.0<br>101.0 | 20.5890 | N/A | 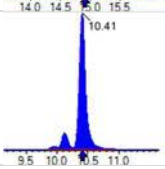 | 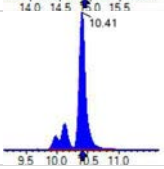 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 4688352<br>( 584.0 / 526.0 ) 2764951 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.0) | 2383.2<br>688.2 | 0.5897<br>98.3<br>98.3 | 22.4580 | N/A | 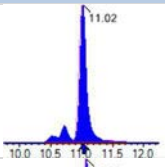 | 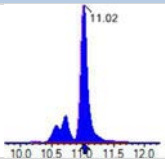 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6907762 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 5119.9 | N/A<br>0.0<br>0.0 | 85.4840 | N/A | 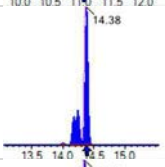 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5528338 | ( 14.75 , 1.00 ) ( 0.02 , N/A , 0.0) | 5731.7 | N/A<br>0.0<br>0.0 | 83.1020 | N/A | 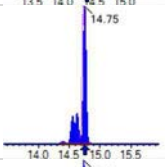 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1364668<br>( 285.0 / 185.0 ) 3536154 | ( 5.63 , 1.00 ) ( -0.01 , N/A , -0.1) | 2459.3<br>3125.1 | 2.5912<br>92.3<br>92.3 | 21.5040 | N/A | 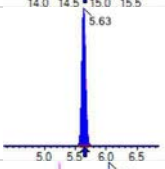 | 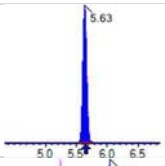 | |
| ADONA | ( 377.0 / 85.0 ) 17414987<br>( 377.0 / 251.0 ) 1757128 | ( 6.78 , 1.20 ) ( N/A , -0.02 , 0.1) | 3602.9<br>2618.0 | 0.1009<br>96.2<br>96.2 | 20.8060 | N/A | 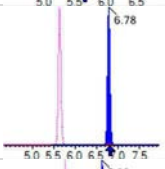 | 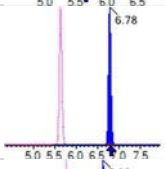 | |
| PFEESA | ( 315.0 / 135.0 ) 6607349<br>( 315.0 / 83.0 ) 3698181 | ( 5.98 , 1.15 ) ( N/A , -0.02 , 0.0) | 3439.3<br>2708.8 | 0.5597<br>87.2<br>87.2 | 38.9200 | N/A | 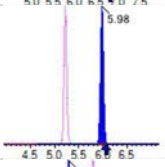 | 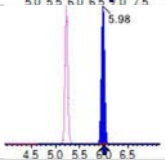 | |
| PFMPA | ( 229.0 / 85.0 ) 3195192 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 11465.8 | N/A<br>0.0<br>0.0 | 43.8720 | N/A | 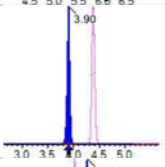 | | |
| PFMBA | ( 279.0 / 85.0 ) 7008463 | ( 4.60 , 1.05 ) ( N/A , -0.01 , 0.0) | 6349.4 | N/A<br>0.0<br>0.0 | 42.7170 | N/A | 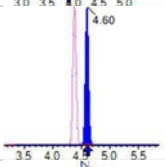 | | |
| NFDHA | ( 295.0 / 201.0 ) 3267704<br>( 295.0 / 85.0 ) 3452312 | ( 5.10 , 0.98 ) ( N/A , -0.01 , 0.1) | 3828.7<br>3736.6 | 1.0565<br>106.2<br>106.2 | 39.4400 | N/A | 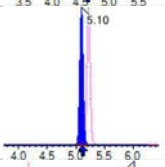 | 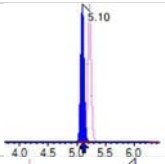 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19365712<br>( 533.0 / 353.0 ) 6025199 | ( 11.17 , 1.98 ) ( N/A , -0.01 , 0.0) | 3972.6<br>3210.4 | 0.3111<br>97.6<br>97.6 | 20.8260 | N/A | 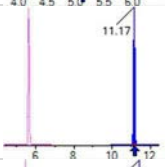 | 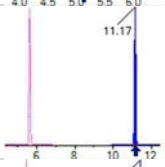 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14885861<br>( 633.0 / 453.0 ) 4856425 | ( 12.65 , 2.24 ) ( N/A , -0.01 , 0.0) | 4696.1<br>3676.4 | 0.3262<br>96.2<br>96.2 | 20.5980 | N/A | 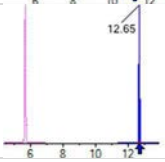 | 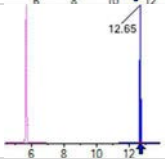 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10792210<br>( 461.0 / 381.2 ) 4094528 | ( 9.42 , 0.90 ) ( N/A , -0.02 , -0.1) | 5896.9<br>5731.1 | 0.3794<br>98.2<br>98.2 | 20.0200 | N/A | 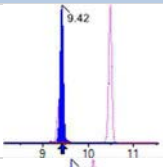 | 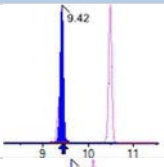 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1331098<br>( 241.0 / 117.0 ) 2977953 | ( 3.96 , 0.90 ) ( N/A , -0.01 , 0.0) | 5314.1<br>6422.8 | 2.2372<br>101.9<br>101.9 | 78.2760 | N/A | 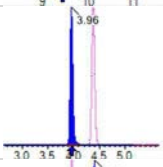 | 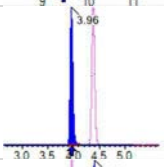 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 5051595<br>( 341.0 / 217.0 ) 7492471 | ( 5.65 , 1.08 ) ( N/A , -0.01 , 0.0) | 1486.6<br>1526.9 | 1.4832<br>96.9<br>96.9 | 79.5690 | N/A | 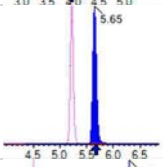 | 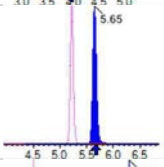 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10903970<br>( 441.0 / 337.0 ) 9463060 | ( 9.30 , 1.78 ) ( N/A , -0.03 , 0.0) | 11802.7<br>26493.6 | 0.8679<br>101.6<br>101.6 | 80.8420 | N/A | 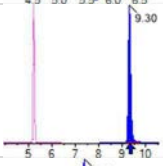 | 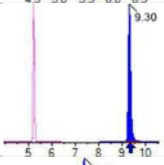 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6401630<br>( 357.2 / 243.0 ) 691595 | ( 5.89 , 1.00 ) ( -0.01 , N/A , 0.0) | 2130.8<br>1985.0 | 0.1080<br>100.7<br>100.7 | 21.6660 | N/A | 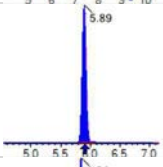 | 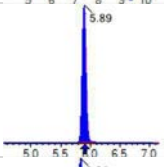 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5962342<br>( 457.2 / 343.0 ) 255761 | ( 8.64 , 1.00 ) ( 0.00 , N/A , 0.3) | 1397.5<br>964.8 | 0.0429<br>95.6<br>95.6 | 20.8210 | N/A | 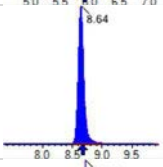 | 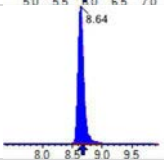 | |
| TDCA | ( 499.0 / 80.0 ) 14316347 | ( 10.48 , 1.00 ) ( N/A , -0.01 , 0.0) | 57784.2 | N/A<br>0.0<br>0.0 | 21.1220 | N/A | 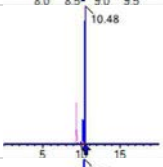 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 243482 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 1266.9 | N/A | 0.8630<br>[ 1.0000 ] | 86.3%<br>{ 87.9% } | 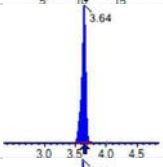 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 128124 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 67838.8 | N/A | 1.0850<br>[ 1.0000 ] | 108.5%<br>{ 111.4% } | 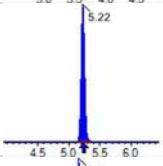 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 414467 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 5671.5 | N/A | 1.0680<br>[ 1.0000 ] | 106.8%<br>{ 105.6% } | 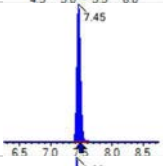 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 308932 | ( 9.03 , N/A ) ( N/A , -0.02 , N/A ) | 1418.7 | N/A | 1.0580<br>[ 1.0000 ] | 105.8%<br>{ 106.3% } | 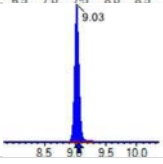 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299193 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 7550.6 | N/A | 1.0440 [ 1.0000 ] | 104.4% { 109.9% } | 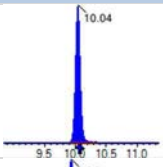 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1050630 | ( 8.04 , N/A ) ( N/A , -0.05 , N/A ) | 5938.9 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 110.4% } | 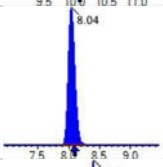 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 844338 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 3663.6 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 114.1% } | 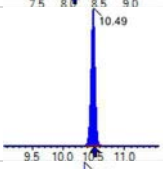 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1996356 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 91367.2 | N/A | 7.5860 [ 8.0000 ] | 94.8% { 81.9% } | 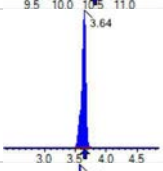 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 793608 | ( 4.38 , N/A ) ( N/A , -0.01 , N/A ) | 4895.6 | N/A | 3.3830 [ 4.0000 ] | 84.6% { 85.8% } | 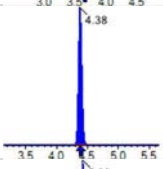 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 502955 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 12364.4 | N/A | 1.7940 [ 2.0000 ] | 89.7% { 94.0% } | 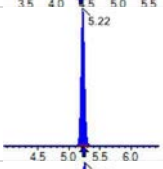 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 549713 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 5786.9 | N/A | 1.7660 [ 2.0000 ] | 88.3% { 96.4% } | 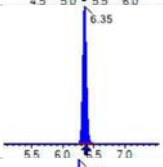 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 813563 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 4980.6 | N/A | 1.8520 [ 2.0000 ] | 92.6% { 107.5% } | 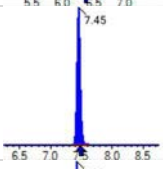 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299964 | ( 9.03 , N/A ) ( N/A , -0.02 , N/A ) | 34627.4 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 105.6% } | 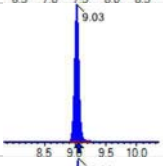 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 333488 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1697.5 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 99.1% } | 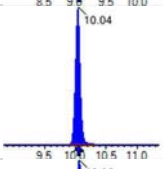 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 379484 | ( 10.96 , N/A ) ( N/A , -0.01 , N/A ) | 1142.3 | N/A | 0.9260 [ 1.0000 ] | 92.6% { 96.8% } | 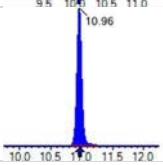 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 404144 | ( 11.86 , N/A ) ( N/A , -0.01 , N/A ) | 1292.8 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 101.3% } | 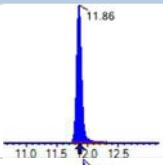 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 353610 | ( 13.14 , N/A ) ( N/A , -0.01 , N/A ) | 1367.5 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 97.6% } | 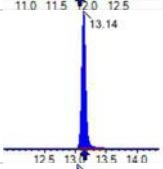 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 615303 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2358.7 | N/A | 1.9750 [ 2.0000 ] | 98.7% { 107.6% } | 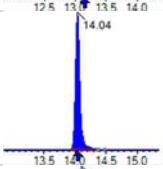 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1580181 | ( 5.40 , N/A ) ( N/A , -0.01 , N/A ) | 1284.0 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 99.4% } | 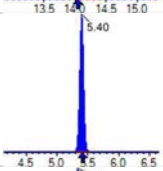 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1390350 | ( 8.04 , N/A ) ( N/A , -0.05 , N/A ) | 6727.0 | N/A | 1.8340 [ 2.0000 ] | 91.7% { 101.2% } | 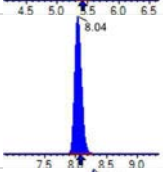 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1730504 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 611.7 | N/A | 1.9260 [ 2.0000 ] | 96.3% { 110.5% } | 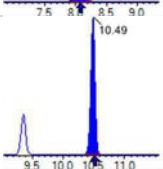 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 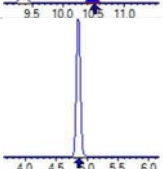 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1311079 | ( 6.93 , N/A ) ( N/A , -0.02 , N/A ) | 4859.9 | N/A | 2.8650 [ 4.0000 ] | 71.6% { 79.0% } | 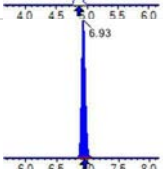 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1187694 | ( 9.36 , N/A ) ( N/A , -0.01 , N/A ) | 1643.7 | N/A | 2.9660 [ 4.0000 ] | 74.2% { 80.3% } | 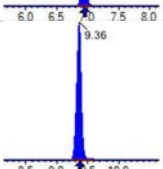 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 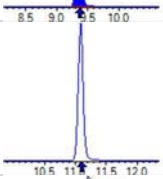 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1749249 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3547.4 | N/A | 1.8340 [ 2.0000 ] | 91.7% { 103.9% } | 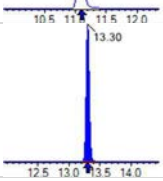 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 403152 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 1970.7 | N/A | 1.8800 [ 2.0000 ] | 94.0% { 108.8% } | 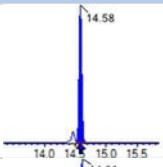  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 361925 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2610.3 | N/A | 1.8470 [ 2.0000 ] | 92.3% { 101.8% } | 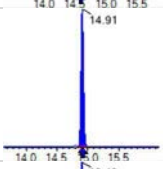  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1143459 | ( 10.40 , N/A ) ( N/A , -0.01 , N/A ) | 3149.4 | N/A | 3.6660 [ 4.0000 ] | 91.7% { 98.7% } | 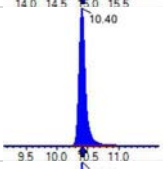  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 860790 | ( 11.01 , N/A ) ( N/A , -0.01 , N/A ) | 2203.6 | N/A | 3.0580 [ 4.0000 ] | 76.4% { 83.3% } | 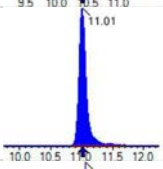  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1492864 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3592.4 | N/A | 18.6370 [ 20.0000 ] | 93.2% { 105.1% } | 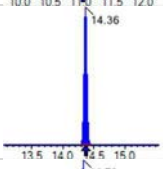  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1396714 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 4587.7 | N/A | 18.6190 [ 20.0000 ] | 93.1% { 104.6% } | 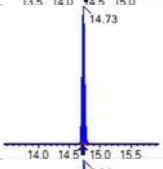  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 864706 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2122.0 | N/A | 7.1220 [ 8.0000 ] | 89.0% { 95.7% } | 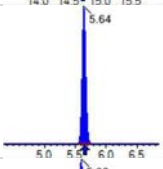  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561949 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 2522.7 | N/A | 1.7230 [ 2.0000 ] | 86.2% { 99.0% } | 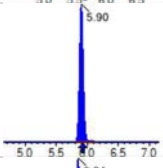  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 692896 | ( 8.64 , N/A ) ( N/A , -0.03 , N/A ) | 1100.9 | N/A | 1.8860 [ 2.0000 ] | 94.3% { 106.0% } | 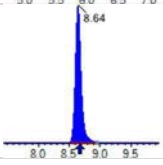  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 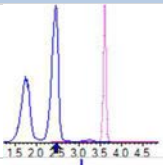 | 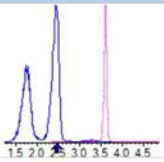 | NR, |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 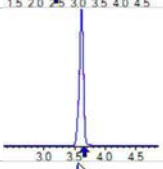 | | NR, |
| PFPeA | ( 263.0 / 219.0 )<br>18554576<br>( 263.0 / 69.0 )<br>221123 | ( 4.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 6986.2<br>2573.5 | 0.0119<br>100.1<br>100.1 | 108.2410 | N/A | 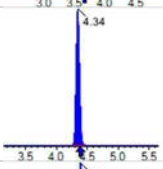 | 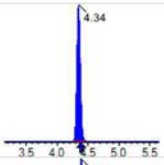 | |
| PFHxA | ( 313.0 / 269.0 )<br>11534220<br>( 313.0 / 119.0 )<br>1329778 | ( 5.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2672.5<br>3229.0 | 0.1153<br>103.7<br>103.7 | 52.7870 | N/A | 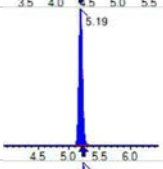 | 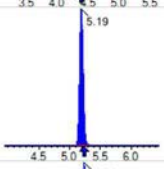 | |
| PFHpA | ( 363.0 / 319.0 )<br>13530873<br>( 363.0 / 169.0 )<br>4150115 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3777.1<br>3792.5 | 0.3067<br>100.4<br>100.4 | 51.0870 | N/A | 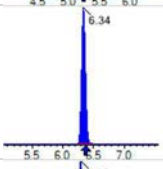 | 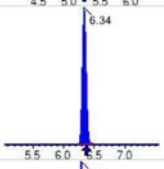 | |
| PFOA | ( 413.0 / 369.0 )<br>19770928<br>( 413.0 / 169.0 )<br>7332025 | ( 7.45 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2723.8<br>3051.6 | 0.3708<br>103.7<br>103.7 | 51.0090 | N/A | 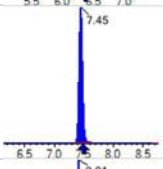 | 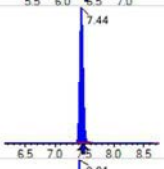 | |
| PFNA | ( 463.0 / 419.0 )<br>14796587<br>( 463.0 / 169.0 )<br>3725225 | ( 9.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2068.6<br>2126.6 | 0.2518<br>102.5<br>102.5 | 52.5390 | N/A | 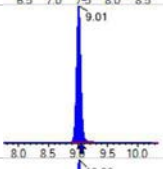 | 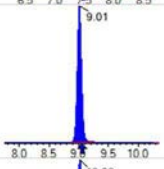 | |
| PFDA | ( 513.0 / 469.0 )<br>15665927<br>( 513.0 / 169.0 )<br>1884520 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , 0.0) | 13025.6<br>5477.1 | 0.1203<br>100.9<br>100.9 | 51.1610 | N/A | 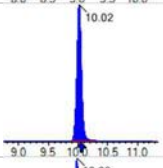 | 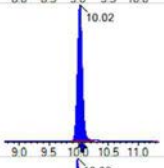 | |
| PFUnA | ( 563.0 / 519.0 )<br>17217624<br>( 563.0 / 169.0 )<br>2479183 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1752.1<br>1201.6 | 0.1440<br>93.0<br>93.0 | 58.3950 | N/A | 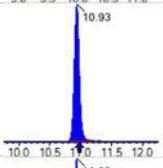 | 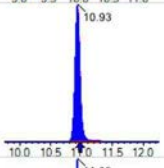 | |
| PFDoA | ( 613.0 / 569.0 )<br>19180204<br>( 613.0 / 169.0 )<br>2853413 | ( 11.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1899.7<br>1815.9 | 0.1488<br>98.0<br>98.0 | 51.8370 | N/A | 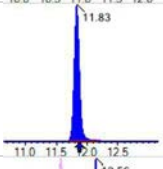 | 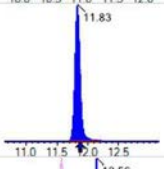 | |
| PFTrDA | ( 663.0 / 619.0 )<br>18136554<br>( 663.0 / 169.0 )<br>4683446 | ( 12.56 , 1.06 )<br>( N/A , -0.04 , 0.1) | 1807.0<br>1776.7 | 0.2582<br>95.9<br>95.9 | 50.4130 | N/A | 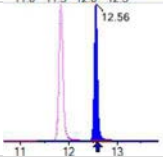 | 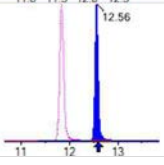 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 15453969<br>( 713.0 / 169.0 ) 4040988 | ( 13.10 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2037.6<br>1868.7 | 0.2615<br>96.4<br>96.4 | 50.0110 | N/A | 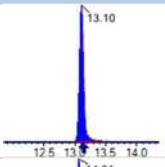 | 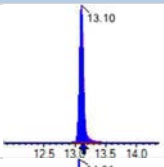 | |
| PFHxDA | ( 813.0 / 769.0 ) 13785746<br>( 813.0 / 169.0 ) 3776458 | ( 14.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3649.3<br>2219.9 | 0.2739<br>104.7<br>104.7 | 51.0880 | N/A | 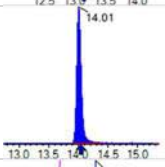 | 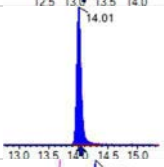 | |
| PFODA | ( 913.0 / 869.0 ) 9179280<br>( 913.0 / 169.0 ) 2594696 | ( 14.74 , 1.05 )<br>( N/A , -0.04 , 0.2) | 3140.3<br>2229.5 | 0.2827<br>90.2<br>90.2 | 53.7110 | N/A | 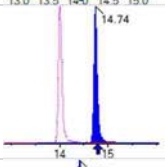 | 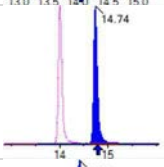 | |
| PFBS | ( 299.0 / 80.0 ) 17642099<br>( 299.0 / 99.0 ) 13037007 | ( 5.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3775.5<br>3570.0 | 0.7390<br>99.8<br>99.8 | 48.5430 | N/A | 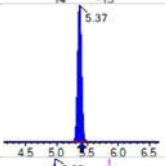 | 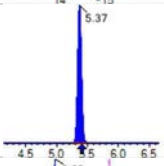 | |
| PFPeS | ( 349.0 / 80.0 ) 41089857<br>( 349.0 / 99.0 ) 15601355 | ( 6.66 , 0.83 )<br>( N/A , -0.03 , 0.0) | 3563.7<br>3576.1 | 0.3797<br>111.1<br>111.1 | 40.2470 | N/A | 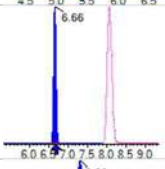 | 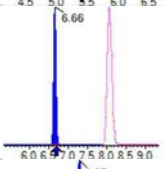 | |
| PFHxS | ( 399.0 / 80.0 ) 59257946<br>( 399.0 / 99.0 ) 19384754 | ( 8.08 , 1.00 )<br>( 0.00 , N/A , 0.2) | 5122.6<br>7240.0 | 0.3271<br>99.7<br>99.7 | 47.6170 | N/A | 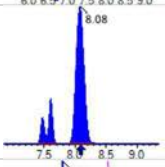 | 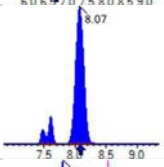 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 46276875<br>( 449.0 / 99.0 ) 13749946 | ( 9.50 , 0.91 )<br>( N/A , -0.03 , -0.1) | 3159.8<br>3453.6 | 0.2971<br>113.9<br>113.9 | 45.6670 | N/A | 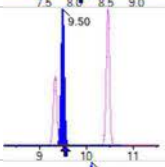 | 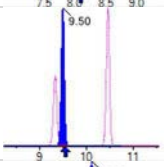 | |
| PFOS | ( 499.0 / 80.0 ) 47298154<br>( 499.0 / 99.0 ) 11732524 | ( 10.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4215.1<br>12254.0 | 0.2481<br>107.4<br>107.4 | 48.0290 | N/A | 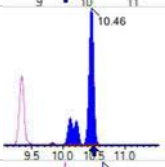 | 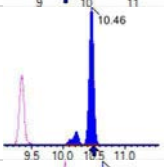 | |
| PFNS | ( 549.0 / 80.0 ) 39659288<br>( 549.0 / 99.0 ) 11404012 | ( 11.34 , 1.08 )<br>( N/A , -0.04 , 0.0) | 3451.9<br>3523.9 | 0.2875<br>107.3<br>107.3 | 44.1830 | N/A | 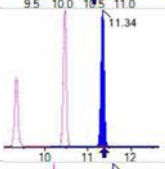 | 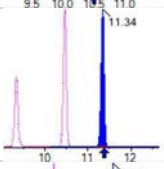 | |
| PFDS | ( 599.0 / 80.0 ) 41471869<br>( 599.0 / 99.0 ) 11416695 | ( 12.15 , 1.16 )<br>( N/A , -0.04 , 0.0) | 3595.8<br>4837.0 | 0.2753<br>108.1<br>108.1 | 37.7980 | N/A | 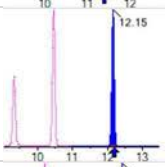 | 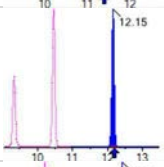 | |
| PFDoS | ( 699.0 / 80.0 ) 39725590<br>( 699.0 / 99.0 ) 10204172 | ( 13.17 , 1.26 )<br>( N/A , -0.03 , 0.0) | 5203.9<br>6256.7 | 0.2569<br>114.9<br>114.9 | 37.4190 | N/A | 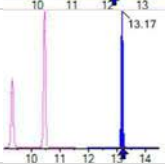 | 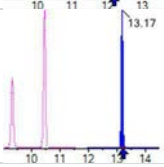 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 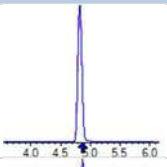 | 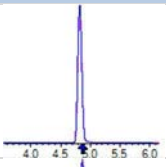 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 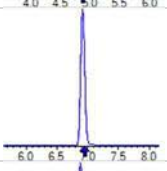 | 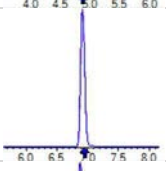 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 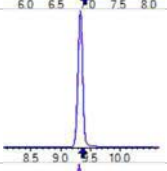 | 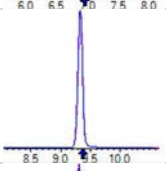 | NR, |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 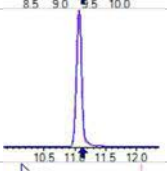 | 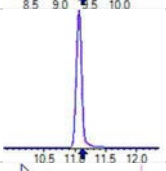 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 30768790<br>( 297.9 / 278.0 ) 43534 | ( 5.52 , 0.38 ) ( N/A , -0.04 , 0.0) | 1847.0<br>354.3 | 0.0014<br>109.3<br>109.3 | 47.1510 | N/A | 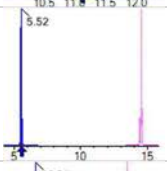 | 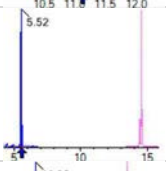 | |
| PFHxSA | ( 397.9 / 78.0 ) 51111724<br>( 397.9 / 378.0 ) 233176 | ( 11.21 , 0.75 ) ( N/A , -0.03 , 0.0) | 1822.2<br>1619.9 | 0.0046<br>113.0<br>113.0 | 50.0600 | N/A | 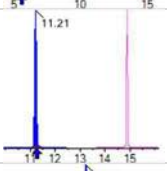 | 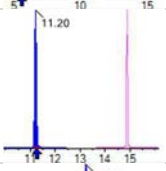 | |
| PFOSA | ( 498.0 / 78.0 ) 40160583<br>( 498.0 / 478.0 ) 658215 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 3742.5<br>3644.9 | 0.0164<br>111.5<br>111.5 | 48.2840 | N/A | 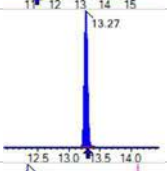 | 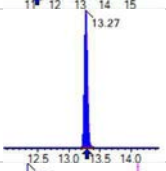 | |
| TFSI | ( 279.7 / 147.0 ) 75387177<br>( 279.7 / 211.0 ) 7514251 | ( 7.04 , 0.53 ) ( N/A , -0.04 , -0.2) | 92.4<br>218246.7 | 0.0997<br>112.6<br>112.6 | 51.8820 | N/A | 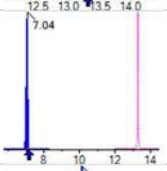 | 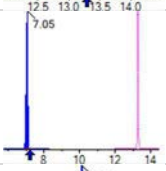 | |
| NMeFOSA | ( 512.0 / 219.0 ) 35094422<br>( 512.0 / 169.0 ) 26676680 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 2.7) | 4161.7<br>1586.2 | 0.7601<br>99.2<br>99.2 | 183.6330 | N/A | 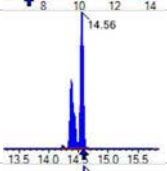 | 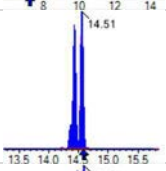 | |
| NEtFOSA | ( 526.0 / 219.0 ) 39274605<br>( 526.0 / 169.0 ) 48620335 | ( 14.88 , 1.00 ) ( 0.00 , N/A , 2.2) | 4404.9<br>3542.8 | 1.2380<br>99.0<br>99.0 | 213.7310 | N/A | 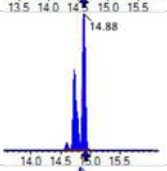 | 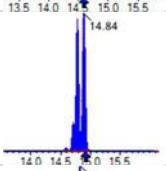 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 11894876<br>( 570.0 / 483.0 ) 5531101 | ( 10.38 , 1.00 ) ( 0.01 , N/A , 0.1) | 7266.9<br>1479.8 | 0.4650<br>100.2<br>100.2 | 50.9080 | N/A | 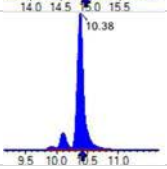 | 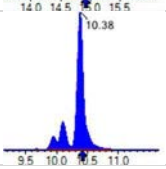 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 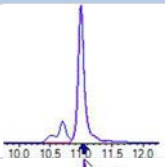 | 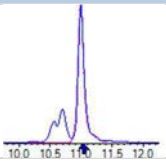 | NR, |
| NMeFOSE | ( 616.0 / 59.0 ) 15548262 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 7738.1 | N/A<br>0.0<br>0.0 | 209.7860 | N/A | 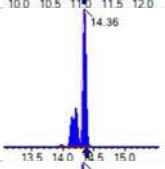 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 13177396 | ( 14.73 , 1.00 ) ( 0.03 , N/A , 0.0) | 7209.8 | N/A<br>0.0<br>0.0 | 213.6710 | N/A | 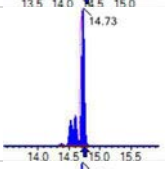 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 3326507<br>( 285.0 / 185.0 ) 8883990 | ( 5.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 2892.0<br>3175.5 | 2.6707<br>95.1<br>95.1 | 54.8320 | N/A | 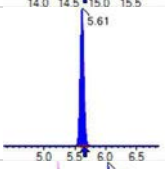 | 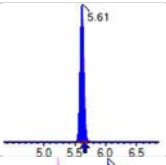 | |
| ADONA | ( 377.0 / 85.0 ) 37445272<br>( 377.0 / 251.0 ) 4192796 | ( 6.77 , 1.21 ) ( N/A , -0.03 , 0.1) | 3377.3<br>3411.7 | 0.1120<br>106.8<br>106.8 | 46.7970 | N/A | 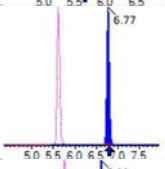 | 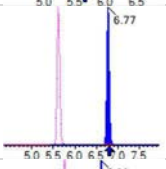 | |
| PFEESA | ( 315.0 / 135.0 ) 14642600<br>( 315.0 / 83.0 ) 8329006 | ( 5.96 , 1.15 ) ( N/A , -0.04 , 0.0) | 3891.0<br>3109.2 | 0.5688<br>88.6<br>88.6 | 92.1100 | N/A | 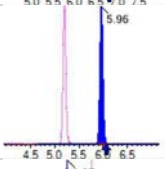 | 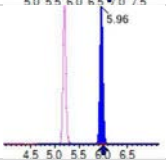 | |
| PFMPA | ( 229.0 / 85.0 ) 6311706 | ( 3.87 , 0.89 ) ( N/A , -0.04 , 0.0) | 13117.5 | N/A<br>0.0<br>0.0 | 100.1500 | N/A | 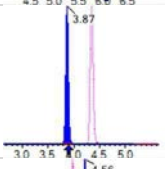 | | |
| PFMBA | ( 279.0 / 85.0 ) 15220419 | ( 4.56 , 1.05 ) ( N/A , -0.04 , 0.0) | 7658.9 | N/A<br>0.0<br>0.0 | 107.2050 | N/A | 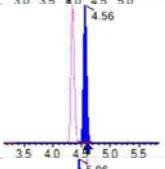 | | |
| NFDHA | ( 295.0 / 201.0 ) 7106610<br>( 295.0 / 85.0 ) 7628719 | ( 5.06 , 0.97 ) ( N/A , -0.04 , -0.2) | 4429.4<br>4187.1 | 1.0735<br>107.9<br>107.9 | 91.6020 | N/A | 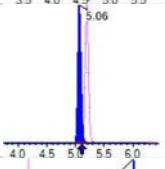 | 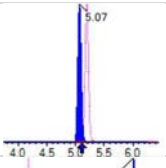 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 43792558<br>( 533.0 / 353.0 ) 14922410 | ( 11.14 , 1.98 ) ( N/A , -0.04 , 0.0) | 3595.8<br>3786.2 | 0.3408<br>106.9<br>106.9 | 49.2630 | N/A | 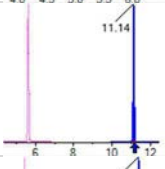 | 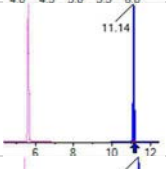 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 30740034<br>( 633.0 / 453.0 ) 10004422 | ( 12.62 , 2.25 ) ( N/A , -0.03 , 0.1) | 4056.4<br>3828.7 | 0.3255<br>95.9<br>95.9 | 44.4940 | N/A | 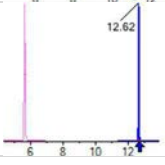 | 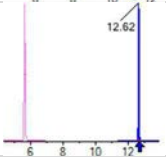 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 27145880<br>( 461.0 / 381.2 ) 10478652 | ( 9.40 , 0.90 )<br>( N/A , -0.04 , -0.1) | 5007.7<br>4849.6 | 0.3860<br>99.9<br>99.9 | 51.3610 | N/A | 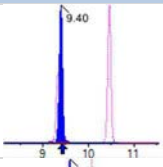 | 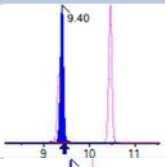 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2874523<br>( 241.0 / 117.0 ) 6492163 | ( 3.92 , 0.90 )<br>( N/A , -0.04 , 0.0) | 9365.4<br>8027.5 | 2.2585<br>102.9<br>102.9 | 195.3420 | N/A | 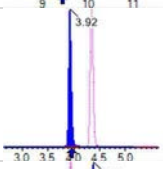 | 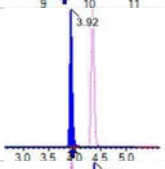 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 11417785<br>( 341.0 / 217.0 ) 17462477 | ( 5.62 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1413.1<br>1415.9 | 1.5294<br>99.9<br>99.9 | 192.0640 | N/A | 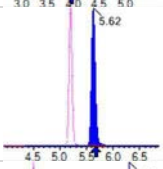 | 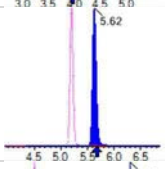 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 24807747<br>( 441.0 / 337.0 ) 21735712 | ( 9.29 , 1.79 )<br>( N/A , -0.04 , 0.1) | 14395.0<br>23388.8 | 0.8762<br>102.6<br>102.6 | 196.4220 | N/A | 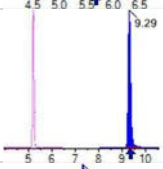 | 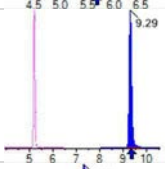 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 14503690<br>( 357.2 / 243.0 ) 1547364 | ( 5.88 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2017.0<br>2021.0 | 0.1067<br>99.5<br>99.5 | 52.1000 | N/A | 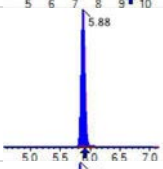 | 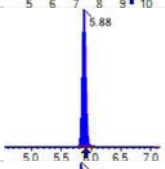 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 13714959<br>( 457.2 / 343.0 ) 570235 | ( 8.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1901.8<br>1195.8 | 0.0416<br>92.6<br>92.6 | 51.8790 | N/A | 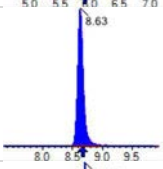 | 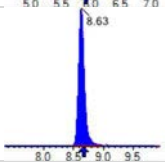 | |
| TDCA | ( 499.0 / 80.0 ) 33897287 | ( 10.45 , 1.00 )<br>( N/A , -0.04 , 0.0) | 48590.1 | N/A<br>0.0<br>0.0 | 51.0080 | N/A | 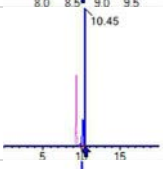 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A ) | N/A | N/A | 0.0000<br>[ 1.0000 ] | 0.0%<br>{ 0.0% } | 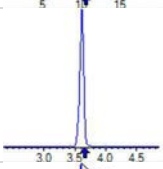 | | NR,IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 114430 | ( 5.20 , N/A )<br>( N/A , -0.04 , N/A ) | 72065.8 | N/A | 0.9690<br>[ 1.0000 ] | 96.9%<br>{ 99.5% } | 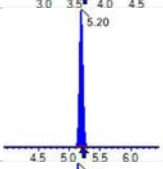 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 368256 | ( 7.45 , N/A )<br>( N/A , -0.03 , N/A ) | 5334.1 | N/A | 0.9490<br>[ 1.0000 ] | 94.9%<br>{ 93.8% } | 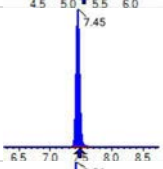 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282658 | ( 9.01 , N/A )<br>( N/A , -0.03 , N/A ) | 1650.3 | N/A | 0.9680<br>[ 1.0000 ] | 96.8%<br>{ 97.3% } | 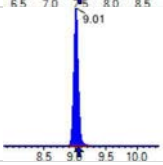 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286370 | ( 10.02 , N/A ) ( N/A , -0.04 , N/A ) | 3201.2 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 105.2% } | 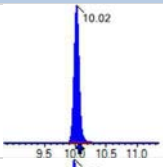 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 982397 | ( 8.08 , N/A ) ( N/A , -0.01 , N/A ) | 4609.5 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 103.3% } | 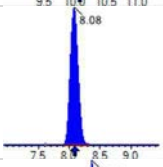 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 829195 | ( 10.47 , N/A ) ( N/A , -0.04 , N/A ) | 4198.3 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 112.1% } | 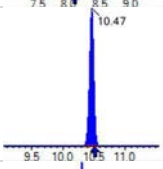 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 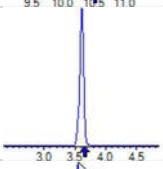 | | NR,S1, |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 686743 | ( 4.34 , N/A ) ( N/A , -0.04 , N/A ) | 4643.4 | N/A | 3.2780 [ 4.0000 ] | 81.9% { 74.2% } | 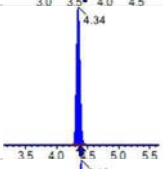 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 470958 | ( 5.19 , N/A ) ( N/A , -0.04 , N/A ) | 11926.8 | N/A | 1.8810 [ 2.0000 ] | 94.1% { 88.0% } | 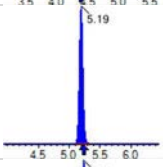 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 533884 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 5860.6 | N/A | 1.9200 [ 2.0000 ] | 96.0% { 93.6% } | 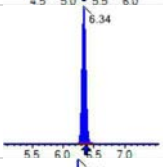 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 771941 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 4563.1 | N/A | 1.9780 [ 2.0000 ] | 98.9% { 102.0% } | 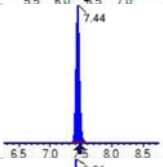 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 280283 | ( 9.01 , N/A ) ( N/A , -0.03 , N/A ) | 7588.4 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 98.7% } | 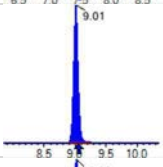 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 306614 | ( 10.02 , N/A ) ( N/A , -0.03 , N/A ) | 1239.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 91.1% } | 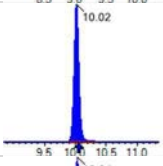 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 324712 | ( 10.94 , N/A ) ( N/A , -0.04 , N/A ) | 1097.9 | N/A | 0.8270 [ 1.0000 ] | 82.7% { 82.8% } | 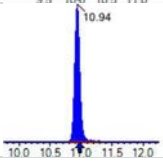 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368717 | ( 11.83 , N/A ) ( N/A , -0.04 , N/A ) | 1365.6 | N/A | 0.9160 [ 1.0000 ] | 91.6% { 92.4% } | 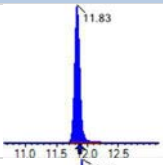 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 330920 | ( 13.11 , N/A ) ( N/A , -0.03 , N/A ) | 1403.1 | N/A | 0.9280 [ 1.0000 ] | 92.8% { 91.4% } | 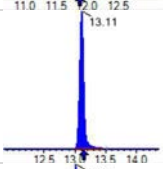 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 576024 | ( 14.01 , N/A ) ( N/A , -0.03 , N/A ) | 2129.5 | N/A | 1.9310 [ 2.0000 ] | 96.6% { 100.8% } | 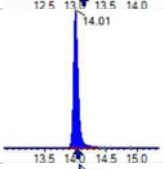 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1477912 | ( 5.38 , N/A ) ( N/A , -0.04 , N/A ) | 950.1 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 93.0% } | 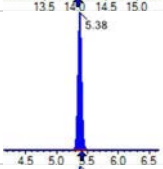 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1421005 | ( 8.07 , N/A ) ( N/A , -0.01 , N/A ) | 5389.1 | N/A | 2.0050 [ 2.0000 ] | 100.3% { 103.5% } | 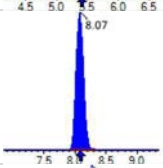 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1696685 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 390.0 | N/A | 1.9230 [ 2.0000 ] | 96.2% { 108.4% } | 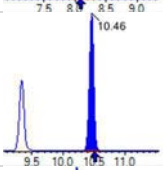 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 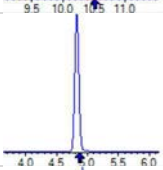 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 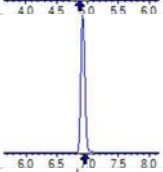 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 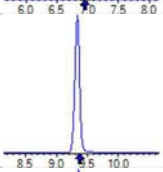 | | S1, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 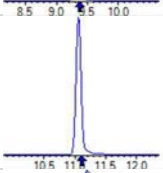 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1719266 | ( 13.28 , N/A ) ( N/A , -0.03 , N/A ) | 3364.9 | N/A | 1.8360 [ 2.0000 ] | 91.8% { 102.1% } | 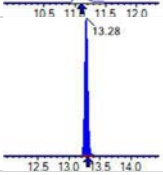 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 430048 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 1664.4 | N/A | 2.0420 [ 2.0000 ] | 102.1% { 116.0% } | 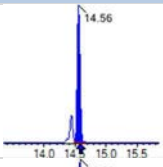  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 324439 | ( 14.88 , N/A ) ( N/A , -0.03 , N/A ) | 2677.9 | N/A | 1.6860 [ 2.0000 ] | 84.3% { 91.2% } | 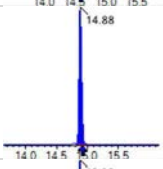  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1013157 | ( 10.38 , N/A ) ( N/A , -0.04 , N/A ) | 2656.2 | N/A | 3.3080 [ 4.0000 ] | 82.7% { 87.4% } | 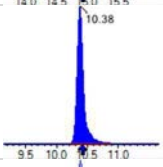  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 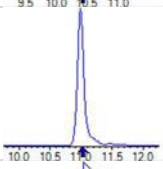 | | S1, |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1369214 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 2597.7 | N/A | 17.4060 [ 20.0000 ] | 87.0% { 96.4% } | 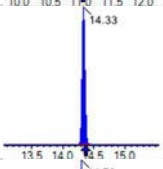  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1294812 | ( 14.70 , N/A ) ( N/A , -0.03 , N/A ) | 4527.9 | N/A | 17.5760 [ 20.0000 ] | 87.9% { 97.0% } | 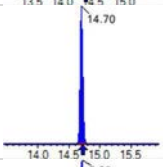  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 826643 | ( 5.62 , N/A ) ( N/A , -0.04 , N/A ) | 2450.0 | N/A | 7.6230 [ 8.0000 ] | 95.3% { 91.5% } | 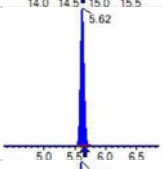  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 529449 | ( 5.89 , N/A ) ( N/A , -0.04 , N/A ) | 2268.9 | N/A | 1.6970 [ 2.0000 ] | 84.8% { 93.3% } | 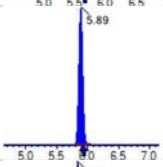  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 639678 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 1130.5 | N/A | 1.8190 [ 2.0000 ] | 91.0% { 97.8% } | 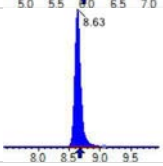  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0121L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.97L | -0.8L | 30.00L |
| PFPeAL | 4.00L | 3.67L | -8.2L | 30.00L |
| PFHxAL | 4.00L | 3.66L | -8.6L | 30.00L |
| PFHpAL | 4.00L | 3.76L | -6.0L | 30.00L |
| PFOAL | 4.00L | 3.43L | -14.3L | 30.00L |
| PFNAL | 4.00L | 3.69L | -7.7L | 30.00L |
| PFDAL | 4.00L | 3.83L | -4.2L | 30.00L |
| PFUnAL | 4.00L | 3.57L | -10.7L | 30.00L |
| PFDoAL | 4.00L | 3.28L | -18.1L | 30.00L |
| PFTrDAL | 4.00L | 3.41L | -14.7L | 30.00L |
| PFTeDAL | 4.00L | 4.03L | 0.6L | 30.00L |
| PFHxDAL | 4.00L | 3.11L | -22.2L | 30.00L |
| PFODAL | 4.00L | 3.42L | -14.5L | 30.00L |
| PFBSL | 4.00L | 3.89L | -2.7L | 30.00L |
| PFPeSL | 4.00L | 3.91L | -2.2L | 30.00L |
| PFHxSL | 4.00L | 3.82L | -4.4L | 30.00L |
| PFHpSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFOSL | 4.00L | 3.43L | -14.3L | 30.00L |
| PFNSL | 4.00L | 3.71L | -7.3L | 30.00L |
| PFDSL | 4.00L | 3.94L | -1.4L | 30.00L |
| PFDoSL | 4.00L | 3.86L | -3.6L | 30.00L |
| 4:2FTSL | 4.00L | 4.10L | 2.5L | 30.00L |
| 6:2FTSL | 4.00L | 4.19L | 4.9L | 30.00L |
| 8:2FTSL | 4.00L | 3.70L | -7.6L | 30.00L |
| 10:2FTSL | 3.86L | 4.07L | 5.5L | 30.00L |
| PFOSAL | 4.00L | 3.70L | -7.5L | 30.00L |
| NMeFOSAL | 4.00L | 3.64L | -9.1L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0121L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.47L | -13.3L | 30.00L |
| NMeFOSAAL | 4.00L | 3.84L | -4.1L | 30.00L |
| NEtFOSAAL | 4.00L | 3.67L | -8.2L | 30.00L |
| NMeFOSEL | 4.00L | 4.04L | 0.9L | 30.00L |
| NEtFOSEL | 4.00L | 3.97L | -0.7L | 30.00L |
| HFPO-DAL | 4.00L | 3.83L | -4.2L | 30.00L |
| ADONAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFEESAL | 4.00L | 3.34L | -16.5L | 30.00L |
| PFMPAL | 4.00L | 3.39L | -15.2L | 30.00L |
| PFMBAL | 4.00L | 3.40L | -15.0L | 30.00L |
| NFDHAL | 4.00L | 3.65L | -8.7L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.71L | -7.1L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 3.92L | -2.0L | 30.00L |
| 3:3FTCAL | 4.00L | 4.15L | 3.7L | 30.00L |
| 5:3FTCAL | 4.00L | 3.77L | -5.7L | 30.00L |
| 7:3FTCAL | 4.00L | 3.91L | -2.1L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.69L | 8.6L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.82L | 20.6L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.7L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.20L | 10.2L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.11L | 11.3L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.14L | 14.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.14L | 13.8L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.15L | 15.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.34L | 17.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.22L | 11.0L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.19L | 9.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0121L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.22L | 11.2L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 5.14L | 28.6L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.87L | 21.7L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 5.00L | 25.0L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 9.84L | 23.0L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.21L | 10.3L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.22L | 11.2L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.25L | 12.6L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.59L | 14.7L | 30.00L |
| D7-NMEFOSEL | 20.0L | 23.3L | 16.7L | 30.00L |
| D9-NETFOSEL | 20.0L | 23.2L | 16.1L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.92L | 11.4L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 235166<br>( 163.0 / 69.0 ) 6507 | ( 2.44 , 0.68 ) ( N/A , -0.05 , 0.2) | 436.6<br>112.0 | 0.0277<br>101.0<br>101.0 | 3.2530 | N/A | 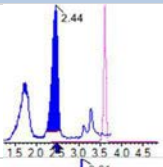 | 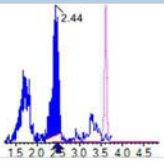 | |
| PFBA | ( 213.0 / 169.0 ) 1360095 | ( 3.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 959.5 | N/A<br>0.0<br>0.0 | 3.9690 | N/A | 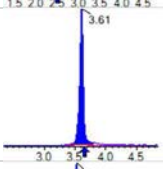 | | |
| PFPeA | ( 263.0 / 219.0 ) 864174<br>( 263.0 / 69.0 ) 10090 | ( 4.33 , 1.00 ) ( 0.00 , N/A , 0.2) | 1777.4<br>171.8 | 0.0117<br>98.1<br>98.1 | 3.6710 | N/A | 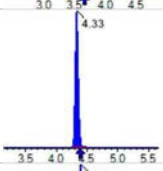 | 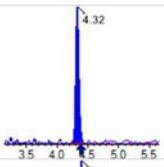 | |
| PFHxA | ( 313.0 / 269.0 ) 915352<br>( 313.0 / 119.0 ) 101986 | ( 5.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 2599.0<br>1473.6 | 0.1114<br>100.2<br>100.2 | 3.6550 | N/A | 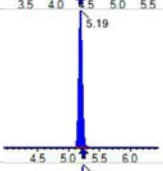 | 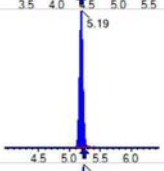 | |
| PFHpA | ( 363.0 / 319.0 ) 1071859<br>( 363.0 / 169.0 ) 316940 | ( 6.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 3462.6<br>2670.7 | 0.2957<br>96.7<br>96.7 | 3.7610 | N/A | 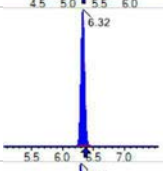 | 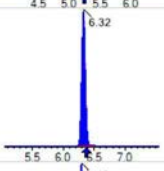 | |
| PFOA | ( 413.0 / 369.0 ) 1421044<br>( 413.0 / 169.0 ) 517030 | ( 7.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1111.6<br>1160.2 | 0.3638<br>101.8<br>101.8 | 3.4280 | N/A | 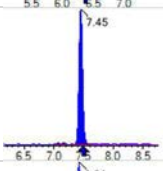 | 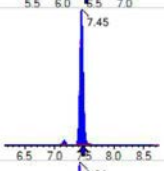 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 1081992<br>( 463.0 / 169.0 ) 275627 | ( 9.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 1996.5<br>2033.4 | 0.2547<br>103.7<br>103.7 | 3.6920 | N/A | 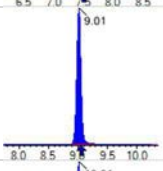 | 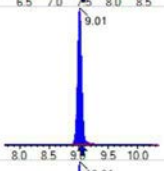 | |
| PFDA | ( 513.0 / 469.0 ) 1273534<br>( 513.0 / 169.0 ) 143723 | ( 10.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 4506.3<br>3091.9 | 0.1129<br>94.7<br>94.7 | 3.8300 | N/A | 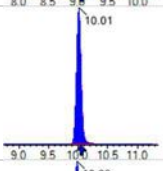 | 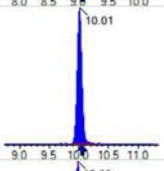 | |
| PFUnA | ( 563.0 / 519.0 ) 1316985<br>( 563.0 / 169.0 ) 190676 | ( 10.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 1275.4<br>513.7 | 0.1448<br>93.5<br>93.5 | 3.5740 | N/A | 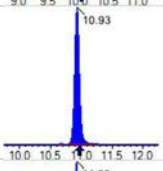 | 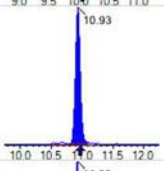 | |
| PFDoA | ( 613.0 / 569.0 ) 1362545<br>( 613.0 / 169.0 ) 209953 | ( 11.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1352.3<br>679.2 | 0.1541<br>101.5<br>101.5 | 3.2770 | N/A | 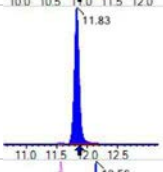 | 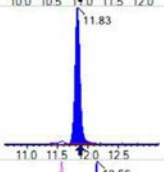 | |
| PFTrDA | ( 663.0 / 619.0 ) 1380135<br>( 663.0 / 169.0 ) 370899 | ( 12.56 , 1.06 ) ( N/A , -0.04 , 0.0) | 1223.6<br>711.5 | 0.2687<br>99.8<br>99.8 | 3.4140 | N/A | 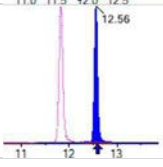 | 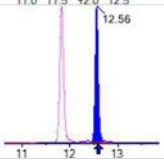 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1393663<br>( 713.0 / 169.0 ) 368951 | ( 13.10 , 1.00 ) ( 0.00 , N/A , 0.0) | 1434.6<br>766.9 | 0.2647<br>97.6<br>97.6 | 4.0260 | N/A | 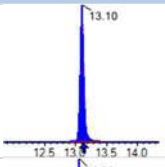 | 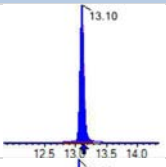 | |
| PFHxDA | ( 813.0 / 769.0 ) 921289<br>( 813.0 / 169.0 ) 252019 | ( 14.01 , 1.00 ) ( 0.00 , N/A , -0.1) | 1667.1<br>757.2 | 0.2736<br>104.6<br>104.6 | 3.1120 | N/A | 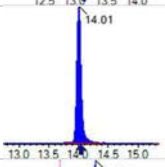 | 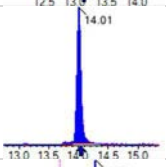 | |
| PFODA | ( 913.0 / 869.0 ) 641579<br>( 913.0 / 169.0 ) 199675 | ( 14.74 , 1.05 ) ( N/A , -0.04 , 0.1) | 1546.6<br>639.9 | 0.3112<br>99.3<br>99.3 | 3.4210 | N/A | 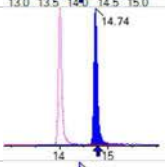 | 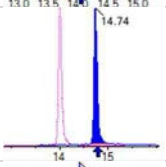 | |
| PFBS | ( 299.0 / 80.0 ) 1513995<br>( 299.0 / 99.0 ) 1113378 | ( 5.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 3017.3<br>2498.3 | 0.7354<br>99.3<br>99.3 | 3.8920 | N/A | 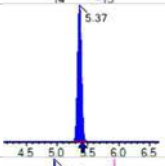 | 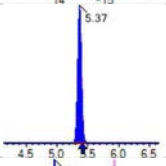 | |
| PFPeS | ( 349.0 / 80.0 ) 3924753<br>( 349.0 / 99.0 ) 1382683 | ( 6.65 , 0.81 ) ( N/A , -0.04 , -0.1) | 4924.1<br>4084.0 | 0.3523<br>103.1<br>103.1 | 3.9110 | N/A | 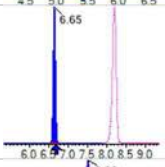 | 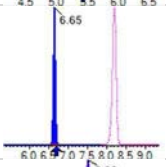 | |
| PFHxS | ( 399.0 / 80.0 ) 4675678<br>( 399.0 / 99.0 ) 1488309 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.1) | 5118.6<br>5169.5 | 0.3183<br>97.0<br>97.0 | 3.8230 | N/A | 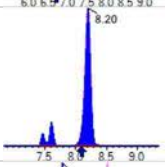 | 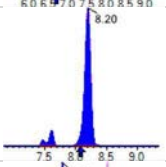 | |
| PFHpS | ( 449.0 / 80.0 ) 3779274<br>( 449.0 / 99.0 ) 1027436 | ( 9.50 , 0.91 ) ( N/A , -0.04 , 0.2) | 2759.4<br>2847.2 | 0.2719<br>104.2<br>104.2 | 3.6680 | N/A | 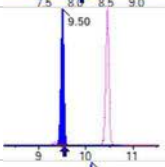 | 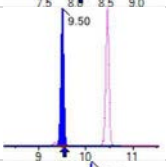 | |
| PFOS | ( 499.0 / 80.0 ) 3432752<br>( 499.0 / 99.0 ) 768658 | ( 10.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1979.3<br>5764.5 | 0.2239<br>96.9<br>96.9 | 3.4290 | N/A | 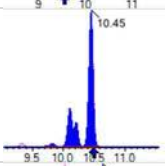 | 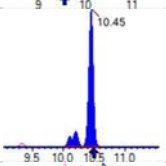 | |
| PFNS | ( 549.0 / 80.0 ) 3385234<br>( 549.0 / 99.0 ) 909095 | ( 11.34 , 1.08 ) ( N/A , -0.04 , 0.0) | 3157.1<br>2600.5 | 0.2685<br>100.2<br>100.2 | 3.7100 | N/A | 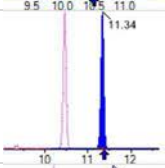 | 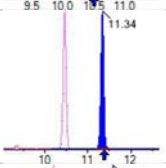 | |
| PFDS | ( 599.0 / 80.0 ) 4398381<br>( 599.0 / 99.0 ) 1122436 | ( 12.15 , 1.16 ) ( N/A , -0.04 , 0.0) | 3445.1<br>2327.6 | 0.2552<br>100.2<br>100.2 | 3.9430 | N/A | 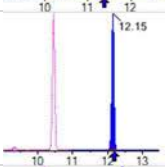 | 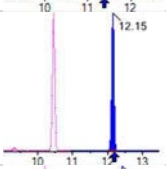 | |
| PFDoS | ( 699.0 / 80.0 ) 4164049<br>( 699.0 / 99.0 ) 969806 | ( 13.17 , 1.26 ) ( N/A , -0.03 , 0.0) | 5492.4<br>4447.0 | 0.2329<br>104.2<br>104.2 | 3.8580 | N/A | 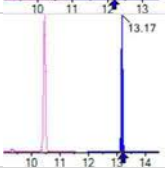 | 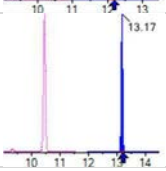 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2181822<br>( 327.0 / 81.0 ) 1810736 | ( 4.81 , 1.00 ) ( -0.01 , N/A , 0.1) | 4312.6<br>3339.1 | 0.8299<br>97.3<br>97.3 | 4.1020 | N/A | 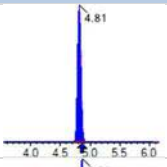 | 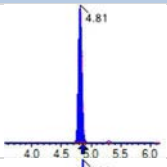 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1668262<br>( 427.0 / 81.0 ) 2042250 | ( 6.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 5547.4<br>6669.4 | 1.2242<br>94.9<br>94.9 | 4.1950 | N/A | 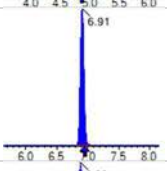 | 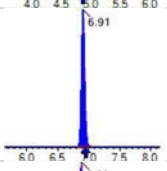 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1530234<br>( 527.0 / 81.0 ) 1580240 | ( 9.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 2841.5<br>2440.7 | 1.0327<br>93.6<br>93.6 | 3.6960 | N/A | 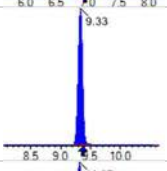 | 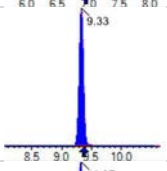 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1449318<br>( 627.0 / 81.0 ) 2006754 | ( 11.07 , 1.00 ) ( 0.01 , N/A , -0.1) | 1302.3<br>1308.2 | 1.3846<br>96.3<br>96.3 | 4.0730 | N/A | 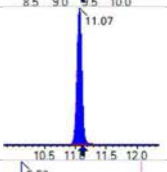 | 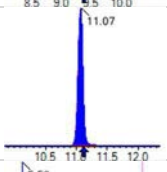 | |
| PFBSA | ( 297.9 / 78.0 ) 2735385<br>( 297.9 / 278.0 ) 4473 | ( 5.53 , 0.38 ) ( N/A , -0.03 , -0.2) | 1976.1<br>51.4 | 0.0016<br>126.3<br>126.3 | 4.3780 | N/A | 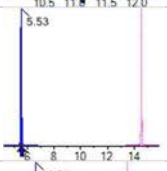 | 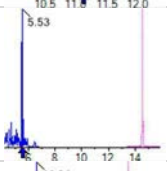 | |
| PFHxSA | ( 397.9 / 78.0 ) 4599620<br>( 397.9 / 378.0 ) 19304 | ( 11.21 , 0.75 ) ( N/A , -0.02 , 0.0) | 1246.5<br>292.1 | 0.0042<br>103.9<br>103.9 | 3.8380 | N/A | 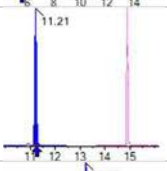 | 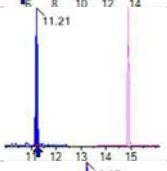 | |
| PFOSA | ( 498.0 / 78.0 ) 3252050<br>( 498.0 / 478.0 ) 46246 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 1959.8<br>597.2 | 0.0142<br>96.7<br>96.7 | 3.7010 | N/A | 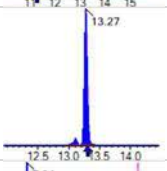 | 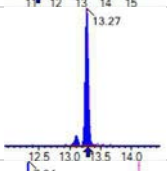 | MI5 DG 2024-03-29 |
| TFSI | ( 279.7 / 147.0 ) 5684699<br>( 279.7 / 211.0 ) 509582 | ( 7.04 , 0.53 ) ( N/A , -0.04 , -0.1) | 83.3<br>2516728.3 | 0.0896<br>101.3<br>101.3 | 3.7040 | N/A | 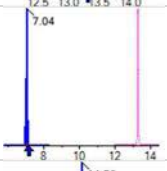 | 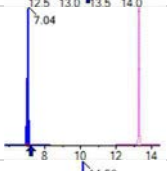 | |
| NMeFOSA | ( 512.0 / 219.0 ) 665367<br>( 512.0 / 169.0 ) 433567 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.0) | 5517.5<br>2636.5 | 0.6516<br>85.0<br>85.0 | 3.6370 | N/A | 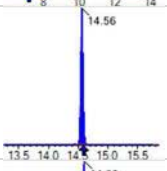 | 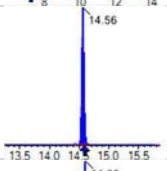 | |
| NEtFOSA | ( 526.0 / 219.0 ) 748227<br>( 526.0 / 169.0 ) 821322 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 0.1) | 7045.4<br>6317.3 | 1.0977<br>87.8<br>87.8 | 3.4690 | N/A | 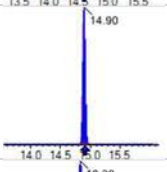 | 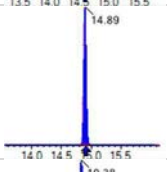 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1134272<br>( 570.0 / 483.0 ) 512190 | ( 10.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3365.8<br>1434.9 | 0.4516<br>97.3<br>97.3 | 3.8380 | N/A | 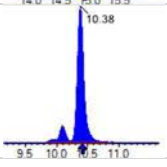 | 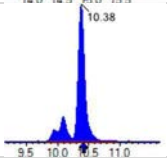 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 993289<br>( 584.0 / 526.0 ) 622352 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1704.2<br>890.6 | 0.6266<br>104.4<br>104.4 | 3.6740 | N/A | 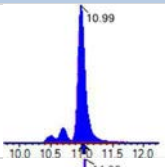 | 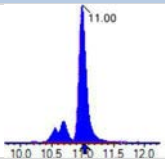 | |
| NMeFOSE | ( 616.0 / 59.0 ) 352402 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2726.5 | N/A<br>0.0<br>0.0 | 4.0360 | N/A | 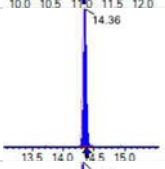 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 284314 | ( 14.73 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2917.8 | N/A<br>0.0<br>0.0 | 3.9720 | N/A | 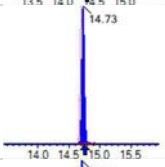 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 253881<br>( 285.0 / 185.0 ) 709307 | ( 5.60 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1622.4<br>2003.2 | 2.7939<br>99.5<br>99.5 | 3.8330 | N/A | 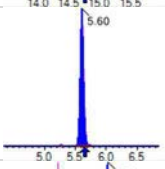 | 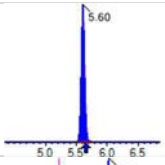 | |
| ADONA | ( 377.0 / 85.0 ) 3254890<br>( 377.0 / 251.0 ) 340133 | ( 6.76 , 1.21 )<br>( N/A , -0.04 , 0.1) | 3009.5<br>1361.5 | 0.1045<br>99.6<br>99.6 | 3.7260 | N/A | 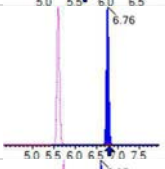 | 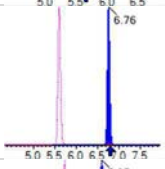 | |
| PFEESA | ( 315.0 / 135.0 ) 608573<br>( 315.0 / 83.0 ) 352500 | ( 5.95 , 1.15 )<br>( N/A , -0.04 , 0.1) | 2920.8<br>1029.1 | 0.5792<br>90.2<br>90.2 | 3.3400 | N/A | 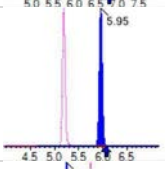 | 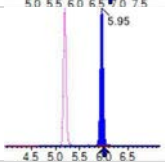 | |
| PFMPA | ( 229.0 / 85.0 ) 293727 | ( 3.86 , 0.89 )<br>( N/A , -0.05 , 0.0) | 6806.6 | N/A<br>0.0<br>0.0 | 3.3940 | N/A | 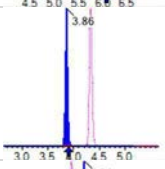 | | |
| PFMBA | ( 279.0 / 85.0 ) 662742 | ( 4.54 , 1.05 )<br>( N/A , -0.06 , 0.0) | 3090.5 | N/A<br>0.0<br>0.0 | 3.3990 | N/A | 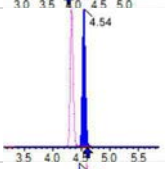 | | |
| NFDHA | ( 295.0 / 201.0 ) 324787<br>( 295.0 / 85.0 ) 331785 | ( 5.06 , 0.98 )<br>( N/A , -0.04 , 0.1) | 2862.8<br>3125.0 | 1.0215<br>102.7<br>102.7 | 3.6530 | N/A | 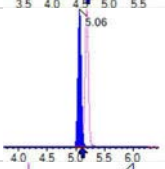 | 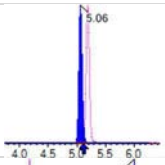 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3604854<br>( 533.0 / 353.0 ) 1165515 | ( 11.13 , 1.98 )<br>( N/A , -0.04 , 0.1) | 3561.2<br>3527.4 | 0.3233<br>101.4<br>101.4 | 3.7140 | N/A | 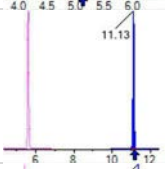 | 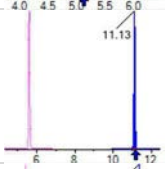 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2957374<br>( 633.0 / 453.0 ) 1020314 | ( 12.62 , 2.25 )<br>( N/A , -0.04 , 0.0) | 4043.5<br>3488.3 | 0.3450<br>101.7<br>101.7 | 3.9210 | N/A | 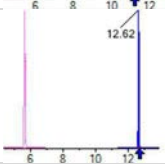 | 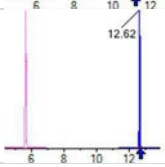 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1825909<br>( 461.0 / 381.2 ) 677380 | ( 9.40 , 0.90 ) ( N/A , -0.04 , 0.0) | 2232.1<br>2205.4 | 0.3710<br>96.0<br>96.0 | 3.3980 | N/A | 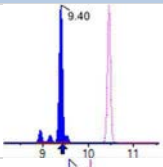 | 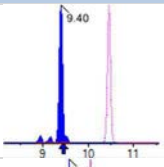 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 83819<br>( 241.0 / 117.0 ) 182168 | ( 3.91 , 0.90 ) ( N/A , -0.05 , 0.0) | 2348.9<br>1073.6 | 2.1733<br>99.0<br>99.0 | 4.1480 | N/A | 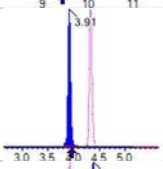 | 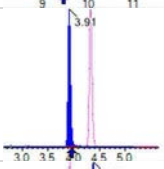 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 257037<br>( 341.0 / 217.0 ) 372405 | ( 5.62 , 1.08 ) ( N/A , -0.04 , 0.0) | 1019.1<br>859.4 | 1.4488<br>94.6<br>94.6 | 3.7730 | N/A | 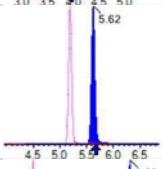 | 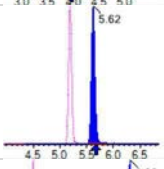 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 566539<br>( 441.0 / 337.0 ) 484100 | ( 9.33 , 1.80 ) ( N/A , 0.00 , 0.1) | 3699.8<br>23194.6 | 0.8545<br>100.0<br>100.0 | 3.9140 | N/A | 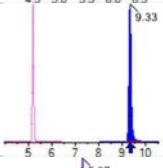 | 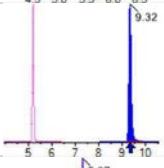 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1383618<br>( 357.2 / 243.0 ) 137847 | ( 5.87 , 1.00 ) ( -0.01 , N/A , -0.1) | 1666.2<br>1141.7 | 0.0996<br>92.9<br>92.9 | 4.0580 | N/A | 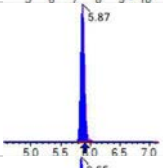 | 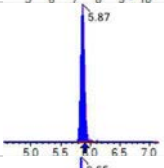 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1241005<br>( 457.2 / 343.0 ) 51903 | ( 8.65 , 1.00 ) ( 0.00 , N/A , 0.1) | 1338.4<br>411.4 | 0.0418<br>93.2<br>93.2 | 4.0610 | N/A | 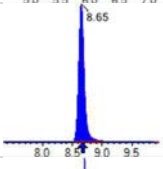 | 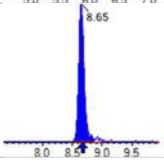 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 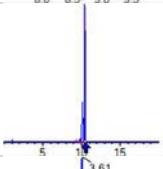 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 271996 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 1637.2 | N/A | 0.9640 [ 1.0000 ] | 96.4% { 98.1% } | 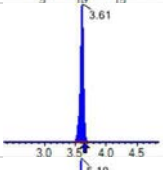 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106809 | ( 5.19 , N/A ) ( N/A , -0.05 , N/A ) | 15822.4 | N/A | 0.9050 [ 1.0000 ] | 90.5% { 92.8% } | 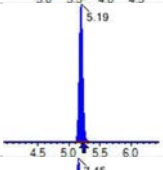 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353445 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 6398.2 | N/A | 0.9110 [ 1.0000 ] | 91.1% { 90.0% } | 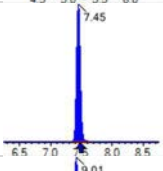 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 263587 | ( 9.01 , N/A ) ( N/A , -0.03 , N/A ) | 1791.1 | N/A | 0.9020 [ 1.0000 ] | 90.2% { 90.7% } | 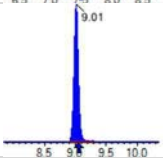 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 258924 | ( 10.02 , N/A ) ( N/A , -0.04 , N/A ) | 3093.0 | N/A | 0.9030 [ 1.0000 ] | 90.3% { 95.1% } | 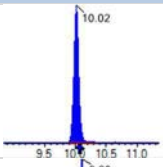 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 883755 | ( 8.20 , N/A ) ( N/A , 0.11 , N/A ) | 6048.5 | N/A | 0.9000 [ 1.0000 ] | 90.0% { 92.9% } | 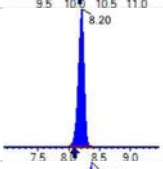 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 728766 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 2669.9 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 98.5% } | 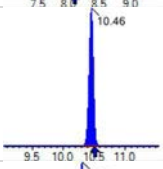 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2555252 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 190912.6 | N/A | 8.6910 [ 8.0000 ] | 108.6% { 104.8% } | 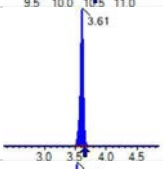 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 943044 | ( 4.33 , N/A ) ( N/A , -0.06 , N/A ) | 7003.3 | N/A | 4.8230 [ 4.0000 ] | 120.6% { 102.0% } | 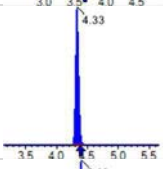 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 539734 | ( 5.19 , N/A ) ( N/A , -0.05 , N/A ) | 7182.2 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 100.9% } | 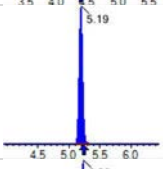 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 574412 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 9188.4 | N/A | 2.2130 [ 2.0000 ] | 110.7% { 100.7% } | 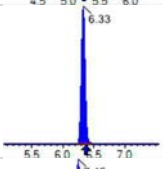 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 825628 | ( 7.45 , N/A ) ( N/A , -0.03 , N/A ) | 5715.1 | N/A | 2.2040 [ 2.0000 ] | 110.2% { 109.1% } | 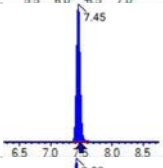 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291694 | ( 9.02 , N/A ) ( N/A , -0.03 , N/A ) | 4491.4 | N/A | 1.1210 [ 1.0000 ] | 112.1% { 102.7% } | 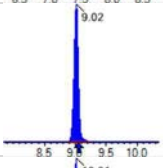 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 332917 | ( 10.01 , N/A ) ( N/A , -0.04 , N/A ) | 1528.0 | N/A | 1.1130 [ 1.0000 ] | 111.3% { 98.9% } | 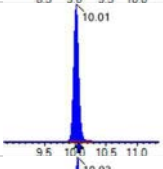 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 405814 | ( 10.93 , N/A ) ( N/A , -0.04 , N/A ) | 1190.6 | N/A | 1.1440 [ 1.0000 ] | 114.4% { 103.5% } | 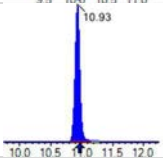 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414363 | ( 11.83 , N/A ) ( N/A , -0.04 , N/A ) | 1464.6 | N/A | 1.1380 [ 1.0000 ] | 113.8% { 103.8% } | 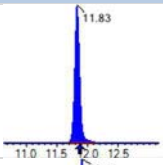 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 370739 | ( 13.11 , N/A ) ( N/A , -0.04 , N/A ) | 1588.6 | N/A | 1.1500 [ 1.0000 ] | 115.0% { 102.3% } | 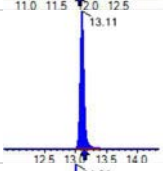 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 632035 | ( 14.01 , N/A ) ( N/A , -0.03 , N/A ) | 2389.9 | N/A | 2.3440 [ 2.0000 ] | 117.2% { 110.6% } | 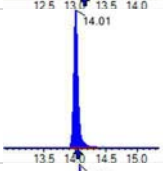 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1582099 | ( 5.37 , N/A ) ( N/A , -0.05 , N/A ) | 1295.3 | N/A | 2.2210 [ 2.0000 ] | 111.0% { 99.6% } | 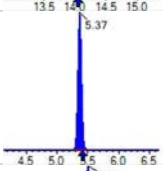 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1396656 | ( 8.20 , N/A ) ( N/A , 0.12 , N/A ) | 6139.5 | N/A | 2.1910 [ 2.0000 ] | 109.5% { 101.7% } | 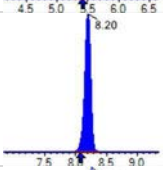 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1724941 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 1537.8 | N/A | 2.2250 [ 2.0000 ] | 111.2% { 110.2% } | 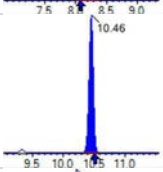 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 805955 | ( 4.82 , N/A ) ( N/A , -0.04 , N/A ) | 66.0 | N/A | 5.1430 [ 4.0000 ] | 128.6% { 115.5% } | 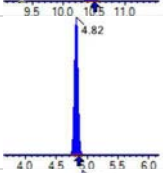 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1874169 | ( 6.91 , N/A ) ( N/A , -0.04 , N/A ) | 7706.7 | N/A | 4.8680 [ 4.0000 ] | 121.7% { 113.0% } | 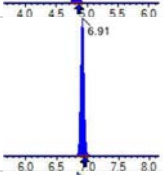 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1683640 | ( 9.33 , N/A ) ( N/A , -0.03 , N/A ) | 2452.3 | N/A | 4.9990 [ 4.0000 ] | 125.0% { 113.9% } | 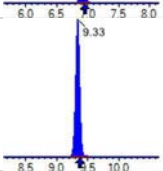 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3584382 | ( 11.06 , N/A ) ( N/A , -0.04 , N/A ) | 1791.4 | N/A | 9.8370 [ 8.0000 ] | 123.0% { 125.9% } | 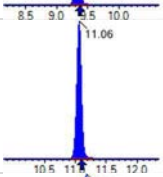 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1816057 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 3294.6 | N/A | 2.2060 [ 2.0000 ] | 110.3% { 107.9% } | 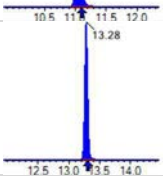 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 411717 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2447.6 | N/A | 2.2250 [ 2.0000 ] | 111.2% { 111.1% } | 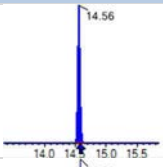 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 380831 | ( 14.89 , N/A ) ( N/A , -0.02 , N/A ) | 2980.8 | N/A | 2.2510 [ 2.0000 ] | 112.6% { 107.1% } | 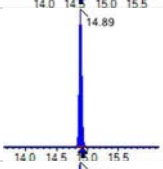 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1281618 | ( 10.38 , N/A ) ( N/A , -0.04 , N/A ) | 3452.4 | N/A | 4.7610 [ 4.0000 ] | 119.0% { 110.6% } | 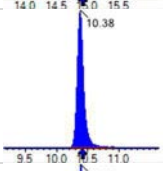 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1114793 | ( 10.98 , N/A ) ( N/A , -0.04 , N/A ) | 2548.9 | N/A | 4.5880 [ 4.0000 ] | 114.7% { 107.9% } | 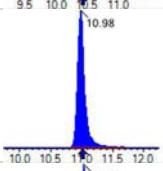 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1612975 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2824.9 | N/A | 23.3300 [ 20.0000 ] | 116.7% { 113.6% } | 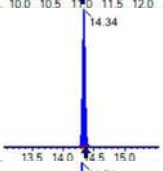 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1502982 | ( 14.71 , N/A ) ( N/A , -0.02 , N/A ) | 4878.2 | N/A | 23.2130 [ 20.0000 ] | 116.1% { 112.6% } | 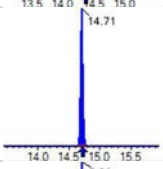 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 902456 | ( 5.61 , N/A ) ( N/A , -0.04 , N/A ) | 2389.7 | N/A | 8.9160 [ 8.0000 ] | 111.4% { 99.9% } | 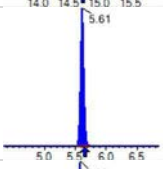 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 648395 | ( 5.88 , N/A ) ( N/A , -0.04 , N/A ) | 1841.6 | N/A | 2.2980 [ 2.0000 ] | 114.9% { 114.2% } | 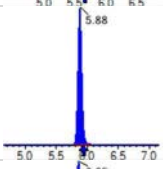 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 739387 | ( 8.65 , N/A ) ( N/A , -0.02 , N/A ) | 1409.3 | N/A | 2.3260 [ 2.0000 ] | 116.3% { 113.1% } | 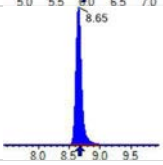 | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0121L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2413019L

**Laboratory ID:W**SD01096-LCV1L

**Sequence:W**SD01096L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.380L | -5.1L | 30.00L |
| PFPeAL | 0.200L | 0.191L | -4.3L | 30.00L |
| PFHxAL | 0.100L | 0.0803L | -19.7L | 30.00L |
| PFHpAL | 0.100L | 0.0940L | -6.0L | 30.00L |
| PFOAL | 0.100L | 0.105L | 4.8L | 30.00L |
| PFNAL | 0.100L | 0.0816L | -18.4L | 30.00L |
| PFDAL | 0.100L | 0.0929L | -7.1L | 30.00L |
| PFUnAL | 0.100L | 0.0891L | -10.9L | 30.00L |
| PFDoAL | 0.100L | 0.0950L | -5.0L | 30.00L |
| PFTrDAL | 0.100L | 0.0951L | -4.9L | 30.00L |
| PFTeDAL | 0.100L | 0.0901L | -9.9L | 30.00L |
| PFBSL | 0.0885L | 0.0833L | -5.8L | 30.00L |
| PFPeSL | 0.0940L | 0.0865L | -8.0L | 30.00L |
| PFHxSL | 0.0915L | 0.0835L | -8.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0823L | -13.8L | 30.00L |
| PFOSL | 0.0930L | 0.0958L | 3.0L | 30.00L |
| PFNSL | 0.0960L | 0.0886L | -7.7L | 30.00L |
| PFDSL | 0.0965L | 0.0979L | 1.5L | 30.00L |
| PFDoSL | 0.0970L | 0.0894L | -7.9L | 30.00L |
| 4:2FTSL | 0.375L | 0.364L | -2.9L | 30.00L |
| 6:2FTSL | 0.380L | 0.355L | -6.5L | 30.00L |
| 8:2FTSL | 0.384L | 0.304L | -20.9L | 30.00L |
| PFOSAL | 0.100L | 0.0907L | -9.3L | 30.00L |
| NMeFOSAL | 0.400L | 0.368L | -7.9L | 30.00L |
| NEtFOSAL | 0.400L | 0.349L | -12.7L | 30.00L |
| NMeFOSAAL | 0.100L | 0.104L | 4.4L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0870L | -13.0L | 30.00L |
| NMeFOSEL | 0.400L | 0.362L | -9.5L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0121L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2413019L

**Laboratory ID:W**SD01096-LCV1L

**Sequence:W**SD01096L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NEtFOSEL | 0.400L | 0.390L | -2.6L | 30.00L |
| HFPO-DAL | 0.100L | 0.0757L | -24.3L | 30.00L |
| ADONAL | 0.0945L | 0.0916L | -3.1L | 30.00L |
| PFEESAL | 0.178L | 0.137L | -22.8L | 30.00L |
| PFMPAL | 0.200L | 0.165L | -17.3L | 30.00L |
| PFMBAL | 0.200L | 0.187L | -6.3L | 30.00L |
| NFDHAL | 0.200L | 0.149L | -25.5L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0831L | -11.1L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0917L | -3.0L | 30.00L |
| 3:3FTCAL | 0.400L | 0.404L | 0.9L | 30.00L |
| 5:3FTCAL | 0.400L | 0.378L | -5.4L | 30.00L |
| 7:3FTCAL | 0.400L | 0.391L | -2.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 10636<br>( 163.0 / 69.0 ) 296 | ( 2.46 , 0.68 ) ( N/A , 0.00 , -0.4) | 46.9<br>30.3 | 0.0279<br>101.6<br>106.2 | 0.1540<br>[ 0.2000 ] | 76.9% | 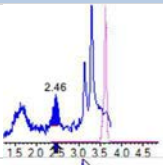 | 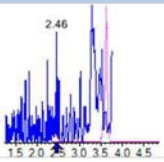 | |
| PFBA | ( 213.0 / 169.0 ) 220352 | ( 3.63 , 1.00 ) ( 0.01 , N/A , 0.0) | 172.1 | N/A<br>0.0<br>0.0 | 0.3800<br>[ 0.4000 ] | 94.9% | 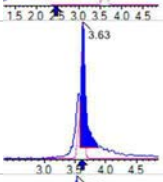 | | |
| PFPeA | ( 263.0 / 219.0 ) 42581<br>( 263.0 / 69.0 ) 521 | ( 4.33 , 1.00 ) ( 0.00 , N/A , -0.2) | 250.3<br>12.6 | 0.0122<br>102.7<br>114.9 | 0.1910<br>[ 0.2000 ] | 95.7% | 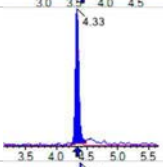 | 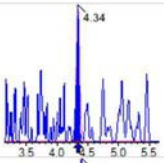 | |
| PFHxA | ( 313.0 / 269.0 ) 19483<br>( 313.0 / 119.0 ) 2906 | ( 5.19 , 1.00 ) ( 0.00 , N/A , -0.1) | 159.5<br>62.1 | 0.1492<br>134.1<br>125.9 | 0.0800<br>[ 0.1000 ] | 80.3% | 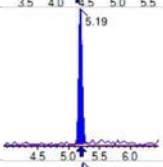 | 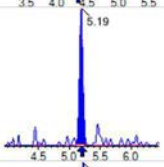 | |
| PFHpA | ( 363.0 / 319.0 ) 27938<br>( 363.0 / 169.0 ) 9159 | ( 6.32 , 1.00 ) ( 0.00 , N/A , 0.2) | 256.4<br>246.8 | 0.3278<br>107.3<br>106.5 | 0.0940<br>[ 0.1000 ] | 94.0% | 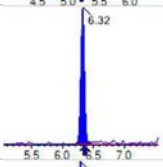 | 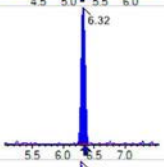 | |
| PFOA | ( 413.0 / 369.0 ) 43742<br>( 413.0 / 169.0 ) 13203 | ( 7.44 , 1.00 ) ( 0.00 , N/A , 0.1) | 89.2<br>102.7 | 0.3018<br>84.4<br>85.1 | 0.1050<br>[ 0.1000 ] | 104.8% | 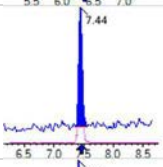 | 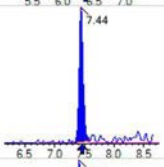 | |
| PFNA | ( 463.0 / 419.0 ) 24535<br>( 463.0 / 169.0 ) 6196 | ( 9.01 , 1.00 ) ( 0.01 , N/A , 0.4) | 317.2<br>168.8 | 0.2526<br>102.8<br>98.5 | 0.0820<br>[ 0.1000 ] | 81.6% | 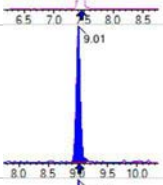 | 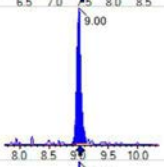 | |
| PFDA | ( 513.0 / 469.0 ) 31183<br>( 513.0 / 169.0 ) 3550 | ( 10.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 306.3<br>2632.3 | 0.1138<br>95.5<br>93.5 | 0.0930<br>[ 0.1000 ] | 92.9% | 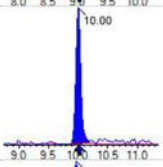 | 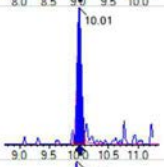 | |
| PFUnA | ( 563.0 / 519.0 ) 33235<br>( 563.0 / 169.0 ) 4697 | ( 10.92 , 1.00 ) ( 0.00 , N/A , 0.8) | 220.5<br>96.4 | 0.1413<br>91.3<br>94.1 | 0.0890<br>[ 0.1000 ] | 89.1% | 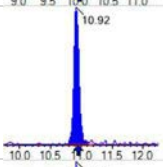 | 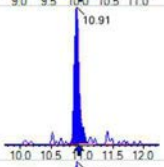 | |
| PFDoA | ( 613.0 / 569.0 ) 38260<br>( 613.0 / 169.0 ) 5388 | ( 11.81 , 1.00 ) ( 0.00 , N/A , -0.4) | 204.3<br>70.3 | 0.1408<br>92.7<br>92.3 | 0.0950<br>[ 0.1000 ] | 95.0% | 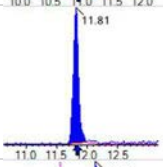 | 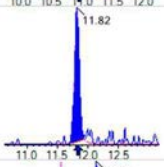 | |
| PFTrDA | ( 663.0 / 619.0 ) 37240<br>( 663.0 / 169.0 ) 8567 | ( 12.55 , 1.06 ) ( N/A , -0.01 , -0.3) | 266.6<br>116.9 | 0.2301<br>85.5<br>87.3 | 0.0950<br>[ 0.1000 ] | 95.1% | 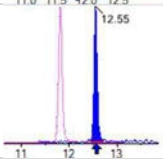 | 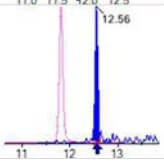 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30181<br>( 713.0 / 169.0 ) 9548 | ( 13.10 , 1.00 ) ( -0.01 , N/A , -0.2) | 157.0<br>95.2 | 0.3164<br>116.6<br>120.2 | 0.0900<br>[ 0.1000 ] | 90.1% | 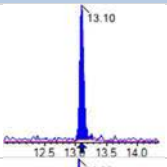 | 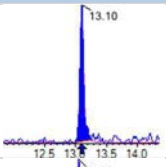 | |
| PFHxDA | ( 813.0 / 769.0 ) 23262<br>( 813.0 / 169.0 ) 5285 | ( 14.00 , 1.00 ) ( -0.01 , N/A , -0.3) | 180.4<br>58.1 | 0.2272<br>86.8<br>84.2 | 0.0910<br>[ 0.1000 ] | 91.0% | 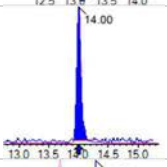 | 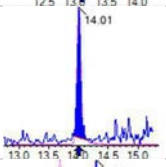 | |
| PFODA | ( 913.0 / 869.0 ) 15205<br>( 913.0 / 169.0 ) 4837 | ( 14.74 , 1.05 ) ( N/A , 0.00 , -0.1) | 79.3<br>25.4 | 0.3181<br>101.5<br>95.0 | 0.0940<br>[ 0.1000 ] | 93.9% | 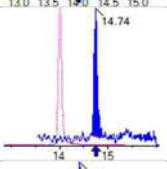 | 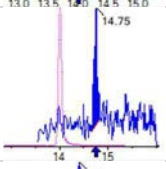 | |
| PFBS | ( 299.0 / 80.0 ) 30561<br>( 299.0 / 99.0 ) 23377 | ( 5.36 , 1.00 ) ( 0.00 , N/A , 0.1) | 352.1<br>215.0 | 0.7649<br>103.3<br>101.4 | 0.0830<br>[ 0.0880 ] | 94.2% | 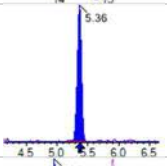 | 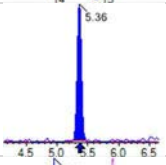 | |
| PFPeS | ( 349.0 / 80.0 ) 89959<br>( 349.0 / 99.0 ) 30203 | ( 6.64 , 0.82 ) ( N/A , -0.03 , 0.1) | 571.2<br>359.7 | 0.3357<br>98.3<br>94.5 | 0.0860<br>[ 0.0940 ] | 92.1% | 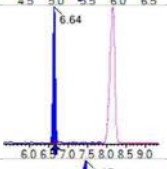 | 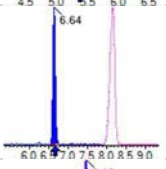 | |
| PFHxS | ( 399.0 / 80.0 ) 105921<br>( 399.0 / 99.0 ) 34177 | ( 8.15 , 1.00 ) ( 0.00 , N/A , -0.3) | 473.2<br>631.9 | 0.3227<br>98.3<br>99.9 | 0.0840<br>[ 0.0910 ] | 91.7% | 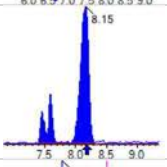 | 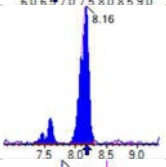 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 82780<br>( 449.0 / 99.0 ) 24435 | ( 9.49 , 0.91 ) ( N/A , -0.02 , 0.0) | 497.9<br>388.8 | 0.2952<br>113.1<br>113.8 | 0.0820<br>[ 0.0950 ] | 86.5% | 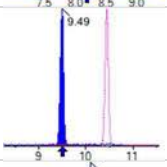 | 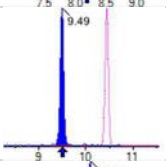 | |
| PFOS | ( 499.0 / 80.0 ) 93613<br>( 499.0 / 99.0 ) 22300 | ( 10.44 , 1.00 ) ( 0.00 , N/A , 0.0) | 528.7<br>2915.7 | 0.2382<br>103.1<br>104.0 | 0.0960<br>[ 0.0930 ] | 103.3% | 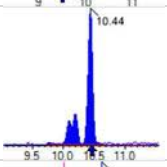 | 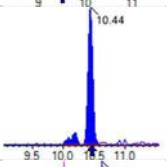 | MI2 DG 2024-03-29 |
| PFNS | ( 549.0 / 80.0 ) 78934<br>( 549.0 / 99.0 ) 22155 | ( 11.33 , 1.08 ) ( N/A , -0.02 , 0.0) | 490.3<br>271.0 | 0.2807<br>104.7<br>102.1 | 0.0890<br>[ 0.0960 ] | 92.3% | 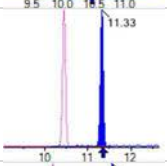 | 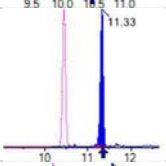 | |
| PFDS | ( 599.0 / 80.0 ) 106648<br>( 599.0 / 99.0 ) 28063 | ( 12.13 , 1.16 ) ( N/A , -0.02 , 0.1) | 450.5<br>247.7 | 0.2631<br>103.3<br>97.6 | 0.0980<br>[ 0.0960 ] | 101.7% | 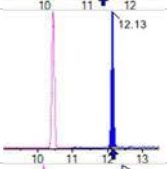 | 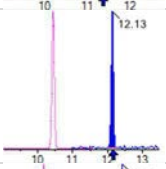 | |
| PFDoS | ( 699.0 / 80.0 ) 94174<br>( 699.0 / 99.0 ) 21618 | ( 13.17 , 1.26 ) ( N/A , -0.01 , -0.1) | 635.7<br>296.6 | 0.2296<br>102.7<br>97.1 | 0.0890<br>[ 0.0970 ] | 92.2% | 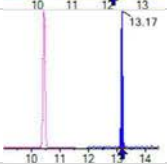 | 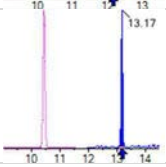 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 186344<br>( 327.0 / 81.0 ) 160209 | ( 4.81 , 1.00 ) ( -0.01 , N/A , 0.0) | 1925.5<br>562.0 | 0.8597<br>100.8<br>98.1 | 0.3640<br>[ 0.3740 ] | 97.4% | 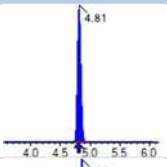 | 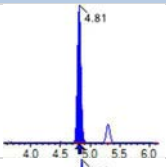 | |
| 6:2FTS | ( 427.0 / 407.0 ) 150946<br>( 427.0 / 81.0 ) 185260 | ( 6.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 1719.0<br>1548.4 | 1.2273<br>95.2<br>94.6 | 0.3550<br>[ 0.3800 ] | 93.6% | 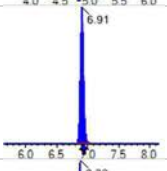 | 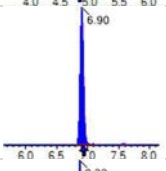 | |
| 8:2FTS | ( 527.0 / 507.0 ) 142017<br>( 527.0 / 81.0 ) 158286 | ( 9.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 1472.0<br>1240.7 | 1.1146<br>101.0<br>101.2 | 0.3040<br>[ 0.3830 ] | 79.2% | 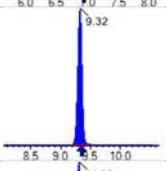 | 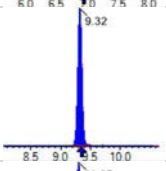 | |
| 10:2FTS | ( 627.0 / 607.0 ) 157965<br>( 627.0 / 81.0 ) 210677 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.2) | 936.5<br>499.7 | 1.3337<br>92.8<br>92.0 | 0.4160<br>[ 0.3860 ] | 107.7% | 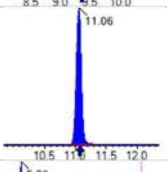 | 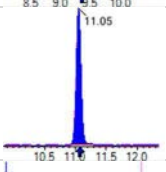 | |
| PFBSA | ( 297.9 / 78.0 ) 50966<br>( 297.9 / 278.0 ) 136 | ( 5.52 , 0.38 ) ( N/A , 0.00 , 4.0) | 496.1<br>3.8 | 0.0027<br>206.0<br>236.9 | 0.0870<br>[ 0.1000 ] | 87.2% | 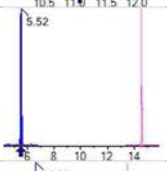 | 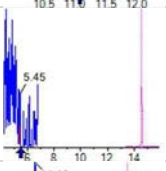 | |
| PFHxSA | ( 397.9 / 78.0 ) 100435<br>( 397.9 / 378.0 ) 322 | ( 11.21 , 0.75 ) ( N/A , -0.02 , 1.2) | 705.6<br>56.9 | 0.0032<br>79.3<br>73.0 | 0.0870<br>[ 0.1000 ] | 86.7% | 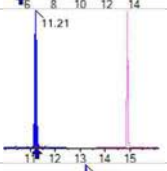 | 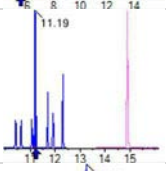 | |
| PFOSA | ( 498.0 / 78.0 ) 75666<br>( 498.0 / 478.0 ) 1184 | ( 13.28 , 1.00 ) ( -0.01 , N/A , -0.3) | 603.8<br>41.8 | 0.0156<br>106.4<br>117.6 | 0.0910<br>[ 0.1000 ] | 90.7% | 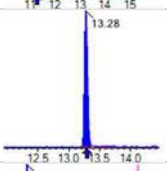 | 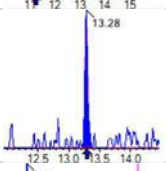 | |
| TFSI | ( 279.7 / 147.0 ) 117559<br>( 279.7 / 211.0 ) 12670 | ( 7.04 , 0.53 ) ( N/A , -0.02 , 0.0) | 47.4<br>11533.4 | 0.1078<br>121.8<br>122.9 | 0.0810<br>[ 0.0980 ] | 82.4% | 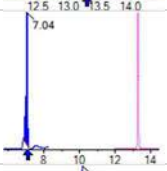 | 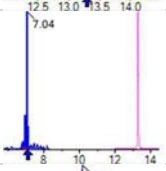 | |
| NMeFOSA | ( 512.0 / 219.0 ) 63066<br>( 512.0 / 169.0 ) 45992 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 1.0) | 660.6<br>273.0 | 0.7293<br>95.1<br>98.0 | 0.3680<br>[ 0.4000 ] | 92.1% | 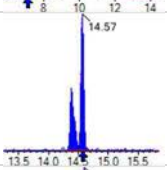 | 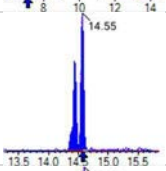 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72776<br>( 526.0 / 169.0 ) 95023 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 1.9) | 808.1<br>763.0 | 1.3057<br>104.4<br>104.9 | 0.3490<br>[ 0.4000 ] | 87.3% | 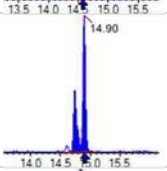 | 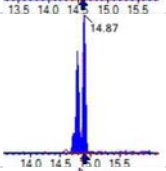 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 31974<br>( 570.0 / 483.0 ) 14212 | ( 10.38 , 1.00 ) ( 0.01 , N/A , 0.5) | 18835.4<br>89887.6 | 0.4445<br>95.8<br>95.2 | 0.1040<br>[ 0.1000 ] | 104.4% | 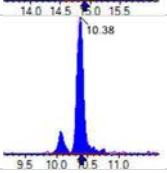 | 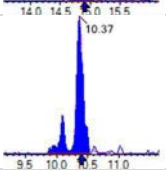 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 25686<br>( 584.0 / 526.0 ) 16067 | ( 10.98 , 1.00 ) ( 0.01 , N/A , -0.3) | 1558.7<br>158.9 | 0.6255<br>104.3<br>104.6 | 0.0870<br>[ 0.1000 ] | 87.0% | 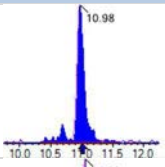 | 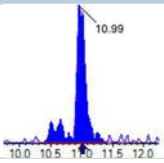 | |
| NMeFOSE | ( 616.0 / 59.0 ) 29720 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 187.7 | N/A<br>0.0<br>0.0 | 0.3620<br>[ 0.4000 ] | 90.5% | 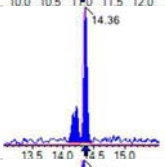 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 26113 | ( 14.74 , 1.00 ) ( 0.02 , N/A , 0.0) | 217.1 | N/A<br>0.0<br>0.0 | 0.3900<br>[ 0.4000 ] | 97.4% | 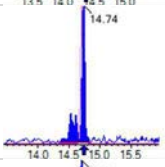 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4929<br>( 285.0 / 185.0 ) 17743 | ( 5.60 , 1.00 ) ( 0.00 , N/A , -0.1) | 181.1<br>173.2 | 3.5995<br>128.2<br>136.3 | 0.0760<br>[ 0.1000 ] | 75.7% | 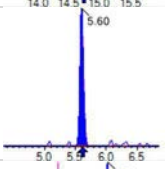 | 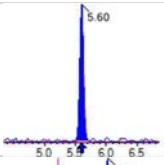 | |
| ADONA | ( 377.0 / 85.0 ) 78662<br>( 377.0 / 251.0 ) 8948 | ( 6.76 , 1.21 ) ( N/A , -0.03 , -0.1) | 723.5<br>87.2 | 0.1138<br>108.5<br>114.1 | 0.0920<br>[ 0.0940 ] | 97.2% | 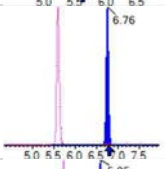 | 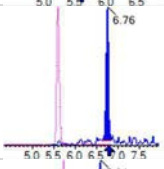 | |
| PFEESA | ( 315.0 / 135.0 ) 24240<br>( 315.0 / 83.0 ) 16750 | ( 5.95 , 1.15 ) ( N/A , -0.02 , 0.1) | 548.9<br>70.7 | 0.6910<br>107.7<br>118.2 | 0.1370<br>[ 0.1780 ] | 76.9% | 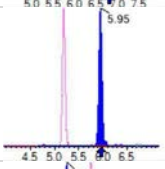 | 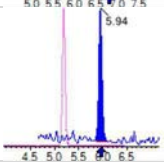 | |
| PFMPA | ( 229.0 / 85.0 ) 13527 | ( 3.87 , 0.89 ) ( N/A , 0.01 , 0.0) | 480.7 | N/A<br>0.0<br>0.0 | 0.1650<br>[ 0.2000 ] | 82.7% | 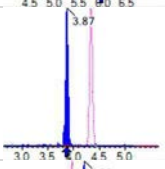 | | |
| PFMBA | ( 279.0 / 85.0 ) 34558 | ( 4.55 , 1.05 ) ( N/A , 0.00 , 0.0) | 460.9 | N/A<br>0.0<br>0.0 | 0.1870<br>[ 0.2000 ] | 93.7% | 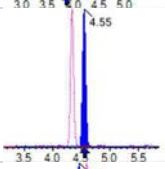 | | |
| NFDHA | ( 295.0 / 201.0 ) 12829<br>( 295.0 / 85.0 ) 15461 | ( 5.06 , 0.98 ) ( N/A , 0.00 , 0.0) | 457.1<br>271.6 | 1.2052<br>121.2<br>116.8 | 0.1490<br>[ 0.2000 ] | 74.5% | 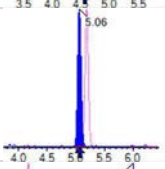 | 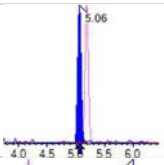 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 79278<br>( 533.0 / 353.0 ) 28868 | ( 11.12 , 1.98 ) ( N/A , -0.02 , -0.1) | 1283.9<br>627.8 | 0.3641<br>114.2<br>109.7 | 0.0830<br>[ 0.0930 ] | 89.0% | 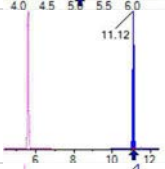 | 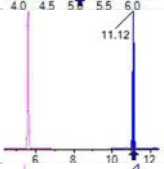 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 67974<br>( 633.0 / 453.0 ) 22983 | ( 12.61 , 2.25 ) ( N/A , -0.01 , 0.1) | 1128.2<br>257.2 | 0.3381<br>99.7<br>99.5 | 0.0920<br>[ 0.0940 ] | 97.2% | 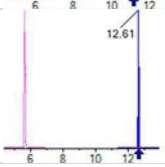 | 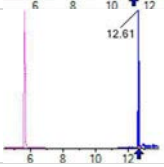 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 39791<br>( 461.0 / 381.2 ) 16377 | ( 9.38 , 0.90 ) ( N/A , -0.02 , -0.1) | 905.9<br>1931.2 | 0.4116<br>106.6<br>103.6 | 0.0760<br>[ 0.0920 ] | 82.1% | 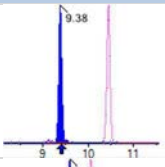 | 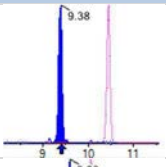 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 7711<br>( 241.0 / 117.0 ) 16120 | ( 3.93 , 0.91 ) ( N/A , 0.01 , 0.0) | 452.0<br>118.3 | 2.0905<br>95.2<br>96.0 | 0.4040<br>[ 0.4000 ] | 100.9% | 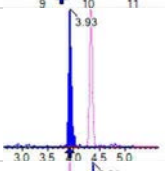 | 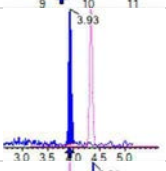 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 24980<br>( 341.0 / 217.0 ) 31927 | ( 5.61 , 1.08 ) ( N/A , -0.02 , -0.2) | 465.7<br>176.3 | 1.2781<br>83.5<br>84.1 | 0.3780<br>[ 0.4000 ] | 94.6% | 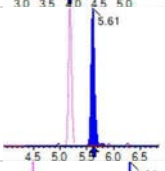 | 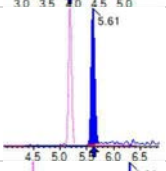 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54876<br>( 441.0 / 337.0 ) 46155 | ( 9.31 , 1.79 ) ( N/A , -0.02 , 0.0) | 5083.5<br>889.9 | 0.8411<br>98.5<br>95.3 | 0.3910<br>[ 0.4000 ] | 97.8% | 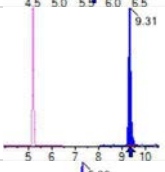 | 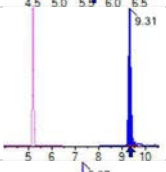 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 29164<br>( 357.2 / 243.0 ) 2923 | ( 5.86 , 1.00 ) ( -0.01 , N/A , -0.4) | 217.8<br>53.0 | 0.1002<br>93.5<br>90.6 | 0.0930<br>[ 0.1000 ] | 92.7% | 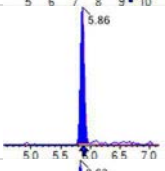 | 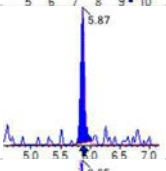 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 31434<br>( 457.2 / 343.0 ) 1033 | ( 8.63 , 1.00 ) ( 0.00 , N/A , -1.0) | 300.1<br>42.4 | 0.0329<br>73.2<br>75.2 | 0.1060<br>[ 0.1000 ] | 105.6% | 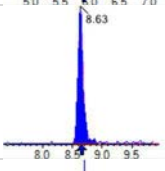 | 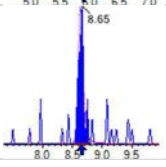 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 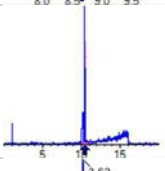 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 267478 | ( 3.62 , N/A ) ( N/A , 0.01 , N/A ) | 1665.9 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 101.2% } | 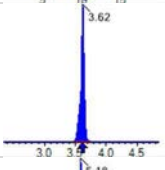 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 104254 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 1568.8 | N/A | 0.8830<br>[ 1.0000 ] | 88.3%<br>{ 90.1% } | 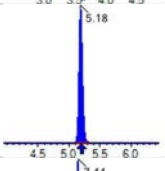 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 358219 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 6002.4 | N/A | 0.9230<br>[ 1.0000 ] | 92.3%<br>{ 99.2% } | 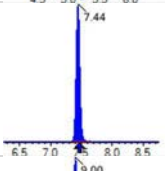 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 269192 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 1349.7 | N/A | 0.9210<br>[ 1.0000 ] | 92.1%<br>{ 96.5% } | 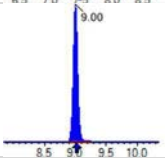 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-LCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274671 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 19479.7 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 99.5% } | 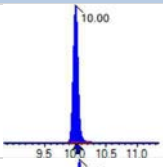 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 897098 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 6442.1 | N/A | 0.9130 [ 1.0000 ] | 91.3% { 97.7% } | 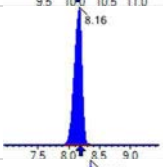 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 731414 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 2684.8 | N/A | 0.9320 [ 1.0000 ] | 93.2% { 94.8% } | 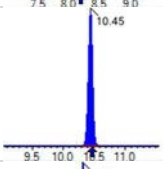 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2442782 | ( 3.62 , N/A ) ( N/A , 0.01 , N/A ) | 76455.9 | N/A | 8.4490 [ 8.0000 ] | 105.6% { 112.5% } | 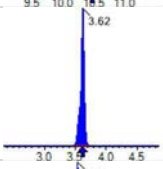 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 891599 | ( 4.34 , N/A ) ( N/A , 0.01 , N/A ) | 4771.6 | N/A | 4.6710 [ 4.0000 ] | 116.8% { 106.6% } | 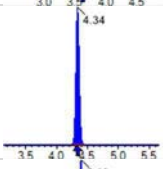 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 522849 | ( 5.19 , N/A ) ( N/A , -0.01 , N/A ) | 10933.7 | N/A | 2.2920 [ 2.0000 ] | 114.6% { 108.7% } | 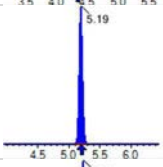 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 599036 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 12046.5 | N/A | 2.3650 [ 2.0000 ] | 118.2% { 109.3% } | 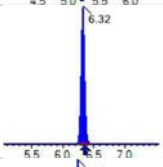 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 831589 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 5536.2 | N/A | 2.1900 [ 2.0000 ] | 109.5% { 108.6% } | 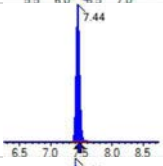 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299102 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 9834.3 | N/A | 1.1250 [ 1.0000 ] | 112.5% { 110.9% } | 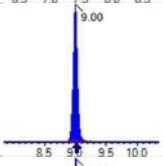 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336157 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1043.1 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 114.3% } | 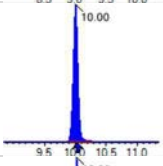 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 410650 | ( 10.92 , N/A ) ( N/A , -0.02 , N/A ) | 1255.8 | N/A | 1.0910 [ 1.0000 ] | 109.1% { 111.2% } | 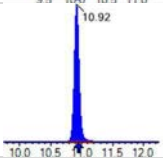 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 401525 | ( 11.82 , N/A ) ( N/A , -0.02 , N/A ) | 1323.2 | N/A | 1.0400 [ 1.0000 ] | 104.0% { 110.7% } | 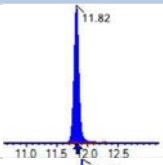 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 358779 | ( 13.10 , N/A ) ( N/A , -0.01 , N/A ) | 1319.7 | N/A | 1.0490 [ 1.0000 ] | 104.9% { 109.5% } | 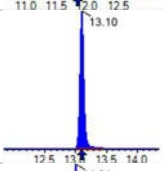 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 545780 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2471.6 | N/A | 1.9080 [ 2.0000 ] | 95.4% { 109.6% } | 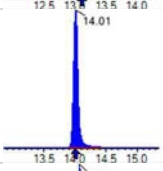 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1491218 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1389.9 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 101.1% } | 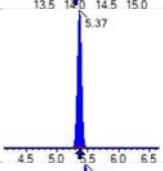 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1448042 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 4767.9 | N/A | 2.2370 [ 2.0000 ] | 111.9% { 111.2% } | 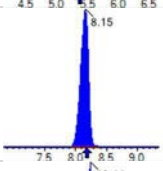 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1683838 | ( 10.44 , N/A ) ( N/A , -0.02 , N/A ) | 1905.6 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 116.6% } | 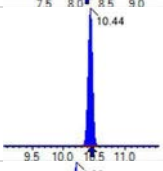 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 775423 | ( 4.82 , N/A ) ( N/A , 0.01 , N/A ) | 57.5 | N/A | 4.8750 [ 4.0000 ] | 121.9% { 119.2% } | 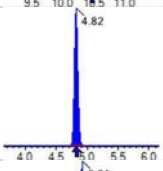 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2001386 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 6335.6 | N/A | 5.1220 [ 4.0000 ] | 128.0% { 113.7% } | 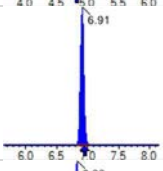 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1901459 | ( 9.33 , N/A ) ( N/A , -0.02 , N/A ) | 2086.5 | N/A | 5.5610 [ 4.0000 ] | 139.0% { 130.7% } | 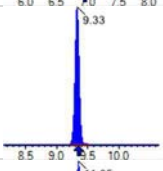 | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3823690 | ( 11.05 , N/A ) ( N/A , -0.02 , N/A ) | 2055.6 | N/A | 10.3380 [ 8.0000 ] | 129.2% { 128.3% } | 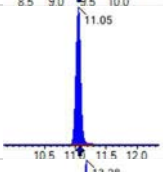 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1724224 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3563.1 | N/A | 2.0870 [ 2.0000 ] | 104.4% { 110.7% } | 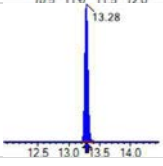 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 385350 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 2811.9 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 105.9% } | 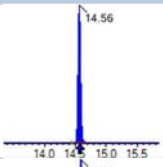 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 367895 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 3265.1 | N/A | 2.1670 [ 2.0000 ] | 108.3% { 106.8% } | 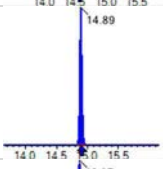 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1327710 | ( 10.37 , N/A ) ( N/A , -0.02 , N/A ) | 4748.9 | N/A | 4.9140 [ 4.0000 ] | 122.9% { 112.5% } | 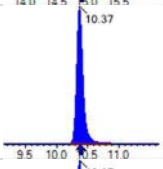 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1217311 | ( 10.97 , N/A ) ( N/A , -0.02 , N/A ) | 2421.2 | N/A | 4.9920 [ 4.0000 ] | 124.8% { 119.4% } | 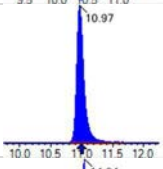 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1516720 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 2592.1 | N/A | 21.8590 [ 20.0000 ] | 109.3% { 114.1% } | 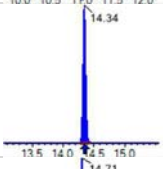 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1406881 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 4040.6 | N/A | 21.6500 [ 20.0000 ] | 108.2% { 112.4% } | 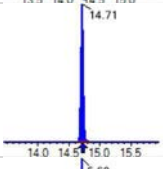 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 887127 | ( 5.60 , N/A ) ( N/A , -0.02 , N/A ) | 4030.6 | N/A | 8.9790 [ 8.0000 ] | 112.2% { 107.2% } | 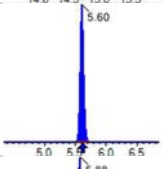 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 598528 | ( 5.88 , N/A ) ( N/A , -0.02 , N/A ) | 2305.4 | N/A | 2.0000 [ 2.0000 ] | 100.0% { 106.6% } | 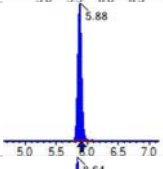 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 720328 | ( 8.64 , N/A ) ( N/A , -0.02 , N/A ) | 1022.3 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 107.5% } | 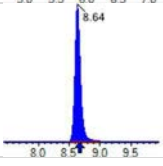 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV1A | PFBA | 20.0A | 18.2A | 91.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.44A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.55A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.53A | 90.5A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.65A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.95A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.86A | 97.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.91A | 98.2A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.00A | 90.5A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.48A | 95.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.27A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.95A | 104A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.56A | 98.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 5.07A | 106A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.12A | 106A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.14A | 106A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.6A | 93.8A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.7A | 93.1A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.2A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.85A | 97.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.9A | 94.3A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.48A | 89.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.63A | 92.6A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV1 | ADONA | 4.72A | 4.55A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFEESA | 8.90A | 8.33A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.05A | 90.5A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.17A | 91.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 8.99A | 89.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.31A | 92.1A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.58A | 97.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.9A | 94.6A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.1A | 90.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 18.1A | 90.5A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 591485<br>( 163.0 / 69.0 ) 15515 | ( 2.46 , 0.68 ) ( N/A , 0.00 , -0.1) | 766.0<br>162.9 | 0.0262<br>95.7<br>100.0 | 9.6280<br>[ 10.0000 ] | 96.3% | 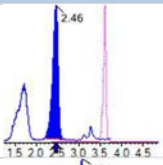 | 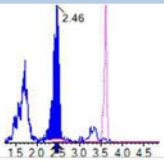 | |
| PFBA | ( 213.0 / 169.0 ) 4970017 | ( 3.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 1874.7 | N/A<br>0.0<br>0.0 | 18.2320<br>[ 20.0000 ] | 91.2% | 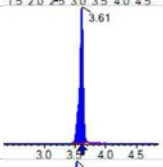 | | |
| PFPeA | ( 263.0 / 219.0 ) 1970604<br>( 263.0 / 69.0 ) 20967 | ( 4.33 , 1.00 ) ( 0.00 , N/A , -0.1) | 3856.0<br>347.5 | 0.0106<br>89.4<br>100.0 | 9.4390<br>[ 10.0000 ] | 94.4% | 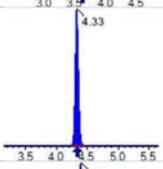 | 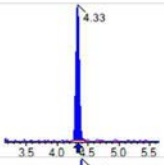 | |
| PFHxA | ( 313.0 / 269.0 ) 1015090<br>( 313.0 / 119.0 ) 120289 | ( 5.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 2199.2<br>1408.7 | 0.1185<br>106.5<br>100.0 | 4.5510<br>[ 5.0000 ] | 91.0% | 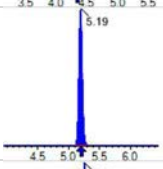 | 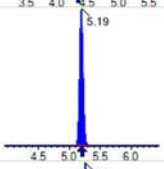 | |
| PFHpA | ( 363.0 / 319.0 ) 1230643<br>( 363.0 / 169.0 ) 378759 | ( 6.35 , 1.00 ) ( 0.00 , N/A , 0.0) | 2470.6<br>2740.8 | 0.3078<br>100.7<br>100.0 | 4.5260<br>[ 5.0000 ] | 90.5% | 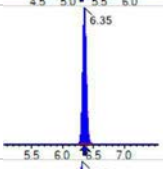 | 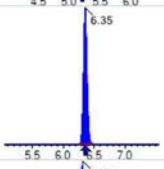 | |
| PFOA | ( 413.0 / 369.0 ) 1795150<br>( 413.0 / 169.0 ) 636720 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.1) | 1530.4<br>2080.0 | 0.3547<br>99.2<br>100.0 | 4.6700<br>[ 5.0000 ] | 93.4% | 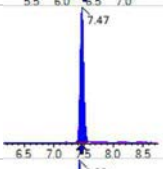 | 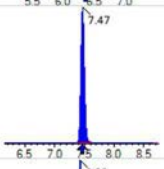 | |
| PFNA | ( 463.0 / 419.0 ) 1260048<br>( 463.0 / 169.0 ) 323212 | ( 9.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 2277.2<br>1758.5 | 0.2565<br>104.4<br>100.0 | 4.6510<br>[ 5.0000 ] | 93.0% | 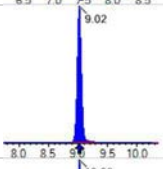 | 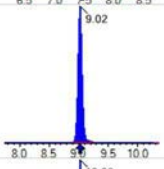 | |
| PFDA | ( 513.0 / 469.0 ) 1453986<br>( 513.0 / 169.0 ) 177107 | ( 10.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 5508.9<br>2896.2 | 0.1218<br>102.2<br>100.0 | 4.9510<br>[ 5.0000 ] | 99.0% | 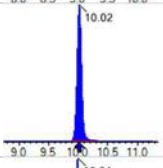 | 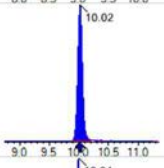 | |
| PFUnA | ( 563.0 / 519.0 ) 1596121<br>( 563.0 / 169.0 ) 239586 | ( 10.94 , 1.00 ) ( 0.00 , N/A , 0.0) | 1430.1<br>860.5 | 0.1501<br>96.9<br>100.0 | 4.7590<br>[ 5.0000 ] | 95.2% | 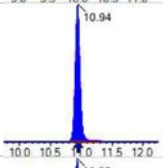 | 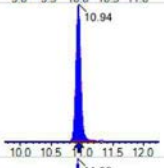 | |
| PFDoA | ( 613.0 / 569.0 ) 1768860<br>( 613.0 / 169.0 ) 269732 | ( 11.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1700.0<br>1323.4 | 0.1525<br>100.4<br>100.0 | 4.8580<br>[ 5.0000 ] | 97.2% | 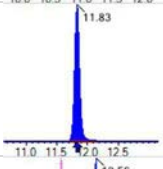 | 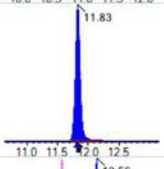 | |
| PFTrDA | ( 663.0 / 619.0 ) 1738116<br>( 663.0 / 169.0 ) 457962 | ( 12.56 , 1.06 ) ( N/A , 0.00 , 0.1) | 1414.4<br>1509.1 | 0.2635<br>97.9<br>100.0 | 4.9090<br>[ 5.0000 ] | 98.2% | 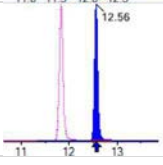 | 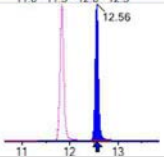 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1444557<br>( 713.0 / 169.0 ) 380247 | ( 13.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 1945.2<br>1404.3 | 0.2632<br>97.0<br>100.0 | 4.7210<br>[ 5.0000 ] | 94.4% | 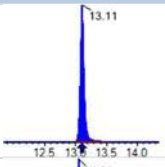 | 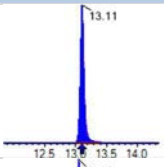 | |
| PFHxDA | ( 813.0 / 769.0 ) 1090356<br>( 813.0 / 169.0 ) 294337 | ( 14.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 2097.6<br>1176.6 | 0.2699<br>103.2<br>100.0 | 4.6750<br>[ 5.0000 ] | 93.5% | 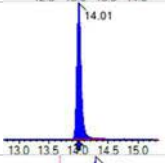 | 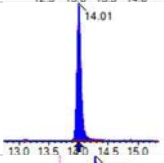 | |
| PFODA | ( 913.0 / 869.0 ) 625006<br>( 913.0 / 169.0 ) 209203 | ( 14.74 , 1.05 ) ( N/A , 0.00 , 0.1) | 1455.2<br>632.9 | 0.3347<br>106.8<br>100.0 | 4.2310<br>[ 5.0000 ] | 84.6% | 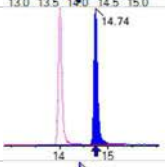 | 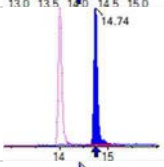 | |
| PFBS | ( 299.0 / 80.0 ) 1450623<br>( 299.0 / 99.0 ) 1094067 | ( 5.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 2786.7<br>2153.9 | 0.7542<br>101.8<br>100.0 | 3.9990<br>[ 4.4240 ] | 90.4% | 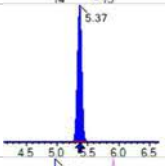 | 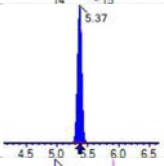 | |
| PFPeS | ( 349.0 / 80.0 ) 4194505<br>( 349.0 / 99.0 ) 1490111 | ( 6.67 , 0.82 ) ( N/A , 0.00 , 0.0) | 3130.0<br>3009.1 | 0.3553<br>104.0<br>100.0 | 4.4830<br>[ 4.6920 ] | 95.6% | 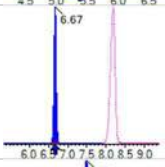 | 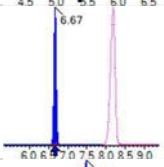 | |
| PFHxS | ( 399.0 / 80.0 ) 4866882<br>( 399.0 / 99.0 ) 1571282 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 4013.7<br>4415.8 | 0.3229<br>98.4<br>100.0 | 4.2680<br>[ 4.5550 ] | 93.7% | 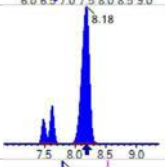 | 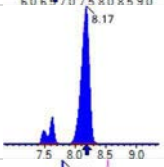 | |
| PFHpS | ( 449.0 / 80.0 ) 4269163<br>( 449.0 / 99.0 ) 1107696 | ( 9.50 , 0.91 ) ( N/A , 0.00 , 0.1) | 3987.6<br>3630.6 | 0.2595<br>99.5<br>100.0 | 4.9480<br>[ 4.7570 ] | 104.0% | 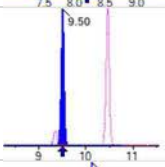 | 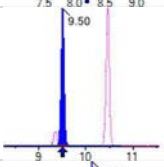 | |
| PFOS | ( 499.0 / 80.0 ) 3826122<br>( 499.0 / 99.0 ) 876571 | ( 10.46 , 1.00 ) ( 0.00 , N/A , 0.0) | 2853.8<br>4193.5 | 0.2291<br>99.2<br>100.0 | 4.5630<br>[ 4.6370 ] | 98.4% | 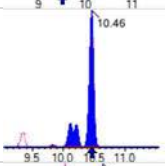 | 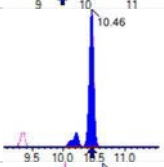 | |
| PFNS | ( 549.0 / 80.0 ) 3873913<br>( 549.0 / 99.0 ) 1065229 | ( 11.34 , 1.08 ) ( N/A , 0.00 , 0.1) | 3663.5<br>2986.0 | 0.2750<br>102.6<br>100.0 | 5.0690<br>[ 4.7990 ] | 105.6% | 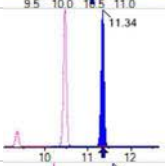 | 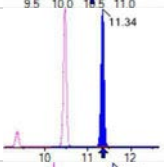 | |
| PFDS | ( 599.0 / 80.0 ) 4778428<br>( 599.0 / 99.0 ) 1287895 | ( 12.15 , 1.16 ) ( N/A , 0.00 , 0.1) | 3848.4<br>3006.1 | 0.2695<br>105.8<br>100.0 | 5.1150<br>[ 4.8160 ] | 106.2% | 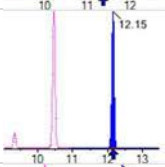 | 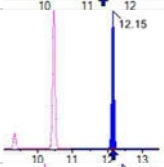 | |
| PFDoS | ( 699.0 / 80.0 ) 4645520<br>( 699.0 / 99.0 ) 1097721 | ( 13.17 , 1.26 ) ( N/A , 0.00 , 0.0) | 5798.1<br>5031.5 | 0.2363<br>105.7<br>100.0 | 5.1400<br>[ 4.8480 ] | 106.0% | 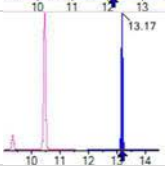 | 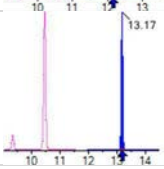 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7572540<br>( 327.0 / 81.0 ) 6634774 | ( 4.81 , 1.00 )<br>( 0.00 , N/A , -0.1) | 4810.7<br>3911.1 | 0.8762<br>102.7<br>100.0 | 17.6350<br>[ 18.6910 ] | 94.4% | 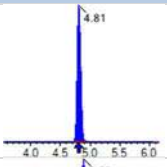 | 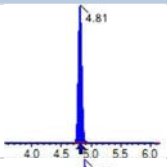 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6606459<br>( 427.0 / 81.0 ) 8574653 | ( 6.93 , 1.00 )<br>( -0.01 , N/A , 0.0) | 6781.3<br>6430.6 | 1.2979<br>100.6<br>100.0 | 17.6900<br>[ 18.9810 ] | 93.2% | 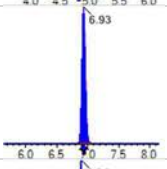 | 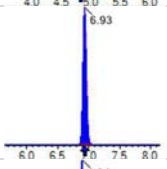 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6508305<br>( 527.0 / 81.0 ) 7171265 | ( 9.34 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2710.8<br>2539.8 | 1.1019<br>99.8<br>100.0 | 18.1880<br>[ 19.1660 ] | 94.9% | 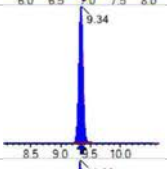 | 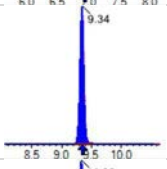 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5877576<br>( 627.0 / 81.0 ) 8517742 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1484.3<br>1902.2 | 1.4492<br>100.8<br>100.0 | 19.8700<br>[ 19.3240 ] | 102.8% | 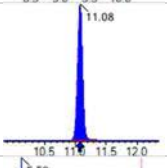 | 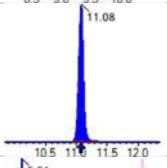 | |
| PFBSA | ( 297.9 / 78.0 ) 2487773<br>( 297.9 / 278.0 ) 2800 | ( 5.52 , 0.38 )<br>( N/A , 0.00 , 1.0) | 1901.2<br>38.1 | 0.0011<br>86.9<br>100.0 | 4.5040<br>[ 5.0000 ] | 90.1% | 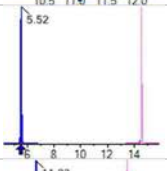 | 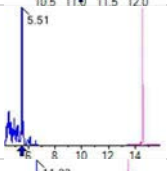 | |
| PFHxSA | ( 397.9 / 78.0 ) 4966024<br>( 397.9 / 378.0 ) 21789 | ( 11.23 , 0.75 )<br>( N/A , 0.00 , 0.1) | 1906.8<br>873.2 | 0.0044<br>108.6<br>100.0 | 4.5810<br>[ 5.0000 ] | 91.6% | 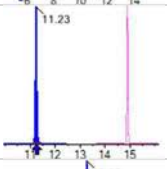 | 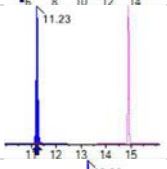 | |
| PFOSA | ( 498.0 / 78.0 ) 3654303<br>( 498.0 / 478.0 ) 48635 | ( 13.29 , 1.00 )<br>( -0.01 , N/A , 0.1) | 3277.8<br>800.8 | 0.0133<br>90.5<br>100.0 | 4.8480<br>[ 5.0000 ] | 97.0% | 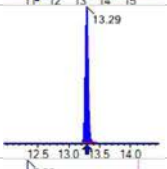 | 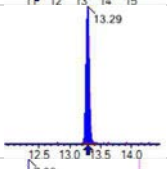 | |
| TFSI | ( 279.7 / 147.0 ) 7170846<br>( 279.7 / 211.0 ) 628687 | ( 7.06 , 0.53 )<br>( N/A , 0.00 , 0.0) | 91.6<br>48746.5 | 0.0877<br>99.1<br>100.0 | 5.4460<br>[ 4.8970 ] | 111.2% | 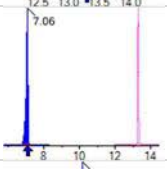 | 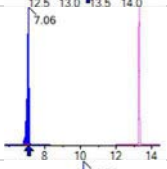 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3089413<br>( 512.0 / 169.0 ) 2300040 | ( 14.57 , 1.00 )<br>( 0.00 , N/A , 1.0) | 4106.5<br>1811.0 | 0.7445<br>97.1<br>100.0 | 19.0980<br>[ 20.0000 ] | 95.5% | 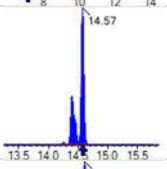 | 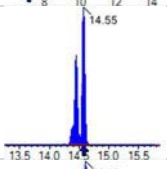 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3679433<br>( 526.0 / 169.0 ) 4578468 | ( 14.91 , 1.00 )<br>( 0.01 , N/A , 2.0) | 4703.4<br>3987.7 | 1.2443<br>99.5<br>100.0 | 18.8580<br>[ 20.0000 ] | 94.3% | 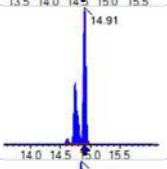 | 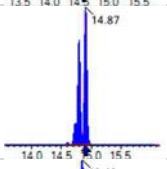 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1219981<br>( 570.0 / 483.0 ) 569609 | ( 10.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4812.9<br>2677.5 | 0.4669<br>100.6<br>100.0 | 4.4820<br>[ 5.0000 ] | 89.6% | 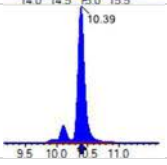 | 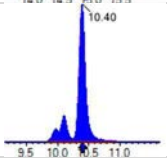 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1156135<br>( 584.0 / 526.0 ) 691284 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.1) | 2186.4<br>786.4 | 0.5979<br>99.7<br>100.0 | 4.6760<br>[ 5.0000 ] | 93.5% | 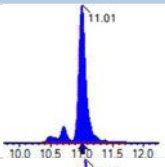 | 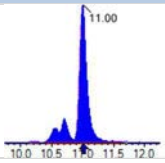 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1359255 | ( 14.37 , 1.00 ) ( 0.02 , N/A , 0.0) | 2610.7 | N/A<br>0.0<br>0.0 | 18.8940<br>[ 20.0000 ] | 94.5% | 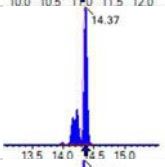 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1159542 | ( 14.74 , 1.00 ) ( 0.03 , N/A , 0.0) | 3999.1 | N/A<br>0.0<br>0.0 | 19.4460<br>[ 20.0000 ] | 97.2% | 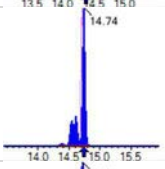 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 281002<br>( 285.0 / 185.0 ) 742127 | ( 5.61 , 1.00 ) ( -0.01 , N/A , 0.1) | 1881.0<br>2280.5 | 2.6410<br>94.1<br>100.0 | 4.6280<br>[ 5.0000 ] | 92.6% | 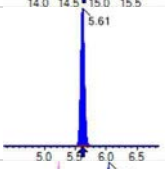 | 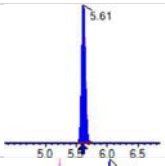 | |
| ADONA | ( 377.0 / 85.0 ) 3642726<br>( 377.0 / 251.0 ) 363047 | ( 6.79 , 1.21 ) ( N/A , 0.00 , 0.1) | 3512.5<br>1397.9 | 0.0997<br>95.0<br>100.0 | 4.5490<br>[ 4.7140 ] | 96.5% | 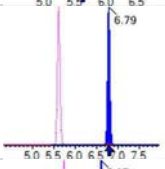 | 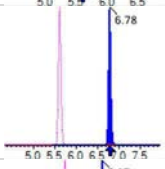 | |
| PFEESA | ( 315.0 / 135.0 ) 1351874<br>( 315.0 / 83.0 ) 790446 | ( 5.97 , 1.15 ) ( N/A , 0.00 , 0.0) | 3084.2<br>1431.2 | 0.5847<br>91.1<br>100.0 | 8.3300<br>[ 8.9250 ] | 93.3% | 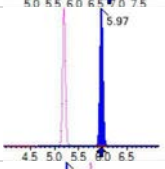 | 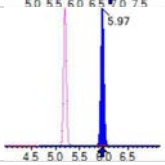 | |
| PFMPA | ( 229.0 / 85.0 ) 694806 | ( 3.86 , 0.89 ) ( N/A , 0.00 , 0.0) | 7230.1 | N/A<br>0.0<br>0.0 | 9.0520<br>[ 10.0000 ] | 90.5% | 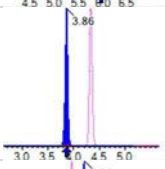 | | |
| PFMBA | ( 279.0 / 85.0 ) 1585903 | ( 4.54 , 1.05 ) ( N/A , 0.00 , 0.0) | 4826.4 | N/A<br>0.0<br>0.0 | 9.1720<br>[ 10.0000 ] | 91.7% | 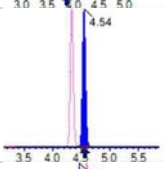 | | |
| NFDHA | ( 295.0 / 201.0 ) 712173<br>( 295.0 / 85.0 ) 734804 | ( 5.06 , 0.97 ) ( N/A , 0.00 , 0.0) | 3780.9<br>2839.5 | 1.0318<br>103.8<br>100.0 | 8.9920<br>[ 10.0000 ] | 89.9% | 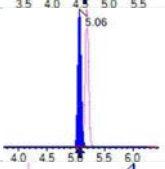 | 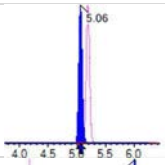 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3833947<br>( 533.0 / 353.0 ) 1272251 | ( 11.14 , 1.98 ) ( N/A , 0.00 , 0.0) | 3204.9<br>2360.2 | 0.3318<br>104.1<br>100.0 | 4.3090<br>[ 4.6660 ] | 92.3% | 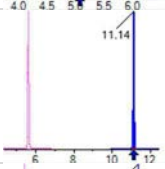 | 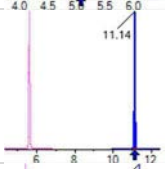 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3168087<br>( 633.0 / 453.0 ) 1077007 | ( 12.62 , 2.25 ) ( N/A , 0.00 , 0.0) | 4240.9<br>3524.6 | 0.3400<br>100.2<br>100.0 | 4.5820<br>[ 4.7160 ] | 97.2% | 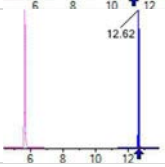 | 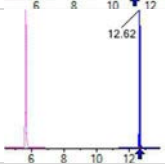 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2006767<br>( 461.0 / 381.2 ) 797243 | ( 9.40 , 0.90 )<br>( N/A , 0.00 , 0.0) | 4555.4<br>4452.9 | 0.3973<br>102.9<br>100.0 | 4.4600<br>[ 4.6190 ] | 96.5% | 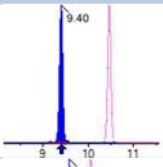 | 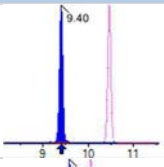 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 339168<br>( 241.0 / 117.0 ) 738935 | ( 3.92 , 0.90 )<br>( N/A , 0.00 , 0.0) | 5669.7<br>4098.8 | 2.1787<br>99.2<br>100.0 | 18.9250<br>[ 20.0000 ] | 94.6% | 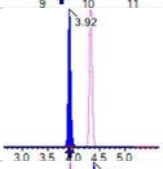 | 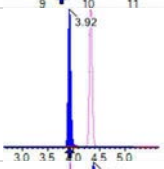 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1101000<br>( 341.0 / 217.0 ) 1672636 | ( 5.63 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1611.1<br>1672.1 | 1.5192<br>99.2<br>100.0 | 18.1420<br>[ 20.0000 ] | 90.7% | 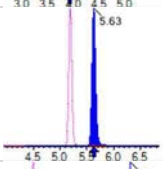 | 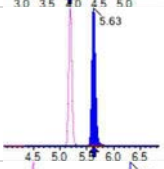 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2333331<br>( 441.0 / 337.0 ) 2058748 | ( 9.33 , 1.80 )<br>( N/A , 0.00 , 0.0) | 11987.2<br>2106.6 | 0.8823<br>103.3<br>100.0 | 18.0970<br>[ 20.0000 ] | 90.5% | 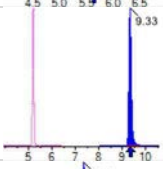 | 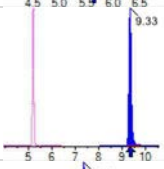 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1527635<br>( 357.2 / 243.0 ) 169037 | ( 5.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1882.9<br>1047.9 | 0.1107<br>103.2<br>100.0 | 5.1720<br>[ 5.0000 ] | 103.4% | 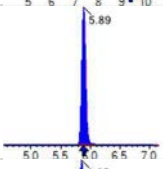 | 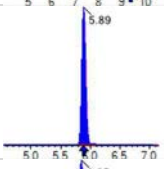 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1477716<br>( 457.2 / 343.0 ) 64553 | ( 8.65 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1258.7<br>547.0 | 0.0437<br>97.3<br>100.0 | 5.3350<br>[ 5.0000 ] | 106.7% | 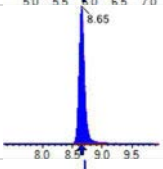 | 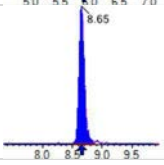 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 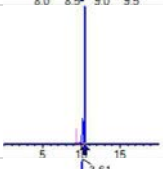 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 264402 | ( 3.61 , N/A )<br>( N/A , 0.00 , N/A ) | 1615.6 | N/A | 0.9370<br>[ 1.0000 ] | 93.7%<br>{ 100.0% } | 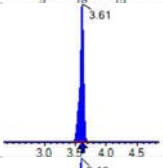 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 115762 | ( 5.19 , N/A )<br>( N/A , 0.00 , N/A ) | 764372.1 | N/A | 0.9810<br>[ 1.0000 ] | 98.1%<br>{ 100.0% } | 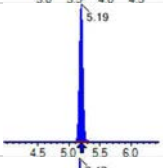 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 360966 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 12363.8 | N/A | 0.9300<br>[ 1.0000 ] | 93.0%<br>{ 100.0% } | 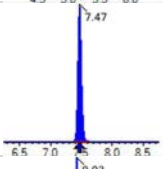 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278817 | ( 9.03 , N/A )<br>( N/A , 0.00 , N/A ) | 1958.9 | N/A | 0.9540<br>[ 1.0000 ] | 95.4%<br>{ 100.0% } | 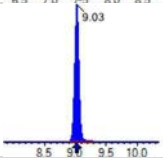 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 276100 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 15115.7 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 100.0% } | 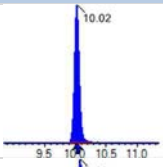 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 917853 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 5460.5 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 100.0% } | 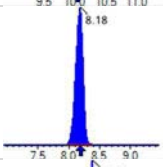 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 771261 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 3409.6 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 100.0% } | 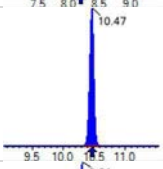 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2171448 | ( 3.61 , N/A ) ( N/A , 0.00 , N/A ) | 113799.8 | N/A | 7.5980 [ 8.0000 ] | 95.0% { 100.0% } | 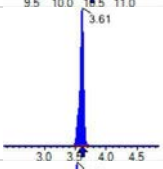 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 836377 | ( 4.33 , N/A ) ( N/A , 0.00 , N/A ) | 4628.4 | N/A | 3.9460 [ 4.0000 ] | 98.7% { 100.0% } | 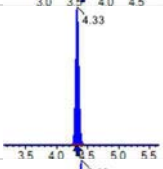 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 480793 | ( 5.19 , N/A ) ( N/A , 0.00 , N/A ) | 27318.2 | N/A | 1.8980 [ 2.0000 ] | 94.9% { 100.0% } | 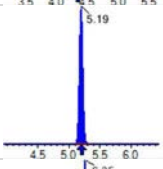 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 548085 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 17409.5 | N/A | 1.9490 [ 2.0000 ] | 97.4% { 100.0% } | 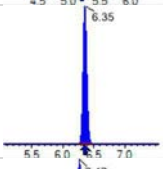 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 765647 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5069.3 | N/A | 2.0010 [ 2.0000 ] | 100.1% { 100.0% } | 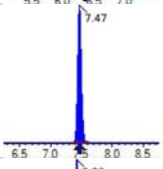 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269622 | ( 9.02 , N/A ) ( N/A , 0.00 , N/A ) | 4467.5 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 100.0% } | 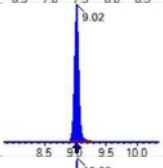 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 294041 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 1407.5 | N/A | 0.9220 [ 1.0000 ] | 92.2% { 100.0% } | 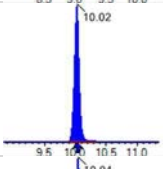 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 369329 | ( 10.94 , N/A ) ( N/A , 0.00 , N/A ) | 1050.3 | N/A | 0.9760 [ 1.0000 ] | 97.6% { 100.0% } | 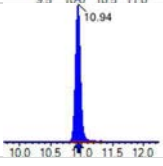 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 362872 | ( 11.83 , N/A ) ( N/A , 0.00 , N/A ) | 1423.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 100.0% } | 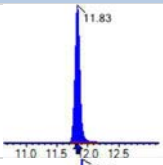 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327667 | ( 13.11 , N/A ) ( N/A , 0.00 , N/A ) | 1436.0 | N/A | 0.9530 [ 1.0000 ] | 95.3% { 100.0% } | 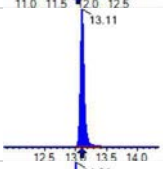 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 497891 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2198.2 | N/A | 1.7310 [ 2.0000 ] | 86.6% { 100.0% } | 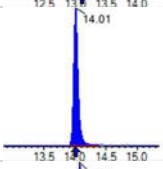 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1474977 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1191.0 | N/A | 1.9940 [ 2.0000 ] | 99.7% { 100.0% } | 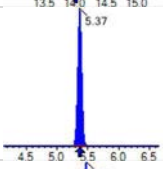 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1302149 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 5082.5 | N/A | 1.9670 [ 2.0000 ] | 98.3% { 100.0% } | 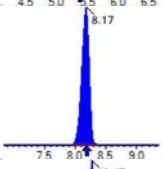 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1444544 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1070.4 | N/A | 1.7600 [ 2.0000 ] | 88.0% { 100.0% } | 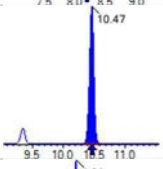 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 650602 | ( 4.81 , N/A ) ( N/A , 0.00 , N/A ) | 93.0 | N/A | 3.9980 [ 4.0000 ] | 99.9% { 100.0% } | 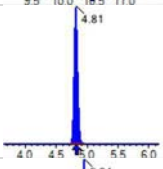 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1759886 | ( 6.94 , N/A ) ( N/A , 0.00 , N/A ) | 6139.2 | N/A | 4.4020 [ 4.0000 ] | 110.0% { 100.0% } | 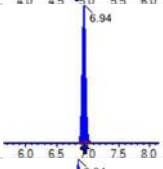 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1455136 | ( 9.34 , N/A ) ( N/A , 0.00 , N/A ) | 2557.1 | N/A | 4.1600 [ 4.0000 ] | 104.0% { 100.0% } | 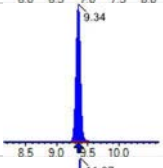 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2980059 | ( 11.07 , N/A ) ( N/A , 0.00 , N/A ) | 1482.9 | N/A | 7.8750 [ 8.0000 ] | 98.4% { 100.0% } | 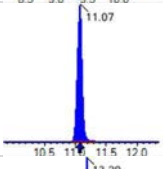 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1558078 | ( 13.29 , N/A ) ( N/A , 0.00 , N/A ) | 2456.6 | N/A | 1.7890 [ 2.0000 ] | 89.4% { 100.0% } | 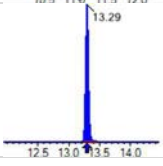 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 364020 | ( 14.57 , N/A ) ( N/A , 0.00 , N/A ) | 2582.9 | N/A | 1.8590 [ 2.0000 ] | 92.9% { 100.0% } | 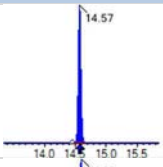  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 344481 | ( 14.90 , N/A ) ( N/A , 0.00 , N/A ) | 3470.8 | N/A | 1.9240 [ 2.0000 ] | 96.2% { 100.0% } | 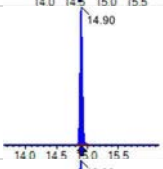  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1180322 | ( 10.39 , N/A ) ( N/A , 0.00 , N/A ) | 3632.7 | N/A | 4.1430 [ 4.0000 ] | 103.6% { 100.0% } | 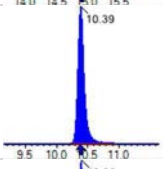  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1019487 | ( 10.99 , N/A ) ( N/A , 0.00 , N/A ) | 2402.1 | N/A | 3.9650 [ 4.0000 ] | 99.1% { 100.0% } | 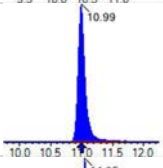  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1329080 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 3587.2 | N/A | 18.1650 [ 20.0000 ] | 90.8% { 100.0% } | 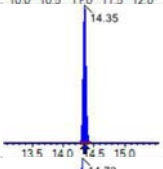  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1251905 | ( 14.72 , N/A ) ( N/A , 0.00 , N/A ) | 4473.5 | N/A | 18.2700 [ 20.0000 ] | 91.3% { 100.0% } | 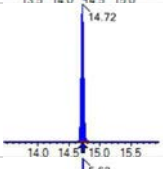  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 827332 | ( 5.62 , N/A ) ( N/A , 0.00 , N/A ) | 2934.0 | N/A | 7.5420 [ 8.0000 ] | 94.3% { 100.0% } | 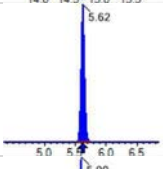  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561718 | ( 5.90 , N/A ) ( N/A , 0.00 , N/A ) | 1959.8 | N/A | 1.8670 [ 2.0000 ] | 93.3% { 100.0% } | 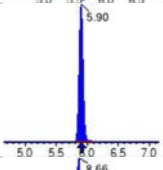  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 670170 | ( 8.66 , N/A ) ( N/A , 0.00 , N/A ) | 1139.2 | N/A | 1.9770 [ 2.0000 ] | 98.8% { 100.0% } | 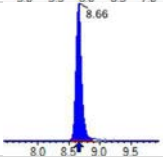  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV2A | PFBA | 20.0A | 19.9A | 99.7A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.53A | 95.3A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.84A | 96.7A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.18A | 83.6A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.66A | 93.1A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.54A | 90.9A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.48A | 89.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.73A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.67A | 93.5A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.95A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 5.00A | 99.9A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.09A | 92.6A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.48A | 95.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.22A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.86A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.50A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.75A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.09A | 106A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.22A | 108A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 19.1A | 102A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.9A | 99.7A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.1A | 94.0A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.5A | 92.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 94.9A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.73A | 94.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 18.8A | 94.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 96.0A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 3.97A | 79.4A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV2 | ADONA | 4.72A | 4.28A | 90.8A | ng/mLA | +/- 30.00%A |
| | PFEESA | 8.90A | 8.29A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.91A | 99.1A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.99A | 89.9A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.42A | 94.2A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.01A | 85.6A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.18A | 88.5A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.0A | 100A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.9A | 94.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.9A | 99.4A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 562053<br>( 163.0 / 69.0 ) 14490 | ( 2.41 , 0.67 ) ( N/A , -0.04 , 0.1) | 841.1<br>219.5 | 0.0258<br>94.1<br>98.3 | 9.6270<br>[ 10.0000 ] | 96.3% | 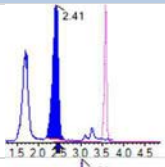 | 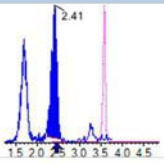 | |
| PFBA | ( 213.0 / 169.0 ) 5156589 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 2100.0 | N/A<br>0.0<br>0.0 | 19.9360<br>[ 20.0000 ] | 99.7% | 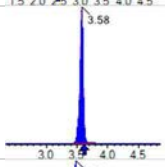 | | |
| PFPeA | ( 263.0 / 219.0 ) 1703403<br>( 263.0 / 69.0 ) 20118 | ( 4.28 , 1.00 ) ( 0.00 , N/A , 0.2) | 4728.8<br>369.9 | 0.0118<br>99.2<br>111.0 | 9.5340<br>[ 10.0000 ] | 95.3% | 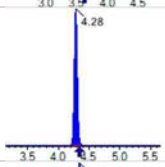 | 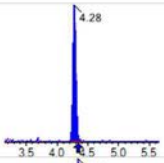 | |
| PFHxA | ( 313.0 / 269.0 ) 888525<br>( 313.0 / 119.0 ) 100725 | ( 5.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1749.6<br>1505.9 | 0.1134<br>101.9<br>95.7 | 4.8360<br>[ 5.0000 ] | 96.7% | 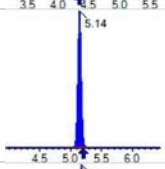 | 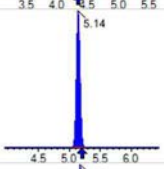 | |
| PFHpA | ( 363.0 / 319.0 ) 1057876<br>( 363.0 / 169.0 ) 328192 | ( 6.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 2147.2<br>1976.2 | 0.3102<br>101.5<br>100.8 | 4.1820<br>[ 5.0000 ] | 83.6% | 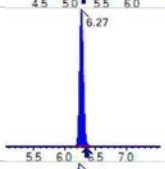 | 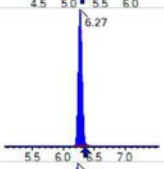 | |
| PFOA | ( 413.0 / 369.0 ) 1634360<br>( 413.0 / 169.0 ) 589327 | ( 7.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1212.3<br>1815.4 | 0.3606<br>100.9<br>101.7 | 4.6570<br>[ 5.0000 ] | 93.1% | 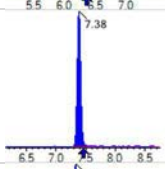 | 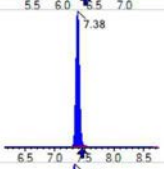 | |
| PFNA | ( 463.0 / 419.0 ) 1070675<br>( 463.0 / 169.0 ) 277472 | ( 8.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 1984.2<br>1696.8 | 0.2592<br>105.5<br>101.0 | 4.5450<br>[ 5.0000 ] | 90.9% | 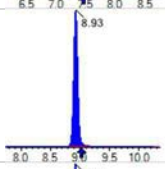 | 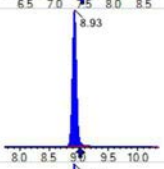 | |
| PFDA | ( 513.0 / 469.0 ) 1217373<br>( 513.0 / 169.0 ) 142431 | ( 9.92 , 1.00 ) ( 0.00 , N/A , 0.0) | 4796.9<br>2319.8 | 0.1170<br>98.2<br>96.1 | 4.4760<br>[ 5.0000 ] | 89.5% | 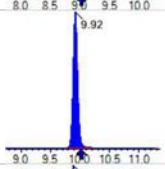 | 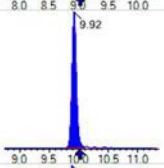 | |
| PFUnA | ( 563.0 / 519.0 ) 1378984<br>( 563.0 / 169.0 ) 207205 | ( 10.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1143.3<br>912.8 | 0.1503<br>97.0<br>100.1 | 4.7340<br>[ 5.0000 ] | 94.7% | 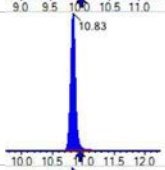 | 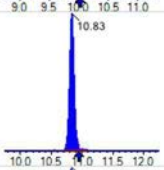 | |
| PFDoA | ( 613.0 / 569.0 ) 1557613<br>( 613.0 / 169.0 ) 235245 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1583.9<br>1030.7 | 0.1510<br>99.4<br>99.0 | 4.6740<br>[ 5.0000 ] | 93.5% | 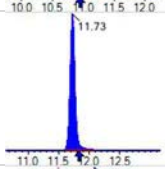 | 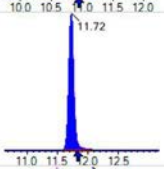 | |
| PFTrDA | ( 663.0 / 619.0 ) 1603042<br>( 663.0 / 169.0 ) 419056 | ( 12.48 , 1.06 ) ( N/A , -0.08 , 0.0) | 1635.4<br>1376.9 | 0.2614<br>97.1<br>99.2 | 4.9480<br>[ 5.0000 ] | 99.0% | 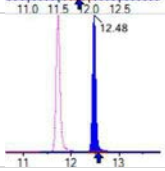 | 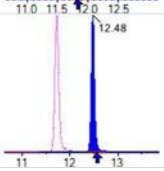 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1363594<br>( 713.0 / 169.0 ) 352024 | ( 13.03 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1578.2<br>1339.4 | 0.2582<br>95.1<br>98.1 | 4.9960<br>[ 5.0000 ] | 99.9% | 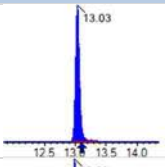 | 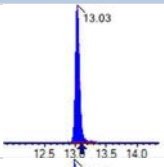 | |
| PFHxDA | ( 813.0 / 769.0 ) 1048828<br>( 813.0 / 169.0 ) 276938 | ( 13.93 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2018.0<br>1178.0 | 0.2640<br>100.9<br>97.8 | 4.6670<br>[ 5.0000 ] | 93.3% | 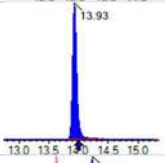 | 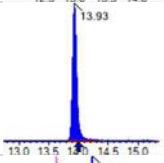 | |
| PFODA | ( 913.0 / 869.0 ) 539632<br>( 913.0 / 169.0 ) 173125 | ( 14.68 , 1.05 )<br>( N/A , -0.07 , 0.3) | 1637.0<br>603.5 | 0.3208<br>102.3<br>95.8 | 3.7910<br>[ 5.0000 ] | 75.8% | 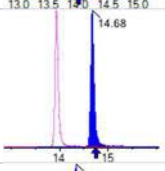 | 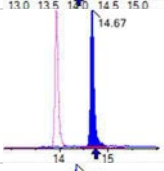 | |
| PFBS | ( 299.0 / 80.0 ) 1268191<br>( 299.0 / 99.0 ) 917505 | ( 5.31 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3110.6<br>1934.1 | 0.7235<br>97.7<br>95.9 | 4.0940<br>[ 4.4240 ] | 92.5% | 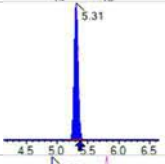 | 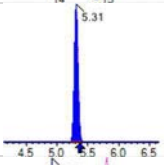 | |
| PFPeS | ( 349.0 / 80.0 ) 3899469<br>( 349.0 / 99.0 ) 1325009 | ( 6.59 , 0.82 )<br>( N/A , -0.08 , 0.0) | 3087.9<br>3224.1 | 0.3398<br>99.4<br>95.6 | 4.4830<br>[ 4.6920 ] | 95.6% | 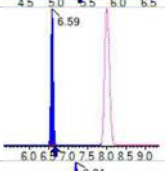 | 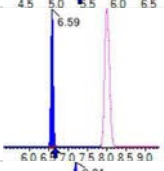 | |
| PFHxS | ( 399.0 / 80.0 ) 4470110<br>( 399.0 / 99.0 ) 1459394 | ( 8.01 , 1.00 )<br>( 0.00 , N/A , 0.3) | 3434.8<br>4061.8 | 0.3265<br>99.5<br>101.1 | 4.2160<br>[ 4.5550 ] | 92.6% | 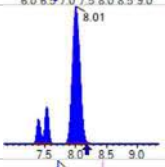 | 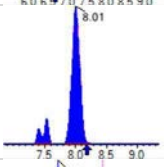 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 3903463<br>( 449.0 / 99.0 ) 1038749 | ( 9.40 , 0.91 )<br>( N/A , -0.10 , 0.0) | 3155.8<br>2827.9 | 0.2661<br>102.0<br>102.6 | 4.8590<br>[ 4.7570 ] | 102.1% | 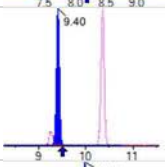 | 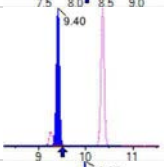 | |
| PFOS | ( 499.0 / 80.0 ) 3512845<br>( 499.0 / 99.0 ) 786008 | ( 10.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2349.9<br>5729.7 | 0.2238<br>96.8<br>97.7 | 4.5000<br>[ 4.6370 ] | 97.0% | 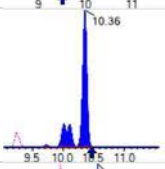 | 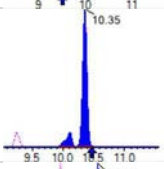 | |
| PFNS | ( 549.0 / 80.0 ) 3380770<br>( 549.0 / 99.0 ) 908323 | ( 11.23 , 1.08 )<br>( N/A , -0.11 , 0.1) | 3383.8<br>2653.4 | 0.2687<br>100.3<br>97.7 | 4.7510<br>[ 4.7990 ] | 99.0% | 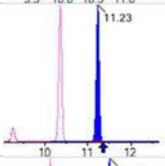 | 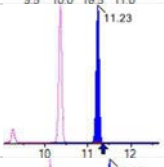 | |
| PFDS | ( 599.0 / 80.0 ) 4423585<br>( 599.0 / 99.0 ) 1130267 | ( 12.05 , 1.16 )<br>( N/A , -0.10 , 0.0) | 4156.7<br>2792.1 | 0.2555<br>100.3<br>94.8 | 5.0860<br>[ 4.8160 ] | 105.6% | 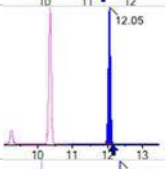 | 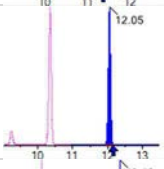 | |
| PFDoS | ( 699.0 / 80.0 ) 4394472<br>( 699.0 / 99.0 ) 1044890 | ( 13.10 , 1.26 )<br>( N/A , -0.07 , 0.0) | 4698.6<br>3325.6 | 0.2378<br>106.4<br>100.6 | 5.2210<br>[ 4.8480 ] | 107.7% | 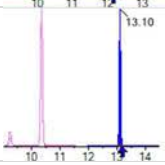 | 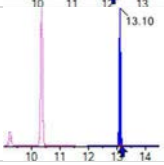 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7091262<br>( 327.0 / 81.0 ) 5898184 | ( 4.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 5460.6<br>3591.3 | 0.8318<br>97.5<br>94.9 | 19.1140<br>[ 18.6910 ] | 102.3% | 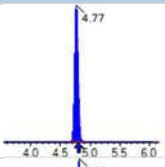 | 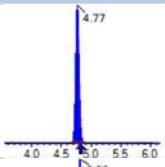 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6029214<br>( 427.0 / 81.0 ) 7376615 | ( 6.86 , 1.00 ) ( 0.00 , N/A , 0.2) | 7388.0<br>6358.2 | 1.2235<br>94.9<br>94.3 | 18.9380<br>[ 18.9810 ] | 99.8% | 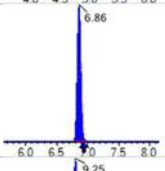 | 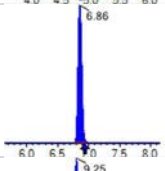 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5893720<br>( 527.0 / 81.0 ) 6132709 | ( 9.25 , 1.00 ) ( 0.00 , N/A , 0.0) | 2838.0<br>2209.4 | 1.0405<br>94.3<br>94.4 | 18.0500<br>[ 19.1660 ] | 94.2% | 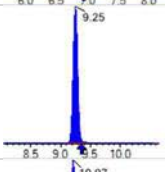 | 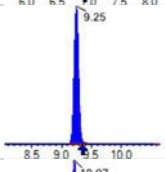 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5222429<br>( 627.0 / 81.0 ) 7154070 | ( 10.97 , 1.00 ) ( 0.01 , N/A , -0.1) | 1700.7<br>1517.7 | 1.3699<br>95.3<br>94.5 | 20.0190<br>[ 19.3240 ] | 103.6% | 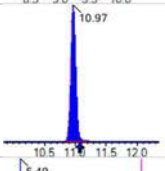 | 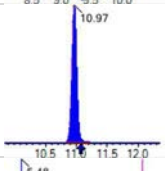 | |
| PFBSA | ( 297.9 / 78.0 ) 1945048<br>( 297.9 / 278.0 ) 4083 | ( 5.49 , 0.38 ) ( N/A , -0.04 , 0.2) | 1327.8<br>49.1 | 0.0021<br>162.2<br>186.5 | 3.8860<br>[ 5.0000 ] | 77.7% | 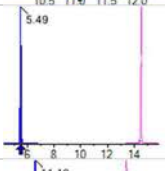 | 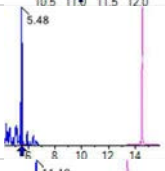 | |
| PFHxSA | ( 397.9 / 78.0 ) 4503386<br>( 397.9 / 378.0 ) 19762 | ( 11.19 , 0.75 ) ( N/A , -0.04 , -0.2) | 1671.5<br>373.7 | 0.0044<br>108.7<br>100.0 | 4.7100<br>[ 5.0000 ] | 94.2% | 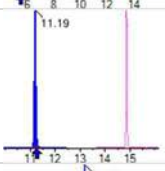 | 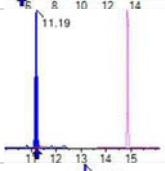 | |
| PFOSA | ( 498.0 / 78.0 ) 3381771<br>( 498.0 / 478.0 ) 48355 | ( 13.25 , 1.00 ) ( -0.01 , N/A , 0.0) | 4980.9<br>947.5 | 0.0143<br>97.3<br>107.4 | 4.7770<br>[ 5.0000 ] | 95.5% | 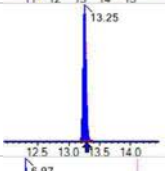 | 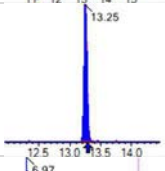 | |
| TFSI | ( 279.7 / 147.0 ) 5801062<br>( 279.7 / 211.0 ) 515718 | ( 6.97 , 0.53 ) ( N/A , -0.10 , 0.0) | 92.7<br>5146.7 | 0.0889<br>100.5<br>101.4 | 4.6900<br>[ 4.8970 ] | 95.8% | 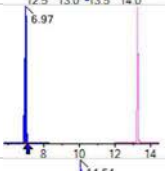 | 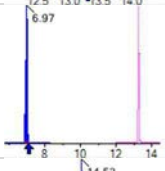 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2709906<br>( 512.0 / 169.0 ) 2063760 | ( 14.54 , 1.00 ) ( 0.00 , N/A , 1.0) | 4025.6<br>1696.2 | 0.7616<br>99.3<br>102.3 | 18.4870<br>[ 20.0000 ] | 92.4% | 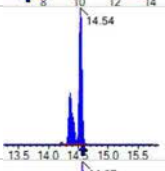 | 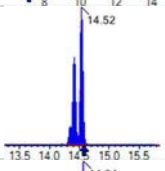 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3266045<br>( 526.0 / 169.0 ) 4045856 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 2.0) | 4885.5<br>3875.3 | 1.2388<br>99.1<br>99.6 | 18.9820<br>[ 20.0000 ] | 94.9% | 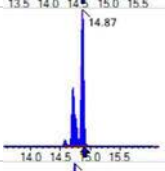 | 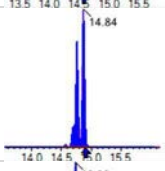 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1115883<br>( 570.0 / 483.0 ) 504412 | ( 10.30 , 1.00 ) ( 0.01 , N/A , 0.0) | 10002.1<br>1760.4 | 0.4520<br>97.4<br>96.8 | 4.7350<br>[ 5.0000 ] | 94.7% | 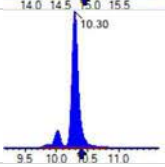 | 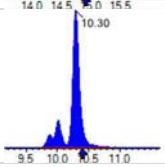 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1028483<br>( 584.0 / 526.0 ) 611202 | ( 10.91 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1882.6<br>840.9 | 0.5943<br>99.1<br>99.4 | 4.6840<br>[ 5.0000 ] | 93.7% | 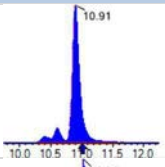 | 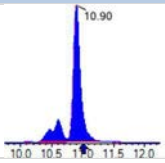 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1210172 | ( 14.34 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2525.2 | N/A<br>0.0<br>0.0 | 18.8220<br>[ 20.0000 ] | 94.1% | 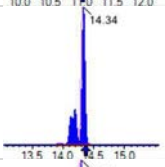 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1013010 | ( 14.71 , 1.00 )<br>( 0.03 , N/A , 0.0) | 3278.1 | N/A<br>0.0<br>0.0 | 19.1920<br>[ 20.0000 ] | 96.0% | 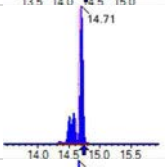 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 236032<br>( 285.0 / 185.0 ) 638779 | ( 5.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1774.6<br>2223.8 | 2.7063<br>96.4<br>102.5 | 3.9720<br>[ 5.0000 ] | 79.4% | 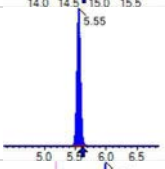 | 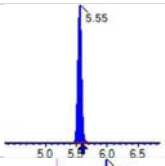 | |
| ADONA | ( 377.0 / 85.0 ) 3358110<br>( 377.0 / 251.0 ) 361036 | ( 6.71 , 1.21 )<br>( N/A , -0.08 , 0.1) | 2492.5<br>1567.4 | 0.1075<br>102.5<br>107.9 | 4.2840<br>[ 4.7140 ] | 90.9% | 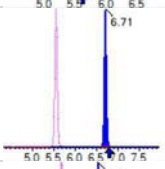 | 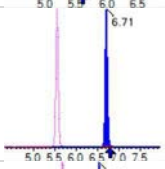 | |
| PFEESA | ( 315.0 / 135.0 ) 1108170<br>( 315.0 / 83.0 ) 714104 | ( 5.90 , 1.15 )<br>( N/A , -0.07 , 0.2) | 2640.5<br>1416.8 | 0.6444<br>100.4<br>110.2 | 8.2910<br>[ 8.9250 ] | 92.9% | 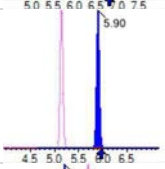 | 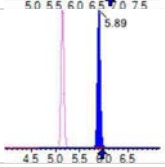 | |
| PFMPA | ( 229.0 / 85.0 ) 651020 | ( 3.82 , 0.89 )<br>( N/A , -0.04 , 0.0) | 7915.4 | N/A<br>0.0<br>0.0 | 9.9110<br>[ 10.0000 ] | 99.1% | 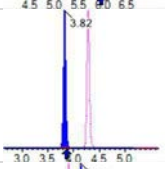 | | |
| PFMBA | ( 279.0 / 85.0 ) 1329766 | ( 4.49 , 1.05 )<br>( N/A , -0.05 , 0.0) | 4806.2 | N/A<br>0.0<br>0.0 | 8.9860<br>[ 10.0000 ] | 89.9% | 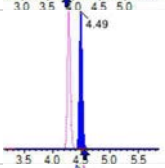 | | |
| NFDHA | ( 295.0 / 201.0 ) 614335<br>( 295.0 / 85.0 ) 706008 | ( 5.01 , 0.98 )<br>( N/A , -0.05 , 0.2) | 3628.6<br>3400.3 | 1.1492<br>115.6<br>111.4 | 9.4180<br>[ 10.0000 ] | 94.2% | 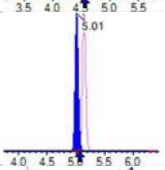 | 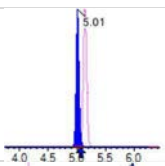 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3489027<br>( 533.0 / 353.0 ) 1061881 | ( 11.03 , 1.98 )<br>( N/A , -0.11 , 0.1) | 3216.6<br>3025.3 | 0.3043<br>95.4<br>91.7 | 4.0070<br>[ 4.6660 ] | 85.9% | 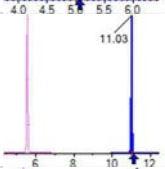 | 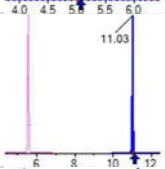 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2825811<br>( 633.0 / 453.0 ) 957234 | ( 12.54 , 2.26 )<br>( N/A , -0.08 , 0.0) | 3747.2<br>3303.2 | 0.3387<br>99.8<br>99.6 | 4.1760<br>[ 4.7160 ] | 88.5% | 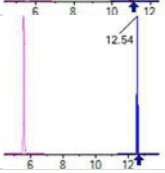 | 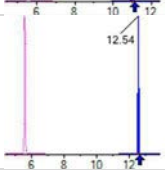 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1732934<br>( 461.0 / 381.2 ) 685900 | ( 9.30 , 0.90 ) ( N/A , -0.10 , 0.0) | 4486.9<br>4844.8 | 0.3958<br>102.5<br>99.6 | 4.1360<br>[ 4.6190 ] | 89.5% | 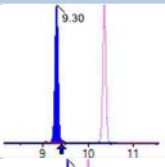 | 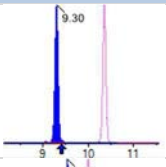 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 307292<br>( 241.0 / 117.0 ) 677820 | ( 3.88 , 0.91 ) ( N/A , -0.04 , 0.1) | 5698.5<br>3495.6 | 2.2058<br>100.5<br>101.2 | 20.0350<br>[ 20.0000 ] | 100.2% | 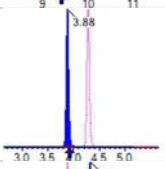 | 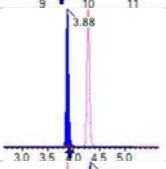 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 946818<br>( 341.0 / 217.0 ) 1472827 | ( 5.57 , 1.08 ) ( N/A , -0.06 , 0.0) | 1615.1<br>1244.7 | 1.5556<br>101.6<br>102.4 | 18.9420<br>[ 20.0000 ] | 94.7% | 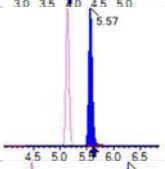 | 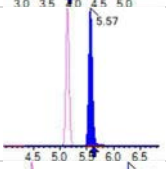 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2110403<br>( 441.0 / 337.0 ) 1894945 | ( 9.24 , 1.80 ) ( N/A , -0.09 , 0.0) | 8679.4<br>81862.5 | 0.8979<br>105.1<br>101.8 | 19.8730<br>[ 20.0000 ] | 99.4% | 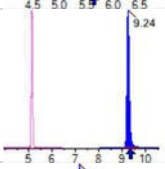 | 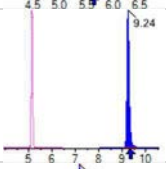 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1438315<br>( 357.2 / 243.0 ) 147118 | ( 5.82 , 1.00 ) ( -0.01 , N/A , 0.1) | 1826.2<br>1468.3 | 0.1023<br>95.4<br>92.4 | 5.5120<br>[ 5.0000 ] | 110.2% | 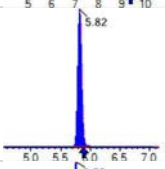 | 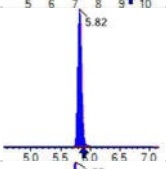 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1274083<br>( 457.2 / 343.0 ) 52498 | ( 8.56 , 1.00 ) ( -0.01 , N/A , 0.2) | 1348.3<br>401.2 | 0.0412<br>91.8<br>94.3 | 5.1890<br>[ 5.0000 ] | 103.8% | 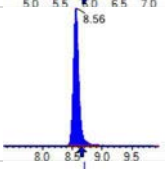 | 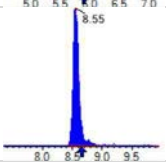 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 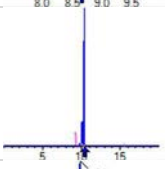 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 255792 | ( 3.58 , N/A ) ( N/A , -0.03 , N/A ) | 1588.8 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 96.7% } | 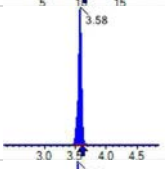 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 91029 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 90739.9 | N/A | 0.7710<br>[ 1.0000 ] | 77.1%<br>{ 78.6% } | 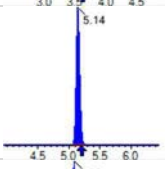 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 350344 | ( 7.38 , N/A ) ( N/A , -0.09 , N/A ) | 5720.5 | N/A | 0.9030<br>[ 1.0000 ] | 90.3%<br>{ 97.1% } | 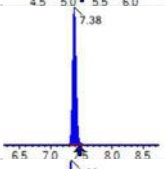 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 248538 | ( 8.93 , N/A ) ( N/A , -0.10 , N/A ) | 1520.2 | N/A | 0.8510<br>[ 1.0000 ] | 85.1%<br>{ 89.1% } | 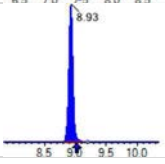 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 235646 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 3668.5 | N/A | 0.8220 [ 1.0000 ] | 82.2% { 85.3% } | 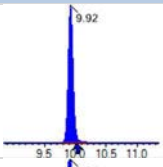 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 870424 | ( 8.01 , N/A ) ( N/A , -0.16 , N/A ) | 5361.7 | N/A | 0.8860 [ 1.0000 ] | 88.6% { 94.8% } | 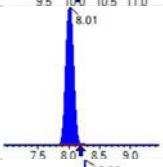 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 694334 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 3927.5 | N/A | 0.8850 [ 1.0000 ] | 88.5% { 90.0% } | 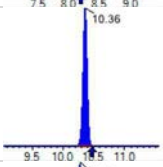 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2063729 | ( 3.57 , N/A ) ( N/A , -0.03 , N/A ) | 64889.1 | N/A | 7.4640 [ 8.0000 ] | 93.3% { 95.0% } | 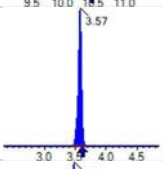 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 715794 | ( 4.28 , N/A ) ( N/A , -0.05 , N/A ) | 6249.9 | N/A | 4.2950 [ 4.0000 ] | 107.4% { 85.6% } | 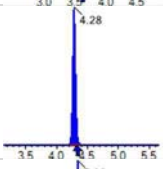 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 395982 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 7283.8 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 82.4% } | 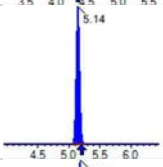 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 509930 | ( 6.27 , N/A ) ( N/A , -0.08 , N/A ) | 8313.0 | N/A | 2.3050 [ 2.0000 ] | 115.3% { 93.0% } | 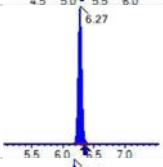 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 699008 | ( 7.38 , N/A ) ( N/A , -0.08 , N/A ) | 5041.1 | N/A | 1.8830 [ 2.0000 ] | 94.1% { 91.3% } | 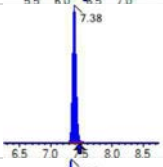 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 234448 | ( 8.93 , N/A ) ( N/A , -0.10 , N/A ) | 3067.5 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 87.0% } | 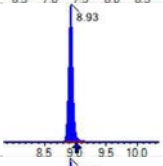 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 272344 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 1838.0 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 92.6% } | 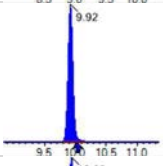 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 320770 | ( 10.83 , N/A ) ( N/A , -0.10 , N/A ) | 1149.2 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 86.9% } | 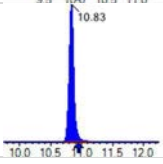 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 332078 | ( 11.73 , N/A ) ( N/A , -0.11 , N/A ) | 1434.2 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 91.5% } | 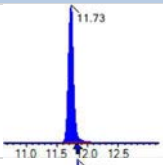 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 292307 | ( 13.03 , N/A ) ( N/A , -0.07 , N/A ) | 1272.7 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 89.2% } | 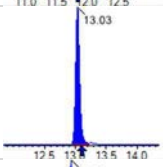 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 479780 | ( 13.94 , N/A ) ( N/A , -0.07 , N/A ) | 2487.7 | N/A | 1.9550 [ 2.0000 ] | 97.7% { 96.4% } | 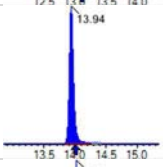 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1259661 | ( 5.31 , N/A ) ( N/A , -0.06 , N/A ) | 1171.7 | N/A | 1.7950 [ 2.0000 ] | 89.8% { 85.4% } | 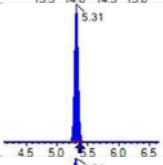 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1210596 | ( 8.01 , N/A ) ( N/A , -0.17 , N/A ) | 6321.4 | N/A | 1.9280 [ 2.0000 ] | 96.4% { 93.0% } | 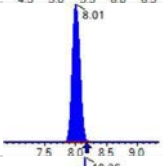 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1345030 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 1224.8 | N/A | 1.8210 [ 2.0000 ] | 91.0% { 93.1% } | 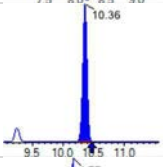 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 562087 | ( 4.77 , N/A ) ( N/A , -0.04 , N/A ) | 81.4 | N/A | 3.6420 [ 4.0000 ] | 91.0% { 86.4% } | 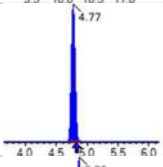 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1500257 | ( 6.86 , N/A ) ( N/A , -0.08 , N/A ) | 5499.8 | N/A | 3.9570 [ 4.0000 ] | 98.9% { 85.2% } | 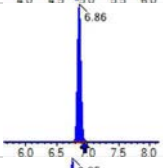 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1327778 | ( 9.25 , N/A ) ( N/A , -0.10 , N/A ) | 2306.6 | N/A | 4.0020 [ 4.0000 ] | 100.1% { 91.2% } | 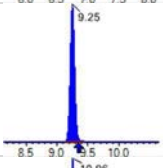 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2628087 | ( 10.96 , N/A ) ( N/A , -0.11 , N/A ) | 1592.3 | N/A | 7.3230 [ 8.0000 ] | 91.5% { 88.2% } | 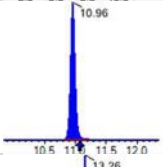 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1463371 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 3363.9 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 93.9% } | 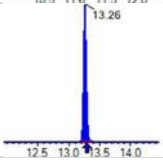 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 329854 | ( 14.53 , N/A ) ( N/A , -0.03 , N/A ) | 2523.2 | N/A | 1.8710 [ 2.0000 ] | 93.5% { 90.6% } | 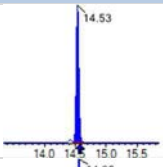 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 303794 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 2135.9 | N/A | 1.8850 [ 2.0000 ] | 94.2% { 88.2% } | 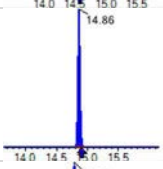 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1021983 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 2611.6 | N/A | 3.9840 [ 4.0000 ] | 99.6% { 86.6% } | 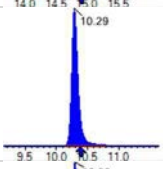 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 905335 | ( 10.89 , N/A ) ( N/A , -0.10 , N/A ) | 2387.7 | N/A | 3.9110 [ 4.0000 ] | 97.8% { 88.8% } | 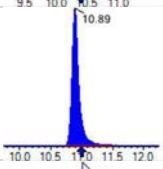 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1187810 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 2222.1 | N/A | 18.0330 [ 20.0000 ] | 90.2% { 89.4% } | 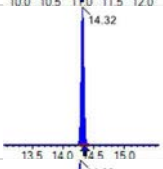 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1108189 | ( 14.68 , N/A ) ( N/A , -0.04 , N/A ) | 4223.3 | N/A | 17.9640 [ 20.0000 ] | 89.8% { 88.5% } | 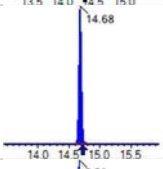 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 809740 | ( 5.56 , N/A ) ( N/A , -0.06 , N/A ) | 3046.6 | N/A | 9.3870 [ 8.0000 ] | 117.3% { 97.9% } | 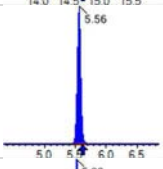 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 496261 | ( 5.83 , N/A ) ( N/A , -0.07 , N/A ) | 1816.9 | N/A | 1.9320 [ 2.0000 ] | 96.6% { 88.3% } | 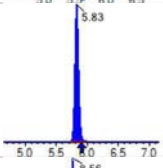 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 594169 | ( 8.56 , N/A ) ( N/A , -0.10 , N/A ) | 1079.0 | N/A | 2.0540 [ 2.0000 ] | 102.7% { 88.7% } | 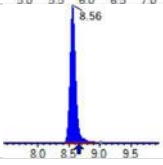 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV3A | PFBA | 20.0A | 18.2A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.22A | 92.2A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 5.16A | 103A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.57A | 91.4A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.48A | 89.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.67A | 93.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.85A | 87.0A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.52A | 96.3A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.26A | 93.1A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.74A | 99.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.26A | 91.7A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.75A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.78A | 99.2A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.97A | 103A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 19.4A | 103A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 16.4A | 86.3A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.4A | 90.4A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.81A | 96.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.7A | 93.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 94.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.46A | 89.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.73A | 94.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 18.1A | 90.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 18.5A | 92.7A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV3 | ADONA | 4.72A | 4.70A | 99.5A | ng/mLA | +/- 30.00%A |
| | PFEESA | 8.90A | 8.75A | 98.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.37A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.01A | 90.1A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.66A | 96.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.32A | 92.2A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.52A | 95.8A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.8A | 93.9A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.0A | 99.8A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 20.6A | 103A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 548207<br>( 163.0 / 69.0 ) 15045 | ( 2.40 , 0.67 )<br>( N/A , -0.05 , 0.0) | 702.0<br>145.0 | 0.0274<br>100.1<br>104.6 | 9.3010<br>[ 10.0000 ] | 93.0% | 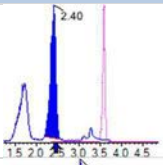 | 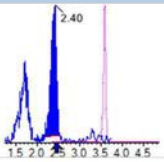 | |
| PFBA | ( 213.0 / 169.0 ) 4761388 | ( 3.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2453.7 | N/A<br>0.0<br>0.0 | 18.2050<br>[ 20.0000 ] | 91.0% | 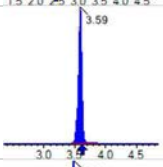 | | |
| PFPeA | ( 263.0 / 219.0 ) 1724009<br>( 263.0 / 69.0 ) 21904 | ( 4.28 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3864.6<br>330.1 | 0.0127<br>106.8<br>119.4 | 9.2200<br>[ 10.0000 ] | 92.2% | 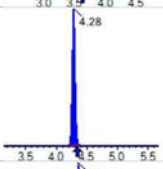 | 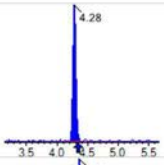 | |
| PFHxA | ( 313.0 / 269.0 ) 925190<br>( 313.0 / 119.0 ) 108111 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2117.1<br>1106.6 | 0.1169<br>105.1<br>98.6 | 5.1580<br>[ 5.0000 ] | 103.2% | 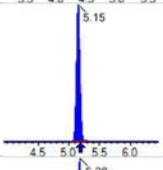 | 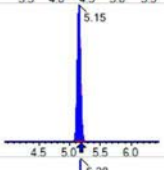 | |
| PFHpA | ( 363.0 / 319.0 ) 1127960<br>( 363.0 / 169.0 ) 331070 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2217.9<br>2581.5 | 0.2935<br>96.0<br>95.4 | 4.5700<br>[ 5.0000 ] | 91.4% | 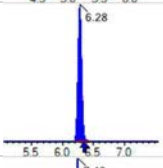 | 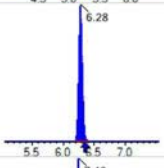 | |
| PFOA | ( 413.0 / 369.0 ) 1658107<br>( 413.0 / 169.0 ) 583891 | ( 7.40 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1329.5<br>1783.1 | 0.3521<br>98.5<br>99.3 | 4.7200<br>[ 5.0000 ] | 94.4% | 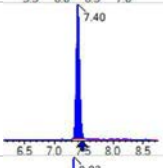 | 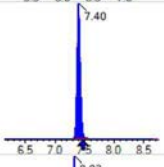 | |
| PFNA | ( 463.0 / 419.0 ) 1074100<br>( 463.0 / 169.0 ) 258985 | ( 8.93 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2054.2<br>1619.7 | 0.2411<br>98.1<br>94.0 | 4.4800<br>[ 5.0000 ] | 89.6% | 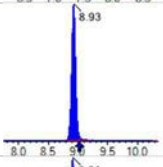 | 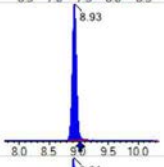 | |
| PFDA | ( 513.0 / 469.0 ) 1267265<br>( 513.0 / 169.0 ) 144059 | ( 9.91 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3781.0<br>3649.0 | 0.1137<br>95.4<br>93.3 | 4.6740<br>[ 5.0000 ] | 93.5% | 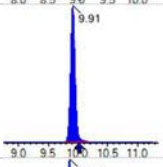 | 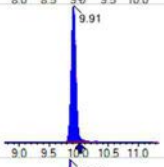 | |
| PFUnA | ( 563.0 / 519.0 ) 1384669<br>( 563.0 / 169.0 ) 214849 | ( 10.82 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1311.6<br>953.7 | 0.1552<br>100.2<br>103.4 | 4.7180<br>[ 5.0000 ] | 94.4% | 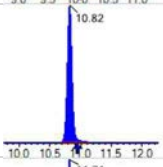 | 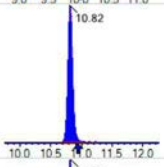 | |
| PFDoA | ( 613.0 / 569.0 ) 1600095<br>( 613.0 / 169.0 ) 235281 | ( 11.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1503.8<br>1273.2 | 0.1470<br>96.8<br>96.4 | 4.8300<br>[ 5.0000 ] | 96.6% | 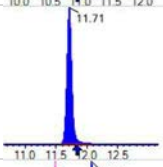 | 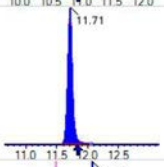 | |
| PFTrDA | ( 663.0 / 619.0 ) 1523283<br>( 663.0 / 169.0 ) 398582 | ( 12.47 , 1.06 )<br>( N/A , -0.09 , 0.1) | 1420.8<br>1209.5 | 0.2617<br>97.2<br>99.3 | 4.7290<br>[ 5.0000 ] | 94.6% | 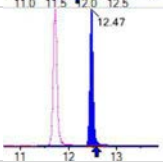 | 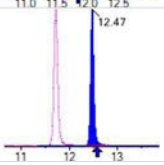 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1345559<br>( 713.0 / 169.0 ) 346394 | ( 13.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 1547.7<br>1137.8 | 0.2574<br>94.9<br>97.8 | 4.7240<br>[ 5.0000 ] | 94.5% | 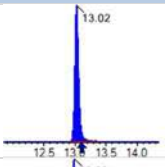 | 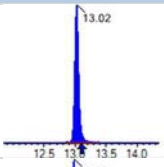 | |
| PFHxDA | ( 813.0 / 769.0 ) 965668<br>( 813.0 / 169.0 ) 271114 | ( 13.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 2143.9<br>1132.9 | 0.2808<br>107.3<br>104.0 | 4.7200<br>[ 5.0000 ] | 94.4% | 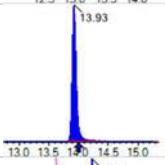 | 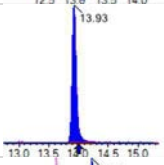 | |
| PFODA | ( 913.0 / 869.0 ) 557253<br>( 913.0 / 169.0 ) 165400 | ( 14.67 , 1.05 ) ( N/A , -0.08 , 0.0) | 1529.9<br>628.8 | 0.2968<br>94.7<br>88.7 | 4.3010<br>[ 5.0000 ] | 86.0% | 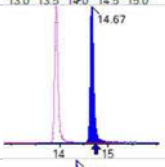 | 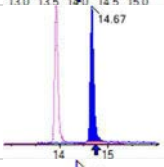 | |
| PFBS | ( 299.0 / 80.0 ) 1269043<br>( 299.0 / 99.0 ) 956282 | ( 5.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 2443.9<br>2237.9 | 0.7535<br>101.7<br>99.9 | 3.8460<br>[ 4.4240 ] | 86.9% | 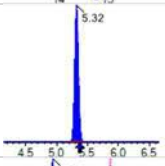 | 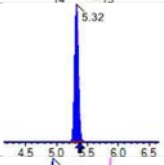 | |
| PFPeS | ( 349.0 / 80.0 ) 3926904<br>( 349.0 / 99.0 ) 1395887 | ( 6.60 , 0.82 ) ( N/A , -0.08 , 0.0) | 3282.1<br>3244.1 | 0.3555<br>104.0<br>100.1 | 4.5250<br>[ 4.6920 ] | 96.4% | 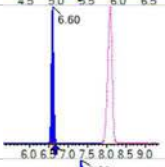 | 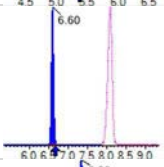 | |
| PFHxS | ( 399.0 / 80.0 ) 4511619<br>( 399.0 / 99.0 ) 1461648 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.1) | 4459.5<br>4758.4 | 0.3240<br>98.7<br>100.3 | 4.2650<br>[ 4.5550 ] | 93.6% | 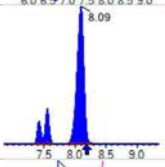 | 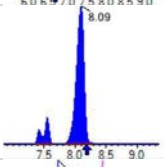 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 3895710<br>( 449.0 / 99.0 ) 1035840 | ( 9.40 , 0.91 ) ( N/A , -0.11 , 0.0) | 3138.6<br>3047.8 | 0.2659<br>101.9<br>102.5 | 4.7390<br>[ 4.7570 ] | 99.6% | 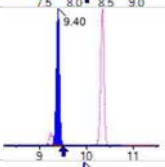 | 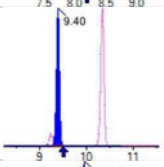 | |
| PFOS | ( 499.0 / 80.0 ) 3407117<br>( 499.0 / 99.0 ) 790696 | ( 10.34 , 1.00 ) ( -0.01 , N/A , -0.1) | 2348.3<br>7099.6 | 0.2321<br>100.4<br>101.3 | 4.2650<br>[ 4.6370 ] | 92.0% | 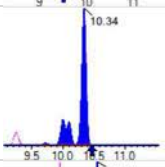 | 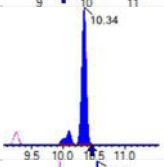 | |
| PFNS | ( 549.0 / 80.0 ) 3458519<br>( 549.0 / 99.0 ) 927051 | ( 11.22 , 1.08 ) ( N/A , -0.13 , 0.0) | 2919.8<br>3015.1 | 0.2680<br>100.0<br>97.5 | 4.7500<br>[ 4.7990 ] | 99.0% | 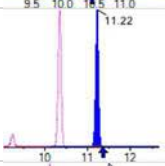 | 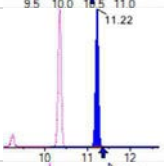 | |
| PFDS | ( 599.0 / 80.0 ) 4256771<br>( 599.0 / 99.0 ) 1103745 | ( 12.04 , 1.16 ) ( N/A , -0.11 , 0.0) | 4042.4<br>3034.6 | 0.2593<br>101.8<br>96.2 | 4.7830<br>[ 4.8160 ] | 99.3% | 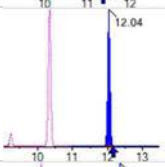 | 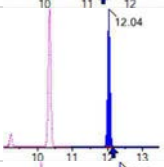 | |
| PFDoS | ( 699.0 / 80.0 ) 4282057<br>( 699.0 / 99.0 ) 973785 | ( 13.09 , 1.27 ) ( N/A , -0.08 , 0.0) | 4374.1<br>3338.9 | 0.2274<br>101.8<br>96.2 | 4.9720<br>[ 4.8480 ] | 102.6% | 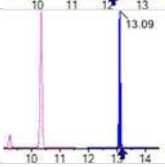 | 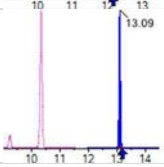 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6728076<br>( 327.0 / 81.0 ) 6275034 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 3949.1<br>4024.1 | 0.9327<br>109.3<br>106.4 | 19.4210<br>[ 18.6910 ] | 103.9% | 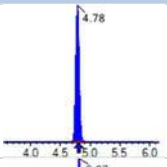 | 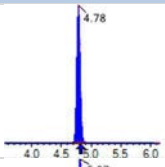 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5755350<br>( 427.0 / 81.0 ) 8013748 | ( 6.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 7488.0<br>6375.7 | 1.3924<br>108.0<br>107.3 | 16.4030<br>[ 18.9810 ] | 86.4% | 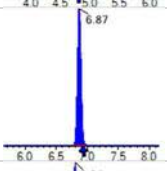 | 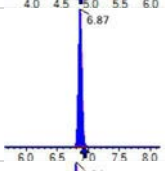 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5752502<br>( 527.0 / 81.0 ) 6199903 | ( 9.24 , 1.00 ) ( 0.00 , N/A , 0.2) | 2782.8<br>2293.5 | 1.0778<br>97.7<br>97.8 | 17.3530<br>[ 19.1660 ] | 90.5% | 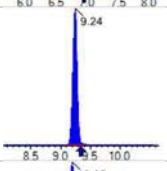 | 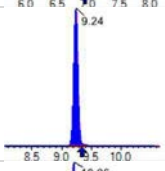 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5228903<br>( 627.0 / 81.0 ) 7809580 | ( 10.95 , 1.00 ) ( 0.01 , N/A , -0.2) | 1426.1<br>1593.7 | 1.4935<br>103.9<br>103.1 | 19.3590<br>[ 19.3240 ] | 100.2% | 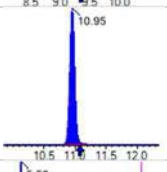 | 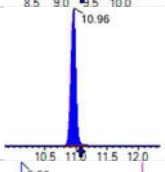 | |
| PFBSA | ( 297.9 / 78.0 ) 2019313<br>( 297.9 / 278.0 ) 3014 | ( 5.50 , 0.38 ) ( N/A , -0.02 , 0.0) | 1762.7<br>33.4 | 0.0015<br>115.3<br>132.6 | 3.9760<br>[ 5.0000 ] | 79.5% | 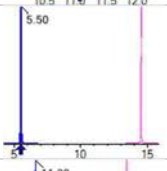 | 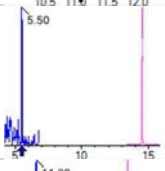 | |
| PFHxSA | ( 397.9 / 78.0 ) 4480785<br>( 397.9 / 378.0 ) 19710 | ( 11.20 , 0.75 ) ( N/A , -0.03 , 0.3) | 1972.0<br>496.6 | 0.0044<br>108.9<br>100.3 | 4.5670<br>[ 5.0000 ] | 91.3% | 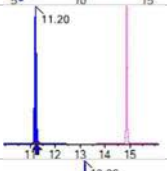 | 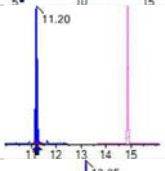 | |
| PFOSA | ( 498.0 / 78.0 ) 3339575<br>( 498.0 / 478.0 ) 48520 | ( 13.26 , 1.00 ) ( -0.01 , N/A , 0.0) | 3724.8<br>1013.0 | 0.0145<br>98.8<br>109.2 | 4.8100<br>[ 5.0000 ] | 96.2% | 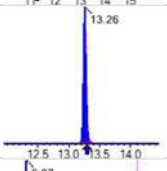 | 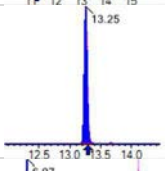 | |
| TFSI | ( 279.7 / 147.0 ) 5892856<br>( 279.7 / 211.0 ) 528564 | ( 6.97 , 0.53 ) ( N/A , -0.09 , -0.1) | 91.6<br>1420553.7 | 0.0897<br>101.4<br>102.3 | 4.8590<br>[ 4.8970 ] | 99.2% | 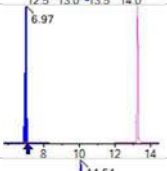 | 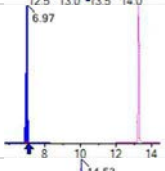 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2776658<br>( 512.0 / 169.0 ) 2103378 | ( 14.54 , 1.00 ) ( 0.00 , N/A , 0.7) | 4502.4<br>2012.0 | 0.7575<br>98.8<br>101.8 | 18.6680<br>[ 20.0000 ] | 93.3% | 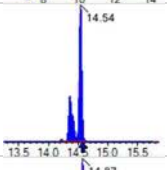 | 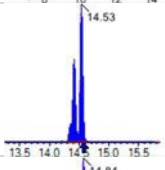 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3349346<br>( 526.0 / 169.0 ) 4132666 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 2.1) | 5219.8<br>4008.0 | 1.2339<br>98.7<br>99.2 | 18.9700<br>[ 20.0000 ] | 94.8% | 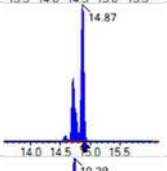 | 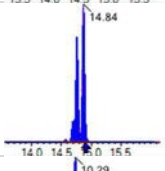 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1057994<br>( 570.0 / 483.0 ) 506080 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 0.1) | 7764.3<br>1907.9 | 0.4783<br>103.1<br>102.5 | 4.4560<br>[ 5.0000 ] | 89.1% | 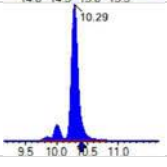 | 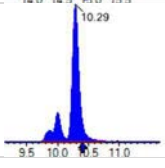 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1035223<br>( 584.0 / 526.0 ) 623710 | ( 10.90 , 1.00 )<br>( 0.01 , N/A , 0.2) | 2045.3<br>937.0 | 0.6025<br>100.4<br>100.8 | 4.7270<br>[ 5.0000 ] | 94.5% | 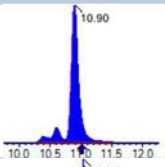 | 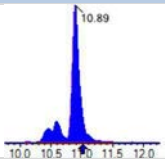 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1187108 | ( 14.34 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2503.6 | N/A<br>0.0<br>0.0 | 18.1410<br>[ 20.0000 ] | 90.7% | 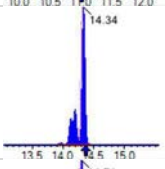 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 988842 | ( 14.71 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3332.6 | N/A<br>0.0<br>0.0 | 18.5420<br>[ 20.0000 ] | 92.7% | 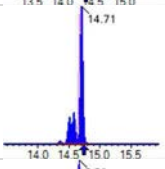 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 243542<br>( 285.0 / 185.0 ) 653462 | ( 5.56 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1804.7<br>2342.6 | 2.6832<br>95.6<br>101.6 | 4.4050<br>[ 5.0000 ] | 88.1% | 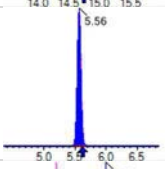 | 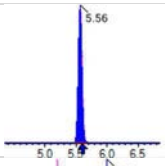 | |
| ADONA | ( 377.0 / 85.0 ) 3424774<br>( 377.0 / 251.0 ) 344686 | ( 6.72 , 1.21 )<br>( N/A , -0.07 , 0.1) | 4153.3<br>1627.6 | 0.1006<br>96.0<br>101.0 | 4.6970<br>[ 4.7140 ] | 99.6% | 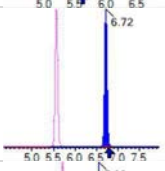 | 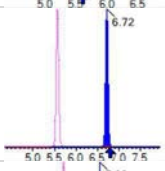 | |
| PFEESA | ( 315.0 / 135.0 ) 1141708<br>( 315.0 / 83.0 ) 708890 | ( 5.90 , 1.15 )<br>( N/A , -0.06 , 0.1) | 3058.9<br>1488.6 | 0.6209<br>96.7<br>106.2 | 8.7490<br>[ 8.9250 ] | 98.0% | 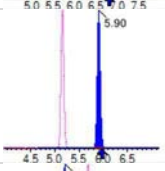 | 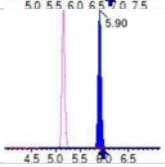 | |
| PFMPA | ( 229.0 / 85.0 ) 644230 | ( 3.83 , 0.89 )<br>( N/A , -0.03 , 0.0) | 8032.2 | N/A<br>0.0<br>0.0 | 9.3710<br>[ 10.0000 ] | 93.7% | 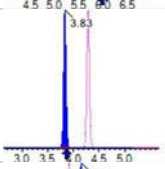 | | |
| PFMBA | ( 279.0 / 85.0 ) 1395950 | ( 4.49 , 1.05 )<br>( N/A , -0.06 , 0.0) | 5524.9 | N/A<br>0.0<br>0.0 | 9.0140<br>[ 10.0000 ] | 90.1% | 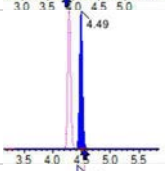 | | |
| NFDHA | ( 295.0 / 201.0 ) 614908<br>( 295.0 / 85.0 ) 614139 | ( 5.03 , 0.98 )<br>( N/A , -0.03 , 0.1) | 4084.3<br>3108.5 | 0.9987<br>100.4<br>96.8 | 9.6560<br>[ 10.0000 ] | 96.6% | 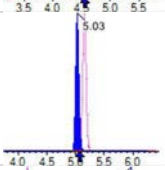 | 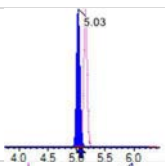 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3496391<br>( 533.0 / 353.0 ) 1123134 | ( 11.01 , 1.98 )<br>( N/A , -0.13 , 0.0) | 3331.0<br>2852.8 | 0.3212<br>100.7<br>96.8 | 4.3160<br>[ 4.6660 ] | 92.5% | 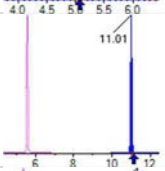 | 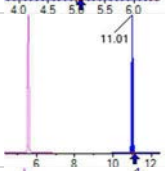 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2846551<br>( 633.0 / 453.0 ) 945597 | ( 12.53 , 2.25 )<br>( N/A , -0.09 , 0.0) | 4587.9<br>3257.3 | 0.3322<br>97.9<br>97.7 | 4.5210<br>[ 4.7160 ] | 95.9% | 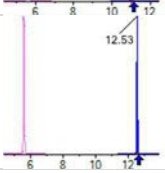 | 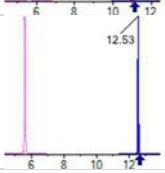 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1755749<br>( 461.0 / 381.2 ) 716009 | ( 9.30 , 0.90 )<br>( N/A , -0.11 , 0.0) | 4566.1<br>5045.3 | 0.4078<br>105.6<br>102.7 | 4.0950<br>[ 4.6190 ] | 88.7% | 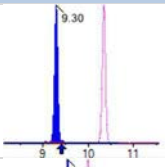 | 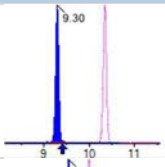 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 301404<br>( 241.0 / 117.0 ) 681990 | ( 3.88 , 0.91 )<br>( N/A , -0.03 , -0.1) | 5433.9<br>3484.9 | 2.2627<br>103.1<br>103.9 | 18.7760<br>[ 20.0000 ] | 93.9% | 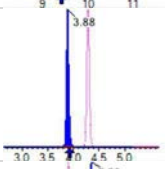 | 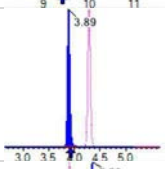 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 974194<br>( 341.0 / 217.0 ) 1464195 | ( 5.58 , 1.08 )<br>( N/A , -0.05 , 0.1) | 1475.3<br>1865.9 | 1.5030<br>98.2<br>98.9 | 19.9640<br>[ 20.0000 ] | 99.8% | 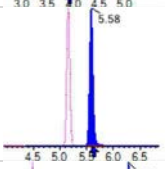 | 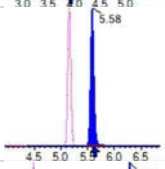 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2132822<br>( 441.0 / 337.0 ) 1834828 | ( 9.26 , 1.80 )<br>( N/A , -0.07 , 0.0) | 12208.7<br>25887.4 | 0.8603<br>100.7<br>97.5 | 20.5720<br>[ 20.0000 ] | 102.9% | 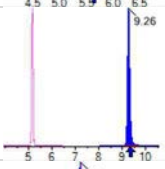 | 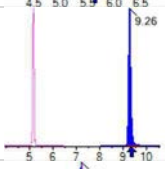 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1430772<br>( 357.2 / 243.0 ) 157915 | ( 5.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1691.8<br>1219.6 | 0.1104<br>102.9<br>99.7 | 5.4730<br>[ 5.0000 ] | 109.5% | 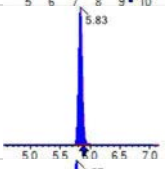 | 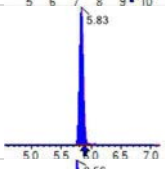 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1272913<br>( 457.2 / 343.0 ) 52113 | ( 8.57 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1470.5<br>546.4 | 0.0409<br>91.2<br>93.7 | 5.3310<br>[ 5.0000 ] | 106.6% | 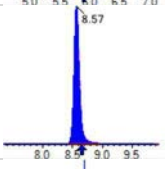 | 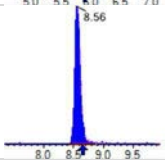 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 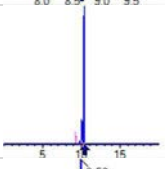 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 249818 | ( 3.59 , N/A )<br>( N/A , -0.02 , N/A ) | 1445.7 | N/A | 0.8850<br>[ 1.0000 ] | 88.5%<br>{ 94.5% } | 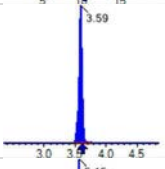 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 99298 | ( 5.15 , N/A )<br>( N/A , -0.04 , N/A ) | 16749.7 | N/A | 0.8410<br>[ 1.0000 ] | 84.1%<br>{ 85.8% } | 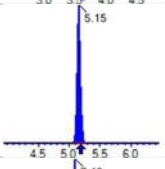 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 345987 | ( 7.40 , N/A )<br>( N/A , -0.07 , N/A ) | 5739.2 | N/A | 0.8910<br>[ 1.0000 ] | 89.1%<br>{ 95.9% } | 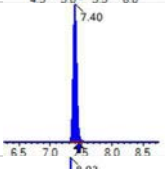 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 236272 | ( 8.93 , N/A )<br>( N/A , -0.10 , N/A ) | 1444.5 | N/A | 0.8090<br>[ 1.0000 ] | 80.9%<br>{ 84.7% } | 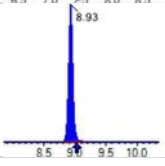 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 234095 | ( 9.92 , N/A ) ( N/A , -0.11 , N/A ) | 24286.7 | N/A | 0.8170 [ 1.0000 ] | 81.7% { 84.8% } | 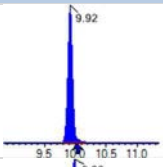 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 872158 | ( 8.09 , N/A ) ( N/A , -0.09 , N/A ) | 6508.6 | N/A | 0.8880 [ 1.0000 ] | 88.8% { 95.0% } | 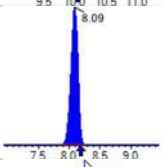 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 636587 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 2631.7 | N/A | 0.8110 [ 1.0000 ] | 81.1% { 82.5% } | 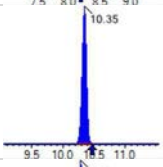 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2083264 | ( 3.59 , N/A ) ( N/A , -0.02 , N/A ) | 134300.6 | N/A | 7.7150 [ 8.0000 ] | 96.4% { 95.9% } | 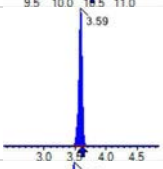 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 749134 | ( 4.28 , N/A ) ( N/A , -0.05 , N/A ) | 6682.3 | N/A | 4.1210 [ 4.0000 ] | 103.0% { 89.6% } | 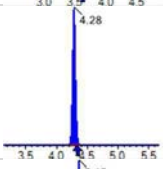 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 386592 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 38274.0 | N/A | 1.7800 [ 2.0000 ] | 89.0% { 80.4% } | 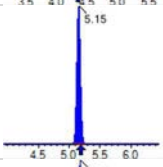 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 497465 | ( 6.28 , N/A ) ( N/A , -0.07 , N/A ) | 8694.0 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 90.8% } | 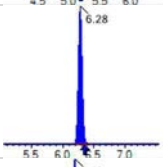 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 699579 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 4226.5 | N/A | 1.9080 [ 2.0000 ] | 95.4% { 91.4% } | 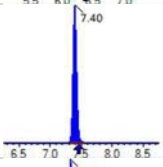 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 238597 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 7388.9 | N/A | 1.0230 [ 1.0000 ] | 102.3% { 88.5% } | 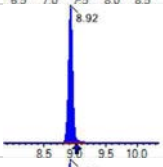 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 271507 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 1452.0 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 92.3% } | 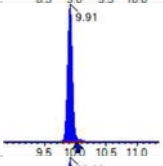 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 323225 | ( 10.82 , N/A ) ( N/A , -0.12 , N/A ) | 1047.1 | N/A | 1.0080 [ 1.0000 ] | 100.8% { 87.5% } | 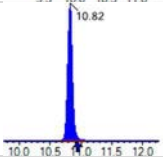 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: SD01096-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 330124 | ( 11.71 , N/A ) ( N/A , -0.12 , N/A ) | 1292.2 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 91.0% } | 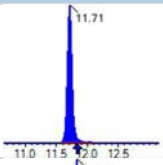 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305027 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1206.9 | N/A | 1.0470 [ 1.0000 ] | 104.7% { 93.1% } | 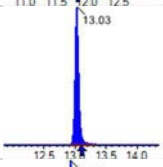 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 436697 | ( 13.93 , N/A ) ( N/A , -0.08 , N/A ) | 2107.8 | N/A | 1.7910 [ 2.0000 ] | 89.6% { 87.7% } | 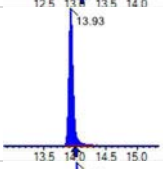 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1341713 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1740.4 | N/A | 1.9090 [ 2.0000 ] | 95.4% { 91.0% } | 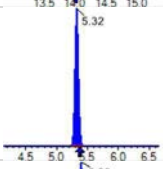 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1207984 | ( 8.09 , N/A ) ( N/A , -0.08 , N/A ) | 7264.1 | N/A | 1.9200 [ 2.0000 ] | 96.0% { 92.8% } | 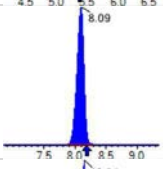 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1376397 | ( 10.34 , N/A ) ( N/A , -0.12 , N/A ) | 1048.7 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 95.3% } | 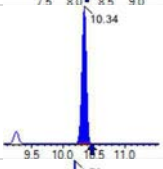 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524865 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 61.7 | N/A | 3.3940 [ 4.0000 ] | 84.8% { 80.7% } | 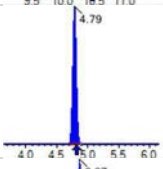 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1653430 | ( 6.87 , N/A ) ( N/A , -0.07 , N/A ) | 8439.3 | N/A | 4.3520 [ 4.0000 ] | 108.8% { 94.0% } | 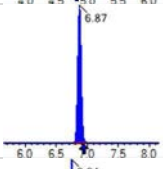 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1348036 | ( 9.24 , N/A ) ( N/A , -0.10 , N/A ) | 1886.2 | N/A | 4.0550 [ 4.0000 ] | 101.4% { 92.6% } | 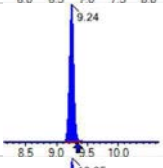 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2721117 | ( 10.95 , N/A ) ( N/A , -0.12 , N/A ) | 1812.8 | N/A | 7.5670 [ 8.0000 ] | 94.6% { 91.3% } | 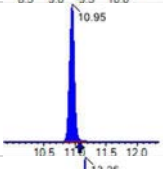 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1435007 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 3521.5 | N/A | 1.9960 [ 2.0000 ] | 99.8% { 92.1% } | 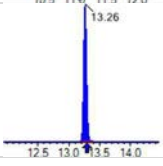 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 334705 | ( 14.54 , N/A ) ( N/A , -0.03 , N/A ) | 2086.7 | N/A | 2.0710 [ 2.0000 ] | 103.5% { 91.9% } | 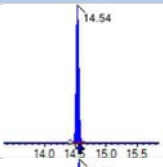 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 311734 | ( 14.86 , N/A ) ( N/A , -0.03 , N/A ) | 2709.9 | N/A | 2.1100 [ 2.0000 ] | 105.5% { 90.5% } | 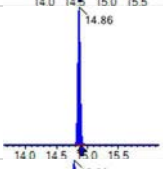 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1029441 | ( 10.29 , N/A ) ( N/A , -0.11 , N/A ) | 2582.6 | N/A | 4.3780 [ 4.0000 ] | 109.4% { 87.2% } | 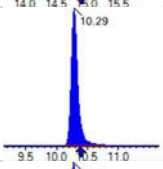 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 903077 | ( 10.88 , N/A ) ( N/A , -0.11 , N/A ) | 2445.5 | N/A | 4.2550 [ 4.0000 ] | 106.4% { 88.6% } | 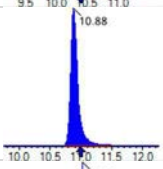 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1208921 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 2363.0 | N/A | 20.0180 [ 20.0000 ] | 100.1% { 91.0% } | 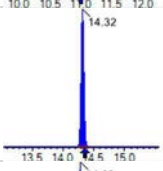 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1119685 | ( 14.68 , N/A ) ( N/A , -0.03 , N/A ) | 4911.2 | N/A | 19.7970 [ 20.0000 ] | 99.0% { 89.4% } | 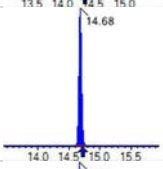 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 753337 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2214.1 | N/A | 8.0060 [ 8.0000 ] | 100.1% { 91.1% } | 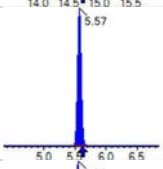 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 497167 | ( 5.84 , N/A ) ( N/A , -0.06 , N/A ) | 1999.3 | N/A | 1.9490 [ 2.0000 ] | 97.4% { 88.5% } | 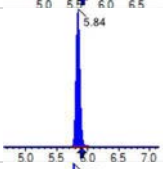 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 577748 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1236.8 | N/A | 2.0100 [ 2.0000 ] | 100.5% { 86.2% } | 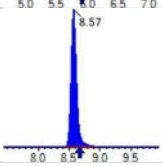 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB10 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB10 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.190 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.280 | ng/mL0 | | |
| | 13C5-PFHXA0 | 1.840 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.040 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.110 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.050 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.250 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.140 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.150 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.010 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 5.380 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.910 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.070 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.140 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.140 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.830 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.890 | ng/mL0 | | |
| | D7-NMEFOSE0 | 20.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.70 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.410 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 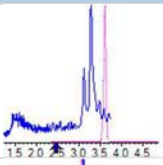 | 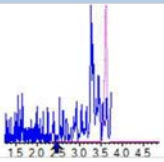 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 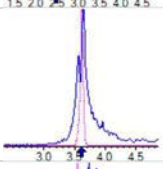 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 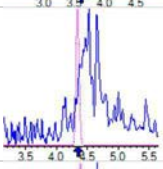 | 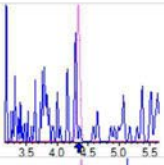 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 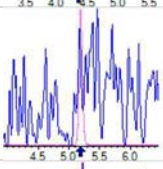 | 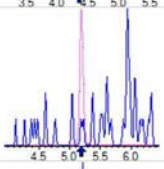 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 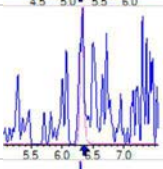 | 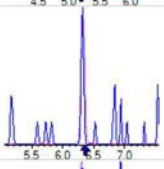 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 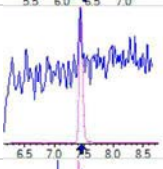 | 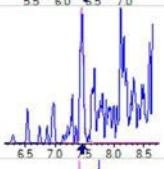 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 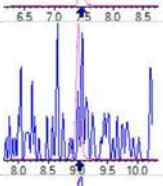 | 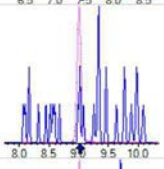 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 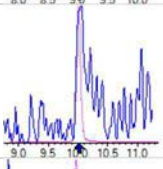 | 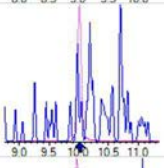 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 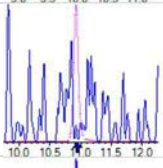 | 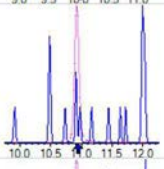 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 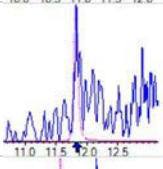 | 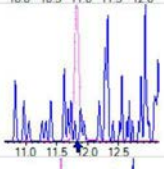 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 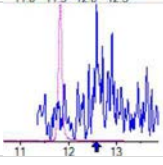 | 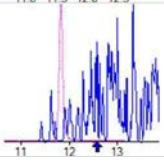 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 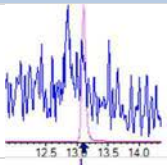 | 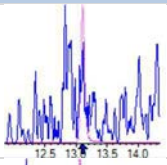 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 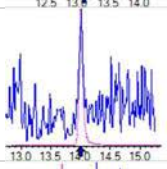 | 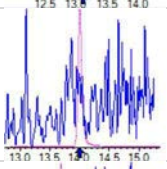 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 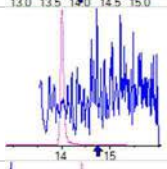 | 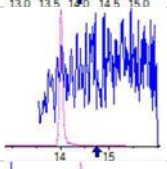 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 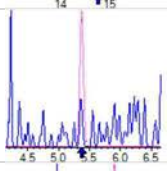 | 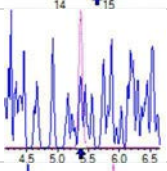 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 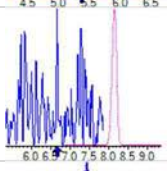 | 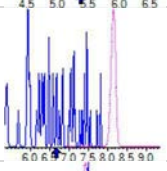 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 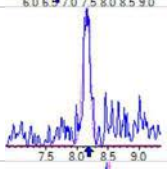 | 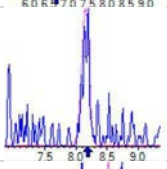 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 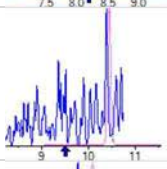 | 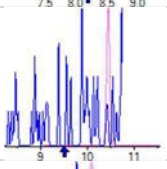 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 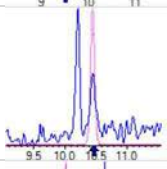 | 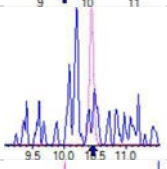 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 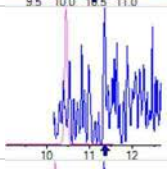 | 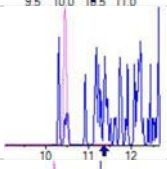 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 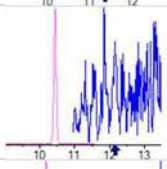 | 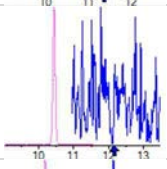 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 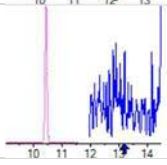 | 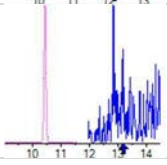 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 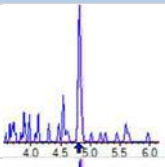 | 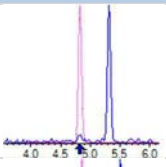 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 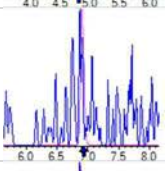 | 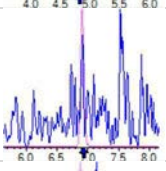 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 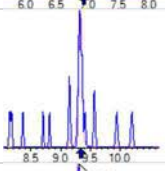 | 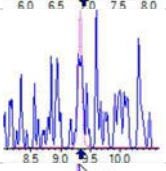 | |
| 10:2FTS | ( 627.0 / 607.0 ) 21951<br>( 627.0 / 81.0 ) 32702 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 236.0<br>108.6 | 1.4897<br>103.6<br>102.8 | 0.0600 | N/A | 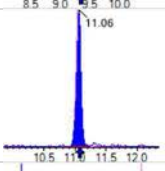 | 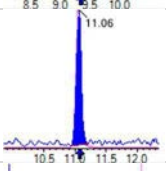 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 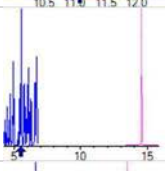 | 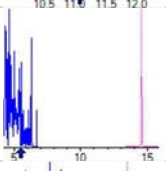 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 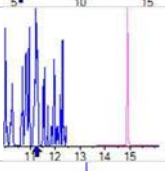 | 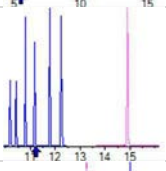 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 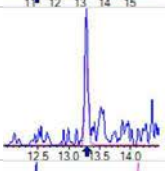 | 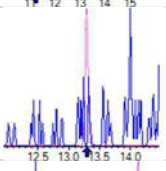 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 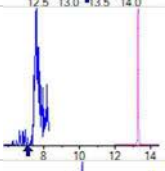 | 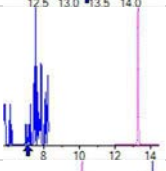 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 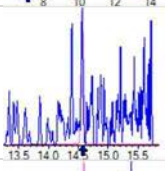 | 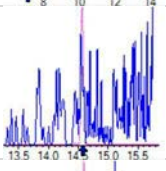 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 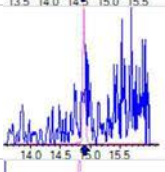 | 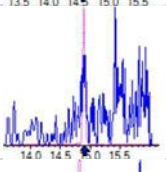 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 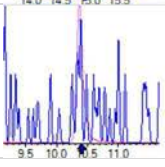 | 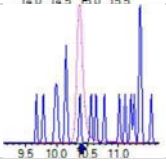 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 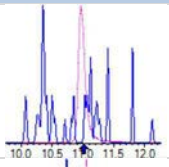 | 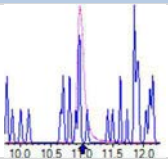 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 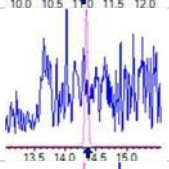 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 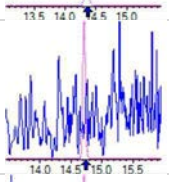 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 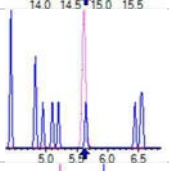 | 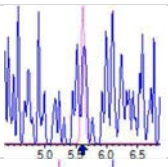 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 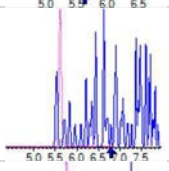 | 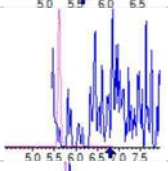 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 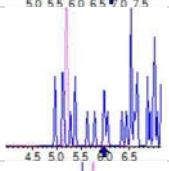 | 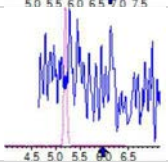 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 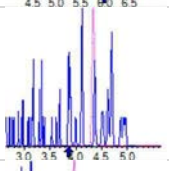 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 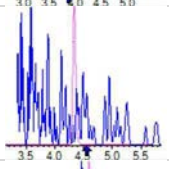 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 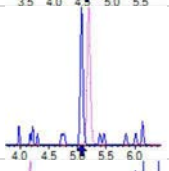 | 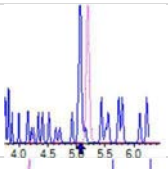 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 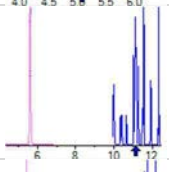 | 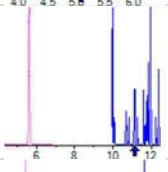 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 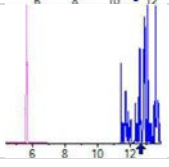 | 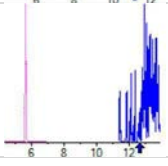 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 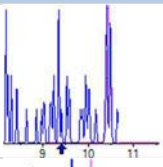 | 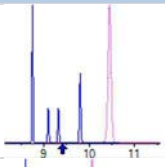 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 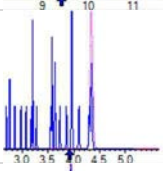 | 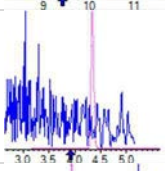 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 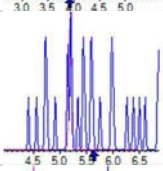 | 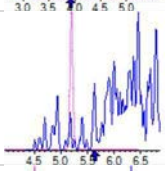 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 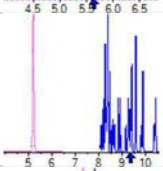 | 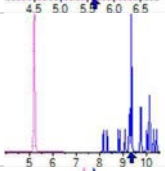 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 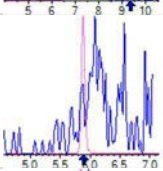 | 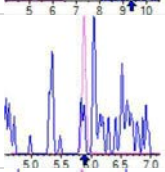 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 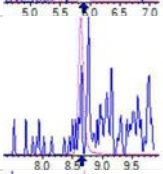 | 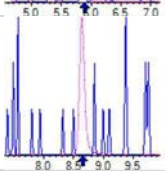 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 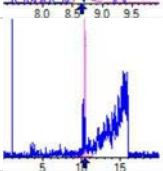 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 298957 | ( 3.61 , N/A )<br>( N/A , 0.01 , N/A ) | 1705.4 | N/A | 1.0590<br>[ 1.0000 ] | 105.9%<br>{ 113.1% } | 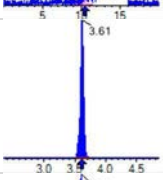 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 124164 | ( 5.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2738.0 | N/A | 1.0520<br>[ 1.0000 ] | 105.2%<br>{ 107.3% } | 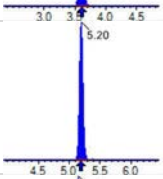 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 394271 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 7401.6 | N/A | 1.0160<br>[ 1.0000 ] | 101.6%<br>{ 109.2% } | 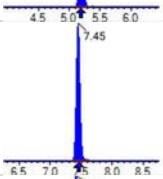 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 286062 | ( 9.01 , N/A )<br>( N/A , -0.02 , N/A ) | 1318.3 | N/A | 0.9790<br>[ 1.0000 ] | 97.9%<br>{ 102.6% } | 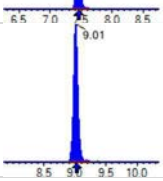 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281693 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 14645.4 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 102.0% } | 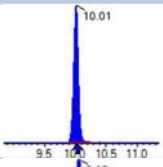 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 958062 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 7474.0 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 104.4% } | 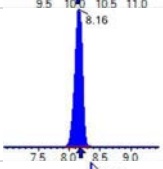 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785233 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 3737.1 | N/A | 1.0010 [ 1.0000 ] | 100.1% { 101.8% } | 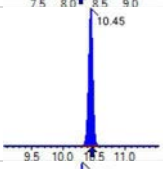 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2646568 | ( 3.61 , N/A ) ( N/A , 0.01 , N/A ) | 284256.3 | N/A | 8.1900 [ 8.0000 ] | 102.4% { 121.9% } | 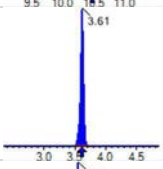 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 972902 | ( 4.34 , N/A ) ( N/A , 0.01 , N/A ) | 5831.2 | N/A | 4.2800 [ 4.0000 ] | 107.0% { 116.3% } | 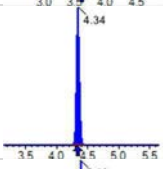 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 499099 | ( 5.19 , N/A ) ( N/A , 0.00 , N/A ) | 11522.1 | N/A | 1.8370 [ 2.0000 ] | 91.9% { 103.8% } | 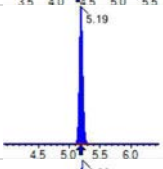 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 615074 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 5975.2 | N/A | 2.0390 [ 2.0000 ] | 101.9% { 112.2% } | 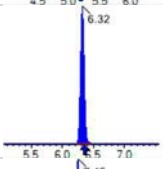 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 852304 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 4104.9 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 111.3% } | 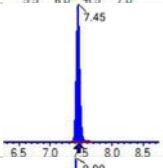 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 313918 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 5592.4 | N/A | 1.1120 [ 1.0000 ] | 111.2% { 116.4% } | 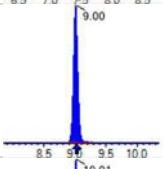 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 335314 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 1279.6 | N/A | 1.0300 [ 1.0000 ] | 103.0% { 114.0% } | 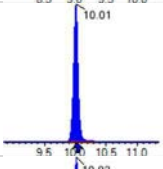 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 427596 | ( 10.92 , N/A ) ( N/A , -0.02 , N/A ) | 1178.5 | N/A | 1.1080 [ 1.0000 ] | 110.8% { 115.8% } | 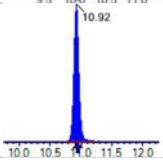 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 419315 | ( 11.82 , N/A ) ( N/A , -0.01 , N/A ) | 1326.5 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 115.6% } | 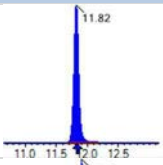 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 369670 | ( 13.11 , N/A ) ( N/A , 0.00 , N/A ) | 1290.7 | N/A | 1.0540 [ 1.0000 ] | 105.4% { 112.8% } | 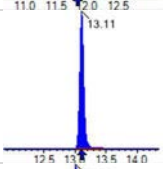 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 610881 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 3021.9 | N/A | 2.0820 [ 2.0000 ] | 104.1% { 122.7% } | 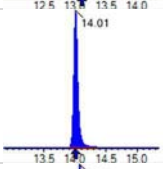 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1739689 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1392.9 | N/A | 2.2530 [ 2.0000 ] | 112.6% { 117.9% } | 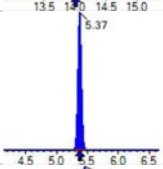 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1482374 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 7376.1 | N/A | 2.1450 [ 2.0000 ] | 107.2% { 113.8% } | 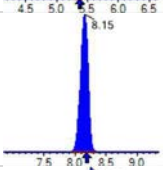 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1793765 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 2897.7 | N/A | 2.1470 [ 2.0000 ] | 107.4% { 124.2% } | 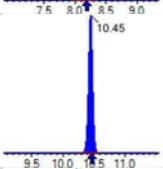 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 850870 | ( 4.82 , N/A ) ( N/A , 0.01 , N/A ) | 60.6 | N/A | 5.0090 [ 4.0000 ] | 125.2% { 130.8% } | 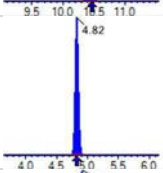 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2243265 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 6538.5 | N/A | 5.3750 [ 4.0000 ] | 134.4% { 127.5% } | 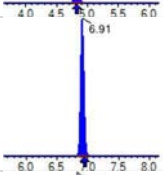 | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1794365 | ( 9.33 , N/A ) ( N/A , -0.01 , N/A ) | 2609.5 | N/A | 4.9140 [ 4.0000 ] | 122.9% { 123.3% } | 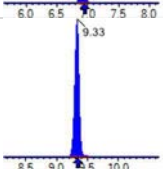 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3707801 | ( 11.05 , N/A ) ( N/A , -0.02 , N/A ) | 1436.2 | N/A | 9.3860 [ 8.0000 ] | 117.3% { 124.4% } | 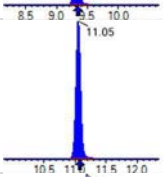 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1837914 | ( 13.29 , N/A ) ( N/A , -0.01 , N/A ) | 3206.7 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 118.0% } | 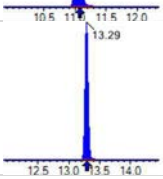 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 425902 | ( 14.56 , N/A ) ( N/A , 0.00 , N/A ) | 2816.6 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 117.0% } | 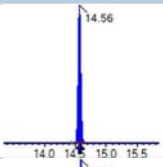  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 390889 | ( 14.89 , N/A ) ( N/A , 0.00 , N/A ) | 3488.3 | N/A | 2.1450 [ 2.0000 ] | 107.2% { 113.5% } | 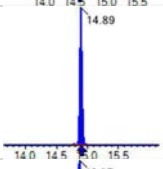  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1400890 | ( 10.37 , N/A ) ( N/A , -0.02 , N/A ) | 3527.7 | N/A | 4.8290 [ 4.0000 ] | 120.7% { 118.7% } | 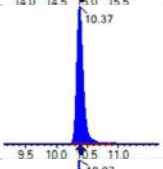  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1279638 | ( 10.97 , N/A ) ( N/A , -0.02 , N/A ) | 2164.1 | N/A | 4.8880 [ 4.0000 ] | 122.2% { 125.5% } | 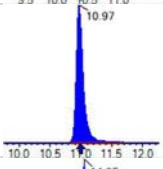  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1498561 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 2762.4 | N/A | 20.1170 [ 20.0000 ] | 100.6% { 112.8% } | 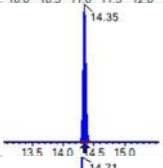  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1377134 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 4695.0 | N/A | 19.7400 [ 20.0000 ] | 98.7% { 110.0% } | 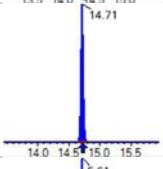  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 989675 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2272.7 | N/A | 8.4110 [ 8.0000 ] | 105.1% { 119.6% } | 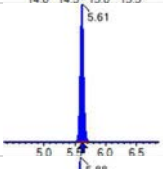  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 696856 | ( 5.88 , N/A ) ( N/A , -0.02 , N/A ) | 1499.9 | N/A | 2.2700 [ 2.0000 ] | 113.5% { 124.1% } | 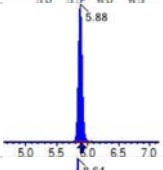  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 817188 | ( 8.64 , N/A ) ( N/A , -0.02 , N/A ) | 971.0 | N/A | 2.3630 [ 2.0000 ] | 118.1% { 121.9% } | 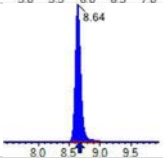  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB20 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB20 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.430 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.880 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.270 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.140 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.120 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.070 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.050 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.050 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.030 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.050 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.820 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.80 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.070 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.10 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.150 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.60 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.730 | ng/mL0 | | |
| | D7-NMEFOSE0 | 20.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.20 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.80 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 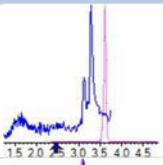 | 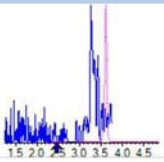 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 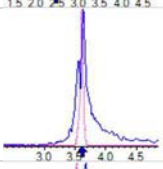 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 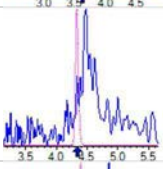 | 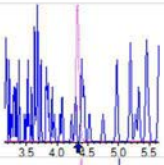 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 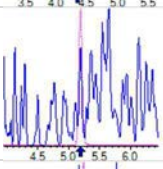 | 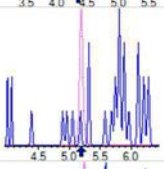 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 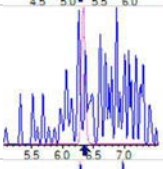 | 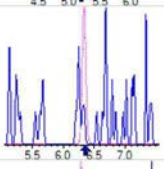 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 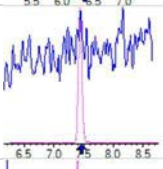 | 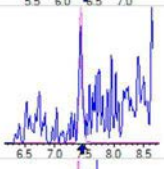 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 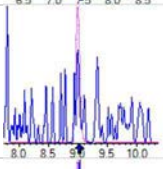 | 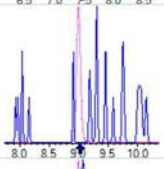 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 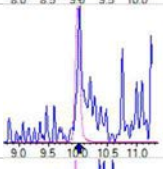 | 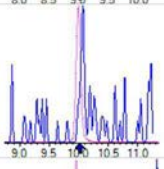 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 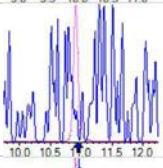 | 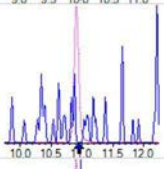 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 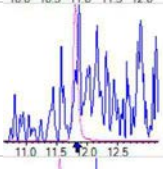 | 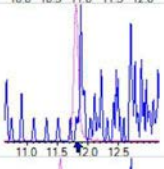 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 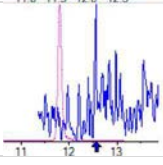 | 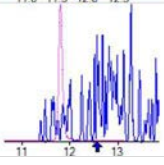 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 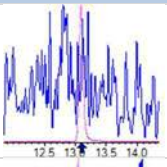 | 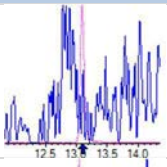 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 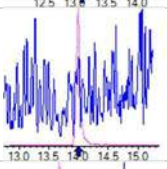 | 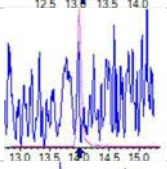 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 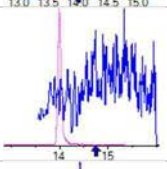 | 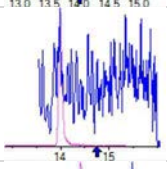 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 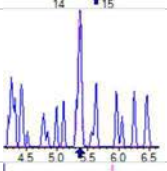 | 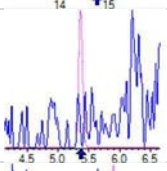 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 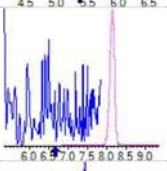 | 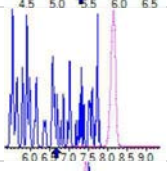 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 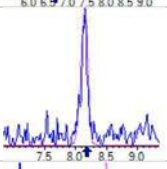 | 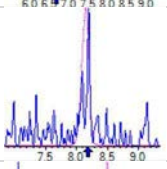 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 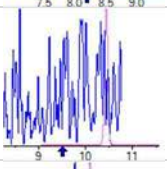 | 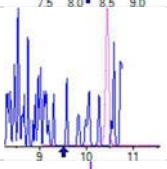 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 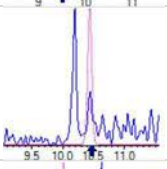 | 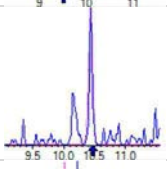 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 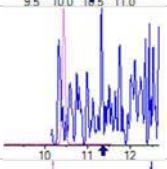 | 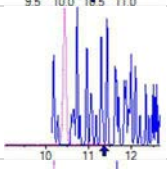 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 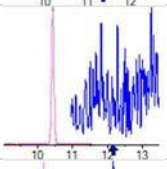 | 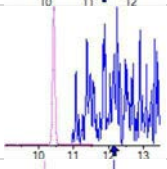 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 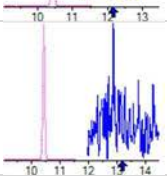 | 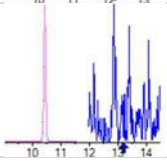 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 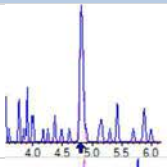 | 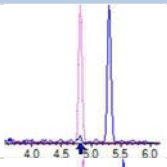 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 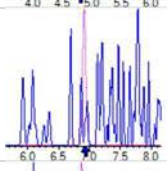 | 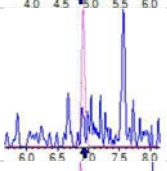 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 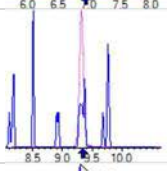 | 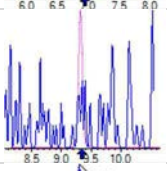 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20869<br>( 627.0 / 81.0 )<br>31853 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , -0.1) | 211.7<br>140.8 | 1.5263<br>106.2<br>105.3 | 0.0550 | N/A | 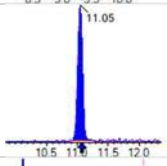 | 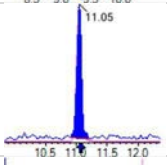 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 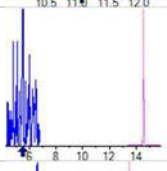 | 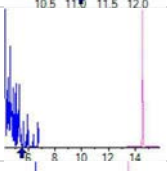 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 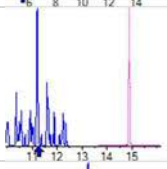 | 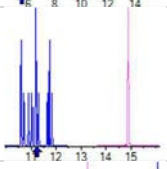 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 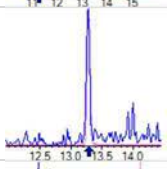 | 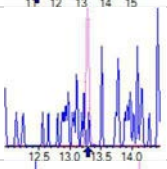 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 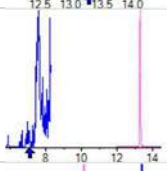 | 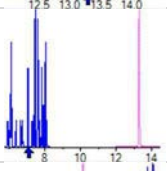 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 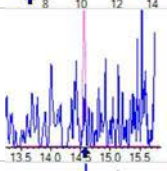 | 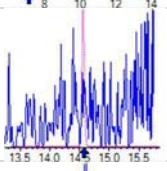 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 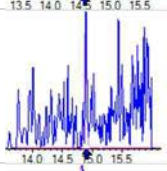 | 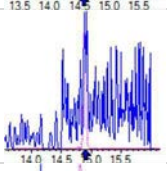 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 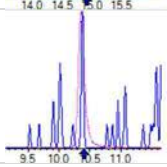 | 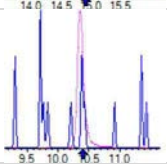 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 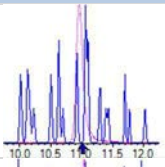 | 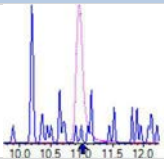 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 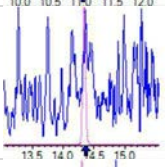 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 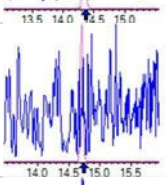 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 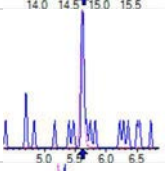 | 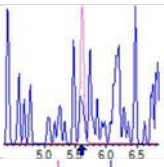 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 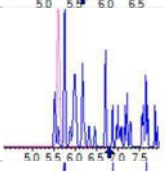 | 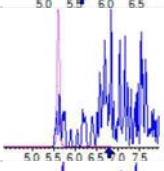 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 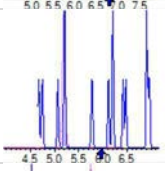 | 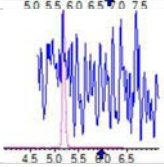 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 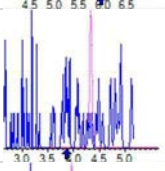 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 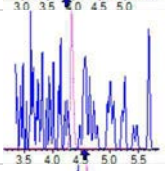 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 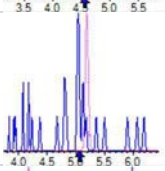 | 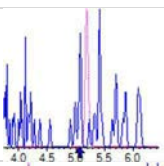 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 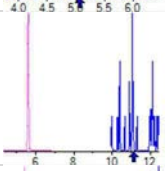 | 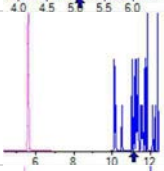 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 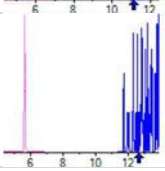 | 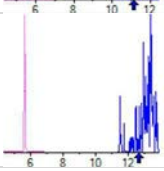 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 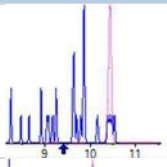 | 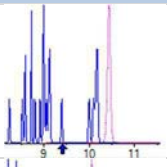 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 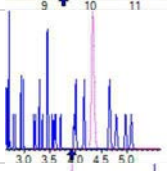 | 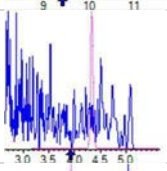 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 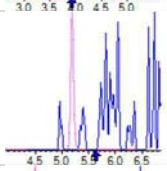 | 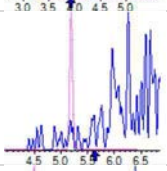 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 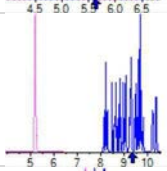 | 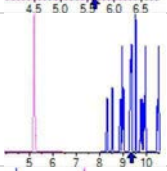 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 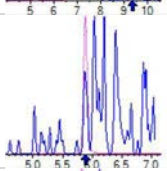 | 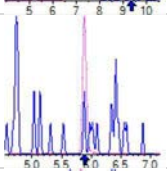 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 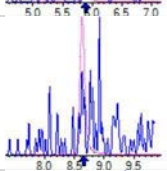 | 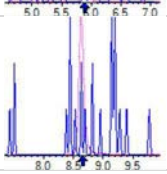 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 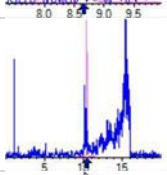 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 287149 | ( 3.61 , N/A )<br>( N/A , 0.00 , N/A ) | 2105.1 | N/A | 1.0170<br>[ 1.0000 ] | 101.7%<br>{ 108.6% } | 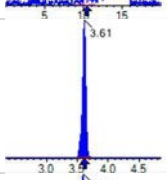 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111915 | ( 5.19 , N/A )<br>( N/A , -0.01 , N/A ) | 9599213.8 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 96.7% } | 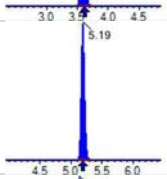 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 369485 | ( 7.44 , N/A )<br>( N/A , -0.03 , N/A ) | 6628.6 | N/A | 0.9520<br>[ 1.0000 ] | 95.2%<br>{ 102.4% } | 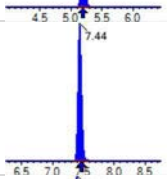 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 271684 | ( 9.00 , N/A )<br>( N/A , -0.03 , N/A ) | 1633.6 | N/A | 0.9300<br>[ 1.0000 ] | 93.0%<br>{ 97.4% } | 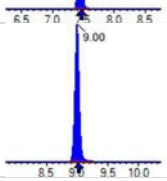 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281395 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 1006589.9 | N/A | 0.9820 [ 1.0000 ] | 98.2% { 101.9% } | 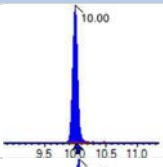  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 980236 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 6984.2 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 106.8% } | 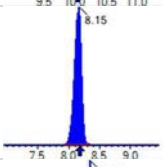  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 759929 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 4493.9 | N/A | 0.9690 [ 1.0000 ] | 96.9% { 98.5% } | 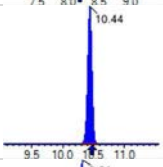  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2617525 | ( 3.61 , N/A ) ( N/A , 0.00 , N/A ) | 163025.4 | N/A | 8.4330 [ 8.0000 ] | 105.4% { 120.5% } | 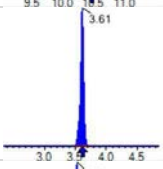  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 999105 | ( 4.33 , N/A ) ( N/A , 0.00 , N/A ) | 6726.4 | N/A | 4.8760 [ 4.0000 ] | 121.9% { 119.5% } | 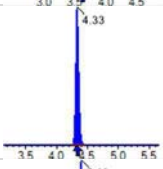  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 554846 | ( 5.19 , N/A ) ( N/A , 0.00 , N/A ) | 11871.5 | N/A | 2.2660 [ 2.0000 ] | 113.3% { 115.4% } | 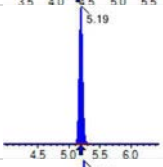  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 581498 | ( 6.33 , N/A ) ( N/A , -0.02 , N/A ) | 6604.5 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 106.1% } | 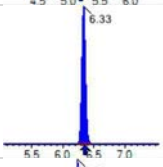  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 830064 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 6356.2 | N/A | 2.1200 [ 2.0000 ] | 106.0% { 108.4% } | 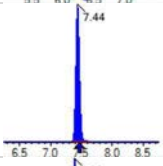  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 288082 | ( 9.00 , N/A ) ( N/A , -0.03 , N/A ) | 4374.9 | N/A | 1.0740 [ 1.0000 ] | 107.4% { 106.8% } | 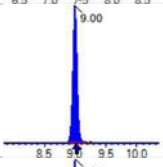  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341888 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1609.4 | N/A | 1.0510 [ 1.0000 ] | 105.2% { 116.3% } | 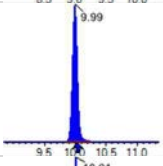  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 407135 | ( 10.91 , N/A ) ( N/A , -0.03 , N/A ) | 1233.1 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 110.2% } | 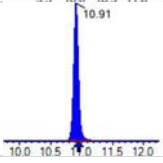  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413804 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1495.4 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 114.0% } | 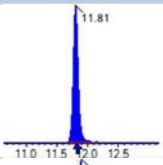 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 359261 | ( 13.09 , N/A ) ( N/A , -0.01 , N/A ) | 1237.8 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 109.6% } | 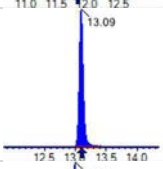 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 578019 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 2874.6 | N/A | 1.9720 [ 2.0000 ] | 98.6% { 116.1% } | 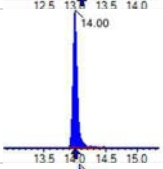 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1616595 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1180.6 | N/A | 2.0460 [ 2.0000 ] | 102.3% { 109.6% } | 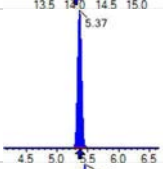 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1456289 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 5475.2 | N/A | 2.0590 [ 2.0000 ] | 103.0% { 111.8% } | 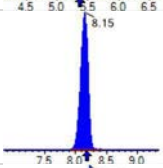 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1641131 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 2473.5 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 113.6% } | 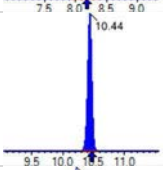 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 837141 | ( 4.82 , N/A ) ( N/A , 0.01 , N/A ) | 52.6 | N/A | 4.8160 [ 4.0000 ] | 120.4% { 128.7% } | 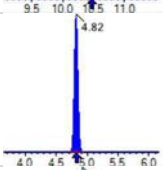 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2049507 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 7325.8 | N/A | 4.8000 [ 4.0000 ] | 120.0% { 116.5% } | 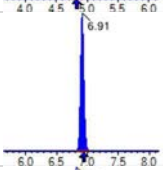 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1726788 | ( 9.32 , N/A ) ( N/A , -0.03 , N/A ) | 1999.2 | N/A | 4.6220 [ 4.0000 ] | 115.6% { 118.7% } | 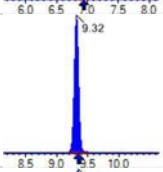 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3848574 | ( 11.04 , N/A ) ( N/A , -0.03 , N/A ) | 1756.9 | N/A | 9.5220 [ 8.0000 ] | 119.0% { 129.1% } | 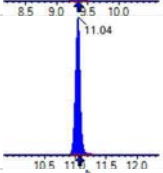 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1773867 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3602.3 | N/A | 2.0670 [ 2.0000 ] | 103.3% { 113.9% } | 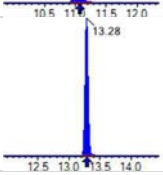 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 405994 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 3293.8 | N/A | 2.1040 [ 2.0000 ] | 105.2% { 111.5% } | 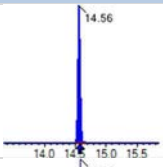  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 378451 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 3186.8 | N/A | 2.1450 [ 2.0000 ] | 107.3% { 109.9% } | 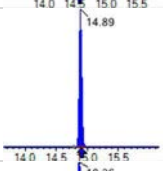  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1291171 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3191.2 | N/A | 4.5990 [ 4.0000 ] | 115.0% { 109.4% } | 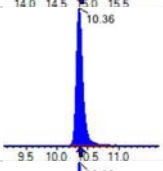  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1197930 | ( 10.96 , N/A ) ( N/A , -0.03 , N/A ) | 2278.0 | N/A | 4.7280 [ 4.0000 ] | 118.2% { 117.5% } | 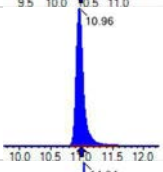  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1448016 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 3084.9 | N/A | 20.0860 [ 20.0000 ] | 100.4% { 108.9% } | 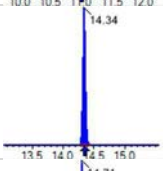  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1299355 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 4406.8 | N/A | 19.2450 [ 20.0000 ] | 96.2% { 103.8% } | 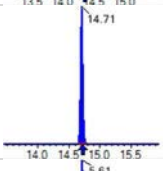  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 933221 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2565.5 | N/A | 8.7990 [ 8.0000 ] | 110.0% { 112.8% } | 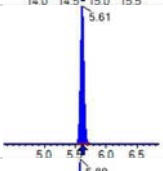  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 646213 | ( 5.89 , N/A ) ( N/A , -0.01 , N/A ) | 2451.7 | N/A | 2.1070 [ 2.0000 ] | 105.4% { 115.0% } | 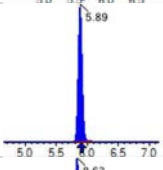  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 788254 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 1215.0 | N/A | 2.2820 [ 2.0000 ] | 114.1% { 117.6% } | 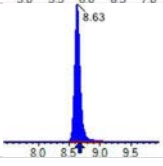  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB30 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB30 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.180 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.690 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.060 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.180 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.10 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.050 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.080 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.070 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.080 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.070 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.080 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.160 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.160 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.650 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.70 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.130 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.230 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.170 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.80 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.660 | ng/mL0 | | |
| | D7-NMEFOSE0 | 22.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.0 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.780 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 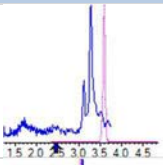 | 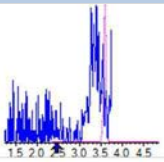 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 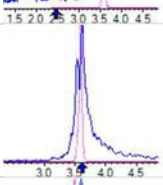 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 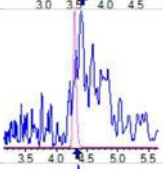 | 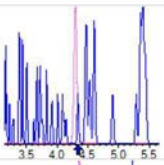 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 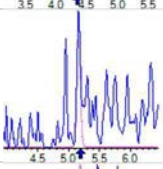 | 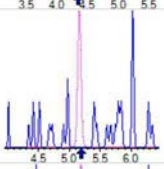 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 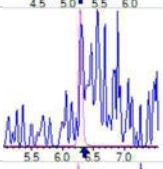 | 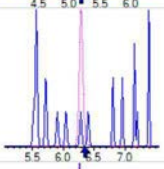 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 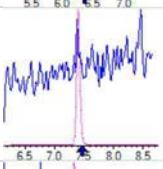 | 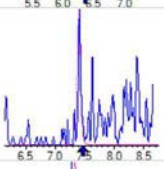 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 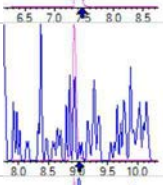 | 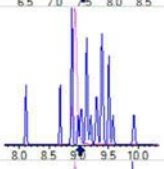 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 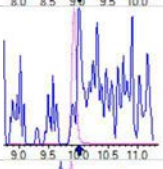 | 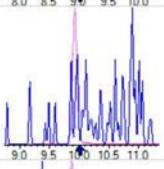 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 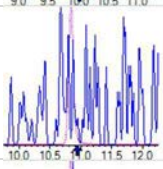 | 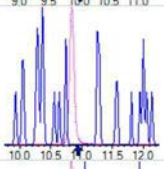 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 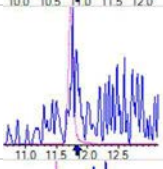 | 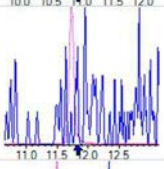 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 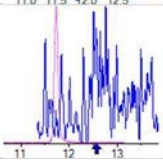 | 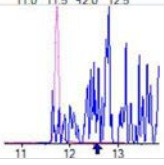 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 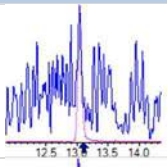 | 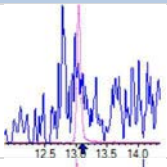 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 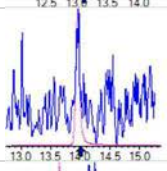 | 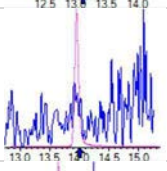 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 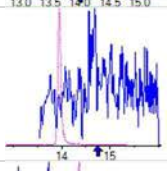 | 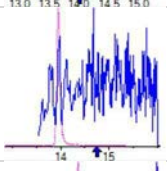 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 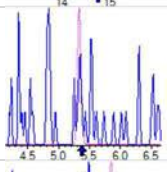 | 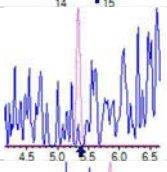 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 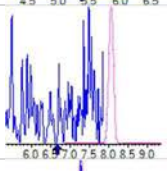 | 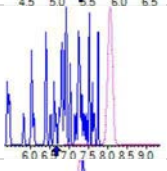 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 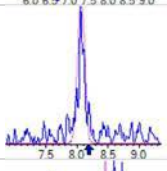 | 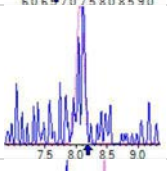 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 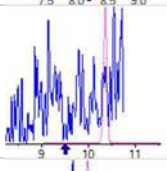 | 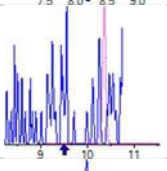 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 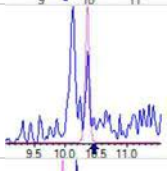 | 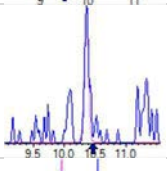 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 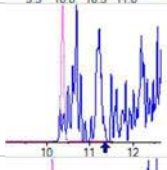 | 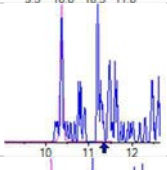 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 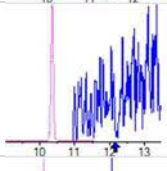 | 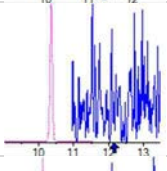 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 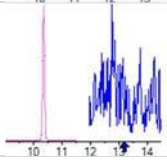 | 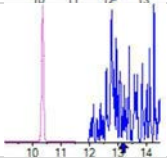 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 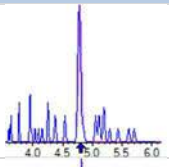 | 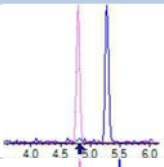 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 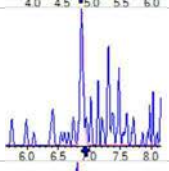 | 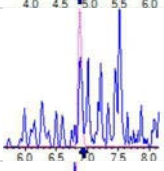 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 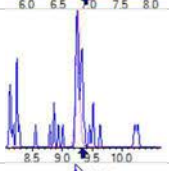 | 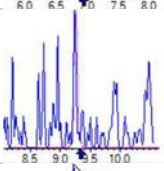 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19946<br>( 627.0 / 81.0 )<br>29621 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.0) | 236.1<br>114.4 | 1.4851<br>103.3<br>102.5 | 0.0560 | N/A | 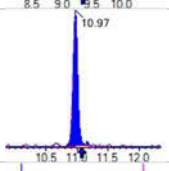 | 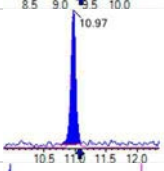 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 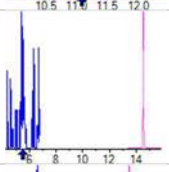 | 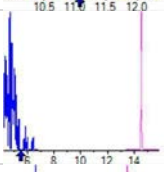 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 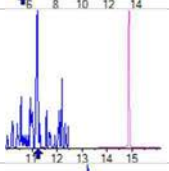 | 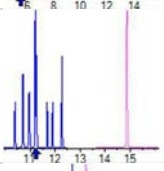 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 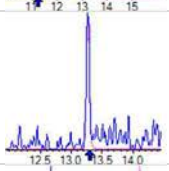 | 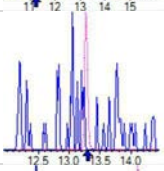 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 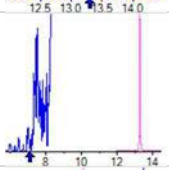 | 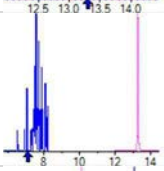 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 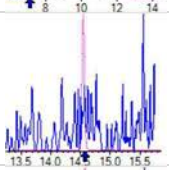 | 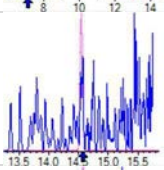 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 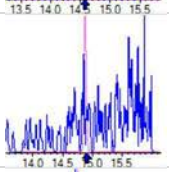 | 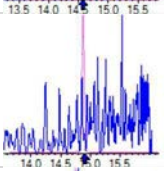 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 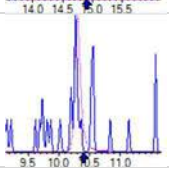 | 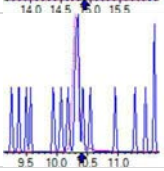 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 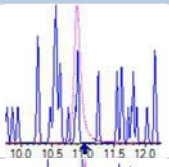 | 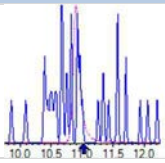 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 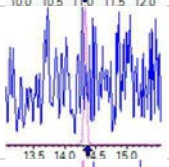 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 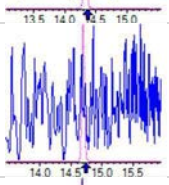 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 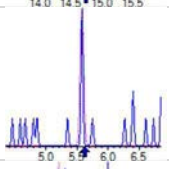 | 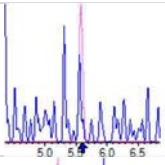 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 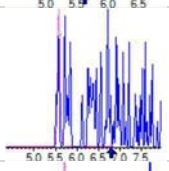 | 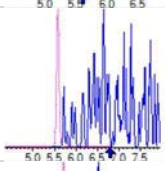 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 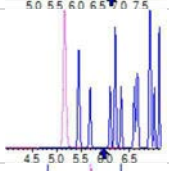 | 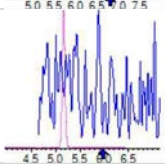 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 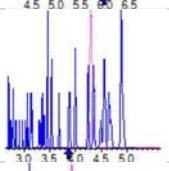 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 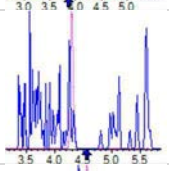 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 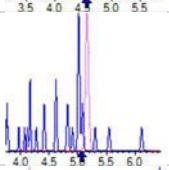 | 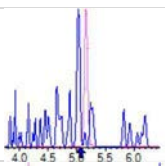 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 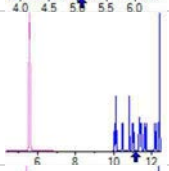 | 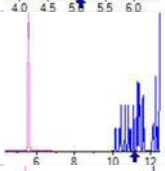 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 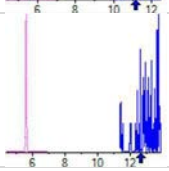 | 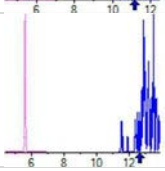 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 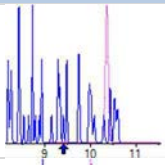 | 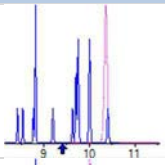 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 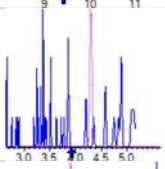 | 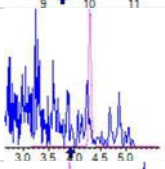 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 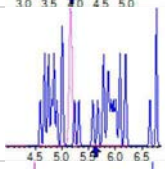 | 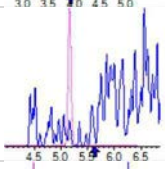 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 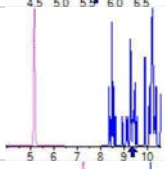 | 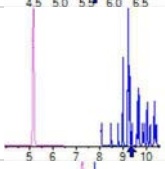 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 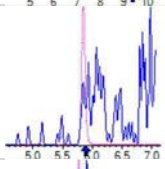 | 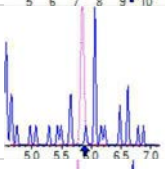 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 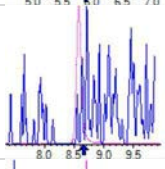 | 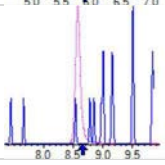 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 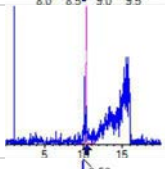 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>284460 | ( 3.59 , N/A )<br>( N/A , -0.01 , N/A ) | 1619.1 | N/A | 1.0080<br>[ 1.0000 ] | 100.8%<br>{ 107.6% } | 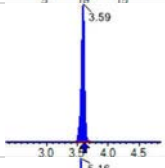 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>101233 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 13141728.6 | N/A | 0.8570<br>[ 1.0000 ] | 85.7%<br>{ 87.4% } | 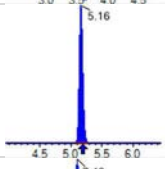 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>361787 | ( 7.40 , N/A )<br>( N/A , -0.07 , N/A ) | 12208.5 | N/A | 0.9320<br>[ 1.0000 ] | 93.2%<br>{ 100.2% } | 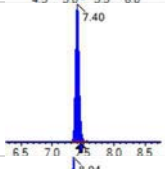 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>253532 | ( 8.94 , N/A )<br>( N/A , -0.09 , N/A ) | 1560.5 | N/A | 0.8680<br>[ 1.0000 ] | 86.8%<br>{ 90.9% } | 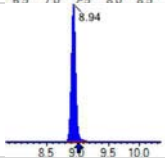 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246504 | ( 9.93 , N/A ) ( N/A , -0.09 , N/A ) | 6968.1 | N/A | 0.8600 [ 1.0000 ] | 86.0% { 89.3% } | 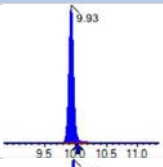 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 897667 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 6881.3 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 97.8% } | 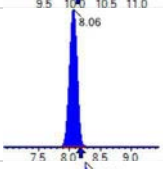 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 674490 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 2809.0 | N/A | 0.8600 [ 1.0000 ] | 86.0% { 87.5% } | 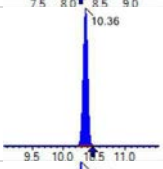 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2514971 | ( 3.59 , N/A ) ( N/A , -0.02 , N/A ) | 83107.2 | N/A | 8.1790 [ 8.0000 ] | 102.2% { 115.8% } | 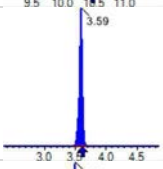 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 868742 | ( 4.30 , N/A ) ( N/A , -0.03 , N/A ) | 6409.5 | N/A | 4.6870 [ 4.0000 ] | 117.2% { 103.9% } | 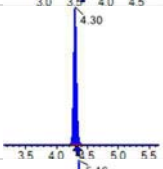 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 456516 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 7797.0 | N/A | 2.0610 [ 2.0000 ] | 103.1% { 95.0% } | 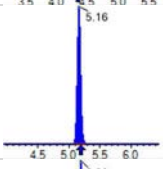 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 536614 | ( 6.29 , N/A ) ( N/A , -0.06 , N/A ) | 7316.9 | N/A | 2.1820 [ 2.0000 ] | 109.1% { 97.9% } | 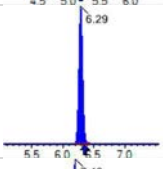 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806897 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 5316.7 | N/A | 2.1040 [ 2.0000 ] | 105.2% { 105.4% } | 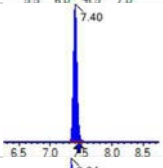 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 263198 | ( 8.94 , N/A ) ( N/A , -0.09 , N/A ) | 4661.6 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 97.6% } | 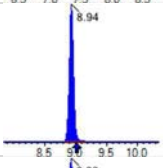 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 308698 | ( 9.93 , N/A ) ( N/A , -0.10 , N/A ) | 1521.8 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 105.0% } | 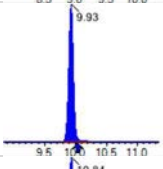 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363019 | ( 10.84 , N/A ) ( N/A , -0.10 , N/A ) | 1141.6 | N/A | 1.0750 [ 1.0000 ] | 107.5% { 98.3% } | 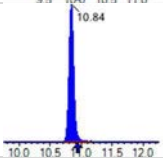 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 375521 | ( 11.73 , N/A ) ( N/A , -0.10 , N/A ) | 1348.1 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 103.5% } | 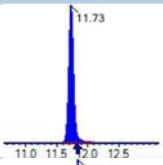 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 329305 | ( 13.04 , N/A ) ( N/A , -0.06 , N/A ) | 1197.3 | N/A | 1.0730 [ 1.0000 ] | 107.3% { 100.5% } | 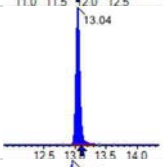 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 500193 | ( 13.95 , N/A ) ( N/A , -0.06 , N/A ) | 2305.6 | N/A | 1.9480 [ 2.0000 ] | 97.4% { 100.5% } | 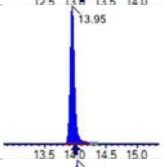 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1507281 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 1423.7 | N/A | 2.0830 [ 2.0000 ] | 104.2% { 102.2% } | 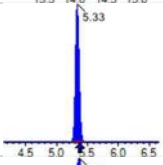 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400565 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 5886.7 | N/A | 2.1630 [ 2.0000 ] | 108.1% { 107.6% } | 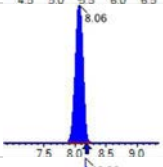 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1550326 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 1967.1 | N/A | 2.1600 [ 2.0000 ] | 108.0% { 107.3% } | 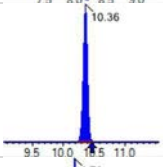 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 739578 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 58.1 | N/A | 4.6460 [ 4.0000 ] | 116.2% { 113.7% } | 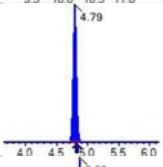 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1837736 | ( 6.88 , N/A ) ( N/A , -0.06 , N/A ) | 6272.6 | N/A | 4.7000 [ 4.0000 ] | 117.5% { 104.4% } | 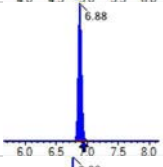 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1688330 | ( 9.26 , N/A ) ( N/A , -0.09 , N/A ) | 2255.7 | N/A | 4.9350 [ 4.0000 ] | 123.4% { 116.0% } | 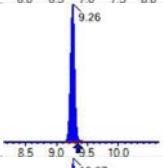 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3609380 | ( 10.97 , N/A ) ( N/A , -0.10 , N/A ) | 1555.8 | N/A | 9.7520 [ 8.0000 ] | 121.9% { 121.1% } | 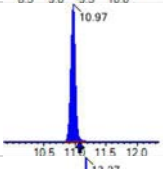 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1622426 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 3058.4 | N/A | 2.1300 [ 2.0000 ] | 106.5% { 104.1% } | 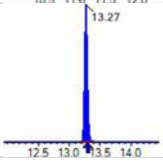 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 381254 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 2353.2 | N/A | 2.2260 [ 2.0000 ] | 111.3% { 104.7% } | 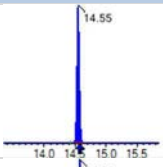 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 340065 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 2483.3 | N/A | 2.1720 [ 2.0000 ] | 108.6% { 98.7% } | 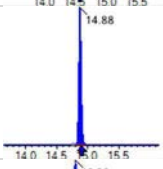 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1197168 | ( 10.30 , N/A ) ( N/A , -0.09 , N/A ) | 4782.8 | N/A | 4.8050 [ 4.0000 ] | 120.1% { 101.4% } | 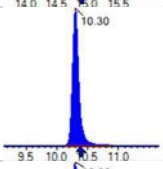 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1047948 | ( 10.90 , N/A ) ( N/A , -0.09 , N/A ) | 2468.7 | N/A | 4.6600 [ 4.0000 ] | 116.5% { 102.8% } | 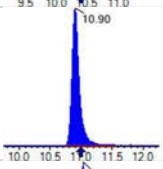 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1411139 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 2813.5 | N/A | 22.0530 [ 20.0000 ] | 110.3% { 106.2% } | 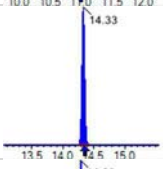 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1139290 | ( 14.69 , N/A ) ( N/A , -0.02 , N/A ) | 4764.9 | N/A | 19.0120 [ 20.0000 ] | 95.1% { 91.0% } | 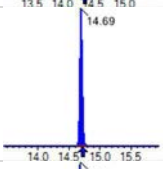 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 841892 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2691.4 | N/A | 8.7760 [ 8.0000 ] | 109.7% { 101.8% } | 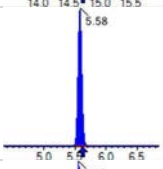 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 618432 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2482.7 | N/A | 2.3020 [ 2.0000 ] | 115.1% { 110.1% } | 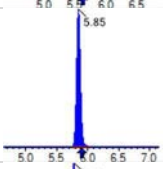 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 713835 | ( 8.58 , N/A ) ( N/A , -0.08 , N/A ) | 1088.9 | N/A | 2.3590 [ 2.0000 ] | 117.9% { 106.5% } | 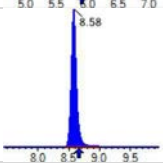 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB40 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB40 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.070 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.60 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.340 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.060 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.090 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.080 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.070 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.090 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.070 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.210 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.720 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.950 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.870 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.150 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.160 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.110 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.820 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.640 | ng/mL0 | | |
| | D7-NMEFOSE0 | 20.70 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.690 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 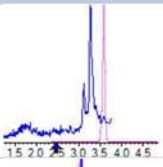 | 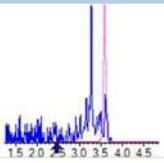 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 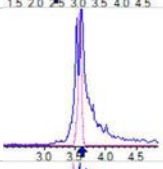 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 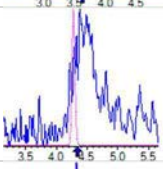 | 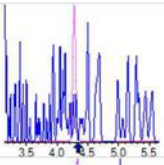 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 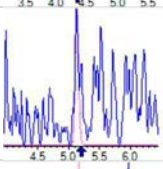 | 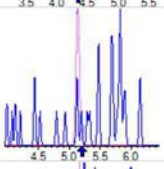 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 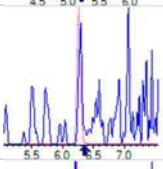 | 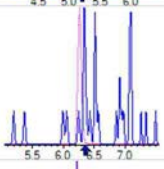 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 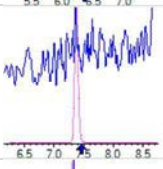 | 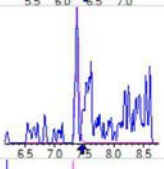 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 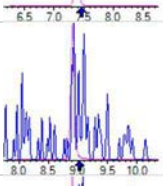 | 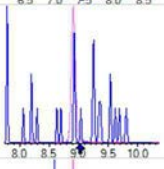 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 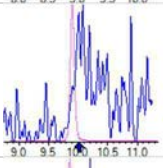 | 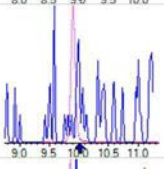 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 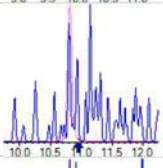 | 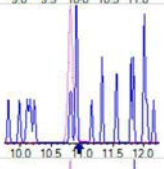 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 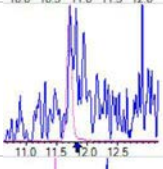 | 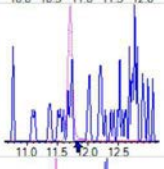 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 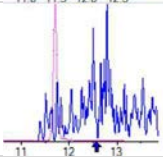 | 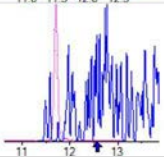 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 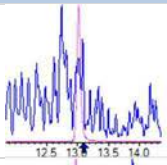 | 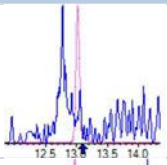 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 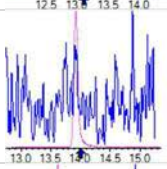 | 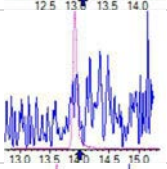 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 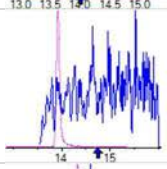 | 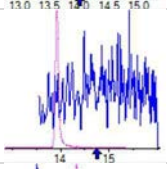 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 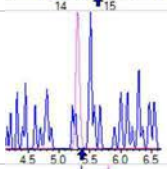 | 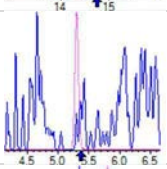 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 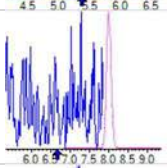 | 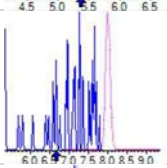 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 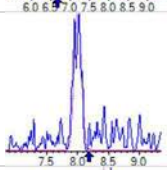 | 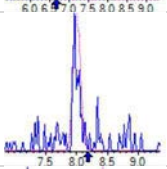 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 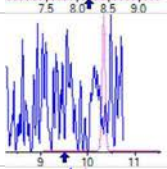 | 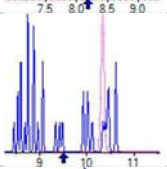 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 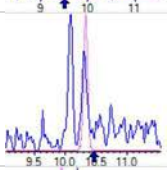 | 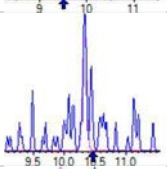 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 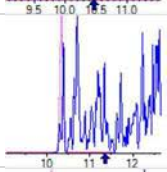 | 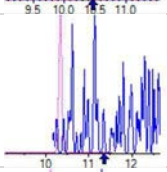 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 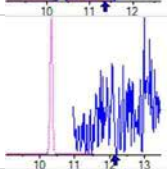 | 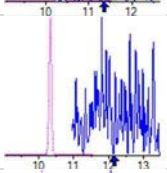 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 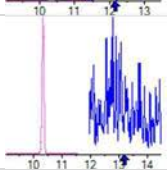 | 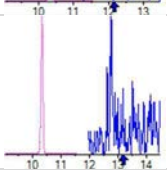 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 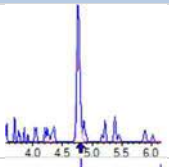 | 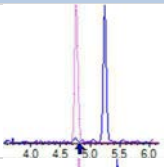 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 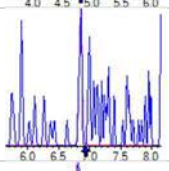 | 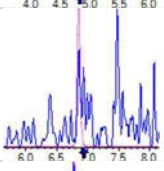 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 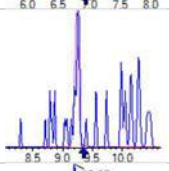 | 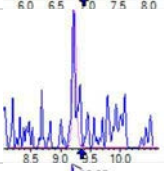 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20060<br>( 627.0 / 81.0 )<br>27386 | ( 10.95 , 1.00 )<br>( 0.01 , N/A , -0.1) | 213.9<br>138.9 | 1.3652<br>95.0<br>94.2 | 0.0570 | N/A | 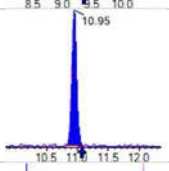 | 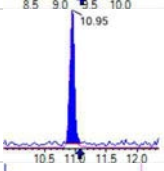 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 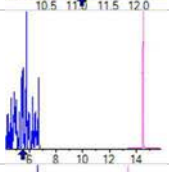 | 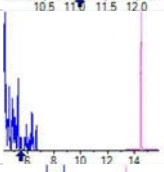 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 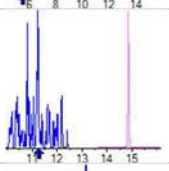 | 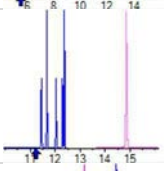 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 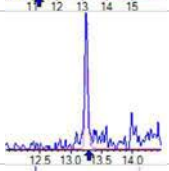 | 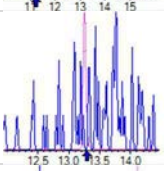 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 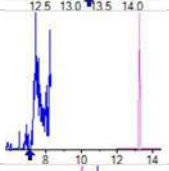 | 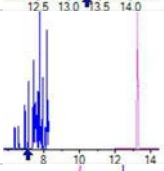 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 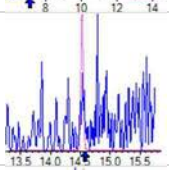 | 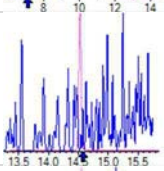 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 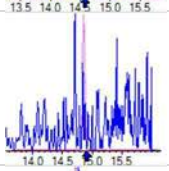 | 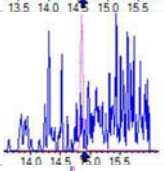 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 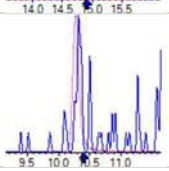 | 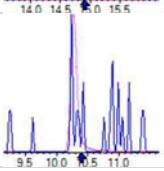 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 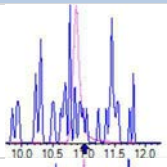 | 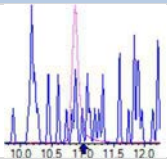 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 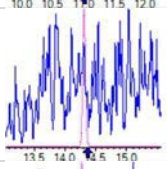 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 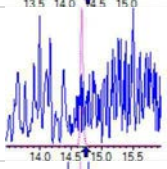 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 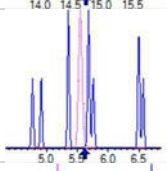 | 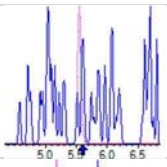 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 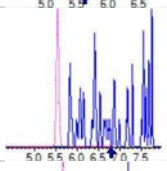 | 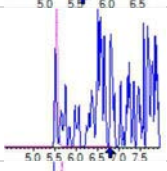 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 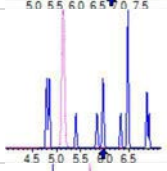 | 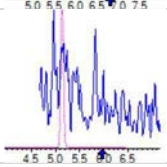 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 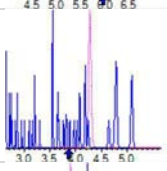 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 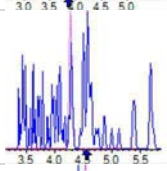 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 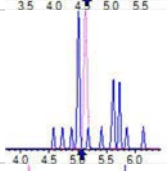 | 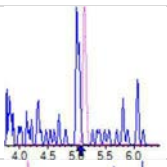 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 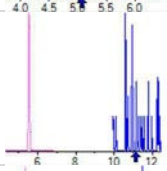 | 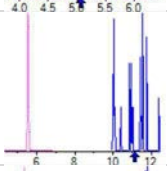 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 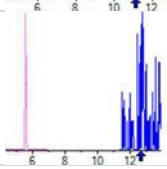 | 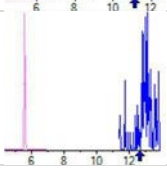 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 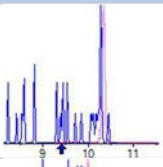 | 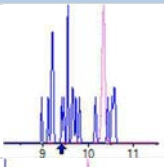 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 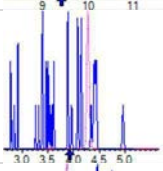 | 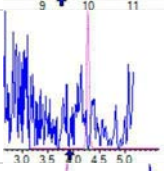 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 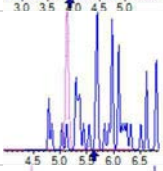 | 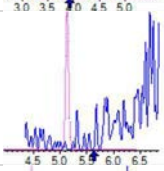 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 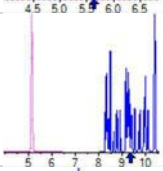 | 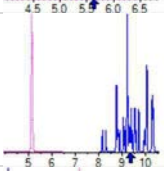 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 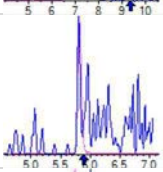 | 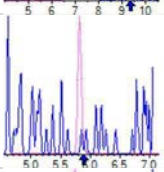 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 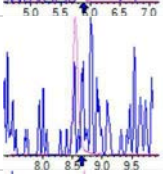 | 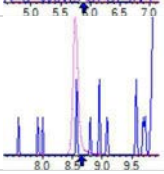 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 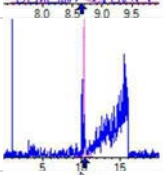 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 285800 | ( 3.58 , N/A )<br>( N/A , -0.03 , N/A ) | 1529.7 | N/A | 1.0130<br>[ 1.0000 ] | 101.3%<br>{ 108.1% } | 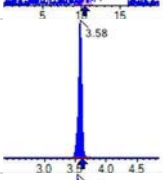 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 102600 | ( 5.14 , N/A )<br>( N/A , -0.06 , N/A ) | 107641.7 | N/A | 0.8690<br>[ 1.0000 ] | 86.9%<br>{ 88.6% } | 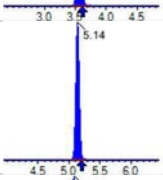 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367822 | ( 7.38 , N/A )<br>( N/A , -0.09 , N/A ) | 7390.7 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 101.9% } | 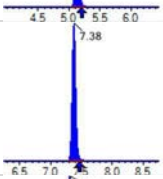 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 245960 | ( 8.91 , N/A )<br>( N/A , -0.12 , N/A ) | 1486.8 | N/A | 0.8420<br>[ 1.0000 ] | 84.2%<br>{ 88.2% } | 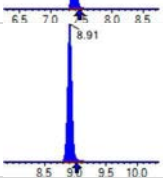 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 248470 | ( 9.90 , N/A ) ( N/A , -0.12 , N/A ) | 6484.9 | N/A | 0.8670 [ 1.0000 ] | 86.7% { 90.0% } | 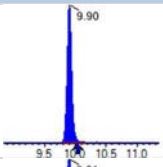 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 924764 | ( 8.01 , N/A ) ( N/A , -0.17 , N/A ) | 6473.6 | N/A | 0.9420 [ 1.0000 ] | 94.2% { 100.8% } | 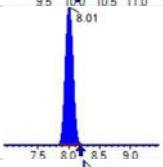 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 684462 | ( 10.34 , N/A ) ( N/A , -0.13 , N/A ) | 3333.6 | N/A | 0.8720 [ 1.0000 ] | 87.2% { 88.7% } | 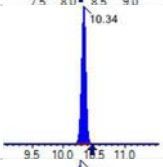 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2493473 | ( 3.58 , N/A ) ( N/A , -0.03 , N/A ) | 75643.0 | N/A | 8.0720 [ 8.0000 ] | 100.9% { 114.8% } | 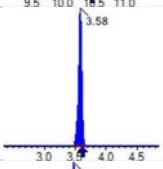 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 864342 | ( 4.28 , N/A ) ( N/A , -0.06 , N/A ) | 5749.9 | N/A | 4.6010 [ 4.0000 ] | 115.0% { 103.3% } | 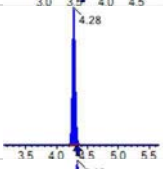 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 465685 | ( 5.13 , N/A ) ( N/A , -0.06 , N/A ) | 4793.3 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 96.9% } | 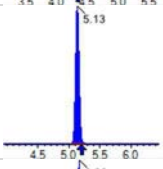 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 583816 | ( 6.26 , N/A ) ( N/A , -0.09 , N/A ) | 8069.5 | N/A | 2.3420 [ 2.0000 ] | 117.1% { 106.5% } | 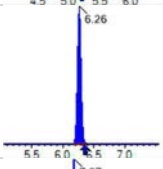 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 803929 | ( 7.37 , N/A ) ( N/A , -0.09 , N/A ) | 5800.4 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 105.0% } | 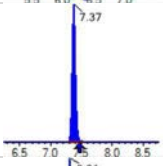 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 265516 | ( 8.91 , N/A ) ( N/A , -0.11 , N/A ) | 5513.0 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 98.5% } | 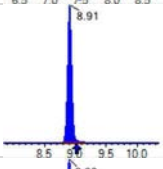 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 311092 | ( 9.90 , N/A ) ( N/A , -0.12 , N/A ) | 1639.9 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 105.8% } | 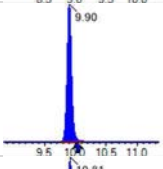 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376366 | ( 10.81 , N/A ) ( N/A , -0.13 , N/A ) | 1223.8 | N/A | 1.1050 [ 1.0000 ] | 110.5% { 101.9% } | 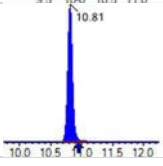 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 373384 | ( 11.71 , N/A ) ( N/A , -0.13 , N/A ) | 1432.5 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 102.9% } | 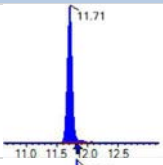 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 335981 | ( 13.02 , N/A ) ( N/A , -0.09 , N/A ) | 1233.3 | N/A | 1.0860 [ 1.0000 ] | 108.6% { 102.5% } | 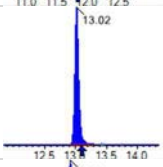 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 490256 | ( 13.92 , N/A ) ( N/A , -0.09 , N/A ) | 2250.5 | N/A | 1.8940 [ 2.0000 ] | 94.7% { 98.5% } | 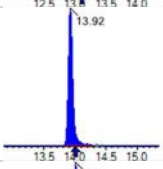 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1546565 | ( 5.30 , N/A ) ( N/A , -0.07 , N/A ) | 1748.6 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 104.9% } | 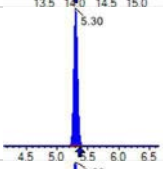 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1382666 | ( 8.00 , N/A ) ( N/A , -0.17 , N/A ) | 6648.6 | N/A | 2.0730 [ 2.0000 ] | 103.6% { 106.2% } | 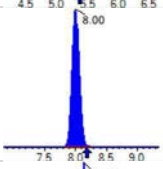 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1605831 | ( 10.34 , N/A ) ( N/A , -0.13 , N/A ) | 2215.3 | N/A | 2.2050 [ 2.0000 ] | 110.3% { 111.2% } | 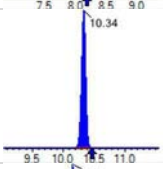 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 774362 | ( 4.77 , N/A ) ( N/A , -0.05 , N/A ) | 61.5 | N/A | 4.7220 [ 4.0000 ] | 118.1% { 119.0% } | 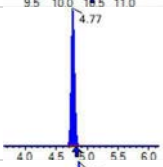 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1992892 | ( 6.85 , N/A ) ( N/A , -0.09 , N/A ) | 7090.5 | N/A | 4.9470 [ 4.0000 ] | 123.7% { 113.2% } | 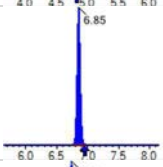 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1715396 | ( 9.23 , N/A ) ( N/A , -0.11 , N/A ) | 2315.8 | N/A | 4.8670 [ 4.0000 ] | 121.7% { 117.9% } | 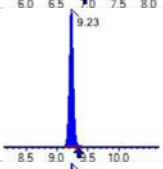 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3548659 | ( 10.94 , N/A ) ( N/A , -0.13 , N/A ) | 2056.6 | N/A | 9.3070 [ 8.0000 ] | 116.3% { 119.1% } | 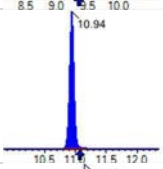 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1658279 | ( 13.25 , N/A ) ( N/A , -0.04 , N/A ) | 4336.8 | N/A | 2.1450 [ 2.0000 ] | 107.3% { 106.4% } | 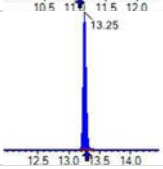 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (36)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 376260 | ( 14.53 , N/A ) ( N/A , -0.04 , N/A ) | 2542.2 | N/A | 2.1650 [ 2.0000 ] | 108.2% { 103.4% } | 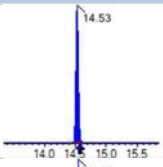 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 335016 | ( 14.85 , N/A ) ( N/A , -0.04 , N/A ) | 2918.0 | N/A | 2.1090 [ 2.0000 ] | 105.4% { 97.3% } | 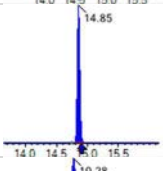 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1217534 | ( 10.28 , N/A ) ( N/A , -0.11 , N/A ) | 3574.4 | N/A | 4.8150 [ 4.0000 ] | 120.4% { 103.2% } | 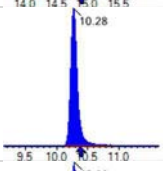 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1057973 | ( 10.88 , N/A ) ( N/A , -0.12 , N/A ) | 2232.8 | N/A | 4.6360 [ 4.0000 ] | 115.9% { 103.8% } | 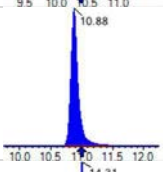 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1346210 | ( 14.31 , N/A ) ( N/A , -0.04 , N/A ) | 2987.0 | N/A | 20.7320 [ 20.0000 ] | 103.7% { 101.3% } | 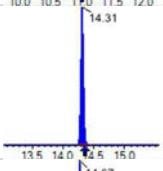 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1163824 | ( 14.67 , N/A ) ( N/A , -0.04 , N/A ) | 4294.8 | N/A | 19.1380 [ 20.0000 ] | 95.7% { 93.0% } | 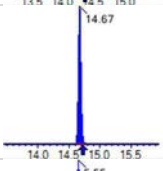 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 844532 | ( 5.55 , N/A ) ( N/A , -0.07 , N/A ) | 2399.4 | N/A | 8.6860 [ 8.0000 ] | 108.6% { 102.1% } | 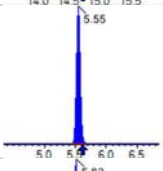 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 627371 | ( 5.82 , N/A ) ( N/A , -0.08 , N/A ) | 2615.2 | N/A | 2.3170 [ 2.0000 ] | 115.8% { 111.7% } | 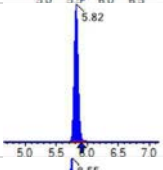 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 702027 | ( 8.55 , N/A ) ( N/A , -0.11 , N/A ) | 1315.9 | N/A | 2.3010 [ 2.0000 ] | 115.1% { 104.8% } | 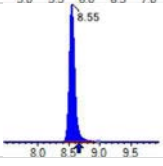 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01148L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01148-ICB1 0 | PFBA0 | .1890 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | 0.0110 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .07990 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .01810 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0121L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01148L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01148-ICB1 0 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.060 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.650 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.030 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.220 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.140 | ng/mL0 | | |
| | 13C9-PFNA | 0.990 | ng/mL0 | | |
| | 13C6-PFDA | 0.960 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9610 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9550 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9480 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.780 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.940 | ng/mL0 | | |
| | 13C3-PFHXS0 | 1.980 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.680 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.390 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.990 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.980 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.420 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.550 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0121L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01148L | Instrument: | Saphira |
| Calibration: | 2413019L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01148-ICB10 | D7-NMEFOSE | 19.80 | ng/mL | 0 | |
| | D9-NETFOSE | 20.40 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.20 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 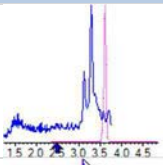 | 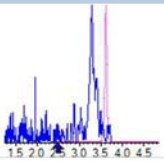 | |
| PFBA | ( 213.0 / 169.0 )<br>158073 | ( 3.64 , 1.01 )<br>( 0.03 , N/A , 0.0) | 104.4 | N/A<br>0.0<br>0.0 | 0.1890 | N/A | 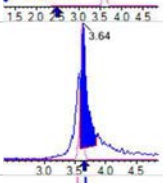 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 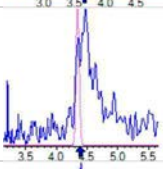 | 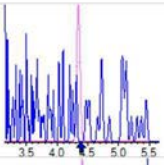 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 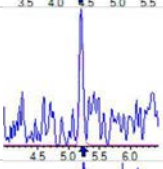 | 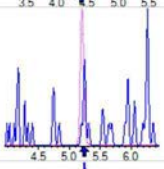 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 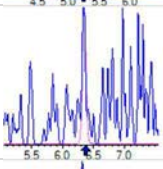 | 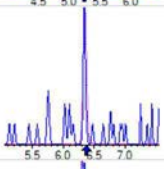 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 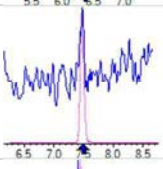 | 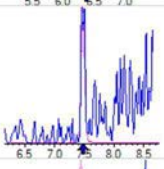 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 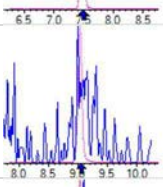 | 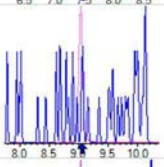 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 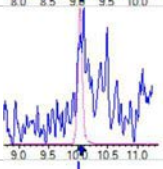 | 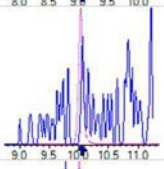 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 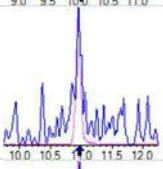 | 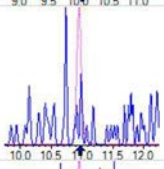 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 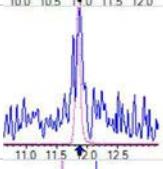 | 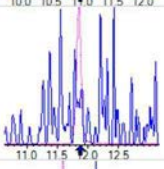 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 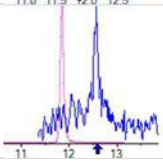 | 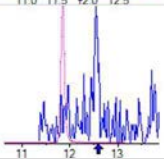 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 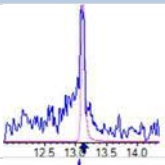 | 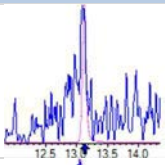 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 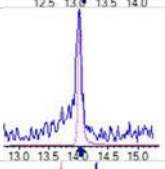 | 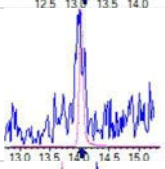 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 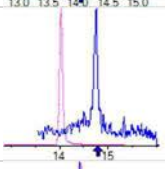 | 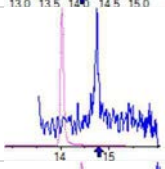 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 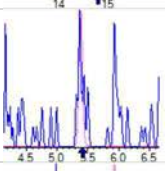 | 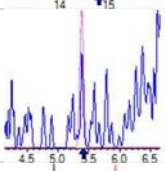 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 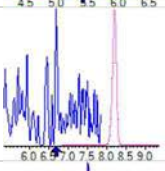 | 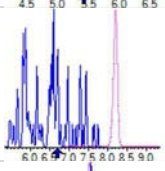 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 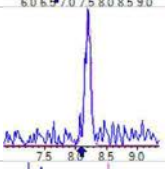 | 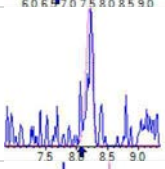 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 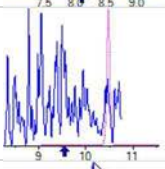 | 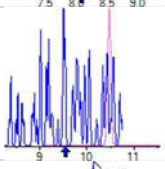 | |
| PFOS | ( 499.0 / 80.0 )<br>10221<br>( 499.0 / 99.0 )<br>2115 | ( 10.41 , 0.99 )<br>( -0.06 , N/A , -3.7) | 64.0<br>1823.6 | 0.2070<br>89.6<br>89.6 | 0.0110 | N/A | 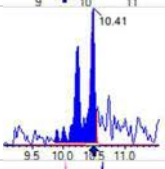 | 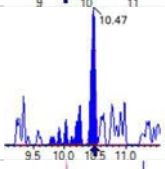 | MI5 DG 2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 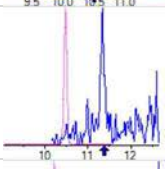 | 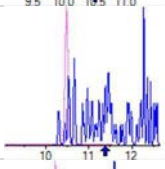 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 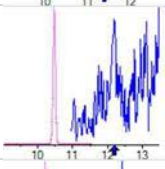 | 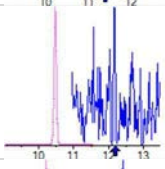 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 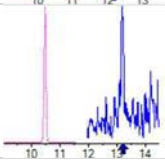 | 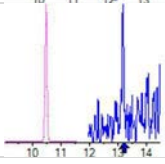 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 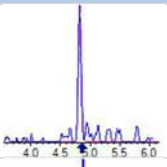 | 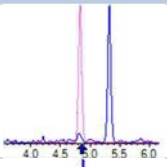 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 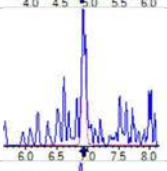 | 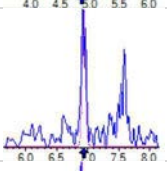 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 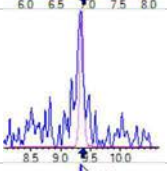 | 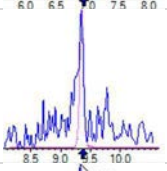 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>25777<br>( 627.0 / 81.0 )<br>32268 | ( 11.08 , 1.00 )<br>( 0.01 , N/A , 0.2) | 119.4<br>103.4 | 1.2518<br>87.1<br>87.1 | 0.0800 | N/A | 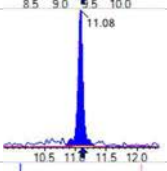 | 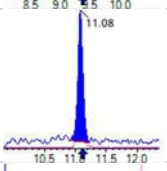 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 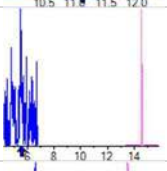 | 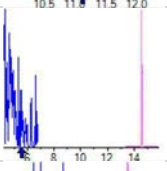 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 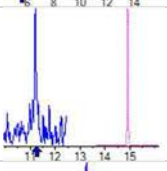 | 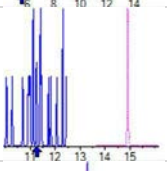 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 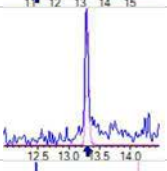 | 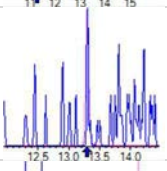 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 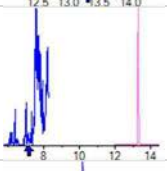 | 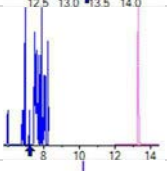 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 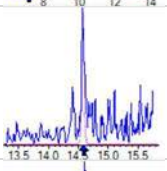 | 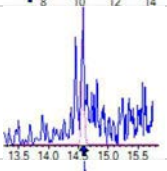 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 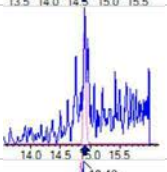 | 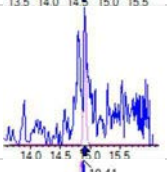 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>5071<br>( 570.0 / 483.0 )<br>2169 | ( 10.42 , 1.00 )<br>( 0.02 , N/A , 0.5) | 43.2<br>791.9 | 0.4278<br>92.2<br>92.2 | 0.0180 | N/A | 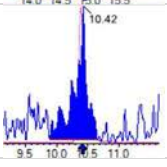 | 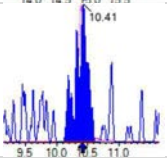 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 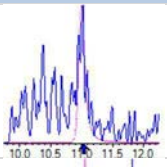 | 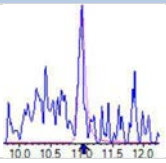 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 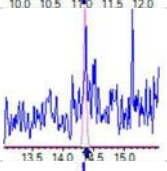 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 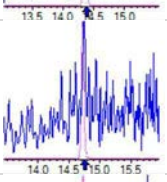 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 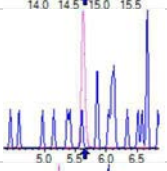 | 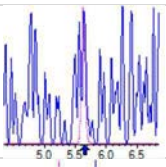 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 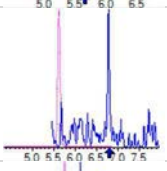 | 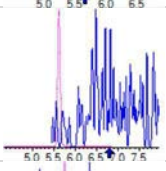 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 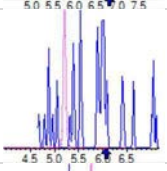 | 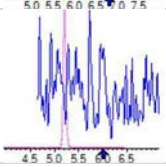 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 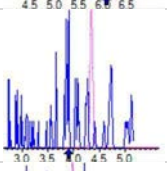 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 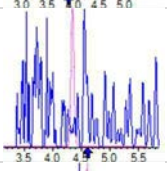 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 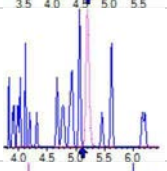 | 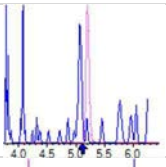 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 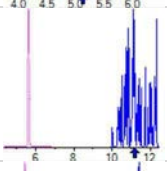 | 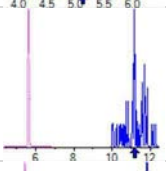 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 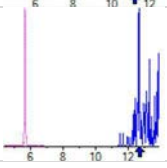 | 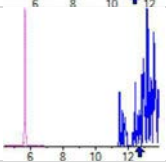 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 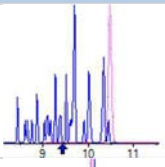 | 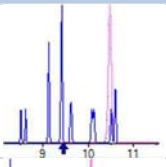 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 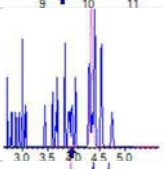 | 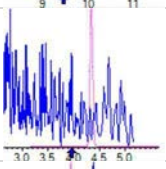 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 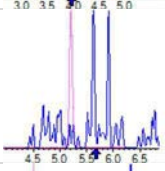 | 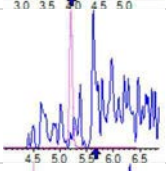 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 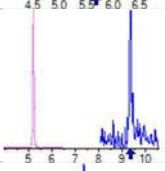 | 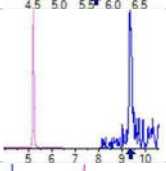 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 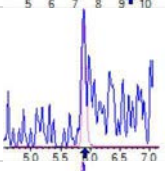 | 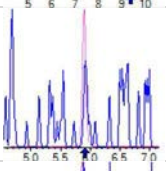 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 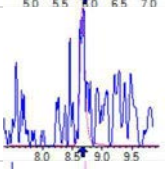 | 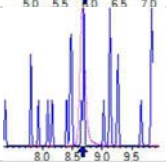 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 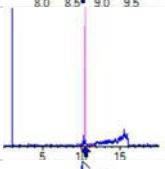 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 271603 | ( 3.61 , N/A )<br>( N/A , -0.04 , N/A ) | 1765.0 | N/A | 0.9620<br>[ 1.0000 ] | 96.2%<br>{ 98.0% } | 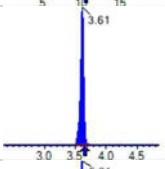 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 109151 | ( 5.21 , N/A )<br>( N/A , -0.03 , N/A ) | 968721.8 | N/A | 0.9250<br>[ 1.0000 ] | 92.5%<br>{ 94.9% } | 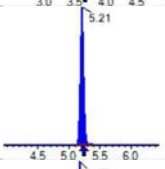 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370901 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 5406.0 | N/A | 0.9560<br>[ 1.0000 ] | 95.6%<br>{ 94.5% } | 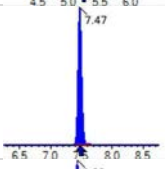 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282226 | ( 9.03 , N/A )<br>( N/A , -0.01 , N/A ) | 2166.9 | N/A | 0.9660<br>[ 1.0000 ] | 96.6%<br>{ 97.1% } | 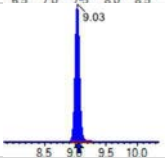 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 295805 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 8472.2 | N/A | 1.0320 [ 1.0000 ] | 103.2% { 108.7% } | 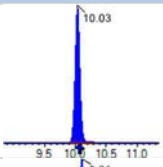 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 940221 | ( 8.21 , N/A ) ( N/A , 0.12 , N/A ) | 5678.7 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 98.8% } | 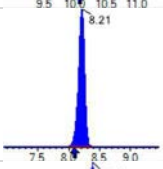 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 743825 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 3764.8 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 100.6% } | 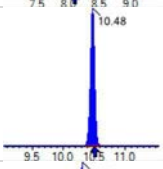 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2366553 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 262733.8 | N/A | 8.0610 [ 8.0000 ] | 100.8% { 97.0% } | 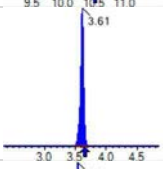 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 929871 | ( 4.34 , N/A ) ( N/A , -0.04 , N/A ) | 6195.5 | N/A | 4.6530 [ 4.0000 ] | 116.3% { 100.5% } | 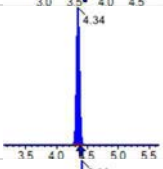 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 484104 | ( 5.20 , N/A ) ( N/A , -0.03 , N/A ) | 9073.5 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 90.5% } | 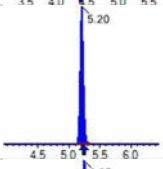 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588065 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 9116.3 | N/A | 2.2170 [ 2.0000 ] | 110.9% { 103.1% } | 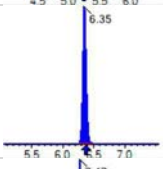 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 842406 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 4909.5 | N/A | 2.1430 [ 2.0000 ] | 107.2% { 111.3% } | 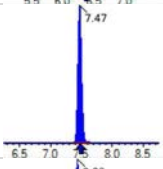 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 275807 | ( 9.03 , N/A ) ( N/A , -0.01 , N/A ) | 5012.8 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 97.1% } | 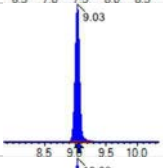 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 328131 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 1418.1 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 97.5% } | 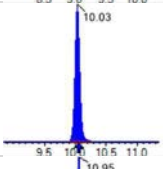 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389721 | ( 10.95 , N/A ) ( N/A , -0.02 , N/A ) | 1166.7 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 99.4% } | 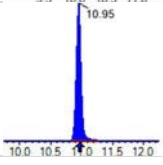 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-ICB1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 396994 | ( 11.85 , N/A ) ( N/A , -0.02 , N/A ) | 1324.6 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 99.5% } | 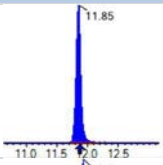  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348990 | ( 13.13 , N/A ) ( N/A , -0.02 , N/A ) | 1332.2 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 96.3% } | 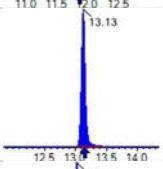  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 549693 | ( 14.03 , N/A ) ( N/A , -0.01 , N/A ) | 2623.2 | N/A | 1.7840 [ 2.0000 ] | 89.2% { 96.2% } | 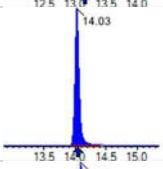  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1469989 | ( 5.39 , N/A ) ( N/A , -0.03 , N/A ) | 1636.0 | N/A | 1.9400 [ 2.0000 ] | 97.0% { 92.5% } | 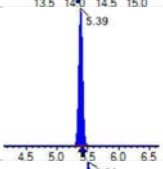  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1346230 | ( 8.21 , N/A ) ( N/A , 0.12 , N/A ) | 6373.3 | N/A | 1.9850 [ 2.0000 ] | 99.2% { 98.0% } | 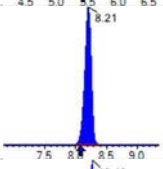  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1606986 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 2074.7 | N/A | 2.0310 [ 2.0000 ] | 101.5% { 102.6% } | 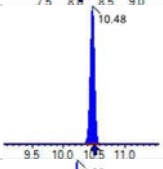  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 778425 | ( 4.83 , N/A ) ( N/A , -0.03 , N/A ) | 59.9 | N/A | 4.6690 [ 4.0000 ] | 116.7% { 111.6% } | 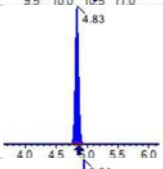  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1915077 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 7754.3 | N/A | 4.6760 [ 4.0000 ] | 116.9% { 115.4% } | 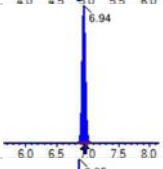  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1655492 | ( 9.35 , N/A ) ( N/A , -0.02 , N/A ) | 2518.6 | N/A | 4.6200 [ 4.0000 ] | 115.5% { 112.0% } | 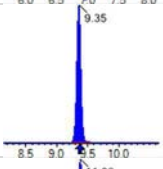  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3250874 | ( 11.08 , N/A ) ( N/A , -0.02 , N/A ) | 1739.5 | N/A | 8.3860 [ 8.0000 ] | 104.8% { 114.2% } | 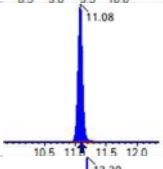  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1670409 | ( 13.30 , N/A ) ( N/A , -0.01 , N/A ) | 3297.5 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 99.2% } | 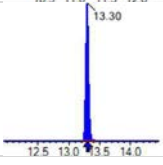  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 374739 | ( 14.57 , N/A ) ( N/A , -0.01 , N/A ) | 2651.6 | N/A | 1.9840 [ 2.0000 ] | 99.2% { 101.1% } | 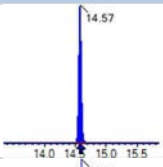  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 360886 | ( 14.90 , N/A ) ( N/A , -0.01 , N/A ) | 3140.8 | N/A | 2.0900 [ 2.0000 ] | 104.5% { 101.5% } | 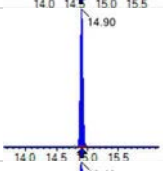  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1214676 | ( 10.40 , N/A ) ( N/A , -0.02 , N/A ) | 4889.3 | N/A | 4.4210 [ 4.0000 ] | 110.5% { 104.8% } | 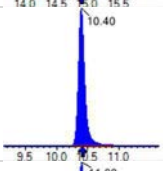  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1128882 | ( 11.00 , N/A ) ( N/A , -0.02 , N/A ) | 2853.5 | N/A | 4.5520 [ 4.0000 ] | 113.8% { 109.2% } | 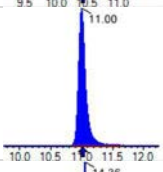  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1394785 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2349.5 | N/A | 19.7660 [ 20.0000 ] | 98.8% { 98.2% } | 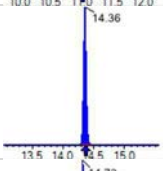  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1345626 | ( 14.72 , N/A ) ( N/A , -0.01 , N/A ) | 4451.8 | N/A | 20.3620 [ 20.0000 ] | 101.8% { 100.8% } | 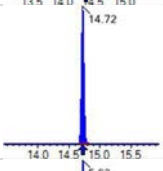  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 847815 | ( 5.63 , N/A ) ( N/A , -0.03 , N/A ) | 2610.7 | N/A | 8.1960 [ 8.0000 ] | 102.5% { 93.9% } | 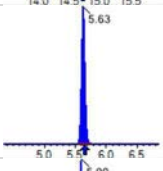  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 584674 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 3075.1 | N/A | 1.8140 [ 2.0000 ] | 90.7% { 103.0% } | 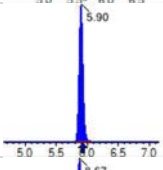  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 660409 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1110.6 | N/A | 1.8180 [ 2.0000 ] | 90.9% { 101.0% } | 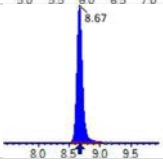  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 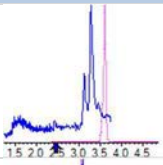 | 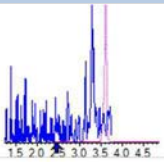 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 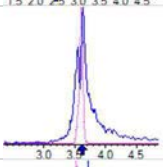 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 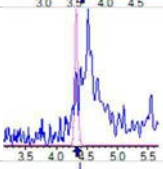 | 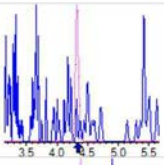 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 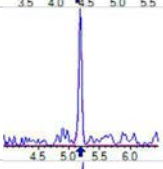 | 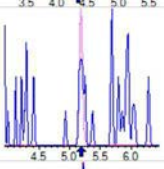 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 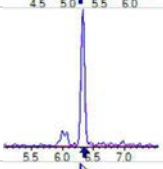 | 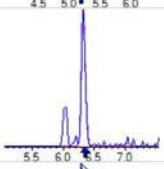 | |
| PFOA | ( 413.0 / 369.0 )<br>3237280<br>( 413.0 / 169.0 )<br>1271532 | ( 7.44 , 1.00 )<br>( 0.00 , N/A , 0.0) | 773.2<br>667.7 | 0.3928<br>109.9<br>110.7 | 7.4740 | N/A | 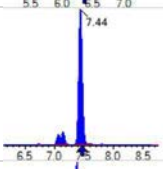 | 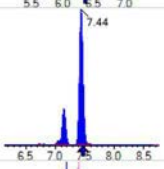 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 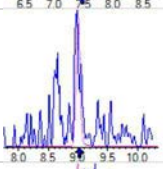 | 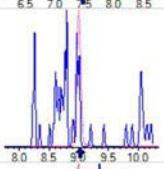 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 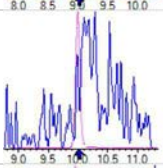 | 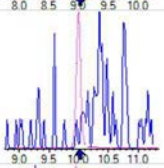 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 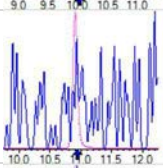 | 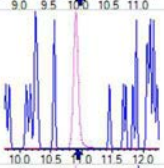 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 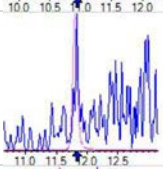 | 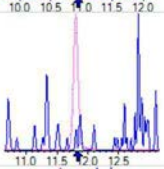 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 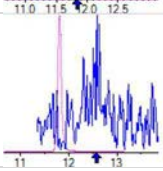 | 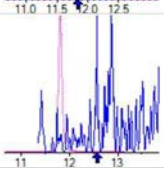 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 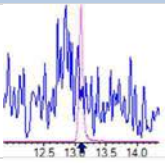 | 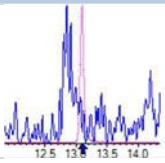 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 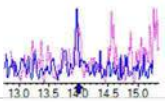 | 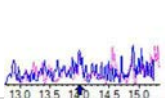 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 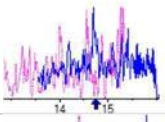 | 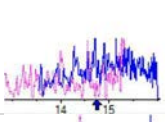 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 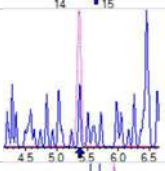 | 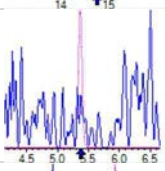 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 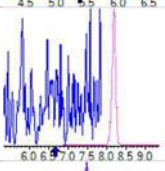 | 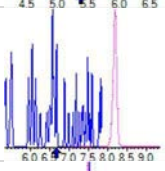 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 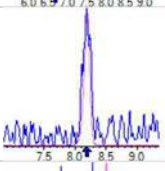 | 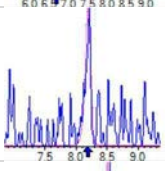 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 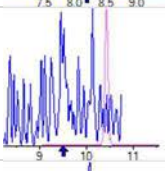 | 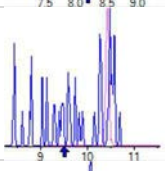 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 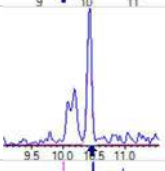 | 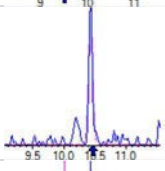 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 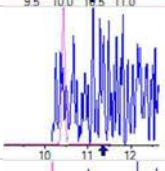 | 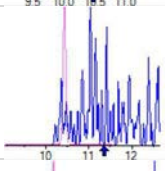 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 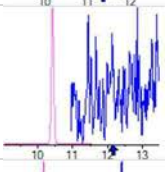 | 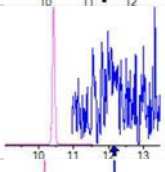 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 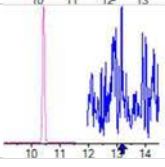 | 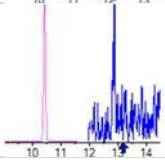 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 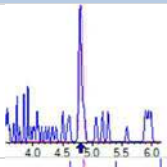 | 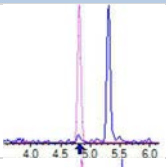 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 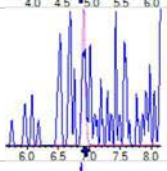 | 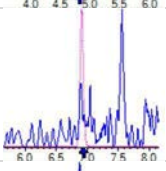 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 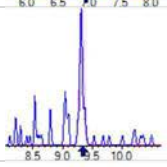 | 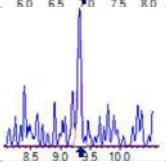 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 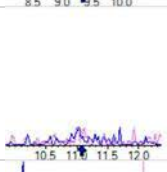 | 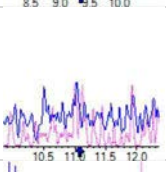 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 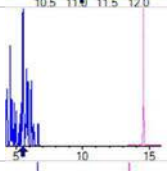 | 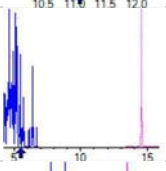 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 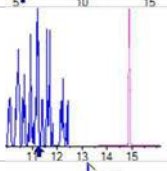 | 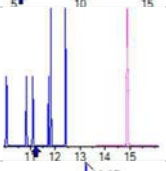 | |
| PFOSA | ( 498.0 / 78.0 ) 8083527<br>( 498.0 / 478.0 ) 120750 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 661.3<br>557.2 | 0.0149<br>101.6<br>112.2 | 9.3530 | N/A | 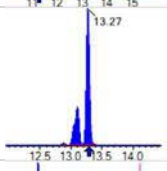 | 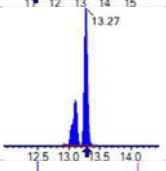 | MI5 DG 2024-03-29 |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 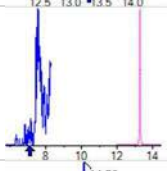 | 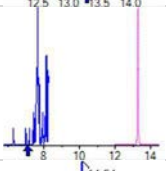 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1596674<br>( 512.0 / 169.0 ) 1170266 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.9) | 3534.3<br>1630.4 | 0.7329<br>95.6<br>98.4 | 8.4570 | N/A | 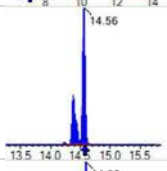 | 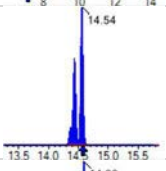 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1785193<br>( 526.0 / 169.0 ) 2221068 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.0) | 4002.5<br>3451.5 | 1.2442<br>99.5<br>100.0 | 8.1380 | N/A | 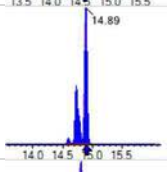 | 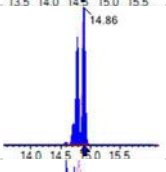 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 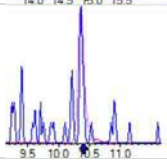 | 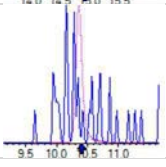 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 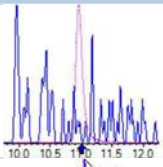 | 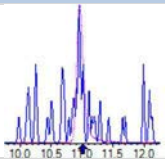 | |
| NMeFOSE | ( 616.0 / 59.0 ) 780143 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 1938.0 | N/A<br>0.0<br>0.0 | 9.2520 | N/A | 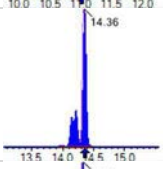 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 603775 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 2402.4 | N/A<br>0.0<br>0.0 | 9.1950 | N/A | 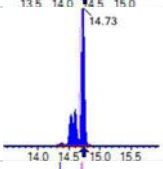 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 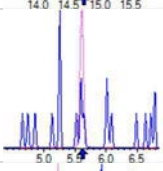 | 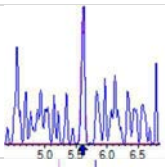 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 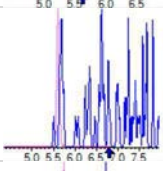 | 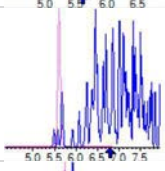 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 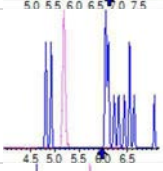 | 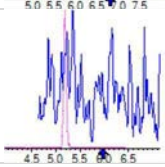 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 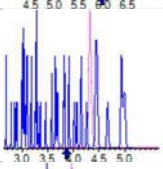 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 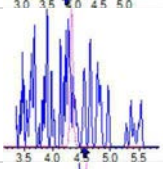 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 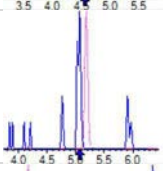 | 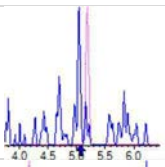 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 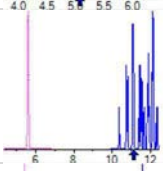 | 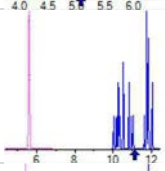 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 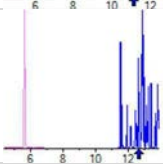 | 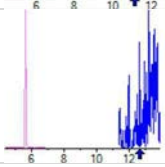 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 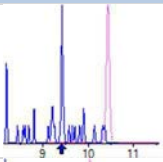 | 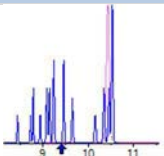 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 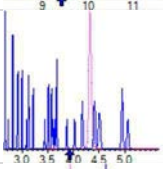 | 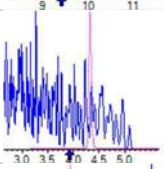 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 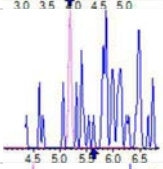 | 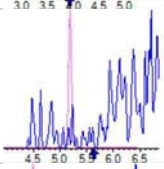 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 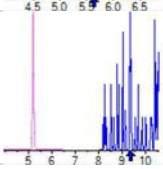 | 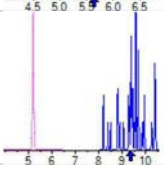 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 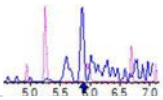 | 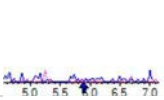 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 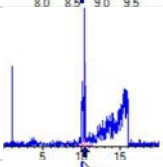 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 278004 | ( 3.61 , N/A )<br>( N/A , 0.00 , N/A ) | 1413.7 | N/A | 0.9850<br>[ 1.0000 ] | 98.5%<br>{ 105.1% } | 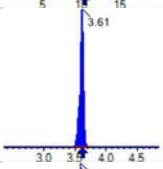 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106997 | ( 5.19 , N/A )<br>( N/A , -0.01 , N/A ) | 609912.6 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 92.4% } | 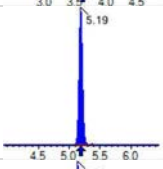 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 362792 | ( 7.44 , N/A )<br>( N/A , -0.03 , N/A ) | 4913.9 | N/A | 0.9350<br>[ 1.0000 ] | 93.5%<br>{ 100.5% } | 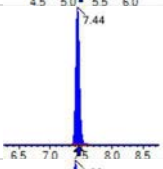 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 264669 | ( 9.00 , N/A )<br>( N/A , -0.03 , N/A ) | 1513.0 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 94.9% } | 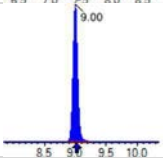 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 270748 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 7033.5 | N/A | 0.9450 [ 1.0000 ] | 94.5% { 98.1% } | 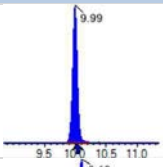 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 906303 | ( 8.19 , N/A ) ( N/A , 0.02 , N/A ) | 6998.3 | N/A | 0.9230 [ 1.0000 ] | 92.3% { 98.7% } | 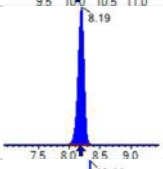 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 736895 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 4167.9 | N/A | 0.9390 [ 1.0000 ] | 93.9% { 95.5% } | 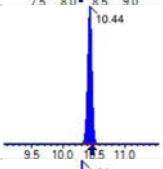 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2530425 | ( 3.61 , N/A ) ( N/A , 0.00 , N/A ) | 1512466.1 | N/A | 8.4210 [ 8.0000 ] | 105.3% { 116.5% } | 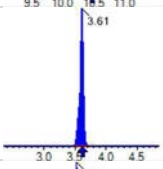 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 929735 | ( 4.32 , N/A ) ( N/A , -0.01 , N/A ) | 6968.9 | N/A | 4.7460 [ 4.0000 ] | 118.7% { 111.2% } | 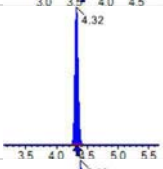 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 545658 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 32771.8 | N/A | 2.3310 [ 2.0000 ] | 116.6% { 113.5% } | 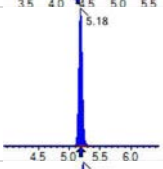 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 571887 | ( 6.33 , N/A ) ( N/A , -0.02 , N/A ) | 10306.6 | N/A | 2.2000 [ 2.0000 ] | 110.0% { 104.3% } | 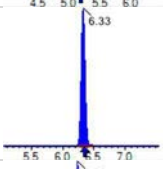 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862590 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 4685.5 | N/A | 2.2430 [ 2.0000 ] | 112.2% { 112.7% } | 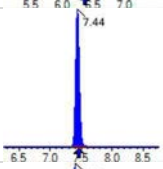 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299389 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 8038.6 | N/A | 1.1460 [ 1.0000 ] | 114.6% { 111.0% } | 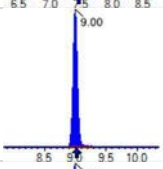 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 344795 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1120.2 | N/A | 1.1020 [ 1.0000 ] | 110.2% { 117.3% } | 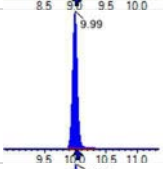 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 407026 | ( 10.91 , N/A ) ( N/A , -0.03 , N/A ) | 1476.0 | N/A | 1.0970 [ 1.0000 ] | 109.7% { 110.2% } | 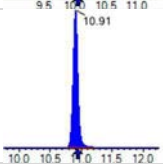 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 418045 | ( 11.80 , N/A ) ( N/A , -0.03 , N/A ) | 1520.4 | N/A | 1.0980 [ 1.0000 ] | 109.8% { 115.2% } | 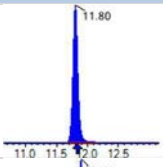  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348779 | ( 13.09 , N/A ) ( N/A , -0.02 , N/A ) | 1283.4 | N/A | 1.0350 [ 1.0000 ] | 103.5% { 106.4% } | 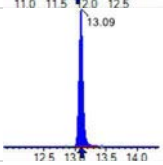  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 621 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 9.3 | N/A | 0.0020 [ 2.0000 ] | 0.1% { 0.1% } | 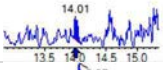  | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1567989 | ( 5.37 , N/A ) ( N/A , -0.01 , N/A ) | 1266.0 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 106.3% } | 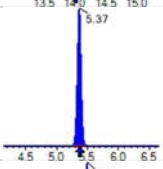  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1429470 | ( 8.19 , N/A ) ( N/A , 0.02 , N/A ) | 6627.3 | N/A | 2.1860 [ 2.0000 ] | 109.3% { 109.8% } | 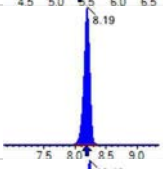  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1702695 | ( 10.43 , N/A ) ( N/A , -0.03 , N/A ) | 3020.2 | N/A | 2.1720 [ 2.0000 ] | 108.6% { 117.9% } | 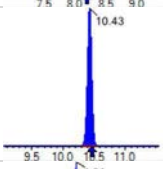  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 844618 | ( 4.81 , N/A ) ( N/A , 0.00 , N/A ) | 61.8 | N/A | 5.2560 [ 4.0000 ] | 131.4% { 129.8% } | 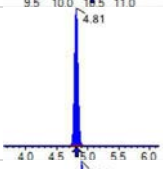  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2250847 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 8327.7 | N/A | 5.7010 [ 4.0000 ] | 142.5% { 127.9% } | 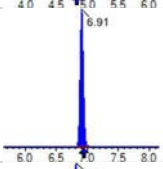  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1750950 | ( 9.32 , N/A ) ( N/A , -0.03 , N/A ) | 2536.1 | N/A | 5.0690 [ 4.0000 ] | 126.7% { 120.3% } | 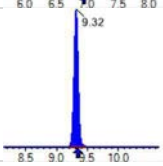  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 421 | ( 11.12 , N/A ) ( N/A , 0.05 , N/A ) | 7.4 | N/A | 0.0010 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1786481 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 3753.6 | N/A | 2.1470 [ 2.0000 ] | 107.3% { 114.7% } | 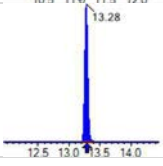  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 424850 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 2454.8 | N/A | 2.2700 [ 2.0000 ] | 113.5% { 116.7% } | 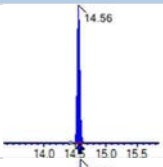  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 387285 | ( 14.88 , N/A ) ( N/A , -0.01 , N/A ) | 2762.7 | N/A | 2.2640 [ 2.0000 ] | 113.2% { 112.4% } | 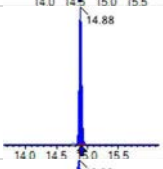  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1311304 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3500.4 | N/A | 4.8170 [ 4.0000 ] | 120.4% { 111.1% } | 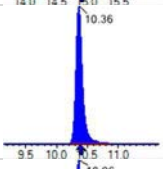  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1211361 | ( 10.96 , N/A ) ( N/A , -0.03 , N/A ) | 2283.8 | N/A | 4.9310 [ 4.0000 ] | 123.3% { 118.8% } | 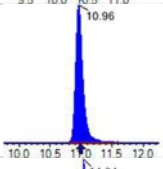  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1557701 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 2825.3 | N/A | 22.2820 [ 20.0000 ] | 111.4% { 117.2% } | 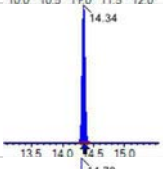  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1378553 | ( 14.70 , N/A ) ( N/A , -0.01 , N/A ) | 4447.8 | N/A | 21.0560 [ 20.0000 ] | 105.3% { 110.1% } | 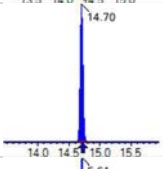  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 919126 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2111.9 | N/A | 9.0650 [ 8.0000 ] | 113.3% { 111.1% } | 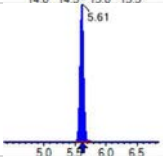  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 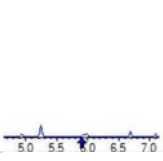 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 155 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 18.0 | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 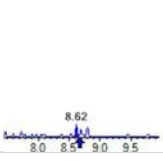  | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (5)
Acquired: 2024/03/28 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26037<br>( 499.0 / 99.0 ) N/A | ( 9.81 , 0.94 ) ( -0.62 , N/A , #Value!) | 11.4 | N/A<br>0.0<br>0.0 | 0.0270 | N/A | 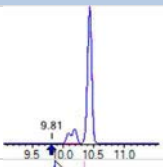 | 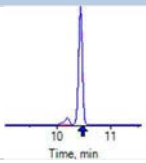 | |
| TDCA | ( 499.0 / 80.0 ) 6670375 | ( 6.52 , 0.62 ) ( N/A , #Value! , 0.0) | 61849.1 | N/A<br>0.0<br>0.0 | 10.1700 | N/A | 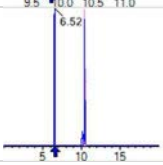 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.81 - 6.52 = 3.29 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.270a | 0.15a | 0.40a | B, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.112a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>19192<br>( 163.0 / 69.0 )<br>598 | ( 2.44 , 0.71 )<br>( N/A , -0.01 , -0.1) | 139.7<br>75.4 | 0.0312<br>113.7<br>118.8 | 0.2930 | N/A | 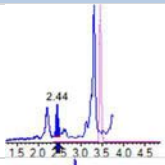 | 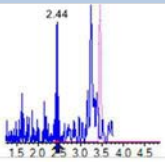 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 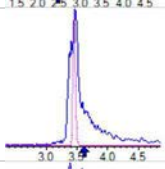 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 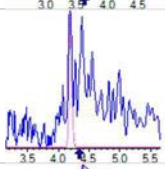 | 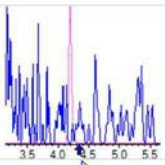 | |
| PFHxA | ( 313.0 / 269.0 )<br>2933<br>( 313.0 / 119.0 )<br>364 | ( 5.19 , 1.00 )<br>( 0.01 , N/A , 0.9) | 26.8<br>15.9 | 0.1240<br>111.5<br>104.7 | 0.0120 | N/A | 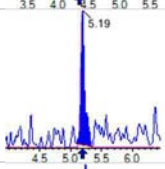 | 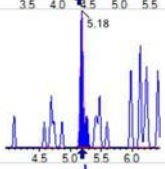 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 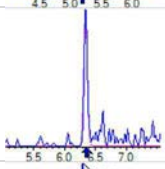 | 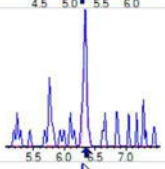 | |
| PFOA | ( 413.0 / 369.0 )<br>28526<br>( 413.0 / 169.0 )<br>10441 | ( 7.45 , 1.00 )<br>( 0.00 , N/A , 0.1) | 59.9<br>91.9 | 0.3660<br>102.4<br>103.2 | 0.0670 | N/A | 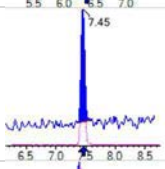 | 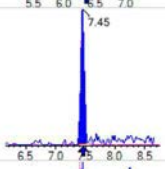 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 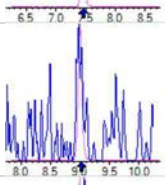 | 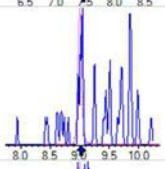 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 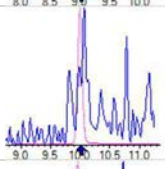 | 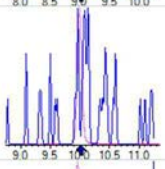 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 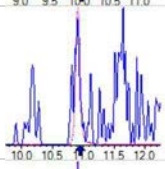 | 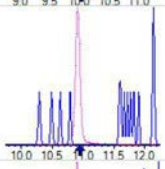 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 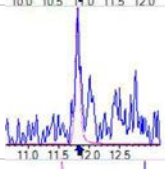 | 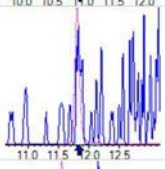 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 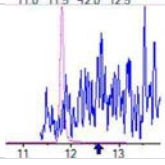 | 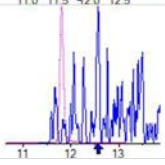 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 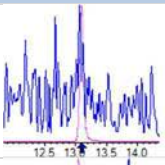 | 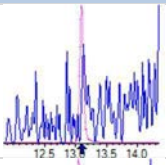 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 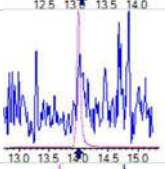 | 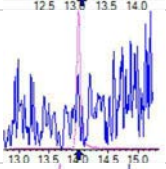 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 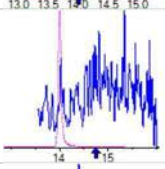 | 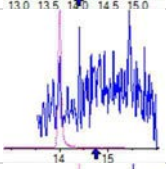 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 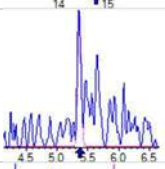 | 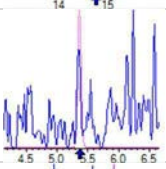 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 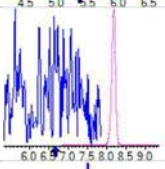 | 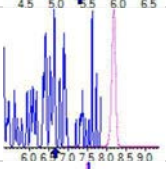 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 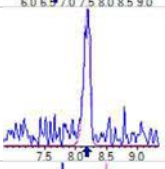 | 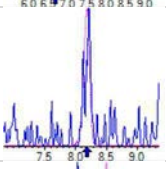 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 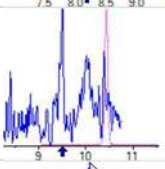 | 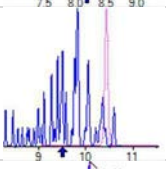 | |
| PFOS | ( 499.0 / 80.0 )<br>28683<br>( 499.0 / 99.0 )<br>5822 | ( 10.43 , 1.00 )<br>( -0.01 , N/A , -0.1) | 154.4<br>410.0 | 0.2030<br>87.9<br>88.6 | 0.0280 | N/A | 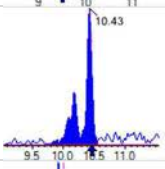 | 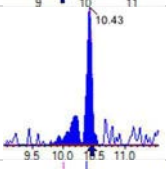 | MI2 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 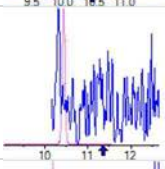 | 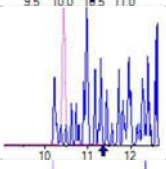 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 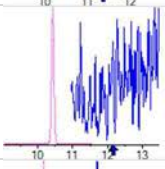 | 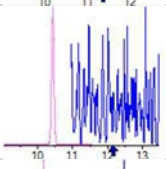 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 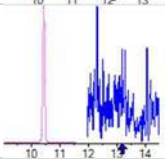 | 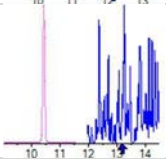 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 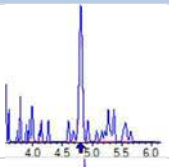 | 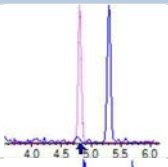 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 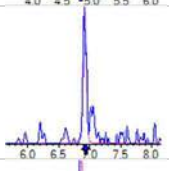 | 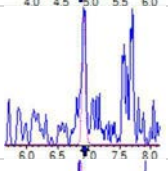 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 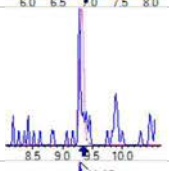 | 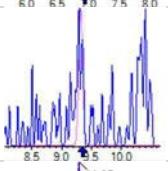 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16723<br>( 627.0 / 81.0 )<br>29932 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.0) | 188.8<br>125.3 | 1.7899<br>124.5<br>123.5 | 0.0500 | N/A | 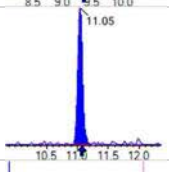 | 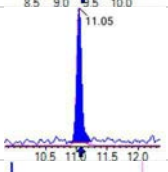 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 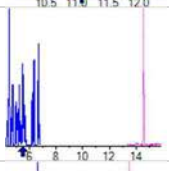 | 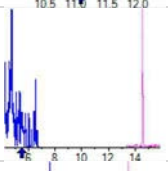 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 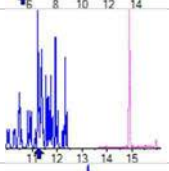 | 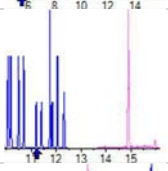 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 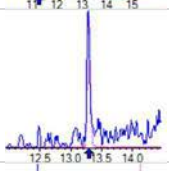 | 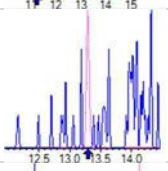 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 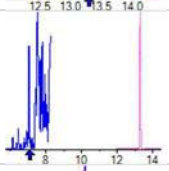 | 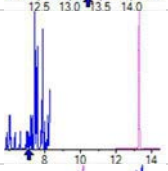 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 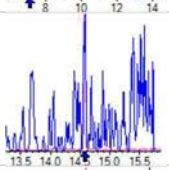 | 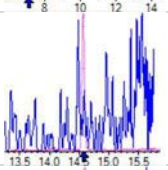 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 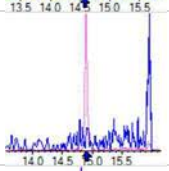 | 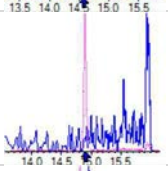 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 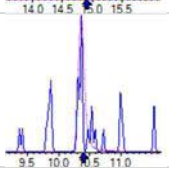 | 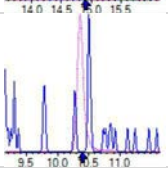 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 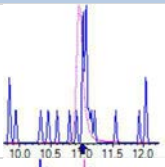 | 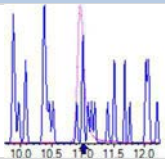 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 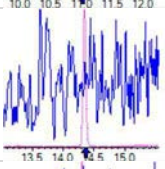 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 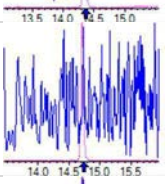 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 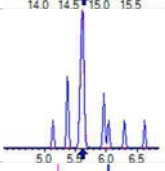 | 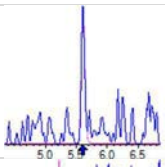 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 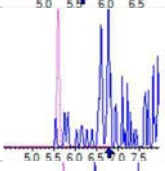 | 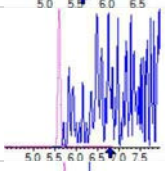 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 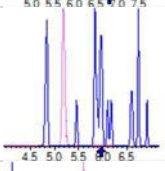 | 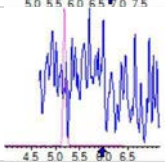 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 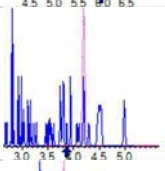 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 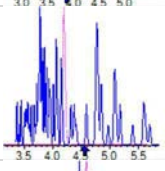 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 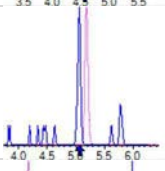 | 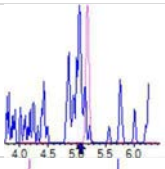 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 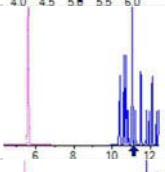 | 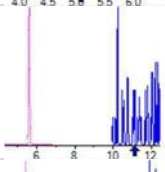 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 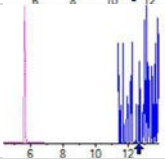 | 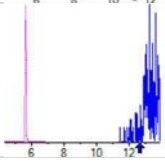 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 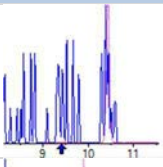 | 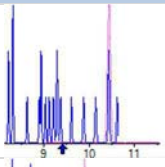 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 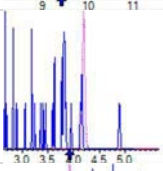 | 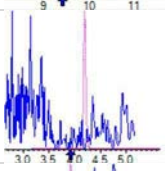 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 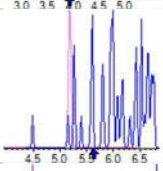 | 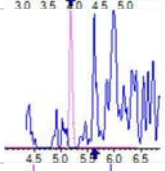 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 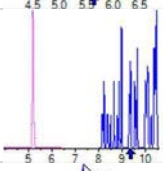 | 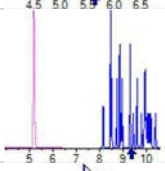 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4598<br>( 357.2 / 243.0 )<br>728 | ( 5.88 , 1.00 )<br>( 0.00 , N/A , 0.3) | 34.9<br>14.9 | 0.1584<br>147.7<br>143.2 | 0.0120 | N/A | 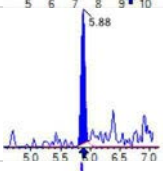 | 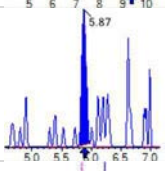 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 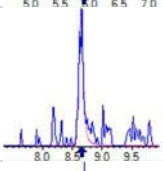 | 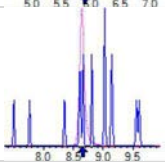 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 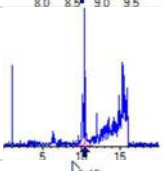 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>278049 | ( 3.45 , N/A )<br>( N/A , -0.16 , N/A ) | 2287.5 | N/A | 0.9850<br>[ 1.0000 ] | 98.5%<br>{ 105.2% } | 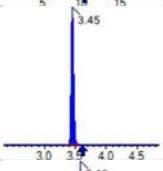 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>135573 | ( 5.18 , N/A )<br>( N/A , -0.01 , N/A ) | 115976.6 | N/A | 1.1480<br>[ 1.0000 ] | 114.8%<br>{ 117.1% } | 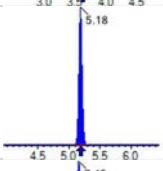 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>408894 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 7142.1 | N/A | 1.0530<br>[ 1.0000 ] | 105.3%<br>{ 113.3% } | 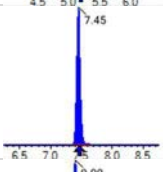 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>291765 | ( 9.00 , N/A )<br>( N/A , -0.02 , N/A ) | 1706.4 | N/A | 0.9990<br>[ 1.0000 ] | 99.9%<br>{ 104.6% } | 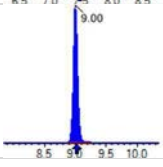 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294135 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1192044.7 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 106.5% } | 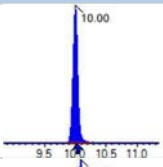  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 986640 | ( 8.19 , N/A ) ( N/A , 0.01 , N/A ) | 6982.6 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 107.5% } | 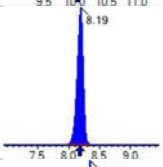  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 835727 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 3982.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 108.4% } | 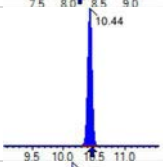  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2314592 | ( 3.45 , N/A ) ( N/A , -0.16 , N/A ) | 86855.8 | N/A | 7.7010 [ 8.0000 ] | 96.3% { 106.6% } | 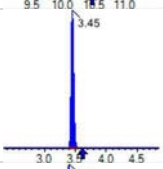  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 906980 | ( 4.19 , N/A ) ( N/A , -0.14 , N/A ) | 4470.9 | N/A | 3.6540 [ 4.0000 ] | 91.4% { 108.4% } | 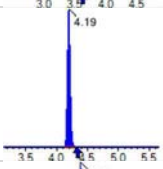  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 516293 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 33693.4 | N/A | 1.7410 [ 2.0000 ] | 87.0% { 107.4% } | 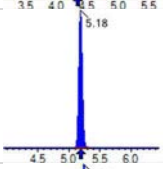  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613861 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 4882.6 | N/A | 1.8630 [ 2.0000 ] | 93.2% { 112.0% } | 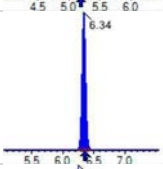  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 841806 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 5049.6 | N/A | 1.9430 [ 2.0000 ] | 97.1% { 109.9% } | 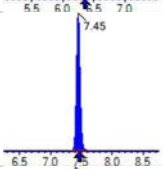  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 296149 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 4718.5 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 109.8% } | 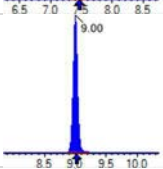  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341929 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 1429.9 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 116.3% } | 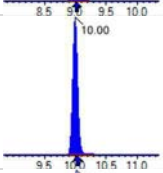  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 403877 | ( 10.91 , N/A ) ( N/A , -0.03 , N/A ) | 1053.0 | N/A | 1.0020 [ 1.0000 ] | 100.2% { 109.4% } | 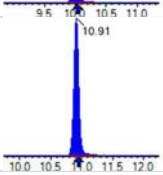  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 387261 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1468.5 | N/A | 0.9370 [ 1.0000 ] | 93.7% { 106.7% } | 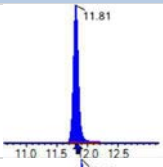 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 333687 | ( 13.10 , N/A ) ( N/A , -0.01 , N/A ) | 1489.0 | N/A | 0.9110 [ 1.0000 ] | 91.1% { 101.8% } | 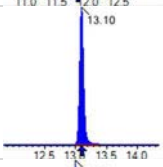 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472045 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1956.7 | N/A | 1.5410 [ 2.0000 ] | 77.0% { 94.8% } | 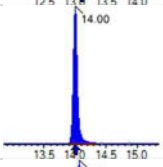 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1559460 | ( 5.36 , N/A ) ( N/A , -0.01 , N/A ) | 1660.4 | N/A | 1.9610 [ 2.0000 ] | 98.0% { 105.7% } | 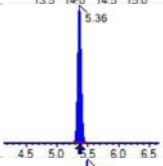 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1447690 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 4866.3 | N/A | 2.0340 [ 2.0000 ] | 101.7% { 111.2% } | 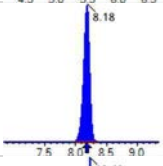 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1767502 | ( 10.43 , N/A ) ( N/A , -0.03 , N/A ) | 2210.6 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 122.4% } | 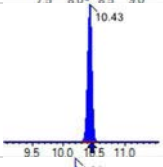 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 914308 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 56.4 | N/A | 5.2260 [ 4.0000 ] | 130.7% { 140.5% } | 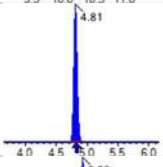 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2156338 | ( 6.92 , N/A ) ( N/A , -0.02 , N/A ) | 5942.2 | N/A | 5.0170 [ 4.0000 ] | 125.4% { 122.5% } | 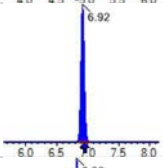 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1757860 | ( 9.32 , N/A ) ( N/A , -0.03 , N/A ) | 2398.5 | N/A | 4.6750 [ 4.0000 ] | 116.9% { 120.8% } | 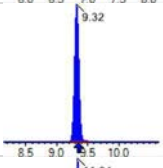 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3388453 | ( 11.04 , N/A ) ( N/A , -0.03 , N/A ) | 1411.5 | N/A | 8.3300 [ 8.0000 ] | 104.1% { 113.7% } | 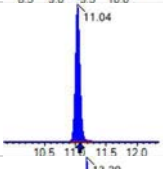 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 470321 | ( 13.29 , N/A ) ( N/A , 0.00 , N/A ) | 2485.6 | N/A | 0.4980 [ 2.0000 ] | 24.9% { 30.2% } | 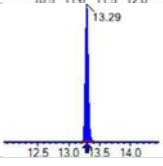 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 43384 | ( 14.57 , N/A ) ( N/A , 0.00 , N/A ) | 973.3 | N/A | 0.2040 [ 2.0000 ] | 10.2% { 11.9% } | 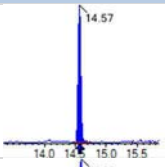 | | MI5 DG 2024-03-29 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 41144 | ( 14.89 , N/A ) ( N/A , 0.00 , N/A ) | 486.0 | N/A | 0.2120 [ 2.0000 ] | 10.6% { 11.9% } | 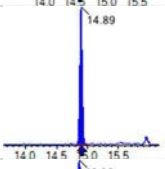 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1249254 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3183.5 | N/A | 4.0470 [ 4.0000 ] | 101.2% { 105.8% } | 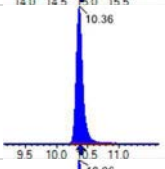 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1116381 | ( 10.96 , N/A ) ( N/A , -0.03 , N/A ) | 2147.3 | N/A | 4.0070 [ 4.0000 ] | 100.2% { 109.5% } | 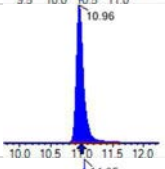 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 325815 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 1030.8 | N/A | 4.1100 [ 20.0000 ] | 20.5% { 24.5% } | 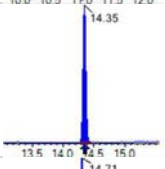 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 373016 | ( 14.71 , N/A ) ( N/A , 0.00 , N/A ) | 1614.9 | N/A | 5.0240 [ 20.0000 ] | 25.1% { 29.8% } | 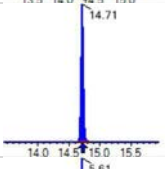 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 924257 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2044.6 | N/A | 7.1940 [ 8.0000 ] | 89.9% { 111.7% } | 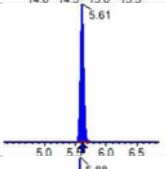 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 704521 | ( 5.88 , N/A ) ( N/A , -0.02 , N/A ) | 1868.1 | N/A | 2.1980 [ 2.0000 ] | 109.9% { 125.4% } | 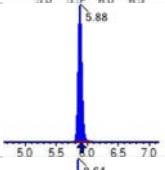 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 684557 | ( 8.64 , N/A ) ( N/A , -0.02 , N/A ) | 1249.3 | N/A | 1.8960 [ 2.0000 ] | 94.8% { 102.1% } | 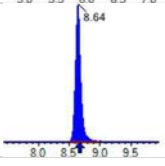 | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BS1a | File ID:a | S2024-03-28B (8)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:15a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Column:a | 1a | | | | Instrument:a Saphira |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 18.7a | 0.21a | 1.6a | |
| PFPeAa | 8.29a | 0.065a | 0.80a | |
| PFHxAa | 4.12a | 0.055a | 0.40a | |
| PFHpAa | 4.01a | 0.041a | 0.40a | |
| PFOAa | 4.35a | 0.15a | 0.40a | |
| PFNAa | 4.14a | 0.082a | 0.40a | |
| PFDAa | 4.11a | 0.10a | 0.40a | |
| PFUnAa | 4.13a | 0.16a | 0.40a | |
| PFDoAa | 4.21a | 0.11a | 0.40a | |
| PFTrDAa | 4.29a | 0.20a | 0.40a | |
| PFTeDAa | 4.11a | 0.20a | 0.40a | |
| PFHxDAa | 3.87a | 0.20a | 0.40a | |
| PFODAa | 3.34a | 0.20a | 0.40a | |
| PFBSa | 3.76a | 0.037a | 0.40a | |
| PFPeSa | 3.94a | 0.063a | 0.40a | |
| PFHxSa | 3.83a | 0.032a | 0.40a | MI5a |
| PFHpSa | 4.11a | 0.051a | 0.40a | |
| PFOSa | 3.95a | 0.064a | 0.40a | |
| PFNSa | 4.15a | 0.12a | 0.40a | |
| PFDSa | 4.25a | 0.15a | 0.40a | |
| PFDoSa | 3.91a | 0.12a | 0.40a | |
| 4:2FTSa | 16.8a | 0.29a | 1.6a | |
| 6:2FTSa | 15.4a | 0.31a | 1.6a | |
| 8:2FTSa | 16.2a | 0.082a | 1.6a | |
| 10:2FTSa | 14.4a | 0.40a | 1.6a | |
| PFOSAa | 4.32a | 0.10a | 0.40a | |
| NMeFOSAa | 17.6a | 0.47a | 1.6a | |
| NEtFOSAa | 17.0a | 0.41a | 1.6a | |
| NMeFOSAAa | 4.03a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BS1a | File ID:a | S2024-03-28B (8)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:15a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.0a | 1.0a | 1.6a | |
| NEtFOSEa | 17.7a | 1.0a | 1.6a | |
| HFPO-DAa | 3.76a | 0.17a | 0.80a | |
| ADONAa | 4.36a | 0.12a | 0.80a | |
| PFEESAa | 7.37a | 0.11a | 0.80a | |
| PFMPAa | 8.09a | 0.054a | 0.80a | |
| PFMBAa | 8.26a | 0.091a | 0.80a | |
| NFDHAa | 8.47a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 4.06a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 4.09a | 0.21a | 0.80a | |
| 3:3FTCAa | 15.4a | 0.57a | 1.6a | |
| 5:3FTCAa | 16.3a | 0.44a | 1.6a | |
| 7:3FTCAa | 14.8a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 256902<br>( 163.0 / 69.0 ) 7510 | ( 2.43 , 0.71 )<br>( N/A , -0.03 , 0.0) | 1428.3<br>469.6 | 0.0292<br>106.7<br>111.4 | 4.0720<br>[ 2.0000 ] | 203.6% | 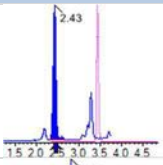 | 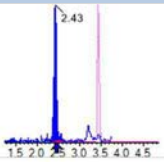 | BS2, |
| PFBA | ( 213.0 / 169.0 ) 1378730 | ( 3.44 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1135.0 | N/A<br>0.0<br>0.0 | 4.6680<br>[ 4.0000 ] | 116.7% | 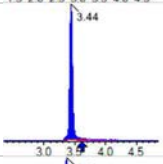 | | |
| PFPeA | ( 263.0 / 219.0 ) 456658<br>( 263.0 / 69.0 ) 5185 | ( 4.17 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1774.8<br>79.0 | 0.0114<br>95.4<br>106.7 | 2.0710<br>[ 2.0000 ] | 103.6% | 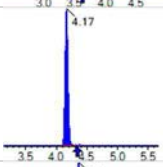 | 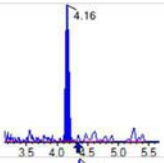 | |
| PFHxA | ( 313.0 / 269.0 ) 234028<br>( 313.0 / 119.0 ) 34137 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1302.9<br>610.4 | 0.1459<br>131.1<br>123.1 | 1.0300<br>[ 1.0000 ] | 103.0% | 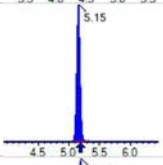 | 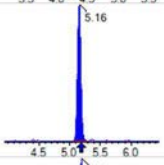 | |
| PFHpA | ( 363.0 / 319.0 ) 283473<br>( 363.0 / 169.0 ) 87791 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1686.7<br>1166.0 | 0.3097<br>101.3<br>100.6 | 1.0030<br>[ 1.0000 ] | 100.3% | 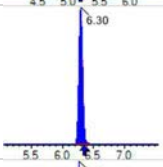 | 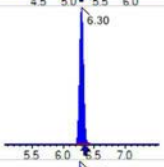 | |
| PFOA | ( 413.0 / 369.0 ) 455691<br>( 413.0 / 169.0 ) 157414 | ( 7.42 , 1.00 )<br>( 0.00 , N/A , -0.1) | 661.7<br>934.7 | 0.3454<br>96.6<br>97.4 | 1.0870<br>[ 1.0000 ] | 108.7% | 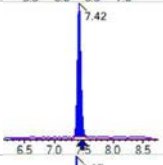 | 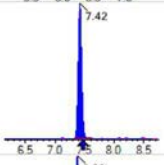 | |
| PFNA | ( 463.0 / 419.0 ) 283346<br>( 463.0 / 169.0 ) 71385 | ( 8.97 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1486.6<br>940.6 | 0.2519<br>102.6<br>98.2 | 1.0350<br>[ 1.0000 ] | 103.5% | 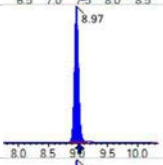 | 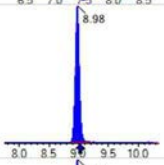 | |
| PFDA | ( 513.0 / 469.0 ) 325089<br>( 513.0 / 169.0 ) 39909 | ( 9.97 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1994.5<br>1937.1 | 0.1228<br>103.0<br>100.8 | 1.0280<br>[ 1.0000 ] | 102.8% | 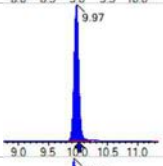 | 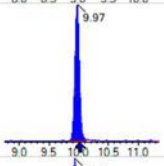 | |
| PFUnA | ( 563.0 / 519.0 ) 340849<br>( 563.0 / 169.0 ) 55258 | ( 10.89 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1015.8<br>657.6 | 0.1621<br>104.7<br>108.0 | 1.0320<br>[ 1.0000 ] | 103.2% | 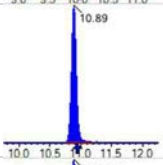 | 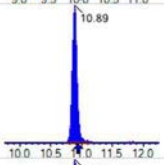 | |
| PFDoA | ( 613.0 / 569.0 ) 387674<br>( 613.0 / 169.0 ) 59865 | ( 11.78 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1282.6<br>623.8 | 0.1544<br>101.7<br>101.3 | 1.0520<br>[ 1.0000 ] | 105.2% | 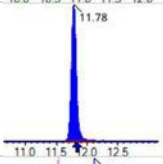 | 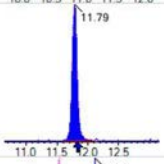 | |
| PFTrDA | ( 663.0 / 619.0 ) 384640<br>( 663.0 / 169.0 ) 100814 | ( 12.53 , 1.06 )<br>( N/A , -0.04 , 0.1) | 1139.4<br>682.0 | 0.2621<br>97.4<br>99.5 | 1.0730<br>[ 1.0000 ] | 107.3% | 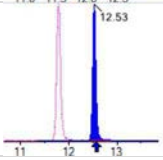 | 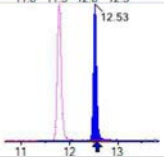 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 308288<br>( 713.0 / 169.0 ) 77857 | ( 13.08 , 1.00 ) ( 0.00 , N/A , 0.1) | 1078.7<br>553.0 | 0.2525<br>93.1<br>95.9 | 1.0260<br>[ 1.0000 ] | 102.6% | 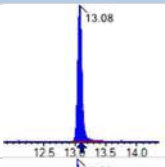 | 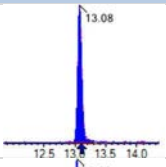 | |
| PFHxDA | ( 813.0 / 769.0 ) 207881<br>( 813.0 / 169.0 ) 59954 | ( 13.98 , 1.00 ) ( 0.00 , N/A , 0.1) | 925.6<br>324.8 | 0.2884<br>110.2<br>106.8 | 0.9660<br>[ 1.0000 ] | 96.6% | 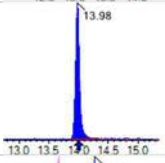 | 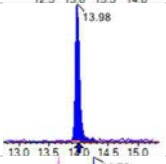 | |
| PFODA | ( 913.0 / 869.0 ) 113895<br>( 913.0 / 169.0 ) 37957 | ( 14.72 , 1.05 ) ( N/A , -0.03 , 0.1) | 425.2<br>192.1 | 0.3333<br>106.3<br>99.6 | 0.8360<br>[ 1.0000 ] | 83.6% | 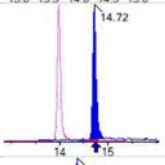 | 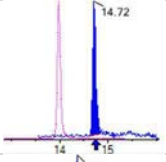 | |
| PFBS | ( 299.0 / 80.0 ) 350697<br>( 299.0 / 99.0 ) 261212 | ( 5.33 , 1.00 ) ( -0.01 , N/A , 0.0) | 1364.0<br>1275.3 | 0.7448<br>100.6<br>98.8 | 0.9410<br>[ 0.8850 ] | 106.4% | 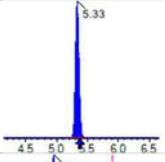 | 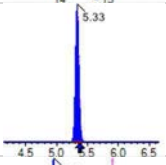 | |
| PFPeS | ( 349.0 / 80.0 ) 990317<br>( 349.0 / 99.0 ) 351199 | ( 6.62 , 0.81 ) ( N/A , -0.05 , 0.1) | 2112.7<br>2222.4 | 0.3546<br>103.8<br>99.8 | 0.9850<br>[ 0.9380 ] | 105.0% | 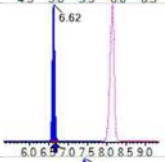 | 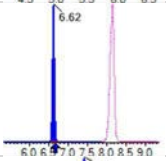 | |
| PFHxS | ( 399.0 / 80.0 ) 1174099<br>( 399.0 / 99.0 ) 371426 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 2335.9<br>3022.3 | 0.3163<br>96.4<br>98.0 | 0.9580<br>[ 0.9110 ] | 105.2% | 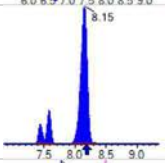 | 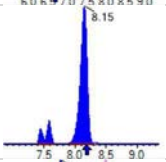 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 987244<br>( 449.0 / 99.0 ) 266029 | ( 9.46 , 0.91 ) ( N/A , -0.05 , 0.1) | 2147.4<br>1949.7 | 0.2695<br>103.3<br>103.9 | 1.0280<br>[ 0.9510 ] | 108.0% | 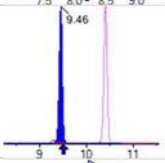 | 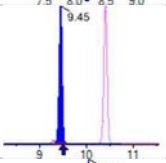 | |
| PFOS | ( 499.0 / 80.0 ) 921330<br>( 499.0 / 99.0 ) 207022 | ( 10.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 1285.5<br>3755.8 | 0.2247<br>97.2<br>98.1 | 0.9870<br>[ 0.9270 ] | 106.4% | 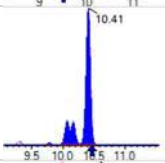 | 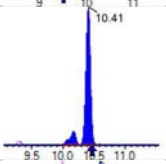 | |
| PFNS | ( 549.0 / 80.0 ) 883105<br>( 549.0 / 99.0 ) 248440 | ( 11.29 , 1.08 ) ( N/A , -0.05 , 0.1) | 2180.2<br>1616.0 | 0.2813<br>105.0<br>102.3 | 1.0380<br>[ 0.9600 ] | 108.1% | 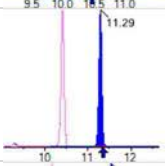 | 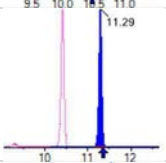 | |
| PFDS | ( 599.0 / 80.0 ) 1104501<br>( 599.0 / 99.0 ) 272820 | ( 12.11 , 1.16 ) ( N/A , -0.04 , 0.1) | 2531.1<br>1326.3 | 0.2470<br>97.0<br>91.6 | 1.0620<br>[ 0.9630 ] | 110.3% | 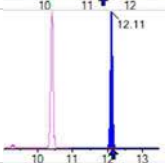 | 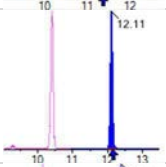 | |
| PFDoS | ( 699.0 / 80.0 ) 983631<br>( 699.0 / 99.0 ) 239750 | ( 13.14 , 1.26 ) ( N/A , -0.03 , -0.1) | 3016.4<br>1992.1 | 0.2437<br>109.1<br>103.2 | 0.9780<br>[ 0.9700 ] | 100.8% | 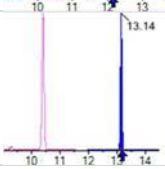 | 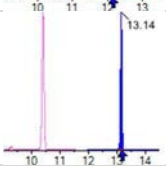 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2024412<br>( 327.0 / 81.0 ) 1865158 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 4405.0<br>3093.2 | 0.9213<br>108.0<br>105.2 | 4.1990<br>[ 3.7380 ] | 112.3% | 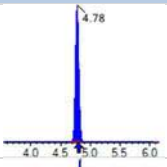 | 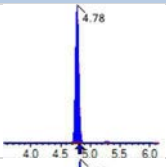 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1644875<br>( 427.0 / 81.0 ) 2149938 | ( 6.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 6096.1<br>4494.1 | 1.3071<br>101.3<br>100.7 | 3.8450<br>[ 3.7960 ] | 101.3% | 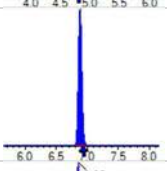 | 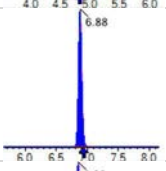 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1704283<br>( 527.0 / 81.0 ) 1708326 | ( 9.29 , 1.00 ) ( -0.01 , N/A , 0.1) | 2348.9<br>2301.6 | 1.0024<br>90.8<br>91.0 | 4.0560<br>[ 3.8330 ] | 105.8% | 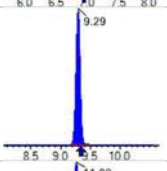 | 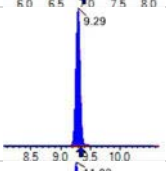 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1207968<br>( 627.0 / 81.0 ) 1676600 | ( 11.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 1720.6<br>1142.1 | 1.3880<br>96.5<br>95.8 | 3.5930<br>[ 3.8650 ] | 93.0% | 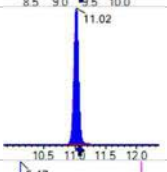 | 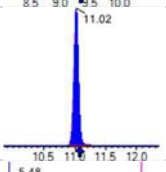 | |
| PFBSA | ( 297.9 / 78.0 ) 462371<br>( 297.9 / 278.0 ) 689 | ( 5.47 , 0.38 ) ( N/A , -0.05 , -0.4) | 1410.4<br>10.1 | 0.0015<br>115.2<br>132.5 | 3.8660<br>[ 1.0000 ] | 386.6% | 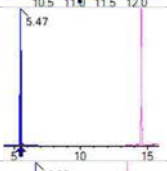 | 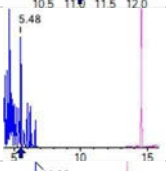 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 958287<br>( 397.9 / 378.0 ) 5134 | ( 11.20 , 0.75 ) ( N/A , -0.03 , 0.0) | 1840.6<br>172.3 | 0.0054<br>132.7<br>122.1 | 4.3810<br>[ 1.0000 ] | 438.1% | 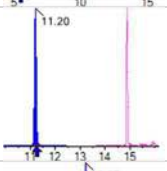 | 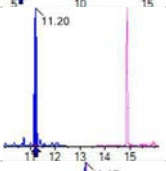 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 404649<br>( 498.0 / 478.0 ) 5309 | ( 13.27 , 1.00 ) ( -0.01 , N/A , -0.2) | 1848.5<br>131.5 | 0.0131<br>89.2<br>98.6 | 1.0800<br>[ 1.0000 ] | 108.0% | 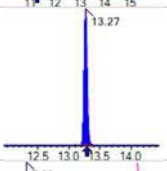 | 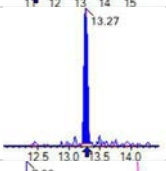 | |
| TFSI | ( 279.7 / 147.0 ) 1210856<br>( 279.7 / 211.0 ) 112129 | ( 7.00 , 0.53 ) ( N/A , -0.06 , 0.0) | 62.2<br>113380.4 | 0.0926<br>104.6<br>105.6 | 1.8500<br>[ 0.9790 ] | 188.9% | 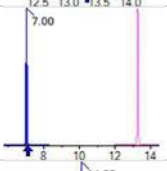 | 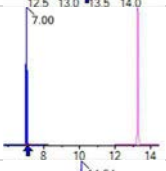 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 153736<br>( 512.0 / 169.0 ) 118694 | ( 14.55 , 1.00 ) ( 0.00 , N/A , 1.1) | 1325.3<br>648.7 | 0.7721<br>100.7<br>103.7 | 4.3890<br>[ 4.0000 ] | 109.7% | 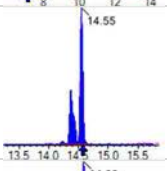 | 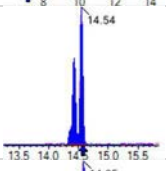 | |
| NEtFOSA | ( 526.0 / 219.0 ) 167797<br>( 526.0 / 169.0 ) 204149 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.1) | 1256.9<br>1318.1 | 1.2166<br>97.3<br>97.8 | 4.2620<br>[ 4.0000 ] | 106.6% | 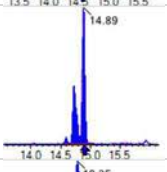 | 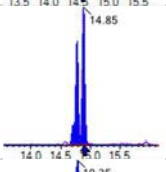 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 263651<br>( 570.0 / 483.0 ) 123727 | ( 10.35 , 1.00 ) ( 0.00 , N/A , -0.1) | 14675.5<br>8393.6 | 0.4693<br>101.1<br>100.5 | 1.0070<br>[ 1.0000 ] | 100.7% | 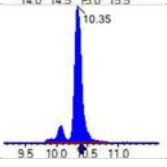 | 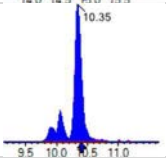 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 268810<br>( 584.0 / 526.0 ) 158351 | ( 10.96 , 1.00 ) ( 0.02 , N/A , 0.1) | 2210.4<br>592.6 | 0.5891<br>98.2<br>98.5 | 1.0990<br>[ 1.0000 ] | 109.9% | 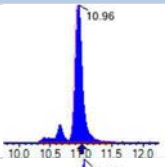 | 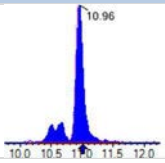 | |
| NMeFOSE | ( 616.0 / 59.0 ) 67161 | ( 14.35 , 1.00 ) ( 0.02 , N/A , 0.0) | 363.7 | N/A<br>0.0<br>0.0 | 3.9890<br>[ 4.0000 ] | 99.7% | 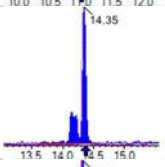 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 51948 | ( 14.72 , 1.00 ) ( 0.03 , N/A , 0.0) | 422.0 | N/A<br>0.0<br>0.0 | 4.4170<br>[ 4.0000 ] | 110.4% | 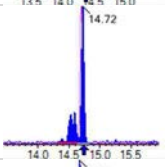 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 56347<br>( 285.0 / 185.0 ) 184448 | ( 5.57 , 1.00 ) ( 0.00 , N/A , 0.1) | 1041.2<br>1228.6 | 3.2734<br>116.6<br>123.9 | 0.9400<br>[ 1.0000 ] | 94.0% | 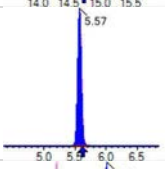 | 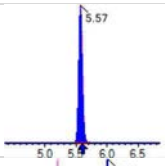 | |
| ADONA | ( 377.0 / 85.0 ) 861582<br>( 377.0 / 251.0 ) 98835 | ( 6.74 , 1.21 ) ( N/A , -0.05 , 0.1) | 2956.3<br>780.4 | 0.1147<br>109.4<br>115.1 | 1.0890<br>[ 0.9430 ] | 115.6% | 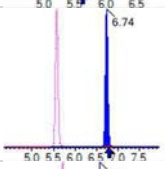 | 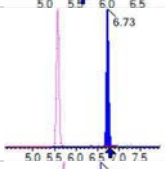 | |
| PFEESA | ( 315.0 / 135.0 ) 304340<br>( 315.0 / 83.0 ) 202564 | ( 5.92 , 1.15 ) ( N/A , -0.04 , 0.1) | 2451.2<br>662.9 | 0.6656<br>103.7<br>113.8 | 1.8420<br>[ 1.7850 ] | 103.2% | 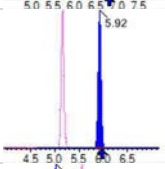 | 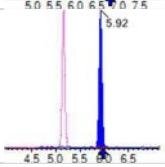 | |
| PFMPA | ( 229.0 / 85.0 ) 163937 | ( 3.66 , 0.88 ) ( N/A , -0.21 , 0.0) | 3494.3 | N/A<br>0.0<br>0.0 | 2.0230<br>[ 2.0000 ] | 101.1% | 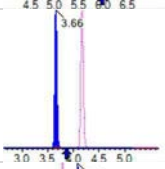 | | |
| PFMBA | ( 279.0 / 85.0 ) 377051 | ( 4.43 , 1.06 ) ( N/A , -0.11 , 0.0) | 2960.5 | N/A<br>0.0<br>0.0 | 2.0650<br>[ 2.0000 ] | 103.3% | 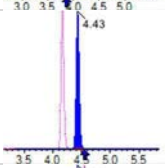 | | |
| NFDHA | ( 295.0 / 201.0 ) 170804<br>( 295.0 / 85.0 ) 173248 | ( 5.03 , 0.98 ) ( N/A , -0.03 , -0.1) | 2394.6<br>1691.6 | 1.0143<br>102.0<br>98.3 | 2.1180<br>[ 2.0000 ] | 105.9% | 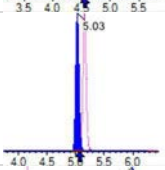 | 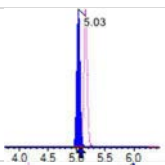 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 891364<br>( 533.0 / 353.0 ) 292206 | ( 11.09 , 1.99 ) ( N/A , -0.06 , -0.1) | 2632.5<br>2027.5 | 0.3278<br>102.8<br>98.8 | 1.0150<br>[ 0.9330 ] | 108.7% | 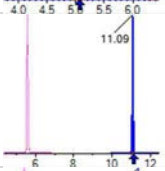 | 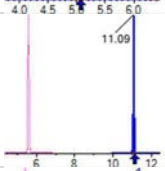 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 699040<br>( 633.0 / 453.0 ) 243793 | ( 12.59 , 2.26 ) ( N/A , -0.03 , 0.0) | 3885.2<br>1905.2 | 0.3488<br>102.8<br>102.6 | 1.0240<br>[ 0.9430 ] | 108.5% | 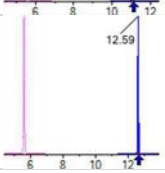 | 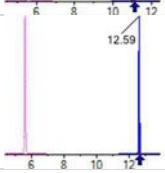 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 460399<br>( 461.0 / 381.2 ) 176301 | ( 9.36 , 0.90 ) ( N/A , -0.05 , -0.1) | 2675.1<br>3023.9 | 0.3829<br>99.1<br>96.4 | 0.9190<br>[ 0.9240 ] | 99.5% | 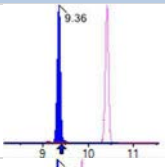 | 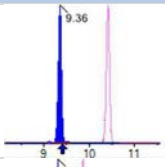 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 72956<br>( 241.0 / 117.0 ) 173416 | ( 3.68 , 0.88 ) ( N/A , -0.23 , 0.2) | 2812.8<br>1327.5 | 2.3770<br>108.3<br>109.1 | 3.8550<br>[ 4.0000 ] | 96.4% | 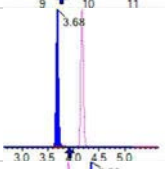 | 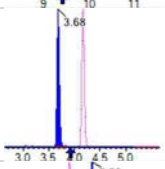 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 251444<br>( 341.0 / 217.0 ) 379468 | ( 5.59 , 1.08 ) ( N/A , -0.04 , 0.0) | 1356.2<br>1064.9 | 1.5092<br>98.6<br>99.3 | 4.0690<br>[ 4.0000 ] | 101.7% | 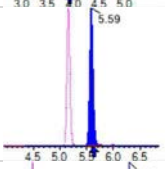 | 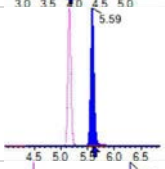 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 487128<br>( 441.0 / 337.0 ) 409671 | ( 9.29 , 1.80 ) ( N/A , -0.04 , 0.1) | 2022338.2<br>19622.3 | 0.8410<br>98.4<br>95.3 | 3.7100<br>[ 4.0000 ] | 92.8% | 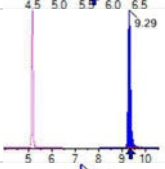 | 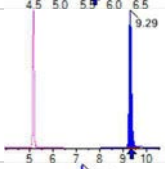 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 311409<br>( 357.2 / 243.0 ) 33857 | ( 5.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 1416.8<br>399.8 | 0.1087<br>101.4<br>98.3 | 0.8510<br>[ 1.0000 ] | 85.1% | 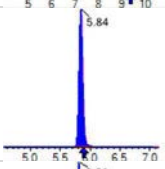 | 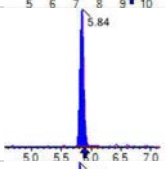 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 239612<br>( 457.2 / 343.0 ) 11492 | ( 8.61 , 1.00 ) ( -0.01 , N/A , -0.1) | 910.1<br>198.2 | 0.0480<br>106.9<br>109.8 | 0.9270<br>[ 1.0000 ] | 92.7% | 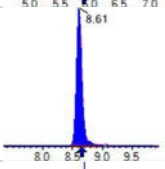 | 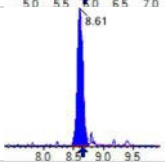 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 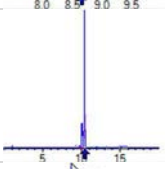 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 245820 | ( 3.44 , N/A ) ( N/A , -0.17 , N/A ) | 2058.7 | N/A | 0.8710<br>[ 1.0000 ] | 87.1%<br>{ 93.0% } | 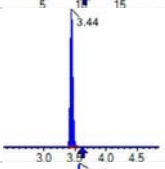 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 109325 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 98784.7 | N/A | 0.9260<br>[ 1.0000 ] | 92.6%<br>{ 94.4% } | 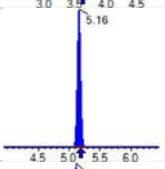 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 356088 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 6550.3 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 98.6% } | 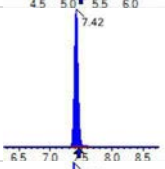 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 255266 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 1992.5 | N/A | 0.8740<br>[ 1.0000 ] | 87.4%<br>{ 91.6% } | 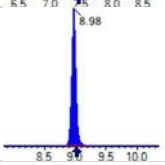 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 263724 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 19509.6 | N/A | 0.9200 [ 1.0000 ] | 92.0% { 95.5% } | 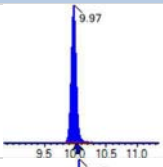 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 913338 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 7647.3 | N/A | 0.9300 [ 1.0000 ] | 93.0% { 99.5% } | 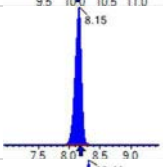 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 695585 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 3004.8 | N/A | 0.8870 [ 1.0000 ] | 88.7% { 90.2% } | 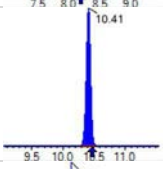 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2229869 | ( 3.44 , N/A ) ( N/A , -0.17 , N/A ) | 220072.8 | N/A | 8.3920 [ 8.0000 ] | 104.9% { 102.7% } | 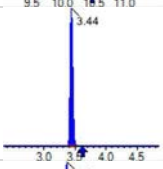 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 883198 | ( 4.17 , N/A ) ( N/A , -0.17 , N/A ) | 6068.1 | N/A | 4.4130 [ 4.0000 ] | 110.3% { 105.6% } | 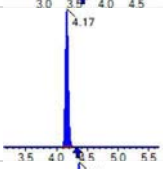 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 489599 | ( 5.16 , N/A ) ( N/A , -0.04 , N/A ) | 15884.9 | N/A | 2.0470 [ 2.0000 ] | 102.4% { 101.8% } | 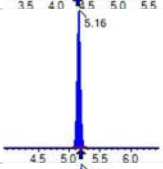 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 569956 | ( 6.30 , N/A ) ( N/A , -0.06 , N/A ) | 6030.2 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 104.0% } | 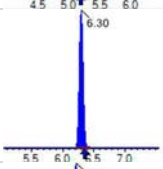 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 835198 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 5066.1 | N/A | 2.2130 [ 2.0000 ] | 110.7% { 109.1% } | 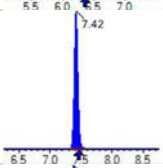 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 272502 | ( 8.97 , N/A ) ( N/A , -0.05 , N/A ) | 4780.4 | N/A | 1.0810 [ 1.0000 ] | 108.1% { 101.1% } | 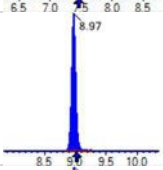 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316582 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1225.2 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 107.7% } | 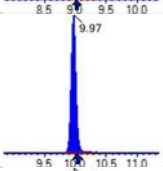 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363843 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 1071.0 | N/A | 1.0070 [ 1.0000 ] | 100.7% { 98.5% } | 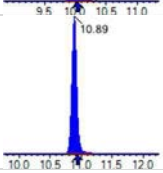 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-BS1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 367345 | ( 11.79 , N/A ) ( N/A , -0.05 , N/A ) | 1243.2 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 101.2% } | 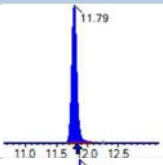 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 321678 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 1413.6 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 98.2% } | 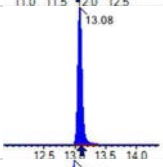 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 459228 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2261.8 | N/A | 1.6720 [ 2.0000 ] | 83.6% { 92.2% } | 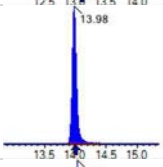 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1515524 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1693.4 | N/A | 2.0590 [ 2.0000 ] | 102.9% { 102.7% } | 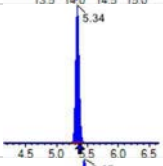 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1399481 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 6952.8 | N/A | 2.1240 [ 2.0000 ] | 106.2% { 107.5% } | 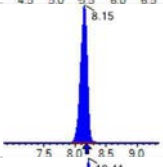 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1608024 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 1322.3 | N/A | 2.1730 [ 2.0000 ] | 108.6% { 111.3% } | 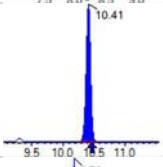 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 730394 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 52.6 | N/A | 4.5100 [ 4.0000 ] | 112.7% { 112.3% } | 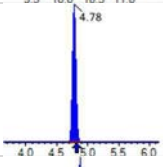 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2015893 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 7368.4 | N/A | 5.0670 [ 4.0000 ] | 126.7% { 114.5% } | 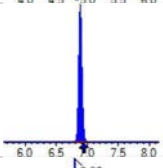 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1708540 | ( 9.30 , N/A ) ( N/A , -0.05 , N/A ) | 2249.3 | N/A | 4.9080 [ 4.0000 ] | 122.7% { 117.4% } | 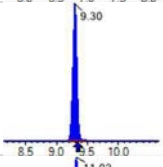 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3386687 | ( 11.02 , N/A ) ( N/A , -0.05 , N/A ) | 1881.4 | N/A | 8.9930 [ 8.0000 ] | 112.4% { 113.6% } | 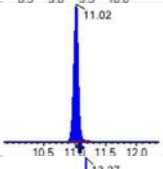 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 774401 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 2721.5 | N/A | 0.9860 [ 2.0000 ] | 49.3% { 49.7% } | 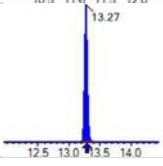 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 78818 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 744.8 | N/A | 0.4460 [ 2.0000 ] | 22.3% { 21.7% } | 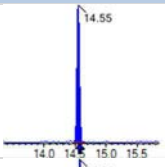 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 69510 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 753.3 | N/A | 0.4310 [ 2.0000 ] | 21.5% { 20.2% } | 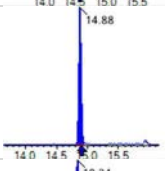 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1134782 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 3116.7 | N/A | 4.4160 [ 4.0000 ] | 110.4% { 96.1% } | 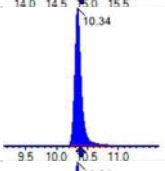 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1008997 | ( 10.94 , N/A ) ( N/A , -0.05 , N/A ) | 2226.1 | N/A | 4.3510 [ 4.0000 ] | 108.8% { 99.0% } | 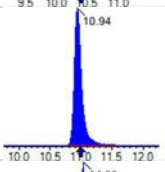 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 311044 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1118.4 | N/A | 4.7140 [ 20.0000 ] | 23.6% { 23.4% } | 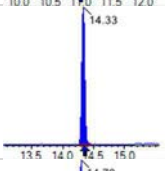 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 246934 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 1260.1 | N/A | 3.9960 [ 20.0000 ] | 20.0% { 19.7% } | 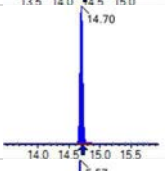 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 817019 | ( 5.57 , N/A ) ( N/A , -0.04 , N/A ) | 2260.9 | N/A | 7.8860 [ 8.0000 ] | 98.6% { 98.8% } | 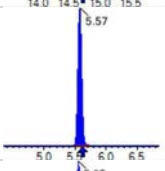 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 695845 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2143.0 | N/A | 2.4210 [ 2.0000 ] | 121.1% { 123.9% } | 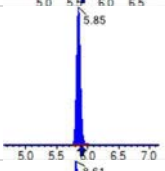 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 625777 | ( 8.61 , N/A ) ( N/A , -0.04 , N/A ) | 1171.5 | N/A | 1.9330 [ 2.0000 ] | 96.6% { 93.4% } | 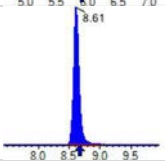 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MRL1a | File ID:a | S2024-03-28B (9)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 4.29a | 0.21a | 1.6a | |
| PFPeAa | 1.43a | 0.065a | 0.80a | |
| PFHxAa | 0.777a | 0.055a | 0.40a | |
| PFHpAa | 0.745a | 0.041a | 0.40a | |
| PFOAa | 1.03a | 0.15a | 0.40a | |
| PFNAa | 0.768a | 0.082a | 0.40a | |
| PFDAa | 0.792a | 0.10a | 0.40a | |
| PFUnAa | 0.757a | 0.16a | 0.40a | |
| PFDoAa | 0.743a | 0.11a | 0.40a | |
| PFTrDAa | 0.784a | 0.20a | 0.40a | |
| PFTeDAa | 0.713a | 0.20a | 0.40a | |
| PFHxDAa | 0.744a | 0.20a | 0.40a | |
| PFODAa | 0.671a | 0.20a | 0.40a | |
| PFBSa | 0.661a | 0.037a | 0.40a | |
| PFPeSa | 0.719a | 0.063a | 0.40a | |
| PFHxSa | 0.682a | 0.032a | 0.40a | MI5a |
| PFHpSa | 0.730a | 0.051a | 0.40a | |
| PFOSa | 0.821a | 0.064a | 0.40a | |
| PFNSa | 0.760a | 0.12a | 0.40a | |
| PFDSa | 0.772a | 0.15a | 0.40a | |
| PFDoSa | 0.739a | 0.12a | 0.40a | |
| 4:2FTSa | 2.83a | 0.29a | 1.6a | |
| 6:2FTSa | 3.01a | 0.31a | 1.6a | |
| 8:2FTSa | 2.91a | 0.082a | 1.6a | |
| 10:2FTSa | 3.13a | 0.40a | 1.6a | |
| PFOSAa | 0.639a | 0.10a | 0.40a | |
| NMeFOSAa | 2.00a | 0.47a | 1.6a | MI5a |
| NEtFOSAa | 2.19a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.723a | 0.11a | 0.40a | |
| NEtFOSAAa | 0.748a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MRL1a | File ID:a | S2024-03-28B (9)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 2.82a | 1.0a | 1.6a | |
| NEtFOSEa | 2.40a | 1.0a | 1.6a | MI5a |
| HFPO-DAa | 0.689a | 0.17a | 0.80a | Ja |
| ADONAa | 0.764a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.43a | 0.11a | 0.80a | |
| PFMPAa | 1.34a | 0.054a | 0.80a | |
| PFMBAa | 1.41a | 0.091a | 0.80a | |
| NFDHAa | 1.37a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.692a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.737a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.66a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.81a | 0.44a | 1.6a | |
| 7:3FTCAa | 2.69a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 70956<br>( 163.0 / 69.0 ) 2256 | ( 2.43 , 0.71 )<br>( N/A , -0.03 , -0.5) | 466.3<br>178.8 | 0.0318<br>116.0<br>121.2 | 1.0120<br>[ 0.4000 ] | 252.9% | 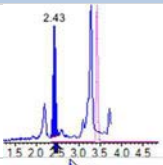 | 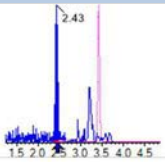 | BS2,MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) 435111 | ( 3.42 , 1.00 )<br>( 0.00 , N/A , 0.0) | 336.5 | N/A<br>0.0<br>0.0 | 1.0720<br>[ 0.8000 ] | 134.0% | 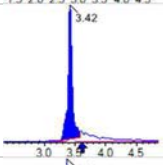 | | |
| PFPeA | ( 263.0 / 219.0 ) 94220<br>( 263.0 / 69.0 ) 1222 | ( 4.17 , 1.00 )<br>( 0.00 , N/A , -0.4) | 505.4<br>20.3 | 0.0130<br>109.0<br>121.9 | 0.3570<br>[ 0.4000 ] | 89.2% | 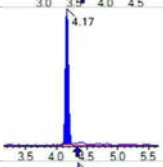 | 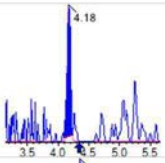 | |
| PFHxA | ( 313.0 / 269.0 ) 50543<br>( 313.0 / 119.0 ) 5737 | ( 5.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 329.6<br>232.9 | 0.1135<br>102.1<br>95.8 | 0.1940<br>[ 0.2000 ] | 97.2% | 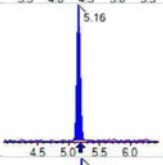 | 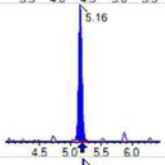 | |
| PFHpA | ( 363.0 / 319.0 ) 57914<br>( 363.0 / 169.0 ) 18406 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.1) | 481.1<br>314.4 | 0.3178<br>104.0<br>103.3 | 0.1860<br>[ 0.2000 ] | 93.1% | 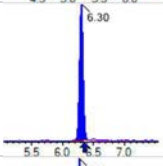 | 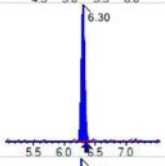 | |
| PFOA | ( 413.0 / 369.0 ) 118974<br>( 413.0 / 169.0 ) 40749 | ( 7.42 , 1.00 )<br>( 0.00 , N/A , 0.1) | 195.1<br>312.0 | 0.3425<br>95.8<br>96.6 | 0.2570<br>[ 0.2000 ] | 128.6% | 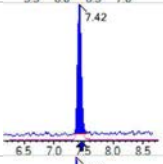 | 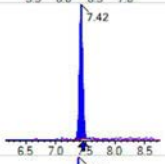 | |
| PFNA | ( 463.0 / 419.0 ) 55840<br>( 463.0 / 169.0 ) 14460 | ( 8.98 , 1.00 )<br>( 0.00 , N/A , 0.1) | 555.5<br>416.7 | 0.2590<br>105.4<br>101.0 | 0.1920<br>[ 0.2000 ] | 96.0% | 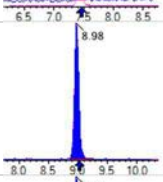 | 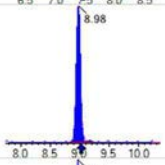 | |
| PFDA | ( 513.0 / 469.0 ) 67086<br>( 513.0 / 169.0 ) 9630 | ( 9.97 , 1.00 )<br>( 0.00 , N/A , 0.0) | 688.5<br>507.2 | 0.1435<br>120.5<br>117.8 | 0.1980<br>[ 0.2000 ] | 99.0% | 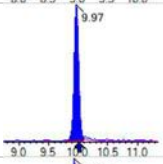 | 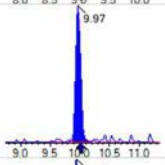 | |
| PFUnA | ( 563.0 / 519.0 ) 69538<br>( 563.0 / 169.0 ) 9868 | ( 10.88 , 1.00 )<br>( -0.01 , N/A , -0.1) | 436.5<br>125.3 | 0.1419<br>91.6<br>94.5 | 0.1890<br>[ 0.2000 ] | 94.6% | 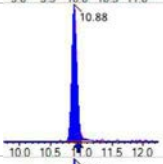 | 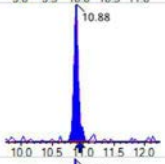 | |
| PFDoA | ( 613.0 / 569.0 ) 77270<br>( 613.0 / 169.0 ) 11313 | ( 11.79 , 1.00 )<br>( 0.00 , N/A , 0.5) | 388.5<br>184.2 | 0.1464<br>96.4<br>96.0 | 0.1860<br>[ 0.2000 ] | 92.9% | 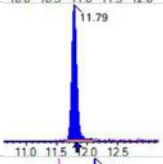 | 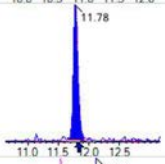 | |
| PFTrDA | ( 663.0 / 619.0 ) 79253<br>( 663.0 / 169.0 ) 21719 | ( 12.53 , 1.06 )<br>( N/A , -0.04 , 0.1) | 410.8<br>211.5 | 0.2740<br>101.8<br>104.0 | 0.1960<br>[ 0.2000 ] | 98.0% | 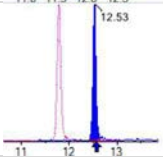 | 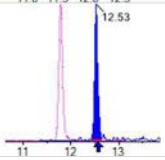 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 60114<br>( 713.0 / 169.0 ) 15498 | ( 13.08 , 1.00 ) ( -0.01 , N/A , -0.2) | 357.0<br>158.3 | 0.2578<br>95.0<br>97.9 | 0.1780<br>[ 0.2000 ] | 89.1% | 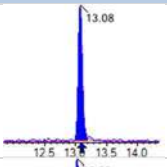 | 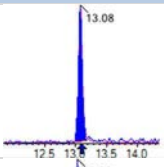 | |
| PFHxDA | ( 813.0 / 769.0 ) 40808<br>( 813.0 / 169.0 ) 13005 | ( 13.98 , 1.00 ) ( -0.01 , N/A , -0.1) | 233.1<br>102.7 | 0.3187<br>121.8<br>118.1 | 0.1860<br>[ 0.2000 ] | 92.9% | 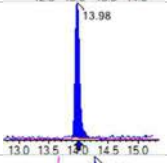 | 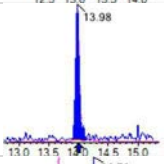 | |
| PFODA | ( 913.0 / 869.0 ) 23337<br>( 913.0 / 169.0 ) 7298 | ( 14.72 , 1.05 ) ( N/A , -0.03 , 0.4) | 107.8<br>40.6 | 0.3127<br>99.8<br>93.4 | 0.1680<br>[ 0.2000 ] | 83.9% | 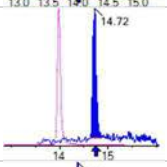 | 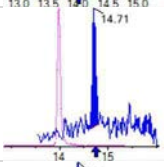 | |
| PFBS | ( 299.0 / 80.0 ) 68261<br>( 299.0 / 99.0 ) 57707 | ( 5.33 , 1.00 ) ( 0.00 , N/A , -0.1) | 529.8<br>454.1 | 0.8454<br>114.1<br>112.1 | 0.1650<br>[ 0.1770 ] | 93.4% | 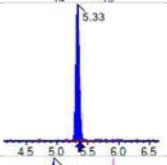 | 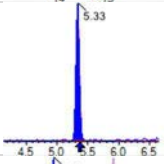 | |
| PFPeS | ( 349.0 / 80.0 ) 198831<br>( 349.0 / 99.0 ) 64997 | ( 6.63 , 0.81 ) ( N/A , -0.05 , 0.0) | 1070.8<br>781.5 | 0.3269<br>95.7<br>92.0 | 0.1800<br>[ 0.1880 ] | 95.8% | 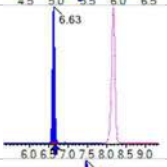 | 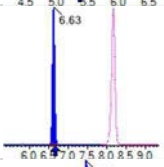 | |
| PFHxS | ( 399.0 / 80.0 ) 229789<br>( 399.0 / 99.0 ) 70887 | ( 8.17 , 1.00 ) ( 0.00 , N/A , 0.0) | 1075.6<br>1330.5 | 0.3085<br>94.0<br>95.6 | 0.1700<br>[ 0.1820 ] | 93.5% | 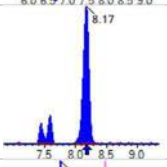 | 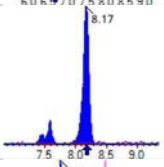 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 187065<br>( 449.0 / 99.0 ) 49004 | ( 9.46 , 0.91 ) ( N/A , -0.05 , 0.0) | 858.8<br>932.0 | 0.2620<br>100.4<br>101.0 | 0.1820<br>[ 0.1900 ] | 95.9% | 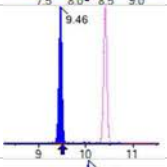 | 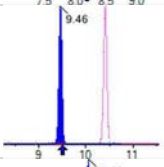 | |
| PFOS | ( 499.0 / 80.0 ) 204435<br>( 499.0 / 99.0 ) 47359 | ( 10.41 , 1.00 ) ( 0.00 , N/A , -0.1) | 578.4<br>3382.1 | 0.2317<br>100.3<br>101.1 | 0.2050<br>[ 0.1850 ] | 110.6% | 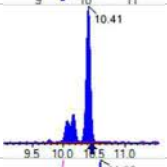 | 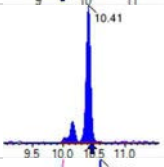 | |
| PFNS | ( 549.0 / 80.0 ) 172554<br>( 549.0 / 99.0 ) 44135 | ( 11.29 , 1.08 ) ( N/A , -0.05 , 0.0) | 802.6<br>495.8 | 0.2558<br>95.5<br>93.0 | 0.1900<br>[ 0.1920 ] | 99.0% | 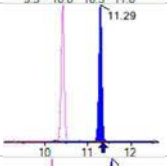 | 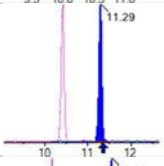 | |
| PFDS | ( 599.0 / 80.0 ) 214266<br>( 599.0 / 99.0 ) 61711 | ( 12.11 , 1.16 ) ( N/A , -0.04 , 0.1) | 901.4<br>392.5 | 0.2880<br>113.1<br>106.9 | 0.1930<br>[ 0.1930 ] | 100.2% | 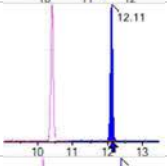 | 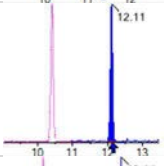 | |
| PFDoS | ( 699.0 / 80.0 ) 198388<br>( 699.0 / 99.0 ) 45299 | ( 13.14 , 1.26 ) ( N/A , -0.03 , 0.1) | 1157.3<br>610.9 | 0.2283<br>102.2<br>96.6 | 0.1850<br>[ 0.1940 ] | 95.3% | 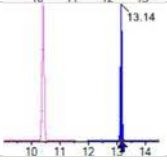 | 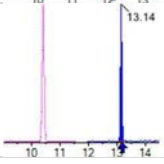 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 394458<br>( 327.0 / 81.0 ) 364346 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 2224.5<br>1084.5 | 0.9237<br>108.3<br>105.4 | 0.7080<br>[ 0.7480 ] | 94.7% | 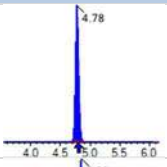 | 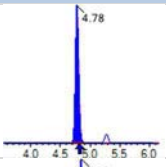 | |
| 6:2FTS | ( 427.0 / 407.0 ) 349101<br>( 427.0 / 81.0 ) 444010 | ( 6.89 , 1.00 ) ( 0.00 , N/A , 0.1) | 4043.3<br>2586.9 | 1.2719<br>98.6<br>98.0 | 0.7520<br>[ 0.7590 ] | 99.1% | 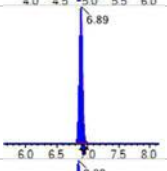 | 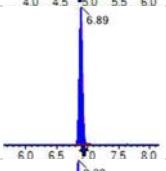 | |
| 8:2FTS | ( 527.0 / 507.0 ) 328089<br>( 527.0 / 81.0 ) 334060 | ( 9.29 , 1.00 ) ( -0.01 , N/A , 0.1) | 2050.9<br>1659.7 | 1.0182<br>92.3<br>92.4 | 0.7290<br>[ 0.7670 ] | 95.0% | 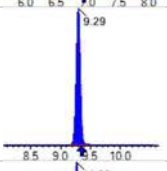 | 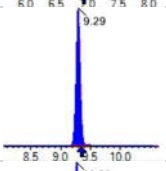 | |
| 10:2FTS | ( 627.0 / 607.0 ) 283325<br>( 627.0 / 81.0 ) 387159 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.2) | 1271.6<br>708.6 | 1.3665<br>95.0<br>94.3 | 0.7820<br>[ 0.7730 ] | 101.2% | 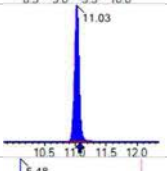 | 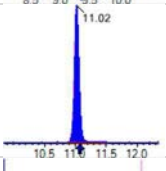 | |
| PFBSA | ( 297.9 / 78.0 ) 88391<br>( 297.9 / 278.0 ) 84 | ( 5.48 , 0.38 ) ( N/A , -0.04 , -1.1) | 698.7<br>2.0 | 0.0009<br>73.3<br>84.3 | 0.5040<br>[ 0.2000 ] | 252.1% | 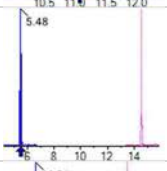 | 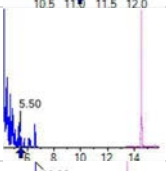 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 202154<br>( 397.9 / 378.0 ) 1110 | ( 11.21 , 0.75 ) ( N/A , -0.03 , -0.5) | 1221.1<br>47.4 | 0.0055<br>136.0<br>125.2 | 0.6780<br>[ 0.2000 ] | 339.1% | 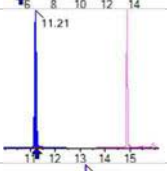 | 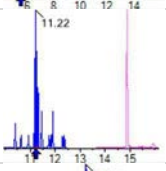 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 76063<br>( 498.0 / 478.0 ) 1287 | ( 13.27 , 1.00 ) ( -0.01 , N/A , -0.1) | 817.9<br>45.5 | 0.0169<br>115.1<br>127.2 | 0.1600<br>[ 0.2000 ] | 79.9% | 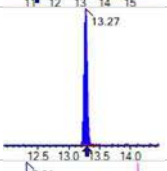 | 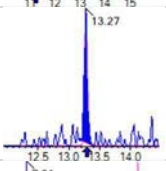 | |
| TFSI | ( 279.7 / 147.0 ) 243058<br>( 279.7 / 211.0 ) 24120 | ( 7.01 , 0.53 ) ( N/A , -0.05 , 0.1) | 62.7<br>28279.1 | 0.0992<br>112.1<br>113.2 | 0.2920<br>[ 0.1960 ] | 149.2% | 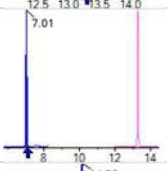 | 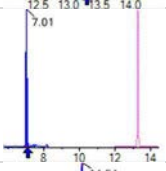 | |
| NMeFOSA | ( 512.0 / 219.0 ) 25650<br>( 512.0 / 169.0 ) 20108 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 1.0) | 277.3<br>173.3 | 0.7839<br>102.3<br>105.3 | 0.5000<br>[ 0.8000 ] | 62.5% | 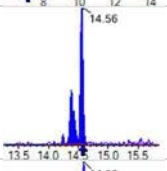 | 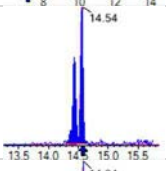 | MI5 DG 2024-03-29 |
| NEtFOSA | ( 526.0 / 219.0 ) 29312<br>( 526.0 / 169.0 ) 31110 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.9) | 336.0<br>240.9 | 1.0613<br>84.9<br>85.3 | 0.5460<br>[ 0.8000 ] | 68.3% | 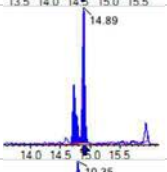 | 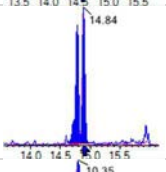 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 51367<br>( 570.0 / 483.0 ) 24233 | ( 10.35 , 1.00 ) ( 0.01 , N/A , 0.1) | 33258.0<br>100878.7 | 0.4718<br>101.7<br>101.0 | 0.1810<br>[ 0.2000 ] | 90.4% | 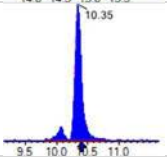 | 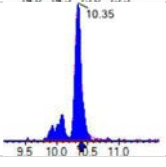 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 49347<br>( 584.0 / 526.0 ) 29842 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.2) | 3819.1<br>320.6 | 0.6047<br>100.8<br>101.1 | 0.1870<br>[ 0.2000 ] | 93.3% | 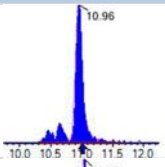 | 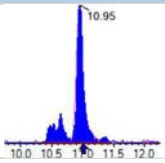 | |
| NMeFOSE | ( 616.0 / 59.0 ) 17187 | ( 14.35 , 1.00 )<br>( 0.02 , N/A , 0.0) | 74.0 | N/A<br>0.0<br>0.0 | 0.7050<br>[ 0.8000 ] | 88.1% | 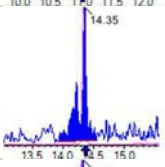 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 10981 | ( 14.73 , 1.00 )<br>( 0.03 , N/A , 0.0) | 106.7 | N/A<br>0.0<br>0.0 | 0.6000<br>[ 0.8000 ] | 75.0% | 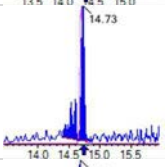 | | MI5 DG 2024-03-29 |
| HFPO-DA | ( 285.0 / 169.0 ) 11979<br>( 285.0 / 185.0 ) 30440 | ( 5.57 , 1.00 )<br>( -0.01 , N/A , 0.1) | 520.9<br>347.2 | 2.5411<br>90.5<br>96.2 | 0.1720<br>[ 0.2000 ] | 86.1% | 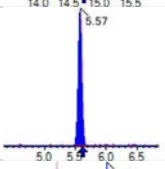 | 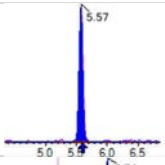 | |
| ADONA | ( 377.0 / 85.0 ) 175180<br>( 377.0 / 251.0 ) 18185 | ( 6.74 , 1.21 )<br>( N/A , -0.05 , 0.1) | 1373.4<br>202.1 | 0.1038<br>99.0<br>104.2 | 0.1910<br>[ 0.1890 ] | 101.3% | 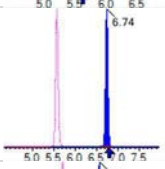 | 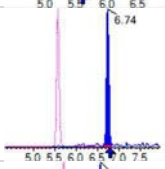 | |
| PFEESA | ( 315.0 / 135.0 ) 67526<br>( 315.0 / 83.0 ) 38712 | ( 5.92 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1129.9<br>169.2 | 0.5733<br>89.3<br>98.0 | 0.3570<br>[ 0.3570 ] | 100.0% | 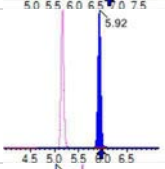 | 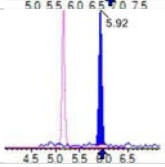 | |
| PFMPA | ( 229.0 / 85.0 ) 32432 | ( 3.66 , 0.88 )<br>( N/A , -0.20 , 0.0) | 992.8 | N/A<br>0.0<br>0.0 | 0.3340<br>[ 0.4000 ] | 83.5% | 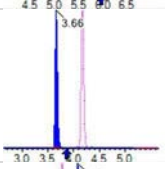 | | |
| PFMBA | ( 279.0 / 85.0 ) 77152 | ( 4.44 , 1.06 )<br>( N/A , -0.11 , 0.0) | 859.7 | N/A<br>0.0<br>0.0 | 0.3530<br>[ 0.4000 ] | 88.2% | 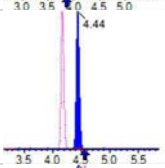 | | |
| NFDHA | ( 295.0 / 201.0 ) 31554<br>( 295.0 / 85.0 ) 35299 | ( 5.03 , 0.98 )<br>( N/A , -0.03 , 0.1) | 1100.1<br>603.9 | 1.1187<br>112.5<br>108.4 | 0.3420<br>[ 0.4000 ] | 85.4% | 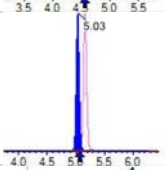 | 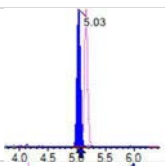 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 176296<br>( 533.0 / 353.0 ) 58483 | ( 11.09 , 1.99 )<br>( N/A , -0.05 , 0.1) | 1620.4<br>739.6 | 0.3317<br>104.0<br>100.0 | 0.1730<br>[ 0.1870 ] | 92.7% | 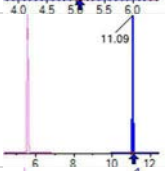 | 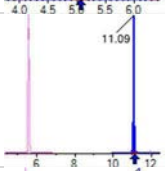 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 145844<br>( 633.0 / 453.0 ) 49834 | ( 12.59 , 2.26 )<br>( N/A , -0.03 , -0.1) | 1619.8<br>555.1 | 0.3417<br>100.7<br>100.5 | 0.1840<br>[ 0.1890 ] | 97.6% | 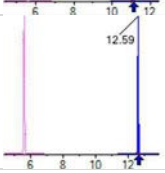 | 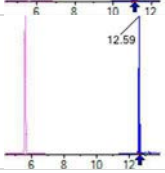 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 90313<br>( 461.0 / 381.2 ) 33933 | ( 9.36 , 0.90 )<br>( N/A , -0.05 , 0.1) | 1402.6<br>374719.8 | 0.3757<br>97.3<br>94.6 | 0.1690<br>[ 0.1850 ] | 91.4% | 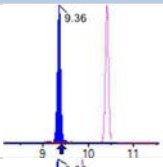 | 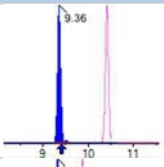 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 15064<br>( 241.0 / 117.0 ) 36195 | ( 3.69 , 0.89 )<br>( N/A , -0.23 , 0.2) | 528.5<br>310.3 | 2.4028<br>109.5<br>110.3 | 0.6640<br>[ 0.8000 ] | 83.0% | 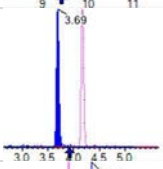 | 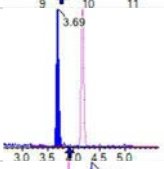 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 49773<br>( 341.0 / 217.0 ) 77900 | ( 5.59 , 1.08 )<br>( N/A , -0.04 , 0.2) | 609.2<br>377.0 | 1.5651<br>102.2<br>103.0 | 0.7030<br>[ 0.8000 ] | 87.9% | 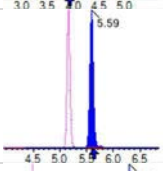 | 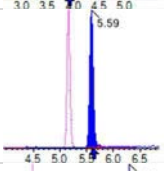 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 101171<br>( 441.0 / 337.0 ) 79444 | ( 9.30 , 1.80 )<br>( N/A , -0.03 , 0.2) | 598284.6<br>7148560.6 | 0.7852<br>91.9<br>89.0 | 0.6730<br>[ 0.8000 ] | 84.1% | 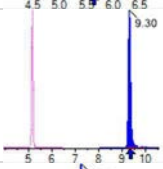 | 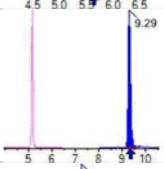 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 74714<br>( 357.2 / 243.0 ) 9503 | ( 5.84 , 1.00 )<br>( -0.01 , N/A , -0.3) | 478.1<br>163.0 | 0.1272<br>118.6<br>114.9 | 0.1940<br>[ 0.2000 ] | 96.8% | 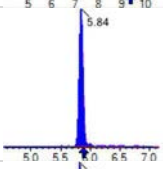 | 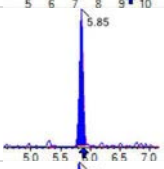 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 58586<br>( 457.2 / 343.0 ) 1887 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 383.1<br>50.6 | 0.0322<br>71.8<br>73.7 | 0.2130<br>[ 0.2000 ] | 106.5% | 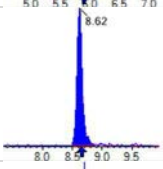 | 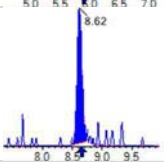 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 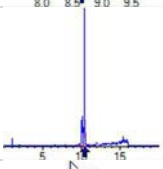 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 278723 | ( 3.42 , N/A )<br>( N/A , -0.19 , N/A ) | 2261.6 | N/A | 0.9880<br>[ 1.0000 ] | 98.8%<br>{ 105.4% } | 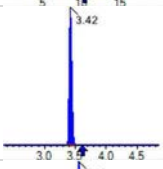 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116799 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 4999.8 | N/A | 0.9890<br>[ 1.0000 ] | 98.9%<br>{ 100.9% } | 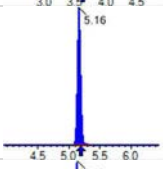 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 409399 | ( 7.43 , N/A )<br>( N/A , -0.04 , N/A ) | 8840.2 | N/A | 1.0550<br>[ 1.0000 ] | 105.5%<br>{ 113.4% } | 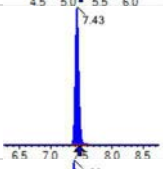 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277841 | ( 8.98 , N/A )<br>( N/A , -0.05 , N/A ) | 1732.9 | N/A | 0.9510<br>[ 1.0000 ] | 95.1%<br>{ 99.7% } | 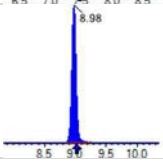 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 280123 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6371.1 | N/A | 0.9770 [ 1.0000 ] | 97.7% { 101.5% } | 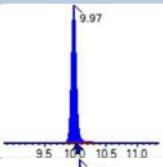 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 994382 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 10544.0 | N/A | 1.0120 [ 1.0000 ] | 101.2% { 108.3% } | 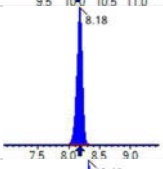 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 772830 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 2559.3 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 100.2% } | 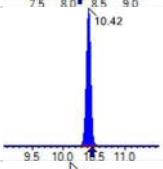 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2478925 | ( 3.42 , N/A ) ( N/A , -0.19 , N/A ) | 72507.8 | N/A | 8.2280 [ 8.0000 ] | 102.9% { 114.2% } | 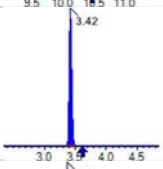 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1058160 | ( 4.17 , N/A ) ( N/A , -0.16 , N/A ) | 6248.0 | N/A | 4.9480 [ 4.0000 ] | 123.7% { 126.5% } | 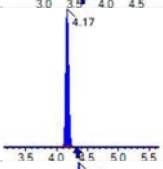 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560656 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 13192.6 | N/A | 2.1940 [ 2.0000 ] | 109.7% { 116.6% } | 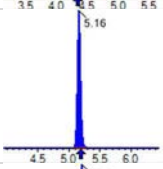 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626742 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 8265.7 | N/A | 2.2080 [ 2.0000 ] | 110.4% { 114.4% } | 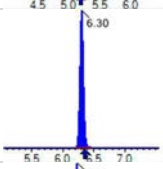 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 921269 | ( 7.42 , N/A ) ( N/A , -0.04 , N/A ) | 4979.8 | N/A | 2.1230 [ 2.0000 ] | 106.2% { 120.3% } | 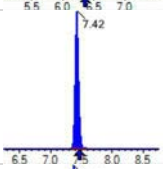 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 289425 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 4715.2 | N/A | 1.0550 [ 1.0000 ] | 105.5% { 107.3% } | 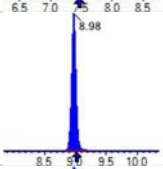 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 339295 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1303.2 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 115.4% } | 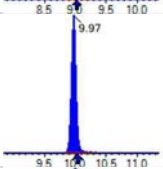 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 404752 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 1285.5 | N/A | 1.0540 [ 1.0000 ] | 105.4% { 109.6% } | 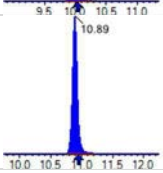 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MRL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414303 | ( 11.79 , N/A ) ( N/A , -0.05 , N/A ) | 1674.9 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 114.2% } | 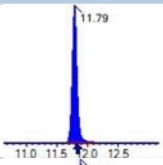 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 361371 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 1190.2 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 110.3% } | 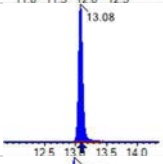 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 468602 | ( 13.98 , N/A ) ( N/A , -0.02 , N/A ) | 2362.2 | N/A | 1.6060 [ 2.0000 ] | 80.3% { 94.1% } | 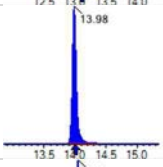 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1679329 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1271.5 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 113.9% } | 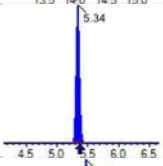 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1539724 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 7912.0 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 118.2% } | 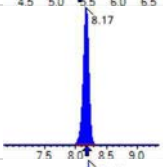 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1716366 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 1877.0 | N/A | 2.0870 [ 2.0000 ] | 104.4% { 118.8% } | 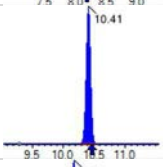 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 844188 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 75.5 | N/A | 4.7880 [ 4.0000 ] | 119.7% { 129.8% } | 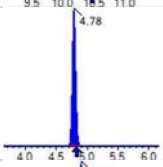 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2187298 | ( 6.89 , N/A ) ( N/A , -0.04 , N/A ) | 7432.1 | N/A | 5.0500 [ 4.0000 ] | 126.2% { 124.3% } | 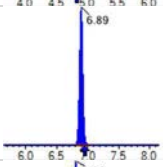 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1831260 | ( 9.30 , N/A ) ( N/A , -0.05 , N/A ) | 2327.6 | N/A | 4.8320 [ 4.0000 ] | 120.8% { 125.8% } | 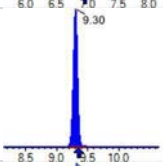 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3647907 | ( 11.02 , N/A ) ( N/A , -0.05 , N/A ) | 1905.3 | N/A | 8.8980 [ 8.0000 ] | 111.2% { 122.4% } | 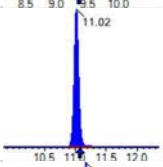 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 984332 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 2611.7 | N/A | 1.1280 [ 2.0000 ] | 56.4% { 63.2% } | 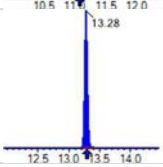 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 115520 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 923.0 | N/A | 0.5890 [ 2.0000 ] | 29.4% { 31.7% } | 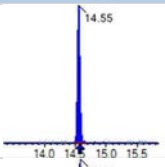 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 94704 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 918.7 | N/A | 0.5280 [ 2.0000 ] | 26.4% { 27.5% } | 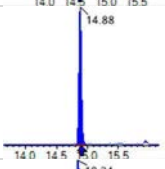 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1232107 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 3975.1 | N/A | 4.3160 [ 4.0000 ] | 107.9% { 104.4% } | 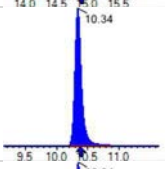 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1090848 | ( 10.94 , N/A ) ( N/A , -0.05 , N/A ) | 2027.9 | N/A | 4.2340 [ 4.0000 ] | 105.8% { 107.0% } | 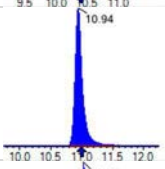 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 450589 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 990.4 | N/A | 6.1460 [ 20.0000 ] | 30.7% { 33.9% } | 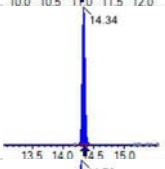 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 384008 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 1797.8 | N/A | 5.5930 [ 20.0000 ] | 28.0% { 30.7% } | 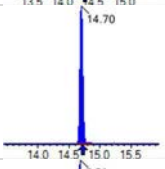 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 947462 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2266.0 | N/A | 8.5600 [ 8.0000 ] | 107.0% { 114.5% } | 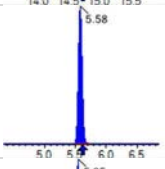 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 733942 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2299.5 | N/A | 2.4040 [ 2.0000 ] | 120.2% { 130.7% } | 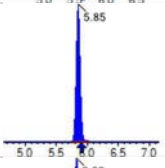 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 665453 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 961.7 | N/A | 1.9350 [ 2.0000 ] | 96.7% { 99.3% } | 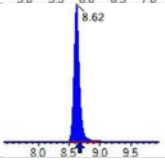 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS1a | File ID:a | S2024-03-28B (10)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:56a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 15.8a | 0.19a | 1.4a | |
| PFPeAa | 9.57a | 0.059a | 0.72a | |
| PFHxAa | 6.13a | 0.050a | 0.36a | |
| PFHpAa | 3.91a | 0.037a | 0.36a | |
| PFOAa | 4.43a | 0.14a | 0.36a | MI5a |
| PFNAa | 3.55a | 0.074a | 0.36a | |
| PFDAa | 3.66a | 0.091a | 0.36a | |
| PFUnAa | 3.70a | 0.14a | 0.36a | |
| PFDoAa | 3.68a | 0.10a | 0.36a | |
| PFTrDAa | 3.73a | 0.18a | 0.36a | |
| PFTeDAa | 3.40a | 0.18a | 0.36a | |
| PFHxDAa | 3.60a | 0.18a | 0.36a | |
| PFODAa | 3.36a | 0.18a | 0.36a | |
| PFBSa | 5.23a | 0.033a | 0.36a | |
| PFPeSa | 4.25a | 0.057a | 0.36a | |
| PFHxSa | 4.27a | 0.029a | 0.36a | MI5a |
| PFHpSa | 3.52a | 0.046a | 0.36a | |
| PFOSa | 3.61a | 0.057a | 0.36a | |
| PFNSa | 3.51a | 0.11a | 0.36a | |
| PFDSa | 3.55a | 0.14a | 0.36a | |
| PFDoSa | 3.44a | 0.11a | 0.36a | |
| 4:2FTSa | 12.4a | 0.26a | 1.4a | |
| 6:2FTSa | 14.0a | 0.28a | 1.4a | |
| 8:2FTSa | 13.2a | 0.074a | 1.4a | |
| 10:2FTSa | 12.2a | 0.36a | 1.4a | |
| PFOSAa | 3.68a | 0.094a | 0.36a | |
| NMeFOSAa | 14.8a | 0.43a | 1.4a | |
| NEtFOSAa | 13.8a | 0.37a | 1.4a | |
| NMeFOSAAa | 3.68a | 0.095a | 0.36a | |
| NEtFOSAAa | 3.44a | 0.10a | 0.36a | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS1a | File ID:a | S2024-03-28B (10)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:56a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 13.9a | 0.91a | 1.4a | |
| NEtFOSEa | 14.8a | 0.94a | 1.4a | |
| HFPO-DAa | 3.60a | 0.16a | 0.72a | |
| ADONAa | 3.79a | 0.11a | 0.72a | |
| PFEESAa | 6.79a | 0.098a | 0.72a | |
| PFMPAa | 6.61a | 0.049a | 0.72a | |
| PFMBAa | 6.90a | 0.082a | 0.72a | |
| NFDHAa | 7.93a | 0.27a | 0.72a | |
| 9Cl-PF3ONSa | 3.48a | 0.19a | 0.72a | |
| 11Cl-PF3OUDSa | 3.74a | 0.19a | 0.72a | |
| 3:3FTCAa | 12.5a | 0.52a | 1.4a | |
| 5:3FTCAa | 16.5a | 0.40a | 1.4a | |
| 7:3FTCAa | 16.9a | 0.50a | 1.4a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (10)
Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 128984<br>( 163.0 / 69.0 ) 3600 | ( 2.28 , 0.68 ) ( N/A , -0.18 , 0.0) | 1023.0<br>300.6 | 0.0279<br>101.8<br>106.4 | 2.4480 | N/A | 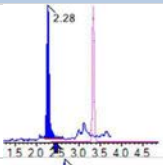 | 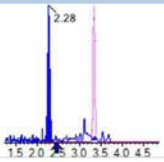 | |
| PFBA | ( 213.0 / 169.0 ) 1088216 | ( 3.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 902.2 | N/A<br>0.0<br>0.0 | 4.3920 | N/A | 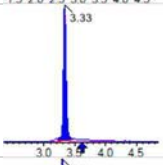 | | |
| PFPeA | ( 263.0 / 219.0 ) 579686<br>( 263.0 / 69.0 ) 7643 | ( 4.10 , 1.00 ) ( 0.00 , N/A , 0.3) | 1899.3<br>157.0 | 0.0132<br>110.8<br>123.9 | 2.6560 | N/A | 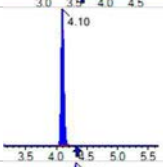 | 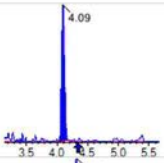 | |
| PFHxA | ( 313.0 / 269.0 ) 334559<br>( 313.0 / 119.0 ) 36585 | ( 5.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 1081.6<br>680.3 | 0.1094<br>98.3<br>92.3 | 1.7010 | N/A | 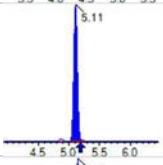 | 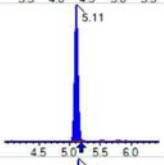 | |
| PFHpA | ( 363.0 / 319.0 ) 286623<br>( 363.0 / 169.0 ) 88921 | ( 6.25 , 1.00 ) ( 0.00 , N/A , 0.1) | 1110.0<br>854.5 | 0.3102<br>101.5<br>100.8 | 1.0840 | N/A | 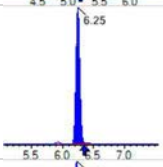 | 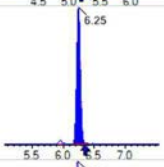 | |
| PFOA | ( 413.0 / 369.0 ) 464952<br>( 413.0 / 169.0 ) 167787 | ( 7.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 635.7<br>668.7 | 0.3609<br>101.0<br>101.7 | 1.2280 | N/A | 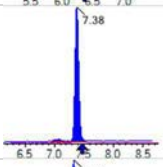 | 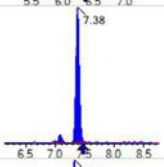 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 262610<br>( 463.0 / 169.0 ) 64909 | ( 8.93 , 1.00 ) ( 0.00 , N/A , 0.1) | 1315.8<br>1086.7 | 0.2472<br>100.6<br>96.4 | 0.9840 | N/A | 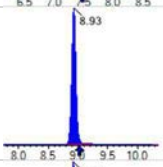 | 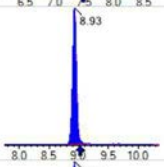 | |
| PFDA | ( 513.0 / 469.0 ) 305914<br>( 513.0 / 169.0 ) 34907 | ( 9.92 , 1.00 ) ( 0.00 , N/A , -0.3) | 2082.7<br>1453.3 | 0.1141<br>95.8<br>93.7 | 1.0160 | N/A | 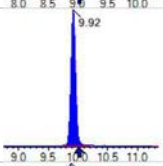 | 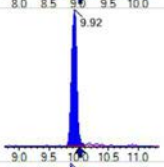 | |
| PFUnA | ( 563.0 / 519.0 ) 341932<br>( 563.0 / 169.0 ) 46862 | ( 10.83 , 1.00 ) ( 0.00 , N/A , 0.1) | 1091.7<br>423.3 | 0.1371<br>88.5<br>91.3 | 1.0270 | N/A | 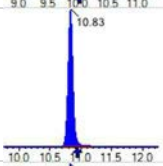 | 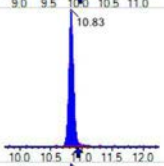 | |
| PFDoA | ( 613.0 / 569.0 ) 373744<br>( 613.0 / 169.0 ) 57022 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.1) | 1086.4<br>428.6 | 0.1526<br>100.5<br>100.1 | 1.0210 | N/A | 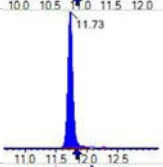 | 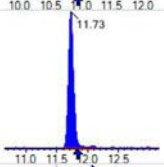 | |
| PFTrDA | ( 663.0 / 619.0 ) 367624<br>( 663.0 / 169.0 ) 94089 | ( 12.47 , 1.06 ) ( N/A , -0.09 , 0.1) | 1113.8<br>685.1 | 0.2559<br>95.1<br>97.1 | 1.0330 | N/A | 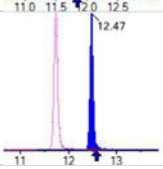 | 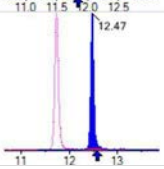 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (10)
Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 291405<br>( 713.0 / 169.0 ) 79785 | ( 13.02 , 1.00 ) ( 0.00 , N/A , 0.2) | 1085.8<br>582.8 | 0.2738<br>100.9<br>104.0 | 0.9420 | N/A | 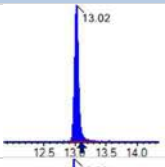 | 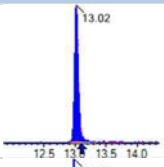 | |
| PFHxDA | ( 813.0 / 769.0 ) 215507<br>( 813.0 / 169.0 ) 58479 | ( 13.92 , 1.00 ) ( 0.00 , N/A , 0.1) | 890.8<br>305.2 | 0.2714<br>103.7<br>100.5 | 0.9980 | N/A | 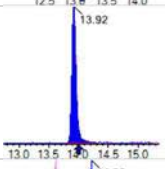 | 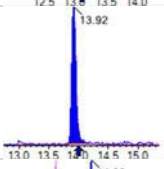 | |
| PFODA | ( 913.0 / 869.0 ) 127495<br>( 913.0 / 169.0 ) 37827 | ( 14.66 , 1.05 ) ( N/A , -0.08 , 0.2) | 502.0<br>175.0 | 0.2967<br>94.6<br>88.6 | 0.9320 | N/A | 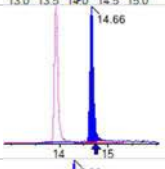 | 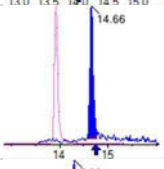 | |
| PFBS | ( 299.0 / 80.0 ) 503657<br>( 299.0 / 99.0 ) 359997 | ( 5.28 , 1.00 ) ( -0.01 , N/A , -0.1) | 1153.8<br>1301.3 | 0.7148<br>96.5<br>94.8 | 1.4500 | N/A | 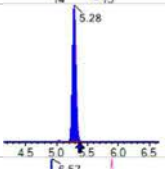 | 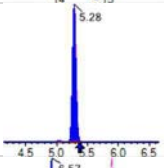 | |
| PFPeS | ( 349.0 / 80.0 ) 1197261<br>( 349.0 / 99.0 ) 400400 | ( 6.57 , 0.81 ) ( N/A , -0.10 , 0.0) | 1402.5<br>1557.4 | 0.3344<br>97.9<br>94.1 | 1.1780 | N/A | 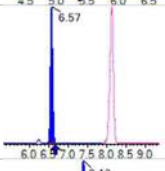 | 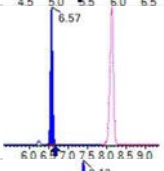 | |
| PFHxS | ( 399.0 / 80.0 ) 1467288<br>( 399.0 / 99.0 ) 456687 | ( 8.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 1750.1<br>2528.0 | 0.3112<br>94.8<br>96.4 | 1.1840 | N/A | 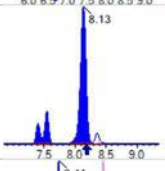 | 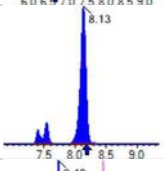 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 932109<br>( 449.0 / 99.0 ) 244629 | ( 9.41 , 0.91 ) ( N/A , -0.10 , 0.1) | 1496.7<br>1465.7 | 0.2624<br>100.6<br>101.1 | 0.9770 | N/A | 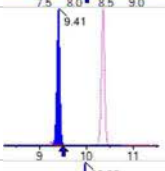 | 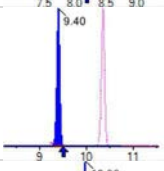 | |
| PFOS | ( 499.0 / 80.0 ) 929927<br>( 499.0 / 99.0 ) 215792 | ( 10.36 , 1.00 ) ( 0.00 , N/A , 0.0) | 1196.4<br>4394.8 | 0.2321<br>100.4<br>101.3 | 1.0030 | N/A | 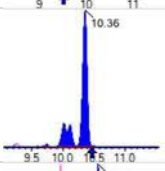 | 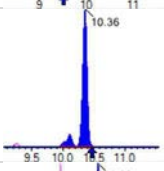 | |
| PFNS | ( 549.0 / 80.0 ) 822199<br>( 549.0 / 99.0 ) 217911 | ( 11.23 , 1.08 ) ( N/A , -0.11 , 0.0) | 1965.5<br>1382.9 | 0.2650<br>98.9<br>96.4 | 0.9730 | N/A | 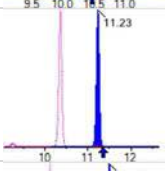 | 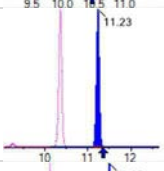 | |
| PFDS | ( 599.0 / 80.0 ) 1018476<br>( 599.0 / 99.0 ) 275832 | ( 12.05 , 1.16 ) ( N/A , -0.10 , -0.1) | 2632.6<br>1268.5 | 0.2708<br>106.3<br>100.5 | 0.9860 | N/A | 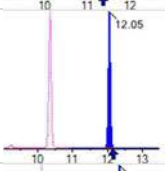 | 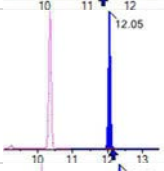 | |
| PFDoS | ( 699.0 / 80.0 ) 953695<br>( 699.0 / 99.0 ) 234401 | ( 13.08 , 1.26 ) ( N/A , -0.09 , 0.0) | 2519.1<br>1867.0 | 0.2458<br>110.0<br>104.0 | 0.9540 | N/A | 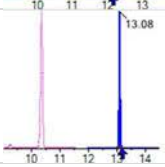 | 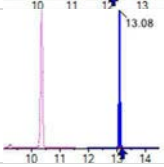 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (10)
Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1700319<br>( 327.0 / 81.0 ) 1570077 | ( 4.73 , 1.00 ) ( 0.00 , N/A , 0.1) | 4254.8<br>1360.8 | 0.9234<br>108.2<br>105.4 | 3.4490 | N/A | 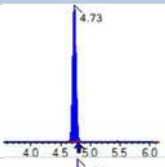 | 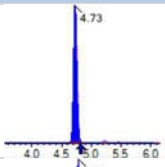 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1557842<br>( 427.0 / 81.0 ) 1898489 | ( 6.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 5161.3<br>4152.1 | 1.2187<br>94.5<br>93.9 | 3.8760 | N/A | 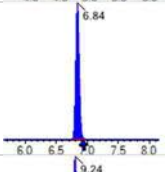 | 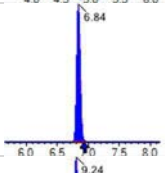 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1500541<br>( 527.0 / 81.0 ) 1496025 | ( 9.24 , 1.00 ) ( -0.01 , N/A , 0.0) | 2584.3<br>2538.9 | 0.9970<br>90.3<br>90.5 | 3.6490 | N/A | 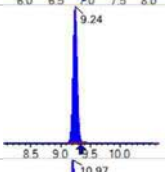 | 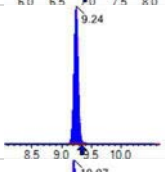 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1181302<br>( 627.0 / 81.0 ) 1790835 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.1) | 1425.3<br>1493.1 | 1.5160<br>105.4<br>104.6 | 3.3790 | N/A | 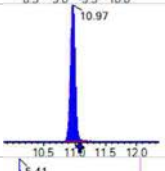 | 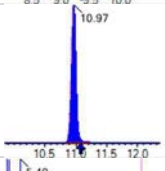 | |
| PFBSA | ( 297.9 / 78.0 ) 437343<br>( 297.9 / 278.0 ) 653 | ( 5.41 , 0.37 ) ( N/A , -0.11 , 0.6) | 1536.4<br>8008.4 | 0.0015<br>115.3<br>132.6 | 1.4510 | N/A | 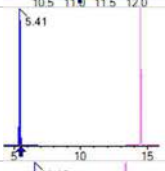 | 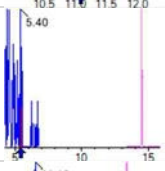 | |
| PFHxSA | ( 397.9 / 78.0 ) 1047382<br>( 397.9 / 378.0 ) 3978 | ( 11.16 , 0.75 ) ( N/A , -0.07 , 0.4) | 1788.1<br>136.3 | 0.0038<br>94.0<br>86.6 | 1.7160 | N/A | 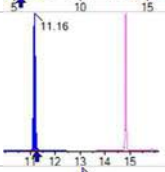 | 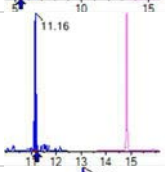 | |
| PFOSA | ( 498.0 / 78.0 ) 695331<br>( 498.0 / 478.0 ) 9078 | ( 13.22 , 1.00 ) ( -0.01 , N/A , 0.2) | 1821.2<br>182.2 | 0.0131<br>88.8<br>98.1 | 1.0210 | N/A | 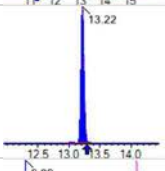 | 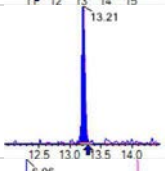 | |
| TFSI | ( 279.7 / 147.0 ) 1118073<br>( 279.7 / 211.0 ) 93897 | ( 6.96 , 0.53 ) ( N/A , -0.10 , 0.0) | 80.9<br>641015.3 | 0.0840<br>94.9<br>95.8 | 0.9400 | N/A | 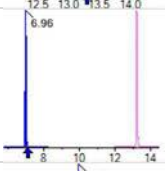 | 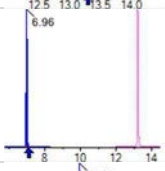 | |
| NMeFOSA | ( 512.0 / 219.0 ) 361729<br>( 512.0 / 169.0 ) 262239 | ( 14.50 , 1.00 ) ( 0.00 , N/A , 0.8) | 2648.4<br>1045.1 | 0.7250<br>94.6<br>97.4 | 4.0970 | N/A | 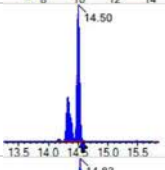 | 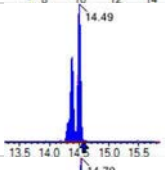 | |
| NEtFOSA | ( 526.0 / 219.0 ) 419645<br>( 526.0 / 169.0 ) 523954 | ( 14.83 , 1.00 ) ( 0.01 , N/A , 2.3) | 2296.3<br>1878.8 | 1.2486<br>99.9<br>100.3 | 3.8200 | N/A | 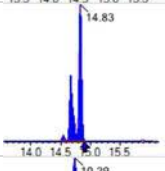 | 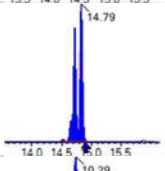 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 256399<br>( 570.0 / 483.0 ) 118437 | ( 10.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 3501.4<br>2397.3 | 0.4619<br>99.5<br>98.9 | 1.0210 | N/A | 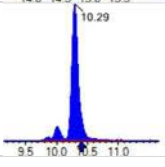 | 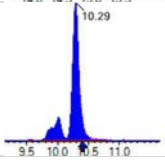 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (10)
Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 236730<br>( 584.0 / 526.0 ) 152411 | ( 10.90 , 1.00 ) ( 0.01 , N/A , -0.1) | 1860.8<br>704.8 | 0.6438<br>107.3<br>107.7 | 0.9550 | N/A | 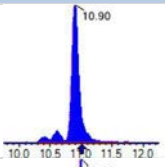 | 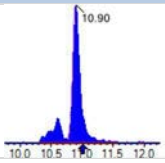 | |
| NMeFOSE | ( 616.0 / 59.0 ) 213071 | ( 14.30 , 1.00 ) ( 0.02 , N/A , 0.0) | 971.0 | N/A<br>0.0<br>0.0 | 3.8460 | N/A | 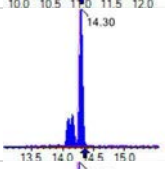 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 177352 | ( 14.67 , 1.00 ) ( 0.02 , N/A , 0.0) | 1107.5 | N/A<br>0.0<br>0.0 | 4.1180 | N/A | 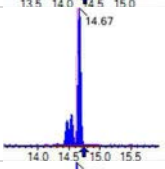 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 57144<br>( 285.0 / 185.0 ) 161880 | ( 5.53 , 1.00 ) ( 0.00 , N/A , 0.2) | 1175.0<br>1153.3 | 2.8328<br>100.9<br>107.3 | 0.9990 | N/A | 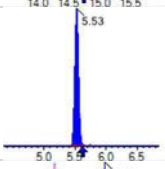 | 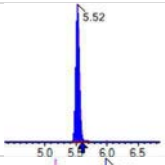 | |
| ADONA | ( 377.0 / 85.0 ) 794115<br>( 377.0 / 251.0 ) 82603 | ( 6.69 , 1.21 ) ( N/A , -0.10 , -0.1) | 1972.1<br>542.1 | 0.1040<br>99.2<br>104.4 | 1.0520 | N/A | 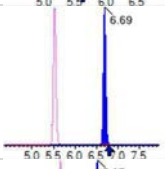 | 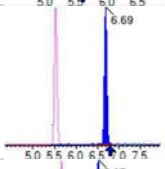 | |
| PFEESA | ( 315.0 / 135.0 ) 269602<br>( 315.0 / 83.0 ) 178174 | ( 5.87 , 1.15 ) ( N/A , -0.10 , 0.0) | 2071.9<br>693.6 | 0.6609<br>103.0<br>113.0 | 1.8840 | N/A | 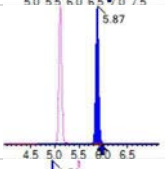 | 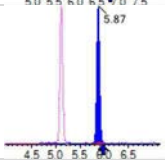 | |
| PFMPA | ( 229.0 / 85.0 ) 147184 | ( 3.59 , 0.88 ) ( N/A , -0.27 , 0.0) | 4047.0 | N/A<br>0.0<br>0.0 | 1.8340 | N/A | 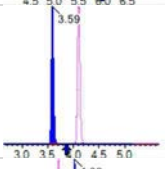 | | |
| PFMBA | ( 279.0 / 85.0 ) 346042 | ( 4.38 , 1.07 ) ( N/A , -0.17 , 0.0) | 2451.6 | N/A<br>0.0<br>0.0 | 1.9140 | N/A | 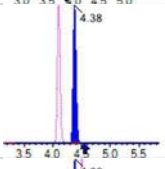 | | |
| NFDHA | ( 295.0 / 201.0 ) 153509<br>( 295.0 / 85.0 ) 154234 | ( 4.98 , 0.98 ) ( N/A , -0.08 , 0.0) | 2137.4<br>1384.0 | 1.0047<br>101.0<br>97.4 | 2.1980 | N/A | 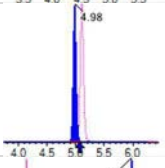 | 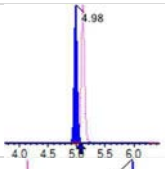 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 808308<br>( 533.0 / 353.0 ) 268398 | ( 11.03 , 2.00 ) ( N/A , -0.11 , 0.0) | 2262.5<br>2040.3 | 0.3320<br>104.1<br>100.1 | 0.9640 | N/A | 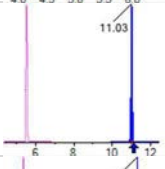 | 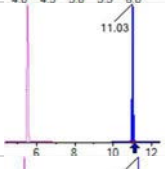 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 675238<br>( 633.0 / 453.0 ) 237098 | ( 12.53 , 2.27 ) ( N/A , -0.09 , 0.0) | 4252.0<br>1856.1 | 0.3511<br>103.5<br>103.3 | 1.0360 | N/A | 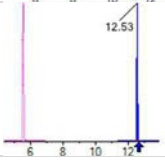 | 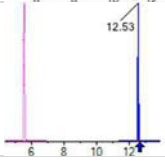 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 399553<br>( 461.0 / 381.2 ) 161478 | ( 9.31 , 0.90 )<br>( N/A , -0.10 , 0.0) | 2572.1<br>2871.7 | 0.4041<br>104.6<br>101.7 | 0.8030 | N/A | 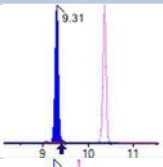 | 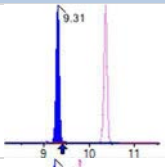 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 65154<br>( 241.0 / 117.0 ) 140036 | ( 3.62 , 0.88 )<br>( N/A , -0.30 , 0.0) | 1858.0<br>805.7 | 2.1493<br>97.9<br>98.7 | 3.4770 | N/A | 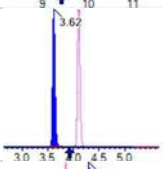 | 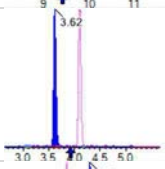 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 244326<br>( 341.0 / 217.0 ) 350951 | ( 5.54 , 1.08 )<br>( N/A , -0.09 , -0.1) | 1775.8<br>1023.8 | 1.4364<br>93.8<br>94.6 | 4.5660 | N/A | 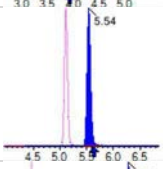 | 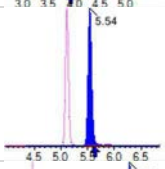 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 531425<br>( 441.0 / 337.0 ) 458179 | ( 9.25 , 1.81 )<br>( N/A , -0.07 , 0.0) | 7607.4<br>10810.6 | 0.8622<br>100.9<br>97.7 | 4.6740 | N/A | 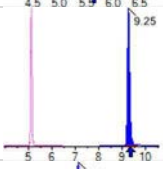 | 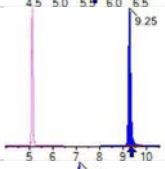 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 296089<br>( 357.2 / 243.0 ) 33398 | ( 5.79 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1030.9<br>349.0 | 0.1128<br>105.2<br>101.9 | 0.8440 | N/A | 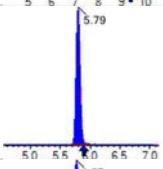 | 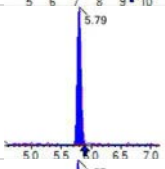 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 265081<br>( 457.2 / 343.0 ) 10737 | ( 8.57 , 1.00 )<br>( -0.01 , N/A , -0.3) | 871.5<br>269.1 | 0.0405<br>90.3<br>92.7 | 1.0010 | N/A | 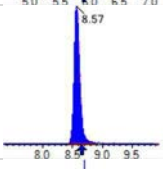 | 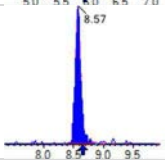 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 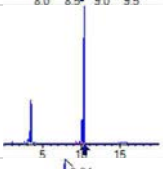 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 233505 | ( 3.34 , N/A )<br>( N/A , -0.27 , N/A ) | 1836.2 | N/A | 0.8270<br>[ 1.0000 ] | 82.7%<br>{ 88.3% } | 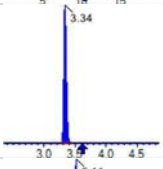 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111576 | ( 5.11 , N/A )<br>( N/A , -0.08 , N/A ) | 17732.3 | N/A | 0.9450<br>[ 1.0000 ] | 94.5%<br>{ 96.4% } | 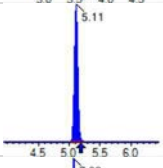 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 348119 | ( 7.38 , N/A )<br>( N/A , -0.09 , N/A ) | 5199.2 | N/A | 0.8970<br>[ 1.0000 ] | 89.7%<br>{ 96.4% } | 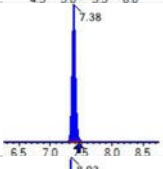 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 276316 | ( 8.93 , N/A )<br>( N/A , -0.10 , N/A ) | 1646.5 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 99.1% } | 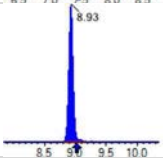 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (10)
Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266561 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 9513.4 | N/A | 0.9300 [ 1.0000 ] | 93.0% { 96.5% } | 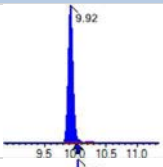 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 956173 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 7247.2 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 104.2% } | 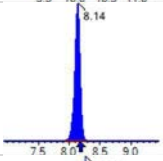 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 763893 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 2457.0 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 99.0% } | 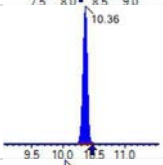 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1862164 | ( 3.34 , N/A ) ( N/A , -0.27 , N/A ) | 40727.1 | N/A | 7.3780 [ 8.0000 ] | 92.2% { 85.8% } | 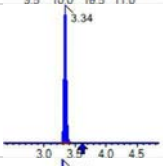 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 874511 | ( 4.10 , N/A ) ( N/A , -0.23 , N/A ) | 4220.7 | N/A | 4.2810 [ 4.0000 ] | 107.0% { 104.6% } | 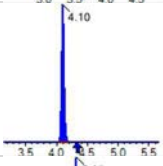 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 423936 | ( 5.11 , N/A ) ( N/A , -0.08 , N/A ) | 10677.4 | N/A | 1.7370 [ 2.0000 ] | 86.8% { 88.2% } | 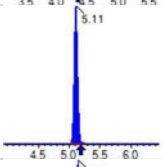 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 533155 | ( 6.25 , N/A ) ( N/A , -0.10 , N/A ) | 8595.9 | N/A | 1.9670 [ 2.0000 ] | 98.3% { 97.3% } | 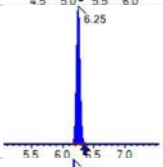 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 754147 | ( 7.38 , N/A ) ( N/A , -0.09 , N/A ) | 3918.3 | N/A | 2.0440 [ 2.0000 ] | 102.2% { 98.5% } | 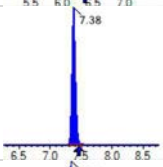 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 265619 | ( 8.93 , N/A ) ( N/A , -0.09 , N/A ) | 3738.6 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 98.5% } | 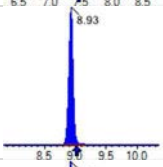 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 301386 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 1579.0 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 102.5% } | 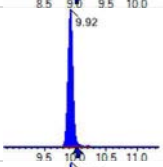 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 366829 | ( 10.83 , N/A ) ( N/A , -0.11 , N/A ) | 1262.8 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 99.3% } | 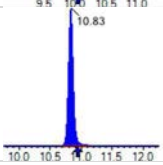 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 364638 | ( 11.73 , N/A ) ( N/A , -0.11 , N/A ) | 1479.9 | N/A | 0.9730 [ 1.0000 ] | 97.3% { 100.5% } | 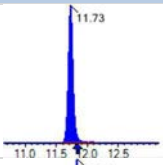 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 331295 | ( 13.02 , N/A ) ( N/A , -0.09 , N/A ) | 1593.5 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 101.1% } | 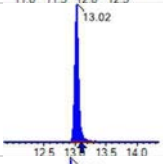 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 460901 | ( 13.92 , N/A ) ( N/A , -0.08 , N/A ) | 2031.0 | N/A | 1.6600 [ 2.0000 ] | 83.0% { 92.6% } | 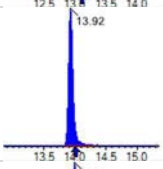 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1412574 | ( 5.29 , N/A ) ( N/A , -0.08 , N/A ) | 1428.0 | N/A | 1.8330 [ 2.0000 ] | 91.6% { 95.8% } | 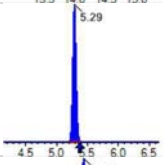 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1414997 | ( 8.13 , N/A ) ( N/A , -0.04 , N/A ) | 6199.9 | N/A | 2.0510 [ 2.0000 ] | 102.6% { 108.7% } | 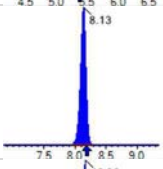 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1598015 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 1293.2 | N/A | 1.9660 [ 2.0000 ] | 98.3% { 110.6% } | 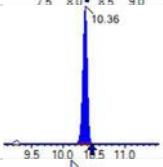 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 746859 | ( 4.73 , N/A ) ( N/A , -0.08 , N/A ) | 64.9 | N/A | 4.4050 [ 4.0000 ] | 110.1% { 114.8% } | 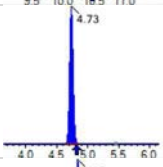 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1894186 | ( 6.85 , N/A ) ( N/A , -0.09 , N/A ) | 5212.3 | N/A | 4.5480 [ 4.0000 ] | 113.7% { 107.6% } | 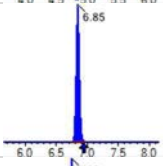 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1672082 | ( 9.25 , N/A ) ( N/A , -0.10 , N/A ) | 2057.7 | N/A | 4.5880 [ 4.0000 ] | 114.7% { 114.9% } | 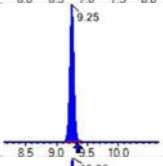 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3522117 | ( 10.96 , N/A ) ( N/A , -0.11 , N/A ) | 1963.1 | N/A | 8.9340 [ 8.0000 ] | 111.7% { 118.2% } | 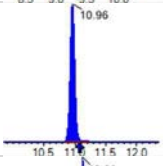 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1407478 | ( 13.22 , N/A ) ( N/A , -0.07 , N/A ) | 3300.9 | N/A | 1.6310 [ 2.0000 ] | 81.6% { 90.3% } | 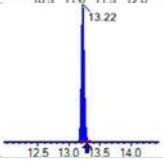 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (10)
Acquired: 2024/03/28 - 22:56

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 198698 | ( 14.50 , N/A ) ( N/A , -0.07 , N/A ) | 1324.3 | N/A | 1.0240 [ 2.0000 ] | 51.2% { 54.6% } | 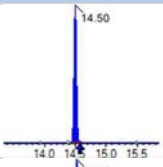  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 193978 | ( 14.82 , N/A ) ( N/A , -0.07 , N/A ) | 1678.8 | N/A | 1.0940 [ 2.0000 ] | 54.7% { 56.3% } | 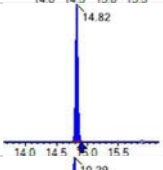  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1088761 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 2699.1 | N/A | 3.8580 [ 4.0000 ] | 96.5% { 92.2% } | 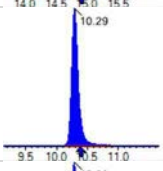  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1021926 | ( 10.89 , N/A ) ( N/A , -0.10 , N/A ) | 2428.4 | N/A | 4.0130 [ 4.0000 ] | 100.3% { 100.2% } | 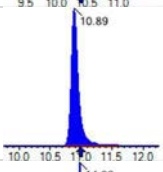  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1023429 | ( 14.28 , N/A ) ( N/A , -0.07 , N/A ) | 2634.5 | N/A | 14.1220 [ 20.0000 ] | 70.6% { 77.0% } | 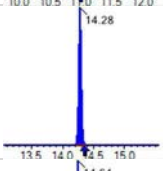  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 904273 | ( 14.64 , N/A ) ( N/A , -0.07 , N/A ) | 3546.3 | N/A | 13.3240 [ 20.0000 ] | 66.6% { 72.2% } | 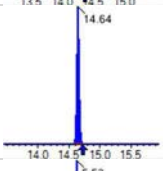  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 779795 | ( 5.53 , N/A ) ( N/A , -0.09 , N/A ) | 2867.2 | N/A | 7.3750 [ 8.0000 ] | 92.2% { 94.3% } | 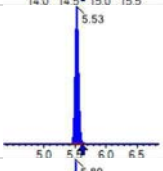  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 667343 | ( 5.80 , N/A ) ( N/A , -0.10 , N/A ) | 2790.4 | N/A | 2.2970 [ 2.0000 ] | 114.9% { 118.8% } | 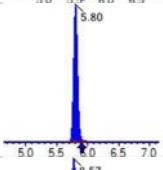  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 640578 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1110.8 | N/A | 1.9570 [ 2.0000 ] | 97.9% { 95.6% } | 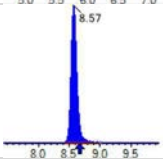  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS2a | File ID:a | S2024-03-28B (12)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 23:37a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.0a | 0.19a | 1.5a | |
| PFPeAa | 7.26a | 0.059a | 0.73a | |
| PFHxAa | 3.98a | 0.050a | 0.36a | |
| PFHpAa | 3.89a | 0.037a | 0.36a | |
| PFOAa | 4.63a | 0.14a | 0.36a | |
| PFNAa | 3.81a | 0.075a | 0.36a | |
| PFDAa | 3.71a | 0.092a | 0.36a | |
| PFUnAa | 3.65a | 0.15a | 0.36a | |
| PFDoAa | 3.67a | 0.10a | 0.36a | |
| PFTrDAa | 3.72a | 0.19a | 0.36a | |
| PFTeDAa | 3.64a | 0.18a | 0.36a | |
| PFHxDAa | 3.68a | 0.18a | 0.36a | |
| PFODAa | 3.16a | 0.18a | 0.36a | |
| PFBSa | 5.97a | 0.033a | 0.36a | |
| PFPeSa | 3.27a | 0.057a | 0.36a | |
| PFHxSa | 3.69a | 0.029a | 0.36a | MI5a |
| PFHpSa | 3.58a | 0.047a | 0.36a | |
| PFOSa | 8.80a | 0.058a | 0.36a | |
| PFNSa | 3.49a | 0.11a | 0.36a | |
| PFDSa | 3.54a | 0.14a | 0.36a | |
| PFDoSa | 3.41a | 0.11a | 0.36a | |
| 4:2FTSa | 13.4a | 0.26a | 1.5a | |
| 6:2FTSa | 13.0a | 0.29a | 1.5a | |
| 8:2FTSa | 13.7a | 0.075a | 1.5a | |
| 10:2FTSa | 13.6a | 0.36a | 1.5a | |
| PFOSAa | 3.73a | 0.095a | 0.36a | |
| NMeFOSAa | 15.0a | 0.43a | 1.5a | |
| NEtFOSAa | 13.4a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.49a | 0.096a | 0.36a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS2a | File ID:a | S2024-03-28B (12)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 23:37a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 12.7a | 0.92a | 1.5a | |
| NEtFOSEa | 13.8a | 0.95a | 1.5a | |
| HFPO-DAa | 3.14a | 0.16a | 0.73a | |
| ADONAa | 3.91a | 0.11a | 0.73a | |
| PFEESAa | 7.05a | 0.099a | 0.73a | |
| PFMPAa | 7.11a | 0.049a | 0.73a | |
| PFMBAa | 7.19a | 0.083a | 0.73a | |
| NFDHAa | 6.75a | 0.27a | 0.73a | |
| 9Cl-PF3ONSa | 3.52a | 0.19a | 0.73a | |
| 11Cl-PF3OUDSa | 3.99a | 0.19a | 0.73a | |
| 3:3FTCAa | 13.6a | 0.52a | 1.5a | |
| 5:3FTCAa | 16.1a | 0.40a | 1.5a | |
| 7:3FTCAa | 17.5a | 0.50a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (12)
Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 224683<br>( 163.0 / 69.0 ) 6123 | ( 2.39 , 0.70 ) ( N/A , -0.07 , -0.1) | 1837.2<br>550.6 | 0.0273<br>99.4<br>103.9 | 4.0810 | N/A | 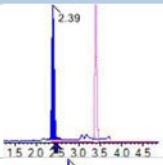 | 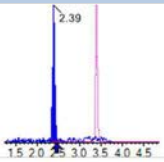 | |
| PFBA | ( 213.0 / 169.0 ) 1137969 | ( 3.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 1061.7 | N/A<br>0.0<br>0.0 | 4.3950 | N/A | 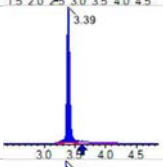 | | |
| PFPeA | ( 263.0 / 219.0 ) 390062<br>( 263.0 / 69.0 ) 4759 | ( 4.16 , 1.00 ) ( 0.00 , N/A , -0.1) | 1373.4<br>71.7 | 0.0122<br>102.5<br>114.7 | 1.9950 | N/A | 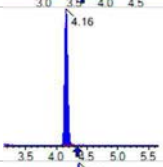 | 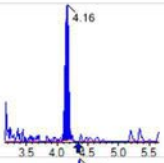 | |
| PFHxA | ( 313.0 / 269.0 ) 205884<br>( 313.0 / 119.0 ) 22893 | ( 5.16 , 1.00 ) ( 0.00 , N/A , 0.0) | 792.5<br>504.7 | 0.1112<br>100.0<br>93.8 | 1.0940 | N/A | 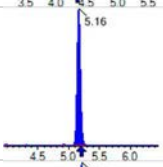 | 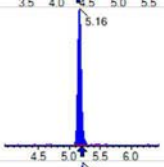 | |
| PFHpA | ( 363.0 / 319.0 ) 276151<br>( 363.0 / 169.0 ) 86100 | ( 6.31 , 1.00 ) ( 0.00 , N/A , 0.0) | 1429.0<br>1064.1 | 0.3118<br>102.0<br>101.3 | 1.0680 | N/A | 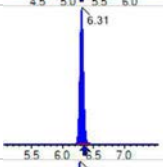 | 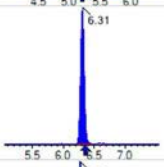 | |
| PFOA | ( 413.0 / 369.0 ) 485091<br>( 413.0 / 169.0 ) 186074 | ( 7.43 , 1.00 ) ( 0.00 , N/A , 0.1) | 595.1<br>870.4 | 0.3836<br>107.3<br>108.1 | 1.2720 | N/A | 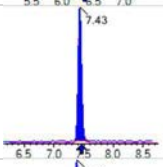 | 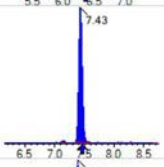 | |
| PFNA | ( 463.0 / 419.0 ) 258540<br>( 463.0 / 169.0 ) 62006 | ( 8.98 , 1.00 ) ( 0.00 , N/A , -0.1) | 1378.7<br>831.9 | 0.2398<br>97.6<br>93.5 | 1.0450 | N/A | 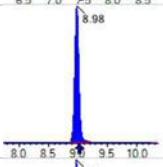 | 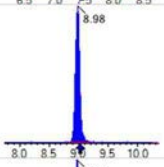 | |
| PFDA | ( 513.0 / 469.0 ) 296966<br>( 513.0 / 169.0 ) 34916 | ( 9.97 , 1.00 ) ( 0.00 , N/A , -0.1) | 2461.9<br>1693.7 | 0.1176<br>98.7<br>96.5 | 1.0180 | N/A | 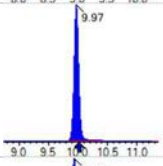 | 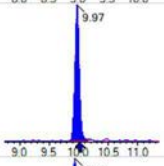 | |
| PFUnA | ( 563.0 / 519.0 ) 323703<br>( 563.0 / 169.0 ) 44567 | ( 10.88 , 1.00 ) ( -0.01 , N/A , 0.0) | 960.4<br>426.7 | 0.1377<br>88.9<br>91.7 | 1.0030 | N/A | 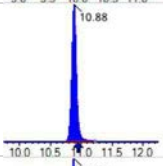 | 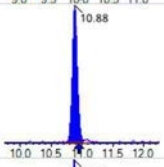 | |
| PFDoA | ( 613.0 / 569.0 ) 365829<br>( 613.0 / 169.0 ) 52774 | ( 11.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 1174.0<br>535.9 | 0.1443<br>95.0<br>94.6 | 1.0070 | N/A | 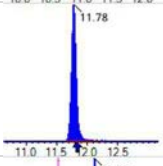 | 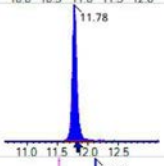 | |
| PFTrDA | ( 663.0 / 619.0 ) 360578<br>( 663.0 / 169.0 ) 91011 | ( 12.53 , 1.06 ) ( N/A , -0.04 , 0.0) | 1025.7<br>698.3 | 0.2524<br>93.8<br>95.8 | 1.0210 | N/A | 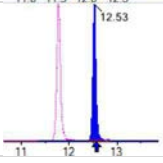 | 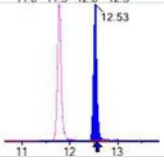 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 297226<br>( 713.0 / 169.0 ) 79026 | ( 13.08 , 1.00 ) ( 0.00 , N/A , 0.1) | 1218.2<br>606.8 | 0.2659<br>98.0<br>101.0 | 0.9990 | N/A | 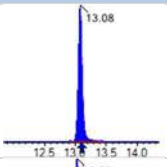 | 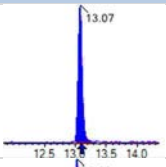 | |
| PFHxDA | ( 813.0 / 769.0 ) 215920<br>( 813.0 / 169.0 ) 65760 | ( 13.98 , 1.00 ) ( -0.01 , N/A , -0.1) | 949.7<br>354.8 | 0.3046<br>116.4<br>112.8 | 1.0110 | N/A | 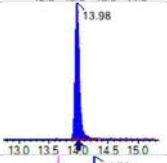 | 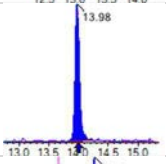 | |
| PFODA | ( 913.0 / 869.0 ) 117433<br>( 913.0 / 169.0 ) 38802 | ( 14.72 , 1.05 ) ( N/A , -0.03 , -0.1) | 405.9<br>161.4 | 0.3304<br>105.4<br>98.7 | 0.8680 | N/A | 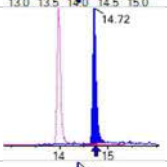 | 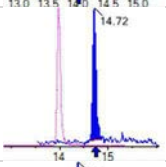 | |
| PFBS | ( 299.0 / 80.0 ) 528265<br>( 299.0 / 99.0 ) 425676 | ( 5.33 , 1.00 ) ( 0.00 , N/A , 0.0) | 1544.9<br>1482.0 | 0.8058<br>108.8<br>106.8 | 1.6380 | N/A | 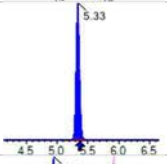 | 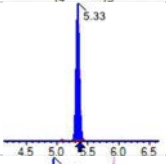 | |
| PFPeS | ( 349.0 / 80.0 ) 876069<br>( 349.0 / 99.0 ) 311036 | ( 6.63 , 0.81 ) ( N/A , -0.05 , 0.0) | 1871.5<br>1574.8 | 0.3550<br>103.9<br>99.9 | 0.8990 | N/A | 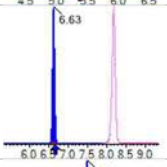 | 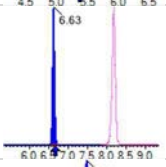 | |
| PFHxS | ( 399.0 / 80.0 ) 1203058<br>( 399.0 / 99.0 ) 397290 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 2280.6<br>2005.8 | 0.3302<br>100.6<br>102.3 | 1.0120 | N/A | 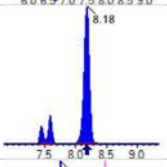 | 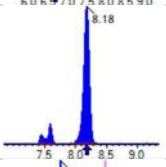 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 892557<br>( 449.0 / 99.0 ) 229555 | ( 9.46 , 0.91 ) ( N/A , -0.05 , 0.1) | 1489.9<br>1416.3 | 0.2572<br>98.6<br>99.1 | 0.9840 | N/A | 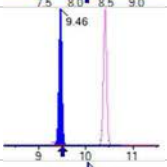 | 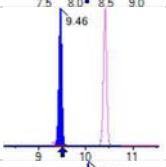 | |
| PFOS | ( 499.0 / 80.0 ) 2129602<br>( 499.0 / 99.0 ) 508264 | ( 10.41 , 1.00 ) ( 0.00 , N/A , -0.1) | 2022.8<br>3594.7 | 0.2387<br>103.3<br>104.2 | 2.4150 | N/A | 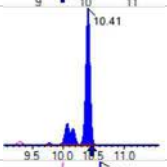 | 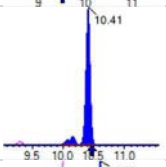 | |
| PFNS | ( 549.0 / 80.0 ) 769511<br>( 549.0 / 99.0 ) 218628 | ( 11.29 , 1.08 ) ( N/A , -0.06 , 0.0) | 1160.5<br>1302.3 | 0.2841<br>106.0<br>103.3 | 0.9570 | N/A | 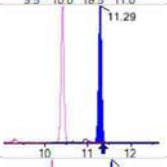 | 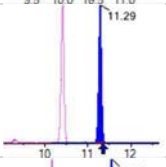 | |
| PFDS | ( 599.0 / 80.0 ) 954170<br>( 599.0 / 99.0 ) 255806 | ( 12.10 , 1.16 ) ( N/A , -0.05 , 0.1) | 1982.2<br>1169.2 | 0.2681<br>105.3<br>99.5 | 0.9710 | N/A | 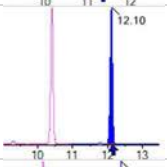 | 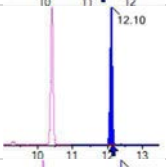 | |
| PFDoS | ( 699.0 / 80.0 ) 889629<br>( 699.0 / 99.0 ) 218467 | ( 13.14 , 1.26 ) ( N/A , -0.03 , 0.1) | 3591.9<br>1946.8 | 0.2456<br>109.9<br>103.9 | 0.9360 | N/A | 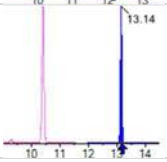 | 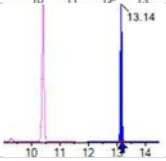 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (12)
Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1517855<br>( 327.0 / 81.0 ) 1416177 | ( 4.78 , 1.00 ) ( 0.00 , N/A , -0.1) | 3697.2<br>1365.5 | 0.9330<br>109.4<br>106.5 | 3.6750 | N/A | 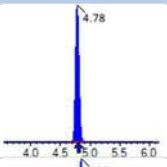 | 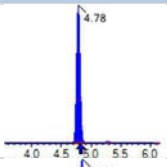 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1420781<br>( 427.0 / 81.0 ) 1834623 | ( 6.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 5212.2<br>3542.4 | 1.2913<br>100.1<br>99.5 | 3.5660 | N/A | 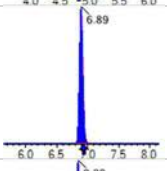 | 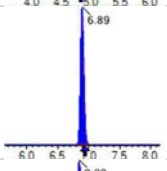 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1419373<br>( 527.0 / 81.0 ) 1506548 | ( 9.29 , 1.00 ) ( -0.01 , N/A , -0.1) | 2457.3<br>2016.0 | 1.0614<br>96.2<br>96.3 | 3.7490 | N/A | 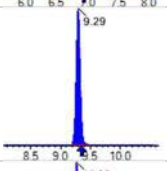 | 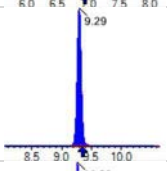 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1173093<br>( 627.0 / 81.0 ) 1614454 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.0) | 1719.5<br>1538.2 | 1.3762<br>95.7<br>95.0 | 3.7230 | N/A | 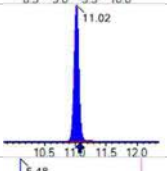 | 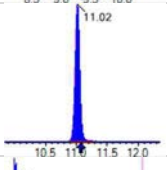 | |
| PFBSA | ( 297.9 / 78.0 ) 384512<br>( 297.9 / 278.0 ) 505 | ( 5.48 , 0.38 ) ( N/A , -0.05 , 0.4) | 1341.6<br>8.9 | 0.0013<br>101.4<br>116.7 | 2.2550 | N/A | 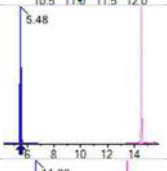 | 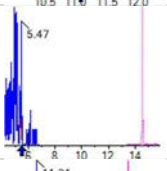 | |
| PFHxSA | ( 397.9 / 78.0 ) 954597<br>( 397.9 / 378.0 ) 4248 | ( 11.22 , 0.75 ) ( N/A , -0.02 , 0.3) | 1554.0<br>203.3 | 0.0045<br>110.2<br>101.4 | 2.6600 | N/A | 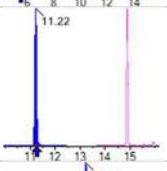 | 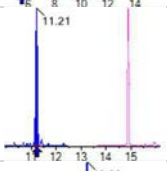 | |
| PFOSA | ( 498.0 / 78.0 ) 655818<br>( 498.0 / 478.0 ) 8973 | ( 13.28 , 1.00 ) ( -0.01 , N/A , -0.2) | 1892.7<br>208.6 | 0.0137<br>93.1<br>102.8 | 1.0230 | N/A | 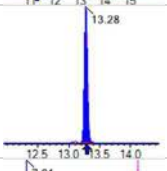 | 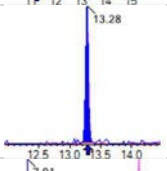 | |
| TFSI | ( 279.7 / 147.0 ) 1010135<br>( 279.7 / 211.0 ) 88634 | ( 7.01 , 0.53 ) ( N/A , -0.05 , -0.1) | 93.9<br>91848.6 | 0.0877<br>99.2<br>100.1 | 0.9020 | N/A | 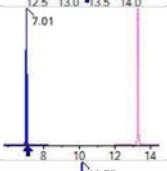 | 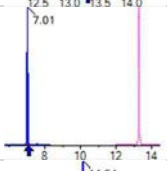 | |
| NMeFOSA | ( 512.0 / 219.0 ) 205175<br>( 512.0 / 169.0 ) 156619 | ( 14.56 , 1.00 ) ( 0.01 , N/A , 1.6) | 1553.1<br>701.5 | 0.7633<br>99.6<br>102.5 | 4.1090 | N/A | 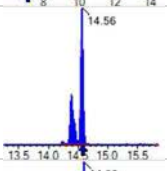 | 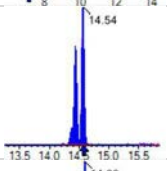 | |
| NEtFOSA | ( 526.0 / 219.0 ) 237688<br>( 526.0 / 169.0 ) 300190 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 1.7) | 1743.3<br>1454.9 | 1.2630<br>101.0<br>101.5 | 3.6800 | N/A | 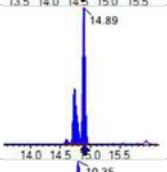 | 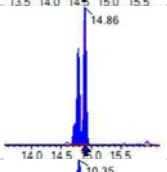 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 235496<br>( 570.0 / 483.0 ) 106405 | ( 10.35 , 1.00 ) ( 0.01 , N/A , 0.0) | 1812.3<br>1238.3 | 0.4518<br>97.4<br>96.8 | 0.9570 | N/A | 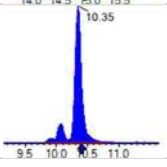 | 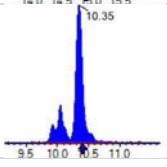 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 226647<br>( 584.0 / 526.0 ) 141637 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1178.6<br>668.4 | 0.6249<br>104.2<br>104.5 | 0.9590 | N/A | 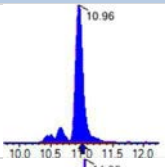 | 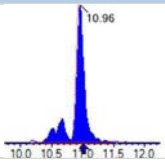 | |
| NMeFOSE | ( 616.0 / 59.0 ) 117449 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 568.0 | N/A<br>0.0<br>0.0 | 3.5000 | N/A | 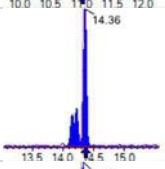 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 103318 | ( 14.73 , 1.00 )<br>( 0.03 , N/A , 0.0) | 776.2 | N/A<br>0.0<br>0.0 | 3.7940 | N/A | 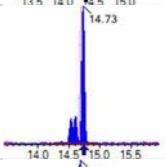 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 47807<br>( 285.0 / 185.0 ) 143933 | ( 5.58 , 1.00 )<br>( 0.00 , N/A , 0.1) | 789.3<br>1069.9 | 3.0107<br>107.2<br>114.0 | 0.8630 | N/A | 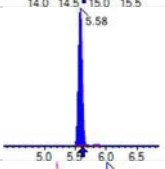 | 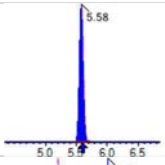 | |
| ADONA | ( 377.0 / 85.0 ) 785100<br>( 377.0 / 251.0 ) 79209 | ( 6.74 , 1.21 )<br>( N/A , -0.04 , 0.1) | 2326.9<br>549.2 | 0.1009<br>96.2<br>101.2 | 1.0740 | N/A | 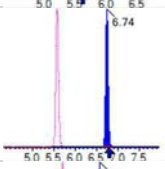 | 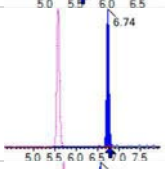 | |
| PFEESA | ( 315.0 / 135.0 ) 265152<br>( 315.0 / 83.0 ) 161109 | ( 5.93 , 1.15 )<br>( N/A , -0.04 , 0.1) | 2069.1<br>663.0 | 0.6076<br>94.7<br>103.9 | 1.9360 | N/A | 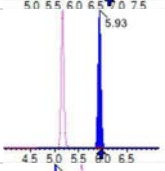 | 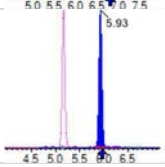 | |
| PFMPA | ( 229.0 / 85.0 ) 140400 | ( 3.64 , 0.88 )<br>( N/A , -0.22 , 0.0) | 3618.4 | N/A<br>0.0<br>0.0 | 1.9530 | N/A | 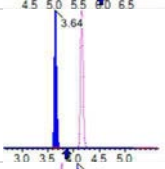 | | |
| PFMBA | ( 279.0 / 85.0 ) 319570 | ( 4.43 , 1.07 )<br>( N/A , -0.11 , 0.0) | 3089.6 | N/A<br>0.0<br>0.0 | 1.9730 | N/A | 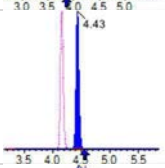 | | |
| NFDHA | ( 295.0 / 201.0 ) 123833<br>( 295.0 / 85.0 ) 144328 | ( 5.03 , 0.98 )<br>( N/A , -0.03 , 0.1) | 1702.5<br>1149.6 | 1.1655<br>117.2<br>113.0 | 1.8530 | N/A | 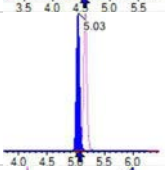 | 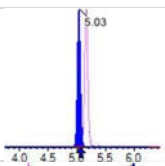 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 785210<br>( 533.0 / 353.0 ) 243145 | ( 11.08 , 1.99 )<br>( N/A , -0.06 , 0.1) | 2574.7<br>2002.9 | 0.3097<br>97.1<br>93.3 | 0.9670 | N/A | 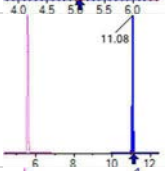 | 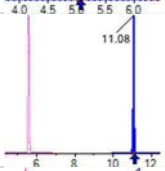 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 691440<br>( 633.0 / 453.0 ) 223761 | ( 12.59 , 2.25 )<br>( N/A , -0.04 , 0.0) | 3399.4<br>1702.0 | 0.3236<br>95.4<br>95.2 | 1.0960 | N/A | 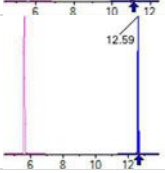 | 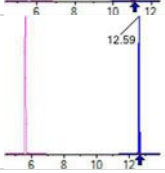 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 390732<br>( 461.0 / 381.2 ) 156592 | ( 9.36 , 0.90 )<br>( N/A , -0.04 , 0.1) | 2373.8<br>1937.1 | 0.4008<br>103.8<br>100.9 | 0.8260 | N/A | 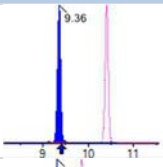 | 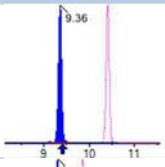 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 62819<br>( 241.0 / 117.0 ) 139686 | ( 3.67 , 0.88 )<br>( N/A , -0.24 , 0.1) | 1489.9<br>1057.8 | 2.2236<br>101.3<br>102.1 | 3.7420 | N/A | 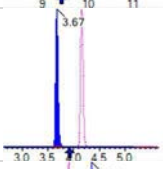 | 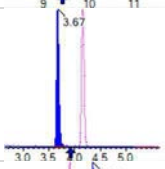 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 225927<br>( 341.0 / 217.0 ) 317590 | ( 5.59 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1204.1<br>877.4 | 1.4057<br>91.8<br>92.5 | 4.4110 | N/A | 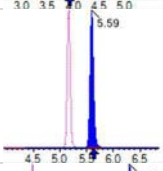 | 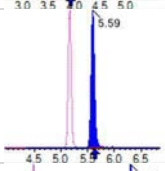 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 521736<br>( 441.0 / 337.0 ) 430697 | ( 9.31 , 1.80 )<br>( N/A , -0.02 , -0.1) | 6447.6<br>6189.8 | 0.8255<br>96.6<br>93.6 | 4.7940 | N/A | 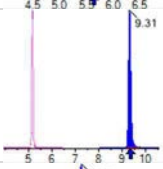 | 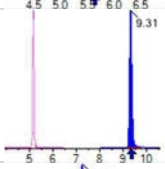 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 307668<br>( 357.2 / 243.0 ) 31303 | ( 5.85 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1220.6<br>228.8 | 0.1017<br>94.9<br>91.9 | 0.9300 | N/A | 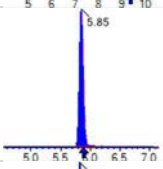 | 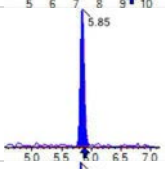 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 256090<br>( 457.2 / 343.0 ) 11056 | ( 8.62 , 1.00 )<br>( 0.00 , N/A , 0.0) | 968.5<br>147.9 | 0.0432<br>96.2<br>98.8 | 0.9810 | N/A | 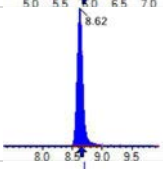 | 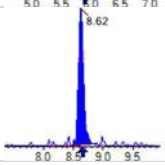 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 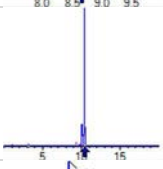 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 226256 | ( 3.39 , N/A )<br>( N/A , -0.22 , N/A ) | 1682.2 | N/A | 0.8020<br>[ 1.0000 ] | 80.2%<br>{ 85.6% } | 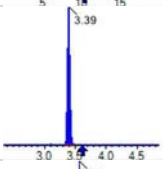 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 101667 | ( 5.16 , N/A )<br>( N/A , -0.03 , N/A ) | 15929.2 | N/A | 0.8610<br>[ 1.0000 ] | 86.1%<br>{ 87.8% } | 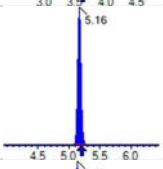 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 369322 | ( 7.43 , N/A )<br>( N/A , -0.04 , N/A ) | 10004.8 | N/A | 0.9520<br>[ 1.0000 ] | 95.2%<br>{ 102.3% } | 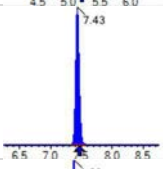 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 256344 | ( 8.98 , N/A )<br>( N/A , -0.05 , N/A ) | 1414.7 | N/A | 0.8770<br>[ 1.0000 ] | 87.7%<br>{ 91.9% } | 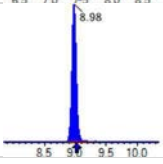 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (12)
Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246534 | ( 9.98 , N/A ) ( N/A , -0.05 , N/A ) | 4817.3 | N/A | 0.8600 [ 1.0000 ] | 86.0% { 89.3% } | 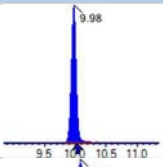 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 935312 | ( 8.19 , N/A ) ( N/A , 0.01 , N/A ) | 7740.2 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 101.9% } | 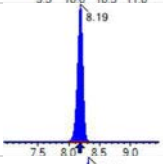 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715393 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2720.3 | N/A | 0.9120 [ 1.0000 ] | 91.2% { 92.8% } | 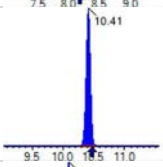 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1946173 | ( 3.39 , N/A ) ( N/A , -0.22 , N/A ) | 68322.9 | N/A | 7.9580 [ 8.0000 ] | 99.5% { 89.6% } | 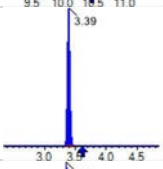 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 783404 | ( 4.16 , N/A ) ( N/A , -0.18 , N/A ) | 5789.1 | N/A | 4.2090 [ 4.0000 ] | 105.2% { 93.7% } | 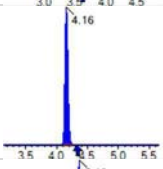 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 405781 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 7468.5 | N/A | 1.8240 [ 2.0000 ] | 91.2% { 84.4% } | 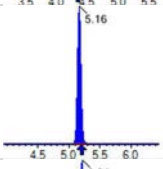 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 521088 | ( 6.31 , N/A ) ( N/A , -0.05 , N/A ) | 12442.7 | N/A | 2.1090 [ 2.0000 ] | 105.5% { 95.1% } | 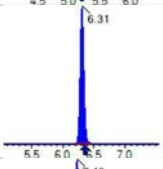 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 759500 | ( 7.43 , N/A ) ( N/A , -0.04 , N/A ) | 4483.5 | N/A | 1.9400 [ 2.0000 ] | 97.0% { 99.2% } | 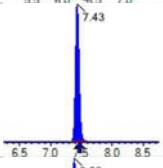 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 246260 | ( 8.98 , N/A ) ( N/A , -0.04 , N/A ) | 4242.1 | N/A | 0.9730 [ 1.0000 ] | 97.3% { 91.3% } | 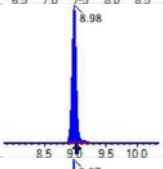 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 292162 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1578.6 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 99.4% } | 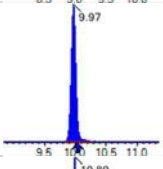 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 355422 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 957.0 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 96.2% } | 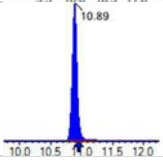 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 362094 | ( 11.78 , N/A ) ( N/A , -0.05 , N/A ) | 1497.1 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 99.8% } | 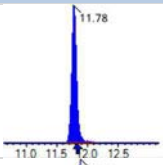 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318478 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 1329.1 | N/A | 1.0380 [ 1.0000 ] | 103.8% { 97.2% } | 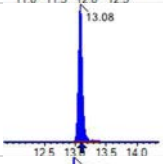 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 455924 | ( 13.98 , N/A ) ( N/A , -0.02 , N/A ) | 2155.6 | N/A | 1.7760 [ 2.0000 ] | 88.8% { 91.6% } | 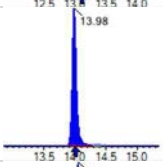 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1311605 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1642.0 | N/A | 1.7400 [ 2.0000 ] | 87.0% { 88.9% } | 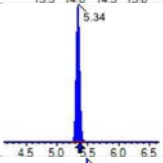 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1356912 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 7117.0 | N/A | 2.0110 [ 2.0000 ] | 100.6% { 104.2% } | 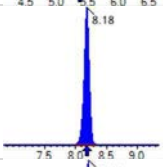 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1519267 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2245.9 | N/A | 1.9960 [ 2.0000 ] | 99.8% { 105.2% } | 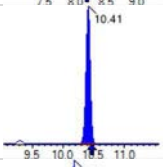 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 625752 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 82.9 | N/A | 3.7730 [ 4.0000 ] | 94.3% { 96.2% } | 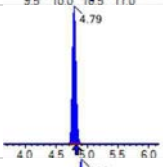 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1877620 | ( 6.90 , N/A ) ( N/A , -0.04 , N/A ) | 4056.7 | N/A | 4.6090 [ 4.0000 ] | 115.2% { 106.7% } | 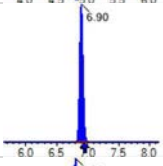 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1539529 | ( 9.30 , N/A ) ( N/A , -0.05 , N/A ) | 2301.2 | N/A | 4.3190 [ 4.0000 ] | 108.0% { 105.8% } | 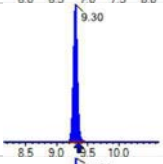 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3174305 | ( 11.01 , N/A ) ( N/A , -0.06 , N/A ) | 1724.2 | N/A | 8.2310 [ 8.0000 ] | 102.9% { 106.5% } | 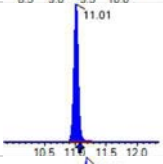 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1324629 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3657.2 | N/A | 1.6390 [ 2.0000 ] | 82.0% { 85.0% } | 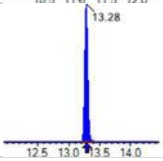 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (12)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:37

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 112374 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 950.4 | N/A | 0.6190 [ 2.0000 ] | 30.9% { 30.9% } | 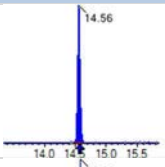 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 114024 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 1163.8 | N/A | 0.6870 [ 2.0000 ] | 34.3% { 33.1% } | 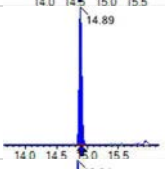 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1066979 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 3334.2 | N/A | 4.0370 [ 4.0000 ] | 100.9% { 90.4% } | 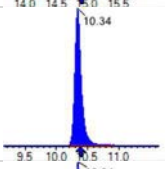 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 974399 | ( 10.94 , N/A ) ( N/A , -0.05 , N/A ) | 2428.9 | N/A | 4.0850 [ 4.0000 ] | 102.1% { 95.6% } | 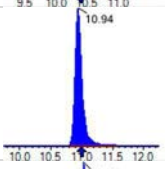 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 619929 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 2148.0 | N/A | 9.1340 [ 20.0000 ] | 45.7% { 46.6% } | 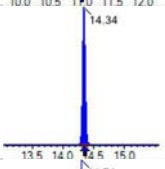 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 571806 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 3101.7 | N/A | 8.9960 [ 20.0000 ] | 45.0% { 45.7% } | 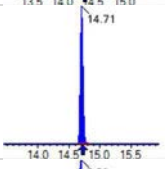 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 755132 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2354.5 | N/A | 7.8380 [ 8.0000 ] | 98.0% { 91.3% } | 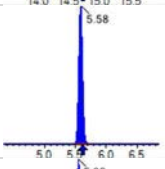 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 629223 | ( 5.86 , N/A ) ( N/A , -0.04 , N/A ) | 1822.3 | N/A | 2.3420 [ 2.0000 ] | 117.1% { 112.0% } | 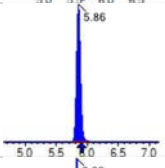 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 631516 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 1115.0 | N/A | 2.0860 [ 2.0000 ] | 104.3% { 94.2% } | 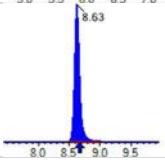 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD1a | File ID:a | S2024-03-28B (11)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 23:16a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.1a | 0.19a | 1.5a | |
| PFPeAa | 9.95a | 0.059a | 0.73a | |
| PFHxAa | 5.45a | 0.050a | 0.36a | |
| PFHpAa | 4.24a | 0.037a | 0.36a | |
| PFOAa | 4.10a | 0.14a | 0.36a | MI5a |
| PFNAa | 3.37a | 0.074a | 0.36a | |
| PFDAa | 3.61a | 0.092a | 0.36a | |
| PFUnAa | 3.61a | 0.15a | 0.36a | |
| PFDoAa | 3.51a | 0.10a | 0.36a | |
| PFTrDAa | 3.68a | 0.19a | 0.36a | |
| PFTeDAa | 3.60a | 0.18a | 0.36a | |
| PFHxDAa | 3.53a | 0.18a | 0.36a | |
| PFODAa | 3.14a | 0.18a | 0.36a | |
| PFBSa | 5.02a | 0.033a | 0.36a | |
| PFPeSa | 4.44a | 0.057a | 0.36a | |
| PFHxSa | 4.55a | 0.029a | 0.36a | MI5a |
| PFHpSa | 3.65a | 0.047a | 0.36a | |
| PFOSa | 3.69a | 0.058a | 0.36a | |
| PFNSa | 3.74a | 0.11a | 0.36a | |
| PFDSa | 3.55a | 0.14a | 0.36a | |
| PFDoSa | 3.75a | 0.11a | 0.36a | |
| 4:2FTSa | 14.0a | 0.26a | 1.5a | |
| 6:2FTSa | 13.5a | 0.29a | 1.5a | |
| 8:2FTSa | 13.8a | 0.075a | 1.5a | |
| 10:2FTSa | 13.3a | 0.36a | 1.5a | |
| PFOSAa | 3.94a | 0.095a | 0.36a | |
| NMeFOSAa | 15.8a | 0.43a | 1.5a | |
| NEtFOSAa | 15.4a | 0.37a | 1.5a | |
| NMeFOSAAa | 3.41a | 0.096a | 0.36a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD1a | File ID:a | S2024-03-28B (11)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 23:16a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 15.1a | 0.92a | 1.5a | |
| NEtFOSEa | 16.3a | 0.95a | 1.5a | |
| HFPO-DAa | 3.72a | 0.16a | 0.73a | |
| ADONAa | 3.90a | 0.11a | 0.73a | |
| PFEESAa | 5.99a | 0.099a | 0.73a | |
| PFMPAa | 7.18a | 0.049a | 0.73a | |
| PFMBAa | 6.91a | 0.082a | 0.73a | |
| NFDHAa | 6.64a | 0.27a | 0.73a | |
| 9Cl-PF3ONSa | 3.72a | 0.19a | 0.73a | |
| 11Cl-PF3OUDSa | 3.91a | 0.19a | 0.73a | |
| 3:3FTCAa | 13.9a | 0.52a | 1.5a | |
| 5:3FTCAa | 12.9a | 0.40a | 1.5a | |
| 7:3FTCAa | 15.1a | 0.50a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (11)
Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 118893<br>( 163.0 / 69.0 ) 3377 | ( 2.44 , 0.71 ) ( N/A , -0.02 , 0.0) | 696.4<br>229.8 | 0.0284<br>103.6<br>108.3 | 2.0500 | N/A | 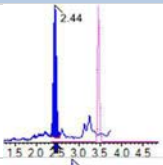 | 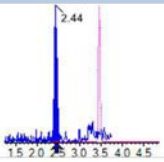 | |
| PFBA | ( 213.0 / 169.0 ) 1208108 | ( 3.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1071.0 | N/A<br>0.0<br>0.0 | 4.4320 | N/A | 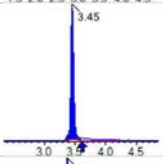 | | |
| PFPeA | ( 263.0 / 219.0 ) 547771<br>( 263.0 / 69.0 ) 7433 | ( 4.18 , 1.00 ) ( 0.00 , N/A , 0.1) | 1381.6<br>94.5 | 0.0136<br>114.0<br>127.5 | 2.7360 | N/A | 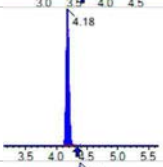 | 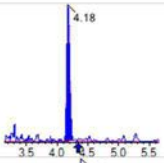 | |
| PFHxA | ( 313.0 / 269.0 ) 344177<br>( 313.0 / 119.0 ) 38062 | ( 5.18 , 1.00 ) ( 0.00 , N/A , 0.0) | 1009.1<br>598.4 | 0.1106<br>99.4<br>93.3 | 1.4980 | N/A | 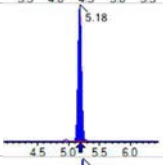 | 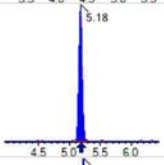 | |
| PFHpA | ( 363.0 / 319.0 ) 297511<br>( 363.0 / 169.0 ) 94007 | ( 6.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 1146.8<br>940.4 | 0.3160<br>103.4<br>102.7 | 1.1670 | N/A | 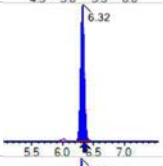 | 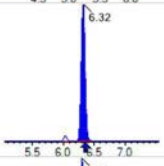 | |
| PFOA | ( 413.0 / 369.0 ) 473941<br>( 413.0 / 169.0 ) 165642 | ( 7.46 , 1.00 ) ( 0.00 , N/A , 0.1) | 538.6<br>642.7 | 0.3495<br>97.8<br>98.5 | 1.1270 | N/A | 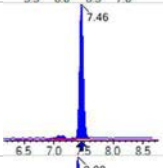 | 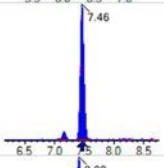 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 266081<br>( 463.0 / 169.0 ) 69625 | ( 9.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 1319.8<br>1281.1 | 0.2617<br>106.5<br>102.0 | 0.9280 | N/A | 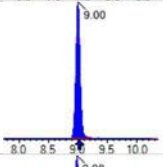 | 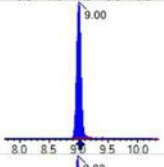 | |
| PFDA | ( 513.0 / 469.0 ) 307135<br>( 513.0 / 169.0 ) 38808 | ( 9.98 , 1.00 ) ( -0.01 , N/A , 0.0) | 2159.3<br>6694.4 | 0.1264<br>106.0<br>103.7 | 0.9940 | N/A | 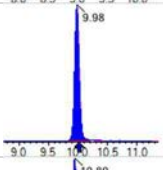 | 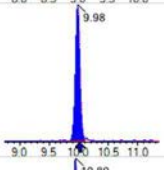 | |
| PFUnA | ( 563.0 / 519.0 ) 323003<br>( 563.0 / 169.0 ) 49329 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 970.5<br>448.0 | 0.1527<br>98.6<br>101.7 | 0.9920 | N/A | 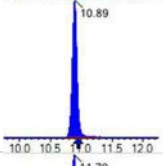 | 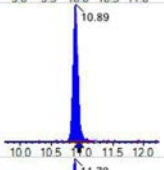 | |
| PFDoA | ( 613.0 / 569.0 ) 351292<br>( 613.0 / 169.0 ) 56143 | ( 11.79 , 1.00 ) ( 0.00 , N/A , 0.0) | 979.5<br>480.6 | 0.1598<br>105.2<br>104.8 | 0.9650 | N/A | 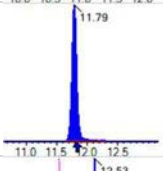 | 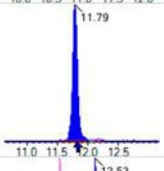 | |
| PFTrDA | ( 663.0 / 619.0 ) 358445<br>( 663.0 / 169.0 ) 98569 | ( 12.53 , 1.06 ) ( N/A , -0.03 , 0.0) | 1219.0<br>630.3 | 0.2750<br>102.1<br>104.4 | 1.0130 | N/A | 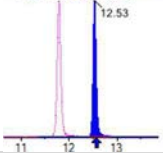 | 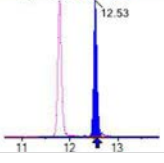 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (11)
Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 299169<br>( 713.0 / 169.0 ) 77530 | ( 13.08 , 1.00 ) ( 0.00 , N/A , 0.0) | 1052.8<br>506.2 | 0.2592<br>95.5<br>98.5 | 0.9910 | N/A | 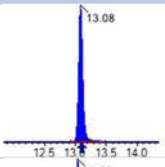 | 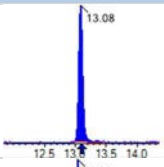 | |
| PFHxDA | ( 813.0 / 769.0 ) 246798<br>( 813.0 / 169.0 ) 61677 | ( 13.99 , 1.00 ) ( 0.00 , N/A , -0.1) | 1319.4<br>379.6 | 0.2499<br>95.5<br>92.6 | 0.9710 | N/A | 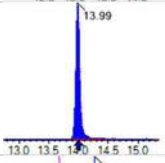 | 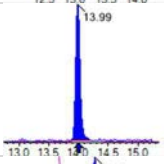 | |
| PFODA | ( 913.0 / 869.0 ) 138779<br>( 913.0 / 169.0 ) 43185 | ( 14.73 , 1.05 ) ( N/A , -0.02 , 0.1) | 426.8<br>188.3 | 0.3112<br>99.3<br>93.0 | 0.8630 | N/A | 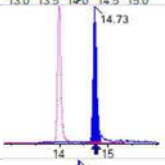 | 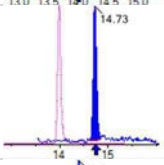 | |
| PFBS | ( 299.0 / 80.0 ) 486579<br>( 299.0 / 99.0 ) 339739 | ( 5.35 , 1.00 ) ( -0.01 , N/A , 0.1) | 1101.2<br>1251.7 | 0.6982<br>94.3<br>92.6 | 1.3810 | N/A | 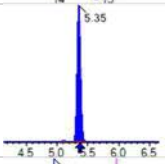 | 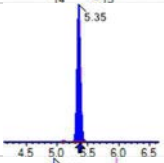 | |
| PFPeS | ( 349.0 / 80.0 ) 1213892<br>( 349.0 / 99.0 ) 437278 | ( 6.64 , 0.80 ) ( N/A , -0.03 , -0.1) | 1297.3<br>1485.6 | 0.3602<br>105.4<br>101.4 | 1.2220 | N/A | 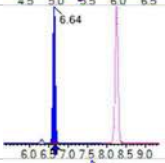 | 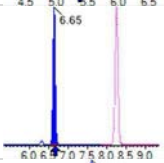 | |
| PFHxS | ( 399.0 / 80.0 ) 1514545<br>( 399.0 / 99.0 ) 485082 | ( 8.26 , 1.00 ) ( 0.00 , N/A , 0.0) | 1996.0<br>3798.9 | 0.3203<br>97.6<br>99.2 | 1.2510 | N/A | 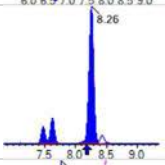 | 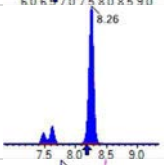 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 930562<br>( 449.0 / 99.0 ) 249376 | ( 9.47 , 0.91 ) ( N/A , -0.03 , 0.1) | 1574.4<br>1622.7 | 0.2680<br>102.7<br>103.3 | 1.0030 | N/A | 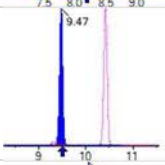 | 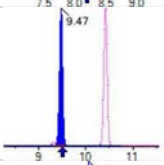 | |
| PFOS | ( 499.0 / 80.0 ) 914365<br>( 499.0 / 99.0 ) 209262 | ( 10.42 , 1.00 ) ( 0.00 , N/A , -0.1) | 1235.9<br>4061.4 | 0.2289<br>99.0<br>99.9 | 1.0140 | N/A | 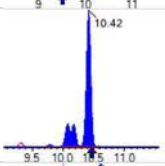 | 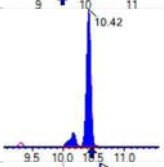 | |
| PFNS | ( 549.0 / 80.0 ) 846539<br>( 549.0 / 99.0 ) 214994 | ( 11.29 , 1.08 ) ( N/A , -0.05 , 0.0) | 1901.7<br>1416.4 | 0.2540<br>94.8<br>92.4 | 1.0300 | N/A | 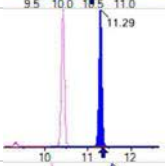 | 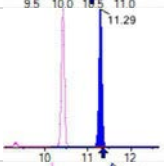 | |
| PFDS | ( 599.0 / 80.0 ) 980514<br>( 599.0 / 99.0 ) 260371 | ( 12.11 , 1.16 ) ( N/A , -0.04 , 0.0) | 1844.1<br>1558.5 | 0.2655<br>104.3<br>98.5 | 0.9760 | N/A | 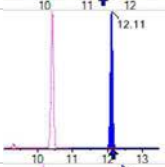 | 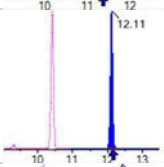 | |
| PFDoS | ( 699.0 / 80.0 ) 1002265<br>( 699.0 / 99.0 ) 235621 | ( 13.15 , 1.26 ) ( N/A , -0.02 , 0.1) | 3209.2<br>1821.1 | 0.2351<br>105.2<br>99.5 | 1.0310 | N/A | 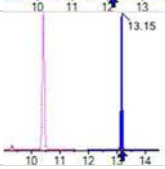 | 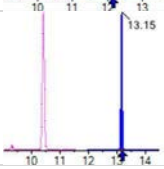 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (11)
Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1632125<br>( 327.0 / 81.0 ) 1537644 | ( 4.80 , 1.00 ) ( -0.01 , N/A , 0.0) | 3633.1<br>1150.6 | 0.9421<br>110.4<br>107.5 | 3.8540 | N/A | 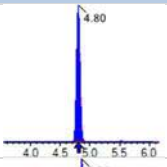 | 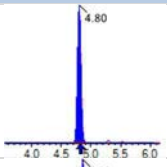 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1556522<br>( 427.0 / 81.0 ) 1973652 | ( 6.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 5527.2<br>4030.1 | 1.2680<br>98.3<br>97.7 | 3.7170 | N/A | 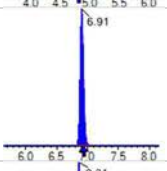 | 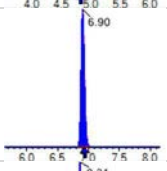 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1474673<br>( 527.0 / 81.0 ) 1621686 | ( 9.31 , 1.00 ) ( -0.01 , N/A , 0.0) | 2455.8<br>2189.6 | 1.0997<br>99.6<br>99.8 | 3.8030 | N/A | 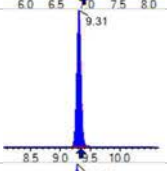 | 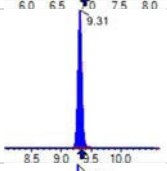 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1206448<br>( 627.0 / 81.0 ) 1722646 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.2) | 1461.2<br>1326.1 | 1.4279<br>99.3<br>98.5 | 3.6570 | N/A | 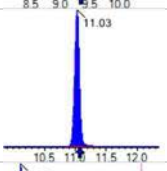 | 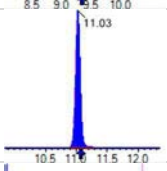 | |
| PFBSA | ( 297.9 / 78.0 ) 417215<br>( 297.9 / 278.0 ) 325 | ( 5.50 , 0.38 ) ( N/A , -0.02 , 2.1) | 1187.8<br>6.6 | 0.0008<br>60.1<br>69.1 | 1.9370 | N/A | 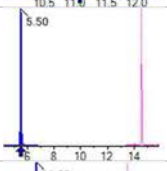 | 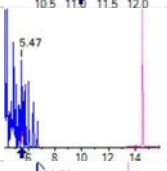 | |
| PFHxSA | ( 397.9 / 78.0 ) 910641<br>( 397.9 / 378.0 ) 3060 | ( 11.23 , 0.75 ) ( N/A , 0.00 , -0.1) | 2074.2<br>85.7 | 0.0034<br>83.2<br>76.6 | 2.1540 | N/A | 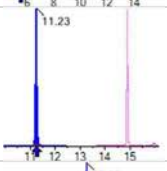 | 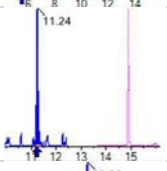 | |
| PFOSA | ( 498.0 / 78.0 ) 574895<br>( 498.0 / 478.0 ) 8076 | ( 13.28 , 1.00 ) ( -0.01 , N/A , 0.2) | 2318.9<br>182.4 | 0.0140<br>95.5<br>105.5 | 1.0850 | N/A | 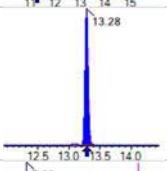 | 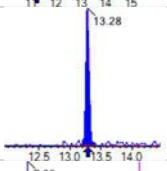 | |
| TFSI | ( 279.7 / 147.0 ) 1117588<br>( 279.7 / 211.0 ) 102536 | ( 7.03 , 0.53 ) ( N/A , -0.03 , -0.1) | 88.7<br>2523.9 | 0.0917<br>103.7<br>104.6 | 1.2070 | N/A | 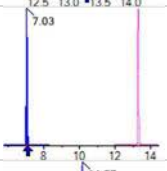 | 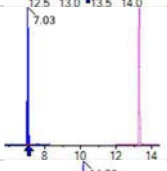 | |
| NMeFOSA | ( 512.0 / 219.0 ) 274183<br>( 512.0 / 169.0 ) 202241 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 0.6) | 1921.1<br>918.0 | 0.7376<br>96.2<br>99.1 | 4.3460 | N/A | 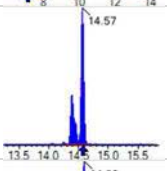 | 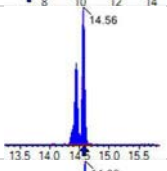 | |
| NEtFOSA | ( 526.0 / 219.0 ) 321543<br>( 526.0 / 169.0 ) 390227 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 2.2) | 1815.4<br>1699.6 | 1.2136<br>97.1<br>97.5 | 4.2270 | N/A | 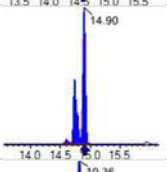 | 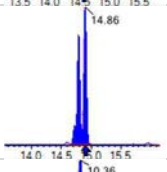 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 234013<br>( 570.0 / 483.0 ) 110632 | ( 10.36 , 1.00 ) ( 0.00 , N/A , -0.1) | 13224.7<br>3974.6 | 0.4728<br>101.9<br>101.3 | 0.9380 | N/A | 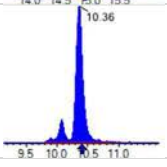 | 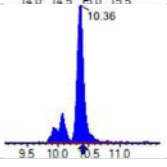 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (11)
Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 241610<br>( 584.0 / 526.0 ) 144162 | ( 10.97 , 1.00 ) ( 0.01 , N/A , -0.4) | 1327.8<br>563.8 | 0.5967<br>99.5<br>99.8 | 1.0230 | N/A | 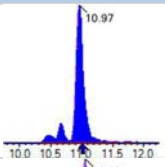 | 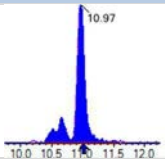 | |
| NMeFOSE | ( 616.0 / 59.0 ) 113193 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 521.1 | N/A<br>0.0<br>0.0 | 4.1670 | N/A | 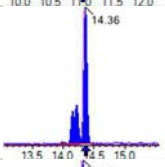 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 95123 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 695.5 | N/A<br>0.0<br>0.0 | 4.4960 | N/A | 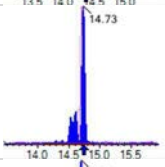 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 57518<br>( 285.0 / 185.0 ) 159730 | ( 5.59 , 1.00 ) ( 0.00 , N/A , 0.1) | 1016.4<br>1132.4 | 2.7771<br>98.9<br>105.2 | 1.0240 | N/A | 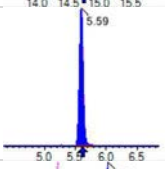 | 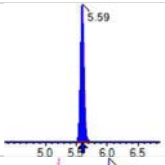 | |
| ADONA | ( 377.0 / 85.0 ) 793985<br>( 377.0 / 251.0 ) 84575 | ( 6.76 , 1.21 ) ( N/A , -0.03 , -0.1) | 2249.0<br>579.0 | 0.1065<br>101.6<br>106.9 | 1.0720 | N/A | 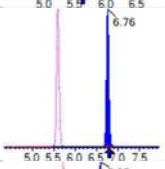 | 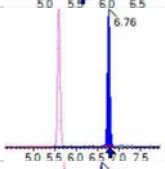 | |
| PFEESA | ( 315.0 / 135.0 ) 275113<br>( 315.0 / 83.0 ) 187762 | ( 5.95 , 1.15 ) ( N/A , -0.02 , 0.1) | 2339.1<br>659.2 | 0.6825<br>106.3<br>116.7 | 1.6460 | N/A | 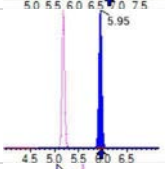 | 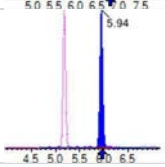 | |
| PFMPA | ( 229.0 / 85.0 ) 145443 | ( 3.68 , 0.88 ) ( N/A , -0.18 , 0.0) | 3612.0 | N/A<br>0.0<br>0.0 | 1.9760 | N/A | 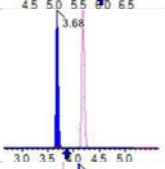 | | |
| PFMBA | ( 279.0 / 85.0 ) 315181 | ( 4.45 , 1.07 ) ( N/A , -0.09 , 0.0) | 2403.6 | N/A<br>0.0<br>0.0 | 1.9010 | N/A | 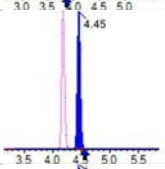 | | |
| NFDHA | ( 295.0 / 201.0 ) 148919<br>( 295.0 / 85.0 ) 150959 | ( 5.05 , 0.98 ) ( N/A , -0.01 , 0.2) | 1911.2<br>998.0 | 1.0137<br>101.9<br>98.2 | 1.8260 | N/A | 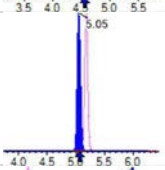 | 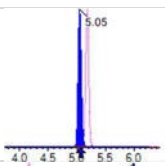 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 841508<br>( 533.0 / 353.0 ) 252808 | ( 11.09 , 1.98 ) ( N/A , -0.05 , -0.1) | 2854.4<br>1881.8 | 0.3004<br>94.2<br>90.5 | 1.0220 | N/A | 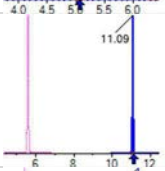 | 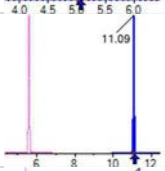 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 687688<br>( 633.0 / 453.0 ) 229362 | ( 12.59 , 2.25 ) ( N/A , -0.03 , 0.0) | 3627.9<br>1828.6 | 0.3335<br>98.3<br>98.1 | 1.0750 | N/A | 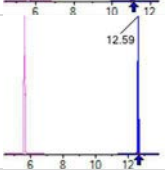 | 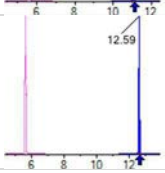 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MSD1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 423307<br>( 461.0 / 381.2 ) 170387 | ( 9.38 , 0.90 ) ( N/A , -0.03 , 0.0) | 2877.3<br>1921.0 | 0.4025<br>104.2<br>101.3 | 0.8750 | N/A | 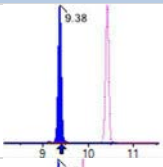 | 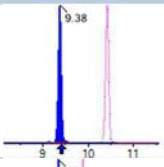 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 65574<br>( 241.0 / 117.0 ) 137929 | ( 3.70 , 0.89 ) ( N/A , -0.21 , 0.0) | 1856.5<br>782.4 | 2.1034<br>95.8<br>96.5 | 3.8150 | N/A | 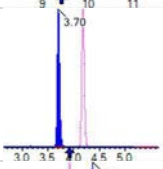 | 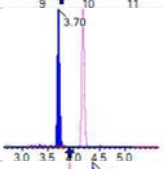 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 221353<br>( 341.0 / 217.0 ) 329851 | ( 5.61 , 1.08 ) ( N/A , -0.02 , -0.1) | 1372.9<br>1052.1 | 1.4902<br>97.3<br>98.1 | 3.5420 | N/A | 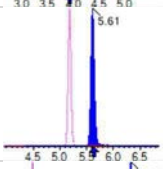 | 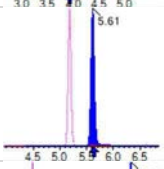 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 553179<br>( 441.0 / 337.0 ) 458489 | ( 9.35 , 1.81 ) ( N/A , 0.03 , 0.0) | 5032.4<br>1812290.6 | 0.8288<br>97.0<br>93.9 | 4.1670 | N/A | 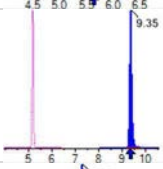 | 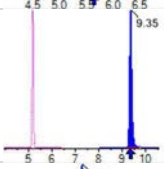 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 309468<br>( 357.2 / 243.0 ) 32547 | ( 5.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 1214.0<br>255.6 | 0.1052<br>98.1<br>95.0 | 0.8800 | N/A | 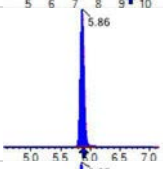 | 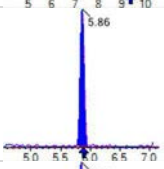 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 265826<br>( 457.2 / 343.0 ) 12793 | ( 8.65 , 1.00 ) ( -0.01 , N/A , 0.4) | 816.4<br>238.2 | 0.0481<br>107.2<br>110.2 | 0.9470 | N/A | 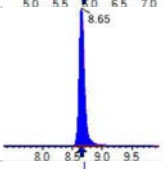 | 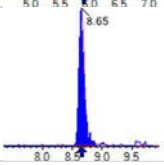 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 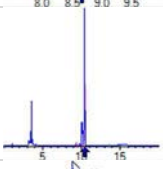 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 255092 | ( 3.46 , N/A ) ( N/A , -0.15 , N/A ) | 2068.4 | N/A | 0.9040<br>[ 1.0000 ] | 90.4%<br>{ 96.5% } | 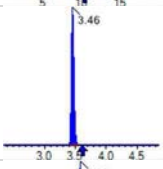 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 107944 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 11842128.5 | N/A | 0.9140<br>[ 1.0000 ] | 91.4%<br>{ 93.2% } | 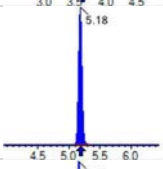 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 363211 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 4990.5 | N/A | 0.9360<br>[ 1.0000 ] | 93.6%<br>{ 100.6% } | 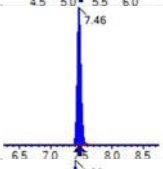 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277118 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 1680.6 | N/A | 0.9490<br>[ 1.0000 ] | 94.9%<br>{ 99.4% } | 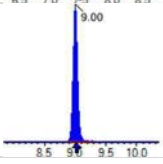 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (11)
Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 268170 | ( 9.99 , N/A ) ( N/A , -0.04 , N/A ) | 23656.6 | N/A | 0.9360 [ 1.0000 ] | 93.6% { 97.1% } | 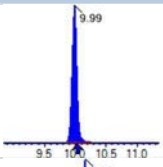 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 961157 | ( 8.26 , N/A ) ( N/A , 0.09 , N/A ) | 9030.6 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 104.7% } | 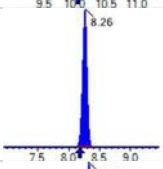 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 781539 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 2605.2 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 101.3% } | 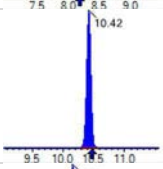 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2049994 | ( 3.46 , N/A ) ( N/A , -0.15 , N/A ) | 70680.1 | N/A | 7.4350 [ 8.0000 ] | 92.9% { 94.4% } | 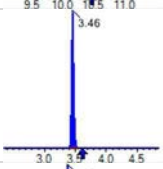 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 802097 | ( 4.18 , N/A ) ( N/A , -0.15 , N/A ) | 4872.6 | N/A | 4.0590 [ 4.0000 ] | 101.5% { 95.9% } | 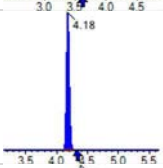 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 495044 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 11653.5 | N/A | 2.0960 [ 2.0000 ] | 104.8% { 103.0% } | 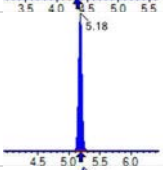 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 514009 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 12058.4 | N/A | 1.9600 [ 2.0000 ] | 98.0% { 93.8% } | 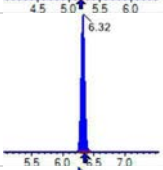 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 837199 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5406.9 | N/A | 2.1750 [ 2.0000 ] | 108.7% { 109.3% } | 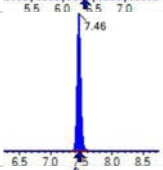 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 285396 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 6811.3 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 105.9% } | 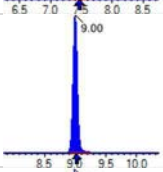 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 309484 | ( 9.98 , N/A ) ( N/A , -0.04 , N/A ) | 1378.4 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 105.3% } | 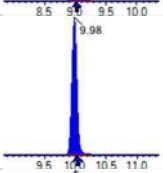 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 358667 | ( 10.89 , N/A ) ( N/A , -0.04 , N/A ) | 1172.0 | N/A | 0.9760 [ 1.0000 ] | 97.6% { 97.1% } | 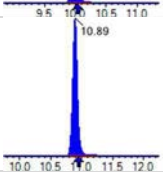 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MSD1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (11)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 362728 | ( 11.79 , N/A ) ( N/A , -0.05 , N/A ) | 1278.2 | N/A | 0.9620 [ 1.0000 ] | 96.2% { 100.0% } | 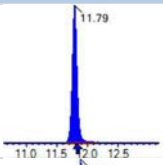 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 323446 | ( 13.09 , N/A ) ( N/A , -0.02 , N/A ) | 1484.6 | N/A | 0.9690 [ 1.0000 ] | 96.9% { 98.7% } | 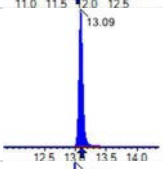 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 542292 | ( 13.99 , N/A ) ( N/A , -0.02 , N/A ) | 2574.8 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 108.9% } | 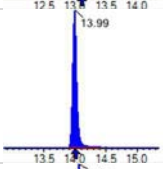 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1432527 | ( 5.36 , N/A ) ( N/A , -0.01 , N/A ) | 1389.2 | N/A | 1.8490 [ 2.0000 ] | 92.5% { 97.1% } | 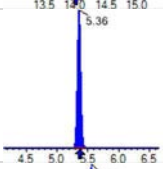 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1382183 | ( 8.26 , N/A ) ( N/A , 0.09 , N/A ) | 6664.4 | N/A | 1.9930 [ 2.0000 ] | 99.7% { 106.1% } | 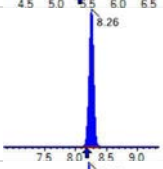 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1553607 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 1445.1 | N/A | 1.8680 [ 2.0000 ] | 93.4% { 107.6% } | 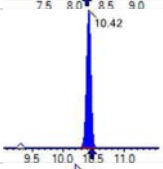 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 641605 | ( 4.80 , N/A ) ( N/A , -0.01 , N/A ) | 73.1 | N/A | 3.7650 [ 4.0000 ] | 94.1% { 98.6% } | 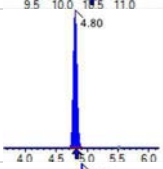 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1973142 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 5526.1 | N/A | 4.7130 [ 4.0000 ] | 117.8% { 112.1% } | 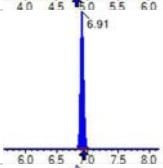 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1576927 | ( 9.31 , N/A ) ( N/A , -0.03 , N/A ) | 2927.3 | N/A | 4.3050 [ 4.0000 ] | 107.6% { 108.4% } | 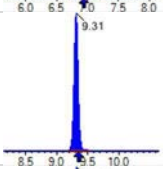 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3323349 | ( 11.02 , N/A ) ( N/A , -0.05 , N/A ) | 1582.6 | N/A | 8.3860 [ 8.0000 ] | 104.8% { 111.5% } | 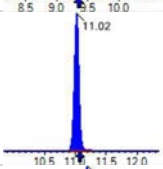 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1095390 | ( 13.29 , N/A ) ( N/A , -0.01 , N/A ) | 3211.1 | N/A | 1.2410 [ 2.0000 ] | 62.0% { 70.3% } | 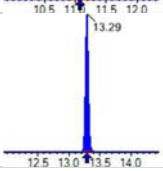 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (11)
Acquired: 2024/03/28 - 23:16

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 141975 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 947.2 | N/A | 0.7150 [ 2.0000 ] | 35.8% { 39.0% } | 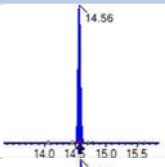 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 134322 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 1309.2 | N/A | 0.7400 [ 2.0000 ] | 37.0% { 39.0% } | 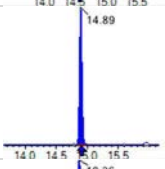 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1082261 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3078.9 | N/A | 3.7490 [ 4.0000 ] | 93.7% { 91.7% } | 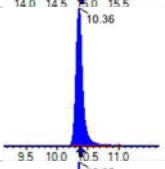 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 973806 | ( 10.95 , N/A ) ( N/A , -0.04 , N/A ) | 2230.8 | N/A | 3.7370 [ 4.0000 ] | 93.4% { 95.5% } | 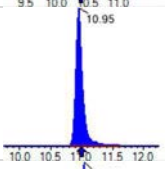 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 501850 | ( 14.35 , N/A ) ( N/A , -0.01 , N/A ) | 1443.8 | N/A | 6.7690 [ 20.0000 ] | 33.8% { 37.8% } | 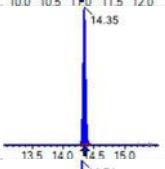 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 444176 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 1941.1 | N/A | 6.3970 [ 20.0000 ] | 32.0% { 35.5% } | 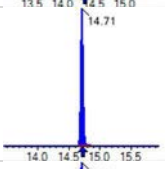 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 765500 | ( 5.60 , N/A ) ( N/A , -0.02 , N/A ) | 2737.9 | N/A | 7.4830 [ 8.0000 ] | 93.5% { 92.5% } | 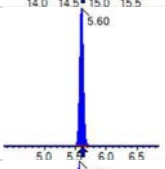 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 669132 | ( 5.87 , N/A ) ( N/A , -0.03 , N/A ) | 2313.8 | N/A | 2.2900 [ 2.0000 ] | 114.5% { 119.1% } | 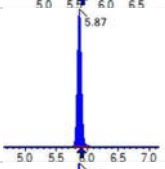 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 678907 | ( 8.66 , N/A ) ( N/A , 0.00 , N/A ) | 1342.0 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 101.3% } | 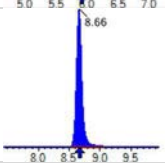 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD2a | File ID:a | S2024-03-28B (13)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 23:57a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 15.2a | 0.18a | 1.4a | |
| PFPeAa | 7.34a | 0.057a | 0.70a | |
| PFHxAa | 3.89a | 0.048a | 0.35a | |
| PFHpAa | 3.63a | 0.036a | 0.35a | |
| PFOAa | 4.70a | 0.13a | 0.35a | |
| PFNAa | 3.61a | 0.072a | 0.35a | |
| PFDAa | 3.64a | 0.089a | 0.35a | |
| PFUnAa | 3.55a | 0.14a | 0.35a | |
| PFDoAa | 3.56a | 0.098a | 0.35a | |
| PFTrDAa | 3.75a | 0.18a | 0.35a | |
| PFTeDAa | 3.69a | 0.17a | 0.35a | |
| PFHxDAa | 3.84a | 0.18a | 0.35a | |
| PFODAa | 3.48a | 0.18a | 0.35a | |
| PFBSa | 6.05a | 0.032a | 0.35a | |
| PFPeSa | 3.32a | 0.055a | 0.35a | |
| PFHxSa | 3.59a | 0.028a | 0.35a | MI5a |
| PFHpSa | 3.63a | 0.045a | 0.35a | |
| PFOSa | 9.08a | 0.056a | 0.35a | |
| PFNSa | 3.34a | 0.11a | 0.35a | |
| PFDSa | 3.58a | 0.13a | 0.35a | |
| PFDoSa | 3.72a | 0.11a | 0.35a | |
| 4:2FTSa | 12.8a | 0.26a | 1.4a | |
| 6:2FTSa | 12.9a | 0.28a | 1.4a | |
| 8:2FTSa | 13.7a | 0.072a | 1.4a | |
| 10:2FTSa | 15.0a | 0.35a | 1.4a | |
| PFOSAa | 3.63a | 0.091a | 0.35a | |
| NMeFOSAa | 15.9a | 0.42a | 1.4a | |
| NEtFOSAa | 14.9a | 0.36a | 1.4a | |
| NMeFOSAAa | 3.49a | 0.093a | 0.35a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0121a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD2a | File ID:a | S2024-03-28B (13)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 23:57a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 14.4a | 0.89a | 1.4a | |
| NEtFOSEa | 13.9a | 0.92a | 1.4a | |
| HFPO-DAa | 3.25a | 0.15a | 0.70a | |
| ADONAa | 3.73a | 0.11a | 0.70a | |
| PFEESAa | 6.65a | 0.096a | 0.70a | |
| PFMPAa | 8.00a | 0.047a | 0.70a | |
| PFMBAa | 7.30a | 0.080a | 0.70a | |
| NFDHAa | 8.54a | 0.26a | 0.70a | |
| 9Cl-PF3ONSa | 3.30a | 0.18a | 0.70a | |
| 11Cl-PF3OUDSa | 3.55a | 0.18a | 0.70a | |
| 3:3FTCAa | 14.3a | 0.51a | 1.4a | |
| 5:3FTCAa | 15.1a | 0.39a | 1.4a | |
| 7:3FTCAa | 16.6a | 0.49a | 1.4a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (13)
Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 274549<br>( 163.0 / 69.0 ) 7027 | ( 2.42 , 0.71 )<br>( N/A , -0.04 , 0.2) | 2149.1<br>552.8 | 0.0256<br>93.4<br>97.6 | 4.9260 | N/A | 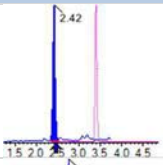 | 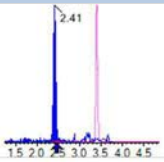 | |
| PFBA | ( 213.0 / 169.0 ) 1133527 | ( 3.40 , 1.00 )<br>( 0.00 , N/A , 0.0) | 992.8 | N/A<br>0.0<br>0.0 | 4.3190 | N/A | 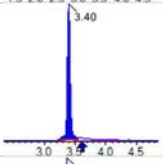 | | |
| PFPeA | ( 263.0 / 219.0 ) 382499<br>( 263.0 / 69.0 ) 4912 | ( 4.17 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1382.1<br>94.7 | 0.0128<br>107.9<br>120.7 | 2.0890 | N/A | 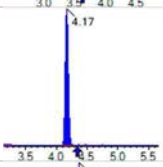 | 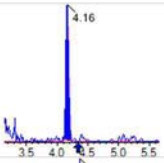 | |
| PFHxA | ( 313.0 / 269.0 ) 192890<br>( 313.0 / 119.0 ) 24081 | ( 5.17 , 1.00 )<br>( 0.00 , N/A , 0.0) | 849.2<br>410.3 | 0.1248<br>112.2<br>105.4 | 1.1070 | N/A | 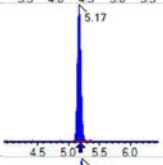 | 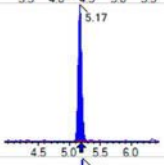 | |
| PFHpA | ( 363.0 / 319.0 ) 260950<br>( 363.0 / 169.0 ) 76886 | ( 6.31 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1123.2<br>883.2 | 0.2946<br>96.4<br>95.7 | 1.0320 | N/A | 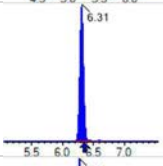 | 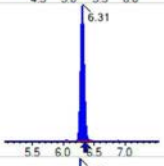 | |
| PFOA | ( 413.0 / 369.0 ) 467635<br>( 413.0 / 169.0 ) 177420 | ( 7.43 , 1.00 )<br>( 0.00 , N/A , 0.0) | 765.0<br>787.9 | 0.3794<br>106.1<br>107.0 | 1.3360 | N/A | 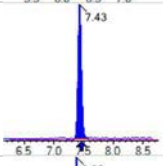 | 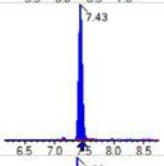 | |
| PFNA | ( 463.0 / 419.0 ) 233402<br>( 463.0 / 169.0 ) 59408 | ( 8.98 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1164.8<br>645.6 | 0.2545<br>103.6<br>99.2 | 1.0270 | N/A | 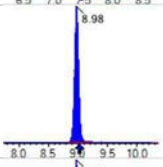 | 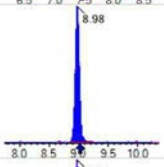 | |
| PFDA | ( 513.0 / 469.0 ) 264372<br>( 513.0 / 169.0 ) 29989 | ( 9.97 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1703.1<br>1379.3 | 0.1134<br>95.2<br>93.1 | 1.0370 | N/A | 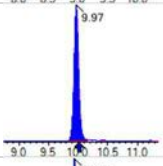 | 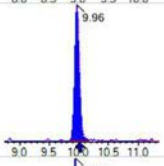 | |
| PFUnA | ( 563.0 / 519.0 ) 292246<br>( 563.0 / 169.0 ) 47052 | ( 10.88 , 1.00 )<br>( 0.00 , N/A , -0.2) | 955.6<br>507.6 | 0.1610<br>104.0<br>107.3 | 1.0100 | N/A | 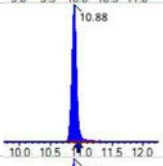 | 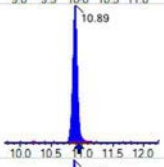 | |
| PFDoA | ( 613.0 / 569.0 ) 332858<br>( 613.0 / 169.0 ) 46773 | ( 11.78 , 1.00 )<br>( 0.00 , N/A , 0.2) | 951.6<br>457.7 | 0.1405<br>92.5<br>92.2 | 1.0140 | N/A | 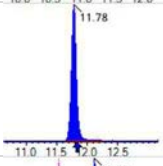 | 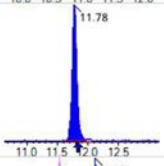 | |
| PFTrDA | ( 663.0 / 619.0 ) 340496<br>( 663.0 / 169.0 ) 88520 | ( 12.52 , 1.06 )<br>( N/A , -0.04 , 0.1) | 1200.0<br>575.8 | 0.2600<br>96.6<br>98.7 | 1.0670 | N/A | 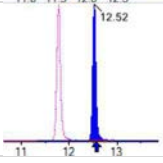 | 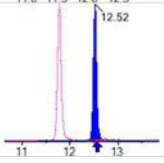 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (13)
Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 276973<br>( 713.0 / 169.0 ) 72341 | ( 13.07 , 1.00 ) ( 0.00 , N/A , -0.1) | 1097.8<br>500.4 | 0.2612<br>96.2<br>99.2 | 1.0500 | N/A | 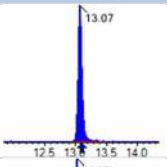 | 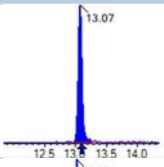 | |
| PFHxDA | ( 813.0 / 769.0 ) 227304<br>( 813.0 / 169.0 ) 62917 | ( 13.97 , 1.00 ) ( -0.01 , N/A , 0.0) | 1048.1<br>338.0 | 0.2768<br>105.8<br>102.5 | 1.0940 | N/A | 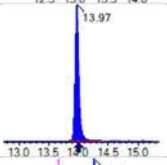 | 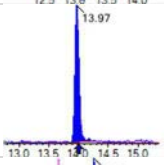 | |
| PFODA | ( 913.0 / 869.0 ) 130447<br>( 913.0 / 169.0 ) 42210 | ( 14.71 , 1.05 ) ( N/A , -0.04 , -0.1) | 539.7<br>234.7 | 0.3236<br>103.2<br>96.7 | 0.9910 | N/A | 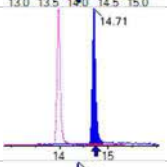 | 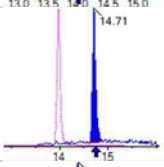 | |
| PFBS | ( 299.0 / 80.0 ) 532869<br>( 299.0 / 99.0 ) 391049 | ( 5.34 , 1.00 ) ( 0.00 , N/A , 0.2) | 1466.0<br>1474.6 | 0.7339<br>99.1<br>97.3 | 1.7210 | N/A | 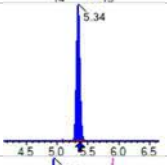 | 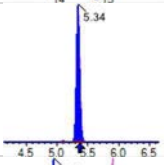 | |
| PFPeS | ( 349.0 / 80.0 ) 826940<br>( 349.0 / 99.0 ) 279352 | ( 6.63 , 0.81 ) ( N/A , -0.05 , 0.0) | 2113.0<br>1421.0 | 0.3378<br>98.9<br>95.1 | 0.9450 | N/A | 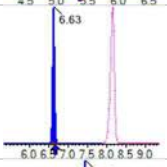 | 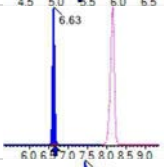 | |
| PFHxS | ( 399.0 / 80.0 ) 1089645<br>( 399.0 / 99.0 ) 355726 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 2125.6<br>2139.5 | 0.3265<br>99.5<br>101.1 | 1.0220 | N/A | 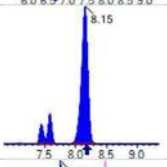 | 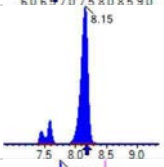 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 826138<br>( 449.0 / 99.0 ) 221325 | ( 9.45 , 0.91 ) ( N/A , -0.05 , 0.0) | 1618.0<br>1466.4 | 0.2679<br>102.7<br>103.3 | 1.0340 | N/A | 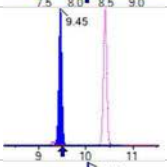 | 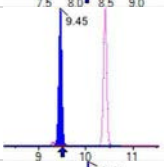 | |
| PFOS | ( 499.0 / 80.0 ) 2006409<br>( 499.0 / 99.0 ) 504760 | ( 10.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 2003.3<br>3205.0 | 0.2516<br>108.9<br>109.8 | 2.5840 | N/A | 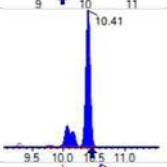 | 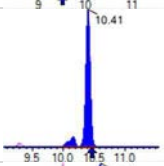 | |
| PFNS | ( 549.0 / 80.0 ) 672779<br>( 549.0 / 99.0 ) 188626 | ( 11.29 , 1.08 ) ( N/A , -0.06 , 0.0) | 956.2<br>996.1 | 0.2804<br>104.6<br>102.0 | 0.9510 | N/A | 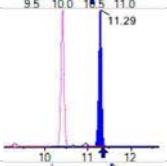 | 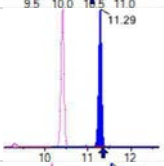 | |
| PFDS | ( 599.0 / 80.0 ) 881008<br>( 599.0 / 99.0 ) 236611 | ( 12.10 , 1.16 ) ( N/A , -0.05 , 0.0) | 1759.6<br>1258.6 | 0.2686<br>105.5<br>99.6 | 1.0180 | N/A | 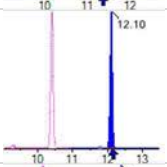 | 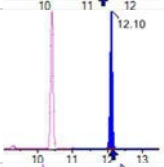 | |
| PFDoS | ( 699.0 / 80.0 ) 886765<br>( 699.0 / 99.0 ) 206071 | ( 13.14 , 1.26 ) ( N/A , -0.03 , 0.0) | 2815.1<br>1980.0 | 0.2324<br>104.0<br>98.3 | 1.0590 | N/A | 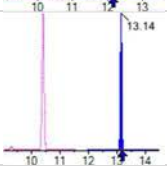 | 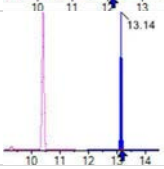 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (13)
Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1431212<br>( 327.0 / 81.0 ) 1346613 | ( 4.79 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4589.5<br>1505.6 | 0.9409<br>110.3<br>107.4 | 3.6480 | N/A | 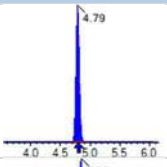 | 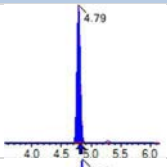 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1320944<br>( 427.0 / 81.0 ) 1769169 | ( 6.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 5456.1<br>3461.2 | 1.3393<br>103.9<br>103.2 | 3.6630 | N/A | 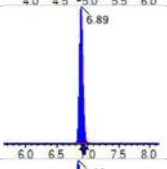 | 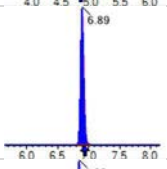 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1281759<br>( 527.0 / 81.0 ) 1298708 | ( 9.29 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2349.9<br>2389.6 | 1.0132<br>91.8<br>92.0 | 3.9030 | N/A | 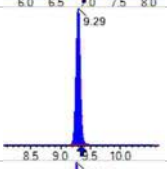 | 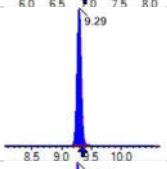 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1089553<br>( 627.0 / 81.0 ) 1555124 | ( 11.02 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1642.1<br>1454.6 | 1.4273<br>99.3<br>98.5 | 4.2810 | N/A | 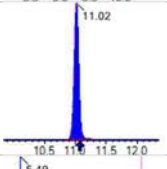 | 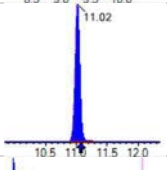 | |
| PFBSA | ( 297.9 / 78.0 ) 333508<br>( 297.9 / 278.0 ) 618 | ( 5.49 , 0.38 )<br>( N/A , -0.04 , 0.1) | 1136.3<br>9.7 | 0.0019<br>143.2<br>164.7 | 2.6270 | N/A | 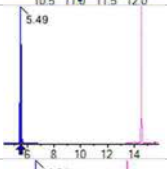 | 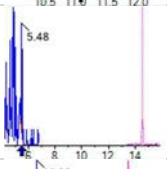 | |
| PFHxSA | ( 397.9 / 78.0 ) 813012<br>( 397.9 / 378.0 ) 2844 | ( 11.21 , 0.75 )<br>( N/A , -0.02 , -0.3) | 1575.5<br>137.0 | 0.0035<br>86.6<br>79.7 | 3.3680 | N/A | 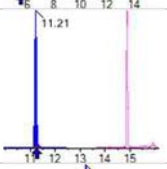 | 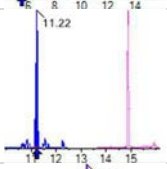 | |
| PFOSA | ( 498.0 / 78.0 ) 554017<br>( 498.0 / 478.0 ) 8831 | ( 13.27 , 1.00 )<br>( -0.01 , N/A , 0.1) | 2226.7<br>221.2 | 0.0159<br>108.4<br>119.8 | 1.0320 | N/A | 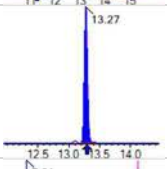 | 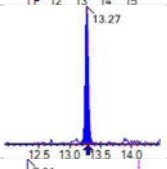 | |
| TFSI | ( 279.7 / 147.0 ) 930943<br>( 279.7 / 211.0 ) 93627 | ( 7.01 , 0.53 )<br>( N/A , -0.05 , 0.1) | 76.0<br>1878.7 | 0.1006<br>113.7<br>114.7 | 0.9930 | N/A | 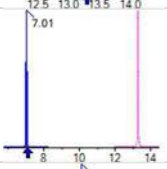 | 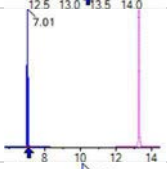 | |
| NMeFOSA | ( 512.0 / 219.0 ) 168243<br>( 512.0 / 169.0 ) 119195 | ( 14.56 , 1.00 )<br>( 0.00 , N/A , 1.4) | 1512.2<br>640.1 | 0.7085<br>92.4<br>95.2 | 4.5250 | N/A | 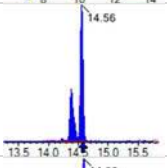 | 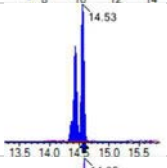 | |
| NEtFOSA | ( 526.0 / 219.0 ) 183627<br>( 526.0 / 169.0 ) 228007 | ( 14.89 , 1.00 )<br>( 0.01 , N/A , 2.3) | 1249.0<br>1332.4 | 1.2417<br>99.3<br>99.8 | 4.2270 | N/A | 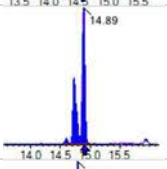 | 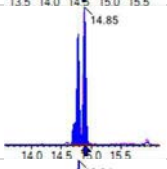 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 210483<br>( 570.0 / 483.0 ) 94202 | ( 10.35 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1842.3<br>1912.9 | 0.4476<br>96.4<br>95.9 | 0.9940 | N/A | 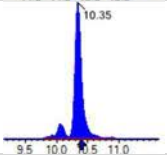 | 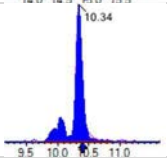 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MSD2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 209810<br>( 584.0 / 526.0 ) 127826 | ( 10.96 , 1.00 )<br>( 0.02 , N/A , 0.3) | 1454.9<br>546.5 | 0.6092<br>101.6<br>101.9 | 0.9920 | N/A | 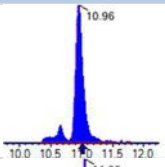 | 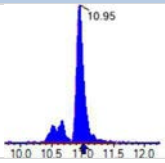 | |
| NMeFOSE | ( 616.0 / 59.0 ) 102229 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 503.3 | N/A<br>0.0<br>0.0 | 4.0920 | N/A | 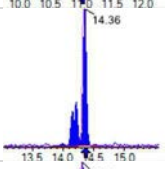 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 84054 | ( 14.72 , 1.00 )<br>( 0.02 , N/A , 0.0) | 688.8 | N/A<br>0.0<br>0.0 | 3.9680 | N/A | 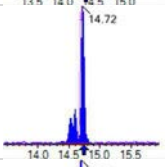 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 49269<br>( 285.0 / 185.0 ) 132238 | ( 5.58 , 1.00 )<br>( -0.01 , N/A , 0.0) | 855.2<br>1105.9 | 2.6840<br>95.6<br>101.6 | 0.9260 | N/A | 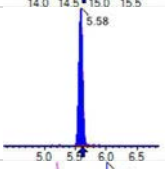 | 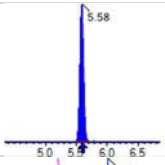 | |
| ADONA | ( 377.0 / 85.0 ) 743761<br>( 377.0 / 251.0 ) 77245 | ( 6.74 , 1.21 )<br>( N/A , -0.04 , 0.0) | 2177.5<br>689.0 | 0.1039<br>99.0<br>104.2 | 1.0600 | N/A | 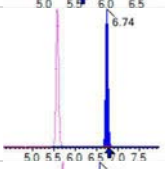 | 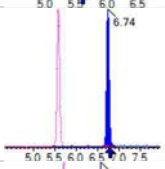 | |
| PFEESA | ( 315.0 / 135.0 ) 239726<br>( 315.0 / 83.0 ) 150455 | ( 5.93 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1505.9<br>568.6 | 0.6276<br>97.8<br>107.3 | 1.8910 | N/A | 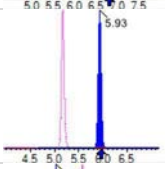 | 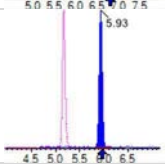 | |
| PFMPA | ( 229.0 / 85.0 ) 153151 | ( 3.65 , 0.88 )<br>( N/A , -0.21 , 0.0) | 4119.9 | N/A<br>0.0<br>0.0 | 2.2750 | N/A | 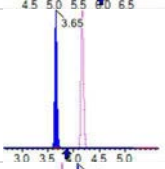 | | |
| PFMBA | ( 279.0 / 85.0 ) 314810 | ( 4.44 , 1.07 )<br>( N/A , -0.11 , 0.0) | 2397.0 | N/A<br>0.0<br>0.0 | 2.0760 | N/A | 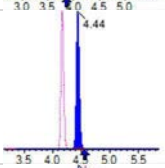 | | |
| NFDHA | ( 295.0 / 201.0 ) 150428<br>( 295.0 / 85.0 ) 137166 | ( 5.04 , 0.98 )<br>( N/A , -0.02 , 0.0) | 2314.2<br>965.4 | 0.9118<br>91.7<br>88.4 | 2.4310 | N/A | 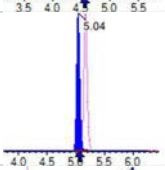 | 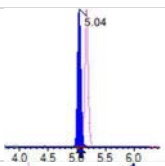 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 731673<br>( 533.0 / 353.0 ) 228564 | ( 11.08 , 1.98 )<br>( N/A , -0.06 , 0.1) | 2757.6<br>1871.0 | 0.3124<br>98.0<br>94.1 | 0.9390 | N/A | 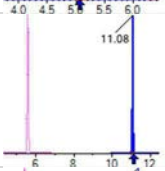 | 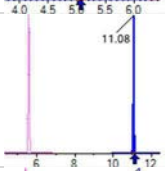 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 612015<br>( 633.0 / 453.0 ) 213608 | ( 12.58 , 2.25 )<br>( N/A , -0.04 , -0.1) | 4047.5<br>1782.8 | 0.3490<br>102.9<br>102.7 | 1.0100 | N/A | 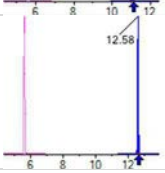 | 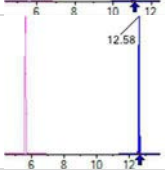 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MSD2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 347341<br>( 461.0 / 381.2 ) 148257 | ( 9.36 , 0.90 )<br>( N/A , -0.05 , 0.1) | 2863.2<br>3339.9 | 0.4268<br>110.5<br>107.4 | 0.8340 | N/A | 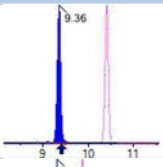 | 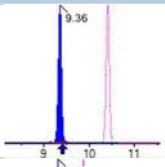 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 64125<br>( 241.0 / 117.0 ) 136607 | ( 3.68 , 0.88 )<br>( N/A , -0.24 , 0.2) | 1958.4<br>943.3 | 2.1303<br>97.0<br>97.8 | 4.0800 | N/A | 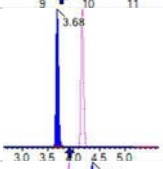 | 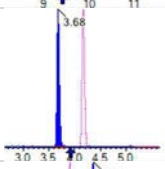 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 203170<br>( 341.0 / 217.0 ) 338221 | ( 5.60 , 1.08 )<br>( N/A , -0.03 , 0.0) | 1233.9<br>1044.0 | 1.6647<br>108.7<br>109.6 | 4.2850 | N/A | 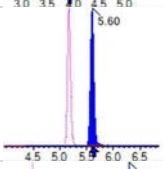 | 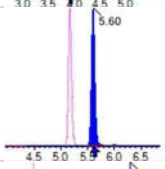 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 476814<br>( 441.0 / 337.0 ) 410815 | ( 9.30 , 1.80 )<br>( N/A , -0.03 , 0.0) | 4309.2<br>16362.4 | 0.8616<br>100.9<br>97.7 | 4.7340 | N/A | 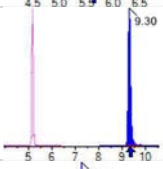 | 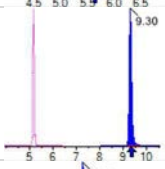 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 279938<br>( 357.2 / 243.0 ) 31841 | ( 5.85 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1103.7<br>189.3 | 0.1137<br>106.1<br>102.8 | 0.9760 | N/A | 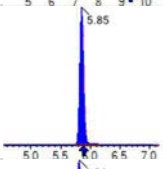 | 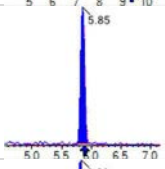 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 239172<br>( 457.2 / 343.0 ) 9917 | ( 8.61 , 1.00 )<br>( 0.00 , N/A , -0.1) | 740.0<br>136.7 | 0.0415<br>92.4<br>94.9 | 1.0830 | N/A | 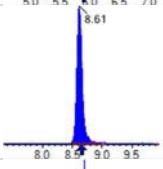 | 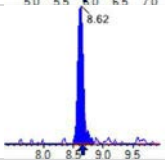 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 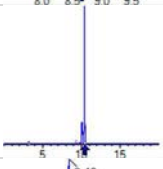 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 218174 | ( 3.40 , N/A )<br>( N/A , -0.21 , N/A ) | 1780.7 | N/A | 0.7730<br>[ 1.0000 ] | 77.3%<br>{ 82.5% } | 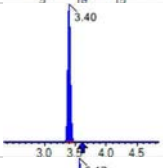 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 91253 | ( 5.17 , N/A )<br>( N/A , -0.02 , N/A ) | 4210.4 | N/A | 0.7730<br>[ 1.0000 ] | 77.3%<br>{ 78.8% } | 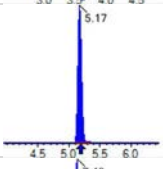 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 330547 | ( 7.43 , N/A )<br>( N/A , -0.04 , N/A ) | 22642.9 | N/A | 0.8520<br>[ 1.0000 ] | 85.2%<br>{ 91.6% } | 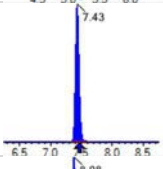 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 224764 | ( 8.98 , N/A )<br>( N/A , -0.05 , N/A ) | 1582.3 | N/A | 0.7690<br>[ 1.0000 ] | 76.9%<br>{ 80.6% } | 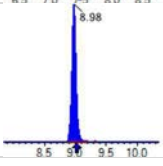 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (13)
Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 226845 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6682.2 | N/A | 0.7910 [ 1.0000 ] | 79.1% { 82.2% } | 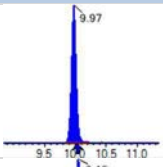 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 811843 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 5455.2 | N/A | 0.8270 [ 1.0000 ] | 82.7% { 88.5% } | 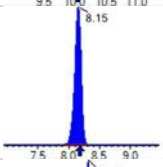 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 622428 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 2858.5 | N/A | 0.7930 [ 1.0000 ] | 79.3% { 80.7% } | 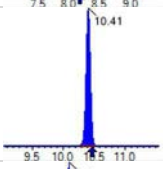 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1969930 | ( 3.40 , N/A ) ( N/A , -0.21 , N/A ) | 65558.2 | N/A | 8.3530 [ 8.0000 ] | 104.4% { 90.7% } | 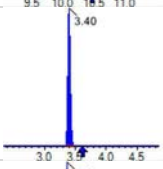 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 733537 | ( 4.17 , N/A ) ( N/A , -0.17 , N/A ) | 5752.6 | N/A | 4.3910 [ 4.0000 ] | 109.8% { 87.7% } | 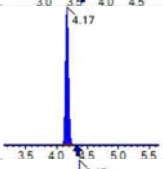 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 375616 | ( 5.17 , N/A ) ( N/A , -0.02 , N/A ) | 6715.2 | N/A | 1.8810 [ 2.0000 ] | 94.1% { 78.1% } | 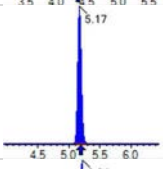 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 509658 | ( 6.31 , N/A ) ( N/A , -0.04 , N/A ) | 17019.4 | N/A | 2.2990 [ 2.0000 ] | 114.9% { 93.0% } | 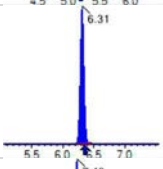 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 696975 | ( 7.43 , N/A ) ( N/A , -0.04 , N/A ) | 5599.2 | N/A | 1.9900 [ 2.0000 ] | 99.5% { 91.0% } | 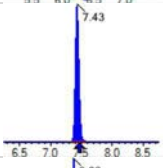 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 226133 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 5659.7 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 83.9% } | 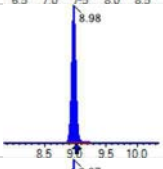 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 255292 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1076.2 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 86.8% } | 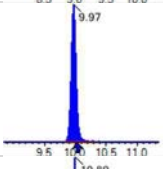 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 318517 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 1407.4 | N/A | 1.0250 [ 1.0000 ] | 102.5% { 86.2% } | 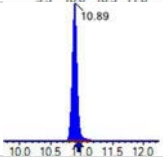 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (13)
Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 327086 | ( 11.78 , N/A ) ( N/A , -0.05 , N/A ) | 1434.5 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 90.1% } | 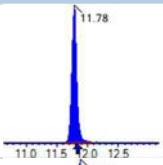 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 282506 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 1332.5 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 86.2% } | 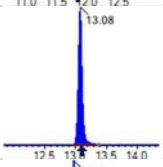 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 443618 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2362.7 | N/A | 1.8780 [ 2.0000 ] | 93.9% { 89.1% } | 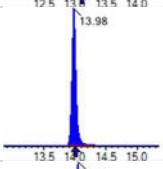 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1258816 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1263.2 | N/A | 1.9240 [ 2.0000 ] | 96.2% { 85.3% } | 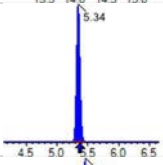 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1217996 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 5792.2 | N/A | 2.0800 [ 2.0000 ] | 104.0% { 93.5% } | 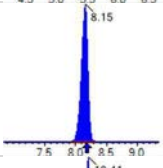 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1337668 | ( 10.41 , N/A ) ( N/A , -0.06 , N/A ) | 1915.2 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 92.6% } | 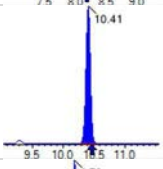 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 594487 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 55.4 | N/A | 4.1300 [ 4.0000 ] | 103.2% { 91.4% } | 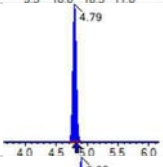 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1699262 | ( 6.90 , N/A ) ( N/A , -0.04 , N/A ) | 4676.8 | N/A | 4.8050 [ 4.0000 ] | 120.1% { 96.6% } | 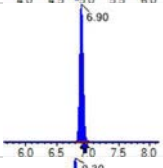 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1335500 | ( 9.30 , N/A ) ( N/A , -0.05 , N/A ) | 1676.3 | N/A | 4.3160 [ 4.0000 ] | 107.9% { 91.8% } | 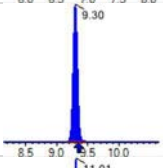 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2564122 | ( 11.01 , N/A ) ( N/A , -0.06 , N/A ) | 1388.1 | N/A | 7.6600 [ 8.0000 ] | 95.8% { 86.0% } | 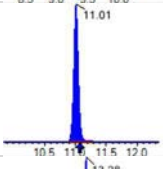 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1109519 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 2878.3 | N/A | 1.5780 [ 2.0000 ] | 78.9% { 71.2% } | 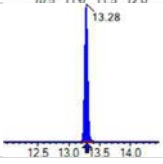 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MSD2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (13)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 23:57

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 83669 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 733.3 | N/A | 0.5290 [ 2.0000 ] | 26.5% { 23.0% } | 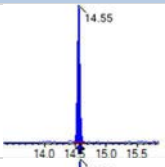 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 76703 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 741.8 | N/A | 0.5310 [ 2.0000 ] | 26.5% { 22.3% } | 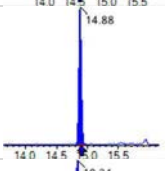 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 918218 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 2783.4 | N/A | 3.9930 [ 4.0000 ] | 99.8% { 77.8% } | 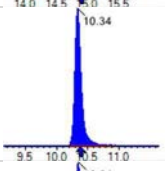 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 872523 | ( 10.94 , N/A ) ( N/A , -0.05 , N/A ) | 2322.9 | N/A | 4.2050 [ 4.0000 ] | 105.1% { 85.6% } | 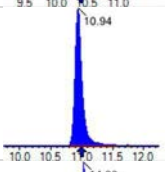 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 461568 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1363.5 | N/A | 7.8170 [ 20.0000 ] | 39.1% { 34.7% } | 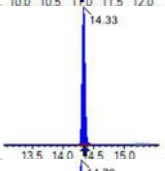 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 444713 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 2731.3 | N/A | 8.0420 [ 20.0000 ] | 40.2% { 35.5% } | 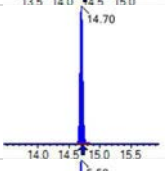 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 724940 | ( 5.59 , N/A ) ( N/A , -0.03 , N/A ) | 1937.1 | N/A | 8.3830 [ 8.0000 ] | 104.8% { 87.6% } | 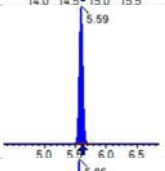 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 545655 | ( 5.86 , N/A ) ( N/A , -0.04 , N/A ) | 2162.6 | N/A | 2.2070 [ 2.0000 ] | 110.4% { 97.1% } | 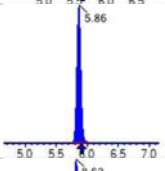 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 534155 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 1261.5 | N/A | 1.9180 [ 2.0000 ] | 95.9% { 79.7% } | 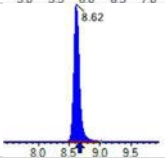 | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

Laboratory: PPL, LLC | Work Order: 24C0121

Client: Tidewater, Inc. | Project: JPL-GW Monitoring

Batch: BDC0337 | Batch Matrix: Water | Preparation: EPA 1633A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-20-4- | 24C0121-01- | 03/22/24 10:26- | 547.39- | 2.00- |
| MW-20-3- | 24C0121-02- | 03/22/24 10:26- | 545.59- | 2.00- |
| MW-20-2- | 24C0121-03- | 03/22/24 10:26- | 546.75- | 2.00- |
| MW-20-1- | 24C0121-04- | 03/22/24 10:26- | 556.71- | 2.00- |
| MW-6- | 24C0121-05- | 03/22/24 10:26- | 526.95- | 2.00- |
| MW-10- | 24C0121-06- | 03/22/24 10:26- | 552.42- | 2.00- |
| DUP-5-031924- | 24C0121-07- | 03/22/24 10:26- | 537.76- | 2.00- |
| MW-5- | 24C0121-08- | 03/22/24 10:26- | 547.65- | 2.00- |
| EB-7-031924- | 24C0121-09- | 03/22/24 10:26- | 553.71- | 2.00- |
| FB-7-031924- | 24C0121-10- | 03/22/24 10:26- | 533.58- | 2.00- |
| Blank- | BDC0337-BLK1- | 03/22/24 10:26- | 500.00- | 2.00- |
| LCS- | BDC0337-BS1- | 03/22/24 10:26- | 500.00- | 2.00- |
| MRL Check- | BDC0337-MRL1- | 03/22/24 10:26- | 500.00- | 2.00- |
| MW-6- | BDC0337-MS1- | 03/22/24 10:26- | 554.71- | 2.00- |
| MW-5- | BDC0337-MS2- | 03/22/24 10:26- | 549.15- | 2.00- |
| MW-6- | BDC0337-MSD1- | 03/22/24 10:26- | 550.17- | 2.00- |
| MW-5- | BDC0337-MSD2- | 03/22/24 10:26- | 569.04- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/26/2024 10:40 am

BDC0337

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Target Weight (g) | Solids (%) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0121-01 A | MW-20-4 F | | | 7 | 3/22/2024 10:26:00AM | 547.386 | 2 | | 200 , 200 | |
| 24C0121-02 A | MW-20-3 F | | | 7 | 3/22/2024 10:26:00AM | 545.585 | 2 | | 200 , 200 | |
| 24C0121-03 A | MW-20-2 F | | | 7 | 3/22/2024 10:26:00AM | 546.747 | 2 | | 200 , 200 | |
| 24C0121-04 A | MW-20-1 F | | | 7 | 3/22/2024 10:26:00AM | 556.711 | 2 | | 200 , 200 | |
| 24C0121-05 A | MW-6 F | | | 7 | 3/22/2024 10:26:00AM | 526.954 | 2 | | 200 , 200 | |
| 24C0121-06 A | MW-10 F | | | 7 | 3/22/2024 10:26:00AM | 552.42 | 2 | | 200 , 200 | |
| 24C0121-07 A | DUP-5-031924 F | | | 7 | 3/22/2024 10:26:00AM | 537.756 | 2 | | 200 , 200 | |
| 24C0121-08 A | MW-5 F | | | 7 | 3/22/2024 10:26:00AM | 547.654 | 2 | | 200 , 200 | |
| 24C0121-09 A | EB-7-031924 F | | | 7 | 3/22/2024 10:26:00AM | 553.705 | 2 | | 200 , 200 | |
| 24C0121-10 A | FB-7-031924 F | | | 7 | 3/22/2024 10:26:00AM | 533.584 | 2 | | 200 , 200 | |
| 24C0131-01 A | MW-15 M | | | 7 | 3/22/2024 10:26:00AM | 565.905 | 2 | | 200 , 200 | |
| 24C0131-02 A | MW-8 M | | | 7 | 3/22/2024 10:26:00AM | 556.501 | 2 | | 200 , 200 | |
| 24C0131-03 A | MW-9 M | | | 7 | 3/22/2024 10:26:00AM | 549.663 | 2 | | 200 , 200 | |
| 24C0131-04 A | EB-8-032024 M | | | 7 | 3/22/2024 10:26:00AM | 540.175 | 2 | | 200 , 200 | |
| 24C0131-05 A | FB-8-032024 M | | | 7 | 3/22/2024 10:26:00AM | 524.233 | 2 | | 200 , 200 | |
| BDC0337-BLK1 | Blank | | | | 3/22/2024 10:26:00AM | 500 | 2 | | 200 , 200 | |
| BDC0337-BS1 | LCS | | | | 3/22/2024 10:26:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MRL1 | MRL Check | | | | 3/22/2024 10:26:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0337-MS1 | Matrix Spike [24C0121-05] | | | | 3/22/2024 10:26:00AM | 554.709 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS2 | Matrix Spike [24C0121-08] | | | | 3/22/2024 10:26:00AM | 549.146 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS3 | Matrix Spike [24C0131-01] | | | | 3/22/2024 10:26:00AM | 564.34 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS4 | Matrix Spike [24C0131-02] | | | | 3/22/2024 10:26:00AM | 544.408 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD1 | Matrix Spike Dup [24C0121-05 | | | | 3/22/2024 10:26:00AM | 550.169 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD2 | Matrix Spike Dup [24C0121-08 | | | | 3/22/2024 10:26:00AM | 569.041 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD3 | Matrix Spike Dup [24C0131-01 | | | | 3/22/2024 10:26:00AM | 556.06 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD4 | Matrix Spike Dup [24C0131-02 | | | | 3/22/2024 10:26:00AM | 554.645 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**
1633

**Spiking Solution(s)**
24B0012 PFAS - MIX 1633 10ng/mL rev1
24C0392 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)**
24B0553 MPFAC-HIF-ES 20.0ng/mL
24C0424 1633 EIS MIXB 20-80ng/mL

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3/26/24



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/26/2024 10:40 am

BDC0337

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47,IG-88
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0488 | Am. Ac. preservative | R021040 |
| 24C0298 | Reagent -0.3M Formic Acid | 50009265 |
| 24C0390 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |
| 24C0391 | Reagent - 0.05MFA | x |
| 24C0421 | Reagent -0.3M Formic Acid | 50009265 |

Batch Comments:

Spiked By: ABK1 3/22/24 10:26
Witness By: MNM2 3/22/24 10:26
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23172102PB,24002101PA
Concentration: 3/26/24 7:49-08:07
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By DLS Date 3/26/24





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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/22/2024 6:48 am

BDC0337

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID (ID's Confirmed By: ABL1) | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24C0121-01 | A | MW-20-4 | F | 593.091 | 45.705 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-02 | A | MW-20-3 | F | 590.615 | 45.030 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-03 | A | MW-20-2 | F | 592.583 | 45.836 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-04 | A | MW-20-1 | F | 602.476 | 45.765 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-05 | A | MW-6 | F | 572.886 | 45.932 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-06 | A | MW-10 | F | 597.993 | 45.573 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-07 | A | DUP-5-031924 | F | 583.729 | 45.973 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-08 | A | MW-5 | F | 593.558 | 45.904 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-09 | A | EB-7-031924 | F | 599.224 | 45.519 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-10 | A | FB-7-031924 | F | 578.710 | 45.126 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-01 | A | MW-15 | M | 611.576 | 45.671 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-02 | A | MW-8 | M | 600.735 | 44.234 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-03 | A | MW-9 | M | 593.767 | 44.104 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-04 | A | EB-8-032024 | M | 586.228 | 46.053 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-05 | A | FB-8-032024 | M | 568.573 | 44.340 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| BDC0337-BLK1 | | Blank | | | | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| BDC0337-BS1 | | LCS | | | | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MRL1 | | MRL Check | | | | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0337-MS1 | B | Matrix Spike [24C0121-05] | | 600.228 | 45.519 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS2 | B | Matrix Spike [24C0121-08] | | 594.910 | 45.764 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS3 | B | Matrix Spike [24C0131-01] | | 609.985 | 45.645 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS4 | B | Matrix Spike [24C0131-02] | | 588.400 | 43.992 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD1 | C | Matrix Spike Dup [24C0121-05] | | 595.323 | 45.154 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD2 | C | Matrix Spike Dup [24C0121-08] | | 614.507 | 45.466 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD3 | C | Matrix Spike Dup [24C0131-01] | | 601.355 | 45.295 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD4 | C | Matrix Spike Dup [24C0131-02] | | 599.863 | 45.218 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0012 | PFAS - MIX 1633 10ng/mL rev1 |
| 24C0392 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

24B0552
+ 24B0553 MPFAC-HIF-ES 20.0ng/mL
24C0424 1633 EIS MIXB 20-80ng/mL
24C0423
24C0280

ABL1/MNM2 @1026 3/22/24
Spiking Witnessed By — Date

ABL1 3/26/24
Preparation Reviewed By — Date

Extracts Received By — Date



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/22/2024 6:48 am

BDC0337

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HL-47, IG-88
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24C0421 | .3m FA | |
| 24C0298 | .3m FA | |
| 24C0391 | 0.05 FA | |
| 24C0390 | 1% AmOH | |
| 24A0488 | Am-Ac Preservative | |

Batch Comments:

Spiked By: ABK1 @1026 3/22/24
Witness By: MMM2 @1026 3/22/24
pH Lot: 10BDH3431
Biotage Cartridge Lot: MS4 – MSD4: 24002101PA all other samples: 23172102PB
Concentration: Start: 3/26/24 @ 0749 → end 3/26/24 @0807
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





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# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01096A | Instrument:A | SaphiraA |
| Calibration: | 2413019A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD01096-CCB1A | S2024-03-28B (1)A | 03/28/24 19:51A |
| Low Cal Checkl | SD01096-LCV1A | S2024-03-28B (2)A | 03/28/24 20:12A |
| Calibration Checkl | SD01096-CCV1A | S2024-03-28B (3)A | 03/28/24 20:32A |
| Performance Mixl | SD01096-PEM1A | S2024-03-28B (4)A | 03/28/24 20:53A |
| Performance Mixl | SD01096-PEM2A | S2024-03-28B (5)A | 03/28/24 21:13A |
| Calibration Blankl | SD01096-CCB2A | S2024-03-28B (6)A | 03/28/24 21:34A |
| Blankl | BDC0337-BLK1A | S2024-03-28B (7)A | 03/28/24 21:54A |
| LCSl | BDC0337-BS1A | S2024-03-28B (8)A | 03/28/24 22:15A |
| MRL Checkl | BDC0337-MRL1A | S2024-03-28B (9)A | 03/28/24 22:35A |
| MW-6l | BDC0337-MS1A | S2024-03-28B (10)A | 03/28/24 22:56A |
| MW-6l | BDC0337-MSD1A | S2024-03-28B (11)A | 03/28/24 23:16A |
| MW-5l | BDC0337-MS2A | S2024-03-28B (12)A | 03/28/24 23:37A |
| MW-5l | BDC0337-MSD2A | S2024-03-28B (13)A | 03/28/24 23:57A |
| MW-20-4l | 24C0121-01A | S2024-03-28B (18)A | 03/29/24 01:40A |
| MW-20-3l | 24C0121-02A | S2024-03-28B (19)A | 03/29/24 02:01A |
| MW-20-2l | 24C0121-03A | S2024-03-28B (20)A | 03/29/24 02:21A |
| MW-20-1l | 24C0121-04A | S2024-03-28B (21)A | 03/29/24 02:42A |
| MW-6l | 24C0121-05A | S2024-03-28B (22)A | 03/29/24 03:02A |
| MW-10l | 24C0121-06A | S2024-03-28B (23)A | 03/29/24 03:23A |
| DUP-5-031924l | 24C0121-07A | S2024-03-28B (24)A | 03/29/24 03:43A |
| MW-5l | 24C0121-08A | S2024-03-28B (25)A | 03/29/24 04:04A |
| EB-7-031924l | 24C0121-09A | S2024-03-28B (26)A | 03/29/24 04:24A |
| FB-7-031924l | 24C0121-10A | S2024-03-28B (27)A | 03/29/24 04:45A |
| Calibration Checkl | SD01096-CCV2A | S2024-03-28B (28)A | 03/29/24 05:05A |
| Calibration Blankl | SD01096-CCB3A | S2024-03-28B (29)A | 03/29/24 05:26A |
| Calibration Checkl | SD01096-CCV3A | S2024-03-28B (35)A | 03/29/24 07:29A |
| Calibration Blankl | SD01096-CCB4A | S2024-03-28B (36)A | 03/29/24 07:49A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0121A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01148A | Instrument:A | SaphiraA |
| Calibration: | 2413019A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD01148-CAL1A | S2024-03-28A (1)A | 03/28/24 15:25A |
| Cal Standardl | SD01148-CAL2A | S2024-03-28A (2)A | 03/28/24 15:45A |
| Cal Standardl | SD01148-CAL3A | S2024-03-28A (3)A | 03/28/24 16:06A |
| Cal Standardl | SD01148-CAL4A | S2024-03-28A (4)A | 03/28/24 16:26A |
| Cal Standardl | SD01148-CAL5A | S2024-03-28A (5)A | 03/28/24 16:47A |
| Cal Standardl | SD01148-CAL6A | S2024-03-28A (6)A | 03/28/24 17:07A |
| Cal Standardl | SD01148-CAL7A | S2024-03-28A (7)A | 03/28/24 17:28A |
| Cal Standardl | SD01148-CAL8A | S2024-03-28A (8)A | 03/28/24 17:48A |
| Initial Cal Blankl | SD01148-ICB1A | S2024-03-28A (9)A | 03/28/24 18:09A |
| Secondary Cal Checkl | SD01148-SCV1A | S2024-03-28A (10)A | 03/28/24 18:29A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**

**CAS #:** 356-02-5

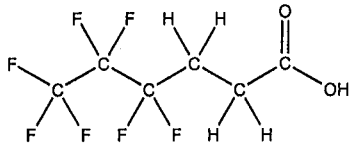


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

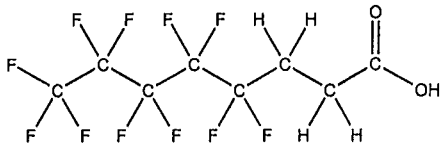

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

*Form#:27, Issued 2004-11-10*
*Revision#:8, Revised 2020-09-10*

# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

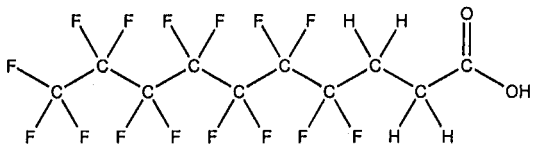

**MOLECULAR FORMULA:** $C_{10}H_5F_{15}O_2$
**MOLECULAR WEIGHT:** 442.12
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 11/12/2020
**EXPIRY DATE:** (mm/dd/yyyy) 11/12/2025
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

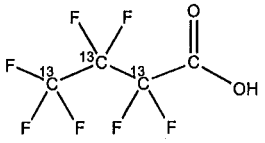

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

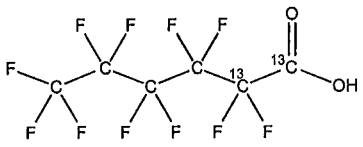

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_4HF_{11}O_2$ | **MOLECULAR WEIGHT:** | 316.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/04/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/04/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

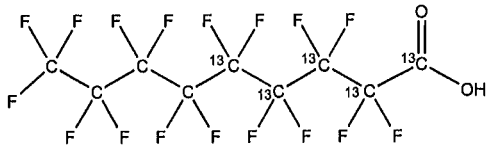

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

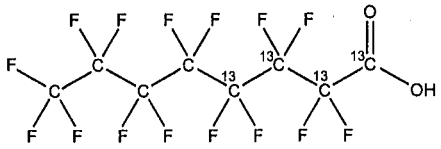

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4HF_{15}O_2$ | **MOLECULAR WEIGHT:** | 418.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/07/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/07/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

## 22A0120

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

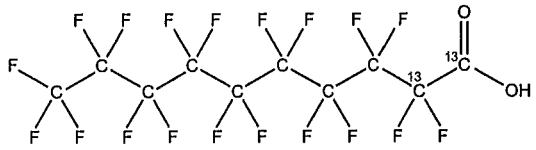

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** MPFOS **LOT NUMBER:** MPFOS0821

**COMPOUND:** Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate

**STRUCTURE:** **CAS #:** 960315-53-1

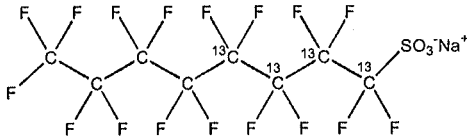

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 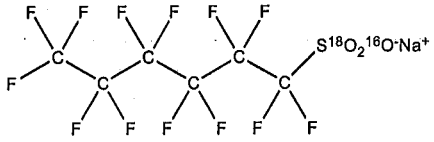 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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**EMD Millipore Corporation | 28820 Single Oak Dr., Temecula, CA 92590**

**Technical Support NA +1-800-221-1975 | email: www.millipore.com/techservices | www.calbiochem.com**

**Technical Support All Other Countries - Contact Your Local Office**

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

## 22J02970

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

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## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

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DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

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# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

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# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

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# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

## 23A0 220

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

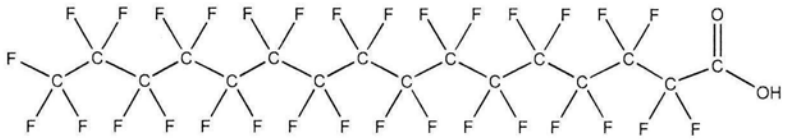

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** PFODA
**COMPOUND:** Perfluoro-n-octadecanoic acid
**LOT NUMBER:** PFODA0622

**STRUCTURE:**
**CAS #:** 16517-11-6

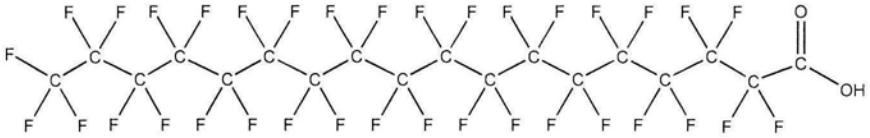

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

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**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

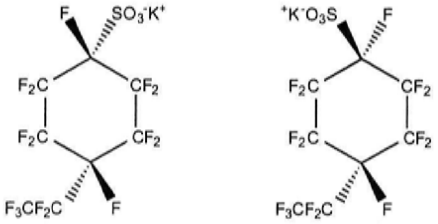


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}SO_3K$ |
| **MOLECULAR WEIGHT:** | 500.22 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (K salt)<br>46.2 ± 2.3 µg/mL (PFECHS acid)<br>46.1 ± 2.3 µg/mL (PFECHS anion) |
| **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% |
| **LAST TESTED:** (mm/dd/yyyy) | 03/28/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/28/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0155C

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FBSA-I
**COMPOUND:** Perfluoro-1-butanesulfonamide
**LOT NUMBER:** FBSA0123I

**STRUCTURE:**

**CAS #:** 30334-69-1

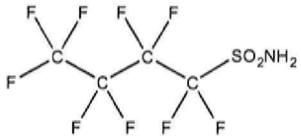

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**
**CAS #:** 41997-13-1

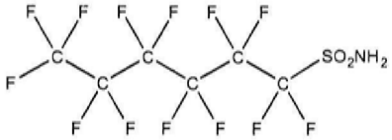

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
800-368-1131
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**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty

Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| Formulated By: | Prashant Chauhan | 051723 DATE |
|---|---|---|
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4448& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Hodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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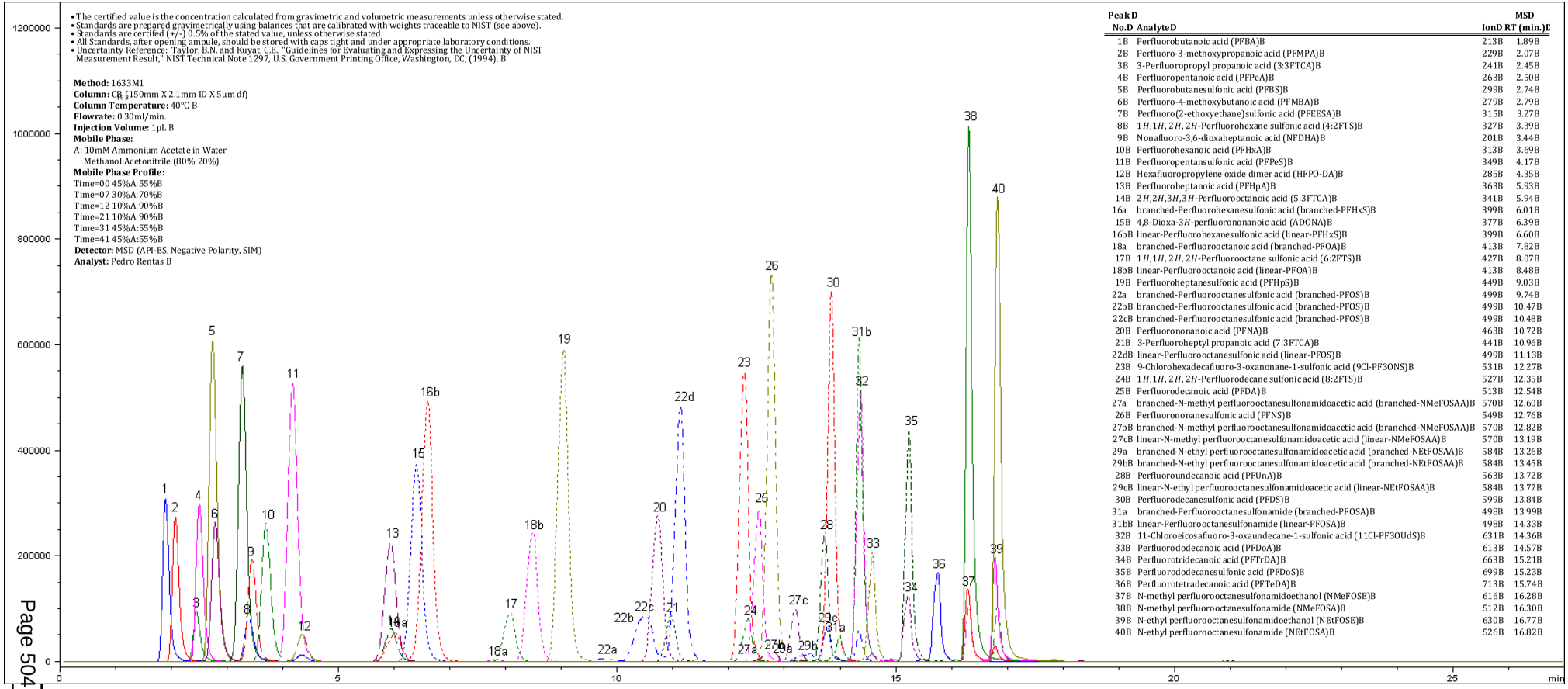


| Peak No. | Analyte | D | MSD Ion | D | RT (min.) | D |
|---|---|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B | 1.89 | B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B | 2.07 | B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B | 2.45 | B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B | 2.50 | B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B | 2.74 | B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B | 2.79 | B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B | 3.27 | B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B | 3.39 | B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B | 3.44 | B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B | 3.69 | B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B | 4.17 | B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B | 4.35 | B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B | 5.93 | B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B | 5.94 | B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B | 6.01 | B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B | 6.39 | B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B | 6.60 | B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B | 7.82 | B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B | 8.07 | B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B | 8.48 | B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B | 9.03 | B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 9.74 | B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.47 | B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.48 | B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B | 10.72 | B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B | 10.96 | B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B | 11.13 | B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B | 12.27 | B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B | 12.35 | B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B | 12.54 | B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.60 | B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B | 12.76 | B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.82 | B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B | 13.19 | B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.26 | B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.45 | B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B | 13.72 | B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B | 13.77 | B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B | 13.84 | B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B | 13.99 | B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B | 14.33 | B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B | 14.36 | B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B | 14.57 | B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B | 15.21 | B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B | 15.23 | B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B | 15.74 | B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B | 16.28 | B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B | 16.30 | B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B | 16.77 | B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B | 16.82 | B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

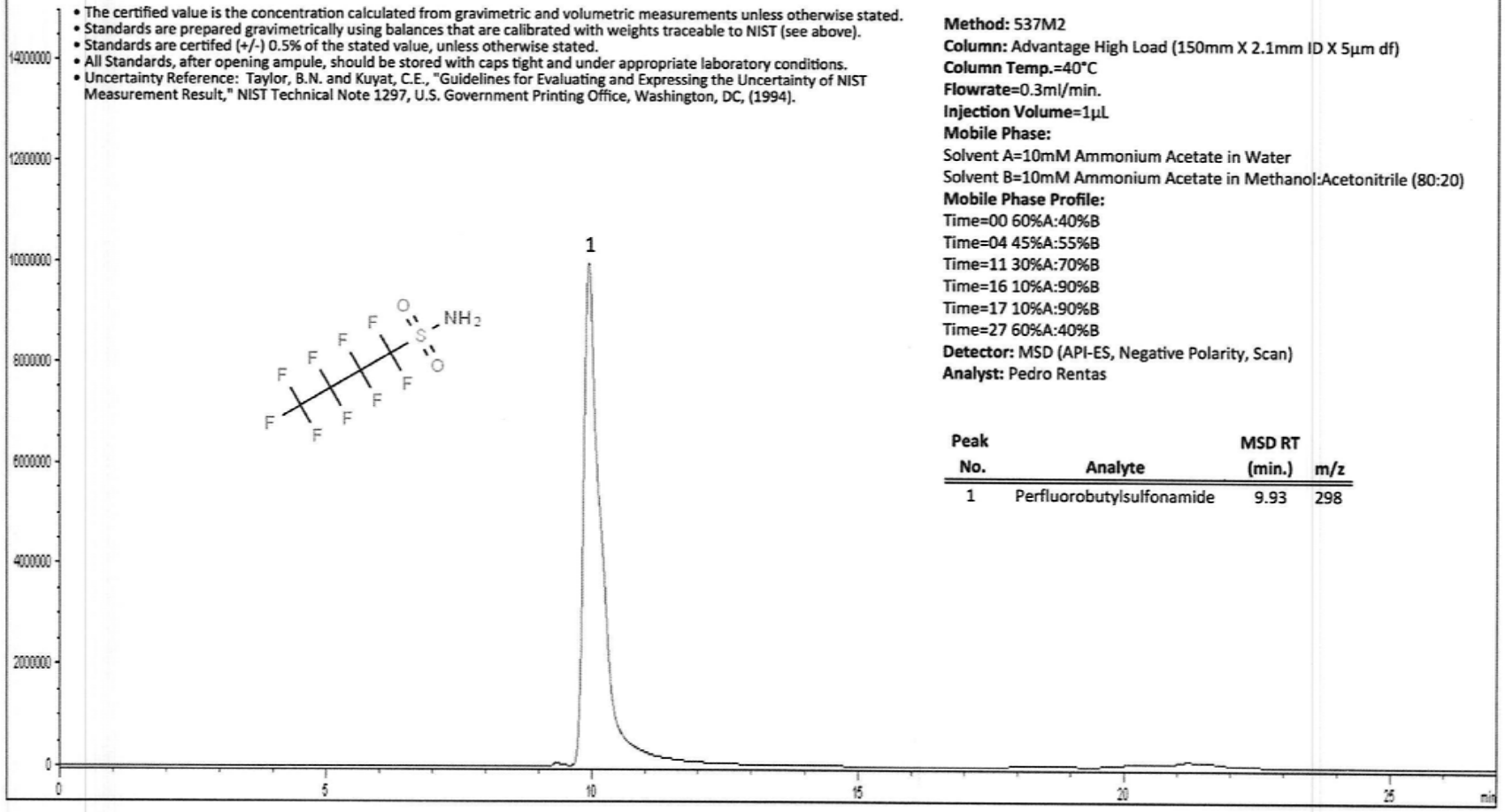


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 091125 | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 23060 | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Formulated By: | Benson Chan | 091120 DATE |
| Reviewed By: | Pedro L. Rentas | 091120 DATE |

| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

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# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

## PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

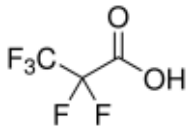


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000 ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0012B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0012** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

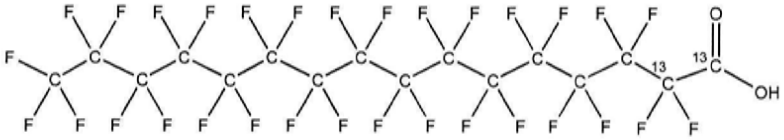

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

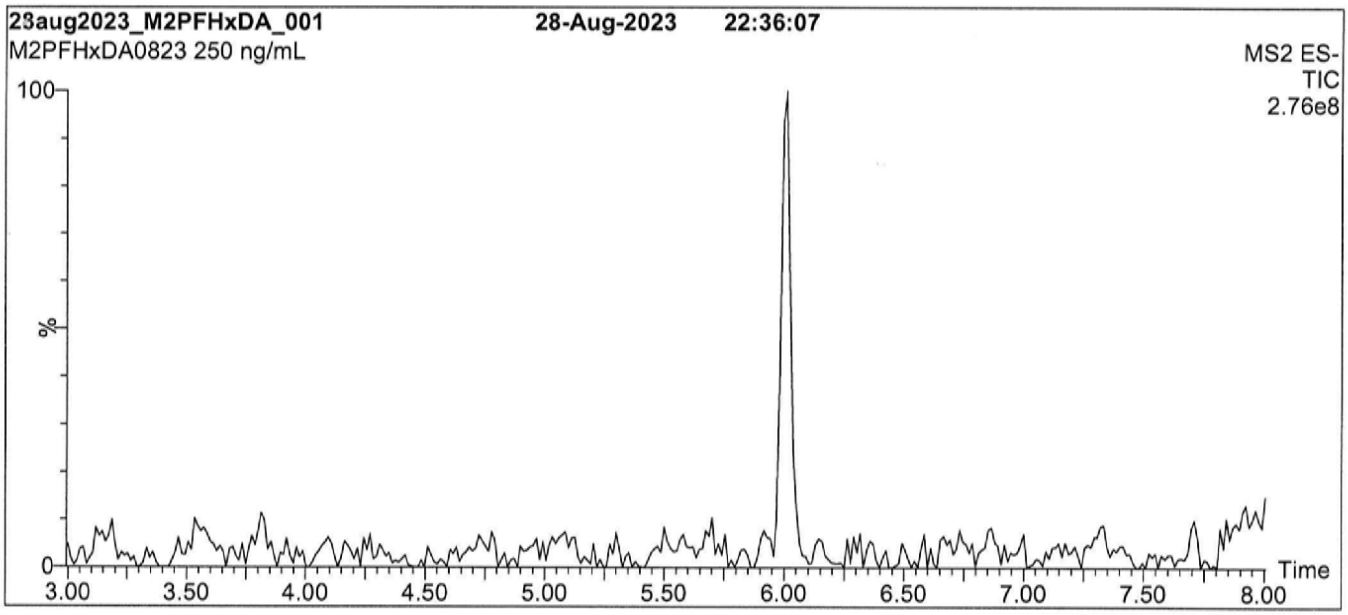


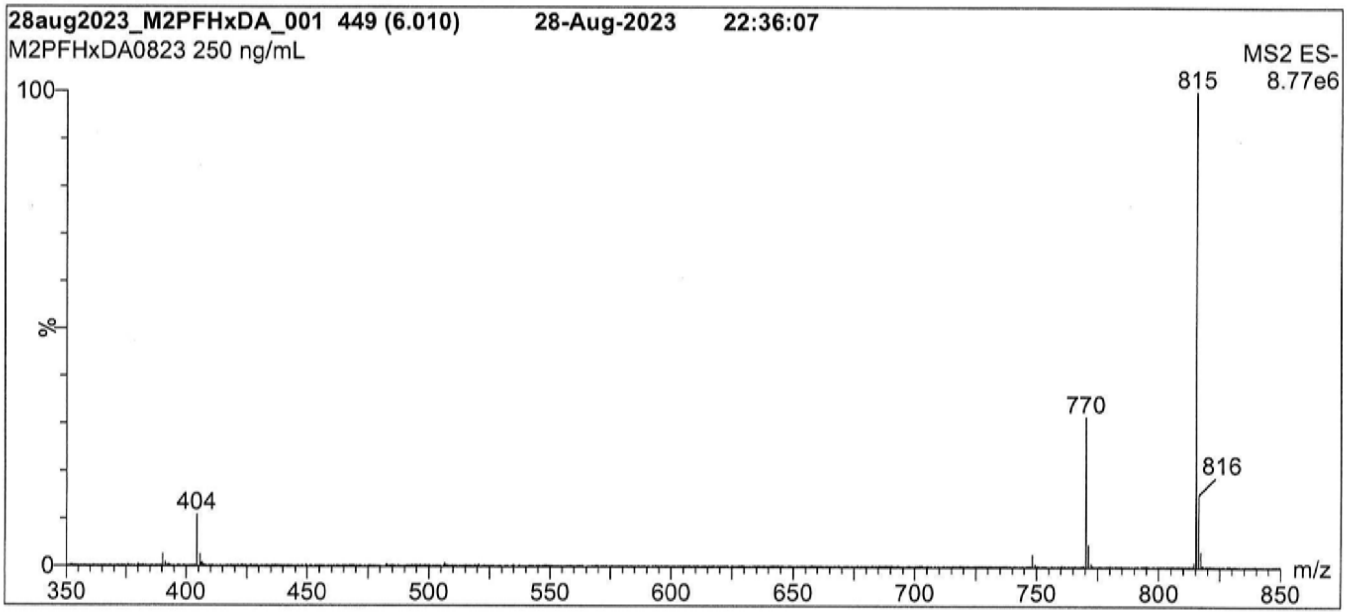


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

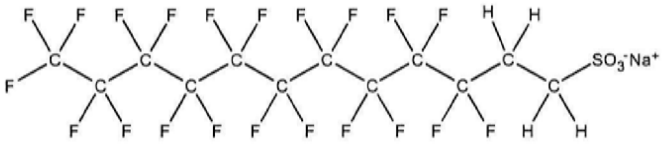


**MOLECULAR FORMULA:** $C_{12}H_4F_{21}SO_3Na$ **MOLECULAR WEIGHT:** 650.18
**CONCENTRATION:** 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
48.3 ± 2.4 µg/mL (10:2FTS acid)
48.2 ± 2.4 µg/mL (10:2FTS anion)
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 09/13/2023
**EXPIRY DATE:** (mm/dd/yyyy) 09/13/2028
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

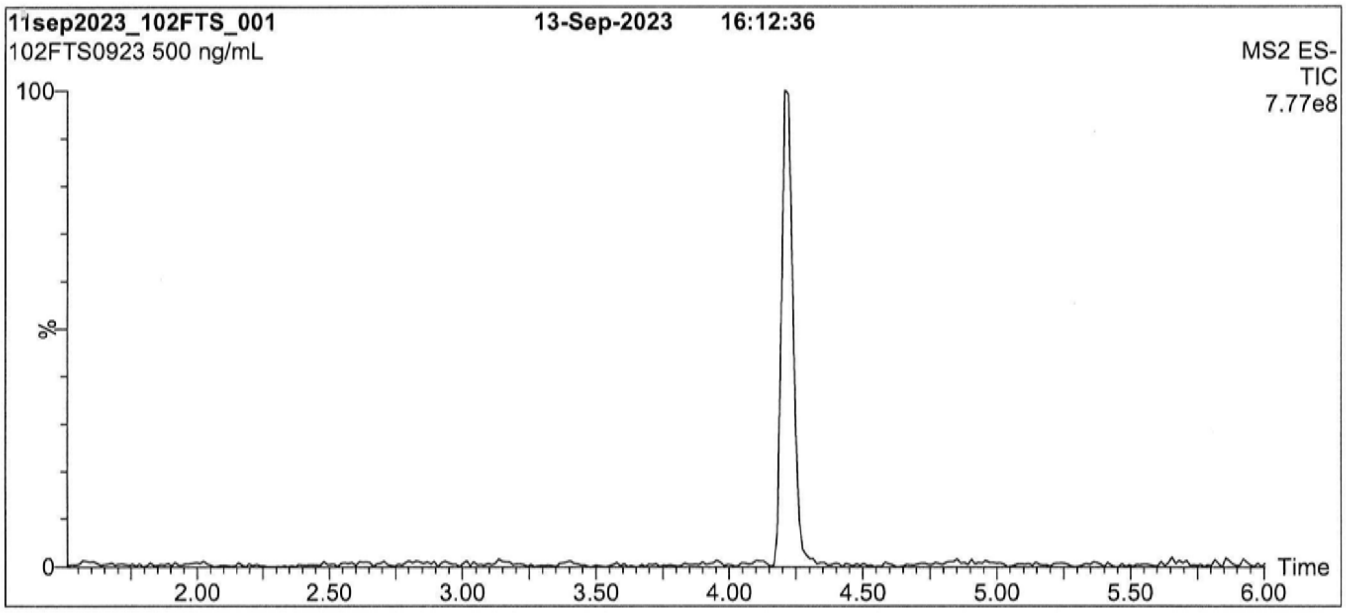


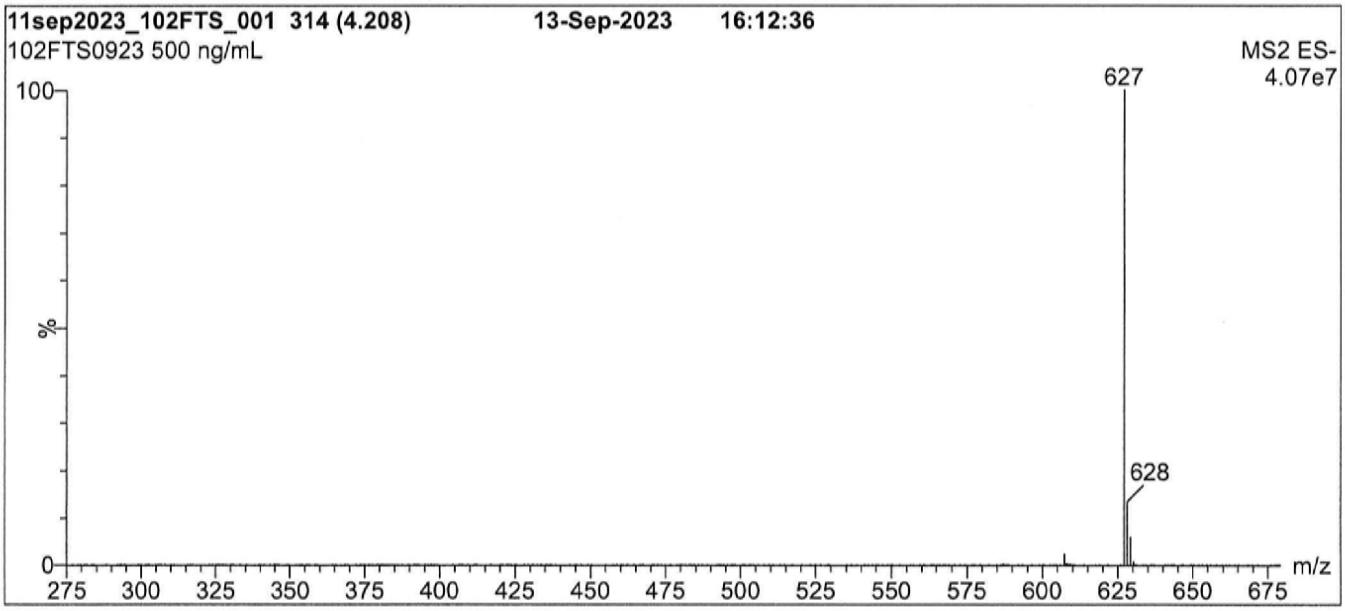


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

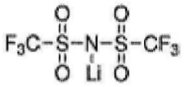

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

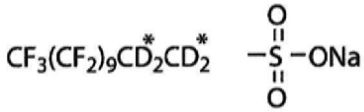

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

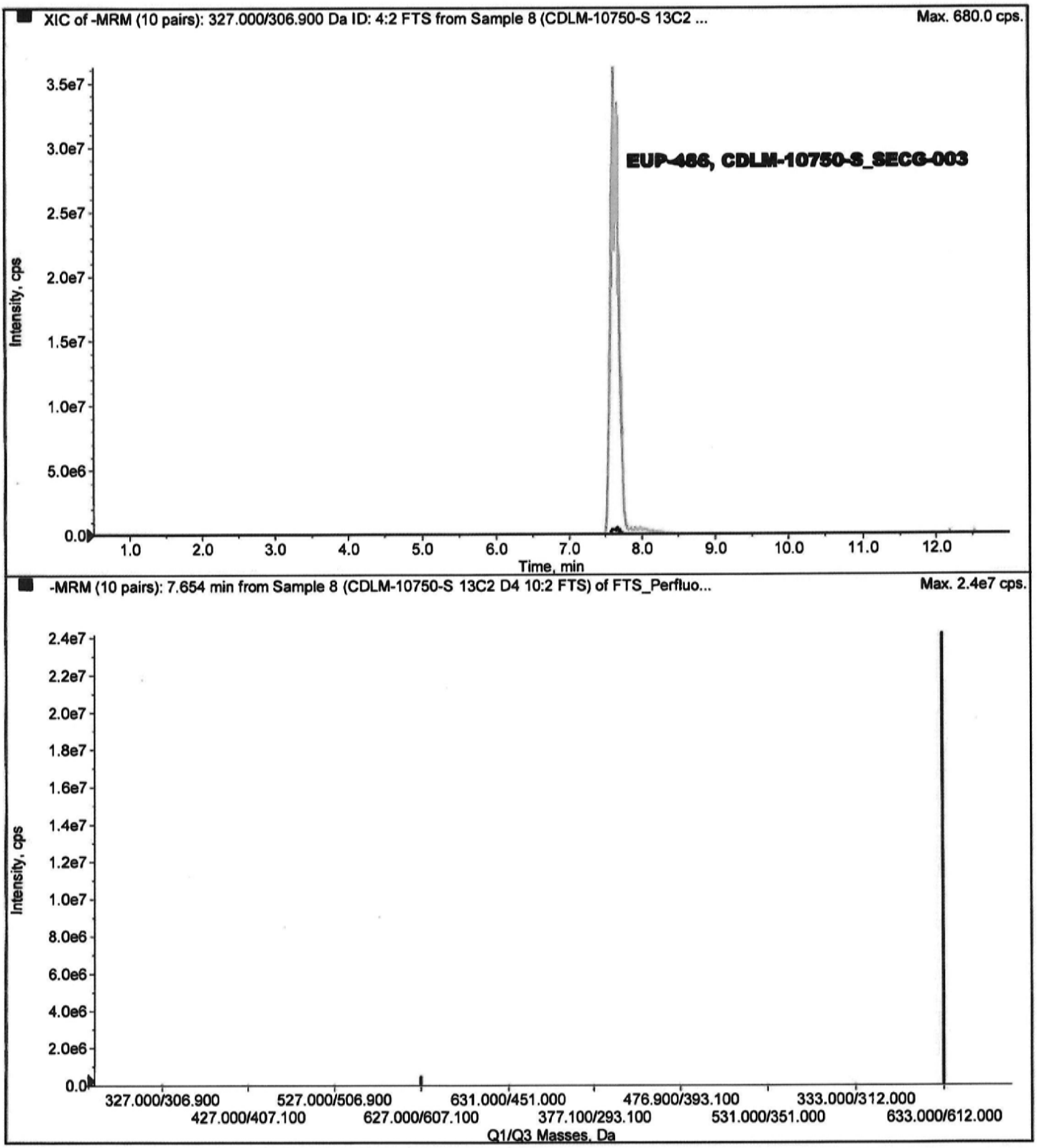

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

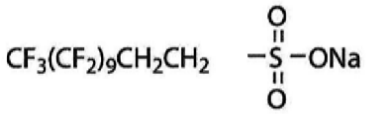

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description: s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls): s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| **nalyte** A | **ParentA** | **CAS NumberA** | **Concentration A** | **UnitsA** |
|---|---|---|---|---|
| 8:2FTUCA s | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FOUEA | **LOT NUMBER:** | FOUEA1123 |
| **COMPOUND:** | 2H-Perfluoro-2-decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 70887-84-2 |

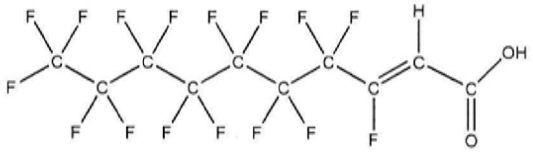

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

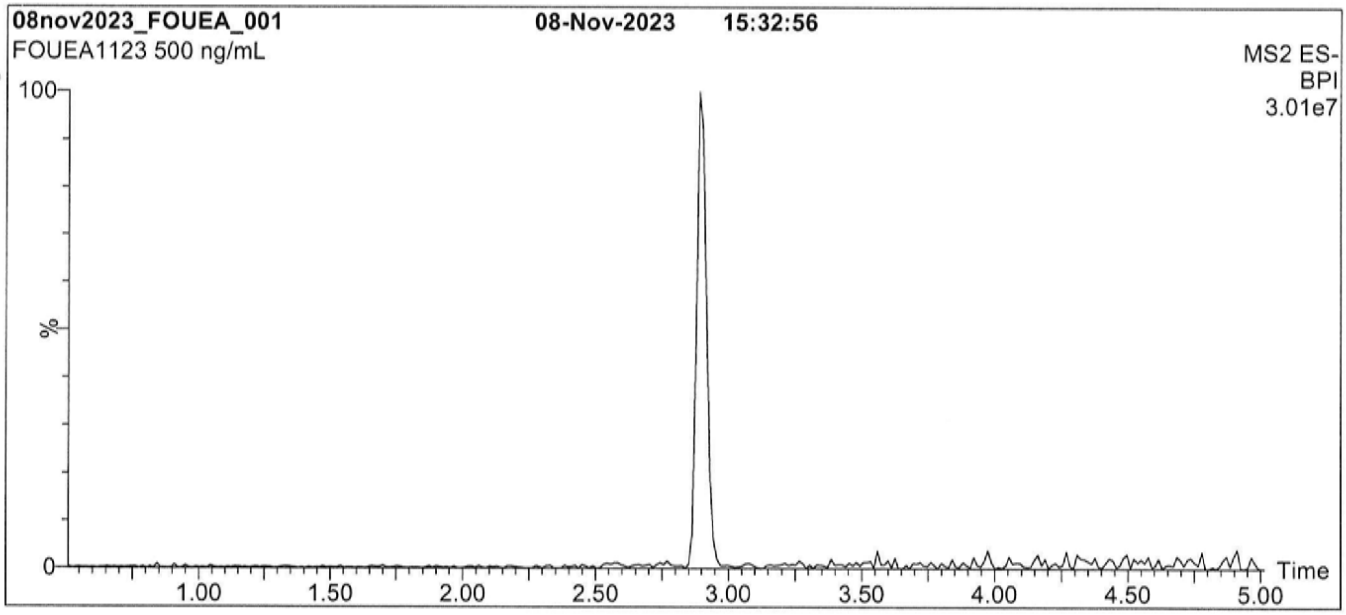


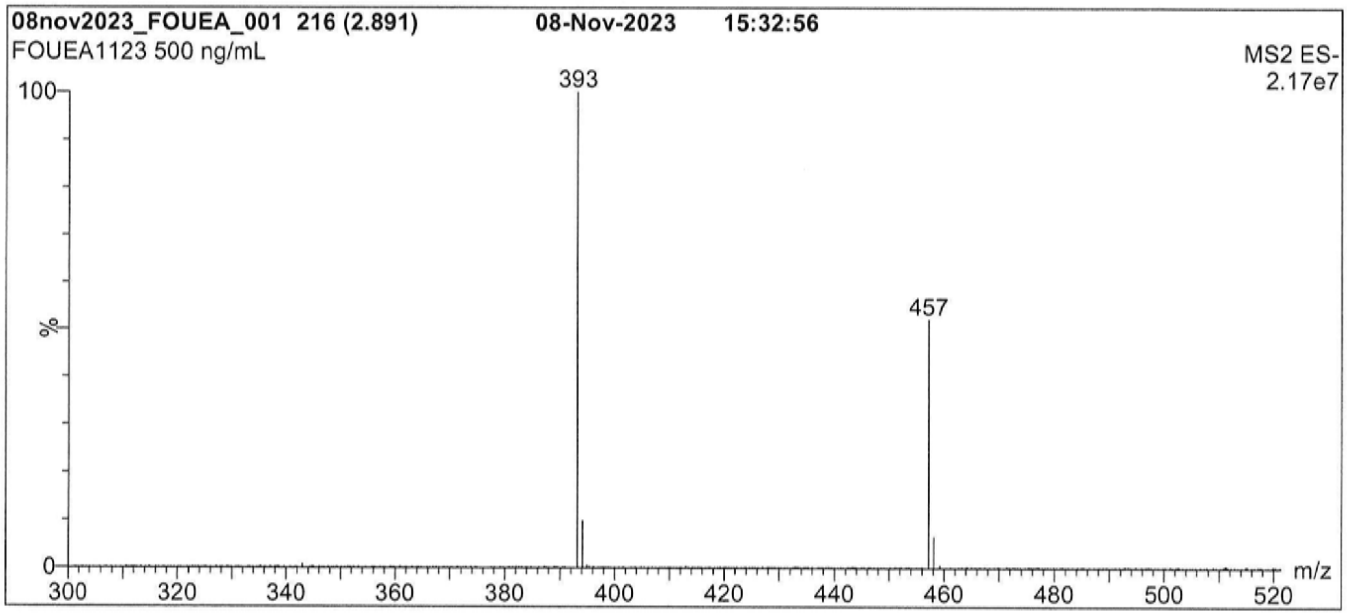


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

**24B0292**

| | | | |
|---|---|---|---|
| Description: s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls): s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| **nalyte** A | **ParentA** | **CAS NumberA** | **Concentration A** | **UnitsA** |
|---|---|---|---|---|
| 6:2FTUCA s | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

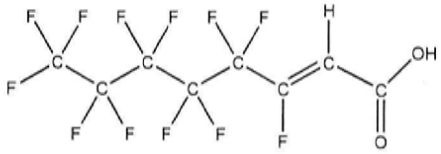

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

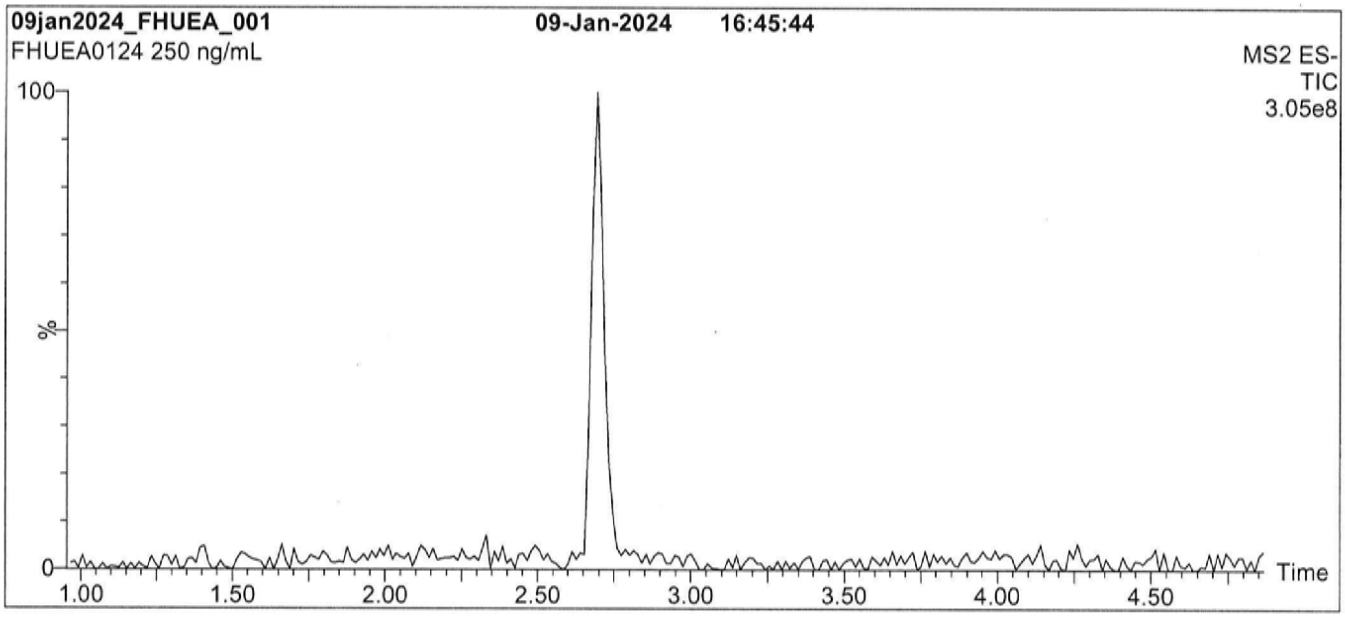


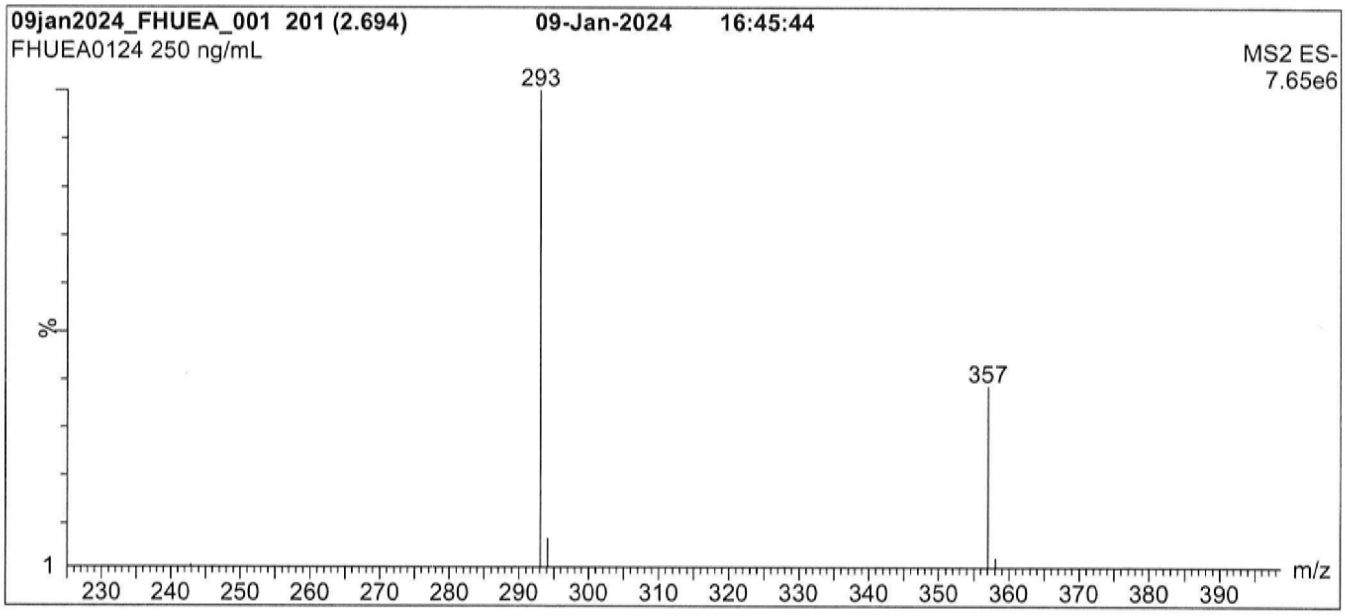


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description: s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls): s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCA s | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

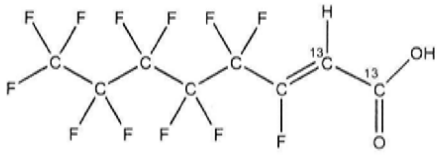

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-($1,2\text{-}^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-($1,2\text{-}^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

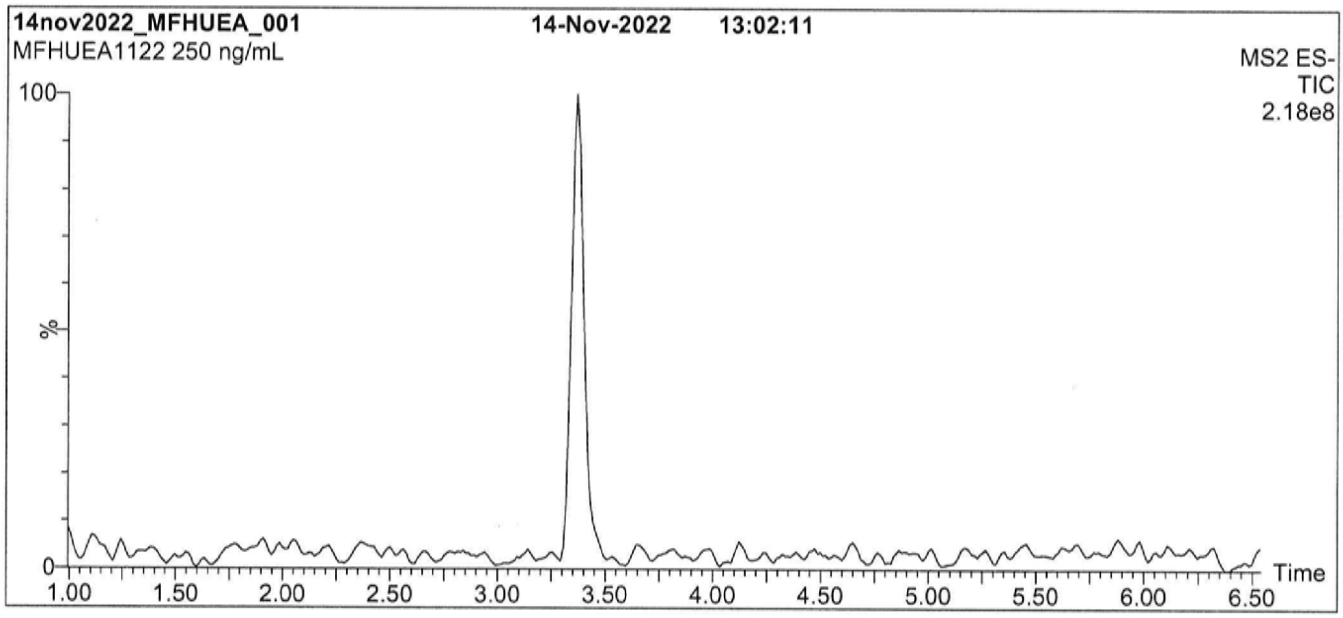


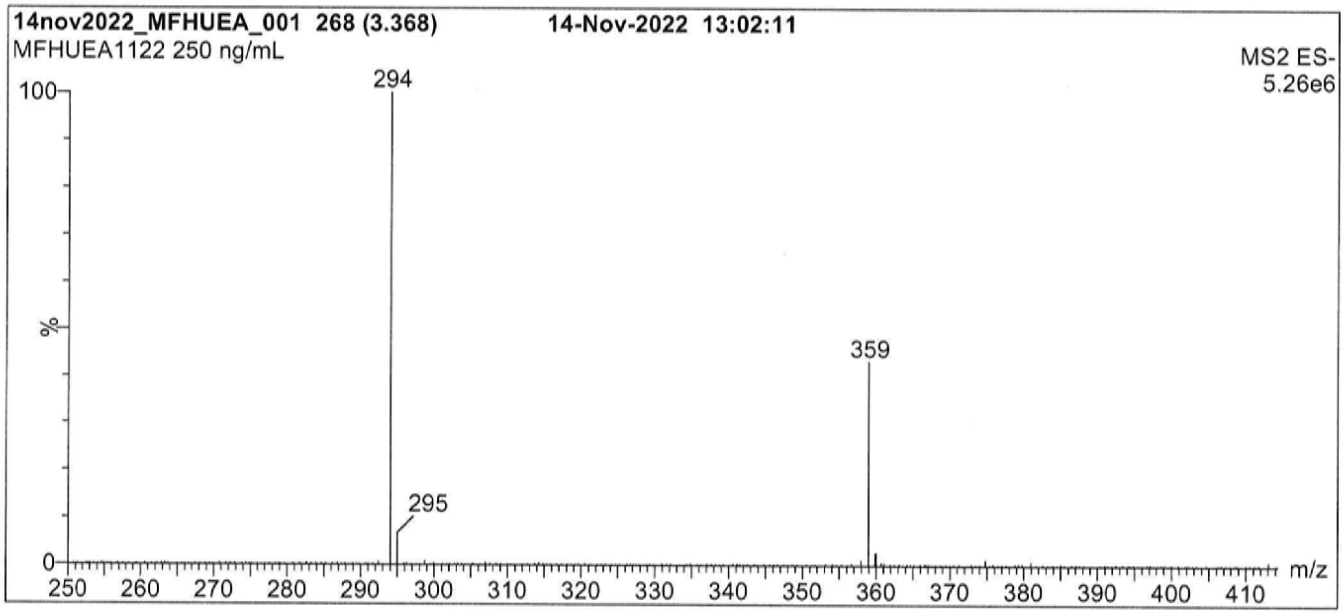


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

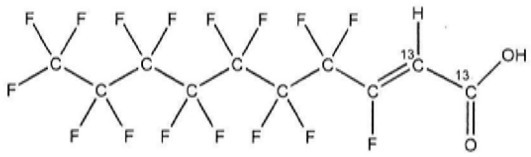

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

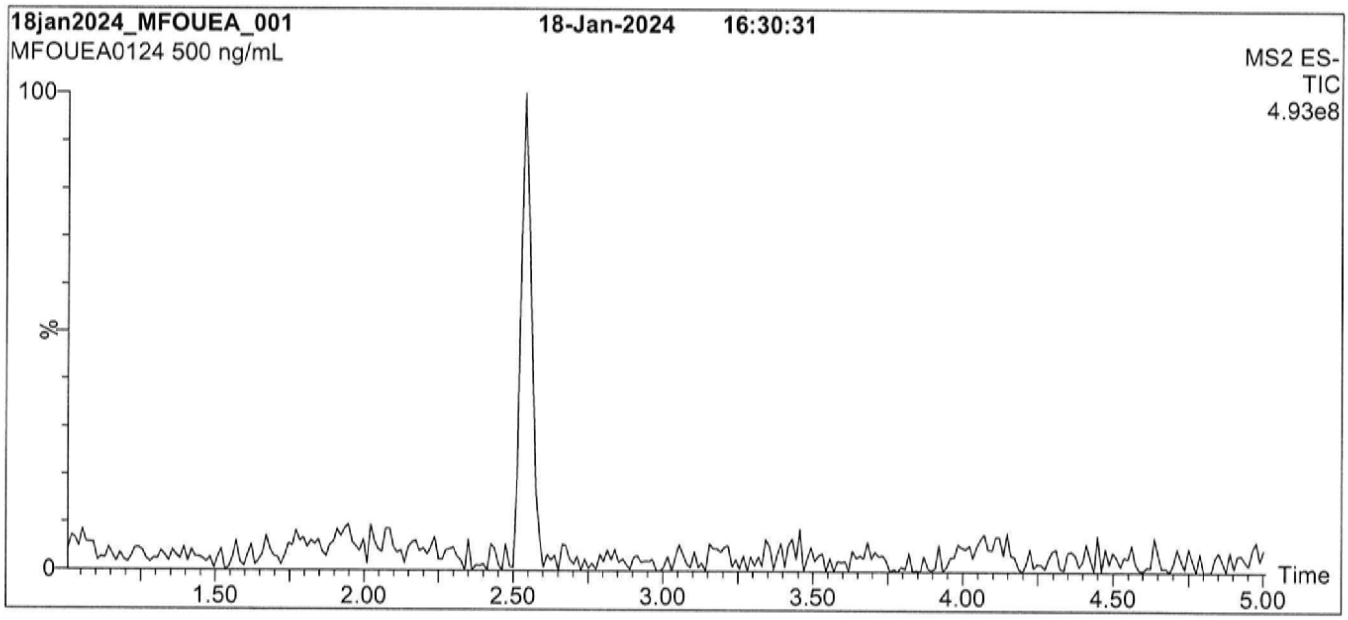


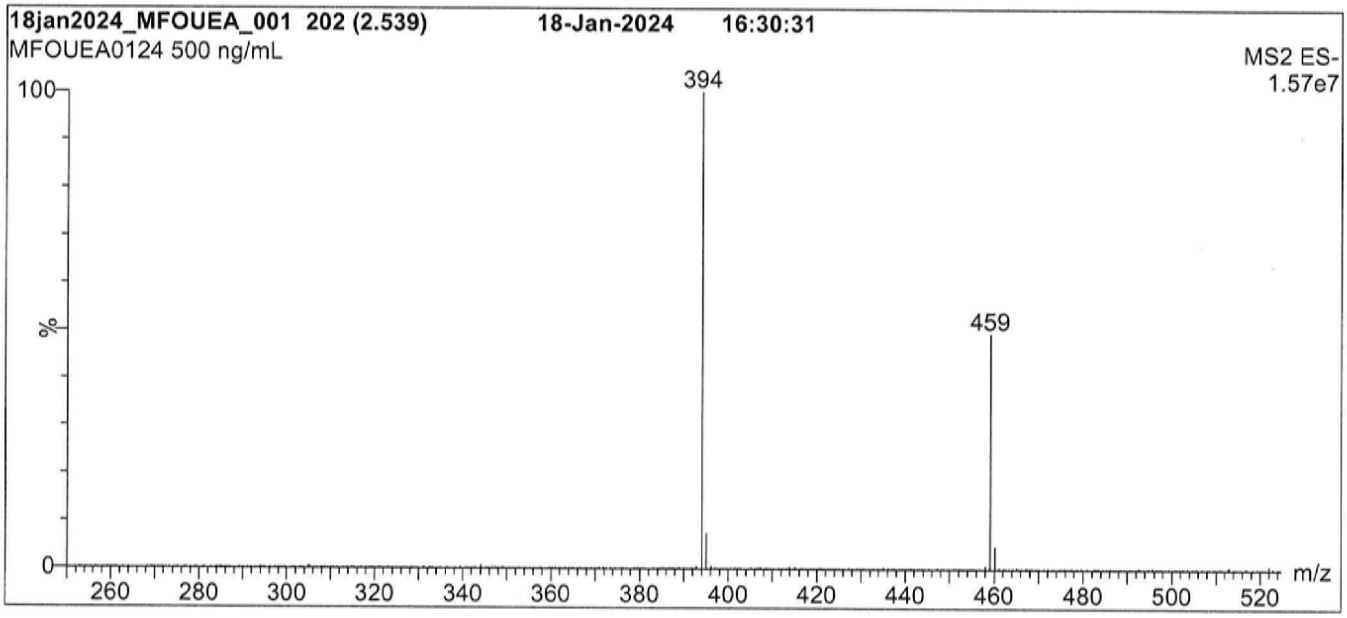


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description: s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description: s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

3050 Spruce Street, Saint Louis, MO 63103, USA
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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

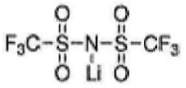

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# Analytical Standard RecordB

## 24C0281B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/12/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 16:39 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# nalytical Standard RecordA

## 24C0392

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 03/18/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/18/2024 11:15 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.25s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24C0424B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/19/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 13:18 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

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908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.comL

NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

April 05, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0131L

Enclosed are the results of analyses for samples received by our laboratory on 3/21/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

E O For Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
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| | | |
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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

# Data Validatable Report

## Analysis Case Narrativen

**n**

**EPA 1633:** Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical t justification are provided as data qualifiers.t

The extracted internal standard 13C8-PFOSA recovered below the lower control limit in sample 05 - FB-8-032024.t

The analyte PFOA recovered above one half the LOQ in the BDC0337-BLK1. The associated samples have been flagged t appropriately. The extracted internal standard 13C8-PFOSA recovered below the lower control limit.t

The analytes PFOA, NMeFOSA, NEtFOSA, NMeFOSE and NEtFOSE recovered above the upper control limits in the t BDC0337-MS3 performed on the sample 01 - MW-15. The extracted internal standards 13C8-PFOSA, D3-NMeFOSA, and t D5-NEtFOSA recovered below the lower control limits. The analytes PFODA and NMeFOSE recovered with high RPD between the BDC0337-MS3 and BDC0337-MSD3.t

## Samples in this Reportn

| Lab IDn | Sample n | Matrixn | Date Sampledn | Date Receivedn |
|---|---|---|---|---|
| 24C0131-01o | MW-15o | Watero | 03/20/2024 08:56o | 03/21/2024o |
| 24C0131-02o | MW-8o | Watero | 03/20/2024 10:35o | 03/21/2024o |
| 24C0131-03o | MW-9o | Watero | 03/20/2024 13:35o | 03/21/2024o |
| 24C0131-04o | EB-8-032024o | Watero | 03/20/2024 13:40o | 03/21/2024o |
| 24C0131-05o | FB-8-032024o | Watero | 03/20/2024 13:45o | 03/21/2024o |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Containers Receivedn

| Lab IDn | Container Typen | Countn | Preservation Checkn |
|---|---|---|---|
| 24C0131-01t | | | |
| | 500mL Pt | 3t | |
| 24C0131-02t | | | |
| | 500mL Pt | 3t | |
| 24C0131-03t | | | |
| | 500mL Pt | 1t | |
| 24C0131-04t | | | |
| | 500mL Pt | 1t | |
| 24C0131-05t | | | |
| | 500mL Pt | 1t | |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Sample Resultsa

a

**Sample: aMW-15 a**

**24C0131-01 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 5.2o | | 1.4o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 4.8o | | 0.71o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 4.9o | | 0.35o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 3.0o | | 0.35o | 0.036o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 5.9o | | 0.35o | 0.13o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | 2.2o | | 0.35o | 0.072o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | 2.8o | | 0.35o | 0.090o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.35o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.35o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.35o | 0.17o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 2.1o | | 0.35o | 0.032o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.20o | Jo | 0.35o | 0.055o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.93o | MI5o | 0.35o | 0.028o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | 0.099o | Jo | 0.35o | 0.045o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 7.6o | | 0.35o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.35o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.35o | 0.13o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.35o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.4o | 0.073o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.4o | 0.35o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.35o | 0.092o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.4o | 0.42o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.35o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.35o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.4o | 0.89o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.4o | 0.92o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.71o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.71o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.71o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.71o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.71o | 0.080o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.71o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.71o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.71o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.4o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.4o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.4o | 0.49o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *96.3%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *118%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Sample Results

**(Continued)**

### Sample: MW-15 (Continued)

**24C0131-01 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *110%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *107%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *95.9%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *96.0%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *102%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *71.0%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *92.6%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *106%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *109%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *127%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *106%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *96.4%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *83.8%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *37.5%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *36.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *95.0%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *103%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *67.0%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *59.9%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-8 a**

**24C0131-02 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 2.1o | | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 1.1o | | 0.72o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 0.55o | | 0.36o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 0.22o | Jo | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.54o | Bo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | | 0.36o | 0.091o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 0.73o | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | | 0.36o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 0.10o | MI5, Jo | 0.36o | 0.028o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 2.3o | | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.4o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.72o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.72o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *96.9%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *125%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Sample Results
**(Continued)**

### Sample: MW-8 (Continued)
**24C0131-02 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *113%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *115%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *97.0%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *100%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *96.6%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *95.7%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *95.6%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *101%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *86.1%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *92.1%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *94.5%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *101%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *113%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *102%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *99.3%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *81.1%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *31.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *32.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *96.3%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *99.1%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *40.6%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *40.2%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *110%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-9 a**

**24C0131-03 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 10o | | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | 11o | | 0.73o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | 11o | | 0.36o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | 6.4o | | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 17o | MI5o | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | 4.4o | | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | 13o | | 0.36o | 0.092o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.36o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.36o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | 6.6o | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | 0.18o | Jo | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | 1.1o | MI5o | 0.36o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | 0.26o | Jo | 0.36o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 20o | | 0.36o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.5o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.5o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.5o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | 0.15o | Jo | 0.36o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.5o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.36o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.5o | 0.92o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.5o | 0.95o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.73o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.73o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.73o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.73o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.73o | 0.083o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.73o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.5o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.5o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.5o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *95.4%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *128%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Sample Results

**(Continued)**

### Sample: MW-9 (Continued)

**24C0131-03 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *108%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *121%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *100%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *98.5%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *102%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *115%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *93.6%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *88.0%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *97.4%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *95.3%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *95.3%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *109%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *96.2%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *90.9%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *82.2%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *52.6%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *57.4%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *79.5%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *91.2%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *63.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *59.1%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *114%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-8-032024 a**

**24C0131-04 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | NDo | | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | | 0.74o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | NDo | | 0.37o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | NDo | | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.42o | Bo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | | 0.37o | 0.076o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | | 0.37o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | NDo | | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | NDo | | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | | 0.37o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.16o | MI5, Jo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | | 1.5o | 0.076o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | 0.18o | Jo | 0.37o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | | 1.5o | 0.44o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | | 0.37o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | | 1.5o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | | 1.5o | 0.97o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | | 0.74o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | | 0.74o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | | 0.74o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | | 0.74o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | | 0.74o | 0.084o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | | 0.74o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | | 0.74o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *109%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *112%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/05/2024 12:21o |

## Sample Resultsa

**(Continued) a**

### Sample: aEB-8-032024 (Continued)a

**24C0131-04 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *94.5%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *110%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *102%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *100%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *102%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *100%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *98.7%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *99.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *86.2%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *99.1%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *107%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *107%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *117%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *118%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *114%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *110%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *63.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *34.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *38.3%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *102%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *104%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *45.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *40.1%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *102%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-8-032024 a**

**24C0131-05 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | NDo | 1.5o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeAo | NDo | 0.76o | 0.062o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxAo | NDo | 0.38o | 0.052o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpAo | NDo | 0.38o | 0.039o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOAo | 0.29o B, Jo | 0.38o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNAo | NDo | 0.38o | 0.078o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDAo | NDo | 0.38o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFUnAo | NDo | 0.38o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoAo | NDo | 0.38o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTrDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFTeDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxDAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFODAo | NDo | 0.38o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFBSo | NDo | 0.38o | 0.035o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFPeSo | NDo | 0.38o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHxSo | NDo | 0.38o | 0.030o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFHpSo | NDo | 0.38o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSo | 0.13o MI5, Jo | 0.38o | 0.061o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFNSo | NDo | 0.38o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDSo | NDo | 0.38o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFDoSo | NDo | 0.38o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 4:2FTSo | NDo | 1.5o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 6:2FTSo | NDo | 1.5o | 0.30o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 8:2FTSo | NDo | 1.5o | 0.078o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 10:2FTSo | NDo | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFOSAo | NDo | 0.38o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAo | NDo | 1.5o | 0.45o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSAAo | NDo | 0.38o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSAAo | NDo | 0.38o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NMeFOSEo | NDo | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NEtFOSEo | NDo | 1.5o | 1.0o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| HFPO-DAo | NDo | 0.76o | 0.17o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| ADONAo | NDo | 0.76o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFEESAo | NDo | 0.76o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMPAo | NDo | 0.76o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| PFMBAo | NDo | 0.76o | 0.087o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| NFDHAo | NDo | 0.76o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 9Cl-PF3ONSo | NDo | 0.76o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 11Cl-PF3OUDSo | NDo | 0.76o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 3:3FTCAo | NDo | 1.5o | 0.55o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 5:3FTCAo | NDo | 1.5o | 0.42o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| 7:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0337o |
| *Surrogate: 13C4-PFBAo* | *92.2%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *112%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Sample Results
**(Continued)**

### Sample: FB-8-032024 (Continued)
**24C0131-05 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *99.2%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *110%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *98.7%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *96.2%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *93.6%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *90.6%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *84.9%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *70.0%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *92.0%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *103%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *113%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *121%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *107%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *104%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *27.3%* | *S1* | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *11.7%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *12.5%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *101%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *103%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *26.5%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *27.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *99.3%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0337 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0337-BLK1)u** | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 21:54o | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/Lo | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/Lo | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/Lo | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/Lo | | | | | | |
| PFOAo | 0.270 B, Jo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/Lo | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/Lo | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/Lo | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/Lo | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/Lo | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/Lo | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/Lo | | | | | | |
| PFOSo | 0.112 MI2, Jo | 0.40o | 0.064o | ng/Lo | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/Lo | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/Lo | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/Lo | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/Lo | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/Lo | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/Lo | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/Lo | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/Lo | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/Lo | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/Lo | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/Lo | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/Lo | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/Lo | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/Lo | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/Lo | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/Lo | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/Lo | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/Lo | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/Lo | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/Lo | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/Lo | | | | | | |
| *Surrogate: 13C4-PFBAo* | *30.8o* | | | *ng/Lo* | *32.0o* | | *96.3o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *14.6o* | | | *ng/Lo* | *16.0o* | | *91.4o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *6.96o* | | | *ng/Lo* | *8.00o* | | *87.0o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *7.45o* | | | *ng/Lo* | *8.00o* | | *93.2o* | *40-130o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0337-BLK1)** | | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 21:54 | | | | | |
| *Surrogate: 13C8-PFOA* | *7.77* | | | | *ng/L* | *8.00* | | *97.1* | *40-130* | | |
| *Surrogate: 13C9-PFNA* | *4.11* | | | | *ng/L* | *4.00* | | *103* | *40-130* | | |
| *Surrogate: 13C6-PFDA* | *4.02* | | | | *ng/L* | *4.00* | | *101* | *40-130* | | |
| *Surrogate: 13C7-PFUnA* | *4.01* | | | | *ng/L* | *4.00* | | *100* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.75* | | | | *ng/L* | *4.00* | | *93.7* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.65* | | | | *ng/L* | *4.00* | | *91.1* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *6.16* | | | | *ng/L* | *8.00* | | *77.0* | *20-150* | | |
| *Surrogate: 13C3-PFBS* | *7.84* | | | | *ng/L* | *8.00* | | *98.0* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *8.14* | | | | *ng/L* | *8.00* | | *102* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *7.95* | | | | *ng/L* | *8.00* | | *99.4* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *20.9* | | | | *ng/L* | *16.0* | | *131* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *20.1* | | | | *ng/L* | *16.0* | | *125* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *18.7* | | | | *ng/L* | *16.0* | | *117* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *33.3* | | | | *ng/L* | *32.0* | | *104* | *20-150* | | |
| *Surrogate: 13C8-PFOSA* | *1.99* | *S1* | | | *ng/L* | *8.00* | | *24.9* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *0.818* | *MI5* | | | *ng/L* | *8.00* | | *10.2* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *0.848* | | | | *ng/L* | *8.00* | | *10.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *16.2* | | | | *ng/L* | *16.0* | | *101* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *16.0* | | | | *ng/L* | *16.0* | | *100* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *16.4* | | | | *ng/L* | *80.0* | | *20.5* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *20.1* | | | | *ng/L* | *80.0* | | *25.1* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *28.8* | | | | *ng/L* | *32.0* | | *89.9* | *40-130* | | |
| **LCS (BDC0337-BS1)** | | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 22:15 | | | | | |
| PFBA | 18.7 | | | 0.21 | ng/L | 16.0 | | 117 | 70-140 | | |
| PFPeA | 8.29 | | | 0.065 | ng/L | 8.00 | | 104 | 65-135 | | |
| PFHxA | 4.12 | | | 0.055 | ng/L | 4.00 | | 103 | 70-145 | | |
| PFHpA | 4.01 | | | 0.041 | ng/L | 4.00 | | 100 | 70-150 | | |
| PFOA | 4.35 | | | 0.15 | ng/L | 4.00 | | 109 | 70-150 | | |
| PFNA | 4.14 | | | 0.082 | ng/L | 4.00 | | 103 | 70-150 | | |
| PFDA | 4.11 | | | 0.10 | ng/L | 4.00 | | 103 | 70-140 | | |
| PFUnA | 4.13 | | | 0.16 | ng/L | 4.00 | | 103 | 70-145 | | |
| PFDoA | 4.21 | | | 0.11 | ng/L | 4.00 | | 105 | 70-140 | | |
| PFTrDA | 4.29 | | | 0.20 | ng/L | 4.00 | | 107 | 65-140 | | |
| PFTeDA | 4.11 | | | 0.20 | ng/L | 4.00 | | 103 | 60-140 | | |
| PFHxDA | 3.87 | | | 0.20 | ng/L | 4.00 | | 96.6 | 40-150 | | |
| PFODA | 3.34 | | | 0.20 | ng/L | 4.00 | | 83.6 | 40-150 | | |
| PFBS | 3.76 | | | 0.037 | ng/L | 3.54 | | 106 | 60-145 | | |
| PFPeS | 3.94 | | | 0.063 | ng/L | 3.76 | | 105 | 65-140 | | |
| PFHxS | 3.83 | *MI5* | | 0.032 | ng/L | 3.66 | | 105 | 65-145 | | |
| PFHpS | 4.11 | | | 0.051 | ng/L | 3.82 | | 108 | 70-150 | | |
| PFOS | 3.95 | | | 0.064 | ng/L | 3.72 | | 106 | 55-150 | | |
| PFNS | 4.15 | | | 0.12 | ng/L | 3.84 | | 108 | 65-145 | | |
| PFDS | 4.25 | | | 0.15 | ng/L | 3.86 | | 110 | 60-145 | | |
| PFDoS | 3.91 | | | 0.12 | ng/L | 3.88 | | 101 | 50-145 | | |
| 4:2FTS | 16.8 | | | 0.29 | ng/L | 15.0 | | 112 | 70-145 | | |
| 6:2FTS | 15.4 | | | 0.31 | ng/L | 15.2 | | 101 | 65-155 | | |
| 8:2FTS | 16.2 | | | 0.082 | ng/L | 15.4 | | 106 | 60-150 | | |
| 10:2FTS | 14.4 | | | 0.40 | ng/L | 15.4 | | 93.1 | 40-150 | | |
| PFOSA | 4.32 | | | 0.10 | ng/L | 4.00 | | 108 | 70-145 | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/05/2024 12:21o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0337-BS1)u** | | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/28/24 22:15o | | | |
| NMeFOSAo | 17.6o | | 0.47o | ng/L | 16.0o | | 110 | 60-150 | | |
| NEtFOSAo | 17.0o | | 0.41o | ng/L | 16.0o | | 107 | 65-145 | | |
| NMeFOSAAo | 4.03o | | 0.11o | ng/L | 4.00o | | 101 | 50-140 | | |
| NEtFOSAAo | 4.39o | | 0.11o | ng/L | 4.00o | | 110 | 70-145 | | |
| NMeFOSEo | 16.0o | | 1.0o | ng/L | 16.0o | | 99.7 | 70-145 | | |
| NEtFOSEo | 17.7o | | 1.0o | ng/L | 16.0o | | 110 | 70-135 | | |
| HFPO-DAo | 3.76o | | 0.17o | ng/L | 4.00o | | 94.0 | 70-140 | | |
| ADONAo | 4.36o | | 0.12o | ng/L | 3.78o | | 115 | 65-145 | | |
| PFEESAo | 7.37o | | 0.11o | ng/L | 7.12o | | 103 | 70-140 | | |
| PFMPAo | 8.09o | | 0.054o | ng/L | 8.00o | | 101 | 55-140 | | |
| PFMBAo | 8.26o | | 0.091o | ng/L | 8.00o | | 103 | 60-150 | | |
| NFDHAo | 8.47o | | 0.30o | ng/L | 8.00o | | 106 | 50-150 | | |
| 9Cl-PF3ONSo | 4.06o | | 0.21o | ng/L | 3.74o | | 109 | 70-155 | | |
| 11Cl-PF3OUDSo | 4.09o | | 0.21o | ng/L | 3.78o | | 108 | 55-160 | | |
| 3:3FTCAo | 15.4o | | 0.57o | ng/L | 16.0o | | 96.4 | 65-130 | | |
| 5:3FTCAo | 16.3o | | 0.44o | ng/L | 16.0o | | 102 | 70-135 | | |
| 7:3FTCAo | 14.8o | | 0.55o | ng/L | 16.0o | | 92.8 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.6o* | | | *ng/Lo* | *32.0o* | | *105* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *110* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *8.19o* | | | *ng/Lo* | *8.00o* | | *102* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.58o* | | | *ng/Lo* | *8.00o* | | *107* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.85o* | | | *ng/Lo* | *8.00o* | | *111* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.33o* | | | *ng/Lo* | *4.00o* | | *108* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.16o* | | | *ng/Lo* | *4.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.03o* | | | *ng/Lo* | *4.00o* | | *101* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *3.96o* | | | *ng/Lo* | *4.00o* | | *99.1* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.92o* | | | *ng/Lo* | *4.00o* | | *98.0* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.69o* | | | *ng/Lo* | *8.00o* | | *83.6* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *8.23o* | | | *ng/Lo* | *8.00o* | | *103* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.50o* | | | *ng/Lo* | *8.00o* | | *106* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.69o* | | | *ng/Lo* | *8.00o* | | *109* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.0o* | | | *ng/Lo* | *16.0o* | | *113* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.3o* | | | *ng/Lo* | *16.0o* | | *127* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.6o* | | | *ng/Lo* | *16.0o* | | *123* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *36.0o* | | | *ng/Lo* | *32.0o* | | *112* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *3.94o* | | | *ng/Lo* | *8.00o* | | *49.3* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *1.78o* | | | *ng/Lo* | *8.00o* | | *22.3* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *1.72o* | | | *ng/Lo* | *8.00o* | | *21.5* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.7o* | | | *ng/Lo* | *16.0o* | | *110* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *17.4o* | | | *ng/Lo* | *16.0o* | | *109* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *18.9o* | | | *ng/Lo* | *80.0o* | | *23.6* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *16.0o* | | | *ng/Lo* | *80.0o* | | *20.0* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *31.5o* | | | *ng/Lo* | *32.0o* | | *98.6* | *40-130* | | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0337-MRL1)u** | | | | | Prepared: 03/22/24 10:26 | Analyzed: 03/28/24 22:35o | | | | |
| PFBAo | 4.29o | | 0.21o | ng/Lo | 3.20o | | 134o | 70-140 | | |
| PFPeAo | 1.43o | | 0.065o | ng/Lo | 1.60o | | 89.2o | 65-135 | | |
| PFHxAo | 0.777o | | 0.055o | ng/Lo | 0.800o | | 97.2o | 70-145 | | |
| PFHpAo | 0.745o | | 0.041o | ng/Lo | 0.800o | | 93.1o | 70-150 | | |
| PFOAo | 1.03o | | 0.15o | ng/Lo | 0.800o | | 129o | 70-150 | | |
| PFNAo | 0.768o | | 0.082o | ng/Lo | 0.800o | | 96.0o | 70-150 | | |
| PFDAo | 0.792o | | 0.10o | ng/Lo | 0.800o | | 99.0o | 70-140 | | |
| PFUnAo | 0.757o | | 0.16o | ng/Lo | 0.800o | | 94.6o | 70-145 | | |
| PFDoAo | 0.743o | | 0.11o | ng/Lo | 0.800o | | 92.9o | 70-140 | | |
| PFTrDAo | 0.784o | | 0.20o | ng/Lo | 0.800o | | 98.0o | 65-140 | | |
| PFTeDAo | 0.713o | | 0.20o | ng/Lo | 0.800o | | 89.1o | 60-140 | | |
| PFHxDAo | 0.744o | | 0.20o | ng/Lo | 0.800o | | 92.9o | 40-150 | | |
| PFODAo | 0.671o | | 0.20o | ng/Lo | 0.800o | | 83.9o | 40-150 | | |
| PFBSo | 0.661o | | 0.037o | ng/Lo | 0.708o | | 93.4o | 60-145 | | |
| PFPeSo | 0.719o | | 0.063o | ng/Lo | 0.752o | | 95.6o | 65-140 | | |
| PFHxSo | 0.682oMI5o | | 0.032o | ng/Lo | 0.732o | | 93.1o | 65-145 | | |
| PFHpSo | 0.730o | | 0.051o | ng/Lo | 0.764o | | 95.5o | 70-150 | | |
| PFOSo | 0.821o | | 0.064o | ng/Lo | 0.744o | | 110o | 55-150 | | |
| PFNSo | 0.760o | | 0.12o | ng/Lo | 0.768o | | 99.0o | 65-145 | | |
| PFDSo | 0.772o | | 0.15o | ng/Lo | 0.772o | | 100o | 60-145 | | |
| PFDoSo | 0.739o | | 0.12o | ng/Lo | 0.776o | | 95.2o | 50-145 | | |
| 4:2FTSo | 2.83o | | 0.29o | ng/Lo | 3.00o | | 94.4o | 70-145 | | |
| 6:2FTSo | 3.01o | | 0.31o | ng/Lo | 3.04o | | 99.0o | 65-155 | | |
| 8:2FTSo | 2.91o | | 0.082o | ng/Lo | 3.07o | | 94.9o | 60-150 | | |
| 10:2FTSo | 3.13o | | 0.40o | ng/Lo | 3.09o | | 101o | 40-150 | | |
| PFOSAo | 0.639o | | 0.10o | ng/Lo | 0.800o | | 79.9o | 70-145 | | |
| NMeFOSAo | 2.00oMI5o | | 0.47o | ng/Lo | 3.20o | | 62.5o | 60-150 | | |
| NEtFOSAo | 2.19o | | 0.41o | ng/Lo | 3.20o | | 68.3o | 65-145 | | |
| NMeFOSAAo | 0.723o | | 0.11o | ng/Lo | 0.800o | | 90.4o | 50-140 | | |
| NEtFOSAAo | 0.746o | | 0.11o | ng/Lo | 0.800o | | 93.3o | 70-145 | | |
| NMeFOSEo | 2.82o | | 1.0o | ng/Lo | 3.20o | | 88.1o | 70-145 | | |
| NEtFOSEo | 2.40oMI5o | | 1.0o | ng/Lo | 3.20o | | 75.0o | 70-135 | | |
| HFPO-DAo | 0.689oJo | | 0.17o | ng/Lo | 0.800o | | 86.1o | 70-140 | | |
| ADONAo | 0.764oJo | | 0.12o | ng/Lo | 0.756o | | 101o | 65-145 | | |
| PFEESAo | 1.43o | | 0.11o | ng/Lo | 1.42o | | 100o | 70-140 | | |
| PFMPAo | 1.34o | | 0.054o | ng/Lo | 1.60o | | 83.5o | 55-140 | | |
| PFMBAo | 1.41o | | 0.091o | ng/Lo | 1.60o | | 88.2o | 60-150 | | |
| NFDHAo | 1.37o | | 0.30o | ng/Lo | 1.60o | | 85.4o | 50-150 | | |
| 9Cl-PF3ONSo | 0.692oJo | | 0.21o | ng/Lo | 0.748o | | 92.5o | 70-155 | | |
| 11Cl-PF3OUDSo | 0.737oJo | | 0.21o | ng/Lo | 0.756o | | 97.5o | 55-160 | | |
| 3:3FTCAo | 2.66o | | 0.57o | ng/Lo | 3.20o | | 83.0o | 65-130 | | |
| 5:3FTCAo | 2.81o | | 0.44o | ng/Lo | 3.20o | | 87.9o | 70-135 | | |
| 7:3FTCAo | 2.69o | | 0.55o | ng/Lo | 3.20o | | 84.1o | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *32.9o* | | | *ng/Lo* | *32.0o* | | *103o* | *5-130 o* | | |
| *Surrogate: 13C5-PFPEAo* | *19.8o* | | | *ng/Lo* | *16.0o* | | *124o* | *40-130 o* | | |
| *Surrogate: 13C5-PFHXAo* | *8.78o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130 o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.83o* | | | *ng/Lo* | *8.00o* | | *110o* | *40-130 o* | | |
| *Surrogate: 13C8-PFOAo* | *8.49o* | | | *ng/Lo* | *8.00o* | | *106o* | *40-130 o* | | |
| *Surrogate: 13C9-PFNAo* | *4.22o* | | | *ng/Lo* | *4.00o* | | *106o* | *40-130 o* | | |
| *Surrogate: 13C6-PFDAo* | *4.19o* | | | *ng/Lo* | *4.00o* | | *105o* | *40-130 o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oJPL-GW Monitoringo
Project Number:oJPL-GW Monitoringo
Project Manager:oDavid Connero

Reported: 04/05/2024 12:21o

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0337-MRL1)u** | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/28/24 22:35o | | | | | |
| *Surrogate: 13C7-PFUnAo* | *4.22o* | | | *ng/Lo* | *4.00o* | | *105o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *4.21o* | | | *ng/Lo* | *4.00o* | | *105o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *4.15o* | | | *ng/Lo* | *4.00o* | | *104o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.42o* | | | *ng/Lo* | *8.00o* | | *80.3o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.38o* | | | *ng/Lo* | *8.00o* | | *105o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *8.59o* | | | *ng/Lo* | *8.00o* | | *107o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *8.35o* | | | *ng/Lo* | *8.00o* | | *104o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *19.2o* | | | *ng/Lo* | *16.0o* | | *120o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.2o* | | | *ng/Lo* | *16.0o* | | *126o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.3o* | | | *ng/Lo* | *16.0o* | | *121o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *35.6o* | | | *ng/Lo* | *32.0o* | | *111o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *4.51o* | | | *ng/Lo* | *8.00o* | | *56.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.35o* | | | *ng/Lo* | *8.00o* | | *29.4o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.11o* | | | *ng/Lo* | *8.00o* | | *26.4o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *17.3o* | | | *ng/Lo* | *16.0o* | | *108o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *16.9o* | | | *ng/Lo* | *16.0o* | | *106o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *24.6o* | | | *ng/Lo* | *80.0o* | | *30.7o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *22.4o* | | | *ng/Lo* | *80.0o* | | *28.0o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *34.2o* | | | *ng/Lo* | *32.0o* | | *107o* | *40-130o* | | |
| **Matrix Spike (BDC0337-MS3)u** | **Source: 24C0131-01u** | | | | Prepared: 03/22/24 10:26 Analyzed: 03/29/24 00:18o | | | | | |
| PFBAo | 24.6o | | 0.18o | ng/Lo | 14.2o | 5.15o | 137o | 70-140o | | |
| PFPeAo | 13.3o | | 0.058o | ng/Lo | 7.09o | 4.78o | 120o | 65-135o | | |
| PFHxAo | 9.54o | | 0.049o | ng/Lo | 3.54o | 4.88o | 132o | 70-145o | | |
| PFHpAo | 7.61o | | 0.036o | ng/Lo | 3.54o | 3.04o | 129o | 70-150o | | |
| PFOAo | 12.1oMI5, MS2o | | 0.14o | ng/Lo | 3.54o | 5.86o | 176o | 70-150o | | |
| PFNAo | 6.71o | | 0.073o | ng/Lo | 3.54o | 2.19o | 128o | 70-150o | | |
| PFDAo | 7.52o | | 0.090o | ng/Lo | 3.54o | 2.80o | 133o | 70-140o | | |
| PFUnAo | 4.61o | | 0.14o | ng/Lo | 3.54o | NDo | 130o | 70-145o | | |
| PFDoAo | 4.55o | | 0.099o | ng/Lo | 3.54o | NDo | 129o | 70-140o | | |
| PFTrDAo | 4.70o | | 0.18o | ng/Lo | 3.54o | NDo | 133o | 65-140o | | |
| PFTeDAo | 4.50o | | 0.18o | ng/Lo | 3.54o | NDo | 127o | 60-140o | | |
| PFHxDAo | 3.63o | | 0.18o | ng/Lo | 3.54o | NDo | 103o | 40-150o | | |
| PFODAo | 4.26o | | 0.18o | ng/Lo | 3.54o | NDo | 120o | 40-150o | | |
| PFBSo | 5.96o | | 0.033o | ng/Lo | 3.14o | 2.08o | 124o | 60-145o | | |
| PFPeSo | 4.16o | | 0.056o | ng/Lo | 3.33o | 0.195o | 119o | 65-140o | | |
| PFHxSo | 4.75oMI5o | | 0.028o | ng/Lo | 3.24o | 0.928o | 118o | 65-145o | | |
| PFHpSo | 4.36o | | 0.045o | ng/Lo | 3.38o | 0.0988o | 126o | 70-150o | | |
| PFOSo | 12.5o | | 0.056o | ng/Lo | 3.30o | 7.64o | 148o | 55-150o | | |
| PFNSo | 3.63o | | 0.11o | ng/Lo | 3.40o | NDo | 107o | 65-145o | | |
| PFDSo | 3.28o | | 0.13o | ng/Lo | 3.42o | NDo | 95.8o | 60-145o | | |
| PFDoSo | 3.29o | | 0.11o | ng/Lo | 3.44o | NDo | 95.8o | 50-145o | | |
| 4:2FTSo | 15.6o | | 0.26o | ng/Lo | 13.3o | NDo | 117o | 70-145o | | |
| 6:2FTSo | 15.7o | | 0.28o | ng/Lo | 13.5o | NDo | 116o | 65-155o | | |
| 8:2FTSo | 15.9o | | 0.073o | ng/Lo | 13.6o | NDo | 117o | 60-150o | | |
| 10:2FTSo | 12.9o | | 0.35o | ng/Lo | 13.7o | NDo | 94.2o | 40-150o | | |
| PFOSAo | 4.68o | | 0.092o | ng/Lo | 3.54o | NDo | 132o | 70-145o | | |
| NMeFOSAo | 23.1oMS2o | | 0.42o | ng/Lo | 14.2o | NDo | 163o | 60-150o | | |
| NEtFOSAo | 21.5oMS2o | | 0.37o | ng/Lo | 14.2o | NDo | 152o | 65-145o | | |
| NMeFOSAAo | 4.31o | | 0.094o | ng/Lo | 3.54o | NDo | 122o | 50-140o | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/05/2024 12:21o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS3)u** | **Source: 24C0131-01** | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/29/24 00:18 | | | |
| NEtFOSAAo | 4.52o | | 0.10o | ng/L | 3.54o | NDo | 127 | 70-145 | | |
| NMeFOSEo | 23.4oMS2o | | 0.90 | ng/L | 14.2o | NDo | 165 | 70-145 | | |
| NEtFOSEo | 19.8oMS2o | | 0.93 | ng/L | 14.2o | NDo | 140 | 70-135 | | |
| HFPO-DAo | 4.40o | | 0.15o | ng/L | 3.54o | NDo | 124 | 70-140 | | |
| ADONAo | 4.28o | | 0.11o | ng/L | 3.35o | NDo | 128 | 65-145 | | |
| PFEESAo | 7.38o | | 0.097o | ng/L | 6.31o | NDo | 117 | 70-140 | | |
| PFMPAo | 6.96o | | 0.048o | ng/L | 7.09o | NDo | 98.3 | 55-140 | | |
| PFMBAo | 8.15o | | 0.080o | ng/L | 7.09o | NDo | 115 | 60-150 | | |
| NFDHAo | 7.36o | | 0.27o | ng/L | 7.09o | NDo | 104 | 50-150 | | |
| 9Cl-PF3ONSo | 3.54o | | 0.19o | ng/L | 3.31o | NDo | 107 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.18o | | 0.18o | ng/L | 3.35o | NDo | 94.9 | 55-160 | | |
| 3:3FTCAo | 12.1o | | 0.51o | ng/L | 14.2o | NDo | 85.3 | 65-130 | | |
| 5:3FTCAo | 15.9o | | 0.39o | ng/L | 14.2o | NDo | 112 | 70-135 | | |
| 7:3FTCAo | 16.0o | | 0.49o | ng/L | 14.2o | NDo | 113 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *17.1o* | | | *ng/Lo* | *28.4o* | | *60.3* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *13.2o* | | | *ng/Lo* | *14.2o* | | *92.9* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *6.33o* | | | *ng/Lo* | *7.09o* | | *89.3* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *6.50o* | | | *ng/Lo* | *7.09o* | | *91.8* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *6.04o* | | | *ng/Lo* | *7.09o* | | *85.3* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *2.95o* | | | *ng/Lo* | *3.54o* | | *83.1* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *2.78o* | | | *ng/Lo* | *3.54o* | | *78.5* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *2.23o* | | | *ng/Lo* | *3.54o* | | *63.0* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *2.08o* | | | *ng/Lo* | *3.54o* | | *58.6* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *2.23o* | | | *ng/Lo* | *3.54o* | | *62.9* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *4.56o* | | | *ng/Lo* | *7.09o* | | *64.4* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *5.60o* | | | *ng/Lo* | *7.09o* | | *79.0* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *6.24o* | | | *ng/Lo* | *7.09o* | | *88.0* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *5.92o* | | | *ng/Lo* | *7.09o* | | *83.6* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *12.2o* | | | *ng/Lo* | *14.2o* | | *85.9* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *14.7o* | | | *ng/Lo* | *14.2o* | | *104* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *11.3o* | | | *ng/Lo* | *14.2o* | | *79.7* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *21.8o* | | | *ng/Lo* | *28.4o* | | *77.1* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *2.15oS1o* | | | *ng/L* | *7.09o* | | *30.3* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *0.345oS1o* | | | *ng/L* | *7.09o* | | *4.86* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *0.446oS1o* | | | *ng/L* | *7.09o* | | *6.29* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *10.4o* | | | *ng/Lo* | *14.2o* | | *73.6* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *9.62o* | | | *ng/Lo* | *14.2o* | | *67.8* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *8.50o* | | | *ng/Lo* | *70.9o* | | *12.0* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *10.3o* | | | *ng/Lo* | *70.9o* | | *14.6* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *24.4o* | | | *ng/Lo* | *28.4o* | | *86.2* | *40-130* | | |

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| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS4)u** | **Source: 24C0131-02** | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/29/24 00:59 | | | |
| PFBAo | 16.7o | | 0.19o | ng/L | 14.7o | 2.09o | 99.4 | 70-140 | | |
| PFPeAo | 7.72o | | 0.060o | ng/L | 7.35o | 1.08o | 90.4 | 65-135 | | |
| PFHxAo | 4.06o | | 0.050o | ng/L | 3.67o | 0.546o | 95.7 | 70-145 | | |
| PFHpAo | 3.99o | | 0.038o | ng/L | 3.67o | 0.217o | 103 | 70-150 | | |
| PFOAo | 4.45o | | 0.14o | ng/L | 3.67o | 0.541o | 107 | 70-150 | | |
| PFNAo | 3.62o | | 0.075o | ng/L | 3.67o | NDo | 98.4 | 70-150 | | |
| PFDAo | 3.52o | | 0.093o | ng/L | 3.67o | NDo | 95.9 | 70-140 | | |
| PFUnAo | 3.76o | | 0.15o | ng/L | 3.67o | NDo | 102 | 70-145 | | |
| PFDoAo | 3.73o | | 0.10o | ng/L | 3.67o | NDo | 102 | 70-140 | | |
| PFTrDAo | 3.75o | | 0.19o | ng/L | 3.67o | NDo | 102 | 65-140 | | |
| PFTeDAo | 3.87o | | 0.18o | ng/L | 3.67o | NDo | 105 | 60-140 | | |
| PFHxDAo | 3.59o | | 0.18o | ng/L | 3.67o | NDo | 97.6 | 40-150 | | |
| PFODAo | 3.25o | | 0.18o | ng/L | 3.67o | NDo | 88.5 | 40-150 | | |
| PFBSo | 3.76o | | 0.034o | ng/L | 3.25o | 0.735o | 93.0 | 60-145 | | |
| PFPeSo | 3.50o | | 0.058o | ng/L | 3.45o | NDo | 101 | 65-140 | | |
| PFHxSo | 3.49oMI5o | | 0.029 | ng/L | 3.36o | 0.0999o | 101 | 65-145 | | |
| PFHpSo | 3.76o | | 0.047o | ng/L | 3.51o | NDo | 107 | 70-150 | | |
| PFOSo | 5.87o | | 0.058o | ng/L | 3.42o | 2.28o | 105 | 55-150 | | |
| PFNSo | 3.64o | | 0.11o | ng/L | 3.53o | NDo | 103 | 65-145 | | |
| PFDSo | 3.89o | | 0.14o | ng/L | 3.55o | NDo | 110 | 60-145 | | |
| PFDoSo | 3.77o | | 0.11o | ng/L | 3.56o | NDo | 106 | 50-145 | | |
| 4:2FTSo | 14.6o | | 0.27o | ng/L | 13.8o | NDo | 106 | 70-145 | | |
| 6:2FTSo | 14.7o | | 0.29o | ng/L | 14.0o | NDo | 105 | 65-155 | | |
| 8:2FTSo | 14.0o | | 0.075o | ng/L | 14.1o | NDo | 99.5 | 60-150 | | |
| 10:2FTSo | 12.7o | | 0.37o | ng/L | 14.2o | NDo | 89.5 | 40-150 | | |
| PFOSAo | 3.90o | | 0.096o | ng/L | 3.67o | NDo | 106 | 70-145 | | |
| NMeFOSAo | 15.6o | | 0.43o | ng/L | 14.7o | NDo | 106 | 60-150 | | |
| NEtFOSAo | 15.9o | | 0.38o | ng/L | 14.7o | NDo | 108 | 65-145 | | |
| NMeFOSAAo | 3.67o | | 0.097o | ng/L | 3.67o | NDo | 100 | 50-140 | | |
| NEtFOSAAo | 3.78o | | 0.11o | ng/L | 3.67o | NDo | 103 | 70-145 | | |
| NMeFOSEo | 14.5o | | 0.93o | ng/L | 14.7o | NDo | 98.5 | 70-145 | | |
| NEtFOSEo | 14.0o | | 0.96o | ng/L | 14.7o | NDo | 95.0 | 70-135 | | |
| HFPO-DAo | 3.32o | | 0.16o | ng/L | 3.67o | NDo | 90.3 | 70-140 | | |
| ADONAo | 3.89o | | 0.11o | ng/L | 3.47o | NDo | 112 | 65-145 | | |
| PFEESAo | 6.61o | | 0.10o | ng/L | 6.54o | NDo | 101 | 70-140 | | |
| PFMPAo | 7.43o | | 0.050o | ng/L | 7.35o | NDo | 101 | 55-140 | | |
| PFMBAo | 7.36o | | 0.083o | ng/L | 7.35o | NDo | 100 | 60-150 | | |
| NFDHAo | 8.06o | | 0.28o | ng/L | 7.35o | NDo | 110 | 50-150 | | |
| 9Cl-PF3ONSo | 3.44o | | 0.19o | ng/L | 3.43o | NDo | 100 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.83o | | 0.19o | ng/L | 3.47o | NDo | 110 | 55-160 | | |
| 3:3FTCAo | 13.2o | | 0.53o | ng/L | 14.7o | NDo | 89.6 | 65-130 | | |
| 5:3FTCAo | 15.3o | | 0.41o | ng/L | 14.7o | NDo | 104 | 70-135 | | |
| 7:3FTCAo | 15.8o | | 0.51o | ng/L | 14.7o | NDo | 107 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *25.1o* | | | *ng/Lo* | *29.4o* | | *85.3* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *16.9o* | | | *ng/Lo* | *14.7o* | | *115* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *7.20o* | | | *ng/Lo* | *7.35o* | | *98.0* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.03o* | | | *ng/Lo* | *7.35o* | | *109* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.15o* | | | *ng/Lo* | *7.35o* | | *97.3* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *3.62o* | | | *ng/Lo* | *3.67o* | | *98.6* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.62o* | | | *ng/Lo* | *3.67o* | | *98.5* | *40-130* | | |

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| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS4)u** | **Source: 24C0131-02u** | | | Prepared: 03/22/24 10:26 Analyzed: 03/29/24 00:59o | | | | | | |
| *Surrogate: 13C7-PFUnAo* | *3.52o* | | | *ng/Lo* | *3.67o* | | *95.9o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.58o* | | | *ng/Lo* | *3.67o* | | *97.5o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.58o* | | | *ng/Lo* | *3.67o* | | *97.4o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *6.28o* | | | *ng/Lo* | *7.35o* | | *85.5o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *6.44o* | | | *ng/Lo* | *7.35o* | | *87.6o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *6.90o* | | | *ng/Lo* | *7.35o* | | *93.8o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *6.90o* | | | *ng/Lo* | *7.35o* | | *93.8o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *13.9o* | | | *ng/Lo* | *14.7o* | | *94.3o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *16.5o* | | | *ng/Lo* | *14.7o* | | *112o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *14.8o* | | | *ng/Lo* | *14.7o* | | *101o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *31.4o* | | | *ng/Lo* | *29.4o* | | *107o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *5.48o* | | | *ng/Lo* | *7.35o* | | *74.6o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *1.99o* | | | *ng/Lo* | *7.35o* | | *27.1o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *1.95o* | | | *ng/Lo* | *7.35o* | | *26.5o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *14.3o* | | | *ng/Lo* | *14.7o* | | *97.2o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *14.9o* | | | *ng/Lo* | *14.7o* | | *101o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *29.8o* | | | *ng/Lo* | *73.5o* | | *40.6o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *29.3o* | | | *ng/Lo* | *73.5o* | | *39.9o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *29.5o* | | | *ng/Lo* | *29.4o* | | *100o* | *40-130o* | | |
| **Matrix Spike Dup (BDC0337-MSD3)u** | **Source: 24C0131-01u** | | | Prepared: 03/22/24 10:26 Analyzed: 03/29/24 00:39o | | | | | | |
| PFBAo | 19.0o | | 0.19o | ng/Lo | 14.4o | 5.15o | 96.6o | 70-140o | 25.6o | 30o |
| PFPeAo | 11.8o | | 0.058o | ng/Lo | 7.19o | 4.78o | 97.1o | 65-135o | 12.0o | 30o |
| PFHxAo | 8.44o | | 0.049o | ng/Lo | 3.60o | 4.88o | 99.1o | 70-145o | 12.2o | 30o |
| PFHpAo | 7.01o | | 0.037o | ng/Lo | 3.60o | 3.04o | 111o | 70-150o | 8.16o | 30o |
| PFOAo | 10.5oMI5o | | 0.14o | ng/Lo | 3.60o | 5.86o | 130o | 70-150o | 13.8o | 30o |
| PFNAo | 6.06o | | 0.074o | ng/Lo | 3.60o | 2.19o | 108o | 70-150o | 10.2o | 30o |
| PFDAo | 6.53o | | 0.091o | ng/Lo | 3.60o | 2.80o | 104o | 70-140o | 14.2o | 30o |
| PFUnAo | 3.74o | | 0.14o | ng/Lo | 3.60o | NDo | 104o | 70-145o | 20.7o | 30o |
| PFDoAo | 3.72o | | 0.10o | ng/Lo | 3.60o | NDo | 104o | 70-140o | 20.0o | 30o |
| PFTrDAo | 3.83o | | 0.18o | ng/Lo | 3.60o | NDo | 106o | 65-140o | 20.5o | 30o |
| PFTeDAo | 3.79o | | 0.18o | ng/Lo | 3.60o | NDo | 105o | 60-140o | 17.1o | 30o |
| PFHxDAo | 3.70o | | 0.18o | ng/Lo | 3.60o | NDo | 103o | 40-150o | 1.72o | 30o |
| PFODAo | 3.14oMS3o | | 0.18o | ng/Lo | 3.60o | NDo | 87.2o | 40-150o | 30.4o | 30o |
| PFBSo | 5.41o | | 0.033o | ng/Lo | 3.18o | 2.08o | 105o | 60-145o | 9.55o | 30o |
| PFPeSo | 3.37o | | 0.056o | ng/Lo | 3.38o | 0.195o | 93.8o | 65-140o | 21.1o | 30o |
| PFHxSo | 4.19oMI5o | | 0.028o | ng/Lo | 3.29o | 0.928o | 99.1o | 65-145o | 12.6o | 30o |
| PFHpSo | 3.71o | | 0.046o | ng/Lo | 3.43o | 0.0988o | 105o | 70-150o | 16.2o | 30o |
| PFOSo | 10.9o | | 0.057o | ng/Lo | 3.34o | 7.64o | 96.9o | 55-150o | 14.1o | 30o |
| PFNSo | 3.44o | | 0.11o | ng/Lo | 3.45o | NDo | 99.5o | 65-145o | 5.54o | 30o |
| PFDSo | 3.79o | | 0.14o | ng/Lo | 3.47o | NDo | 109o | 60-145o | 14.5o | 30o |
| PFDoSo | 3.64o | | 0.11o | ng/Lo | 3.49o | NDo | 104o | 50-145o | 10.0o | 30o |
| 4:2FTSo | 13.8o | | 0.26o | ng/Lo | 13.5o | NDo | 103o | 70-145o | 11.7o | 30o |
| 6:2FTSo | 13.9o | | 0.28o | ng/Lo | 13.7o | NDo | 101o | 65-155o | 12.2o | 30o |
| 8:2FTSo | 13.4o | | 0.074o | ng/Lo | 13.8o | NDo | 96.7o | 60-150o | 17.6o | 30o |
| 10:2FTSo | 14.3o | | 0.36o | ng/Lo | 13.9o | NDo | 103o | 40-150o | 10.3o | 30o |
| PFOSAo | 4.04o | | 0.094o | ng/Lo | 3.60o | NDo | 112o | 70-145o | 14.6o | 30o |
| NMeFOSAo | 18.8o | | 0.43o | ng/Lo | 14.4o | NDo | 131o | 60-150o | 20.6o | 30o |
| NEtFOSAo | 18.3o | | 0.37o | ng/Lo | 14.4o | NDo | 127o | 65-145o | 16.3o | 30o |
| NMeFOSAAo | 3.46o | | 0.095o | ng/Lo | 3.60o | NDo | 96.3o | 50-140o | 21.7o | 30o |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD3)** | **Source: 24C0131-01** | | | | | Prepared: 03/22/24 10:26 | | Analyzed: 03/29/24 00:39 | | | |
| NEtFOSAA | 3.80 | | | 0.10 | ng/L | 3.60 | ND | 106 | 70-145 | 17.4 | 30 |
| NMeFOSE | 15.0 | MS3 | | 0.91 | ng/L | 14.4 | ND | 105 | 70-145 | 43.4 | 30 |
| NEtFOSE | 16.1 | | | 0.94 | ng/L | 14.4 | ND | 112 | 70-135 | 20.7 | 30 |
| HFPO-DA | 3.48 | | | 0.16 | ng/L | 3.60 | ND | 96.7 | 70-140 | 23.4 | 30 |
| ADONA | 4.11 | | | 0.11 | ng/L | 3.40 | ND | 121 | 65-145 | 4.23 | 30 |
| PFEESA | 6.37 | | | 0.098 | ng/L | 6.40 | ND | 99.5 | 70-140 | 14.7 | 30 |
| PFMPA | 6.62 | | | 0.048 | ng/L | 7.19 | ND | 92.0 | 55-140 | 5.09 | 30 |
| PFMBA | 6.31 | | | 0.082 | ng/L | 7.19 | ND | 87.7 | 60-150 | 25.5 | 30 |
| NFDHA | 7.82 | | | 0.27 | ng/L | 7.19 | ND | 109 | 50-150 | 6.05 | 30 |
| 9Cl-PF3ONS | 3.78 | | | 0.19 | ng/L | 3.36 | ND | 112 | 70-155 | 6.67 | 30 |
| 11Cl-PF3OUDS | 3.97 | | | 0.19 | ng/L | 3.40 | ND | 117 | 55-160 | 22.1 | 30 |
| 3:3FTCA | 12.3 | | | 0.52 | ng/L | 14.4 | ND | 85.8 | 65-130 | 2.04 | 30 |
| 5:3FTCA | 14.5 | | | 0.40 | ng/L | 14.4 | ND | 101 | 70-135 | 9.10 | 30 |
| 7:3FTCA | 15.2 | | | 0.50 | ng/L | 14.4 | ND | 106 | 50-145 | 4.99 | 30 |
| *Surrogate: 13C4-PFBA* | *29.8* | | | | *ng/L* | *28.8* | | *104* | *5-130* | | |
| *Surrogate: 13C5-PFPEA* | *17.9* | | | | *ng/L* | *14.4* | | *125* | *40-130* | | |
| *Surrogate: 13C5-PFHXA* | *7.15* | | | | *ng/L* | *7.19* | | *99.4* | *40-130* | | |
| *Surrogate: 13C4-PFHPA* | *7.72* | | | | *ng/L* | *7.19* | | *107* | *40-130* | | |
| *Surrogate: 13C8-PFOA* | *7.35* | | | | *ng/L* | *7.19* | | *102* | *40-130* | | |
| *Surrogate: 13C9-PFNA* | *3.56* | | | | *ng/L* | *3.60* | | *99.0* | *40-130* | | |
| *Surrogate: 13C6-PFDA* | *3.90* | | | | *ng/L* | *3.60* | | *109* | *40-130* | | |
| *Surrogate: 13C7-PFUnA* | *3.89* | | | | *ng/L* | *3.60* | | *108* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.85* | | | | *ng/L* | *3.60* | | *107* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.78* | | | | *ng/L* | *3.60* | | *105* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *6.43* | | | | *ng/L* | *7.19* | | *89.4* | *20-150* | | |
| *Surrogate: 13C3-PFBS* | *6.89* | | | | *ng/L* | *7.19* | | *95.8* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *7.61* | | | | *ng/L* | *7.19* | | *106* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *7.41* | | | | *ng/L* | *7.19* | | *103* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *13.7* | | | | *ng/L* | *14.4* | | *95.0* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *16.8* | | | | *ng/L* | *14.4* | | *117* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *14.8* | | | | *ng/L* | *14.4* | | *103* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *28.6* | | | | *ng/L* | *28.8* | | *99.4* | *20-150* | | |
| *Surrogate: 13C8-PFOSA* | *5.88* | | | | *ng/L* | *7.19* | | *81.8* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *2.83* | | | | *ng/L* | *7.19* | | *39.3* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *2.85* | | | | *ng/L* | *7.19* | | *39.6* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *14.9* | | | | *ng/L* | *14.4* | | *103* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *15.0* | | | | *ng/L* | *14.4* | | *105* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *42.6* | | | | *ng/L* | *71.9* | | *59.2* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *41.5* | | | | *ng/L* | *71.9* | | *57.6* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *27.6* | | | | *ng/L* | *28.8* | | *95.9* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD4)u** | **Source: 24C0131-02u** | | | Prepared: 03/22/24 10:26 | Analyzed: 03/29/24 01:19o | | | | | |
| PFBAo | 15.9o | | 0.19o | ng/Lo | 14.4o | 2.09o | 96.0o | 70-140o | 4.69o | 30o |
| PFPeAo | 8.18o | | 0.059o | ng/Lo | 7.21o | 1.08o | 98.5o | 65-135o | 5.78o | 30o |
| PFHxAo | 4.33o | | 0.050o | ng/Lo | 3.61o | 0.546o | 105o | 70-145o | 6.47o | 30o |
| PFHpAo | 3.85o | | 0.037o | ng/Lo | 3.61o | 0.217o | 101o | 70-150o | 3.67o | 30o |
| PFOAo | 4.03o | | 0.14o | ng/Lo | 3.61o | 0.541o | 96.7o | 70-150o | 10.0o | 30o |
| PFNAo | 3.54o | | 0.074o | ng/Lo | 3.61o | NDo | 98.1o | 70-150o | 2.18o | 30o |
| PFDAo | 3.63o | | 0.091o | ng/Lo | 3.61o | NDo | 101o | 70-140o | 2.95o | 30o |
| PFUnAo | 3.64o | | 0.14o | ng/Lo | 3.61o | NDo | 101o | 70-145o | 3.35o | 30o |
| PFDoAo | 3.65o | | 0.10o | ng/Lo | 3.61o | NDo | 101o | 70-140o | 2.12o | 30o |
| PFTrDAo | 3.80o | | 0.18o | ng/Lo | 3.61o | NDo | 105o | 65-140o | 1.20o | 30o |
| PFTeDAo | 3.76o | | 0.18o | ng/Lo | 3.61o | NDo | 104o | 60-140o | 3.02o | 30o |
| PFHxDAo | 3.57o | | 0.18o | ng/Lo | 3.61o | NDo | 99.1o | 40-150o | 0.355o | 30o |
| PFODAo | 3.41o | | 0.18o | ng/Lo | 3.61o | NDo | 94.5o | 40-150o | 4.67o | 30o |
| PFBSo | 3.89o | | 0.033o | ng/Lo | 3.19o | 0.735o | 98.8o | 60-145o | 3.35o | 30o |
| PFPeSo | 3.44o | | 0.057o | ng/Lo | 3.39o | NDo | 101o | 65-140o | 1.88o | 30o |
| PFHxSo | 3.37oMI5o | | 0.029o | ng/Lo | 3.30o | 0.0999o | 99.1o | 65-145o | 3.58o | 30o |
| PFHpSo | 3.48o | | 0.046o | ng/Lo | 3.44o | NDo | 101o | 70-150o | 7.89o | 30o |
| PFOSo | 5.63o | | 0.057o | ng/Lo | 3.35o | 2.28o | 99.7o | 55-150o | 4.23o | 30o |
| PFNSo | 3.54o | | 0.11o | ng/Lo | 3.46o | NDo | 102o | 65-145o | 2.74o | 30o |
| PFDSo | 3.57o | | 0.14o | ng/Lo | 3.48o | NDo | 103o | 60-145o | 8.58o | 30o |
| PFDoSo | 3.66o | | 0.11o | ng/Lo | 3.50o | NDo | 105o | 50-145o | 3.01o | 30o |
| 4:2FTSo | 14.5o | | 0.26o | ng/Lo | 13.5o | NDo | 108o | 70-145o | 0.506o | 30o |
| 6:2FTSo | 13.8o | | 0.28o | ng/Lo | 13.7o | NDo | 101o | 65-155o | 5.84o | 30o |
| 8:2FTSo | 14.3o | | 0.074o | ng/Lo | 13.8o | NDo | 103o | 60-150o | 1.51o | 30o |
| 10:2FTSo | 12.2o | | 0.36o | ng/Lo | 13.9o | NDo | 87.3o | 40-150o | 4.33o | 30o |
| PFOSAo | 3.69o | | 0.094o | ng/Lo | 3.61o | NDo | 102o | 70-145o | 5.44o | 30o |
| NMeFOSAo | 14.2o | | 0.43o | ng/Lo | 14.4o | NDo | 98.4o | 60-150o | 9.63o | 30o |
| NEtFOSAo | 12.8o | | 0.37o | ng/Lo | 14.4o | NDo | 89.0o | 65-145o | 21.3o | 30o |
| NMeFOSAAo | 3.69o | | 0.095o | ng/Lo | 3.61o | NDo | 102o | 50-140o | 0.428o | 30o |
| NEtFOSAAo | 3.64o | | 0.10o | ng/Lo | 3.61o | NDo | 101o | 70-145o | 3.52o | 30o |
| NMeFOSEo | 13.0o | | 0.91o | ng/Lo | 14.4o | NDo | 90.3o | 70-145o | 10.6o | 30o |
| NEtFOSEo | 14.1o | | 0.94o | ng/Lo | 14.4o | NDo | 97.9o | 70-135o | 1.06o | 30o |
| HFPO-DAo | 3.50o | | 0.16o | ng/Lo | 3.61o | NDo | 97.0o | 70-140o | 5.33o | 30o |
| ADONAo | 3.85o | | 0.11o | ng/Lo | 3.41o | NDo | 113o | 65-145o | 1.05o | 30o |
| PFEESAo | 7.19o | | 0.098o | ng/Lo | 6.42o | NDo | 112o | 70-140o | 8.49o | 30o |
| PFMPAo | 7.40o | | 0.049o | ng/Lo | 7.21o | NDo | 103o | 55-140o | 0.470o | 30o |
| PFMBAo | 7.35o | | 0.082o | ng/Lo | 7.21o | NDo | 102o | 60-150o | 0.152o | 30o |
| NFDHAo | 7.39o | | 0.27o | ng/Lo | 7.21o | NDo | 102o | 50-150o | 8.70o | 30o |
| 9Cl-PF3ONSo | 3.50o | | 0.19o | ng/Lo | 3.37o | NDo | 104o | 70-155o | 1.92o | 30o |
| 11Cl-PF3OUDSo | 3.76o | | 0.19o | ng/Lo | 3.41o | NDo | 110o | 55-160o | 1.95o | 30o |
| 3:3FTCAo | 13.9o | | 0.52o | ng/Lo | 14.4o | NDo | 96.6o | 65-130o | 5.68o | 30o |
| 5:3FTCAo | 16.2o | | 0.40o | ng/Lo | 14.4o | NDo | 112o | 70-135o | 5.83o | 30o |
| 7:3FTCAo | 16.9o | | 0.50o | ng/Lo | 14.4o | NDo | 117o | 50-145o | 6.97o | 30o |
| *Surrogate: 13C4-PFBAo* | *24.4o* | | | *ng/Lo* | *28.8o* | | *84.6o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *13.5o* | | | *ng/Lo* | *14.4o* | | *93.5o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *5.81o* | | | *ng/Lo* | *7.21o* | | *80.5o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *6.72o* | | | *ng/Lo* | *7.21o* | | *93.2o* | *40-130o* | | |
| *Surrogate: 13C8-PFOAo* | *6.64o* | | | *ng/Lo* | *7.21o* | | *92.1o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *3.48o* | | | *ng/Lo* | *3.61o* | | *96.5o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *3.53o* | | | *ng/Lo* | *3.61o* | | *98.0o* | *40-130o* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/05/2024 12:21 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD4)** | **Source: 24C0131-02** | | | | | Prepared: 03/22/24 10:26 Analyzed: 03/29/24 01:19 | | | | | |
| *Surrogate: 13C7-PFUnA* | *3.47* | | | | *ng/L* | *3.61* | | *96.3* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.58* | | | | *ng/L* | *3.61* | | *99.4* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.53* | | | | *ng/L* | *3.61* | | *97.8* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *6.24* | | | | *ng/L* | *7.21* | | *86.5* | *20-150* | | |
| *Surrogate: 13C3-PFBS* | *5.86* | | | | *ng/L* | *7.21* | | *81.2* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *6.47* | | | | *ng/L* | *7.21* | | *89.8* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *6.48* | | | | *ng/L* | *7.21* | | *89.9* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *11.7* | | | | *ng/L* | *14.4* | | *81.1* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *15.0* | | | | *ng/L* | *14.4* | | *104* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *14.2* | | | | *ng/L* | *14.4* | | *98.3* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *29.6* | | | | *ng/L* | *28.8* | | *103* | *20-150* | | |
| *Surrogate: 13C8-PFOSA* | *5.21* | | | | *ng/L* | *7.21* | | *72.2* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *2.23* | | | | *ng/L* | *7.21* | | *30.9* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *2.38* | | | | *ng/L* | *7.21* | | *33.0* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *12.8* | | | | *ng/L* | *14.4* | | *88.5* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *13.1* | | | | *ng/L* | *14.4* | | *91.1* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *24.7* | | | | *ng/L* | *72.1* | | *34.3* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *23.0* | | | | *ng/L* | *72.1* | | *31.9* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *24.3* | | | | *ng/L* | *28.8* | | *84.3* | *40-130* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.*
*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/05/2024 12:21o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| Bo | Blank contamination |
| IR1o | Ion ratio below the lower control limit o |
| Jo | Estimated value o |
| MI2o | Manual integration, non-target peak interference o |
| MI5o | Manual integration, whole peak was not integrated o |
| MS2o | Matrix spike recovered above the upper control limit o |
| MS3o | MS/MSD recovered with high RPD o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limits o |
| RPDo | Relative Percent Difference o |
| %RECo | Percent Recovery o |
| Sourceo | Sample that was matrix spiked or duplicated. o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL). o

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0131** R

Printed: 04/05/2024 12:22 pmi

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**

Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**

Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715i

Date Received:i 03/21/2024 10:00 AMi
Date Due:i 04/04/2024 (10.00 day TAT)i

Logged In By:i Eric Ogdeni
Received By:i Terry Moreni

| Analysisa | Commentsa |
|---|---|

**24C0131-01 MW-15 [Water] Sampled 3/20/2024 8:56:00AMR**
***Sample Comments: MS.MSDR***

| | |
|---|---|
| 1633i | NASA Listi |

**24C0131-02 MW-8 [Water] Sampled 3/20/2024 10:35:00AMR**
***Sample Comments: MS.MSDR***

| | |
|---|---|
| 1633i | NASA Listi |

**24C0131-03 MW-9 [Water] Sampled 3/20/2024 1:35:00PMR**

| | |
|---|---|
| 1633i | NASA Listi |

**24C0131-04 EB-8-032024 [Water] Sampled 3/20/2024 1:40:00PMR**

| | |
|---|---|
| 1633i | NASA Listi |

**24C0131-05 FB-8-032024 [Water] Sampled 3/20/2024 1:45:00PMR**

| | |
|---|---|
| 1633i | NASA Listi |

**24C0131C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **1.8°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Yesi | Were all containers sealed in separate bags?i | Yesi |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yesi |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yesi |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yesi |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yesi |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | Noi |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | Noi |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | Noi |

24C0131

IRB 1.8

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: 626-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 | Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh2o.net | | Email: david.conner@tideh2o.net | |

| Project Name/Number | Sampler (Print) |
|---|---|
| JPL-GW Monitoring | Think Hoang |
| Purchase Order Number | Sampler (Signature) |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | Analysis Requested/Method Number: PFAS 1633 | Date Shipped: / Carrier: / Waybill No.: / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-15 | | 03/20/24 | 0856 | | 3 | X | | | X | Laboratory please select 2 SDGs for level IV Validation ms/msd@MW-15 ms/msd@MW-8 |
| MW-8 | | | 1035 | | 3 | X | | | X | |
| MW-9 | | | 1335 | | 1 3 | X | | | X | |
| FB-8-032024 | | | 1340 | | 4 | X | | | X | |
| FB-8-032024 | | | 1345 | | 1 | X | | | X | |

Shuttle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/20/24 | 1400 | Nicole Park | Nicole (Blaine Tech) | 3/20/24 | 1600 | FEDEX 7756 2028 6842 |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 3/21/24 | 10:00 | Jerry Moren APPL |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information



Table of Contents

Butkle
Seal
2636642
2636642

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

MW-15-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0131-01- | File ID:- | S2024-03-28B (30)- |
| Sampled:- | 03/20/24 08:56- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 05:46- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 565.905 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 5.2- | 0.18- | 1.4- | |
| PFPeA- | 4.8- | 0.057- | 0.71- | |
| PFHxA- | 4.9- | 0.049- | 0.35- | |
| PFHpA- | 3.0- | 0.036- | 0.35- | |
| PFOA- | 5.9- | 0.13- | 0.35- | |
| PFNA- | 2.2- | 0.072- | 0.35- | |
| PFDA- | 2.8- | 0.090- | 0.35- | |
| PFUnA- | ND- | 0.14- | 0.35- | U- |
| PFDoA- | ND- | 0.099- | 0.35- | U- |
| PFTrDA- | ND- | 0.18- | 0.35- | U- |
| PFTeDA- | ND- | 0.17- | 0.35- | U- |
| PFHxDA- | ND- | 0.18- | 0.35- | U- |
| PFODA- | ND- | 0.18- | 0.35- | U- |
| PFBS- | 2.1- | 0.032- | 0.35- | |
| PFPeS- | 0.20- | 0.055- | 0.35- | J- |
| PFHxS- | 0.93- | 0.028- | 0.35- | MI5- |
| PFHpS- | 0.099- | 0.045- | 0.35- | J- |
| PFOS- | 7.6- | 0.056- | 0.35- | |
| PFNS- | ND- | 0.11- | 0.35- | U- |
| PFDS- | ND- | 0.13- | 0.35- | U- |
| PFDoS- | ND- | 0.11- | 0.35- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.073- | 1.4- | U- |
| 10:2FTS- | ND- | 0.35- | 1.4- | U- |
| PFOSA- | ND- | 0.092- | 0.35- | U- |
| NMeFOSA- | ND- | 0.42- | 1.4- | U- |
| NEtFOSA- | ND- | 0.36- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.093- | 0.35- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.35- | U- |

# ANALYSIS DATA SHEETL

MW-15-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0131-01- | File ID:- | S2024-03-28B (30)- |
| Sampled:- | 03/20/24 08:56- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 05:46- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 565.905 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.89- | 1.4- | U- |
| NEtFOSE- | ND- | 0.92- | 1.4- | U- |
| HFPO-DA- | ND- | 0.15- | 0.71- | U- |
| ADONA- | ND- | 0.11- | 0.71- | U- |
| PFEESA- | ND- | 0.096- | 0.71- | U- |
| PFMPA- | ND- | 0.048- | 0.71- | U- |
| PFMBA- | ND- | 0.080- | 0.71- | U- |
| NFDHA- | ND- | 0.27- | 0.71- | U- |
| 9Cl-PF3ONS- | ND- | 0.18- | 0.71- | U- |
| 11Cl-PF3OUDS- | ND- | 0.18- | 0.71- | U- |
| 3:3FTCA- | ND- | 0.51- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.39- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.49- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (30)
Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 86793<br>( 163.0 / 69.0 ) 2650 | ( 2.37 , 0.70 ) ( N/A , -0.08 , 0.0) | 671.0<br>219.9 | 0.0305<br>111.4<br>116.4 | 1.5920 | N/A | 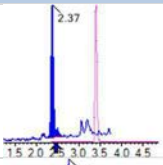 | 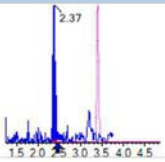 | |
| PFBA | ( 213.0 / 169.0 ) 429667 | ( 3.40 , 1.00 ) ( 0.00 , N/A , 0.0) | 421.1 | N/A<br>0.0<br>0.0 | 1.4580 | N/A | 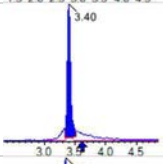 | | |
| PFPeA | ( 263.0 / 219.0 ) 269689<br>( 263.0 / 69.0 ) 2682 | ( 4.15 , 1.00 ) ( 0.00 , N/A , 0.3) | 746.7<br>42.0 | 0.0099<br>83.6<br>93.5 | 1.3530 | N/A | 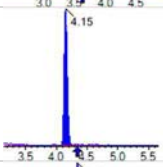 | 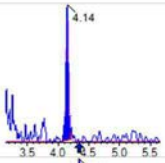 | |
| PFHxA | ( 313.0 / 269.0 ) 260917<br>( 313.0 / 119.0 ) 30104 | ( 5.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 814.7<br>475.1 | 0.1154<br>103.7<br>97.4 | 1.3810 | N/A | 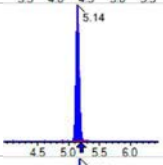 | 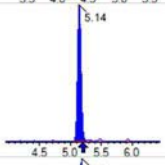 | |
| PFHpA | ( 363.0 / 319.0 ) 209719<br>( 363.0 / 169.0 ) 70018 | ( 6.27 , 1.00 ) ( 0.00 , N/A , -0.2) | 787.4<br>1074.8 | 0.3339<br>109.2<br>108.5 | 0.8590 | N/A | 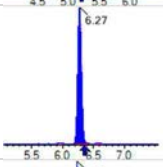 | 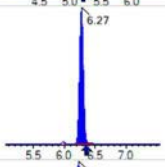 | |
| PFOA | ( 413.0 / 369.0 ) 610714<br>( 413.0 / 169.0 ) 237713 | ( 7.39 , 1.00 ) ( 0.00 , N/A , 0.1) | 709.4<br>662.8 | 0.3892<br>108.9<br>109.7 | 1.6580 | N/A | 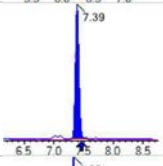 | 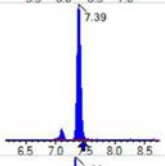 | |
| PFNA | ( 463.0 / 419.0 ) 137188<br>( 463.0 / 169.0 ) 33498 | ( 8.92 , 1.00 ) ( 0.00 , N/A , 0.0) | 744.4<br>405.1 | 0.2442<br>99.4<br>95.2 | 0.6200 | N/A | 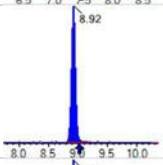 | 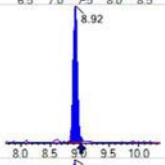 | |
| PFDA | ( 513.0 / 469.0 ) 211069<br>( 513.0 / 169.0 ) 29913 | ( 9.92 , 1.00 ) ( 0.00 , N/A , 0.3) | 1327.2<br>665.5 | 0.1417<br>118.9<br>116.3 | 0.7930 | N/A | 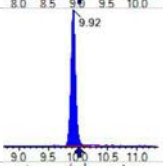 | 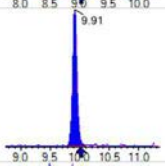 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 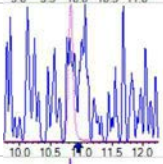 | 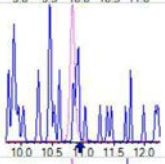 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 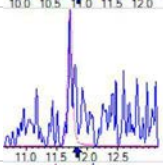 | 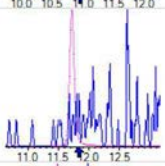 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 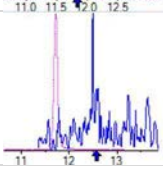 | 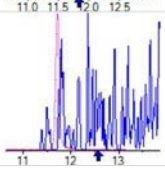 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (30)
Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 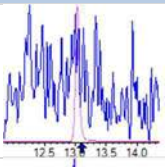 | 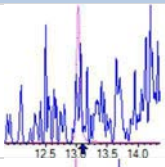 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 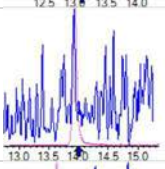 | 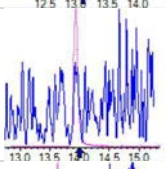 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 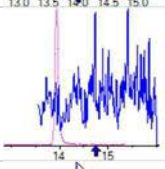 | 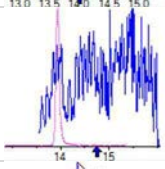 | |
| PFBS | ( 299.0 / 80.0 )<br>175521<br>( 299.0 / 99.0 )<br>139757 | ( 5.31 , 1.00 )<br>( 0.00 , N/A , 0.0) | 652.6<br>741.4 | 0.7962<br>107.5<br>105.6 | 0.5870 | N/A | 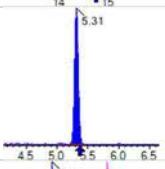 | 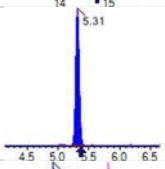 | |
| PFPeS | ( 349.0 / 80.0 )<br>49392<br>( 349.0 / 99.0 )<br>17695 | ( 6.60 , 0.82 )<br>( N/A , -0.08 , 0.0) | 207.5<br>176.5 | 0.3582<br>104.8<br>100.8 | 0.0550 | N/A | 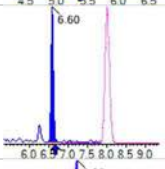 | 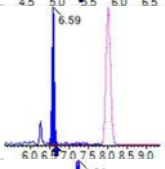 | |
| PFHxS | ( 399.0 / 80.0 )<br>285974<br>( 399.0 / 99.0 )<br>89707 | ( 8.02 , 1.00 )<br>( 0.00 , N/A , 0.1) | 690.1<br>662.5 | 0.3137<br>95.6<br>97.2 | 0.2630 | N/A | 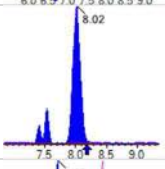 | 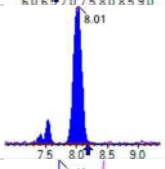 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>22621<br>( 449.0 / 99.0 )<br>7354 | ( 9.40 , 0.91 )<br>( N/A , -0.11 , -0.4) | 68.3<br>70.3 | 0.3251<br>124.6<br>125.3 | 0.0280 | N/A | 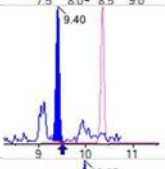 | 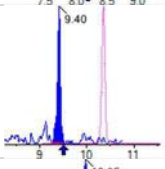 | |
| PFOS | ( 499.0 / 80.0 )<br>1698913<br>( 499.0 / 99.0 )<br>336356 | ( 10.35 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1152.2<br>3296.9 | 0.1980<br>85.7<br>86.4 | 2.1610 | N/A | 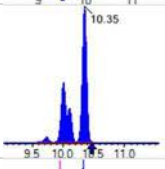 | 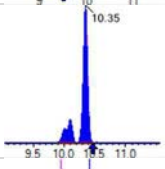 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 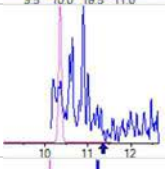 | 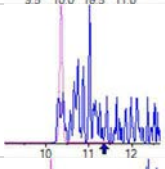 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 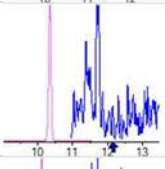 | 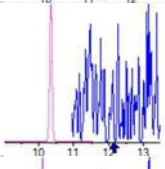 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 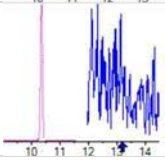 | 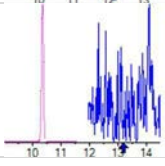 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (30)
Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 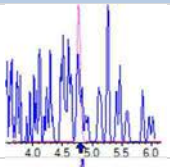 | 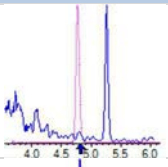 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 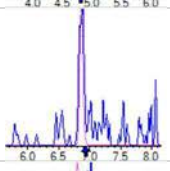 | 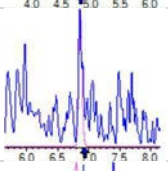 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 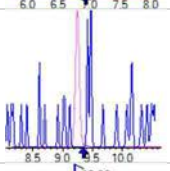 | 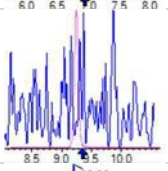 | |
| 10:2FTS | ( 627.0 / 607.0 ) 13518<br>( 627.0 / 81.0 ) 22386 | ( 10.96 , 1.00 ) ( 0.00 , N/A , 0.0) | 215.4<br>86.0 | 1.6560<br>115.2<br>114.3 | 0.0530 | N/A | 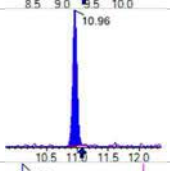 | 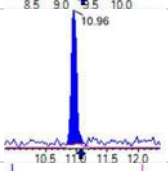 | |
| PFBSA | ( 297.9 / 78.0 ) 2413<br>( 297.9 / 278.0 ) N/A | ( 5.46 , 0.38 ) ( N/A , -0.07 , #Value!) | 36.8<br>N/A | N/A<br>0.0<br>0.0 | 0.0130 | N/A | 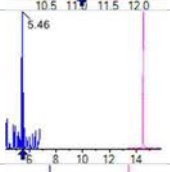 | 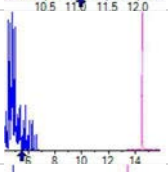 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 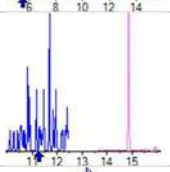 | 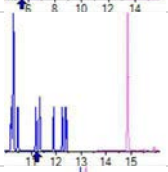 | |
| PFOSA | ( 498.0 / 78.0 ) 13307<br>( 498.0 / 478.0 ) N/A | ( 13.25 , 1.00 ) ( -0.01 , N/A , #Value!) | 180.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0230 | N/A | 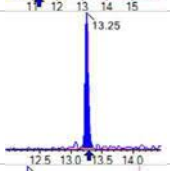 | 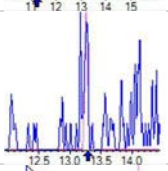 | |
| TFSI | ( 279.7 / 147.0 ) 37752<br>( 279.7 / 211.0 ) 3781 | ( 6.97 , 0.53 ) ( N/A , -0.09 , 0.1) | 34.1<br>140.8 | 0.1002<br>113.2<br>114.2 | 0.0370 | N/A | 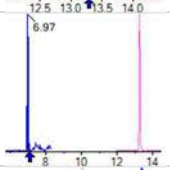 | 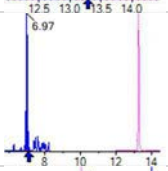 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 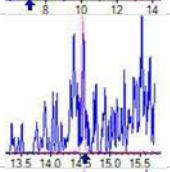 | 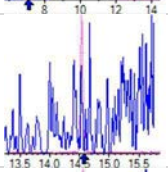 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 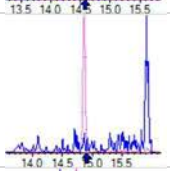 | 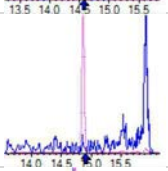 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 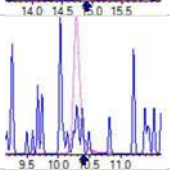 | 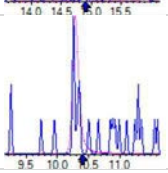 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (30)
Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 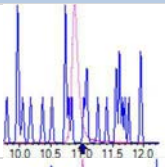 | 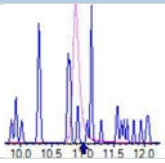 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 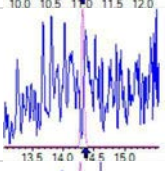 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 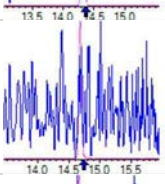 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 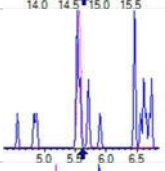 | 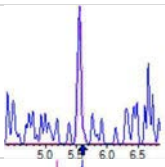 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 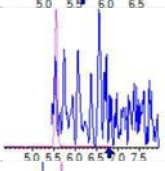 | 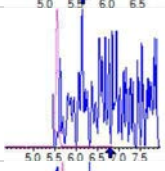 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 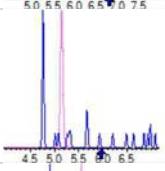 | 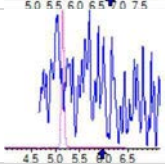 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 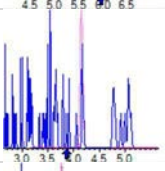 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 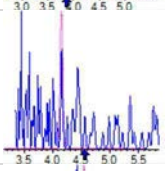 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 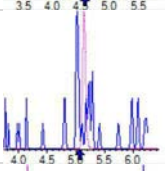 | 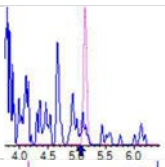 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 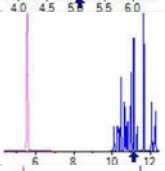 | 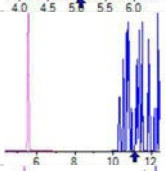 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 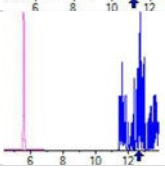 | 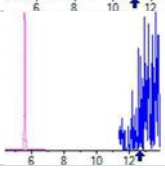 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (30)
Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 11503<br>( 461.0 / 381.2 ) 3446 | ( 9.29 , 0.90 )<br>( N/A , -0.11 , -0.4) | 142.1<br>39.8 | 0.2995<br>77.6<br>75.4 | 0.0270 | N/A | 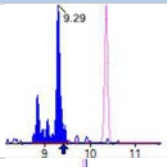 | 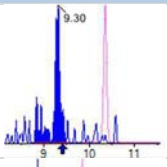 | MI5 DG 2024-03-29 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 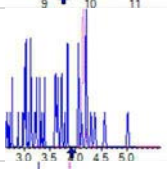 | 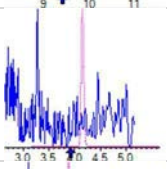 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 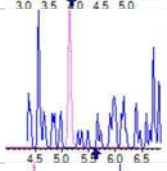 | 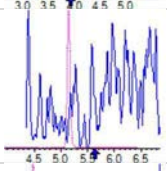 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 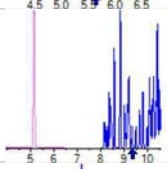 | 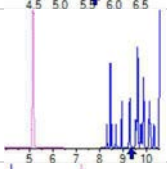 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 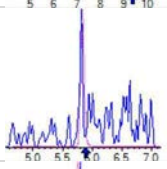 | 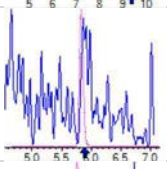 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 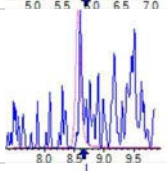 | 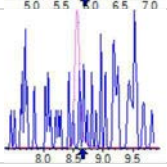 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 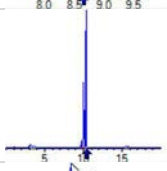 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 231395 | ( 3.40 , N/A )<br>( N/A , -0.21 , N/A ) | 1610.9 | N/A | 0.8200<br>[ 1.0000 ] | 82.0%<br>{ 87.5% } | 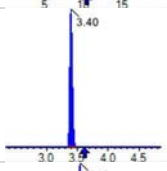 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 92269 | ( 5.15 , N/A )<br>( N/A , -0.05 , N/A ) | 3379.0 | N/A | 0.7820<br>[ 1.0000 ] | 78.2%<br>{ 79.7% } | 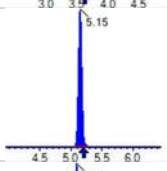 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 324866 | ( 7.39 , N/A )<br>( N/A , -0.08 , N/A ) | 6444.6 | N/A | 0.8370<br>[ 1.0000 ] | 83.7%<br>{ 90.0% } | 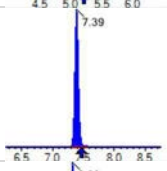 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 222100 | ( 8.92 , N/A )<br>( N/A , -0.10 , N/A ) | 1576.6 | N/A | 0.7600<br>[ 1.0000 ] | 76.0%<br>{ 79.7% } | 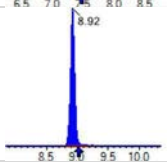 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0131-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 225865 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 24220.9 | N/A | 0.7880 [ 1.0000 ] | 78.8% { 81.8% } | 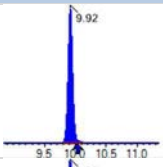 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 813712 | ( 8.02 , N/A ) ( N/A , -0.16 , N/A ) | 5174.8 | N/A | 0.8290 [ 1.0000 ] | 82.9% { 88.7% } | 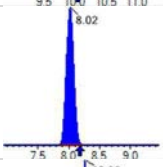 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 632000 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 1768.8 | N/A | 0.8060 [ 1.0000 ] | 80.6% { 81.9% } | 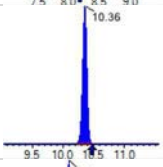 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1926960 | ( 3.40 , N/A ) ( N/A , -0.21 , N/A ) | 61648.0 | N/A | 7.7040 [ 8.0000 ] | 96.3% { 88.7% } | 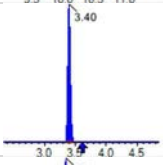 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 798483 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 5526.4 | N/A | 4.7270 [ 4.0000 ] | 118.2% { 95.5% } | 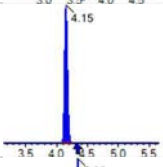 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 407335 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 10242.5 | N/A | 2.0180 [ 2.0000 ] | 100.9% { 84.7% } | 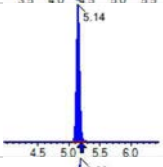 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 491902 | ( 6.28 , N/A ) ( N/A , -0.08 , N/A ) | 6966.4 | N/A | 2.1940 [ 2.0000 ] | 109.7% { 89.7% } | 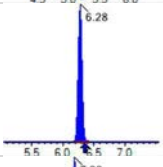 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 733441 | ( 7.38 , N/A ) ( N/A , -0.08 , N/A ) | 5480.4 | N/A | 2.1300 [ 2.0000 ] | 106.5% { 95.8% } | 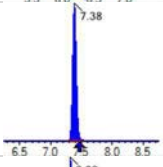 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 220388 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 4331.4 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 81.7% } | 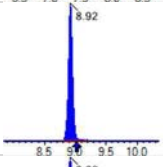 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 266455 | ( 9.92 , N/A ) ( N/A , -0.11 , N/A ) | 1366.8 | N/A | 1.0210 [ 1.0000 ] | 102.1% { 90.6% } | 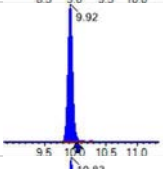 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 296926 | ( 10.83 , N/A ) ( N/A , -0.11 , N/A ) | 1293.5 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 80.4% } | 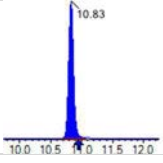 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0131-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 304936 | ( 11.72 , N/A ) ( N/A , -0.11 , N/A ) | 1344.0 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 84.0% } | 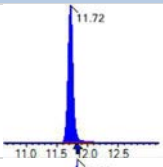 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 286192 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1369.0 | N/A | 1.0180 [ 1.0000 ] | 101.8% { 87.3% } | 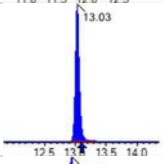 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 334282 | ( 13.94 , N/A ) ( N/A , -0.07 , N/A ) | 1523.3 | N/A | 1.4210 [ 2.0000 ] | 71.0% { 67.1% } | 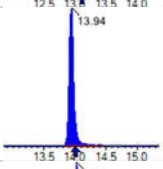 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1215270 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1447.6 | N/A | 1.8530 [ 2.0000 ] | 92.6% { 82.4% } | 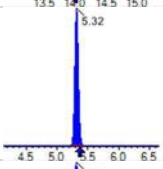 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1243269 | ( 8.01 , N/A ) ( N/A , -0.16 , N/A ) | 5438.6 | N/A | 2.1180 [ 2.0000 ] | 105.9% { 95.5% } | 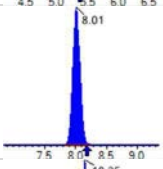 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1354416 | ( 10.35 , N/A ) ( N/A , -0.11 , N/A ) | 1932.0 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 93.8% } | 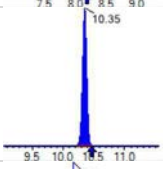 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 629369 | ( 4.77 , N/A ) ( N/A , -0.04 , N/A ) | 66.3 | N/A | 4.3620 [ 4.0000 ] | 109.0% { 96.7% } | 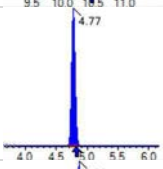 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1795628 | ( 6.86 , N/A ) ( N/A , -0.07 , N/A ) | 4800.8 | N/A | 5.0660 [ 4.0000 ] | 126.6% { 102.0% } | 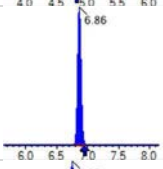 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1313173 | ( 9.25 , N/A ) ( N/A , -0.10 , N/A ) | 1895.9 | N/A | 4.2340 [ 4.0000 ] | 105.9% { 90.2% } | 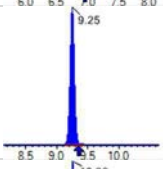 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2587115 | ( 10.96 , N/A ) ( N/A , -0.11 , N/A ) | 1715.9 | N/A | 7.7110 [ 8.0000 ] | 96.4% { 86.8% } | 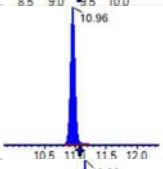 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1196490 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 3449.5 | N/A | 1.6760 [ 2.0000 ] | 83.8% { 76.8% } | 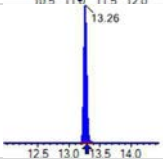 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (30)
Acquired: 2024/03/29 - 05:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 120502 | ( 14.53 , N/A ) ( N/A , -0.03 , N/A ) | 895.1 | N/A | 0.7510 [ 2.0000 ] | 37.5% { 33.1% } | 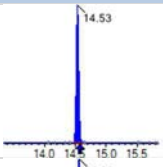 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 107868 | ( 14.86 , N/A ) ( N/A , -0.03 , N/A ) | 941.4 | N/A | 0.7350 [ 2.0000 ] | 36.8% { 31.3% } | 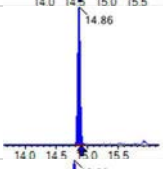 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 887369 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 2771.5 | N/A | 3.8010 [ 4.0000 ] | 95.0% { 75.2% } | 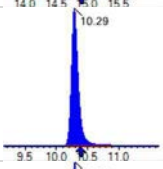 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 866501 | ( 10.89 , N/A ) ( N/A , -0.10 , N/A ) | 2336.6 | N/A | 4.1120 [ 4.0000 ] | 102.8% { 85.0% } | 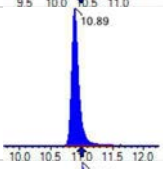 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 803741 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 2005.5 | N/A | 13.4050 [ 20.0000 ] | 67.0% { 60.5% } | 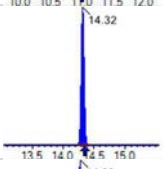 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 673212 | ( 14.68 , N/A ) ( N/A , -0.03 , N/A ) | 2710.4 | N/A | 11.9890 [ 20.0000 ] | 59.9% { 53.8% } | 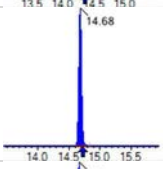 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 705148 | ( 5.56 , N/A ) ( N/A , -0.06 , N/A ) | 2364.7 | N/A | 8.0640 [ 8.0000 ] | 100.8% { 85.2% } | 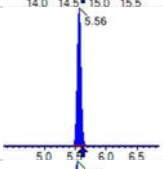 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 568655 | ( 5.83 , N/A ) ( N/A , -0.07 , N/A ) | 1642.9 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 101.2% } | 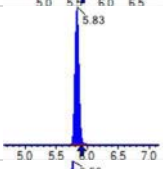 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 526361 | ( 8.56 , N/A ) ( N/A , -0.10 , N/A ) | 1032.2 | N/A | 1.8980 [ 2.0000 ] | 94.9% { 78.5% } | 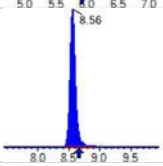 | | |

# ANALYSIS DATA SHEETL

MW-8-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0131-02- | File ID:- | S2024-03-28B (31)- |
| Sampled:- | 03/20/24 10:35- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 06:07- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 556.501 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 2.1- | 0.19- | 1.4- | |
| PFPeA- | 1.1- | 0.058- | 0.72- | |
| PFHxA- | 0.55- | 0.049- | 0.36- | |
| PFHpA- | 0.22- | 0.037- | 0.36- | J- |
| PFOA- | 0.54- | 0.14- | 0.36- | B- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | ND- | 0.091- | 0.36- | U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 0.73- | 0.033- | 0.36- | |
| PFPeS- | ND- | 0.056- | 0.36- | U- |
| PFHxS- | 0.10- | 0.028- | 0.36- | MI5, J- |
| PFHpS- | ND- | 0.046- | 0.36- | U- |
| PFOS- | 2.3- | 0.057- | 0.36- | |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.094- | 0.36- | U- |
| NMeFOSA- | ND- | 0.43- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.095- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-8-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0131-02- | File ID:- | S2024-03-28B (31)- |
| Sampled:- | 03/20/24 10:35- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 06:07- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 556.501 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.94- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.098- | 0.72- | U- |
| PFMPA- | ND- | 0.048- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 35613<br>( 163.0 / 69.0 ) 1022 | ( 2.36 , 0.69 ) ( N/A , -0.10 , 0.5) | 362.2<br>91.7 | 0.0287<br>104.7<br>109.4 | 0.6860 | N/A | 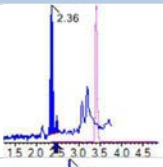 | 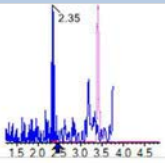 | |
| PFBA | ( 213.0 / 169.0 ) 211426 | ( 3.41 , 1.00 ) ( 0.01 , N/A , 0.0) | 142.2 | N/A<br>0.0<br>0.0 | 0.5820 | N/A | 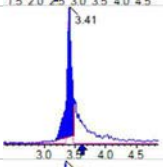 | | |
| PFPeA | ( 263.0 / 219.0 ) 50577<br>( 263.0 / 69.0 ) 192 | ( 4.15 , 1.00 ) ( 0.00 , N/A , -1.6) | 296.1<br>8.0 | 0.0038<br>31.9<br>35.7 | 0.3000 | N/A | 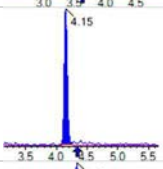 | 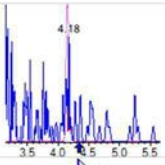 | |
| PFHxA | ( 313.0 / 269.0 ) 25936<br>( 313.0 / 119.0 ) 3402 | ( 5.13 , 1.00 ) ( 0.00 , N/A , 0.2) | 204.4<br>113.6 | 0.1312<br>117.9<br>110.7 | 0.1520 | N/A | 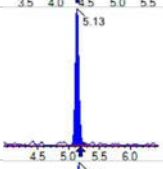 | 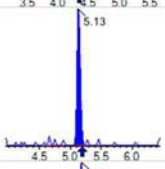 | |
| PFHpA | ( 363.0 / 319.0 ) 12419<br>( 363.0 / 169.0 ) 4566 | ( 6.26 , 1.00 ) ( 0.00 , N/A , -0.3) | 103.3<br>90.2 | 0.3677<br>120.3<br>119.5 | 0.0600 | N/A | 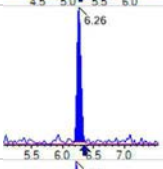 | 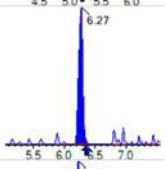 | |
| PFOA | ( 413.0 / 369.0 ) 48650<br>( 413.0 / 169.0 ) 19014 | ( 7.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 100.3<br>141.1 | 0.3908<br>109.3<br>110.2 | 0.1500 | N/A | 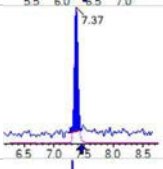 | 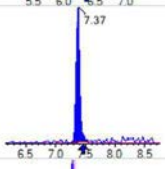 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 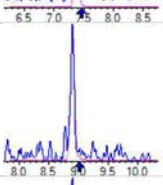 | 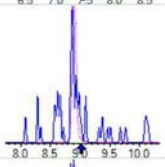 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 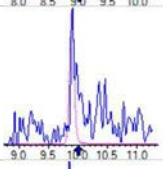 | 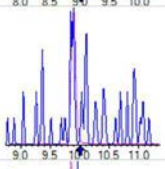 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 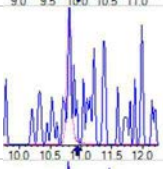 | 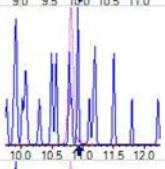 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 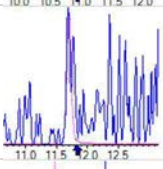 | 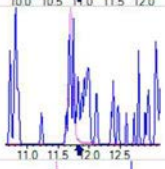 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 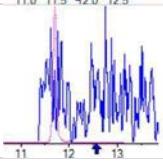 | 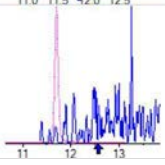 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 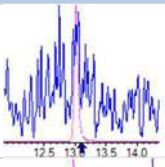 | 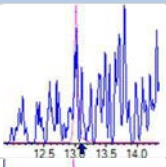 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 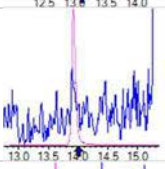 | 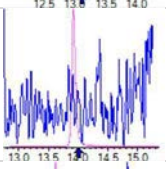 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 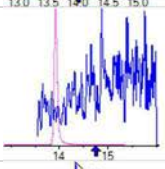 | 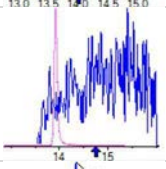 | |
| PFBS | ( 299.0 / 80.0 )<br>58453<br>( 299.0 / 99.0 )<br>45882 | ( 5.30 , 1.00 )<br>( 0.00 , N/A , -0.1) | 523.3<br>500.3 | 0.7849<br>106.0<br>104.1 | 0.2040 | N/A | 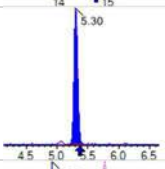 | 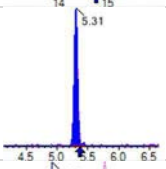 | |
| PFPeS | ( 349.0 / 80.0 )<br>8807<br>( 349.0 / 99.0 )<br>2961 | ( 6.58 , 0.83 )<br>( N/A , -0.09 , 0.1) | 78.3<br>53.6 | 0.3362<br>98.4<br>94.6 | 0.0100 | N/A | 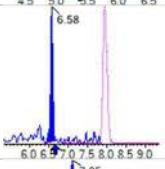 | 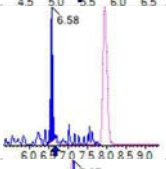 | |
| PFHxS | ( 399.0 / 80.0 )<br>28613<br>( 399.0 / 99.0 )<br>8614 | ( 7.95 , 1.00 )<br>( 0.00 , N/A , -1.0) | 202.6<br>184.3 | 0.3011<br>91.7<br>93.2 | 0.0280 | N/A | 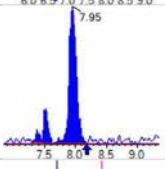 | 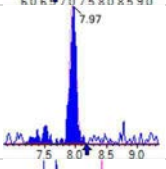 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 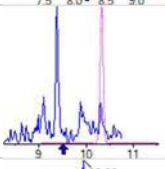 | 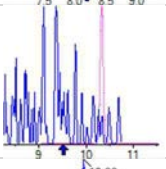 | |
| PFOS | ( 499.0 / 80.0 )<br>446363<br>( 499.0 / 99.0 )<br>85775 | ( 10.28 , 1.00 )<br>( -0.05 , N/A , -2.9) | 617.6<br>1031.2 | 0.1922<br>83.2<br>83.9 | 0.6340 | N/A | 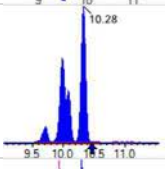 | 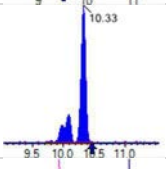 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 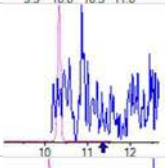 | 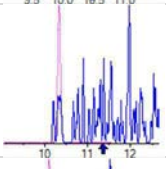 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 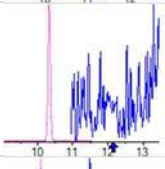 | 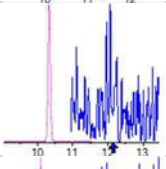 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 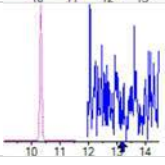 | 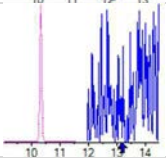 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 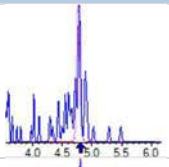 | 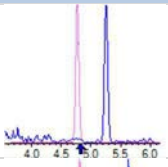 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 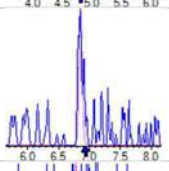 | 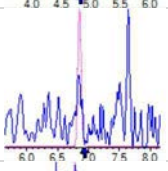 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 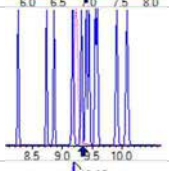 | 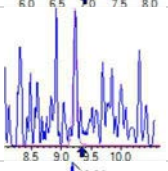 | |
| 10:2FTS | ( 627.0 / 607.0 ) 13837<br>( 627.0 / 81.0 ) 20242 | ( 10.95 , 1.00 ) ( 0.01 , N/A , 0.4) | 189.7<br>83.6 | 1.4628<br>101.8<br>100.9 | 0.0540 | N/A | 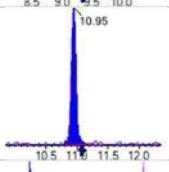 | 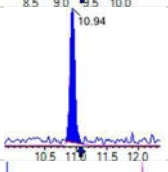 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 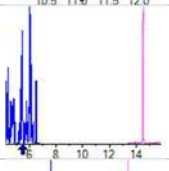 | 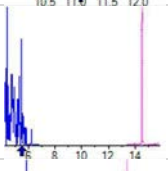 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 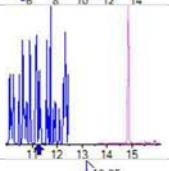 | 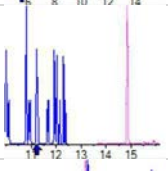 | |
| PFOSA | ( 498.0 / 78.0 ) 8243<br>( 498.0 / 478.0 ) N/A | ( 13.25 , 1.00 ) ( 0.00 , N/A , #Value!) | 104.8<br>N/A | N/A<br>0.0<br>0.0 | 0.0150 | N/A | 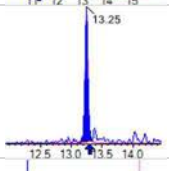 | 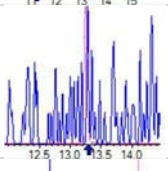 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 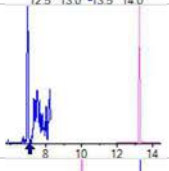 | 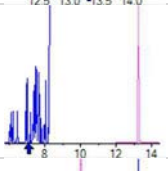 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 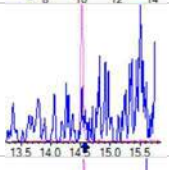 | 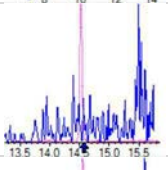 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 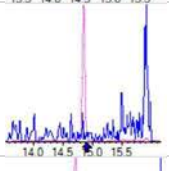 | 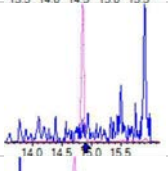 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 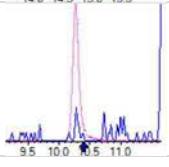 | 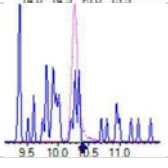 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 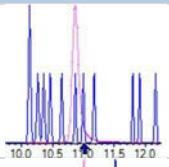 | 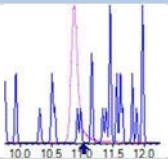 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 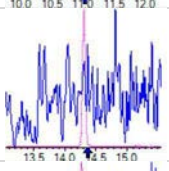 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 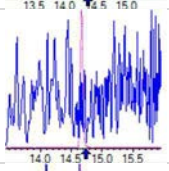 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 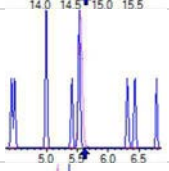 | 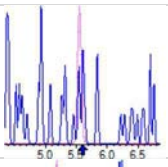 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 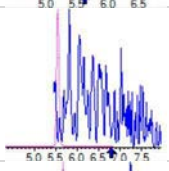 | 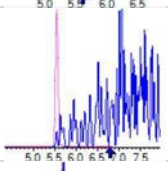 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 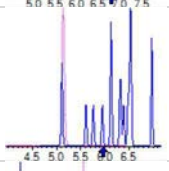 | 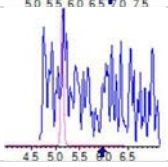 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 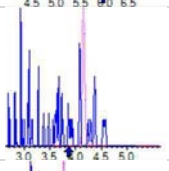 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 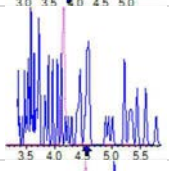 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 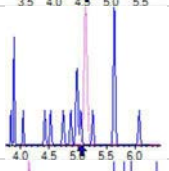 | 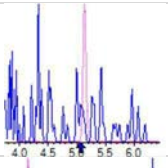 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 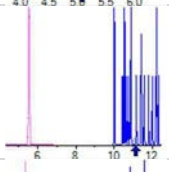 | 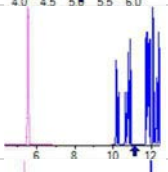 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 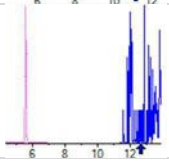 | 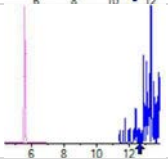 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 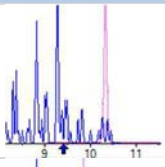 | 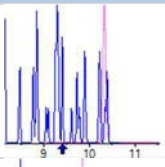 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 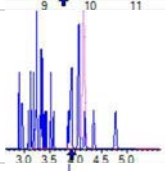 | 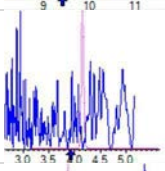 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 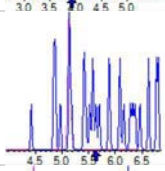 | 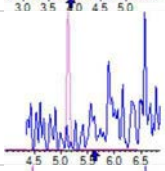 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 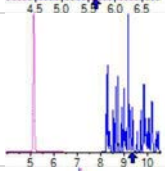 | 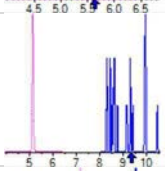 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 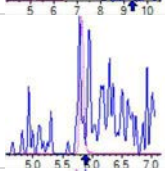 | 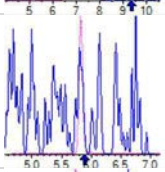 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 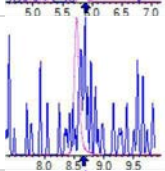 | 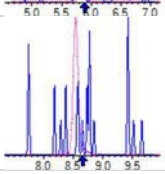 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 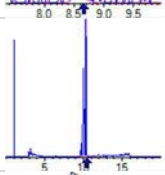 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 219053 | ( 3.41 , N/A )<br>( N/A , -0.20 , N/A ) | 1827.9 | N/A | 0.7760<br>[ 1.0000 ] | 77.6%<br>{ 82.8% } | 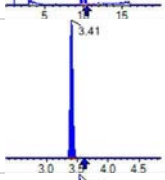 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 74068 | ( 5.13 , N/A )<br>( N/A , -0.06 , N/A ) | 3681.1 | N/A | 0.6270<br>[ 1.0000 ] | 62.7%<br>{ 64.0% } | 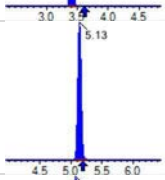 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 313178 | ( 7.37 , N/A )<br>( N/A , -0.10 , N/A ) | 5166.2 | N/A | 0.8070<br>[ 1.0000 ] | 80.7%<br>{ 86.8% } | 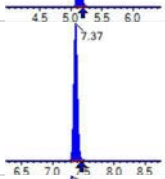 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 208303 | ( 8.91 , N/A )<br>( N/A , -0.12 , N/A ) | 1804.0 | N/A | 0.7130<br>[ 1.0000 ] | 71.3%<br>{ 74.7% } | 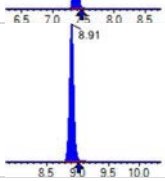 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 212015 | ( 9.90 , N/A ) ( N/A , -0.13 , N/A ) | 4167.7 | N/A | 0.7400 [ 1.0000 ] | 74.0% { 76.8% } | 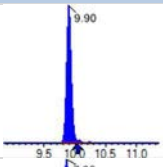 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 782961 | ( 7.96 , N/A ) ( N/A , -0.22 , N/A ) | 6973.9 | N/A | 0.7970 [ 1.0000 ] | 79.7% { 85.3% } | 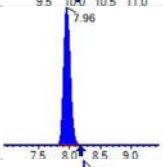 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 602523 | ( 10.33 , N/A ) ( N/A , -0.13 , N/A ) | 2524.7 | N/A | 0.7680 [ 1.0000 ] | 76.8% { 78.1% } | 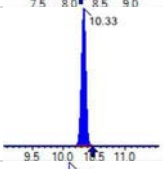 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1835931 | ( 3.40 , N/A ) ( N/A , -0.20 , N/A ) | 150912.1 | N/A | 7.7540 [ 8.0000 ] | 96.9% { 84.5% } | 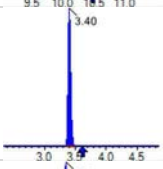 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 675858 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 5346.2 | N/A | 4.9840 [ 4.0000 ] | 124.6% { 80.8% } | 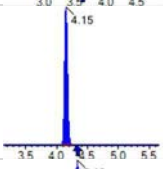 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 367661 | ( 5.13 , N/A ) ( N/A , -0.06 , N/A ) | 10502.6 | N/A | 2.2690 [ 2.0000 ] | 113.4% { 76.5% } | 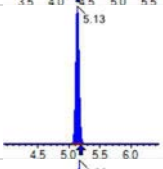 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 414321 | ( 6.26 , N/A ) ( N/A , -0.09 , N/A ) | 5609.7 | N/A | 2.3020 [ 2.0000 ] | 115.1% { 75.6% } | 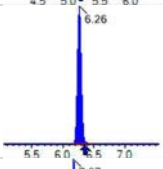 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 644157 | ( 7.37 , N/A ) ( N/A , -0.10 , N/A ) | 4706.9 | N/A | 1.9410 [ 2.0000 ] | 97.0% { 84.1% } | 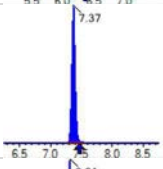 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 205578 | ( 8.91 , N/A ) ( N/A , -0.12 , N/A ) | 3774.9 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 76.2% } | 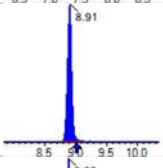 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 236552 | ( 9.90 , N/A ) ( N/A , -0.13 , N/A ) | 1110.4 | N/A | 0.9660 [ 1.0000 ] | 96.6% { 80.4% } | 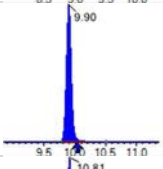 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 278127 | ( 10.81 , N/A ) ( N/A , -0.13 , N/A ) | 1125.2 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 75.3% } | 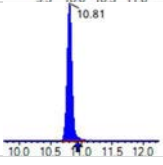 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 285031 | ( 11.70 , N/A ) ( N/A , -0.13 , N/A ) | 1108.5 | N/A | 0.9560 [ 1.0000 ] | 95.6% { 78.5% } | 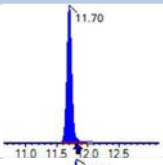 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 265405 | ( 13.01 , N/A ) ( N/A , -0.09 , N/A ) | 1353.2 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 81.0% } | 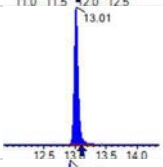 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 380153 | ( 13.92 , N/A ) ( N/A , -0.09 , N/A ) | 2196.9 | N/A | 1.7220 [ 2.0000 ] | 86.1% { 76.4% } | 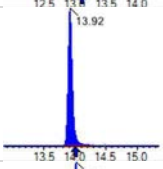 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1162479 | ( 5.31 , N/A ) ( N/A , -0.06 , N/A ) | 2099.1 | N/A | 1.8420 [ 2.0000 ] | 92.1% { 78.8% } | 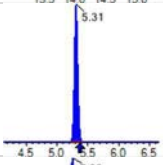 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1174939 | ( 7.96 , N/A ) ( N/A , -0.21 , N/A ) | 5844.1 | N/A | 2.0800 [ 2.0000 ] | 104.0% { 90.2% } | 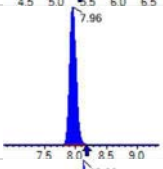 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1212044 | ( 10.33 , N/A ) ( N/A , -0.13 , N/A ) | 1990.2 | N/A | 1.8910 [ 2.0000 ] | 94.5% { 83.9% } | 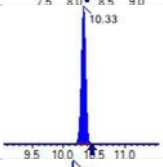 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 561869 | ( 4.77 , N/A ) ( N/A , -0.05 , N/A ) | 65.6 | N/A | 4.0470 [ 4.0000 ] | 101.2% { 86.4% } | 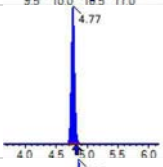 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1538545 | ( 6.85 , N/A ) ( N/A , -0.09 , N/A ) | 4147.1 | N/A | 4.5110 [ 4.0000 ] | 112.8% { 87.4% } | 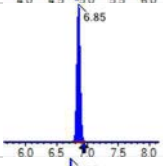 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1221257 | ( 9.23 , N/A ) ( N/A , -0.12 , N/A ) | 2325.3 | N/A | 4.0930 [ 4.0000 ] | 102.3% { 83.9% } | 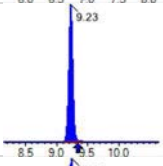 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2563475 | ( 10.94 , N/A ) ( N/A , -0.13 , N/A ) | 1966.1 | N/A | 7.9410 [ 8.0000 ] | 99.3% { 86.0% } | 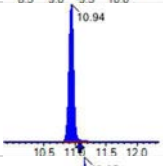 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1103120 | ( 13.25 , N/A ) ( N/A , -0.05 , N/A ) | 2562.6 | N/A | 1.6210 [ 2.0000 ] | 81.1% { 70.8% } | 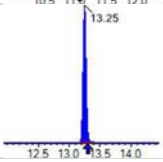 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (31)
Acquired: 2024/03/29 - 06:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 97407 | ( 14.52 , N/A ) ( N/A , -0.05 , N/A ) | 777.7 | N/A | 0.6370 [ 2.0000 ] | 31.8% { 26.8% } | 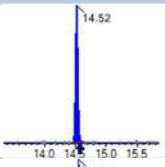 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 91628 | ( 14.85 , N/A ) ( N/A , -0.05 , N/A ) | 935.2 | N/A | 0.6550 [ 2.0000 ] | 32.8% { 26.6% } | 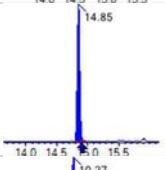 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 856989 | ( 10.27 , N/A ) ( N/A , -0.12 , N/A ) | 2835.6 | N/A | 3.8500 [ 4.0000 ] | 96.3% { 72.6% } | 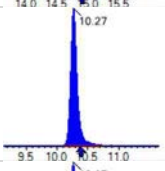 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 796162 | ( 10.87 , N/A ) ( N/A , -0.12 , N/A ) | 2702.7 | N/A | 3.9630 [ 4.0000 ] | 99.1% { 78.1% } | 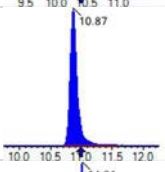 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 463987 | ( 14.31 , N/A ) ( N/A , -0.04 , N/A ) | 1669.1 | N/A | 8.1170 [ 20.0000 ] | 40.6% { 34.9% } | 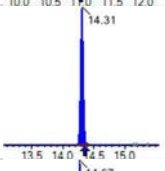 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 430776 | ( 14.67 , N/A ) ( N/A , -0.05 , N/A ) | 2340.5 | N/A | 8.0470 [ 20.0000 ] | 40.2% { 34.4% } | 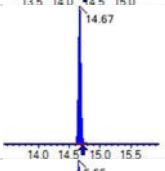 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 614907 | ( 5.55 , N/A ) ( N/A , -0.07 , N/A ) | 2104.5 | N/A | 8.7600 [ 8.0000 ] | 109.5% { 74.3% } | 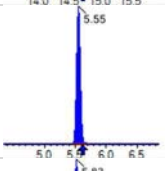 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 527916 | ( 5.83 , N/A ) ( N/A , -0.07 , N/A ) | 1898.8 | N/A | 2.2850 [ 2.0000 ] | 114.2% { 94.0% } | 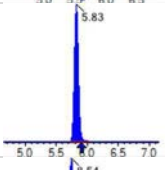 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 518169 | ( 8.54 , N/A ) ( N/A , -0.12 , N/A ) | 1222.1 | N/A | 1.9910 [ 2.0000 ] | 99.5% { 77.3% } | 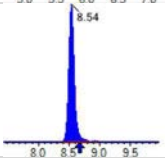 | | |

# ANALYSIS DATA SHEETL

MW-9-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0131-03- | File ID:- | S2024-03-28B (32)- |
| Sampled:- | 03/20/24 13:35- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 06:27- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.663 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 10- | 0.19- | 1.5- | |
| PFPeA- | 11- | 0.059- | 0.73- | |
| PFHxA- | 11- | 0.050- | 0.36- | |
| PFHpA- | 6.4- | 0.037- | 0.36- | |
| PFOA- | 17- | 0.14- | 0.36- | MI5- |
| PFNA- | 4.4- | 0.074- | 0.36- | |
| PFDA- | 13- | 0.092- | 0.36- | |
| PFUnA- | ND- | 0.15- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.19- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | 6.6- | 0.033- | 0.36- | |
| PFPeS- | 0.18- | 0.057- | 0.36- | J- |
| PFHxS- | 1.1- | 0.029- | 0.36- | MI5- |
| PFHpS- | 0.26- | 0.047- | 0.36- | J- |
| PFOS- | 20- | 0.058- | 0.36- | |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.36- | 1.5- | U- |
| PFOSA- | 0.15- | 0.095- | 0.36- | J- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.096- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-9-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0131-03- | File ID:- | S2024-03-28B (32)- |
| Sampled:- | 03/20/24 13:35- | Prepared:- | 03/22/24 10:26- | Analyzed:- | 03/29/24 06:27- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 549.663 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0337- | Sequence:- | SD01096 | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.92- | 1.5- | U- |
| NEtFOSE- | ND- | 0.95- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.099- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.27- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 116051<br>( 163.0 / 69.0 ) 3206 | ( 2.35 , 0.70 ) ( N/A , -0.11 , -0.4) | 992.6<br>291.6 | 0.0276<br>100.8<br>105.3 | 2.4030 | N/A | 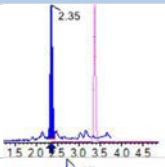 | 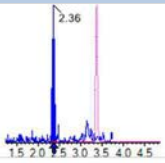 | MI6 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) 649828 | ( 3.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 728.1 | N/A<br>0.0<br>0.0 | 2.7380 | N/A | 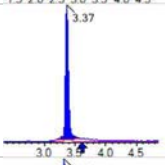 | | |
| PFPeA | ( 263.0 / 219.0 ) 566767<br>( 263.0 / 69.0 ) 6475 | ( 4.12 , 1.00 ) ( 0.00 , N/A , -0.3) | 980.0<br>80.5 | 0.0114<br>96.0<br>107.4 | 3.0940 | N/A | 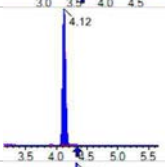 | 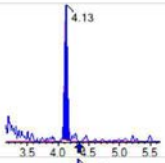 | |
| PFHxA | ( 313.0 / 269.0 ) 510886<br>( 313.0 / 119.0 ) 60044 | ( 5.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 1145.1<br>662.8 | 0.1175<br>105.7<br>99.2 | 2.9860 | N/A | 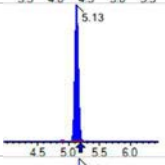 | 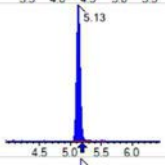 | |
| PFHpA | ( 363.0 / 319.0 ) 397968<br>( 363.0 / 169.0 ) 125387 | ( 6.27 , 1.00 ) ( 0.00 , N/A , 0.1) | 1098.7<br>964.6 | 0.3151<br>103.1<br>102.4 | 1.7470 | N/A | 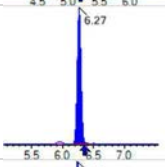 | 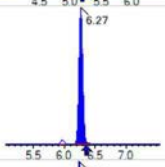 | |
| PFOA | ( 413.0 / 369.0 ) 1597234<br>( 413.0 / 169.0 ) 603562 | ( 7.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 963.4<br>971.0 | 0.3779<br>105.7<br>106.5 | 4.6780 | N/A | 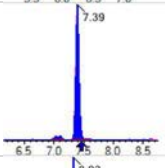 | 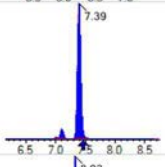 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 268677<br>( 463.0 / 169.0 ) 69197 | ( 8.92 , 1.00 ) ( 0.00 , N/A , 0.1) | 877.1<br>492.6 | 0.2575<br>104.8<br>100.4 | 1.2190 | N/A | 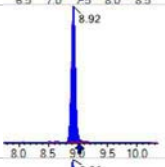 | 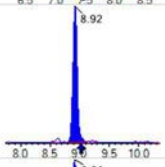 | |
| PFDA | ( 513.0 / 469.0 ) 899288<br>( 513.0 / 169.0 ) 103065 | ( 9.91 , 1.00 ) ( 0.00 , N/A , 0.0) | 3213.3<br>1708.1 | 0.1146<br>96.2<br>94.1 | 3.6130 | N/A | 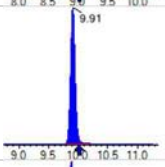 | 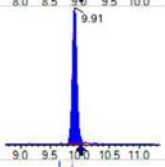 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 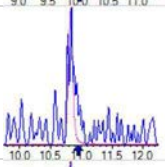 | 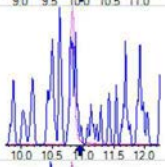 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 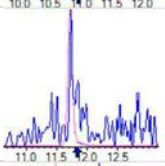 | 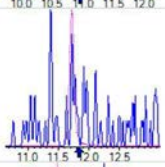 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 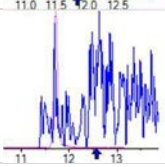 | 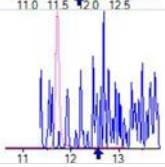 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 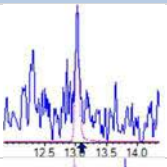 | 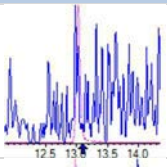 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 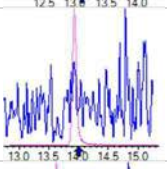 | 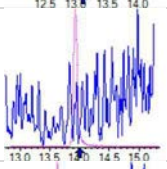 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 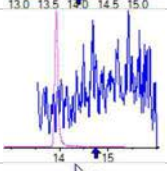 | 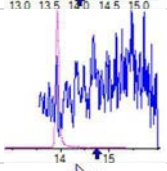 | |
| PFBS | ( 299.0 / 80.0 )<br>522299<br>( 299.0 / 99.0 )<br>353939 | ( 5.30 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1222.6<br>1073.6 | 0.6777<br>91.5<br>89.9 | 1.8010 | N/A | 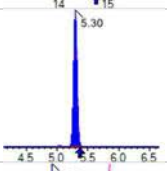 | 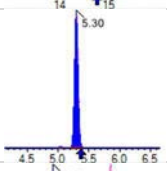 | |
| PFPeS | ( 349.0 / 80.0 )<br>42641<br>( 349.0 / 99.0 )<br>16785 | ( 6.58 , 0.82 )<br>( N/A , -0.09 , -0.1) | 190.3<br>117.5 | 0.3936<br>115.2<br>110.8 | 0.0510 | N/A | 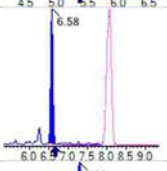 | 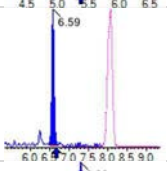 | |
| PFHxS | ( 399.0 / 80.0 )<br>304483<br>( 399.0 / 99.0 )<br>101887 | ( 8.06 , 1.00 )<br>( 0.00 , N/A , 0.1) | 821.6<br>799.8 | 0.3346<br>102.0<br>103.6 | 0.2980 | N/A | 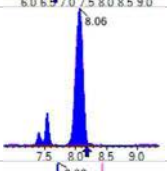 | 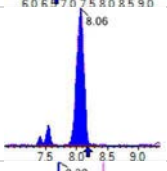 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>56771<br>( 449.0 / 99.0 )<br>16287 | ( 9.39 , 0.91 )<br>( N/A , -0.11 , 0.1) | 122.2<br>113.1 | 0.2869<br>110.0<br>110.6 | 0.0710 | N/A | 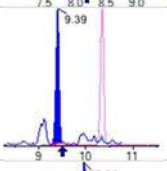 | 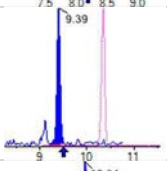 | |
| PFOS | ( 499.0 / 80.0 )<br>4326391<br>( 499.0 / 99.0 )<br>864908 | ( 10.34 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1843.1<br>2683.6 | 0.1999<br>86.5<br>87.3 | 5.5740 | N/A | 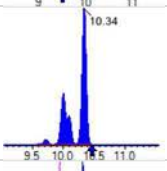 | 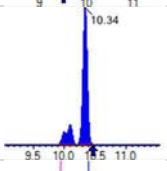 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 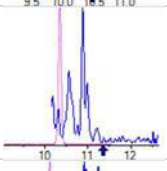 | 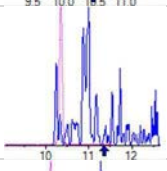 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 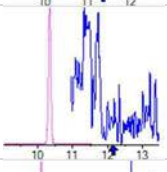 | 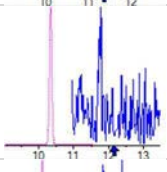 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 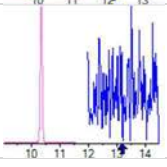 | 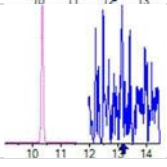 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 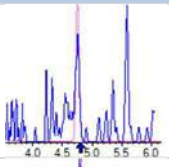 | 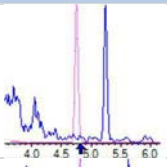 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 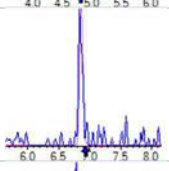 | 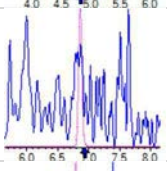 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 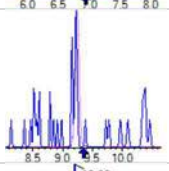 | 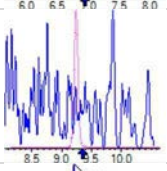 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14601<br>( 627.0 / 81.0 ) 19042 | ( 10.96 , 1.00 ) ( 0.01 , N/A , 0.0) | 200.2<br>90.6 | 1.3041<br>90.7<br>90.0 | 0.0590 | N/A | 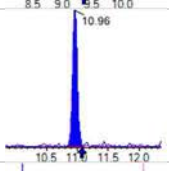 | 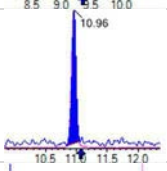 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 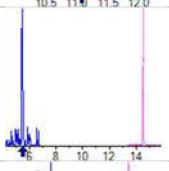 | 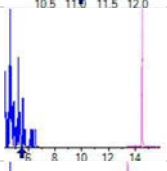 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 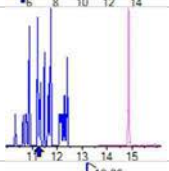 | 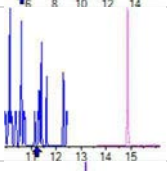 | |
| PFOSA | ( 498.0 / 78.0 ) 24016<br>( 498.0 / 478.0 ) N/A | ( 13.26 , 1.00 ) ( 0.00 , N/A , #Value!) | 266.3<br>N/A | N/A<br>0.0<br>0.0 | 0.0410 | N/A | 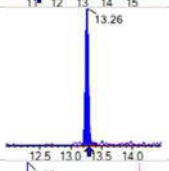 | 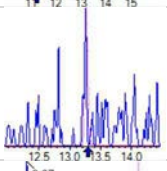 | |
| TFSI | ( 279.7 / 147.0 ) 24446<br>( 279.7 / 211.0 ) 1838 | ( 6.96 , 0.53 ) ( N/A , -0.10 , -0.3) | 25.7<br>355771.2 | 0.0752<br>84.9<br>85.7 | 0.0240 | N/A | 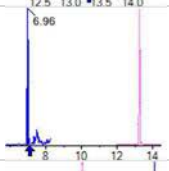 | 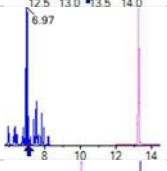 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 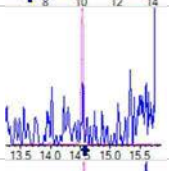 | 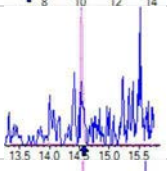 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 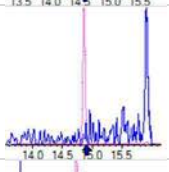 | 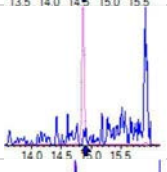 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 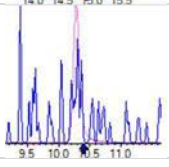 | 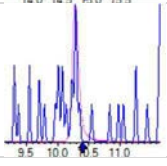 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 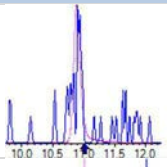 | 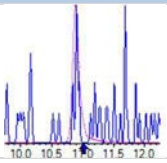 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 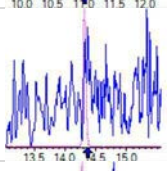 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 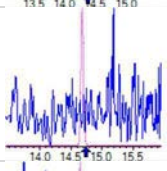 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 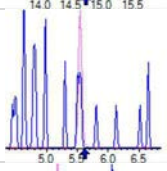 | 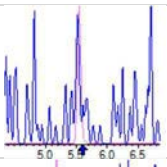 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 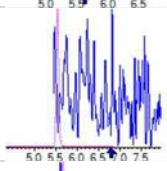 | 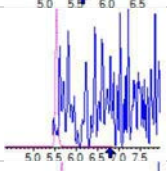 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 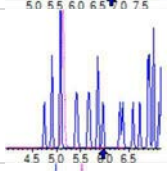 | 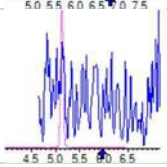 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 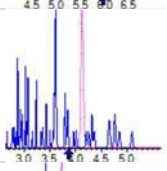 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 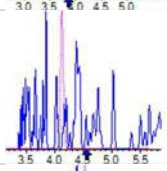 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 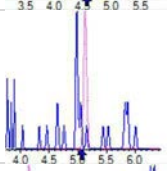 | 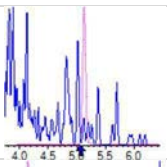 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 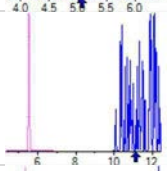 | 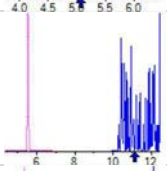 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 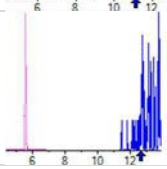 | 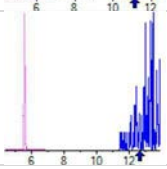 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10614<br>( 461.0 / 381.2 ) 3417 | ( 9.30 , 0.90 ) ( N/A , -0.10 , 0.4) | 73.6<br>40.3 | 0.3219<br>83.4<br>81.0 | 0.0250 | N/A | 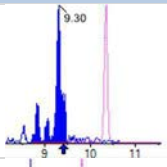 | 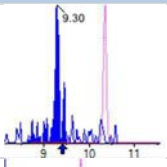 | MI5 DG 2024-03-29 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 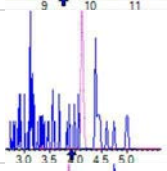 | 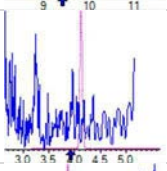 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 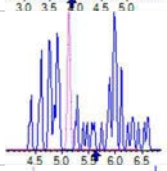 | 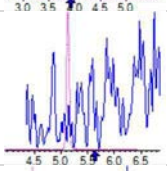 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 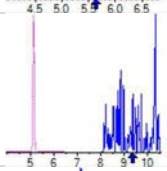 | 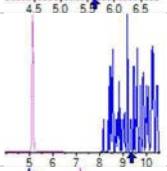 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 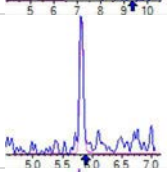 | 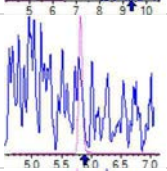 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 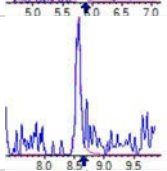 | 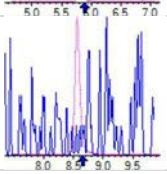 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 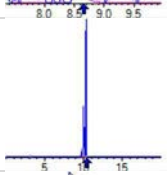 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 206973 | ( 3.37 , N/A ) ( N/A , -0.24 , N/A ) | 1803.0 | N/A | 0.7330 [ 1.0000 ] | 73.3% { 78.3% } | 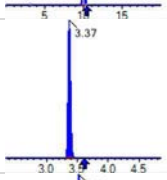 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 78202 | ( 5.13 , N/A ) ( N/A , -0.07 , N/A ) | 2367.7 | N/A | 0.6620 [ 1.0000 ] | 66.2% { 67.6% } | 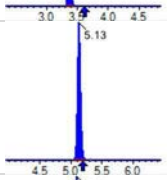 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 316916 | ( 7.39 , N/A ) ( N/A , -0.08 , N/A ) | 6422.8 | N/A | 0.8170 [ 1.0000 ] | 81.7% { 87.8% } | 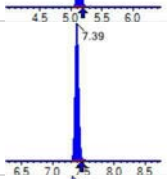 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 212899 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 1676.4 | N/A | 0.7290 [ 1.0000 ] | 72.9% { 76.4% } | 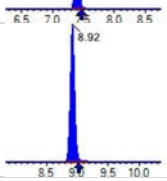 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0131-03 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (32)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 215317 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 7354.0 | N/A | 0.7510 [ 1.0000 ] | 75.1% { 78.0% } | 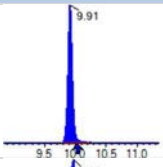 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 830966 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 5071.6 | N/A | 0.8460 [ 1.0000 ] | 84.6% { 90.5% } | 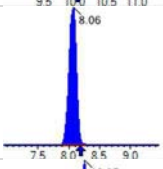 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 659628 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 2102.7 | N/A | 0.8410 [ 1.0000 ] | 84.1% { 85.5% } | 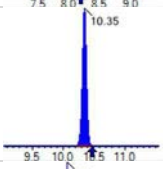 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1707095 | ( 3.37 , N/A ) ( N/A , -0.24 , N/A ) | 74190.6 | N/A | 7.6310 [ 8.0000 ] | 95.4% { 78.6% } | 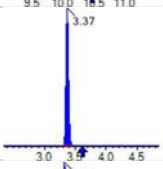 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 733781 | ( 4.12 , N/A ) ( N/A , -0.21 , N/A ) | 4611.3 | N/A | 5.1250 [ 4.0000 ] | 128.1% { 87.7% } | 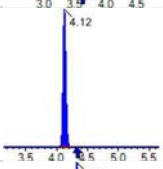 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 368761 | ( 5.13 , N/A ) ( N/A , -0.06 , N/A ) | 9011.3 | N/A | 2.1550 [ 2.0000 ] | 107.8% { 76.7% } | 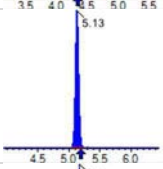 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 459199 | ( 6.27 , N/A ) ( N/A , -0.09 , N/A ) | 10110.5 | N/A | 2.4170 [ 2.0000 ] | 120.8% { 83.8% } | 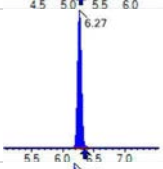 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 680047 | ( 7.39 , N/A ) ( N/A , -0.08 , N/A ) | 6706.3 | N/A | 2.0250 [ 2.0000 ] | 101.2% { 88.8% } | 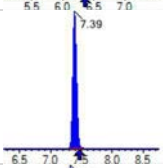 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 219326 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 3334.2 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 81.3% } | 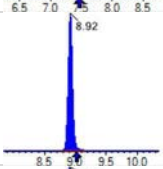 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 249228 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 1471.5 | N/A | 1.0020 [ 1.0000 ] | 100.2% { 84.8% } | 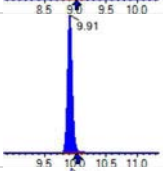 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 290798 | ( 10.82 , N/A ) ( N/A , -0.11 , N/A ) | 953.7 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 78.7% } | 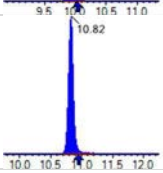 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 308134 | ( 11.72 , N/A ) ( N/A , -0.12 , N/A ) | 1414.9 | N/A | 1.0180 [ 1.0000 ] | 101.8% { 84.9% } | 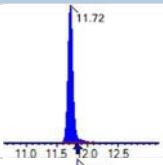 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 308321 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1329.0 | N/A | 1.1500 [ 1.0000 ] | 115.0% { 94.1% } | 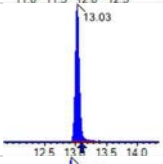 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 419775 | ( 13.93 , N/A ) ( N/A , -0.08 , N/A ) | 1785.4 | N/A | 1.8720 [ 2.0000 ] | 93.6% { 84.3% } | 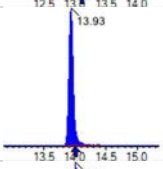 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1179076 | ( 5.30 , N/A ) ( N/A , -0.07 , N/A ) | 1523.5 | N/A | 1.7600 [ 2.0000 ] | 88.0% { 79.9% } | 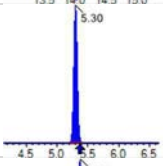 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1168242 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 4947.9 | N/A | 1.9490 [ 2.0000 ] | 97.4% { 89.7% } | 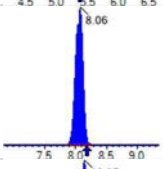 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1337287 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 2090.5 | N/A | 1.9060 [ 2.0000 ] | 95.3% { 92.6% } | 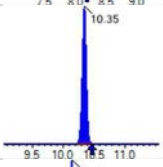 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 561759 | ( 4.75 , N/A ) ( N/A , -0.06 , N/A ) | 74.0 | N/A | 3.8130 [ 4.0000 ] | 95.3% { 86.3% } | 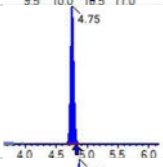 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1583278 | ( 6.86 , N/A ) ( N/A , -0.08 , N/A ) | 3221.9 | N/A | 4.3740 [ 4.0000 ] | 109.4% { 90.0% } | 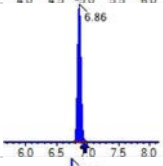 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1218882 | ( 9.24 , N/A ) ( N/A , -0.10 , N/A ) | 2045.7 | N/A | 3.8490 [ 4.0000 ] | 96.2% { 83.8% } | 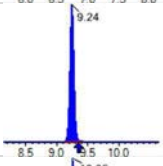 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2491945 | ( 10.95 , N/A ) ( N/A , -0.12 , N/A ) | 1746.1 | N/A | 7.2730 [ 8.0000 ] | 90.9% { 83.6% } | 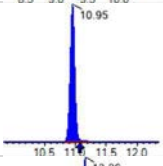 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1224908 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 3203.0 | N/A | 1.6440 [ 2.0000 ] | 82.2% { 78.6% } | 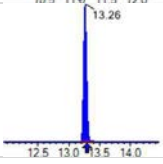 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (32)
Acquired: 2024/03/29 - 06:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 176246 | ( 14.53 , N/A ) ( N/A , -0.04 , N/A ) | 1402.9 | N/A | 1.0520 [ 2.0000 ] | 52.6% { 48.4% } | 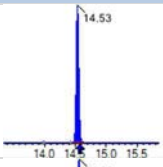  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 175854 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 1357.2 | N/A | 1.1490 [ 2.0000 ] | 57.4% { 51.0% } | 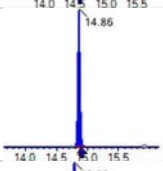  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 774830 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 2109.0 | N/A | 3.1800 [ 4.0000 ] | 79.5% { 65.6% } | 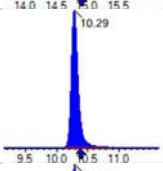  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 802300 | ( 10.89 , N/A ) ( N/A , -0.11 , N/A ) | 2555.5 | N/A | 3.6480 [ 4.0000 ] | 91.2% { 78.7% } | 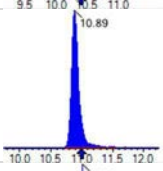  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 797750 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 2026.0 | N/A | 12.7480 [ 20.0000 ] | 63.7% { 60.0% } | 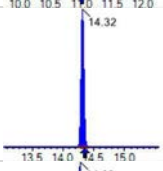  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 693009 | ( 14.68 , N/A ) ( N/A , -0.04 , N/A ) | 3616.5 | N/A | 11.8250 [ 20.0000 ] | 59.1% { 55.4% } | 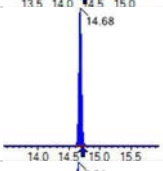  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 677344 | ( 5.54 , N/A ) ( N/A , -0.08 , N/A ) | 2444.9 | N/A | 9.1400 [ 8.0000 ] | 114.2% { 81.9% } | 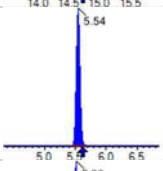  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 562077 | ( 5.82 , N/A ) ( N/A , -0.08 , N/A ) | 2461.0 | N/A | 2.3950 [ 2.0000 ] | 119.8% { 100.1% } | 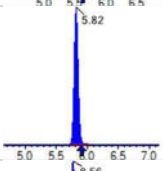  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 529966 | ( 8.56 , N/A ) ( N/A , -0.09 , N/A ) | 953.4 | N/A | 2.0050 [ 2.0000 ] | 100.2% { 79.1% } | 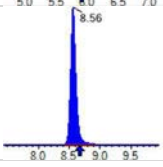  | | |

# ANALYSIS DATA SHEETL

EB-8-032024-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0131- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0131-04- | File ID: | S2024-03-28B (33)- |
| Sampled: | 03/20/24 13:40- | Prepared: | 03/22/24 10:26- | Analyzed: | 03/29/24 06:48- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 540.175 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0337- | Sequence: | SD01096- | Calibration: | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.19- | 1.5- | U- |
| PFPeA- | ND- | 0.060- | 0.74- | U- |
| PFHxA- | ND- | 0.051- | 0.37- | U- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | 0.42- | 0.14- | 0.37- | B- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | ND- | 0.029- | 0.37- | U- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.16- | 0.059- | 0.37- | MI5, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | 0.18- | 0.096- | 0.37- | J- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

EB-8-032024-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0131- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0131-04- | File ID: | S2024-03-28B (33)- |
| Sampled: | 03/20/24 13:40- | Prepared: | 03/22/24 10:26- | Analyzed: | 03/29/24 06:48- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 540.175 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0337- | Sequence: | SD01096 | Calibration: | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (33)
Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>15714<br>( 163.0 / 69.0 )<br>365 | ( 2.42 , 0.70 )<br>( N/A , -0.04 , 0.4) | 130.2<br>31.2 | 0.0232<br>84.7<br>88.5 | 0.2470 | N/A | 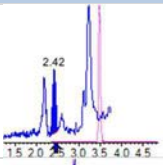 | 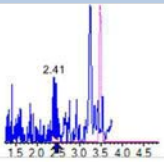 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 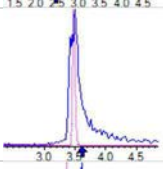 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 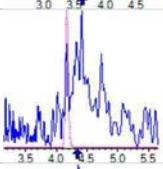 | 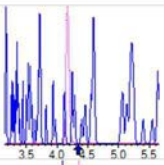 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 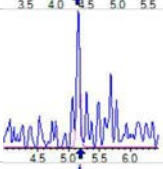 | 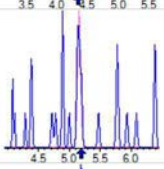 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 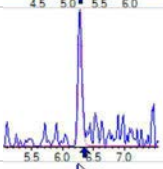 | 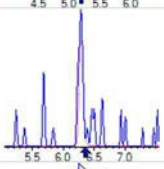 | |
| PFOA | ( 413.0 / 369.0 )<br>42511<br>( 413.0 / 169.0 )<br>14590 | ( 7.40 , 1.00 )<br>( 0.00 , N/A , -0.2) | 104.1<br>120.8 | 0.3432<br>96.0<br>96.8 | 0.1130 | N/A | 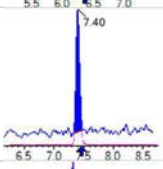 | 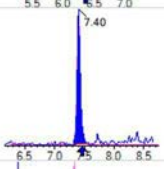 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 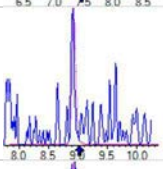 | 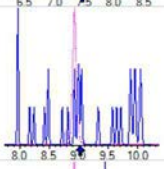 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 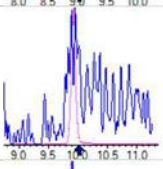 | 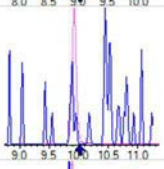 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 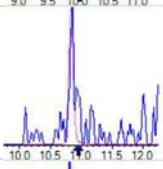 | 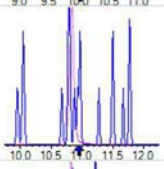 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 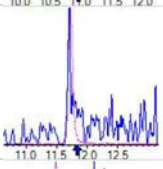 | 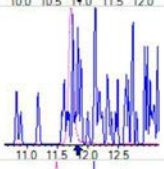 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 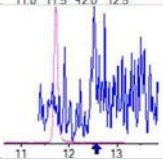 | 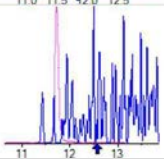 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (33)
Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 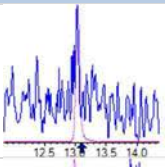 | 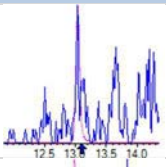 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 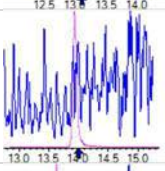 | 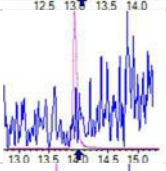 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 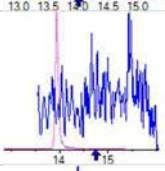 | 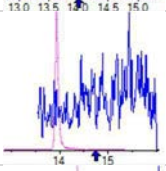 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 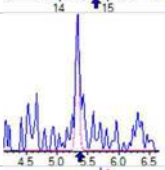 | 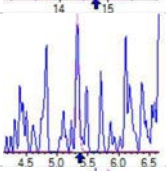 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 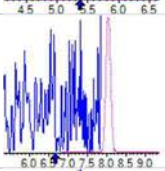 | 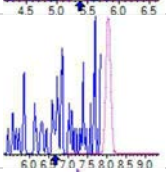 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 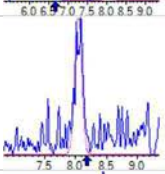 | 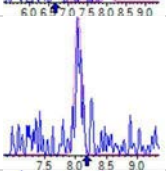 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 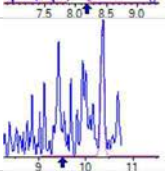 | 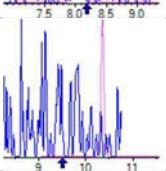 | |
| PFOS | ( 499.0 / 80.0 ) 37352<br>( 499.0 / 99.0 ) 7463 | ( 10.35 , 1.00 ) ( -0.01 , N/A , -0.7) | 184.2<br>994.7 | 0.1998<br>86.5<br>87.2 | 0.0450 | N/A | 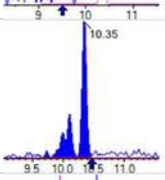 | 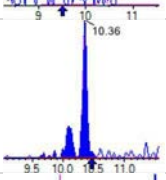 | MI5 DG 2024-03-29 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 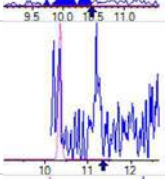 | 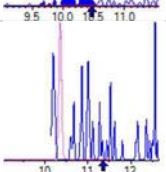 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 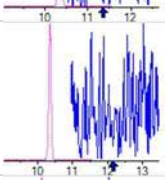 | 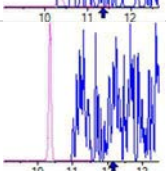 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 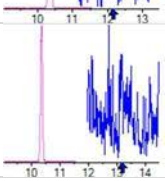 | 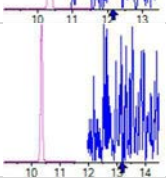 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (33)
Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 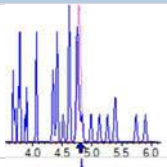 | 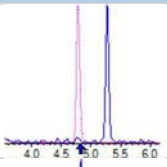 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 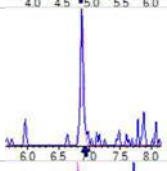 | 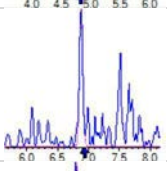 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 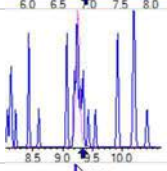 | 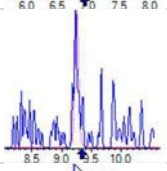 | |
| 10:2FTS | ( 627.0 / 607.0 ) 14276<br>( 627.0 / 81.0 ) 23314 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.1) | 209.0<br>116.3 | 1.6332<br>113.6<br>112.7 | 0.0470 | N/A | 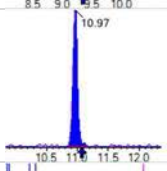 | 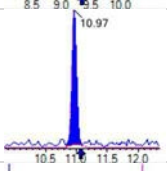 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 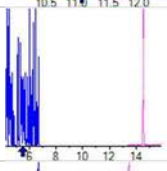 | 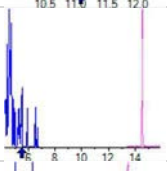 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 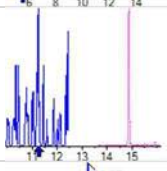 | 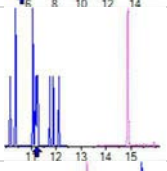 | |
| PFOSA | ( 498.0 / 78.0 ) 21481<br>( 498.0 / 478.0 ) N/A | ( 13.27 , 1.00 ) ( -0.01 , N/A , #Value!) | 258.0<br>N/A | N/A<br>0.0<br>0.0 | 0.0480 | N/A | 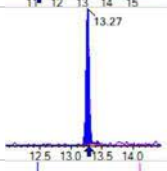 | 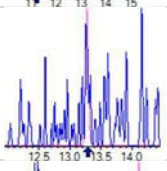 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 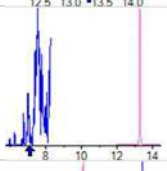 | 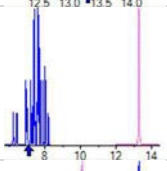 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 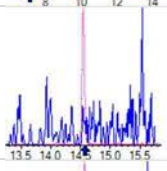 | 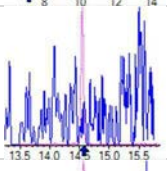 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 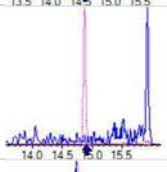 | 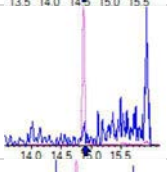 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 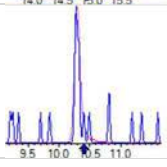 | 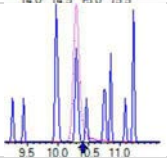 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (33)
Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 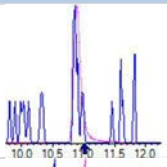 | 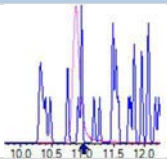 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 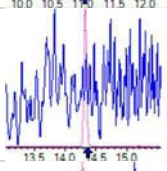 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 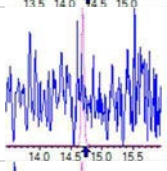 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 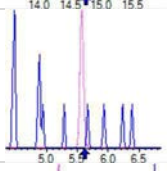 | 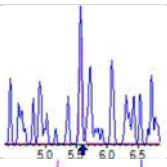 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 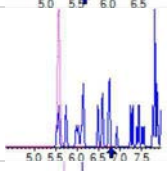 | 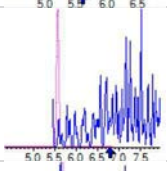 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 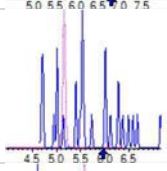 | 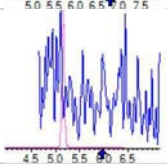 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 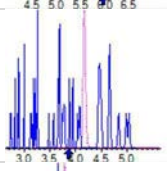 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 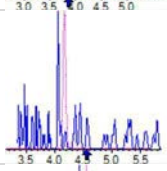 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 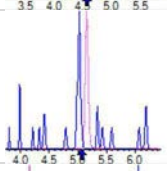 | 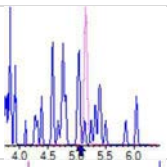 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 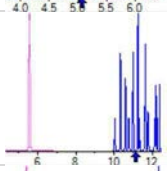 | 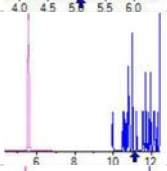 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 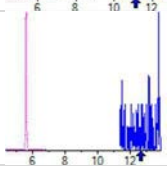 | 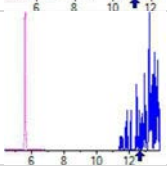 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0131-04 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 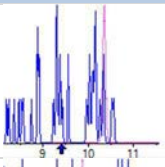 | 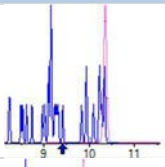 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 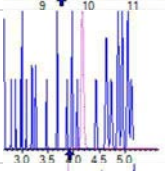 | 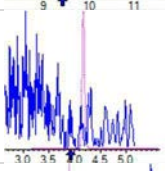 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 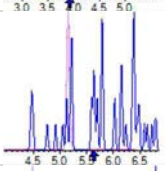 | 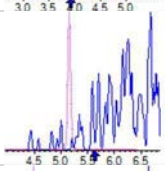 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 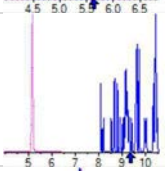 | 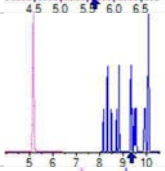 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 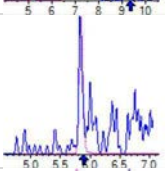 | 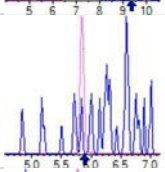 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 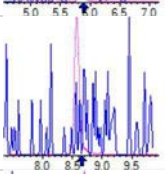 | 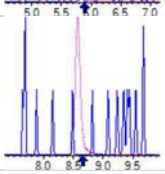 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 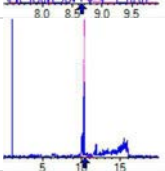 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 237812 | ( 3.48 , N/A )<br>( N/A , -0.13 , N/A ) | 2173.6 | N/A | 0.8430<br>[ 1.0000 ] | 84.3%<br>{ 89.9% } | 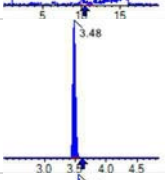 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 91103 | ( 5.16 , N/A )<br>( N/A , -0.04 , N/A ) | 17783.0 | N/A | 0.7720<br>[ 1.0000 ] | 77.2%<br>{ 78.7% } | 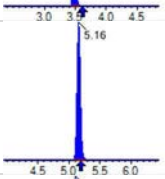 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 346584 | ( 7.40 , N/A )<br>( N/A , -0.07 , N/A ) | 6872.2 | N/A | 0.8930<br>[ 1.0000 ] | 89.3%<br>{ 96.0% } | 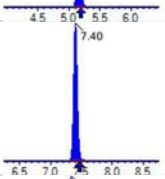 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 244217 | ( 8.93 , N/A )<br>( N/A , -0.09 , N/A ) | 1362.2 | N/A | 0.8360<br>[ 1.0000 ] | 83.6%<br>{ 87.6% } | 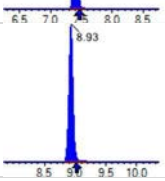 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (33)
Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 231934 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 6204.1 | N/A | 0.8090 [ 1.0000 ] | 80.9% { 84.0% } | 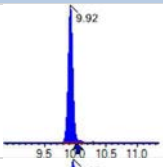 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 851474 | ( 8.05 , N/A ) ( N/A , -0.13 , N/A ) | 5445.2 | N/A | 0.8670 [ 1.0000 ] | 86.7% { 92.8% } | 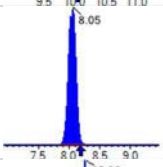 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 636188 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 2874.0 | N/A | 0.8110 [ 1.0000 ] | 81.1% { 82.5% } | 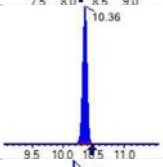 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2246258 | ( 3.48 , N/A ) ( N/A , -0.13 , N/A ) | 82630.1 | N/A | 8.7390 [ 8.0000 ] | 109.2% { 103.4% } | 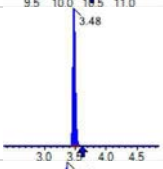 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 749936 | ( 4.17 , N/A ) ( N/A , -0.16 , N/A ) | 6048.5 | N/A | 4.4960 [ 4.0000 ] | 112.4% { 89.7% } | 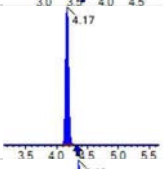 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 376818 | ( 5.16 , N/A ) ( N/A , -0.04 , N/A ) | 10404.3 | N/A | 1.8910 [ 2.0000 ] | 94.5% { 78.4% } | 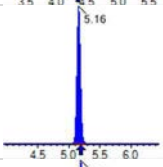 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 488068 | ( 6.29 , N/A ) ( N/A , -0.07 , N/A ) | 5772.3 | N/A | 2.2050 [ 2.0000 ] | 110.2% { 89.1% } | 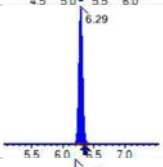 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 750990 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 6123.7 | N/A | 2.0450 [ 2.0000 ] | 102.2% { 98.1% } | 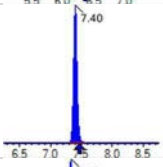 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 241049 | ( 8.93 , N/A ) ( N/A , -0.09 , N/A ) | 5526.5 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 89.4% } | 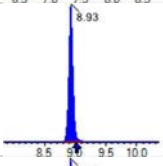 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 274252 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 1245.8 | N/A | 1.0230 [ 1.0000 ] | 102.3% { 93.3% } | 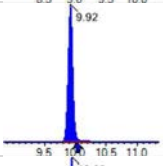 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 318936 | ( 10.83 , N/A ) ( N/A , -0.10 , N/A ) | 1082.4 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 86.4% } | 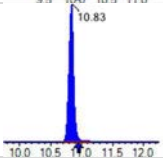 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0131-04 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (33)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 321932 | ( 11.72 , N/A ) ( N/A , -0.11 , N/A ) | 1116.0 | N/A | 0.9870 [ 1.0000 ] | 98.7% { 88.7% } | 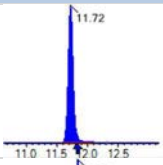 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 287561 | ( 13.04 , N/A ) ( N/A , -0.07 , N/A ) | 1376.4 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 87.8% } | 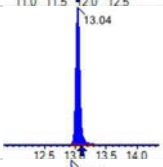 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 416367 | ( 13.94 , N/A ) ( N/A , -0.07 , N/A ) | 1987.3 | N/A | 1.7240 [ 2.0000 ] | 86.2% { 83.6% } | 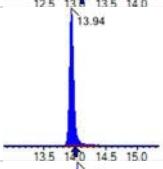 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1359840 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 1833.7 | N/A | 1.9810 [ 2.0000 ] | 99.1% { 92.2% } | 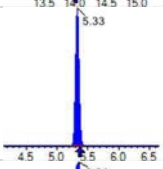 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1313655 | ( 8.04 , N/A ) ( N/A , -0.13 , N/A ) | 8152.1 | N/A | 2.1390 [ 2.0000 ] | 106.9% { 100.9% } | 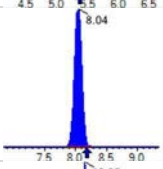 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1444686 | ( 10.35 , N/A ) ( N/A , -0.11 , N/A ) | 2034.5 | N/A | 2.1340 [ 2.0000 ] | 106.7% { 100.0% } | 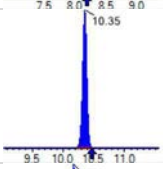 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 704444 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 64.7 | N/A | 4.6660 [ 4.0000 ] | 116.6% { 108.3% } | 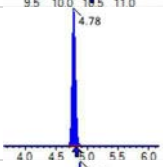 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1753824 | ( 6.88 , N/A ) ( N/A , -0.06 , N/A ) | 6944.6 | N/A | 4.7290 [ 4.0000 ] | 118.2% { 99.7% } | 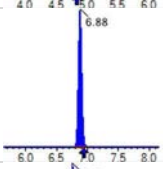 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1481129 | ( 9.25 , N/A ) ( N/A , -0.09 , N/A ) | 2697.4 | N/A | 4.5640 [ 4.0000 ] | 114.1% { 101.8% } | 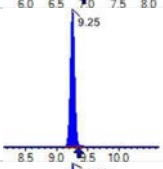 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3090043 | ( 10.96 , N/A ) ( N/A , -0.11 , N/A ) | 1572.8 | N/A | 8.8020 [ 8.0000 ] | 110.0% { 103.7% } | 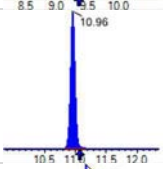 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 918443 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 2795.5 | N/A | 1.2780 [ 2.0000 ] | 63.9% { 58.9% } | 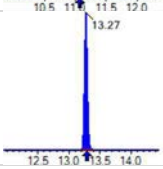 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (33)
Acquired: 2024/03/29 - 06:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 111720 | ( 14.54 , N/A ) ( N/A , -0.03 , N/A ) | 939.1 | N/A | 0.6920 [ 2.0000 ] | 34.6% { 30.7% } | 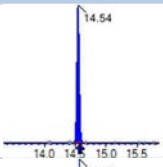 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 113187 | ( 14.87 , N/A ) ( N/A , -0.03 , N/A ) | 1189.4 | N/A | 0.7660 [ 2.0000 ] | 38.3% { 32.9% } | 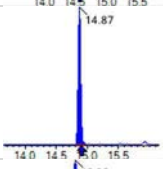 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 962884 | ( 10.30 , N/A ) ( N/A , -0.09 , N/A ) | 4154.8 | N/A | 4.0970 [ 4.0000 ] | 102.4% { 81.6% } | 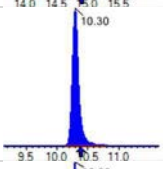 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 883741 | ( 10.89 , N/A ) ( N/A , -0.10 , N/A ) | 2069.5 | N/A | 4.1670 [ 4.0000 ] | 104.2% { 86.7% } | 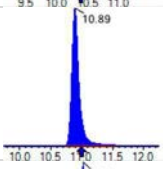 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 548527 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1352.7 | N/A | 9.0890 [ 20.0000 ] | 45.4% { 41.3% } | 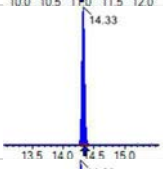 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 452850 | ( 14.69 , N/A ) ( N/A , -0.03 , N/A ) | 2309.0 | N/A | 8.0120 [ 20.0000 ] | 40.1% { 36.2% } | 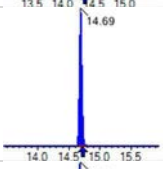 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 703326 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2558.9 | N/A | 8.1470 [ 8.0000 ] | 101.8% { 85.0% } | 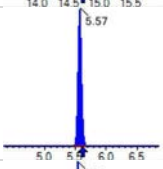 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 616084 | ( 5.84 , N/A ) ( N/A , -0.06 , N/A ) | 2605.7 | N/A | 2.4370 [ 2.0000 ] | 121.9% { 109.7% } | 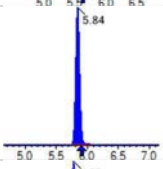 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 577201 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1264.9 | N/A | 2.0270 [ 2.0000 ] | 101.3% { 86.1% } | 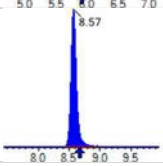 | | |

# ANALYSIS DATA SHEETL

FB-8-032024-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0131- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0131-05- | File ID: | S2024-03-28B (34)- |
| Sampled: | 03/20/24 13:45- | Prepared: | 03/22/24 10:26- | Analyzed: | 03/29/24 07:08- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 524.233 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0337- | Sequence: | SD01096- | Calibration: | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | ND- | 0.20- | 1.5- | U- |
| PFPeA- | ND- | 0.062- | 0.76- | U- |
| PFHxA- | ND- | 0.052- | 0.38- | U- |
| PFHpA- | ND- | 0.039- | 0.38- | U- |
| PFOA- | 0.29- | 0.15- | 0.38- | B, J- |
| PFNA- | ND- | 0.078- | 0.38- | U- |
| PFDA- | ND- | 0.097- | 0.38- | U- |
| PFUnA- | ND- | 0.15- | 0.38- | U- |
| PFDoA- | ND- | 0.11- | 0.38- | U- |
| PFTrDA- | ND- | 0.19- | 0.38- | U- |
| PFTeDA- | ND- | 0.19- | 0.38- | U- |
| PFHxDA- | ND- | 0.19- | 0.38- | U- |
| PFODA- | ND- | 0.19- | 0.38- | U- |
| PFBS- | ND- | 0.035- | 0.38- | U- |
| PFPeS- | ND- | 0.060- | 0.38- | U- |
| PFHxS- | ND- | 0.030- | 0.38- | U- |
| PFHpS- | ND- | 0.049- | 0.38- | U- |
| PFOS- | 0.13- | 0.061- | 0.38- | MI5, J- |
| PFNS- | ND- | 0.12- | 0.38- | U- |
| PFDS- | ND- | 0.14- | 0.38- | U- |
| PFDoS- | ND- | 0.12- | 0.38- | U- |
| 4:2FTS- | ND- | 0.28- | 1.5- | U- |
| 6:2FTS- | ND- | 0.30- | 1.5- | U- |
| 8:2FTS- | ND- | 0.078- | 1.5- | U- |
| 10:2FTS- | ND- | 0.38- | 1.5- | U- |
| PFOSA- | ND- | 0.099- | 0.38- | U- |
| NMeFOSA- | ND- | 0.45- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.10- | 0.38- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.38- | U- |

# ANALYSIS DATA SHEETL

FB-8-032024-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | APPL, LLC- | | | Work Order: | 24C0131- |
| Client: | Tidewater, Inc.- | | | Project: | JPL-GW Monitoring- |
| Matrix: | Water- | Laboratory ID: | 24C0131-05- | File ID: | S2024-03-28B (34)- |
| Sampled: | 03/20/24 13:45- | Prepared: | 03/22/24 10:26- | Analyzed: | 03/29/24 07:08- |
| Solids: | | Preparation: | EPA 1633- | Dilution: | 1- |
| Initial/Final: | 524.233 mL / 2 mL- | | | Instrument: | Saphira- |
| Batch: | BDC0337- | Sequence: | SD01096 | Calibration: | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.96- | 1.5- | U- |
| NEtFOSE- | ND- | 1.0- | 1.5- | U- |
| HFPO-DA- | ND- | 0.17- | 0.76- | U- |
| ADONA- | ND- | 0.12- | 0.76- | U- |
| PFEESA- | ND- | 0.10- | 0.76- | U- |
| PFMPA- | ND- | 0.051- | 0.76- | U- |
| PFMBA- | ND- | 0.087- | 0.76- | U- |
| NFDHA- | ND- | 0.29- | 0.76- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.76- | U- |
| 11Cl-PF3OUDS- | ND- | 0.20- | 0.76- | U- |
| 3:3FTCA- | ND- | 0.55- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.42- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.53- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>14504<br>( 163.0 / 69.0 )<br>445 | ( 2.41 , 0.70 )<br>( N/A , -0.04 , 0.5) | 126.3<br>38.2 | 0.0307<br>111.8<br>116.9 | 0.2180 | N/A | 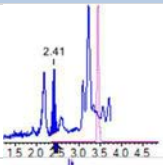 | 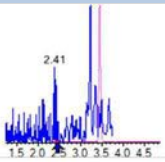 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 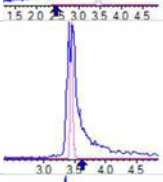 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 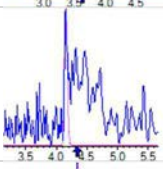 | 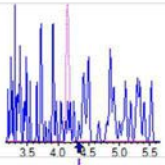 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 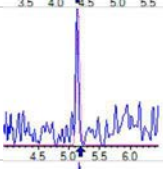 | 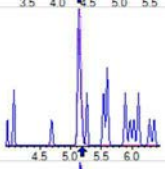 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 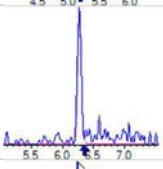 | 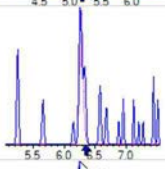 | |
| PFOA | ( 413.0 / 369.0 )<br>31342<br>( 413.0 / 169.0 )<br>11435 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , -0.3) | 61.9<br>98.6 | 0.3648<br>102.1<br>102.9 | 0.0760 | N/A | 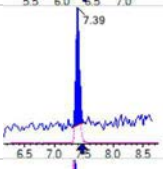 | 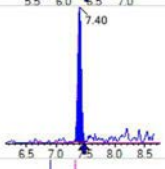 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 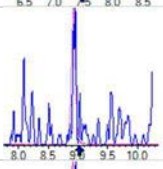 | 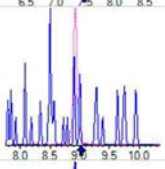 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 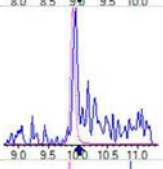 | 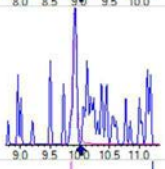 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 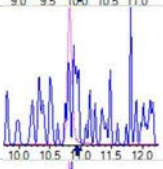 | 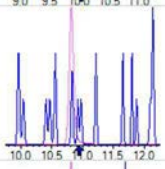 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 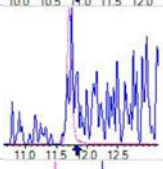 | 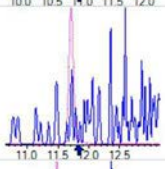 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 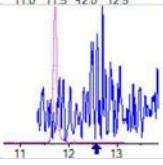 | 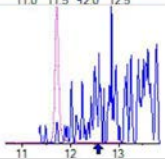 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 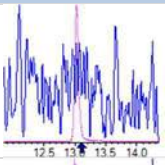 | 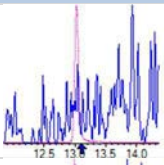 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 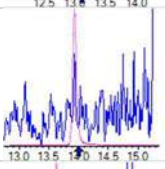 | 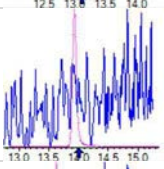 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 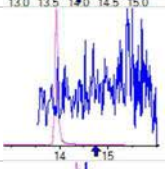 | 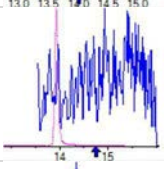 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 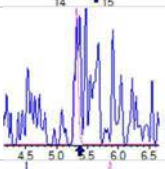 | 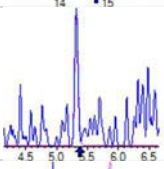 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 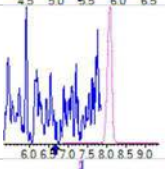 | 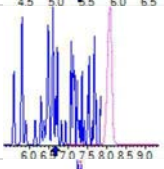 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 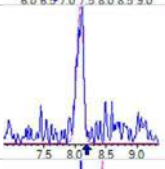 | 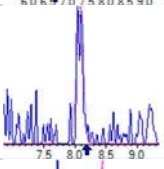 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 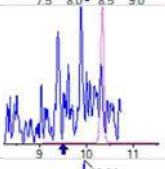 | 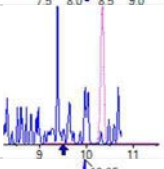 | |
| PFOS | ( 499.0 / 80.0 ) 31361<br>( 499.0 / 99.0 ) 6878 | ( 10.34 , 1.00 )<br>( 0.00 , N/A , -0.1) | 173.9<br>743.0 | 0.2193<br>94.9<br>95.7 | 0.0330 | N/A | 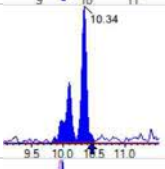 | 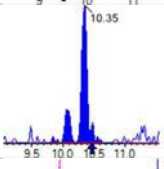 | MI5 DG 2024-03-29 |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 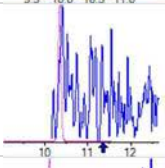 | 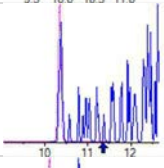 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 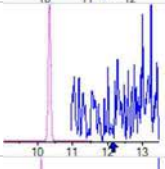 | 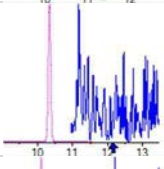 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 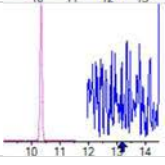 | 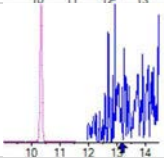 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 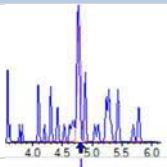 | 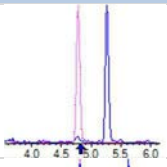 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 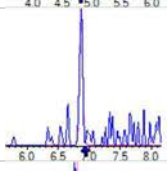 | 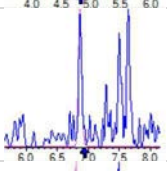 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 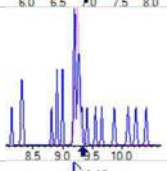 | 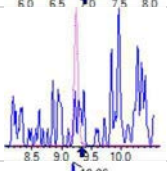 | |
| 10:2FTS | ( 627.0 / 607.0 ) 16288<br>( 627.0 / 81.0 ) 27592 | ( 10.95 , 1.00 ) ( 0.01 , N/A , -0.4) | 234.9<br>108.3 | 1.6940<br>117.8<br>116.9 | 0.0490 | N/A | 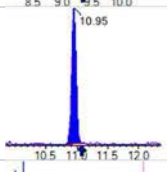 | 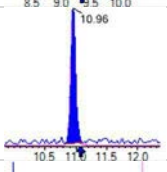 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 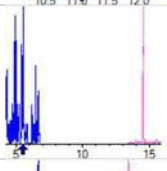 | 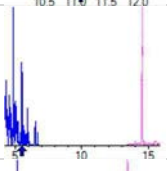 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 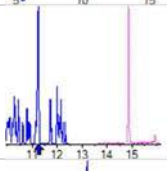 | 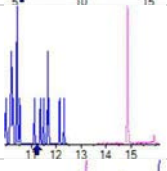 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 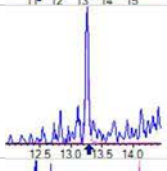 | 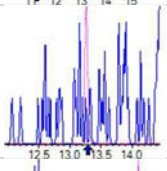 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 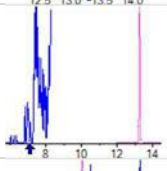 | 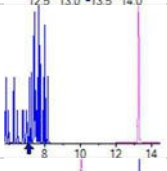 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 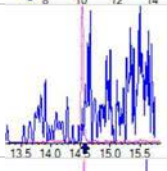 | 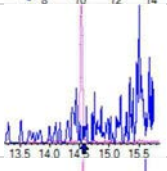 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 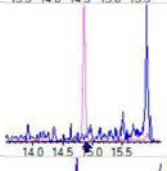 | 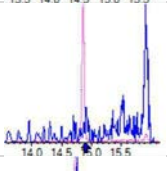 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 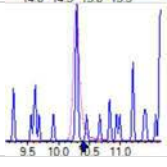 | 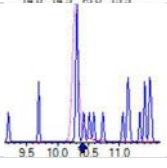 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 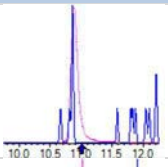 | 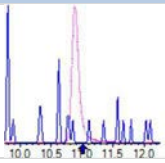 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 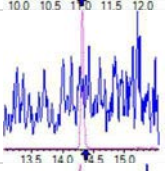 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 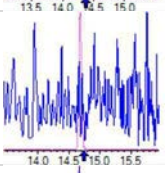 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 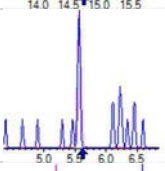 | 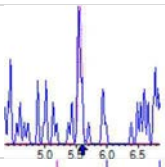 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 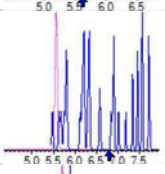 | 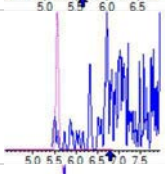 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 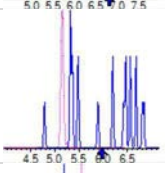 | 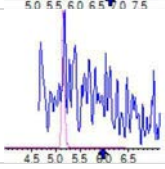 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 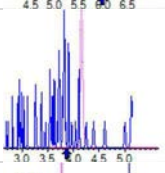 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 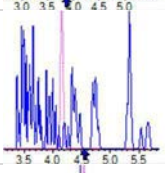 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 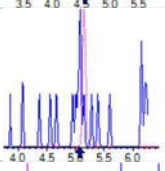 | 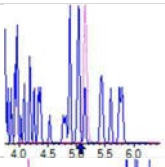 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 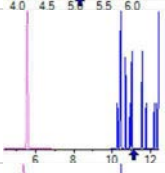 | 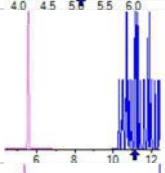 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 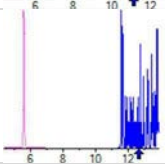 | 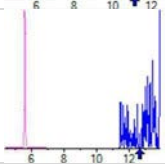 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 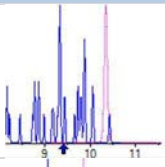 | 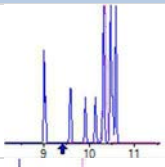 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 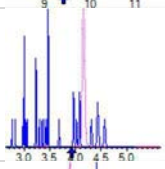 | 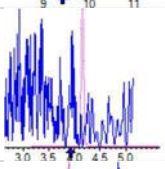 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 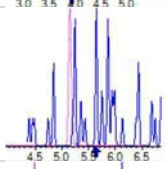 | 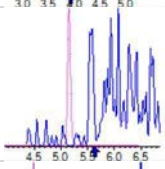 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 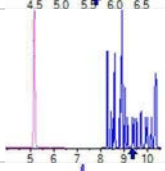 | 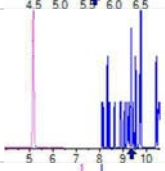 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 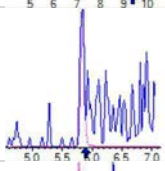 | 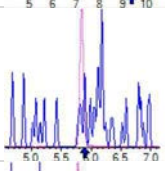 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 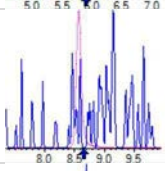 | 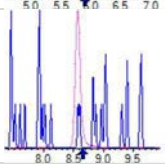 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 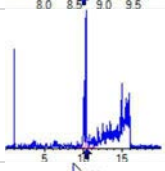 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 294480 | ( 3.44 , N/A ) ( N/A , -0.17 , N/A ) | 2094.6 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 111.4% } | 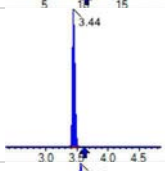 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 107216 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 18223.9 | N/A | 0.9080 [ 1.0000 ] | 90.8% { 92.6% } | 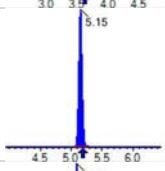 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 382582 | ( 7.39 , N/A ) ( N/A , -0.08 , N/A ) | 12377.9 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 106.0% } | 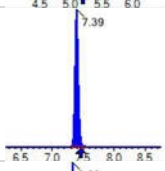 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270910 | ( 8.93 , N/A ) ( N/A , -0.10 , N/A ) | 1521.8 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 97.2% } | 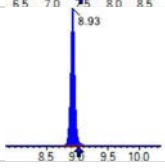 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 283120 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 15635.8 | N/A | 0.9880 [ 1.0000 ] | 98.8% { 102.5% } | 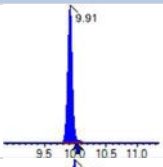 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 976920 | ( 8.08 , N/A ) ( N/A , -0.09 , N/A ) | 7584.5 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 106.4% } | 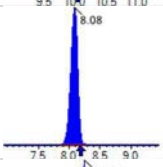 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 753185 | ( 10.34 , N/A ) ( N/A , -0.12 , N/A ) | 2834.9 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 97.7% } | 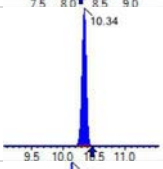 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2346963 | ( 3.45 , N/A ) ( N/A , -0.16 , N/A ) | 110724.6 | N/A | 7.3730 [ 8.0000 ] | 92.2% { 108.1% } | 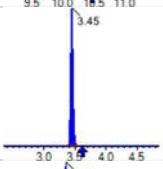 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 882101 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 5035.9 | N/A | 4.4940 [ 4.0000 ] | 112.3% { 105.5% } | 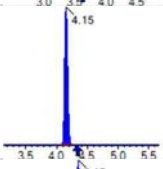 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 465236 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 5075.9 | N/A | 1.9830 [ 2.0000 ] | 99.2% { 96.8% } | 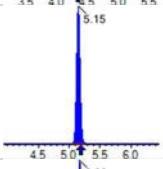 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 575695 | ( 6.28 , N/A ) ( N/A , -0.08 , N/A ) | 6359.8 | N/A | 2.2100 [ 2.0000 ] | 110.5% { 105.0% } | 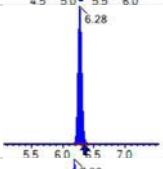 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 820897 | ( 7.39 , N/A ) ( N/A , -0.07 , N/A ) | 5954.9 | N/A | 2.0250 [ 2.0000 ] | 101.2% { 107.2% } | 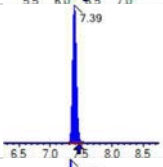 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 263865 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 5061.9 | N/A | 0.9870 [ 1.0000 ] | 98.7% { 97.9% } | 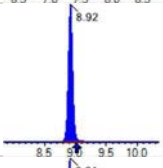 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314638 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 1391.8 | N/A | 0.9620 [ 1.0000 ] | 96.2% { 107.0% } | 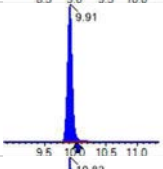 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363066 | ( 10.82 , N/A ) ( N/A , -0.12 , N/A ) | 1087.8 | N/A | 0.9360 [ 1.0000 ] | 93.6% { 98.3% } | 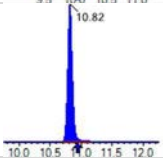 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0131-05 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (34)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 360613 | ( 11.71 , N/A ) ( N/A , -0.12 , N/A ) | 1231.2 | N/A | 0.9060 [ 1.0000 ] | 90.6% { 99.4% } | 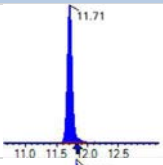 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 299368 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1070.1 | N/A | 0.8490 [ 1.0000 ] | 84.9% { 91.4% } | 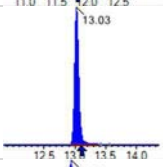 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 413111 | ( 13.93 , N/A ) ( N/A , -0.08 , N/A ) | 1985.6 | N/A | 1.4010 [ 2.0000 ] | 70.0% { 83.0% } | 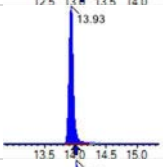 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1449504 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1626.8 | N/A | 1.8410 [ 2.0000 ] | 92.0% { 98.3% } | 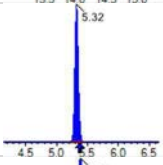 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1458843 | ( 8.08 , N/A ) ( N/A , -0.09 , N/A ) | 4984.9 | N/A | 2.0700 [ 2.0000 ] | 103.5% { 112.0% } | 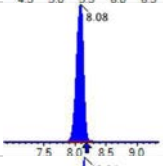 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1615831 | ( 10.34 , N/A ) ( N/A , -0.12 , N/A ) | 2825.2 | N/A | 2.0160 [ 2.0000 ] | 100.8% { 111.9% } | 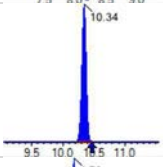 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 781336 | ( 4.78 , N/A ) ( N/A , -0.04 , N/A ) | 46.9 | N/A | 4.5110 [ 4.0000 ] | 112.8% { 120.1% } | 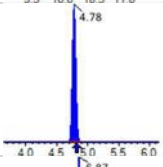 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2060661 | ( 6.87 , N/A ) ( N/A , -0.07 , N/A ) | 6529.5 | N/A | 4.8420 [ 4.0000 ] | 121.1% { 117.1% } | 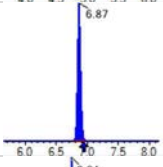 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1591429 | ( 9.24 , N/A ) ( N/A , -0.10 , N/A ) | 2436.9 | N/A | 4.2740 [ 4.0000 ] | 106.9% { 109.4% } | 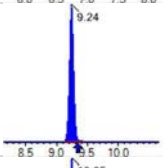 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3336836 | ( 10.95 , N/A ) ( N/A , -0.12 , N/A ) | 1672.7 | N/A | 8.2840 [ 8.0000 ] | 103.6% { 112.0% } | 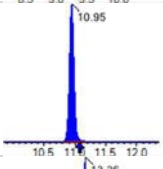 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 464106 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 2758.9 | N/A | 0.5460 [ 2.0000 ] | 27.3% { 29.8% } | 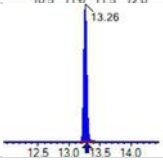 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0131-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (34)
Acquired: 2024/03/29 - 07:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 44861 | ( 14.53 , N/A ) ( N/A , -0.04 , N/A ) | 420.9 | N/A | 0.2350 [ 2.0000 ] | 11.7% { 12.3% } | 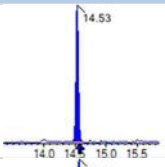 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 43835 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 457.4 | N/A | 0.2510 [ 2.0000 ] | 12.5% { 12.7% } | 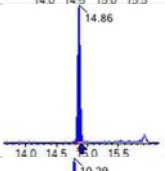 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1123179 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 3251.4 | N/A | 4.0370 [ 4.0000 ] | 100.9% { 95.2% } | 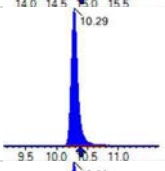 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1031817 | ( 10.88 , N/A ) ( N/A , -0.11 , N/A ) | 2355.7 | N/A | 4.1090 [ 4.0000 ] | 102.7% { 101.2% } | 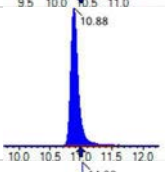 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 378399 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 1367.3 | N/A | 5.2960 [ 20.0000 ] | 26.5% { 28.5% } | 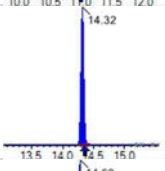 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 372133 | ( 14.68 , N/A ) ( N/A , -0.04 , N/A ) | 2179.4 | N/A | 5.5610 [ 20.0000 ] | 27.8% { 29.7% } | 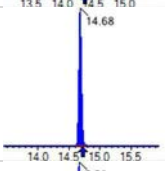 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 807446 | ( 5.56 , N/A ) ( N/A , -0.06 , N/A ) | 3257.4 | N/A | 7.9470 [ 8.0000 ] | 99.3% { 97.6% } | 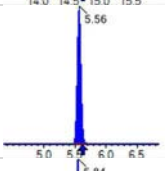 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 704191 | ( 5.84 , N/A ) ( N/A , -0.06 , N/A ) | 2343.9 | N/A | 2.2820 [ 2.0000 ] | 114.1% { 125.4% } | 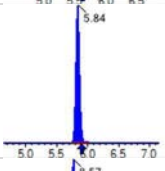 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 656947 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1092.3 | N/A | 1.8900 [ 2.0000 ] | 94.5% { 98.0% } | 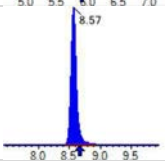 | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-15 (24C0131-01 ) ng/L** | Lab File ID: S2024-03-28B (30) | | | Analyzed: 03/29/24 05:46 |
| 13C4-PFBA | 28.3 | 96.3 | 5 - 130 | |
| 13C5-PFPEA | 14.1 | 118 | 40 - 130 | |
| 13C5-PFHXA | 7.07 | 101 | 40 - 130 | |
| 13C4-PFHPA | 7.07 | 110 | 40 - 130 | |
| 13C8-PFOA | 7.07 | 107 | 40 - 130 | |
| 13C9-PFNA | 3.53 | 101 | 40 - 130 | |
| 13C6-PFDA | 3.53 | 102 | 40 - 130 | |
| 13C7-PFUnA | 3.53 | 95.9 | 30 - 130 | |
| 13C2-PFDOA | 3.53 | 96.0 | 10 - 130 | |
| 13C2-PFTEDA | 3.53 | 102 | 10 - 130 | |
| 13C2-PFHxDA | 7.07 | 71.0 | 20 - 150 | |
| 13C3-PFBS | 7.07 | 92.6 | 40 - 135 | |
| 13C3-PFHXS | 7.07 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.07 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 14.1 | 109 | 40 - 200 | |
| 13C2-6:2FTS | 14.1 | 127 | 40 - 200 | |
| 13C2-8:2FTS | 14.1 | 106 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.3 | 96.4 | 20 - 150 | |
| 13C8-PFOSA | 7.07 | 83.8 | 40 - 130 | |
| D3-NMEFOSA | 7.07 | 37.5 | 10 - 130 | |
| D5-NETFOSA | 7.07 | 36.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.1 | 95.0 | 40 - 170 | |
| D5-NETFOSAA | 14.1 | 103 | 25 - 135 | |
| D7-NMEFOSE | 70.7 | 67.0 | 10 - 130 | |
| D9-NETFOSE | 70.7 | 59.9 | 10 - 130 | |
| 13C3-HFPO-DA | 28.3 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-8 (24C0131-02 ) ng/L** | Lab File ID: S2024-03-28B (31) | | | Analyzed: 03/29/24 06:07 |
| 13C4-PFBA | 28.8 | 96.9 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 125 | 40 - 130 | |
| 13C5-PFHXA | 7.19 | 113 | 40 - 130 | |
| 13C4-PFHPA | 7.19 | 115 | 40 - 130 | |
| 13C8-PFOA | 7.19 | 97.0 | 40 - 130 | |
| 13C9-PFNA | 3.59 | 100 | 40 - 130 | |
| 13C6-PFDA | 3.59 | 96.6 | 40 - 130 | |
| 13C7-PFUnA | 3.59 | 95.7 | 30 - 130 | |
| 13C2-PFDOA | 3.59 | 95.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.59 | 101 | 10 - 130 | |
| 13C2-PFHxDA | 7.19 | 86.1 | 20 - 150 | |
| 13C3-PFBS | 7.19 | 92.1 | 40 - 135 | |
| 13C3-PFHXS | 7.19 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.19 | 94.5 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 101 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 113 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 102 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 99.3 | 20 - 150 | |
| 13C8-PFOSA | 7.19 | 81.1 | 40 - 130 | |
| D3-NMEFOSA | 7.19 | 31.8 | 10 - 130 | |
| D5-NETFOSA | 7.19 | 32.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 96.3 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 99.1 | 25 - 135 | |
| D7-NMEFOSE | 71.9 | 40.6 | 10 - 130 | |
| D9-NETFOSE | 71.9 | 40.2 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 110 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-9 (24C0131-03 ) ng/L** | Lab File ID: S2024-03-28B (32) | | | Analyzed: 03/29/24 06:27 |
| 13C4-PFBA | 29.1 | 95.4 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 128 | 40 - 130 | |
| 13C5-PFHXA | 7.28 | 108 | 40 - 130 | |
| 13C4-PFHPA | 7.28 | 121 | 40 - 130 | |
| 13C8-PFOA | 7.28 | 101 | 40 - 130 | |
| 13C9-PFNA | 3.64 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.64 | 100 | 40 - 130 | |
| 13C7-PFUnA | 3.64 | 98.5 | 30 - 130 | |
| 13C2-PFDOA | 3.64 | 102 | 10 - 130 | |
| 13C2-PFTEDA | 3.64 | 115 | 10 - 130 | |
| 13C2-PFHxDA | 7.28 | 93.6 | 20 - 150 | |
| 13C3-PFBS | 7.28 | 88.0 | 40 - 135 | |
| 13C3-PFHXS | 7.28 | 97.4 | 40 - 130 | |
| 13C8-PFOS | 7.28 | 95.3 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 95.3 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 109 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 96.2 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.1 | 90.9 | 20 - 150 | |
| 13C8-PFOSA | 7.28 | 82.2 | 40 - 130 | |
| D3-NMEFOSA | 7.28 | 52.6 | 10 - 130 | |
| D5-NETFOSA | 7.28 | 57.4 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 79.5 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 91.2 | 25 - 135 | |
| D7-NMEFOSE | 72.8 | 63.7 | 10 - 130 | |
| D9-NETFOSE | 72.8 | 59.1 | 10 - 130 | |
| 13C3-HFPO-DA | 29.1 | 114 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-8-032024 (24C0131-04 ) ng/L** | Lab File ID: S2024-03-28B (33) | | | Analyzed: 03/29/24 06:48 |
| 13C4-PFBA | 29.6 | 109 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 112 | 40 - 130 | |
| 13C5-PFHXA | 7.41 | 94.5 | 40 - 130 | |
| 13C4-PFHPA | 7.41 | 110 | 40 - 130 | |
| 13C8-PFOA | 7.41 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.70 | 100 | 40 - 130 | |
| 13C6-PFDA | 3.70 | 102 | 40 - 130 | |
| 13C7-PFUnA | 3.70 | 100 | 30 - 130 | |
| 13C2-PFDOA | 3.70 | 98.7 | 10 - 130 | |
| 13C2-PFTEDA | 3.70 | 99.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.41 | 86.2 | 20 - 150 | |
| 13C3-PFBS | 7.41 | 99.1 | 40 - 135 | |
| 13C3-PFHXS | 7.41 | 107 | 40 - 130 | |
| 13C8-PFOS | 7.41 | 107 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 117 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 118 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 114 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.6 | 110 | 20 - 150 | |
| 13C8-PFOSA | 7.41 | 63.9 | 40 - 130 | |
| D3-NMEFOSA | 7.41 | 34.6 | 10 - 130 | |
| D5-NETFOSA | 7.41 | 38.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 102 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 104 | 25 - 135 | |
| D7-NMEFOSE | 74.1 | 45.4 | 10 - 130 | |
| D9-NETFOSE | 74.1 | 40.1 | 10 - 130 | |
| 13C3-HFPO-DA | 29.6 | 102 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-8-032024 (24C0131-05 ) ng/L** | Lab File ID: S2024-03-28B (34) | | | Analyzed: 03/29/24 07:08 |
| 13C4-PFBA | 30.5 | 92.2 | 5 - 130 | |
| 13C5-PFPEA | 15.3 | 112 | 40 - 130 | |
| 13C5-PFHXA | 7.63 | 99.2 | 40 - 130 | |
| 13C4-PFHPA | 7.63 | 110 | 40 - 130 | |
| 13C8-PFOA | 7.63 | 101 | 40 - 130 | |
| 13C9-PFNA | 3.82 | 98.7 | 40 - 130 | |
| 13C6-PFDA | 3.82 | 96.2 | 40 - 130 | |
| 13C7-PFUnA | 3.82 | 93.6 | 30 - 130 | |
| 13C2-PFDOA | 3.82 | 90.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.82 | 84.9 | 10 - 130 | |
| 13C2-PFHxDA | 7.63 | 70.0 | 20 - 150 | |
| 13C3-PFBS | 7.63 | 92.0 | 40 - 135 | |
| 13C3-PFHXS | 7.63 | 103 | 40 - 130 | |
| 13C8-PFOS | 7.63 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 15.3 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 15.3 | 121 | 40 - 200 | |
| 13C2-8:2FTS | 15.3 | 107 | 40 - 300 | |
| 13C2D4-10:2FTS | 30.5 | 104 | 20 - 150 | |
| 13C8-PFOSA | 7.63 | 27.3 | 40 - 130 | *R |
| D3-NMEFOSA | 7.63 | 11.7 | 10 - 130 | |
| D5-NETFOSA | 7.63 | 12.5 | 10 - 130 | |
| D3-NMEFOSAA | 15.3 | 101 | 40 - 170 | |
| D5-NETFOSAA | 15.3 | 103 | 25 - 135 | |
| D7-NMEFOSE | 76.3 | 26.5 | 10 - 130 | |
| D9-NETFOSE | 76.3 | 27.8 | 10 - 130 | |
| 13C3-HFPO-DA | 30.5 | 99.3 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0337-BLK1 ) ng/L** | Lab File ID: S2024-03-28B (7) | | | Analyzed: 03/28/24 21:54 |
| 13C4-PFBA | 32.0 | 96.3 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 91.4 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 87.0 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 93.2 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 97.1 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 103 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 101 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 100 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 93.7 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 91.1 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 77.0 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 98.0 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 102 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 99.4 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 131 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 125 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 117 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 104 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 24.9 | 40 - 130 | *R |
| D3-NMEFOSA | 8.00 | 10.2 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 10.6 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 101 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 100 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 20.5 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 25.1 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 89.9 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0337-BS1 ) ng/L | Lab File ID: S2024-03-28B (8) | | | Analyzed: 03/28/24 22:15 |
| 13C4-PFBA | 32.0 | 105 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 110 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 102 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 111 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 108 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 104 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 101 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 99.1 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 98.0 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 83.6 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 103 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 106 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 109 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 127 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 112 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 49.3 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 22.3 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 21.5 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 110 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 109 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 23.6 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 20.0 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 98.6 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0337-MRL1 ) ng/L** | Lab File ID: S2024-03-28B (9) | | | Analyzed: 03/28/24 22:35 |
| 13C4-PFBA | 32.0 | 103 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 124 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 110 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 110 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 106 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 106 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 105 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 105 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 105 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 104 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 80.3 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 105 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 120 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 126 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 121 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 111 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 56.4 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 29.4 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 26.4 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 108 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 106 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 30.7 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 28.0 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 107 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS3 ) ng/L** | Lab File ID: S2024-03-28B (14) | | | Analyzed: 03/29/24 00:18 |
| 13C4-PFBA | 28.4 | 60.3 | 5 - 130 | |
| 13C5-PFPEA | 14.2 | 92.9 | 40 - 130 | |
| 13C5-PFHXA | 7.09 | 89.3 | 40 - 130 | |
| 13C4-PFHPA | 7.09 | 91.8 | 40 - 130 | |
| 13C8-PFOA | 7.09 | 85.3 | 40 - 130 | |
| 13C9-PFNA | 3.54 | 83.1 | 40 - 130 | |
| 13C6-PFDA | 3.54 | 78.5 | 40 - 130 | |
| 13C7-PFUnA | 3.54 | 63.0 | 30 - 130 | |
| 13C2-PFDOA | 3.54 | 58.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.54 | 62.9 | 10 - 130 | |
| 13C2-PFHxDA | 7.09 | 64.4 | 20 - 150 | |
| 13C3-PFBS | 7.09 | 79.0 | 40 - 135 | |
| 13C3-PFHXS | 7.09 | 88.0 | 40 - 130 | |
| 13C8-PFOS | 7.09 | 83.6 | 40 - 130 | |
| 13C2-4:2FTS | 14.2 | 85.9 | 40 - 200 | |
| 13C2-6:2FTS | 14.2 | 104 | 40 - 200 | |
| 13C2-8:2FTS | 14.2 | 79.7 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.4 | 77.1 | 20 - 150 | |
| 13C8-PFOSA | 7.09 | 30.3 | 40 - 130 | *R |
| D3-NMEFOSA | 7.09 | 4.86 | 10 - 130 | *R |
| D5-NETFOSA | 7.09 | 6.29 | 10 - 130 | *R |
| D3-NMEFOSAA | 14.2 | 73.6 | 40 - 170 | |
| D5-NETFOSAA | 14.2 | 67.8 | 25 - 135 | |
| D7-NMEFOSE | 70.9 | 12.0 | 10 - 130 | |
| D9-NETFOSE | 70.9 | 14.6 | 10 - 130 | |
| 13C3-HFPO-DA | 28.4 | 86.2 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Matrix Spike (BDC0337-MS4 ) ng/L** | Lab File ID: S2024-03-28B (16) | | | Analyzed: 03/29/24 00:59 |
| 13C4-PFBA | 29.4 | 85.3 | 5 - 130 | |
| 13C5-PFPEA | 14.7 | 115 | 40 - 130 | |
| 13C5-PFHXA | 7.35 | 98.0 | 40 - 130 | |
| 13C4-PFHPA | 7.35 | 109 | 40 - 130 | |
| 13C8-PFOA | 7.35 | 97.3 | 40 - 130 | |
| 13C9-PFNA | 3.67 | 98.6 | 40 - 130 | |
| 13C6-PFDA | 3.67 | 98.5 | 40 - 130 | |
| 13C7-PFUnA | 3.67 | 95.9 | 30 - 130 | |
| 13C2-PFDOA | 3.67 | 97.5 | 10 - 130 | |
| 13C2-PFTEDA | 3.67 | 97.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.35 | 85.5 | 20 - 150 | |
| 13C3-PFBS | 7.35 | 87.6 | 40 - 135 | |
| 13C3-PFHXS | 7.35 | 93.8 | 40 - 130 | |
| 13C8-PFOS | 7.35 | 93.8 | 40 - 130 | |
| 13C2-4:2FTS | 14.7 | 94.3 | 40 - 200 | |
| 13C2-6:2FTS | 14.7 | 112 | 40 - 200 | |
| 13C2-8:2FTS | 14.7 | 101 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.4 | 107 | 20 - 150 | |
| 13C8-PFOSA | 7.35 | 74.6 | 40 - 130 | |
| D3-NMEFOSA | 7.35 | 27.1 | 10 - 130 | |
| D5-NETFOSA | 7.35 | 26.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.7 | 97.2 | 40 - 170 | |
| D5-NETFOSAA | 14.7 | 101 | 25 - 135 | |
| D7-NMEFOSE | 73.5 | 40.6 | 10 - 130 | |
| D9-NETFOSE | 73.5 | 39.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.4 | 100 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD3 ) ng/L** | Lab File ID: S2024-03-28B (15) | | | Analyzed: 03/29/24 00:39 |
| 13C4-PFBA | 28.8 | 104 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 125 | 40 - 130 | |
| 13C5-PFHXA | 7.19 | 99.4 | 40 - 130 | |
| 13C4-PFHPA | 7.19 | 107 | 40 - 130 | |
| 13C8-PFOA | 7.19 | 102 | 40 - 130 | |
| 13C9-PFNA | 3.60 | 99.0 | 40 - 130 | |
| 13C6-PFDA | 3.60 | 109 | 40 - 130 | |
| 13C7-PFUnA | 3.60 | 108 | 30 - 130 | |
| 13C2-PFDOA | 3.60 | 107 | 10 - 130 | |
| 13C2-PFTEDA | 3.60 | 105 | 10 - 130 | |
| 13C2-PFHxDA | 7.19 | 89.4 | 20 - 150 | |
| 13C3-PFBS | 7.19 | 95.8 | 40 - 135 | |
| 13C3-PFHXS | 7.19 | 106 | 40 - 130 | |
| 13C8-PFOS | 7.19 | 103 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 95.0 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 117 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 103 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 99.4 | 20 - 150 | |
| 13C8-PFOSA | 7.19 | 81.8 | 40 - 130 | |
| D3-NMEFOSA | 7.19 | 39.3 | 10 - 130 | |
| D5-NETFOSA | 7.19 | 39.6 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 103 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 105 | 25 - 135 | |
| D7-NMEFOSE | 71.9 | 59.2 | 10 - 130 | |
| D9-NETFOSE | 71.9 | 57.6 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 95.9 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0131
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | QR |
|---|---|---|---|---|
| **Matrix Spike Dup (BDC0337-MSD4 ) ng/L** | Lab File ID: S2024-03-28B (17) | | | Analyzed: 03/29/24 01:19 |
| 13C4-PFBA | 28.8 | 84.6 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 93.5 | 40 - 130 | |
| 13C5-PFHXA | 7.21 | 80.5 | 40 - 130 | |
| 13C4-PFHPA | 7.21 | 93.2 | 40 - 130 | |
| 13C8-PFOA | 7.21 | 92.1 | 40 - 130 | |
| 13C9-PFNA | 3.61 | 96.5 | 40 - 130 | |
| 13C6-PFDA | 3.61 | 98.0 | 40 - 130 | |
| 13C7-PFUnA | 3.61 | 96.3 | 30 - 130 | |
| 13C2-PFDOA | 3.61 | 99.4 | 10 - 130 | |
| 13C2-PFTEDA | 3.61 | 97.8 | 10 - 130 | |
| 13C2-PFHxDA | 7.21 | 86.5 | 20 - 150 | |
| 13C3-PFBS | 7.21 | 81.2 | 40 - 135 | |
| 13C3-PFHXS | 7.21 | 89.8 | 40 - 130 | |
| 13C8-PFOS | 7.21 | 89.9 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 81.1 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 104 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 98.3 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 103 | 20 - 150 | |
| 13C8-PFOSA | 7.21 | 72.2 | 40 - 130 | |
| D3-NMEFOSA | 7.21 | 30.9 | 10 - 130 | |
| D5-NETFOSA | 7.21 | 33.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 88.5 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 91.1 | 25 - 135 | |
| D7-NMEFOSE | 72.1 | 34.3 | 10 - 130 | |
| D9-NETFOSE | 72.1 | 31.9 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 84.3 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0131T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0337-BLK1T Batch:T BDC0337T Prepared:T 03/22/2024 10:26/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0337-BS1T | S2024-03-28B (8)T | 22:15T |
| MRL CheckT | BDC0337-MRL1T | S2024-03-28B (9)T | 22:35T |
| Matrix SpikeT | BDC0337-MS3T | S2024-03-28B (14)T | 00:18T |
| Matrix Spike DupT | BDC0337-MSD3T | S2024-03-28B (15)T | 00:39T |
| Matrix SpikeT | BDC0337-MS4T | S2024-03-28B (16)T | 00:59T |
| Matrix Spike DupT | BDC0337-MSD4T | S2024-03-28B (17)T | 01:19T |
| MW-15T | 24C0131-01T | S2024-03-28B (30)T | 05:46T |
| MW-8T | 24C0131-02T | S2024-03-28B (31)T | 06:07T |
| MW-9T | 24C0131-03T | S2024-03-28B (32)T | 06:27T |
| EB-8-032024T | 24C0131-04T | S2024-03-28B (33)T | 06:48T |
| FB-8-032024T | 24C0131-05T | S2024-03-28B (34)T | 07:08T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.270a | 0.15a | 0.40a | B, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.112a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0337A | Laboratory ID:A | BDC0337-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 18.7A | 117A | 70 - 140A |
| PFPeA | 8.00A | 8.29A | 104A | 65 - 135A |
| PFHxA | 4.00A | 4.12A | 103A | 70 - 145A |
| PFHpA | 4.00A | 4.01A | 100A | 70 - 150A |
| PFOA | 4.00A | 4.35A | 109A | 70 - 150A |
| PFNA | 4.00A | 4.14A | 103A | 70 - 150A |
| PFDA | 4.00A | 4.11A | 103A | 70 - 140A |
| PFUnA | 4.00A | 4.13A | 103A | 70 - 145A |
| PFDoA | 4.00A | 4.21A | 105A | 70 - 140A |
| PFTrDA | 4.00A | 4.29A | 107A | 65 - 140A |
| PFTeDA | 4.00A | 4.11A | 103A | 60 - 140A |
| PFHxDA | 4.00A | 3.87A | 96.6A | 40 - 150A |
| PFODA | 4.00A | 3.34A | 83.6A | 40 - 150A |
| PFBSA | 3.54A | 3.76A | 106A | 60 - 145A |
| PFPeSA | 3.76A | 3.94A | 105A | 65 - 140A |
| PFHxSA | 3.66A | 3.83A | 105A | 65 - 145A |
| PFHpSA | 3.82A | 4.11A | 108A | 70 - 150A |
| PFOSA | 3.72A | 3.95A | 106A | 55 - 150A |
| PFNSA | 3.84A | 4.15A | 108A | 65 - 145A |
| PFDSA | 3.86A | 4.25A | 110A | 60 - 145A |
| PFDoSA | 3.88A | 3.91A | 101A | 50 - 145A |
| 4:2FTSA | 15.0A | 16.8A | 112A | 70 - 145A |
| 6:2FTSA | 15.2A | 15.4A | 101A | 65 - 155A |
| 8:2FTSA | 15.4A | 16.2A | 106A | 60 - 150A |
| 10:2FTSA | 15.4A | 14.4A | 93.1A | 40 - 150A |
| PFOSA | 4.00A | 4.32A | 108A | 70 - 145A |
| NMeFOSA | 16.0A | 17.6A | 110A | 60 - 150A |
| NEtFOSA | 16.0A | 17.0A | 107A | 65 - 145A |
| NMeFOSA | 4.00A | 4.03A | 101A | 50 - 140A |
| NEtFOSA | 4.00A | 4.39A | 110A | 70 - 145A |
| NMeFOSEA | 16.0A | 16.0A | 99.7A | 70 - 145A |
| NEtFOSEA | 16.0A | 17.7A | 110A | 70 - 135A |
| HFPO-DA | 4.00A | 3.76A | 94.0 | 70 - 140A |
| DONA | 3.78A | 4.36A | 115A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0337A | Laboratory ID:A | BDC0337-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.37A | 103A | 70 - 140A |
| PFMPA | 8.00A | 8.09A | 101A | 55 - 140A |
| PFMBA | 8.00A | 8.26A | 103A | 60 - 150A |
| NFDHA | 8.00A | 8.47A | 106A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 4.06A | 109A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 4.09A | 108A | 55 - 160A |
| 3:3FTCA | 16.0A | 15.4A | 96.4A | 65 - 130A |
| 5:3FTCA | 16.0A | 16.3A | 102A | 70 - 135A |
| 7:3FTCA | 16.0A | 14.8A | 92.8A | 50 - 145A |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-15-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS3- |
| Column:- | | Sample Lab ID:- | 24C0131-01- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | | QC LIMITST REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.2- | 5.15- | 24.6- | 137- | | 70 - 140- |
| PFPeA- | 7.09- | 4.78- | 13.3- | 120- | | 65 - 135- |
| PFHxA- | 3.54- | 4.88- | 9.54- | 132- | | 70 - 145- |
| PFHpA- | 3.54- | 3.04- | 7.61- | 129- | | 70 - 150- |
| PFOA- | 3.54- | 5.86- | 12.1- | 176- | *- | 70 - 150- |
| PFNA- | 3.54- | 2.19- | 6.71- | 128- | | 70 - 150- |
| PFDA- | 3.54- | 2.80- | 7.52- | 133- | | 70 - 140- |
| PFUnA- | 3.54- | ND- | 4.61- | 130- | | 70 - 145- |
| PFDoA- | 3.54- | ND- | 4.55- | 129- | | 70 - 140- |
| PFTrDA- | 3.54- | ND- | 4.70- | 133- | | 65 - 140- |
| PFTeDA- | 3.54- | ND- | 4.50- | 127- | | 60 - 140- |
| PFHxDA- | 3.54- | ND- | 3.63- | 103- | | 40 - 150- |
| PFODA- | 3.54- | ND- | 4.26- | 120- | | 40 - 150- |
| PFBS- | 3.14- | 2.08- | 5.96- | 124- | | 60 - 145- |
| PFPeS- | 3.33- | 0.195- | 4.16- | 119- | | 65 - 140- |
| PFHxS- | 3.24- | 0.928- | 4.75- | 118- | | 65 - 145- |
| PFHpS- | 3.38- | 0.0988- | 4.36- | 126- | | 70 - 150- |
| PFOS- | 3.30- | 7.64- | 12.5- | 148- | | 55 - 150- |
| PFNS- | 3.40- | ND- | 3.63- | 107- | | 65 - 145- |
| PFDS- | 3.42- | ND- | 3.28- | 95.8- | | 60 - 145- |
| PFDoS- | 3.44- | ND- | 3.29- | 95.8- | | 50 - 145- |
| 4:2FTS- | 13.3- | ND- | 15.6- | 117- | | 70 - 145- |
| 6:2FTS- | 13.5- | ND- | 15.7- | 116- | | 65 - 155- |
| 8:2FTS- | 13.6- | ND- | 15.9- | 117- | | 60 - 150- |
| 10:2FTS- | 13.7- | ND- | 12.9- | 94.2- | | 40 - 150- |
| PFOSA- | 3.54- | ND- | 4.68- | 132- | | 70 - 145- |
| NMeFOSA- | 14.2- | ND- | 23.1- | 163- | *- | 60 - 150- |
| NEtFOSA- | 14.2- | ND- | 21.5- | 152- | *- | 65 - 145- |
| NMeFOSAA- | 3.54- | ND- | 4.31- | 122- | | 50 - 140- |
| NEtFOSAA- | 3.54- | ND- | 4.52- | 127- | | 70 - 145- |
| NMeFOSE- | 14.2- | ND- | 23.4- | 165- | *- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-15-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS3- |
| Column:- | | Sample Lab ID:- | 24C0131-01- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | | QC LIMITST REC.T |
|---|---|---|---|---|---|---|
| NEtFOSE- | 14.2- | ND- | 19.8- | 140- | *- | 70 - 135- |
| HFPO-DA- | 3.54- | ND- | 4.40- | 124- | | 70 - 140- |
| ADONA- | 3.35- | ND- | 4.28- | 128- | | 65 - 145- |
| PFEESA- | 6.31- | ND- | 7.38- | 117- | | 70 - 140- |
| PFMPA- | 7.09- | ND- | 6.96- | 98.3- | | 55 - 140- |
| PFMBA- | 7.09- | ND- | 8.15- | 115- | | 60 - 150- |
| NFDHA- | 7.09- | ND- | 7.36- | 104- | | 50 - 150- |
| 9Cl-PF3ONS- | 3.31- | ND- | 3.54- | 107- | | 70 - 155- |
| 11Cl-PF3OUDS- | 3.35- | ND- | 3.18- | 94.9- | | 55 - 160- |
| 3:3FTCA- | 14.2- | ND- | 12.1- | 85.3- | | 65 - 130- |
| 5:3FTCA- | 14.2- | ND- | 15.9- | 112- | | 70 - 135- |
| 7:3FTCA- | 14.2- | ND- | 16.0- | 113- | | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-15-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD3- |
| Column:- | | Sample Lab ID:- | 24C0131-01- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | | T QC LIMITST RPDT | T QC LIMITST REC.T |
|---|---|---|---|---|---|---|---|
| PFBA- | 14.4- | 19.0- | 96.6- | 25.6- | | 30- | 70 - 140- |
| PFPeA- | 7.19- | 11.8- | 97.1- | 12.0- | | 30- | 65 - 135- |
| PFHxA- | 3.60- | 8.44- | 99.1- | 12.2- | | 30- | 70 - 145- |
| PFHpA- | 3.60- | 7.01- | 111- | 8.16- | | 30- | 70 - 150- |
| PFOA- | 3.60- | 10.5- | 130- | 13.8- | | 30- | 70 - 150- |
| PFNA- | 3.60- | 6.06- | 108- | 10.2- | | 30- | 70 - 150- |
| PFDA- | 3.60- | 6.53- | 104- | 14.2- | | 30- | 70 - 140- |
| PFUnA- | 3.60- | 3.74- | 104- | 20.7- | | 30- | 70 - 145- |
| PFDoA- | 3.60- | 3.72- | 104- | 20.0- | | 30- | 70 - 140- |
| PFTrDA- | 3.60- | 3.83- | 106- | 20.5- | | 30- | 65 - 140- |
| PFTeDA- | 3.60- | 3.79- | 105- | 17.1- | | 30- | 60 - 140- |
| PFHxDA- | 3.60- | 3.70- | 103- | 1.72- | | 30- | 40 - 150- |
| PFODA- | 3.60- | 3.14- | 87.2- | 30.4- | * | 30- | 40 - 150- |
| PFBS- | 3.18- | 5.41- | 105- | 9.55- | | 30- | 60 - 145- |
| PFPeS- | 3.38- | 3.37- | 93.8- | 21.1- | | 30- | 65 - 140- |
| PFHxS- | 3.29- | 4.19- | 99.1- | 12.6- | | 30- | 65 - 145- |
| PFHpS- | 3.43- | 3.71- | 105- | 16.2- | | 30- | 70 - 150- |
| PFOS- | 3.34- | 10.9- | 96.9- | 14.1- | | 30- | 55 - 150- |
| PFNS- | 3.45- | 3.44- | 99.5- | 5.54- | | 30- | 65 - 145- |
| PFDS- | 3.47- | 3.79- | 109- | 14.5- | | 30- | 60 - 145- |
| PFDoS- | 3.49- | 3.64- | 104- | 10.0- | | 30- | 50 - 145- |
| 4:2FTS- | 13.5- | 13.8- | 103- | 11.7- | | 30- | 70 - 145- |
| 6:2FTS- | 13.7- | 13.9- | 101- | 12.2- | | 30- | 65 - 155- |
| 8:2FTS- | 13.8- | 13.4- | 96.7- | 17.6- | | 30- | 60 - 150- |
| 10:2FTS- | 13.9- | 14.3- | 103- | 10.3- | | 30- | 40 - 150- |
| PFOSA- | 3.60- | 4.04- | 112- | 14.6- | | 30- | 70 - 145- |
| NMeFOSA- | 14.4- | 18.8- | 131- | 20.6- | | 30- | 60 - 150- |
| NEtFOSA- | 14.4- | 18.3- | 127- | 16.3- | | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-15-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD3- |
| Column:- | | Sample Lab ID:- | 24C0131-01- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.60- | 3.46- | 96.3- | 21.7- | | 30- | 50 - 140- |
| NEtFOSAA- | 3.60- | 3.80- | 106- | 17.4- | | 30- | 70 - 145- |
| NMeFOSE- | 14.4- | 15.0- | 105- | 43.4- | * | 30- | 70 - 145- |
| NEtFOSE- | 14.4- | 16.1- | 112- | 20.7- | | 30- | 70 - 135- |
| HFPO-DA- | 3.60- | 3.48- | 96.7- | 23.4- | | 30- | 70 - 140- |
| ADONA- | 3.40- | 4.11- | 121- | 4.23- | | 30- | 65 - 145- |
| PFEESA- | 6.40- | 6.37- | 99.5- | 14.7- | | 30- | 70 - 140- |
| PFMPA- | 7.19- | 6.62- | 92.0- | 5.09- | | 30- | 55 - 140- |
| PFMBA- | 7.19- | 6.31- | 87.7- | 25.5- | | 30- | 60 - 150- |
| NFDHA- | 7.19- | 7.82- | 109- | 6.05- | | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.36- | 3.78- | 112- | 6.67- | | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.40- | 3.97- | 117- | 22.1- | | 30- | 55 - 160- |
| 3:3FTCA- | 14.4- | 12.3- | 85.8- | 2.04- | | 30- | 65 - 130- |
| 5:3FTCA- | 14.4- | 14.5- | 101- | 9.10- | | 30- | 70 - 135- |
| 7:3FTCA- | 14.4- | 15.2- | 106- | 4.99- | | 30- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-8-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS4- |
| Column:- | | Sample Lab ID:- | 24C0131-02- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-8-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS4- |
| Column:- | | Sample Lab ID:- | 24C0131-02- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| PFBA- | 14.7- | 2.09- | 16.7- | 99.4- | 70 - 140- |
| PFPeA- | 7.35- | 1.08- | 7.72- | 90.4- | 65 - 135- |
| PFHxA- | 3.67- | 0.546- | 4.06- | 95.7- | 70 - 145- |
| PFHpA- | 3.67- | 0.217- | 3.99- | 103- | 70 - 150- |
| PFOA- | 3.67- | 0.541- | 4.45- | 107- | 70 - 150- |
| PFNA- | 3.67- | ND- | 3.62- | 98.4- | 70 - 150- |
| PFDA- | 3.67- | ND- | 3.52- | 95.9- | 70 - 140- |
| PFUnA- | 3.67- | ND- | 3.76- | 102- | 70 - 145- |
| PFDoA- | 3.67- | ND- | 3.73- | 102- | 70 - 140- |
| PFTrDA- | 3.67- | ND- | 3.75- | 102- | 65 - 140- |
| PFTeDA- | 3.67- | ND- | 3.87- | 105- | 60 - 140- |
| PFHxDA- | 3.67- | ND- | 3.59- | 97.6- | 40 - 150- |
| PFODA- | 3.67- | ND- | 3.25- | 88.5- | 40 - 150- |
| PFBS- | 3.25- | 0.735- | 3.76- | 93.0- | 60 - 145- |
| PFPeS- | 3.45- | ND- | 3.50- | 101- | 65 - 140- |
| PFHxS- | 3.36- | 0.0999- | 3.49- | 101- | 65 - 145- |
| PFHpS- | 3.51- | ND- | 3.76- | 107- | 70 - 150- |
| PFOS- | 3.42- | 2.28- | 5.87- | 105- | 55 - 150- |
| PFNS- | 3.53- | ND- | 3.64- | 103- | 65 - 145- |
| PFDS- | 3.55- | ND- | 3.89- | 110- | 60 - 145- |
| PFDoS- | 3.56- | ND- | 3.77- | 106- | 50 - 145- |
| 4:2FTS- | 13.8- | ND- | 14.6- | 106- | 70 - 145- |
| 6:2FTS- | 14.0- | ND- | 14.7- | 105- | 65 - 155- |
| 8:2FTS- | 14.1- | ND- | 14.0- | 99.5- | 60 - 150- |
| 10:2FTS- | 14.2- | ND- | 12.7- | 89.5- | 40 - 150- |
| PFOSA- | 3.67- | ND- | 3.90- | 106- | 70 - 145- |
| NMeFOSA- | 14.7- | ND- | 15.6- | 106- | 60 - 150- |
| NEtFOSA- | 14.7- | ND- | 15.9- | 108- | 65 - 145- |
| NMeFOSAA- | 3.67- | ND- | 3.67- | 100- | 50 - 140- |
| NEtFOSAA- | 3.67- | ND- | 3.78- | 103- | 70 - 145- |
| NMeFOSE- | 14.7- | ND- | 14.5- | 98.5- | 70 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-8-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MS4- |
| Column:- | | Sample Lab ID:- | 24C0131-02- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | SAMPLET CONCENTRATIONT (ng/L)T | MST CONCENTRATIONT (ng/L)T | MS T %T REC. T | QC LIMITST REC.T |
|---|---|---|---|---|---|
| NEtFOSE- | 14.7- | ND- | 14.0- | 95.0- | 70 - 135- |
| HFPO-DA- | 3.67- | ND- | 3.32- | 90.3- | 70 - 140- |
| ADONA- | 3.47- | ND- | 3.89- | 112- | 65 - 145- |
| PFEESA- | 6.54- | ND- | 6.61- | 101- | 70 - 140- |
| PFMPA- | 7.35- | ND- | 7.43- | 101- | 55 - 140- |
| PFMBA- | 7.35- | ND- | 7.36- | 100- | 60 - 150- |
| NFDHA- | 7.35- | ND- | 8.06- | 110- | 50 - 150- |
| 9Cl-PF3ONS- | 3.43- | ND- | 3.44- | 100- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.47- | ND- | 3.83- | 110- | 55 - 160- |
| 3:3FTCA- | 14.7- | ND- | 13.2- | 89.6- | 65 - 130- |
| 5:3FTCA- | 14.7- | ND- | 15.3- | 104- | 70 - 135- |
| 7:3FTCA- | 14.7- | ND- | 15.8- | 107- | 50 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-8-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD4- |
| Column:- | | Sample Lab ID:- | 24C0131-02- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| PFBA- | 14.4- | 15.9- | 96.0- | 4.69- | 30- | 70 - 140- |
| PFPeA- | 7.21- | 8.18- | 98.5- | 5.78- | 30- | 65 - 135- |
| PFHxA- | 3.61- | 4.33- | 105- | 6.47- | 30- | 70 - 145- |
| PFHpA- | 3.61- | 3.85- | 101- | 3.67- | 30- | 70 - 150- |
| PFOA- | 3.61- | 4.03- | 96.7- | 10.0- | 30- | 70 - 150- |
| PFNA- | 3.61- | 3.54- | 98.1- | 2.18- | 30- | 70 - 150- |
| PFDA- | 3.61- | 3.63- | 101- | 2.95- | 30- | 70 - 140- |
| PFUnA- | 3.61- | 3.64- | 101- | 3.35- | 30- | 70 - 145- |
| PFDoA- | 3.61- | 3.65- | 101- | 2.12- | 30- | 70 - 140- |
| PFTrDA- | 3.61- | 3.80- | 105- | 1.20- | 30- | 65 - 140- |
| PFTeDA- | 3.61- | 3.76- | 104- | 3.02- | 30- | 60 - 140- |
| PFHxDA- | 3.61- | 3.57- | 99.1- | 0.355- | 30- | 40 - 150- |
| PFODA- | 3.61- | 3.41- | 94.5- | 4.67- | 30- | 40 - 150- |
| PFBS- | 3.19- | 3.89- | 98.8- | 3.35- | 30- | 60 - 145- |
| PFPeS- | 3.39- | 3.44- | 101- | 1.88- | 30- | 65 - 140- |
| PFHxS- | 3.30- | 3.37- | 99.1- | 3.58- | 30- | 65 - 145- |
| PFHpS- | 3.44- | 3.48- | 101- | 7.89- | 30- | 70 - 150- |
| PFOS- | 3.35- | 5.63- | 99.7- | 4.23- | 30- | 55 - 150- |
| PFNS- | 3.46- | 3.54- | 102- | 2.74- | 30- | 65 - 145- |
| PFDS- | 3.48- | 3.57- | 103- | 8.58- | 30- | 60 - 145- |
| PFDoS- | 3.50- | 3.66- | 105- | 3.01- | 30- | 50 - 145- |
| 4:2FTS- | 13.5- | 14.5- | 108- | 0.506- | 30- | 70 - 145- |
| 6:2FTS- | 13.7- | 13.8- | 101- | 5.84- | 30- | 65 - 155- |
| 8:2FTS- | 13.8- | 14.3- | 103- | 1.51- | 30- | 60 - 150- |
| 10:2FTS- | 13.9- | 12.2- | 87.3- | 4.33- | 30- | 40 - 150- |
| PFOSA- | 3.61- | 3.69- | 102- | 5.44- | 30- | 70 - 145- |
| NMeFOSA- | 14.4- | 14.2- | 98.4- | 9.63- | 30- | 60 - 150- |
| NEtFOSA- | 14.4- | 12.8- | 89.0- | 21.3- | 30- | 65 - 145- |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERYT

MW-8-

| | | | |
|---|---|---|---|
| Laboratory:- | APPL, LLC- | Work Order:- | 24C0131- |
| Client:- | Tidewater, Inc.- | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Analysis:- | EPA 1633- |
| Batch:- | BDC0337- | Preparation:- | EPA 1633- |
| % Solids:- | | Laboratory ID:- | BDC0337-MSD4- |
| Column:- | | Sample Lab ID:- | 24C0131-02- |

| ANALYTET | SPIKET ADDEDT (ng/L)T | MSDT CONCENTRATIONT (ng/L)T | MSD T %T REC. #T | T %T RPD T | T QC LIMITST T RPDT | REC.T |
|---|---|---|---|---|---|---|
| NMeFOSAA- | 3.61- | 3.69- | 102- | 0.428- | 30- | 50 - 140- |
| NEtFOSAA- | 3.61- | 3.64- | 101- | 3.52- | 30- | 70 - 145- |
| NMeFOSE- | 14.4- | 13.0- | 90.3- | 10.6- | 30- | 70 - 145- |
| NEtFOSE- | 14.4- | 14.1- | 97.9- | 1.06- | 30- | 70 - 135- |
| HFPO-DA- | 3.61- | 3.50- | 97.0- | 5.33- | 30- | 70 - 140- |
| ADONA- | 3.41- | 3.85- | 113- | 1.05- | 30- | 65 - 145- |
| PFEESA- | 6.42- | 7.19- | 112- | 8.49- | 30- | 70 - 140- |
| PFMPA- | 7.21- | 7.40- | 103- | 0.470- | 30- | 55 - 140- |
| PFMBA- | 7.21- | 7.35- | 102- | 0.152- | 30- | 60 - 150- |
| NFDHA- | 7.21- | 7.39- | 102- | 8.70- | 30- | 50 - 150- |
| 9Cl-PF3ONS- | 3.37- | 3.50- | 104- | 1.92- | 30- | 70 - 155- |
| 11Cl-PF3OUDS- | 3.41- | 3.76- | 110- | 1.95- | 30- | 55 - 160- |
| 3:3FTCA- | 14.4- | 13.9- | 96.6- | 5.68- | 30- | 65 - 130- |
| 5:3FTCA- | 14.4- | 16.2- | 112- | 5.83- | 30- | 70 - 135- |
| 7:3FTCA- | 14.4- | 16.9- | 117- | 6.97- | 30- | 50 - 145- |

# CALIBRATION SUMMARYL

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.05658 x (std. dev. = 0.00942) (weighting: None) | %RSE=16.7 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49263 x + 0.04347 (r = 0.99956) (weighting: 1 / x) | %RSE=3.6 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.49922 x (std. dev. = 0.03294) (weighting: None) | %RSE=6.6 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.46396 x (std. dev. = 0.03593) (weighting: None) | %RSE=7.7 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49610 x (std. dev. = 0.02906) (weighting: None) | %RSE=5.9 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 0.50211 x (std. dev. = 0.02926) (weighting: None) | %RSE=5.8 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00481 x (std. dev. = 0.04365) (weighting: None) | %RSE=4.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 0.99868 x (std. dev. = 0.05189) (weighting: None) | %RSE=5.2 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.90803 x (std. dev. = 0.09985) (weighting: None) | %RSE=11.0 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00351 x (std. dev. = 0.04887) (weighting: None) | %RSE=4.9 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.97570 x (std. dev. = 0.06326) (weighting: None) | %RSE=6.5 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93380 x (std. dev. = 0.04173) (weighting: None) | %RSE=4.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.46845 x (std. dev. = 0.01773) (weighting: None) | %RSE=3.8 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29669 x (std. dev. = 0.02397) (weighting: None) | %RSE=8.1 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8850 | y = 0.21756 x (std. dev. = 0.01699) (weighting: None) | %RSE=7.8 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9380 | y = 0.67420 x (std. dev. = 0.04128) (weighting: None) | %RSE=6.1 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.79781 x (std. dev. = 0.03897) (weighting: None) | %RSE=4.9 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9510 | y = 0.56824 x (std. dev. = 0.02975) (weighting: None) | %RSE=5.2 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9270 | y = 0.53833 x (std. dev. = 0.02074) (weighting: None) | %RSE=3.9 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9600 | y = 0.50782 x (std. dev. = 0.02565) (weighting: None) | %RSE=5.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9630 | y = 0.62281 x (std. dev. = 0.06711) (weighting: None) | %RSE=10.8 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9700 | y = 0.60668 x (std. dev. = 0.06243) (weighting: None) | %RSE=10.3 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9350 | y = 2.46725 x (std. dev. = 0.12108) (weighting: None) | %RSE=4.9 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.80558 x (std. dev. = 0.03512) (weighting: None) | %RSE=4.4 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9580 | y = 0.94263 x (std. dev. = 0.08100) (weighting: None) | %RSE=8.6 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9660 | y = 0.38362 x (std. dev. = 0.01374) (weighting: None) | %RSE=3.6 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 1.51739 x (std. dev. = 0.05746) (weighting: None) | %RSE=3.8 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.14702 x (std. dev. = 0.20606) (weighting: None) | %RSE=6.5 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.48379 x (std. dev. = 0.02055) (weighting: None) | %RSE=4.2 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9790 | y = 0.82771 x (std. dev. = 0.07132) (weighting: None) | %RSE=8.6 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.77759 x (std. dev. = 0.09332) (weighting: None) | %RSE=5.3 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.26554 x (std. dev. = 0.11465) (weighting: None) | %RSE=5.1 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23062 x (std. dev. = 0.00868) (weighting: None) | %RSE=3.8 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24252 x (std. dev. = 0.01770) (weighting: None) | %RSE=7.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21652 x (std. dev. = 0.01255) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.19052 x (std. dev. = 0.00900) (weighting: None) | %RSE=4.7 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07339 x (std. dev. = 0.00821) (weighting: None) | %RSE=11.2 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9430 | y = 0.91250 x (std. dev. = 0.06385) (weighting: None) | %RSE=7.0 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8920 | y = 0.60249 x (std. dev. = 0.04382) (weighting: None) | %RSE=7.3 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.18354 x (std. dev. = 0.01098) (weighting: None) | %RSE=6.0 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.41347 x (std. dev. = 0.02750) (weighting: None) | %RSE=6.7 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.32946 x (std. dev. = 0.02348) (weighting: None) | %RSE=7.1 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9330 | y = 1.00360 x (std. dev. = 0.08363) (weighting: None) | %RSE=8.3 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9430 | y = 0.78829 x (std. dev. = 0.06163) (weighting: None) | %RSE=7.8 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9240 | y = 0.28779 x (std. dev. = 0.02105) (weighting: None) | %RSE=7.3 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.08571 x (std. dev. = 0.00689) (weighting: None) | %RSE=8.0 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.50491 x (std. dev. = 0.04227) (weighting: None) | %RSE=8.4 |

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 1.07269 x (std. dev. = 0.08355) (weighting: None) | %RSE=7.8 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.52579 x (std. dev. = 0.03797) (weighting: None) | %RSE=7.2 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.41328 x (std. dev. = 0.03407) (weighting: None) | %RSE=8.2 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39167 x (std. dev. = 0.01908) (weighting: None) | %RSE=4.9 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 282245.7148 x | %RSD=11.5 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 118063.2838 x | %RSD=5.1 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 388138.8961 x | %RSD=6.9 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 292133.7888 x | %RSD=5.1 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 286626.9039 x | %RSD=5.3 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 982139.5047 x | %RSD=5.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 784514.6312 x | %RSD=5.9 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 8.6472 x | %RSD=4.0 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.3234 x | %RSD=11.0 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.3755 x | %RSD=6.7 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.8597 x | %RSD=6.3 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1197 x | %RSD=6.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9873 x | %RSD=3.1 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1555 x | %RSD=5.6 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3704 x | %RSD=8.7 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4057 x | %RSD=5.1 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.2448 x | %RSD=7.2 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.0831 x | %RSD=4.7 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.6121 x | %RSD=5.9 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4428 x | %RSD=4.6 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1278 x | %RSD=3.4 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.7093 x | %RSD=12.3 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.7424 x | %RSD=13.8 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.5245 x | %RSD=13.7 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.2984 x | %RSD=7.8 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.2589 x | %RSD=6.5 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.5079 x | %RSD=5.8 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4642 x | %RSD=8.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.4776 x | %RSD=9.4 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.3336 x | %RSD=11.5 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8973 x | %RSD=7.9 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.7769 x | %RSD=7.9 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 7.5812 x | %RSD=6.7 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1795 x | %RSD=10.3 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.4555 x | %RSD=5.9 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{in curve standard mix}$$

$$\text{Result } \left(\frac{\text{ng}}{\text{mL}}\right) = x\text{*Multiplier*Acid Factor}$$

Chemist:DAG

Instrument:Saphira

Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

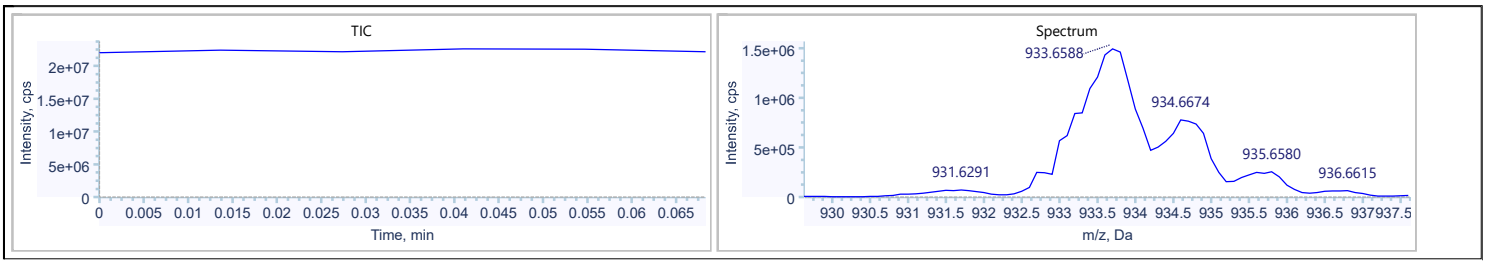


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

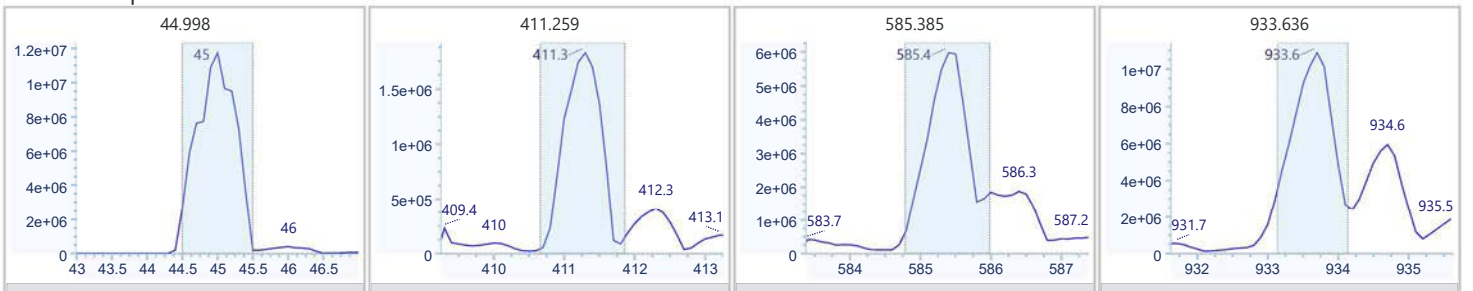


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

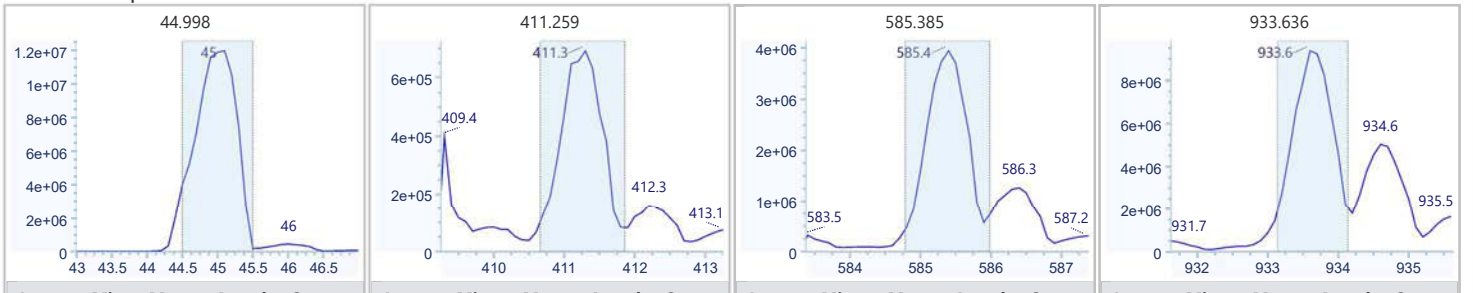


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

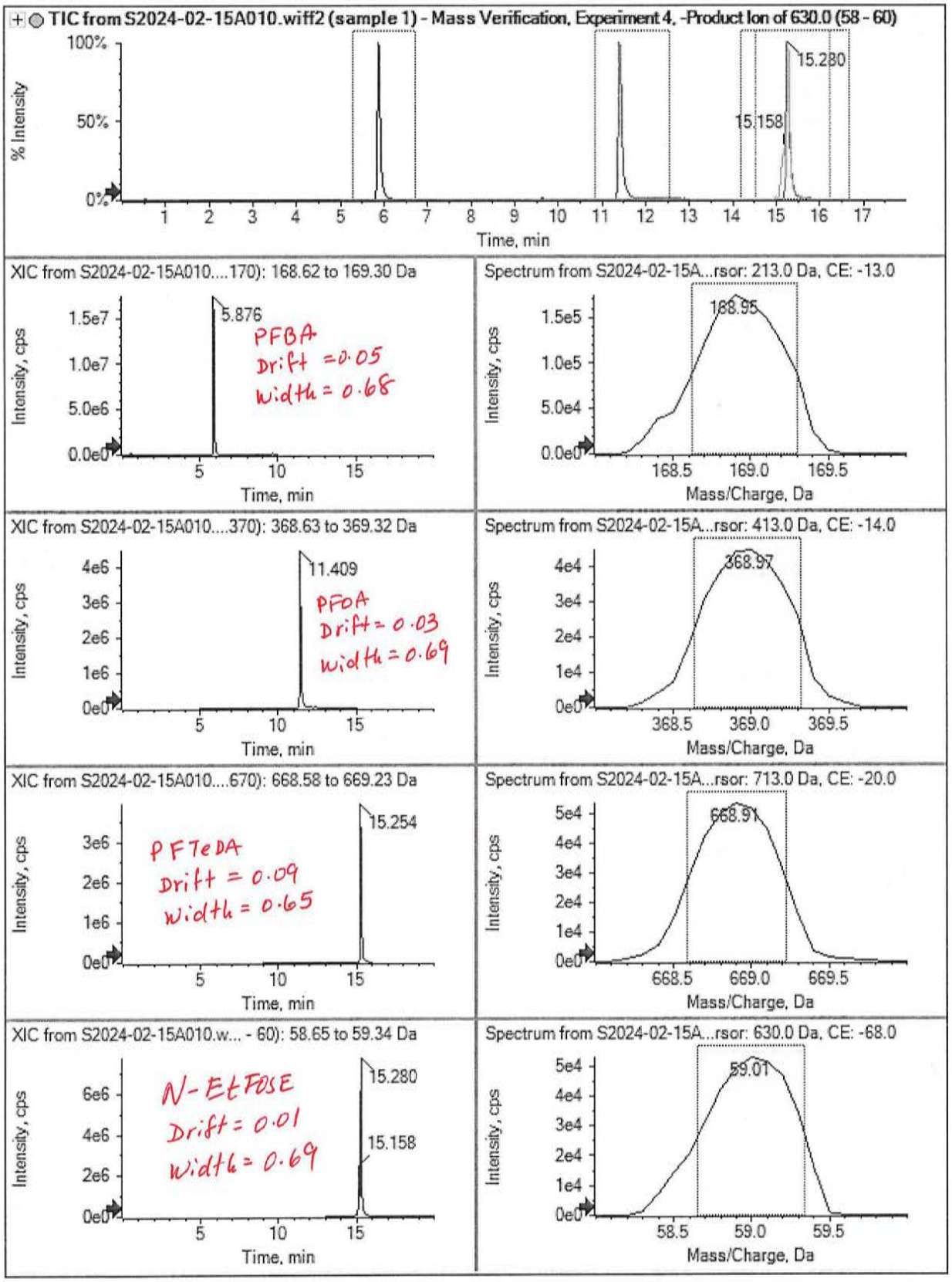

# EPA 1633A

Initial Calibration: SD01148 i

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A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 11424<br>( 163.0 / 69.0 ) 513 | ( 2.49 , 0.68 )<br>( N/A , -0.01 , 1.9) | 50.8<br>48.2 | 0.0449<br>164.0<br>164.0 | 0.1520 | N/A | 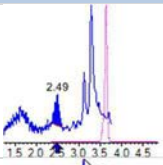 | 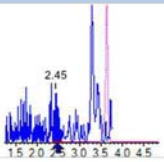 | |
| PFBA | ( 213.0 / 169.0 ) 244062 | ( 3.64 , 1.00 )<br>( 0.01 , N/A , 0.0) | 171.8 | N/A<br>0.0<br>0.0 | 0.3920 | N/A | 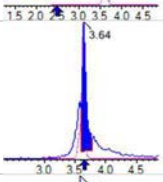 | | |
| PFPeA | ( 263.0 / 219.0 ) 47108<br>( 263.0 / 69.0 ) 481 | ( 4.39 , 1.00 )<br>( 0.00 , N/A , -0.6) | 249.8<br>14.0 | 0.0102<br>85.9<br>85.9 | 0.2050 | N/A | 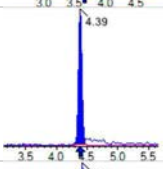 | 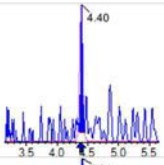 | |
| PFHxA | ( 313.0 / 269.0 ) 21432<br>( 313.0 / 119.0 ) 2635 | ( 5.22 , 1.00 )<br>( 0.00 , N/A , 0.5) | 165.4<br>89.5 | 0.1229<br>110.5<br>110.5 | 0.0850 | N/A | 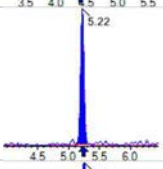 | 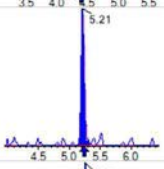 | |
| PFHpA | ( 363.0 / 319.0 ) 28749<br>( 363.0 / 169.0 ) 8589 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , -0.1) | 286.3<br>191.0 | 0.2988<br>97.8<br>97.8 | 0.0950 | N/A | 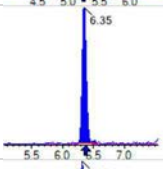 | 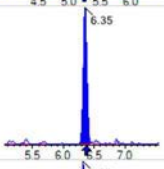 | |
| PFOA | ( 413.0 / 369.0 ) 47012<br>( 413.0 / 169.0 ) 15577 | ( 7.47 , 1.00 )<br>( 0.00 , N/A , -0.1) | 106.9<br>124.3 | 0.3313<br>92.7<br>92.7 | 0.1100 | N/A | 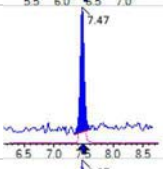 | 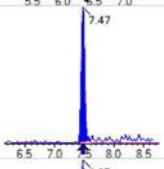 | |
| PFNA | ( 463.0 / 419.0 ) 29466<br>( 463.0 / 169.0 ) 6868 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , -0.1) | 332.1<br>154.1 | 0.2331<br>94.9<br>94.9 | 0.1000 | N/A | 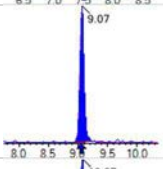 | 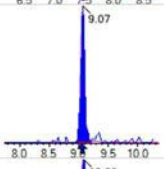 | |
| PFDA | ( 513.0 / 469.0 ) 35328<br>( 513.0 / 169.0 ) 2624 | ( 10.07 , 1.00 )<br>( 0.00 , N/A , -0.6) | 303.6<br>363874.1 | 0.0743<br>62.3<br>62.3 | 0.1020 | N/A | 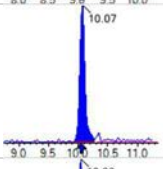 | 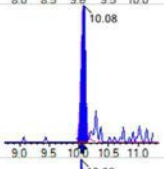 | |
| PFUnA | ( 563.0 / 519.0 ) 30872<br>( 563.0 / 169.0 ) 5510 | ( 10.99 , 1.00 )<br>( 0.00 , N/A , 0.4) | 303.8<br>133.6 | 0.1785<br>115.3<br>115.3 | 0.0820 | N/A | 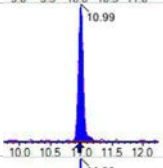 | 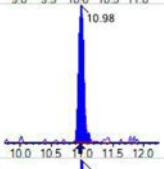 | |
| PFDoA | ( 613.0 / 569.0 ) 39355<br>( 613.0 / 169.0 ) 5791 | ( 11.89 , 1.00 )<br>( 0.00 , N/A , -0.3) | 220.9<br>74.1 | 0.1472<br>96.9<br>96.9 | 0.0950 | N/A | 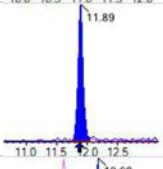 | 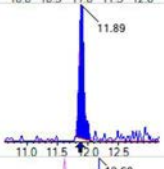 | |
| PFTrDA | ( 663.0 / 619.0 ) 36629<br>( 663.0 / 169.0 ) 9543 | ( 12.60 , 1.06 )<br>( N/A , 0.01 , 0.0) | 249.0<br>136.1 | 0.2605<br>96.8<br>96.8 | 0.0910 | N/A | 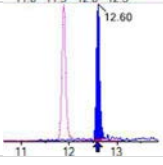 | 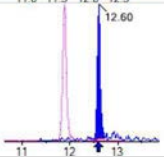 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>33810<br>( 713.0 / 169.0 )<br>8418 | ( 13.14 , 1.00 )<br>( -0.01 , N/A , -0.4) | 204.5<br>85.3 | 0.2490<br>91.7<br>91.7 | 0.0990 | N/A | 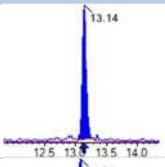 | 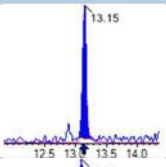 | |
| PFHxDA | ( 813.0 / 769.0 )<br>27570<br>( 813.0 / 169.0 )<br>7349 | ( 14.04 , 1.00 )<br>( 0.00 , N/A , -0.5) | 175.8<br>49.0 | 0.2666<br>101.9<br>101.9 | 0.0990 | N/A | 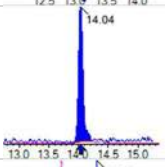 | 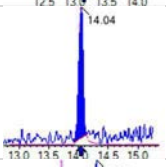 | |
| PFODA | ( 913.0 / 869.0 )<br>15390<br>( 913.0 / 169.0 )<br>5052 | ( 14.77 , 1.05 )<br>( N/A , -0.01 , 0.0) | 76.1<br>29.2 | 0.3282<br>104.7<br>104.7 | 0.0880 | N/A | 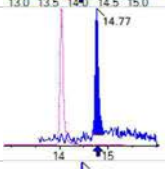 | 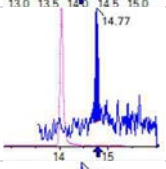 | |
| PFBS | ( 299.0 / 80.0 )<br>30767<br>( 299.0 / 99.0 )<br>21524 | ( 5.40 , 1.00 )<br>( 0.00 , N/A , 0.2) | 429.2<br>168.7 | 0.6996<br>94.4<br>94.4 | 0.0770 | N/A | 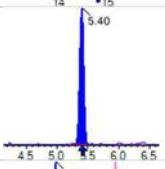 | 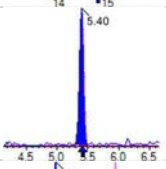 | |
| PFPeS | ( 349.0 / 80.0 )<br>95828<br>( 349.0 / 99.0 )<br>33243 | ( 6.68 , 0.81 )<br>( N/A , -0.01 , 0.0) | 599.9<br>525.5 | 0.3469<br>101.5<br>101.5 | 0.0930 | N/A | 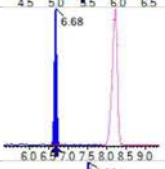 | 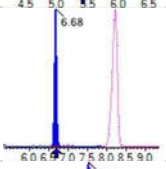 | |
| PFHxS | ( 399.0 / 80.0 )<br>110599<br>( 399.0 / 99.0 )<br>35884 | ( 8.22 , 1.00 )<br>( 0.00 , N/A , 0.7) | 583.8<br>1059.5 | 0.3244<br>98.9<br>98.9 | 0.0880 | N/A | 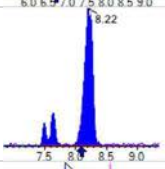 | 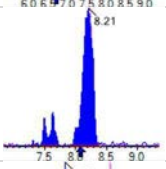 | MI5 DG<br>2024-03-29 |
| PFHpS | ( 449.0 / 80.0 )<br>87755<br>( 449.0 / 99.0 )<br>24540 | ( 9.56 , 0.91 )<br>( N/A , 0.02 , 0.2) | 562.3<br>294.7 | 0.2796<br>107.2<br>107.2 | 0.0870 | N/A | 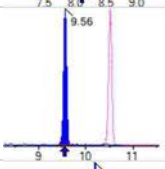 | 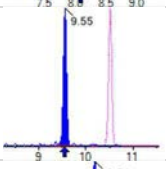 | |
| PFOS | ( 499.0 / 80.0 )<br>93324<br>( 499.0 / 99.0 )<br>21599 | ( 10.52 , 1.00 )<br>( 0.00 , N/A , 0.1) | 466.3<br>718.8 | 0.2314<br>100.2<br>100.2 | 0.0960 | N/A | 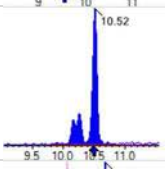 | 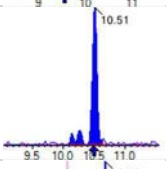 | |
| PFNS | ( 549.0 / 80.0 )<br>79220<br>( 549.0 / 99.0 )<br>23878 | ( 11.40 , 1.08 )<br>( N/A , 0.02 , -0.1) | 457.0<br>238.4 | 0.3014<br>112.5<br>112.5 | 0.0890 | N/A | 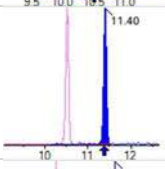 | 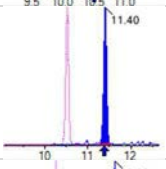 | |
| PFDS | ( 599.0 / 80.0 )<br>101122<br>( 599.0 / 99.0 )<br>27831 | ( 12.20 , 1.16 )<br>( N/A , 0.01 , 0.0) | 650.8<br>191.7 | 0.2752<br>108.1<br>108.1 | 0.0930 | N/A | 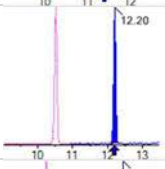 | 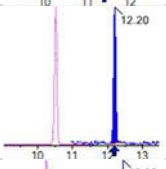 | |
| PFDoS | ( 699.0 / 80.0 )<br>102038<br>( 699.0 / 99.0 )<br>24044 | ( 13.20 , 1.26 )<br>( N/A , 0.00 , -0.1) | 719.1<br>269.5 | 0.2356<br>105.4<br>105.4 | 0.0970 | N/A | 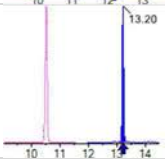 | 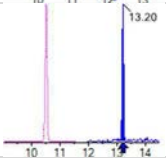 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 179225<br>( 327.0 / 81.0 ) 151427 | ( 4.85 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1812.8<br>582.9 | 0.8449<br>99.0<br>99.0 | 0.3630 | N/A | 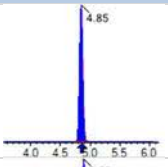 | 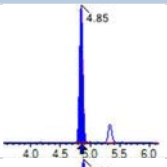 | |
| 6:2FTS | ( 427.0 / 407.0 ) 138066<br>( 427.0 / 81.0 ) 181781 | ( 6.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2052.8<br>1492.7 | 1.3166<br>102.1<br>102.1 | 0.3540 | N/A | 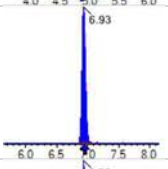 | 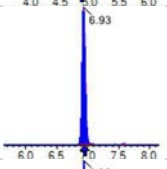 | |
| 8:2FTS | ( 527.0 / 507.0 ) 148936<br>( 527.0 / 81.0 ) 154914 | ( 9.38 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1697.0<br>1003.9 | 1.0401<br>94.2<br>94.2 | 0.3610 | N/A | 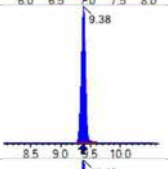 | 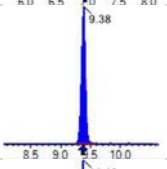 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119836<br>( 627.0 / 81.0 ) 174439 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.2) | 800.4<br>423.0 | 1.4556<br>101.2<br>101.2 | 0.3590 | N/A | 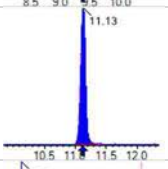 | 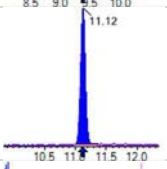 | |
| PFBSA | ( 297.9 / 78.0 ) 59293<br>( 297.9 / 278.0 ) 218 | ( 5.55 , 0.38 )<br>( N/A , 0.00 , -8.5) | 436.4<br>4.1 | 0.0037<br>283.6<br>283.6 | 0.0990 | N/A | 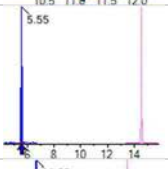 | 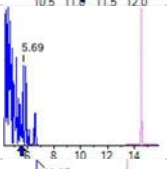 | |
| PFHxSA | ( 397.9 / 78.0 ) 115672<br>( 397.9 / 378.0 ) 314 | ( 11.23 , 0.75 )<br>( N/A , 0.00 , -1.0) | 957.5<br>40.0 | 0.0027<br>67.1<br>67.1 | 0.0980 | N/A | 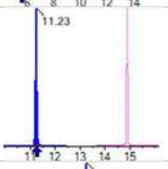 | 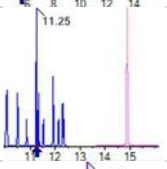 | |
| PFOSA | ( 498.0 / 78.0 ) 83077<br>( 498.0 / 478.0 ) 1224 | ( 13.28 , 1.00 )<br>( -0.01 , N/A , -0.9) | 783.8<br>28.3 | 0.0147<br>100.2<br>100.2 | 0.0980 | N/A | 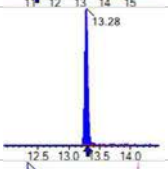 | 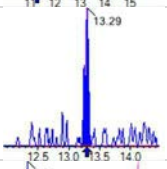 | |
| TFSI | ( 279.7 / 147.0 ) 117672<br>( 279.7 / 211.0 ) 11787 | ( 7.09 , 0.53 )<br>( N/A , 0.01 , 0.0) | 50.1<br>658.9 | 0.1002<br>113.2<br>113.2 | 0.0790 | N/A | 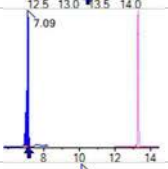 | 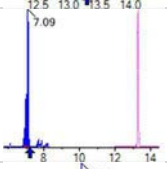 | |
| NMeFOSA | ( 512.0 / 219.0 ) 67741<br>( 512.0 / 169.0 ) 52839 | ( 14.56 , 1.00 )<br>( 0.00 , N/A , 1.3) | 832.1<br>344.5 | 0.7800<br>101.8<br>101.8 | 0.3840 | N/A | 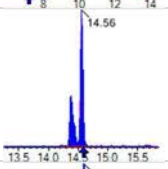 | 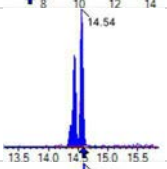 | |
| NEtFOSA | ( 526.0 / 219.0 ) 79393<br>( 526.0 / 169.0 ) 99627 | ( 14.89 , 1.00 )<br>( 0.01 , N/A , 1.7) | 803.6<br>795.8 | 1.2549<br>100.4<br>100.4 | 0.3730 | N/A | 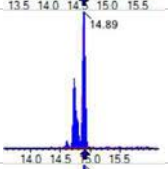 | 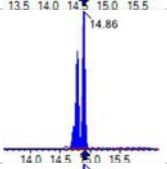 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 27875<br>( 570.0 / 483.0 ) 13190 | ( 10.44 , 1.00 )<br>( 0.01 , N/A , 0.1) | 439.1<br>93119.3 | 0.4732<br>102.0<br>102.0 | 0.0990 | N/A | 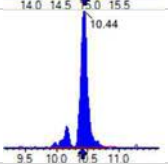 | 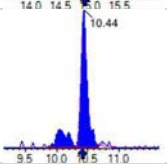 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 24693<br>( 584.0 / 526.0 ) 15199 | ( 11.04 , 1.00 ) ( 0.00 , N/A , -0.7) | 1791.1<br>276.3 | 0.6155<br>102.6<br>102.6 | 0.0920 | N/A | 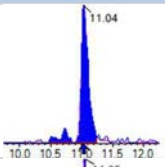 | 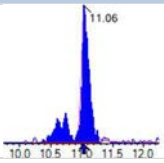 | MI5 DG 2024-03-29 |
| NMeFOSE | ( 616.0 / 59.0 ) 33653 | ( 14.35 , 1.00 ) ( 0.02 , N/A , 0.0) | 186.6 | N/A<br>0.0<br>0.0 | 0.4040 | N/A | 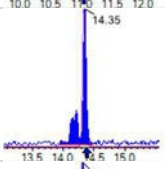 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 26710 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 222.3 | N/A<br>0.0<br>0.0 | 0.3890 | N/A | 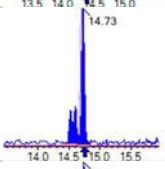 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 5426<br>( 285.0 / 185.0 ) 16307 | ( 5.64 , 1.00 ) ( 0.00 , N/A , -0.1) | 221.6<br>196.1 | 3.0053<br>107.0<br>107.0 | 0.0760 | N/A | 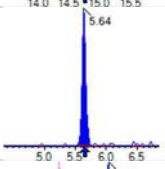 | 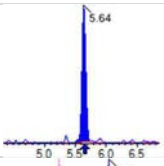 | |
| ADONA | ( 377.0 / 85.0 ) 79219<br>( 377.0 / 251.0 ) 6946 | ( 6.79 , 1.20 ) ( N/A , -0.01 , 0.0) | 955.1<br>83.6 | 0.0877<br>83.6<br>83.6 | 0.0850 | N/A | 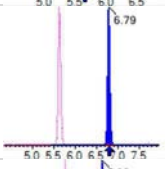 | 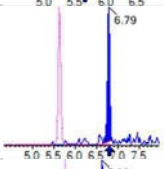 | |
| PFEESA | ( 315.0 / 135.0 ) 33896<br>( 315.0 / 83.0 ) 21770 | ( 5.98 , 1.15 ) ( N/A , -0.02 , 0.1) | 640.5<br>110.2 | 0.6423<br>100.1<br>100.1 | 0.1850 | N/A | 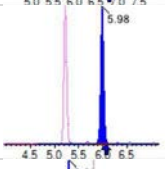 | 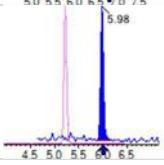 | |
| PFMPA | ( 229.0 / 85.0 ) 16056 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 513.9 | N/A<br>0.0<br>0.0 | 0.1900 | N/A | 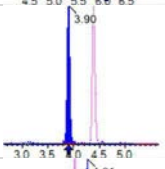 | | |
| PFMBA | ( 279.0 / 85.0 ) 36236 | ( 4.61 , 1.05 ) ( N/A , 0.00 , 0.0) | 411.6 | N/A<br>0.0<br>0.0 | 0.1900 | N/A | 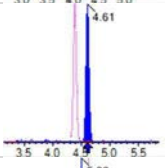 | | |
| NFDHA | ( 295.0 / 201.0 ) 18745<br>( 295.0 / 85.0 ) 17618 | ( 5.09 , 0.98 ) ( N/A , -0.01 , 0.3) | 942.2<br>271.5 | 0.9399<br>94.5<br>94.5 | 0.2090 | N/A | 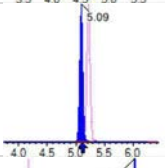 | 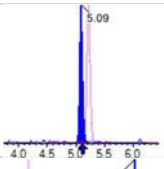 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86161<br>( 533.0 / 353.0 ) 26940 | ( 11.20 , 1.99 ) ( N/A , 0.02 , 0.1) | 937.2<br>514.1 | 0.3127<br>98.1<br>98.1 | 0.0830 | N/A | 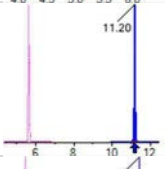 | 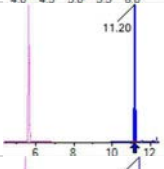 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 66326<br>( 633.0 / 453.0 ) 23901 | ( 12.66 , 2.25 ) ( N/A , 0.01 , 0.2) | 975.7<br>319.4 | 0.3604<br>106.2<br>106.2 | 0.0820 | N/A | 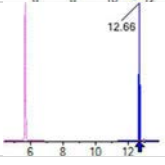 | 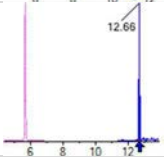 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 43851<br>( 461.0 / 381.2 ) 15851 | ( 9.46 , 0.90 )<br>( N/A , 0.02 , 0.1) | 2157.0<br>908.5 | 0.3615<br>93.6<br>93.6 | 0.0840 | N/A | 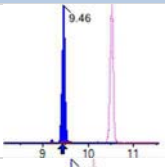 | 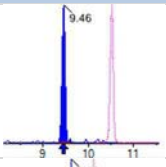 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 8726<br>( 241.0 / 117.0 ) 18815 | ( 3.96 , 0.90 )<br>( N/A , -0.01 , 0.0) | 412.1<br>133.0 | 2.1562<br>98.2<br>98.2 | 0.4410 | N/A | 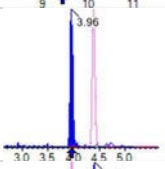 | 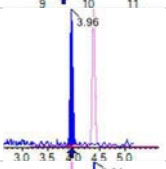 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 28555<br>( 341.0 / 217.0 ) 37510 | ( 5.64 , 1.08 )<br>( N/A , -0.02 , 0.1) | 552.1<br>219.2 | 1.3136<br>85.8<br>85.8 | 0.4160 | N/A | 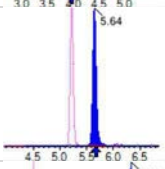 | 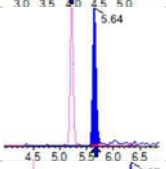 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 57118<br>( 441.0 / 337.0 ) 46760 | ( 9.37 , 1.80 )<br>( N/A , 0.04 , 0.1) | 769.6<br>2363120.9 | 0.8187<br>95.8<br>95.8 | 0.3920 | N/A | 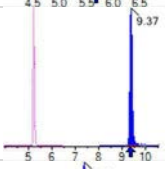 | 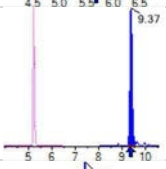 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 29520<br>( 357.2 / 243.0 ) 3301 | ( 5.89 , 1.00 )<br>( -0.01 , N/A , -0.7) | 246.8<br>51.9 | 0.1118<br>104.3<br>104.3 | 0.0840 | N/A | 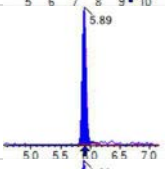 | 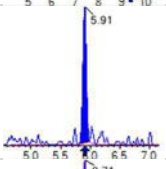 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24816<br>( 457.2 / 343.0 ) 1129 | ( 8.69 , 1.00 )<br>( -0.01 , N/A , -1.3) | 260.9<br>16441.3 | 0.0455<br>101.4<br>101.4 | 0.0810 | N/A | 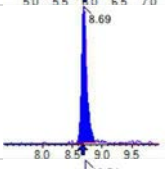 | 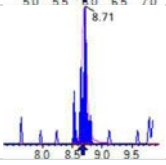 | |
| TDCA | ( 499.0 / 80.0 ) 62286 | ( 10.51 , 1.00 )<br>( N/A , 0.02 , 0.0) | 932.4 | N/A<br>0.0<br>0.0 | 0.0950 | N/A | 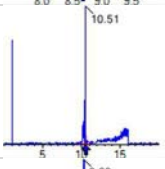 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 297658 | ( 3.63 , N/A )<br>( N/A , -0.02 , N/A ) | 1635.1 | N/A | 1.0550<br>[ 1.0000 ] | 105.5%<br>{ 107.4% } | 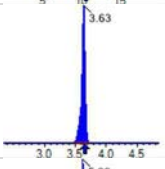 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 114374 | ( 5.22 , N/A )<br>( N/A , -0.02 , N/A ) | 670228.8 | N/A | 0.9690<br>[ 1.0000 ] | 96.9%<br>{ 99.4% } | 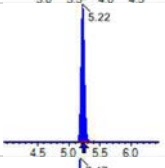 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378250 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 5267.8 | N/A | 0.9750<br>[ 1.0000 ] | 97.5%<br>{ 96.4% } | 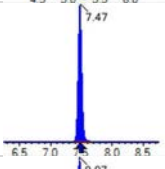 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 297288 | ( 9.07 , N/A )<br>( N/A , 0.02 , N/A ) | 1494.8 | N/A | 1.0180<br>[ 1.0000 ] | 101.8%<br>{ 102.3% } | 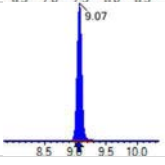 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281405 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 24158.5 | N/A | 0.9820 [ 1.0000 ] | 98.2% { 103.4% } | 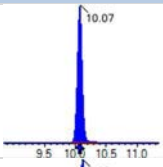 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 967713 | ( 8.22 , N/A ) ( N/A , 0.13 , N/A ) | 9229.8 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 101.7% } | 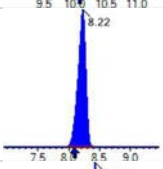 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 751287 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 3115.8 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 101.6% } | 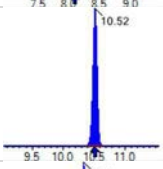 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2658506 | ( 3.63 , N/A ) ( N/A , -0.02 , N/A ) | 322733.7 | N/A | 8.2630 [ 8.0000 ] | 103.3% { 109.0% } | 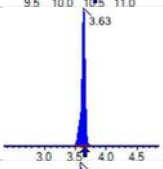 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 922775 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 5673.3 | N/A | 4.4070 [ 4.0000 ] | 110.2% { 99.8% } | 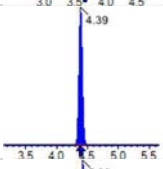 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 543980 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 7572.4 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 101.6% } | 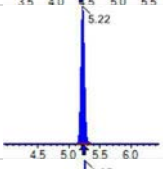 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 610145 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 6550.2 | N/A | 2.1950 [ 2.0000 ] | 109.8% { 107.0% } | 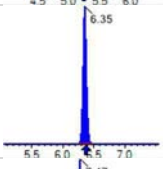 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 852451 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5309.5 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 112.6% } | 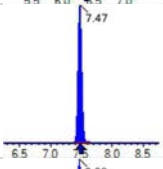 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292129 | ( 9.06 , N/A ) ( N/A , 0.02 , N/A ) | 4367.0 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 102.9% } | 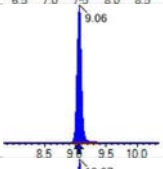 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348347 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1671.8 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 103.5% } | 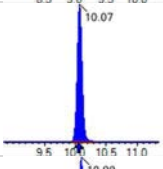 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412449 | ( 10.99 , N/A ) ( N/A , 0.02 , N/A ) | 1234.6 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 105.2% } | 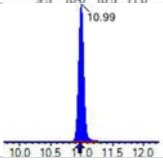 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413551 | ( 11.89 , N/A ) ( N/A , 0.02 , N/A ) | 1443.6 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 103.6% } | 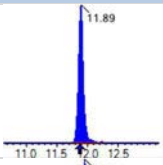 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 364139 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1250.0 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 100.5% } | 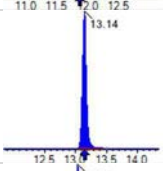 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 591883 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2281.7 | N/A | 2.0190 [ 2.0000 ] | 101.0% { 103.6% } | 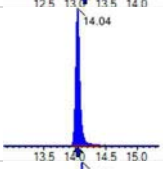 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1619455 | ( 5.40 , N/A ) ( N/A , -0.01 , N/A ) | 2095.4 | N/A | 2.0760 [ 2.0000 ] | 103.8% { 101.9% } | 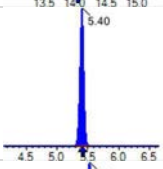 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440662 | ( 8.22 , N/A ) ( N/A , 0.13 , N/A ) | 5874.9 | N/A | 2.0640 [ 2.0000 ] | 103.2% { 104.9% } | 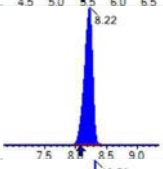 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1682588 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1902.6 | N/A | 2.1050 [ 2.0000 ] | 105.3% { 107.5% } | 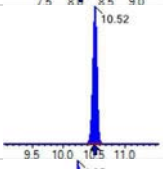 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 747900 | ( 4.85 , N/A ) ( N/A , -0.01 , N/A ) | 64.6 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 107.2% } | 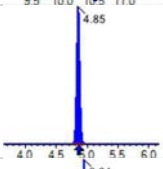 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1840115 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 6568.9 | N/A | 4.3650 [ 4.0000 ] | 109.1% { 110.9% } | 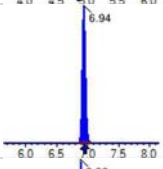 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1679015 | ( 9.39 , N/A ) ( N/A , 0.02 , N/A ) | 2075.8 | N/A | 4.5520 [ 4.0000 ] | 113.8% { 113.6% } | 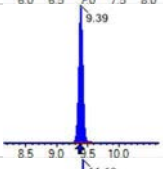 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3361452 | ( 11.12 , N/A ) ( N/A , 0.02 , N/A ) | 1949.2 | N/A | 8.4250 [ 8.0000 ] | 105.3% { 118.1% } | 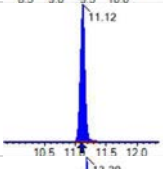 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1755121 | ( 13.29 , N/A ) ( N/A , -0.02 , N/A ) | 3216.8 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 104.3% } | 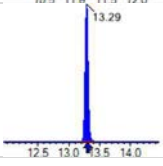 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 396518 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2692.0 | N/A | 2.0780 [ 2.0000 ] | 103.9% { 107.0% } | 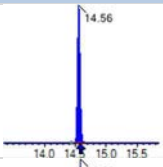  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 376281 | ( 14.88 , N/A ) ( N/A , -0.03 , N/A ) | 2584.8 | N/A | 2.1580 [ 2.0000 ] | 107.9% { 105.8% } | 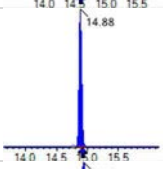  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1222822 | ( 10.44 , N/A ) ( N/A , 0.02 , N/A ) | 3931.4 | N/A | 4.4060 [ 4.0000 ] | 110.2% { 105.5% } | 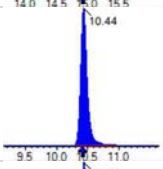  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1100790 | ( 11.04 , N/A ) ( N/A , 0.02 , N/A ) | 3251.6 | N/A | 4.3950 [ 4.0000 ] | 109.9% { 106.5% } | 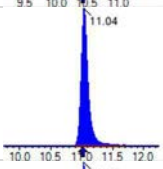  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1538473 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2676.2 | N/A | 21.5860 [ 20.0000 ] | 107.9% { 108.4% } | 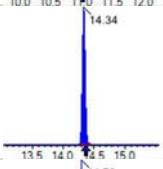  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1440884 | ( 14.70 , N/A ) ( N/A , -0.03 , N/A ) | 5136.3 | N/A | 21.5870 [ 20.0000 ] | 107.9% { 107.9% } | 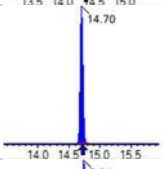  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 968447 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2880.8 | N/A | 8.9350 [ 8.0000 ] | 111.7% { 107.2% } | 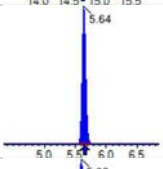  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 666361 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 1584.8 | N/A | 2.1730 [ 2.0000 ] | 108.6% { 117.4% } | 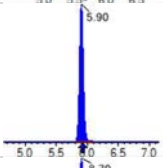  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 744188 | ( 8.70 , N/A ) ( N/A , 0.03 , N/A ) | 1145.3 | N/A | 2.1540 [ 2.0000 ] | 107.7% { 113.8% } | 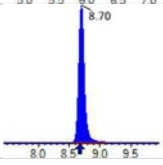  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 71130<br>( 163.0 / 69.0 ) 2043 | ( 2.49 , 0.68 )<br>( N/A , 0.00 , -1.0) | 192.9<br>54.7 | 0.0287<br>104.8<br>104.8 | 0.8600 | N/A | 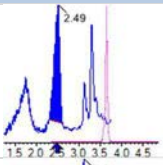 | 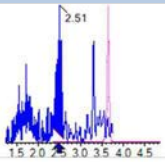 | |
| PFBA | ( 213.0 / 169.0 ) 852236 | ( 3.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 622.3 | N/A<br>0.0<br>0.0 | 2.0150 | N/A | 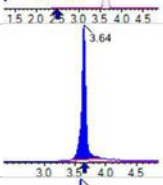 | | |
| PFPeA | ( 263.0 / 219.0 ) 233658<br>( 263.0 / 69.0 ) 1847 | ( 4.39 , 1.00 )<br>( 0.00 , N/A , 0.7) | 1204.4<br>30.0 | 0.0079<br>66.4<br>66.4 | 1.0080 | N/A | 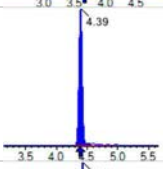 | 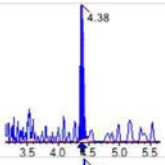 | |
| PFHxA | ( 313.0 / 269.0 ) 120459<br>( 313.0 / 119.0 ) 15334 | ( 5.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 699.9<br>446.4 | 0.1273<br>114.4<br>114.4 | 0.4900 | N/A | 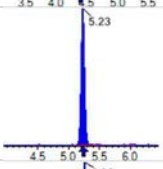 | 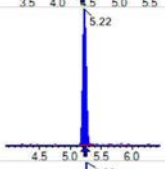 | |
| PFHpA | ( 363.0 / 319.0 ) 144823<br>( 363.0 / 169.0 ) 44324 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 873.2<br>621.4 | 0.3061<br>100.1<br>100.1 | 0.4970 | N/A | 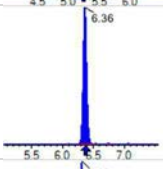 | 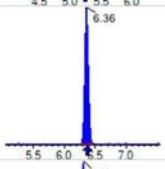 | |
| PFOA | ( 413.0 / 369.0 ) 201655<br>( 413.0 / 169.0 ) 72410 | ( 7.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 312.9<br>520.1 | 0.3591<br>100.5<br>100.5 | 0.4550 | N/A | 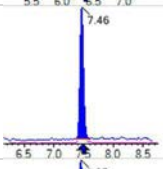 | 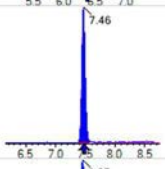 | |
| PFNA | ( 463.0 / 419.0 ) 142582<br>( 463.0 / 169.0 ) 34136 | ( 9.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 994.2<br>492.6 | 0.2394<br>97.5<br>97.5 | 0.4980 | N/A | 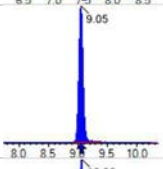 | 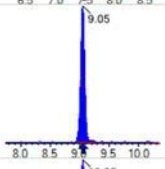 | |
| PFDA | ( 513.0 / 469.0 ) 173070<br>( 513.0 / 169.0 ) 20337 | ( 10.06 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1742.8<br>100786.3 | 0.1175<br>98.6<br>98.6 | 0.5010 | N/A | 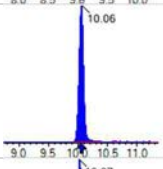 | 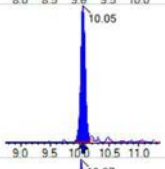 | |
| PFUnA | ( 563.0 / 519.0 ) 181180<br>( 563.0 / 169.0 ) 23660 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.3) | 814.5<br>326.2 | 0.1306<br>84.3<br>84.3 | 0.4790 | N/A | 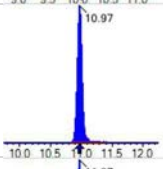 | 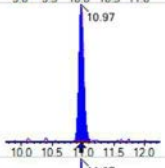 | |
| PFDoA | ( 613.0 / 569.0 ) 200523<br>( 613.0 / 169.0 ) 29402 | ( 11.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 764.3<br>384.0 | 0.1466<br>96.5<br>96.5 | 0.4790 | N/A | 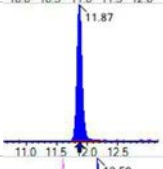 | 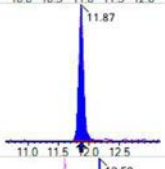 | |
| PFTrDA | ( 663.0 / 619.0 ) 192911<br>( 663.0 / 169.0 ) 52830 | ( 12.59 , 1.06 )<br>( N/A , 0.00 , -0.1) | 825.5<br>436.7 | 0.2739<br>101.7<br>101.7 | 0.4740 | N/A | 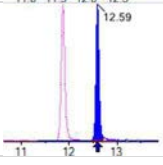 | 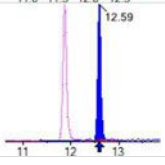 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 165100<br>( 713.0 / 169.0 ) 45935 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.4) | 650.2<br>289.7 | 0.2782<br>102.5<br>102.5 | 0.5140 | N/A | 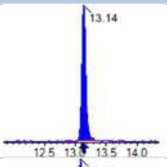 | 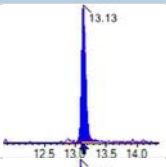 | |
| PFHxDA | ( 813.0 / 769.0 ) 140221<br>( 813.0 / 169.0 ) 36682 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.2) | 649.4<br>245.5 | 0.2616<br>100.0<br>100.0 | 0.5090 | N/A | 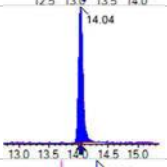 | 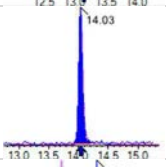 | |
| PFODA | ( 913.0 / 869.0 ) 86338<br>( 913.0 / 169.0 ) 29199 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.1) | 347.5<br>142.5 | 0.3382<br>107.9<br>107.9 | 0.4940 | N/A | 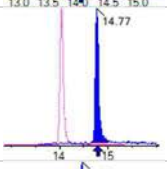 | 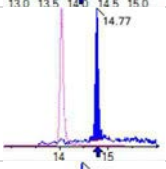 | |
| PFBS | ( 299.0 / 80.0 ) 174035<br>( 299.0 / 99.0 ) 131818 | ( 5.40 , 1.00 ) ( -0.01 , N/A , 0.0) | 1419.0<br>726.5 | 0.7574<br>102.3<br>102.3 | 0.4380 | N/A | 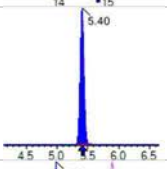 | 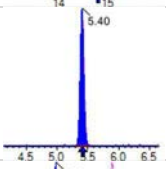 | |
| PFPeS | ( 349.0 / 80.0 ) 499313<br>( 349.0 / 99.0 ) 174428 | ( 6.69 , 0.82 ) ( N/A , -0.01 , 0.1) | 1718.1<br>1396.7 | 0.3493<br>102.2<br>102.2 | 0.4820 | N/A | 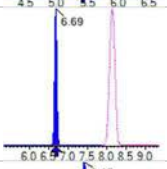 | 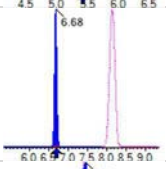 | |
| PFHxS | ( 399.0 / 80.0 ) 565570<br>( 399.0 / 99.0 ) 186087 | ( 8.15 , 1.00 ) ( 0.01 , N/A , 0.3) | 1490.6<br>1304.6 | 0.3290<br>100.3<br>100.3 | 0.4480 | N/A | 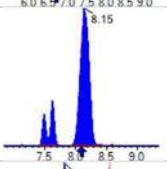 | 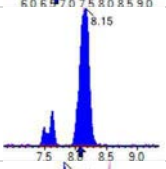 | |
| PFHpS | ( 449.0 / 80.0 ) 471503<br>( 449.0 / 99.0 ) 136814 | ( 9.54 , 0.91 ) ( N/A , 0.01 , 0.0) | 1680.6<br>1249.8 | 0.2902<br>111.2<br>111.2 | 0.4750 | N/A | 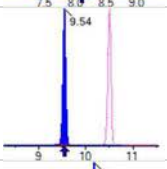 | 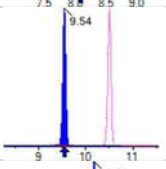 | |
| PFOS | ( 499.0 / 80.0 ) 444392<br>( 499.0 / 99.0 ) 96575 | ( 10.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 1103.0<br>2945.2 | 0.2173<br>94.1<br>94.1 | 0.4600 | N/A | 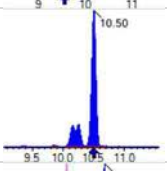 | 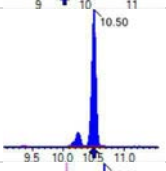 | |
| PFNS | ( 549.0 / 80.0 ) 431530<br>( 549.0 / 99.0 ) 121653 | ( 11.39 , 1.08 ) ( N/A , 0.00 , 0.2) | 1458.1<br>972.5 | 0.2819<br>105.2<br>105.2 | 0.4900 | N/A | 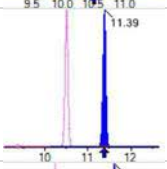 | 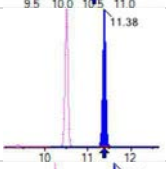 | |
| PFDS | ( 599.0 / 80.0 ) 534969<br>( 599.0 / 99.0 ) 135685 | ( 12.19 , 1.16 ) ( N/A , 0.00 , 0.1) | 1714.8<br>678.7 | 0.2536<br>99.6<br>99.6 | 0.4970 | N/A | 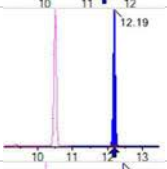 | 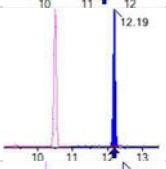 | |
| PFDoS | ( 699.0 / 80.0 ) 513457<br>( 699.0 / 99.0 ) 116280 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 2043.6<br>1130.8 | 0.2265<br>101.3<br>101.3 | 0.4930 | N/A | 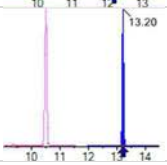 | 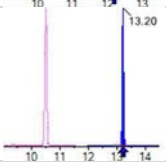 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 959487<br>( 327.0 / 81.0 ) 866625 | ( 4.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 4587.5<br>2183.1 | 0.9032<br>105.9<br>105.9 | 1.9420 | N/A | 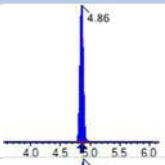 | 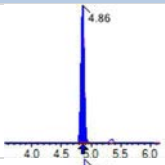 | |
| 6:2FTS | ( 427.0 / 407.0 ) 773348<br>( 427.0 / 81.0 ) 1003546 | ( 6.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 4664.5<br>4127.3 | 1.2977<br>100.6<br>100.6 | 1.9730 | N/A | 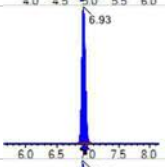 | 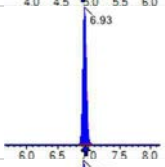 | |
| 8:2FTS | ( 527.0 / 507.0 ) 781918<br>( 527.0 / 81.0 ) 851272 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2204.0<br>2423.7 | 1.0887<br>98.6<br>98.6 | 2.1520 | N/A | 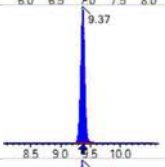 | 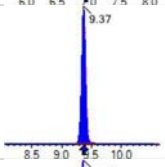 | |
| 10:2FTS | ( 627.0 / 607.0 ) 685080<br>( 627.0 / 81.0 ) 988519 | ( 11.11 , 1.00 ) ( 0.01 , N/A , 0.1) | 1504.9<br>1440.5 | 1.4429<br>100.4<br>100.4 | 1.9730 | N/A | 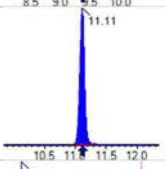 | 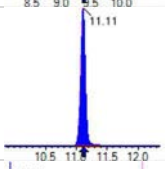 | |
| PFBSA | ( 297.9 / 78.0 ) 300472<br>( 297.9 / 278.0 ) 345 | ( 5.56 , 0.38 ) ( N/A , 0.00 , 0.9) | 931.0<br>6.5 | 0.0011<br>88.6<br>88.6 | 0.5350 | N/A | 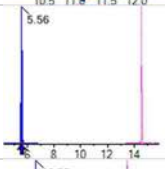 | 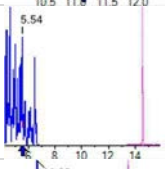 | |
| PFHxSA | ( 397.9 / 78.0 ) 583051<br>( 397.9 / 378.0 ) 2436 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.3) | 1594.8<br>109.4 | 0.0042<br>103.4<br>103.4 | 0.5050 | N/A | 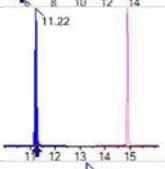 | 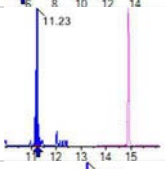 | |
| PFOSA | ( 498.0 / 78.0 ) 425048<br>( 498.0 / 478.0 ) 4917 | ( 13.28 , 1.00 ) ( -0.01 , N/A , 0.3) | 2164.9<br>122.6 | 0.0116<br>78.7<br>78.7 | 0.4940 | N/A | 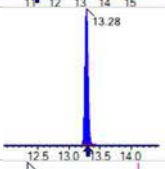 | 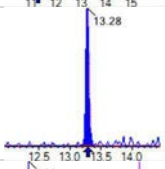 | |
| TFSI | ( 279.7 / 147.0 ) 737122<br>( 279.7 / 211.0 ) 70195 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.2) | 69.9<br>57592.6 | 0.0952<br>107.6<br>107.6 | 0.4910 | N/A | 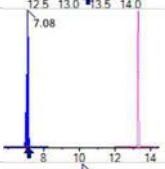 | 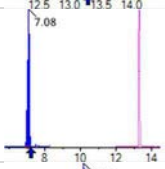 | |
| NMeFOSA | ( 512.0 / 219.0 ) 346231<br>( 512.0 / 169.0 ) 263582 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 1.3) | 1889.1<br>1004.9 | 0.7613<br>99.3<br>99.3 | 2.1060 | N/A | 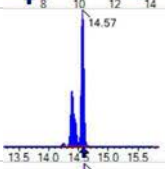 | 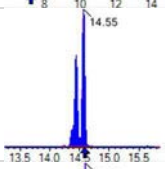 | |
| NEtFOSA | ( 526.0 / 219.0 ) 405095<br>( 526.0 / 169.0 ) 492466 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 1.7) | 2086.8<br>1956.4 | 1.2157<br>97.2<br>97.2 | 1.9510 | N/A | 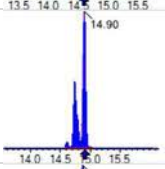 | 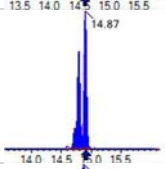 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 136672<br>( 570.0 / 483.0 ) 66727 | ( 10.42 , 1.00 ) ( 0.01 , N/A , 0.1) | 10906.3<br>5311.6 | 0.4882<br>105.2<br>105.2 | 0.5080 | N/A | 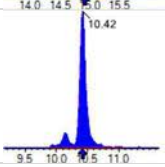 | 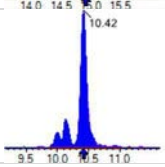 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 126811<br>( 584.0 / 526.0 ) 79788 | ( 11.04 , 1.00 ) ( 0.01 , N/A , -0.4) | 20295.9<br>508.6 | 0.6292<br>104.9<br>104.9 | 0.4870 | N/A | 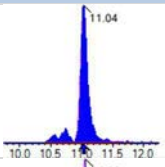 | 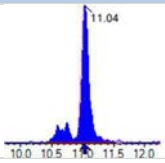 | |
| NMeFOSE | ( 616.0 / 59.0 ) 154569 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 692.5 | N/A<br>0.0<br>0.0 | 1.9760 | N/A | 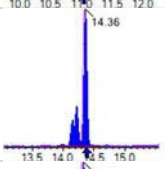 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 128541 | ( 14.74 , 1.00 ) ( 0.03 , N/A , 0.0) | 919.8 | N/A<br>0.0<br>0.0 | 2.0030 | N/A | 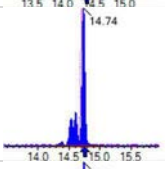 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 33046<br>( 285.0 / 185.0 ) 90444 | ( 5.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 1125.8<br>634.4 | 2.7369<br>97.5<br>97.5 | 0.4780 | N/A | 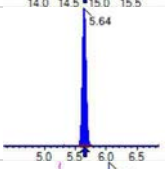 | 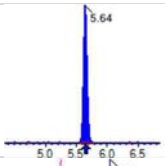 | |
| ADONA | ( 377.0 / 85.0 ) 413299<br>( 377.0 / 251.0 ) 43822 | ( 6.79 , 1.20 ) ( N/A , -0.01 , -0.2) | 2490.1<br>495.7 | 0.1060<br>101.1<br>101.1 | 0.4530 | N/A | 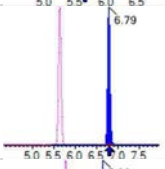 | 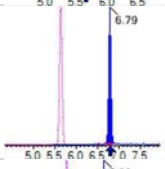 | |
| PFEESA | ( 315.0 / 135.0 ) 158771<br>( 315.0 / 83.0 ) 95912 | ( 5.99 , 1.15 ) ( N/A , -0.01 , -0.1) | 2285.3<br>270.2 | 0.6041<br>94.1<br>94.1 | 0.8870 | N/A | 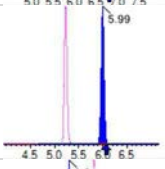 | 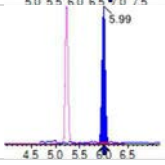 | |
| PFMPA | ( 229.0 / 85.0 ) 86584 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 2108.8 | N/A<br>0.0<br>0.0 | 1.0160 | N/A | 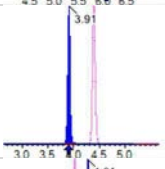 | | |
| PFMBA | ( 279.0 / 85.0 ) 186380 | ( 4.61 , 1.05 ) ( N/A , 0.01 , 0.0) | 1673.3 | N/A<br>0.0<br>0.0 | 0.9700 | N/A | 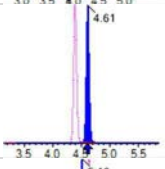 | | |
| NFDHA | ( 295.0 / 201.0 ) 93370<br>( 295.0 / 85.0 ) 98548 | ( 5.10 , 0.98 ) ( N/A , 0.00 , 0.0) | 1641.9<br>1235.3 | 1.0555<br>106.1<br>106.1 | 1.0690 | N/A | 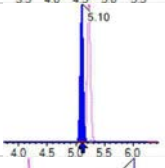 | 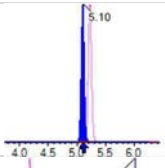 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 425787<br>( 533.0 / 353.0 ) 146975 | ( 11.18 , 1.98 ) ( N/A , 0.01 , 0.0) | 2558.3<br>1153.7 | 0.3452<br>108.3<br>108.3 | 0.4200 | N/A | 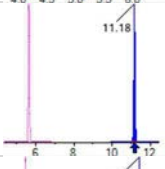 | 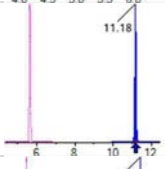 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 358272<br>( 633.0 / 453.0 ) 122752 | ( 12.65 , 2.24 ) ( N/A , 0.00 , 0.0) | 2472.0<br>1032.6 | 0.3426<br>101.0<br>101.0 | 0.4550 | N/A | 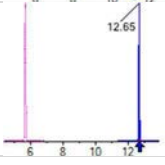 | 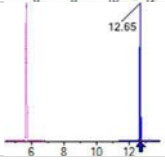 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 229740<br>( 461.0 / 381.2 ) 87792 | ( 9.44 , 0.90 )<br>( N/A , 0.01 , 0.1) | 2312.9<br>11707.1 | 0.3821<br>98.9<br>98.9 | 0.4430 | N/A | 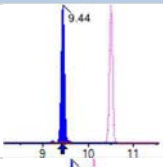 | 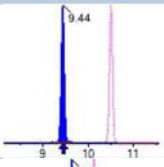 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 43054<br>( 241.0 / 117.0 ) 91972 | ( 3.96 , 0.90 )<br>( N/A , 0.00 , -0.2) | 1829.7<br>660.2 | 2.1362<br>97.3<br>97.3 | 2.1630 | N/A | 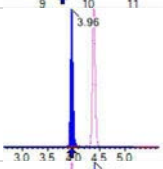 | 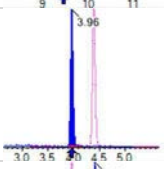 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 142287<br>( 341.0 / 217.0 ) 210281 | ( 5.65 , 1.08 )<br>( N/A , -0.01 , -0.2) | 1171.9<br>849.1 | 1.4779<br>96.5<br>96.5 | 2.1260 | N/A | 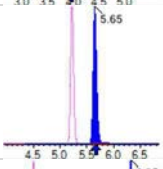 | 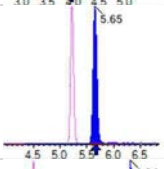 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 296746<br>( 441.0 / 337.0 ) 252083 | ( 9.35 , 1.79 )<br>( N/A , 0.02 , 0.2) | 5942.8<br>13250392.4 | 0.8495<br>99.4<br>99.4 | 2.0870 | N/A | 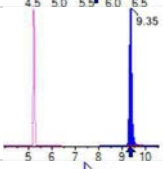 | 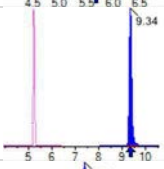 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172769<br>( 357.2 / 243.0 ) 18678 | ( 5.90 , 1.00 )<br>( -0.01 , N/A , 0.0) | 727.9<br>299.5 | 0.1081<br>100.8<br>100.8 | 0.4850 | N/A | 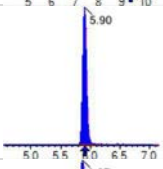 | 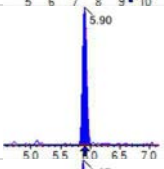 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 151786<br>( 457.2 / 343.0 ) 6616 | ( 8.67 , 1.00 )<br>( -0.01 , N/A , -0.3) | 677.9<br>179.5 | 0.0436<br>97.1<br>97.1 | 0.4980 | N/A | 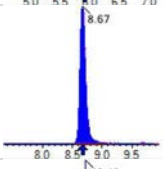 | 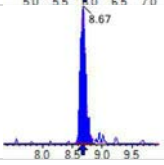 | |
| TDCA | ( 499.0 / 80.0 ) 318331 | ( 10.49 , 1.00 )<br>( N/A , 0.00 , 0.0) | 2136.4 | N/A<br>0.0<br>0.0 | 0.4890 | N/A | 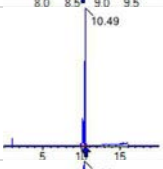 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 323037 | ( 3.64 , N/A )<br>( N/A , -0.01 , N/A ) | 1649.4 | N/A | 1.1450<br>[ 1.0000 ] | 114.5%<br>{ 116.6% } | 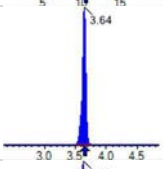 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119925 | ( 5.23 , N/A )<br>( N/A , -0.01 , N/A ) | 5368.4 | N/A | 1.0160<br>[ 1.0000 ] | 101.6%<br>{ 104.2% } | 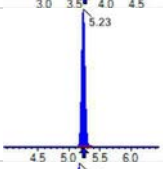 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 410964 | ( 7.46 , N/A )<br>( N/A , -0.01 , N/A ) | 6719.2 | N/A | 1.0590<br>[ 1.0000 ] | 105.9%<br>{ 104.7% } | 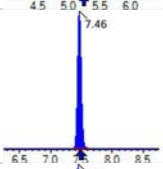 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 298322 | ( 9.05 , N/A )<br>( N/A , 0.01 , N/A ) | 1523.3 | N/A | 1.0210<br>[ 1.0000 ] | 102.1%<br>{ 102.7% } | 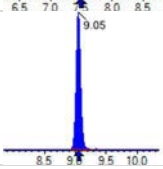 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 309296 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 24599.9 | N/A | 1.0790 [ 1.0000 ] | 107.9% { 113.6% } | 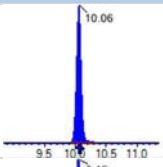 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1020358 | ( 8.15 , N/A ) ( N/A , 0.06 , N/A ) | 5835.6 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 107.3% } | 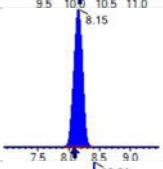 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 799049 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 3335.3 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 108.0% } | 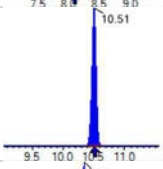 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2922788 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 109727.0 | N/A | 8.3710 [ 8.0000 ] | 104.6% { 119.8% } | 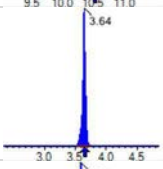 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 928942 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 6120.6 | N/A | 4.2310 [ 4.0000 ] | 105.8% { 100.4% } | 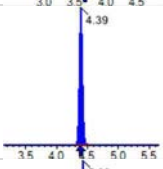 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 530264 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 11749.4 | N/A | 2.0210 [ 2.0000 ] | 101.1% { 99.1% } | 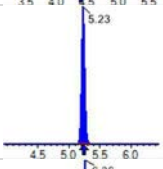 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 586880 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 5180.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 102.9% } | 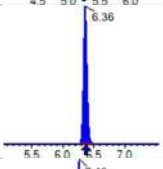 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 883058 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5945.6 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 116.7% } | 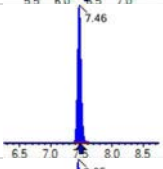 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 285138 | ( 9.05 , N/A ) ( N/A , 0.01 , N/A ) | 6659.2 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 100.4% } | 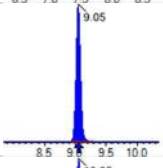 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 345915 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1675.8 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 102.8% } | 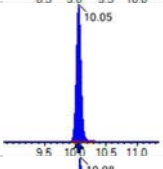 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 416572 | ( 10.98 , N/A ) ( N/A , 0.00 , N/A ) | 1014.3 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 106.3% } | 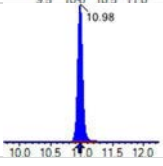 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 416908 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1379.0 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 104.5% } | 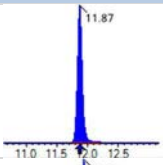 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 344034 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1219.6 | N/A | 0.8940 [ 1.0000 ] | 89.4% { 95.0% } | 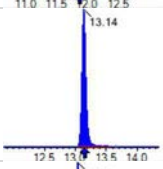 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 588510 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2798.2 | N/A | 1.8270 [ 2.0000 ] | 91.3% { 103.0% } | 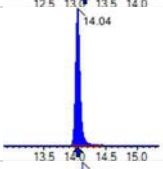 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1615177 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1232.5 | N/A | 1.9640 [ 2.0000 ] | 98.2% { 101.6% } | 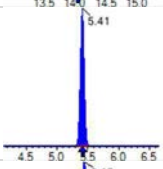 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1442698 | ( 8.15 , N/A ) ( N/A , 0.06 , N/A ) | 5802.0 | N/A | 1.9600 [ 2.0000 ] | 98.0% { 105.0% } | 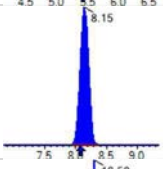 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1663183 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1522.1 | N/A | 1.9560 [ 2.0000 ] | 97.8% { 106.2% } | 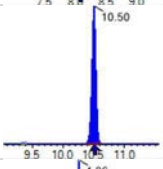 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 748709 | ( 4.86 , N/A ) ( N/A , 0.00 , N/A ) | 53.9 | N/A | 4.1380 [ 4.0000 ] | 103.5% { 107.3% } | 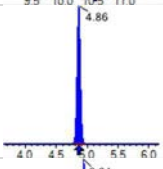 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1847080 | ( 6.94 , N/A ) ( N/A , -0.02 , N/A ) | 5883.5 | N/A | 4.1560 [ 4.0000 ] | 103.9% { 111.3% } | 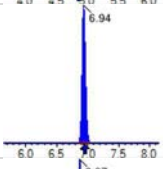 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1477518 | ( 9.37 , N/A ) ( N/A , 0.01 , N/A ) | 1686.1 | N/A | 3.7990 [ 4.0000 ] | 95.0% { 99.9% } | 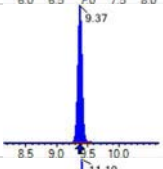 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3497358 | ( 11.10 , N/A ) ( N/A , 0.01 , N/A ) | 1518.5 | N/A | 8.3130 [ 8.0000 ] | 103.9% { 122.8% } | 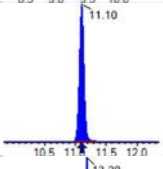 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1777416 | ( 13.29 , N/A ) ( N/A , -0.02 , N/A ) | 3787.0 | N/A | 1.9690 [ 2.0000 ] | 98.5% { 105.6% } | 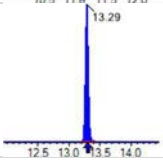 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 369985 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2420.3 | N/A | 1.8230 [ 2.0000 ] | 91.2% { 99.8% } | 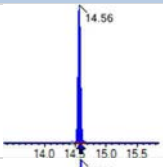 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 366514 | ( 14.89 , N/A ) ( N/A , -0.02 , N/A ) | 2737.2 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 103.0% } | 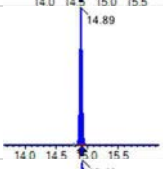 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1166984 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 3991.0 | N/A | 3.9540 [ 4.0000 ] | 98.8% { 100.7% } | 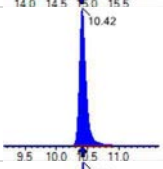 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1074413 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 2790.3 | N/A | 4.0330 [ 4.0000 ] | 100.8% { 104.0% } | 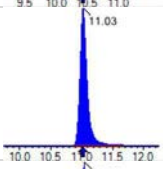 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1445300 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 3088.3 | N/A | 19.0660 [ 20.0000 ] | 95.3% { 101.8% } | 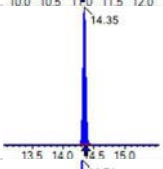 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347446 | ( 14.71 , N/A ) ( N/A , -0.02 , N/A ) | 4435.6 | N/A | 18.9800 [ 20.0000 ] | 94.9% { 100.9% } | 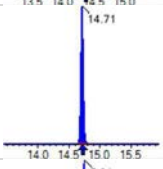 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 941627 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2470.3 | N/A | 8.2850 [ 8.0000 ] | 103.6% { 104.2% } | 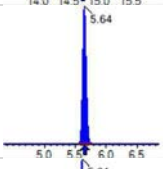 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677271 | ( 5.91 , N/A ) ( N/A , -0.01 , N/A ) | 1607.3 | N/A | 2.0090 [ 2.0000 ] | 100.5% { 119.3% } | 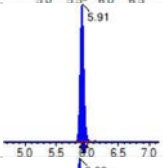 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 737759 | ( 8.68 , N/A ) ( N/A , 0.01 , N/A ) | 1148.4 | N/A | 1.9430 [ 2.0000 ] | 97.1% { 112.8% } | 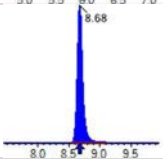 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 145514<br>( 163.0 / 69.0 ) 3863 | ( 2.49 , 0.68 ) ( N/A , 0.00 , 1.1) | 298.1<br>82.3 | 0.0265<br>96.9<br>96.9 | 2.0040 | N/A | 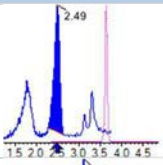 | 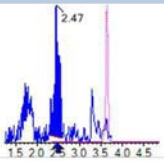 | |
| PFBA | ( 213.0 / 169.0 ) 1425799 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 999.9 | N/A<br>0.0<br>0.0 | 4.1580 | N/A | 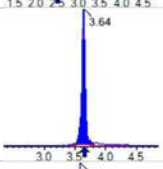 | | |
| PFPeA | ( 263.0 / 219.0 ) 476899<br>( 263.0 / 69.0 ) 6696 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1860.7<br>144.3 | 0.0140<br>118.0<br>118.0 | 2.1100 | N/A | 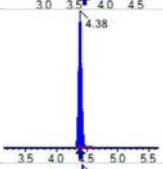 | 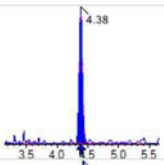 | |
| PFHxA | ( 313.0 / 269.0 ) 259371<br>( 313.0 / 119.0 ) 28876 | ( 5.22 , 1.00 ) ( 0.00 , N/A , 0.2) | 1291.2<br>581.9 | 0.1113<br>100.1<br>100.1 | 1.0520 | N/A | 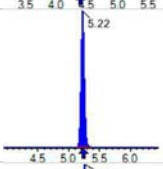 | 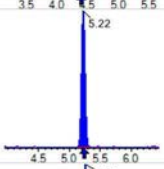 | |
| PFHpA | ( 363.0 / 319.0 ) 308156<br>( 363.0 / 169.0 ) 95195 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.1) | 1306.5<br>1624.2 | 0.3089<br>101.1<br>101.1 | 1.0480 | N/A | 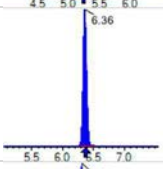 | 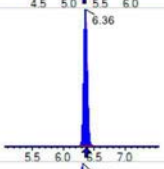 | |
| PFOA | ( 413.0 / 369.0 ) 423798<br>( 413.0 / 169.0 ) 150375 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 634.0<br>871.9 | 0.3548<br>99.3<br>99.3 | 0.9610 | N/A | 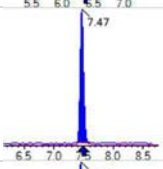 | 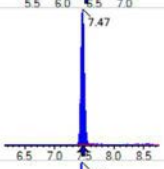 | |
| PFNA | ( 463.0 / 419.0 ) 290147<br>( 463.0 / 169.0 ) 75359 | ( 9.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 1122.7<br>716.3 | 0.2597<br>105.7<br>105.7 | 0.9470 | N/A | 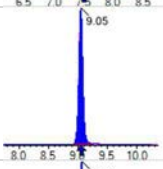 | 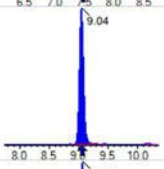 | |
| PFDA | ( 513.0 / 469.0 ) 341989<br>( 513.0 / 169.0 ) 40754 | ( 10.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2229.9<br>1987.1 | 0.1192<br>100.0<br>100.0 | 1.0380 | N/A | 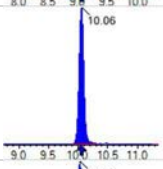 | 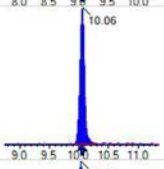 | |
| PFUnA | ( 563.0 / 519.0 ) 387879<br>( 563.0 / 169.0 ) 50654 | ( 10.98 , 1.00 ) ( 0.00 , N/A , 0.0) | 1226.3<br>445.3 | 0.1306<br>84.3<br>84.3 | 1.0320 | N/A | 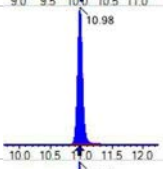 | 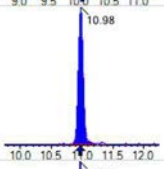 | |
| PFDoA | ( 613.0 / 569.0 ) 435851<br>( 613.0 / 169.0 ) 64674 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1108.5<br>481.9 | 0.1484<br>97.7<br>97.7 | 1.0430 | N/A | 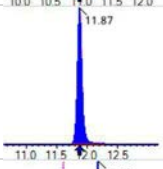 | 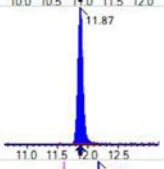 | |
| PFTrDA | ( 663.0 / 619.0 ) 421756<br>( 663.0 / 169.0 ) 104133 | ( 12.60 , 1.06 ) ( N/A , 0.00 , 0.0) | 1178.9<br>677.4 | 0.2469<br>91.7<br>91.7 | 1.0380 | N/A | 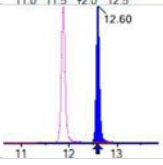 | 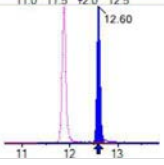 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 350549<br>( 713.0 / 169.0 ) 92196 | ( 13.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 1165.3<br>556.7 | 0.2630<br>96.9<br>96.9 | 1.0270 | N/A | 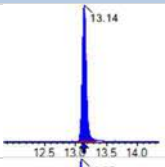 | 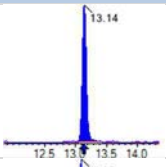 | |
| PFHxDA | ( 813.0 / 769.0 ) 273645<br>( 813.0 / 169.0 ) 71604 | ( 14.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 1080.5<br>482.6 | 0.2617<br>100.0<br>100.0 | 0.9290 | N/A | 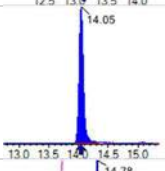 | 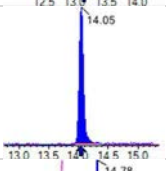 | |
| PFODA | ( 913.0 / 869.0 ) 199547<br>( 913.0 / 169.0 ) 57993 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.3) | 619.5<br>240.4 | 0.2906<br>92.7<br>92.7 | 1.0700 | N/A | 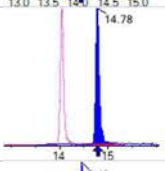 | 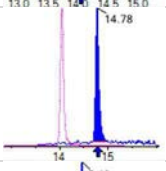 | |
| PFBS | ( 299.0 / 80.0 ) 376594<br>( 299.0 / 99.0 ) 275015 | ( 5.40 , 1.00 ) ( 0.00 , N/A , -0.1) | 1997.1<br>1158.3 | 0.7303<br>98.6<br>98.6 | 0.9530 | N/A | 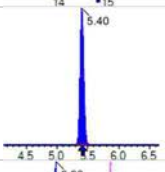 | 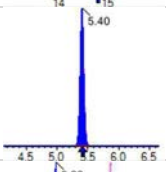 | |
| PFPeS | ( 349.0 / 80.0 ) 1027089<br>( 349.0 / 99.0 ) 355133 | ( 6.68 , 0.83 ) ( N/A , -0.01 , 0.0) | 2004.8<br>1922.2 | 0.3458<br>101.2<br>101.2 | 0.9670 | N/A | 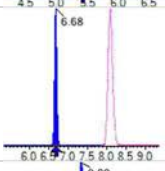 | 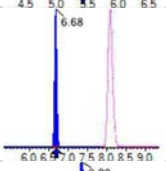 | |
| PFHxS | ( 399.0 / 80.0 ) 1175433<br>( 399.0 / 99.0 ) 378742 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.0) | 2231.6<br>2489.3 | 0.3222<br>98.2<br>98.2 | 0.9080 | N/A | 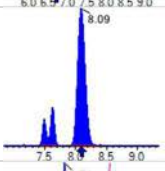 | 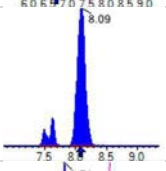 | |
| PFHpS | ( 449.0 / 80.0 ) 997685<br>( 449.0 / 99.0 ) 264661 | ( 9.54 , 0.91 ) ( N/A , 0.01 , 0.0) | 2687.4<br>2093.3 | 0.2653<br>101.7<br>101.7 | 0.9600 | N/A | 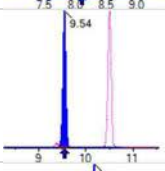 | 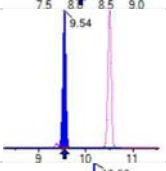 | |
| PFOS | ( 499.0 / 80.0 ) 908024<br>( 499.0 / 99.0 ) 210627 | ( 10.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 1780.4<br>2945.9 | 0.2320<br>100.4<br>100.4 | 0.9000 | N/A | 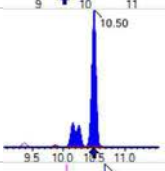 | 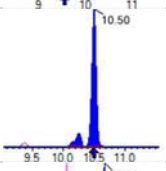 | |
| PFNS | ( 549.0 / 80.0 ) 909278<br>( 549.0 / 99.0 ) 249520 | ( 11.39 , 1.08 ) ( N/A , 0.01 , 0.1) | 2172.1<br>1187.4 | 0.2744<br>102.4<br>102.4 | 0.9880 | N/A | 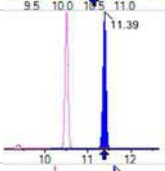 | 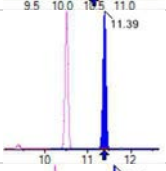 | |
| PFDS | ( 599.0 / 80.0 ) 1168204<br>( 599.0 / 99.0 ) 296179 | ( 12.19 , 1.16 ) ( N/A , 0.01 , -0.1) | 2510.7<br>1223.7 | 0.2535<br>99.6<br>99.6 | 1.0390 | N/A | 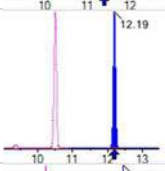 | 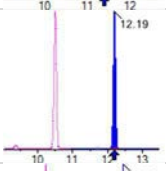 | |
| PFDoS | ( 699.0 / 80.0 ) 1112363<br>( 699.0 / 99.0 ) 254718 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.0) | 2874.9<br>1923.8 | 0.2290<br>102.5<br>102.5 | 1.0220 | N/A | 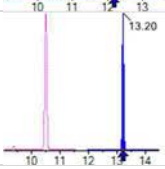 | 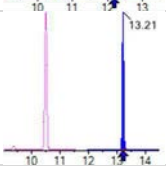 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1902835<br>( 327.0 / 81.0 ) 1699760 | ( 4.85 , 1.00 ) ( 0.00 , N/A , 0.0) | 3617.0<br>3087.8 | 0.8933<br>104.7<br>104.7 | 3.7550 | N/A | 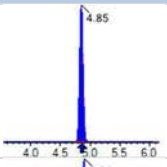 | 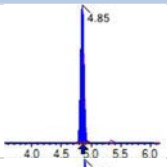 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1562397<br>( 427.0 / 81.0 ) 2137487 | ( 6.94 , 1.00 ) ( 0.00 , N/A , 0.2) | 5404.1<br>4640.0 | 1.3681<br>106.1<br>106.1 | 3.7380 | N/A | 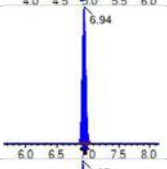 | 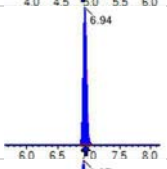 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1685864<br>( 527.0 / 81.0 ) 1749456 | ( 9.37 , 1.00 ) ( -0.01 , N/A , 0.1) | 3003.5<br>3022.9 | 1.0377<br>94.0<br>94.0 | 3.9330 | N/A | 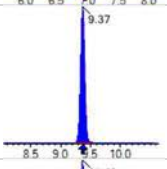 | 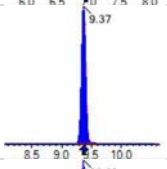 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1406760<br>( 627.0 / 81.0 ) 1987463 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.1) | 1478.3<br>1746.3 | 1.4128<br>98.3<br>98.3 | 3.9320 | N/A | 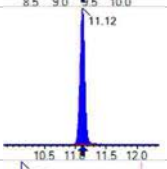 | 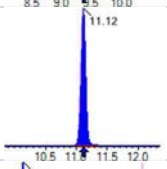 | |
| PFBSA | ( 297.9 / 78.0 ) 613429<br>( 297.9 / 278.0 ) 1175 | ( 5.55 , 0.38 ) ( N/A , -0.01 , -1.9) | 1321.9<br>11.3 | 0.0019<br>147.9<br>147.9 | 0.9760 | N/A | 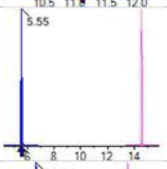 | 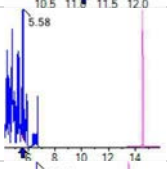 | |
| PFHxSA | ( 397.9 / 78.0 ) 1246780<br>( 397.9 / 378.0 ) 3972 | ( 11.23 , 0.75 ) ( N/A , -0.01 , 0.2) | 1831.4<br>168.1 | 0.0032<br>78.9<br>78.9 | 1.0580 | N/A | 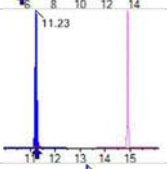 | 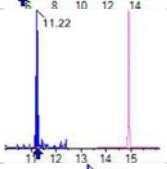 | |
| PFOSA | ( 498.0 / 78.0 ) 936174<br>( 498.0 / 478.0 ) 13937 | ( 13.29 , 1.00 ) ( -0.01 , N/A , 0.0) | 2398.2<br>342.3 | 0.0149<br>101.3<br>101.3 | 1.0440 | N/A | 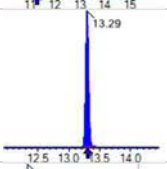 | 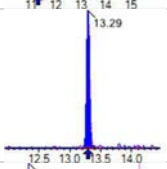 | |
| TFSI | ( 279.7 / 147.0 ) 1495168<br>( 279.7 / 211.0 ) 133745 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.2) | 86.1<br>2322.9 | 0.0895<br>101.1<br>101.1 | 0.9550 | N/A | 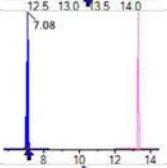 | 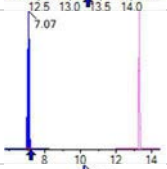 | |
| NMeFOSA | ( 512.0 / 219.0 ) 757556<br>( 512.0 / 169.0 ) 575082 | ( 14.58 , 1.00 ) ( 0.00 , N/A , 1.2) | 3001.3<br>1365.0 | 0.7591<br>99.0<br>99.0 | 4.1160 | N/A | 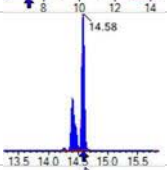 | 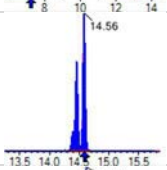 | |
| NEtFOSA | ( 526.0 / 219.0 ) 848996<br>( 526.0 / 169.0 ) 1092083 | ( 14.91 , 1.00 ) ( 0.01 , N/A , 2.2) | 3155.5<br>2671.5 | 1.2863<br>102.9<br>102.9 | 4.0050 | N/A | 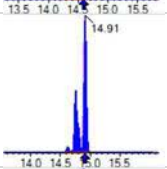 | 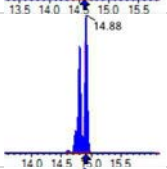 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 295170<br>( 570.0 / 483.0 ) 135509 | ( 10.43 , 1.00 ) ( 0.00 , N/A , -0.1) | 15553.3<br>2463.7 | 0.4591<br>98.9<br>98.9 | 1.0520 | N/A | 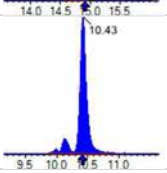 | 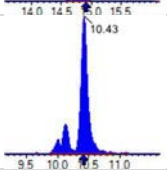 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 278378<br>( 584.0 / 526.0 ) 162542 | ( 11.04 , 1.00 )<br>( 0.01 , N/A , 0.3) | 1771.5<br>526.6 | 0.5839<br>97.3<br>97.3 | 1.0500 | N/A | 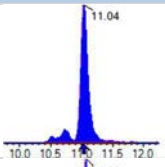 | 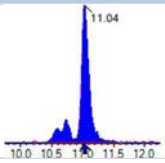 | |
| NMeFOSE | ( 616.0 / 59.0 ) 339675 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1402.9 | N/A<br>0.0<br>0.0 | 3.9500 | N/A | 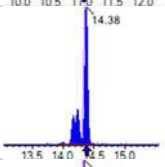 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 281541 | ( 14.75 , 1.00 )<br>( 0.02 , N/A , 0.0) | 1360.0 | N/A<br>0.0<br>0.0 | 3.9800 | N/A | 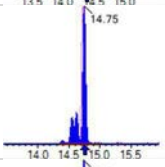 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 70438<br>( 285.0 / 185.0 ) 185220 | ( 5.64 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1210.6<br>1237.0 | 2.6295<br>93.7<br>93.7 | 1.0390 | N/A | 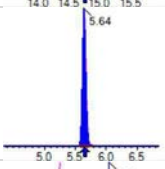 | 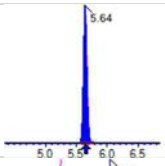 | |
| ADONA | ( 377.0 / 85.0 ) 859878<br>( 377.0 / 251.0 ) 91610 | ( 6.79 , 1.20 )<br>( N/A , -0.01 , -0.1) | 2767.7<br>764.9 | 0.1065<br>101.6<br>101.6 | 0.9620 | N/A | 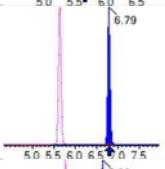 | 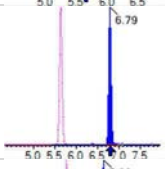 | |
| PFEESA | ( 315.0 / 135.0 ) 323289<br>( 315.0 / 83.0 ) 195259 | ( 5.99 , 1.15 )<br>( N/A , -0.01 , 0.0) | 2106.9<br>569.7 | 0.6040<br>94.1<br>94.1 | 1.8020 | N/A | 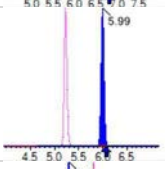 | 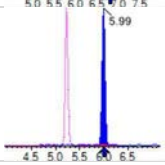 | |
| PFMPA | ( 229.0 / 85.0 ) 175871 | ( 3.90 , 0.89 )<br>( N/A , -0.01 , 0.0) | 5066.9 | N/A<br>0.0<br>0.0 | 2.1160 | N/A | 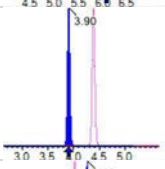 | | |
| PFMBA | ( 279.0 / 85.0 ) 352957 | ( 4.60 , 1.05 )<br>( N/A , 0.00 , 0.0) | 2717.3 | N/A<br>0.0<br>0.0 | 1.8850 | N/A | 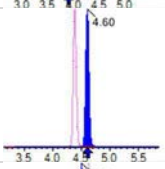 | | |
| NFDHA | ( 295.0 / 201.0 ) 177168<br>( 295.0 / 85.0 ) 181976 | ( 5.10 , 0.98 )<br>( N/A , -0.01 , 0.2) | 3407.4<br>1396.4 | 1.0271<br>103.3<br>103.3 | 2.0230 | N/A | 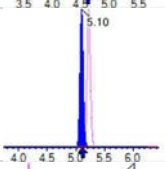 | 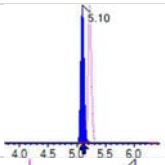 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 921016<br>( 533.0 / 353.0 ) 292103 | ( 11.18 , 1.98 )<br>( N/A , 0.01 , 0.1) | 3301.2<br>2335.6 | 0.3172<br>99.5<br>99.5 | 0.9270 | N/A | 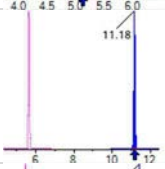 | 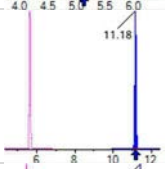 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 767652<br>( 633.0 / 453.0 ) 260925 | ( 12.66 , 2.24 )<br>( N/A , 0.01 , 0.0) | 3575.1<br>2371.9 | 0.3399<br>100.2<br>100.2 | 0.9950 | N/A | 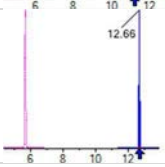 | 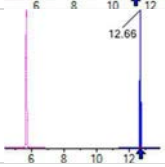 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 467142<br>( 461.0 / 381.2 ) 182220 | ( 9.44 , 0.90 ) ( N/A , 0.01 , 0.2) | 3706.9<br>3376.2 | 0.3901<br>101.0<br>101.0 | 0.8620 | N/A | 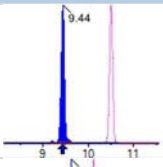 | 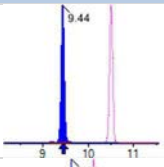 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 78844<br>( 241.0 / 117.0 ) 192973 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.0) | 1916.4<br>1101.3 | 2.4475<br>111.5<br>111.5 | 4.0630 | N/A | 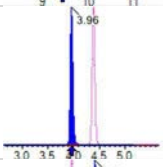 | 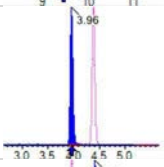 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 269659<br>( 341.0 / 217.0 ) 438937 | ( 5.65 , 1.08 ) ( N/A , -0.01 , 0.1) | 1425.7<br>1009.2 | 1.6277<br>106.3<br>106.3 | 4.0180 | N/A | 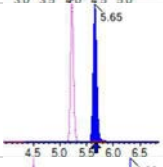 | 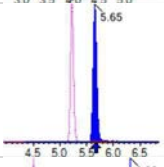 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 599610<br>( 441.0 / 337.0 ) 538412 | ( 9.33 , 1.79 ) ( N/A , 0.00 , 0.1) | 10806.0<br>11527.9 | 0.8979<br>105.1<br>105.1 | 4.2060 | N/A | 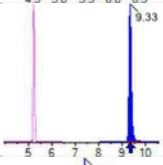 | 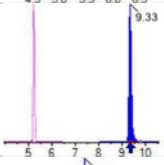 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 359955<br>( 357.2 / 243.0 ) 38813 | ( 5.90 , 1.00 ) ( -0.01 , N/A , 0.0) | 1073.6<br>490.0 | 0.1078<br>100.6<br>100.6 | 1.0040 | N/A | 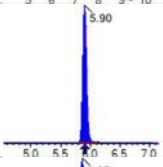 | 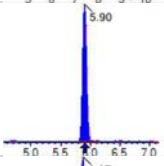 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 314580<br>( 457.2 / 343.0 ) 11976 | ( 8.67 , 1.00 ) ( 0.00 , N/A , 0.0) | 970.9<br>284.9 | 0.0381<br>84.8<br>84.8 | 1.0180 | N/A | 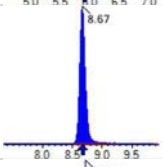 | 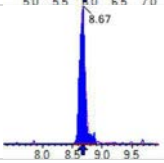 | |
| TDCA | ( 499.0 / 80.0 ) 662831 | ( 10.49 , 1.00 ) ( N/A , 0.01 , 0.0) | 5021.6 | N/A<br>0.0<br>0.0 | 0.9730 | N/A | 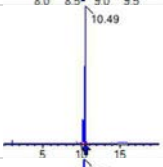 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 314166 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 1805.0 | N/A | 1.1130 [ 1.0000 ] | 111.3% { 113.4% } | 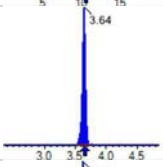 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125606 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 15935526.7 | N/A | 1.0640 [ 1.0000 ] | 106.4% { 109.2% } | 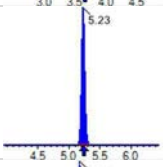 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 424058 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5688.3 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 108.0% } | 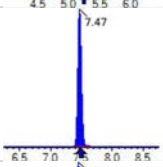 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 311748 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 1913.2 | N/A | 1.0670 [ 1.0000 ] | 106.7% { 107.3% } | 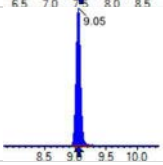 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 300394 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 5494.7 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 110.4% } | 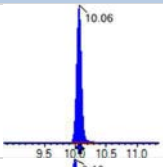 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056354 | ( 8.10 , N/A ) ( N/A , 0.00 , N/A ) | 7602.5 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 111.0% } | 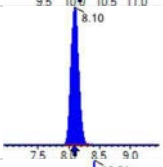 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 828067 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 2686.0 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 111.9% } | 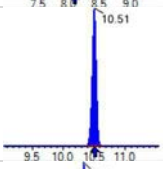 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2566437 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 134366.8 | N/A | 7.5580 [ 8.0000 ] | 94.5% { 105.2% } | 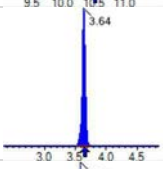 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 905587 | ( 4.38 , N/A ) ( N/A , 0.00 , N/A ) | 5048.4 | N/A | 3.9380 [ 4.0000 ] | 98.4% { 97.9% } | 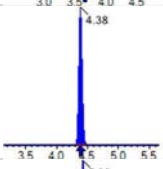 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 531649 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 57010.9 | N/A | 1.9350 [ 2.0000 ] | 96.7% { 99.3% } | 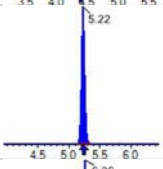 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 592663 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 6270.5 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 103.9% } | 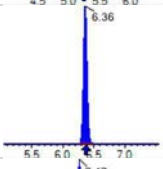 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 878219 | ( 7.47 , N/A ) ( N/A , -0.01 , N/A ) | 7252.7 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 116.0% } | 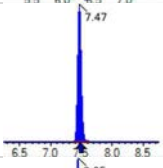 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 304768 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 5045.9 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 107.3% } | 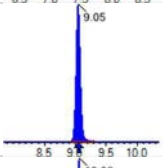 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 329781 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 1797.9 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 98.0% } | 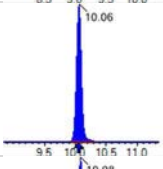 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 413773 | ( 10.98 , N/A ) ( N/A , 0.01 , N/A ) | 1043.0 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 105.5% } | 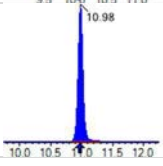 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 416497 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1405.5 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 104.4% } | 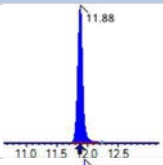 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 365648 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1378.9 | N/A | 0.9780 [ 1.0000 ] | 97.8% { 100.9% } | 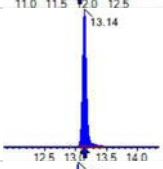 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 628692 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2983.9 | N/A | 2.0090 [ 2.0000 ] | 100.5% { 110.0% } | 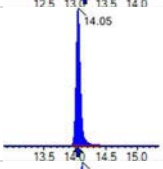 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1607606 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1368.2 | N/A | 1.8880 [ 2.0000 ] | 94.4% { 101.2% } | 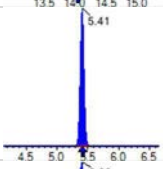 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1477903 | ( 8.09 , N/A ) ( N/A , 0.01 , N/A ) | 5393.3 | N/A | 1.9390 [ 2.0000 ] | 97.0% { 107.6% } | 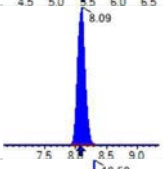 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1739176 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1505.4 | N/A | 1.9740 [ 2.0000 ] | 98.7% { 111.1% } | 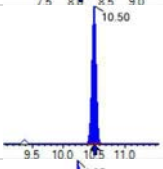 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 767667 | ( 4.85 , N/A ) ( N/A , -0.01 , N/A ) | 64.2 | N/A | 4.0980 [ 4.0000 ] | 102.5% { 110.0% } | 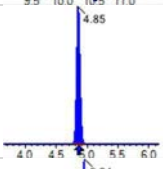 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1969693 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 6493.7 | N/A | 4.2810 [ 4.0000 ] | 107.0% { 118.7% } | 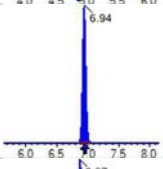 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1742876 | ( 9.37 , N/A ) ( N/A , 0.01 , N/A ) | 2037.4 | N/A | 4.3290 [ 4.0000 ] | 108.2% { 117.9% } | 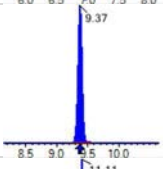 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3604522 | ( 11.11 , N/A ) ( N/A , 0.01 , N/A ) | 1564.9 | N/A | 8.2760 [ 8.0000 ] | 103.5% { 126.6% } | 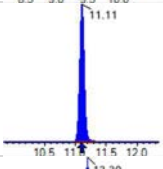 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1853258 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3817.1 | N/A | 1.9820 [ 2.0000 ] | 99.1% { 110.1% } | 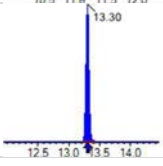 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 414163 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 2724.4 | N/A | 1.9700 [ 2.0000 ] | 98.5% { 111.7% } | 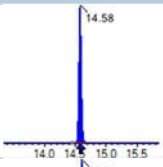  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 374296 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2901.4 | N/A | 1.9470 [ 2.0000 ] | 97.4% { 105.2% } | 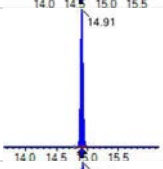  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1216766 | ( 10.42 , N/A ) ( N/A , 0.01 , N/A ) | 3570.8 | N/A | 3.9780 [ 4.0000 ] | 99.4% { 105.0% } | 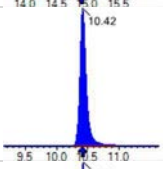  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1093128 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 2431.9 | N/A | 3.9600 [ 4.0000 ] | 99.0% { 105.8% } | 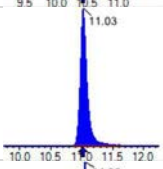  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1588712 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3552.1 | N/A | 20.2240 [ 20.0000 ] | 101.1% { 111.9% } | 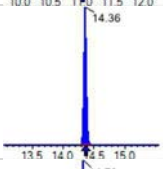  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1485051 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 4971.9 | N/A | 20.1850 [ 20.0000 ] | 100.9% { 111.2% } | 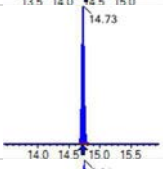  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 923542 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2227.0 | N/A | 7.7590 [ 8.0000 ] | 97.0% { 102.2% } | 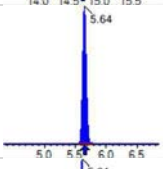  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 682194 | ( 5.91 , N/A ) ( N/A , -0.01 , N/A ) | 1763.2 | N/A | 2.0840 [ 2.0000 ] | 104.2% { 120.2% } | 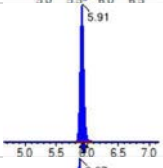  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 747738 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1167.0 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 114.3% } | 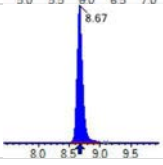  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 280958<br>( 163.0 / 69.0 ) 8406 | ( 2.49 , 0.68 ) ( N/A , 0.00 , -0.6) | 509.8<br>111.0 | 0.0299<br>109.2<br>109.2 | 4.1210 | N/A | 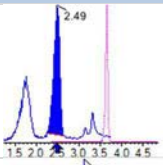 | 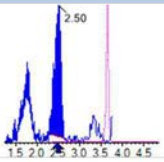 | |
| PFBA | ( 213.0 / 169.0 ) 2546709 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 1671.4 | N/A<br>0.0<br>0.0 | 8.2280 | N/A | 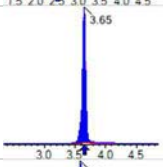 | | |
| PFPeA | ( 263.0 / 219.0 ) 859484<br>( 263.0 / 69.0 ) 10121 | ( 4.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 2509.6<br>171.5 | 0.0118<br>99.0<br>99.0 | 3.9160 | N/A | 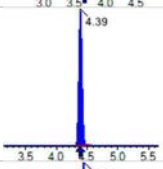 | 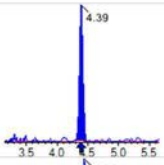 | |
| PFHxA | ( 313.0 / 269.0 ) 477184<br>( 313.0 / 119.0 ) 58579 | ( 5.24 , 1.00 ) ( 0.00 , N/A , 0.1) | 1609.0<br>802.0 | 0.1228<br>110.4<br>110.4 | 2.0720 | N/A | 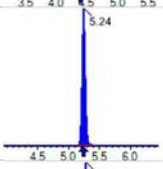 | 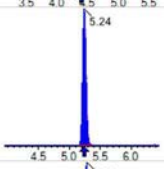 | |
| PFHpA | ( 363.0 / 319.0 ) 561132<br>( 363.0 / 169.0 ) 174177 | ( 6.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1684.5<br>1767.2 | 0.3104<br>101.6<br>101.6 | 1.9210 | N/A | 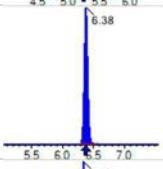 | 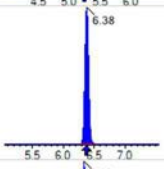 | |
| PFOA | ( 413.0 / 369.0 ) 818445<br>( 413.0 / 169.0 ) 299700 | ( 7.49 , 1.00 ) ( 0.00 , N/A , 0.1) | 834.7<br>1378.5 | 0.3662<br>102.4<br>102.4 | 2.0250 | N/A | 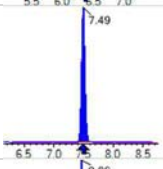 | 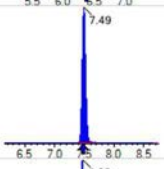 | |
| PFNA | ( 463.0 / 419.0 ) 586380<br>( 463.0 / 169.0 ) 148433 | ( 9.06 , 1.00 ) ( 0.00 , N/A , -0.2) | 1740.8<br>1612.6 | 0.2531<br>103.0<br>103.0 | 2.1240 | N/A | 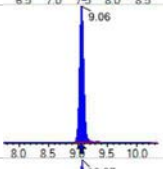 | 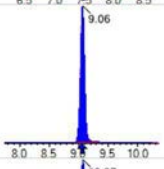 | |
| PFDA | ( 513.0 / 469.0 ) 666543<br>( 513.0 / 169.0 ) 80690 | ( 10.07 , 1.00 ) ( 0.00 , N/A , 0.0) | 3136.9<br>5619.1 | 0.1211<br>101.6<br>101.6 | 2.0720 | N/A | 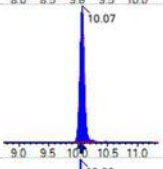 | 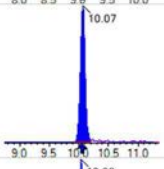 | |
| PFUnA | ( 563.0 / 519.0 ) 742182<br>( 563.0 / 169.0 ) 113773 | ( 10.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 1155.6<br>848.9 | 0.1533<br>99.0<br>99.0 | 2.0030 | N/A | 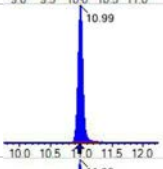 | 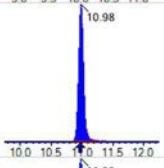 | |
| PFDoA | ( 613.0 / 569.0 ) 847736<br>( 613.0 / 169.0 ) 129433 | ( 11.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 1362.0<br>801.0 | 0.1527<br>100.5<br>100.5 | 2.0770 | N/A | 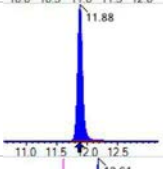 | 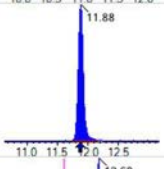 | |
| PFTrDA | ( 663.0 / 619.0 ) 850384<br>( 663.0 / 169.0 ) 217072 | ( 12.61 , 1.06 ) ( N/A , 0.01 , 0.0) | 1342.5<br>919.6 | 0.2553<br>94.8<br>94.8 | 2.1430 | N/A | 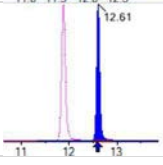 | 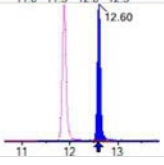 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 692145<br>( 713.0 / 169.0 ) 182569 | ( 13.15 , 1.00 ) ( 0.00 , N/A , 0.0) | 1403.5<br>850.8 | 0.2638<br>97.2<br>97.2 | 1.9780 | N/A | 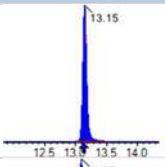 | 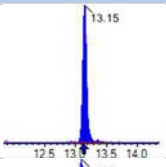 | |
| PFHxDA | ( 813.0 / 769.0 ) 566500<br>( 813.0 / 169.0 ) 153346 | ( 14.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 1407.9<br>696.7 | 0.2707<br>103.5<br>103.5 | 1.9940 | N/A | 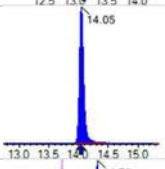 | 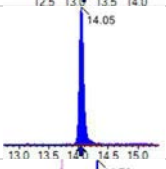 | |
| PFODA | ( 913.0 / 869.0 ) 386961<br>( 913.0 / 169.0 ) 117391 | ( 14.78 , 1.05 ) ( N/A , 0.01 , 0.0) | 1224.2<br>477.9 | 0.3034<br>96.8<br>96.8 | 2.1500 | N/A | 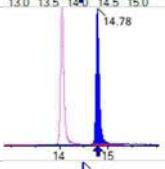 | 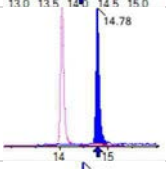 | |
| PFBS | ( 299.0 / 80.0 ) 679819<br>( 299.0 / 99.0 ) 506378 | ( 5.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 2729.6<br>1826.6 | 0.7449<br>100.6<br>100.6 | 1.7600 | N/A | 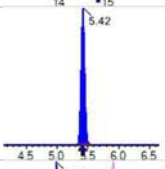 | 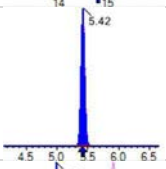 | |
| PFPeS | ( 349.0 / 80.0 ) 1932428<br>( 349.0 / 99.0 ) 672651 | ( 6.70 , 0.82 ) ( N/A , 0.01 , -0.1) | 3746.3<br>3772.4 | 0.3481<br>101.9<br>101.9 | 1.9670 | N/A | 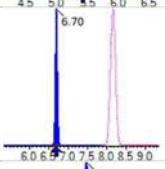 | 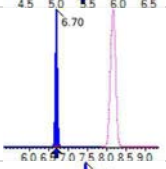 | |
| PFHxS | ( 399.0 / 80.0 ) 2208377<br>( 399.0 / 99.0 ) 729906 | ( 8.17 , 1.00 ) ( 0.00 , N/A , 0.2) | 2663.2<br>2994.9 | 0.3305<br>100.7<br>100.7 | 1.8440 | N/A | 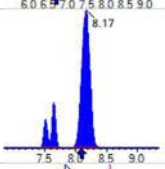 | 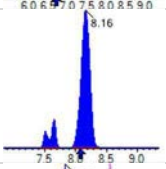 | |
| PFHpS | ( 449.0 / 80.0 ) 1978707<br>( 449.0 / 99.0 ) 521853 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.1) | 2956.0<br>2403.5 | 0.2637<br>101.1<br>101.1 | 2.0790 | N/A | 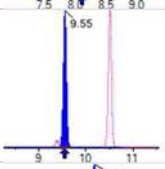 | 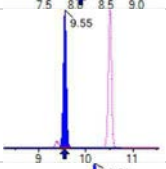 | |
| PFOS | ( 499.0 / 80.0 ) 1809820<br>( 499.0 / 99.0 ) 429080 | ( 10.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 2557.0<br>6203.8 | 0.2371<br>102.6<br>102.6 | 1.9570 | N/A | 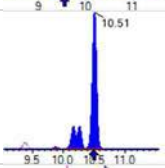 | 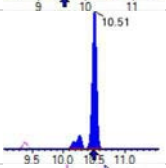 | |
| PFNS | ( 549.0 / 80.0 ) 1711402<br>( 549.0 / 99.0 ) 479185 | ( 11.39 , 1.08 ) ( N/A , 0.01 , -0.1) | 2257.9<br>1855.6 | 0.2800<br>104.5<br>104.5 | 2.0300 | N/A | 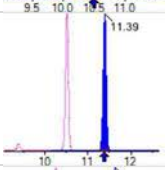 | 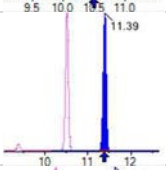 | |
| PFDS | ( 599.0 / 80.0 ) 2303005<br>( 599.0 / 99.0 ) 605086 | ( 12.20 , 1.16 ) ( N/A , 0.01 , 0.1) | 3615.0<br>2237.4 | 0.2627<br>103.2<br>103.2 | 2.2350 | N/A | 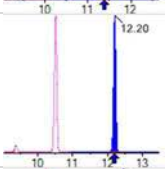 | 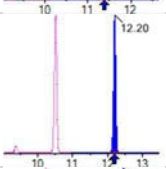 | |
| PFDoS | ( 699.0 / 80.0 ) 2188537<br>( 699.0 / 99.0 ) 513707 | ( 13.21 , 1.26 ) ( N/A , 0.01 , 0.1) | 4641.7<br>3226.0 | 0.2347<br>105.0<br>105.0 | 2.1950 | N/A | 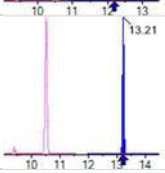 | 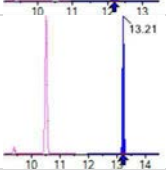 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3326281<br>( 327.0 / 81.0 ) 3107523 | ( 4.87 , 1.00 ) ( 0.00 , N/A , 0.2) | 5254.9<br>3844.4 | 0.9342<br>109.5<br>109.5 | 7.2450 | N/A | 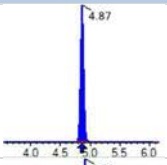 | 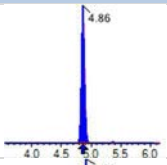 | |
| 6:2FTS | ( 427.0 / 407.0 ) 3086997<br>( 427.0 / 81.0 ) 3757029 | ( 6.96 , 1.00 ) ( 0.00 , N/A , 0.1) | 5270.6<br>7414.4 | 1.2171<br>94.4<br>94.4 | 8.0350 | N/A | 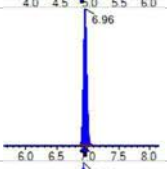 | 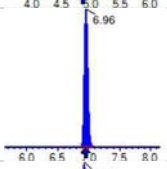 | |
| 8:2FTS | ( 527.0 / 507.0 ) 3242856<br>( 527.0 / 81.0 ) 3257495 | ( 9.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3507.6<br>2613.9 | 1.0045<br>91.0<br>91.0 | 8.3810 | N/A | 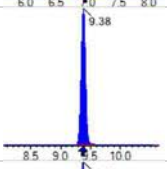 | 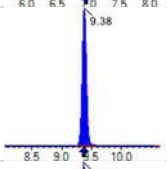 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2562664<br>( 627.0 / 81.0 ) 3719670 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.3) | 1499.1<br>1492.2 | 1.4515<br>101.0<br>101.0 | 7.9260 | N/A | 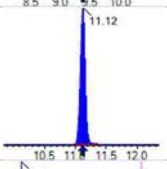 | 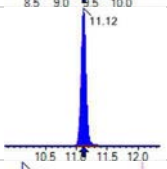 | |
| PFBSA | ( 297.9 / 78.0 ) 1212729<br>( 297.9 / 278.0 ) 1709 | ( 5.57 , 0.38 ) ( N/A , 0.01 , -0.2) | 1379.5<br>16.7 | 0.0014<br>108.8<br>108.8 | 1.9740 | N/A | 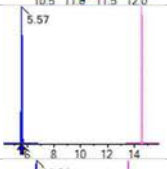 | 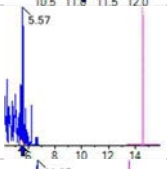 | |
| PFHxSA | ( 397.9 / 78.0 ) 2487712<br>( 397.9 / 378.0 ) 9746 | ( 11.24 , 0.75 ) ( N/A , 0.01 , -0.3) | 2093.3<br>373.8 | 0.0039<br>97.0<br>97.0 | 2.0930 | N/A | 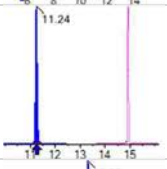 | 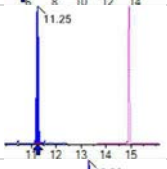 | |
| PFOSA | ( 498.0 / 78.0 ) 1799808<br>( 498.0 / 478.0 ) 24039 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.1) | 2681.0<br>450.1 | 0.0134<br>90.8<br>90.8 | 2.0330 | N/A | 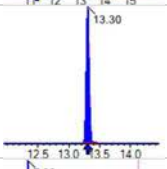 | 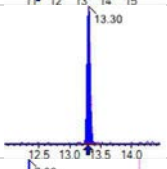 | |
| TFSI | ( 279.7 / 147.0 ) 3051709<br>( 279.7 / 211.0 ) 267670 | ( 7.09 , 0.53 ) ( N/A , 0.01 , 0.0) | 83.5<br>166407.7 | 0.0877<br>99.1<br>99.1 | 1.9730 | N/A | 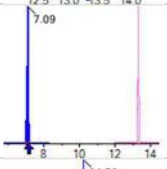 | 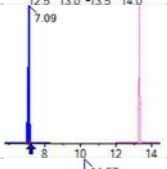 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1496986<br>( 512.0 / 169.0 ) 1143838 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 1.4) | 3969.6<br>1905.8 | 0.7641<br>99.7<br>99.7 | 8.3200 | N/A | 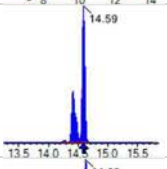 | 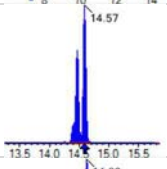 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1759136<br>( 526.0 / 169.0 ) 2199535 | ( 14.93 , 1.00 ) ( 0.01 , N/A , 2.1) | 3999.2<br>3622.7 | 1.2503<br>100.0<br>100.0 | 8.2220 | N/A | 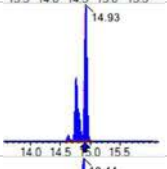 | 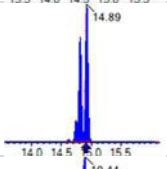 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 538209<br>( 570.0 / 483.0 ) 263265 | ( 10.44 , 1.00 ) ( 0.01 , N/A , 0.1) | 641.0<br>2844.9 | 0.4891<br>105.4<br>105.4 | 1.9660 | N/A | 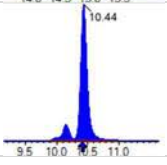 | 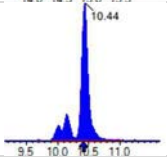 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 536778<br>( 584.0 / 526.0 ) 318100 | ( 11.05 , 1.00 ) ( 0.01 , N/A , 0.0) | 2328.7<br>645.1 | 0.5926<br>98.8<br>98.8 | 2.0570 | N/A | 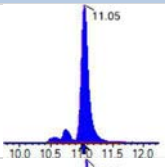 | 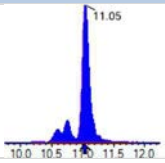 | |
| NMeFOSE | ( 616.0 / 59.0 ) 695855 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 1783.3 | N/A<br>0.0<br>0.0 | 8.3670 | N/A | 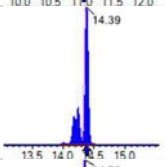 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 572559 | ( 14.76 , 1.00 ) ( 0.02 , N/A , 0.0) | 2146.3 | N/A<br>0.0<br>0.0 | 8.2890 | N/A | 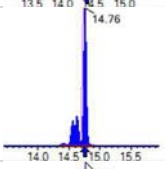 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 140562<br>( 285.0 / 185.0 ) 367785 | ( 5.66 , 1.00 ) ( 0.00 , N/A , 0.2) | 1874.9<br>1550.0 | 2.6165<br>93.2<br>93.2 | 2.1710 | N/A | 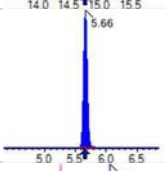 | 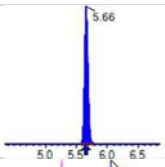 | |
| ADONA | ( 377.0 / 85.0 ) 1652515<br>( 377.0 / 251.0 ) 171701 | ( 6.81 , 1.20 ) ( N/A , 0.01 , 0.1) | 2811.0<br>1192.7 | 0.1039<br>99.1<br>99.1 | 1.9360 | N/A | 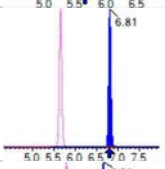 | 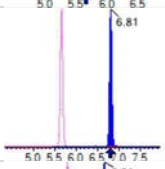 | |
| PFEESA | ( 315.0 / 135.0 ) 620578<br>( 315.0 / 83.0 ) 386374 | ( 6.01 , 1.15 ) ( N/A , 0.01 , 0.0) | 3273.2<br>978.1 | 0.6226<br>97.0<br>97.0 | 3.7040 | N/A | 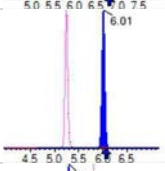 | 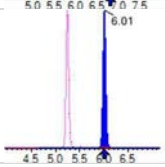 | |
| PFMPA | ( 229.0 / 85.0 ) 326561 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 4533.8 | N/A<br>0.0<br>0.0 | 4.0470 | N/A | 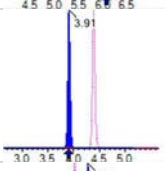 | | |
| PFMBA | ( 279.0 / 85.0 ) 792058 | ( 4.61 , 1.05 ) ( N/A , 0.01 , 0.0) | 4157.4 | N/A<br>0.0<br>0.0 | 4.3580 | N/A | 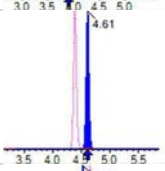 | | |
| NFDHA | ( 295.0 / 201.0 ) 359159<br>( 295.0 / 85.0 ) 356401 | ( 5.12 , 0.98 ) ( N/A , 0.01 , 0.1) | 3656.1<br>2166.3 | 0.9923<br>99.8<br>99.8 | 4.3920 | N/A | 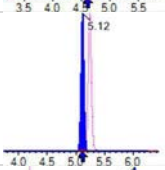 | 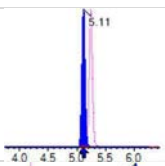 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1848172<br>( 533.0 / 353.0 ) 593017 | ( 11.19 , 1.98 ) ( N/A , 0.01 , 0.1) | 2707.6<br>2895.5 | 0.3209<br>100.6<br>100.6 | 1.9480 | N/A | 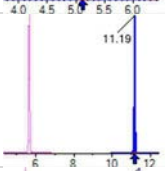 | 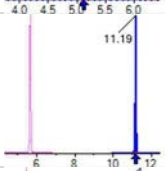 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1503185<br>( 633.0 / 453.0 ) 520004 | ( 12.66 , 2.24 ) ( N/A , 0.01 , -0.1) | 3930.2<br>2908.8 | 0.3459<br>102.0<br>102.0 | 2.0390 | N/A | 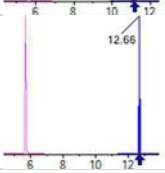 | 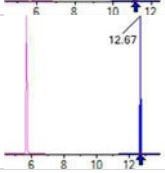 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 959824<br>( 461.0 / 381.2 ) 360156 | ( 9.45 , 0.90 )<br>( N/A , 0.02 , 0.0) | 3688.7<br>3416.3 | 0.3752<br>97.1<br>97.1 | 1.9330 | N/A | 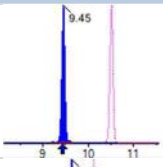 | 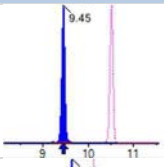 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 159682<br>( 241.0 / 117.0 ) 376621 | ( 3.96 , 0.90 )<br>( N/A , 0.00 , -0.1) | 3883.4<br>1867.5 | 2.3586<br>107.4<br>107.4 | 8.4760 | N/A | 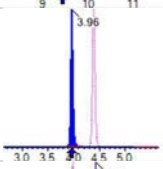 | 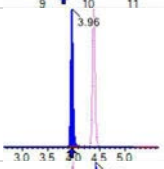 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 567194<br>( 341.0 / 217.0 ) 811951 | ( 5.67 , 1.08 )<br>( N/A , 0.01 , 0.0) | 1208.1<br>1531.4 | 1.4315<br>93.5<br>93.5 | 9.0520 | N/A | 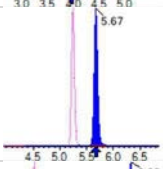 | 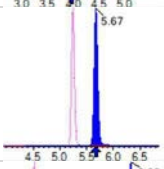 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 1200723<br>( 441.0 / 337.0 ) 1029784 | ( 9.36 , 1.79 )<br>( N/A , 0.03 , 0.1) | 12481.8<br>18357.4 | 0.8576<br>100.4<br>100.4 | 9.0200 | N/A | 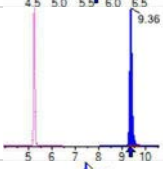 | 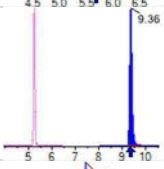 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 726637<br>( 357.2 / 243.0 ) 75689 | ( 5.92 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1778.6<br>780.8 | 0.1042<br>97.1<br>97.1 | 2.0210 | N/A | 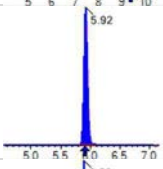 | 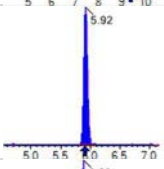 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 636763<br>( 457.2 / 343.0 ) 28293 | ( 8.69 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1082.7<br>577.7 | 0.0444<br>99.0<br>99.0 | 2.1580 | N/A | 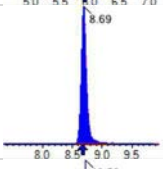 | 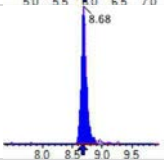 | |
| TDCA | ( 499.0 / 80.0 ) 1350109 | ( 10.50 , 1.00 )<br>( N/A , 0.01 , 0.0) | 7643.2 | N/A<br>0.0<br>0.0 | 2.1630 | N/A | 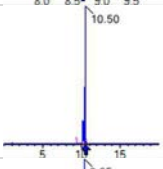 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 281337 | ( 3.65 , N/A )<br>( N/A , 0.00 , N/A ) | 1641.3 | N/A | 0.9970<br>[ 1.0000 ] | 99.7%<br>{ 101.5% } | 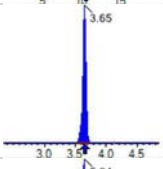 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116609 | ( 5.24 , N/A )<br>( N/A , 0.01 , N/A ) | 98172.4 | N/A | 0.9880<br>[ 1.0000 ] | 98.8%<br>{ 101.3% } | 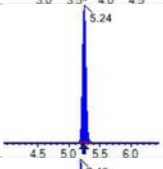 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 349325 | ( 7.49 , N/A )<br>( N/A , 0.02 , N/A ) | 5480.7 | N/A | 0.9000<br>[ 1.0000 ] | 90.0%<br>{ 89.0% } | 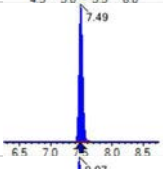 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 279583 | ( 9.07 , N/A )<br>( N/A , 0.02 , N/A ) | 1800.3 | N/A | 0.9570<br>[ 1.0000 ] | 95.7%<br>{ 96.2% } | 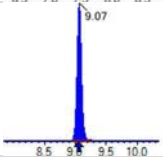 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277934 | ( 10.07 , N/A ) ( N/A , 0.01 , N/A ) | 7820.3 | N/A | 0.9700 [ 1.0000 ] | 97.0% { 102.1% } | 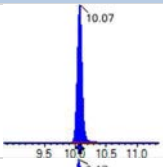 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 921598 | ( 8.17 , N/A ) ( N/A , 0.08 , N/A ) | 6069.8 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 96.9% } | 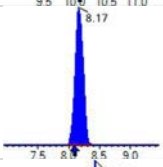 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727296 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 4541.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 98.3% } | 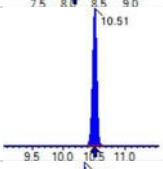 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2409864 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1244067.1 | N/A | 7.9250 [ 8.0000 ] | 99.1% { 98.8% } | 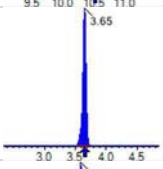 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 879194 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 4687.2 | N/A | 4.1180 [ 4.0000 ] | 103.0% { 95.1% } | 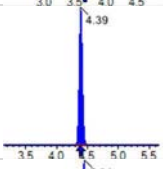 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 496392 | ( 5.24 , N/A ) ( N/A , 0.01 , N/A ) | 19023.4 | N/A | 1.9460 [ 2.0000 ] | 97.3% { 92.8% } | 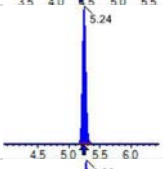 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588735 | ( 6.38 , N/A ) ( N/A , 0.01 , N/A ) | 8845.4 | N/A | 2.0780 [ 2.0000 ] | 103.9% { 103.2% } | 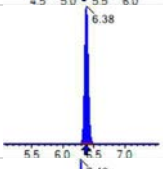 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 805049 | ( 7.49 , N/A ) ( N/A , 0.02 , N/A ) | 4914.9 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 106.3% } | 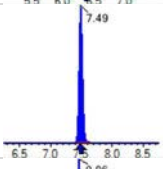 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274761 | ( 9.06 , N/A ) ( N/A , 0.02 , N/A ) | 14442.9 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 96.8% } | 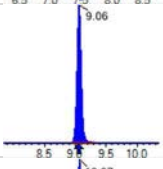 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 322055 | ( 10.07 , N/A ) ( N/A , 0.01 , N/A ) | 1215.9 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 95.7% } | 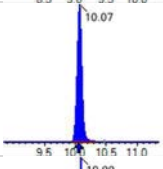 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 408049 | ( 10.99 , N/A ) ( N/A , 0.01 , N/A ) | 1180.8 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 104.1% } | 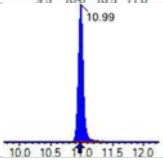 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 406674 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1723.4 | N/A | 1.0410 [ 1.0000 ] | 104.1% { 101.9% } | 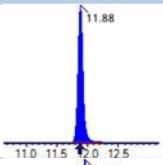 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 374749 | ( 13.15 , N/A ) ( N/A , 0.01 , N/A ) | 1407.1 | N/A | 1.0830 [ 1.0000 ] | 108.3% { 103.5% } | 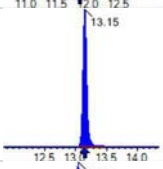 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 606541 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2628.9 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 106.1% } | 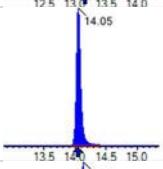 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570870 | ( 5.42 , N/A ) ( N/A , 0.01 , N/A ) | 1648.8 | N/A | 2.1150 [ 2.0000 ] | 105.7% { 98.9% } | 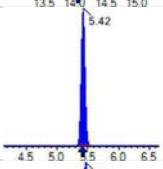 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1367635 | ( 8.17 , N/A ) ( N/A , 0.08 , N/A ) | 6748.2 | N/A | 2.0570 [ 2.0000 ] | 102.9% { 99.6% } | 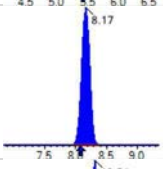 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1593623 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 1775.1 | N/A | 2.0600 [ 2.0000 ] | 103.0% { 101.8% } | 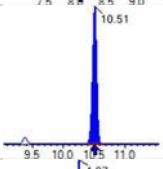 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 695640 | ( 4.87 , N/A ) ( N/A , 0.00 , N/A ) | 55.1 | N/A | 4.2570 [ 4.0000 ] | 106.4% { 99.7% } | 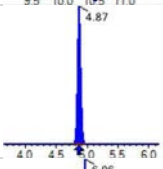 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1810422 | ( 6.96 , N/A ) ( N/A , 0.01 , N/A ) | 5914.3 | N/A | 4.5100 [ 4.0000 ] | 112.7% { 109.1% } | 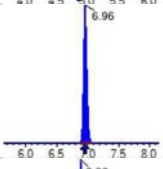 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1573483 | ( 9.39 , N/A ) ( N/A , 0.02 , N/A ) | 1754.7 | N/A | 4.4800 [ 4.0000 ] | 112.0% { 106.4% } | 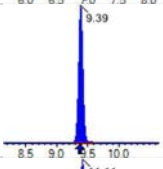 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3257337 | ( 11.11 , N/A ) ( N/A , 0.01 , N/A ) | 1329.6 | N/A | 8.5720 [ 8.0000 ] | 107.2% { 114.4% } | 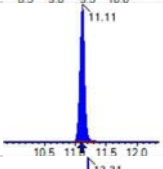 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1830002 | ( 13.31 , N/A ) ( N/A , 0.01 , N/A ) | 3678.9 | N/A | 2.2280 [ 2.0000 ] | 111.4% { 108.7% } | 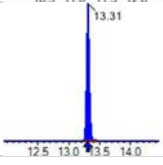 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 404855 | ( 14.59 , N/A ) ( N/A , 0.01 , N/A ) | 2501.8 | N/A | 2.1920 [ 2.0000 ] | 109.6% { 109.2% } | 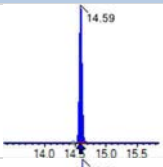  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 377740 | ( 14.92 , N/A ) ( N/A , 0.01 , N/A ) | 3109.7 | N/A | 2.2380 [ 2.0000 ] | 111.9% { 106.2% } | 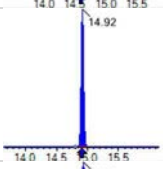  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1186780 | ( 10.43 , N/A ) ( N/A , 0.02 , N/A ) | 3797.4 | N/A | 4.4170 [ 4.0000 ] | 110.4% { 102.4% } | 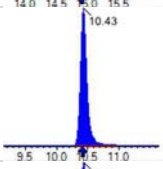  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1075995 | ( 11.03 , N/A ) ( N/A , 0.01 , N/A ) | 2702.0 | N/A | 4.4380 [ 4.0000 ] | 110.9% { 104.1% } | 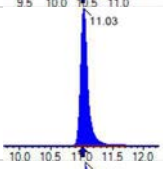  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1536412 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3118.3 | N/A | 22.2680 [ 20.0000 ] | 111.3% { 108.2% } | 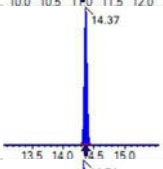  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1450205 | ( 14.74 , N/A ) ( N/A , 0.01 , N/A ) | 3666.0 | N/A | 22.4430 [ 20.0000 ] | 112.2% { 108.6% } | 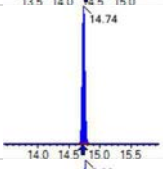  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 882027 | ( 5.66 , N/A ) ( N/A , 0.01 , N/A ) | 2659.6 | N/A | 7.9820 [ 8.0000 ] | 99.8% { 97.6% } | 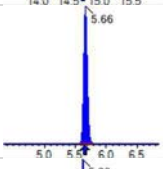  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 683769 | ( 5.93 , N/A ) ( N/A , 0.01 , N/A ) | 1953.6 | N/A | 2.2580 [ 2.0000 ] | 112.9% { 120.5% } | 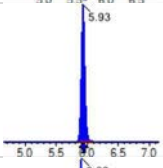  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 713849 | ( 8.69 , N/A ) ( N/A , 0.02 , N/A ) | 1146.8 | N/A | 2.0920 [ 2.0000 ] | 104.6% { 109.2% } | 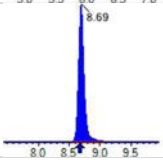  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 648060<br>( 163.0 / 69.0 ) 17761 | ( 2.49 , 0.68 ) ( N/A , 0.00 , -0.1) | 647.4<br>165.2 | 0.0274<br>100.0<br>100.0 | 9.3920 | N/A | 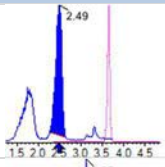 | 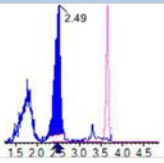 | |
| PFBA | ( 213.0 / 169.0 ) 5789052 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 2315.7 | N/A<br>0.0<br>0.0 | 18.9200 | N/A | 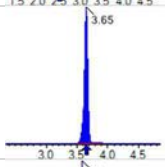 | | |
| PFPeA | ( 263.0 / 219.0 ) 2023232<br>( 263.0 / 69.0 ) 24077 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3977.7<br>333.5 | 0.0119<br>100.0<br>100.0 | 8.7630 | N/A | 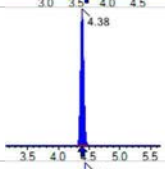 | 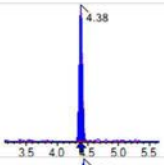 | |
| PFHxA | ( 313.0 / 269.0 ) 1179163<br>( 313.0 / 119.0 ) 131159 | ( 5.23 , 1.00 ) ( 0.00 , N/A , 0.1) | 2359.8<br>1537.5 | 0.1112<br>100.0<br>100.0 | 4.7490 | N/A | 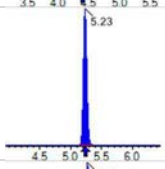 | 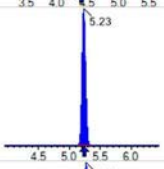 | |
| PFHpA | ( 363.0 / 319.0 ) 1309433<br>( 363.0 / 169.0 ) 400217 | ( 6.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2319.8<br>2574.5 | 0.3056<br>100.0<br>100.0 | 4.6280 | N/A | 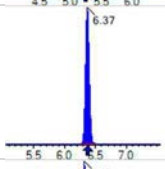 | 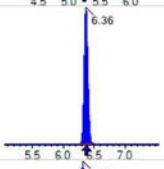 | |
| PFOA | ( 413.0 / 369.0 ) 1854014<br>( 413.0 / 169.0 ) 662712 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.1) | 1197.6<br>1955.5 | 0.3574<br>100.0<br>100.0 | 4.8780 | N/A | 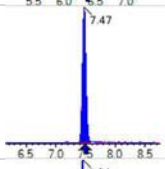 | 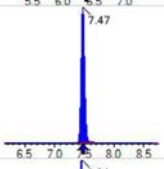 | |
| PFNA | ( 463.0 / 419.0 ) 1353850<br>( 463.0 / 169.0 ) 332596 | ( 9.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 1987.3<br>2018.4 | 0.2457<br>100.0<br>100.0 | 4.7450 | N/A | 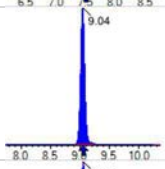 | 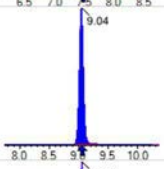 | |
| PFDA | ( 513.0 / 469.0 ) 1479091<br>( 513.0 / 169.0 ) 176256 | ( 10.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 5273.1<br>5077.9 | 0.1192<br>100.0<br>100.0 | 4.4010 | N/A | 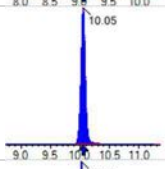 | 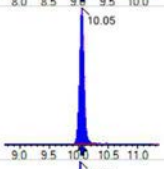 | |
| PFUnA | ( 563.0 / 519.0 ) 1611191<br>( 563.0 / 169.0 ) 249482 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 1315.7<br>968.6 | 0.1548<br>100.0<br>100.0 | 4.5260 | N/A | 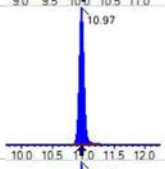 | 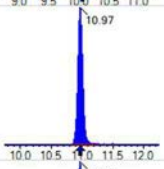 | |
| PFDoA | ( 613.0 / 569.0 ) 1860735<br>( 613.0 / 169.0 ) 282596 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1995.1<br>1191.8 | 0.1519<br>100.0<br>100.0 | 4.6460 | N/A | 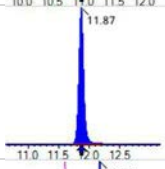 | 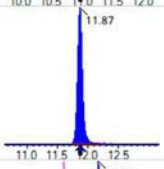 | |
| PFTrDA | ( 663.0 / 619.0 ) 1794665<br>( 663.0 / 169.0 ) 483150 | ( 12.59 , 1.06 ) ( N/A , 0.00 , 0.0) | 1559.0<br>1527.5 | 0.2692<br>100.0<br>100.0 | 4.6090 | N/A | 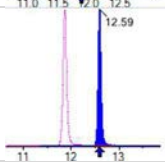 | 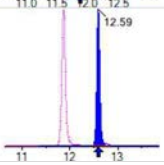 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1535133<br>( 713.0 / 169.0 ) 416590 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1795.5<br>1402.7 | 0.2714<br>100.0<br>100.0 | 4.5380 | N/A | 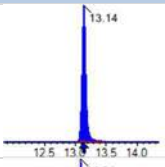 | 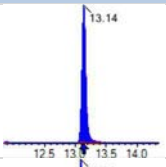 | |
| PFHxDA | ( 813.0 / 769.0 ) 1293413<br>( 813.0 / 169.0 ) 338356 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2411.3<br>1216.4 | 0.2616<br>100.0<br>100.0 | 4.8300 | N/A | 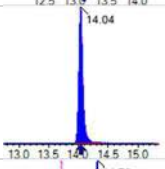 | 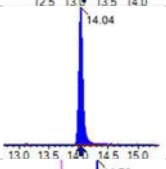 | |
| PFODA | ( 913.0 / 869.0 ) 791549<br>( 913.0 / 169.0 ) 248125 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.1) | 1706.2<br>923.3 | 0.3135<br>100.0<br>100.0 | 4.6680 | N/A | 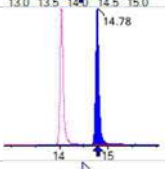 | 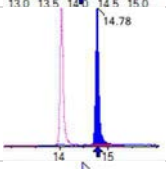 | |
| PFBS | ( 299.0 / 80.0 ) 1642161<br>( 299.0 / 99.0 ) 1216344 | ( 5.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 3254.9<br>2633.5 | 0.7407<br>100.0<br>100.0 | 4.2030 | N/A | 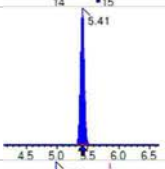 | 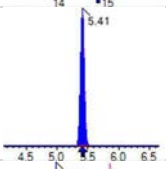 | |
| PFPeS | ( 349.0 / 80.0 ) 4665382<br>( 349.0 / 99.0 ) 1594131 | ( 6.69 , 0.83 ) ( N/A , 0.00 , 0.0) | 4734.1<br>4227.4 | 0.3417<br>100.0<br>100.0 | 4.7280 | N/A | 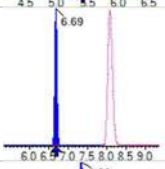 | 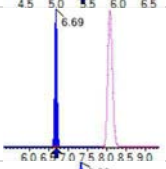 | |
| PFHxS | ( 399.0 / 80.0 ) 5100879<br>( 399.0 / 99.0 ) 1674005 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 3944.0<br>4430.5 | 0.3282<br>100.0<br>100.0 | 4.2410 | N/A | 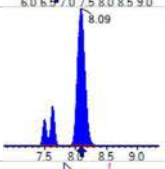 | 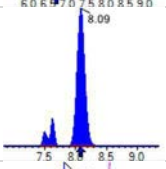 | |
| PFHpS | ( 449.0 / 80.0 ) 4334193<br>( 449.0 / 99.0 ) 1130788 | ( 9.53 , 0.91 ) ( N/A , 0.00 , 0.0) | 3315.1<br>2729.4 | 0.2609<br>100.0<br>100.0 | 4.6350 | N/A | 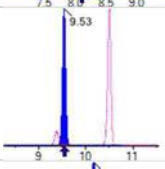 | 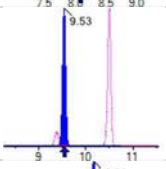 | |
| PFOS | ( 499.0 / 80.0 ) 3995293<br>( 499.0 / 99.0 ) 923153 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 2972.9<br>6712.8 | 0.2311<br>100.0<br>100.0 | 4.3970 | N/A | 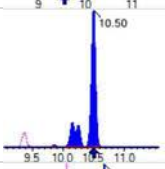 | 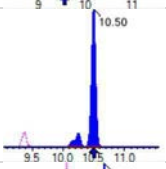 | |
| PFNS | ( 549.0 / 80.0 ) 3955021<br>( 549.0 / 99.0 ) 1059805 | ( 11.38 , 1.08 ) ( N/A , 0.00 , 0.1) | 3219.3<br>2629.2 | 0.2680<br>100.0<br>100.0 | 4.7750 | N/A | 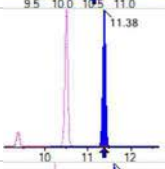 | 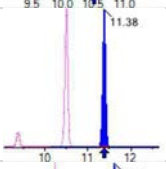 | |
| PFDS | ( 599.0 / 80.0 ) 4924068<br>( 599.0 / 99.0 ) 1254008 | ( 12.19 , 1.16 ) ( N/A , 0.00 , -0.1) | 4145.2<br>2834.2 | 0.2547<br>100.0<br>100.0 | 4.8640 | N/A | 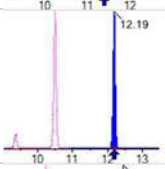 | 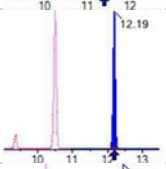 | |
| PFDoS | ( 699.0 / 80.0 ) 4865689<br>( 699.0 / 99.0 ) 1087465 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 4270.0<br>4361.8 | 0.2235<br>100.0<br>100.0 | 4.9670 | N/A | 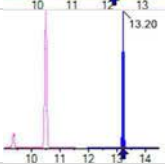 | 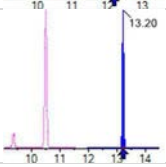 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 8113263<br>( 327.0 / 81.0 ) 6922214 | ( 4.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 6947.9<br>4823.6 | 0.8532<br>100.0<br>100.0 | 17.6170 | N/A | 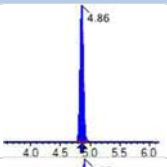 | 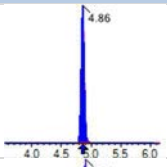 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6620628<br>( 427.0 / 81.0 ) 8538390 | ( 6.95 , 1.00 ) ( 0.00 , N/A , 0.1) | 6990.3<br>6415.9 | 1.2897<br>100.0<br>100.0 | 18.8080 | N/A | 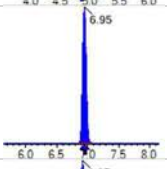 | 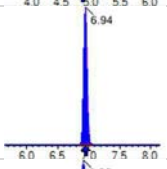 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6241512<br>( 527.0 / 81.0 ) 6888385 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2492.0<br>2311.5 | 1.1036<br>100.0<br>100.0 | 17.1660 | N/A | 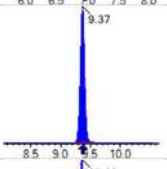 | 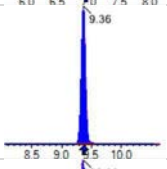 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5477078<br>( 627.0 / 81.0 ) 7874345 | ( 11.11 , 1.00 ) ( 0.01 , N/A , -0.1) | 1483.9<br>1444.8 | 1.4377<br>100.0<br>100.0 | 19.3810 | N/A | 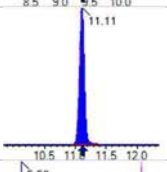 | 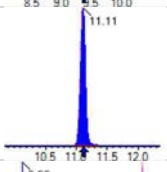 | |
| PFBSA | ( 297.9 / 78.0 ) 2862047<br>( 297.9 / 278.0 ) 3705 | ( 5.56 , 0.38 ) ( N/A , 0.00 , 0.5) | 1632.7<br>27.9 | 0.0013<br>100.0<br>100.0 | 5.0880 | N/A | 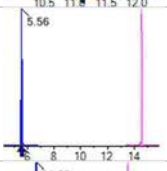 | 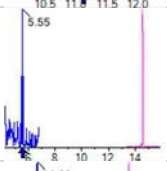 | |
| PFHxSA | ( 397.9 / 78.0 ) 4800431<br>( 397.9 / 378.0 ) 19388 | ( 11.23 , 0.75 ) ( N/A , 0.00 , 0.1) | 1988.9<br>467.6 | 0.0040<br>100.0<br>100.0 | 4.2890 | N/A | 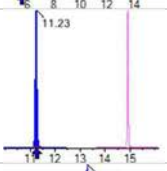 | 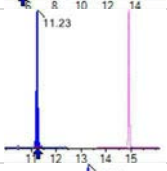 | |
| PFOSA | ( 498.0 / 78.0 ) 3805705<br>( 498.0 / 478.0 ) 55953 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.0) | 4258.8<br>1038.5 | 0.0147<br>100.0<br>100.0 | 4.6730 | N/A | 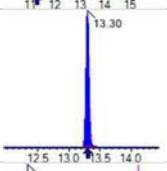 | 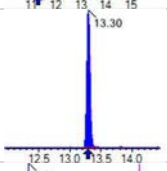 | |
| TFSI | ( 279.7 / 147.0 ) 7048670<br>( 279.7 / 211.0 ) 623738 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.0) | 84.5<br>31300821.4 | 0.0885<br>100.0<br>100.0 | 4.9550 | N/A | 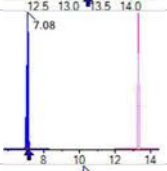 | 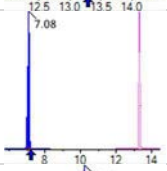 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3092097<br>( 512.0 / 169.0 ) 2370255 | ( 14.58 , 1.00 ) ( 0.00 , N/A , 1.3) | 4390.7<br>1754.1 | 0.7666<br>100.0<br>100.0 | 18.7700 | N/A | 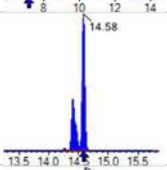 | 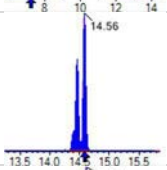 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3779125<br>( 526.0 / 169.0 ) 4725110 | ( 14.92 , 1.00 ) ( 0.01 , N/A , 2.1) | 4338.1<br>3548.5 | 1.2503<br>100.0<br>100.0 | 18.7590 | N/A | 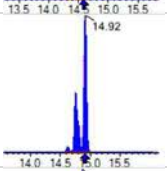 | 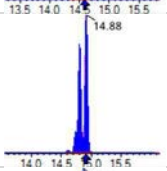 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1240421<br>( 570.0 / 483.0 ) 575595 | ( 10.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 126950.6<br>2371.8 | 0.4640<br>100.0<br>100.0 | 4.6410 | N/A | 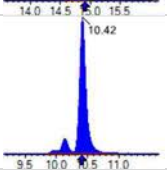 | 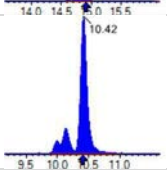 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1148920<br>( 584.0 / 526.0 ) 689225 | ( 11.04 , 1.00 )<br>( 0.01 , N/A , 0.2) | 2247.1<br>757.4 | 0.5999<br>100.0<br>100.0 | 4.5840 | N/A | 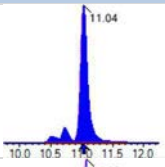 | 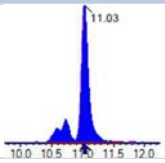 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1364930 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2308.1 | N/A<br>0.0<br>0.0 | 17.7610 | N/A | 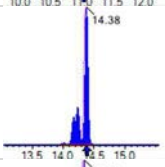 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1171484 | ( 14.75 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3474.5 | N/A<br>0.0<br>0.0 | 18.4200 | N/A | 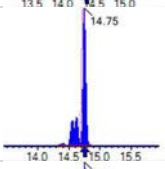 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 311130<br>( 285.0 / 185.0 ) 873489 | ( 5.65 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2042.5<br>2466.0 | 2.8075<br>100.0<br>100.0 | 4.6930 | N/A | 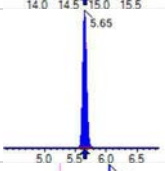 | 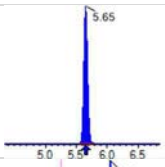 | |
| ADONA | ( 377.0 / 85.0 ) 3823329<br>( 377.0 / 251.0 ) 400996 | ( 6.80 , 1.20 )<br>( N/A , 0.00 , 0.0) | 3270.0<br>1761.6 | 0.1049<br>100.0<br>100.0 | 4.3730 | N/A | 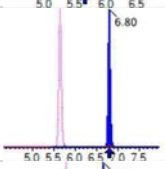 | 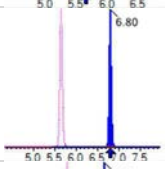 | |
| PFEESA | ( 315.0 / 135.0 ) 1367203<br>( 315.0 / 83.0 ) 877540 | ( 6.00 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4177.8<br>1585.5 | 0.6419<br>100.0<br>100.0 | 7.5680 | N/A | 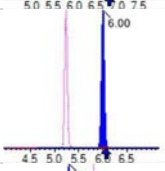 | 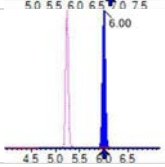 | |
| PFMPA | ( 229.0 / 85.0 ) 779251 | ( 3.91 , 0.89 )<br>( N/A , 0.00 , 0.0) | 10808.5 | N/A<br>0.0<br>0.0 | 9.1810 | N/A | 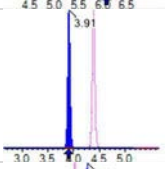 | | |
| PFMBA | ( 279.0 / 85.0 ) 1760365 | ( 4.60 , 1.05 )<br>( N/A , 0.00 , 0.0) | 7506.8 | N/A<br>0.0<br>0.0 | 9.2060 | N/A | 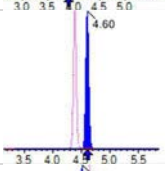 | | |
| NFDHA | ( 295.0 / 201.0 ) 787938<br>( 295.0 / 85.0 ) 783543 | ( 5.11 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3610.1<br>3074.7 | 0.9944<br>100.0<br>100.0 | 8.9370 | N/A | 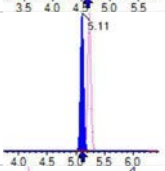 | 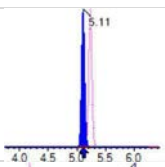 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4263457<br>( 533.0 / 353.0 ) 1359493 | ( 11.18 , 1.98 )<br>( N/A , 0.00 , 0.1) | 3140.1<br>2523.7 | 0.3189<br>100.0<br>100.0 | 4.3890 | N/A | 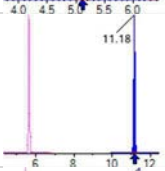 | 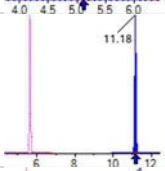 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3409140<br>( 633.0 / 453.0 ) 1156654 | ( 12.66 , 2.24 )<br>( N/A , 0.00 , 0.0) | 4579.0<br>3687.7 | 0.3393<br>100.0<br>100.0 | 4.5160 | N/A | 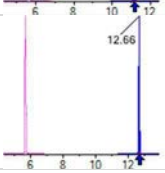 | 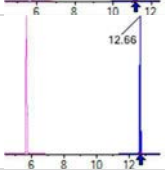 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2199689<br>( 461.0 / 381.2 ) 849612 | ( 9.44 , 0.90 ) ( N/A , 0.00 , 0.0) | 4673.7<br>4472.4 | 0.3862<br>100.0<br>100.0 | 4.5110 | N/A | 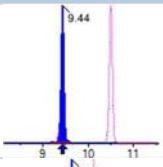 | 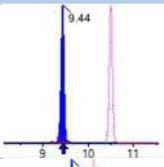 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 352296<br>( 241.0 / 117.0 ) 773362 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.0) | 5949.6<br>3763.1 | 2.1952<br>100.0<br>100.0 | 17.7760 | N/A | 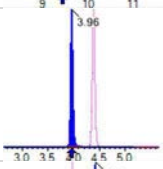 | 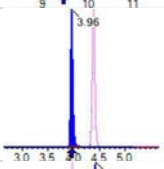 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1147153<br>( 341.0 / 217.0 ) 1756394 | ( 5.66 , 1.08 ) ( N/A , 0.00 , -0.1) | 1554.9<br>1526.0 | 1.5311<br>100.0<br>100.0 | 16.9810 | N/A | 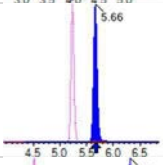 | 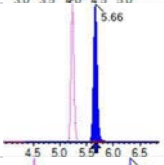 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2500654<br>( 441.0 / 337.0 ) 2136156 | ( 9.33 , 1.78 ) ( N/A , 0.00 , 0.0) | 10903.9<br>26038.4 | 0.8542<br>100.0<br>100.0 | 17.4230 | N/A | 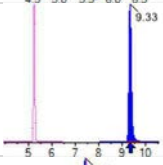 | 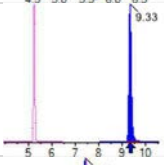 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1558737<br>( 357.2 / 243.0 ) 167151 | ( 5.91 , 1.00 ) ( -0.01 , N/A , 0.0) | 2124.2<br>1192.1 | 0.1072<br>100.0<br>100.0 | 5.2230 | N/A | 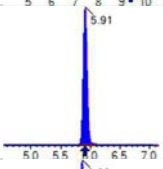 | 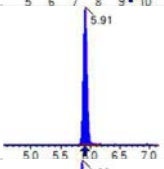 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1383033<br>( 457.2 / 343.0 ) 62067 | ( 8.66 , 1.00 ) ( -0.01 , N/A , 0.1) | 1425.5<br>639.8 | 0.0449<br>100.0<br>100.0 | 5.1180 | N/A | 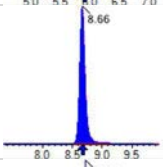 | 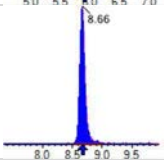 | |
| TDCA | ( 499.0 / 80.0 ) 2925200 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 23057.3 | N/A<br>0.0<br>0.0 | 4.7710 | N/A | 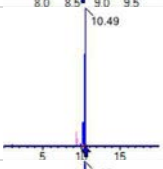 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277139 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1362.3 | N/A | 0.9820<br>[ 1.0000 ] | 98.2%<br>{ 100.0% } | 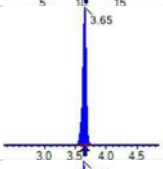 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 115060 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 18847.2 | N/A | 0.9750<br>[ 1.0000 ] | 97.5%<br>{ 100.0% } | 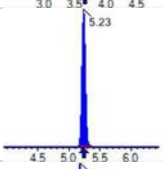 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 392520 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 6469.4 | N/A | 1.0110<br>[ 1.0000 ] | 101.1%<br>{ 100.0% } | 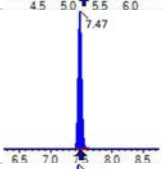 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 290614 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 1640.6 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 100.0% } | 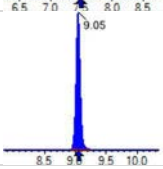 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL5 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272171 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 157007.7 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 100.0% } | 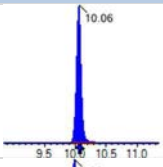  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 951286 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5836.5 | N/A | 0.9690 [ 1.0000 ] | 96.9% { 100.0% } | 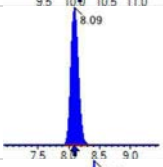  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 739718 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 4014.2 | N/A | 0.9430 [ 1.0000 ] | 94.3% { 100.0% } | 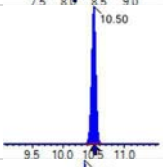  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2438938 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 72163.7 | N/A | 8.1420 [ 8.0000 ] | 101.8% { 100.0% } | 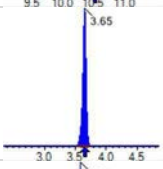  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 924925 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 5250.5 | N/A | 4.3910 [ 4.0000 ] | 109.8% { 100.0% } | 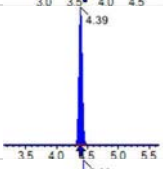  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 535186 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 32203.4 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 100.0% } | 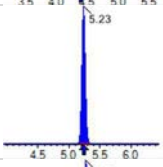  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 570287 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 12603.7 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 100.0% } | 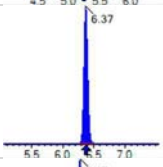  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 756985 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5516.4 | N/A | 1.8200 [ 2.0000 ] | 91.0% { 100.0% } | 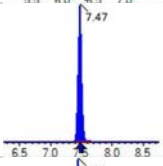  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283961 | ( 9.04 , N/A ) ( N/A , 0.00 , N/A ) | 6387.3 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 100.0% } | 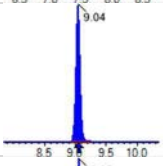  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336539 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1510.2 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 100.0% } | 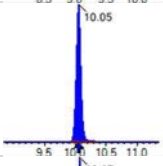  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392051 | ( 10.97 , N/A ) ( N/A , 0.00 , N/A ) | 1050.8 | N/A | 1.0510 [ 1.0000 ] | 105.1% { 100.0% } | 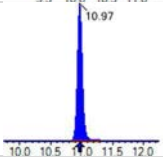  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL5 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 399094 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1546.0 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 100.0% } | 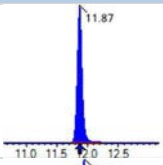  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362241 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1334.8 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 100.0% } | 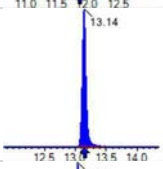  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 571585 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2545.5 | N/A | 2.0160 [ 2.0000 ] | 100.8% { 100.0% } | 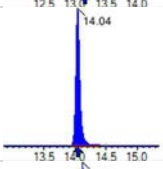  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1588988 | ( 5.41 , N/A ) ( N/A , 0.00 , N/A ) | 2162.0 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 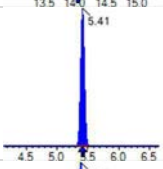  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373382 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5719.9 | N/A | 2.0010 [ 2.0000 ] | 100.1% { 100.0% } | 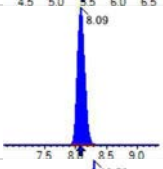  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1565551 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1057.0 | N/A | 1.9890 [ 2.0000 ] | 99.5% { 100.0% } | 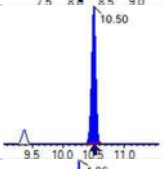  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 697760 | ( 4.86 , N/A ) ( N/A , 0.00 , N/A ) | 58.7 | N/A | 4.1370 [ 4.0000 ] | 103.4% { 100.0% } | 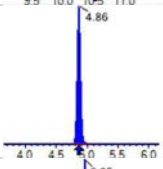  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1658824 | ( 6.95 , N/A ) ( N/A , 0.00 , N/A ) | 5866.7 | N/A | 4.0030 [ 4.0000 ] | 100.1% { 100.0% } | 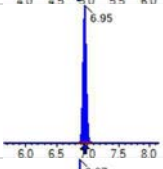  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1478563 | ( 9.37 , N/A ) ( N/A , 0.00 , N/A ) | 3104.3 | N/A | 4.0780 [ 4.0000 ] | 102.0% { 100.0% } | 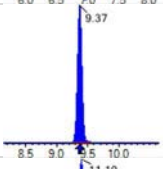  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2847020 | ( 11.10 , N/A ) ( N/A , 0.00 , N/A ) | 1774.9 | N/A | 7.2590 [ 8.0000 ] | 90.7% { 100.0% } | 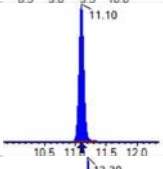  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1683304 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3070.2 | N/A | 2.0150 [ 2.0000 ] | 100.7% { 100.0% } | 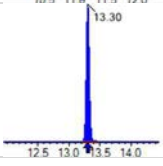  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 370692 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 2352.3 | N/A | 1.9730 [ 2.0000 ] | 98.7% { 100.0% } | 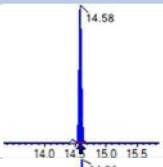  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 355689 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2645.7 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 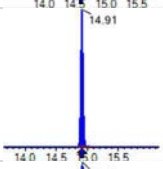  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1158891 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 3684.2 | N/A | 4.2410 [ 4.0000 ] | 106.0% { 100.0% } | 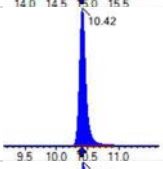  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1033424 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 3055.1 | N/A | 4.1900 [ 4.0000 ] | 104.8% { 100.0% } | 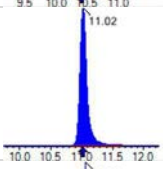  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1419770 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3426.4 | N/A | 20.2320 [ 20.0000 ] | 101.2% { 100.0% } | 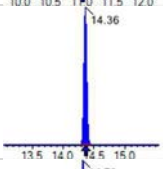  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1335269 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 5403.2 | N/A | 20.3170 [ 20.0000 ] | 101.6% { 100.0% } | 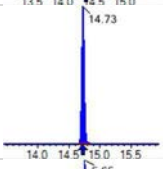  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 903308 | ( 5.65 , N/A ) ( N/A , 0.00 , N/A ) | 2350.3 | N/A | 8.2840 [ 8.0000 ] | 103.6% { 100.0% } | 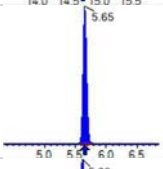  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 567556 | ( 5.92 , N/A ) ( N/A , 0.00 , N/A ) | 2313.3 | N/A | 1.9140 [ 2.0000 ] | 95.7% { 100.0% } | 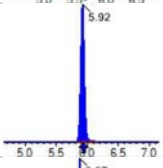  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 653909 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1282.2 | N/A | 1.9570 [ 2.0000 ] | 97.8% { 100.0% } | 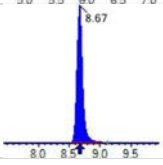  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1410776<br>( 163.0 / 69.0 ) 39371 | ( 2.48 , 0.68 ) ( N/A , -0.01 , 0.2) | 1403.2<br>319.4 | 0.0279<br>101.8<br>101.8 | 23.6740 | N/A | 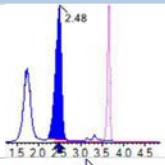 | 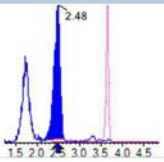 | |
| PFBA | ( 213.0 / 169.0 ) 10236281 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 2879.9 | N/A<br>0.0<br>0.0 | 39.1070 | N/A | 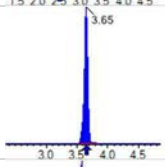 | | |
| PFPeA | ( 263.0 / 219.0 ) 4048261<br>( 263.0 / 69.0 ) 46489 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 5627.7<br>547.2 | 0.0115<br>96.5<br>96.5 | 18.8630 | N/A | 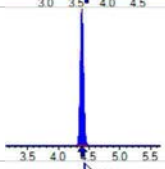 | 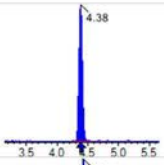 | |
| PFHxA | ( 313.0 / 269.0 ) 2339879<br>( 313.0 / 119.0 ) 278107 | ( 5.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 2343.3<br>1828.3 | 0.1189<br>106.9<br>106.9 | 9.8390 | N/A | 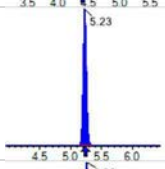 | 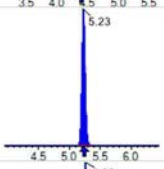 | |
| PFHpA | ( 363.0 / 319.0 ) 2699056<br>( 363.0 / 169.0 ) 836355 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.0) | 2955.7<br>2567.7 | 0.3099<br>101.4<br>101.4 | 9.9190 | N/A | 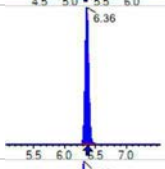 | 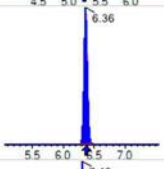 | |
| PFOA | ( 413.0 / 369.0 ) 3931616<br>( 413.0 / 169.0 ) 1422616 | ( 7.46 , 1.00 ) ( 0.00 , N/A , 0.1) | 2035.7<br>2247.3 | 0.3618<br>101.2<br>101.2 | 9.7280 | N/A | 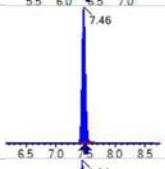 | 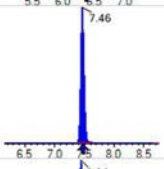 | |
| PFNA | ( 463.0 / 419.0 ) 2766583<br>( 463.0 / 169.0 ) 693602 | ( 9.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2439.9<br>2100.0 | 0.2507<br>102.1<br>102.1 | 9.6980 | N/A | 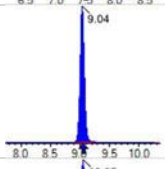 | 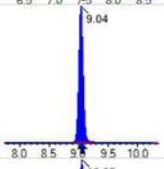 | |
| PFDA | ( 513.0 / 469.0 ) 3151937<br>( 513.0 / 169.0 ) 374125 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 6041.9<br>3869.6 | 0.1187<br>99.6<br>99.6 | 9.8040 | N/A | 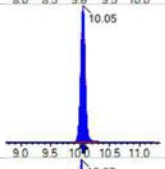 | 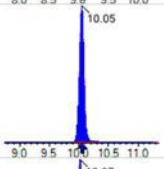 | |
| PFUnA | ( 563.0 / 519.0 ) 3513685<br>( 563.0 / 169.0 ) 520449 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 1519.2<br>1154.2 | 0.1481<br>95.7<br>95.7 | 9.9360 | N/A | 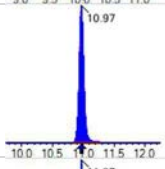 | 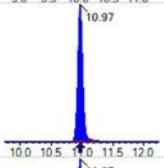 | |
| PFDoA | ( 613.0 / 569.0 ) 3919525<br>( 613.0 / 169.0 ) 592934 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 2119.3<br>1738.8 | 0.1513<br>99.6<br>99.6 | 9.9560 | N/A | 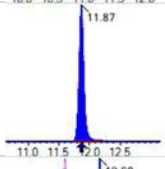 | 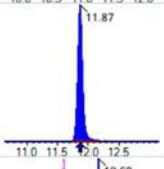 | |
| PFTrDA | ( 663.0 / 619.0 ) 4001296<br>( 663.0 / 169.0 ) 1042973 | ( 12.60 , 1.06 ) ( N/A , 0.00 , 0.0) | 1852.5<br>1696.7 | 0.2607<br>96.8<br>96.8 | 10.4540 | N/A | 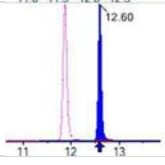 | 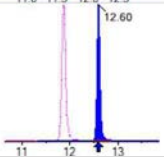 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3255016<br>( 713.0 / 169.0 ) 874433 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 2053.0<br>1430.2 | 0.2686<br>99.0<br>99.0 | 9.9300 | N/A | 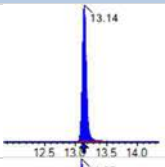 | 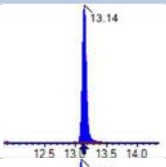 | |
| PFHxDA | ( 813.0 / 769.0 ) 2833744<br>( 813.0 / 169.0 ) 723213 | ( 14.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 2117.6<br>1323.6 | 0.2552<br>97.6<br>97.6 | 10.2560 | N/A | 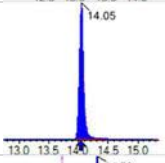 | 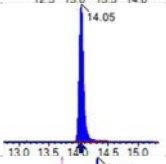 | |
| PFODA | ( 913.0 / 869.0 ) 1612349<br>( 913.0 / 169.0 ) 538911 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.0) | 2225.2<br>1483.9 | 0.3342<br>106.6<br>106.6 | 9.2140 | N/A | 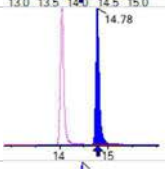 | 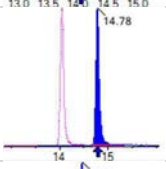 | |
| PFBS | ( 299.0 / 80.0 ) 3230446<br>( 299.0 / 99.0 ) 2480147 | ( 5.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 4578.2<br>3619.1 | 0.7677<br>103.7<br>103.7 | 8.3490 | N/A | 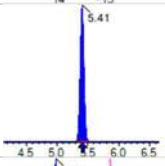 | 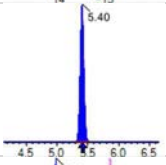 | |
| PFPeS | ( 349.0 / 80.0 ) 9433675<br>( 349.0 / 99.0 ) 3278192 | ( 6.68 , 0.83 ) ( N/A , -0.01 , 0.0) | 3596.1<br>3202.3 | 0.3475<br>101.7<br>101.7 | 9.3820 | N/A | 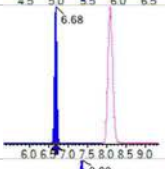 | 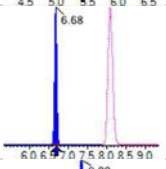 | |
| PFHxS | ( 399.0 / 80.0 ) 10963120<br>( 399.0 / 99.0 ) 3556590 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 4134.1<br>7330.4 | 0.3244<br>98.9<br>98.9 | 8.9450 | N/A | 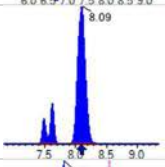 | 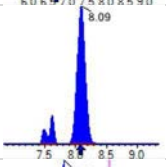 | |
| PFHpS | ( 449.0 / 80.0 ) 9554510<br>( 449.0 / 99.0 ) 2565679 | ( 9.53 , 0.91 ) ( N/A , -0.01 , 0.0) | 3632.9<br>3833.5 | 0.2685<br>102.9<br>102.9 | 9.6130 | N/A | 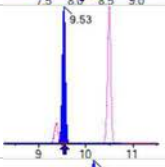 | 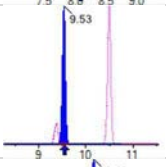 | |
| PFOS | ( 499.0 / 80.0 ) 8612719<br>( 499.0 / 99.0 ) 1969372 | ( 10.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 3701.4<br>26412.4 | 0.2287<br>99.0<br>99.0 | 8.9170 | N/A | 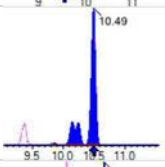 | 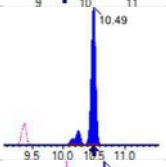 | |
| PFNS | ( 549.0 / 80.0 ) 8536984<br>( 549.0 / 99.0 ) 2272578 | ( 11.38 , 1.08 ) ( N/A , 0.00 , 0.1) | 3435.6<br>3070.7 | 0.2662<br>99.3<br>99.3 | 9.6960 | N/A | 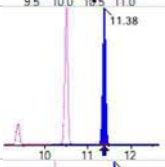 | 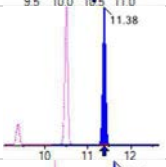 | |
| PFDS | ( 599.0 / 80.0 ) 10328374<br>( 599.0 / 99.0 ) 2646854 | ( 12.19 , 1.16 ) ( N/A , 0.00 , -0.1) | 3070.9<br>3125.1 | 0.2563<br>100.6<br>100.6 | 9.5970 | N/A | 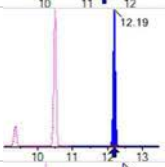 | 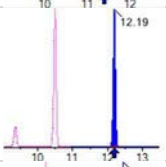 | |
| PFDoS | ( 699.0 / 80.0 ) 10304526<br>( 699.0 / 99.0 ) 2358315 | ( 13.21 , 1.26 ) ( N/A , 0.00 , 0.0) | 3708.6<br>3908.4 | 0.2289<br>102.4<br>102.4 | 9.8960 | N/A | 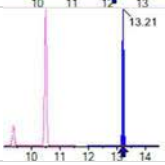 | 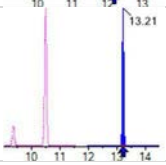 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12826412<br>( 327.0 / 81.0 ) 12040727 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -0.1) | 5557.6<br>3826.0 | 0.9387<br>110.0<br>110.0 | 40.1350 | N/A | 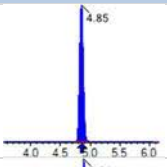 | 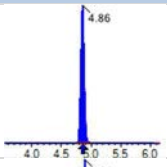 | |
| 6:2FTS | ( 427.0 / 407.0 ) 12451942<br>( 427.0 / 81.0 ) 14327020 | ( 6.94 , 1.00 ) ( 0.00 , N/A , 0.0) | 6527.5<br>6891.6 | 1.1506<br>89.2<br>89.2 | 38.8800 | N/A | 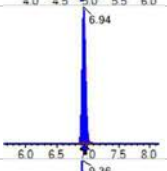 | 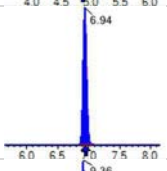 | |
| 8:2FTS | ( 527.0 / 507.0 ) 12302014<br>( 527.0 / 81.0 ) 12387553 | ( 9.36 , 1.00 ) ( 0.00 , N/A , -0.1) | 2416.2<br>2406.2 | 1.0070<br>91.2<br>91.2 | 38.1390 | N/A | 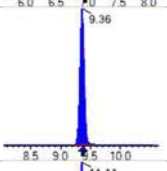 | 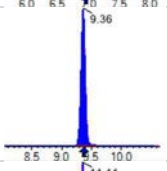 | |
| 10:2FTS | ( 627.0 / 607.0 ) 10300136<br>( 627.0 / 81.0 ) 14674308 | ( 11.11 , 1.00 ) ( 0.01 , N/A , -0.1) | 1307.6<br>1434.9 | 1.4247<br>99.1<br>99.1 | 38.7910 | N/A | 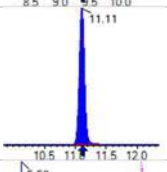 | 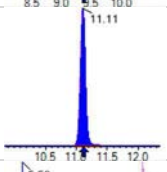 | |
| PFBSA | ( 297.9 / 78.0 ) 5932998<br>( 297.9 / 278.0 ) 7823 | ( 5.56 , 0.38 ) ( N/A , 0.00 , -0.3) | 2373.4<br>92.2 | 0.0013<br>101.9<br>101.9 | 9.9660 | N/A | 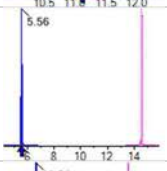 | 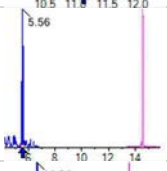 | |
| PFHxSA | ( 397.9 / 78.0 ) 11374028<br>( 397.9 / 378.0 ) 46692 | ( 11.24 , 0.75 ) ( N/A , 0.00 , -0.2) | 1944.2<br>771.6 | 0.0041<br>101.6<br>101.6 | 9.8990 | N/A | 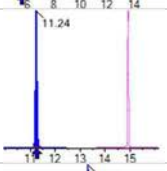 | 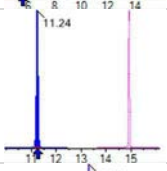 | |
| PFOSA | ( 498.0 / 78.0 ) 8608641<br>( 498.0 / 478.0 ) 121621 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.1) | 3522.9<br>1461.7 | 0.0141<br>96.1<br>96.1 | 10.0630 | N/A | 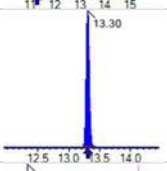 | 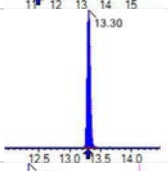 | |
| TFSI | ( 279.7 / 147.0 ) 15108526<br>( 279.7 / 211.0 ) 1326403 | ( 7.07 , 0.53 ) ( N/A , -0.01 , 0.0) | 95.8<br>4726.2 | 0.0878<br>99.2<br>99.2 | 10.1090 | N/A | 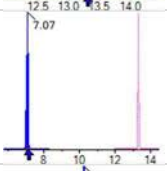 | 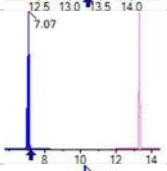 | |
| NMeFOSA | ( 512.0 / 219.0 ) 7108106<br>( 512.0 / 169.0 ) 5412014 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 1.7) | 4566.0<br>1799.3 | 0.7614<br>99.3<br>99.3 | 40.7690 | N/A | 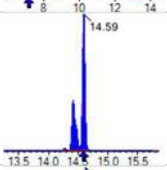 | 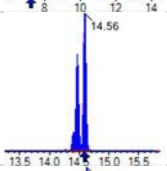 | |
| NEtFOSA | ( 526.0 / 219.0 ) 8272563<br>( 526.0 / 169.0 ) 10357876 | ( 14.93 , 1.00 ) ( 0.01 , N/A , 2.2) | 5059.7<br>3979.7 | 1.2521<br>100.1<br>100.1 | 40.0030 | N/A | 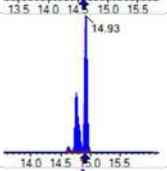 | 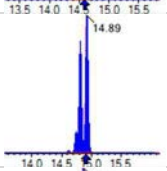 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 2561023<br>( 570.0 / 483.0 ) 1207080 | ( 10.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 9045.2<br>1777.3 | 0.4713<br>101.6<br>101.6 | 9.8500 | N/A | 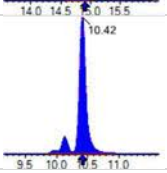 | 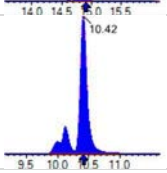 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 2363676<br>( 584.0 / 526.0 ) 1403055 | ( 11.03 , 1.00 ) ( 0.01 , N/A , -0.1) | 2001.8<br>758.0 | 0.5936<br>99.0<br>99.0 | 9.8330 | N/A | 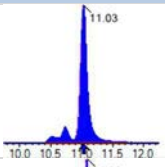 | 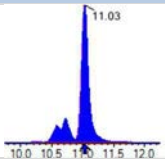 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3082333 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 3738.6 | N/A<br>0.0<br>0.0 | 38.5190 | N/A | 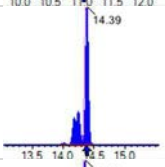 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2512991 | ( 14.76 , 1.00 ) ( 0.03 , N/A , 0.0) | 4539.0 | N/A<br>0.0<br>0.0 | 38.6480 | N/A | 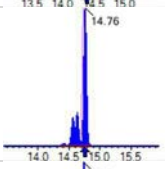 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 642376<br>( 285.0 / 185.0 ) 1708527 | ( 5.64 , 1.00 ) ( 0.00 , N/A , 0.1) | 2067.0<br>3090.7 | 2.6597<br>94.7<br>94.7 | 10.4470 | N/A | 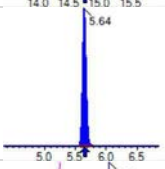 | 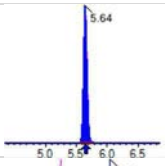 | |
| ADONA | ( 377.0 / 85.0 ) 8184355<br>( 377.0 / 251.0 ) 838218 | ( 6.79 , 1.20 ) ( N/A , -0.01 , 0.0) | 3547.3<br>2209.7 | 0.1024<br>97.7<br>97.7 | 10.0920 | N/A | 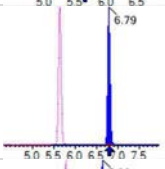 | 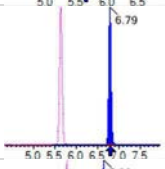 | |
| PFEESA | ( 315.0 / 135.0 ) 2948130<br>( 315.0 / 83.0 ) 1807357 | ( 5.99 , 1.15 ) ( N/A , -0.01 , -0.1) | 3424.7<br>2942.5 | 0.6131<br>95.5<br>95.5 | 17.0400 | N/A | 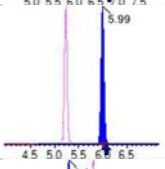 | 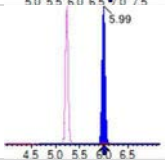 | |
| PFMPA | ( 229.0 / 85.0 ) 1499132 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 10379.5 | N/A<br>0.0<br>0.0 | 19.0000 | N/A | 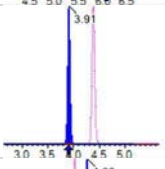 | | |
| PFMBA | ( 279.0 / 85.0 ) 3509087 | ( 4.60 , 1.05 ) ( N/A , -0.01 , 0.0) | 5279.9 | N/A<br>0.0<br>0.0 | 19.7420 | N/A | 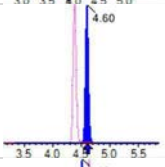 | | |
| NFDHA | ( 295.0 / 201.0 ) 1654782<br>( 295.0 / 85.0 ) 1488098 | ( 5.10 , 0.98 ) ( N/A , 0.00 , 0.0) | 4255.9<br>3811.0 | 0.8993<br>90.4<br>90.4 | 19.5980 | N/A | 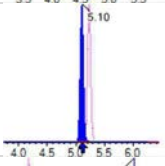 | 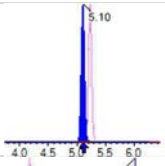 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 8935681<br>( 533.0 / 353.0 ) 2744055 | ( 11.18 , 1.98 ) ( N/A , 0.00 , 0.1) | 2592.7<br>3173.5 | 0.3071<br>96.3<br>96.3 | 9.9180 | N/A | 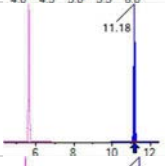 | 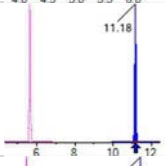 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 6852342<br>( 633.0 / 453.0 ) 2268398 | ( 12.66 , 2.24 ) ( N/A , 0.00 , 0.1) | 4354.9<br>4055.9 | 0.3310<br>97.6<br>97.6 | 9.7860 | N/A | 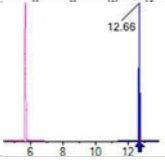 | 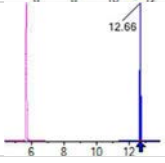 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 4706891<br>( 461.0 / 381.2 ) 1798113 | ( 9.43 , 0.90 ) ( N/A , -0.01 , 0.0) | 5200.7<br>5755.6 | 0.3820<br>98.9<br>98.9 | 9.0800 | N/A | 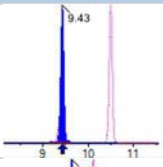 | 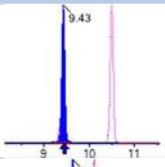 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 660291<br>( 241.0 / 117.0 ) 1572648 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.1) | 7042.7<br>5484.0 | 2.3817<br>108.5<br>108.5 | 35.8410 | N/A | 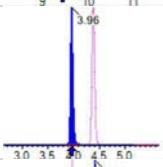 | 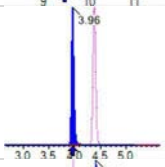 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 2477767<br>( 341.0 / 217.0 ) 3891348 | ( 5.66 , 1.08 ) ( N/A , 0.00 , 0.1) | 2053.6<br>2000.1 | 1.5705<br>102.6<br>102.6 | 38.2960 | N/A | 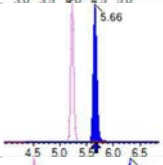 | 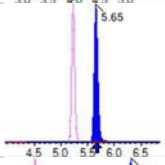 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5141269<br>( 441.0 / 337.0 ) 4590024 | ( 9.33 , 1.78 ) ( N/A , 0.00 , 0.1) | 14794.4<br>16877.7 | 0.8928<br>104.5<br>104.5 | 37.4030 | N/A | 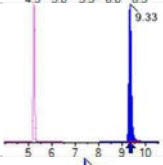 | 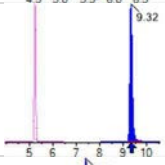 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3279006<br>( 357.2 / 243.0 ) 353637 | ( 5.91 , 1.00 ) ( -0.01 , N/A , 0.0) | 2632.7<br>1790.3 | 0.1078<br>100.6<br>100.6 | 10.0310 | N/A | 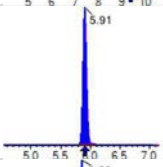 | 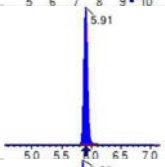 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2860820<br>( 457.2 / 343.0 ) 125837 | ( 8.66 , 1.00 ) ( -0.01 , N/A , 0.1) | 1481.4<br>938.9 | 0.0440<br>98.0<br>98.0 | 9.9810 | N/A | 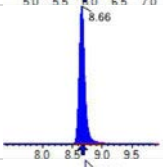 | 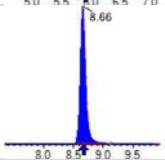 | |
| TDCA | ( 499.0 / 80.0 ) 6469918 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 43110.0 | N/A<br>0.0<br>0.0 | 9.9260 | N/A | 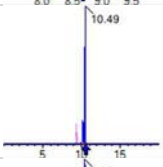 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238901 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1298.3 | N/A | 0.8460<br>[ 1.0000 ] | 84.6%<br>{ 86.2% } | 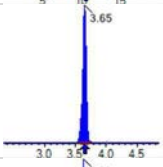 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 110377 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 116220.5 | N/A | 0.9350<br>[ 1.0000 ] | 93.5%<br>{ 95.9% } | 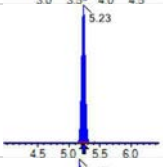 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367272 | ( 7.47 , N/A ) ( N/A , -0.01 , N/A ) | 6296.2 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 93.6% } | 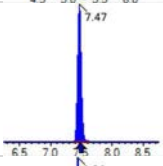 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 267925 | ( 9.04 , N/A ) ( N/A , -0.01 , N/A ) | 1602.2 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 92.2% } | 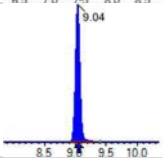 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266253 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 7915.3 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 97.8% } | 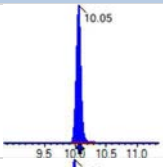 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 906781 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5459.0 | N/A | 0.9230 [ 1.0000 ] | 92.3% { 95.3% } | 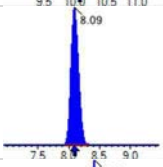 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 757166 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 3989.1 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 102.4% } | 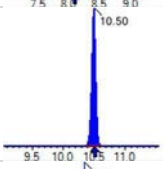 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2106359 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 117705.5 | N/A | 8.1570 [ 8.0000 ] | 102.0% { 86.4% } | 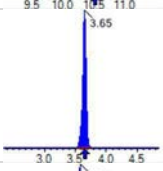 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 859769 | ( 4.38 , N/A ) ( N/A , -0.01 , N/A ) | 7061.2 | N/A | 4.2550 [ 4.0000 ] | 106.4% { 93.0% } | 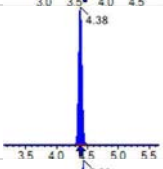 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 512563 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 9789.5 | N/A | 2.1230 [ 2.0000 ] | 106.1% { 95.8% } | 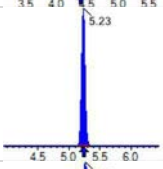 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 548495 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 8960.0 | N/A | 2.0450 [ 2.0000 ] | 102.3% { 96.2% } | 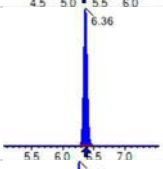 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 804930 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5914.7 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 106.3% } | 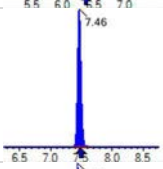 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283915 | ( 9.04 , N/A ) ( N/A , -0.01 , N/A ) | 9552.5 | N/A | 1.0730 [ 1.0000 ] | 107.3% { 100.0% } | 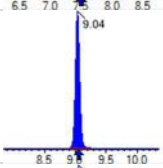 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321929 | ( 10.05 , N/A ) ( N/A , -0.01 , N/A ) | 1251.4 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 95.7% } | 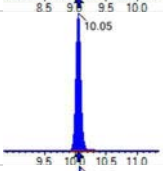 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389467 | ( 10.97 , N/A ) ( N/A , 0.00 , N/A ) | 1198.0 | N/A | 1.0670 [ 1.0000 ] | 106.7% { 99.3% } | 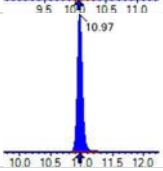 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL6 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392293 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1474.6 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 98.3% } | 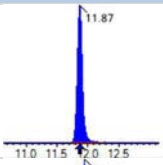  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 351047 | ( 13.15 , N/A ) ( N/A , 0.00 , N/A ) | 1512.8 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 96.9% } | 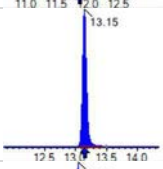  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 589796 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2357.7 | N/A | 2.1270 [ 2.0000 ] | 106.3% { 103.2% } | 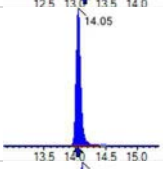  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1573417 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1278.0 | N/A | 2.1530 [ 2.0000 ] | 107.6% { 99.0% } | 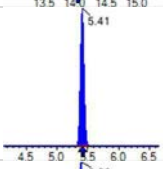  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1399479 | ( 8.09 , N/A ) ( N/A , 0.01 , N/A ) | 5713.0 | N/A | 2.1390 [ 2.0000 ] | 107.0% { 101.9% } | 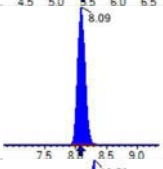  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1664184 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 914.0 | N/A | 2.0660 [ 2.0000 ] | 103.3% { 106.3% } | 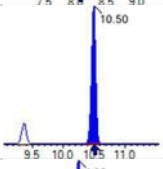  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 484195 | ( 4.86 , N/A ) ( N/A , -0.01 , N/A ) | 73.1 | N/A | 3.0110 [ 4.0000 ] | 75.3% { 69.4% } | 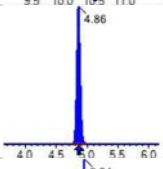  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1509185 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 5300.1 | N/A | 3.8210 [ 4.0000 ] | 95.5% { 91.0% } | 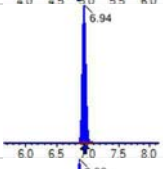  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1311671 | ( 9.36 , N/A ) ( N/A , -0.01 , N/A ) | 1896.3 | N/A | 3.7950 [ 4.0000 ] | 94.9% { 88.7% } | 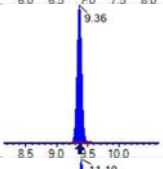  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2675016 | ( 11.10 , N/A ) ( N/A , 0.00 , N/A ) | 1367.6 | N/A | 7.1550 [ 8.0000 ] | 89.4% { 94.0% } | 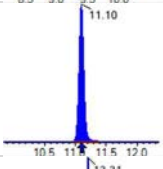  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1768293 | ( 13.31 , N/A ) ( N/A , 0.01 , N/A ) | 3201.2 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 105.0% } | 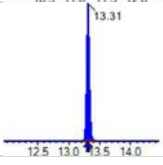  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 392329 | ( 14.59 , N/A ) ( N/A , 0.01 , N/A ) | 2195.6 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 105.8% } | 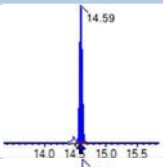  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 365125 | ( 14.92 , N/A ) ( N/A , 0.01 , N/A ) | 2483.7 | N/A | 2.0770 [ 2.0000 ] | 103.9% { 102.7% } | 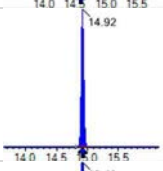  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1127383 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2830.7 | N/A | 4.0310 [ 4.0000 ] | 100.8% { 97.3% } | 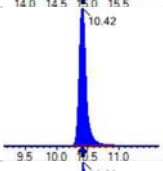  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 991205 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 2493.6 | N/A | 3.9270 [ 4.0000 ] | 98.2% { 95.9% } | 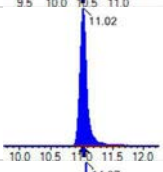  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1478328 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3364.6 | N/A | 20.5810 [ 20.0000 ] | 102.9% { 104.1% } | 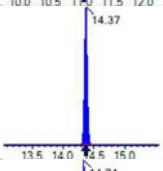  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365169 | ( 14.74 , N/A ) ( N/A , 0.01 , N/A ) | 4529.3 | N/A | 20.2930 [ 20.0000 ] | 101.5% { 102.2% } | 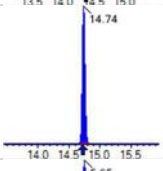  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 837808 | ( 5.65 , N/A ) ( N/A , -0.01 , N/A ) | 3014.0 | N/A | 8.0100 [ 8.0000 ] | 100.1% { 92.7% } | 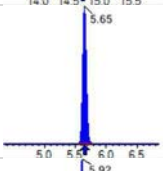  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 621730 | ( 5.92 , N/A ) ( N/A , -0.01 , N/A ) | 2463.3 | N/A | 2.1430 [ 2.0000 ] | 107.1% { 109.5% } | 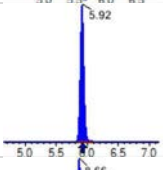  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 693525 | ( 8.66 , N/A ) ( N/A , -0.01 , N/A ) | 1087.6 | N/A | 2.1220 [ 2.0000 ] | 106.1% { 106.1% } | 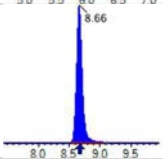  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2767895<br>( 163.0 / 69.0 ) 73153 | ( 2.48 , 0.68 ) ( N/A , -0.01 , 0.0) | 1529.3<br>428.2 | 0.0264<br>96.4<br>96.4 | 49.0070 | N/A | 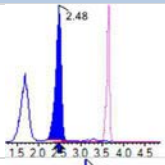 | 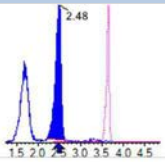 | |
| PFBA | ( 213.0 / 169.0 ) 20144386 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 2896.1 | N/A<br>0.0<br>0.0 | 81.5800 | N/A | 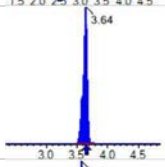 | | |
| PFPeA | ( 263.0 / 219.0 ) 8191769<br>( 263.0 / 69.0 ) 95115 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 6544.5<br>1379.7 | 0.0116<br>97.6<br>97.6 | 41.3530 | N/A | 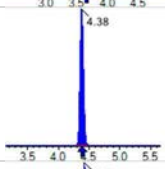 | 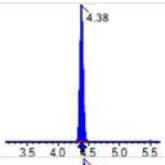 | |
| PFHxA | ( 313.0 / 269.0 ) 5108899<br>( 313.0 / 119.0 ) 581861 | ( 5.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 3270.0<br>2394.0 | 0.1139<br>102.4<br>102.4 | 21.8930 | N/A | 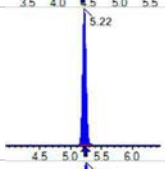 | 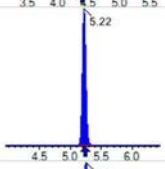 | |
| PFHpA | ( 363.0 / 319.0 ) 6040424<br>( 363.0 / 169.0 ) 1767960 | ( 6.35 , 1.00 ) ( 0.00 , N/A , 0.0) | 3112.7<br>2804.9 | 0.2927<br>95.8<br>95.8 | 22.1490 | N/A | 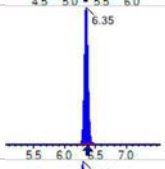 | 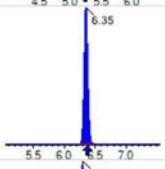 | |
| PFOA | ( 413.0 / 369.0 ) 8578956<br>( 413.0 / 169.0 ) 3122595 | ( 7.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 2081.6<br>2560.7 | 0.3640<br>101.8<br>101.8 | 21.0010 | N/A | 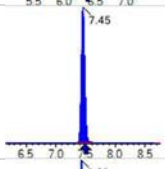 | 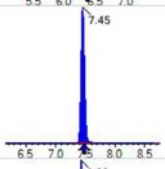 | |
| PFNA | ( 463.0 / 419.0 ) 6159981<br>( 463.0 / 169.0 ) 1566898 | ( 9.03 , 1.00 ) ( 0.00 , N/A , 0.1) | 2350.7<br>1871.3 | 0.2544<br>103.5<br>103.5 | 20.4370 | N/A | 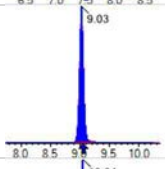 | 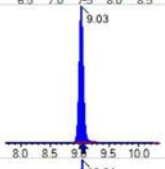 | |
| PFDA | ( 513.0 / 469.0 ) 6822175<br>( 513.0 / 169.0 ) 793094 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 9930.9<br>4899.1 | 0.1163<br>97.6<br>97.6 | 20.4840 | N/A | 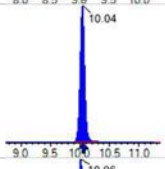 | 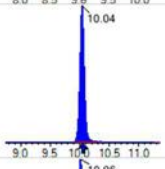 | |
| PFUnA | ( 563.0 / 519.0 ) 7699348<br>( 563.0 / 169.0 ) 1073513 | ( 10.96 , 1.00 ) ( 0.00 , N/A , 0.0) | 1361.8<br>1146.0 | 0.1394<br>90.0<br>90.0 | 22.3440 | N/A | 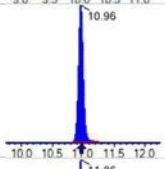 | 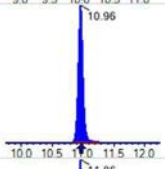 | |
| PFDoA | ( 613.0 / 569.0 ) 8517622<br>( 613.0 / 169.0 ) 1268183 | ( 11.86 , 1.00 ) ( 0.00 , N/A , 0.0) | 2070.7<br>1670.2 | 0.1489<br>98.0<br>98.0 | 21.0020 | N/A | 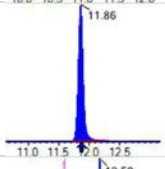 | 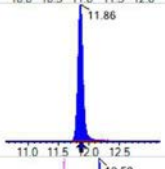 | |
| PFTrDA | ( 663.0 / 619.0 ) 8350718<br>( 663.0 / 169.0 ) 2094467 | ( 12.59 , 1.06 ) ( N/A , -0.01 , 0.0) | 1909.3<br>1721.2 | 0.2508<br>93.2<br>93.2 | 21.1770 | N/A | 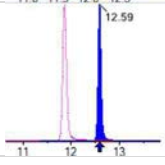 | 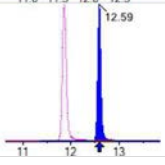 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 7009272<br>( 713.0 / 169.0 ) 1839944 | ( 13.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1809.0<br>1449.9 | 0.2625<br>96.7<br>96.7 | 21.2270 | N/A | 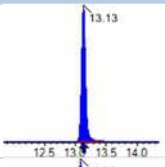 | 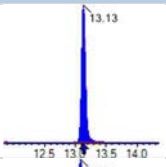 | |
| PFHxDA | ( 813.0 / 769.0 ) 6046764<br>( 813.0 / 169.0 ) 1462750 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.3<br>1729.1 | 0.2419<br>92.5<br>92.5 | 20.9780 | N/A | 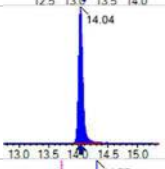 | 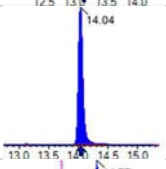 | |
| PFODA | ( 913.0 / 869.0 ) 3872356<br>( 913.0 / 169.0 ) 1207475 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.0) | 2776.6<br>2020.6 | 0.3118<br>99.5<br>99.5 | 21.2120 | N/A | 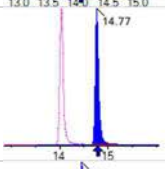 | 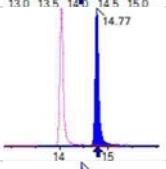 | |
| PFBS | ( 299.0 / 80.0 ) 7383443<br>( 299.0 / 99.0 ) 5403141 | ( 5.40 , 1.00 ) ( 0.00 , N/A , 0.0) | 3012.4<br>2867.8 | 0.7318<br>98.8<br>98.8 | 19.0010 | N/A | 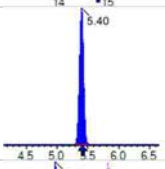 | 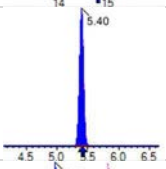 | |
| PFPeS | ( 349.0 / 80.0 ) 19547962<br>( 349.0 / 99.0 ) 7036099 | ( 6.67 , 0.83 ) ( N/A , -0.02 , 0.1) | 4291.5<br>4836.8 | 0.3599<br>105.3<br>105.3 | 19.5690 | N/A | 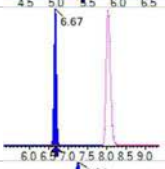 | 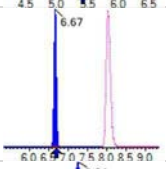 | |
| PFHxS | ( 399.0 / 80.0 ) 24130124<br>( 399.0 / 99.0 ) 7650869 | ( 8.04 , 1.00 ) ( 0.00 , N/A , 0.2) | 4657.0<br>5151.5 | 0.3171<br>96.6<br>96.6 | 19.8170 | N/A | 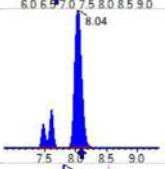 | 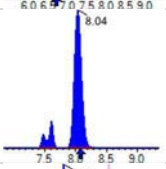 | |
| PFHpS | ( 449.0 / 80.0 ) 20405149<br>( 449.0 / 99.0 ) 5670578 | ( 9.52 , 0.91 ) ( N/A , -0.01 , 0.1) | 3021.0<br>2990.5 | 0.2779<br>106.5<br>106.5 | 19.7430 | N/A | 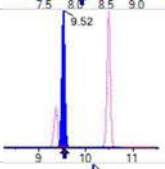 | 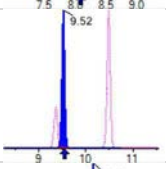 | |
| PFOS | ( 499.0 / 80.0 ) 18765848<br>( 499.0 / 99.0 ) 4259440 | ( 10.48 , 1.00 ) ( 0.00 , N/A , 0.0) | 4643.5<br>13759.1 | 0.2270<br>98.2<br>98.2 | 18.6830 | N/A | 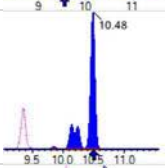 | 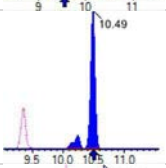 | |
| PFNS | ( 549.0 / 80.0 ) 18249823<br>( 549.0 / 99.0 ) 5058160 | ( 11.37 , 1.08 ) ( N/A , -0.01 , 0.0) | 3632.1<br>3729.3 | 0.2772<br>103.4<br>103.4 | 19.9340 | N/A | 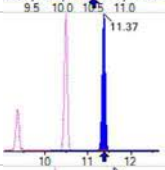 | 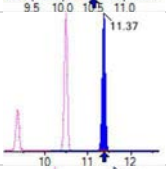 | |
| PFDS | ( 599.0 / 80.0 ) 20950812<br>( 599.0 / 99.0 ) 5699792 | ( 12.18 , 1.16 ) ( N/A , -0.01 , 0.0) | 4312.8<br>3759.2 | 0.2721<br>106.8<br>106.8 | 18.7220 | N/A | 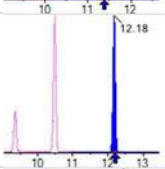 | 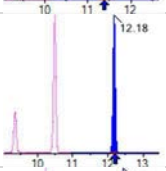 | |
| PFDoS | ( 699.0 / 80.0 ) 20566724<br>( 699.0 / 99.0 ) 5039727 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 4646.2<br>5764.7 | 0.2450<br>109.6<br>109.6 | 18.9940 | N/A | 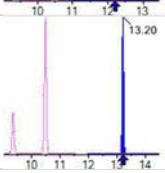 | 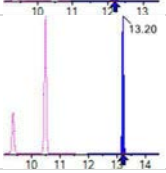 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 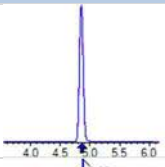 | 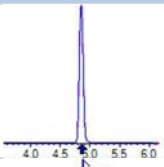 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) 20512887<br>( 427.0 / 81.0 ) 25142299 | ( 6.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 6835.6<br>6457.3 | 1.2257<br>95.0<br>95.0 | 73.7280 | N/A | 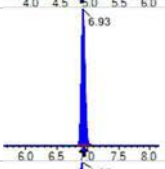 | 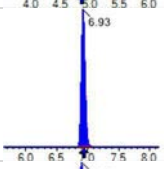 | |
| 8:2FTS | ( 527.0 / 507.0 ) 20737387<br>( 527.0 / 81.0 ) 22196144 | ( 9.35 , 1.00 ) ( -0.01 , N/A , 0.1) | 2027.1<br>2088.8 | 1.0703<br>97.0<br>97.0 | 71.0010 | N/A | 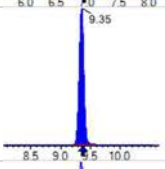 | 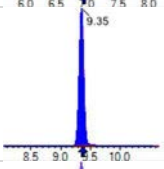 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 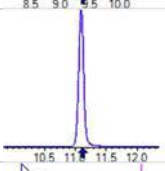 | 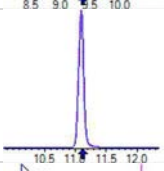 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 12524701<br>( 297.9 / 278.0 ) 17127 | ( 5.55 , 0.38 ) ( N/A , -0.01 , 0.3) | 1280.6<br>148.2 | 0.0014<br>105.6<br>105.6 | 20.4740 | N/A | 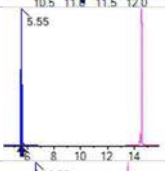 | 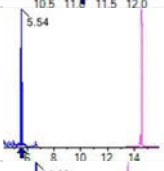 | |
| PFHxSA | ( 397.9 / 78.0 ) 24114997<br>( 397.9 / 378.0 ) 100173 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.2) | 1968.6<br>1032.9 | 0.0042<br>102.9<br>102.9 | 21.1720 | N/A | 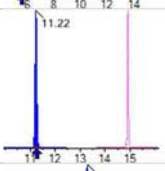 | 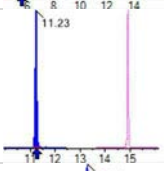 | |
| PFOSA | ( 498.0 / 78.0 ) 18038492<br>( 498.0 / 478.0 ) 256040 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.0) | 3155.8<br>2047.1 | 0.0142<br>96.5<br>96.5 | 21.3150 | N/A | 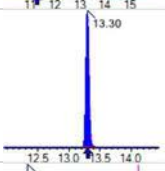 | 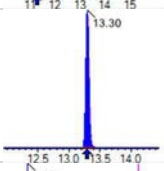 | |
| TFSI | ( 279.7 / 147.0 ) 31918008<br>( 279.7 / 211.0 ) 2902274 | ( 7.07 , 0.53 ) ( N/A , -0.01 , 0.0) | 103.5<br>5242.1 | 0.0909<br>102.8<br>102.8 | 21.5900 | N/A | 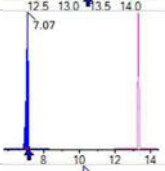 | 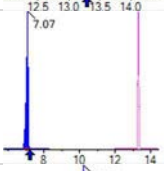 | |
| NMeFOSA | ( 512.0 / 219.0 ) 14921604<br>( 512.0 / 169.0 ) 11712804 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 2.0) | 4959.6<br>1712.0 | 0.7850<br>102.4<br>102.4 | 83.2870 | N/A | 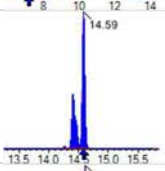 | 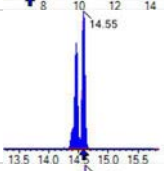 | |
| NEtFOSA | ( 526.0 / 219.0 ) 17338797<br>( 526.0 / 169.0 ) 21713888 | ( 14.92 , 1.00 ) ( 0.01 , N/A , 2.5) | 5472.5<br>3992.7 | 1.2523<br>100.2<br>100.2 | 84.5840 | N/A | 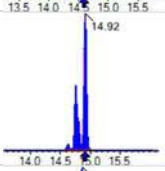 | 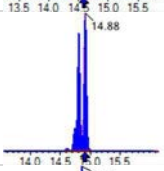 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5429378<br>( 570.0 / 483.0 ) 2544481 | ( 10.41 , 1.00 ) ( 0.01 , N/A , 0.1) | 9339.1<br>1721.1 | 0.4687<br>101.0<br>101.0 | 20.5890 | N/A | 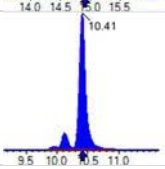 | 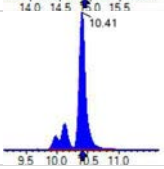 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 4688352<br>( 584.0 / 526.0 ) 2764951 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.0) | 2383.2<br>688.2 | 0.5897<br>98.3<br>98.3 | 22.4580 | N/A | 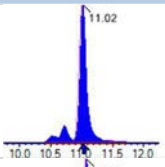 | 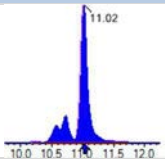 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6907762 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 5119.9 | N/A<br>0.0<br>0.0 | 85.4840 | N/A | 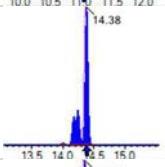 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5528338 | ( 14.75 , 1.00 ) ( 0.02 , N/A , 0.0) | 5731.7 | N/A<br>0.0<br>0.0 | 83.1020 | N/A | 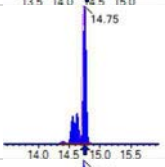 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1364668<br>( 285.0 / 185.0 ) 3536154 | ( 5.63 , 1.00 ) ( -0.01 , N/A , -0.1) | 2459.3<br>3125.1 | 2.5912<br>92.3<br>92.3 | 21.5040 | N/A | 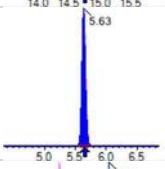 | 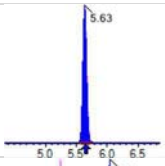 | |
| ADONA | ( 377.0 / 85.0 ) 17414987<br>( 377.0 / 251.0 ) 1757128 | ( 6.78 , 1.20 ) ( N/A , -0.02 , 0.1) | 3602.9<br>2618.0 | 0.1009<br>96.2<br>96.2 | 20.8060 | N/A | 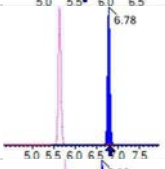 | 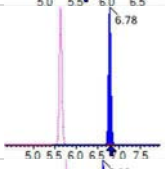 | |
| PFEESA | ( 315.0 / 135.0 ) 6607349<br>( 315.0 / 83.0 ) 3698181 | ( 5.98 , 1.15 ) ( N/A , -0.02 , 0.0) | 3439.3<br>2708.8 | 0.5597<br>87.2<br>87.2 | 38.9200 | N/A | 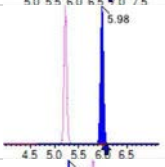 | 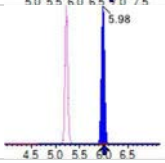 | |
| PFMPA | ( 229.0 / 85.0 ) 3195192 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 11465.8 | N/A<br>0.0<br>0.0 | 43.8720 | N/A | 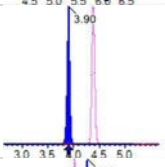 | | |
| PFMBA | ( 279.0 / 85.0 ) 7008463 | ( 4.60 , 1.05 ) ( N/A , -0.01 , 0.0) | 6349.4 | N/A<br>0.0<br>0.0 | 42.7170 | N/A | 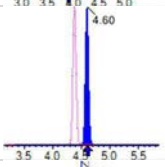 | | |
| NFDHA | ( 295.0 / 201.0 ) 3267704<br>( 295.0 / 85.0 ) 3452312 | ( 5.10 , 0.98 ) ( N/A , -0.01 , 0.1) | 3828.7<br>3736.6 | 1.0565<br>106.2<br>106.2 | 39.4400 | N/A | 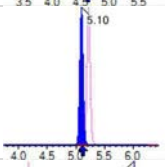 | 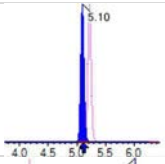 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19365712<br>( 533.0 / 353.0 ) 6025199 | ( 11.17 , 1.98 ) ( N/A , -0.01 , 0.0) | 3972.6<br>3210.4 | 0.3111<br>97.6<br>97.6 | 20.8260 | N/A | 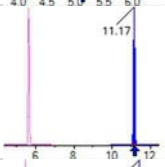 | 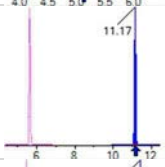 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14885861<br>( 633.0 / 453.0 ) 4856425 | ( 12.65 , 2.24 ) ( N/A , -0.01 , 0.0) | 4696.1<br>3676.4 | 0.3262<br>96.2<br>96.2 | 20.5980 | N/A | 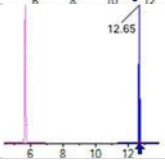 | 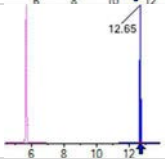 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10792210<br>( 461.0 / 381.2 ) 4094528 | ( 9.42 , 0.90 )<br>( N/A , -0.02 , -0.1) | 5896.9<br>5731.1 | 0.3794<br>98.2<br>98.2 | 20.0200 | N/A | 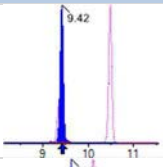 | 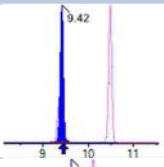 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1331098<br>( 241.0 / 117.0 ) 2977953 | ( 3.96 , 0.90 )<br>( N/A , -0.01 , 0.0) | 5314.1<br>6422.8 | 2.2372<br>101.9<br>101.9 | 78.2760 | N/A | 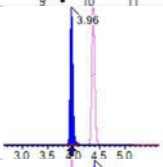 | 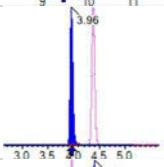 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 5051595<br>( 341.0 / 217.0 ) 7492471 | ( 5.65 , 1.08 )<br>( N/A , -0.01 , 0.0) | 1486.6<br>1526.9 | 1.4832<br>96.9<br>96.9 | 79.5690 | N/A | 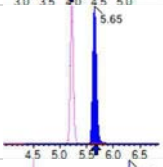 | 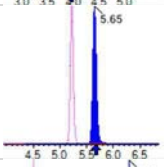 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10903970<br>( 441.0 / 337.0 ) 9463060 | ( 9.30 , 1.78 )<br>( N/A , -0.03 , 0.0) | 11802.7<br>26493.6 | 0.8679<br>101.6<br>101.6 | 80.8420 | N/A | 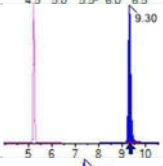 | 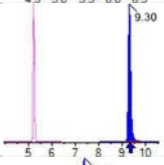 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6401630<br>( 357.2 / 243.0 ) 691595 | ( 5.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2130.8<br>1985.0 | 0.1080<br>100.7<br>100.7 | 21.6660 | N/A | 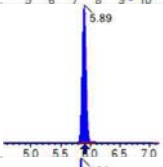 | 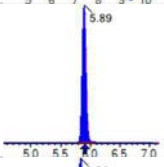 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5962342<br>( 457.2 / 343.0 ) 255761 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1397.5<br>964.8 | 0.0429<br>95.6<br>95.6 | 20.8210 | N/A | 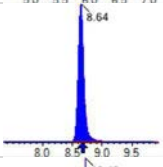 | 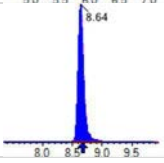 | |
| TDCA | ( 499.0 / 80.0 ) 14316347 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 57784.2 | N/A<br>0.0<br>0.0 | 21.1220 | N/A | 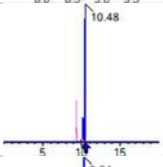 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 243482 | ( 3.64 , N/A )<br>( N/A , -0.01 , N/A ) | 1266.9 | N/A | 0.8630<br>[ 1.0000 ] | 86.3%<br>{ 87.9% } | 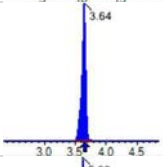 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 128124 | ( 5.22 , N/A )<br>( N/A , -0.01 , N/A ) | 67838.8 | N/A | 1.0850<br>[ 1.0000 ] | 108.5%<br>{ 111.4% } | 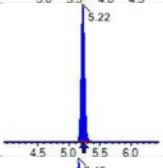 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 414467 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 5671.5 | N/A | 1.0680<br>[ 1.0000 ] | 106.8%<br>{ 105.6% } | 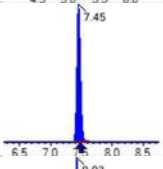 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 308932 | ( 9.03 , N/A )<br>( N/A , -0.02 , N/A ) | 1418.7 | N/A | 1.0580<br>[ 1.0000 ] | 105.8%<br>{ 106.3% } | 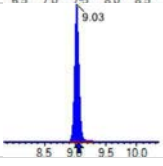 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299193 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 7550.6 | N/A | 1.0440 [ 1.0000 ] | 104.4% { 109.9% } | 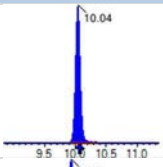 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1050630 | ( 8.04 , N/A ) ( N/A , -0.05 , N/A ) | 5938.9 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 110.4% } | 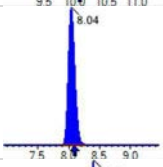 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 844338 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 3663.6 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 114.1% } | 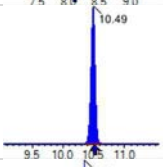 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1996356 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 91367.2 | N/A | 7.5860 [ 8.0000 ] | 94.8% { 81.9% } | 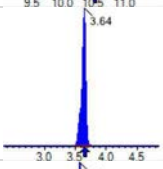 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 793608 | ( 4.38 , N/A ) ( N/A , -0.01 , N/A ) | 4895.6 | N/A | 3.3830 [ 4.0000 ] | 84.6% { 85.8% } | 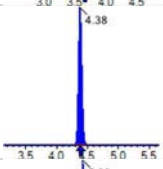 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 502955 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 12364.4 | N/A | 1.7940 [ 2.0000 ] | 89.7% { 94.0% } | 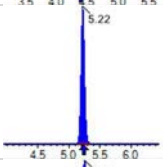 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 549713 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 5786.9 | N/A | 1.7660 [ 2.0000 ] | 88.3% { 96.4% } | 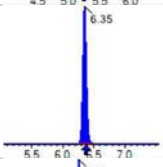 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 813563 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 4980.6 | N/A | 1.8520 [ 2.0000 ] | 92.6% { 107.5% } | 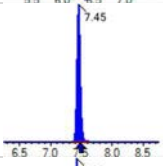 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299964 | ( 9.03 , N/A ) ( N/A , -0.02 , N/A ) | 34627.4 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 105.6% } | 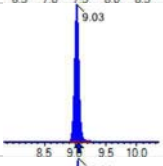 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 333488 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1697.5 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 99.1% } | 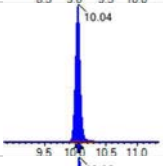 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 379484 | ( 10.96 , N/A ) ( N/A , -0.01 , N/A ) | 1142.3 | N/A | 0.9260 [ 1.0000 ] | 92.6% { 96.8% } | 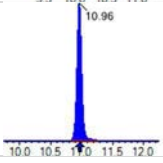 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 404144 | ( 11.86 , N/A ) ( N/A , -0.01 , N/A ) | 1292.8 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 101.3% } | 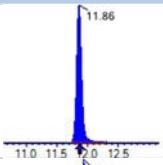  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 353610 | ( 13.14 , N/A ) ( N/A , -0.01 , N/A ) | 1367.5 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 97.6% } | 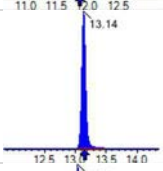  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 615303 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2358.7 | N/A | 1.9750 [ 2.0000 ] | 98.7% { 107.6% } | 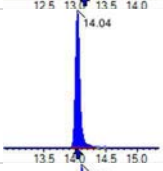  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1580181 | ( 5.40 , N/A ) ( N/A , -0.01 , N/A ) | 1284.0 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 99.4% } | 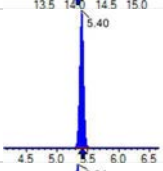  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1390350 | ( 8.04 , N/A ) ( N/A , -0.05 , N/A ) | 6727.0 | N/A | 1.8340 [ 2.0000 ] | 91.7% { 101.2% } | 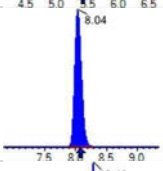  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1730504 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 611.7 | N/A | 1.9260 [ 2.0000 ] | 96.3% { 110.5% } | 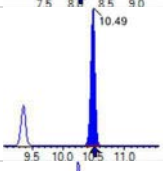  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 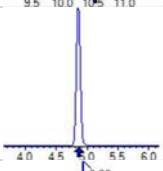 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1311079 | ( 6.93 , N/A ) ( N/A , -0.02 , N/A ) | 4859.9 | N/A | 2.8650 [ 4.0000 ] | 71.6% { 79.0% } | 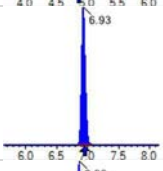  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1187694 | ( 9.36 , N/A ) ( N/A , -0.01 , N/A ) | 1643.7 | N/A | 2.9660 [ 4.0000 ] | 74.2% { 80.3% } | 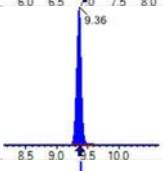  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 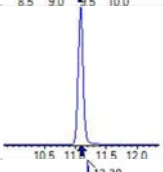 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1749249 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3547.4 | N/A | 1.8340 [ 2.0000 ] | 91.7% { 103.9% } | 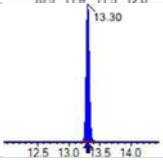  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 403152 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 1970.7 | N/A | 1.8800 [ 2.0000 ] | 94.0% { 108.8% } | 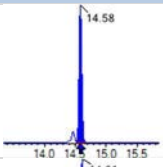  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 361925 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2610.3 | N/A | 1.8470 [ 2.0000 ] | 92.3% { 101.8% } | 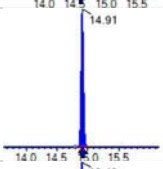  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1143459 | ( 10.40 , N/A ) ( N/A , -0.01 , N/A ) | 3149.4 | N/A | 3.6660 [ 4.0000 ] | 91.7% { 98.7% } | 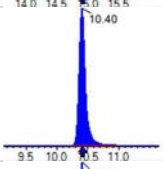  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 860790 | ( 11.01 , N/A ) ( N/A , -0.01 , N/A ) | 2203.6 | N/A | 3.0580 [ 4.0000 ] | 76.4% { 83.3% } | 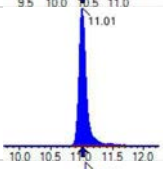  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1492864 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3592.4 | N/A | 18.6370 [ 20.0000 ] | 93.2% { 105.1% } | 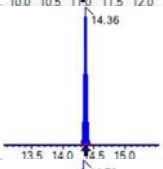  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1396714 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 4587.7 | N/A | 18.6190 [ 20.0000 ] | 93.1% { 104.6% } | 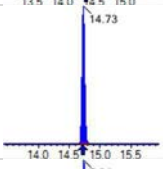  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 864706 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2122.0 | N/A | 7.1220 [ 8.0000 ] | 89.0% { 95.7% } | 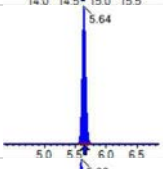  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561949 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 2522.7 | N/A | 1.7230 [ 2.0000 ] | 86.2% { 99.0% } | 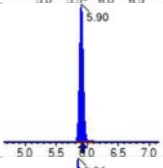  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 692896 | ( 8.64 , N/A ) ( N/A , -0.03 , N/A ) | 1100.9 | N/A | 1.8860 [ 2.0000 ] | 94.3% { 106.0% } | 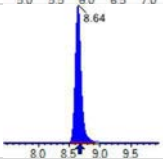  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 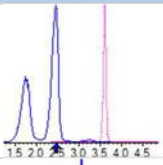 | 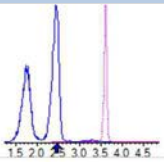 | NR, |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 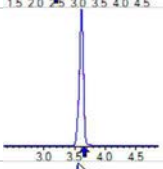 | | NR, |
| PFPeA | ( 263.0 / 219.0 )<br>18554576<br>( 263.0 / 69.0 )<br>221123 | ( 4.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 6986.2<br>2573.5 | 0.0119<br>100.1<br>100.1 | 108.2410 | N/A | 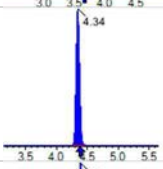 | 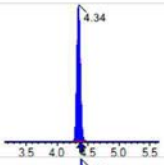 | |
| PFHxA | ( 313.0 / 269.0 )<br>11534220<br>( 313.0 / 119.0 )<br>1329778 | ( 5.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2672.5<br>3229.0 | 0.1153<br>103.7<br>103.7 | 52.7870 | N/A | 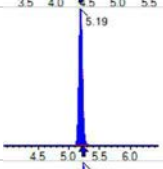 | 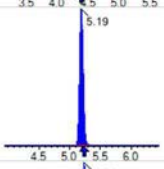 | |
| PFHpA | ( 363.0 / 319.0 )<br>13530873<br>( 363.0 / 169.0 )<br>4150115 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3777.1<br>3792.5 | 0.3067<br>100.4<br>100.4 | 51.0870 | N/A | 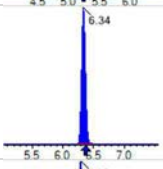 | 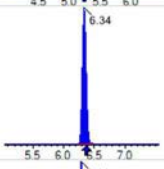 | |
| PFOA | ( 413.0 / 369.0 )<br>19770928<br>( 413.0 / 169.0 )<br>7332025 | ( 7.45 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2723.8<br>3051.6 | 0.3708<br>103.7<br>103.7 | 51.0090 | N/A | 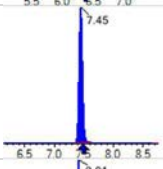 | 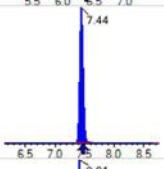 | |
| PFNA | ( 463.0 / 419.0 )<br>14796587<br>( 463.0 / 169.0 )<br>3725225 | ( 9.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2068.6<br>2126.6 | 0.2518<br>102.5<br>102.5 | 52.5390 | N/A | 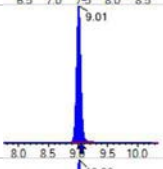 | 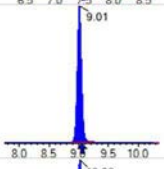 | |
| PFDA | ( 513.0 / 469.0 )<br>15665927<br>( 513.0 / 169.0 )<br>1884520 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , 0.0) | 13025.6<br>5477.1 | 0.1203<br>100.9<br>100.9 | 51.1610 | N/A | 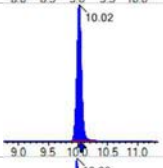 | 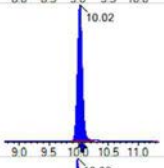 | |
| PFUnA | ( 563.0 / 519.0 )<br>17217624<br>( 563.0 / 169.0 )<br>2479183 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1752.1<br>1201.6 | 0.1440<br>93.0<br>93.0 | 58.3950 | N/A | 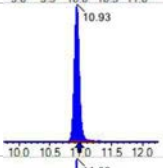 | 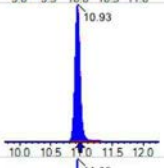 | |
| PFDoA | ( 613.0 / 569.0 )<br>19180204<br>( 613.0 / 169.0 )<br>2853413 | ( 11.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1899.7<br>1815.9 | 0.1488<br>98.0<br>98.0 | 51.8370 | N/A | 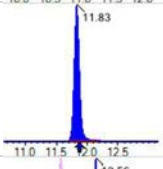 | 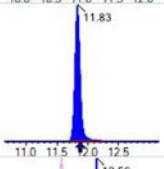 | |
| PFTrDA | ( 663.0 / 619.0 )<br>18136554<br>( 663.0 / 169.0 )<br>4683446 | ( 12.56 , 1.06 )<br>( N/A , -0.04 , 0.1) | 1807.0<br>1776.7 | 0.2582<br>95.9<br>95.9 | 50.4130 | N/A | 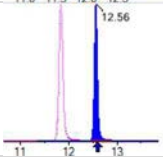 | 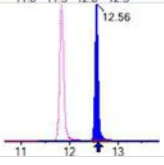 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 15453969<br>( 713.0 / 169.0 ) 4040988 | ( 13.10 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2037.6<br>1868.7 | 0.2615<br>96.4<br>96.4 | 50.0110 | N/A | 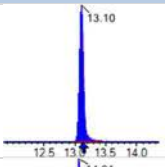 | 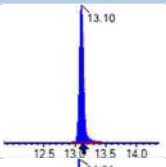 | |
| PFHxDA | ( 813.0 / 769.0 ) 13785746<br>( 813.0 / 169.0 ) 3776458 | ( 14.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3649.3<br>2219.9 | 0.2739<br>104.7<br>104.7 | 51.0880 | N/A | 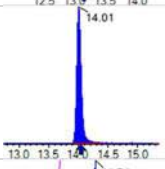 | 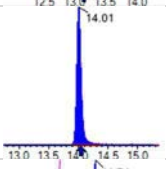 | |
| PFODA | ( 913.0 / 869.0 ) 9179280<br>( 913.0 / 169.0 ) 2594696 | ( 14.74 , 1.05 )<br>( N/A , -0.04 , 0.2) | 3140.3<br>2229.5 | 0.2827<br>90.2<br>90.2 | 53.7110 | N/A | 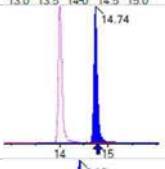 | 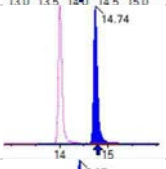 | |
| PFBS | ( 299.0 / 80.0 ) 17642099<br>( 299.0 / 99.0 ) 13037007 | ( 5.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3775.5<br>3570.0 | 0.7390<br>99.8<br>99.8 | 48.5430 | N/A | 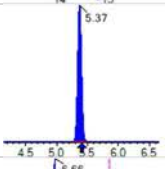 | 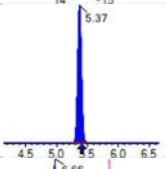 | |
| PFPeS | ( 349.0 / 80.0 ) 41089857<br>( 349.0 / 99.0 ) 15601355 | ( 6.66 , 0.83 )<br>( N/A , -0.03 , 0.0) | 3563.7<br>3576.1 | 0.3797<br>111.1<br>111.1 | 40.2470 | N/A | 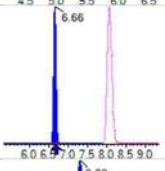 | 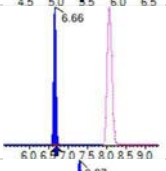 | |
| PFHxS | ( 399.0 / 80.0 ) 59257946<br>( 399.0 / 99.0 ) 19384754 | ( 8.08 , 1.00 )<br>( 0.00 , N/A , 0.2) | 5122.6<br>7240.0 | 0.3271<br>99.7<br>99.7 | 47.6170 | N/A | 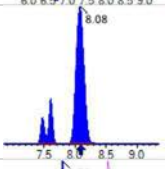 | 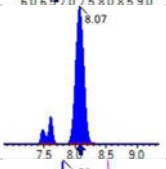 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 46276875<br>( 449.0 / 99.0 ) 13749946 | ( 9.50 , 0.91 )<br>( N/A , -0.03 , -0.1) | 3159.8<br>3453.6 | 0.2971<br>113.9<br>113.9 | 45.6670 | N/A | 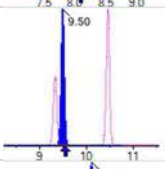 | 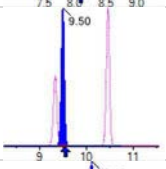 | |
| PFOS | ( 499.0 / 80.0 ) 47298154<br>( 499.0 / 99.0 ) 11732524 | ( 10.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4215.1<br>12254.0 | 0.2481<br>107.4<br>107.4 | 48.0290 | N/A | 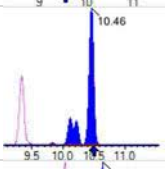 | 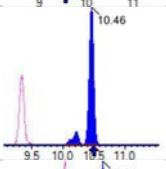 | |
| PFNS | ( 549.0 / 80.0 ) 39659288<br>( 549.0 / 99.0 ) 11404012 | ( 11.34 , 1.08 )<br>( N/A , -0.04 , 0.0) | 3451.9<br>3523.9 | 0.2875<br>107.3<br>107.3 | 44.1830 | N/A | 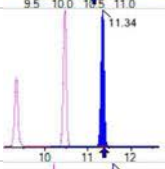 | 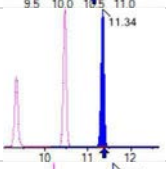 | |
| PFDS | ( 599.0 / 80.0 ) 41471869<br>( 599.0 / 99.0 ) 11416695 | ( 12.15 , 1.16 )<br>( N/A , -0.04 , 0.0) | 3595.8<br>4837.0 | 0.2753<br>108.1<br>108.1 | 37.7980 | N/A | 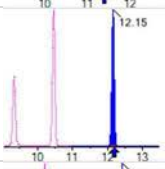 | 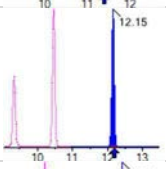 | |
| PFDoS | ( 699.0 / 80.0 ) 39725590<br>( 699.0 / 99.0 ) 10204172 | ( 13.17 , 1.26 )<br>( N/A , -0.03 , 0.0) | 5203.9<br>6256.7 | 0.2569<br>114.9<br>114.9 | 37.4190 | N/A | 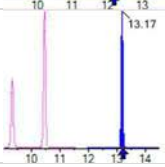 | 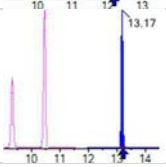 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 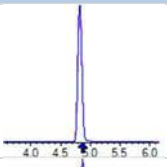 | 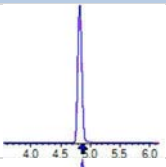 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 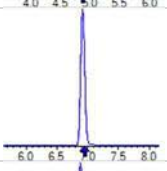 | 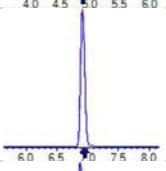 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 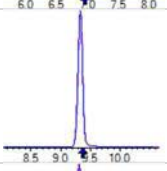 | 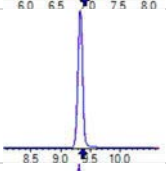 | NR, |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 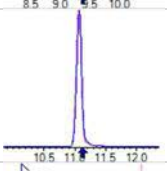 | 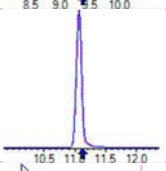 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 30768790<br>( 297.9 / 278.0 ) 43534 | ( 5.52 , 0.38 ) ( N/A , -0.04 , 0.0) | 1847.0<br>354.3 | 0.0014<br>109.3<br>109.3 | 47.1510 | N/A | 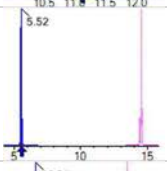 | 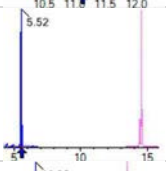 | |
| PFHxSA | ( 397.9 / 78.0 ) 51111724<br>( 397.9 / 378.0 ) 233176 | ( 11.21 , 0.75 ) ( N/A , -0.03 , 0.0) | 1822.2<br>1619.9 | 0.0046<br>113.0<br>113.0 | 50.0600 | N/A | 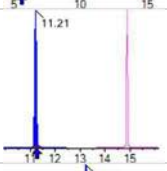 | 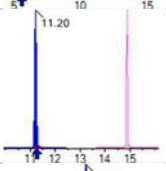 | |
| PFOSA | ( 498.0 / 78.0 ) 40160583<br>( 498.0 / 478.0 ) 658215 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 3742.5<br>3644.9 | 0.0164<br>111.5<br>111.5 | 48.2840 | N/A | 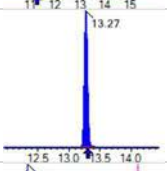 | 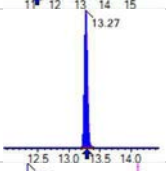 | |
| TFSI | ( 279.7 / 147.0 ) 75387177<br>( 279.7 / 211.0 ) 7514251 | ( 7.04 , 0.53 ) ( N/A , -0.04 , -0.2) | 92.4<br>218246.7 | 0.0997<br>112.6<br>112.6 | 51.8820 | N/A | 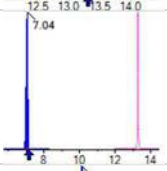 | 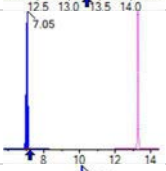 | |
| NMeFOSA | ( 512.0 / 219.0 ) 35094422<br>( 512.0 / 169.0 ) 26676680 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 2.7) | 4161.7<br>1586.2 | 0.7601<br>99.2<br>99.2 | 183.6330 | N/A | 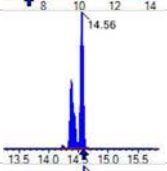 | 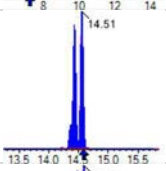 | |
| NEtFOSA | ( 526.0 / 219.0 ) 39274605<br>( 526.0 / 169.0 ) 48620335 | ( 14.88 , 1.00 ) ( 0.00 , N/A , 2.2) | 4404.9<br>3542.8 | 1.2380<br>99.0<br>99.0 | 213.7310 | N/A | 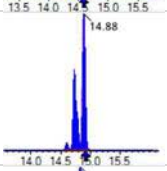 | 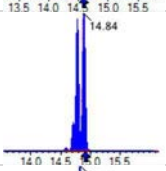 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 11894876<br>( 570.0 / 483.0 ) 5531101 | ( 10.38 , 1.00 ) ( 0.01 , N/A , 0.1) | 7266.9<br>1479.8 | 0.4650<br>100.2<br>100.2 | 50.9080 | N/A | 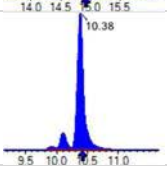 | 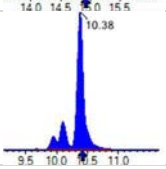 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 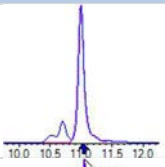 | 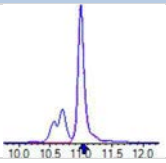 | NR, |
| NMeFOSE | ( 616.0 / 59.0 ) 15548262 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 7738.1 | N/A<br>0.0<br>0.0 | 209.7860 | N/A | 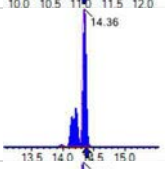 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 13177396 | ( 14.73 , 1.00 ) ( 0.03 , N/A , 0.0) | 7209.8 | N/A<br>0.0<br>0.0 | 213.6710 | N/A | 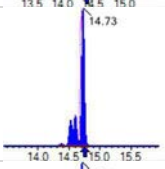 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 3326507<br>( 285.0 / 185.0 ) 8883990 | ( 5.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 2892.0<br>3175.5 | 2.6707<br>95.1<br>95.1 | 54.8320 | N/A | 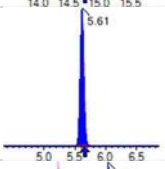 | 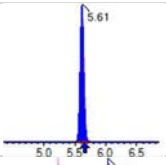 | |
| ADONA | ( 377.0 / 85.0 ) 37445272<br>( 377.0 / 251.0 ) 4192796 | ( 6.77 , 1.21 ) ( N/A , -0.03 , 0.1) | 3377.3<br>3411.7 | 0.1120<br>106.8<br>106.8 | 46.7970 | N/A | 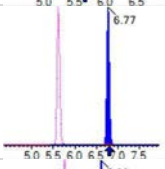 | 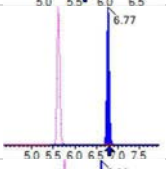 | |
| PFEESA | ( 315.0 / 135.0 ) 14642600<br>( 315.0 / 83.0 ) 8329006 | ( 5.96 , 1.15 ) ( N/A , -0.04 , 0.0) | 3891.0<br>3109.2 | 0.5688<br>88.6<br>88.6 | 92.1100 | N/A | 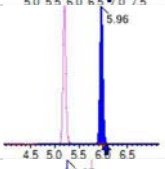 | 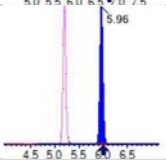 | |
| PFMPA | ( 229.0 / 85.0 ) 6311706 | ( 3.87 , 0.89 ) ( N/A , -0.04 , 0.0) | 13117.5 | N/A<br>0.0<br>0.0 | 100.1500 | N/A | 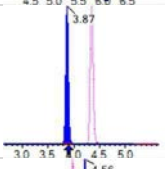 | | |
| PFMBA | ( 279.0 / 85.0 ) 15220419 | ( 4.56 , 1.05 ) ( N/A , -0.04 , 0.0) | 7658.9 | N/A<br>0.0<br>0.0 | 107.2050 | N/A | 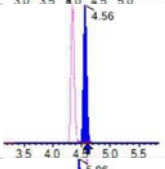 | | |
| NFDHA | ( 295.0 / 201.0 ) 7106610<br>( 295.0 / 85.0 ) 7628719 | ( 5.06 , 0.97 ) ( N/A , -0.04 , -0.2) | 4429.4<br>4187.1 | 1.0735<br>107.9<br>107.9 | 91.6020 | N/A | 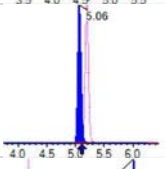 | 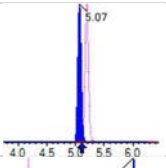 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 43792558<br>( 533.0 / 353.0 ) 14922410 | ( 11.14 , 1.98 ) ( N/A , -0.04 , 0.0) | 3595.8<br>3786.2 | 0.3408<br>106.9<br>106.9 | 49.2630 | N/A | 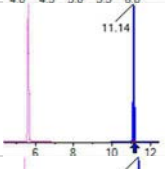 | 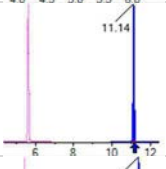 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 30740034<br>( 633.0 / 453.0 ) 10004422 | ( 12.62 , 2.25 ) ( N/A , -0.03 , 0.1) | 4056.4<br>3828.7 | 0.3255<br>95.9<br>95.9 | 44.4940 | N/A | 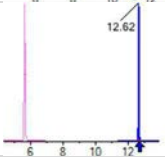 | 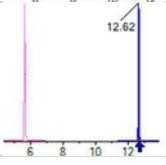 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 27145880<br>( 461.0 / 381.2 ) 10478652 | ( 9.40 , 0.90 )<br>( N/A , -0.04 , -0.1) | 5007.7<br>4849.6 | 0.3860<br>99.9<br>99.9 | 51.3610 | N/A | 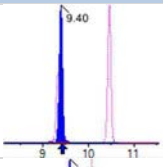 | 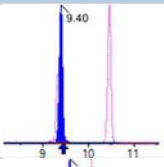 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2874523<br>( 241.0 / 117.0 ) 6492163 | ( 3.92 , 0.90 )<br>( N/A , -0.04 , 0.0) | 9365.4<br>8027.5 | 2.2585<br>102.9<br>102.9 | 195.3420 | N/A | 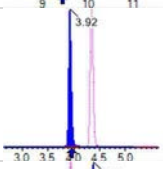 | 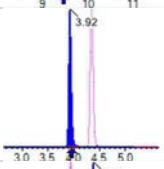 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 11417785<br>( 341.0 / 217.0 ) 17462477 | ( 5.62 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1413.1<br>1415.9 | 1.5294<br>99.9<br>99.9 | 192.0640 | N/A | 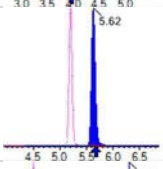 | 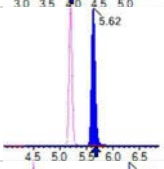 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 24807747<br>( 441.0 / 337.0 ) 21735712 | ( 9.29 , 1.79 )<br>( N/A , -0.04 , 0.1) | 14395.0<br>23388.8 | 0.8762<br>102.6<br>102.6 | 196.4220 | N/A | 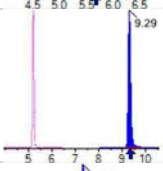 | 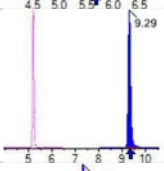 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 14503690<br>( 357.2 / 243.0 ) 1547364 | ( 5.88 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2017.0<br>2021.0 | 0.1067<br>99.5<br>99.5 | 52.1000 | N/A | 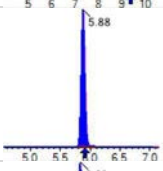 | 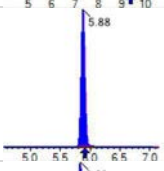 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 13714959<br>( 457.2 / 343.0 ) 570235 | ( 8.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1901.8<br>1195.8 | 0.0416<br>92.6<br>92.6 | 51.8790 | N/A | 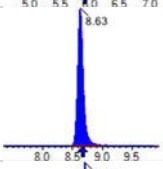 | 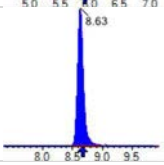 | |
| TDCA | ( 499.0 / 80.0 ) 33897287 | ( 10.45 , 1.00 )<br>( N/A , -0.04 , 0.0) | 48590.1 | N/A<br>0.0<br>0.0 | 51.0080 | N/A | 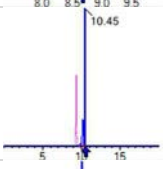 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A ) | N/A | N/A | 0.0000<br>[ 1.0000 ] | 0.0%<br>{ 0.0% } | 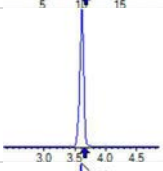 | | NR,IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 114430 | ( 5.20 , N/A )<br>( N/A , -0.04 , N/A ) | 72065.8 | N/A | 0.9690<br>[ 1.0000 ] | 96.9%<br>{ 99.5% } | 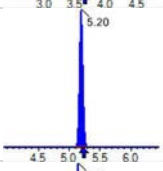 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 368256 | ( 7.45 , N/A )<br>( N/A , -0.03 , N/A ) | 5334.1 | N/A | 0.9490<br>[ 1.0000 ] | 94.9%<br>{ 93.8% } | 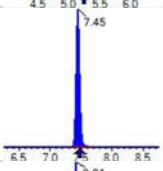 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282658 | ( 9.01 , N/A )<br>( N/A , -0.03 , N/A ) | 1650.3 | N/A | 0.9680<br>[ 1.0000 ] | 96.8%<br>{ 97.3% } | 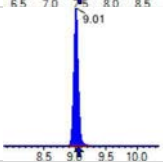 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286370 | ( 10.02 , N/A ) ( N/A , -0.04 , N/A ) | 3201.2 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 105.2% } | 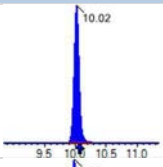 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 982397 | ( 8.08 , N/A ) ( N/A , -0.01 , N/A ) | 4609.5 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 103.3% } | 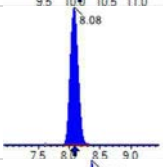 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 829195 | ( 10.47 , N/A ) ( N/A , -0.04 , N/A ) | 4198.3 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 112.1% } | 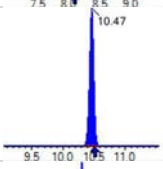 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 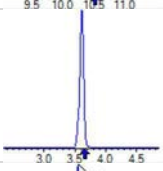 | | NR,S1, |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 686743 | ( 4.34 , N/A ) ( N/A , -0.04 , N/A ) | 4643.4 | N/A | 3.2780 [ 4.0000 ] | 81.9% { 74.2% } | 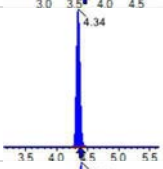 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 470958 | ( 5.19 , N/A ) ( N/A , -0.04 , N/A ) | 11926.8 | N/A | 1.8810 [ 2.0000 ] | 94.1% { 88.0% } | 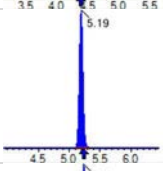 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 533884 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 5860.6 | N/A | 1.9200 [ 2.0000 ] | 96.0% { 93.6% } | 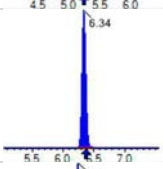 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 771941 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 4563.1 | N/A | 1.9780 [ 2.0000 ] | 98.9% { 102.0% } | 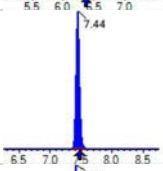 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 280283 | ( 9.01 , N/A ) ( N/A , -0.03 , N/A ) | 7588.4 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 98.7% } | 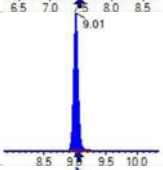 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 306614 | ( 10.02 , N/A ) ( N/A , -0.03 , N/A ) | 1239.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 91.1% } | 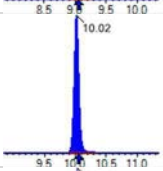 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 324712 | ( 10.94 , N/A ) ( N/A , -0.04 , N/A ) | 1097.9 | N/A | 0.8270 [ 1.0000 ] | 82.7% { 82.8% } | 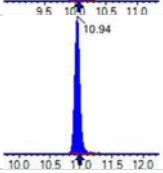 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL8 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368717 | ( 11.83 , N/A ) ( N/A , -0.04 , N/A ) | 1365.6 | N/A | 0.9160 [ 1.0000 ] | 91.6% { 92.4% } | 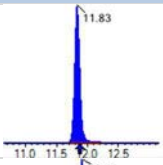 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 330920 | ( 13.11 , N/A ) ( N/A , -0.03 , N/A ) | 1403.1 | N/A | 0.9280 [ 1.0000 ] | 92.8% { 91.4% } | 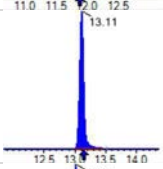 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 576024 | ( 14.01 , N/A ) ( N/A , -0.03 , N/A ) | 2129.5 | N/A | 1.9310 [ 2.0000 ] | 96.6% { 100.8% } | 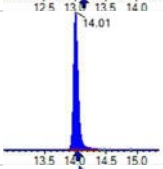 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1477912 | ( 5.38 , N/A ) ( N/A , -0.04 , N/A ) | 950.1 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 93.0% } | 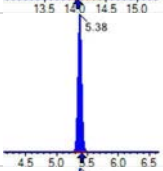 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1421005 | ( 8.07 , N/A ) ( N/A , -0.01 , N/A ) | 5389.1 | N/A | 2.0050 [ 2.0000 ] | 100.3% { 103.5% } | 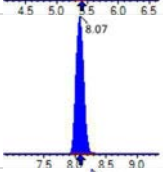 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1696685 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 390.0 | N/A | 1.9230 [ 2.0000 ] | 96.2% { 108.4% } | 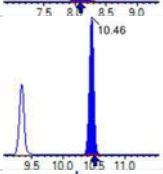 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 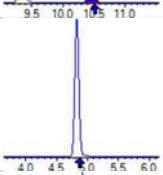 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 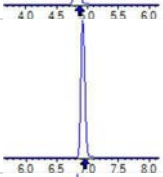 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 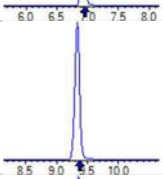 | | S1, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 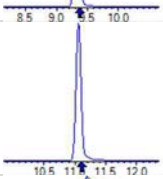 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1719266 | ( 13.28 , N/A ) ( N/A , -0.03 , N/A ) | 3364.9 | N/A | 1.8360 [ 2.0000 ] | 91.8% { 102.1% } | 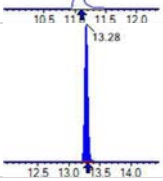 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 430048 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 1664.4 | N/A | 2.0420 [ 2.0000 ] | 102.1% { 116.0% } | 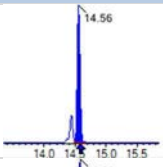  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 324439 | ( 14.88 , N/A ) ( N/A , -0.03 , N/A ) | 2677.9 | N/A | 1.6860 [ 2.0000 ] | 84.3% { 91.2% } | 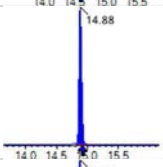  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1013157 | ( 10.38 , N/A ) ( N/A , -0.04 , N/A ) | 2656.2 | N/A | 3.3080 [ 4.0000 ] | 82.7% { 87.4% } | 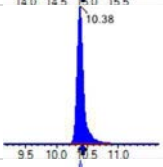  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 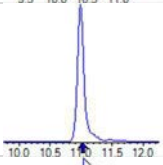 | | S1, |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1369214 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 2597.7 | N/A | 17.4060 [ 20.0000 ] | 87.0% { 96.4% } | 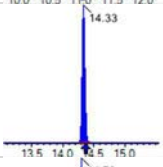  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1294812 | ( 14.70 , N/A ) ( N/A , -0.03 , N/A ) | 4527.9 | N/A | 17.5760 [ 20.0000 ] | 87.9% { 97.0% } | 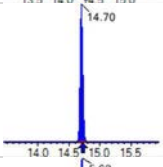  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 826643 | ( 5.62 , N/A ) ( N/A , -0.04 , N/A ) | 2450.0 | N/A | 7.6230 [ 8.0000 ] | 95.3% { 91.5% } | 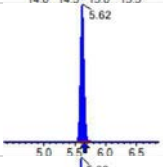  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 529449 | ( 5.89 , N/A ) ( N/A , -0.04 , N/A ) | 2268.9 | N/A | 1.6970 [ 2.0000 ] | 84.8% { 93.3% } | 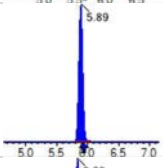  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 639678 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 1130.5 | N/A | 1.8190 [ 2.0000 ] | 91.0% { 97.8% } | 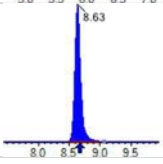  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0131L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.97L | -0.8L | 30.00L |
| PFPeAL | 4.00L | 3.67L | -8.2L | 30.00L |
| PFHxAL | 4.00L | 3.66L | -8.6L | 30.00L |
| PFHpAL | 4.00L | 3.76L | -6.0L | 30.00L |
| PFOAL | 4.00L | 3.43L | -14.3L | 30.00L |
| PFNAL | 4.00L | 3.69L | -7.7L | 30.00L |
| PFDAL | 4.00L | 3.83L | -4.2L | 30.00L |
| PFUnAL | 4.00L | 3.57L | -10.7L | 30.00L |
| PFDoAL | 4.00L | 3.28L | -18.1L | 30.00L |
| PFTrDAL | 4.00L | 3.41L | -14.7L | 30.00L |
| PFTeDAL | 4.00L | 4.03L | 0.6L | 30.00L |
| PFHxDAL | 4.00L | 3.11L | -22.2L | 30.00L |
| PFODAL | 4.00L | 3.42L | -14.5L | 30.00L |
| PFBSL | 4.00L | 3.89L | -2.7L | 30.00L |
| PFPeSL | 4.00L | 3.91L | -2.2L | 30.00L |
| PFHxSL | 4.00L | 3.82L | -4.4L | 30.00L |
| PFHpSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFOSL | 4.00L | 3.43L | -14.3L | 30.00L |
| PFNSL | 4.00L | 3.71L | -7.3L | 30.00L |
| PFDSL | 4.00L | 3.94L | -1.4L | 30.00L |
| PFDoSL | 4.00L | 3.86L | -3.6L | 30.00L |
| 4:2FTSL | 4.00L | 4.10L | 2.5L | 30.00L |
| 6:2FTSL | 4.00L | 4.19L | 4.9L | 30.00L |
| 8:2FTSL | 4.00L | 3.70L | -7.6L | 30.00L |
| 10:2FTSL | 3.86L | 4.07L | 5.5L | 30.00L |
| PFOSAL | 4.00L | 3.70L | -7.5L | 30.00L |
| NMeFOSAL | 4.00L | 3.64L | -9.1L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0131L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.47L | -13.3L | 30.00L |
| NMeFOSAAL | 4.00L | 3.84L | -4.1L | 30.00L |
| NEtFOSAAL | 4.00L | 3.67L | -8.2L | 30.00L |
| NMeFOSEL | 4.00L | 4.04L | 0.9L | 30.00L |
| NEtFOSEL | 4.00L | 3.97L | -0.7L | 30.00L |
| HFPO-DAL | 4.00L | 3.83L | -4.2L | 30.00L |
| ADONAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFEESAL | 4.00L | 3.34L | -16.5L | 30.00L |
| PFMPAL | 4.00L | 3.39L | -15.2L | 30.00L |
| PFMBAL | 4.00L | 3.40L | -15.0L | 30.00L |
| NFDHAL | 4.00L | 3.65L | -8.7L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.71L | -7.1L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 3.92L | -2.0L | 30.00L |
| 3:3FTCAL | 4.00L | 4.15L | 3.7L | 30.00L |
| 5:3FTCAL | 4.00L | 3.77L | -5.7L | 30.00L |
| 7:3FTCAL | 4.00L | 3.91L | -2.1L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.69L | 8.6L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.82L | 20.6L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.7L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.20L | 10.2L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.11L | 11.3L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.14L | 14.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.14L | 13.8L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.15L | 15.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.34L | 17.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.22L | 11.0L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.19L | 9.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0131L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.22L | 11.2L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 5.14L | 28.6L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.87L | 21.7L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 5.00L | 25.0L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 9.84L | 23.0L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.21L | 10.3L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.22L | 11.2L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.25L | 12.6L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.59L | 14.7L | 30.00L |
| D7-NMEFOSEL | 20.0L | 23.3L | 16.7L | 30.00L |
| D9-NETFOSEL | 20.0L | 23.2L | 16.1L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.92L | 11.4L | 30.00L |

* Values outside of QC limitsL

APPL
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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 235166<br>( 163.0 / 69.0 ) 6507 | ( 2.44 , 0.68 )<br>( N/A , -0.05 , 0.2) | 436.6<br>112.0 | 0.0277<br>101.0<br>101.0 | 3.2530 | N/A | 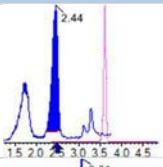 | 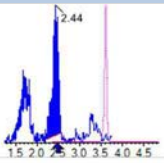 | |
| PFBA | ( 213.0 / 169.0 ) 1360095 | ( 3.61 , 1.00 )<br>( 0.00 , N/A , 0.0) | 959.5 | N/A<br>0.0<br>0.0 | 3.9690 | N/A | 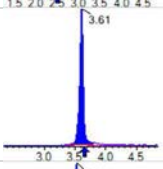 | | |
| PFPeA | ( 263.0 / 219.0 ) 864174<br>( 263.0 / 69.0 ) 10090 | ( 4.33 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1777.4<br>171.8 | 0.0117<br>98.1<br>98.1 | 3.6710 | N/A | 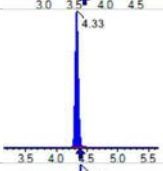 | 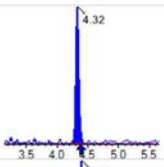 | |
| PFHxA | ( 313.0 / 269.0 ) 915352<br>( 313.0 / 119.0 ) 101986 | ( 5.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2599.0<br>1473.6 | 0.1114<br>100.2<br>100.2 | 3.6550 | N/A | 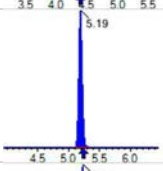 | 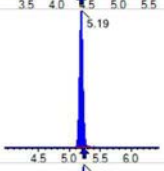 | |
| PFHpA | ( 363.0 / 319.0 ) 1071859<br>( 363.0 / 169.0 ) 316940 | ( 6.32 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3462.6<br>2670.7 | 0.2957<br>96.7<br>96.7 | 3.7610 | N/A | 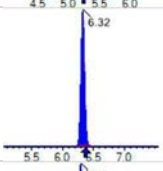 | 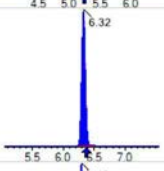 | |
| PFOA | ( 413.0 / 369.0 ) 1421044<br>( 413.0 / 169.0 ) 517030 | ( 7.45 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1111.6<br>1160.2 | 0.3638<br>101.8<br>101.8 | 3.4280 | N/A | 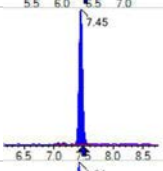 | 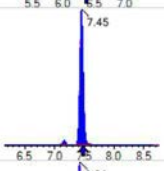 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 1081992<br>( 463.0 / 169.0 ) 275627 | ( 9.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1996.5<br>2033.4 | 0.2547<br>103.7<br>103.7 | 3.6920 | N/A | 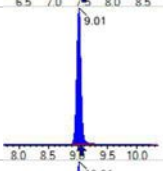 | 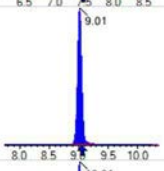 | |
| PFDA | ( 513.0 / 469.0 ) 1273534<br>( 513.0 / 169.0 ) 143723 | ( 10.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4506.3<br>3091.9 | 0.1129<br>94.7<br>94.7 | 3.8300 | N/A | 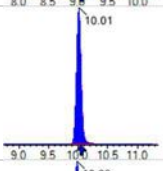 | 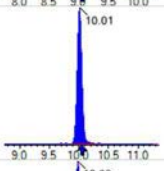 | |
| PFUnA | ( 563.0 / 519.0 ) 1316985<br>( 563.0 / 169.0 ) 190676 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1275.4<br>513.7 | 0.1448<br>93.5<br>93.5 | 3.5740 | N/A | 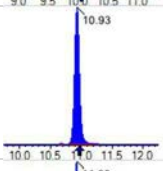 | 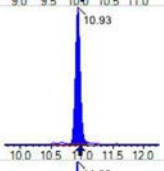 | |
| PFDoA | ( 613.0 / 569.0 ) 1362545<br>( 613.0 / 169.0 ) 209953 | ( 11.83 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1352.3<br>679.2 | 0.1541<br>101.5<br>101.5 | 3.2770 | N/A | 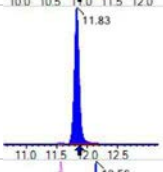 | 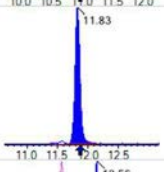 | |
| PFTrDA | ( 663.0 / 619.0 ) 1380135<br>( 663.0 / 169.0 ) 370899 | ( 12.56 , 1.06 )<br>( N/A , -0.04 , 0.0) | 1223.6<br>711.5 | 0.2687<br>99.8<br>99.8 | 3.4140 | N/A | 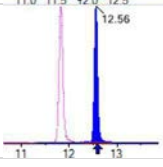 | 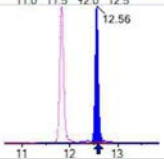 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1393663<br>( 713.0 / 169.0 ) 368951 | ( 13.10 , 1.00 ) ( 0.00 , N/A , 0.0) | 1434.6<br>766.9 | 0.2647<br>97.6<br>97.6 | 4.0260 | N/A | 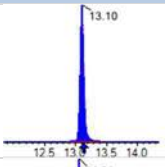 | 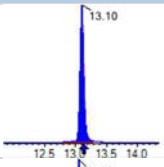 | |
| PFHxDA | ( 813.0 / 769.0 ) 921289<br>( 813.0 / 169.0 ) 252019 | ( 14.01 , 1.00 ) ( 0.00 , N/A , -0.1) | 1667.1<br>757.2 | 0.2736<br>104.6<br>104.6 | 3.1120 | N/A | 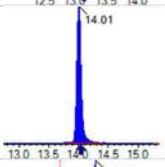 | 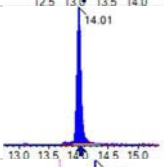 | |
| PFODA | ( 913.0 / 869.0 ) 641579<br>( 913.0 / 169.0 ) 199675 | ( 14.74 , 1.05 ) ( N/A , -0.04 , 0.1) | 1546.6<br>639.9 | 0.3112<br>99.3<br>99.3 | 3.4210 | N/A | 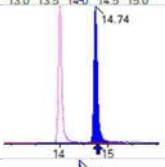 | 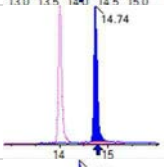 | |
| PFBS | ( 299.0 / 80.0 ) 1513995<br>( 299.0 / 99.0 ) 1113378 | ( 5.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 3017.3<br>2498.3 | 0.7354<br>99.3<br>99.3 | 3.8920 | N/A | 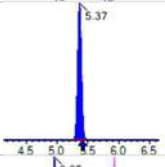 | 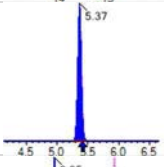 | |
| PFPeS | ( 349.0 / 80.0 ) 3924753<br>( 349.0 / 99.0 ) 1382683 | ( 6.65 , 0.81 ) ( N/A , -0.04 , -0.1) | 4924.1<br>4084.0 | 0.3523<br>103.1<br>103.1 | 3.9110 | N/A | 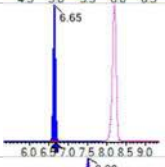 | 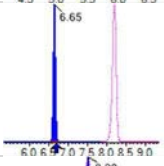 | |
| PFHxS | ( 399.0 / 80.0 ) 4675678<br>( 399.0 / 99.0 ) 1488309 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.1) | 5118.6<br>5169.5 | 0.3183<br>97.0<br>97.0 | 3.8230 | N/A | 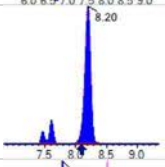 | 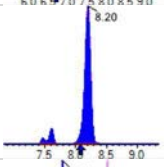 | |
| PFHpS | ( 449.0 / 80.0 ) 3779274<br>( 449.0 / 99.0 ) 1027436 | ( 9.50 , 0.91 ) ( N/A , -0.04 , 0.2) | 2759.4<br>2847.2 | 0.2719<br>104.2<br>104.2 | 3.6680 | N/A | 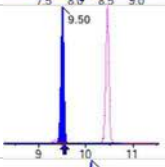 | 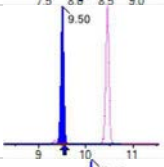 | |
| PFOS | ( 499.0 / 80.0 ) 3432752<br>( 499.0 / 99.0 ) 768658 | ( 10.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1979.3<br>5764.5 | 0.2239<br>96.9<br>96.9 | 3.4290 | N/A | 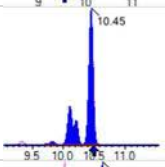 | 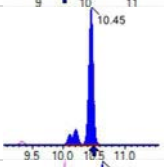 | |
| PFNS | ( 549.0 / 80.0 ) 3385234<br>( 549.0 / 99.0 ) 909095 | ( 11.34 , 1.08 ) ( N/A , -0.04 , 0.0) | 3157.1<br>2600.5 | 0.2685<br>100.2<br>100.2 | 3.7100 | N/A | 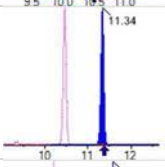 | 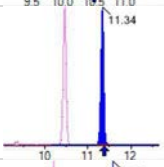 | |
| PFDS | ( 599.0 / 80.0 ) 4398381<br>( 599.0 / 99.0 ) 1122436 | ( 12.15 , 1.16 ) ( N/A , -0.04 , 0.0) | 3445.1<br>2327.6 | 0.2552<br>100.2<br>100.2 | 3.9430 | N/A | 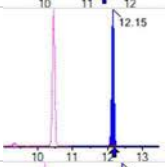 | 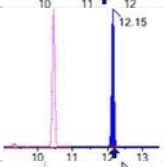 | |
| PFDoS | ( 699.0 / 80.0 ) 4164049<br>( 699.0 / 99.0 ) 969806 | ( 13.17 , 1.26 ) ( N/A , -0.03 , 0.0) | 5492.4<br>4447.0 | 0.2329<br>104.2<br>104.2 | 3.8580 | N/A | 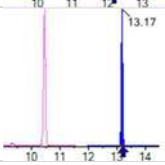 | 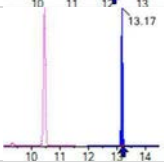 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2181822<br>( 327.0 / 81.0 ) 1810736 | ( 4.81 , 1.00 ) ( -0.01 , N/A , 0.1) | 4312.6<br>3339.1 | 0.8299<br>97.3<br>97.3 | 4.1020 | N/A | 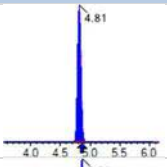 | 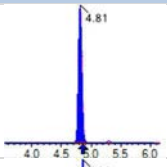 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1668262<br>( 427.0 / 81.0 ) 2042250 | ( 6.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 5547.4<br>6669.4 | 1.2242<br>94.9<br>94.9 | 4.1950 | N/A | 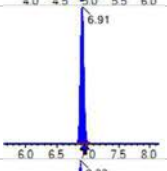 | 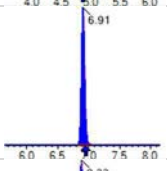 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1530234<br>( 527.0 / 81.0 ) 1580240 | ( 9.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 2841.5<br>2440.7 | 1.0327<br>93.6<br>93.6 | 3.6960 | N/A | 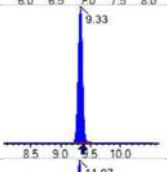 | 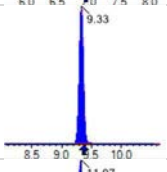 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1449318<br>( 627.0 / 81.0 ) 2006754 | ( 11.07 , 1.00 ) ( 0.01 , N/A , -0.1) | 1302.3<br>1308.2 | 1.3846<br>96.3<br>96.3 | 4.0730 | N/A | 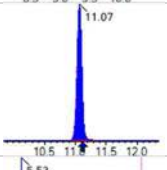 | 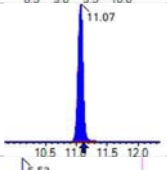 | |
| PFBSA | ( 297.9 / 78.0 ) 2735385<br>( 297.9 / 278.0 ) 4473 | ( 5.53 , 0.38 ) ( N/A , -0.03 , -0.2) | 1976.1<br>51.4 | 0.0016<br>126.3<br>126.3 | 4.3780 | N/A | 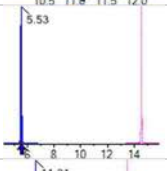 | 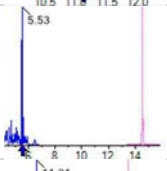 | |
| PFHxSA | ( 397.9 / 78.0 ) 4599620<br>( 397.9 / 378.0 ) 19304 | ( 11.21 , 0.75 ) ( N/A , -0.02 , 0.0) | 1246.5<br>292.1 | 0.0042<br>103.9<br>103.9 | 3.8380 | N/A | 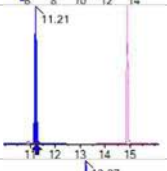 | 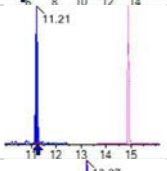 | |
| PFOSA | ( 498.0 / 78.0 ) 3252050<br>( 498.0 / 478.0 ) 46246 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 1959.8<br>597.2 | 0.0142<br>96.7<br>96.7 | 3.7010 | N/A | 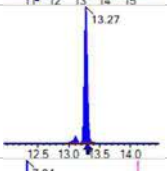 | 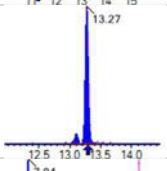 | MI5 DG 2024-03-29 |
| TFSI | ( 279.7 / 147.0 ) 5684699<br>( 279.7 / 211.0 ) 509582 | ( 7.04 , 0.53 ) ( N/A , -0.04 , -0.1) | 83.3<br>2516728.3 | 0.0896<br>101.3<br>101.3 | 3.7040 | N/A | 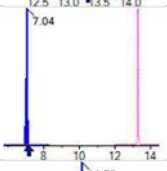 | 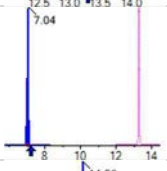 | |
| NMeFOSA | ( 512.0 / 219.0 ) 665367<br>( 512.0 / 169.0 ) 433567 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.0) | 5517.5<br>2636.5 | 0.6516<br>85.0<br>85.0 | 3.6370 | N/A | 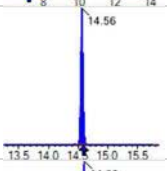 | 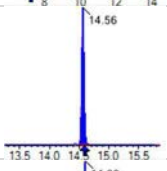 | |
| NEtFOSA | ( 526.0 / 219.0 ) 748227<br>( 526.0 / 169.0 ) 821322 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 0.1) | 7045.4<br>6317.3 | 1.0977<br>87.8<br>87.8 | 3.4690 | N/A | 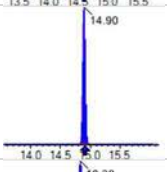 | 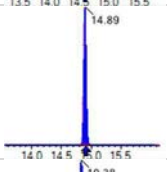 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1134272<br>( 570.0 / 483.0 ) 512190 | ( 10.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3365.8<br>1434.9 | 0.4516<br>97.3<br>97.3 | 3.8380 | N/A | 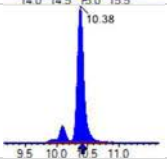 | 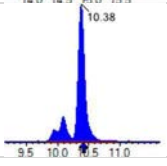 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 993289<br>( 584.0 / 526.0 ) 622352 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1704.2<br>890.6 | 0.6266<br>104.4<br>104.4 | 3.6740 | N/A | 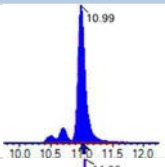 | 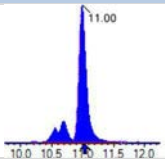 | |
| NMeFOSE | ( 616.0 / 59.0 ) 352402 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2726.5 | N/A<br>0.0<br>0.0 | 4.0360 | N/A | 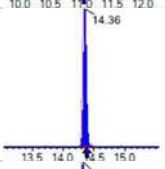 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 284314 | ( 14.73 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2917.8 | N/A<br>0.0<br>0.0 | 3.9720 | N/A | 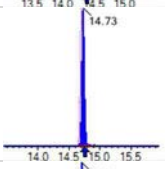 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 253881<br>( 285.0 / 185.0 ) 709307 | ( 5.60 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1622.4<br>2003.2 | 2.7939<br>99.5<br>99.5 | 3.8330 | N/A | 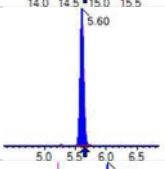 | 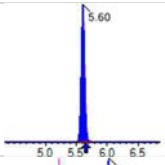 | |
| ADONA | ( 377.0 / 85.0 ) 3254890<br>( 377.0 / 251.0 ) 340133 | ( 6.76 , 1.21 )<br>( N/A , -0.04 , 0.1) | 3009.5<br>1361.5 | 0.1045<br>99.6<br>99.6 | 3.7260 | N/A | 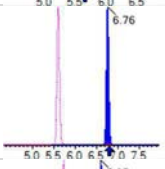 | 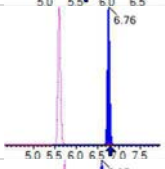 | |
| PFEESA | ( 315.0 / 135.0 ) 608573<br>( 315.0 / 83.0 ) 352500 | ( 5.95 , 1.15 )<br>( N/A , -0.04 , 0.1) | 2920.8<br>1029.1 | 0.5792<br>90.2<br>90.2 | 3.3400 | N/A | 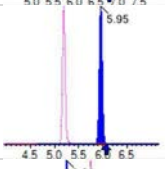 | 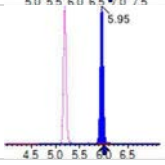 | |
| PFMPA | ( 229.0 / 85.0 ) 293727 | ( 3.86 , 0.89 )<br>( N/A , -0.05 , 0.0) | 6806.6 | N/A<br>0.0<br>0.0 | 3.3940 | N/A | 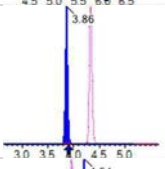 | | |
| PFMBA | ( 279.0 / 85.0 ) 662742 | ( 4.54 , 1.05 )<br>( N/A , -0.06 , 0.0) | 3090.5 | N/A<br>0.0<br>0.0 | 3.3990 | N/A | 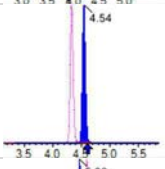 | | |
| NFDHA | ( 295.0 / 201.0 ) 324787<br>( 295.0 / 85.0 ) 331785 | ( 5.06 , 0.98 )<br>( N/A , -0.04 , 0.1) | 2862.8<br>3125.0 | 1.0215<br>102.7<br>102.7 | 3.6530 | N/A | 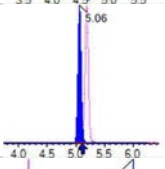 | 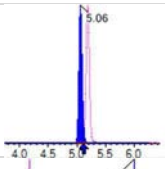 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3604854<br>( 533.0 / 353.0 ) 1165515 | ( 11.13 , 1.98 )<br>( N/A , -0.04 , 0.1) | 3561.2<br>3527.4 | 0.3233<br>101.4<br>101.4 | 3.7140 | N/A | 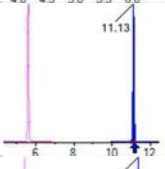 | 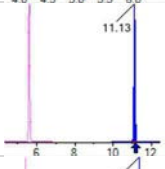 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2957374<br>( 633.0 / 453.0 ) 1020314 | ( 12.62 , 2.25 )<br>( N/A , -0.04 , 0.0) | 4043.5<br>3488.3 | 0.3450<br>101.7<br>101.7 | 3.9210 | N/A | 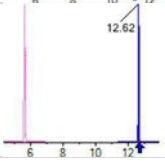 | 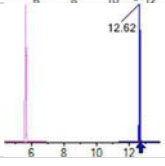 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1825909<br>( 461.0 / 381.2 ) 677380 | ( 9.40 , 0.90 )<br>( N/A , -0.04 , 0.0) | 2232.1<br>2205.4 | 0.3710<br>96.0<br>96.0 | 3.3980 | N/A | 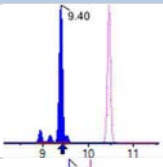 | 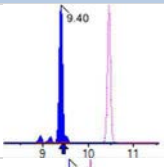 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 83819<br>( 241.0 / 117.0 ) 182168 | ( 3.91 , 0.90 )<br>( N/A , -0.05 , 0.0) | 2348.9<br>1073.6 | 2.1733<br>99.0<br>99.0 | 4.1480 | N/A | 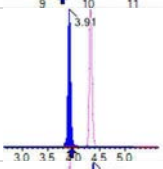 | 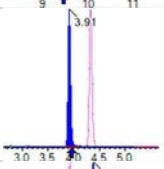 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 257037<br>( 341.0 / 217.0 ) 372405 | ( 5.62 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1019.1<br>859.4 | 1.4488<br>94.6<br>94.6 | 3.7730 | N/A | 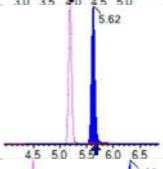 | 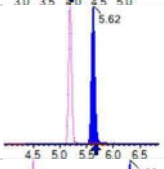 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 566539<br>( 441.0 / 337.0 ) 484100 | ( 9.33 , 1.80 )<br>( N/A , 0.00 , 0.1) | 3699.8<br>23194.6 | 0.8545<br>100.0<br>100.0 | 3.9140 | N/A | 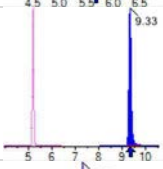 | 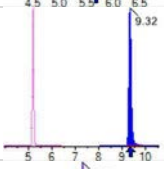 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1383618<br>( 357.2 / 243.0 ) 137847 | ( 5.87 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1666.2<br>1141.7 | 0.0996<br>92.9<br>92.9 | 4.0580 | N/A | 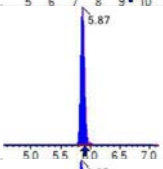 | 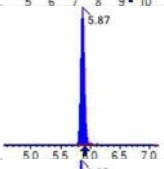 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1241005<br>( 457.2 / 343.0 ) 51903 | ( 8.65 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1338.4<br>411.4 | 0.0418<br>93.2<br>93.2 | 4.0610 | N/A | 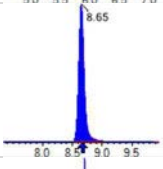 | 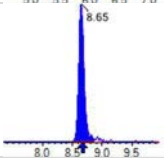 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 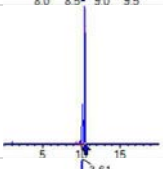 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 271996 | ( 3.61 , N/A )<br>( N/A , -0.04 , N/A ) | 1637.2 | N/A | 0.9640<br>[ 1.0000 ] | 96.4%<br>{ 98.1% } | 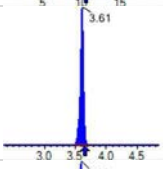 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106809 | ( 5.19 , N/A )<br>( N/A , -0.05 , N/A ) | 15822.4 | N/A | 0.9050<br>[ 1.0000 ] | 90.5%<br>{ 92.8% } | 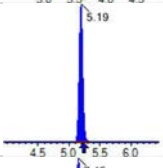 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353445 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 6398.2 | N/A | 0.9110<br>[ 1.0000 ] | 91.1%<br>{ 90.0% } | 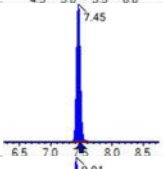 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 263587 | ( 9.01 , N/A )<br>( N/A , -0.03 , N/A ) | 1791.1 | N/A | 0.9020<br>[ 1.0000 ] | 90.2%<br>{ 90.7% } | 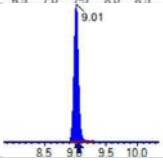 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 258924 | ( 10.02 , N/A ) ( N/A , -0.04 , N/A ) | 3093.0 | N/A | 0.9030 [ 1.0000 ] | 90.3% { 95.1% } | 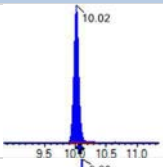 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 883755 | ( 8.20 , N/A ) ( N/A , 0.11 , N/A ) | 6048.5 | N/A | 0.9000 [ 1.0000 ] | 90.0% { 92.9% } | 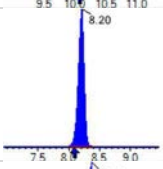 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 728766 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 2669.9 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 98.5% } | 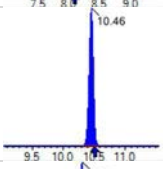 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2555252 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 190912.6 | N/A | 8.6910 [ 8.0000 ] | 108.6% { 104.8% } | 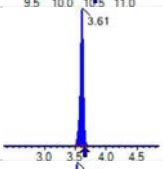 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 943044 | ( 4.33 , N/A ) ( N/A , -0.06 , N/A ) | 7003.3 | N/A | 4.8230 [ 4.0000 ] | 120.6% { 102.0% } | 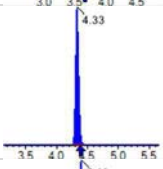 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 539734 | ( 5.19 , N/A ) ( N/A , -0.05 , N/A ) | 7182.2 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 100.9% } | 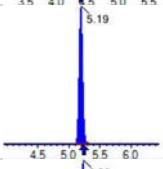 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 574412 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 9188.4 | N/A | 2.2130 [ 2.0000 ] | 110.7% { 100.7% } | 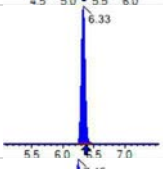 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 825628 | ( 7.45 , N/A ) ( N/A , -0.03 , N/A ) | 5715.1 | N/A | 2.2040 [ 2.0000 ] | 110.2% { 109.1% } | 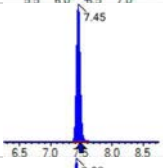 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291694 | ( 9.02 , N/A ) ( N/A , -0.03 , N/A ) | 4491.4 | N/A | 1.1210 [ 1.0000 ] | 112.1% { 102.7% } | 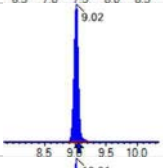 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 332917 | ( 10.01 , N/A ) ( N/A , -0.04 , N/A ) | 1528.0 | N/A | 1.1130 [ 1.0000 ] | 111.3% { 98.9% } | 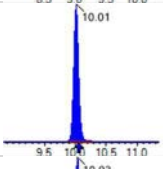 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 405814 | ( 10.93 , N/A ) ( N/A , -0.04 , N/A ) | 1190.6 | N/A | 1.1440 [ 1.0000 ] | 114.4% { 103.5% } | 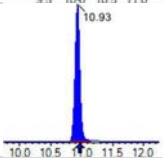 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414363 | ( 11.83 , N/A ) ( N/A , -0.04 , N/A ) | 1464.6 | N/A | 1.1380 [ 1.0000 ] | 113.8% { 103.8% } | 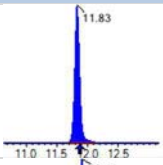 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 370739 | ( 13.11 , N/A ) ( N/A , -0.04 , N/A ) | 1588.6 | N/A | 1.1500 [ 1.0000 ] | 115.0% { 102.3% } | 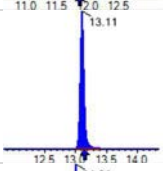 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 632035 | ( 14.01 , N/A ) ( N/A , -0.03 , N/A ) | 2389.9 | N/A | 2.3440 [ 2.0000 ] | 117.2% { 110.6% } | 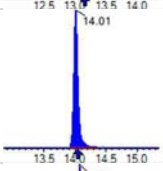 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1582099 | ( 5.37 , N/A ) ( N/A , -0.05 , N/A ) | 1295.3 | N/A | 2.2210 [ 2.0000 ] | 111.0% { 99.6% } | 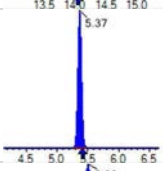 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1396656 | ( 8.20 , N/A ) ( N/A , 0.12 , N/A ) | 6139.5 | N/A | 2.1910 [ 2.0000 ] | 109.5% { 101.7% } | 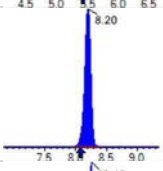 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1724941 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 1537.8 | N/A | 2.2250 [ 2.0000 ] | 111.2% { 110.2% } | 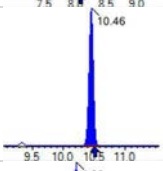 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 805955 | ( 4.82 , N/A ) ( N/A , -0.04 , N/A ) | 66.0 | N/A | 5.1430 [ 4.0000 ] | 128.6% { 115.5% } | 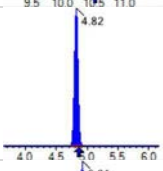 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1874169 | ( 6.91 , N/A ) ( N/A , -0.04 , N/A ) | 7706.7 | N/A | 4.8680 [ 4.0000 ] | 121.7% { 113.0% } | 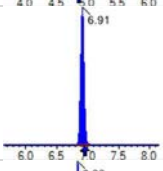 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1683640 | ( 9.33 , N/A ) ( N/A , -0.03 , N/A ) | 2452.3 | N/A | 4.9990 [ 4.0000 ] | 125.0% { 113.9% } | 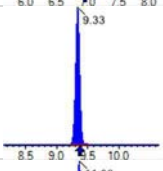 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3584382 | ( 11.06 , N/A ) ( N/A , -0.04 , N/A ) | 1791.4 | N/A | 9.8370 [ 8.0000 ] | 123.0% { 125.9% } | 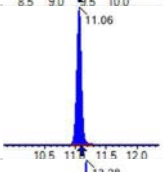 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1816057 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 3294.6 | N/A | 2.2060 [ 2.0000 ] | 110.3% { 107.9% } | 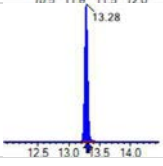 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 411717 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2447.6 | N/A | 2.2250 [ 2.0000 ] | 111.2% { 111.1% } | 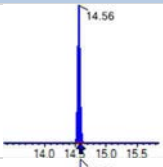 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 380831 | ( 14.89 , N/A ) ( N/A , -0.02 , N/A ) | 2980.8 | N/A | 2.2510 [ 2.0000 ] | 112.6% { 107.1% } | 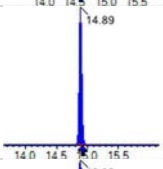 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1281618 | ( 10.38 , N/A ) ( N/A , -0.04 , N/A ) | 3452.4 | N/A | 4.7610 [ 4.0000 ] | 119.0% { 110.6% } | 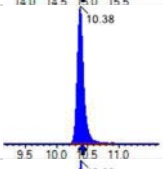 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1114793 | ( 10.98 , N/A ) ( N/A , -0.04 , N/A ) | 2548.9 | N/A | 4.5880 [ 4.0000 ] | 114.7% { 107.9% } | 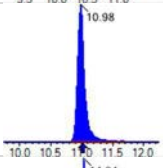 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1612975 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2824.9 | N/A | 23.3300 [ 20.0000 ] | 116.7% { 113.6% } | 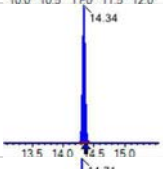 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1502982 | ( 14.71 , N/A ) ( N/A , -0.02 , N/A ) | 4878.2 | N/A | 23.2130 [ 20.0000 ] | 116.1% { 112.6% } | 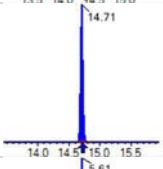 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 902456 | ( 5.61 , N/A ) ( N/A , -0.04 , N/A ) | 2389.7 | N/A | 8.9160 [ 8.0000 ] | 111.4% { 99.9% } | 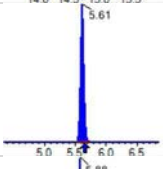 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 648395 | ( 5.88 , N/A ) ( N/A , -0.04 , N/A ) | 1841.6 | N/A | 2.2980 [ 2.0000 ] | 114.9% { 114.2% } | 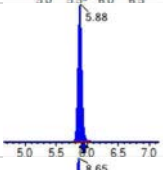 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 739387 | ( 8.65 , N/A ) ( N/A , -0.02 , N/A ) | 1409.3 | N/A | 2.3260 [ 2.0000 ] | 116.3% { 113.1% } | 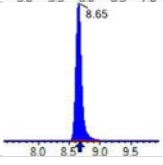 | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0131L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2413019L

**Laboratory ID:W**SD01096-LCV1L

**Sequence:W**SD01096L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.380L | -5.1L | 30.00L |
| PFPeAL | 0.200L | 0.191L | -4.3L | 30.00L |
| PFHxAL | 0.100L | 0.0803L | -19.7L | 30.00L |
| PFHpAL | 0.100L | 0.0940L | -6.0L | 30.00L |
| PFOAL | 0.100L | 0.105L | 4.8L | 30.00L |
| PFNAL | 0.100L | 0.0816L | -18.4L | 30.00L |
| PFDAL | 0.100L | 0.0929L | -7.1L | 30.00L |
| PFUnAL | 0.100L | 0.0891L | -10.9L | 30.00L |
| PFDoAL | 0.100L | 0.0950L | -5.0L | 30.00L |
| PFTrDAL | 0.100L | 0.0951L | -4.9L | 30.00L |
| PFTeDAL | 0.100L | 0.0901L | -9.9L | 30.00L |
| PFBSL | 0.0885L | 0.0833L | -5.8L | 30.00L |
| PFPeSL | 0.0940L | 0.0865L | -8.0L | 30.00L |
| PFHxSL | 0.0915L | 0.0835L | -8.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0823L | -13.8L | 30.00L |
| PFOSL | 0.0930L | 0.0958L | 3.0L | 30.00L |
| PFNSL | 0.0960L | 0.0886L | -7.7L | 30.00L |
| PFDSL | 0.0965L | 0.0979L | 1.5L | 30.00L |
| PFDoSL | 0.0970L | 0.0894L | -7.9L | 30.00L |
| 4:2FTSL | 0.375L | 0.364L | -2.9L | 30.00L |
| 6:2FTSL | 0.380L | 0.355L | -6.5L | 30.00L |
| 8:2FTSL | 0.384L | 0.304L | -20.9L | 30.00L |
| PFOSAL | 0.100L | 0.0907L | -9.3L | 30.00L |
| NMeFOSAL | 0.400L | 0.368L | -7.9L | 30.00L |
| NEtFOSAL | 0.400L | 0.349L | -12.7L | 30.00L |
| NMeFOSAAL | 0.100L | 0.104L | 4.4L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0870L | -13.0L | 30.00L |
| NMeFOSEL | 0.400L | 0.362L | -9.5L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0131L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2413019L

**Laboratory ID:W**SD01096-LCV1L

**Sequence:W**SD01096L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NEtFOSEL | 0.400L | 0.390L | -2.6L | 30.00L |
| HFPO-DAL | 0.100L | 0.0757L | -24.3L | 30.00L |
| ADONAL | 0.0945L | 0.0916L | -3.1L | 30.00L |
| PFEESAL | 0.178L | 0.137L | -22.8L | 30.00L |
| PFMPAL | 0.200L | 0.165L | -17.3L | 30.00L |
| PFMBAL | 0.200L | 0.187L | -6.3L | 30.00L |
| NFDHAL | 0.200L | 0.149L | -25.5L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0831L | -11.1L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0917L | -3.0L | 30.00L |
| 3:3FTCAL | 0.400L | 0.404L | 0.9L | 30.00L |
| 5:3FTCAL | 0.400L | 0.378L | -5.4L | 30.00L |
| 7:3FTCAL | 0.400L | 0.391L | -2.2L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 10636<br>( 163.0 / 69.0 ) 296 | ( 2.46 , 0.68 ) ( N/A , 0.00 , -0.4) | 46.9<br>30.3 | 0.0279<br>101.6<br>106.2 | 0.1540<br>[ 0.2000 ] | 76.9% | 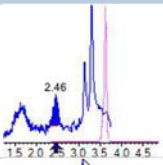 | 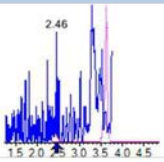 | |
| PFBA | ( 213.0 / 169.0 ) 220352 | ( 3.63 , 1.00 ) ( 0.01 , N/A , 0.0) | 172.1 | N/A<br>0.0<br>0.0 | 0.3800<br>[ 0.4000 ] | 94.9% | 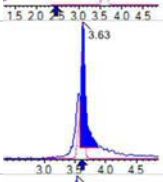 | | |
| PFPeA | ( 263.0 / 219.0 ) 42581<br>( 263.0 / 69.0 ) 521 | ( 4.33 , 1.00 ) ( 0.00 , N/A , -0.2) | 250.3<br>12.6 | 0.0122<br>102.7<br>114.9 | 0.1910<br>[ 0.2000 ] | 95.7% | 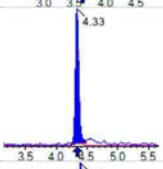 | 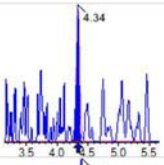 | |
| PFHxA | ( 313.0 / 269.0 ) 19483<br>( 313.0 / 119.0 ) 2906 | ( 5.19 , 1.00 ) ( 0.00 , N/A , -0.1) | 159.5<br>62.1 | 0.1492<br>134.1<br>125.9 | 0.0800<br>[ 0.1000 ] | 80.3% | 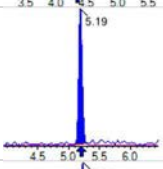 | 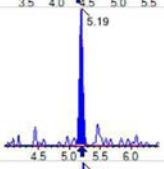 | |
| PFHpA | ( 363.0 / 319.0 ) 27938<br>( 363.0 / 169.0 ) 9159 | ( 6.32 , 1.00 ) ( 0.00 , N/A , 0.2) | 256.4<br>246.8 | 0.3278<br>107.3<br>106.5 | 0.0940<br>[ 0.1000 ] | 94.0% | 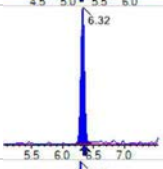 | 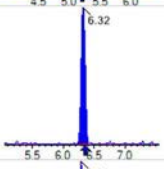 | |
| PFOA | ( 413.0 / 369.0 ) 43742<br>( 413.0 / 169.0 ) 13203 | ( 7.44 , 1.00 ) ( 0.00 , N/A , 0.1) | 89.2<br>102.7 | 0.3018<br>84.4<br>85.1 | 0.1050<br>[ 0.1000 ] | 104.8% | 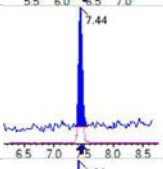 | 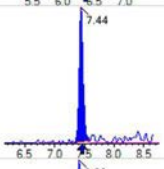 | |
| PFNA | ( 463.0 / 419.0 ) 24535<br>( 463.0 / 169.0 ) 6196 | ( 9.01 , 1.00 ) ( 0.01 , N/A , 0.4) | 317.2<br>168.8 | 0.2526<br>102.8<br>98.5 | 0.0820<br>[ 0.1000 ] | 81.6% | 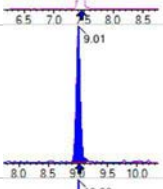 | 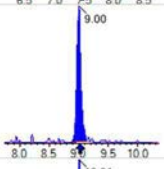 | |
| PFDA | ( 513.0 / 469.0 ) 31183<br>( 513.0 / 169.0 ) 3550 | ( 10.00 , 1.00 ) ( 0.00 , N/A , -0.2) | 306.3<br>2632.3 | 0.1138<br>95.5<br>93.5 | 0.0930<br>[ 0.1000 ] | 92.9% | 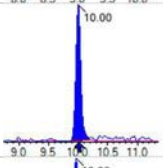 | 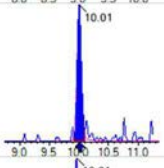 | |
| PFUnA | ( 563.0 / 519.0 ) 33235<br>( 563.0 / 169.0 ) 4697 | ( 10.92 , 1.00 ) ( 0.00 , N/A , 0.8) | 220.5<br>96.4 | 0.1413<br>91.3<br>94.1 | 0.0890<br>[ 0.1000 ] | 89.1% | 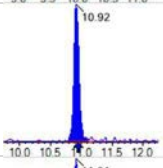 | 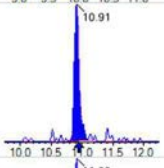 | |
| PFDoA | ( 613.0 / 569.0 ) 38260<br>( 613.0 / 169.0 ) 5388 | ( 11.81 , 1.00 ) ( 0.00 , N/A , -0.4) | 204.3<br>70.3 | 0.1408<br>92.7<br>92.3 | 0.0950<br>[ 0.1000 ] | 95.0% | 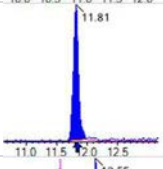 | 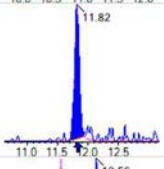 | |
| PFTrDA | ( 663.0 / 619.0 ) 37240<br>( 663.0 / 169.0 ) 8567 | ( 12.55 , 1.06 ) ( N/A , -0.01 , -0.3) | 266.6<br>116.9 | 0.2301<br>85.5<br>87.3 | 0.0950<br>[ 0.1000 ] | 95.1% | 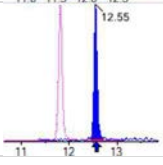 | 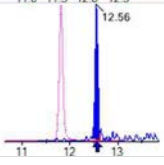 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 30181<br>( 713.0 / 169.0 ) 9548 | ( 13.10 , 1.00 ) ( -0.01 , N/A , -0.2) | 157.0<br>95.2 | 0.3164<br>116.6<br>120.2 | 0.0900<br>[ 0.1000 ] | 90.1% | 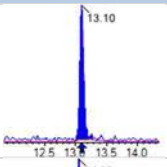 | 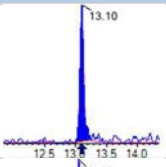 | |
| PFHxDA | ( 813.0 / 769.0 ) 23262<br>( 813.0 / 169.0 ) 5285 | ( 14.00 , 1.00 ) ( -0.01 , N/A , -0.3) | 180.4<br>58.1 | 0.2272<br>86.8<br>84.2 | 0.0910<br>[ 0.1000 ] | 91.0% | 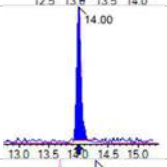 | 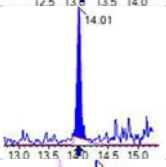 | |
| PFODA | ( 913.0 / 869.0 ) 15205<br>( 913.0 / 169.0 ) 4837 | ( 14.74 , 1.05 ) ( N/A , 0.00 , -0.1) | 79.3<br>25.4 | 0.3181<br>101.5<br>95.0 | 0.0940<br>[ 0.1000 ] | 93.9% | 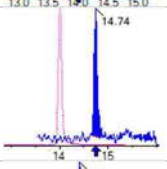 | 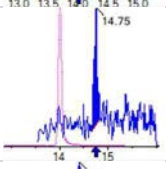 | |
| PFBS | ( 299.0 / 80.0 ) 30561<br>( 299.0 / 99.0 ) 23377 | ( 5.36 , 1.00 ) ( 0.00 , N/A , 0.1) | 352.1<br>215.0 | 0.7649<br>103.3<br>101.4 | 0.0830<br>[ 0.0880 ] | 94.2% | 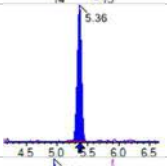 | 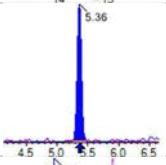 | |
| PFPeS | ( 349.0 / 80.0 ) 89959<br>( 349.0 / 99.0 ) 30203 | ( 6.64 , 0.82 ) ( N/A , -0.03 , 0.1) | 571.2<br>359.7 | 0.3357<br>98.3<br>94.5 | 0.0860<br>[ 0.0940 ] | 92.1% | 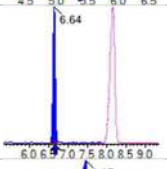 | 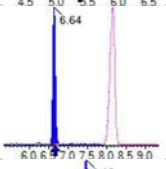 | |
| PFHxS | ( 399.0 / 80.0 ) 105921<br>( 399.0 / 99.0 ) 34177 | ( 8.15 , 1.00 ) ( 0.00 , N/A , -0.3) | 473.2<br>631.9 | 0.3227<br>98.3<br>99.9 | 0.0840<br>[ 0.0910 ] | 91.7% | 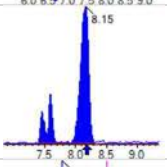 | 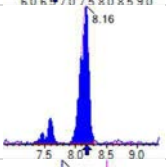 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 82780<br>( 449.0 / 99.0 ) 24435 | ( 9.49 , 0.91 ) ( N/A , -0.02 , 0.0) | 497.9<br>388.8 | 0.2952<br>113.1<br>113.8 | 0.0820<br>[ 0.0950 ] | 86.5% | 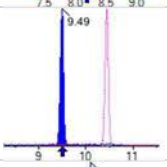 | 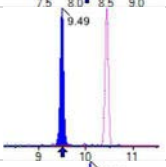 | |
| PFOS | ( 499.0 / 80.0 ) 93613<br>( 499.0 / 99.0 ) 22300 | ( 10.44 , 1.00 ) ( 0.00 , N/A , 0.0) | 528.7<br>2915.7 | 0.2382<br>103.1<br>104.0 | 0.0960<br>[ 0.0930 ] | 103.3% | 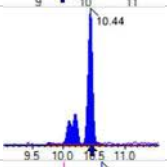 | 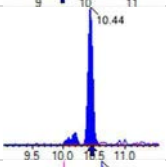 | MI2 DG 2024-03-29 |
| PFNS | ( 549.0 / 80.0 ) 78934<br>( 549.0 / 99.0 ) 22155 | ( 11.33 , 1.08 ) ( N/A , -0.02 , 0.0) | 490.3<br>271.0 | 0.2807<br>104.7<br>102.1 | 0.0890<br>[ 0.0960 ] | 92.3% | 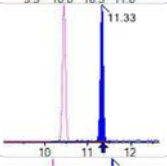 | 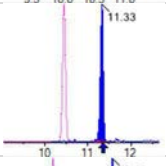 | |
| PFDS | ( 599.0 / 80.0 ) 106648<br>( 599.0 / 99.0 ) 28063 | ( 12.13 , 1.16 ) ( N/A , -0.02 , 0.1) | 450.5<br>247.7 | 0.2631<br>103.3<br>97.6 | 0.0980<br>[ 0.0960 ] | 101.7% | 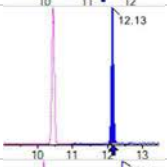 | 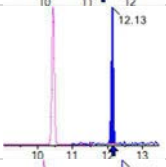 | |
| PFDoS | ( 699.0 / 80.0 ) 94174<br>( 699.0 / 99.0 ) 21618 | ( 13.17 , 1.26 ) ( N/A , -0.01 , -0.1) | 635.7<br>296.6 | 0.2296<br>102.7<br>97.1 | 0.0890<br>[ 0.0970 ] | 92.2% | 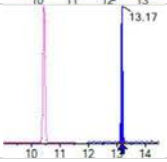 | 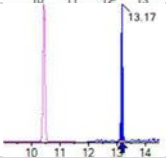 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 186344<br>( 327.0 / 81.0 ) 160209 | ( 4.81 , 1.00 ) ( -0.01 , N/A , 0.0) | 1925.5<br>562.0 | 0.8597<br>100.8<br>98.1 | 0.3640<br>[ 0.3740 ] | 97.4% | 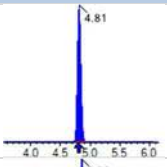 | 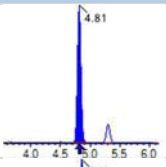 | |
| 6:2FTS | ( 427.0 / 407.0 ) 150946<br>( 427.0 / 81.0 ) 185260 | ( 6.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 1719.0<br>1548.4 | 1.2273<br>95.2<br>94.6 | 0.3550<br>[ 0.3800 ] | 93.6% | 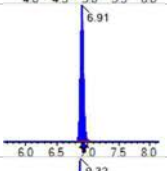 | 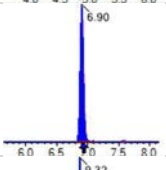 | |
| 8:2FTS | ( 527.0 / 507.0 ) 142017<br>( 527.0 / 81.0 ) 158286 | ( 9.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 1472.0<br>1240.7 | 1.1146<br>101.0<br>101.2 | 0.3040<br>[ 0.3830 ] | 79.2% | 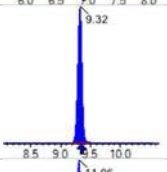 | 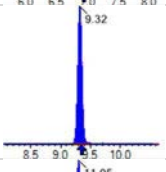 | |
| 10:2FTS | ( 627.0 / 607.0 ) 157965<br>( 627.0 / 81.0 ) 210677 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.2) | 936.5<br>499.7 | 1.3337<br>92.8<br>92.0 | 0.4160<br>[ 0.3860 ] | 107.7% | 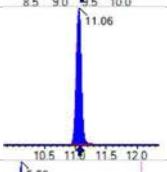 | 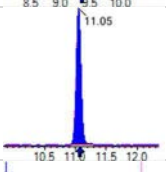 | |
| PFBSA | ( 297.9 / 78.0 ) 50966<br>( 297.9 / 278.0 ) 136 | ( 5.52 , 0.38 ) ( N/A , 0.00 , 4.0) | 496.1<br>3.8 | 0.0027<br>206.0<br>236.9 | 0.0870<br>[ 0.1000 ] | 87.2% | 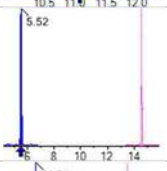 | 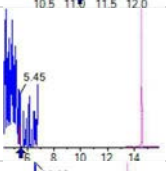 | |
| PFHxSA | ( 397.9 / 78.0 ) 100435<br>( 397.9 / 378.0 ) 322 | ( 11.21 , 0.75 ) ( N/A , -0.02 , 1.2) | 705.6<br>56.9 | 0.0032<br>79.3<br>73.0 | 0.0870<br>[ 0.1000 ] | 86.7% | 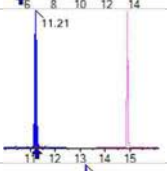 | 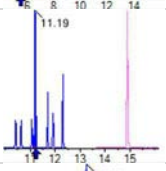 | |
| PFOSA | ( 498.0 / 78.0 ) 75666<br>( 498.0 / 478.0 ) 1184 | ( 13.28 , 1.00 ) ( -0.01 , N/A , -0.3) | 603.8<br>41.8 | 0.0156<br>106.4<br>117.6 | 0.0910<br>[ 0.1000 ] | 90.7% | 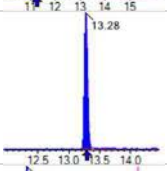 | 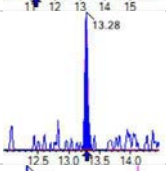 | |
| TFSI | ( 279.7 / 147.0 ) 117559<br>( 279.7 / 211.0 ) 12670 | ( 7.04 , 0.53 ) ( N/A , -0.02 , 0.0) | 47.4<br>11533.4 | 0.1078<br>121.8<br>122.9 | 0.0810<br>[ 0.0980 ] | 82.4% | 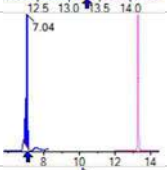 | 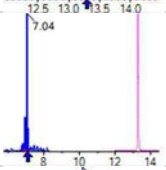 | |
| NMeFOSA | ( 512.0 / 219.0 ) 63066<br>( 512.0 / 169.0 ) 45992 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 1.0) | 660.6<br>273.0 | 0.7293<br>95.1<br>98.0 | 0.3680<br>[ 0.4000 ] | 92.1% | 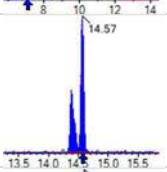 | 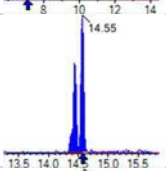 | |
| NEtFOSA | ( 526.0 / 219.0 ) 72776<br>( 526.0 / 169.0 ) 95023 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 1.9) | 808.1<br>763.0 | 1.3057<br>104.4<br>104.9 | 0.3490<br>[ 0.4000 ] | 87.3% | 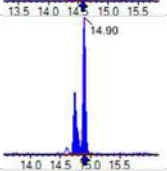 | 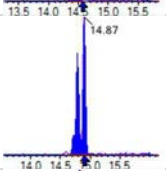 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 31974<br>( 570.0 / 483.0 ) 14212 | ( 10.38 , 1.00 ) ( 0.01 , N/A , 0.5) | 18835.4<br>89887.6 | 0.4445<br>95.8<br>95.2 | 0.1040<br>[ 0.1000 ] | 104.4% | 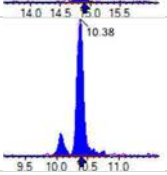 | 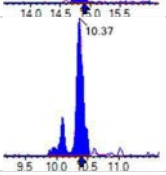 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 25686<br>( 584.0 / 526.0 ) 16067 | ( 10.98 , 1.00 ) ( 0.01 , N/A , -0.3) | 1558.7<br>158.9 | 0.6255<br>104.3<br>104.6 | 0.0870<br>[ 0.1000 ] | 87.0% | 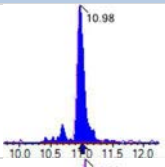 | 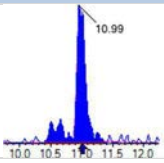 | |
| NMeFOSE | ( 616.0 / 59.0 ) 29720 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 187.7 | N/A<br>0.0<br>0.0 | 0.3620<br>[ 0.4000 ] | 90.5% | 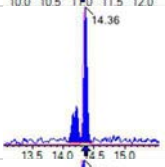 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 26113 | ( 14.74 , 1.00 ) ( 0.02 , N/A , 0.0) | 217.1 | N/A<br>0.0<br>0.0 | 0.3900<br>[ 0.4000 ] | 97.4% | 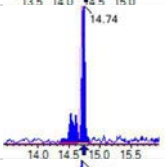 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 4929<br>( 285.0 / 185.0 ) 17743 | ( 5.60 , 1.00 ) ( 0.00 , N/A , -0.1) | 181.1<br>173.2 | 3.5995<br>128.2<br>136.3 | 0.0760<br>[ 0.1000 ] | 75.7% | 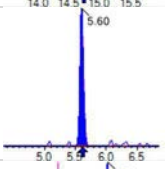 | 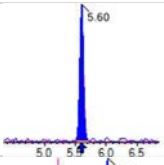 | |
| ADONA | ( 377.0 / 85.0 ) 78662<br>( 377.0 / 251.0 ) 8948 | ( 6.76 , 1.21 ) ( N/A , -0.03 , -0.1) | 723.5<br>87.2 | 0.1138<br>108.5<br>114.1 | 0.0920<br>[ 0.0940 ] | 97.2% | 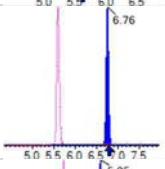 | 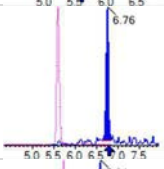 | |
| PFEESA | ( 315.0 / 135.0 ) 24240<br>( 315.0 / 83.0 ) 16750 | ( 5.95 , 1.15 ) ( N/A , -0.02 , 0.1) | 548.9<br>70.7 | 0.6910<br>107.7<br>118.2 | 0.1370<br>[ 0.1780 ] | 76.9% | 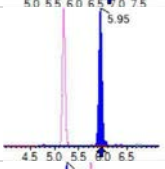 | 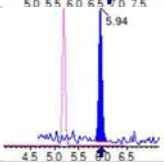 | |
| PFMPA | ( 229.0 / 85.0 ) 13527 | ( 3.87 , 0.89 ) ( N/A , 0.01 , 0.0) | 480.7 | N/A<br>0.0<br>0.0 | 0.1650<br>[ 0.2000 ] | 82.7% | 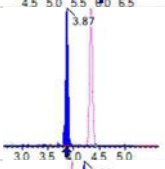 | | |
| PFMBA | ( 279.0 / 85.0 ) 34558 | ( 4.55 , 1.05 ) ( N/A , 0.00 , 0.0) | 460.9 | N/A<br>0.0<br>0.0 | 0.1870<br>[ 0.2000 ] | 93.7% | 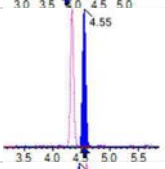 | | |
| NFDHA | ( 295.0 / 201.0 ) 12829<br>( 295.0 / 85.0 ) 15461 | ( 5.06 , 0.98 ) ( N/A , 0.00 , 0.0) | 457.1<br>271.6 | 1.2052<br>121.2<br>116.8 | 0.1490<br>[ 0.2000 ] | 74.5% | 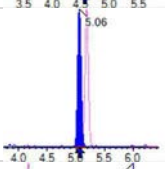 | 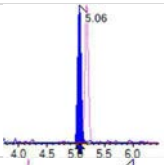 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 79278<br>( 533.0 / 353.0 ) 28868 | ( 11.12 , 1.98 ) ( N/A , -0.02 , -0.1) | 1283.9<br>627.8 | 0.3641<br>114.2<br>109.7 | 0.0830<br>[ 0.0930 ] | 89.0% | 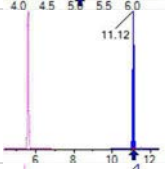 | 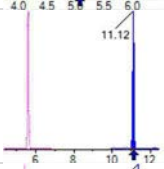 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 67974<br>( 633.0 / 453.0 ) 22983 | ( 12.61 , 2.25 ) ( N/A , -0.01 , 0.1) | 1128.2<br>257.2 | 0.3381<br>99.7<br>99.5 | 0.0920<br>[ 0.0940 ] | 97.2% | 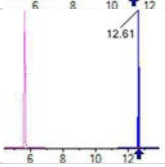 | 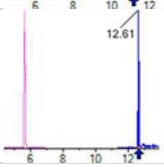 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-LCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 39791<br>( 461.0 / 381.2 ) 16377 | ( 9.38 , 0.90 )<br>( N/A , -0.02 , -0.1) | 905.9<br>1931.2 | 0.4116<br>106.6<br>103.6 | 0.0760<br>[ 0.0920 ] | 82.1% | 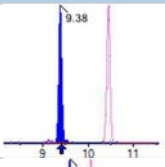 | 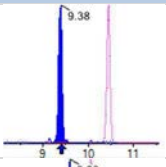 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 7711<br>( 241.0 / 117.0 ) 16120 | ( 3.93 , 0.91 )<br>( N/A , 0.01 , 0.0) | 452.0<br>118.3 | 2.0905<br>95.2<br>96.0 | 0.4040<br>[ 0.4000 ] | 100.9% | 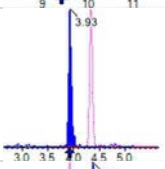 | 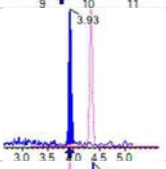 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 24980<br>( 341.0 / 217.0 ) 31927 | ( 5.61 , 1.08 )<br>( N/A , -0.02 , -0.2) | 465.7<br>176.3 | 1.2781<br>83.5<br>84.1 | 0.3780<br>[ 0.4000 ] | 94.6% | 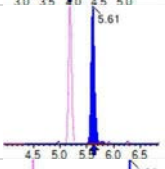 | 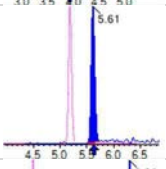 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 54876<br>( 441.0 / 337.0 ) 46155 | ( 9.31 , 1.79 )<br>( N/A , -0.02 , 0.0) | 5083.5<br>889.9 | 0.8411<br>98.5<br>95.3 | 0.3910<br>[ 0.4000 ] | 97.8% | 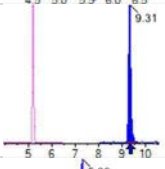 | 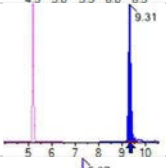 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 29164<br>( 357.2 / 243.0 ) 2923 | ( 5.86 , 1.00 )<br>( -0.01 , N/A , -0.4) | 217.8<br>53.0 | 0.1002<br>93.5<br>90.6 | 0.0930<br>[ 0.1000 ] | 92.7% | 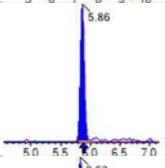 | 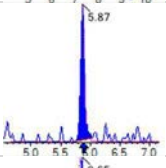 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 31434<br>( 457.2 / 343.0 ) 1033 | ( 8.63 , 1.00 )<br>( 0.00 , N/A , -1.0) | 300.1<br>42.4 | 0.0329<br>73.2<br>75.2 | 0.1060<br>[ 0.1000 ] | 105.6% | 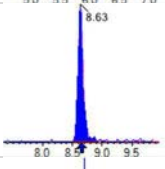 | 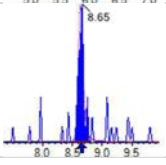 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 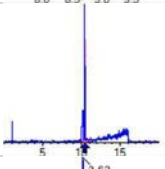 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 267478 | ( 3.62 , N/A )<br>( N/A , 0.01 , N/A ) | 1665.9 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 101.2% } | 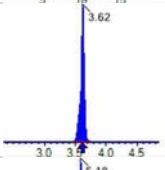 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 104254 | ( 5.18 , N/A )<br>( N/A , -0.01 , N/A ) | 1568.8 | N/A | 0.8830<br>[ 1.0000 ] | 88.3%<br>{ 90.1% } | 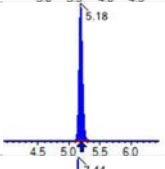 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 358219 | ( 7.44 , N/A )<br>( N/A , -0.03 , N/A ) | 6002.4 | N/A | 0.9230<br>[ 1.0000 ] | 92.3%<br>{ 99.2% } | 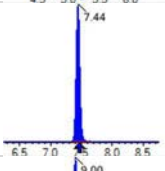 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 269192 | ( 9.00 , N/A )<br>( N/A , -0.02 , N/A ) | 1349.7 | N/A | 0.9210<br>[ 1.0000 ] | 92.1%<br>{ 96.5% } | 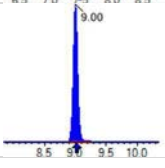 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-LCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274671 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 19479.7 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 99.5% } | 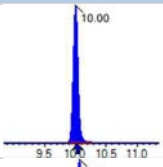 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 897098 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 6442.1 | N/A | 0.9130 [ 1.0000 ] | 91.3% { 97.7% } | 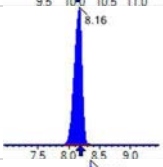 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 731414 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 2684.8 | N/A | 0.9320 [ 1.0000 ] | 93.2% { 94.8% } | 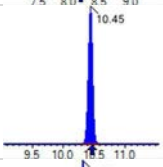 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2442782 | ( 3.62 , N/A ) ( N/A , 0.01 , N/A ) | 76455.9 | N/A | 8.4490 [ 8.0000 ] | 105.6% { 112.5% } | 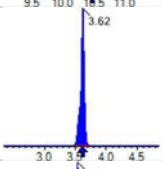 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 891599 | ( 4.34 , N/A ) ( N/A , 0.01 , N/A ) | 4771.6 | N/A | 4.6710 [ 4.0000 ] | 116.8% { 106.6% } | 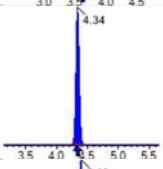 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 522849 | ( 5.19 , N/A ) ( N/A , -0.01 , N/A ) | 10933.7 | N/A | 2.2920 [ 2.0000 ] | 114.6% { 108.7% } | 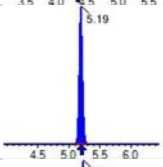 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 599036 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 12046.5 | N/A | 2.3650 [ 2.0000 ] | 118.2% { 109.3% } | 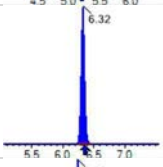 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 831589 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 5536.2 | N/A | 2.1900 [ 2.0000 ] | 109.5% { 108.6% } | 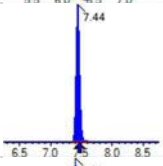 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299102 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 9834.3 | N/A | 1.1250 [ 1.0000 ] | 112.5% { 110.9% } | 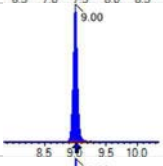 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336157 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1043.1 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 114.3% } | 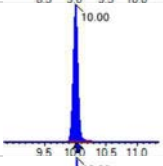 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 410650 | ( 10.92 , N/A ) ( N/A , -0.02 , N/A ) | 1255.8 | N/A | 1.0910 [ 1.0000 ] | 109.1% { 111.2% } | 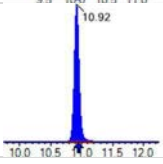 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-LCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 401525 | ( 11.82 , N/A ) ( N/A , -0.02 , N/A ) | 1323.2 | N/A | 1.0400 [ 1.0000 ] | 104.0% { 110.7% } | 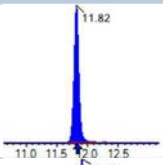 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 358779 | ( 13.10 , N/A ) ( N/A , -0.01 , N/A ) | 1319.7 | N/A | 1.0490 [ 1.0000 ] | 104.9% { 109.5% } | 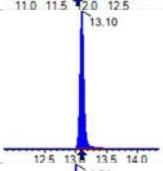 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 545780 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2471.6 | N/A | 1.9080 [ 2.0000 ] | 95.4% { 109.6% } | 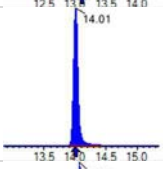 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1491218 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1389.9 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 101.1% } | 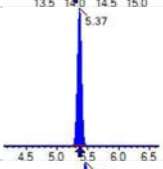 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1448042 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 4767.9 | N/A | 2.2370 [ 2.0000 ] | 111.9% { 111.2% } | 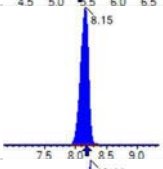 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1683838 | ( 10.44 , N/A ) ( N/A , -0.02 , N/A ) | 1905.6 | N/A | 2.1640 [ 2.0000 ] | 108.2% { 116.6% } | 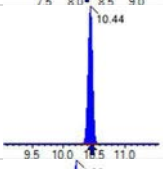 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 775423 | ( 4.82 , N/A ) ( N/A , 0.01 , N/A ) | 57.5 | N/A | 4.8750 [ 4.0000 ] | 121.9% { 119.2% } | 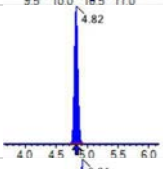 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2001386 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 6335.6 | N/A | 5.1220 [ 4.0000 ] | 128.0% { 113.7% } | 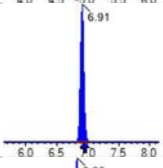 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1901459 | ( 9.33 , N/A ) ( N/A , -0.02 , N/A ) | 2086.5 | N/A | 5.5610 [ 4.0000 ] | 139.0% { 130.7% } | 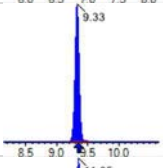 | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3823690 | ( 11.05 , N/A ) ( N/A , -0.02 , N/A ) | 2055.6 | N/A | 10.3380 [ 8.0000 ] | 129.2% { 128.3% } | 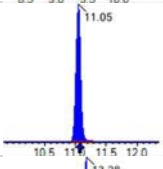 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1724224 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3563.1 | N/A | 2.0870 [ 2.0000 ] | 104.4% { 110.7% } | 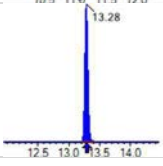 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (2)
Acquired: 2024/03/28 - 20:12

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 385350 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 2811.9 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 105.9% } | 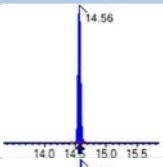 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 367895 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 3265.1 | N/A | 2.1670 [ 2.0000 ] | 108.3% { 106.8% } | 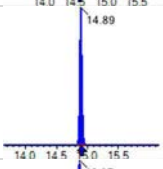 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1327710 | ( 10.37 , N/A ) ( N/A , -0.02 , N/A ) | 4748.9 | N/A | 4.9140 [ 4.0000 ] | 122.9% { 112.5% } | 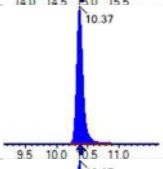 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1217311 | ( 10.97 , N/A ) ( N/A , -0.02 , N/A ) | 2421.2 | N/A | 4.9920 [ 4.0000 ] | 124.8% { 119.4% } | 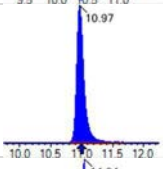 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1516720 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 2592.1 | N/A | 21.8590 [ 20.0000 ] | 109.3% { 114.1% } | 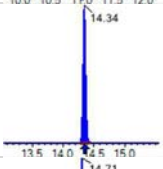 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1406881 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 4040.6 | N/A | 21.6500 [ 20.0000 ] | 108.2% { 112.4% } | 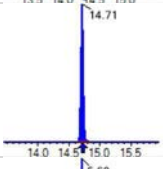 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 887127 | ( 5.60 , N/A ) ( N/A , -0.02 , N/A ) | 4030.6 | N/A | 8.9790 [ 8.0000 ] | 112.2% { 107.2% } | 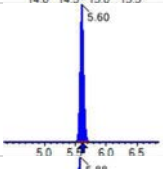 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 598528 | ( 5.88 , N/A ) ( N/A , -0.02 , N/A ) | 2305.4 | N/A | 2.0000 [ 2.0000 ] | 100.0% { 106.6% } | 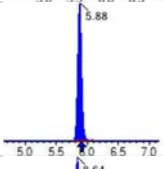 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 720328 | ( 8.64 , N/A ) ( N/A , -0.02 , N/A ) | 1022.3 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 107.5% } | 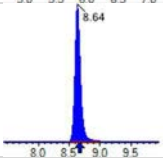 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV1A | PFBA | 20.0A | 18.2A | 91.2A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.44A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.55A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.53A | 90.5A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.65A | 93.0A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.95A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.86A | 97.2A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.91A | 98.2A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.00A | 90.5A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.48A | 95.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.27A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.95A | 104A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.56A | 98.1A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 5.07A | 106A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.12A | 106A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.14A | 106A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.6A | 93.8A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.7A | 93.1A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.2A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.85A | 97.0A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.9A | 94.3A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.48A | 89.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.4A | 97.2A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.63A | 92.6A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV1 | ADONA | 4.72A | 4.55A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFEESA | 8.90A | 8.33A | 93.6A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.05A | 90.5A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.17A | 91.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 8.99A | 89.9A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.31A | 92.1A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.58A | 97.1A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.9A | 94.6A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.1A | 90.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 18.1A | 90.5A | ng/mLA | +/- 30.00%A |

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Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 591485<br>( 163.0 / 69.0 ) 15515 | ( 2.46 , 0.68 ) ( N/A , 0.00 , -0.1) | 766.0<br>162.9 | 0.0262<br>95.7<br>100.0 | 9.6280<br>[ 10.0000 ] | 96.3% | 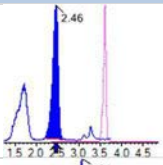 | 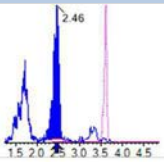 | |
| PFBA | ( 213.0 / 169.0 ) 4970017 | ( 3.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 1874.7 | N/A<br>0.0<br>0.0 | 18.2320<br>[ 20.0000 ] | 91.2% | 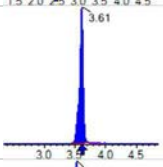 | | |
| PFPeA | ( 263.0 / 219.0 ) 1970604<br>( 263.0 / 69.0 ) 20967 | ( 4.33 , 1.00 ) ( 0.00 , N/A , -0.1) | 3856.0<br>347.5 | 0.0106<br>89.4<br>100.0 | 9.4390<br>[ 10.0000 ] | 94.4% | 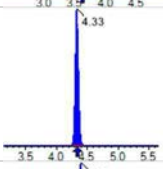 | 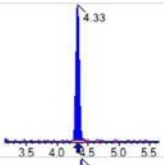 | |
| PFHxA | ( 313.0 / 269.0 ) 1015090<br>( 313.0 / 119.0 ) 120289 | ( 5.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 2199.2<br>1408.7 | 0.1185<br>106.5<br>100.0 | 4.5510<br>[ 5.0000 ] | 91.0% | 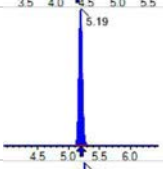 | 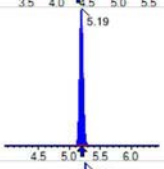 | |
| PFHpA | ( 363.0 / 319.0 ) 1230643<br>( 363.0 / 169.0 ) 378759 | ( 6.35 , 1.00 ) ( 0.00 , N/A , 0.0) | 2470.6<br>2740.8 | 0.3078<br>100.7<br>100.0 | 4.5260<br>[ 5.0000 ] | 90.5% | 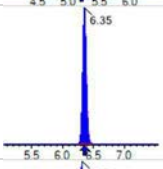 | 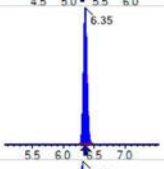 | |
| PFOA | ( 413.0 / 369.0 ) 1795150<br>( 413.0 / 169.0 ) 636720 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.1) | 1530.4<br>2080.0 | 0.3547<br>99.2<br>100.0 | 4.6700<br>[ 5.0000 ] | 93.4% | 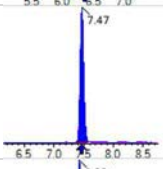 | 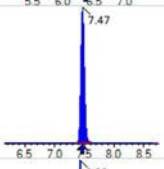 | |
| PFNA | ( 463.0 / 419.0 ) 1260048<br>( 463.0 / 169.0 ) 323212 | ( 9.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 2277.2<br>1758.5 | 0.2565<br>104.4<br>100.0 | 4.6510<br>[ 5.0000 ] | 93.0% | 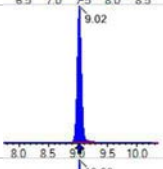 | 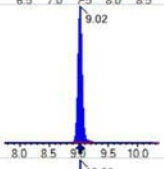 | |
| PFDA | ( 513.0 / 469.0 ) 1453986<br>( 513.0 / 169.0 ) 177107 | ( 10.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 5508.9<br>2896.2 | 0.1218<br>102.2<br>100.0 | 4.9510<br>[ 5.0000 ] | 99.0% | 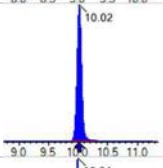 | 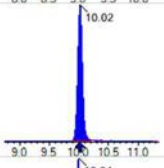 | |
| PFUnA | ( 563.0 / 519.0 ) 1596121<br>( 563.0 / 169.0 ) 239586 | ( 10.94 , 1.00 ) ( 0.00 , N/A , 0.0) | 1430.1<br>860.5 | 0.1501<br>96.9<br>100.0 | 4.7590<br>[ 5.0000 ] | 95.2% | 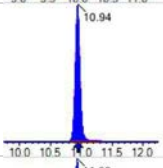 | 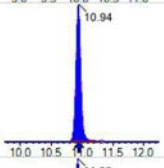 | |
| PFDoA | ( 613.0 / 569.0 ) 1768860<br>( 613.0 / 169.0 ) 269732 | ( 11.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1700.0<br>1323.4 | 0.1525<br>100.4<br>100.0 | 4.8580<br>[ 5.0000 ] | 97.2% | 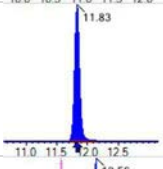 | 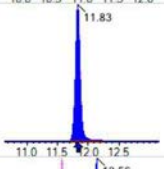 | |
| PFTrDA | ( 663.0 / 619.0 ) 1738116<br>( 663.0 / 169.0 ) 457962 | ( 12.56 , 1.06 ) ( N/A , 0.00 , 0.1) | 1414.4<br>1509.1 | 0.2635<br>97.9<br>100.0 | 4.9090<br>[ 5.0000 ] | 98.2% | 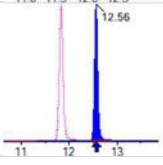 | 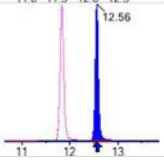 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1444557<br>( 713.0 / 169.0 ) 380247 | ( 13.11 , 1.00 ) ( 0.00 , N/A , 0.0) | 1945.2<br>1404.3 | 0.2632<br>97.0<br>100.0 | 4.7210<br>[ 5.0000 ] | 94.4% | 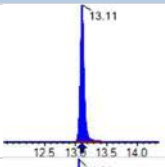 | 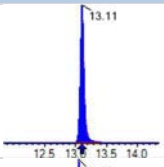 | |
| PFHxDA | ( 813.0 / 769.0 ) 1090356<br>( 813.0 / 169.0 ) 294337 | ( 14.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 2097.6<br>1176.6 | 0.2699<br>103.2<br>100.0 | 4.6750<br>[ 5.0000 ] | 93.5% | 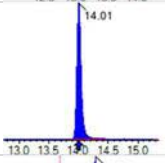 | 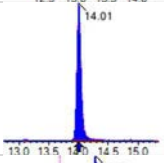 | |
| PFODA | ( 913.0 / 869.0 ) 625006<br>( 913.0 / 169.0 ) 209203 | ( 14.74 , 1.05 ) ( N/A , 0.00 , 0.1) | 1455.2<br>632.9 | 0.3347<br>106.8<br>100.0 | 4.2310<br>[ 5.0000 ] | 84.6% | 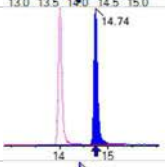 | 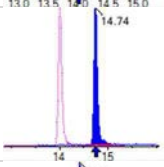 | |
| PFBS | ( 299.0 / 80.0 ) 1450623<br>( 299.0 / 99.0 ) 1094067 | ( 5.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 2786.7<br>2153.9 | 0.7542<br>101.8<br>100.0 | 3.9990<br>[ 4.4240 ] | 90.4% | 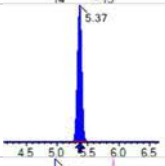 | 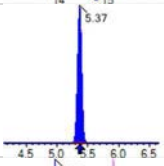 | |
| PFPeS | ( 349.0 / 80.0 ) 4194505<br>( 349.0 / 99.0 ) 1490111 | ( 6.67 , 0.82 ) ( N/A , 0.00 , 0.0) | 3130.0<br>3009.1 | 0.3553<br>104.0<br>100.0 | 4.4830<br>[ 4.6920 ] | 95.6% | 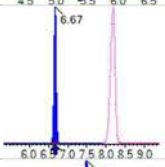 | 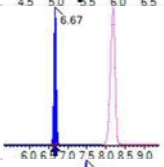 | |
| PFHxS | ( 399.0 / 80.0 ) 4866882<br>( 399.0 / 99.0 ) 1571282 | ( 8.18 , 1.00 ) ( 0.00 , N/A , 0.2) | 4013.7<br>4415.8 | 0.3229<br>98.4<br>100.0 | 4.2680<br>[ 4.5550 ] | 93.7% | 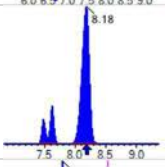 | 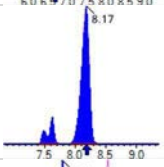 | |
| PFHpS | ( 449.0 / 80.0 ) 4269163<br>( 449.0 / 99.0 ) 1107696 | ( 9.50 , 0.91 ) ( N/A , 0.00 , 0.1) | 3987.6<br>3630.6 | 0.2595<br>99.5<br>100.0 | 4.9480<br>[ 4.7570 ] | 104.0% | 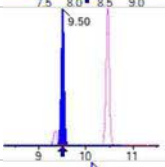 | 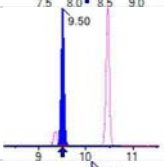 | |
| PFOS | ( 499.0 / 80.0 ) 3826122<br>( 499.0 / 99.0 ) 876571 | ( 10.46 , 1.00 ) ( 0.00 , N/A , 0.0) | 2853.8<br>4193.5 | 0.2291<br>99.2<br>100.0 | 4.5630<br>[ 4.6370 ] | 98.4% | 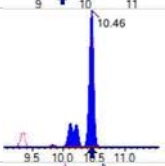 | 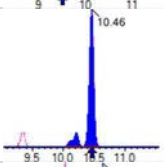 | |
| PFNS | ( 549.0 / 80.0 ) 3873913<br>( 549.0 / 99.0 ) 1065229 | ( 11.34 , 1.08 ) ( N/A , 0.00 , 0.1) | 3663.5<br>2986.0 | 0.2750<br>102.6<br>100.0 | 5.0690<br>[ 4.7990 ] | 105.6% | 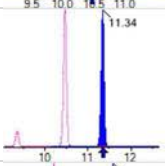 | 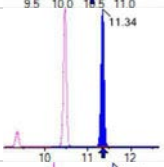 | |
| PFDS | ( 599.0 / 80.0 ) 4778428<br>( 599.0 / 99.0 ) 1287895 | ( 12.15 , 1.16 ) ( N/A , 0.00 , 0.1) | 3848.4<br>3006.1 | 0.2695<br>105.8<br>100.0 | 5.1150<br>[ 4.8160 ] | 106.2% | 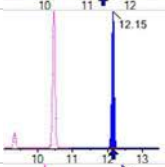 | 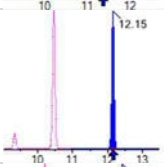 | |
| PFDoS | ( 699.0 / 80.0 ) 4645520<br>( 699.0 / 99.0 ) 1097721 | ( 13.17 , 1.26 ) ( N/A , 0.00 , 0.0) | 5798.1<br>5031.5 | 0.2363<br>105.7<br>100.0 | 5.1400<br>[ 4.8480 ] | 106.0% | 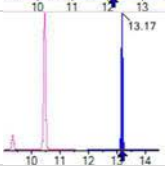 | 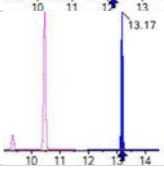 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7572540<br>( 327.0 / 81.0 ) 6634774 | ( 4.81 , 1.00 ) ( 0.00 , N/A , -0.1) | 4810.7<br>3911.1 | 0.8762<br>102.7<br>100.0 | 17.6350<br>[ 18.6910 ] | 94.4% | 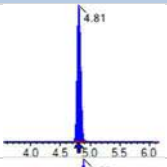 | 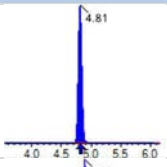 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6606459<br>( 427.0 / 81.0 ) 8574653 | ( 6.93 , 1.00 ) ( -0.01 , N/A , 0.0) | 6781.3<br>6430.6 | 1.2979<br>100.6<br>100.0 | 17.6900<br>[ 18.9810 ] | 93.2% | 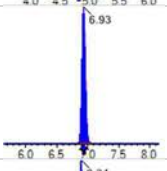 | 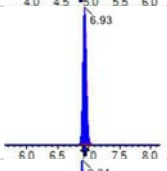 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6508305<br>( 527.0 / 81.0 ) 7171265 | ( 9.34 , 1.00 ) ( -0.01 , N/A , 0.0) | 2710.8<br>2539.8 | 1.1019<br>99.8<br>100.0 | 18.1880<br>[ 19.1660 ] | 94.9% | 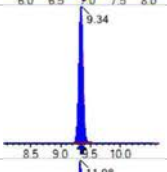 | 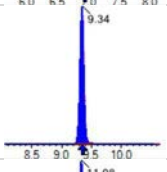 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5877576<br>( 627.0 / 81.0 ) 8517742 | ( 11.08 , 1.00 ) ( 0.01 , N/A , 0.1) | 1484.3<br>1902.2 | 1.4492<br>100.8<br>100.0 | 19.8700<br>[ 19.3240 ] | 102.8% | 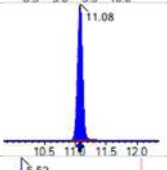 | 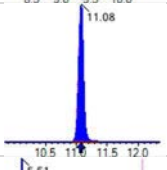 | |
| PFBSA | ( 297.9 / 78.0 ) 2487773<br>( 297.9 / 278.0 ) 2800 | ( 5.52 , 0.38 ) ( N/A , 0.00 , 1.0) | 1901.2<br>38.1 | 0.0011<br>86.9<br>100.0 | 4.5040<br>[ 5.0000 ] | 90.1% | 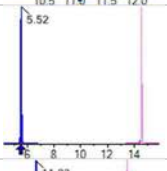 | 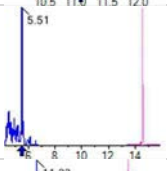 | |
| PFHxSA | ( 397.9 / 78.0 ) 4966024<br>( 397.9 / 378.0 ) 21789 | ( 11.23 , 0.75 ) ( N/A , 0.00 , 0.1) | 1906.8<br>873.2 | 0.0044<br>108.6<br>100.0 | 4.5810<br>[ 5.0000 ] | 91.6% | 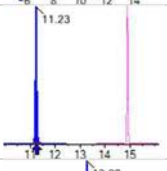 | 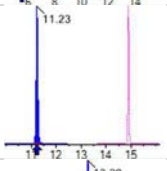 | |
| PFOSA | ( 498.0 / 78.0 ) 3654303<br>( 498.0 / 478.0 ) 48635 | ( 13.29 , 1.00 ) ( -0.01 , N/A , 0.1) | 3277.8<br>800.8 | 0.0133<br>90.5<br>100.0 | 4.8480<br>[ 5.0000 ] | 97.0% | 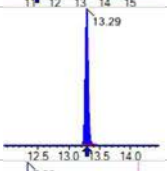 | 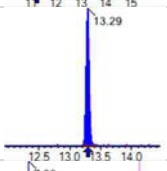 | |
| TFSI | ( 279.7 / 147.0 ) 7170846<br>( 279.7 / 211.0 ) 628687 | ( 7.06 , 0.53 ) ( N/A , 0.00 , 0.0) | 91.6<br>48746.5 | 0.0877<br>99.1<br>100.0 | 5.4460<br>[ 4.8970 ] | 111.2% | 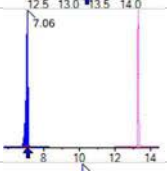 | 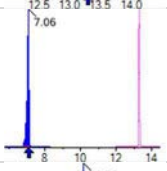 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3089413<br>( 512.0 / 169.0 ) 2300040 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 1.0) | 4106.5<br>1811.0 | 0.7445<br>97.1<br>100.0 | 19.0980<br>[ 20.0000 ] | 95.5% | 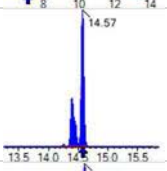 | 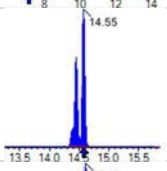 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3679433<br>( 526.0 / 169.0 ) 4578468 | ( 14.91 , 1.00 ) ( 0.01 , N/A , 2.0) | 4703.4<br>3987.7 | 1.2443<br>99.5<br>100.0 | 18.8580<br>[ 20.0000 ] | 94.3% | 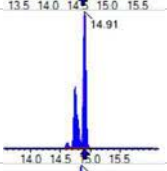 | 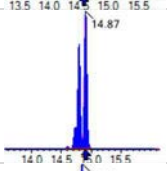 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1219981<br>( 570.0 / 483.0 ) 569609 | ( 10.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 4812.9<br>2677.5 | 0.4669<br>100.6<br>100.0 | 4.4820<br>[ 5.0000 ] | 89.6% | 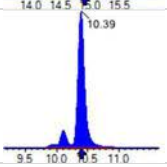 | 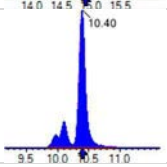 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1156135<br>( 584.0 / 526.0 ) 691284 | ( 11.01 , 1.00 )<br>( 0.01 , N/A , 0.1) | 2186.4<br>786.4 | 0.5979<br>99.7<br>100.0 | 4.6760<br>[ 5.0000 ] | 93.5% | 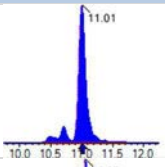 | 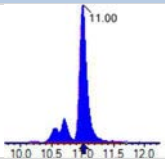 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1359255 | ( 14.37 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2610.7 | N/A<br>0.0<br>0.0 | 18.8940<br>[ 20.0000 ] | 94.5% | 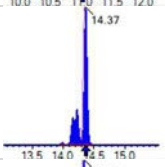 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1159542 | ( 14.74 , 1.00 )<br>( 0.03 , N/A , 0.0) | 3999.1 | N/A<br>0.0<br>0.0 | 19.4460<br>[ 20.0000 ] | 97.2% | 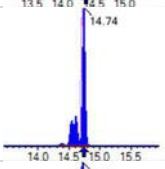 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 281002<br>( 285.0 / 185.0 ) 742127 | ( 5.61 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1881.0<br>2280.5 | 2.6410<br>94.1<br>100.0 | 4.6280<br>[ 5.0000 ] | 92.6% | 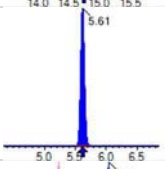 | 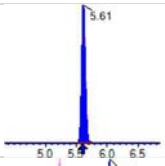 | |
| ADONA | ( 377.0 / 85.0 ) 3642726<br>( 377.0 / 251.0 ) 363047 | ( 6.79 , 1.21 )<br>( N/A , 0.00 , 0.1) | 3512.5<br>1397.9 | 0.0997<br>95.0<br>100.0 | 4.5490<br>[ 4.7140 ] | 96.5% | 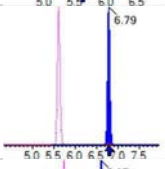 | 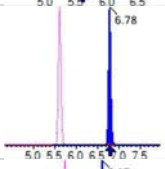 | |
| PFEESA | ( 315.0 / 135.0 ) 1351874<br>( 315.0 / 83.0 ) 790446 | ( 5.97 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3084.2<br>1431.2 | 0.5847<br>91.1<br>100.0 | 8.3300<br>[ 8.9250 ] | 93.3% | 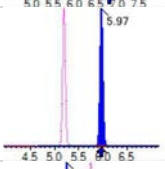 | 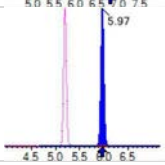 | |
| PFMPA | ( 229.0 / 85.0 ) 694806 | ( 3.86 , 0.89 )<br>( N/A , 0.00 , 0.0) | 7230.1 | N/A<br>0.0<br>0.0 | 9.0520<br>[ 10.0000 ] | 90.5% | 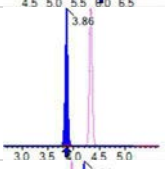 | | |
| PFMBA | ( 279.0 / 85.0 ) 1585903 | ( 4.54 , 1.05 )<br>( N/A , 0.00 , 0.0) | 4826.4 | N/A<br>0.0<br>0.0 | 9.1720<br>[ 10.0000 ] | 91.7% | 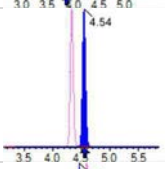 | | |
| NFDHA | ( 295.0 / 201.0 ) 712173<br>( 295.0 / 85.0 ) 734804 | ( 5.06 , 0.97 )<br>( N/A , 0.00 , 0.0) | 3780.9<br>2839.5 | 1.0318<br>103.8<br>100.0 | 8.9920<br>[ 10.0000 ] | 89.9% | 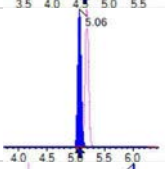 | 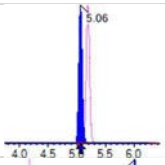 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3833947<br>( 533.0 / 353.0 ) 1272251 | ( 11.14 , 1.98 )<br>( N/A , 0.00 , 0.0) | 3204.9<br>2360.2 | 0.3318<br>104.1<br>100.0 | 4.3090<br>[ 4.6660 ] | 92.3% | 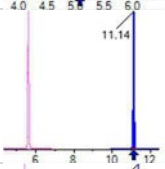 | 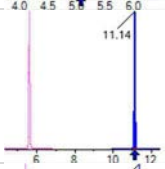 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3168087<br>( 633.0 / 453.0 ) 1077007 | ( 12.62 , 2.25 )<br>( N/A , 0.00 , 0.0) | 4240.9<br>3524.6 | 0.3400<br>100.2<br>100.0 | 4.5820<br>[ 4.7160 ] | 97.2% | 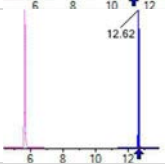 | 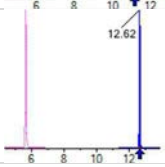 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2006767<br>( 461.0 / 381.2 ) 797243 | ( 9.40 , 0.90 )<br>( N/A , 0.00 , 0.0) | 4555.4<br>4452.9 | 0.3973<br>102.9<br>100.0 | 4.4600<br>[ 4.6190 ] | 96.5% | 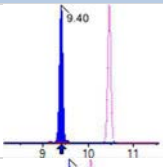 | 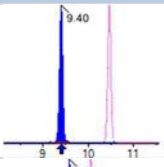 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 339168<br>( 241.0 / 117.0 ) 738935 | ( 3.92 , 0.90 )<br>( N/A , 0.00 , 0.0) | 5669.7<br>4098.8 | 2.1787<br>99.2<br>100.0 | 18.9250<br>[ 20.0000 ] | 94.6% | 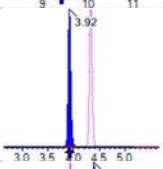 | 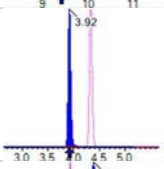 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1101000<br>( 341.0 / 217.0 ) 1672636 | ( 5.63 , 1.08 )<br>( N/A , 0.00 , 0.1) | 1611.1<br>1672.1 | 1.5192<br>99.2<br>100.0 | 18.1420<br>[ 20.0000 ] | 90.7% | 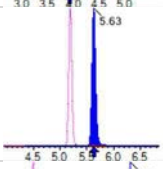 | 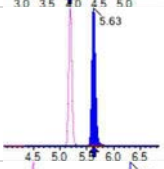 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2333331<br>( 441.0 / 337.0 ) 2058748 | ( 9.33 , 1.80 )<br>( N/A , 0.00 , 0.0) | 11987.2<br>2106.6 | 0.8823<br>103.3<br>100.0 | 18.0970<br>[ 20.0000 ] | 90.5% | 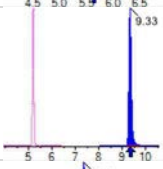 | 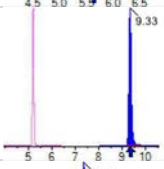 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1527635<br>( 357.2 / 243.0 ) 169037 | ( 5.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1882.9<br>1047.9 | 0.1107<br>103.2<br>100.0 | 5.1720<br>[ 5.0000 ] | 103.4% | 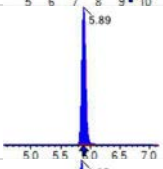 | 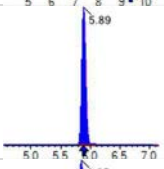 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1477716<br>( 457.2 / 343.0 ) 64553 | ( 8.65 , 1.00 )<br>( -0.01 , N/A , 0.1) | 1258.7<br>547.0 | 0.0437<br>97.3<br>100.0 | 5.3350<br>[ 5.0000 ] | 106.7% | 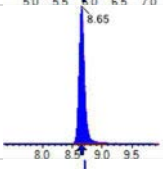 | 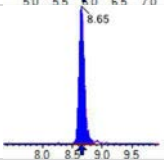 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 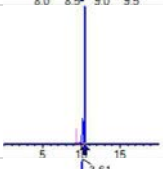 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 264402 | ( 3.61 , N/A )<br>( N/A , 0.00 , N/A ) | 1615.6 | N/A | 0.9370<br>[ 1.0000 ] | 93.7%<br>{ 100.0% } | 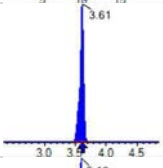 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 115762 | ( 5.19 , N/A )<br>( N/A , 0.00 , N/A ) | 764372.1 | N/A | 0.9810<br>[ 1.0000 ] | 98.1%<br>{ 100.0% } | 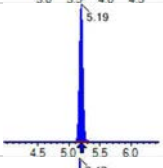 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 360966 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 12363.8 | N/A | 0.9300<br>[ 1.0000 ] | 93.0%<br>{ 100.0% } | 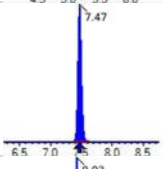 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 278817 | ( 9.03 , N/A )<br>( N/A , 0.00 , N/A ) | 1958.9 | N/A | 0.9540<br>[ 1.0000 ] | 95.4%<br>{ 100.0% } | 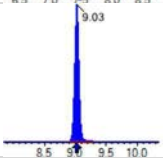 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 276100 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 15115.7 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 100.0% } | 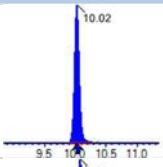 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 917853 | ( 8.18 , N/A ) ( N/A , 0.00 , N/A ) | 5460.5 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 100.0% } | 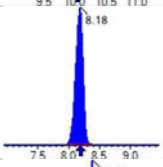 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 771261 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 3409.6 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 100.0% } | 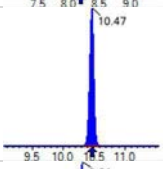 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2171448 | ( 3.61 , N/A ) ( N/A , 0.00 , N/A ) | 113799.8 | N/A | 7.5980 [ 8.0000 ] | 95.0% { 100.0% } | 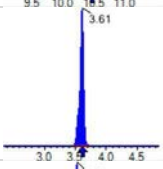 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 836377 | ( 4.33 , N/A ) ( N/A , 0.00 , N/A ) | 4628.4 | N/A | 3.9460 [ 4.0000 ] | 98.7% { 100.0% } | 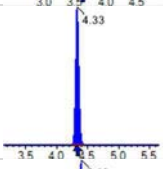 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 480793 | ( 5.19 , N/A ) ( N/A , 0.00 , N/A ) | 27318.2 | N/A | 1.8980 [ 2.0000 ] | 94.9% { 100.0% } | 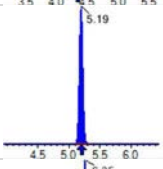 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 548085 | ( 6.35 , N/A ) ( N/A , 0.00 , N/A ) | 17409.5 | N/A | 1.9490 [ 2.0000 ] | 97.4% { 100.0% } | 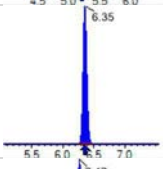 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 765647 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5069.3 | N/A | 2.0010 [ 2.0000 ] | 100.1% { 100.0% } | 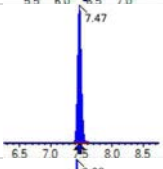 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 269622 | ( 9.02 , N/A ) ( N/A , 0.00 , N/A ) | 4467.5 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 100.0% } | 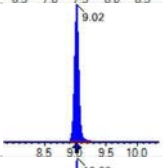 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 294041 | ( 10.02 , N/A ) ( N/A , 0.00 , N/A ) | 1407.5 | N/A | 0.9220 [ 1.0000 ] | 92.2% { 100.0% } | 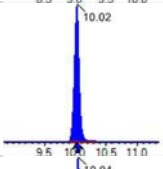 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 369329 | ( 10.94 , N/A ) ( N/A , 0.00 , N/A ) | 1050.3 | N/A | 0.9760 [ 1.0000 ] | 97.6% { 100.0% } | 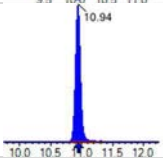 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 362872 | ( 11.83 , N/A ) ( N/A , 0.00 , N/A ) | 1423.4 | N/A | 0.9350 [ 1.0000 ] | 93.5% { 100.0% } | 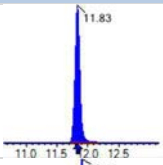  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 327667 | ( 13.11 , N/A ) ( N/A , 0.00 , N/A ) | 1436.0 | N/A | 0.9530 [ 1.0000 ] | 95.3% { 100.0% } | 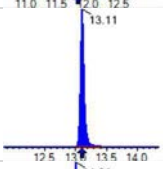  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 497891 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 2198.2 | N/A | 1.7310 [ 2.0000 ] | 86.6% { 100.0% } | 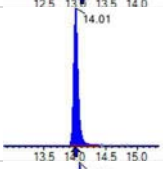  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1474977 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1191.0 | N/A | 1.9940 [ 2.0000 ] | 99.7% { 100.0% } | 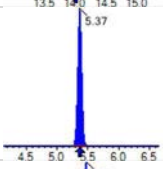  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1302149 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 5082.5 | N/A | 1.9670 [ 2.0000 ] | 98.3% { 100.0% } | 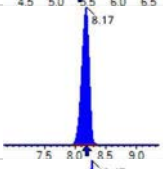  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1444544 | ( 10.47 , N/A ) ( N/A , 0.00 , N/A ) | 1070.4 | N/A | 1.7600 [ 2.0000 ] | 88.0% { 100.0% } | 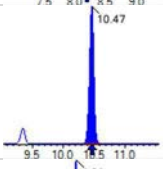  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 650602 | ( 4.81 , N/A ) ( N/A , 0.00 , N/A ) | 93.0 | N/A | 3.9980 [ 4.0000 ] | 99.9% { 100.0% } | 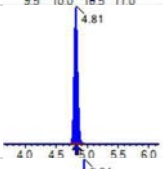  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1759886 | ( 6.94 , N/A ) ( N/A , 0.00 , N/A ) | 6139.2 | N/A | 4.4020 [ 4.0000 ] | 110.0% { 100.0% } | 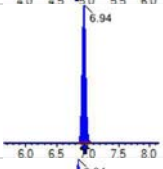  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1455136 | ( 9.34 , N/A ) ( N/A , 0.00 , N/A ) | 2557.1 | N/A | 4.1600 [ 4.0000 ] | 104.0% { 100.0% } | 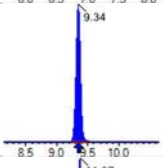  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2980059 | ( 11.07 , N/A ) ( N/A , 0.00 , N/A ) | 1482.9 | N/A | 7.8750 [ 8.0000 ] | 98.4% { 100.0% } | 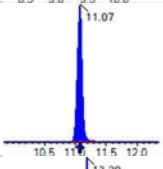  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1558078 | ( 13.29 , N/A ) ( N/A , 0.00 , N/A ) | 2456.6 | N/A | 1.7890 [ 2.0000 ] | 89.4% { 100.0% } | 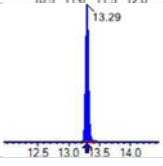  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (3)
Acquired: 2024/03/28 - 20:32

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 364020 | ( 14.57 , N/A ) ( N/A , 0.00 , N/A ) | 2582.9 | N/A | 1.8590 [ 2.0000 ] | 92.9% { 100.0% } | 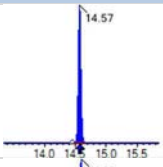 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 344481 | ( 14.90 , N/A ) ( N/A , 0.00 , N/A ) | 3470.8 | N/A | 1.9240 [ 2.0000 ] | 96.2% { 100.0% } | 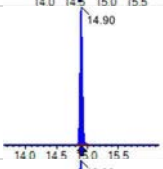 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1180322 | ( 10.39 , N/A ) ( N/A , 0.00 , N/A ) | 3632.7 | N/A | 4.1430 [ 4.0000 ] | 103.6% { 100.0% } | 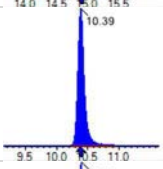 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1019487 | ( 10.99 , N/A ) ( N/A , 0.00 , N/A ) | 2402.1 | N/A | 3.9650 [ 4.0000 ] | 99.1% { 100.0% } | 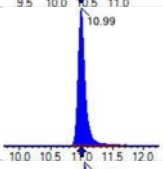 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1329080 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 3587.2 | N/A | 18.1650 [ 20.0000 ] | 90.8% { 100.0% } | 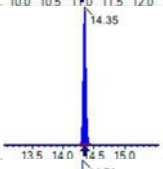 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1251905 | ( 14.72 , N/A ) ( N/A , 0.00 , N/A ) | 4473.5 | N/A | 18.2700 [ 20.0000 ] | 91.3% { 100.0% } | 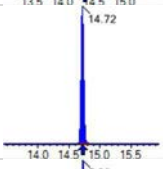 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 827332 | ( 5.62 , N/A ) ( N/A , 0.00 , N/A ) | 2934.0 | N/A | 7.5420 [ 8.0000 ] | 94.3% { 100.0% } | 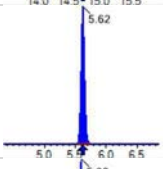 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561718 | ( 5.90 , N/A ) ( N/A , 0.00 , N/A ) | 1959.8 | N/A | 1.8670 [ 2.0000 ] | 93.3% { 100.0% } | 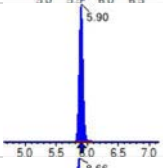 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 670170 | ( 8.66 , N/A ) ( N/A , 0.00 , N/A ) | 1139.2 | N/A | 1.9770 [ 2.0000 ] | 98.8% { 100.0% } | 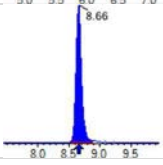 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV2A | PFBA | 20.0A | 19.9A | 99.7A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.53A | 95.3A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.84A | 96.7A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.18A | 83.6A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.66A | 93.1A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.54A | 90.9A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.48A | 89.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.73A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.67A | 93.5A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.95A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 5.00A | 99.9A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.09A | 92.6A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.48A | 95.4A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.22A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.86A | 102A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.50A | 96.8A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.75A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.09A | 106A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.22A | 108A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 19.1A | 102A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 18.9A | 99.7A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.1A | 94.0A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.5A | 92.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 94.9A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.73A | 94.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.68A | 93.7A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 18.8A | 94.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.2A | 96.0A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 3.97A | 79.4A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV2 | ADONA | 4.72A | 4.28A | 90.8A | ng/mLA | +/- 30.00%A |
| | PFEESA | 8.90A | 8.29A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.91A | 99.1A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.99A | 89.9A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.42A | 94.2A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.01A | 85.6A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.18A | 88.5A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.0A | 100A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.9A | 94.7A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.9A | 99.4A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 562053<br>( 163.0 / 69.0 ) 14490 | ( 2.41 , 0.67 ) ( N/A , -0.04 , 0.1) | 841.1<br>219.5 | 0.0258<br>94.1<br>98.3 | 9.6270<br>[ 10.0000 ] | 96.3% | 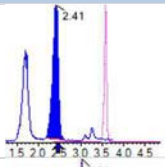 | 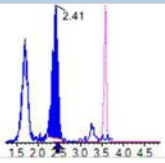 | |
| PFBA | ( 213.0 / 169.0 ) 5156589 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 2100.0 | N/A<br>0.0<br>0.0 | 19.9360<br>[ 20.0000 ] | 99.7% | 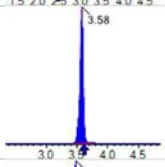 | | |
| PFPeA | ( 263.0 / 219.0 ) 1703403<br>( 263.0 / 69.0 ) 20118 | ( 4.28 , 1.00 ) ( 0.00 , N/A , 0.2) | 4728.8<br>369.9 | 0.0118<br>99.2<br>111.0 | 9.5340<br>[ 10.0000 ] | 95.3% | 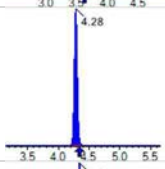 | 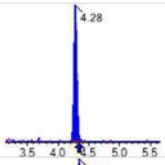 | |
| PFHxA | ( 313.0 / 269.0 ) 888525<br>( 313.0 / 119.0 ) 100725 | ( 5.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1749.6<br>1505.9 | 0.1134<br>101.9<br>95.7 | 4.8360<br>[ 5.0000 ] | 96.7% | 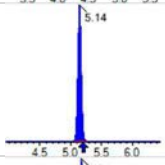 | 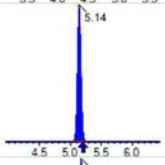 | |
| PFHpA | ( 363.0 / 319.0 ) 1057876<br>( 363.0 / 169.0 ) 328192 | ( 6.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 2147.2<br>1976.2 | 0.3102<br>101.5<br>100.8 | 4.1820<br>[ 5.0000 ] | 83.6% | 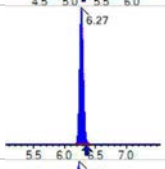 | 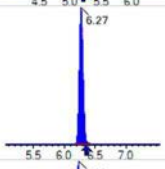 | |
| PFOA | ( 413.0 / 369.0 ) 1634360<br>( 413.0 / 169.0 ) 589327 | ( 7.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1212.3<br>1815.4 | 0.3606<br>100.9<br>101.7 | 4.6570<br>[ 5.0000 ] | 93.1% | 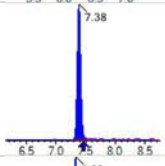 | 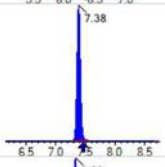 | |
| PFNA | ( 463.0 / 419.0 ) 1070675<br>( 463.0 / 169.0 ) 277472 | ( 8.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 1984.2<br>1696.8 | 0.2592<br>105.5<br>101.0 | 4.5450<br>[ 5.0000 ] | 90.9% | 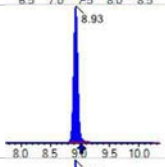 | 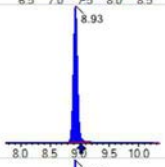 | |
| PFDA | ( 513.0 / 469.0 ) 1217373<br>( 513.0 / 169.0 ) 142431 | ( 9.92 , 1.00 ) ( 0.00 , N/A , 0.0) | 4796.9<br>2319.8 | 0.1170<br>98.2<br>96.1 | 4.4760<br>[ 5.0000 ] | 89.5% | 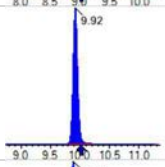 | 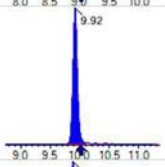 | |
| PFUnA | ( 563.0 / 519.0 ) 1378984<br>( 563.0 / 169.0 ) 207205 | ( 10.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1143.3<br>912.8 | 0.1503<br>97.0<br>100.1 | 4.7340<br>[ 5.0000 ] | 94.7% | 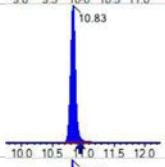 | 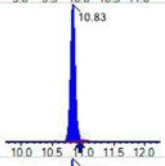 | |
| PFDoA | ( 613.0 / 569.0 ) 1557613<br>( 613.0 / 169.0 ) 235245 | ( 11.73 , 1.00 ) ( 0.00 , N/A , 0.0) | 1583.9<br>1030.7 | 0.1510<br>99.4<br>99.0 | 4.6740<br>[ 5.0000 ] | 93.5% | 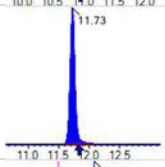 | 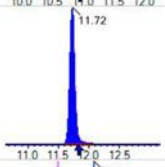 | |
| PFTrDA | ( 663.0 / 619.0 ) 1603042<br>( 663.0 / 169.0 ) 419056 | ( 12.48 , 1.06 ) ( N/A , -0.08 , 0.0) | 1635.4<br>1376.9 | 0.2614<br>97.1<br>99.2 | 4.9480<br>[ 5.0000 ] | 99.0% | 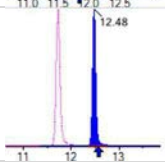 | 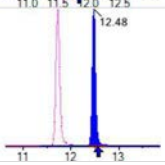 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1363594<br>( 713.0 / 169.0 ) 352024 | ( 13.03 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1578.2<br>1339.4 | 0.2582<br>95.1<br>98.1 | 4.9960<br>[ 5.0000 ] | 99.9% | 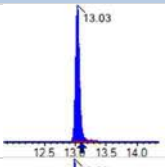 | 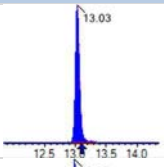 | |
| PFHxDA | ( 813.0 / 769.0 ) 1048828<br>( 813.0 / 169.0 ) 276938 | ( 13.93 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2018.0<br>1178.0 | 0.2640<br>100.9<br>97.8 | 4.6670<br>[ 5.0000 ] | 93.3% | 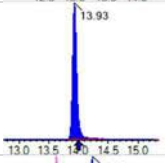 | 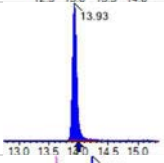 | |
| PFODA | ( 913.0 / 869.0 ) 539632<br>( 913.0 / 169.0 ) 173125 | ( 14.68 , 1.05 )<br>( N/A , -0.07 , 0.3) | 1637.0<br>603.5 | 0.3208<br>102.3<br>95.8 | 3.7910<br>[ 5.0000 ] | 75.8% | 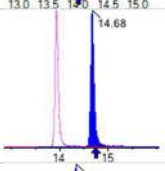 | 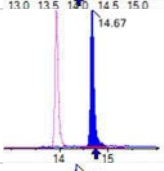 | |
| PFBS | ( 299.0 / 80.0 ) 1268191<br>( 299.0 / 99.0 ) 917505 | ( 5.31 , 1.00 )<br>( -0.01 , N/A , 0.0) | 3110.6<br>1934.1 | 0.7235<br>97.7<br>95.9 | 4.0940<br>[ 4.4240 ] | 92.5% | 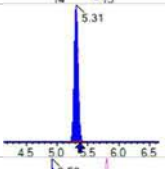 | 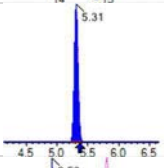 | |
| PFPeS | ( 349.0 / 80.0 ) 3899469<br>( 349.0 / 99.0 ) 1325009 | ( 6.59 , 0.82 )<br>( N/A , -0.08 , 0.0) | 3087.9<br>3224.1 | 0.3398<br>99.4<br>95.6 | 4.4830<br>[ 4.6920 ] | 95.6% | 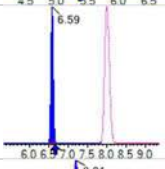 | 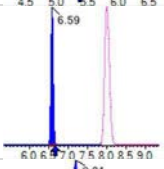 | |
| PFHxS | ( 399.0 / 80.0 ) 4470110<br>( 399.0 / 99.0 ) 1459394 | ( 8.01 , 1.00 )<br>( 0.00 , N/A , 0.3) | 3434.8<br>4061.8 | 0.3265<br>99.5<br>101.1 | 4.2160<br>[ 4.5550 ] | 92.6% | 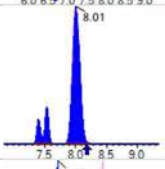 | 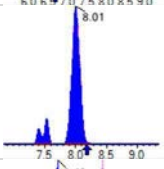 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 3903463<br>( 449.0 / 99.0 ) 1038749 | ( 9.40 , 0.91 )<br>( N/A , -0.10 , 0.0) | 3155.8<br>2827.9 | 0.2661<br>102.0<br>102.6 | 4.8590<br>[ 4.7570 ] | 102.1% | 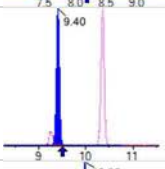 | 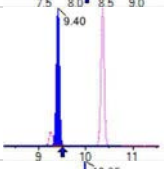 | |
| PFOS | ( 499.0 / 80.0 ) 3512845<br>( 499.0 / 99.0 ) 786008 | ( 10.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2349.9<br>5729.7 | 0.2238<br>96.8<br>97.7 | 4.5000<br>[ 4.6370 ] | 97.0% | 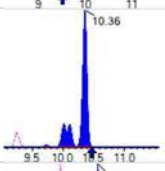 | 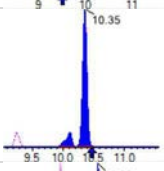 | |
| PFNS | ( 549.0 / 80.0 ) 3380770<br>( 549.0 / 99.0 ) 908323 | ( 11.23 , 1.08 )<br>( N/A , -0.11 , 0.1) | 3383.8<br>2653.4 | 0.2687<br>100.3<br>97.7 | 4.7510<br>[ 4.7990 ] | 99.0% | 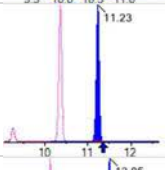 | 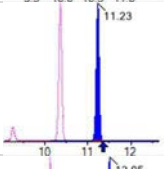 | |
| PFDS | ( 599.0 / 80.0 ) 4423585<br>( 599.0 / 99.0 ) 1130267 | ( 12.05 , 1.16 )<br>( N/A , -0.10 , 0.0) | 4156.7<br>2792.1 | 0.2555<br>100.3<br>94.8 | 5.0860<br>[ 4.8160 ] | 105.6% | 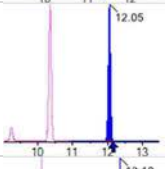 | 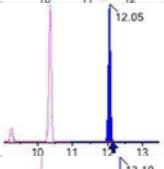 | |
| PFDoS | ( 699.0 / 80.0 ) 4394472<br>( 699.0 / 99.0 ) 1044890 | ( 13.10 , 1.26 )<br>( N/A , -0.07 , 0.0) | 4698.6<br>3325.6 | 0.2378<br>106.4<br>100.6 | 5.2210<br>[ 4.8480 ] | 107.7% | 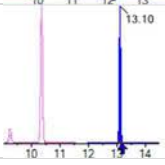 | 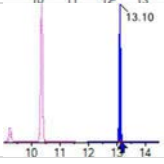 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7091262<br>( 327.0 / 81.0 ) 5898184 | ( 4.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 5460.6<br>3591.3 | 0.8318<br>97.5<br>94.9 | 19.1140<br>[ 18.6910 ] | 102.3% | 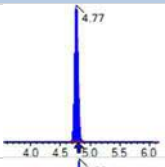 | 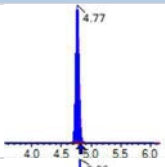 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6029214<br>( 427.0 / 81.0 ) 7376615 | ( 6.86 , 1.00 ) ( 0.00 , N/A , 0.2) | 7388.0<br>6358.2 | 1.2235<br>94.9<br>94.3 | 18.9380<br>[ 18.9810 ] | 99.8% | 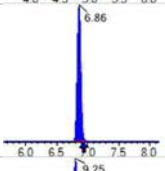 | 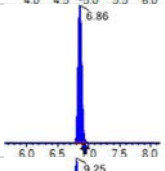 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5893720<br>( 527.0 / 81.0 ) 6132709 | ( 9.25 , 1.00 ) ( 0.00 , N/A , 0.0) | 2838.0<br>2209.4 | 1.0405<br>94.3<br>94.4 | 18.0500<br>[ 19.1660 ] | 94.2% | 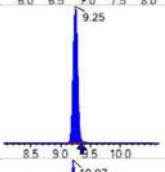 | 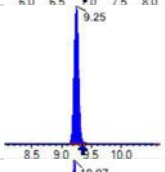 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5222429<br>( 627.0 / 81.0 ) 7154070 | ( 10.97 , 1.00 ) ( 0.01 , N/A , -0.1) | 1700.7<br>1517.7 | 1.3699<br>95.3<br>94.5 | 20.0190<br>[ 19.3240 ] | 103.6% | 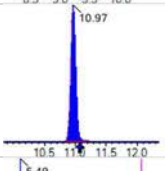 | 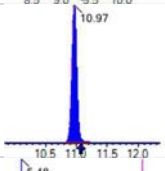 | |
| PFBSA | ( 297.9 / 78.0 ) 1945048<br>( 297.9 / 278.0 ) 4083 | ( 5.49 , 0.38 ) ( N/A , -0.04 , 0.2) | 1327.8<br>49.1 | 0.0021<br>162.2<br>186.5 | 3.8860<br>[ 5.0000 ] | 77.7% | 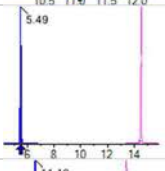 | 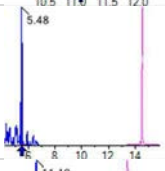 | |
| PFHxSA | ( 397.9 / 78.0 ) 4503386<br>( 397.9 / 378.0 ) 19762 | ( 11.19 , 0.75 ) ( N/A , -0.04 , -0.2) | 1671.5<br>373.7 | 0.0044<br>108.7<br>100.0 | 4.7100<br>[ 5.0000 ] | 94.2% | 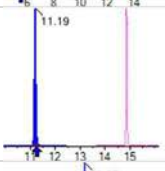 | 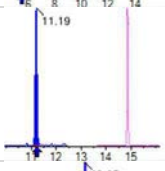 | |
| PFOSA | ( 498.0 / 78.0 ) 3381771<br>( 498.0 / 478.0 ) 48355 | ( 13.25 , 1.00 ) ( -0.01 , N/A , 0.0) | 4980.9<br>947.5 | 0.0143<br>97.3<br>107.4 | 4.7770<br>[ 5.0000 ] | 95.5% | 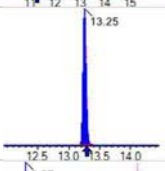 | 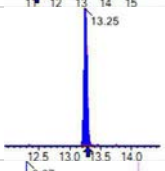 | |
| TFSI | ( 279.7 / 147.0 ) 5801062<br>( 279.7 / 211.0 ) 515718 | ( 6.97 , 0.53 ) ( N/A , -0.10 , 0.0) | 92.7<br>5146.7 | 0.0889<br>100.5<br>101.4 | 4.6900<br>[ 4.8970 ] | 95.8% | 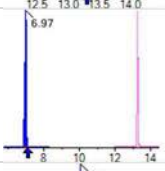 | 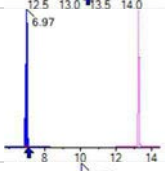 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2709906<br>( 512.0 / 169.0 ) 2063760 | ( 14.54 , 1.00 ) ( 0.00 , N/A , 1.0) | 4025.6<br>1696.2 | 0.7616<br>99.3<br>102.3 | 18.4870<br>[ 20.0000 ] | 92.4% | 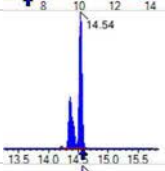 | 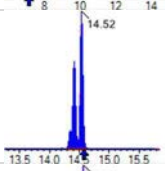 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3266045<br>( 526.0 / 169.0 ) 4045856 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 2.0) | 4885.5<br>3875.3 | 1.2388<br>99.1<br>99.6 | 18.9820<br>[ 20.0000 ] | 94.9% | 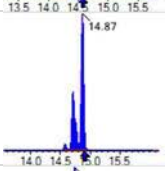 | 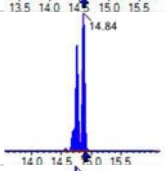 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1115883<br>( 570.0 / 483.0 ) 504412 | ( 10.30 , 1.00 ) ( 0.01 , N/A , 0.0) | 10002.1<br>1760.4 | 0.4520<br>97.4<br>96.8 | 4.7350<br>[ 5.0000 ] | 94.7% | 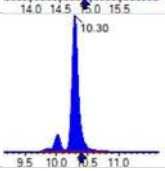 | 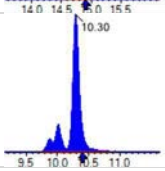 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1028483<br>( 584.0 / 526.0 ) 611202 | ( 10.91 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1882.6<br>840.9 | 0.5943<br>99.1<br>99.4 | 4.6840<br>[ 5.0000 ] | 93.7% | 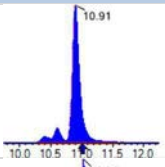 | 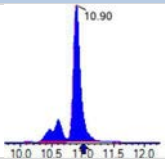 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1210172 | ( 14.34 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2525.2 | N/A<br>0.0<br>0.0 | 18.8220<br>[ 20.0000 ] | 94.1% | 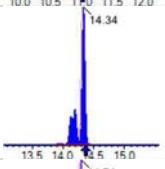 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1013010 | ( 14.71 , 1.00 )<br>( 0.03 , N/A , 0.0) | 3278.1 | N/A<br>0.0<br>0.0 | 19.1920<br>[ 20.0000 ] | 96.0% | 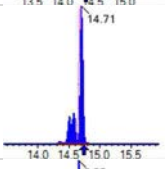 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 236032<br>( 285.0 / 185.0 ) 638779 | ( 5.55 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1774.6<br>2223.8 | 2.7063<br>96.4<br>102.5 | 3.9720<br>[ 5.0000 ] | 79.4% | 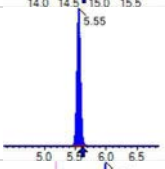 | 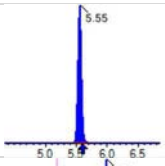 | |
| ADONA | ( 377.0 / 85.0 ) 3358110<br>( 377.0 / 251.0 ) 361036 | ( 6.71 , 1.21 )<br>( N/A , -0.08 , 0.1) | 2492.5<br>1567.4 | 0.1075<br>102.5<br>107.9 | 4.2840<br>[ 4.7140 ] | 90.9% | 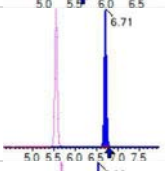 | 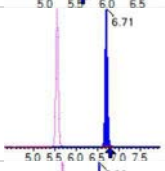 | |
| PFEESA | ( 315.0 / 135.0 ) 1108170<br>( 315.0 / 83.0 ) 714104 | ( 5.90 , 1.15 )<br>( N/A , -0.07 , 0.2) | 2640.5<br>1416.8 | 0.6444<br>100.4<br>110.2 | 8.2910<br>[ 8.9250 ] | 92.9% | 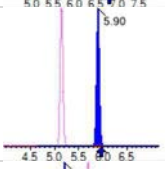 | 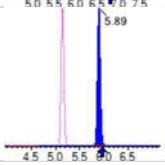 | |
| PFMPA | ( 229.0 / 85.0 ) 651020 | ( 3.82 , 0.89 )<br>( N/A , -0.04 , 0.0) | 7915.4 | N/A<br>0.0<br>0.0 | 9.9110<br>[ 10.0000 ] | 99.1% | 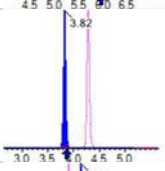 | | |
| PFMBA | ( 279.0 / 85.0 ) 1329766 | ( 4.49 , 1.05 )<br>( N/A , -0.05 , 0.0) | 4806.2 | N/A<br>0.0<br>0.0 | 8.9860<br>[ 10.0000 ] | 89.9% | 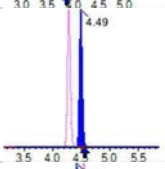 | | |
| NFDHA | ( 295.0 / 201.0 ) 614335<br>( 295.0 / 85.0 ) 706008 | ( 5.01 , 0.98 )<br>( N/A , -0.05 , 0.2) | 3628.6<br>3400.3 | 1.1492<br>115.6<br>111.4 | 9.4180<br>[ 10.0000 ] | 94.2% | 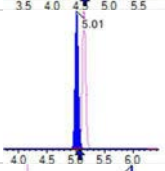 | 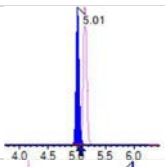 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3489027<br>( 533.0 / 353.0 ) 1061881 | ( 11.03 , 1.98 )<br>( N/A , -0.11 , 0.1) | 3216.6<br>3025.3 | 0.3043<br>95.4<br>91.7 | 4.0070<br>[ 4.6660 ] | 85.9% | 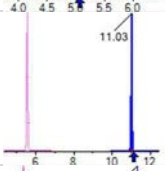 | 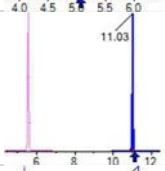 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2825811<br>( 633.0 / 453.0 ) 957234 | ( 12.54 , 2.26 )<br>( N/A , -0.08 , 0.0) | 3747.2<br>3303.2 | 0.3387<br>99.8<br>99.6 | 4.1760<br>[ 4.7160 ] | 88.5% | 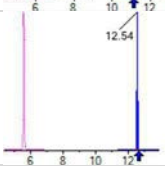 | 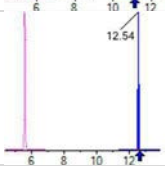 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1732934<br>( 461.0 / 381.2 ) 685900 | ( 9.30 , 0.90 ) ( N/A , -0.10 , 0.0) | 4486.9<br>4844.8 | 0.3958<br>102.5<br>99.6 | 4.1360<br>[ 4.6190 ] | 89.5% | 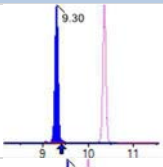 | 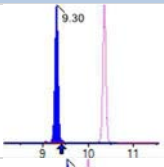 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 307292<br>( 241.0 / 117.0 ) 677820 | ( 3.88 , 0.91 ) ( N/A , -0.04 , 0.1) | 5698.5<br>3495.6 | 2.2058<br>100.5<br>101.2 | 20.0350<br>[ 20.0000 ] | 100.2% | 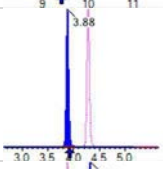 | 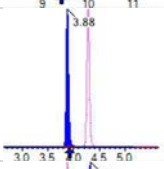 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 946818<br>( 341.0 / 217.0 ) 1472827 | ( 5.57 , 1.08 ) ( N/A , -0.06 , 0.0) | 1615.1<br>1244.7 | 1.5556<br>101.6<br>102.4 | 18.9420<br>[ 20.0000 ] | 94.7% | 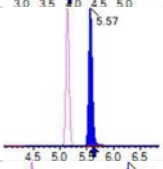 | 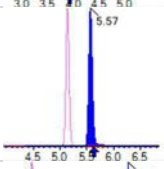 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2110403<br>( 441.0 / 337.0 ) 1894945 | ( 9.24 , 1.80 ) ( N/A , -0.09 , 0.0) | 8679.4<br>81862.5 | 0.8979<br>105.1<br>101.8 | 19.8730<br>[ 20.0000 ] | 99.4% | 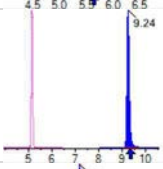 | 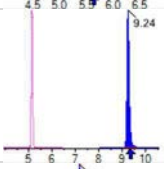 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1438315<br>( 357.2 / 243.0 ) 147118 | ( 5.82 , 1.00 ) ( -0.01 , N/A , 0.1) | 1826.2<br>1468.3 | 0.1023<br>95.4<br>92.4 | 5.5120<br>[ 5.0000 ] | 110.2% | 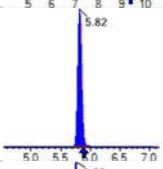 | 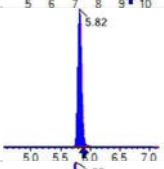 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1274083<br>( 457.2 / 343.0 ) 52498 | ( 8.56 , 1.00 ) ( -0.01 , N/A , 0.2) | 1348.3<br>401.2 | 0.0412<br>91.8<br>94.3 | 5.1890<br>[ 5.0000 ] | 103.8% | 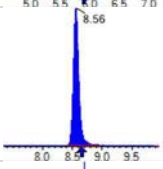 | 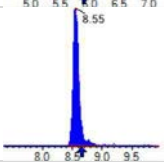 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 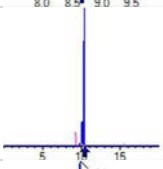 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 255792 | ( 3.58 , N/A ) ( N/A , -0.03 , N/A ) | 1588.8 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 96.7% } | 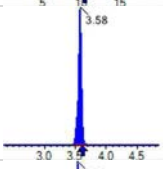 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 91029 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 90739.9 | N/A | 0.7710<br>[ 1.0000 ] | 77.1%<br>{ 78.6% } | 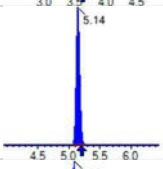 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 350344 | ( 7.38 , N/A ) ( N/A , -0.09 , N/A ) | 5720.5 | N/A | 0.9030<br>[ 1.0000 ] | 90.3%<br>{ 97.1% } | 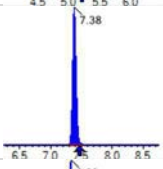 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 248538 | ( 8.93 , N/A ) ( N/A , -0.10 , N/A ) | 1520.2 | N/A | 0.8510<br>[ 1.0000 ] | 85.1%<br>{ 89.1% } | 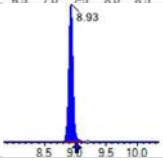 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 235646 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 3668.5 | N/A | 0.8220 [ 1.0000 ] | 82.2% { 85.3% } | 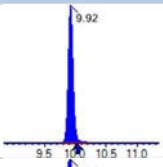 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 870424 | ( 8.01 , N/A ) ( N/A , -0.16 , N/A ) | 5361.7 | N/A | 0.8860 [ 1.0000 ] | 88.6% { 94.8% } | 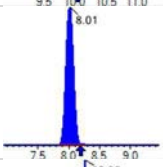 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 694334 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 3927.5 | N/A | 0.8850 [ 1.0000 ] | 88.5% { 90.0% } | 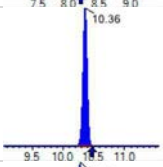 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2063729 | ( 3.57 , N/A ) ( N/A , -0.03 , N/A ) | 64889.1 | N/A | 7.4640 [ 8.0000 ] | 93.3% { 95.0% } | 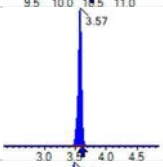 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 715794 | ( 4.28 , N/A ) ( N/A , -0.05 , N/A ) | 6249.9 | N/A | 4.2950 [ 4.0000 ] | 107.4% { 85.6% } | 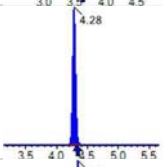 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 395982 | ( 5.14 , N/A ) ( N/A , -0.05 , N/A ) | 7283.8 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 82.4% } | 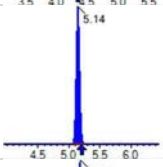 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 509930 | ( 6.27 , N/A ) ( N/A , -0.08 , N/A ) | 8313.0 | N/A | 2.3050 [ 2.0000 ] | 115.3% { 93.0% } | 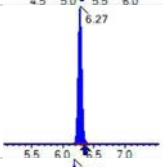 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 699008 | ( 7.38 , N/A ) ( N/A , -0.08 , N/A ) | 5041.1 | N/A | 1.8830 [ 2.0000 ] | 94.1% { 91.3% } | 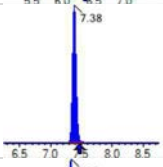 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 234448 | ( 8.93 , N/A ) ( N/A , -0.10 , N/A ) | 3067.5 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 87.0% } | 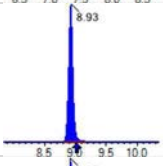 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 272344 | ( 9.92 , N/A ) ( N/A , -0.10 , N/A ) | 1838.0 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 92.6% } | 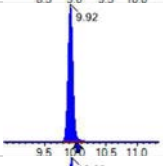 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 320770 | ( 10.83 , N/A ) ( N/A , -0.10 , N/A ) | 1149.2 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 86.9% } | 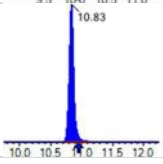 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (28)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 332078 | ( 11.73 , N/A ) ( N/A , -0.11 , N/A ) | 1434.2 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 91.5% } | 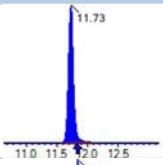 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 292307 | ( 13.03 , N/A ) ( N/A , -0.07 , N/A ) | 1272.7 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 89.2% } | 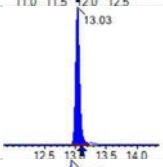 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 479780 | ( 13.94 , N/A ) ( N/A , -0.07 , N/A ) | 2487.7 | N/A | 1.9550 [ 2.0000 ] | 97.7% { 96.4% } | 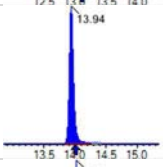 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1259661 | ( 5.31 , N/A ) ( N/A , -0.06 , N/A ) | 1171.7 | N/A | 1.7950 [ 2.0000 ] | 89.8% { 85.4% } | 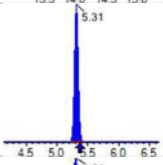 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1210596 | ( 8.01 , N/A ) ( N/A , -0.17 , N/A ) | 6321.4 | N/A | 1.9280 [ 2.0000 ] | 96.4% { 93.0% } | 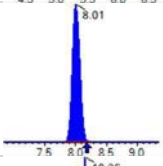 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1345030 | ( 10.36 , N/A ) ( N/A , -0.11 , N/A ) | 1224.8 | N/A | 1.8210 [ 2.0000 ] | 91.0% { 93.1% } | 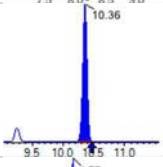 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 562087 | ( 4.77 , N/A ) ( N/A , -0.04 , N/A ) | 81.4 | N/A | 3.6420 [ 4.0000 ] | 91.0% { 86.4% } | 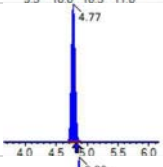 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1500257 | ( 6.86 , N/A ) ( N/A , -0.08 , N/A ) | 5499.8 | N/A | 3.9570 [ 4.0000 ] | 98.9% { 85.2% } | 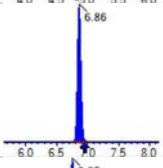 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1327778 | ( 9.25 , N/A ) ( N/A , -0.10 , N/A ) | 2306.6 | N/A | 4.0020 [ 4.0000 ] | 100.1% { 91.2% } | 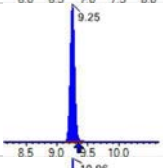 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2628087 | ( 10.96 , N/A ) ( N/A , -0.11 , N/A ) | 1592.3 | N/A | 7.3230 [ 8.0000 ] | 91.5% { 88.2% } | 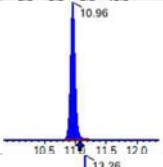 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1463371 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 3363.9 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 93.9% } | 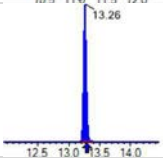 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (28)
Acquired: 2024/03/29 - 05:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 329854 | ( 14.53 , N/A ) ( N/A , -0.03 , N/A ) | 2523.2 | N/A | 1.8710 [ 2.0000 ] | 93.5% { 90.6% } | 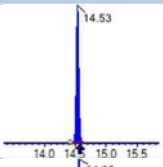 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 303794 | ( 14.86 , N/A ) ( N/A , -0.04 , N/A ) | 2135.9 | N/A | 1.8850 [ 2.0000 ] | 94.2% { 88.2% } | 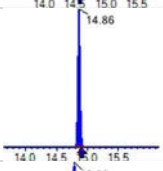 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1021983 | ( 10.29 , N/A ) ( N/A , -0.10 , N/A ) | 2611.6 | N/A | 3.9840 [ 4.0000 ] | 99.6% { 86.6% } | 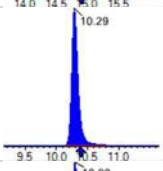 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 905335 | ( 10.89 , N/A ) ( N/A , -0.10 , N/A ) | 2387.7 | N/A | 3.9110 [ 4.0000 ] | 97.8% { 88.8% } | 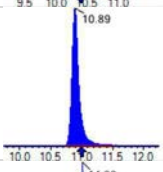 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1187810 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 2222.1 | N/A | 18.0330 [ 20.0000 ] | 90.2% { 89.4% } | 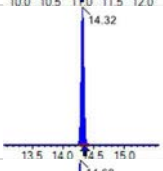 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1108189 | ( 14.68 , N/A ) ( N/A , -0.04 , N/A ) | 4223.3 | N/A | 17.9640 [ 20.0000 ] | 89.8% { 88.5% } | 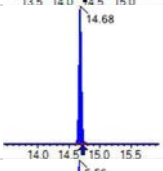 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 809740 | ( 5.56 , N/A ) ( N/A , -0.06 , N/A ) | 3046.6 | N/A | 9.3870 [ 8.0000 ] | 117.3% { 97.9% } | 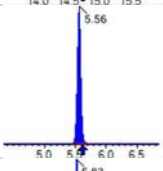 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 496261 | ( 5.83 , N/A ) ( N/A , -0.07 , N/A ) | 1816.9 | N/A | 1.9320 [ 2.0000 ] | 96.6% { 88.3% } | 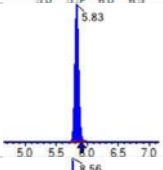 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 594169 | ( 8.56 , N/A ) ( N/A , -0.10 , N/A ) | 1079.0 | N/A | 2.0540 [ 2.0000 ] | 102.7% { 88.7% } | 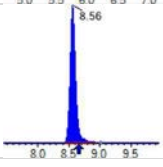 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV3A | PFBA | 20.0A | 18.2A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.22A | 92.2A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 5.16A | 103A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.57A | 91.4A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.48A | 89.6A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.67A | 93.5A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.83A | 96.6A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.72A | 94.5A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.85A | 87.0A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.52A | 96.3A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.26A | 93.1A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.74A | 99.1A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.26A | 91.7A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.75A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.78A | 99.2A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.97A | 103A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 19.4A | 103A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 16.4A | 86.3A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.4A | 90.4A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.81A | 96.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.7A | 93.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.0A | 94.8A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.46A | 89.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.73A | 94.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSEA | 20.0A | 18.1A | 90.7A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 18.5A | 92.7A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01096A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01096-CCV3 | ADONA | 4.72A | 4.70A | 99.5A | ng/mLA | +/- 30.00%A |
| | PFEESA | 8.90A | 8.75A | 98.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.37A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.01A | 90.1A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.66A | 96.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.32A | 92.2A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.52A | 95.8A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.8A | 93.9A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 20.0A | 99.8A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 20.6A | 103A | ng/mLA | +/- 30.00%A |

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Chemist: DAG | Sample I.D.: SD01096-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 548207<br>( 163.0 / 69.0 ) 15045 | ( 2.40 , 0.67 )<br>( N/A , -0.05 , 0.0) | 702.0<br>145.0 | 0.0274<br>100.1<br>104.6 | 9.3010<br>[ 10.0000 ] | 93.0% | 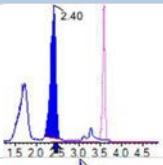 | 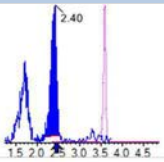 | |
| PFBA | ( 213.0 / 169.0 ) 4761388 | ( 3.59 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2453.7 | N/A<br>0.0<br>0.0 | 18.2050<br>[ 20.0000 ] | 91.0% | 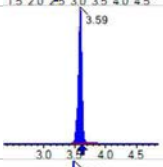 | | |
| PFPeA | ( 263.0 / 219.0 ) 1724009<br>( 263.0 / 69.0 ) 21904 | ( 4.28 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3864.6<br>330.1 | 0.0127<br>106.8<br>119.4 | 9.2200<br>[ 10.0000 ] | 92.2% | 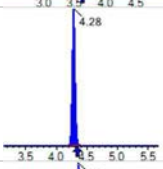 | 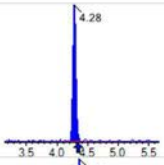 | |
| PFHxA | ( 313.0 / 269.0 ) 925190<br>( 313.0 / 119.0 ) 108111 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2117.1<br>1106.6 | 0.1169<br>105.1<br>98.6 | 5.1580<br>[ 5.0000 ] | 103.2% | 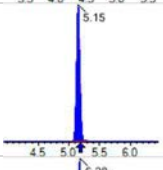 | 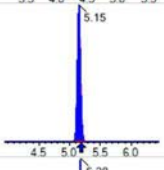 | |
| PFHpA | ( 363.0 / 319.0 ) 1127960<br>( 363.0 / 169.0 ) 331070 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2217.9<br>2581.5 | 0.2935<br>96.0<br>95.4 | 4.5700<br>[ 5.0000 ] | 91.4% | 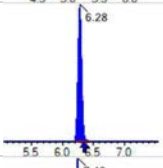 | 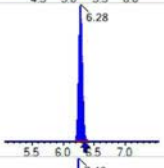 | |
| PFOA | ( 413.0 / 369.0 ) 1658107<br>( 413.0 / 169.0 ) 583891 | ( 7.40 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1329.5<br>1783.1 | 0.3521<br>98.5<br>99.3 | 4.7200<br>[ 5.0000 ] | 94.4% | 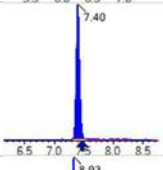 | 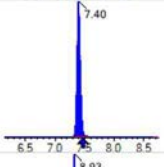 | |
| PFNA | ( 463.0 / 419.0 ) 1074100<br>( 463.0 / 169.0 ) 258985 | ( 8.93 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2054.2<br>1619.7 | 0.2411<br>98.1<br>94.0 | 4.4800<br>[ 5.0000 ] | 89.6% | 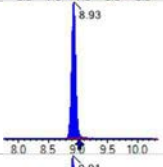 | 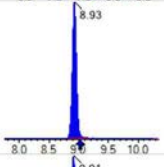 | |
| PFDA | ( 513.0 / 469.0 ) 1267265<br>( 513.0 / 169.0 ) 144059 | ( 9.91 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3781.0<br>3649.0 | 0.1137<br>95.4<br>93.3 | 4.6740<br>[ 5.0000 ] | 93.5% | 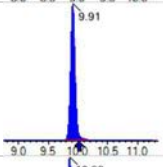 | 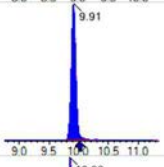 | |
| PFUnA | ( 563.0 / 519.0 ) 1384669<br>( 563.0 / 169.0 ) 214849 | ( 10.82 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1311.6<br>953.7 | 0.1552<br>100.2<br>103.4 | 4.7180<br>[ 5.0000 ] | 94.4% | 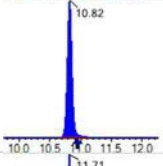 | 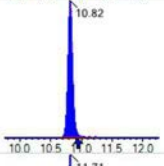 | |
| PFDoA | ( 613.0 / 569.0 ) 1600095<br>( 613.0 / 169.0 ) 235281 | ( 11.71 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1503.8<br>1273.2 | 0.1470<br>96.8<br>96.4 | 4.8300<br>[ 5.0000 ] | 96.6% | 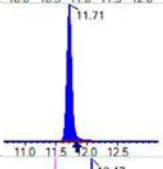 | 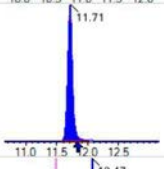 | |
| PFTrDA | ( 663.0 / 619.0 ) 1523283<br>( 663.0 / 169.0 ) 398582 | ( 12.47 , 1.06 )<br>( N/A , -0.09 , 0.1) | 1420.8<br>1209.5 | 0.2617<br>97.2<br>99.3 | 4.7290<br>[ 5.0000 ] | 94.6% | 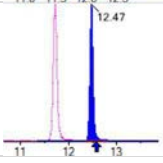 | 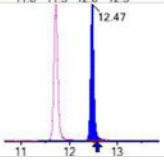 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1345559<br>( 713.0 / 169.0 ) 346394 | ( 13.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 1547.7<br>1137.8 | 0.2574<br>94.9<br>97.8 | 4.7240<br>[ 5.0000 ] | 94.5% | 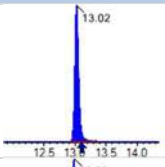 | 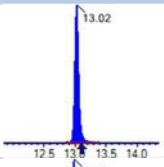 | |
| PFHxDA | ( 813.0 / 769.0 ) 965668<br>( 813.0 / 169.0 ) 271114 | ( 13.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 2143.9<br>1132.9 | 0.2808<br>107.3<br>104.0 | 4.7200<br>[ 5.0000 ] | 94.4% | 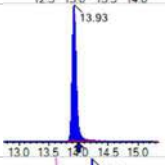 | 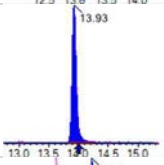 | |
| PFODA | ( 913.0 / 869.0 ) 557253<br>( 913.0 / 169.0 ) 165400 | ( 14.67 , 1.05 ) ( N/A , -0.08 , 0.0) | 1529.9<br>628.8 | 0.2968<br>94.7<br>88.7 | 4.3010<br>[ 5.0000 ] | 86.0% | 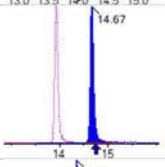 | 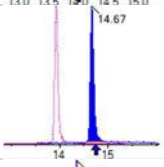 | |
| PFBS | ( 299.0 / 80.0 ) 1269043<br>( 299.0 / 99.0 ) 956282 | ( 5.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 2443.9<br>2237.9 | 0.7535<br>101.7<br>99.9 | 3.8460<br>[ 4.4240 ] | 86.9% | 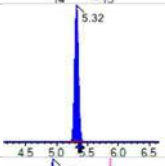 | 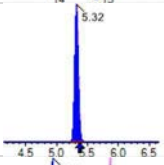 | |
| PFPeS | ( 349.0 / 80.0 ) 3926904<br>( 349.0 / 99.0 ) 1395887 | ( 6.60 , 0.82 ) ( N/A , -0.08 , 0.0) | 3282.1<br>3244.1 | 0.3555<br>104.0<br>100.1 | 4.5250<br>[ 4.6920 ] | 96.4% | 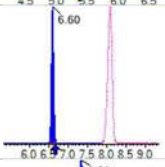 | 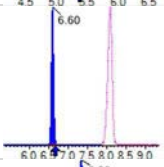 | |
| PFHxS | ( 399.0 / 80.0 ) 4511619<br>( 399.0 / 99.0 ) 1461648 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.1) | 4459.5<br>4758.4 | 0.3240<br>98.7<br>100.3 | 4.2650<br>[ 4.5550 ] | 93.6% | 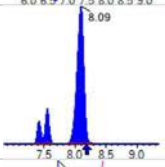 | 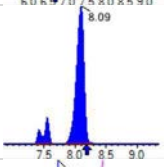 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 3895710<br>( 449.0 / 99.0 ) 1035840 | ( 9.40 , 0.91 ) ( N/A , -0.11 , 0.0) | 3138.6<br>3047.8 | 0.2659<br>101.9<br>102.5 | 4.7390<br>[ 4.7570 ] | 99.6% | 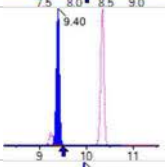 | 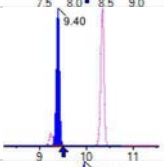 | |
| PFOS | ( 499.0 / 80.0 ) 3407117<br>( 499.0 / 99.0 ) 790696 | ( 10.34 , 1.00 ) ( -0.01 , N/A , -0.1) | 2348.3<br>7099.6 | 0.2321<br>100.4<br>101.3 | 4.2650<br>[ 4.6370 ] | 92.0% | 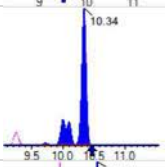 | 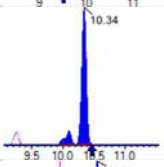 | |
| PFNS | ( 549.0 / 80.0 ) 3458519<br>( 549.0 / 99.0 ) 927051 | ( 11.22 , 1.08 ) ( N/A , -0.13 , 0.0) | 2919.8<br>3015.1 | 0.2680<br>100.0<br>97.5 | 4.7500<br>[ 4.7990 ] | 99.0% | 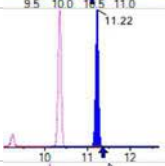 | 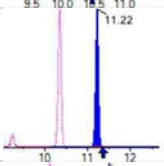 | |
| PFDS | ( 599.0 / 80.0 ) 4256771<br>( 599.0 / 99.0 ) 1103745 | ( 12.04 , 1.16 ) ( N/A , -0.11 , 0.0) | 4042.4<br>3034.6 | 0.2593<br>101.8<br>96.2 | 4.7830<br>[ 4.8160 ] | 99.3% | 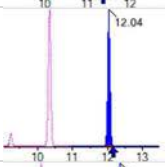 | 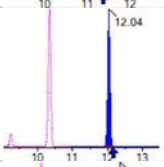 | |
| PFDoS | ( 699.0 / 80.0 ) 4282057<br>( 699.0 / 99.0 ) 973785 | ( 13.09 , 1.27 ) ( N/A , -0.08 , 0.0) | 4374.1<br>3338.9 | 0.2274<br>101.8<br>96.2 | 4.9720<br>[ 4.8480 ] | 102.6% | 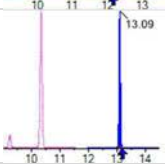 | 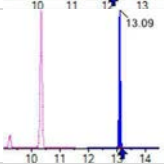 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 6728076<br>( 327.0 / 81.0 ) 6275034 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 3949.1<br>4024.1 | 0.9327<br>109.3<br>106.4 | 19.4210<br>[ 18.6910 ] | 103.9% | 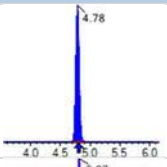 | 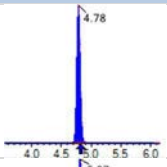 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5755350<br>( 427.0 / 81.0 ) 8013748 | ( 6.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 7488.0<br>6375.7 | 1.3924<br>108.0<br>107.3 | 16.4030<br>[ 18.9810 ] | 86.4% | 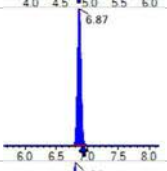 | 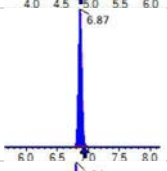 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5752502<br>( 527.0 / 81.0 ) 6199903 | ( 9.24 , 1.00 ) ( 0.00 , N/A , 0.2) | 2782.8<br>2293.5 | 1.0778<br>97.7<br>97.8 | 17.3530<br>[ 19.1660 ] | 90.5% | 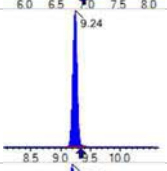 | 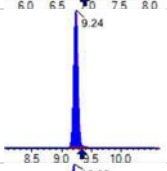 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5228903<br>( 627.0 / 81.0 ) 7809580 | ( 10.95 , 1.00 ) ( 0.01 , N/A , -0.2) | 1426.1<br>1593.7 | 1.4935<br>103.9<br>103.1 | 19.3590<br>[ 19.3240 ] | 100.2% | 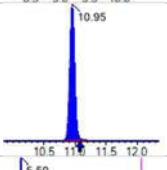 | 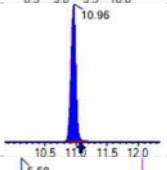 | |
| PFBSA | ( 297.9 / 78.0 ) 2019313<br>( 297.9 / 278.0 ) 3014 | ( 5.50 , 0.38 ) ( N/A , -0.02 , 0.0) | 1762.7<br>33.4 | 0.0015<br>115.3<br>132.6 | 3.9760<br>[ 5.0000 ] | 79.5% | 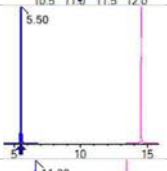 | 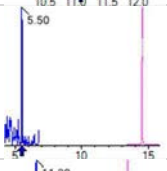 | |
| PFHxSA | ( 397.9 / 78.0 ) 4480785<br>( 397.9 / 378.0 ) 19710 | ( 11.20 , 0.75 ) ( N/A , -0.03 , 0.3) | 1972.0<br>496.6 | 0.0044<br>108.9<br>100.3 | 4.5670<br>[ 5.0000 ] | 91.3% | 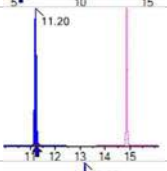 | 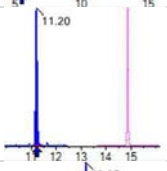 | |
| PFOSA | ( 498.0 / 78.0 ) 3339575<br>( 498.0 / 478.0 ) 48520 | ( 13.26 , 1.00 ) ( -0.01 , N/A , 0.0) | 3724.8<br>1013.0 | 0.0145<br>98.8<br>109.2 | 4.8100<br>[ 5.0000 ] | 96.2% | 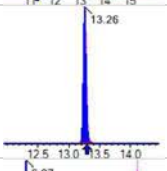 | 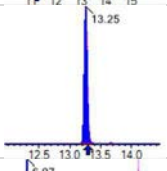 | |
| TFSI | ( 279.7 / 147.0 ) 5892856<br>( 279.7 / 211.0 ) 528564 | ( 6.97 , 0.53 ) ( N/A , -0.09 , -0.1) | 91.6<br>1420553.7 | 0.0897<br>101.4<br>102.3 | 4.8590<br>[ 4.8970 ] | 99.2% | 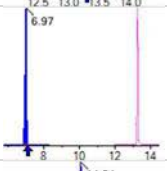 | 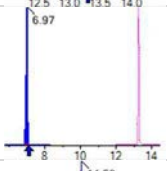 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2776658<br>( 512.0 / 169.0 ) 2103378 | ( 14.54 , 1.00 ) ( 0.00 , N/A , 0.7) | 4502.4<br>2012.0 | 0.7575<br>98.8<br>101.8 | 18.6680<br>[ 20.0000 ] | 93.3% | 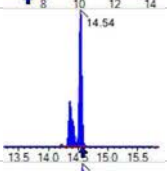 | 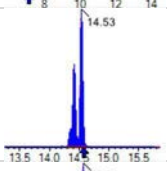 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3349346<br>( 526.0 / 169.0 ) 4132666 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 2.1) | 5219.8<br>4008.0 | 1.2339<br>98.7<br>99.2 | 18.9700<br>[ 20.0000 ] | 94.8% | 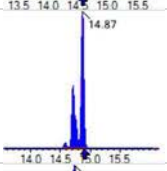 | 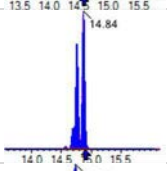 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1057994<br>( 570.0 / 483.0 ) 506080 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 0.1) | 7764.3<br>1907.9 | 0.4783<br>103.1<br>102.5 | 4.4560<br>[ 5.0000 ] | 89.1% | 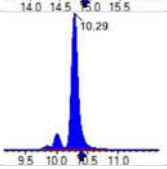 | 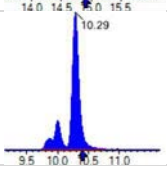 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1035223<br>( 584.0 / 526.0 ) 623710 | ( 10.90 , 1.00 ) ( 0.01 , N/A , 0.2) | 2045.3<br>937.0 | 0.6025<br>100.4<br>100.8 | 4.7270<br>[ 5.0000 ] | 94.5% | 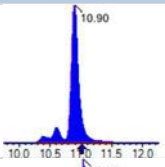 | 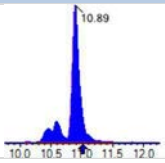 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1187108 | ( 14.34 , 1.00 ) ( 0.02 , N/A , 0.0) | 2503.6 | N/A<br>0.0<br>0.0 | 18.1410<br>[ 20.0000 ] | 90.7% | 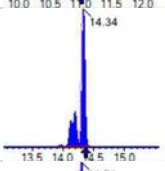 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 988842 | ( 14.71 , 1.00 ) ( 0.02 , N/A , 0.0) | 3332.6 | N/A<br>0.0<br>0.0 | 18.5420<br>[ 20.0000 ] | 92.7% | 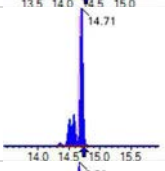 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 243542<br>( 285.0 / 185.0 ) 653462 | ( 5.56 , 1.00 ) ( -0.01 , N/A , 0.0) | 1804.7<br>2342.6 | 2.6832<br>95.6<br>101.6 | 4.4050<br>[ 5.0000 ] | 88.1% | 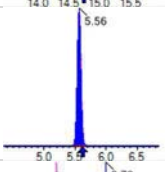 | 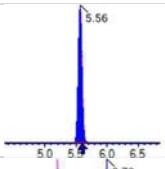 | |
| ADONA | ( 377.0 / 85.0 ) 3424774<br>( 377.0 / 251.0 ) 344686 | ( 6.72 , 1.21 ) ( N/A , -0.07 , 0.1) | 4153.3<br>1627.6 | 0.1006<br>96.0<br>101.0 | 4.6970<br>[ 4.7140 ] | 99.6% | 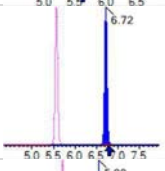 | 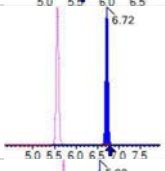 | |
| PFEESA | ( 315.0 / 135.0 ) 1141708<br>( 315.0 / 83.0 ) 708890 | ( 5.90 , 1.15 ) ( N/A , -0.06 , 0.1) | 3058.9<br>1488.6 | 0.6209<br>96.7<br>106.2 | 8.7490<br>[ 8.9250 ] | 98.0% | 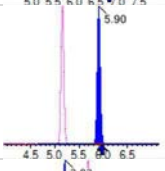 | 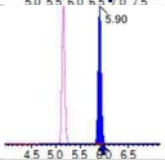 | |
| PFMPA | ( 229.0 / 85.0 ) 644230 | ( 3.83 , 0.89 ) ( N/A , -0.03 , 0.0) | 8032.2 | N/A<br>0.0<br>0.0 | 9.3710<br>[ 10.0000 ] | 93.7% | 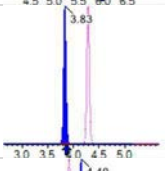 | | |
| PFMBA | ( 279.0 / 85.0 ) 1395950 | ( 4.49 , 1.05 ) ( N/A , -0.06 , 0.0) | 5524.9 | N/A<br>0.0<br>0.0 | 9.0140<br>[ 10.0000 ] | 90.1% | 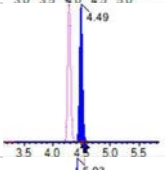 | | |
| NFDHA | ( 295.0 / 201.0 ) 614908<br>( 295.0 / 85.0 ) 614139 | ( 5.03 , 0.98 ) ( N/A , -0.03 , 0.1) | 4084.3<br>3108.5 | 0.9987<br>100.4<br>96.8 | 9.6560<br>[ 10.0000 ] | 96.6% | 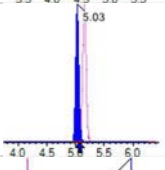 | 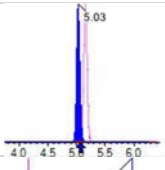 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3496391<br>( 533.0 / 353.0 ) 1123134 | ( 11.01 , 1.98 ) ( N/A , -0.13 , 0.0) | 3331.0<br>2852.8 | 0.3212<br>100.7<br>96.8 | 4.3160<br>[ 4.6660 ] | 92.5% | 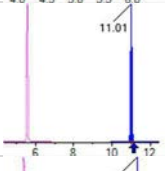 | 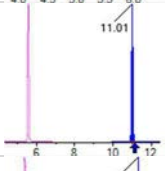 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2846551<br>( 633.0 / 453.0 ) 945597 | ( 12.53 , 2.25 ) ( N/A , -0.09 , 0.0) | 4587.9<br>3257.3 | 0.3322<br>97.9<br>97.7 | 4.5210<br>[ 4.7160 ] | 95.9% | 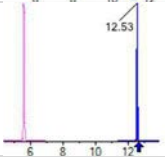 | 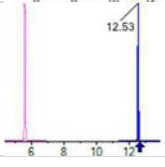 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (35)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1755749<br>( 461.0 / 381.2 ) 716009 | ( 9.30 , 0.90 )<br>( N/A , -0.11 , 0.0) | 4566.1<br>5045.3 | 0.4078<br>105.6<br>102.7 | 4.0950<br>[ 4.6190 ] | 88.7% | 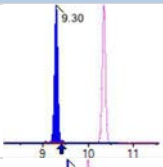 | 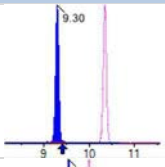 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 301404<br>( 241.0 / 117.0 ) 681990 | ( 3.88 , 0.91 )<br>( N/A , -0.03 , -0.1) | 5433.9<br>3484.9 | 2.2627<br>103.1<br>103.9 | 18.7760<br>[ 20.0000 ] | 93.9% | 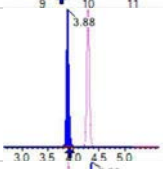 | 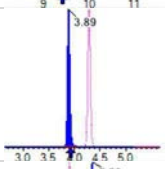 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 974194<br>( 341.0 / 217.0 ) 1464195 | ( 5.58 , 1.08 )<br>( N/A , -0.05 , 0.1) | 1475.3<br>1865.9 | 1.5030<br>98.2<br>98.9 | 19.9640<br>[ 20.0000 ] | 99.8% | 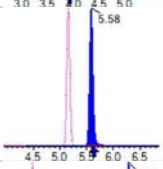 | 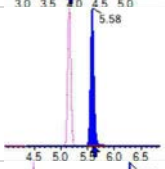 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2132822<br>( 441.0 / 337.0 ) 1834828 | ( 9.26 , 1.80 )<br>( N/A , -0.07 , 0.0) | 12208.7<br>25887.4 | 0.8603<br>100.7<br>97.5 | 20.5720<br>[ 20.0000 ] | 102.9% | 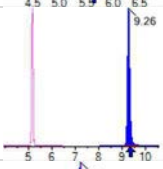 | 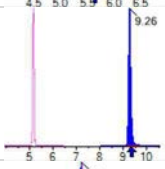 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1430772<br>( 357.2 / 243.0 ) 157915 | ( 5.83 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1691.8<br>1219.6 | 0.1104<br>102.9<br>99.7 | 5.4730<br>[ 5.0000 ] | 109.5% | 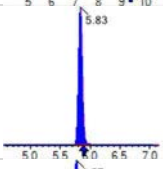 | 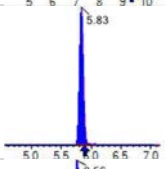 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1272913<br>( 457.2 / 343.0 ) 52113 | ( 8.57 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1470.5<br>546.4 | 0.0409<br>91.2<br>93.7 | 5.3310<br>[ 5.0000 ] | 106.6% | 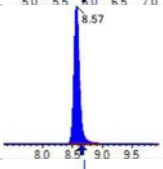 | 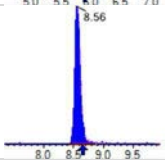 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 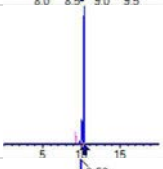 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 249818 | ( 3.59 , N/A )<br>( N/A , -0.02 , N/A ) | 1445.7 | N/A | 0.8850<br>[ 1.0000 ] | 88.5%<br>{ 94.5% } | 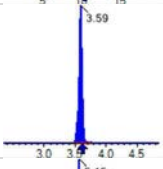 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 99298 | ( 5.15 , N/A )<br>( N/A , -0.04 , N/A ) | 16749.7 | N/A | 0.8410<br>[ 1.0000 ] | 84.1%<br>{ 85.8% } | 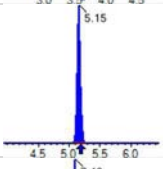 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 345987 | ( 7.40 , N/A )<br>( N/A , -0.07 , N/A ) | 5739.2 | N/A | 0.8910<br>[ 1.0000 ] | 89.1%<br>{ 95.9% } | 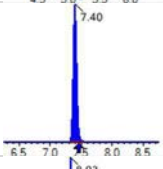 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 236272 | ( 8.93 , N/A )<br>( N/A , -0.10 , N/A ) | 1444.5 | N/A | 0.8090<br>[ 1.0000 ] | 80.9%<br>{ 84.7% } | 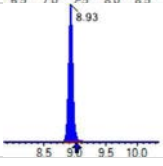 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 234095 | ( 9.92 , N/A ) ( N/A , -0.11 , N/A ) | 24286.7 | N/A | 0.8170 [ 1.0000 ] | 81.7% { 84.8% } | 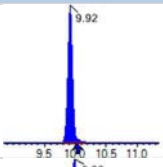 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 872158 | ( 8.09 , N/A ) ( N/A , -0.09 , N/A ) | 6508.6 | N/A | 0.8880 [ 1.0000 ] | 88.8% { 95.0% } | 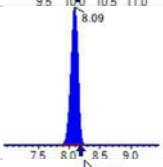 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 636587 | ( 10.35 , N/A ) ( N/A , -0.12 , N/A ) | 2631.7 | N/A | 0.8110 [ 1.0000 ] | 81.1% { 82.5% } | 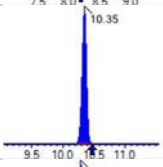 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2083264 | ( 3.59 , N/A ) ( N/A , -0.02 , N/A ) | 134300.6 | N/A | 7.7150 [ 8.0000 ] | 96.4% { 95.9% } | 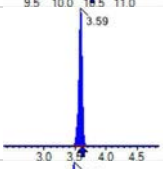 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 749134 | ( 4.28 , N/A ) ( N/A , -0.05 , N/A ) | 6682.3 | N/A | 4.1210 [ 4.0000 ] | 103.0% { 89.6% } | 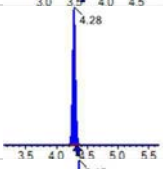 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 386592 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 38274.0 | N/A | 1.7800 [ 2.0000 ] | 89.0% { 80.4% } | 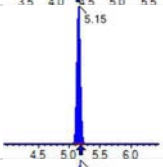 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 497465 | ( 6.28 , N/A ) ( N/A , -0.07 , N/A ) | 8694.0 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 90.8% } | 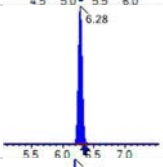 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 699579 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 4226.5 | N/A | 1.9080 [ 2.0000 ] | 95.4% { 91.4% } | 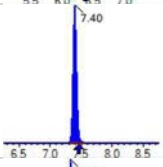 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 238597 | ( 8.92 , N/A ) ( N/A , -0.10 , N/A ) | 7388.9 | N/A | 1.0230 [ 1.0000 ] | 102.3% { 88.5% } | 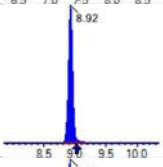 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 271507 | ( 9.91 , N/A ) ( N/A , -0.11 , N/A ) | 1452.0 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 92.3% } | 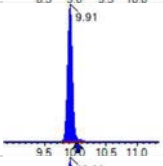 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 323225 | ( 10.82 , N/A ) ( N/A , -0.12 , N/A ) | 1047.1 | N/A | 1.0080 [ 1.0000 ] | 100.8% { 87.5% } | 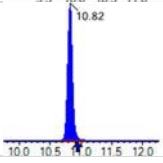 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 330124 | ( 11.71 , N/A ) ( N/A , -0.12 , N/A ) | 1292.2 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 91.0% } | 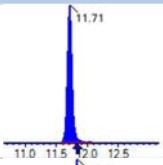 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 305027 | ( 13.03 , N/A ) ( N/A , -0.08 , N/A ) | 1206.9 | N/A | 1.0470 [ 1.0000 ] | 104.7% { 93.1% } | 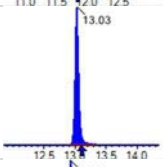 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 436697 | ( 13.93 , N/A ) ( N/A , -0.08 , N/A ) | 2107.8 | N/A | 1.7910 [ 2.0000 ] | 89.6% { 87.7% } | 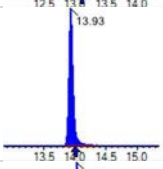 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1341713 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1740.4 | N/A | 1.9090 [ 2.0000 ] | 95.4% { 91.0% } | 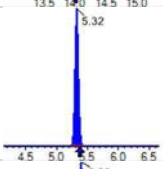 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1207984 | ( 8.09 , N/A ) ( N/A , -0.08 , N/A ) | 7264.1 | N/A | 1.9200 [ 2.0000 ] | 96.0% { 92.8% } | 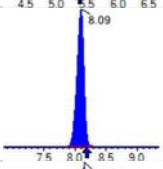 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1376397 | ( 10.34 , N/A ) ( N/A , -0.12 , N/A ) | 1048.7 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 95.3% } | 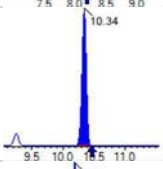 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 524865 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 61.7 | N/A | 3.3940 [ 4.0000 ] | 84.8% { 80.7% } | 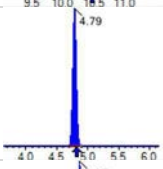 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1653430 | ( 6.87 , N/A ) ( N/A , -0.07 , N/A ) | 8439.3 | N/A | 4.3520 [ 4.0000 ] | 108.8% { 94.0% } | 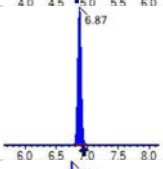 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1348036 | ( 9.24 , N/A ) ( N/A , -0.10 , N/A ) | 1886.2 | N/A | 4.0550 [ 4.0000 ] | 101.4% { 92.6% } | 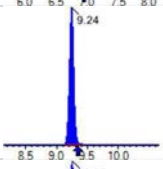 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2721117 | ( 10.95 , N/A ) ( N/A , -0.12 , N/A ) | 1812.8 | N/A | 7.5670 [ 8.0000 ] | 94.6% { 91.3% } | 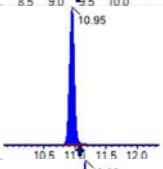 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1435007 | ( 13.26 , N/A ) ( N/A , -0.03 , N/A ) | 3521.5 | N/A | 1.9960 [ 2.0000 ] | 99.8% { 92.1% } | 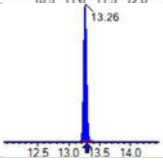 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (35)
Acquired: 2024/03/29 - 07:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 334705 | ( 14.54 , N/A ) ( N/A , -0.03 , N/A ) | 2086.7 | N/A | 2.0710 [ 2.0000 ] | 103.5% { 91.9% } | 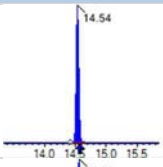 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 311734 | ( 14.86 , N/A ) ( N/A , -0.03 , N/A ) | 2709.9 | N/A | 2.1100 [ 2.0000 ] | 105.5% { 90.5% } | 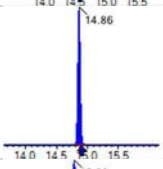 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1029441 | ( 10.29 , N/A ) ( N/A , -0.11 , N/A ) | 2582.6 | N/A | 4.3780 [ 4.0000 ] | 109.4% { 87.2% } | 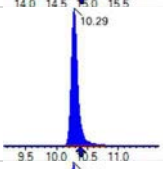 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 903077 | ( 10.88 , N/A ) ( N/A , -0.11 , N/A ) | 2445.5 | N/A | 4.2550 [ 4.0000 ] | 106.4% { 88.6% } | 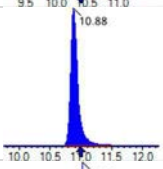 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1208921 | ( 14.32 , N/A ) ( N/A , -0.03 , N/A ) | 2363.0 | N/A | 20.0180 [ 20.0000 ] | 100.1% { 91.0% } | 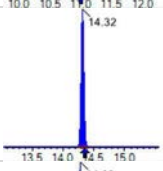 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1119685 | ( 14.68 , N/A ) ( N/A , -0.03 , N/A ) | 4911.2 | N/A | 19.7970 [ 20.0000 ] | 99.0% { 89.4% } | 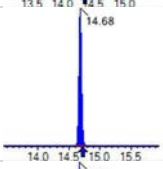 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 753337 | ( 5.57 , N/A ) ( N/A , -0.05 , N/A ) | 2214.1 | N/A | 8.0060 [ 8.0000 ] | 100.1% { 91.1% } | 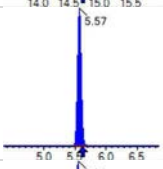 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 497167 | ( 5.84 , N/A ) ( N/A , -0.06 , N/A ) | 1999.3 | N/A | 1.9490 [ 2.0000 ] | 97.4% { 88.5% } | 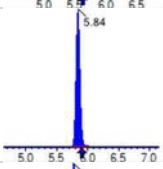 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 577748 | ( 8.57 , N/A ) ( N/A , -0.09 , N/A ) | 1236.8 | N/A | 2.0100 [ 2.0000 ] | 100.5% { 86.2% } | 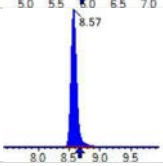 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01096L
Calibration:N 2413019L
SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB10 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0131L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | SaphiraL |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB10 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.190 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.280 | ng/mL0 | | |
| | 13C5-PFHXA0 | 1.840 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.040 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.040 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.110 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.030 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.050 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.250 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.140 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.150 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.010 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 5.380 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.910 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.070 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.140 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.140 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.830 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.890 | ng/mL0 | | |
| | D7-NMEFOSE0 | 20.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.70 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.410 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 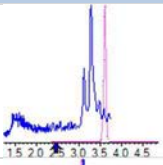 | 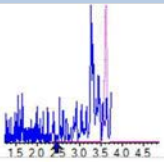 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 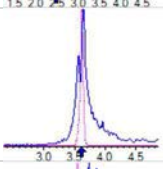 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 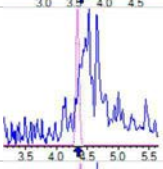 | 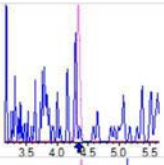 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 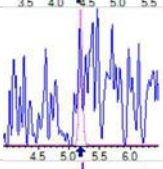 | 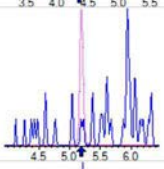 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 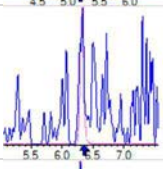 | 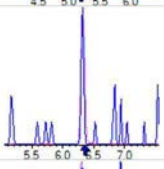 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 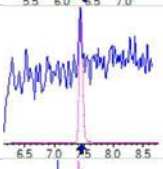 | 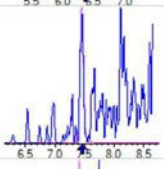 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 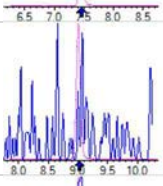 | 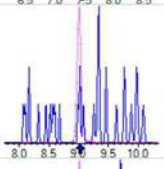 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 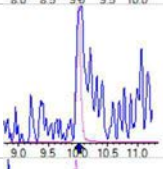 | 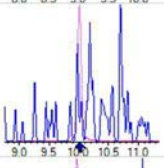 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 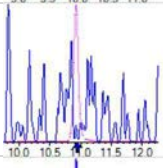 | 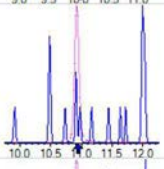 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 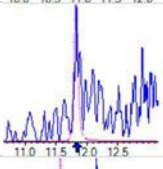 | 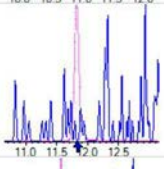 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 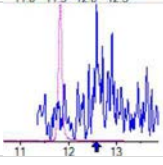 | 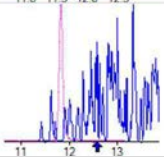 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 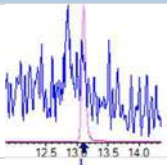 | 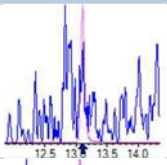 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 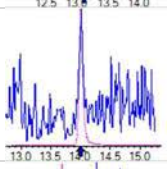 | 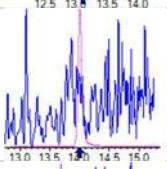 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 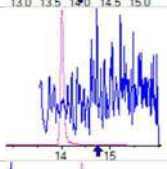 | 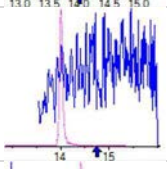 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 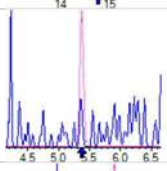 | 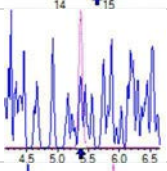 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 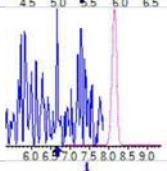 | 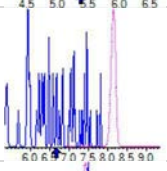 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 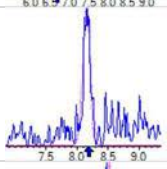 | 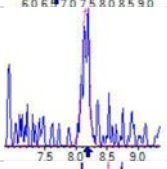 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 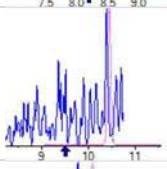 | 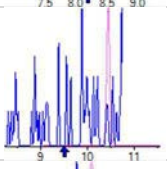 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 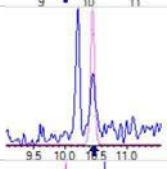 | 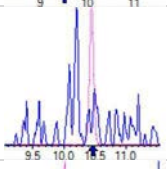 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 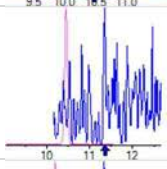 | 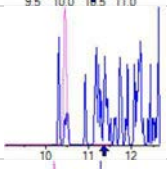 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 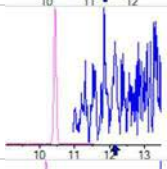 | 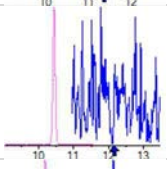 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 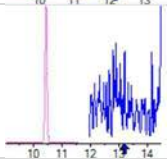 | 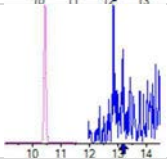 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 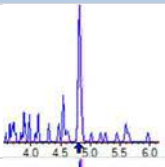 | 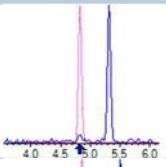 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 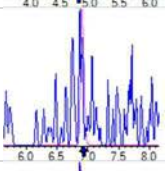 | 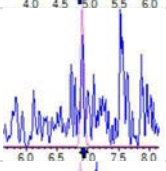 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 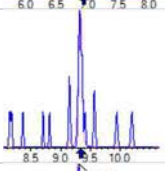 | 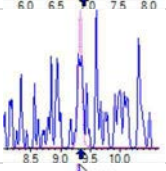 | |
| 10:2FTS | ( 627.0 / 607.0 ) 21951<br>( 627.0 / 81.0 ) 32702 | ( 11.06 , 1.00 ) ( 0.01 , N/A , 0.0) | 236.0<br>108.6 | 1.4897<br>103.6<br>102.8 | 0.0600 | N/A | 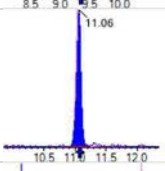 | 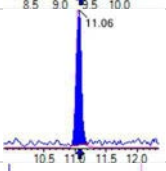 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 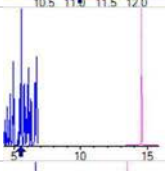 | 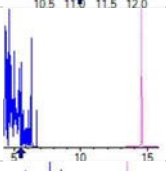 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 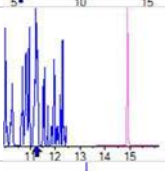 | 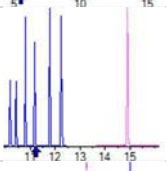 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 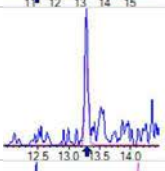 | 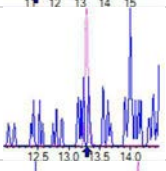 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 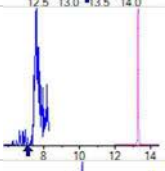 | 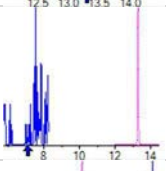 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 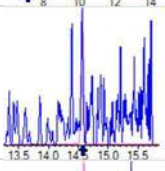 | 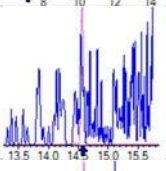 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 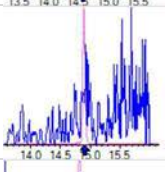 | 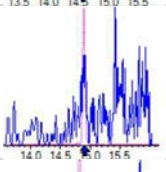 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 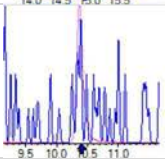 | 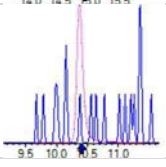 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 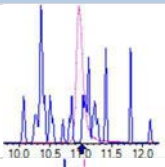 | 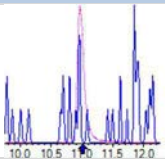 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 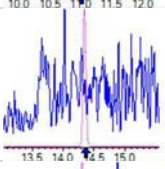 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 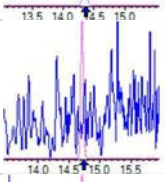 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 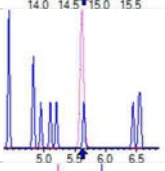 | 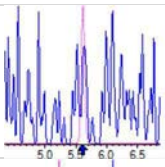 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 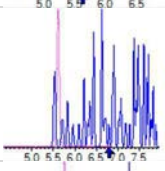 | 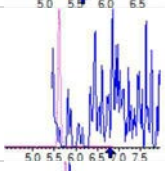 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 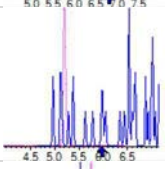 | 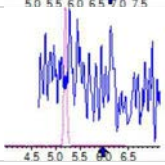 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 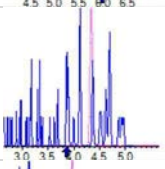 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 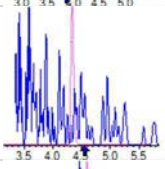 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 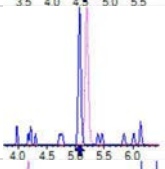 | 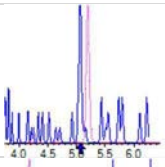 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 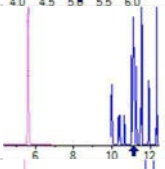 | 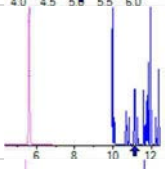 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 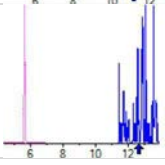 | 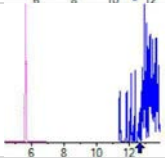 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 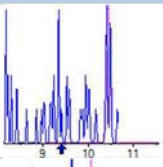 | 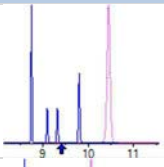 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 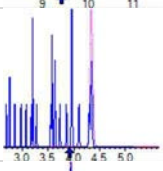 | 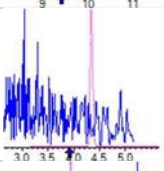 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 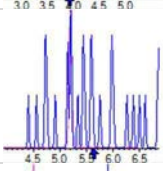 | 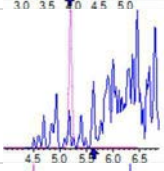 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 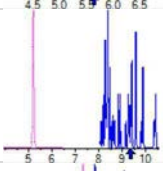 | 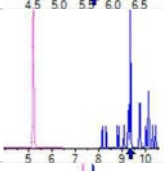 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 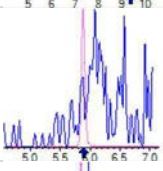 | 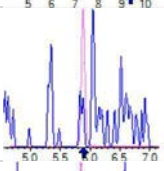 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 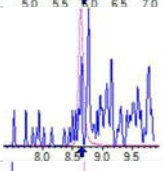 | 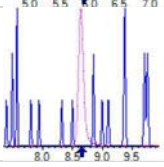 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 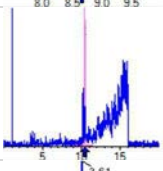 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>298957 | ( 3.61 , N/A )<br>( N/A , 0.01 , N/A ) | 1705.4 | N/A | 1.0590<br>[ 1.0000 ] | 105.9%<br>{ 113.1% } | 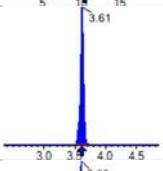 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>124164 | ( 5.20 , N/A )<br>( N/A , 0.00 , N/A ) | 2738.0 | N/A | 1.0520<br>[ 1.0000 ] | 105.2%<br>{ 107.3% } | 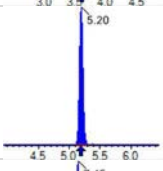 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>394271 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 7401.6 | N/A | 1.0160<br>[ 1.0000 ] | 101.6%<br>{ 109.2% } | 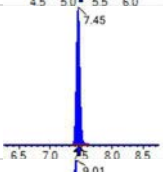 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>286062 | ( 9.01 , N/A )<br>( N/A , -0.02 , N/A ) | 1318.3 | N/A | 0.9790<br>[ 1.0000 ] | 97.9%<br>{ 102.6% } | 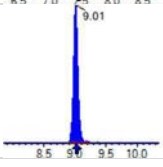 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281693 | ( 10.01 , N/A ) ( N/A , -0.01 , N/A ) | 14645.4 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 102.0% } | 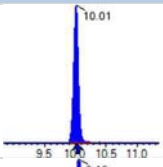 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 958062 | ( 8.16 , N/A ) ( N/A , -0.02 , N/A ) | 7474.0 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 104.4% } | 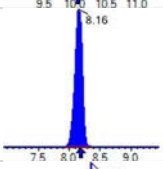 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 785233 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 3737.1 | N/A | 1.0010 [ 1.0000 ] | 100.1% { 101.8% } | 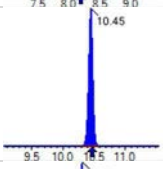 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2646568 | ( 3.61 , N/A ) ( N/A , 0.01 , N/A ) | 284256.3 | N/A | 8.1900 [ 8.0000 ] | 102.4% { 121.9% } | 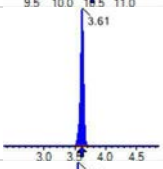 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 972902 | ( 4.34 , N/A ) ( N/A , 0.01 , N/A ) | 5831.2 | N/A | 4.2800 [ 4.0000 ] | 107.0% { 116.3% } | 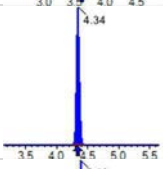 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 499099 | ( 5.19 , N/A ) ( N/A , 0.00 , N/A ) | 11522.1 | N/A | 1.8370 [ 2.0000 ] | 91.9% { 103.8% } | 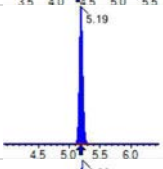 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 615074 | ( 6.32 , N/A ) ( N/A , -0.03 , N/A ) | 5975.2 | N/A | 2.0390 [ 2.0000 ] | 101.9% { 112.2% } | 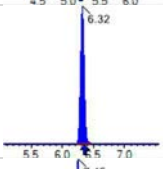 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 852304 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 4104.9 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 111.3% } | 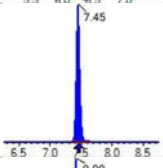 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 313918 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 5592.4 | N/A | 1.1120 [ 1.0000 ] | 111.2% { 116.4% } | 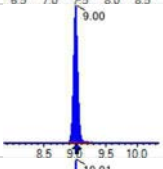 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 335314 | ( 10.01 , N/A ) ( N/A , -0.02 , N/A ) | 1279.6 | N/A | 1.0300 [ 1.0000 ] | 103.0% { 114.0% } | 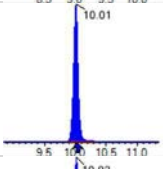 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 427596 | ( 10.92 , N/A ) ( N/A , -0.02 , N/A ) | 1178.5 | N/A | 1.1080 [ 1.0000 ] | 110.8% { 115.8% } | 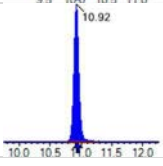 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 419315 | ( 11.82 , N/A ) ( N/A , -0.01 , N/A ) | 1326.5 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 115.6% } | 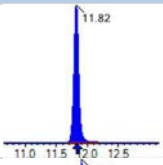 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 369670 | ( 13.11 , N/A ) ( N/A , 0.00 , N/A ) | 1290.7 | N/A | 1.0540 [ 1.0000 ] | 105.4% { 112.8% } | 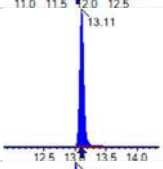 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 610881 | ( 14.01 , N/A ) ( N/A , 0.00 , N/A ) | 3021.9 | N/A | 2.0820 [ 2.0000 ] | 104.1% { 122.7% } | 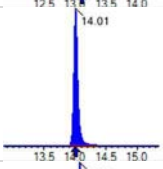 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1739689 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1392.9 | N/A | 2.2530 [ 2.0000 ] | 112.6% { 117.9% } | 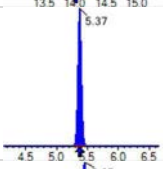 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1482374 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 7376.1 | N/A | 2.1450 [ 2.0000 ] | 107.2% { 113.8% } | 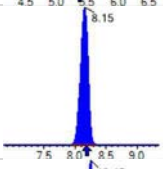 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1793765 | ( 10.45 , N/A ) ( N/A , -0.02 , N/A ) | 2897.7 | N/A | 2.1470 [ 2.0000 ] | 107.4% { 124.2% } | 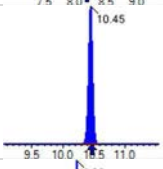 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 850870 | ( 4.82 , N/A ) ( N/A , 0.01 , N/A ) | 60.6 | N/A | 5.0090 [ 4.0000 ] | 125.2% { 130.8% } | 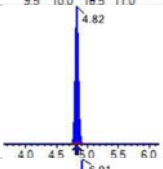 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2243265 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 6538.5 | N/A | 5.3750 [ 4.0000 ] | 134.4% { 127.5% } | 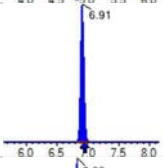 | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1794365 | ( 9.33 , N/A ) ( N/A , -0.01 , N/A ) | 2609.5 | N/A | 4.9140 [ 4.0000 ] | 122.9% { 123.3% } | 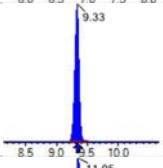 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3707801 | ( 11.05 , N/A ) ( N/A , -0.02 , N/A ) | 1436.2 | N/A | 9.3860 [ 8.0000 ] | 117.3% { 124.4% } | 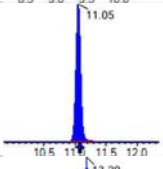 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1837914 | ( 13.29 , N/A ) ( N/A , -0.01 , N/A ) | 3206.7 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 118.0% } | 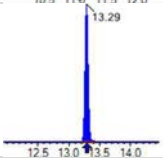 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (1)
Acquired: 2024/03/28 - 19:51

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 425902 | ( 14.56 , N/A ) ( N/A , 0.00 , N/A ) | 2816.6 | N/A | 2.1360 [ 2.0000 ] | 106.8% { 117.0% } | 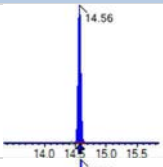 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 390889 | ( 14.89 , N/A ) ( N/A , 0.00 , N/A ) | 3488.3 | N/A | 2.1450 [ 2.0000 ] | 107.2% { 113.5% } | 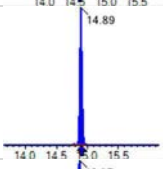 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1400890 | ( 10.37 , N/A ) ( N/A , -0.02 , N/A ) | 3527.7 | N/A | 4.8290 [ 4.0000 ] | 120.7% { 118.7% } | 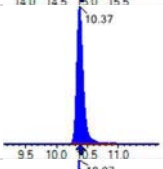 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1279638 | ( 10.97 , N/A ) ( N/A , -0.02 , N/A ) | 2164.1 | N/A | 4.8880 [ 4.0000 ] | 122.2% { 125.5% } | 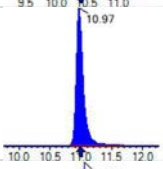 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1498561 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 2762.4 | N/A | 20.1170 [ 20.0000 ] | 100.6% { 112.8% } | 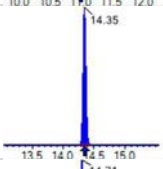 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1377134 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 4695.0 | N/A | 19.7400 [ 20.0000 ] | 98.7% { 110.0% } | 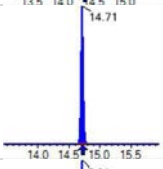 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 989675 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2272.7 | N/A | 8.4110 [ 8.0000 ] | 105.1% { 119.6% } | 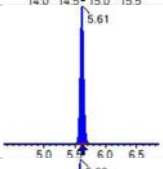 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 696856 | ( 5.88 , N/A ) ( N/A , -0.02 , N/A ) | 1499.9 | N/A | 2.2700 [ 2.0000 ] | 113.5% { 124.1% } | 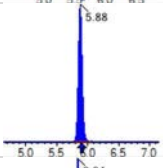 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 817188 | ( 8.64 , N/A ) ( N/A , -0.02 , N/A ) | 971.0 | N/A | 2.3630 [ 2.0000 ] | 118.1% { 121.9% } | 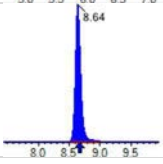 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01096L
Calibration:N 2413019L

SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB20 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01096L
Calibration:N 2413019L

SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB20 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.430 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.880 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.270 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.140 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.120 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.070 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.050 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.060 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.050 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.030 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.050 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.060 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.820 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.80 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.070 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.10 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.150 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.60 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.730 | ng/mL0 | | |
| | D7-NMEFOSE0 | 20.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.20 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.80 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 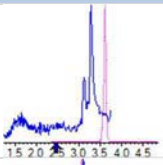 | 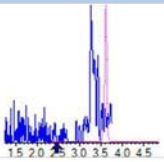 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 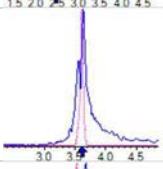 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 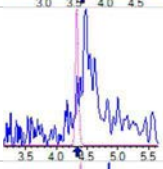 | 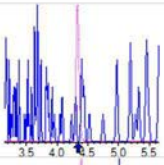 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 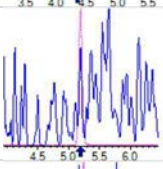 | 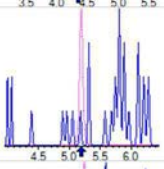 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 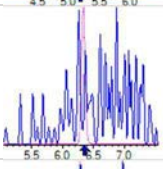 | 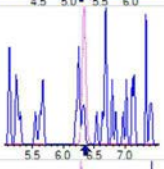 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 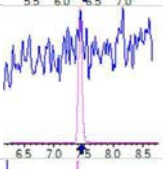 | 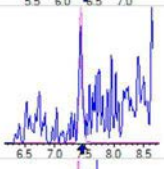 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 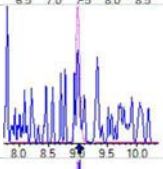 | 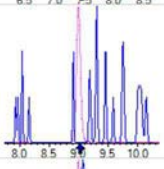 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 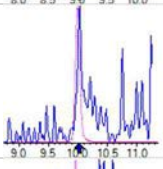 | 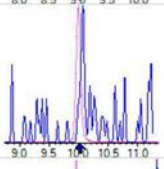 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 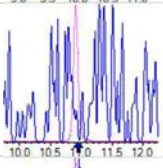 | 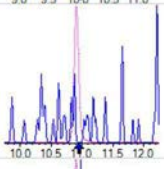 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 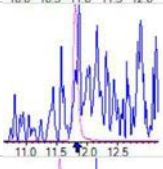 | 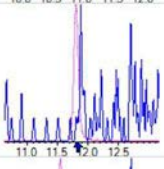 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 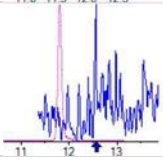 | 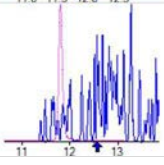 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 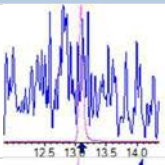 | 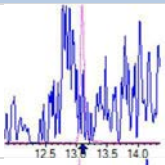 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 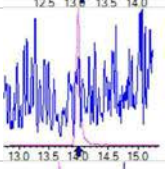 | 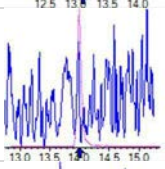 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 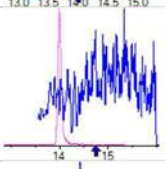 | 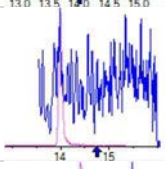 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 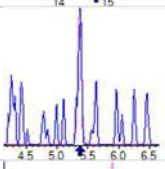 | 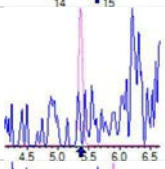 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 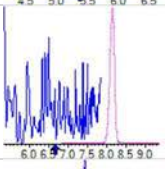 | 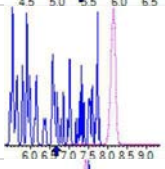 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 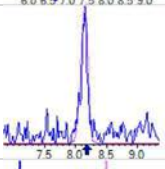 | 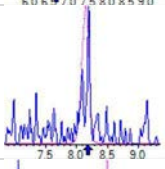 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 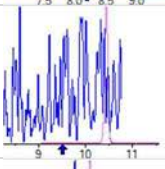 | 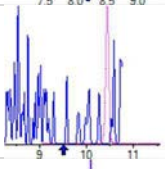 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 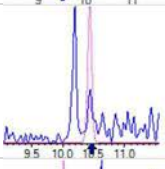 | 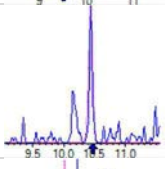 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 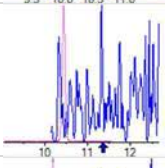 | 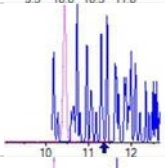 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 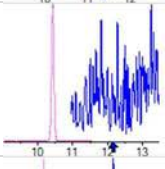 | 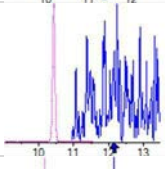 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 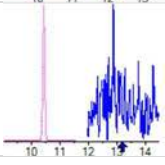 | 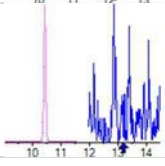 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 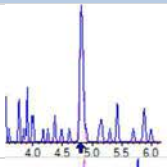 | 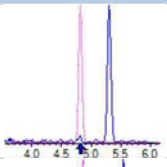 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 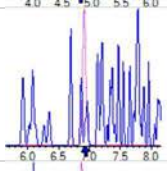 | 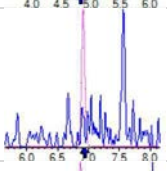 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 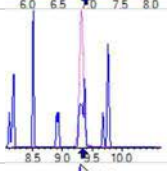 | 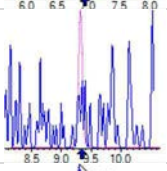 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20869<br>( 627.0 / 81.0 )<br>31853 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , -0.1) | 211.7<br>140.8 | 1.5263<br>106.2<br>105.3 | 0.0550 | N/A | 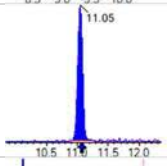 | 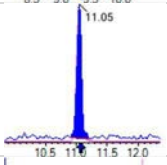 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 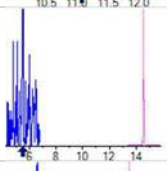 | 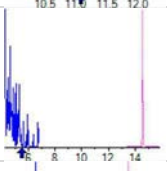 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 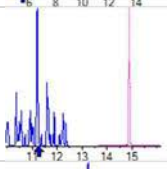 | 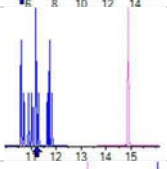 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 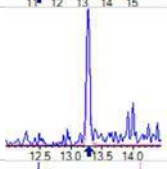 | 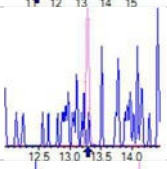 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 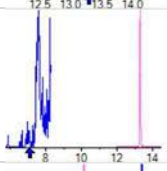 | 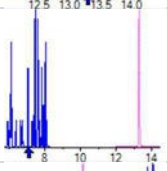 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 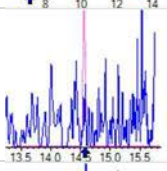 | 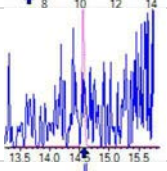 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 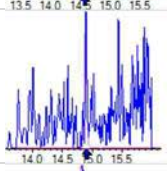 | 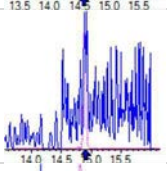 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 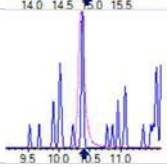 | 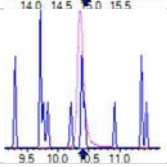 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 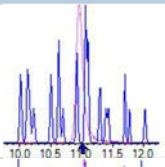 | 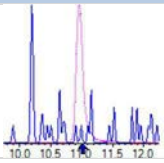 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 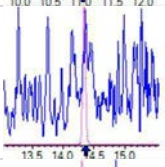 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 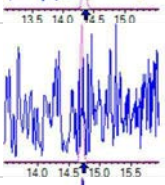 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 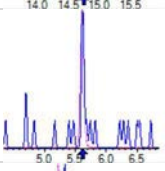 | 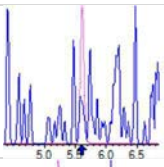 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 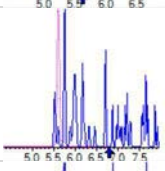 | 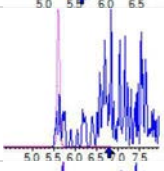 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 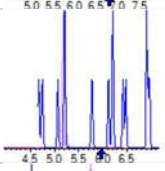 | 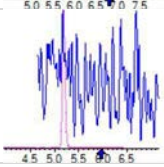 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 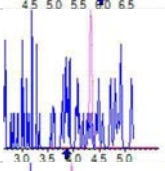 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 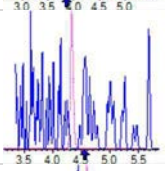 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 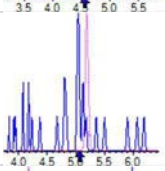 | 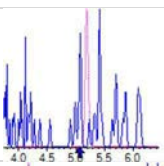 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 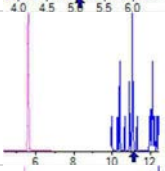 | 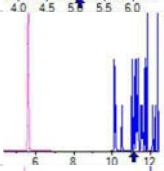 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 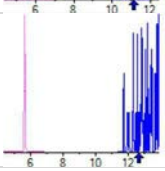 | 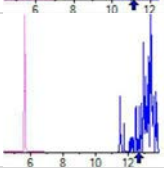 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 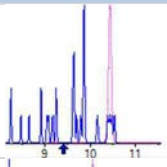 | 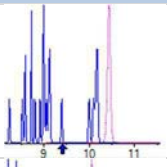 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 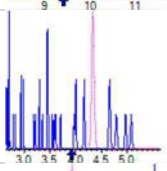 | 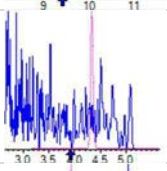 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 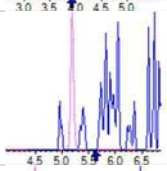 | 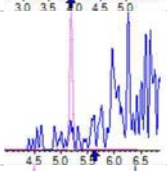 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 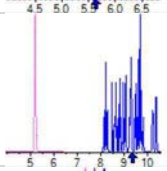 | 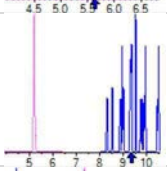 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 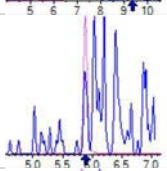 | 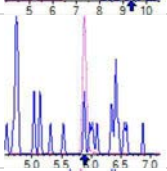 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 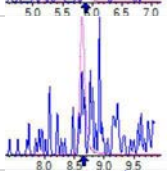 | 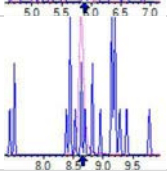 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 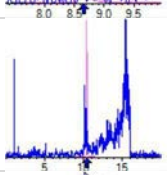 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 287149 | ( 3.61 , N/A )<br>( N/A , 0.00 , N/A ) | 2105.1 | N/A | 1.0170<br>[ 1.0000 ] | 101.7%<br>{ 108.6% } | 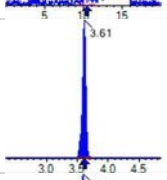 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 111915 | ( 5.19 , N/A )<br>( N/A , -0.01 , N/A ) | 9599213.8 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 96.7% } | 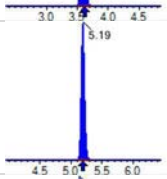 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 369485 | ( 7.44 , N/A )<br>( N/A , -0.03 , N/A ) | 6628.6 | N/A | 0.9520<br>[ 1.0000 ] | 95.2%<br>{ 102.4% } | 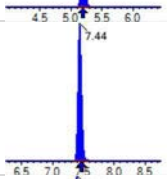 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 271684 | ( 9.00 , N/A )<br>( N/A , -0.03 , N/A ) | 1633.6 | N/A | 0.9300<br>[ 1.0000 ] | 93.0%<br>{ 97.4% } | 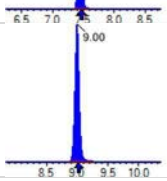 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281395 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 1006589.9 | N/A | 0.9820 [ 1.0000 ] | 98.2% { 101.9% } | 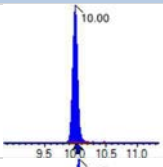  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 980236 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 6984.2 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 106.8% } | 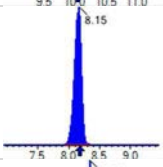  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 759929 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 4493.9 | N/A | 0.9690 [ 1.0000 ] | 96.9% { 98.5% } | 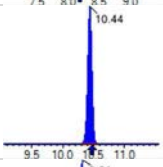  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2617525 | ( 3.61 , N/A ) ( N/A , 0.00 , N/A ) | 163025.4 | N/A | 8.4330 [ 8.0000 ] | 105.4% { 120.5% } | 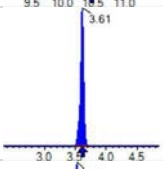  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 999105 | ( 4.33 , N/A ) ( N/A , 0.00 , N/A ) | 6726.4 | N/A | 4.8760 [ 4.0000 ] | 121.9% { 119.5% } | 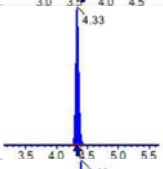  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 554846 | ( 5.19 , N/A ) ( N/A , 0.00 , N/A ) | 11871.5 | N/A | 2.2660 [ 2.0000 ] | 113.3% { 115.4% } | 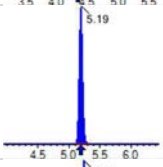  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 581498 | ( 6.33 , N/A ) ( N/A , -0.02 , N/A ) | 6604.5 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 106.1% } | 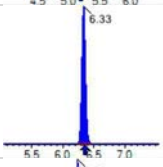  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 830064 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 6356.2 | N/A | 2.1200 [ 2.0000 ] | 106.0% { 108.4% } | 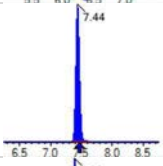  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 288082 | ( 9.00 , N/A ) ( N/A , -0.03 , N/A ) | 4374.9 | N/A | 1.0740 [ 1.0000 ] | 107.4% { 106.8% } | 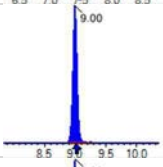  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341888 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1609.4 | N/A | 1.0510 [ 1.0000 ] | 105.2% { 116.3% } | 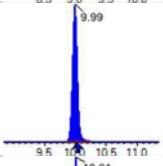  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 407135 | ( 10.91 , N/A ) ( N/A , -0.03 , N/A ) | 1233.1 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 110.2% } | 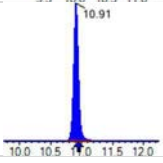  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413804 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1495.4 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 114.0% } | 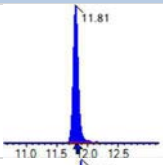 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 359261 | ( 13.09 , N/A ) ( N/A , -0.01 , N/A ) | 1237.8 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 109.6% } | 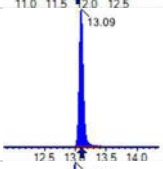 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 578019 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 2874.6 | N/A | 1.9720 [ 2.0000 ] | 98.6% { 116.1% } | 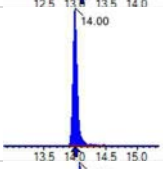 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1616595 | ( 5.37 , N/A ) ( N/A , 0.00 , N/A ) | 1180.6 | N/A | 2.0460 [ 2.0000 ] | 102.3% { 109.6% } | 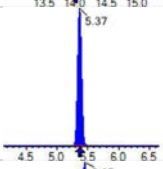 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1456289 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 5475.2 | N/A | 2.0590 [ 2.0000 ] | 103.0% { 111.8% } | 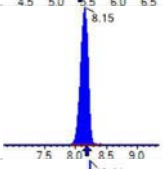 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1641131 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 2473.5 | N/A | 2.0300 [ 2.0000 ] | 101.5% { 113.6% } | 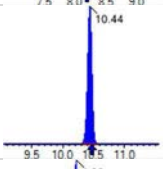 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 837141 | ( 4.82 , N/A ) ( N/A , 0.01 , N/A ) | 52.6 | N/A | 4.8160 [ 4.0000 ] | 120.4% { 128.7% } | 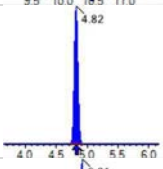 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2049507 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 7325.8 | N/A | 4.8000 [ 4.0000 ] | 120.0% { 116.5% } | 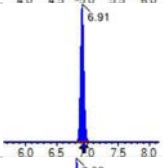 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1726788 | ( 9.32 , N/A ) ( N/A , -0.03 , N/A ) | 1999.2 | N/A | 4.6220 [ 4.0000 ] | 115.6% { 118.7% } | 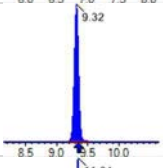 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3848574 | ( 11.04 , N/A ) ( N/A , -0.03 , N/A ) | 1756.9 | N/A | 9.5220 [ 8.0000 ] | 119.0% { 129.1% } | 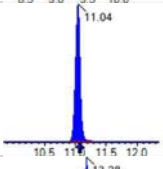 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1773867 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3602.3 | N/A | 2.0670 [ 2.0000 ] | 103.3% { 113.9% } | 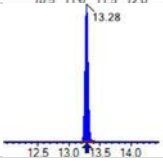 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (6)
Acquired: 2024/03/28 - 21:34

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 405994 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 3293.8 | N/A | 2.1040 [ 2.0000 ] | 105.2% { 111.5% } | 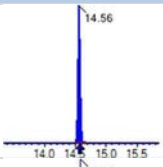 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 378451 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 3186.8 | N/A | 2.1450 [ 2.0000 ] | 107.3% { 109.9% } | 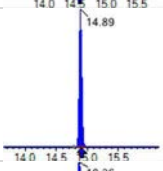 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1291171 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3191.2 | N/A | 4.5990 [ 4.0000 ] | 115.0% { 109.4% } | 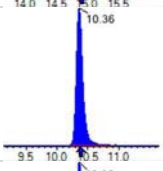 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1197930 | ( 10.96 , N/A ) ( N/A , -0.03 , N/A ) | 2278.0 | N/A | 4.7280 [ 4.0000 ] | 118.2% { 117.5% } | 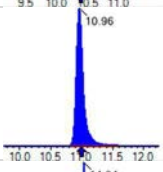 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1448016 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 3084.9 | N/A | 20.0860 [ 20.0000 ] | 100.4% { 108.9% } | 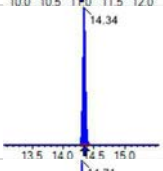 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1299355 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 4406.8 | N/A | 19.2450 [ 20.0000 ] | 96.2% { 103.8% } | 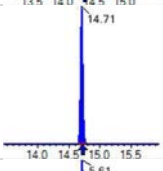 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 933221 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2565.5 | N/A | 8.7990 [ 8.0000 ] | 110.0% { 112.8% } | 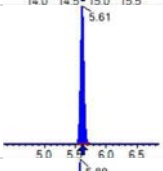 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 646213 | ( 5.89 , N/A ) ( N/A , -0.01 , N/A ) | 2451.7 | N/A | 2.1070 [ 2.0000 ] | 105.4% { 115.0% } | 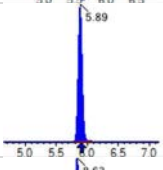 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 788254 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 1215.0 | N/A | 2.2820 [ 2.0000 ] | 114.1% { 117.6% } | 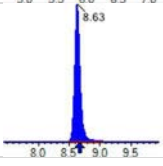 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01096L
Calibration:N 2413019L

SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB30 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0131L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01096L | Instrument:N | SaphiraL |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB30 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.180 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.690 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.060 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.180 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.10 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.050 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.080 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.070 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.080 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.070 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.080 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.160 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.160 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.650 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.70 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.930 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.130 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.230 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.170 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.80 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.660 | ng/mL0 | | |
| | D7-NMEFOSE0 | 22.10 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.0 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.780 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 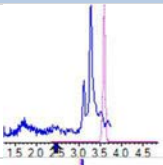 | 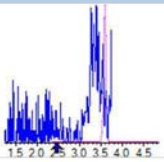 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 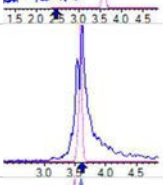 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 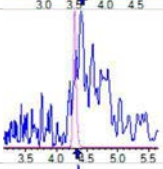 | 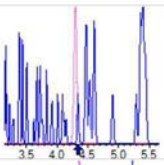 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 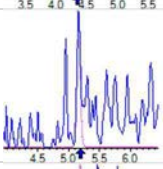 | 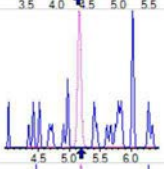 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 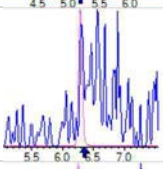 | 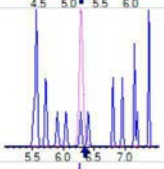 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 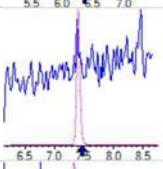 | 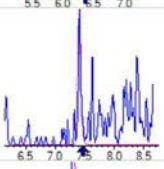 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 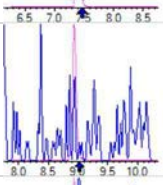 | 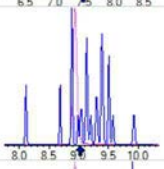 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 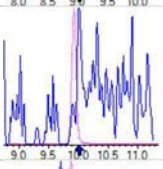 | 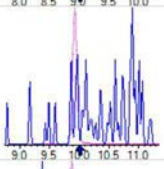 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 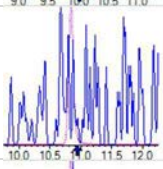 | 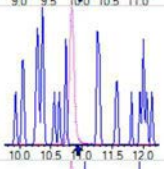 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 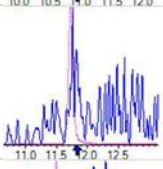 | 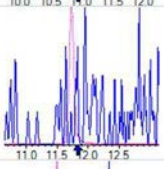 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 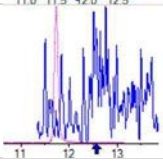 | 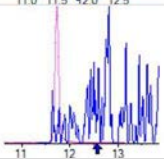 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 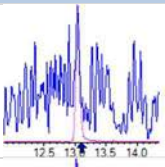 | 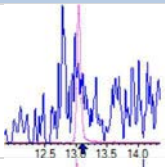 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 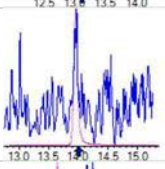 | 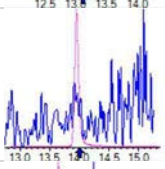 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 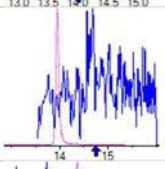 | 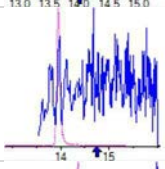 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 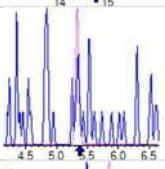 | 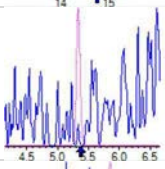 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 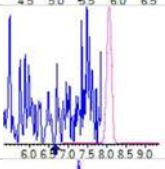 | 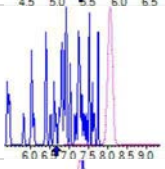 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 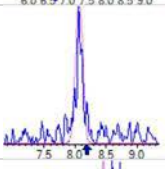 | 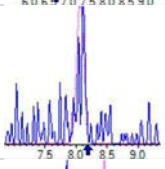 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 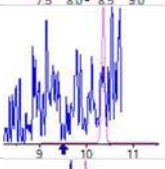 | 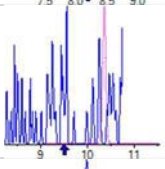 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 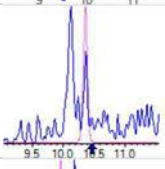 | 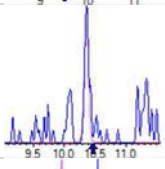 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 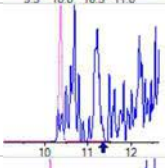 | 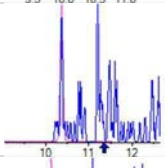 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 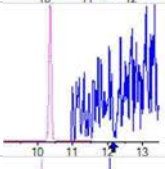 | 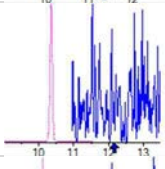 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 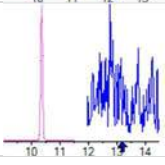 | 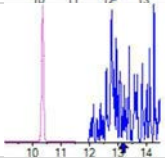 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 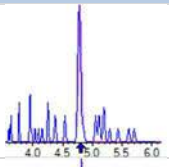 | 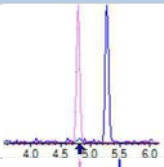 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 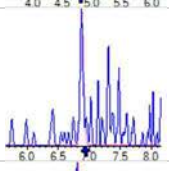 | 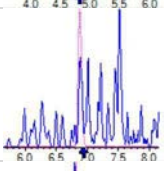 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 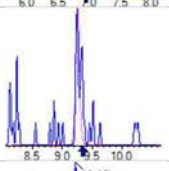 | 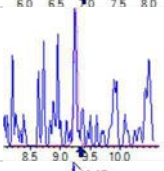 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19946<br>( 627.0 / 81.0 )<br>29621 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.0) | 236.1<br>114.4 | 1.4851<br>103.3<br>102.5 | 0.0560 | N/A | 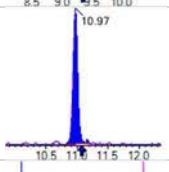 | 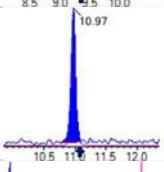 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 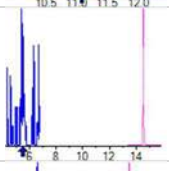 | 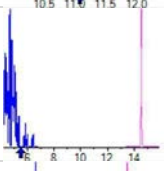 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 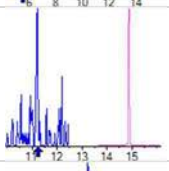 | 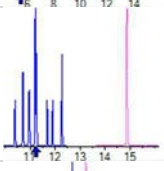 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 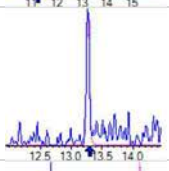 | 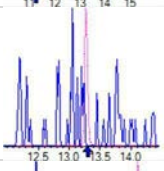 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 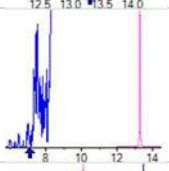 | 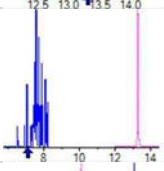 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 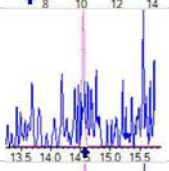 | 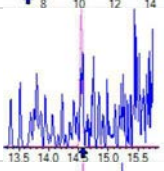 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 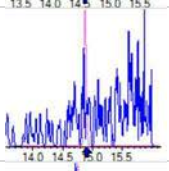 | 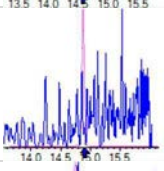 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 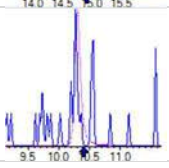 | 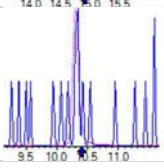 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 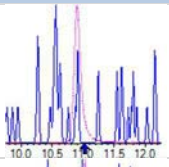 | 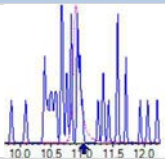 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 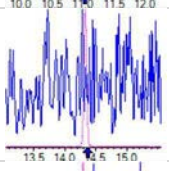 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 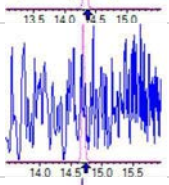 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 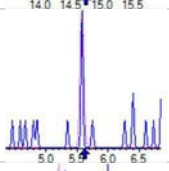 | 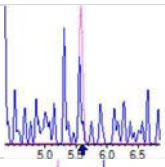 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 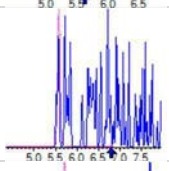 | 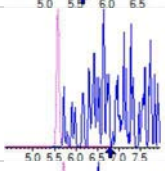 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 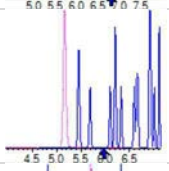 | 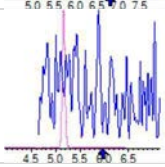 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 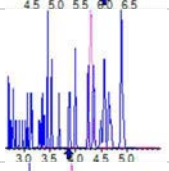 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 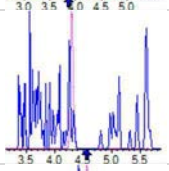 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 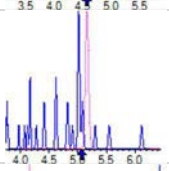 | 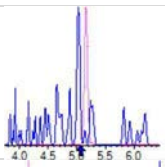 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 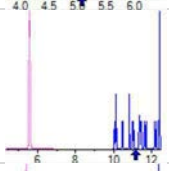 | 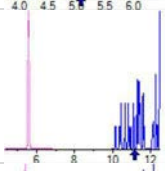 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 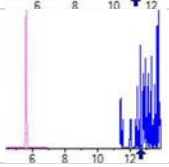 | 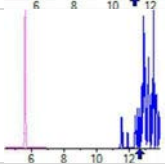 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 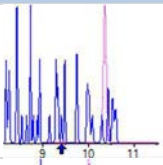 | 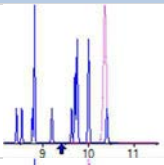 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 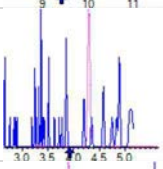 | 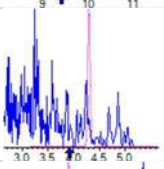 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 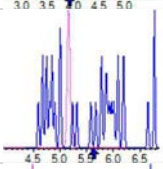 | 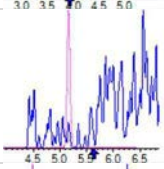 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 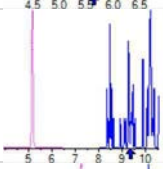 | 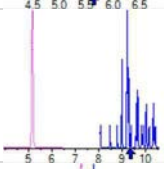 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 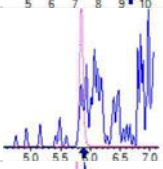 | 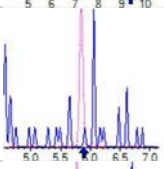 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 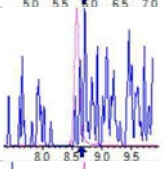 | 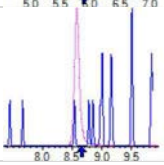 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 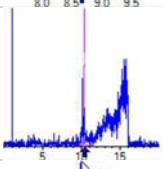 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 284460 | ( 3.59 , N/A ) ( N/A , -0.01 , N/A ) | 1619.1 | N/A | 1.0080 [ 1.0000 ] | 100.8% { 107.6% } | 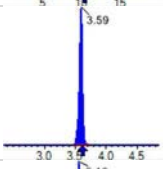 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 101233 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 13141728.6 | N/A | 0.8570 [ 1.0000 ] | 85.7% { 87.4% } | 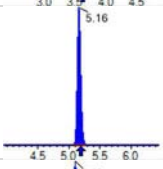 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 361787 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 12208.5 | N/A | 0.9320 [ 1.0000 ] | 93.2% { 100.2% } | 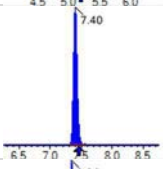 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 253532 | ( 8.94 , N/A ) ( N/A , -0.09 , N/A ) | 1560.5 | N/A | 0.8680 [ 1.0000 ] | 86.8% { 90.9% } | 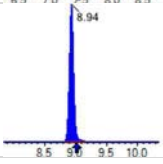 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 246504 | ( 9.93 , N/A ) ( N/A , -0.09 , N/A ) | 6968.1 | N/A | 0.8600 [ 1.0000 ] | 86.0% { 89.3% } | 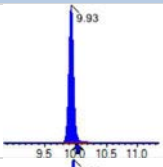 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 897667 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 6881.3 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 97.8% } | 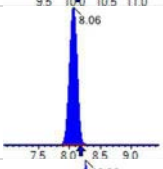 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 674490 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 2809.0 | N/A | 0.8600 [ 1.0000 ] | 86.0% { 87.5% } | 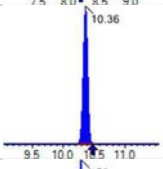 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2514971 | ( 3.59 , N/A ) ( N/A , -0.02 , N/A ) | 83107.2 | N/A | 8.1790 [ 8.0000 ] | 102.2% { 115.8% } | 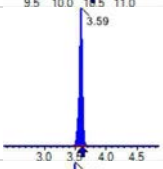 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 868742 | ( 4.30 , N/A ) ( N/A , -0.03 , N/A ) | 6409.5 | N/A | 4.6870 [ 4.0000 ] | 117.2% { 103.9% } | 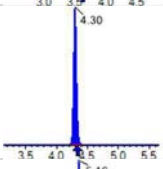 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 456516 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 7797.0 | N/A | 2.0610 [ 2.0000 ] | 103.1% { 95.0% } | 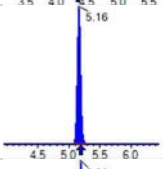 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 536614 | ( 6.29 , N/A ) ( N/A , -0.06 , N/A ) | 7316.9 | N/A | 2.1820 [ 2.0000 ] | 109.1% { 97.9% } | 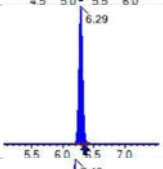 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 806897 | ( 7.40 , N/A ) ( N/A , -0.07 , N/A ) | 5316.7 | N/A | 2.1040 [ 2.0000 ] | 105.2% { 105.4% } | 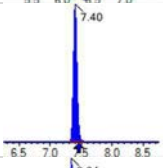 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 263198 | ( 8.94 , N/A ) ( N/A , -0.09 , N/A ) | 4661.6 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 97.6% } | 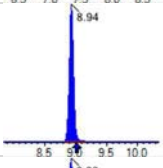 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 308698 | ( 9.93 , N/A ) ( N/A , -0.10 , N/A ) | 1521.8 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 105.0% } | 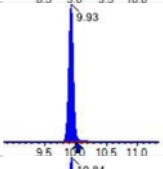 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363019 | ( 10.84 , N/A ) ( N/A , -0.10 , N/A ) | 1141.6 | N/A | 1.0750 [ 1.0000 ] | 107.5% { 98.3% } | 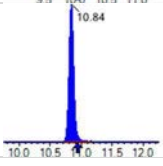 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (29)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 375521 | ( 11.73 , N/A ) ( N/A , -0.10 , N/A ) | 1348.1 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 103.5% } | 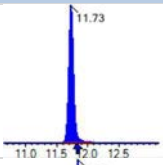 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 329305 | ( 13.04 , N/A ) ( N/A , -0.06 , N/A ) | 1197.3 | N/A | 1.0730 [ 1.0000 ] | 107.3% { 100.5% } | 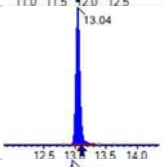 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 500193 | ( 13.95 , N/A ) ( N/A , -0.06 , N/A ) | 2305.6 | N/A | 1.9480 [ 2.0000 ] | 97.4% { 100.5% } | 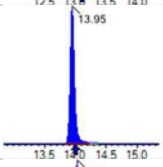 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1507281 | ( 5.33 , N/A ) ( N/A , -0.04 , N/A ) | 1423.7 | N/A | 2.0830 [ 2.0000 ] | 104.2% { 102.2% } | 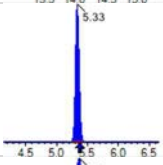 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1400565 | ( 8.06 , N/A ) ( N/A , -0.11 , N/A ) | 5886.7 | N/A | 2.1630 [ 2.0000 ] | 108.1% { 107.6% } | 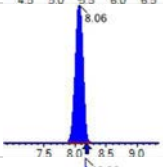 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1550326 | ( 10.36 , N/A ) ( N/A , -0.10 , N/A ) | 1967.1 | N/A | 2.1600 [ 2.0000 ] | 108.0% { 107.3% } | 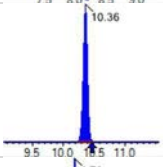 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 739578 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 58.1 | N/A | 4.6460 [ 4.0000 ] | 116.2% { 113.7% } | 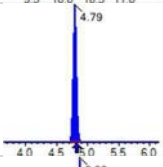 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1837736 | ( 6.88 , N/A ) ( N/A , -0.06 , N/A ) | 6272.6 | N/A | 4.7000 [ 4.0000 ] | 117.5% { 104.4% } | 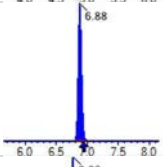 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1688330 | ( 9.26 , N/A ) ( N/A , -0.09 , N/A ) | 2255.7 | N/A | 4.9350 [ 4.0000 ] | 123.4% { 116.0% } | 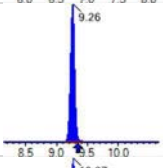 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3609380 | ( 10.97 , N/A ) ( N/A , -0.10 , N/A ) | 1555.8 | N/A | 9.7520 [ 8.0000 ] | 121.9% { 121.1% } | 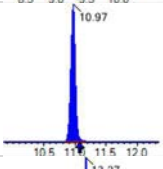 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1622426 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 3058.4 | N/A | 2.1300 [ 2.0000 ] | 106.5% { 104.1% } | 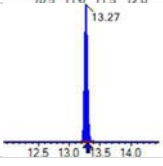 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (29)
Acquired: 2024/03/29 - 05:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 381254 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 2353.2 | N/A | 2.2260 [ 2.0000 ] | 111.3% { 104.7% } | 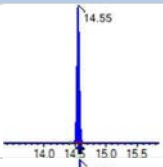 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 340065 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 2483.3 | N/A | 2.1720 [ 2.0000 ] | 108.6% { 98.7% } | 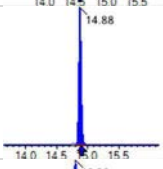 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1197168 | ( 10.30 , N/A ) ( N/A , -0.09 , N/A ) | 4782.8 | N/A | 4.8050 [ 4.0000 ] | 120.1% { 101.4% } | 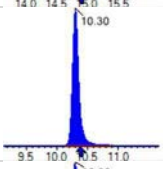 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1047948 | ( 10.90 , N/A ) ( N/A , -0.09 , N/A ) | 2468.7 | N/A | 4.6600 [ 4.0000 ] | 116.5% { 102.8% } | 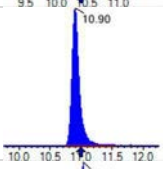 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1411139 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 2813.5 | N/A | 22.0530 [ 20.0000 ] | 110.3% { 106.2% } | 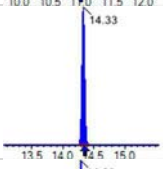 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1139290 | ( 14.69 , N/A ) ( N/A , -0.02 , N/A ) | 4764.9 | N/A | 19.0120 [ 20.0000 ] | 95.1% { 91.0% } | 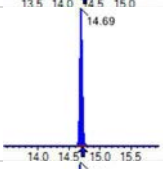 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 841892 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2691.4 | N/A | 8.7760 [ 8.0000 ] | 109.7% { 101.8% } | 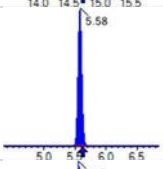 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 618432 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2482.7 | N/A | 2.3020 [ 2.0000 ] | 115.1% { 110.1% } | 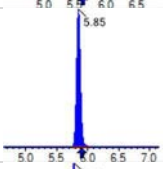 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 713835 | ( 8.58 , N/A ) ( N/A , -0.08 , N/A ) | 1088.9 | N/A | 2.3590 [ 2.0000 ] | 117.9% { 106.5% } | 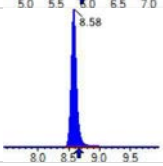 | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01096L
Calibration:N 2413019L
SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB40 | PFBA0 | .0 | ng/mL0 | .75 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |
| | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01096L
Calibration:N 2413019L

SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01096-CCB40 | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.070 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.60 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.070 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.340 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.060 | ng/mL0 | | |
| | 13C9-PFNA0 | 1.090 | ng/mL0 | | |
| | 13C6-PFDA0 | 1.080 | ng/mL0 | | |
| | 13C7-PFUnA0 | 1.110 | ng/mL0 | | |
| | 13C2-PFDOA0 | 1.070 | ng/mL0 | | |
| | 13C2-PFTEDA0 | 1.090 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.070 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.070 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.210 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.720 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.950 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.870 | ng/mL0 | | |
| | 13C8-PFOSA0 | 2.150 | ng/mL0 | | |
| | D3-NMEFOSA0 | 2.160 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.110 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.820 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.640 | ng/mL0 | | |
| | D7-NMEFOSE0 | 20.70 | ng/mL0 | | |
| | D9-NETFOSE0 | 19.10 | ng/mL0 | | |
| | 13C3-HFPO-DA0 | 8.690 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 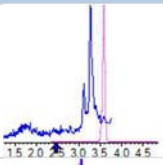 | 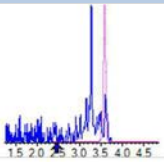 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 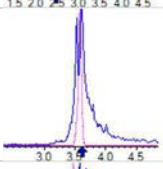 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 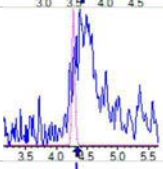 | 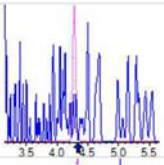 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 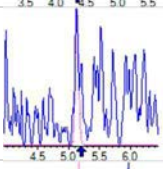 | 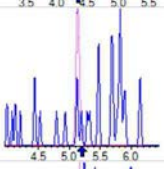 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 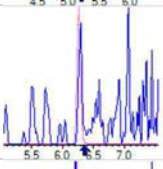 | 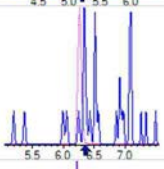 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 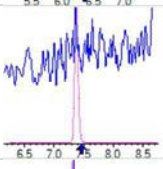 | 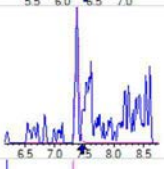 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 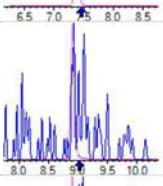 | 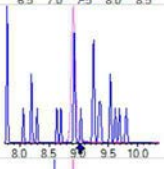 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 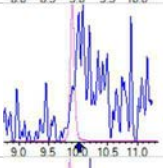 | 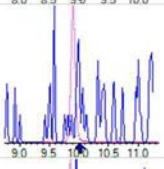 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 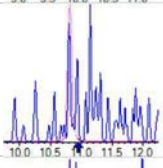 | 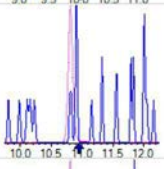 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 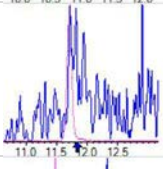 | 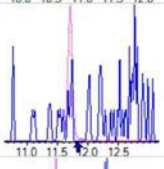 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 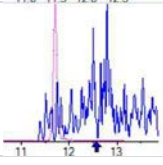 | 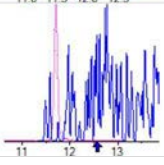 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 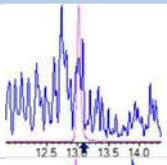 | 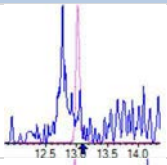 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 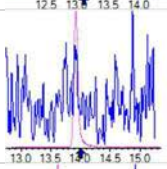 | 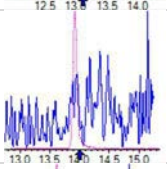 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 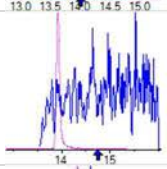 | 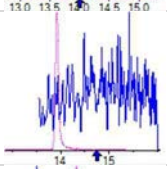 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 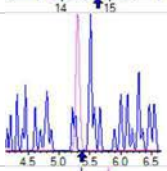 | 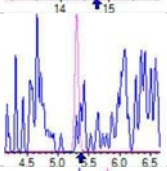 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 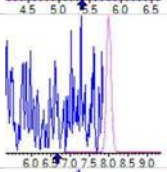 | 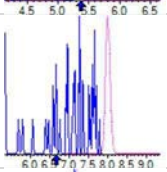 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 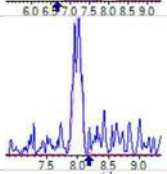 | 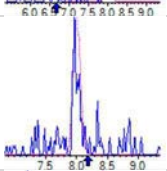 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 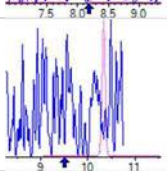 | 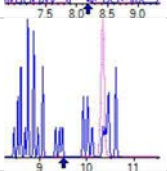 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 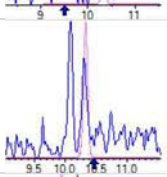 | 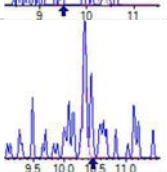 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 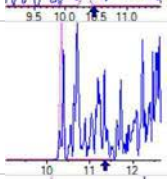 | 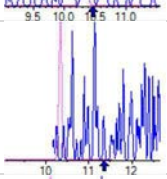 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 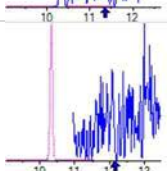 | 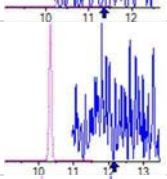 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 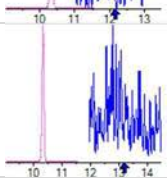 | 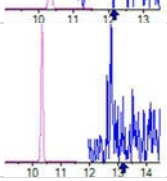 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 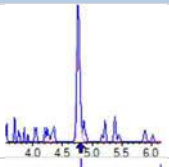 | 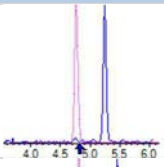 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 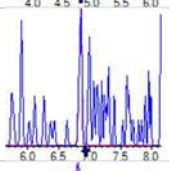 | 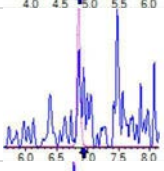 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 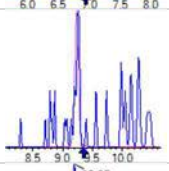 | 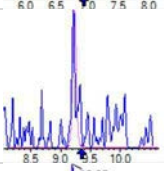 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20060<br>( 627.0 / 81.0 )<br>27386 | ( 10.95 , 1.00 )<br>( 0.01 , N/A , -0.1) | 213.9<br>138.9 | 1.3652<br>95.0<br>94.2 | 0.0570 | N/A | 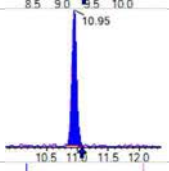 | 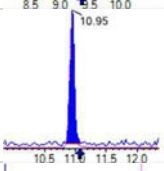 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 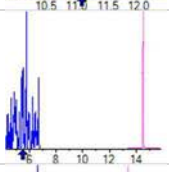 | 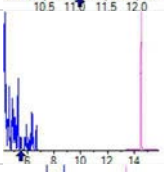 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 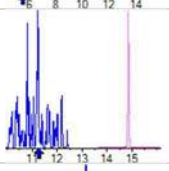 | 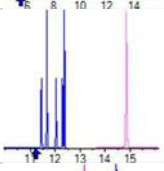 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 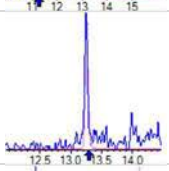 | 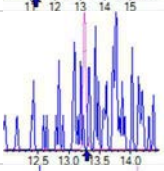 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 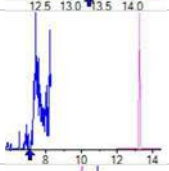 | 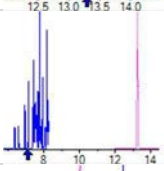 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 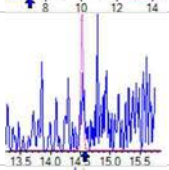 | 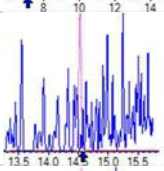 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 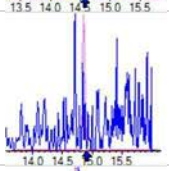 | 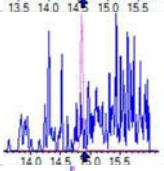 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 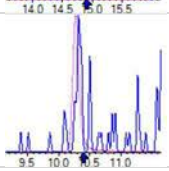 | 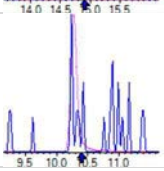 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 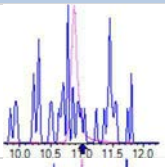 | 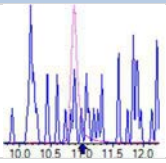 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 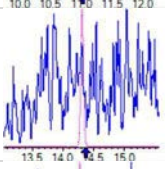 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 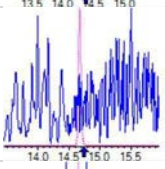 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 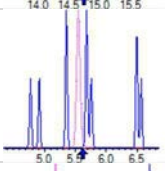 | 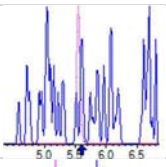 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 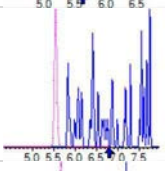 | 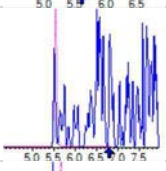 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 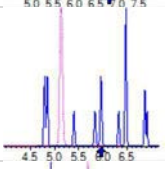 | 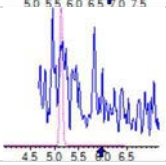 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 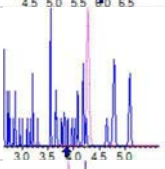 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 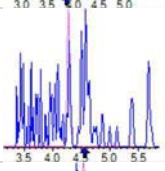 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 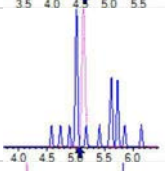 | 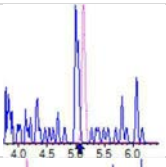 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 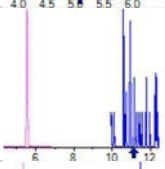 | 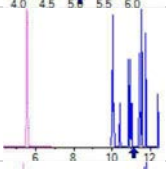 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 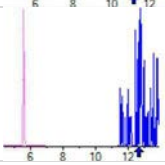 | 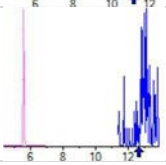 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 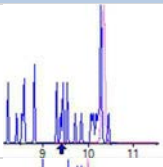 | 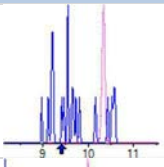 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 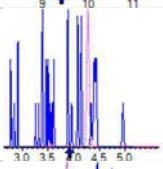 | 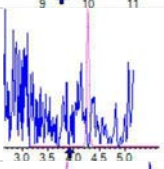 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 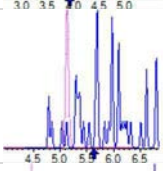 | 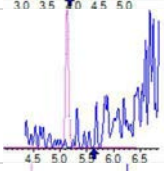 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 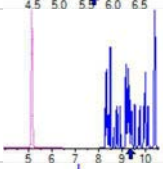 | 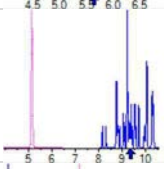 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 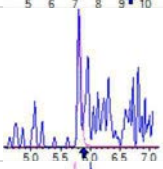 | 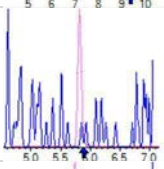 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 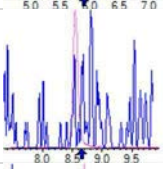 | 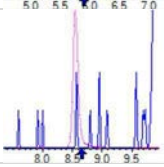 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 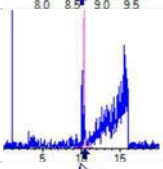 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 285800 | ( 3.58 , N/A )<br>( N/A , -0.03 , N/A ) | 1529.7 | N/A | 1.0130<br>[ 1.0000 ] | 101.3%<br>{ 108.1% } | 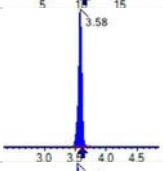 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 102600 | ( 5.14 , N/A )<br>( N/A , -0.06 , N/A ) | 107641.7 | N/A | 0.8690<br>[ 1.0000 ] | 86.9%<br>{ 88.6% } | 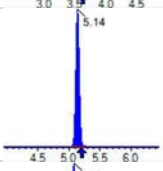 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367822 | ( 7.38 , N/A )<br>( N/A , -0.09 , N/A ) | 7390.7 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 101.9% } | 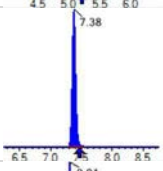 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 245960 | ( 8.91 , N/A )<br>( N/A , -0.12 , N/A ) | 1486.8 | N/A | 0.8420<br>[ 1.0000 ] | 84.2%<br>{ 88.2% } | 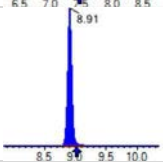 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 248470 | ( 9.90 , N/A ) ( N/A , -0.12 , N/A ) | 6484.9 | N/A | 0.8670 [ 1.0000 ] | 86.7% { 90.0% } | 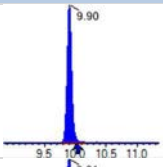 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 924764 | ( 8.01 , N/A ) ( N/A , -0.17 , N/A ) | 6473.6 | N/A | 0.9420 [ 1.0000 ] | 94.2% { 100.8% } | 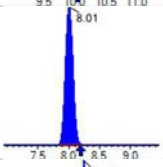 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 684462 | ( 10.34 , N/A ) ( N/A , -0.13 , N/A ) | 3333.6 | N/A | 0.8720 [ 1.0000 ] | 87.2% { 88.7% } | 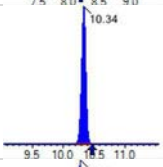 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2493473 | ( 3.58 , N/A ) ( N/A , -0.03 , N/A ) | 75643.0 | N/A | 8.0720 [ 8.0000 ] | 100.9% { 114.8% } | 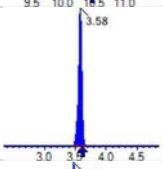 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 864342 | ( 4.28 , N/A ) ( N/A , -0.06 , N/A ) | 5749.9 | N/A | 4.6010 [ 4.0000 ] | 115.0% { 103.3% } | 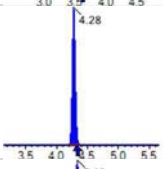 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 465685 | ( 5.13 , N/A ) ( N/A , -0.06 , N/A ) | 4793.3 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 96.9% } | 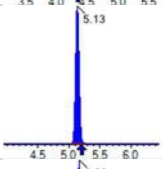 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 583816 | ( 6.26 , N/A ) ( N/A , -0.09 , N/A ) | 8069.5 | N/A | 2.3420 [ 2.0000 ] | 117.1% { 106.5% } | 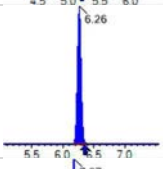 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 803929 | ( 7.37 , N/A ) ( N/A , -0.09 , N/A ) | 5800.4 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 105.0% } | 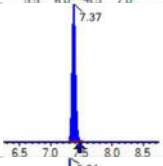 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 265516 | ( 8.91 , N/A ) ( N/A , -0.11 , N/A ) | 5513.0 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 98.5% } | 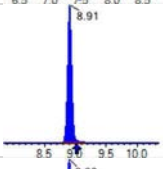 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 311092 | ( 9.90 , N/A ) ( N/A , -0.12 , N/A ) | 1639.9 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 105.8% } | 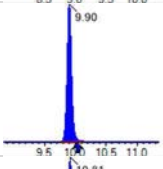 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 376366 | ( 10.81 , N/A ) ( N/A , -0.13 , N/A ) | 1223.8 | N/A | 1.1050 [ 1.0000 ] | 110.5% { 101.9% } | 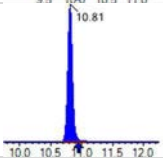 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 373384 | ( 11.71 , N/A ) ( N/A , -0.13 , N/A ) | 1432.5 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 102.9% } | 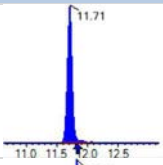 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 335981 | ( 13.02 , N/A ) ( N/A , -0.09 , N/A ) | 1233.3 | N/A | 1.0860 [ 1.0000 ] | 108.6% { 102.5% } | 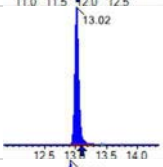 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 490256 | ( 13.92 , N/A ) ( N/A , -0.09 , N/A ) | 2250.5 | N/A | 1.8940 [ 2.0000 ] | 94.7% { 98.5% } | 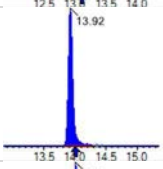 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1546565 | ( 5.30 , N/A ) ( N/A , -0.07 , N/A ) | 1748.6 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 104.9% } | 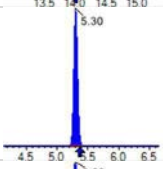 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1382666 | ( 8.00 , N/A ) ( N/A , -0.17 , N/A ) | 6648.6 | N/A | 2.0730 [ 2.0000 ] | 103.6% { 106.2% } | 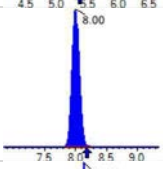 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1605831 | ( 10.34 , N/A ) ( N/A , -0.13 , N/A ) | 2215.3 | N/A | 2.2050 [ 2.0000 ] | 110.3% { 111.2% } | 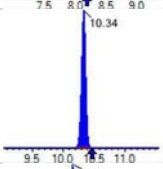 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 774362 | ( 4.77 , N/A ) ( N/A , -0.05 , N/A ) | 61.5 | N/A | 4.7220 [ 4.0000 ] | 118.1% { 119.0% } | 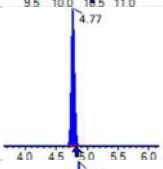 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1992892 | ( 6.85 , N/A ) ( N/A , -0.09 , N/A ) | 7090.5 | N/A | 4.9470 [ 4.0000 ] | 123.7% { 113.2% } | 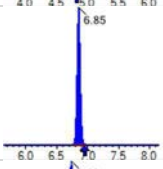 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1715396 | ( 9.23 , N/A ) ( N/A , -0.11 , N/A ) | 2315.8 | N/A | 4.8670 [ 4.0000 ] | 121.7% { 117.9% } | 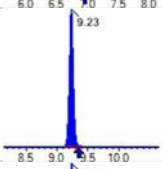 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3548659 | ( 10.94 , N/A ) ( N/A , -0.13 , N/A ) | 2056.6 | N/A | 9.3070 [ 8.0000 ] | 116.3% { 119.1% } | 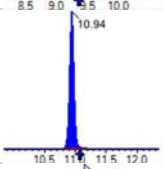 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1658279 | ( 13.25 , N/A ) ( N/A , -0.04 , N/A ) | 4336.8 | N/A | 2.1450 [ 2.0000 ] | 107.3% { 106.4% } | 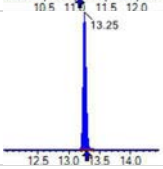 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (36)
Acquired: 2024/03/29 - 07:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 376260 | ( 14.53 , N/A ) ( N/A , -0.04 , N/A ) | 2542.2 | N/A | 2.1650 [ 2.0000 ] | 108.2% { 103.4% } | 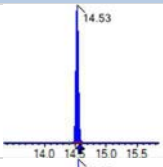  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 335016 | ( 14.85 , N/A ) ( N/A , -0.04 , N/A ) | 2918.0 | N/A | 2.1090 [ 2.0000 ] | 105.4% { 97.3% } | 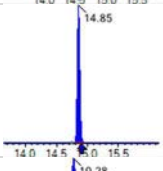  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1217534 | ( 10.28 , N/A ) ( N/A , -0.11 , N/A ) | 3574.4 | N/A | 4.8150 [ 4.0000 ] | 120.4% { 103.2% } | 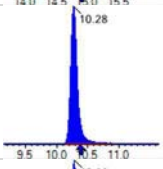  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1057973 | ( 10.88 , N/A ) ( N/A , -0.12 , N/A ) | 2232.8 | N/A | 4.6360 [ 4.0000 ] | 115.9% { 103.8% } | 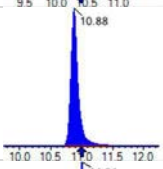  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1346210 | ( 14.31 , N/A ) ( N/A , -0.04 , N/A ) | 2987.0 | N/A | 20.7320 [ 20.0000 ] | 103.7% { 101.3% } | 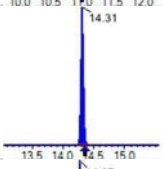  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1163824 | ( 14.67 , N/A ) ( N/A , -0.04 , N/A ) | 4294.8 | N/A | 19.1380 [ 20.0000 ] | 95.7% { 93.0% } | 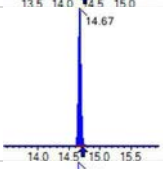  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 844532 | ( 5.55 , N/A ) ( N/A , -0.07 , N/A ) | 2399.4 | N/A | 8.6860 [ 8.0000 ] | 108.6% { 102.1% } | 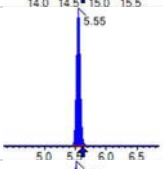  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 627371 | ( 5.82 , N/A ) ( N/A , -0.08 , N/A ) | 2615.2 | N/A | 2.3170 [ 2.0000 ] | 115.8% { 111.7% } | 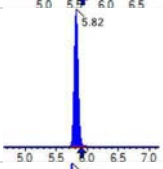  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 702027 | ( 8.55 , N/A ) ( N/A , -0.11 , N/A ) | 1315.9 | N/A | 2.3010 [ 2.0000 ] | 115.1% { 104.8% } | 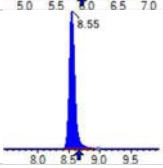  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01148L
Calibration:N 2413019L
SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01148-ICB1 0 | PFBA0 | .1890 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | 0.0110 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .07990 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .01810 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01148L
Calibration:N 2413019L

SDG:N 24C0131L
Project:N JPL-GW MonitoringL
Instrument:N SaphiraL

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01148-ICB1 0 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.060 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.650 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.030 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.220 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.140 | ng/mL0 | | |
| | 13C9-PFNA | 0.990 | ng/mL0 | | |
| | 13C6-PFDA | 0.960 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9610 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9550 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9480 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.780 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.940 | ng/mL0 | | |
| | 13C3-PFHXS0 | 1.980 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.680 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.390 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.990 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.980 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.420 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.550 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0131L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01148L | Instrument: | SaphiraL |
| Calibration: | 2413019L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01148-ICB10 | D7-NMEFOSE0 | 19.80 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.40 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 0 | 8.20 | ng/mL | 0 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 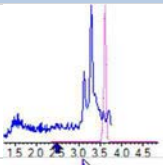 | 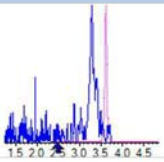 | |
| PFBA | ( 213.0 / 169.0 ) 158073 | ( 3.64 , 1.01 ) ( 0.03 , N/A , 0.0) | 104.4 | N/A<br>0.0<br>0.0 | 0.1890 | N/A | 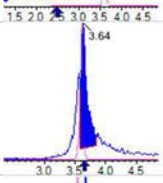 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 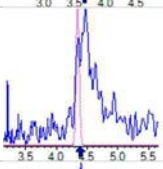 | 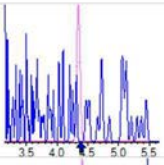 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 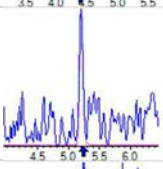 | 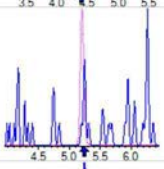 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 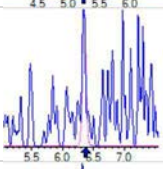 | 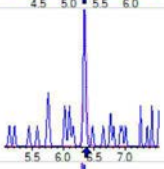 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 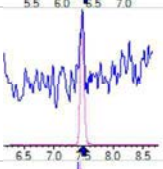 | 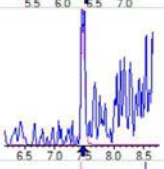 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 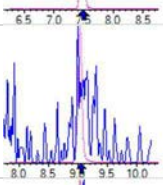 | 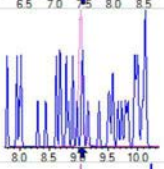 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 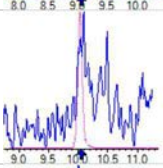 | 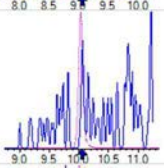 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 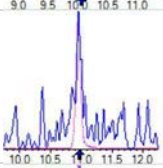 | 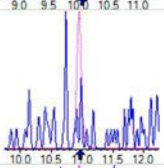 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 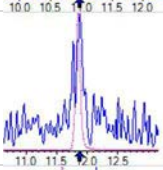 | 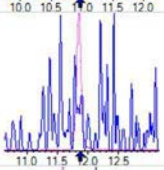 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 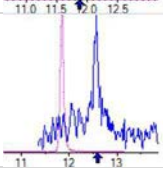 | 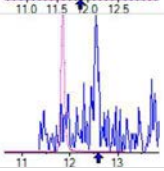 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 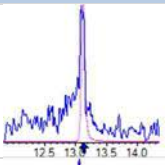 | 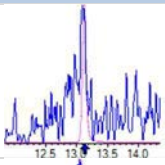 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 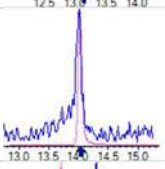 | 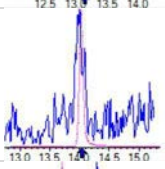 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 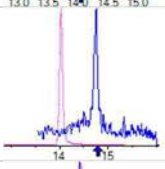 | 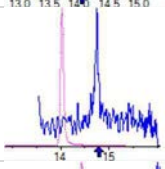 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 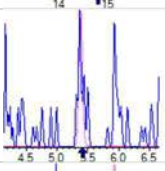 | 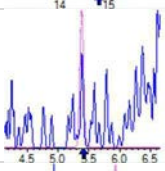 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 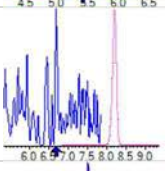 | 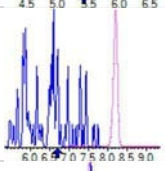 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 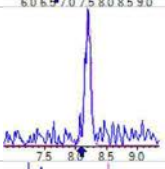 | 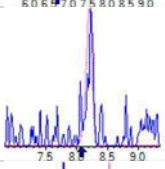 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 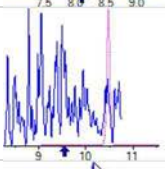 | 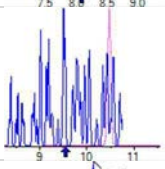 | |
| PFOS | ( 499.0 / 80.0 )<br>10221<br>( 499.0 / 99.0 )<br>2115 | ( 10.41 , 0.99 )<br>( -0.06 , N/A , -3.7) | 64.0<br>1823.6 | 0.2070<br>89.6<br>89.6 | 0.0110 | N/A | 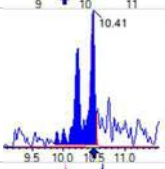 | 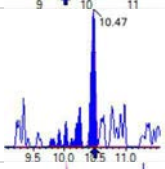 | MI5 DG 2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 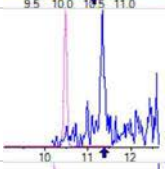 | 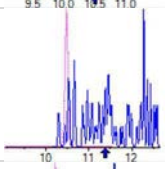 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 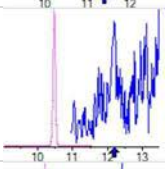 | 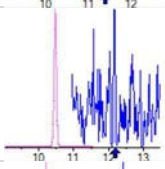 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 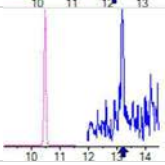 | 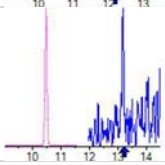 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 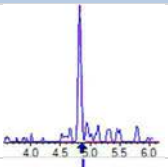 | 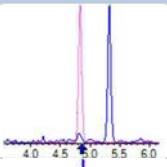 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 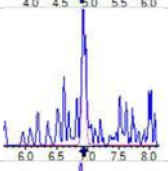 | 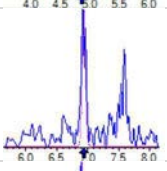 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 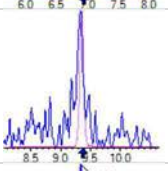 | 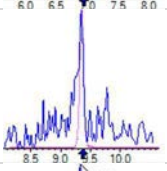 | |
| 10:2FTS | ( 627.0 / 607.0 ) 25777<br>( 627.0 / 81.0 ) 32268 | ( 11.08 , 1.00 ) ( 0.01 , N/A , 0.2) | 119.4<br>103.4 | 1.2518<br>87.1<br>87.1 | 0.0800 | N/A | 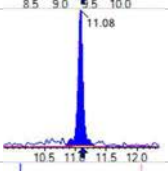 | 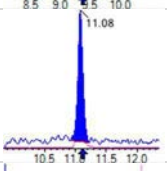 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 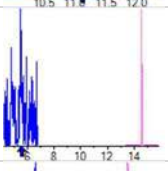 | 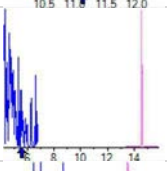 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 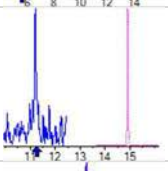 | 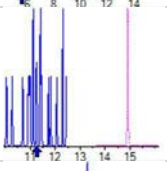 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 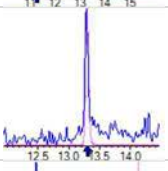 | 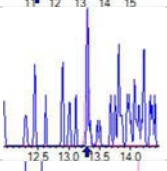 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 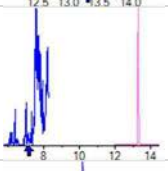 | 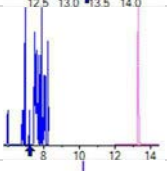 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 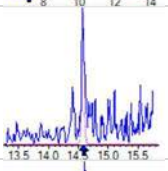 | 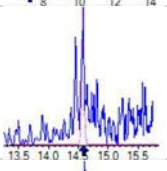 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 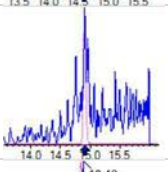 | 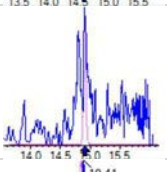 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5071<br>( 570.0 / 483.0 ) 2169 | ( 10.42 , 1.00 ) ( 0.02 , N/A , 0.5) | 43.2<br>791.9 | 0.4278<br>92.2<br>92.2 | 0.0180 | N/A | 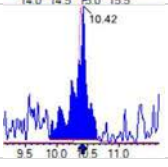 | 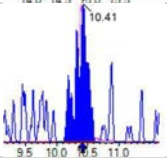 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 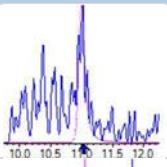 | 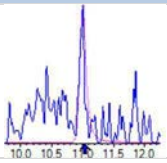 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 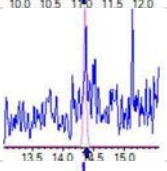 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 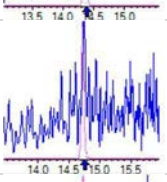 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 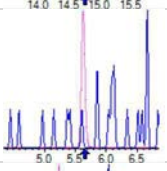 | 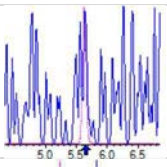 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 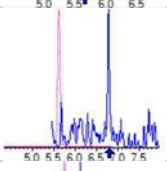 | 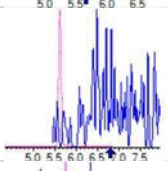 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 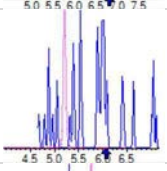 | 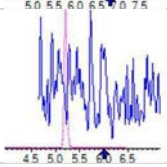 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 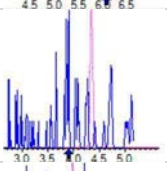 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 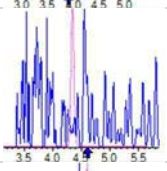 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 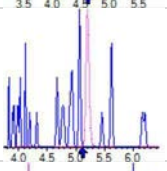 | 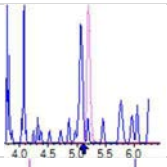 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 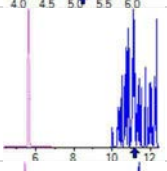 | 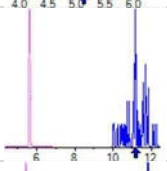 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 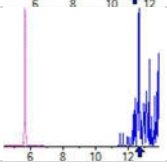 | 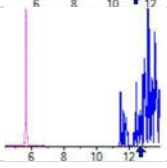 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 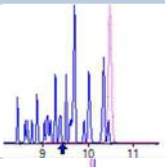 | 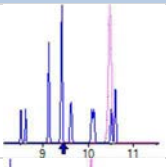 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 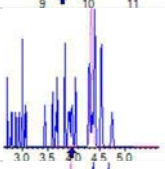 | 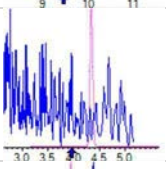 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 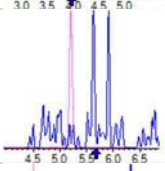 | 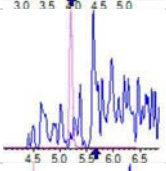 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 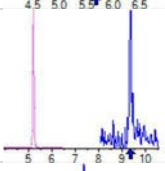 | 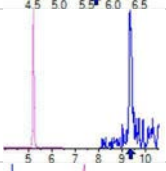 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 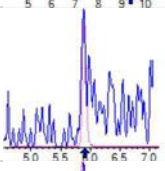 | 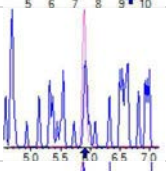 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 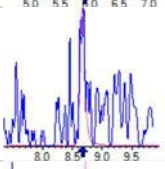 | 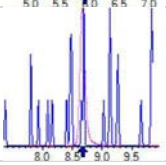 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 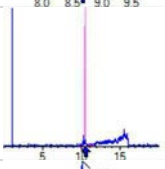 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 271603 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 1765.0 | N/A | 0.9620 [ 1.0000 ] | 96.2% { 98.0% } | 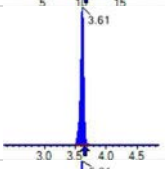 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 109151 | ( 5.21 , N/A ) ( N/A , -0.03 , N/A ) | 968721.8 | N/A | 0.9250 [ 1.0000 ] | 92.5% { 94.9% } | 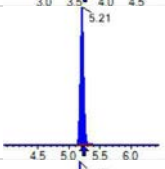 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370901 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5406.0 | N/A | 0.9560 [ 1.0000 ] | 95.6% { 94.5% } | 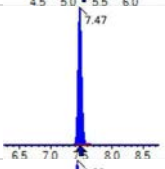 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282226 | ( 9.03 , N/A ) ( N/A , -0.01 , N/A ) | 2166.9 | N/A | 0.9660 [ 1.0000 ] | 96.6% { 97.1% } | 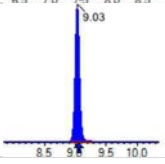 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-ICB1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 295805 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 8472.2 | N/A | 1.0320 [ 1.0000 ] | 103.2% { 108.7% } | 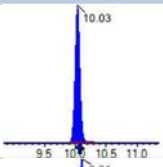  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 940221 | ( 8.21 , N/A ) ( N/A , 0.12 , N/A ) | 5678.7 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 98.8% } | 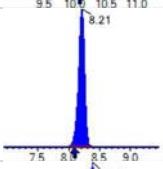  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 743825 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 3764.8 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 100.6% } | 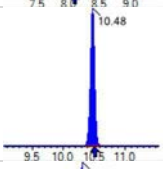  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2366553 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 262733.8 | N/A | 8.0610 [ 8.0000 ] | 100.8% { 97.0% } | 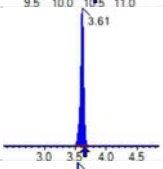  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 929871 | ( 4.34 , N/A ) ( N/A , -0.04 , N/A ) | 6195.5 | N/A | 4.6530 [ 4.0000 ] | 116.3% { 100.5% } | 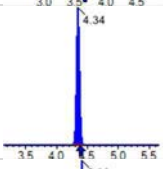  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 484104 | ( 5.20 , N/A ) ( N/A , -0.03 , N/A ) | 9073.5 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 90.5% } | 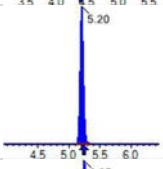  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588065 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 9116.3 | N/A | 2.2170 [ 2.0000 ] | 110.9% { 103.1% } | 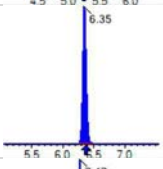  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 842406 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 4909.5 | N/A | 2.1430 [ 2.0000 ] | 107.2% { 111.3% } | 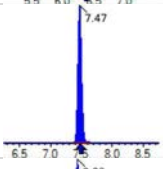  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 275807 | ( 9.03 , N/A ) ( N/A , -0.01 , N/A ) | 5012.8 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 97.1% } | 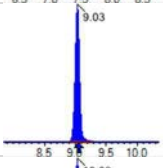  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 328131 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 1418.1 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 97.5% } | 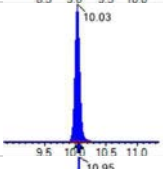  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389721 | ( 10.95 , N/A ) ( N/A , -0.02 , N/A ) | 1166.7 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 99.4% } | 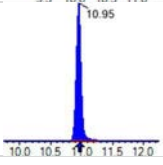  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-ICB1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 396994 | ( 11.85 , N/A ) ( N/A , -0.02 , N/A ) | 1324.6 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 99.5% } | 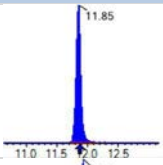  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348990 | ( 13.13 , N/A ) ( N/A , -0.02 , N/A ) | 1332.2 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 96.3% } | 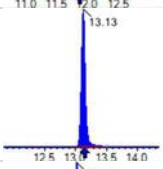  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 549693 | ( 14.03 , N/A ) ( N/A , -0.01 , N/A ) | 2623.2 | N/A | 1.7840 [ 2.0000 ] | 89.2% { 96.2% } | 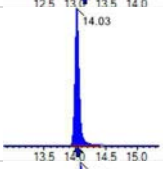  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1469989 | ( 5.39 , N/A ) ( N/A , -0.03 , N/A ) | 1636.0 | N/A | 1.9400 [ 2.0000 ] | 97.0% { 92.5% } | 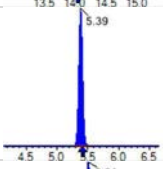  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1346230 | ( 8.21 , N/A ) ( N/A , 0.12 , N/A ) | 6373.3 | N/A | 1.9850 [ 2.0000 ] | 99.2% { 98.0% } | 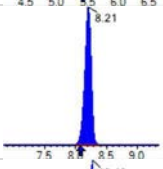  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1606986 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 2074.7 | N/A | 2.0310 [ 2.0000 ] | 101.5% { 102.6% } | 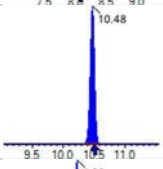  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 778425 | ( 4.83 , N/A ) ( N/A , -0.03 , N/A ) | 59.9 | N/A | 4.6690 [ 4.0000 ] | 116.7% { 111.6% } | 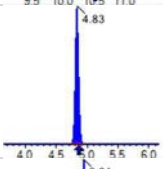  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1915077 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 7754.3 | N/A | 4.6760 [ 4.0000 ] | 116.9% { 115.4% } | 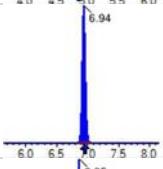  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1655492 | ( 9.35 , N/A ) ( N/A , -0.02 , N/A ) | 2518.6 | N/A | 4.6200 [ 4.0000 ] | 115.5% { 112.0% } | 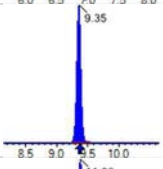  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3250874 | ( 11.08 , N/A ) ( N/A , -0.02 , N/A ) | 1739.5 | N/A | 8.3860 [ 8.0000 ] | 104.8% { 114.2% } | 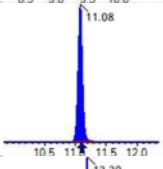  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1670409 | ( 13.30 , N/A ) ( N/A , -0.01 , N/A ) | 3297.5 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 99.2% } | 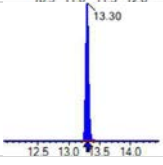  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 374739 | ( 14.57 , N/A ) ( N/A , -0.01 , N/A ) | 2651.6 | N/A | 1.9840 [ 2.0000 ] | 99.2% { 101.1% } | 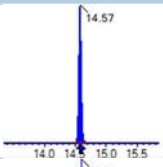 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 360886 | ( 14.90 , N/A ) ( N/A , -0.01 , N/A ) | 3140.8 | N/A | 2.0900 [ 2.0000 ] | 104.5% { 101.5% } | 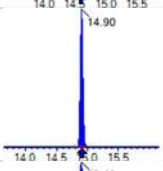 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1214676 | ( 10.40 , N/A ) ( N/A , -0.02 , N/A ) | 4889.3 | N/A | 4.4210 [ 4.0000 ] | 110.5% { 104.8% } | 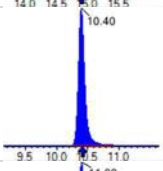 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1128882 | ( 11.00 , N/A ) ( N/A , -0.02 , N/A ) | 2853.5 | N/A | 4.5520 [ 4.0000 ] | 113.8% { 109.2% } | 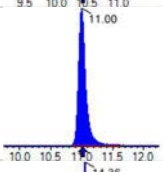 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1394785 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2349.5 | N/A | 19.7660 [ 20.0000 ] | 98.8% { 98.2% } | 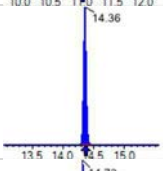 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1345626 | ( 14.72 , N/A ) ( N/A , -0.01 , N/A ) | 4451.8 | N/A | 20.3620 [ 20.0000 ] | 101.8% { 100.8% } | 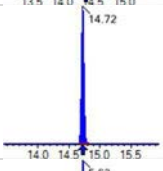 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 847815 | ( 5.63 , N/A ) ( N/A , -0.03 , N/A ) | 2610.7 | N/A | 8.1960 [ 8.0000 ] | 102.5% { 93.9% } | 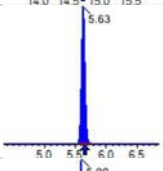 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 584674 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 3075.1 | N/A | 1.8140 [ 2.0000 ] | 90.7% { 103.0% } | 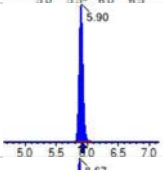 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 660409 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1110.6 | N/A | 1.8180 [ 2.0000 ] | 90.9% { 101.0% } | 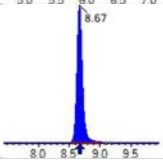 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 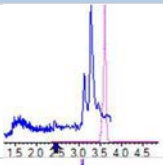 | 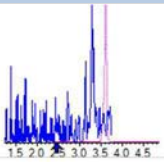 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 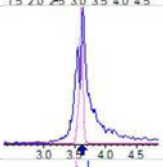 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 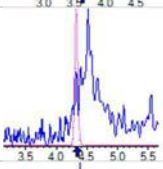 | 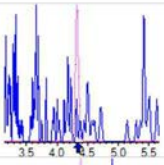 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 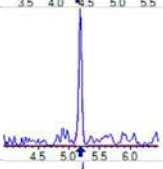 | 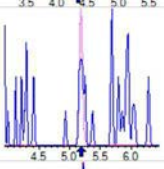 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 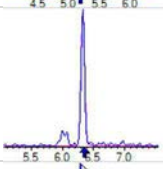 | 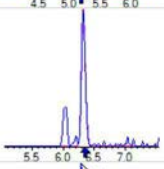 | |
| PFOA | ( 413.0 / 369.0 )<br>3237280<br>( 413.0 / 169.0 )<br>1271532 | ( 7.44 , 1.00 )<br>( 0.00 , N/A , 0.0) | 773.2<br>667.7 | 0.3928<br>109.9<br>110.7 | 7.4740 | N/A | 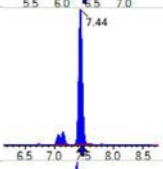 | 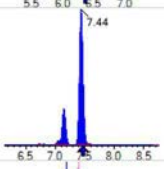 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 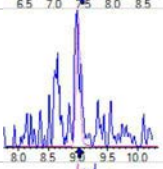 | 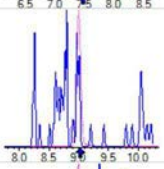 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 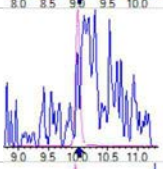 | 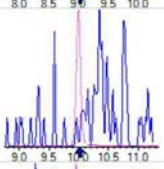 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 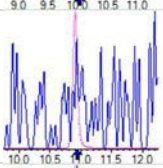 | 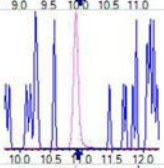 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 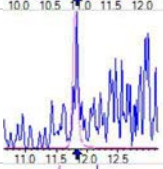 | 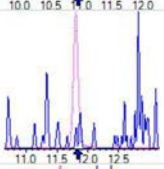 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 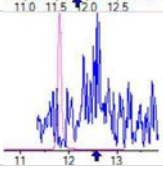 | 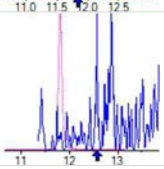 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 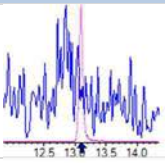 | 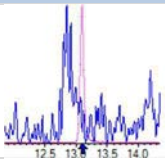 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 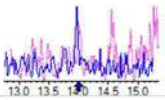 | 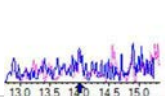 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 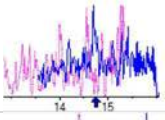 | 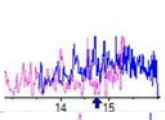 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 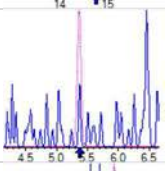 | 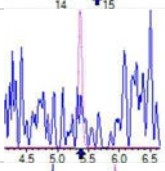 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 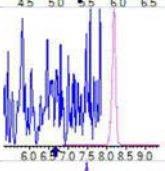 | 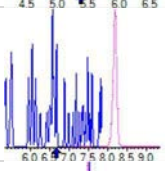 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 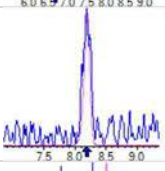 | 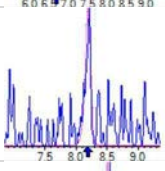 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 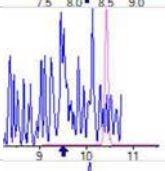 | 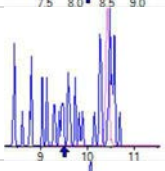 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 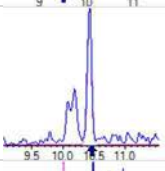 | 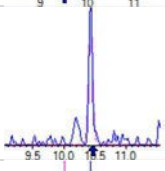 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 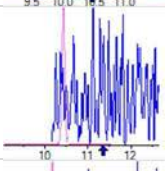 | 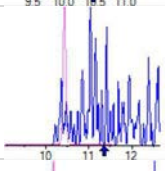 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 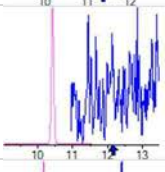 | 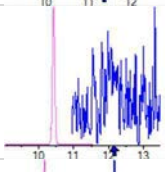 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 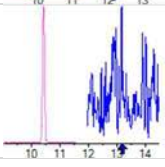 | 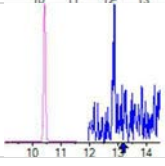 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 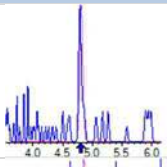 | 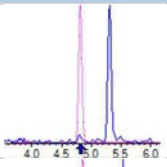 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 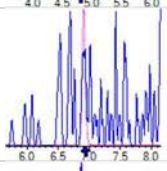 | 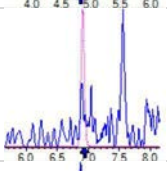 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 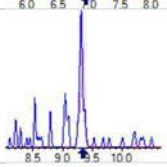 | 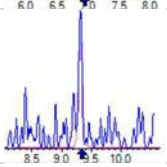 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 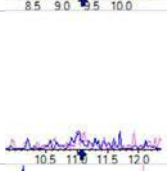 | 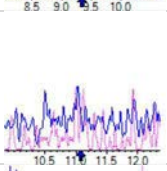 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 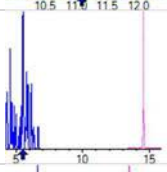 | 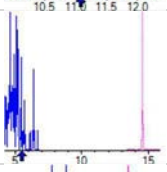 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 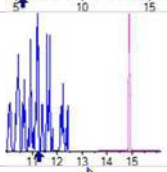 | 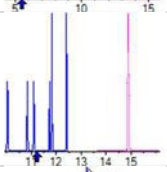 | |
| PFOSA | ( 498.0 / 78.0 ) 8083527<br>( 498.0 / 478.0 ) 120750 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 661.3<br>557.2 | 0.0149<br>101.6<br>112.2 | 9.3530 | N/A | 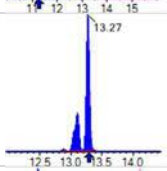 | 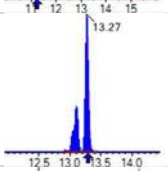 | MI5 DG 2024-03-29 |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 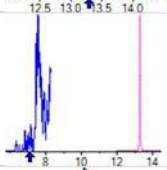 | 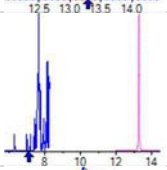 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1596674<br>( 512.0 / 169.0 ) 1170266 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.9) | 3534.3<br>1630.4 | 0.7329<br>95.6<br>98.4 | 8.4570 | N/A | 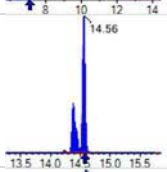 | 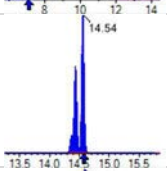 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1785193<br>( 526.0 / 169.0 ) 2221068 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.0) | 4002.5<br>3451.5 | 1.2442<br>99.5<br>100.0 | 8.1380 | N/A | 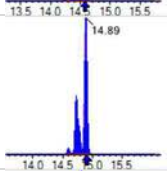 | 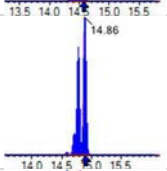 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 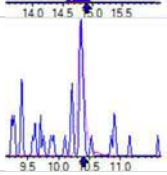 | 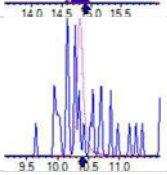 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 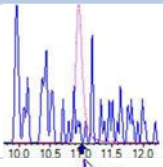 | 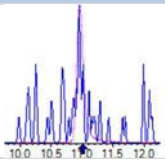 | |
| NMeFOSE | ( 616.0 / 59.0 ) 780143 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 1938.0 | N/A<br>0.0<br>0.0 | 9.2520 | N/A | 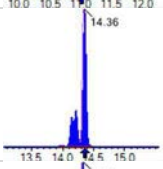 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 603775 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 2402.4 | N/A<br>0.0<br>0.0 | 9.1950 | N/A | 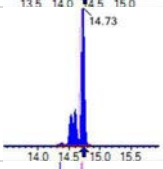 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 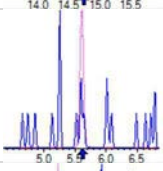 | 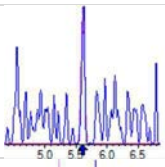 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 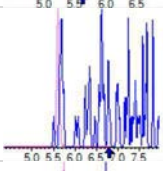 | 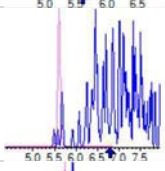 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 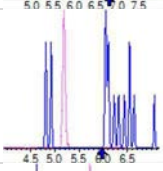 | 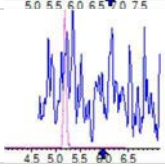 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 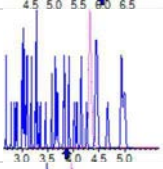 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 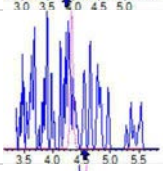 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 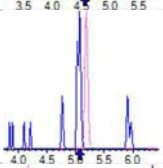 | 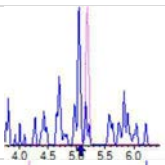 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 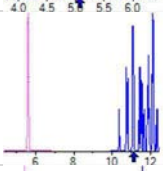 | 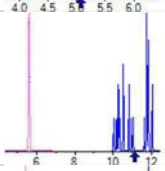 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 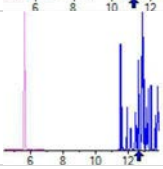 | 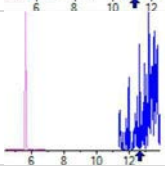 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 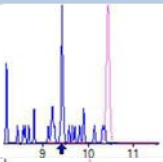 | 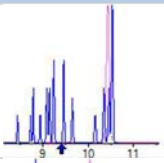 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 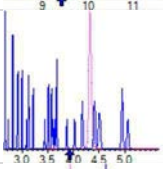 | 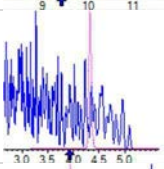 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 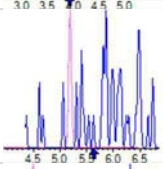 | 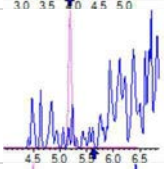 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 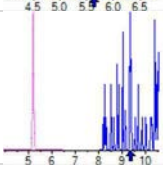 | 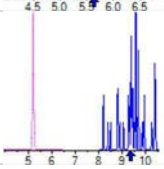 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 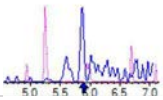 | 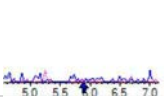 | NR, |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | | | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 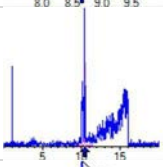 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 278004 | ( 3.61 , N/A )<br>( N/A , 0.00 , N/A ) | 1413.7 | N/A | 0.9850<br>[ 1.0000 ] | 98.5%<br>{ 105.1% } | 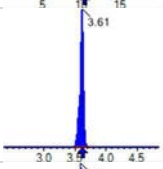 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106997 | ( 5.19 , N/A )<br>( N/A , -0.01 , N/A ) | 609912.6 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 92.4% } | 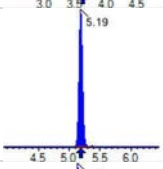 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 362792 | ( 7.44 , N/A )<br>( N/A , -0.03 , N/A ) | 4913.9 | N/A | 0.9350<br>[ 1.0000 ] | 93.5%<br>{ 100.5% } | 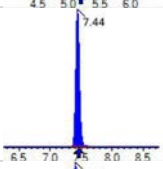 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 264669 | ( 9.00 , N/A )<br>( N/A , -0.03 , N/A ) | 1513.0 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 94.9% } | 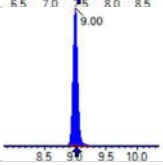 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (4)
Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 270748 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 7033.5 | N/A | 0.9450 [ 1.0000 ] | 94.5% { 98.1% } | 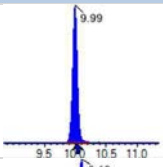 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 906303 | ( 8.19 , N/A ) ( N/A , 0.02 , N/A ) | 6998.3 | N/A | 0.9230 [ 1.0000 ] | 92.3% { 98.7% } | 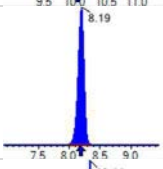 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 736895 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 4167.9 | N/A | 0.9390 [ 1.0000 ] | 93.9% { 95.5% } | 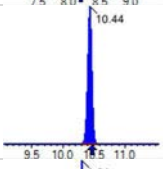 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2530425 | ( 3.61 , N/A ) ( N/A , 0.00 , N/A ) | 1512466.1 | N/A | 8.4210 [ 8.0000 ] | 105.3% { 116.5% } | 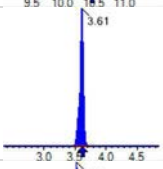 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 929735 | ( 4.32 , N/A ) ( N/A , -0.01 , N/A ) | 6968.9 | N/A | 4.7460 [ 4.0000 ] | 118.7% { 111.2% } | 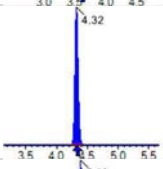 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 545658 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 32771.8 | N/A | 2.3310 [ 2.0000 ] | 116.6% { 113.5% } | 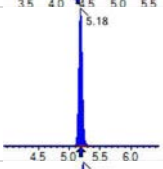 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 571887 | ( 6.33 , N/A ) ( N/A , -0.02 , N/A ) | 10306.6 | N/A | 2.2000 [ 2.0000 ] | 110.0% { 104.3% } | 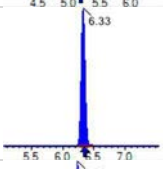 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862590 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 4685.5 | N/A | 2.2430 [ 2.0000 ] | 112.2% { 112.7% } | 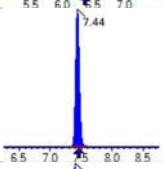 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299389 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 8038.6 | N/A | 1.1460 [ 1.0000 ] | 114.6% { 111.0% } | 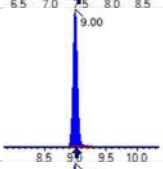 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 344795 | ( 9.99 , N/A ) ( N/A , -0.03 , N/A ) | 1120.2 | N/A | 1.1020 [ 1.0000 ] | 110.2% { 117.3% } | 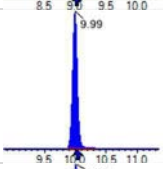 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 407026 | ( 10.91 , N/A ) ( N/A , -0.03 , N/A ) | 1476.0 | N/A | 1.0970 [ 1.0000 ] | 109.7% { 110.2% } | 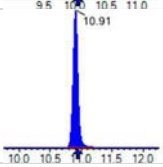 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 418045 | ( 11.80 , N/A ) ( N/A , -0.03 , N/A ) | 1520.4 | N/A | 1.0980 [ 1.0000 ] | 109.8% { 115.2% } | 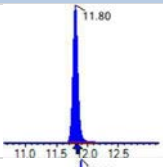  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348779 | ( 13.09 , N/A ) ( N/A , -0.02 , N/A ) | 1283.4 | N/A | 1.0350 [ 1.0000 ] | 103.5% { 106.4% } | 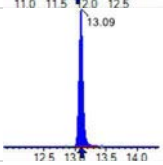  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 621 | ( 14.01 , N/A ) ( N/A , 0.01 , N/A ) | 9.3 | N/A | 0.0020 [ 2.0000 ] | 0.1% { 0.1% } | 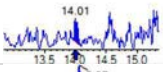  | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1567989 | ( 5.37 , N/A ) ( N/A , -0.01 , N/A ) | 1266.0 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 106.3% } | 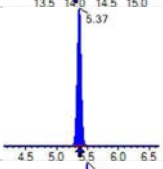  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1429470 | ( 8.19 , N/A ) ( N/A , 0.02 , N/A ) | 6627.3 | N/A | 2.1860 [ 2.0000 ] | 109.3% { 109.8% } | 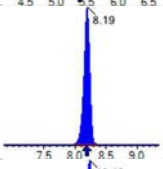  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1702695 | ( 10.43 , N/A ) ( N/A , -0.03 , N/A ) | 3020.2 | N/A | 2.1720 [ 2.0000 ] | 108.6% { 117.9% } | 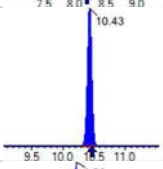  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 844618 | ( 4.81 , N/A ) ( N/A , 0.00 , N/A ) | 61.8 | N/A | 5.2560 [ 4.0000 ] | 131.4% { 129.8% } | 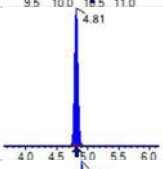  | | S2, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2250847 | ( 6.91 , N/A ) ( N/A , -0.03 , N/A ) | 8327.7 | N/A | 5.7010 [ 4.0000 ] | 142.5% { 127.9% } | 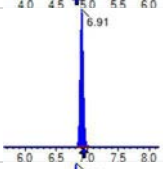  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1750950 | ( 9.32 , N/A ) ( N/A , -0.03 , N/A ) | 2536.1 | N/A | 5.0690 [ 4.0000 ] | 126.7% { 120.3% } | 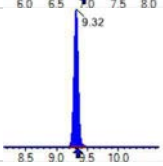  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 421 | ( 11.12 , N/A ) ( N/A , 0.05 , N/A ) | 7.4 | N/A | 0.0010 [ 8.0000 ] | 0.0% { 0.0% } | | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1786481 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 3753.6 | N/A | 2.1470 [ 2.0000 ] | 107.3% { 114.7% } | 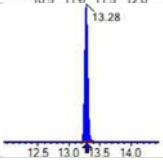  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01096-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 20:53

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 424850 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 2454.8 | N/A | 2.2700 [ 2.0000 ] | 113.5% { 116.7% } | 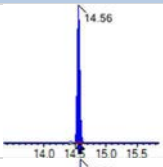  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 387285 | ( 14.88 , N/A ) ( N/A , -0.01 , N/A ) | 2762.7 | N/A | 2.2640 [ 2.0000 ] | 113.2% { 112.4% } | 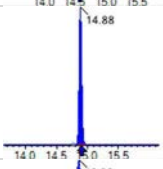  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1311304 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3500.4 | N/A | 4.8170 [ 4.0000 ] | 120.4% { 111.1% } | 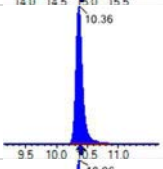  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1211361 | ( 10.96 , N/A ) ( N/A , -0.03 , N/A ) | 2283.8 | N/A | 4.9310 [ 4.0000 ] | 123.3% { 118.8% } | 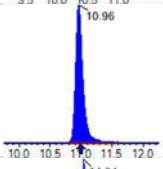  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1557701 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 2825.3 | N/A | 22.2820 [ 20.0000 ] | 111.4% { 117.2% } | 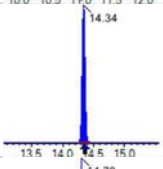  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1378553 | ( 14.70 , N/A ) ( N/A , -0.01 , N/A ) | 4447.8 | N/A | 21.0560 [ 20.0000 ] | 105.3% { 110.1% } | 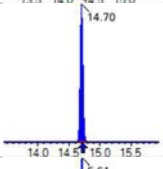  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 919126 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2111.9 | N/A | 9.0650 [ 8.0000 ] | 113.3% { 111.1% } | 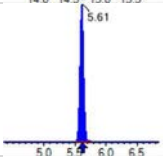  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 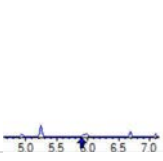 | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 155 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 18.0 | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 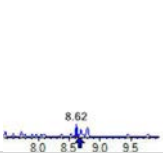  | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01096-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (5)
Acquired: 2024/03/28 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 26037<br>( 499.0 / 99.0 ) N/A | ( 9.81 , 0.94 ) ( -0.62 , N/A , #Value!) | 11.4 | N/A<br>0.0<br>0.0 | 0.0270 | N/A | 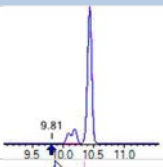 | 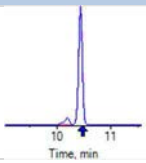 | |
| TDCA | ( 499.0 / 80.0 ) 6670375 | ( 6.52 , 0.62 ) ( N/A , #Value! , 0.0) | 61849.1 | N/A<br>0.0<br>0.0 | 10.1700 | N/A | 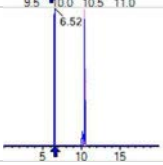 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.81 - 6.52 = 3.29 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.270a | 0.15a | 0.40a | B, Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.112a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BLK1a | File ID:a | S2024-03-28B (7)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 21:54a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>19192<br>( 163.0 / 69.0 )<br>598 | ( 2.44 , 0.71 )<br>( N/A , -0.01 , -0.1) | 139.7<br>75.4 | 0.0312<br>113.7<br>118.8 | 0.2930 | N/A | 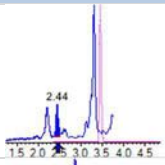 | 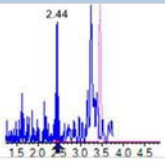 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 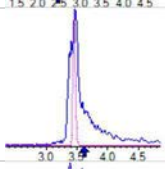 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 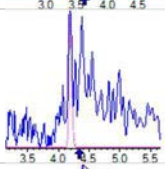 | 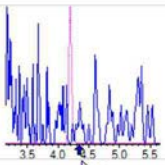 | |
| PFHxA | ( 313.0 / 269.0 )<br>2933<br>( 313.0 / 119.0 )<br>364 | ( 5.19 , 1.00 )<br>( 0.01 , N/A , 0.9) | 26.8<br>15.9 | 0.1240<br>111.5<br>104.7 | 0.0120 | N/A | 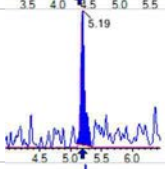 | 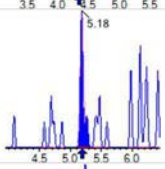 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 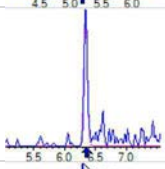 | 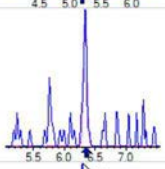 | |
| PFOA | ( 413.0 / 369.0 )<br>28526<br>( 413.0 / 169.0 )<br>10441 | ( 7.45 , 1.00 )<br>( 0.00 , N/A , 0.1) | 59.9<br>91.9 | 0.3660<br>102.4<br>103.2 | 0.0670 | N/A | 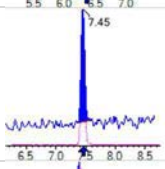 | 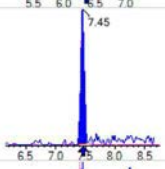 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 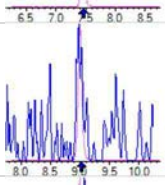 | 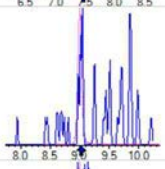 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 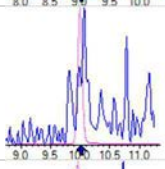 | 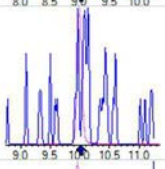 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 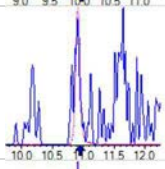 | 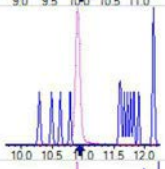 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 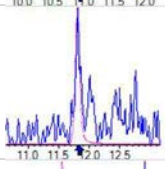 | 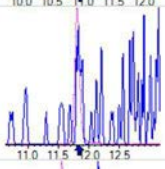 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 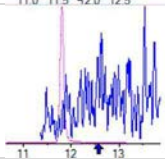 | 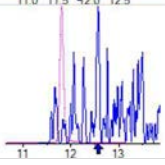 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 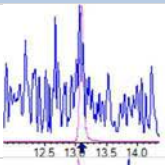 | 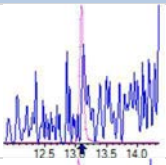 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 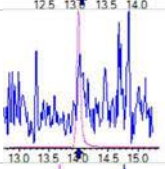 | 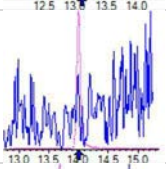 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 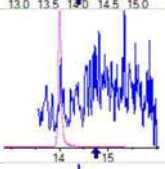 | 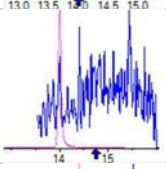 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 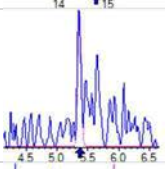 | 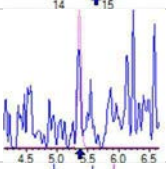 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 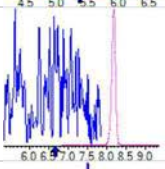 | 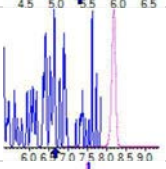 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 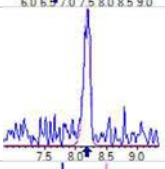 | 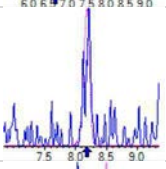 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 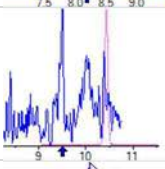 | 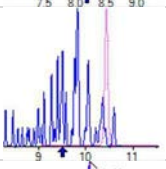 | |
| PFOS | ( 499.0 / 80.0 )<br>28683<br>( 499.0 / 99.0 )<br>5822 | ( 10.43 , 1.00 )<br>( -0.01 , N/A , -0.1) | 154.4<br>410.0 | 0.2030<br>87.9<br>88.6 | 0.0280 | N/A | 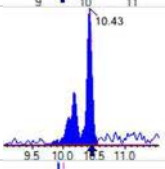 | 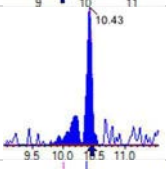 | MI2 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 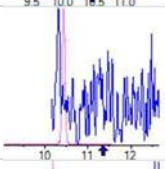 | 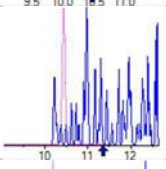 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 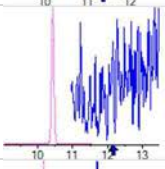 | 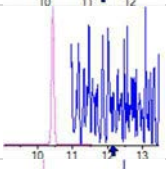 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 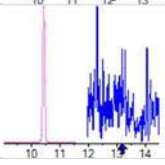 | 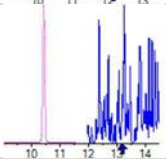 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 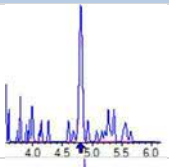 | 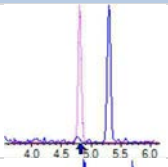 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 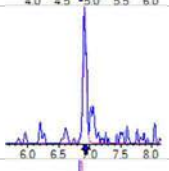 | 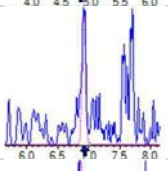 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 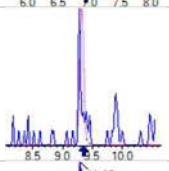 | 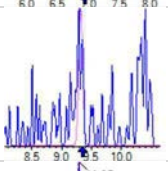 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>16723<br>( 627.0 / 81.0 )<br>29932 | ( 11.05 , 1.00 )<br>( 0.01 , N/A , 0.0) | 188.8<br>125.3 | 1.7899<br>124.5<br>123.5 | 0.0500 | N/A | 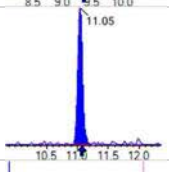 | 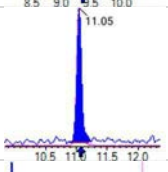 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 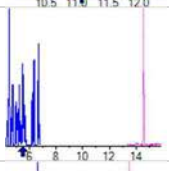 | 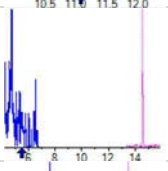 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 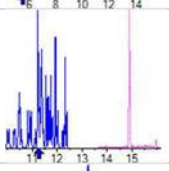 | 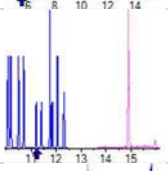 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 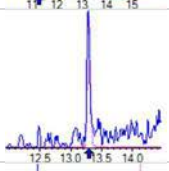 | 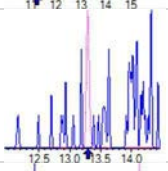 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 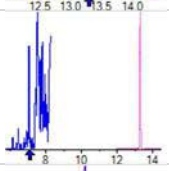 | 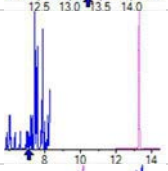 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 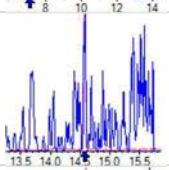 | 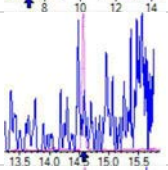 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 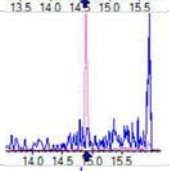 | 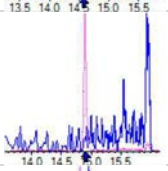 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 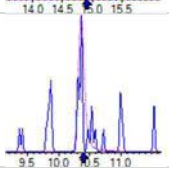 | 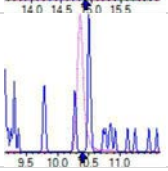 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 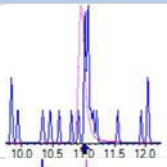 | 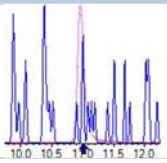 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 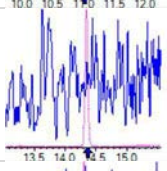 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 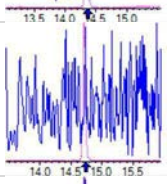 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 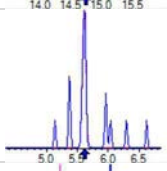 | 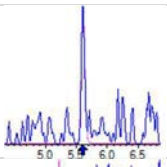 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 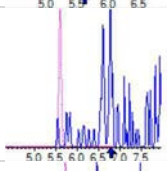 | 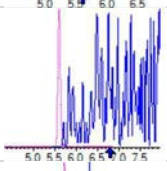 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 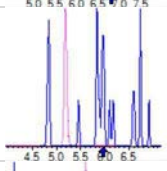 | 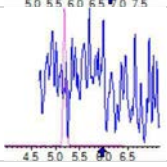 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 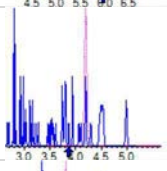 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 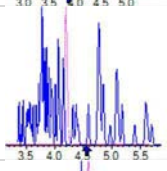 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 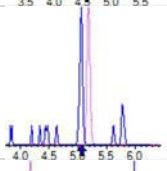 | 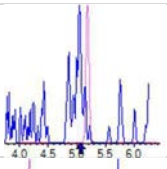 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 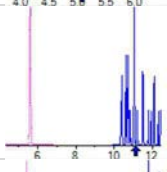 | 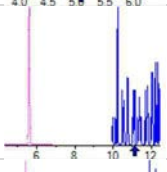 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 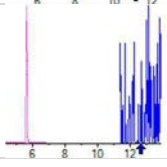 | 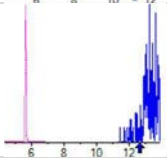 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 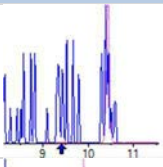 | 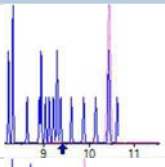 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 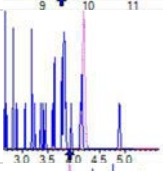 | 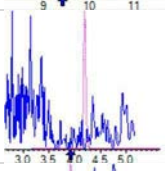 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 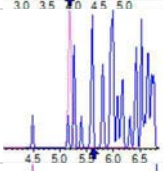 | 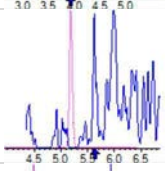 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 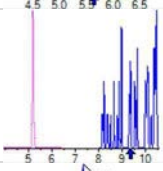 | 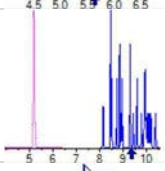 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4598<br>( 357.2 / 243.0 )<br>728 | ( 5.88 , 1.00 )<br>( 0.00 , N/A , 0.3) | 34.9<br>14.9 | 0.1584<br>147.7<br>143.2 | 0.0120 | N/A | 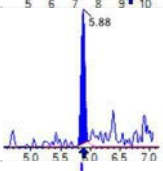 | 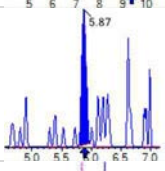 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 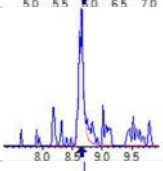 | 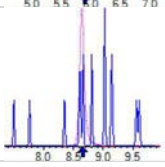 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 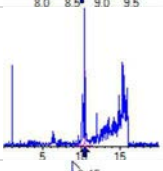 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>278049 | ( 3.45 , N/A )<br>( N/A , -0.16 , N/A ) | 2287.5 | N/A | 0.9850<br>[ 1.0000 ] | 98.5%<br>{ 105.2% } | 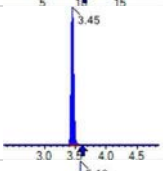 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>135573 | ( 5.18 , N/A )<br>( N/A , -0.01 , N/A ) | 115976.6 | N/A | 1.1480<br>[ 1.0000 ] | 114.8%<br>{ 117.1% } | 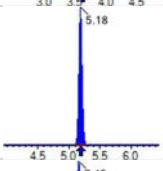 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>408894 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 7142.1 | N/A | 1.0530<br>[ 1.0000 ] | 105.3%<br>{ 113.3% } | 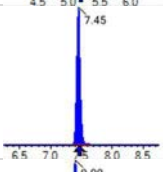 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>291765 | ( 9.00 , N/A )<br>( N/A , -0.02 , N/A ) | 1706.4 | N/A | 0.9990<br>[ 1.0000 ] | 99.9%<br>{ 104.6% } | 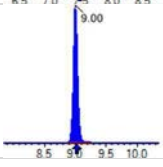 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 294135 | ( 10.00 , N/A ) ( N/A , -0.02 , N/A ) | 1192044.7 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 106.5% } | 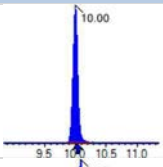  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 986640 | ( 8.19 , N/A ) ( N/A , 0.01 , N/A ) | 6982.6 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 107.5% } | 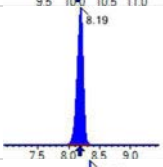  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 835727 | ( 10.44 , N/A ) ( N/A , -0.03 , N/A ) | 3982.2 | N/A | 1.0650 [ 1.0000 ] | 106.5% { 108.4% } | 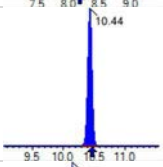  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2314592 | ( 3.45 , N/A ) ( N/A , -0.16 , N/A ) | 86855.8 | N/A | 7.7010 [ 8.0000 ] | 96.3% { 106.6% } | 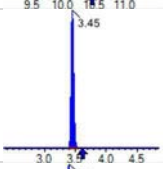  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 906980 | ( 4.19 , N/A ) ( N/A , -0.14 , N/A ) | 4470.9 | N/A | 3.6540 [ 4.0000 ] | 91.4% { 108.4% } | 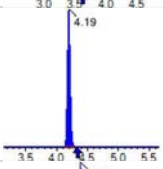  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 516293 | ( 5.18 , N/A ) ( N/A , -0.01 , N/A ) | 33693.4 | N/A | 1.7410 [ 2.0000 ] | 87.0% { 107.4% } | 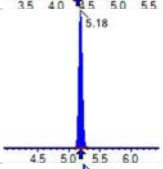  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 613861 | ( 6.34 , N/A ) ( N/A , -0.02 , N/A ) | 4882.6 | N/A | 1.8630 [ 2.0000 ] | 93.2% { 112.0% } | 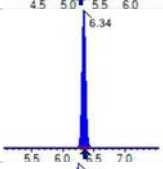  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 841806 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 5049.6 | N/A | 1.9430 [ 2.0000 ] | 97.1% { 109.9% } | 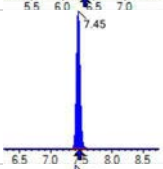  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 296149 | ( 9.00 , N/A ) ( N/A , -0.02 , N/A ) | 4718.5 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 109.8% } | 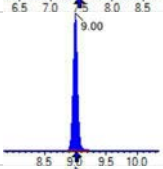  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 341929 | ( 10.00 , N/A ) ( N/A , -0.03 , N/A ) | 1429.9 | N/A | 1.0060 [ 1.0000 ] | 100.6% { 116.3% } | 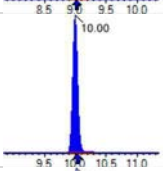  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 403877 | ( 10.91 , N/A ) ( N/A , -0.03 , N/A ) | 1053.0 | N/A | 1.0020 [ 1.0000 ] | 100.2% { 109.4% } | 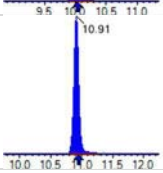  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 387261 | ( 11.81 , N/A ) ( N/A , -0.03 , N/A ) | 1468.5 | N/A | 0.9370 [ 1.0000 ] | 93.7% { 106.7% } | 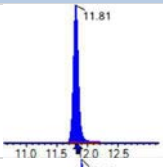 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 333687 | ( 13.10 , N/A ) ( N/A , -0.01 , N/A ) | 1489.0 | N/A | 0.9110 [ 1.0000 ] | 91.1% { 101.8% } | 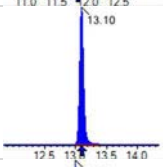 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 472045 | ( 14.00 , N/A ) ( N/A , -0.01 , N/A ) | 1956.7 | N/A | 1.5410 [ 2.0000 ] | 77.0% { 94.8% } | 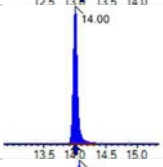 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1559460 | ( 5.36 , N/A ) ( N/A , -0.01 , N/A ) | 1660.4 | N/A | 1.9610 [ 2.0000 ] | 98.0% { 105.7% } | 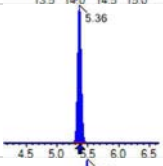 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1447690 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 4866.3 | N/A | 2.0340 [ 2.0000 ] | 101.7% { 111.2% } | 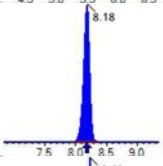 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1767502 | ( 10.43 , N/A ) ( N/A , -0.03 , N/A ) | 2210.6 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 122.4% } | 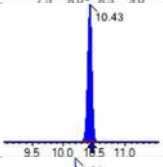 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 914308 | ( 4.81 , N/A ) ( N/A , -0.01 , N/A ) | 56.4 | N/A | 5.2260 [ 4.0000 ] | 130.7% { 140.5% } | 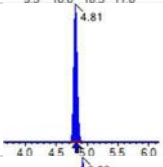 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2156338 | ( 6.92 , N/A ) ( N/A , -0.02 , N/A ) | 5942.2 | N/A | 5.0170 [ 4.0000 ] | 125.4% { 122.5% } | 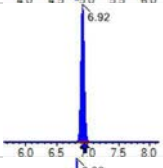 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1757860 | ( 9.32 , N/A ) ( N/A , -0.03 , N/A ) | 2398.5 | N/A | 4.6750 [ 4.0000 ] | 116.9% { 120.8% } | 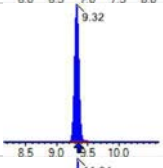 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3388453 | ( 11.04 , N/A ) ( N/A , -0.03 , N/A ) | 1411.5 | N/A | 8.3300 [ 8.0000 ] | 104.1% { 113.7% } | 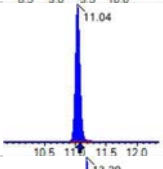 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 470321 | ( 13.29 , N/A ) ( N/A , 0.00 , N/A ) | 2485.6 | N/A | 0.4980 [ 2.0000 ] | 24.9% { 30.2% } | 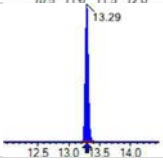 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (7)
Acquired: 2024/03/28 - 21:54

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 43384 | ( 14.57 , N/A ) ( N/A , 0.00 , N/A ) | 973.3 | N/A | 0.2040 [ 2.0000 ] | 10.2% { 11.9% } | 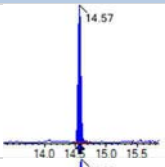 | | MI5 DG 2024-03-29 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 41144 | ( 14.89 , N/A ) ( N/A , 0.00 , N/A ) | 486.0 | N/A | 0.2120 [ 2.0000 ] | 10.6% { 11.9% } | 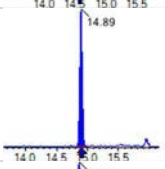 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1249254 | ( 10.36 , N/A ) ( N/A , -0.03 , N/A ) | 3183.5 | N/A | 4.0470 [ 4.0000 ] | 101.2% { 105.8% } | 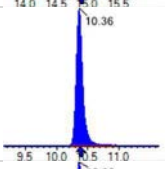 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1116381 | ( 10.96 , N/A ) ( N/A , -0.03 , N/A ) | 2147.3 | N/A | 4.0070 [ 4.0000 ] | 100.2% { 109.5% } | 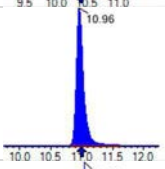 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 325815 | ( 14.35 , N/A ) ( N/A , 0.00 , N/A ) | 1030.8 | N/A | 4.1100 [ 20.0000 ] | 20.5% { 24.5% } | 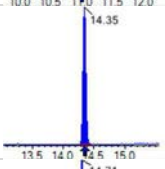 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 373016 | ( 14.71 , N/A ) ( N/A , 0.00 , N/A ) | 1614.9 | N/A | 5.0240 [ 20.0000 ] | 25.1% { 29.8% } | 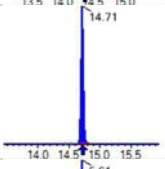 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 924257 | ( 5.61 , N/A ) ( N/A , -0.01 , N/A ) | 2044.6 | N/A | 7.1940 [ 8.0000 ] | 89.9% { 111.7% } | 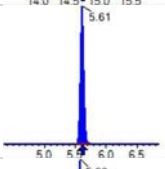 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 704521 | ( 5.88 , N/A ) ( N/A , -0.02 , N/A ) | 1868.1 | N/A | 2.1980 [ 2.0000 ] | 109.9% { 125.4% } | 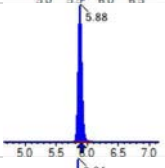 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 684557 | ( 8.64 , N/A ) ( N/A , -0.02 , N/A ) | 1249.3 | N/A | 1.8960 [ 2.0000 ] | 94.8% { 102.1% } | 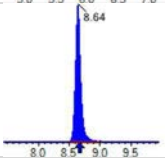 | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BS1a | File ID:a | S2024-03-28B (8)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:15a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 18.7a | 0.21a | 1.6a | |
| PFPeAa | 8.29a | 0.065a | 0.80a | |
| PFHxAa | 4.12a | 0.055a | 0.40a | |
| PFHpAa | 4.01a | 0.041a | 0.40a | |
| PFOAa | 4.35a | 0.15a | 0.40a | |
| PFNAa | 4.14a | 0.082a | 0.40a | |
| PFDAa | 4.11a | 0.10a | 0.40a | |
| PFUnAa | 4.13a | 0.16a | 0.40a | |
| PFDoAa | 4.21a | 0.11a | 0.40a | |
| PFTrDAa | 4.29a | 0.20a | 0.40a | |
| PFTeDAa | 4.11a | 0.20a | 0.40a | |
| PFHxDAa | 3.87a | 0.20a | 0.40a | |
| PFODAa | 3.34a | 0.20a | 0.40a | |
| PFBSa | 3.76a | 0.037a | 0.40a | |
| PFPeSa | 3.94a | 0.063a | 0.40a | |
| PFHxSa | 3.83a | 0.032a | 0.40a | MI5a |
| PFHpSa | 4.11a | 0.051a | 0.40a | |
| PFOSa | 3.95a | 0.064a | 0.40a | |
| PFNSa | 4.15a | 0.12a | 0.40a | |
| PFDSa | 4.25a | 0.15a | 0.40a | |
| PFDoSa | 3.91a | 0.12a | 0.40a | |
| 4:2FTSa | 16.8a | 0.29a | 1.6a | |
| 6:2FTSa | 15.4a | 0.31a | 1.6a | |
| 8:2FTSa | 16.2a | 0.082a | 1.6a | |
| 10:2FTSa | 14.4a | 0.40a | 1.6a | |
| PFOSAa | 4.32a | 0.10a | 0.40a | |
| NMeFOSAa | 17.6a | 0.47a | 1.6a | |
| NEtFOSAa | 17.0a | 0.41a | 1.6a | |
| NMeFOSAAa | 4.03a | 0.11a | 0.40a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-BS1a | File ID:a | S2024-03-28B (8)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:15a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 16.0a | 1.0a | 1.6a | |
| NEtFOSEa | 17.7a | 1.0a | 1.6a | |
| HFPO-DAa | 3.76a | 0.17a | 0.80a | |
| ADONAa | 4.36a | 0.12a | 0.80a | |
| PFEESAa | 7.37a | 0.11a | 0.80a | |
| PFMPAa | 8.09a | 0.054a | 0.80a | |
| PFMBAa | 8.26a | 0.091a | 0.80a | |
| NFDHAa | 8.47a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 4.06a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 4.09a | 0.21a | 0.80a | |
| 3:3FTCAa | 15.4a | 0.57a | 1.6a | |
| 5:3FTCAa | 16.3a | 0.44a | 1.6a | |
| 7:3FTCAa | 14.8a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 256902<br>( 163.0 / 69.0 ) 7510 | ( 2.43 , 0.71 ) ( N/A , -0.03 , 0.0) | 1428.3<br>469.6 | 0.0292<br>106.7<br>111.4 | 4.0720<br>[ 2.0000 ] | 203.6% | 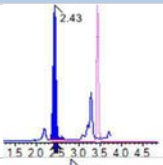 | 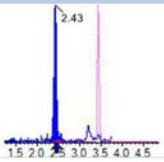 | BS2, |
| PFBA | ( 213.0 / 169.0 ) 1378730 | ( 3.44 , 1.00 ) ( 0.00 , N/A , 0.0) | 1135.0 | N/A<br>0.0<br>0.0 | 4.6680<br>[ 4.0000 ] | 116.7% | 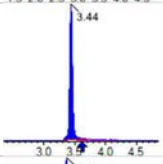 | | |
| PFPeA | ( 263.0 / 219.0 ) 456658<br>( 263.0 / 69.0 ) 5185 | ( 4.17 , 1.00 ) ( 0.00 , N/A , 0.1) | 1774.8<br>79.0 | 0.0114<br>95.4<br>106.7 | 2.0710<br>[ 2.0000 ] | 103.6% | 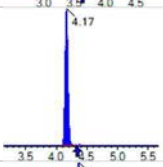 | 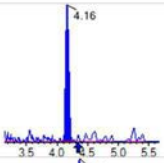 | |
| PFHxA | ( 313.0 / 269.0 ) 234028<br>( 313.0 / 119.0 ) 34137 | ( 5.15 , 1.00 ) ( 0.00 , N/A , -0.1) | 1302.9<br>610.4 | 0.1459<br>131.1<br>123.1 | 1.0300<br>[ 1.0000 ] | 103.0% | 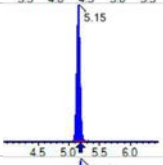 | 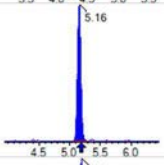 | |
| PFHpA | ( 363.0 / 319.0 ) 283473<br>( 363.0 / 169.0 ) 87791 | ( 6.30 , 1.00 ) ( 0.00 , N/A , -0.1) | 1686.7<br>1166.0 | 0.3097<br>101.3<br>100.6 | 1.0030<br>[ 1.0000 ] | 100.3% | 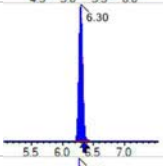 | 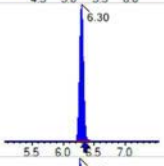 | |
| PFOA | ( 413.0 / 369.0 ) 455691<br>( 413.0 / 169.0 ) 157414 | ( 7.42 , 1.00 ) ( 0.00 , N/A , -0.1) | 661.7<br>934.7 | 0.3454<br>96.6<br>97.4 | 1.0870<br>[ 1.0000 ] | 108.7% | 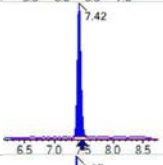 | 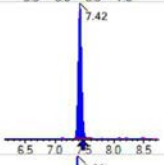 | |
| PFNA | ( 463.0 / 419.0 ) 283346<br>( 463.0 / 169.0 ) 71385 | ( 8.97 , 1.00 ) ( 0.00 , N/A , -0.1) | 1486.6<br>940.6 | 0.2519<br>102.6<br>98.2 | 1.0350<br>[ 1.0000 ] | 103.5% | 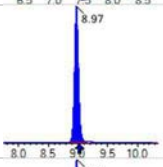 | 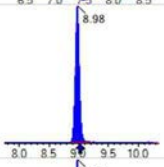 | |
| PFDA | ( 513.0 / 469.0 ) 325089<br>( 513.0 / 169.0 ) 39909 | ( 9.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 1994.5<br>1937.1 | 0.1228<br>103.0<br>100.8 | 1.0280<br>[ 1.0000 ] | 102.8% | 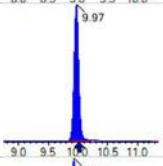 | 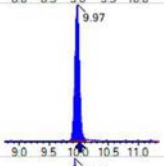 | |
| PFUnA | ( 563.0 / 519.0 ) 340849<br>( 563.0 / 169.0 ) 55258 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 1015.8<br>657.6 | 0.1621<br>104.7<br>108.0 | 1.0320<br>[ 1.0000 ] | 103.2% | 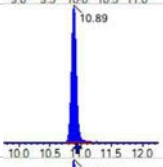 | 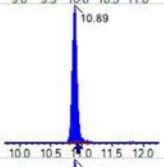 | |
| PFDoA | ( 613.0 / 569.0 ) 387674<br>( 613.0 / 169.0 ) 59865 | ( 11.78 , 1.00 ) ( 0.00 , N/A , -0.1) | 1282.6<br>623.8 | 0.1544<br>101.7<br>101.3 | 1.0520<br>[ 1.0000 ] | 105.2% | 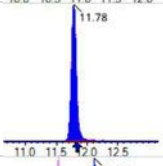 | 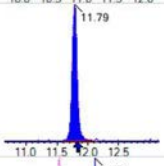 | |
| PFTrDA | ( 663.0 / 619.0 ) 384640<br>( 663.0 / 169.0 ) 100814 | ( 12.53 , 1.06 ) ( N/A , -0.04 , 0.1) | 1139.4<br>682.0 | 0.2621<br>97.4<br>99.5 | 1.0730<br>[ 1.0000 ] | 107.3% | 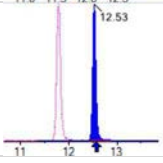 | 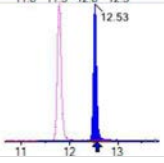 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 308288<br>( 713.0 / 169.0 ) 77857 | ( 13.08 , 1.00 ) ( 0.00 , N/A , 0.1) | 1078.7<br>553.0 | 0.2525<br>93.1<br>95.9 | 1.0260<br>[ 1.0000 ] | 102.6% | 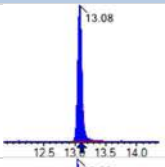 | 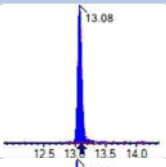 | |
| PFHxDA | ( 813.0 / 769.0 ) 207881<br>( 813.0 / 169.0 ) 59954 | ( 13.98 , 1.00 ) ( 0.00 , N/A , 0.1) | 925.6<br>324.8 | 0.2884<br>110.2<br>106.8 | 0.9660<br>[ 1.0000 ] | 96.6% | 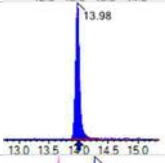 | 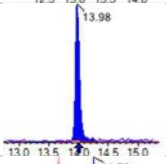 | |
| PFODA | ( 913.0 / 869.0 ) 113895<br>( 913.0 / 169.0 ) 37957 | ( 14.72 , 1.05 ) ( N/A , -0.03 , 0.1) | 425.2<br>192.1 | 0.3333<br>106.3<br>99.6 | 0.8360<br>[ 1.0000 ] | 83.6% | 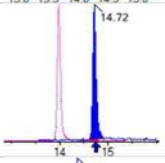 | 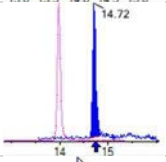 | |
| PFBS | ( 299.0 / 80.0 ) 350697<br>( 299.0 / 99.0 ) 261212 | ( 5.33 , 1.00 ) ( -0.01 , N/A , 0.0) | 1364.0<br>1275.3 | 0.7448<br>100.6<br>98.8 | 0.9410<br>[ 0.8850 ] | 106.4% | 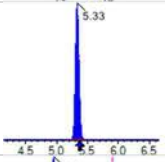 | 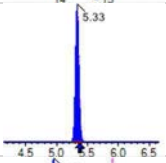 | |
| PFPeS | ( 349.0 / 80.0 ) 990317<br>( 349.0 / 99.0 ) 351199 | ( 6.62 , 0.81 ) ( N/A , -0.05 , 0.1) | 2112.7<br>2222.4 | 0.3546<br>103.8<br>99.8 | 0.9850<br>[ 0.9380 ] | 105.0% | 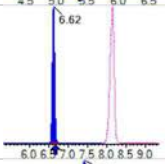 | 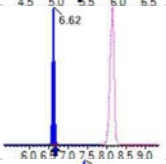 | |
| PFHxS | ( 399.0 / 80.0 ) 1174099<br>( 399.0 / 99.0 ) 371426 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 2335.9<br>3022.3 | 0.3163<br>96.4<br>98.0 | 0.9580<br>[ 0.9110 ] | 105.2% | 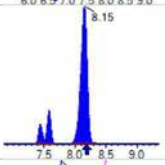 | 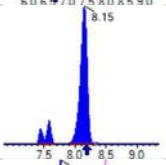 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 987244<br>( 449.0 / 99.0 ) 266029 | ( 9.46 , 0.91 ) ( N/A , -0.05 , 0.1) | 2147.4<br>1949.7 | 0.2695<br>103.3<br>103.9 | 1.0280<br>[ 0.9510 ] | 108.0% | 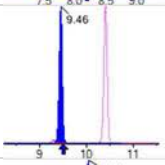 | 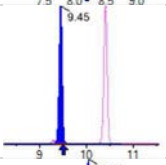 | |
| PFOS | ( 499.0 / 80.0 ) 921330<br>( 499.0 / 99.0 ) 207022 | ( 10.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 1285.5<br>3755.8 | 0.2247<br>97.2<br>98.1 | 0.9870<br>[ 0.9270 ] | 106.4% | 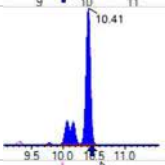 | 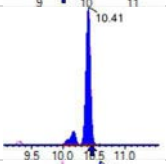 | |
| PFNS | ( 549.0 / 80.0 ) 883105<br>( 549.0 / 99.0 ) 248440 | ( 11.29 , 1.08 ) ( N/A , -0.05 , 0.1) | 2180.2<br>1616.0 | 0.2813<br>105.0<br>102.3 | 1.0380<br>[ 0.9600 ] | 108.1% | 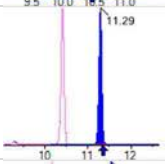 | 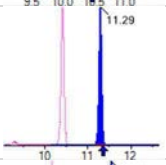 | |
| PFDS | ( 599.0 / 80.0 ) 1104501<br>( 599.0 / 99.0 ) 272820 | ( 12.11 , 1.16 ) ( N/A , -0.04 , 0.1) | 2531.1<br>1326.3 | 0.2470<br>97.0<br>91.6 | 1.0620<br>[ 0.9630 ] | 110.3% | 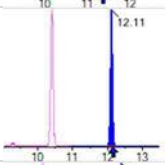 | 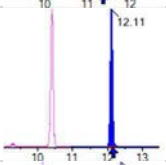 | |
| PFDoS | ( 699.0 / 80.0 ) 983631<br>( 699.0 / 99.0 ) 239750 | ( 13.14 , 1.26 ) ( N/A , -0.03 , -0.1) | 3016.4<br>1992.1 | 0.2437<br>109.1<br>103.2 | 0.9780<br>[ 0.9700 ] | 100.8% | 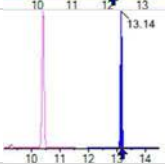 | 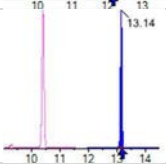 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2024412<br>( 327.0 / 81.0 ) 1865158 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 4405.0<br>3093.2 | 0.9213<br>108.0<br>105.2 | 4.1990<br>[ 3.7380 ] | 112.3% | 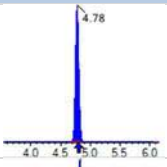 | 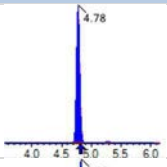 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1644875<br>( 427.0 / 81.0 ) 2149938 | ( 6.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 6096.1<br>4494.1 | 1.3071<br>101.3<br>100.7 | 3.8450<br>[ 3.7960 ] | 101.3% | 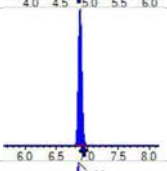 | 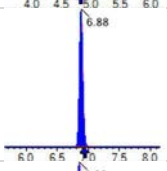 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1704283<br>( 527.0 / 81.0 ) 1708326 | ( 9.29 , 1.00 ) ( -0.01 , N/A , 0.1) | 2348.9<br>2301.6 | 1.0024<br>90.8<br>91.0 | 4.0560<br>[ 3.8330 ] | 105.8% | 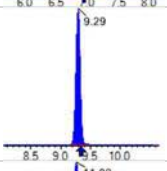 | 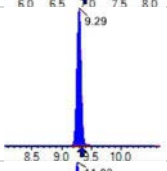 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1207968<br>( 627.0 / 81.0 ) 1676600 | ( 11.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 1720.6<br>1142.1 | 1.3880<br>96.5<br>95.8 | 3.5930<br>[ 3.8650 ] | 93.0% | 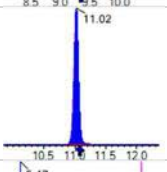 | 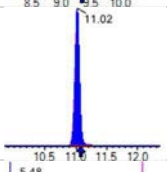 | |
| PFBSA | ( 297.9 / 78.0 ) 462371<br>( 297.9 / 278.0 ) 689 | ( 5.47 , 0.38 ) ( N/A , -0.05 , -0.4) | 1410.4<br>10.1 | 0.0015<br>115.2<br>132.5 | 3.8660<br>[ 1.0000 ] | 386.6% | 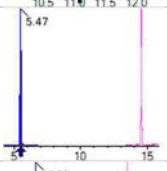 | 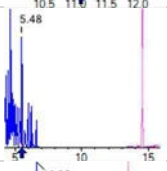 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 958287<br>( 397.9 / 378.0 ) 5134 | ( 11.20 , 0.75 ) ( N/A , -0.03 , 0.0) | 1840.6<br>172.3 | 0.0054<br>132.7<br>122.1 | 4.3810<br>[ 1.0000 ] | 438.1% | 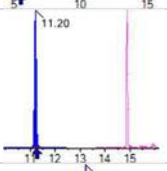 | 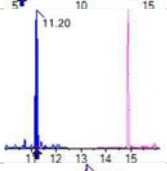 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 404649<br>( 498.0 / 478.0 ) 5309 | ( 13.27 , 1.00 ) ( -0.01 , N/A , -0.2) | 1848.5<br>131.5 | 0.0131<br>89.2<br>98.6 | 1.0800<br>[ 1.0000 ] | 108.0% | 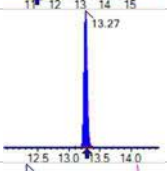 | 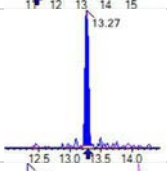 | |
| TFSI | ( 279.7 / 147.0 ) 1210856<br>( 279.7 / 211.0 ) 112129 | ( 7.00 , 0.53 ) ( N/A , -0.06 , 0.0) | 62.2<br>113380.4 | 0.0926<br>104.6<br>105.6 | 1.8500<br>[ 0.9790 ] | 188.9% | 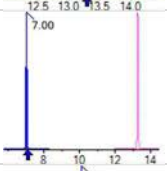 | 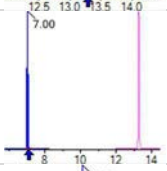 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 153736<br>( 512.0 / 169.0 ) 118694 | ( 14.55 , 1.00 ) ( 0.00 , N/A , 1.1) | 1325.3<br>648.7 | 0.7721<br>100.7<br>103.7 | 4.3890<br>[ 4.0000 ] | 109.7% | 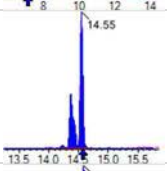 | 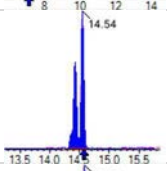 | |
| NEtFOSA | ( 526.0 / 219.0 ) 167797<br>( 526.0 / 169.0 ) 204149 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.1) | 1256.9<br>1318.1 | 1.2166<br>97.3<br>97.8 | 4.2620<br>[ 4.0000 ] | 106.6% | 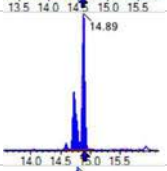 | 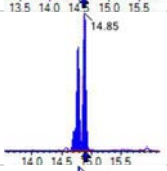 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 263651<br>( 570.0 / 483.0 ) 123727 | ( 10.35 , 1.00 ) ( 0.00 , N/A , -0.1) | 14675.5<br>8393.6 | 0.4693<br>101.1<br>100.5 | 1.0070<br>[ 1.0000 ] | 100.7% | 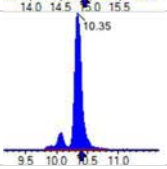 | 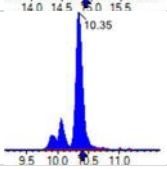 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 268810<br>( 584.0 / 526.0 ) 158351 | ( 10.96 , 1.00 ) ( 0.02 , N/A , 0.1) | 2210.4<br>592.6 | 0.5891<br>98.2<br>98.5 | 1.0990<br>[ 1.0000 ] | 109.9% | 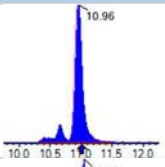 | 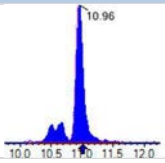 | |
| NMeFOSE | ( 616.0 / 59.0 ) 67161 | ( 14.35 , 1.00 ) ( 0.02 , N/A , 0.0) | 363.7 | N/A<br>0.0<br>0.0 | 3.9890<br>[ 4.0000 ] | 99.7% | 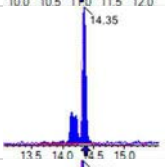 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 51948 | ( 14.72 , 1.00 ) ( 0.03 , N/A , 0.0) | 422.0 | N/A<br>0.0<br>0.0 | 4.4170<br>[ 4.0000 ] | 110.4% | 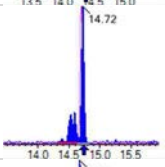 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 56347<br>( 285.0 / 185.0 ) 184448 | ( 5.57 , 1.00 ) ( 0.00 , N/A , 0.1) | 1041.2<br>1228.6 | 3.2734<br>116.6<br>123.9 | 0.9400<br>[ 1.0000 ] | 94.0% | 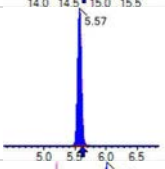 | 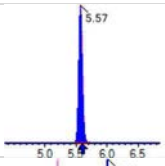 | |
| ADONA | ( 377.0 / 85.0 ) 861582<br>( 377.0 / 251.0 ) 98835 | ( 6.74 , 1.21 ) ( N/A , -0.05 , 0.1) | 2956.3<br>780.4 | 0.1147<br>109.4<br>115.1 | 1.0890<br>[ 0.9430 ] | 115.6% | 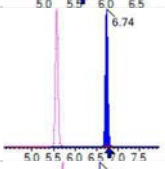 | 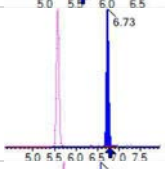 | |
| PFEESA | ( 315.0 / 135.0 ) 304340<br>( 315.0 / 83.0 ) 202564 | ( 5.92 , 1.15 ) ( N/A , -0.04 , 0.1) | 2451.2<br>662.9 | 0.6656<br>103.7<br>113.8 | 1.8420<br>[ 1.7850 ] | 103.2% | 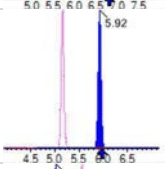 | 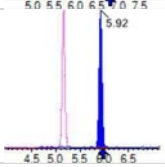 | |
| PFMPA | ( 229.0 / 85.0 ) 163937 | ( 3.66 , 0.88 ) ( N/A , -0.21 , 0.0) | 3494.3 | N/A<br>0.0<br>0.0 | 2.0230<br>[ 2.0000 ] | 101.1% | 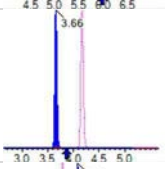 | | |
| PFMBA | ( 279.0 / 85.0 ) 377051 | ( 4.43 , 1.06 ) ( N/A , -0.11 , 0.0) | 2960.5 | N/A<br>0.0<br>0.0 | 2.0650<br>[ 2.0000 ] | 103.3% | 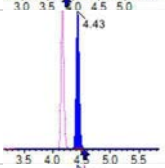 | | |
| NFDHA | ( 295.0 / 201.0 ) 170804<br>( 295.0 / 85.0 ) 173248 | ( 5.03 , 0.98 ) ( N/A , -0.03 , -0.1) | 2394.6<br>1691.6 | 1.0143<br>102.0<br>98.3 | 2.1180<br>[ 2.0000 ] | 105.9% | 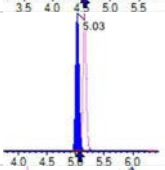 | 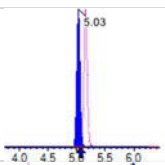 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 891364<br>( 533.0 / 353.0 ) 292206 | ( 11.09 , 1.99 ) ( N/A , -0.06 , -0.1) | 2632.5<br>2027.5 | 0.3278<br>102.8<br>98.8 | 1.0150<br>[ 0.9330 ] | 108.7% | 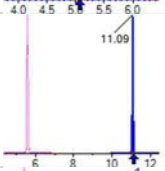 | 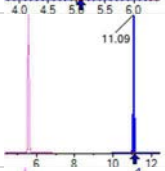 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 699040<br>( 633.0 / 453.0 ) 243793 | ( 12.59 , 2.26 ) ( N/A , -0.03 , 0.0) | 3885.2<br>1905.2 | 0.3488<br>102.8<br>102.6 | 1.0240<br>[ 0.9430 ] | 108.5% | 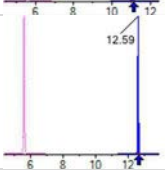 | 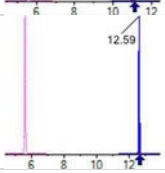 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 460399<br>( 461.0 / 381.2 ) 176301 | ( 9.36 , 0.90 ) ( N/A , -0.05 , -0.1) | 2675.1<br>3023.9 | 0.3829<br>99.1<br>96.4 | 0.9190<br>[ 0.9240 ] | 99.5% | 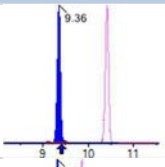 | 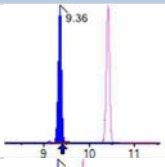 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 72956<br>( 241.0 / 117.0 ) 173416 | ( 3.68 , 0.88 ) ( N/A , -0.23 , 0.2) | 2812.8<br>1327.5 | 2.3770<br>108.3<br>109.1 | 3.8550<br>[ 4.0000 ] | 96.4% | 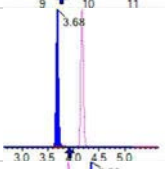 | 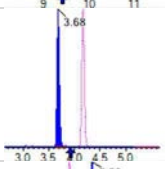 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 251444<br>( 341.0 / 217.0 ) 379468 | ( 5.59 , 1.08 ) ( N/A , -0.04 , 0.0) | 1356.2<br>1064.9 | 1.5092<br>98.6<br>99.3 | 4.0690<br>[ 4.0000 ] | 101.7% | 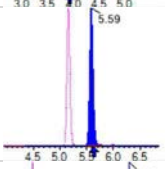 | 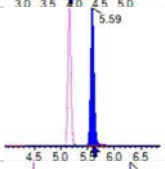 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 487128<br>( 441.0 / 337.0 ) 409671 | ( 9.29 , 1.80 ) ( N/A , -0.04 , 0.1) | 2022338.2<br>19622.3 | 0.8410<br>98.4<br>95.3 | 3.7100<br>[ 4.0000 ] | 92.8% | 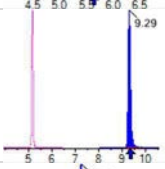 | 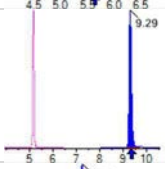 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 311409<br>( 357.2 / 243.0 ) 33857 | ( 5.84 , 1.00 ) ( -0.01 , N/A , 0.0) | 1416.8<br>399.8 | 0.1087<br>101.4<br>98.3 | 0.8510<br>[ 1.0000 ] | 85.1% | 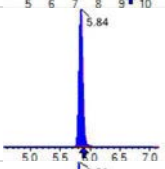 | 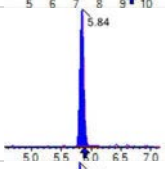 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 239612<br>( 457.2 / 343.0 ) 11492 | ( 8.61 , 1.00 ) ( -0.01 , N/A , -0.1) | 910.1<br>198.2 | 0.0480<br>106.9<br>109.8 | 0.9270<br>[ 1.0000 ] | 92.7% | 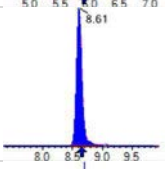 | 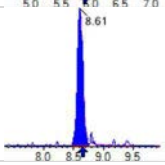 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 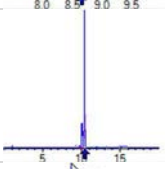 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 245820 | ( 3.44 , N/A ) ( N/A , -0.17 , N/A ) | 2058.7 | N/A | 0.8710<br>[ 1.0000 ] | 87.1%<br>{ 93.0% } | 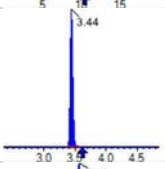 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 109325 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 98784.7 | N/A | 0.9260<br>[ 1.0000 ] | 92.6%<br>{ 94.4% } | 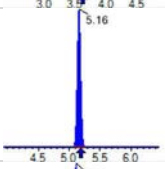 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 356088 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 6550.3 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 98.6% } | 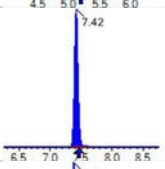 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 255266 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 1992.5 | N/A | 0.8740<br>[ 1.0000 ] | 87.4%<br>{ 91.6% } | 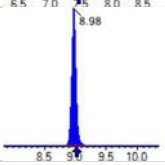 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 263724 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 19509.6 | N/A | 0.9200 [ 1.0000 ] | 92.0% { 95.5% } | 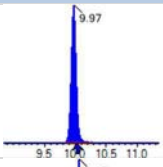 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 913338 | ( 8.15 , N/A ) ( N/A , -0.02 , N/A ) | 7647.3 | N/A | 0.9300 [ 1.0000 ] | 93.0% { 99.5% } | 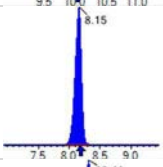 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 695585 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 3004.8 | N/A | 0.8870 [ 1.0000 ] | 88.7% { 90.2% } | 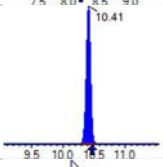 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2229869 | ( 3.44 , N/A ) ( N/A , -0.17 , N/A ) | 220072.8 | N/A | 8.3920 [ 8.0000 ] | 104.9% { 102.7% } | 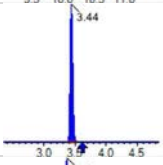 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 883198 | ( 4.17 , N/A ) ( N/A , -0.17 , N/A ) | 6068.1 | N/A | 4.4130 [ 4.0000 ] | 110.3% { 105.6% } | 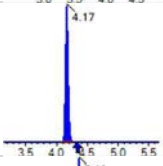 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 489599 | ( 5.16 , N/A ) ( N/A , -0.04 , N/A ) | 15884.9 | N/A | 2.0470 [ 2.0000 ] | 102.4% { 101.8% } | 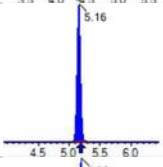 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 569956 | ( 6.30 , N/A ) ( N/A , -0.06 , N/A ) | 6030.2 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 104.0% } | 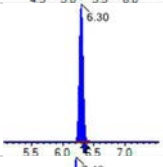 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 835198 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 5066.1 | N/A | 2.2130 [ 2.0000 ] | 110.7% { 109.1% } | 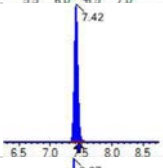 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 272502 | ( 8.97 , N/A ) ( N/A , -0.05 , N/A ) | 4780.4 | N/A | 1.0810 [ 1.0000 ] | 108.1% { 101.1% } | 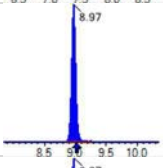 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316582 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1225.2 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 107.7% } | 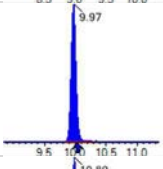 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 363843 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 1071.0 | N/A | 1.0070 [ 1.0000 ] | 100.7% { 98.5% } | 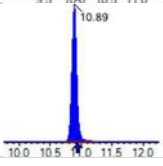 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-BS1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 367345 | ( 11.79 , N/A ) ( N/A , -0.05 , N/A ) | 1243.2 | N/A | 0.9910 [ 1.0000 ] | 99.1% { 101.2% } | 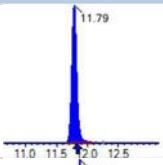 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 321678 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 1413.6 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 98.2% } | 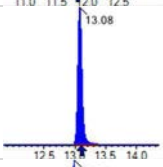 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 459228 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2261.8 | N/A | 1.6720 [ 2.0000 ] | 83.6% { 92.2% } | 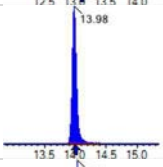 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1515524 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1693.4 | N/A | 2.0590 [ 2.0000 ] | 102.9% { 102.7% } | 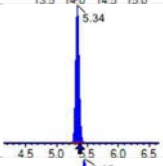 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1399481 | ( 8.15 , N/A ) ( N/A , -0.03 , N/A ) | 6952.8 | N/A | 2.1240 [ 2.0000 ] | 106.2% { 107.5% } | 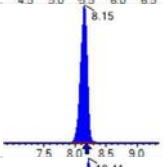 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1608024 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 1322.3 | N/A | 2.1730 [ 2.0000 ] | 108.6% { 111.3% } | 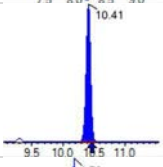 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 730394 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 52.6 | N/A | 4.5100 [ 4.0000 ] | 112.7% { 112.3% } | 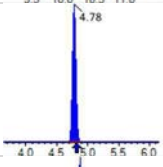 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2015893 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 7368.4 | N/A | 5.0670 [ 4.0000 ] | 126.7% { 114.5% } | 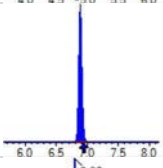 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1708540 | ( 9.30 , N/A ) ( N/A , -0.05 , N/A ) | 2249.3 | N/A | 4.9080 [ 4.0000 ] | 122.7% { 117.4% } | 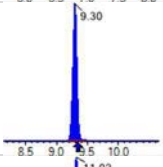 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3386687 | ( 11.02 , N/A ) ( N/A , -0.05 , N/A ) | 1881.4 | N/A | 8.9930 [ 8.0000 ] | 112.4% { 113.6% } | 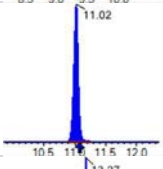 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 774401 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 2721.5 | N/A | 0.9860 [ 2.0000 ] | 49.3% { 49.7% } | 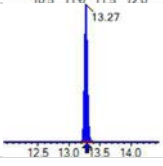 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (8)
Acquired: 2024/03/28 - 22:15

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 78818 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 744.8 | N/A | 0.4460 [ 2.0000 ] | 22.3% { 21.7% } | 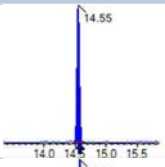 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 69510 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 753.3 | N/A | 0.4310 [ 2.0000 ] | 21.5% { 20.2% } | 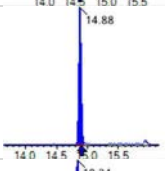 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1134782 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 3116.7 | N/A | 4.4160 [ 4.0000 ] | 110.4% { 96.1% } | 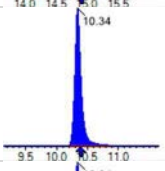 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1008997 | ( 10.94 , N/A ) ( N/A , -0.05 , N/A ) | 2226.1 | N/A | 4.3510 [ 4.0000 ] | 108.8% { 99.0% } | 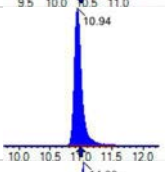 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 311044 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1118.4 | N/A | 4.7140 [ 20.0000 ] | 23.6% { 23.4% } | 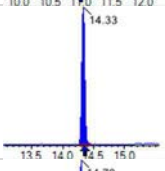 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 246934 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 1260.1 | N/A | 3.9960 [ 20.0000 ] | 20.0% { 19.7% } | 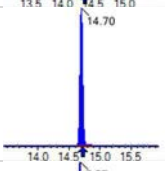 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 817019 | ( 5.57 , N/A ) ( N/A , -0.04 , N/A ) | 2260.9 | N/A | 7.8860 [ 8.0000 ] | 98.6% { 98.8% } | 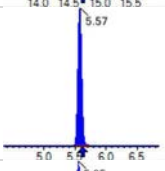 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 695845 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2143.0 | N/A | 2.4210 [ 2.0000 ] | 121.1% { 123.9% } | 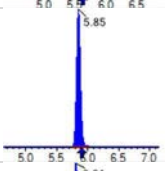 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 625777 | ( 8.61 , N/A ) ( N/A , -0.04 , N/A ) | 1171.5 | N/A | 1.9330 [ 2.0000 ] | 96.6% { 93.4% } | 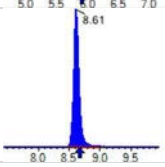 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MRL1a | File ID:a | S2024-03-28B (9)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 4.29a | 0.21a | 1.6a | |
| PFPeAa | 1.43a | 0.065a | 0.80a | |
| PFHxAa | 0.777a | 0.055a | 0.40a | |
| PFHpAa | 0.745a | 0.041a | 0.40a | |
| PFOAa | 1.03a | 0.15a | 0.40a | |
| PFNAa | 0.768a | 0.082a | 0.40a | |
| PFDAa | 0.792a | 0.10a | 0.40a | |
| PFUnAa | 0.757a | 0.16a | 0.40a | |
| PFDoAa | 0.743a | 0.11a | 0.40a | |
| PFTrDAa | 0.784a | 0.20a | 0.40a | |
| PFTeDAa | 0.713a | 0.20a | 0.40a | |
| PFHxDAa | 0.744a | 0.20a | 0.40a | |
| PFODAa | 0.671a | 0.20a | 0.40a | |
| PFBSa | 0.661a | 0.037a | 0.40a | |
| PFPeSa | 0.719a | 0.063a | 0.40a | |
| PFHxSa | 0.682a | 0.032a | 0.40a | MI5a |
| PFHpSa | 0.730a | 0.051a | 0.40a | |
| PFOSa | 0.821a | 0.064a | 0.40a | |
| PFNSa | 0.760a | 0.12a | 0.40a | |
| PFDSa | 0.772a | 0.15a | 0.40a | |
| PFDoSa | 0.739a | 0.12a | 0.40a | |
| 4:2FTSa | 2.83a | 0.29a | 1.6a | |
| 6:2FTSa | 3.01a | 0.31a | 1.6a | |
| 8:2FTSa | 2.91a | 0.082a | 1.6a | |
| 10:2FTSa | 3.13a | 0.40a | 1.6a | |
| PFOSAa | 0.639a | 0.10a | 0.40a | |
| NMeFOSAa | 2.00a | 0.47a | 1.6a | MI5a |
| NEtFOSAa | 2.19a | 0.41a | 1.6a | |
| NMeFOSAAa | 0.723a | 0.11a | 0.40a | |
| NEtFOSAAa | 0.748a | 0.11a | 0.40a | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MRL1a | File ID:a | S2024-03-28B (9)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/28/24 22:35a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 2.82a | 1.0a | 1.6a | |
| NEtFOSEa | 2.40a | 1.0a | 1.6a | MI5a |
| HFPO-DAa | 0.689a | 0.17a | 0.80a | Ja |
| ADONAa | 0.764a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.43a | 0.11a | 0.80a | |
| PFMPAa | 1.34a | 0.054a | 0.80a | |
| PFMBAa | 1.41a | 0.091a | 0.80a | |
| NFDHAa | 1.37a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.692a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.737a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.66a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.81a | 0.44a | 1.6a | |
| 7:3FTCAa | 2.69a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 70956<br>( 163.0 / 69.0 ) 2256 | ( 2.43 , 0.71 )<br>( N/A , -0.03 , -0.5) | 466.3<br>178.8 | 0.0318<br>116.0<br>121.2 | 1.0120<br>[ 0.4000 ] | 252.9% | 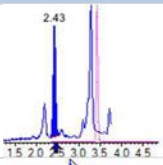 | 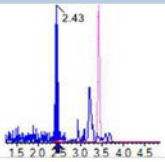 | BS2,MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) 435111 | ( 3.42 , 1.00 )<br>( 0.00 , N/A , 0.0) | 336.5 | N/A<br>0.0<br>0.0 | 1.0720<br>[ 0.8000 ] | 134.0% | 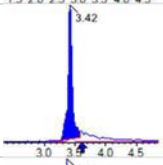 | | |
| PFPeA | ( 263.0 / 219.0 ) 94220<br>( 263.0 / 69.0 ) 1222 | ( 4.17 , 1.00 )<br>( 0.00 , N/A , -0.4) | 505.4<br>20.3 | 0.0130<br>109.0<br>121.9 | 0.3570<br>[ 0.4000 ] | 89.2% | 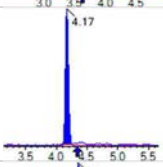 | 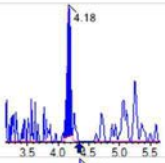 | |
| PFHxA | ( 313.0 / 269.0 ) 50543<br>( 313.0 / 119.0 ) 5737 | ( 5.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 329.6<br>232.9 | 0.1135<br>102.1<br>95.8 | 0.1940<br>[ 0.2000 ] | 97.2% | 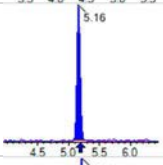 | 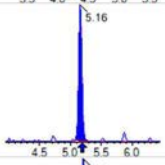 | |
| PFHpA | ( 363.0 / 319.0 ) 57914<br>( 363.0 / 169.0 ) 18406 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.1) | 481.1<br>314.4 | 0.3178<br>104.0<br>103.3 | 0.1860<br>[ 0.2000 ] | 93.1% | 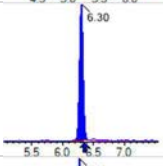 | 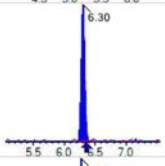 | |
| PFOA | ( 413.0 / 369.0 ) 118974<br>( 413.0 / 169.0 ) 40749 | ( 7.42 , 1.00 )<br>( 0.00 , N/A , 0.1) | 195.1<br>312.0 | 0.3425<br>95.8<br>96.6 | 0.2570<br>[ 0.2000 ] | 128.6% | 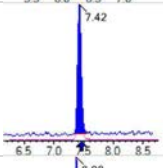 | 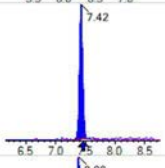 | |
| PFNA | ( 463.0 / 419.0 ) 55840<br>( 463.0 / 169.0 ) 14460 | ( 8.98 , 1.00 )<br>( 0.00 , N/A , 0.1) | 555.5<br>416.7 | 0.2590<br>105.4<br>101.0 | 0.1920<br>[ 0.2000 ] | 96.0% | 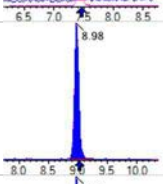 | 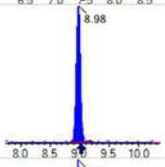 | |
| PFDA | ( 513.0 / 469.0 ) 67086<br>( 513.0 / 169.0 ) 9630 | ( 9.97 , 1.00 )<br>( 0.00 , N/A , 0.0) | 688.5<br>507.2 | 0.1435<br>120.5<br>117.8 | 0.1980<br>[ 0.2000 ] | 99.0% | 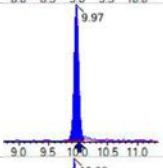 | 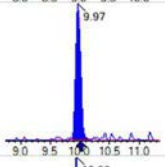 | |
| PFUnA | ( 563.0 / 519.0 ) 69538<br>( 563.0 / 169.0 ) 9868 | ( 10.88 , 1.00 )<br>( -0.01 , N/A , -0.1) | 436.5<br>125.3 | 0.1419<br>91.6<br>94.5 | 0.1890<br>[ 0.2000 ] | 94.6% | 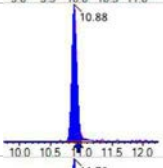 | 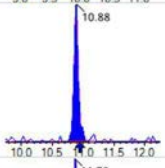 | |
| PFDoA | ( 613.0 / 569.0 ) 77270<br>( 613.0 / 169.0 ) 11313 | ( 11.79 , 1.00 )<br>( 0.00 , N/A , 0.5) | 388.5<br>184.2 | 0.1464<br>96.4<br>96.0 | 0.1860<br>[ 0.2000 ] | 92.9% | 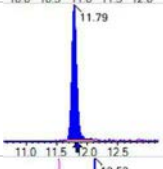 | 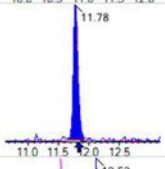 | |
| PFTrDA | ( 663.0 / 619.0 ) 79253<br>( 663.0 / 169.0 ) 21719 | ( 12.53 , 1.06 )<br>( N/A , -0.04 , 0.1) | 410.8<br>211.5 | 0.2740<br>101.8<br>104.0 | 0.1960<br>[ 0.2000 ] | 98.0% | 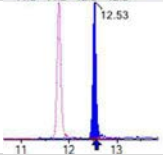 | 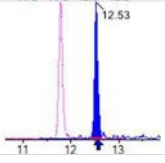 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 60114<br>( 713.0 / 169.0 ) 15498 | ( 13.08 , 1.00 )<br>( -0.01 , N/A , -0.2) | 357.0<br>158.3 | 0.2578<br>95.0<br>97.9 | 0.1780<br>[ 0.2000 ] | 89.1% | 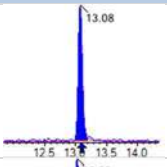 | 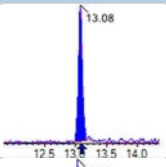 | |
| PFHxDA | ( 813.0 / 769.0 ) 40808<br>( 813.0 / 169.0 ) 13005 | ( 13.98 , 1.00 )<br>( -0.01 , N/A , -0.1) | 233.1<br>102.7 | 0.3187<br>121.8<br>118.1 | 0.1860<br>[ 0.2000 ] | 92.9% | 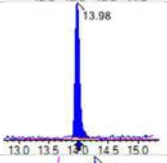 | 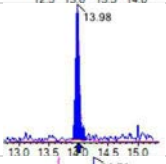 | |
| PFODA | ( 913.0 / 869.0 ) 23337<br>( 913.0 / 169.0 ) 7298 | ( 14.72 , 1.05 )<br>( N/A , -0.03 , 0.4) | 107.8<br>40.6 | 0.3127<br>99.8<br>93.4 | 0.1680<br>[ 0.2000 ] | 83.9% | 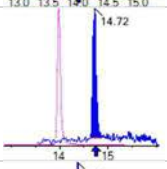 | 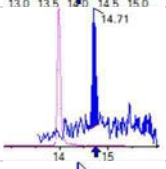 | |
| PFBS | ( 299.0 / 80.0 ) 68261<br>( 299.0 / 99.0 ) 57707 | ( 5.33 , 1.00 )<br>( 0.00 , N/A , -0.1) | 529.8<br>454.1 | 0.8454<br>114.1<br>112.1 | 0.1650<br>[ 0.1770 ] | 93.4% | 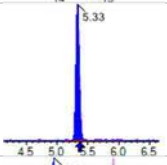 | 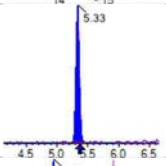 | |
| PFPeS | ( 349.0 / 80.0 ) 198831<br>( 349.0 / 99.0 ) 64997 | ( 6.63 , 0.81 )<br>( N/A , -0.05 , 0.0) | 1070.8<br>781.5 | 0.3269<br>95.7<br>92.0 | 0.1800<br>[ 0.1880 ] | 95.8% | 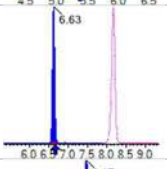 | 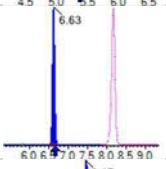 | |
| PFHxS | ( 399.0 / 80.0 ) 229789<br>( 399.0 / 99.0 ) 70887 | ( 8.17 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1075.6<br>1330.5 | 0.3085<br>94.0<br>95.6 | 0.1700<br>[ 0.1820 ] | 93.5% | 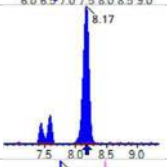 | 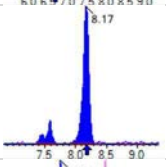 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 187065<br>( 449.0 / 99.0 ) 49004 | ( 9.46 , 0.91 )<br>( N/A , -0.05 , 0.0) | 858.8<br>932.0 | 0.2620<br>100.4<br>101.0 | 0.1820<br>[ 0.1900 ] | 95.9% | 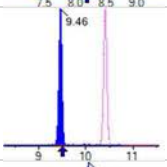 | 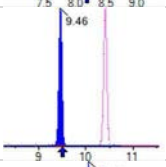 | |
| PFOS | ( 499.0 / 80.0 ) 204435<br>( 499.0 / 99.0 ) 47359 | ( 10.41 , 1.00 )<br>( 0.00 , N/A , -0.1) | 578.4<br>3382.1 | 0.2317<br>100.3<br>101.1 | 0.2050<br>[ 0.1850 ] | 110.6% | 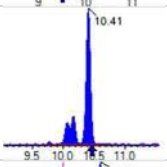 | 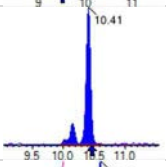 | |
| PFNS | ( 549.0 / 80.0 ) 172554<br>( 549.0 / 99.0 ) 44135 | ( 11.29 , 1.08 )<br>( N/A , -0.05 , 0.0) | 802.6<br>495.8 | 0.2558<br>95.5<br>93.0 | 0.1900<br>[ 0.1920 ] | 99.0% | 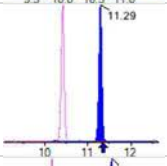 | 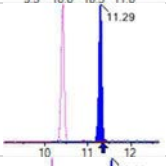 | |
| PFDS | ( 599.0 / 80.0 ) 214266<br>( 599.0 / 99.0 ) 61711 | ( 12.11 , 1.16 )<br>( N/A , -0.04 , 0.1) | 901.4<br>392.5 | 0.2880<br>113.1<br>106.9 | 0.1930<br>[ 0.1930 ] | 100.2% | 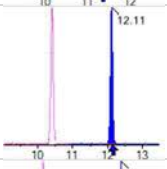 | 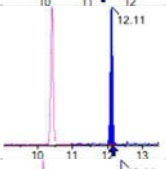 | |
| PFDoS | ( 699.0 / 80.0 ) 198388<br>( 699.0 / 99.0 ) 45299 | ( 13.14 , 1.26 )<br>( N/A , -0.03 , 0.1) | 1157.3<br>610.9 | 0.2283<br>102.2<br>96.6 | 0.1850<br>[ 0.1940 ] | 95.3% | 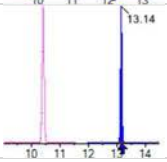 | 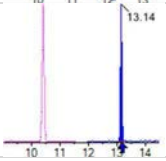 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 394458<br>( 327.0 / 81.0 ) 364346 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 2224.5<br>1084.5 | 0.9237<br>108.3<br>105.4 | 0.7080<br>[ 0.7480 ] | 94.7% | 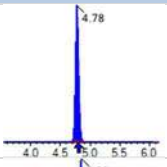 | 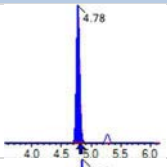 | |
| 6:2FTS | ( 427.0 / 407.0 ) 349101<br>( 427.0 / 81.0 ) 444010 | ( 6.89 , 1.00 ) ( 0.00 , N/A , 0.1) | 4043.3<br>2586.9 | 1.2719<br>98.6<br>98.0 | 0.7520<br>[ 0.7590 ] | 99.1% | 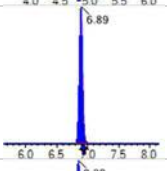 | 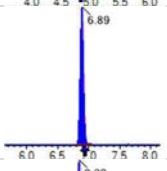 | |
| 8:2FTS | ( 527.0 / 507.0 ) 328089<br>( 527.0 / 81.0 ) 334060 | ( 9.29 , 1.00 ) ( -0.01 , N/A , 0.1) | 2050.9<br>1659.7 | 1.0182<br>92.3<br>92.4 | 0.7290<br>[ 0.7670 ] | 95.0% | 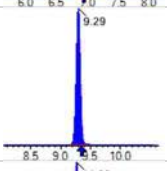 | 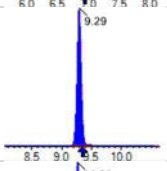 | |
| 10:2FTS | ( 627.0 / 607.0 ) 283325<br>( 627.0 / 81.0 ) 387159 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.2) | 1271.6<br>708.6 | 1.3665<br>95.0<br>94.3 | 0.7820<br>[ 0.7730 ] | 101.2% | 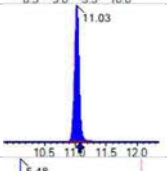 | 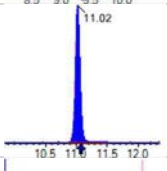 | |
| PFBSA | ( 297.9 / 78.0 ) 88391<br>( 297.9 / 278.0 ) 84 | ( 5.48 , 0.38 ) ( N/A , -0.04 , -1.1) | 698.7<br>2.0 | 0.0009<br>73.3<br>84.3 | 0.5040<br>[ 0.2000 ] | 252.1% | 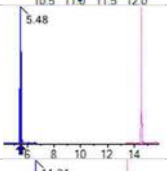 | 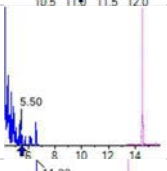 | BS2, |
| PFHxSA | ( 397.9 / 78.0 ) 202154<br>( 397.9 / 378.0 ) 1110 | ( 11.21 , 0.75 ) ( N/A , -0.03 , -0.5) | 1221.1<br>47.4 | 0.0055<br>136.0<br>125.2 | 0.6780<br>[ 0.2000 ] | 339.1% | 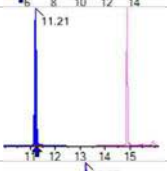 | 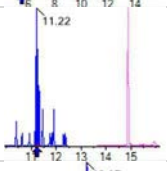 | BS2, |
| PFOSA | ( 498.0 / 78.0 ) 76063<br>( 498.0 / 478.0 ) 1287 | ( 13.27 , 1.00 ) ( -0.01 , N/A , -0.1) | 817.9<br>45.5 | 0.0169<br>115.1<br>127.2 | 0.1600<br>[ 0.2000 ] | 79.9% | 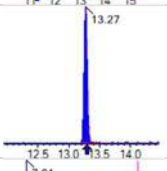 | 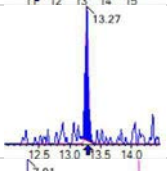 | |
| TFSI | ( 279.7 / 147.0 ) 243058<br>( 279.7 / 211.0 ) 24120 | ( 7.01 , 0.53 ) ( N/A , -0.05 , 0.1) | 62.7<br>28279.1 | 0.0992<br>112.1<br>113.2 | 0.2920<br>[ 0.1960 ] | 149.2% | 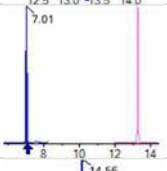 | 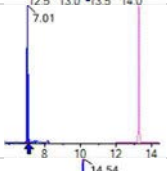 | |
| NMeFOSA | ( 512.0 / 219.0 ) 25650<br>( 512.0 / 169.0 ) 20108 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 1.0) | 277.3<br>173.3 | 0.7839<br>102.3<br>105.3 | 0.5000<br>[ 0.8000 ] | 62.5% | 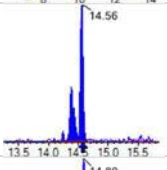 | 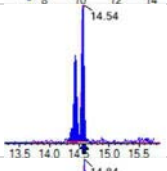 | MI5 DG 2024-03-29 |
| NEtFOSA | ( 526.0 / 219.0 ) 29312<br>( 526.0 / 169.0 ) 31110 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.9) | 336.0<br>240.9 | 1.0613<br>84.9<br>85.3 | 0.5460<br>[ 0.8000 ] | 68.3% | 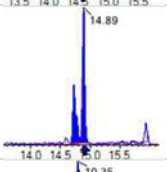 | 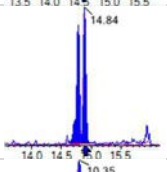 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 51367<br>( 570.0 / 483.0 ) 24233 | ( 10.35 , 1.00 ) ( 0.01 , N/A , 0.1) | 33258.0<br>100878.7 | 0.4718<br>101.7<br>101.0 | 0.1810<br>[ 0.2000 ] | 90.4% | 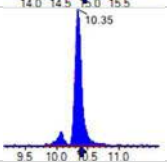 | 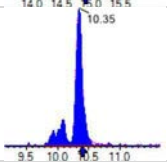 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 49347<br>( 584.0 / 526.0 ) 29842 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.2) | 3819.1<br>320.6 | 0.6047<br>100.8<br>101.1 | 0.1870<br>[ 0.2000 ] | 93.3% | 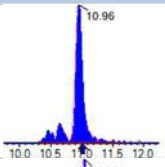 | 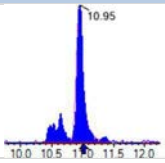 | |
| NMeFOSE | ( 616.0 / 59.0 ) 17187 | ( 14.35 , 1.00 )<br>( 0.02 , N/A , 0.0) | 74.0 | N/A<br>0.0<br>0.0 | 0.7050<br>[ 0.8000 ] | 88.1% | 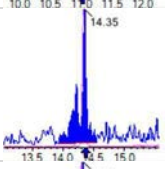 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 10981 | ( 14.73 , 1.00 )<br>( 0.03 , N/A , 0.0) | 106.7 | N/A<br>0.0<br>0.0 | 0.6000<br>[ 0.8000 ] | 75.0% | 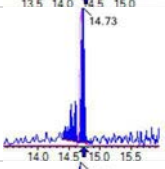 | | MI5 DG 2024-03-29 |
| HFPO-DA | ( 285.0 / 169.0 ) 11979<br>( 285.0 / 185.0 ) 30440 | ( 5.57 , 1.00 )<br>( -0.01 , N/A , 0.1) | 520.9<br>347.2 | 2.5411<br>90.5<br>96.2 | 0.1720<br>[ 0.2000 ] | 86.1% | 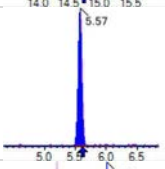 | 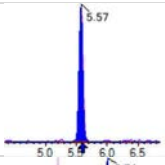 | |
| ADONA | ( 377.0 / 85.0 ) 175180<br>( 377.0 / 251.0 ) 18185 | ( 6.74 , 1.21 )<br>( N/A , -0.05 , 0.1) | 1373.4<br>202.1 | 0.1038<br>99.0<br>104.2 | 0.1910<br>[ 0.1890 ] | 101.3% | 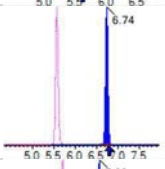 | 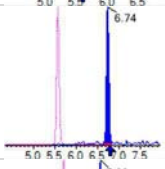 | |
| PFEESA | ( 315.0 / 135.0 ) 67526<br>( 315.0 / 83.0 ) 38712 | ( 5.92 , 1.15 )<br>( N/A , -0.04 , 0.0) | 1129.9<br>169.2 | 0.5733<br>89.3<br>98.0 | 0.3570<br>[ 0.3570 ] | 100.0% | 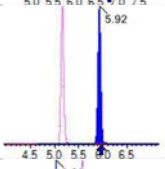 | 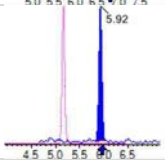 | |
| PFMPA | ( 229.0 / 85.0 ) 32432 | ( 3.66 , 0.88 )<br>( N/A , -0.20 , 0.0) | 992.8 | N/A<br>0.0<br>0.0 | 0.3340<br>[ 0.4000 ] | 83.5% | 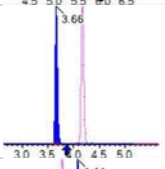 | | |
| PFMBA | ( 279.0 / 85.0 ) 77152 | ( 4.44 , 1.06 )<br>( N/A , -0.11 , 0.0) | 859.7 | N/A<br>0.0<br>0.0 | 0.3530<br>[ 0.4000 ] | 88.2% | 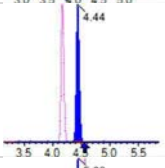 | | |
| NFDHA | ( 295.0 / 201.0 ) 31554<br>( 295.0 / 85.0 ) 35299 | ( 5.03 , 0.98 )<br>( N/A , -0.03 , 0.1) | 1100.1<br>603.9 | 1.1187<br>112.5<br>108.4 | 0.3420<br>[ 0.4000 ] | 85.4% | 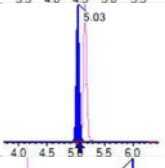 | 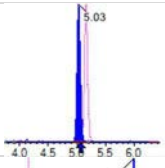 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 176296<br>( 533.0 / 353.0 ) 58483 | ( 11.09 , 1.99 )<br>( N/A , -0.05 , 0.1) | 1620.4<br>739.6 | 0.3317<br>104.0<br>100.0 | 0.1730<br>[ 0.1870 ] | 92.7% | 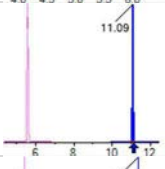 | 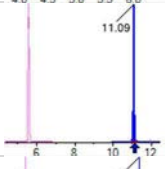 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 145844<br>( 633.0 / 453.0 ) 49834 | ( 12.59 , 2.26 )<br>( N/A , -0.03 , -0.1) | 1619.8<br>555.1 | 0.3417<br>100.7<br>100.5 | 0.1840<br>[ 0.1890 ] | 97.6% | 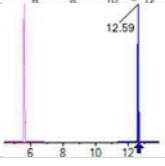 | 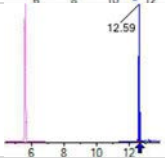 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 90313<br>( 461.0 / 381.2 ) 33933 | ( 9.36 , 0.90 ) ( N/A , -0.05 , 0.1) | 1402.6<br>374719.8 | 0.3757<br>97.3<br>94.6 | 0.1690<br>[ 0.1850 ] | 91.4% | 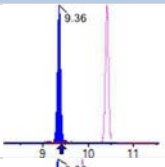 | 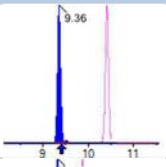 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 15064<br>( 241.0 / 117.0 ) 36195 | ( 3.69 , 0.89 ) ( N/A , -0.23 , 0.2) | 528.5<br>310.3 | 2.4028<br>109.5<br>110.3 | 0.6640<br>[ 0.8000 ] | 83.0% | 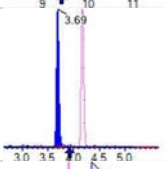 | 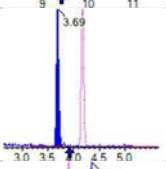 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 49773<br>( 341.0 / 217.0 ) 77900 | ( 5.59 , 1.08 ) ( N/A , -0.04 , 0.2) | 609.2<br>377.0 | 1.5651<br>102.2<br>103.0 | 0.7030<br>[ 0.8000 ] | 87.9% | 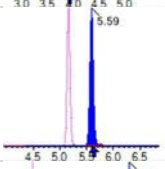 | 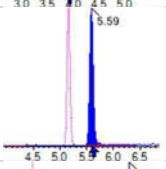 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 101171<br>( 441.0 / 337.0 ) 79444 | ( 9.30 , 1.80 ) ( N/A , -0.03 , 0.2) | 598284.6<br>7148560.6 | 0.7852<br>91.9<br>89.0 | 0.6730<br>[ 0.8000 ] | 84.1% | 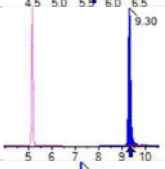 | 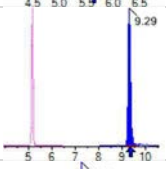 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 74714<br>( 357.2 / 243.0 ) 9503 | ( 5.84 , 1.00 ) ( -0.01 , N/A , -0.3) | 478.1<br>163.0 | 0.1272<br>118.6<br>114.9 | 0.1940<br>[ 0.2000 ] | 96.8% | 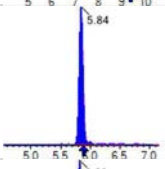 | 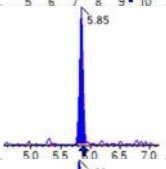 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 58586<br>( 457.2 / 343.0 ) 1887 | ( 8.62 , 1.00 ) ( 0.00 , N/A , 0.0) | 383.1<br>50.6 | 0.0322<br>71.8<br>73.7 | 0.2130<br>[ 0.2000 ] | 106.5% | 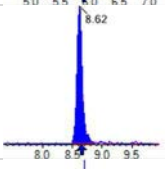 | 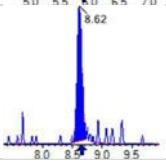 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 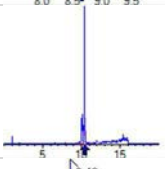 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 278723 | ( 3.42 , N/A ) ( N/A , -0.19 , N/A ) | 2261.6 | N/A | 0.9880<br>[ 1.0000 ] | 98.8%<br>{ 105.4% } | 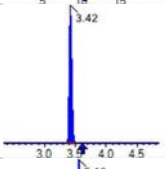 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116799 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 4999.8 | N/A | 0.9890<br>[ 1.0000 ] | 98.9%<br>{ 100.9% } | 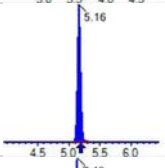 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 409399 | ( 7.43 , N/A ) ( N/A , -0.04 , N/A ) | 8840.2 | N/A | 1.0550<br>[ 1.0000 ] | 105.5%<br>{ 113.4% } | 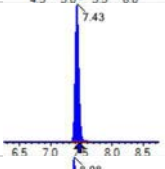 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 277841 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 1732.9 | N/A | 0.9510<br>[ 1.0000 ] | 95.1%<br>{ 99.7% } | 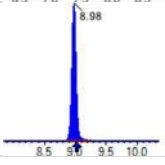 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 280123 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 6371.1 | N/A | 0.9770 [ 1.0000 ] | 97.7% { 101.5% } | 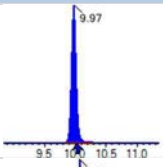 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 994382 | ( 8.18 , N/A ) ( N/A , 0.01 , N/A ) | 10544.0 | N/A | 1.0120 [ 1.0000 ] | 101.2% { 108.3% } | 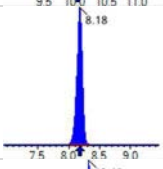 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 772830 | ( 10.42 , N/A ) ( N/A , -0.05 , N/A ) | 2559.3 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 100.2% } | 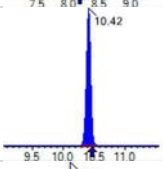 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2478925 | ( 3.42 , N/A ) ( N/A , -0.19 , N/A ) | 72507.8 | N/A | 8.2280 [ 8.0000 ] | 102.9% { 114.2% } | 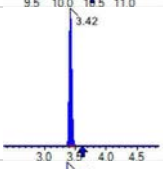 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 1058160 | ( 4.17 , N/A ) ( N/A , -0.16 , N/A ) | 6248.0 | N/A | 4.9480 [ 4.0000 ] | 123.7% { 126.5% } | 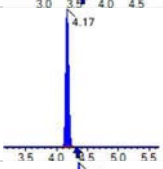 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 560656 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 13192.6 | N/A | 2.1940 [ 2.0000 ] | 109.7% { 116.6% } | 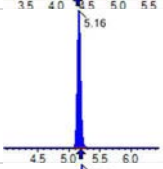 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 626742 | ( 6.30 , N/A ) ( N/A , -0.05 , N/A ) | 8265.7 | N/A | 2.2080 [ 2.0000 ] | 110.4% { 114.4% } | 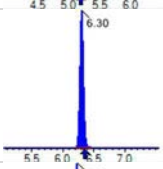 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 921269 | ( 7.42 , N/A ) ( N/A , -0.04 , N/A ) | 4979.8 | N/A | 2.1230 [ 2.0000 ] | 106.2% { 120.3% } | 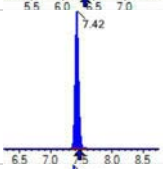 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 289425 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 4715.2 | N/A | 1.0550 [ 1.0000 ] | 105.5% { 107.3% } | 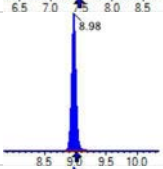 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 339295 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1303.2 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 115.4% } | 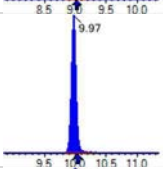 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 404752 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 1285.5 | N/A | 1.0540 [ 1.0000 ] | 105.4% { 109.6% } | 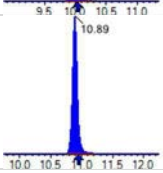 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414303 | ( 11.79 , N/A ) ( N/A , -0.05 , N/A ) | 1674.9 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 114.2% } | 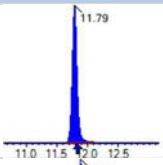 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 361371 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 1190.2 | N/A | 1.0360 [ 1.0000 ] | 103.6% { 110.3% } | 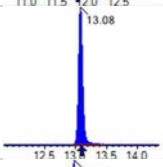 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 468602 | ( 13.98 , N/A ) ( N/A , -0.02 , N/A ) | 2362.2 | N/A | 1.6060 [ 2.0000 ] | 80.3% { 94.1% } | 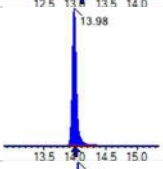 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1679329 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1271.5 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 113.9% } | 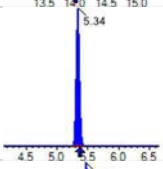 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1539724 | ( 8.17 , N/A ) ( N/A , 0.00 , N/A ) | 7912.0 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 118.2% } | 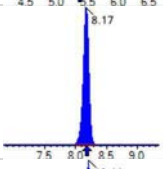 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1716366 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 1877.0 | N/A | 2.0870 [ 2.0000 ] | 104.4% { 118.8% } | 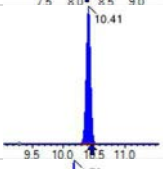 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 844188 | ( 4.78 , N/A ) ( N/A , -0.03 , N/A ) | 75.5 | N/A | 4.7880 [ 4.0000 ] | 119.7% { 129.8% } | 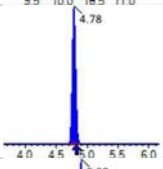 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2187298 | ( 6.89 , N/A ) ( N/A , -0.04 , N/A ) | 7432.1 | N/A | 5.0500 [ 4.0000 ] | 126.2% { 124.3% } | 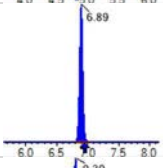 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1831260 | ( 9.30 , N/A ) ( N/A , -0.05 , N/A ) | 2327.6 | N/A | 4.8320 [ 4.0000 ] | 120.8% { 125.8% } | 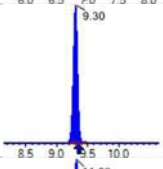 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3647907 | ( 11.02 , N/A ) ( N/A , -0.05 , N/A ) | 1905.3 | N/A | 8.8980 [ 8.0000 ] | 111.2% { 122.4% } | 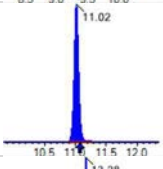 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 984332 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 2611.7 | N/A | 1.1280 [ 2.0000 ] | 56.4% { 63.2% } | 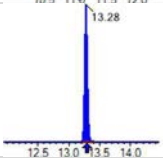 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (9)
Acquired: 2024/03/28 - 22:35

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 115520 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 923.0 | N/A | 0.5890 [ 2.0000 ] | 29.4% { 31.7% } | 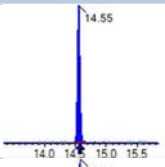 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 94704 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 918.7 | N/A | 0.5280 [ 2.0000 ] | 26.4% { 27.5% } | 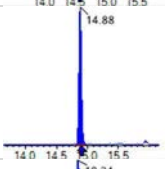 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1232107 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 3975.1 | N/A | 4.3160 [ 4.0000 ] | 107.9% { 104.4% } | 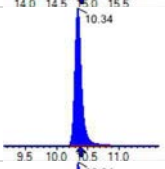 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1090848 | ( 10.94 , N/A ) ( N/A , -0.05 , N/A ) | 2027.9 | N/A | 4.2340 [ 4.0000 ] | 105.8% { 107.0% } | 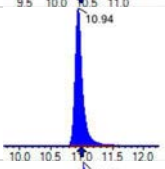 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 450589 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 990.4 | N/A | 6.1460 [ 20.0000 ] | 30.7% { 33.9% } | 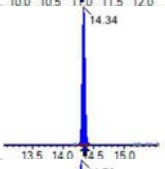 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 384008 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 1797.8 | N/A | 5.5930 [ 20.0000 ] | 28.0% { 30.7% } | 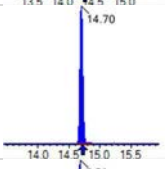 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 947462 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2266.0 | N/A | 8.5600 [ 8.0000 ] | 107.0% { 114.5% } | 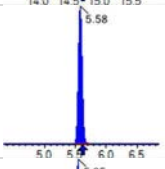 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 733942 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2299.5 | N/A | 2.4040 [ 2.0000 ] | 120.2% { 130.7% } | 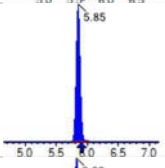 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 665453 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 961.7 | N/A | 1.9350 [ 2.0000 ] | 96.7% { 99.3% } | 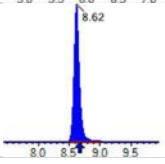 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS3a | File ID:a | S2024-03-28B (14)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 00:18a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | 24.6a | 0.18a | 1.4a | |
| PFPeAa | 13.3a | 0.058a | 0.71a | |
| PFHxAa | 9.54a | 0.049a | 0.35a | |
| PFHpAa | 7.61a | 0.036a | 0.35a | |
| PFOAa | 12.1a | 0.14a | 0.35a | MI5, MS2a |
| PFNAa | 6.71a | 0.073a | 0.35a | |
| PFDAa | 7.52a | 0.090a | 0.35a | |
| PFUnAa | 4.61a | 0.14a | 0.35a | |
| PFDoAa | 4.55a | 0.099a | 0.35a | |
| PFTrDAa | 4.70a | 0.18a | 0.35a | |
| PFTeDAa | 4.50a | 0.18a | 0.35a | |
| PFHxDAa | 3.63a | 0.18a | 0.35a | |
| PFODAa | 4.26a | 0.18a | 0.35a | |
| PFBSa | 5.96a | 0.033a | 0.35a | |
| PFPeSa | 4.16a | 0.056a | 0.35a | |
| PFHxSa | 4.75a | 0.028a | 0.35a | MI5a |
| PFHpSa | 4.36a | 0.045a | 0.35a | |
| PFOSa | 12.5a | 0.056a | 0.35a | |
| PFNSa | 3.63a | 0.11a | 0.35a | |
| PFDSa | 3.28a | 0.13a | 0.35a | |
| PFDoSa | 3.29a | 0.11a | 0.35a | |
| 4:2FTSa | 15.6a | 0.26a | 1.4a | |
| 6:2FTSa | 15.7a | 0.28a | 1.4a | |
| 8:2FTSa | 15.9a | 0.073a | 1.4a | |
| 10:2FTSa | 12.9a | 0.35a | 1.4a | |
| PFOSAa | 4.68a | 0.092a | 0.35a | |
| NMeFOSAa | 23.1a | 0.42a | 1.4a | MS2a |
| NEtFOSAa | 21.5a | 0.37a | 1.4a | MS2a |
| NMeFOSAAa | 4.31a | 0.094a | 0.35a | |
| NEtFOSAAa | 4.53a | 0.18a | 0.35a | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS3a | File ID:a | S2024-03-28B (14)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 00:18a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 23.4a | 0.90a | 1.4a | MS2a |
| NEtFOSEa | 19.8a | 0.93a | 1.4a | MS2a |
| HFPO-DAa | 4.40a | 0.15a | 0.71a | |
| ADONAa | 4.28a | 0.11a | 0.71a | |
| PFEESAa | 7.38a | 0.097a | 0.71a | |
| PFMPAa | 6.96a | 0.048a | 0.71a | |
| PFMBAa | 8.15a | 0.080a | 0.71a | |
| NFDHAa | 7.36a | 0.27a | 0.71a | |
| 9Cl-PF3ONSa | 3.54a | 0.19a | 0.71a | |
| 11Cl-PF3OUDSa | 3.18a | 0.18a | 0.71a | |
| 3:3FTCAa | 12.1a | 0.51a | 1.4a | |
| 5:3FTCAa | 15.9a | 0.39a | 1.4a | |
| 7:3FTCAa | 16.0a | 0.49a | 1.4a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (14)
Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 85986<br>( 163.0 / 69.0 ) 2130 | ( 2.40 , 0.70 ) ( N/A , -0.05 , 0.5) | 680.7<br>175.1 | 0.0248<br>90.4<br>94.4 | 2.5720 | N/A | 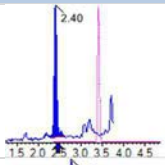 | 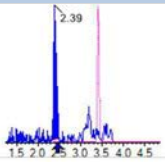 | |
| PFBA | ( 213.0 / 169.0 ) 1063254 | ( 3.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 915.0 | N/A<br>0.0<br>0.0 | 6.9530 | N/A | 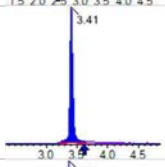 | | |
| PFPeA | ( 263.0 / 219.0 ) 630333<br>( 263.0 / 69.0 ) 7834 | ( 4.17 , 1.00 ) ( 0.00 , N/A , 0.0) | 1228.1<br>97.4 | 0.0124<br>104.4<br>116.8 | 3.7450 | N/A | 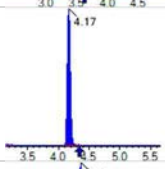 | 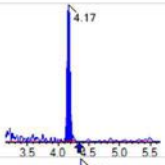 | |
| PFHxA | ( 313.0 / 269.0 ) 483709<br>( 313.0 / 119.0 ) 50830 | ( 5.16 , 1.00 ) ( 0.00 , N/A , -0.1) | 1375.5<br>764.0 | 0.1051<br>94.5<br>88.7 | 2.6930 | N/A | 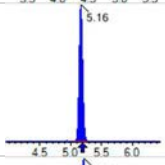 | 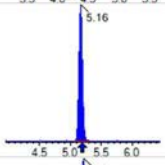 | |
| PFHpA | ( 363.0 / 319.0 ) 470682<br>( 363.0 / 169.0 ) 144363 | ( 6.30 , 1.00 ) ( 0.00 , N/A , 0.0) | 1339.2<br>1553.7 | 0.3067<br>100.4<br>99.7 | 2.1480 | N/A | 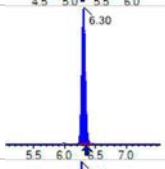 | 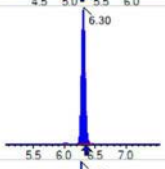 | |
| PFOA | ( 413.0 / 369.0 ) 1091934<br>( 413.0 / 169.0 ) 388388 | ( 7.43 , 1.00 ) ( 0.00 , N/A , 0.1) | 818.8<br>1054.6 | 0.3557<br>99.5<br>100.3 | 3.4140 | N/A | 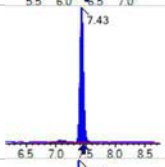 | 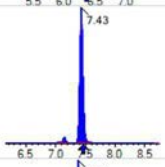 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 389116<br>( 463.0 / 169.0 ) 95232 | ( 8.98 , 1.00 ) ( 0.00 , N/A , 0.0) | 1230.4<br>844.3 | 0.2447<br>99.6<br>95.4 | 1.8930 | N/A | 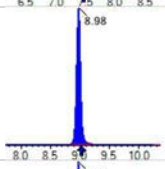 | 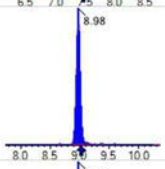 | |
| PFDA | ( 513.0 / 469.0 ) 474838<br>( 513.0 / 169.0 ) 60274 | ( 9.97 , 1.00 ) ( 0.00 , N/A , -0.2) | 2556.0<br>6711.7 | 0.1269<br>106.5<br>104.2 | 2.1230 | N/A | 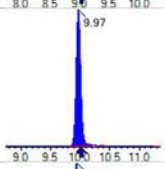 | 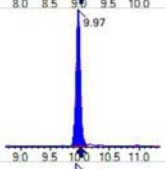 | |
| PFUnA | ( 563.0 / 519.0 ) 251604<br>( 563.0 / 169.0 ) 39394 | ( 10.89 , 1.00 ) ( 0.00 , N/A , 0.2) | 1068.4<br>372.4 | 0.1566<br>101.1<br>104.3 | 1.3000 | N/A | 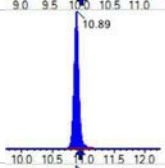 | 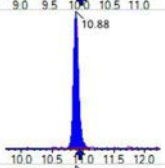 | |
| PFDoA | ( 613.0 / 569.0 ) 262358<br>( 613.0 / 169.0 ) 40885 | ( 11.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 1047.2<br>312.5 | 0.1558<br>102.6<br>102.2 | 1.2850 | N/A | 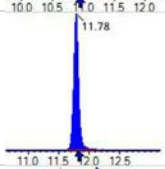 | 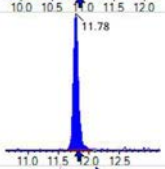 | |
| PFTrDA | ( 663.0 / 619.0 ) 263238<br>( 663.0 / 169.0 ) 69675 | ( 12.53 , 1.06 ) ( N/A , -0.03 , 0.0) | 1070.4<br>595.2 | 0.2647<br>98.3<br>100.5 | 1.3260 | N/A | 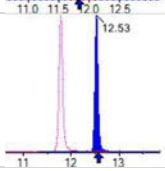 | 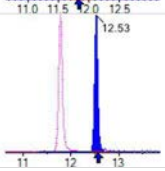 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (14)
Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 229435<br>( 713.0 / 169.0 ) 57996 | ( 13.07 , 1.00 ) ( -0.01 , N/A , 0.0) | 892.5<br>418.2 | 0.2528<br>93.1<br>96.0 | 1.2710 | N/A | 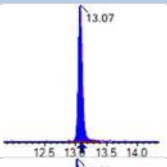 | 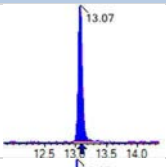 | |
| PFHxDA | ( 813.0 / 769.0 ) 159078<br>( 813.0 / 169.0 ) 43845 | ( 13.98 , 1.00 ) ( 0.00 , N/A , 0.2) | 722.1<br>282.7 | 0.2756<br>105.4<br>102.1 | 1.0260 | N/A | 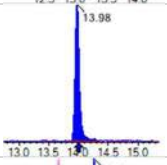 | 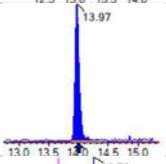 | |
| PFODA | ( 913.0 / 869.0 ) 118093<br>( 913.0 / 169.0 ) 31724 | ( 14.71 , 1.05 ) ( N/A , -0.03 , 0.1) | 409.1<br>122.2 | 0.2686<br>85.7<br>80.3 | 1.2020 | N/A | 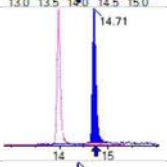 | 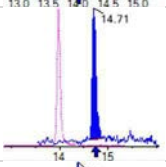 | |
| PFBS | ( 299.0 / 80.0 ) 475921<br>( 299.0 / 99.0 ) 344403 | ( 5.34 , 1.00 ) ( -0.01 , N/A , 0.0) | 1179.7<br>1214.7 | 0.7237<br>97.7<br>96.0 | 1.6810 | N/A | 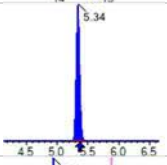 | 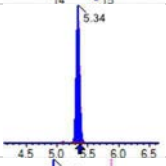 | |
| PFPeS | ( 349.0 / 80.0 ) 968081<br>( 349.0 / 99.0 ) 326801 | ( 6.63 , 0.82 ) ( N/A , -0.05 , -0.1) | 1512.5<br>1634.5 | 0.3376<br>98.8<br>95.0 | 1.1740 | N/A | 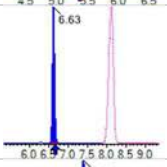 | 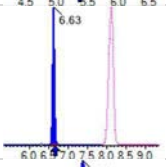 | |
| PFHxS | ( 399.0 / 80.0 ) 1347756<br>( 399.0 / 99.0 ) 432584 | ( 8.12 , 1.00 ) ( 0.00 , N/A , 0.4) | 1707.2<br>1779.5 | 0.3210<br>97.8<br>99.4 | 1.3410 | N/A | 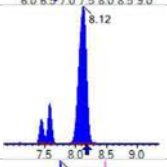 | 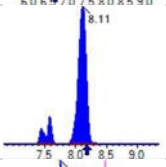 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 881063<br>( 449.0 / 99.0 ) 236919 | ( 9.45 , 0.91 ) ( N/A , -0.05 , 0.0) | 1294.3<br>1112.6 | 0.2689<br>103.1<br>103.6 | 1.2300 | N/A | 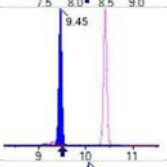 | 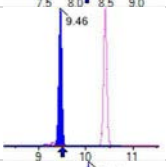 | |
| PFOS | ( 499.0 / 80.0 ) 2459956<br>( 499.0 / 99.0 ) 506782 | ( 10.41 , 1.00 ) ( 0.00 , N/A , -0.1) | 1459.1<br>2957.6 | 0.2060<br>89.2<br>89.9 | 3.5340 | N/A | 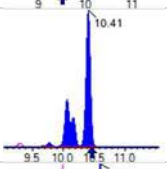 | 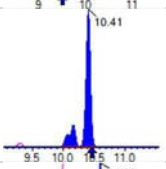 | |
| PFNS | ( 549.0 / 80.0 ) 650099<br>( 549.0 / 99.0 ) 173859 | ( 11.29 , 1.08 ) ( N/A , -0.05 , 0.1) | 1242.0<br>1311.1 | 0.2674<br>99.8<br>97.3 | 1.0250 | N/A | 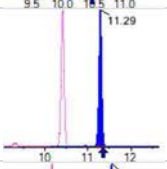 | 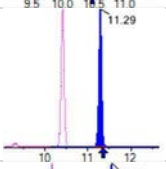 | |
| PFDS | ( 599.0 / 80.0 ) 717287<br>( 599.0 / 99.0 ) 198979 | ( 12.10 , 1.16 ) ( N/A , -0.05 , 0.1) | 1661.6<br>1056.2 | 0.2774<br>108.9<br>102.9 | 0.9250 | N/A | 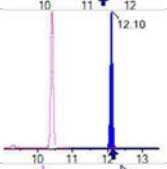 | 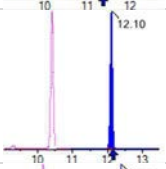 | |
| PFDoS | ( 699.0 / 80.0 ) 697200<br>( 699.0 / 99.0 ) 162763 | ( 13.14 , 1.26 ) ( N/A , -0.03 , 0.0) | 2445.9<br>1360.2 | 0.2335<br>104.5<br>98.8 | 0.9290 | N/A | 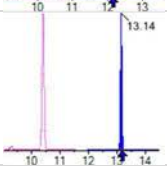 | 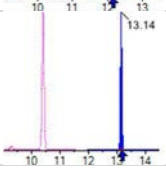 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (14)
Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1597147<br>( 327.0 / 81.0 ) 1543219 | ( 4.79 , 1.00 ) ( -0.01 , N/A , 0.1) | 5245.2<br>1132.4 | 0.9662<br>113.2<br>110.3 | 4.3930 | N/A | 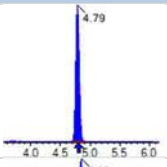 | 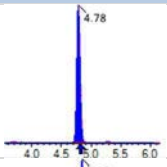 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1529707<br>( 427.0 / 81.0 ) 1964712 | ( 6.90 , 1.00 ) ( 0.00 , N/A , 0.2) | 5279.7<br>3061.2 | 1.2844<br>99.6<br>99.0 | 4.4170 | N/A | 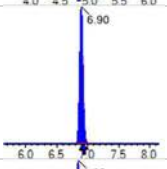 | 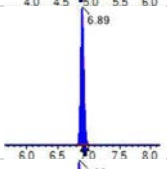 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1213790<br>( 527.0 / 81.0 ) 1293567 | ( 9.29 , 1.00 ) ( -0.01 , N/A , 0.0) | 2169.6<br>2075.0 | 1.0657<br>96.6<br>96.7 | 4.4950 | N/A | 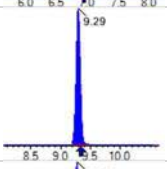 | 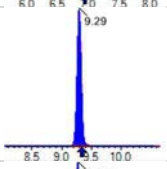 | |
| 10:2FTS | ( 627.0 / 607.0 ) 829518<br>( 627.0 / 81.0 ) 1216676 | ( 11.03 , 1.00 ) ( 0.01 , N/A , 0.1) | 1538.0<br>1335.6 | 1.4667<br>102.0<br>101.2 | 3.6370 | N/A | 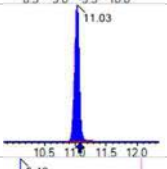 | 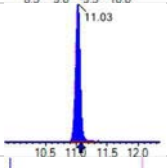 | |
| PFBSA | ( 297.9 / 78.0 ) 248318<br>( 297.9 / 278.0 ) 102 | ( 5.48 , 0.38 ) ( N/A , -0.05 , 0.7) | 1092.7<br>3.9 | 0.0004<br>31.7<br>36.5 | 9.8270 | N/A | 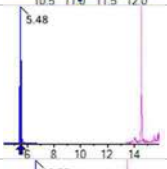 | 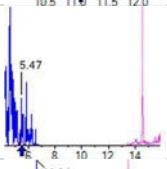 | |
| PFHxSA | ( 397.9 / 78.0 ) 683346<br>( 397.9 / 378.0 ) 2912 | ( 11.22 , 0.75 ) ( N/A , -0.01 , 0.5) | 1690.6<br>134.6 | 0.0043<br>105.5<br>97.1 | 11.0230 | N/A | 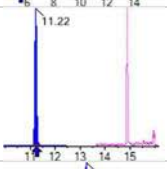 | 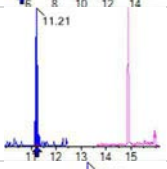 | |
| PFOSA | ( 498.0 / 78.0 ) 294451<br>( 498.0 / 478.0 ) 4271 | ( 13.28 , 1.00 ) ( -0.01 , N/A , -0.1) | 1380.2<br>94.6 | 0.0145<br>98.7<br>109.0 | 1.3200 | N/A | 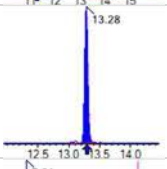 | 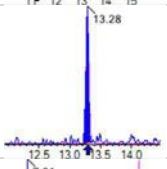 | |
| TFSI | ( 279.7 / 147.0 ) 1118534<br>( 279.7 / 211.0 ) 88070 | ( 7.01 , 0.53 ) ( N/A , -0.05 , -0.1) | 86.7<br>539729.4 | 0.0787<br>89.0<br>89.8 | 2.8710 | N/A | 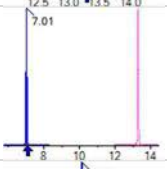 | 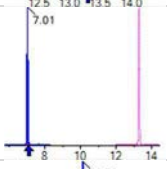 | |
| NMeFOSA | ( 512.0 / 219.0 ) 48212<br>( 512.0 / 169.0 ) 37678 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.1) | 705.7<br>250.4 | 0.7815<br>102.0<br>105.0 | 6.5140 | N/A | 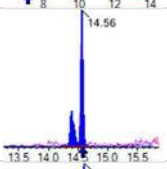 | 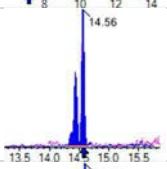 | |
| NEtFOSA | ( 526.0 / 219.0 ) 67661<br>( 526.0 / 169.0 ) 83335 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 1.6) | 724.4<br>799.9 | 1.2317<br>98.5<br>99.0 | 6.0640 | N/A | 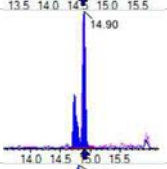 | 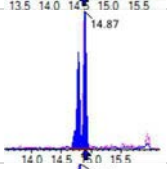 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 205491<br>( 570.0 / 483.0 ) 97234 | ( 10.35 , 1.00 ) ( 0.00 , N/A , -0.3) | 6602.9<br>6716.3 | 0.4732<br>102.0<br>101.3 | 1.2150 | N/A | 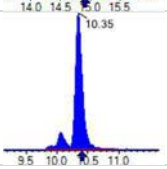 | 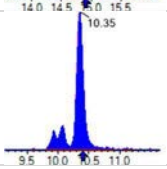 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (14)
Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 188557<br>( 584.0 / 526.0 ) 115094 | ( 10.96 , 1.00 ) ( 0.01 , N/A , 0.4) | 1164.7<br>619.8 | 0.6104<br>101.8<br>102.1 | 1.2750 | N/A | 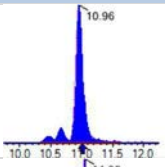 | 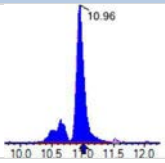 | |
| NMeFOSE | ( 616.0 / 59.0 ) 54801 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 283.8 | N/A<br>0.0<br>0.0 | 6.6000 | N/A | 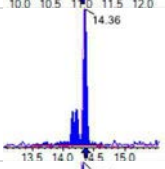 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 46417 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 345.7 | N/A<br>0.0<br>0.0 | 5.5830 | N/A | 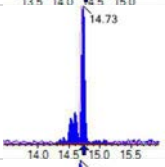 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 58961<br>( 285.0 / 185.0 ) 144745 | ( 5.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 1293.6<br>913.1 | 2.4549<br>87.4<br>93.0 | 1.2410 | N/A | 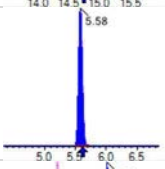 | 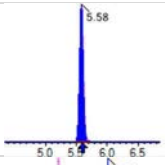 | |
| ADONA | ( 377.0 / 85.0 ) 757287<br>( 377.0 / 251.0 ) 81311 | ( 6.74 , 1.21 ) ( N/A , -0.04 , 0.1) | 2154.8<br>601.3 | 0.1074<br>102.4<br>107.7 | 1.2080 | N/A | 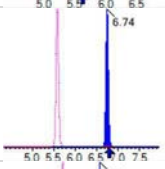 | 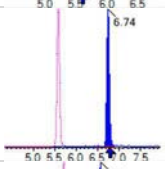 | |
| PFEESA | ( 315.0 / 135.0 ) 272191<br>( 315.0 / 83.0 ) 165964 | ( 5.93 , 1.15 ) ( N/A , -0.04 , 0.1) | 1937.0<br>550.1 | 0.6097<br>95.0<br>104.3 | 2.0830 | N/A | 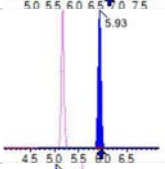 | 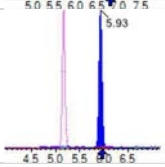 | |
| PFMPA | ( 229.0 / 85.0 ) 121588 | ( 3.66 , 0.88 ) ( N/A , -0.20 , 0.0) | 2839.2 | N/A<br>0.0<br>0.0 | 1.9650 | N/A | 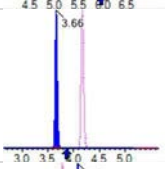 | | |
| PFMBA | ( 279.0 / 85.0 ) 320690 | ( 4.44 , 1.07 ) ( N/A , -0.10 , 0.0) | 2996.7 | N/A<br>0.0<br>0.0 | 2.3010 | N/A | 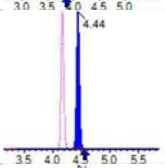 | | |
| NFDHA | ( 295.0 / 201.0 ) 132438<br>( 295.0 / 85.0 ) 144198 | ( 5.04 , 0.98 ) ( N/A , -0.02 , -0.2) | 2359.9<br>814.1 | 1.0888<br>109.5<br>105.5 | 2.0770 | N/A | 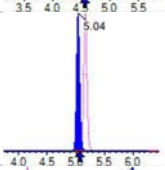 | 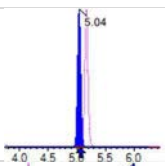 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 695187<br>( 533.0 / 353.0 ) 223930 | ( 11.09 , 1.99 ) ( N/A , -0.05 , 0.0) | 2398.4<br>1466.3 | 0.3221<br>101.0<br>97.1 | 0.9990 | N/A | 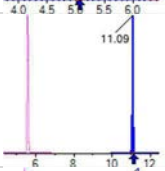 | 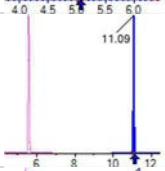 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 485225<br>( 633.0 / 453.0 ) 169190 | ( 12.59 , 2.25 ) ( N/A , -0.03 , 0.0) | 3827.8<br>1703.8 | 0.3487<br>102.8<br>102.6 | 0.8970 | N/A | 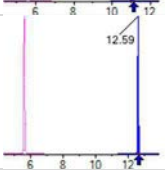 | 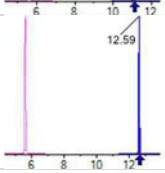 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 385588<br>( 461.0 / 381.2 ) 154480 | ( 9.36 , 0.90 )<br>( N/A , -0.05 , 0.0) | 3339.3<br>2079.7 | 0.4006<br>103.7<br>100.8 | 1.0320 | N/A | 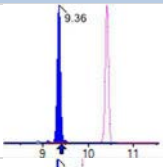 | 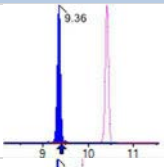 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 49289<br>( 241.0 / 117.0 ) 109861 | ( 3.69 , 0.88 )<br>( N/A , -0.23 , 0.0) | 1277.1<br>764.4 | 2.2289<br>101.5<br>102.3 | 3.4120 | N/A | 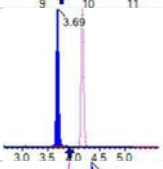 | 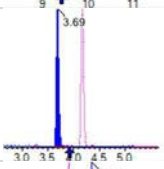 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 219080<br>( 341.0 / 217.0 ) 309932 | ( 5.60 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1493.6<br>969.7 | 1.4147<br>92.4<br>93.1 | 4.4830 | N/A | 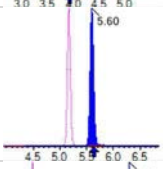 | 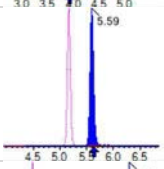 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 469145<br>( 441.0 / 337.0 ) 409706 | ( 9.29 , 1.80 )<br>( N/A , -0.04 , 0.0) | 5238.4<br>9490.1 | 0.8733<br>102.2<br>99.0 | 4.5190 | N/A | 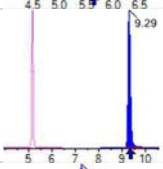 | 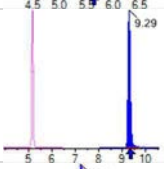 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 308314<br>( 357.2 / 243.0 ) 35669 | ( 5.85 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1266.0<br>257.9 | 0.1157<br>107.9<br>104.6 | 0.9260 | N/A | 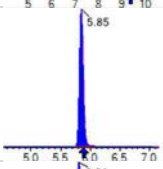 | 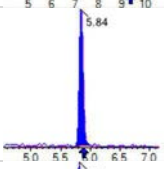 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 258722<br>( 457.2 / 343.0 ) 11782 | ( 8.61 , 1.00 )<br>( -0.01 , N/A , -0.1) | 936.4<br>204.2 | 0.0455<br>101.5<br>104.2 | 1.0780 | N/A | 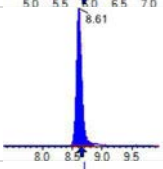 | 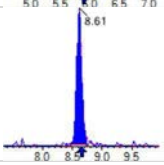 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 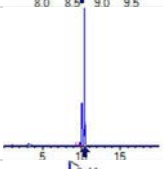 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 226527 | ( 3.41 , N/A )<br>( N/A , -0.20 , N/A ) | 1615.4 | N/A | 0.8030<br>[ 1.0000 ] | 80.3%<br>{ 85.7% } | 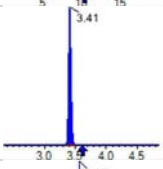 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 99071 | ( 5.17 , N/A )<br>( N/A , -0.03 , N/A ) | 63495.5 | N/A | 0.8390<br>[ 1.0000 ] | 83.9%<br>{ 85.6% } | 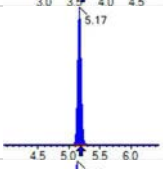 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 352459 | ( 7.43 , N/A )<br>( N/A , -0.04 , N/A ) | 6157.6 | N/A | 0.9080<br>[ 1.0000 ] | 90.8%<br>{ 97.6% } | 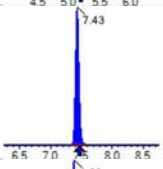 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 249217 | ( 8.98 , N/A )<br>( N/A , -0.05 , N/A ) | 1873.5 | N/A | 0.8530<br>[ 1.0000 ] | 85.3%<br>{ 89.4% } | 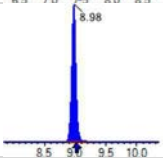 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 247011 | ( 9.98 , N/A ) ( N/A , -0.05 , N/A ) | 28676.8 | N/A | 0.8620 [ 1.0000 ] | 86.2% { 89.5% } | 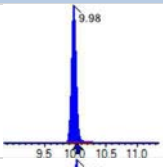 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 903967 | ( 8.12 , N/A ) ( N/A , -0.05 , N/A ) | 5245.1 | N/A | 0.9200 [ 1.0000 ] | 92.0% { 98.5% } | 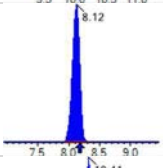 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 674246 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 1920.2 | N/A | 0.8590 [ 1.0000 ] | 85.9% { 87.4% } | 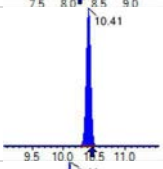 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1181743 | ( 3.41 , N/A ) ( N/A , -0.20 , N/A ) | 64996.0 | N/A | 4.8260 [ 8.0000 ] | 60.3% { 54.4% } | 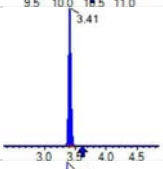 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 674220 | ( 4.17 , N/A ) ( N/A , -0.16 , N/A ) | 4483.2 | N/A | 3.7170 [ 4.0000 ] | 92.9% { 80.6% } | 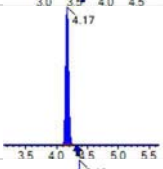 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 387158 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 7924.0 | N/A | 1.7860 [ 2.0000 ] | 89.3% { 80.5% } | 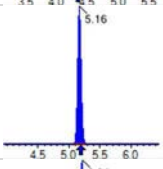 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 441748 | ( 6.31 , N/A ) ( N/A , -0.05 , N/A ) | 5511.7 | N/A | 1.8350 [ 2.0000 ] | 91.8% { 80.6% } | 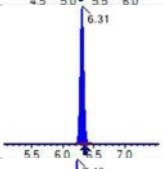 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 636952 | ( 7.43 , N/A ) ( N/A , -0.04 , N/A ) | 5201.5 | N/A | 1.7050 [ 2.0000 ] | 85.3% { 83.2% } | 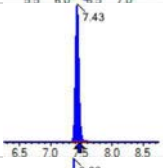 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 204526 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 6224.7 | N/A | 0.8310 [ 1.0000 ] | 83.1% { 75.9% } | 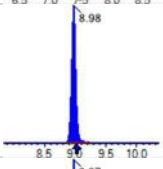 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 223951 | ( 9.97 , N/A ) ( N/A , -0.05 , N/A ) | 1052.6 | N/A | 0.7850 [ 1.0000 ] | 78.5% { 76.2% } | 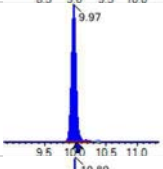 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 213117 | ( 10.89 , N/A ) ( N/A , -0.05 , N/A ) | 1078.5 | N/A | 0.6300 [ 1.0000 ] | 63.0% { 57.7% } | 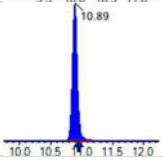 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 203424 | ( 11.79 , N/A ) ( N/A , -0.05 , N/A ) | 1346.9 | N/A | 0.5860 [ 1.0000 ] | 58.6% { 56.1% } | 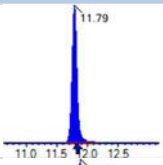 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 193342 | ( 13.08 , N/A ) ( N/A , -0.03 , N/A ) | 973.6 | N/A | 0.6290 [ 1.0000 ] | 62.9% { 59.0% } | 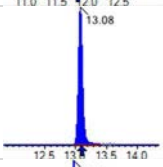 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 331117 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 1906.4 | N/A | 1.2870 [ 2.0000 ] | 64.4% { 66.5% } | 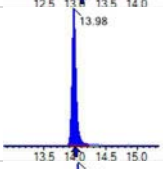 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1151301 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1438.4 | N/A | 1.5800 [ 2.0000 ] | 79.0% { 78.1% } | 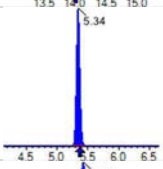 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1147575 | ( 8.12 , N/A ) ( N/A , -0.06 , N/A ) | 4077.7 | N/A | 1.7600 [ 2.0000 ] | 88.0% { 88.1% } | 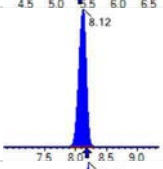 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1199241 | ( 10.41 , N/A ) ( N/A , -0.05 , N/A ) | 1677.7 | N/A | 1.6720 [ 2.0000 ] | 83.6% { 83.0% } | 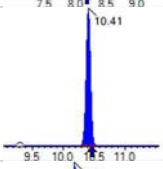 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 550791 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 54.8 | N/A | 3.4360 [ 4.0000 ] | 85.9% { 84.7% } | 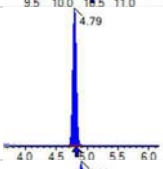 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1632073 | ( 6.90 , N/A ) ( N/A , -0.04 , N/A ) | 4005.2 | N/A | 4.1450 [ 4.0000 ] | 103.6% { 92.7% } | 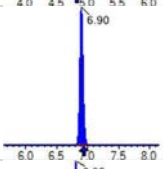 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1098177 | ( 9.30 , N/A ) ( N/A , -0.04 , N/A ) | 1967.2 | N/A | 3.1870 [ 4.0000 ] | 79.7% { 75.5% } | 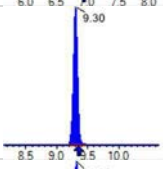 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2297717 | ( 11.02 , N/A ) ( N/A , -0.05 , N/A ) | 1516.1 | N/A | 6.1650 [ 8.0000 ] | 77.1% { 77.1% } | 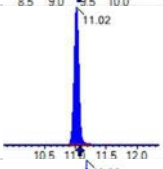 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 460966 | ( 13.29 , N/A ) ( N/A , -0.01 , N/A ) | 2283.4 | N/A | 0.6050 [ 2.0000 ] | 30.3% { 29.6% } | 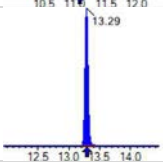 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (14)
Acquired: 2024/03/29 - 00:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 16653 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 159.2 | N/A | 0.0970 [ 2.0000 ] | 4.9% { 4.6% } | 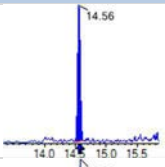  | | S1, |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 19699 | ( 14.89 , N/A ) ( N/A , -0.01 , N/A ) | 232.4 | N/A | 0.1260 [ 2.0000 ] | 6.3% { 5.7% } | 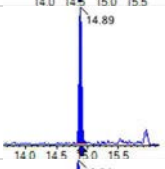  | | S1, |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 733057 | ( 10.34 , N/A ) ( N/A , -0.05 , N/A ) | 2538.0 | N/A | 2.9430 [ 4.0000 ] | 73.6% { 62.1% } | 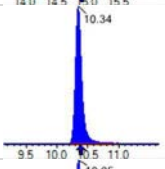  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 609969 | ( 10.95 , N/A ) ( N/A , -0.04 , N/A ) | 1826.1 | N/A | 2.7140 [ 4.0000 ] | 67.8% { 59.8% } | 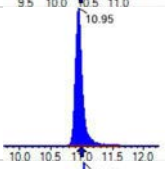  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 153400 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 728.9 | N/A | 2.3980 [ 20.0000 ] | 12.0% { 11.5% } | 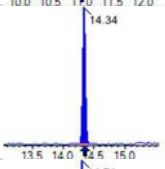  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 174552 | ( 14.71 , N/A ) ( N/A , -0.01 , N/A ) | 928.2 | N/A | 2.9140 [ 20.0000 ] | 14.6% { 13.9% } | 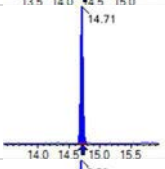  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 647378 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2082.3 | N/A | 6.8950 [ 8.0000 ] | 86.2% { 78.2% } | 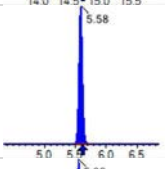  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 633145 | ( 5.86 , N/A ) ( N/A , -0.04 , N/A ) | 2179.9 | N/A | 2.3520 [ 2.0000 ] | 117.6% { 112.7% } | 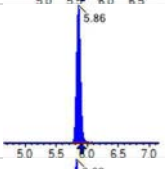  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 580672 | ( 8.62 , N/A ) ( N/A , -0.04 , N/A ) | 1024.0 | N/A | 1.9150 [ 2.0000 ] | 95.7% { 86.6% } | 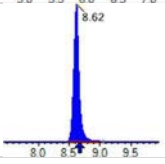  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS4a | File ID:a | S2024-03-28B (16)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 00:59a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.7a | 0.19a | 1.5a | |
| PFPeAa | 7.72a | 0.060a | 0.73a | |
| PFHxAa | 4.06a | 0.050a | 0.37a | |
| PFHpAa | 3.99a | 0.038a | 0.37a | |
| PFOAa | 4.45a | 0.14a | 0.37a | |
| PFNAa | 3.62a | 0.075a | 0.37a | |
| PFDAa | 3.52a | 0.093a | 0.37a | |
| PFUnAa | 3.76a | 0.15a | 0.37a | |
| PFDoAa | 3.73a | 0.10a | 0.37a | |
| PFTrDAa | 3.75a | 0.19a | 0.37a | |
| PFTeDAa | 3.87a | 0.18a | 0.37a | |
| PFHxDAa | 3.59a | 0.18a | 0.37a | |
| PFODAa | 3.25a | 0.18a | 0.37a | |
| PFBSa | 3.76a | 0.034a | 0.37a | |
| PFPeSa | 3.50a | 0.058a | 0.37a | |
| PFHxSa | 3.49a | 0.029a | 0.37a | MI5a |
| PFHpSa | 3.76a | 0.047a | 0.37a | |
| PFOSa | 5.87a | 0.058a | 0.37a | |
| PFNSa | 3.64a | 0.11a | 0.37a | |
| PFDSa | 3.89a | 0.14a | 0.37a | |
| PFDoSa | 3.77a | 0.11a | 0.37a | |
| 4:2FTSa | 14.6a | 0.27a | 1.5a | |
| 6:2FTSa | 14.7a | 0.29a | 1.5a | |
| 8:2FTSa | 14.0a | 0.075a | 1.5a | |
| 10:2FTSa | 12.7a | 0.37a | 1.5a | |
| PFOSAa | 3.90a | 0.096a | 0.37a | |
| NMeFOSAa | 15.6a | 0.43a | 1.5a | |
| NEtFOSAa | 15.9a | 0.38a | 1.5a | |
| NMeFOSAAa | 3.67a | 0.097a | 0.37a | |
| NEtFOSAAa | 3.78a | 0.11a | 0.37a | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spikea

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MS4a | File ID:a | S2024-03-28B (16)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 00:59a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 14.5a | 0.93a | 1.5a | |
| NEtFOSEa | 14.0a | 0.96a | 1.5a | |
| HFPO-DAa | 3.32a | 0.16a | 0.73a | |
| ADONAa | 3.89a | 0.11a | 0.73a | |
| PFEESAa | 6.61a | 0.10a | 0.73a | |
| PFMPAa | 7.43a | 0.050a | 0.73a | |
| PFMBAa | 7.36a | 0.083a | 0.73a | |
| NFDHAa | 8.06a | 0.28a | 0.73a | |
| 9Cl-PF3ONSa | 3.44a | 0.19a | 0.73a | |
| 11Cl-PF3OUDSa | 3.83a | 0.19a | 0.73a | |
| 3:3FTCAa | 13.2a | 0.53a | 1.5a | |
| 5:3FTCAa | 15.3a | 0.41a | 1.5a | |
| 7:3FTCAa | 15.8a | 0.51a | 1.5a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (16)
Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 145279<br>( 163.0 / 69.0 ) 4172 | ( 2.39 , 0.71 )<br>( N/A , -0.07 , 0.1) | 1455.8<br>499.0 | 0.0287<br>104.8<br>109.5 | 2.7170 | N/A | 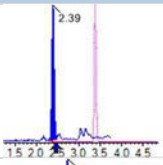 | 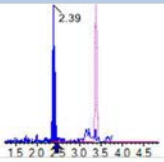 | |
| PFBA | ( 213.0 / 169.0 ) 1140207 | ( 3.38 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1071.0 | N/A<br>0.0<br>0.0 | 4.5460 | N/A | 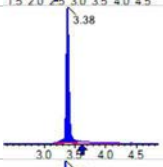 | | |
| PFPeA | ( 263.0 / 219.0 ) 408216<br>( 263.0 / 69.0 ) 5204 | ( 4.14 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1663.3<br>105.9 | 0.0127<br>107.1<br>119.8 | 2.1010 | N/A | 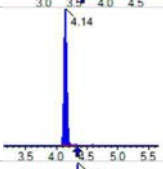 | 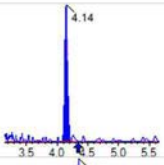 | |
| PFHxA | ( 313.0 / 269.0 ) 202781<br>( 313.0 / 119.0 ) 25590 | ( 5.15 , 1.00 )<br>( 0.00 , N/A , -0.1) | 976.6<br>514.2 | 0.1262<br>113.5<br>106.5 | 1.1060 | N/A | 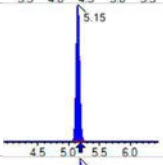 | 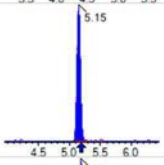 | |
| PFHpA | ( 363.0 / 319.0 ) 263838<br>( 363.0 / 169.0 ) 75781 | ( 6.28 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1356.5<br>991.2 | 0.2872<br>94.0<br>93.3 | 1.0870 | N/A | 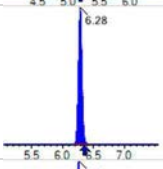 | 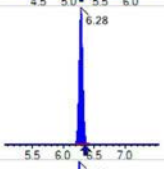 | |
| PFOA | ( 413.0 / 369.0 ) 429298<br>( 413.0 / 169.0 ) 154829 | ( 7.41 , 1.00 )<br>( 0.00 , N/A , 0.1) | 568.8<br>873.4 | 0.3607<br>100.9<br>101.7 | 1.2120 | N/A | 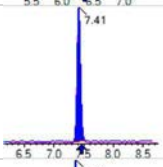 | 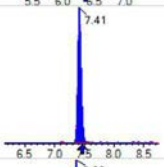 | |
| PFNA | ( 463.0 / 419.0 ) 232527<br>( 463.0 / 169.0 ) 62413 | ( 8.96 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1306.3<br>900.1 | 0.2684<br>109.3<br>104.6 | 0.9840 | N/A | 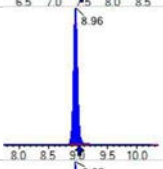 | 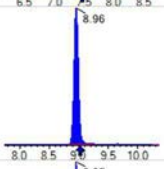 | |
| PFDA | ( 513.0 / 469.0 ) 263232<br>( 513.0 / 169.0 ) 30990 | ( 9.95 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1790.9<br>1586.6 | 0.1177<br>98.8<br>96.7 | 0.9590 | N/A | 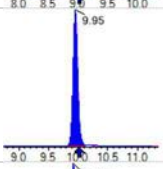 | 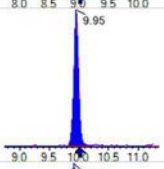 | |
| PFUnA | ( 563.0 / 519.0 ) 294921<br>( 563.0 / 169.0 ) 45497 | ( 10.87 , 1.00 )<br>( 0.00 , N/A , 0.1) | 999.1<br>451.9 | 0.1543<br>99.6<br>102.8 | 1.0230 | N/A | 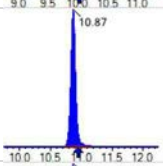 | 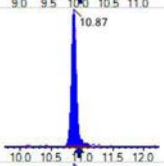 | |
| PFDoA | ( 613.0 / 569.0 ) 337094<br>( 613.0 / 169.0 ) 51438 | ( 11.76 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1140.3<br>399.9 | 0.1526<br>100.5<br>100.1 | 1.0160 | N/A | 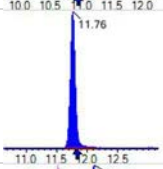 | 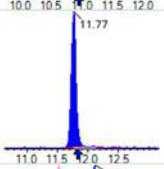 | |
| PFTrDA | ( 663.0 / 619.0 ) 329333<br>( 663.0 / 169.0 ) 85456 | ( 12.51 , 1.06 )<br>( N/A , -0.05 , 0.1) | 1058.7<br>714.0 | 0.2595<br>96.4<br>98.5 | 1.0210 | N/A | 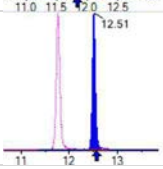 | 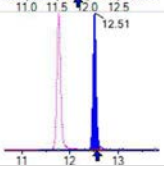 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (16)
Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 288276<br>( 713.0 / 169.0 ) 72951 | ( 13.06 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1034.2<br>611.5 | 0.2531<br>93.3<br>96.1 | 1.0550 | N/A | 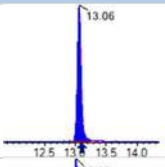 | 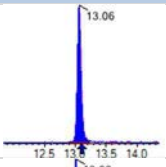 | |
| PFHxDA | ( 813.0 / 769.0 ) 196523<br>( 813.0 / 169.0 ) 52166 | ( 13.96 , 1.00 )<br>( 0.00 , N/A , 0.0) | 870.9<br>278.0 | 0.2654<br>101.5<br>98.3 | 0.9760 | N/A | 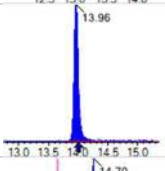 | 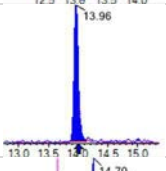 | |
| PFODA | ( 913.0 / 869.0 ) 112863<br>( 913.0 / 169.0 ) 37358 | ( 14.70 , 1.05 )<br>( N/A , -0.04 , 0.3) | 411.3<br>181.0 | 0.3310<br>105.6<br>98.9 | 0.8850 | N/A | 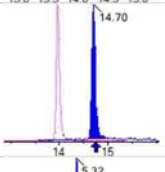 | 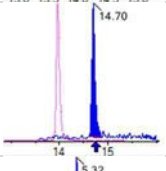 | |
| PFBS | ( 299.0 / 80.0 ) 308704<br>( 299.0 / 99.0 ) 246056 | ( 5.32 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1323.7<br>1306.5 | 0.7971<br>107.6<br>105.7 | 1.0230 | N/A | 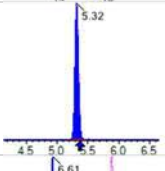 | 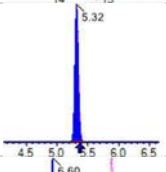 | |
| PFPeS | ( 349.0 / 80.0 ) 805496<br>( 349.0 / 99.0 ) 277007 | ( 6.61 , 0.81 )<br>( N/A , -0.07 , 0.1) | 1661.2<br>1279.7 | 0.3439<br>100.6<br>96.8 | 0.9530 | N/A | 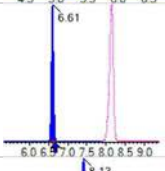 | 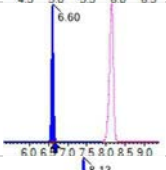 | |
| PFHxS | ( 399.0 / 80.0 ) 979070<br>( 399.0 / 99.0 ) 316783 | ( 8.13 , 1.00 )<br>( 0.00 , N/A , 0.2) | 2122.1<br>2437.9 | 0.3236<br>98.6<br>100.2 | 0.9510 | N/A | 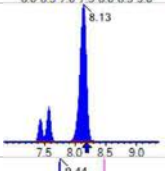 | 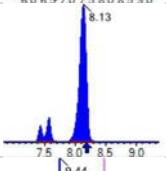 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 810716<br>( 449.0 / 99.0 ) 212126 | ( 9.44 , 0.91 )<br>( N/A , -0.07 , 0.1) | 1524.2<br>1228.6 | 0.2617<br>100.3<br>100.8 | 1.0240 | N/A | 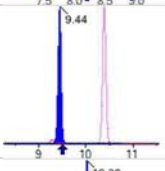 | 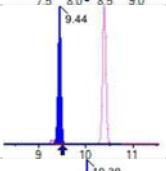 | |
| PFOS | ( 499.0 / 80.0 ) 1229494<br>( 499.0 / 99.0 ) 253349 | ( 10.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1205.3<br>2067.4 | 0.2061<br>89.2<br>89.9 | 1.5970 | N/A | 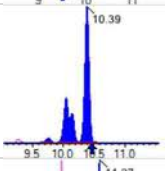 | 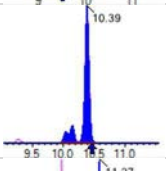 | |
| PFNS | ( 549.0 / 80.0 ) 694561<br>( 549.0 / 99.0 ) 200852 | ( 11.27 , 1.08 )<br>( N/A , -0.08 , 0.0) | 1601.9<br>1228.9 | 0.2892<br>107.9<br>105.2 | 0.9900 | N/A | 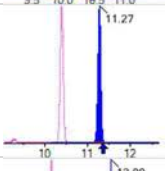 | 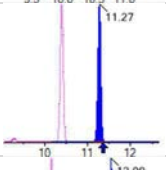 | |
| PFDS | ( 599.0 / 80.0 ) 908321<br>( 599.0 / 99.0 ) 232770 | ( 12.09 , 1.16 )<br>( N/A , -0.06 , 0.0) | 2365.0<br>1192.8 | 0.2563<br>100.6<br>95.1 | 1.0590 | N/A | 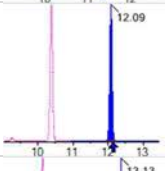 | 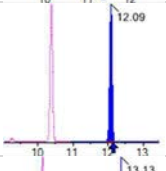 | |
| PFDoS | ( 699.0 / 80.0 ) 851643<br>( 699.0 / 99.0 ) 211519 | ( 13.13 , 1.26 )<br>( N/A , -0.05 , 0.0) | 2598.0<br>1855.8 | 0.2484<br>111.1<br>105.1 | 1.0260 | N/A | 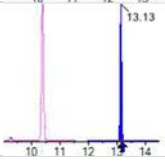 | 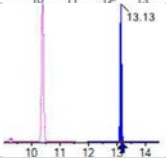 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (16)
Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1525404<br>( 327.0 / 81.0 ) 1384459 | ( 4.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 4815.7<br>2223.7 | 0.9076<br>106.4<br>103.6 | 3.9800 | N/A | 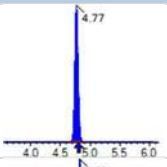 | 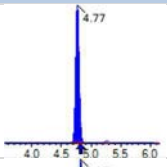 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1439148<br>( 427.0 / 81.0 ) 1734883 | ( 6.88 , 1.00 ) ( 0.00 , N/A , 0.1) | 5599.0<br>3846.9 | 1.2055<br>93.5<br>92.9 | 3.9890 | N/A | 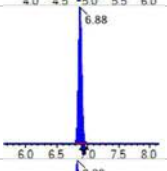 | 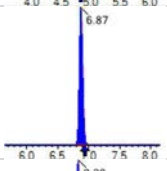 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1255469<br>( 527.0 / 81.0 ) 1333940 | ( 9.28 , 1.00 ) ( 0.00 , N/A , 0.0) | 2405.6<br>1814.4 | 1.0625<br>96.3<br>96.4 | 3.8220 | N/A | 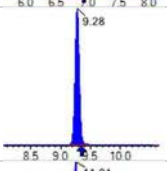 | 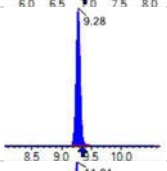 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1051004<br>( 627.0 / 81.0 ) 1577236 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.0) | 1601.2<br>1509.5 | 1.5007<br>104.4<br>103.6 | 3.4550 | N/A | 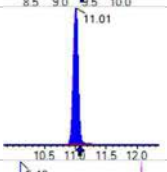 | 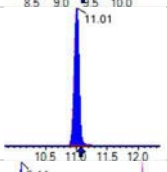 | |
| PFBSA | ( 297.9 / 78.0 ) 311319<br>( 297.9 / 278.0 ) 746 | ( 5.46 , 0.38 ) ( N/A , -0.07 , 1.3) | 1109.3<br>14.6 | 0.0024<br>185.1<br>212.9 | 2.2410 | N/A | 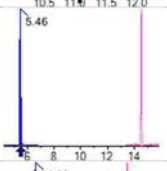 | 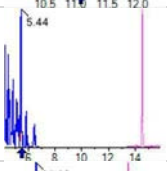 | |
| PFHxSA | ( 397.9 / 78.0 ) 820669<br>( 397.9 / 378.0 ) 4007 | ( 11.20 , 0.75 ) ( N/A , -0.03 , 0.7) | 1646.4<br>102.1 | 0.0049<br>120.9<br>111.3 | 3.1920 | N/A | 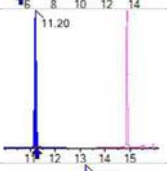 | 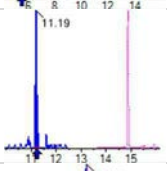 | |
| PFOSA | ( 498.0 / 78.0 ) 575224<br>( 498.0 / 478.0 ) 8183 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.0) | 1943.7<br>163.5 | 0.0142<br>96.8<br>106.9 | 1.0620 | N/A | 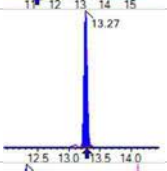 | 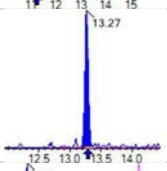 | |
| TFSI | ( 279.7 / 147.0 ) 789047<br>( 279.7 / 211.0 ) 69766 | ( 6.99 , 0.53 ) ( N/A , -0.07 , 0.0) | 83.9<br>761361.3 | 0.0884<br>99.9<br>100.9 | 0.8340 | N/A | 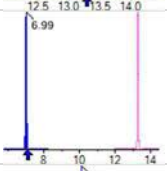 | 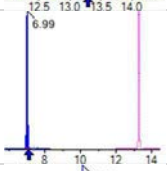 | |
| NMeFOSA | ( 512.0 / 219.0 ) 172994<br>( 512.0 / 169.0 ) 131960 | ( 14.55 , 1.00 ) ( 0.00 , N/A , 1.1) | 1730.9<br>664.3 | 0.7628<br>99.5<br>102.5 | 4.2530 | N/A | 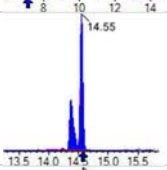 | 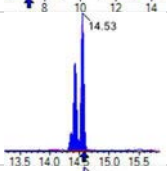 | |
| NEtFOSA | ( 526.0 / 219.0 ) 200247<br>( 526.0 / 169.0 ) 248469 | ( 14.88 , 1.00 ) ( 0.01 , N/A , 2.1) | 1388.0<br>1432.0 | 1.2408<br>99.2<br>99.7 | 4.3280 | N/A | 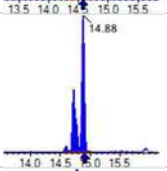 | 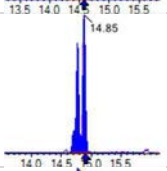 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 219817<br>( 570.0 / 483.0 ) 105975 | ( 10.33 , 1.00 ) ( 0.01 , N/A , 0.1) | 3851.6<br>1338.0 | 0.4821<br>103.9<br>103.3 | 1.0000 | N/A | 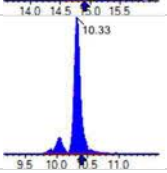 | 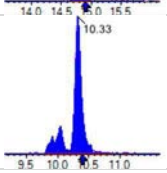 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 223926<br>( 584.0 / 526.0 ) 133106 | ( 10.94 , 1.00 ) ( 0.01 , N/A , 0.1) | 1219.3<br>497.1 | 0.5944<br>99.1<br>99.4 | 1.0280 | N/A | 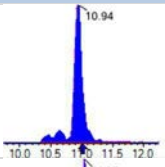 | 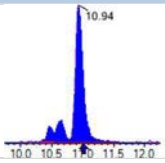 | |
| NMeFOSE | ( 616.0 / 59.0 ) 109132 | ( 14.35 , 1.00 ) ( 0.02 , N/A , 0.0) | 545.5 | N/A<br>0.0<br>0.0 | 3.9410 | N/A | 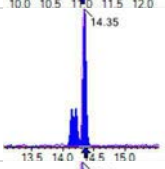 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 85153 | ( 14.72 , 1.00 ) ( 0.02 , N/A , 0.0) | 720.4 | N/A<br>0.0<br>0.0 | 3.8020 | N/A | 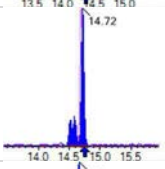 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 46462<br>( 285.0 / 185.0 ) 130516 | ( 5.56 , 1.00 ) ( -0.01 , N/A , -0.2) | 840.0<br>1052.0 | 2.8091<br>100.1<br>106.4 | 0.9030 | N/A | 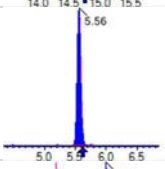 | 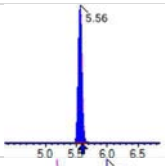 | |
| ADONA | ( 377.0 / 85.0 ) 719526<br>( 377.0 / 251.0 ) 75190 | ( 6.72 , 1.21 ) ( N/A , -0.06 , 0.1) | 2174.8<br>621.0 | 0.1045<br>99.6<br>104.9 | 1.0600 | N/A | 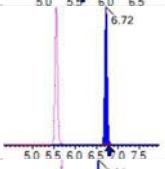 | 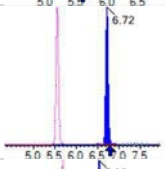 | |
| PFEESA | ( 315.0 / 135.0 ) 239991<br>( 315.0 / 83.0 ) 150673 | ( 5.91 , 1.15 ) ( N/A , -0.06 , 0.2) | 2013.8<br>513.0 | 0.6278<br>97.8<br>107.4 | 1.7990 | N/A | 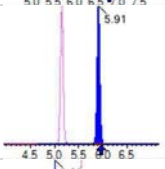 | 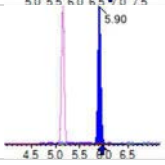 | |
| PFMPA | ( 229.0 / 85.0 ) 144534 | ( 3.63 , 0.88 ) ( N/A , -0.23 , 0.0) | 3097.3 | N/A<br>0.0<br>0.0 | 2.0240 | N/A | 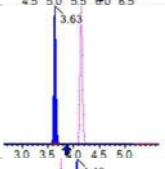 | | |
| PFMBA | ( 279.0 / 85.0 ) 322484 | ( 4.42 , 1.07 ) ( N/A , -0.12 , 0.0) | 2205.9 | N/A<br>0.0<br>0.0 | 2.0040 | N/A | 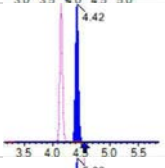 | | |
| NFDHA | ( 295.0 / 201.0 ) 142933<br>( 295.0 / 85.0 ) 145950 | ( 5.02 , 0.98 ) ( N/A , -0.04 , -0.1) | 1991.4<br>1301.8 | 1.0211<br>102.7<br>99.0 | 2.1950 | N/A | 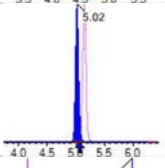 | 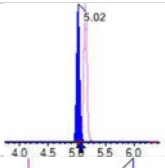 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 705250<br>( 533.0 / 353.0 ) 236304 | ( 11.06 , 1.99 ) ( N/A , -0.08 , 0.0) | 2446.9<br>2088.8 | 0.3351<br>105.1<br>101.0 | 0.9350 | N/A | 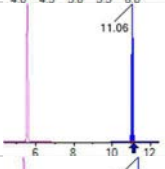 | 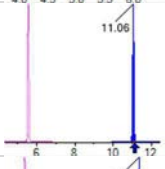 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 611318<br>( 633.0 / 453.0 ) 203436 | ( 12.57 , 2.26 ) ( N/A , -0.05 , 0.1) | 3811.6<br>1370.8 | 0.3328<br>98.1<br>97.9 | 1.0430 | N/A | 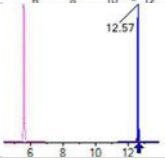 | 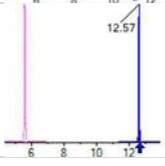 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 345978<br>( 461.0 / 381.2 ) 137500 | ( 9.34 , 0.90 ) ( N/A , -0.07 , 0.0) | 2489.1<br>2151.6 | 0.3974<br>102.9<br>100.0 | 0.8380 | N/A | 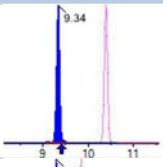 | 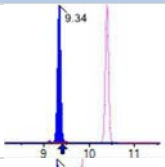 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 59747<br>( 241.0 / 117.0 ) 139826 | ( 3.66 , 0.88 ) ( N/A , -0.26 , 0.1) | 2144.8<br>1232.0 | 2.3403<br>106.6<br>107.4 | 3.5830 | N/A | 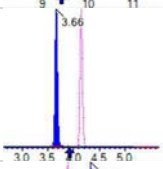 | 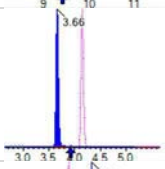 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 207861<br>( 341.0 / 217.0 ) 308205 | ( 5.58 , 1.08 ) ( N/A , -0.06 , 0.1) | 1051.0<br>832.5 | 1.4827<br>96.8<br>97.6 | 4.1660 | N/A | 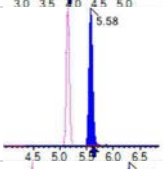 | 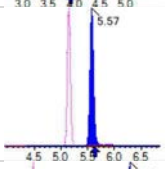 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 454725<br>( 441.0 / 337.0 ) 401625 | ( 9.28 , 1.80 ) ( N/A , -0.05 , 0.1) | 26105.7<br>135205.5 | 0.8832<br>103.4<br>100.1 | 4.2890 | N/A | 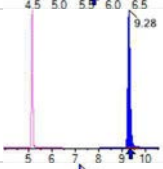 | 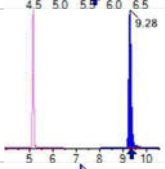 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 304929<br>( 357.2 / 243.0 ) 33887 | ( 5.83 , 1.00 ) ( -0.01 , N/A , 0.1) | 1340.9<br>335.6 | 0.1111<br>103.6<br>100.4 | 0.9190 | N/A | 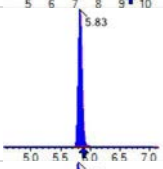 | 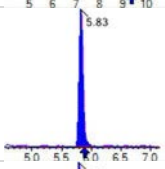 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 252198<br>( 457.2 / 343.0 ) 10049 | ( 8.59 , 1.00 ) ( -0.01 , N/A , 0.3) | 913.5<br>198.8 | 0.0398<br>88.8<br>91.2 | 1.0760 | N/A | 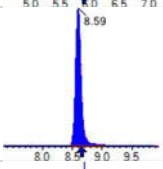 | 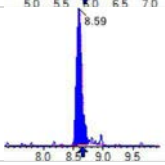 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 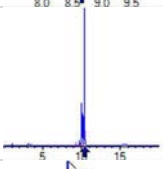 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 256176 | ( 3.38 , N/A ) ( N/A , -0.23 , N/A ) | 2521.1 | N/A | 0.9080<br>[ 1.0000 ] | 90.8%<br>{ 96.9% } | 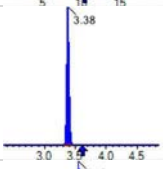 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 92178 | ( 5.15 , N/A ) ( N/A , -0.04 , N/A ) | 16138.2 | N/A | 0.7810<br>[ 1.0000 ] | 78.1%<br>{ 79.6% } | 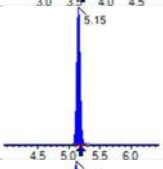 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 341848 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 4780.4 | N/A | 0.8810<br>[ 1.0000 ] | 88.1%<br>{ 94.7% } | 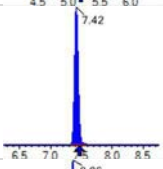 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 241520 | ( 8.96 , N/A ) ( N/A , -0.06 , N/A ) | 1355.4 | N/A | 0.8270<br>[ 1.0000 ] | 82.7%<br>{ 86.6% } | 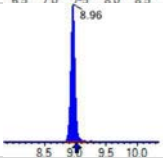 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 241400 | ( 9.96 , N/A ) ( N/A , -0.07 , N/A ) | 11604.1 | N/A | 0.8420 [ 1.0000 ] | 84.2% { 87.4% } | 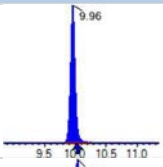 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 868576 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 6703.0 | N/A | 0.8840 [ 1.0000 ] | 88.4% { 94.6% } | 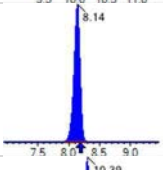 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 664052 | ( 10.39 , N/A ) ( N/A , -0.07 , N/A ) | 3319.9 | N/A | 0.8460 [ 1.0000 ] | 84.6% { 86.1% } | 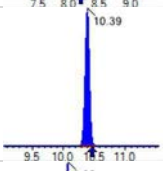 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1890016 | ( 3.38 , N/A ) ( N/A , -0.23 , N/A ) | 92313.3 | N/A | 6.8260 [ 8.0000 ] | 85.3% { 87.0% } | 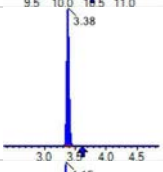 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 778225 | ( 4.15 , N/A ) ( N/A , -0.19 , N/A ) | 5650.5 | N/A | 4.6110 [ 4.0000 ] | 115.3% { 93.0% } | 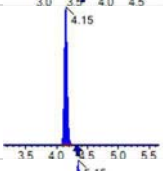 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 395302 | ( 5.15 , N/A ) ( N/A , -0.05 , N/A ) | 10451.9 | N/A | 1.9600 [ 2.0000 ] | 98.0% { 82.2% } | 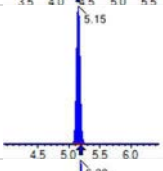 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 489470 | ( 6.28 , N/A ) ( N/A , -0.07 , N/A ) | 8425.0 | N/A | 2.1850 [ 2.0000 ] | 109.3% { 89.3% } | 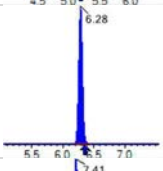 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 705250 | ( 7.41 , N/A ) ( N/A , -0.05 , N/A ) | 5221.4 | N/A | 1.9470 [ 2.0000 ] | 97.3% { 92.1% } | 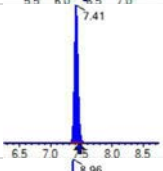 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235109 | ( 8.96 , N/A ) ( N/A , -0.06 , N/A ) | 4383.8 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 87.2% } | 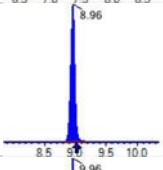 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 274716 | ( 9.96 , N/A ) ( N/A , -0.07 , N/A ) | 1877.5 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 93.4% } | 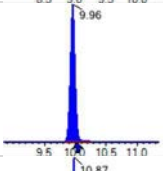 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 317399 | ( 10.87 , N/A ) ( N/A , -0.07 , N/A ) | 1160.6 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 85.9% } | 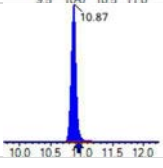 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0337-MS4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28B (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 330690 | ( 11.76 , N/A ) ( N/A , -0.07 , N/A ) | 1529.2 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 91.1% } | 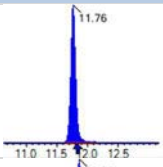 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 292733 | ( 13.06 , N/A ) ( N/A , -0.04 , N/A ) | 1163.0 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 89.3% } | 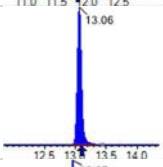 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 429806 | ( 13.97 , N/A ) ( N/A , -0.04 , N/A ) | 2513.0 | N/A | 1.7090 [ 2.0000 ] | 85.5% { 86.3% } | 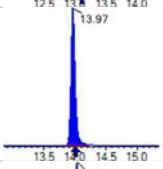 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1227137 | ( 5.32 , N/A ) ( N/A , -0.05 , N/A ) | 1675.2 | N/A | 1.7530 [ 2.0000 ] | 87.6% { 83.2% } | 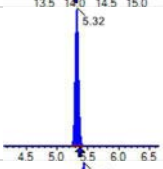 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1176070 | ( 8.14 , N/A ) ( N/A , -0.04 , N/A ) | 5598.8 | N/A | 1.8770 [ 2.0000 ] | 93.8% { 90.3% } | 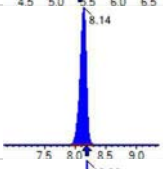 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1326046 | ( 10.39 , N/A ) ( N/A , -0.08 , N/A ) | 1905.0 | N/A | 1.8770 [ 2.0000 ] | 93.8% { 91.8% } | 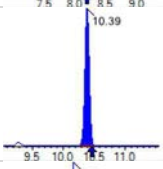 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 580666 | ( 4.77 , N/A ) ( N/A , -0.04 , N/A ) | 62.4 | N/A | 3.7700 [ 4.0000 ] | 94.3% { 89.3% } | 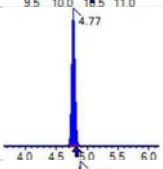 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1700074 | ( 6.88 , N/A ) ( N/A , -0.06 , N/A ) | 5086.5 | N/A | 4.4930 [ 4.0000 ] | 112.3% { 96.6% } | 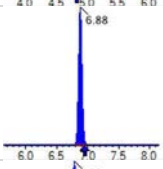 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1335630 | ( 9.28 , N/A ) ( N/A , -0.07 , N/A ) | 2201.7 | N/A | 4.0350 [ 4.0000 ] | 100.9% { 91.8% } | 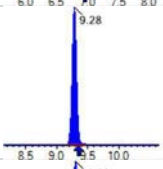 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3064532 | ( 11.00 , N/A ) ( N/A , -0.07 , N/A ) | 1832.0 | N/A | 8.5570 [ 8.0000 ] | 107.0% { 102.8% } | 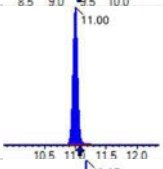 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1119669 | ( 13.27 , N/A ) ( N/A , -0.02 , N/A ) | 3735.6 | N/A | 1.4930 [ 2.0000 ] | 74.6% { 71.9% } | 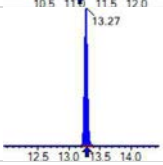 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MS4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (16)
Acquired: 2024/03/29 - 00:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 91535 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 844.2 | N/A | 0.5430 [ 2.0000 ] | 27.1% { 25.1% } | 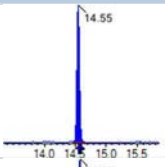 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 81699 | ( 14.87 , N/A ) ( N/A , -0.02 , N/A ) | 924.1 | N/A | 0.5300 [ 2.0000 ] | 26.5% { 23.7% } | 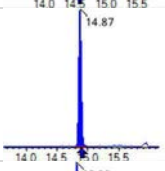 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 953316 | ( 10.33 , N/A ) ( N/A , -0.06 , N/A ) | 2645.9 | N/A | 3.8860 [ 4.0000 ] | 97.2% { 80.8% } | 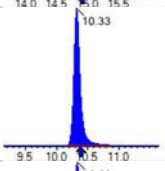 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 898445 | ( 10.93 , N/A ) ( N/A , -0.07 , N/A ) | 2245.4 | N/A | 4.0580 [ 4.0000 ] | 101.5% { 88.1% } | 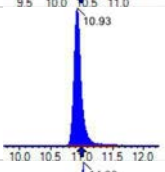 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 511524 | ( 14.33 , N/A ) ( N/A , -0.02 , N/A ) | 1475.1 | N/A | 8.1200 [ 20.0000 ] | 40.6% { 38.5% } | 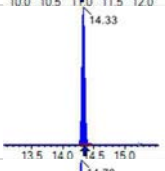 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 470268 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 2734.5 | N/A | 7.9710 [ 20.0000 ] | 39.9% { 37.6% } | 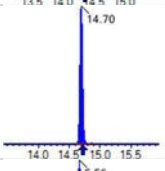 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 701383 | ( 5.56 , N/A ) ( N/A , -0.05 , N/A ) | 2280.8 | N/A | 8.0290 [ 8.0000 ] | 100.4% { 84.8% } | 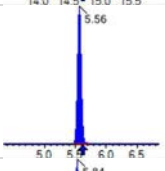 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 631169 | ( 5.84 , N/A ) ( N/A , -0.06 , N/A ) | 3508.0 | N/A | 2.3990 [ 2.0000 ] | 120.0% { 112.4% } | 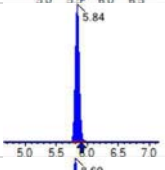 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 566902 | ( 8.60 , N/A ) ( N/A , -0.06 , N/A ) | 926.8 | N/A | 1.9130 [ 2.0000 ] | 95.6% { 84.6% } | 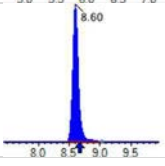 | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD3a | File ID:a | S2024-03-28B (15)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 00:39a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | 19.0a | 0.19a | 1.4a | |
| PFPeAa | 11.8a | 0.058a | 0.72a | |
| PFHxAa | 8.44a | 0.049a | 0.36a | |
| PFHpAa | 7.01a | 0.037a | 0.36a | |
| PFOAa | 10.5a | 0.14a | 0.36a | MI5a |
| PFNAa | 6.06a | 0.074a | 0.36a | |
| PFDAa | 6.53a | 0.091a | 0.36a | |
| PFUnAa | 3.74a | 0.14a | 0.36a | |
| PFDoAa | 3.72a | 0.10a | 0.36a | |
| PFTrDAa | 3.83a | 0.18a | 0.36a | |
| PFTeDAa | 3.79a | 0.18a | 0.36a | |
| PFHxDAa | 3.70a | 0.18a | 0.36a | |
| PFODAa | 3.14a | 0.18a | 0.36a | MS3a |
| PFBSa | 5.41a | 0.033a | 0.36a | |
| PFPeSa | 3.37a | 0.056a | 0.36a | |
| PFHxSa | 4.19a | 0.028a | 0.36a | MI5a |
| PFHpSa | 3.71a | 0.046a | 0.36a | |
| PFOSa | 10.9a | 0.057a | 0.36a | |
| PFNSa | 3.44a | 0.11a | 0.36a | |
| PFDSa | 3.79a | 0.14a | 0.36a | |
| PFDoSa | 3.64a | 0.11a | 0.36a | |
| 4:2FTSa | 13.8a | 0.26a | 1.4a | |
| 6:2FTSa | 13.9a | 0.28a | 1.4a | |
| 8:2FTSa | 13.4a | 0.074a | 1.4a | |
| 10:2FTSa | 14.3a | 0.36a | 1.4a | |
| PFOSAa | 4.04a | 0.094a | 0.36a | |
| NMeFOSAa | 18.8a | 0.43a | 1.4a | |
| NEtFOSAa | 18.3a | 0.37a | 1.4a | |
| NMeFOSAAa | 3.46a | 0.095a | 0.36a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD3a | File ID:a | S2024-03-28B (15)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 00:39a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 15.0a | 0.91a | 1.4a | MS3a |
| NEtFOSEa | 16.1a | 0.94a | 1.4a | |
| HFPO-DAa | 3.48a | 0.16a | 0.72a | |
| ADONAa | 4.11a | 0.11a | 0.72a | |
| PFEESAa | 6.37a | 0.098a | 0.72a | |
| PFMPAa | 6.62a | 0.048a | 0.72a | |
| PFMBAa | 6.31a | 0.082a | 0.72a | |
| NFDHAa | 7.82a | 0.27a | 0.72a | |
| 9Cl-PF3ONSa | 3.78a | 0.19a | 0.72a | |
| 11Cl-PF3OUDSa | 3.97a | 0.19a | 0.72a | |
| 3:3FTCAa | 12.3a | 0.52a | 1.4a | |
| 5:3FTCAa | 14.5a | 0.40a | 1.4a | |
| 7:3FTCAa | 15.2a | 0.50a | 1.4a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 243540<br>( 163.0 / 69.0 ) 7177 | ( 2.39 , 0.70 ) ( N/A , -0.07 , 0.1) | 1878.5<br>593.2 | 0.0295<br>107.5<br>112.3 | 4.4870 | N/A | 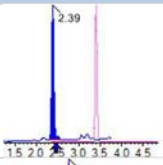 | 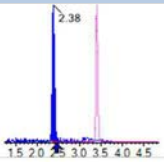 | |
| PFBA | ( 213.0 / 169.0 ) 1334572 | ( 3.40 , 1.00 ) ( 0.00 , N/A , 0.0) | 1228.8 | N/A<br>0.0<br>0.0 | 5.2950 | N/A | 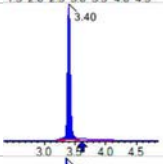 | | |
| PFPeA | ( 263.0 / 219.0 ) 680119<br>( 263.0 / 69.0 ) 8927 | ( 4.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 1439.5<br>112.9 | 0.0131<br>110.3<br>123.4 | 3.2720 | N/A | 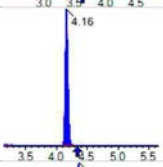 | 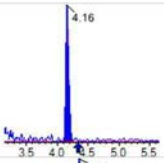 | |
| PFHxA | ( 313.0 / 269.0 ) 432240<br>( 313.0 / 119.0 ) 50150 | ( 5.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 1125.7<br>804.6 | 0.1160<br>104.3<br>97.9 | 2.3480 | N/A | 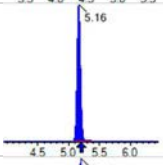 | 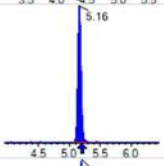 | |
| PFHpA | ( 363.0 / 319.0 ) 460157<br>( 363.0 / 169.0 ) 142664 | ( 6.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 1467.2<br>1674.7 | 0.3100<br>101.4<br>100.7 | 1.9500 | N/A | 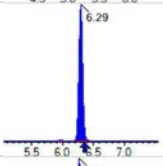 | 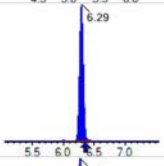 | |
| PFOA | ( 413.0 / 369.0 ) 1032349<br>( 413.0 / 169.0 ) 369635 | ( 7.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 1113.5<br>895.1 | 0.3581<br>100.2<br>100.9 | 2.9290 | N/A | 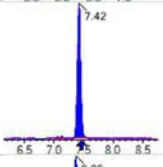 | 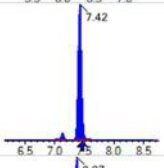 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 371613<br>( 463.0 / 169.0 ) 93575 | ( 8.96 , 1.00 ) ( 0.00 , N/A , -0.1) | 1281.6<br>623.6 | 0.2518<br>102.5<br>98.2 | 1.6840 | N/A | 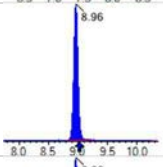 | 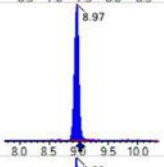 | |
| PFDA | ( 513.0 / 469.0 ) 482485<br>( 513.0 / 169.0 ) 56117 | ( 9.96 , 1.00 ) ( 0.00 , N/A , 0.0) | 2265.3<br>1114.7 | 0.1163<br>97.6<br>95.5 | 1.8150 | N/A | 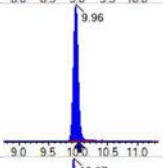 | 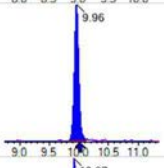 | |
| PFUnA | ( 563.0 / 519.0 ) 297395<br>( 563.0 / 169.0 ) 43992 | ( 10.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 867.1<br>361.4 | 0.1479<br>95.5<br>98.5 | 1.0400 | N/A | 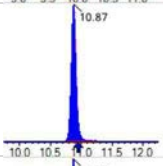 | 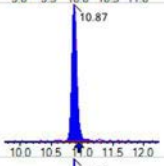 | |
| PFDoA | ( 613.0 / 569.0 ) 332133<br>( 613.0 / 169.0 ) 47745 | ( 11.77 , 1.00 ) ( 0.00 , N/A , 0.1) | 1227.5<br>474.3 | 0.1438<br>94.7<br>94.3 | 1.0360 | N/A | 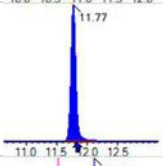 | 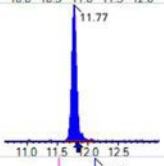 | |
| PFTrDA | ( 663.0 / 619.0 ) 331862<br>( 663.0 / 169.0 ) 87081 | ( 12.52 , 1.06 ) ( N/A , -0.04 , -0.1) | 1129.7<br>601.0 | 0.2624<br>97.5<br>99.6 | 1.0640 | N/A | 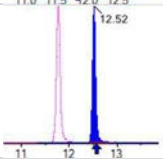 | 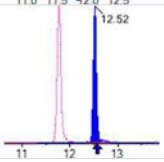 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 273737<br>( 713.0 / 169.0 ) 71948 | ( 13.07 , 1.00 ) ( 0.00 , N/A , 0.0) | 1038.1<br>553.2 | 0.2628<br>96.9<br>99.9 | 1.0550 | N/A | 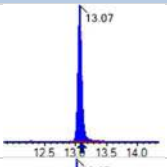 | 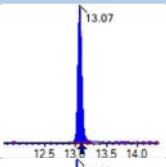 | |
| PFHxDA | ( 813.0 / 769.0 ) 190398<br>( 813.0 / 169.0 ) 52321 | ( 13.97 , 1.00 ) ( -0.01 , N/A , 0.0) | 830.3<br>376.4 | 0.2748<br>105.0<br>101.8 | 1.0280 | N/A | 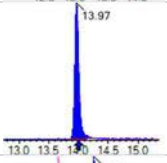 | 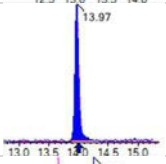 | |
| PFODA | ( 913.0 / 869.0 ) 102284<br>( 913.0 / 169.0 ) 33119 | ( 14.71 , 1.05 ) ( N/A , -0.04 , 0.1) | 397.0<br>151.7 | 0.3238<br>103.3<br>96.7 | 0.8720 | N/A | 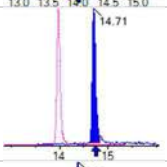 | 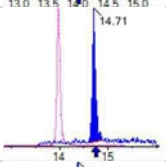 | |
| PFBS | ( 299.0 / 80.0 ) 467629<br>( 299.0 / 99.0 ) 329579 | ( 5.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 1238.4<br>1510.2 | 0.7048<br>95.2<br>93.4 | 1.5050 | N/A | 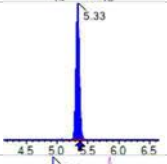 | 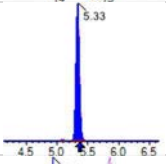 | |
| PFPeS | ( 349.0 / 80.0 ) 839220<br>( 349.0 / 99.0 ) 302734 | ( 6.61 , 0.82 ) ( N/A , -0.06 , 0.0) | 1963.0<br>1719.0 | 0.3607<br>105.6<br>101.5 | 0.9360 | N/A | 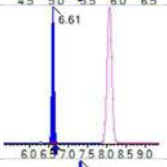 | 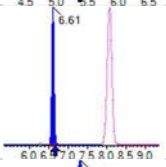 | |
| PFHxS | ( 399.0 / 80.0 ) 1272571<br>( 399.0 / 99.0 ) 406185 | ( 8.07 , 1.00 ) ( 0.00 , N/A , 0.2) | 1602.1<br>1534.8 | 0.3192<br>97.3<br>98.9 | 1.1650 | N/A | 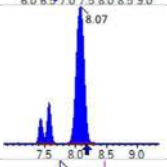 | 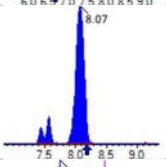 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 840673<br>( 449.0 / 99.0 ) 222597 | ( 9.44 , 0.91 ) ( N/A , -0.06 , 0.0) | 1267.9<br>1360.3 | 0.2648<br>101.5<br>102.1 | 1.0310 | N/A | 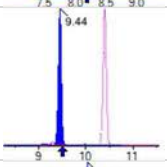 | 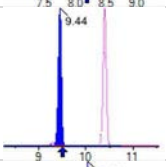 | |
| PFOS | ( 499.0 / 80.0 ) 2396774<br>( 499.0 / 99.0 ) 499742 | ( 10.40 , 1.00 ) ( 0.00 , N/A , -0.1) | 1370.3<br>6041.8 | 0.2085<br>90.2<br>91.0 | 3.0240 | N/A | 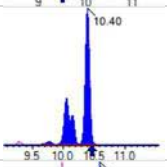 | 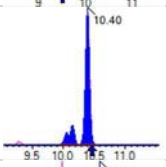 | |
| PFNS | ( 549.0 / 80.0 ) 689954<br>( 549.0 / 99.0 ) 194281 | ( 11.28 , 1.08 ) ( N/A , -0.07 , 0.0) | 1260.2<br>1244.2 | 0.2816<br>105.1<br>102.4 | 0.9550 | N/A | 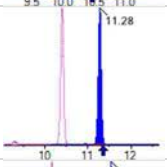 | 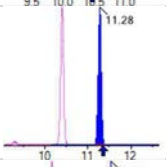 | |
| PFDS | ( 599.0 / 80.0 ) 930034<br>( 599.0 / 99.0 ) 247192 | ( 12.09 , 1.16 ) ( N/A , -0.06 , 0.1) | 2326.2<br>1285.4 | 0.2658<br>104.4<br>98.6 | 1.0530 | N/A | 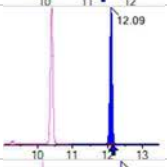 | 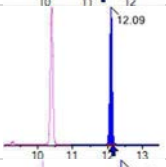 | |
| PFDoS | ( 699.0 / 80.0 ) 864590<br>( 699.0 / 99.0 ) 204131 | ( 13.13 , 1.26 ) ( N/A , -0.04 , 0.0) | 2688.9<br>1748.9 | 0.2361<br>105.6<br>99.9 | 1.0120 | N/A | 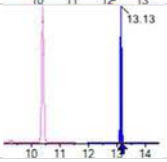 | 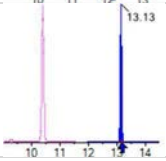 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1399609<br>( 327.0 / 81.0 ) 1270161 | ( 4.78 , 1.00 ) ( -0.01 , N/A , 0.0) | 4452.3<br>1040.1 | 0.9075<br>106.4<br>103.6 | 3.8490 | N/A | 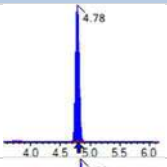 | 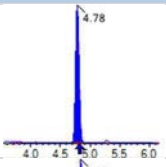 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1362914<br>( 427.0 / 81.0 ) 1747385 | ( 6.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 4989.4<br>3753.9 | 1.2821<br>99.4<br>98.8 | 3.8520 | N/A | 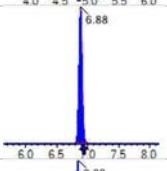 | 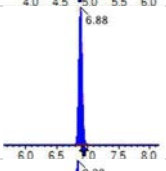 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1172376<br>( 527.0 / 81.0 ) 1312357 | ( 9.28 , 1.00 ) ( 0.00 , N/A , 0.1) | 2485.2<br>2132.0 | 1.1194<br>101.4<br>101.6 | 3.7130 | N/A | 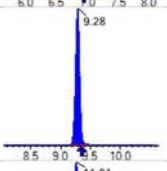 | 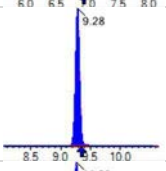 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1056879<br>( 627.0 / 81.0 ) 1409416 | ( 11.01 , 1.00 ) ( 0.01 , N/A , -0.1) | 1494.1<br>1171.3 | 1.3336<br>92.8<br>92.0 | 3.9730 | N/A | 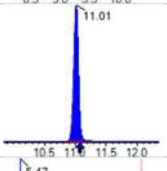 | 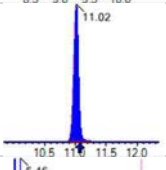 | |
| PFBSA | ( 297.9 / 78.0 ) 331644<br>( 297.9 / 278.0 ) 562 | ( 5.47 , 0.38 ) ( N/A , -0.05 , 0.5) | 959.2<br>9.2 | 0.0017<br>130.8<br>150.5 | 1.7600 | N/A | 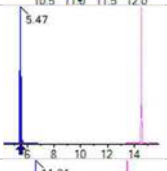 | 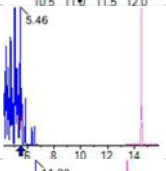 | |
| PFHxSA | ( 397.9 / 78.0 ) 847024<br>( 397.9 / 378.0 ) 3682 | ( 11.21 , 0.75 ) ( N/A , -0.02 , -0.6) | 1614.5<br>156.7 | 0.0043<br>107.6<br>99.1 | 2.3520 | N/A | 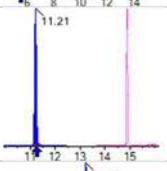 | 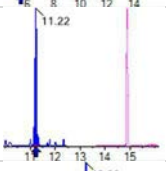 | |
| PFOSA | ( 498.0 / 78.0 ) 624909<br>( 498.0 / 478.0 ) 8470 | ( 13.27 , 1.00 ) ( -0.01 , N/A , -0.2) | 1739.0<br>187.7 | 0.0136<br>92.2<br>101.8 | 1.1240 | N/A | 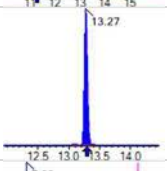 | 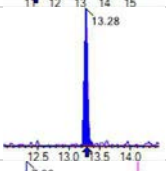 | |
| TFSI | ( 279.7 / 147.0 ) 1012773<br>( 279.7 / 211.0 ) 83634 | ( 7.00 , 0.53 ) ( N/A , -0.06 , 0.1) | 89.1<br>1762.9 | 0.0826<br>93.3<br>94.2 | 1.0420 | N/A | 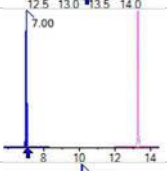 | 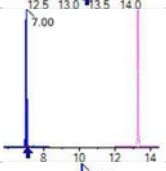 | |
| NMeFOSA | ( 512.0 / 219.0 ) 288196<br>( 512.0 / 169.0 ) 213611 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.8) | 2189.4<br>884.3 | 0.7412<br>96.7<br>99.6 | 5.2210 | N/A | 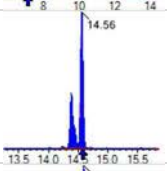 | 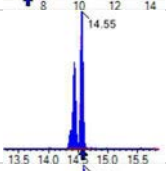 | |
| NEtFOSA | ( 526.0 / 219.0 ) 329112<br>( 526.0 / 169.0 ) 404114 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 1.8) | 2264.2<br>1879.5 | 1.2279<br>98.2<br>98.7 | 5.0770 | N/A | 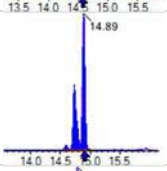 | 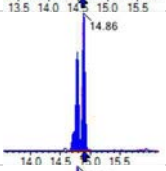 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 211031<br>( 570.0 / 483.0 ) 99665 | ( 10.34 , 1.00 ) ( 0.01 , N/A , 0.0) | 2655.3<br>7001.3 | 0.4723<br>101.8<br>101.2 | 0.9630 | N/A | 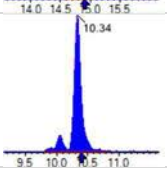 | 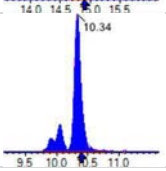 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 222143<br>( 584.0 / 526.0 ) 132654 | ( 10.95 , 1.00 )<br>( 0.01 , N/A , 0.0) | 1371.6<br>509.0 | 0.5972<br>99.5<br>99.9 | 1.0550 | N/A | 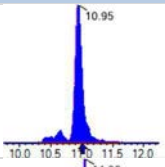 | 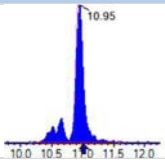 | |
| NMeFOSE | ( 616.0 / 59.0 ) 158178 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 752.7 | N/A<br>0.0<br>0.0 | 4.1820 | N/A | 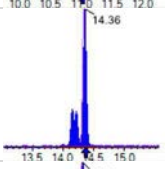 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 135773 | ( 14.73 , 1.00 )<br>( 0.02 , N/A , 0.0) | 977.1 | N/A<br>0.0<br>0.0 | 4.4710 | N/A | 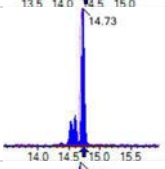 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 47061<br>( 285.0 / 185.0 ) 129702 | ( 5.58 , 1.00 )<br>( 0.00 , N/A , 0.1) | 925.0<br>999.7 | 2.7561<br>98.2<br>104.4 | 0.9670 | N/A | 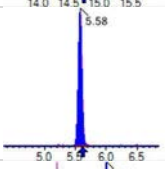 | 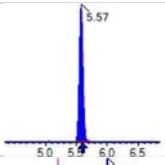 | |
| ADONA | ( 377.0 / 85.0 ) 732650<br>( 377.0 / 251.0 ) 76769 | ( 6.73 , 1.21 )<br>( N/A , -0.06 , 0.0) | 2098.0<br>657.1 | 0.1048<br>99.9<br>105.1 | 1.1410 | N/A | 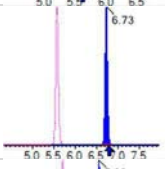 | 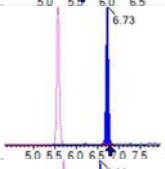 | |
| PFEESA | ( 315.0 / 135.0 ) 237317<br>( 315.0 / 83.0 ) 144314 | ( 5.92 , 1.15 )<br>( N/A , -0.05 , -0.1) | 2131.4<br>611.8 | 0.6081<br>94.7<br>104.0 | 1.7720 | N/A | 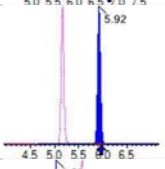 | 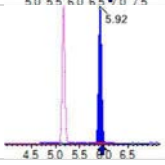 | |
| PFMPA | ( 229.0 / 85.0 ) 140613 | ( 3.66 , 0.88 )<br>( N/A , -0.21 , 0.0) | 2589.6 | N/A<br>0.0<br>0.0 | 1.8400 | N/A | 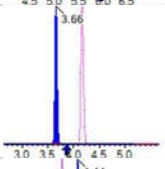 | | |
| PFMBA | ( 279.0 / 85.0 ) 301980 | ( 4.44 , 1.07 )<br>( N/A , -0.11 , 0.0) | 2128.1 | N/A<br>0.0<br>0.0 | 1.7540 | N/A | 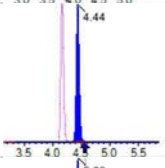 | | |
| NFDHA | ( 295.0 / 201.0 ) 142086<br>( 295.0 / 85.0 ) 132260 | ( 5.03 , 0.98 )<br>( N/A , -0.03 , -0.1) | 2248.3<br>942.1 | 0.9308<br>93.6<br>90.2 | 2.1740 | N/A | 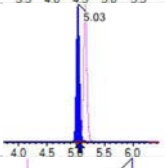 | 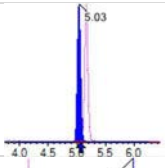 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 750011<br>( 533.0 / 353.0 ) 234024 | ( 11.07 , 1.98 )<br>( N/A , -0.07 , -0.1) | 2475.5<br>1987.6 | 0.3120<br>97.9<br>94.0 | 1.0520 | N/A | 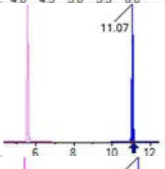 | 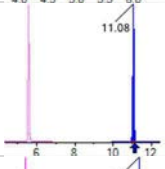 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 611124<br>( 633.0 / 453.0 ) 201674 | ( 12.58 , 2.25 )<br>( N/A , -0.04 , 0.1) | 2897.0<br>1433.0 | 0.3300<br>97.3<br>97.1 | 1.1030 | N/A | 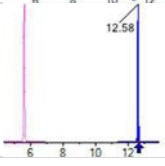 | 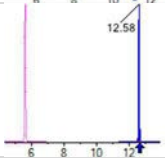 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 375077<br>( 461.0 / 381.2 ) 148133 | ( 9.34 , 0.90 ) ( N/A , -0.06 , 0.2) | 2728.0<br>1884.1 | 0.3949<br>102.3<br>99.4 | 0.8820 | N/A | 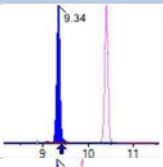 | 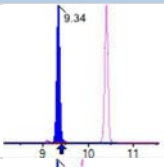 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 61211<br>( 241.0 / 117.0 ) 135108 | ( 3.68 , 0.88 ) ( N/A , -0.24 , 0.0) | 1940.6<br>902.6 | 2.2073<br>100.5<br>101.3 | 3.4310 | N/A | 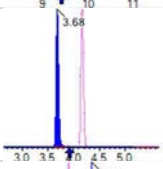 | 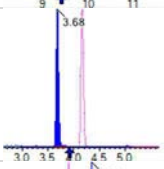 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 201982<br>( 341.0 / 217.0 ) 305858 | ( 5.59 , 1.08 ) ( N/A , -0.04 , 0.1) | 1269.8<br>900.4 | 1.5143<br>98.9<br>99.7 | 4.0330 | N/A | 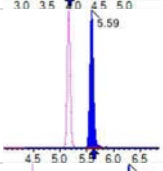 | 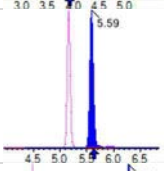 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 450737<br>( 441.0 / 337.0 ) 399929 | ( 9.27 , 1.80 ) ( N/A , -0.05 , 0.1) | 4529.3<br>183164.7 | 0.8873<br>103.9<br>100.6 | 4.2360 | N/A | 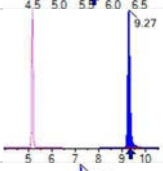 | 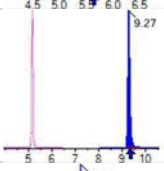 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 276336<br>( 357.2 / 243.0 ) 32529 | ( 5.84 , 1.00 ) ( -0.01 , N/A , 0.1) | 1004.6<br>202.1 | 0.1177<br>109.8<br>106.4 | 0.9400 | N/A | 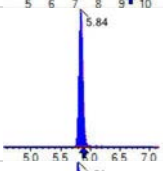 | 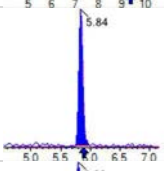 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 237559<br>( 457.2 / 343.0 ) 10720 | ( 8.59 , 1.00 ) ( -0.01 , N/A , -0.3) | 743.1<br>189.3 | 0.0451<br>100.6<br>103.3 | 1.0410 | N/A | 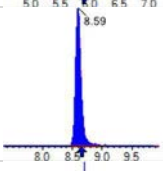 | 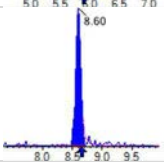 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 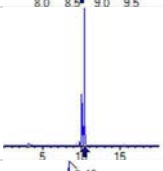 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 213955 | ( 3.40 , N/A ) ( N/A , -0.21 , N/A ) | 1751.9 | N/A | 0.7580 [ 1.0000 ] | 75.8% { 80.9% } | 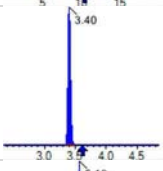 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 91195 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 4305.2 | N/A | 0.7720 [ 1.0000 ] | 77.2% { 78.8% } | 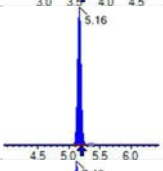 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 324139 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 5759.5 | N/A | 0.8350 [ 1.0000 ] | 83.5% { 89.8% } | 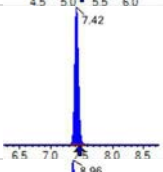 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 224679 | ( 8.96 , N/A ) ( N/A , -0.06 , N/A ) | 1310.5 | N/A | 0.7690 [ 1.0000 ] | 76.9% { 80.6% } | 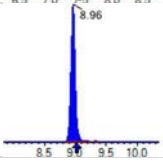 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 212331 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 4416.5 | N/A | 0.7410 [ 1.0000 ] | 74.1% { 76.9% } | 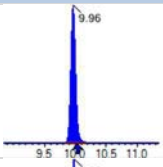 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 817670 | ( 8.08 , N/A ) ( N/A , -0.10 , N/A ) | 5951.5 | N/A | 0.8330 [ 1.0000 ] | 83.3% { 89.1% } | 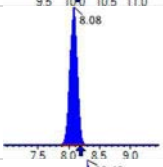 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 622498 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 1866.0 | N/A | 0.7930 [ 1.0000 ] | 79.3% { 80.7% } | 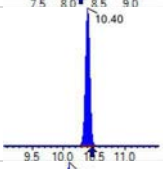 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1918618 | ( 3.40 , N/A ) ( N/A , -0.21 , N/A ) | 187182.3 | N/A | 8.2960 [ 8.0000 ] | 103.7% { 88.4% } | 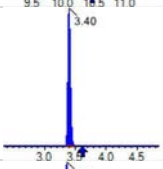 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 832643 | ( 4.16 , N/A ) ( N/A , -0.17 , N/A ) | 5767.3 | N/A | 4.9870 [ 4.0000 ] | 124.7% { 99.6% } | 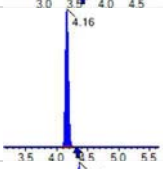 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 396808 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 8874.6 | N/A | 1.9890 [ 2.0000 ] | 99.4% { 82.5% } | 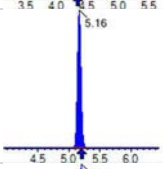 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 475611 | ( 6.29 , N/A ) ( N/A , -0.06 , N/A ) | 6169.4 | N/A | 2.1460 [ 2.0000 ] | 107.3% { 86.8% } | 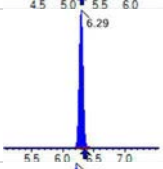 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 701874 | ( 7.42 , N/A ) ( N/A , -0.05 , N/A ) | 5154.1 | N/A | 2.0430 [ 2.0000 ] | 102.2% { 91.7% } | 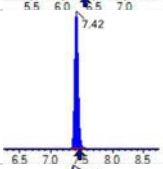 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 219638 | ( 8.96 , N/A ) ( N/A , -0.06 , N/A ) | 2940.5 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 81.5% } | 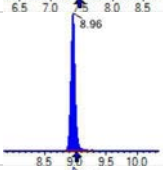 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 266231 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1270.3 | N/A | 1.0850 [ 1.0000 ] | 108.5% { 90.5% } | 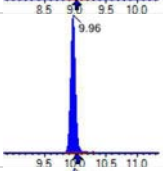 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 314797 | ( 10.88 , N/A ) ( N/A , -0.06 , N/A ) | 1084.4 | N/A | 1.0820 [ 1.0000 ] | 108.2% { 85.2% } | 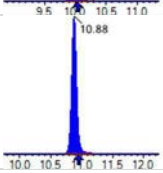 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 319579 | ( 11.77 , N/A ) ( N/A , -0.06 , N/A ) | 1585.9 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 88.1% } | 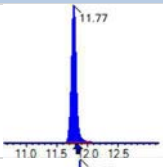 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 277988 | ( 13.07 , N/A ) ( N/A , -0.04 , N/A ) | 1361.6 | N/A | 1.0520 [ 1.0000 ] | 105.2% { 84.8% } | 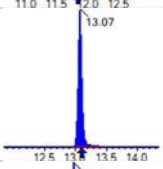 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 395355 | ( 13.98 , N/A ) ( N/A , -0.03 , N/A ) | 2096.8 | N/A | 1.7880 [ 2.0000 ] | 89.4% { 79.4% } | 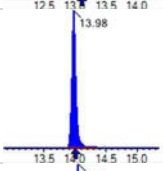 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1263200 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1323.4 | N/A | 1.9170 [ 2.0000 ] | 95.8% { 85.6% } | 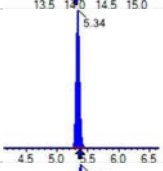 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1247392 | ( 8.07 , N/A ) ( N/A , -0.10 , N/A ) | 3934.3 | N/A | 2.1150 [ 2.0000 ] | 105.7% { 95.8% } | 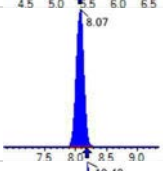 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1365355 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 1188.4 | N/A | 2.0620 [ 2.0000 ] | 103.1% { 94.5% } | 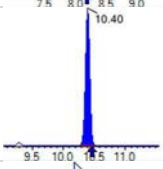 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 550890 | ( 4.79 , N/A ) ( N/A , -0.02 , N/A ) | 53.2 | N/A | 3.8000 [ 4.0000 ] | 95.0% { 84.7% } | 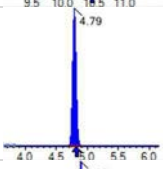 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1667277 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 3652.9 | N/A | 4.6810 [ 4.0000 ] | 117.0% { 94.7% } | 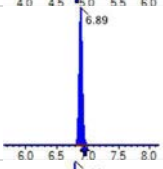 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1283951 | ( 9.29 , N/A ) ( N/A , -0.06 , N/A ) | 1967.8 | N/A | 4.1200 [ 4.0000 ] | 103.0% { 88.2% } | 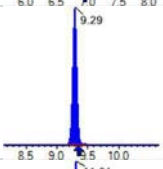 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2679673 | ( 11.01 , N/A ) ( N/A , -0.06 , N/A ) | 1760.0 | N/A | 7.9480 [ 8.0000 ] | 99.4% { 89.9% } | 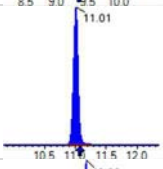 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1149598 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3465.8 | N/A | 1.6350 [ 2.0000 ] | 81.8% { 73.8% } | 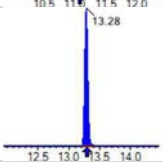 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (15)
Acquired: 2024/03/29 - 00:39

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 124202 | ( 14.56 , N/A ) ( N/A , -0.01 , N/A ) | 1109.1 | N/A | 0.7860 [ 2.0000 ] | 39.3% { 34.1% } | 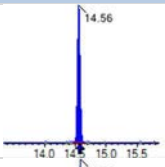  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 114450 | ( 14.88 , N/A ) ( N/A , -0.01 , N/A ) | 1025.9 | N/A | 0.7920 [ 2.0000 ] | 39.6% { 33.2% } | 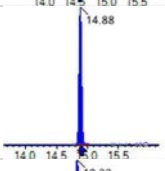  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 950009 | ( 10.33 , N/A ) ( N/A , -0.06 , N/A ) | 2839.4 | N/A | 4.1310 [ 4.0000 ] | 103.3% { 80.5% } | 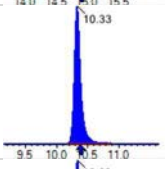  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 868068 | ( 10.93 , N/A ) ( N/A , -0.06 , N/A ) | 2271.5 | N/A | 4.1830 [ 4.0000 ] | 104.6% { 85.1% } | 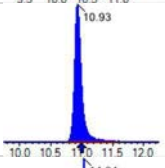  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 698789 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 1985.5 | N/A | 11.8330 [ 20.0000 ] | 59.2% { 52.6% } | 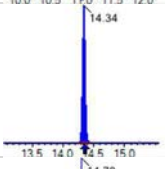  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 637508 | ( 14.70 , N/A ) ( N/A , -0.01 , N/A ) | 3146.1 | N/A | 11.5270 [ 20.0000 ] | 57.6% { 50.9% } | 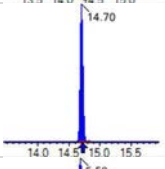  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 663106 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 1999.2 | N/A | 7.6730 [ 8.0000 ] | 95.9% { 80.2% } | 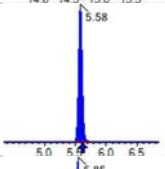  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 559366 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 2119.0 | N/A | 2.4170 [ 2.0000 ] | 120.9% { 99.6% } | 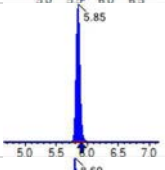  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 552401 | ( 8.60 , N/A ) ( N/A , -0.06 , N/A ) | 1273.3 | N/A | 2.1190 [ 2.0000 ] | 105.9% { 82.4% } | 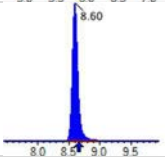  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD4a | File ID:a | S2024-03-28B (17)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 01:19a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 15.9a | 0.19a | 1.4a | |
| PFPeAa | 8.18a | 0.059a | 0.72a | |
| PFHxAa | 4.33a | 0.050a | 0.36a | |
| PFHpAa | 3.85a | 0.037a | 0.36a | |
| PFOAa | 4.03a | 0.14a | 0.36a | |
| PFNAa | 3.54a | 0.074a | 0.36a | |
| PFDAa | 3.63a | 0.091a | 0.36a | |
| PFUnAa | 3.64a | 0.14a | 0.36a | |
| PFDoAa | 3.65a | 0.10a | 0.36a | |
| PFTrDAa | 3.80a | 0.18a | 0.36a | |
| PFTeDAa | 3.76a | 0.18a | 0.36a | |
| PFHxDAa | 3.57a | 0.18a | 0.36a | |
| PFODAa | 3.41a | 0.18a | 0.36a | |
| PFBSa | 3.89a | 0.033a | 0.36a | |
| PFPeSa | 3.44a | 0.057a | 0.36a | |
| PFHxSa | 3.37a | 0.029a | 0.36a | MI5a |
| PFHpSa | 3.48a | 0.046a | 0.36a | |
| PFOSa | 5.63a | 0.057a | 0.36a | |
| PFNSa | 3.54a | 0.11a | 0.36a | |
| PFDSa | 3.57a | 0.14a | 0.36a | |
| PFDoSa | 3.66a | 0.11a | 0.36a | |
| 4:2FTSa | 14.5a | 0.26a | 1.4a | |
| 6:2FTSa | 13.8a | 0.28a | 1.4a | |
| 8:2FTSa | 14.3a | 0.074a | 1.4a | |
| 10:2FTSa | 12.2a | 0.36a | 1.4a | |
| PFOSAa | 3.69a | 0.094a | 0.36a | |
| NMeFOSAa | 14.2a | 0.43a | 1.4a | |
| NEtFOSAa | 12.8a | 0.37a | 1.4a | |
| NMeFOSAAa | 3.69a | 0.095a | 0.36a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

## Matrix Spike Dupa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0131a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0337-MSD4a | File ID:a | S2024-03-28B (17)a |
| Sampled:a | | Prepared:a | 03/22/24 10:26a | Analyzed:a | 03/29/24 01:19a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0337a | Sequence:a | SD01096a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 13.0a | 0.91a | 1.4a | |
| NEtFOSEa | 14.1a | 0.94a | 1.4a | |
| HFPO-DAa | 3.50a | 0.16a | 0.72a | |
| ADONAa | 3.85a | 0.11a | 0.72a | |
| PFEESAa | 7.19a | 0.098a | 0.72a | |
| PFMPAa | 7.40a | 0.049a | 0.72a | |
| PFMBAa | 7.35a | 0.082a | 0.72a | |
| NFDHAa | 7.39a | 0.27a | 0.72a | |
| 9Cl-PF3ONSa | 3.50a | 0.19a | 0.72a | |
| 11Cl-PF3OUDSa | 3.76a | 0.19a | 0.72a | |
| 3:3FTCAa | 13.9a | 0.52a | 1.4a | |
| 5:3FTCAa | 16.2a | 0.40a | 1.4a | |
| 7:3FTCAa | 16.9a | 0.50a | 1.4a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 120111<br>( 163.0 / 69.0 ) 3388 | ( 2.38 , 0.70 )<br>( N/A , -0.08 , -0.1) | 998.3<br>306.7 | 0.0282<br>102.9<br>107.5 | 2.3630 | N/A | 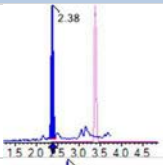 | 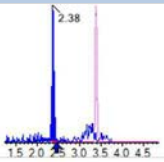 | MI2 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) 1055612 | ( 3.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1004.0 | N/A<br>0.0<br>0.0 | 4.4190 | N/A | 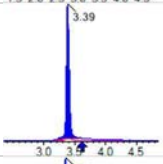 | | |
| PFPeA | ( 263.0 / 219.0 ) 418497<br>( 263.0 / 69.0 ) 5566 | ( 4.15 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1498.1<br>89.7 | 0.0133<br>111.8<br>125.0 | 2.2680 | N/A | 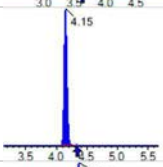 | 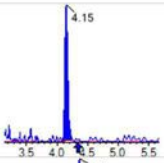 | |
| PFHxA | ( 313.0 / 269.0 ) 212158<br>( 313.0 / 119.0 ) 24388 | ( 5.16 , 1.00 )<br>( 0.00 , N/A , 0.1) | 998.8<br>456.3 | 0.1150<br>103.3<br>97.0 | 1.2020 | N/A | 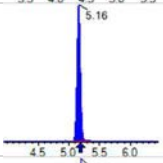 | 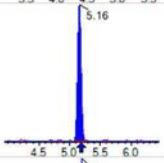 | |
| PFHpA | ( 363.0 / 319.0 ) 259000<br>( 363.0 / 169.0 ) 74366 | ( 6.30 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1179.2<br>1002.0 | 0.2871<br>93.9<br>93.3 | 1.0670 | N/A | 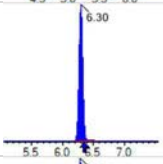 | 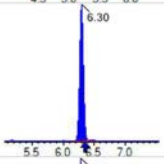 | |
| PFOA | ( 413.0 / 369.0 ) 403396<br>( 413.0 / 169.0 ) 143046 | ( 7.44 , 1.00 )<br>( 0.00 , N/A , 0.1) | 530.8<br>826.3 | 0.3546<br>99.2<br>100.0 | 1.1170 | N/A | 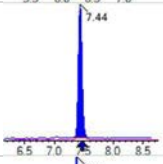 | 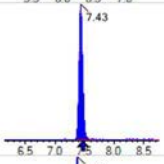 | |
| PFNA | ( 463.0 / 419.0 ) 230820<br>( 463.0 / 169.0 ) 58452 | ( 8.97 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1227.3<br>645.3 | 0.2532<br>103.1<br>98.7 | 0.9810 | N/A | 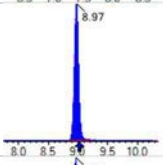 | 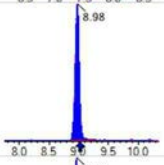 | |
| PFDA | ( 513.0 / 469.0 ) 265487<br>( 513.0 / 169.0 ) 30713 | ( 9.96 , 1.00 )<br>( 0.00 , N/A , 0.4) | 1690.1<br>1391.7 | 0.1157<br>97.1<br>95.0 | 1.0070 | N/A | 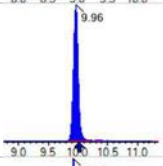 | 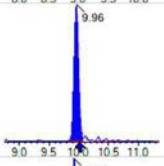 | |
| PFUnA | ( 563.0 / 519.0 ) 281862<br>( 563.0 / 169.0 ) 44585 | ( 10.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1029.5<br>443.5 | 0.1582<br>102.2<br>105.4 | 1.0080 | N/A | 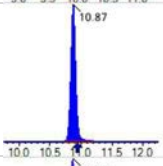 | 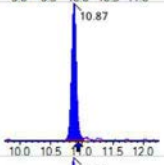 | |
| PFDoA | ( 613.0 / 569.0 ) 331243<br>( 613.0 / 169.0 ) 46381 | ( 11.77 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1194.9<br>390.9 | 0.1400<br>92.2<br>91.8 | 1.0130 | N/A | 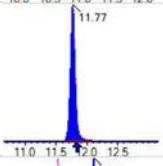 | 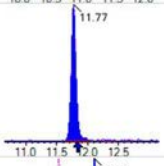 | |
| PFTrDA | ( 663.0 / 619.0 ) 334546<br>( 663.0 / 169.0 ) 84824 | ( 12.51 , 1.06 )<br>( N/A , -0.05 , 0.0) | 998.5<br>563.9 | 0.2535<br>94.2<br>96.2 | 1.0520 | N/A | 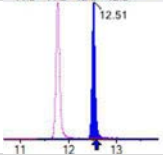 | 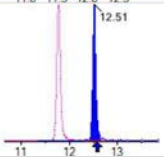 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 276321<br>( 713.0 / 169.0 ) 68827 | ( 13.06 , 1.00 ) ( 0.00 , N/A , -0.2) | 1000.1<br>458.3 | 0.2491<br>91.8<br>94.6 | 1.0420 | N/A | 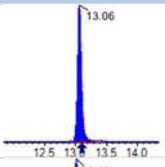 | 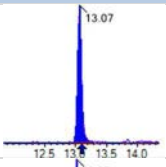 | |
| PFHxDA | ( 813.0 / 769.0 ) 195081<br>( 813.0 / 169.0 ) 52955 | ( 13.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 852.6<br>317.1 | 0.2715<br>103.8<br>100.6 | 0.9910 | N/A | 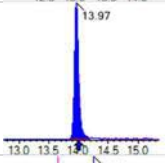 | 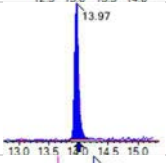 | |
| PFODA | ( 913.0 / 869.0 ) 117810<br>( 913.0 / 169.0 ) 41156 | ( 14.70 , 1.05 ) ( N/A , -0.04 , -0.2) | 477.5<br>192.7 | 0.3493<br>111.4<br>104.4 | 0.9450 | N/A | 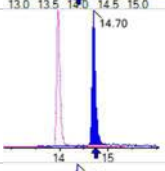 | 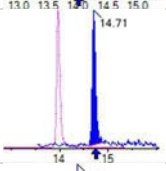 | |
| PFBS | ( 299.0 / 80.0 ) 322755<br>( 299.0 / 99.0 ) 252383 | ( 5.33 , 1.00 ) ( 0.00 , N/A , -0.1) | 1423.4<br>1571.8 | 0.7820<br>105.6<br>103.7 | 1.0780 | N/A | 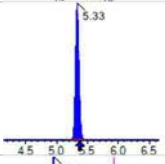 | 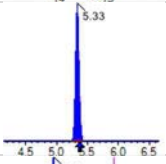 | |
| PFPeS | ( 349.0 / 80.0 ) 824714<br>( 349.0 / 99.0 ) 279612 | ( 6.62 , 0.81 ) ( N/A , -0.05 , 0.1) | 2576.1<br>1705.9 | 0.3390<br>99.2<br>95.4 | 0.9530 | N/A | 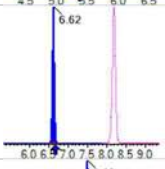 | 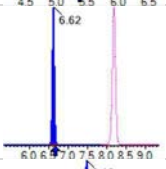 | |
| PFHxS | ( 399.0 / 80.0 ) 985573<br>( 399.0 / 99.0 ) 319845 | ( 8.19 , 1.00 ) ( 0.00 , N/A , 0.2) | 2305.8<br>2515.5 | 0.3245<br>98.9<br>100.5 | 0.9340 | N/A | 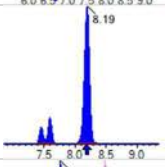 | 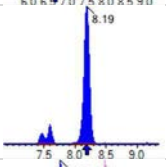 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 783253<br>( 449.0 / 99.0 ) 214051 | ( 9.45 , 0.91 ) ( N/A , -0.06 , 0.0) | 1612.8<br>1187.3 | 0.2733<br>104.7<br>105.3 | 0.9640 | N/A | 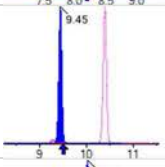 | 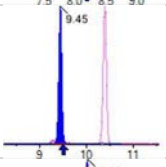 | |
| PFOS | ( 499.0 / 80.0 ) 1232092<br>( 499.0 / 99.0 ) 269860 | ( 10.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 1292.5<br>2636.0 | 0.2190<br>94.8<br>95.6 | 1.5600 | N/A | 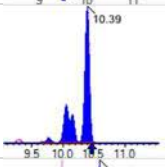 | 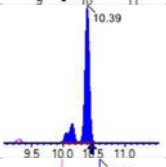 | |
| PFNS | ( 549.0 / 80.0 ) 706505<br>( 549.0 / 99.0 ) 194196 | ( 11.27 , 1.08 ) ( N/A , -0.07 , -0.1) | 1623.9<br>1380.5 | 0.2749<br>102.6<br>100.0 | 0.9810 | N/A | 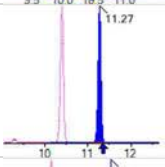 | 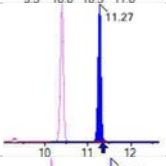 | |
| PFDS | ( 599.0 / 80.0 ) 871439<br>( 599.0 / 99.0 ) 250955 | ( 12.09 , 1.16 ) ( N/A , -0.06 , 0.1) | 1744.8<br>1103.1 | 0.2880<br>113.1<br>106.8 | 0.9900 | N/A | 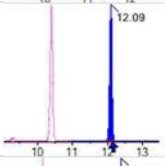 | 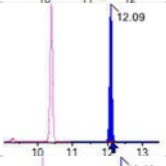 | |
| PFDoS | ( 699.0 / 80.0 ) 863963<br>( 699.0 / 99.0 ) 205089 | ( 13.13 , 1.26 ) ( N/A , -0.04 , 0.1) | 3320.8<br>1664.0 | 0.2374<br>106.2<br>100.5 | 1.0150 | N/A | 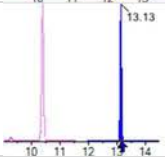 | 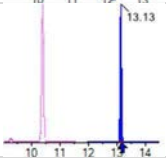 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1424829<br>( 327.0 / 81.0 ) 1221578 | ( 4.78 , 1.00 ) ( -0.01 , N/A , 0.0) | 5923.2<br>2167.3 | 0.8574<br>100.5<br>97.9 | 4.0350 | N/A | 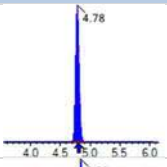 | 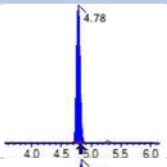 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1369803<br>( 427.0 / 81.0 ) 1783406 | ( 6.89 , 1.00 ) ( 0.00 , N/A , 0.1) | 5609.0<br>3803.4 | 1.3019<br>101.0<br>100.3 | 3.8340 | N/A | 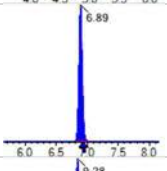 | 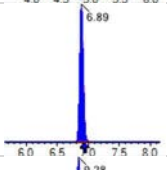 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1354502<br>( 527.0 / 81.0 ) 1346664 | ( 9.28 , 1.00 ) ( -0.01 , N/A , 0.0) | 2642.4<br>2441.2 | 0.9942<br>90.1<br>90.2 | 3.9540 | N/A | 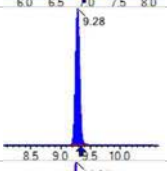 | 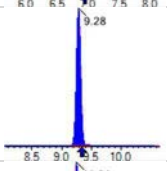 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1054679<br>( 627.0 / 81.0 ) 1595115 | ( 11.01 , 1.00 ) ( 0.01 , N/A , 0.2) | 1452.9<br>1381.7 | 1.5124<br>105.2<br>104.4 | 3.3710 | N/A | 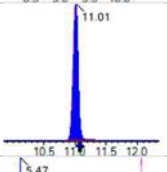 | 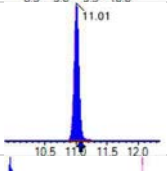 | |
| PFBSA | ( 297.9 / 78.0 ) 313711<br>( 297.9 / 278.0 ) 227 | ( 5.47 , 0.38 ) ( N/A , -0.05 , -2.4) | 1161.4<br>2.7 | 0.0007<br>56.0<br>64.4 | 1.8540 | N/A | 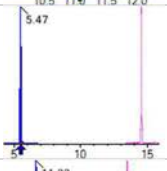 | 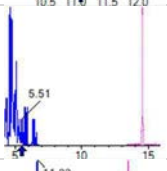 | |
| PFHxSA | ( 397.9 / 78.0 ) 839423<br>( 397.9 / 378.0 ) 3961 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.3) | 2197.0<br>165.6 | 0.0047<br>116.8<br>107.6 | 2.4450 | N/A | 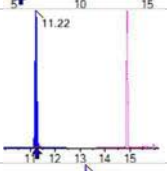 | 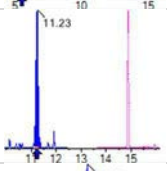 | |
| PFOSA | ( 498.0 / 78.0 ) 575339<br>( 498.0 / 478.0 ) 7822 | ( 13.27 , 1.00 ) ( -0.01 , N/A , -0.2) | 1946.6<br>198.9 | 0.0136<br>92.5<br>102.2 | 1.0250 | N/A | 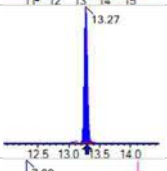 | 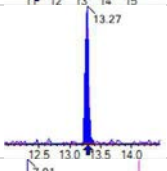 | |
| TFSI | ( 279.7 / 147.0 ) 929048<br>( 279.7 / 211.0 ) 84860 | ( 7.00 , 0.53 ) ( N/A , -0.06 , -0.1) | 84.9<br>543944.5 | 0.0913<br>103.2<br>104.2 | 0.9470 | N/A | 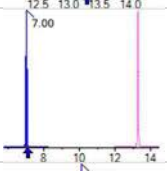 | 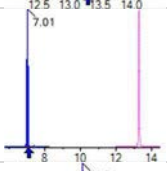 | |
| NMeFOSA | ( 512.0 / 219.0 ) 195029<br>( 512.0 / 169.0 ) 140013 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 1.1) | 1730.9<br>687.2 | 0.7179<br>93.7<br>96.4 | 3.9350 | N/A | 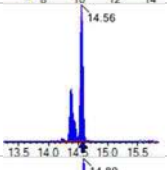 | 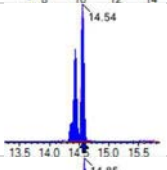 | |
| NEtFOSA | ( 526.0 / 219.0 ) 220048<br>( 526.0 / 169.0 ) 274487 | ( 14.89 , 1.00 ) ( 0.01 , N/A , 2.4) | 1488.6<br>1520.1 | 1.2474<br>99.8<br>100.2 | 3.5610 | N/A | 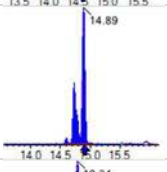 | 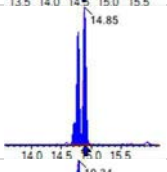 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 219388<br>( 570.0 / 483.0 ) 102813 | ( 10.34 , 1.00 ) ( 0.00 , N/A , -0.2) | 13305.9<br>1361.8 | 0.4686<br>101.0<br>100.4 | 1.0230 | N/A | 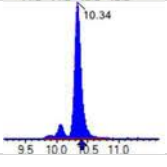 | 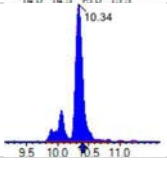 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 211987<br>( 584.0 / 526.0 ) 129829 | ( 10.95 , 1.00 )<br>( 0.02 , N/A , 0.2) | 13923.3<br>585.4 | 0.6124<br>102.1<br>102.4 | 1.0110 | N/A | 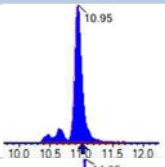 | 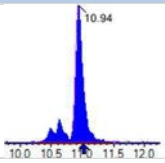 | |
| NMeFOSE | ( 616.0 / 59.0 ) 90468 | ( 14.35 , 1.00 )<br>( 0.02 , N/A , 0.0) | 489.4 | N/A<br>0.0<br>0.0 | 3.6130 | N/A | 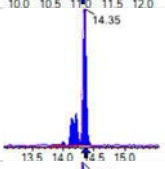 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 75142 | ( 14.72 , 1.00 )<br>( 0.02 , N/A , 0.0) | 594.4 | N/A<br>0.0<br>0.0 | 3.9140 | N/A | 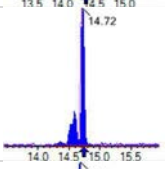 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 49142<br>( 285.0 / 185.0 ) 130318 | ( 5.58 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1400.0<br>1043.5 | 2.6518<br>94.5<br>100.4 | 0.9700 | N/A | 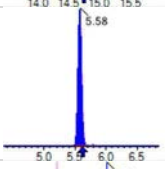 | 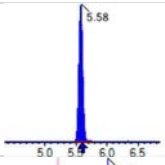 | |
| ADONA | ( 377.0 / 85.0 ) 714021<br>( 377.0 / 251.0 ) 79857 | ( 6.74 , 1.21 )<br>( N/A , -0.05 , 0.0) | 1826.6<br>624.1 | 0.1118<br>106.6<br>112.2 | 1.0690 | N/A | 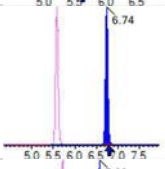 | 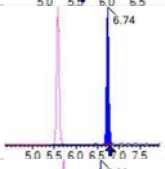 | |
| PFEESA | ( 315.0 / 135.0 ) 256216<br>( 315.0 / 83.0 ) 154143 | ( 5.92 , 1.15 )<br>( N/A , -0.05 , 0.0) | 2267.8<br>571.1 | 0.6016<br>93.7<br>102.9 | 1.9950 | N/A | 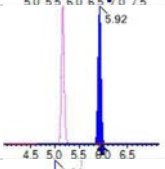 | 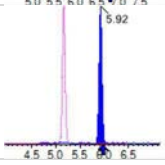 | |
| PFMPA | ( 229.0 / 85.0 ) 139189 | ( 3.64 , 0.88 )<br>( N/A , -0.22 , 0.0) | 2849.6 | N/A<br>0.0<br>0.0 | 2.0520 | N/A | 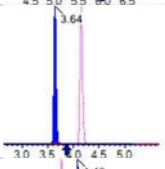 | | |
| PFMBA | ( 279.0 / 85.0 ) 311548 | ( 4.43 , 1.07 )<br>( N/A , -0.12 , 0.0) | 2416.0 | N/A<br>0.0<br>0.0 | 2.0390 | N/A | 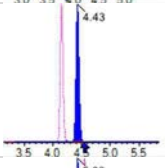 | | |
| NFDHA | ( 295.0 / 201.0 ) 128484<br>( 295.0 / 85.0 ) 136493 | ( 5.03 , 0.97 )<br>( N/A , -0.03 , 0.0) | 1936.7<br>1353.3 | 1.0623<br>106.8<br>103.0 | 2.0500 | N/A | 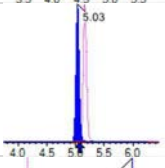 | 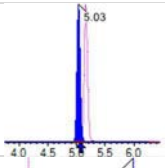 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 720930<br>( 533.0 / 353.0 ) 230342 | ( 11.07 , 1.98 )<br>( N/A , -0.07 , -0.1) | 2029.4<br>1668.6 | 0.3195<br>100.2<br>96.3 | 0.9710 | N/A | 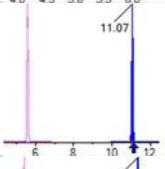 | 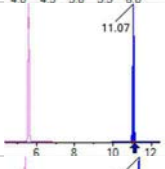 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 601195<br>( 633.0 / 453.0 ) 206916 | ( 12.57 , 2.25 )<br>( N/A , -0.05 , 0.0) | 2992.1<br>1719.8 | 0.3442<br>101.4<br>101.2 | 1.0420 | N/A | 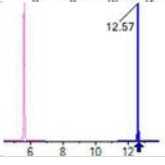 | 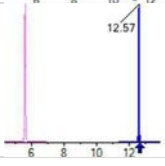 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 364139<br>( 461.0 / 381.2 ) 139997 | ( 9.35 , 0.90 ) ( N/A , -0.05 , 0.1) | 3565.9<br>2097.7 | 0.3845<br>99.5<br>96.8 | 0.8590 | N/A | 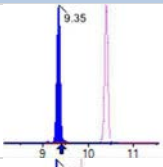 | 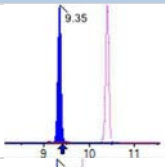 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 61189<br>( 241.0 / 117.0 ) 137845 | ( 3.67 , 0.88 ) ( N/A , -0.25 , 0.1) | 2155.6<br>883.9 | 2.2528<br>102.6<br>103.4 | 3.8640 | N/A | 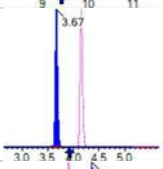 | 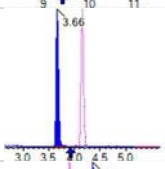 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 216082<br>( 341.0 / 217.0 ) 306732 | ( 5.59 , 1.08 ) ( N/A , -0.04 , -0.1) | 1487.1<br>809.3 | 1.4195<br>92.7<br>93.4 | 4.4990 | N/A | 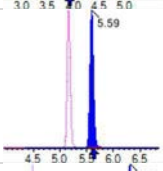 | 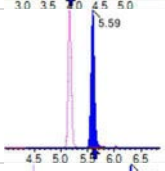 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 478140<br>( 441.0 / 337.0 ) 411221 | ( 9.31 , 1.80 ) ( N/A , -0.02 , 0.0) | 19565.8<br>32059.3 | 0.8600<br>100.7<br>97.5 | 4.6860 | N/A | 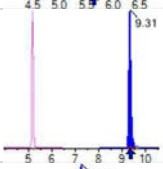 | 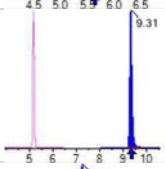 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 268446<br>( 357.2 / 243.0 ) 33377 | ( 5.85 , 1.00 ) ( -0.01 , N/A , 0.2) | 946.9<br>260.9 | 0.1243<br>115.9<br>112.4 | 0.8690 | N/A | 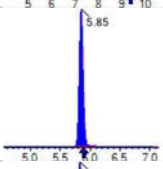 | 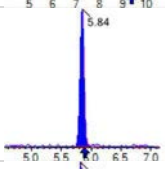 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 226009<br>( 457.2 / 343.0 ) 9584 | ( 8.62 , 1.00 ) ( -0.01 , N/A , 0.1) | 891.0<br>152.8 | 0.0424<br>94.5<br>97.1 | 0.9970 | N/A | 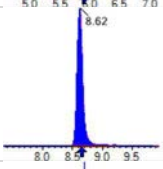 | 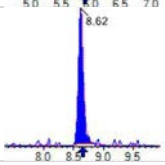 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 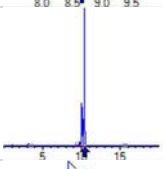 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 245561 | ( 3.39 , N/A ) ( N/A , -0.22 , N/A ) | 1952.4 | N/A | 0.8700<br>[ 1.0000 ] | 87.0%<br>{ 92.9% } | 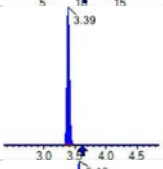 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 107988 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 12731.3 | N/A | 0.9150<br>[ 1.0000 ] | 91.5%<br>{ 93.3% } | 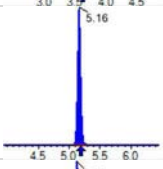 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 368440 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 4620.9 | N/A | 0.9490<br>[ 1.0000 ] | 94.9%<br>{ 102.1% } | 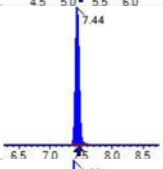 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 245797 | ( 8.98 , N/A ) ( N/A , -0.05 , N/A ) | 1412.3 | N/A | 0.8410<br>[ 1.0000 ] | 84.1%<br>{ 88.2% } | 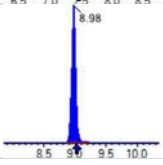 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 233192 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 4408.9 | N/A | 0.8140 [ 1.0000 ] | 81.4% { 84.5% } | 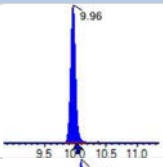 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 930071 | ( 8.19 , N/A ) ( N/A , 0.02 , N/A ) | 7286.5 | N/A | 0.9470 [ 1.0000 ] | 94.7% { 101.3% } | 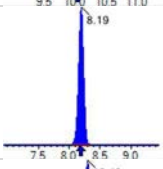 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 711495 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 2777.0 | N/A | 0.9070 [ 1.0000 ] | 90.7% { 92.3% } | 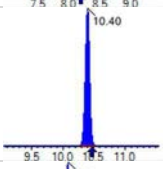 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1796327 | ( 3.39 , N/A ) ( N/A , -0.22 , N/A ) | 81475.7 | N/A | 6.7680 [ 8.0000 ] | 84.6% { 82.7% } | 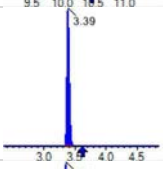 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 739081 | ( 4.15 , N/A ) ( N/A , -0.18 , N/A ) | 5800.9 | N/A | 3.7380 [ 4.0000 ] | 93.5% { 88.4% } | 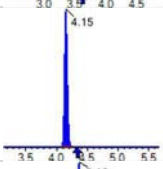 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 380504 | ( 5.16 , N/A ) ( N/A , -0.03 , N/A ) | 4703.7 | N/A | 1.6110 [ 2.0000 ] | 80.5% { 79.1% } | 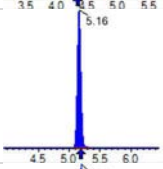 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 489263 | ( 6.30 , N/A ) ( N/A , -0.06 , N/A ) | 13287.9 | N/A | 1.8650 [ 2.0000 ] | 93.2% { 89.3% } | 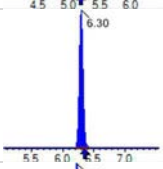 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 719234 | ( 7.43 , N/A ) ( N/A , -0.03 , N/A ) | 5680.9 | N/A | 1.8420 [ 2.0000 ] | 92.1% { 93.9% } | 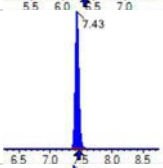 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 234133 | ( 8.97 , N/A ) ( N/A , -0.05 , N/A ) | 4411.0 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 86.8% } | 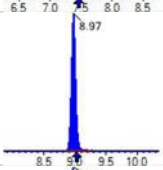 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 264062 | ( 9.96 , N/A ) ( N/A , -0.06 , N/A ) | 1156.0 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 89.8% } | 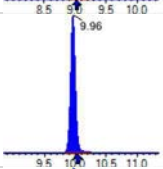 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 307886 | ( 10.87 , N/A ) ( N/A , -0.06 , N/A ) | 917.6 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 83.4% } | 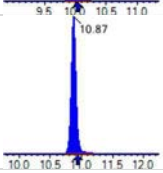 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 325793 | ( 11.77 , N/A ) ( N/A , -0.06 , N/A ) | 1452.2 | N/A | 0.9940 [ 1.0000 ] | 99.4% { 89.8% } | 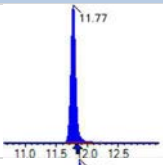 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 283848 | ( 13.07 , N/A ) ( N/A , -0.04 , N/A ) | 1235.6 | N/A | 0.9780 [ 1.0000 ] | 97.8% { 86.6% } | 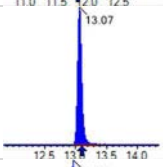 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 420268 | ( 13.97 , N/A ) ( N/A , -0.04 , N/A ) | 2265.2 | N/A | 1.7300 [ 2.0000 ] | 86.5% { 84.4% } | 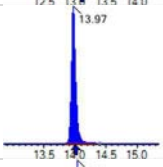 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1217776 | ( 5.34 , N/A ) ( N/A , -0.03 , N/A ) | 1635.1 | N/A | 1.6240 [ 2.0000 ] | 81.2% { 82.6% } | 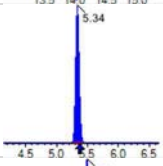 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1204382 | ( 8.19 , N/A ) ( N/A , 0.02 , N/A ) | 7156.3 | N/A | 1.7950 [ 2.0000 ] | 89.8% { 92.5% } | 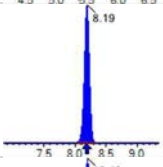 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1360723 | ( 10.40 , N/A ) ( N/A , -0.07 , N/A ) | 1305.2 | N/A | 1.7980 [ 2.0000 ] | 89.9% { 94.2% } | 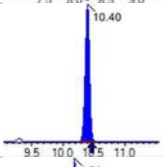 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 535068 | ( 4.79 , N/A ) ( N/A , -0.03 , N/A ) | 66.1 | N/A | 3.2440 [ 4.0000 ] | 81.1% { 82.2% } | 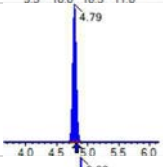 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1683795 | ( 6.89 , N/A ) ( N/A , -0.05 , N/A ) | 5217.9 | N/A | 4.1560 [ 4.0000 ] | 103.9% { 95.7% } | 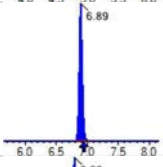 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1393129 | ( 9.29 , N/A ) ( N/A , -0.05 , N/A ) | 2287.6 | N/A | 3.9300 [ 4.0000 ] | 98.3% { 95.7% } | 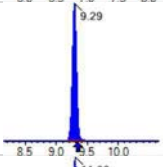 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3152169 | ( 11.00 , N/A ) ( N/A , -0.07 , N/A ) | 1837.9 | N/A | 8.2200 [ 8.0000 ] | 102.8% { 105.8% } | 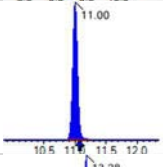 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1160693 | ( 13.28 , N/A ) ( N/A , -0.01 , N/A ) | 3176.7 | N/A | 1.4440 [ 2.0000 ] | 72.2% { 74.5% } | 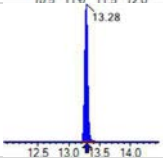 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0337-MSD4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28B (17)
Acquired: 2024/03/29 - 01:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 111538 | ( 14.55 , N/A ) ( N/A , -0.02 , N/A ) | 935.4 | N/A | 0.6170 [ 2.0000 ] | 30.9% { 30.6% } | 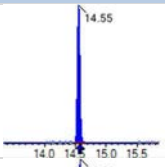 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 109092 | ( 14.88 , N/A ) ( N/A , -0.02 , N/A ) | 949.2 | N/A | 0.6610 [ 2.0000 ] | 33.0% { 31.7% } | 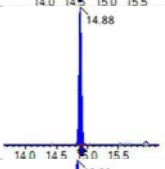 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 929906 | ( 10.33 , N/A ) ( N/A , -0.06 , N/A ) | 3698.3 | N/A | 3.5380 [ 4.0000 ] | 88.5% { 78.8% } | 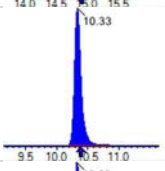 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 864759 | ( 10.93 , N/A ) ( N/A , -0.06 , N/A ) | 2325.8 | N/A | 3.6460 [ 4.0000 ] | 91.1% { 84.8% } | 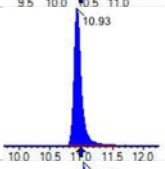 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 462581 | ( 14.34 , N/A ) ( N/A , -0.01 , N/A ) | 1185.9 | N/A | 6.8530 [ 20.0000 ] | 34.3% { 34.8% } | 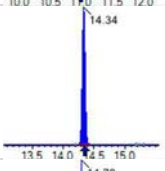 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 403032 | ( 14.70 , N/A ) ( N/A , -0.02 , N/A ) | 1934.6 | N/A | 6.3760 [ 20.0000 ] | 31.9% { 32.2% } | 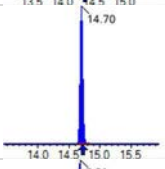 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 690356 | ( 5.58 , N/A ) ( N/A , -0.04 , N/A ) | 2484.2 | N/A | 6.7460 [ 8.0000 ] | 84.3% { 83.4% } | 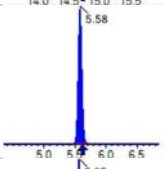 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 587748 | ( 5.85 , N/A ) ( N/A , -0.05 , N/A ) | 1528.1 | N/A | 2.3130 [ 2.0000 ] | 115.6% { 104.6% } | 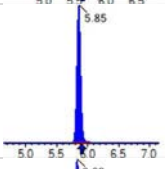 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 548337 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 940.5 | N/A | 1.9150 [ 2.0000 ] | 95.8% { 81.8% } | 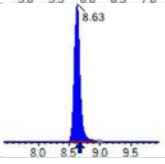 | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | PPL, LLC | Work Order: | 24C0131A |
| Client: | Tidewater, Inc. | Project: | JPL-GW Monitoring |
| Batch: | BDC0337A Batch Matrix: Water | Preparation: | EPA 1633A |

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-15- | 24C0131-01- | 03/22/24 10:26- | 565.91- | 2.00- |
| MW-8- | 24C0131-02- | 03/22/24 10:26- | 556.50- | 2.00- |
| MW-9 | 24C0131-03- | 03/22/24 10:26- | 549.66- | 2.00- |
| EB-8-032024- | 24C0131-04- | 03/22/24 10:26- | 540.18- | 2.00- |
| FB-8-032024- | 24C0131-05- | 03/22/24 10:26- | 524.23- | 2.00- |
| Blank- | BDC0337-BLK1- | 03/22/24 10:26- | 500.00- | 2.00- |
| LCS- | BDC0337-BS1- | 03/22/24 10:26- | 500.00- | 2.00- |
| MRL Check- | BDC0337-MRL1- | 03/22/24 10:26- | 500.00- | 2.00- |
| MW-15- | BDC0337-MS3- | 03/22/24 10:26- | 564.34- | 2.00- |
| MW-8- | BDC0337-MS4- | 03/22/24 10:26- | 544.41- | 2.00- |
| MW-15- | BDC0337-MSD3- | 03/22/24 10:26- | 556.06- | 2.00- |
| MW-8- | BDC0337-MSD4- | 03/22/24 10:26- | 554.65- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/26/2024 10:40 am

BDC0337

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Target Weight (g) | Solids (%) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0121-01 A | MW-20-4 F | | | 7 | 3/22/2024 10:26:00AM | 547.386 | 2 | | 200 , 200 | |
| 24C0121-02 A | MW-20-3 F | | | 7 | 3/22/2024 10:26:00AM | 545.585 | 2 | | 200 , 200 | |
| 24C0121-03 A | MW-20-2 F | | | 7 | 3/22/2024 10:26:00AM | 546.747 | 2 | | 200 , 200 | |
| 24C0121-04 A | MW-20-1 F | | | 7 | 3/22/2024 10:26:00AM | 556.711 | 2 | | 200 , 200 | |
| 24C0121-05 A | MW-6 F | | | 7 | 3/22/2024 10:26:00AM | 526.954 | 2 | | 200 , 200 | |
| 24C0121-06 A | MW-10 F | | | 7 | 3/22/2024 10:26:00AM | 552.42 | 2 | | 200 , 200 | |
| 24C0121-07 A | DUP-5-031924 F | | | 7 | 3/22/2024 10:26:00AM | 537.756 | 2 | | 200 , 200 | |
| 24C0121-08 A | MW-5 F | | | 7 | 3/22/2024 10:26:00AM | 547.654 | 2 | | 200 , 200 | |
| 24C0121-09 A | EB-7-031924 F | | | 7 | 3/22/2024 10:26:00AM | 553.705 | 2 | | 200 , 200 | |
| 24C0121-10 A | FB-7-031924 F | | | 7 | 3/22/2024 10:26:00AM | 533.584 | 2 | | 200 , 200 | |
| 24C0131-01 A | MW-15 M | | | 7 | 3/22/2024 10:26:00AM | 565.905 | 2 | | 200 , 200 | |
| 24C0131-02 A | MW-8 M | | | 7 | 3/22/2024 10:26:00AM | 556.501 | 2 | | 200 , 200 | |
| 24C0131-03 A | MW-9 M | | | 7 | 3/22/2024 10:26:00AM | 549.663 | 2 | | 200 , 200 | |
| 24C0131-04 A | EB-8-032024 M | | | 7 | 3/22/2024 10:26:00AM | 540.175 | 2 | | 200 , 200 | |
| 24C0131-05 A | FB-8-032024 M | | | 7 | 3/22/2024 10:26:00AM | 524.233 | 2 | | 200 , 200 | |
| BDC0337-BLK1 | Blank | | | | 3/22/2024 10:26:00AM | 500 | 2 | | 200 , 200 | |
| BDC0337-BS1 | LCS | | | | 3/22/2024 10:26:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MRL1 | MRL Check | | | | 3/22/2024 10:26:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0337-MS1 | Matrix Spike [24C0121-05] | | | | 3/22/2024 10:26:00AM | 554.709 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS2 | Matrix Spike [24C0121-08] | | | | 3/22/2024 10:26:00AM | 549.146 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS3 | Matrix Spike [24C0131-01] | | | | 3/22/2024 10:26:00AM | 564.34 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS4 | Matrix Spike [24C0131-02] | | | | 3/22/2024 10:26:00AM | 544.408 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD1 | Matrix Spike Dup [24C0121-05 | | | | 3/22/2024 10:26:00AM | 550.169 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD2 | Matrix Spike Dup [24C0121-08 | | | | 3/22/2024 10:26:00AM | 569.041 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD3 | Matrix Spike Dup [24C0131-01 | | | | 3/22/2024 10:26:00AM | 556.06 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD4 | Matrix Spike Dup [24C0131-02 | | | | 3/22/2024 10:26:00AM | 554.645 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**
1633

**Spiking Solution(s)**
24B0012 PFAS - MIX 1633 10ng/mL rev1
24C0392 1633 MIX B 5C 10ng/mL

**Surrogate Solution(s)**
24B0553 MPFAC-HIF-ES 20.0ng/mL
24C0424 1633 EIS MIXB 20-80ng/mL

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3/26/24



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/26/2024 10:40 am

BDC0337

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47,IG-88
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24A0488 | Am. Ac. preservative | R021040 |
| 24C0298 | Reagent -0.3M Formic Acid | 50009265 |
| 24C0390 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |
| 24C0391 | Reagent - 0.05MFA | x |
| 24C0421 | Reagent -0.3M Formic Acid | 50009265 |

Batch Comments:

Spiked By: ABK1 3/22/24 10:26
Witness By: MNM2 3/22/24 10:26
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23172102PB,24002101PA
Concentration: 3/26/24 7:49-08:07
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By DLS Date 3/26/24





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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/22/2024 6:48 am

BDC0337

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID (ID's Confirmed By: ABL1) | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24C0121-01 | A | MW-20-4 | F | 593.091 | 45.705 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-02 | A | MW-20-3 | F | 590.615 | 45.030 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-03 | A | MW-20-2 | F | 592.583 | 45.836 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-04 | A | MW-20-1 | F | 602.476 | 45.765 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-05 | A | MW-6 | F | 572.886 | 45.932 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-06 | A | MW-10 | F | 597.993 | 45.573 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-07 | A | DUP-5-031924 | F | 583.729 | 45.973 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-08 | A | MW-5 | F | 593.558 | 45.904 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-09 | A | EB-7-031924 | F | 599.224 | 45.519 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0121-10 | A | FB-7-031924 | F | 578.710 | 45.126 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-01 | A | MW-15 | M | 611.576 | 45.671 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-02 | A | MW-8 | M | 600.735 | 44.234 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-03 | A | MW-9 | M | 593.767 | 44.104 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-04 | A | EB-8-032024 | M | 586.228 | 46.053 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| 24C0131-05 | A | FB-8-032024 | M | 568.573 | 44.340 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| BDC0337-BLK1 | | Blank | | | | 7 | 3/22/2024 6:46:00AM | 500 | 2 | | 200 , 200 | |
| BDC0337-BS1 | | LCS | | | | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MRL1 | | MRL Check | | | | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |
| BDC0337-MS1 | B | Matrix Spike [24C0121-05] | | 600.228 | 45.519 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS2 | B | Matrix Spike [24C0121-08] | | 594.910 | 45.764 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS3 | B | Matrix Spike [24C0131-01] | | 609.985 | 45.645 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MS4 | B | Matrix Spike [24C0131-02] | | 588.400 | 43.992 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD1 | C | Matrix Spike Dup [24C0121-05] | | 595.323 | 45.154 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD2 | C | Matrix Spike Dup [24C0121-08] | | 614.507 | 45.466 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD3 | C | Matrix Spike Dup [24C0131-01] | | 601.355 | 45.295 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0337-MSD4 | C | Matrix Spike Dup [24C0131-02] | | 599.863 | 45.218 | 7 | 3/22/2024 6:46:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0012 | PFAS - MIX 1633 10ng/mL rev1 |
| 24C0392 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

24B0552
+ 24B0553 MPFAC-HIF-ES 20.0ng/mL
24C0424 1633 EIS MIXB 20-80ng/mL
24C0423
24C0280

ABL1/MNM2 @1026 3/22/24
Spiking Witnessed By — Date

ABL1 3/26/24
Preparation Reviewed By — Date

Extracts Received By — Date



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/22/2024 6:48 am

BDC0337

(Continued)

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HL-47, IG-88
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 24C0421 | .3m FA | |
| 24C0298 | .3m FA | |
| 24C0391 | 0.05 FA | |
| 24C0390 | 1% AmOH | |
| 24A0488 | Am-Ac Preservative | |

Batch Comments:

Spiked By: ABK1 @1026 3/22/24
Witness By: MMM2 @1026 3/22/24
pH Lot: 10BDH3431
Biotage Cartridge Lot: MS4 – MSD4: 24002101PA all other samples: 23172102PB
Concentration: Start: 3/26/24 @ 0749 → end 3/26/24 @0807
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





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# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01096A | Instrument:A | SaphiraA |
| Calibration: | 2413019A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration Blankl | SD01096-CCB1A | S2024-03-28B (1)A | 03/28/24 19:51A |
| Low Cal Checkl | SD01096-LCV1A | S2024-03-28B (2)A | 03/28/24 20:12A |
| Calibration Checkl | SD01096-CCV1A | S2024-03-28B (3)A | 03/28/24 20:32A |
| Performance Mixl | SD01096-PEM1A | S2024-03-28B (4)A | 03/28/24 20:53A |
| Performance Mixl | SD01096-PEM2A | S2024-03-28B (5)A | 03/28/24 21:13A |
| Calibration Blankl | SD01096-CCB2A | S2024-03-28B (6)A | 03/28/24 21:34A |
| Blankl | BDC0337-BLK1A | S2024-03-28B (7)A | 03/28/24 21:54A |
| LCSl | BDC0337-BS1A | S2024-03-28B (8)A | 03/28/24 22:15A |
| MRL Checkl | BDC0337-MRL1A | S2024-03-28B (9)A | 03/28/24 22:35A |
| MW-15l | BDC0337-MS3A | S2024-03-28B (14)A | 03/29/24 00:18A |
| MW-15l | BDC0337-MSD3A | S2024-03-28B (15)A | 03/29/24 00:39A |
| MW-8l | BDC0337-MS4A | S2024-03-28B (16)A | 03/29/24 00:59A |
| MW-8l | BDC0337-MSD4A | S2024-03-28B (17)A | 03/29/24 01:19A |
| Calibration Checkl | SD01096-CCV2A | S2024-03-28B (28)A | 03/29/24 05:05A |
| Calibration Blankl | SD01096-CCB3A | S2024-03-28B (29)A | 03/29/24 05:26A |
| MW-15l | 24C0131-01A | S2024-03-28B (30)A | 03/29/24 05:46A |
| MW-8l | 24C0131-02A | S2024-03-28B (31)A | 03/29/24 06:07A |
| MW-9l | 24C0131-03A | S2024-03-28B (32)A | 03/29/24 06:27A |
| EB-8-032024l | 24C0131-04A | S2024-03-28B (33)A | 03/29/24 06:48A |
| FB-8-032024l | 24C0131-05A | S2024-03-28B (34)A | 03/29/24 07:08A |
| Calibration Checkl | SD01096-CCV3A | S2024-03-28B (35)A | 03/29/24 07:29A |
| Calibration Blankl | SD01096-CCB4A | S2024-03-28B (36)A | 03/29/24 07:49A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0131A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01148A | Instrument:A | SaphiraA |
| Calibration: | 2413019A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD01148-CAL1A | S2024-03-28A (1)A | 03/28/24 15:25A |
| Cal Standardl | SD01148-CAL2A | S2024-03-28A (2)A | 03/28/24 15:45A |
| Cal Standardl | SD01148-CAL3A | S2024-03-28A (3)A | 03/28/24 16:06A |
| Cal Standardl | SD01148-CAL4A | S2024-03-28A (4)A | 03/28/24 16:26A |
| Cal Standardl | SD01148-CAL5A | S2024-03-28A (5)A | 03/28/24 16:47A |
| Cal Standardl | SD01148-CAL6A | S2024-03-28A (6)A | 03/28/24 17:07A |
| Cal Standardl | SD01148-CAL7A | S2024-03-28A (7)A | 03/28/24 17:28A |
| Cal Standardl | SD01148-CAL8A | S2024-03-28A (8)A | 03/28/24 17:48A |
| Initial Cal Blankl | SD01148-ICB1A | S2024-03-28A (9)A | 03/28/24 18:09A |
| Secondary Cal Checkl | SD01148-SCV1A | S2024-03-28A (10)A | 03/28/24 18:29A |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FPrPA | **LOT NUMBER:** | FPrPA1020 |
| **COMPOUND:** | 3-Perfluoropropyl propanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 356-02-5 |

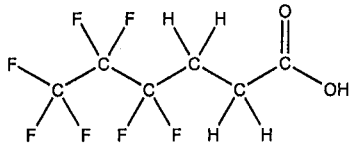

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

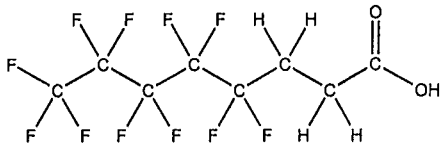

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

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**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

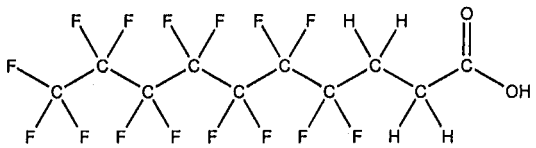

**MOLECULAR FORMULA:** $C_{10}H_5F_{15}O_2$
**MOLECULAR WEIGHT:** 442.12
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 11/12/2020
**EXPIRY DATE:** (mm/dd/yyyy) 11/12/2025
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

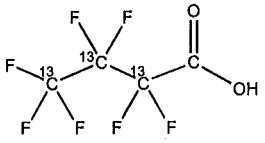

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

**LOT NUMBER:** MPFHxA0921

**STRUCTURE:**

**CAS #:** 960315-47-3

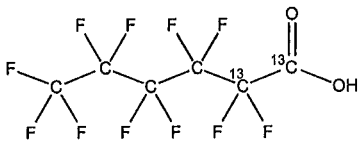

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_{11}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 10/04/2021
**EXPIRY DATE:** (mm/dd/yyyy) 10/04/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By: | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

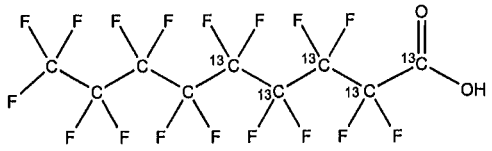

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires:s | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

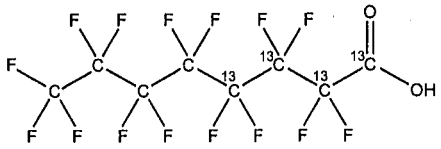

**MOLECULAR FORMULA:** $^{13}C_4{}^{12}C_4HF_{15}O_2$
**CONCENTRATION:** 50.0 ± 2.5 µg/mL

**MOLECULAR WEIGHT:** 418.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 12/07/2021
**EXPIRY DATE:** (mm/dd/yyyy) 12/07/2026
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

## 22A0120

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mLs | Expires:s | 12/08/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

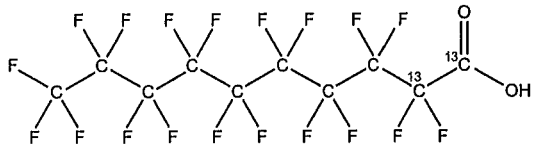

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

# Analytical Standard Record0

**22A01210**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires:s | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

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# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOS **LOT NUMBER:** MPFOS0821

**COMPOUND:** Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate

**STRUCTURE:** **CAS #:** 960315-53-1

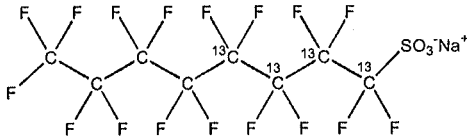

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

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**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record0

**22A01220**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mLs | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 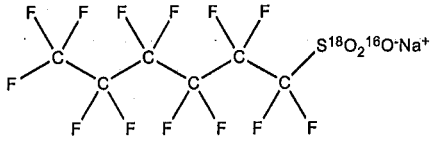 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

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**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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**Technical Support NA +1-800-221-1975 | email: www.millipore.com/techservices | www.calbiochem.com**

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A01230**

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | | 516-50-7s | 1000000s | ug/gs |

# Analytical Standard Record0

**22A0234** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires: | 01/20/2023s |
| Standard Type: | Internal Standard | Prepared: | 01/20/2022s |
| Solvent: | MeOH/61252 | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 12s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBA | 22A0116s | 13C3-PFBA | 5s | ug/mLs |
| 13C2-PFHXA | 22A0117s | 13C2-PFHxA | 5s | ug/mLs |
| 13C5-PFNA | 22A0118s | 13C5-PFNA | 5s | ug/mLs |
| 13C4-PFOA | 22A0119s | 13C4-PFOA | 5s | ug/mLs |
| 13C2-PFDA | 22A0120s | 13C2-PFDA | 5s | ug/mLs |
| 13C4-PFOS | 22A0121s | 13C4-PFOS | 5s | ug/mLs |
| 18O2-PFHXS | 22A0122s | 18O2-PFHXS | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117s | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921 | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021 | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021s | Wellington Laboratories | MPFOA1121 | 12/07/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221 | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821 | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021 | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/12/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 25s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22A0123s | 516-50-7s | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochems | 3761825s | 09/30/2030s | 03/06/2024 17:00s | by HGHs | 0.025 |

# Analytical Standard Record

## 22F04460

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires: | 09/19/2026s |
| Standard Type: | Others | Prepared: | 01/13/2022s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 3s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0445s | 516-50-7s | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOA | Expires: | 01/27/2027s |
| Standard Type: | Others | Prepared: | 01/27/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: TPFOA0122) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOA | | 335-67-1s | 50s | ug/mLs |

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## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 09/14/2022s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: br-FOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSA | | 754-91-6s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03010

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires: | 08/23/2027s |
| Standard Type: | Others | Prepared: | 08/23/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSA0822) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSAs | | 4151-50-2s | 50s | ug/mLs |

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

## 22J03030

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSEs | | 24448-09-7s | 50s | ug/mLs |

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DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03040

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires: | 10/07/2027s |
| Standard Type: | Others | Prepared: | 10/07/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSEs | | 1691-99-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mLs | Expires: | 04/24/2023s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date s

# Analytical Standard Record

**23A0 220**

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# Analytical Standard Record

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | methanol 77283s | Prepared By: | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOS | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 01/04/2023s |
| Solvent: | 62097s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 40s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOS | 23A0022s | 1763-23-1s | 0.4s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date s

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mL | Expires: | 02/23/2027s |
| Standard Type: | Analyte Spike | Prepared: | 02/23/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFHxDA0222) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222 | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 50s | ug/mLs |

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## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

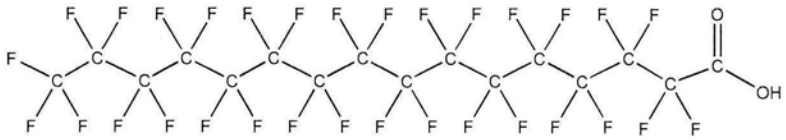

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires: | 07/05/2027s |
| Standard Type: | Analyte Spike | Prepared: | 07/05/2022s |
| Solvent: | Methanols | Prepared By: | Wellington Laboratories (Lot#: PFODA0622) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

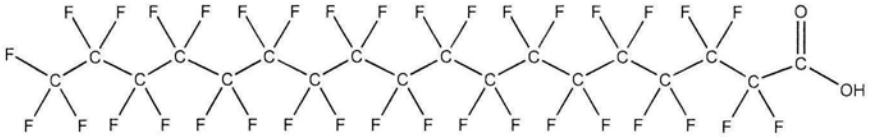

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires: | 03/28/2027s |
| Standard Type: | Others | Prepared: | 03/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

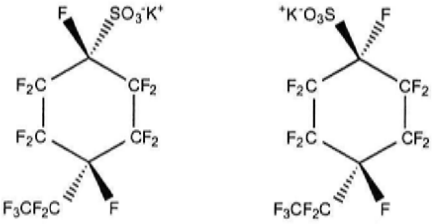


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}SO_3K$ |
| **MOLECULAR WEIGHT:** | 500.22 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (K salt)<br>46.2 ± 2.3 µg/mL (PFECHS acid)<br>46.1 ± 2.3 µg/mL (PFECHS anion) |
| **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% |
| **LAST TESTED:** (mm/dd/yyyy) | 03/28/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/28/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0155C

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type: | Others | Prepared: | 02/01/2023s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FBSA0123I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSA | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FBSA-I
**COMPOUND:** Perfluoro-1-butanesulfonamide

**LOT NUMBER:** FBSA0123I

**STRUCTURE:**

**CAS #:** 30334-69-1

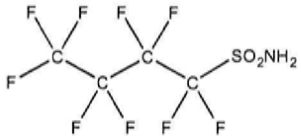

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type: | Others | Prepared: | 12/29/2021s |
| Solvent: | Isopropanols | Prepared By: | Wellington Laboratories (Lot#: FHxSA1221I) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221I | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**
**CAS #:** 41997-13-1

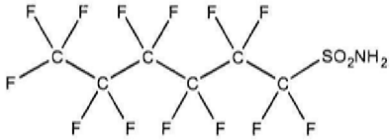

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard RecordC

## 23C0442C

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025s |
| Standard Type: | Others | Prepared: | 10/28/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number:s | MPFACHIFES1022s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-4:2FTS | | 13C2-4:2FTS | 1s | ug/mLs |
| 13C2-6:2FTS | | 13C2-6:2FTS | 1s | ug/mLs |
| 13C2-8:2FTS | | 13C2-8:2FTS | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBS | | 13C3-PFBS | 0.5s | ug/mLs |
| 13C3-PFHXS | | 13C3-PFHXS | 0.5s | ug/mLs |
| 13C4-PFBA | | 13C4-PFBA | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOS | | 13C8-PFOS | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 10/21/2023s |
| Standard Type: | Surrogate Spike | Prepared: | 04/24/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTS | 23C0442s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23C0442s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23C0442s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23C0442s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23C0442s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23C0442s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBA | 23C0442s | 13C4-PFBA | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23C0442s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23C0442s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23C0442s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23C0442s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23C0442s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23C0442s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23C0442s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23C0442s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23C0442s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022s | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2s |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires: | 07/03/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62286s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOS | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type: | Others | Prepared: | 04/26/2023s |
| Solvent: | MeOH/62244s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:23 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 23D0468s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 23D0468s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 23D0468s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 23D0468s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 23D0468s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBA | 23D0468s | 13C4-PFBA | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 23D0468s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | * | * | 10/21/2023s | 03/07/2024 18:19s | by ABK | 0.1s |

# Analytical Standard RecordF

**23F0057** F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires: | 05/17/2024s |
| Standard Type: | Others | Prepared: | 05/17/2023s |
| Solvent: | MeOH(1mMKOH)040723 | Prepared By: | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTS | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTS | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTS | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBS | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoS | | 79780-39-5s | 2s | ug/mLs |
| PFDS | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpS | | 375-92-8s | 2s | ug/mLs |
| PFHxA | | 307-24-4s | 2s | ug/mLs |
| PFHxS | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNS | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOS | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeS | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
800-368-1131
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**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| | | |
|---|---|---|
| Formulated By: | Prashant Chauhan | 051723 DATE |
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4488& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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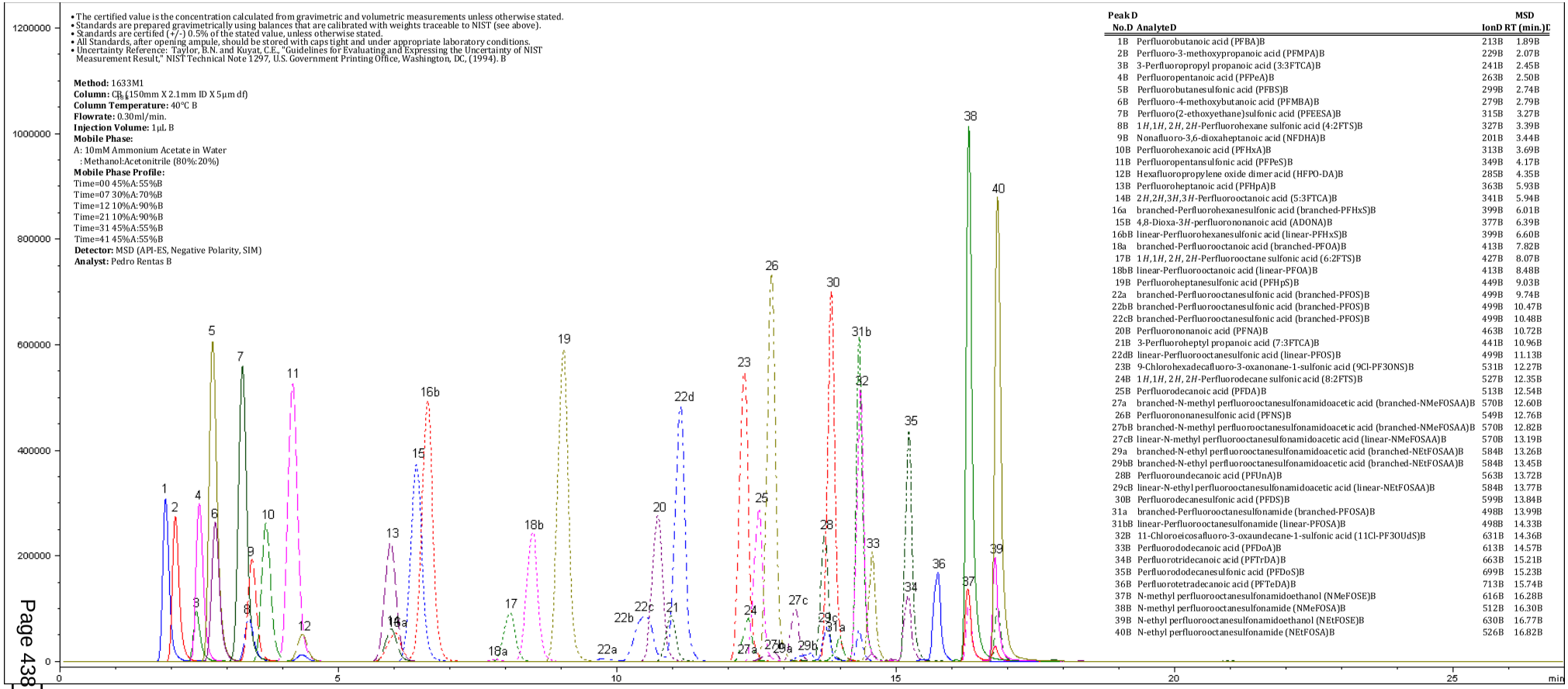


| Peak No. | D Analyte | D | MSD Ion | D | RT (min.) | D |
|---|---|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B | 1.89 | B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B | 2.07 | B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B | 2.45 | B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B | 2.50 | B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B | 2.74 | B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B | 2.79 | B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B | 3.27 | B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B | 3.39 | B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B | 3.44 | B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B | 3.69 | B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B | 4.17 | B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B | 4.35 | B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B | 5.93 | B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B | 5.94 | B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B | 6.01 | B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B | 6.39 | B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B | 6.60 | B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B | 7.82 | B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B | 8.07 | B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B | 8.48 | B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B | 9.03 | B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 9.74 | B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.47 | B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.48 | B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B | 10.72 | B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B | 10.96 | B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B | 11.13 | B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B | 12.27 | B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B | 12.35 | B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B | 12.54 | B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.60 | B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B | 12.76 | B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.82 | B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B | 13.19 | B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.26 | B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.45 | B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B | 13.72 | B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B | 13.77 | B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B | 13.84 | B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B | 13.99 | B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B | 14.33 | B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B | 14.36 | B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B | 14.57 | B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B | 15.21 | B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B | 15.23 | B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B | 15.74 | B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B | 16.28 | B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B | 16.30 | B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B | 16.77 | B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B | 16.82 | B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires: | 05/17/2024s |
| Standard Type: | Calibration Standard | Prepared: | 07/27/2023s |
| Solvent: | MeOH/62335s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONS | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDS | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxA | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeS | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standards | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

## 23H0440H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 12/12/2022s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:57 by ABK |
| Lot Number:s | 222121115s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 1.82s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 04/22/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

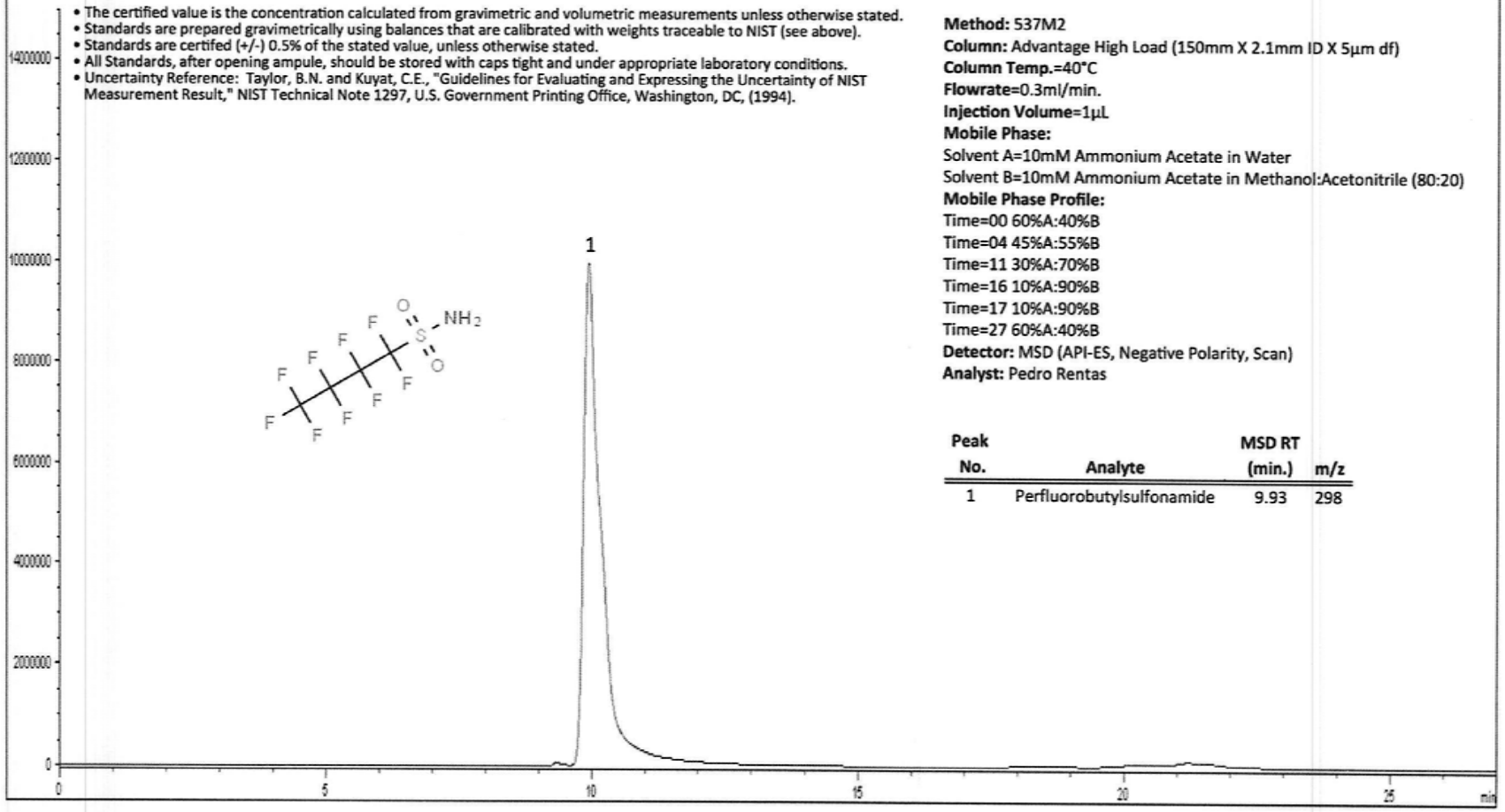


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires: | 09/11/2025s |
| Standard Type: | Others | Prepared: | 09/11/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSA | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 091125 | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 23060 | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 091120 |
| Formulated By: | Benson Chan | DATE |
| | | 091120 |
| Reviewed By: | Pedro L. Rentas | DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Formulated By: | Benson Chan | 101520 DATE |
| Reviewed By: | Pedro L. Rentas | 101520 DATE |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires: | 10/15/2025s |
| Standard Type: | Others | Prepared: | 10/15/2020s |
| Solvent: | MeOHs | Prepared By: | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 08/21/2023 14:57 by ABK |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDA | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | | 25.0 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mL | Expires: | 04/22/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:42 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSA | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA) | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard Record

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires: | 01/12/2025s |
| Standard Type: | Others | Prepared: | 08/21/2023s |
| Solvent: | MeOH/63096s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:43 by ABK |
| Lot Number:s | * | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHS | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDA | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABK | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA) | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABK | 1s |
| 23H0522s | PFBSA-and PFHxSA SS Stock 20ug/mL | 08/21/2023s | * | * | 04/22/2025s | 03/06/2024 19:42s | by ABK | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 03/24/2026s |
| Standard Type: | Others | Prepared: | 03/23/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

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# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires: | 10/03/2026s |
| Standard Type: | Others | Prepared: | 09/25/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDS | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONS | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

**23L0007** D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

## 23L0007 D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 12/01/2023s |
| Solvent: | MeOH 63264s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/01/2023 14:54 by DAGs |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires: | 10/19/2028s |
| Standard Type: | Others | Prepared: | 10/17/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type: | Others | Prepared:s | 09/28/2023s |
| Solvent: | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0523D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

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CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires:s | 11/02/2026s |
| Standard Type: | Others | Prepared:s | 10/31/2023s |
| Solvent: | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS)s | Expires: | 08/16/2032s |
| Standard Type: | Others | Prepared: | 08/16/2022s |
| Solvent: | * | Prepared By: | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1 s | Last Edit: | 03/06/2024 18:56 by ABK |
| Lot Number: s | MKCS1066 | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

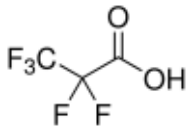


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires: | 07/14/2034s |
| Standard Type: | Analyte Spike | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:03 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24A0370

| | | | |
|---|---|---|---|
| Description: s | PFPrA (SS) 200ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:05 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrA s | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires: | 07/14/2034s |
| Standard Type: | Others | Prepared: | 01/16/2024s |
| Solvent: | MeOH/63321s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0012B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1 | Expires: | 05/29/2024s |
| Standard Type: | Analyte Spike | Prepared: | 02/01/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0012** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires: | 03/05/2025s |
| Standard Type: | Others | Prepared: | 02/05/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011649) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0183B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 09/20/2023s |
| Solvent: | methanols | Prepared By: | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

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USA

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

# Analytical Standard RecordB

## 24B0184B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires: | 08/06/2025s |
| Standard Type: | Others | Prepared: | 07/06/2023s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 7/20

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires: | 02/24/2026s |
| Standard Type: | Others | Prepared: | 01/24/2024s |
| Solvent: | MeOHs | Prepared By: | AccuStandard (Lot#: 224011548) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mL | Expires: | 08/28/2028s |
| Standard Type: | Others | Prepared: | 08/28/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: M2PFHxDA0823) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDA | | 13C2-PFHxDA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

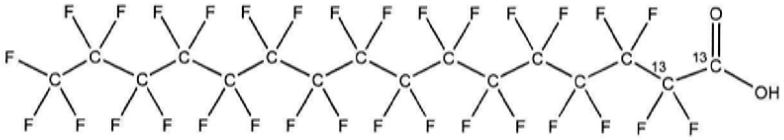

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

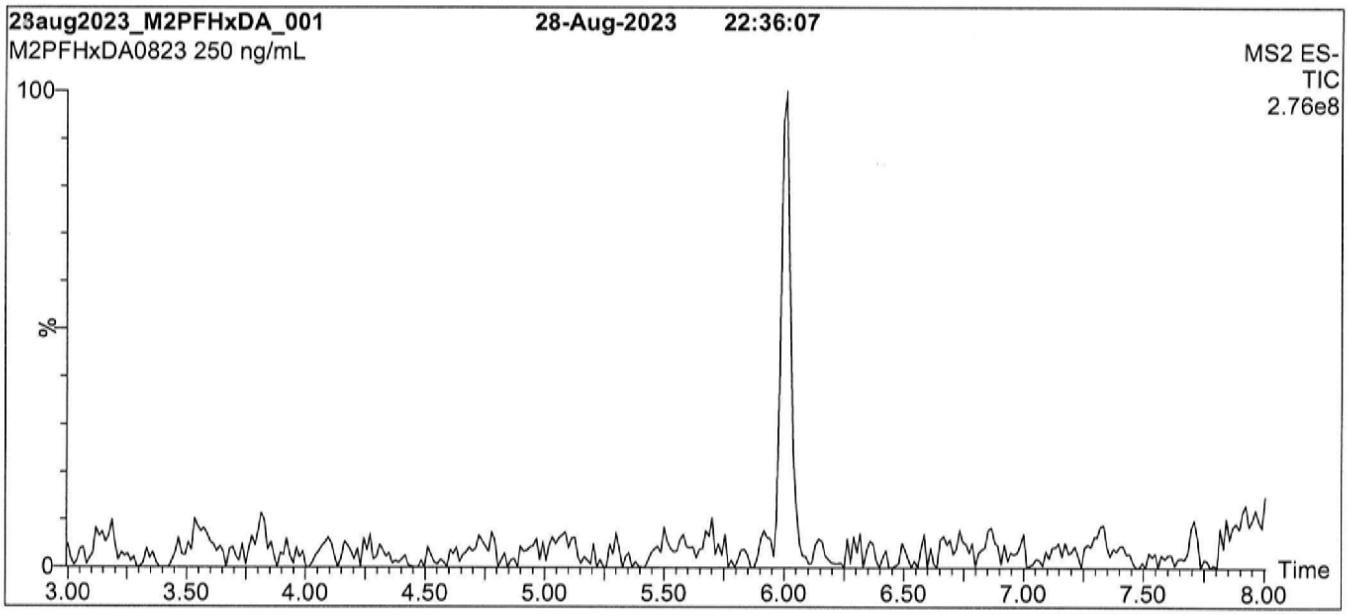


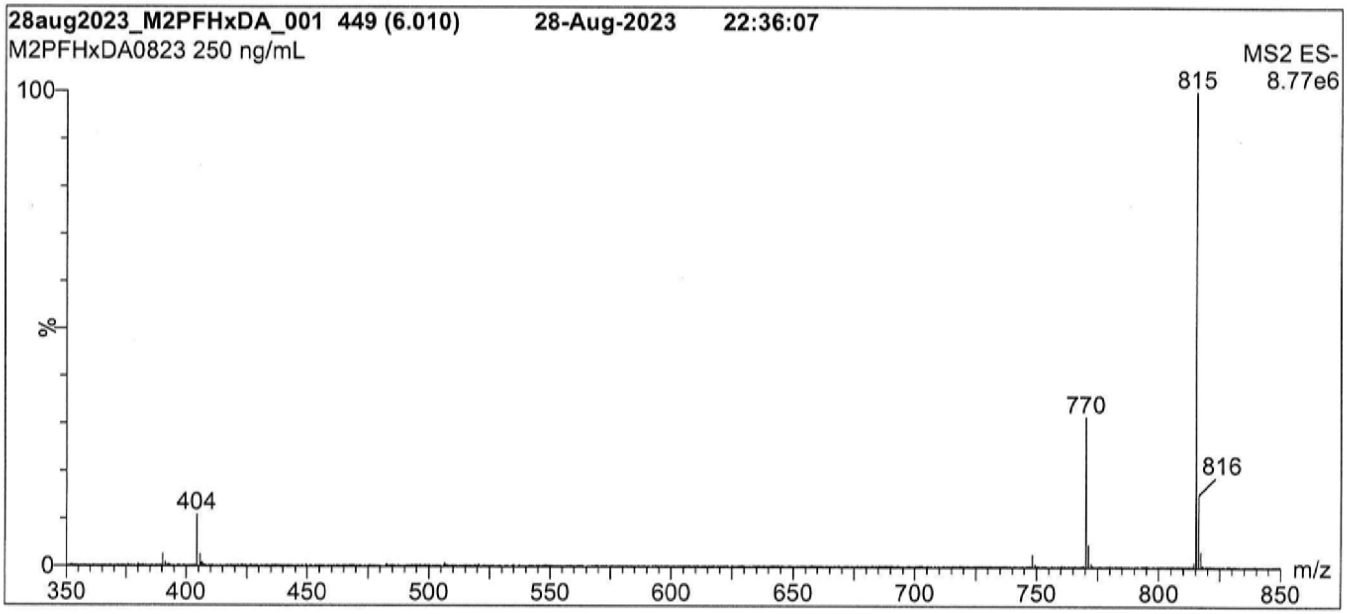


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires: | 09/13/2028s |
| Standard Type: | Others | Prepared: | 09/13/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: 102FTS0923) |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

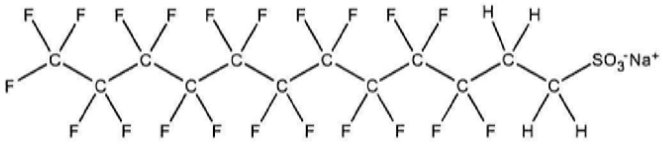


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{12}H_4F_{21}SO_3Na$ | **MOLECULAR WEIGHT:** | 650.18 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt) | **SOLVENT(S):** | Methanol |
| | 48.3 ± 2.4 µg/mL (10:2FTS acid) | | |
| | 48.2 ± 2.4 µg/mL (10:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 09/13/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 09/13/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

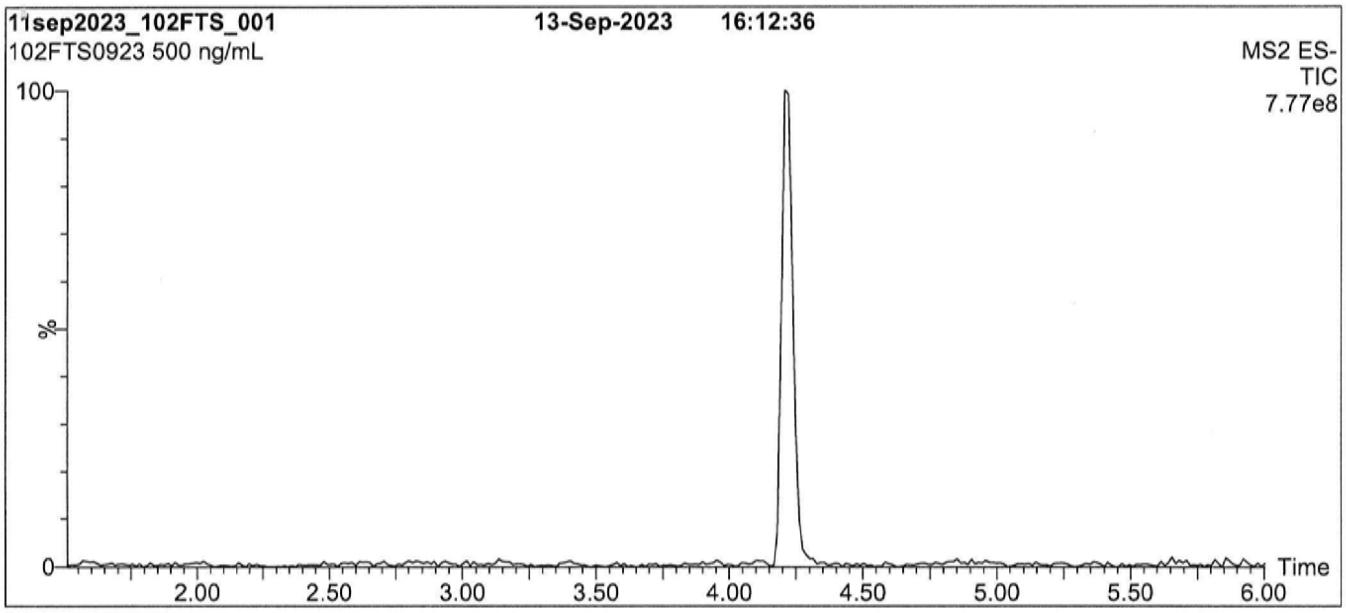


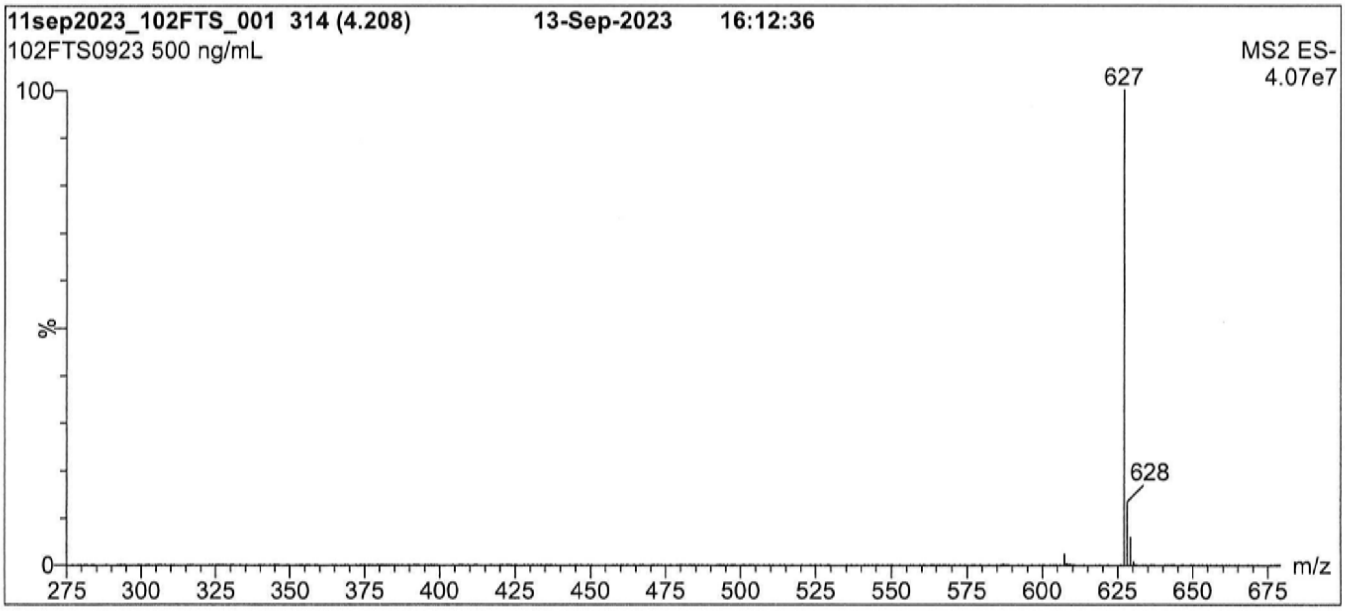


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0188** B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith] | Expires:s | 08/08/2034s |
| Standard Type: | Others | Prepared:s | 08/08/2022s |
| Solvent: | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABK |
| Lot Number:s | MKCS0286 | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

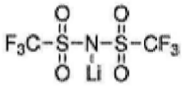

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

**24B0192** B

| | | | |
|---|---|---|---|
| Description: s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires: | 10/26/2027s |
| Standard Type: | Others | Prepared: | 10/26/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SECG-003) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 02/13/2024 18:17 by ABK |
| Lot Number: s | SECG-003s | | |
| Comments: a | Transferred to injection value - ABK 2/13/24a | | |

| Analyte B | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTS | | 13C2D4-10:2FTS | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification) 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

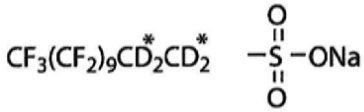

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

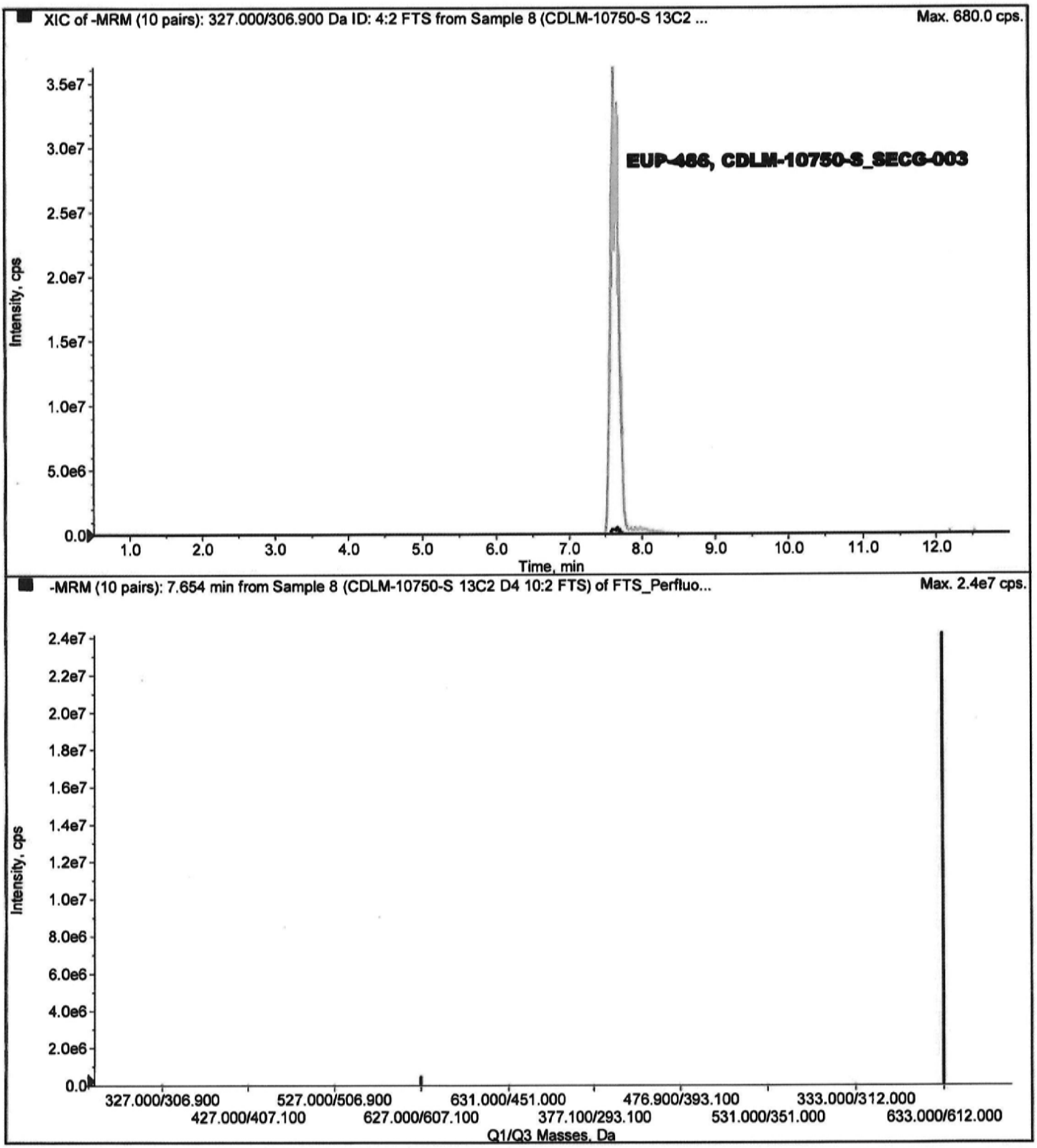

# Analytical Standard RecordB

**24B0193** B

| | | | |
|---|---|---|---|
| Description: s | 10:2 FTS (SS) 50ug/mLs | Expires: | 02/03/2027s |
| Standard Type: | Others | Prepared: | 02/03/2022s |
| Solvent: | MeOHs | Prepared By: | Cambridge Isotope Laboratories (Lot#: SEBF-016) |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number: s | SEBF-016s | | |

| Analyte B | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

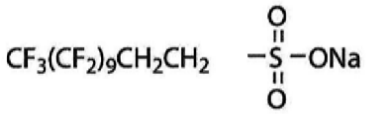

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/15/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/26/2024 13:44 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0528s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0528s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0528s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0528s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0528s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0528s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# nalytical Standard RecordA

**24B0290**

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires: | 11/08/2026s |
| Standard Type: | Others | Prepared: | 11/08/2023s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FOUEA1123)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:51 by ABK |
| Lot Number: | FOUEA1123s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FOUEA
**COMPOUND:** 2H-Perfluoro-2-decenoic acid

**LOT NUMBER:** FOUEA1123

**STRUCTURE:**

**CAS #:** 70887-84-2

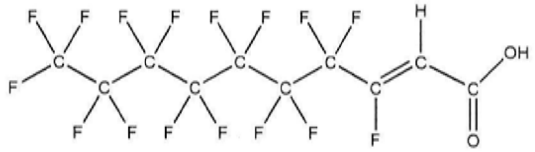

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

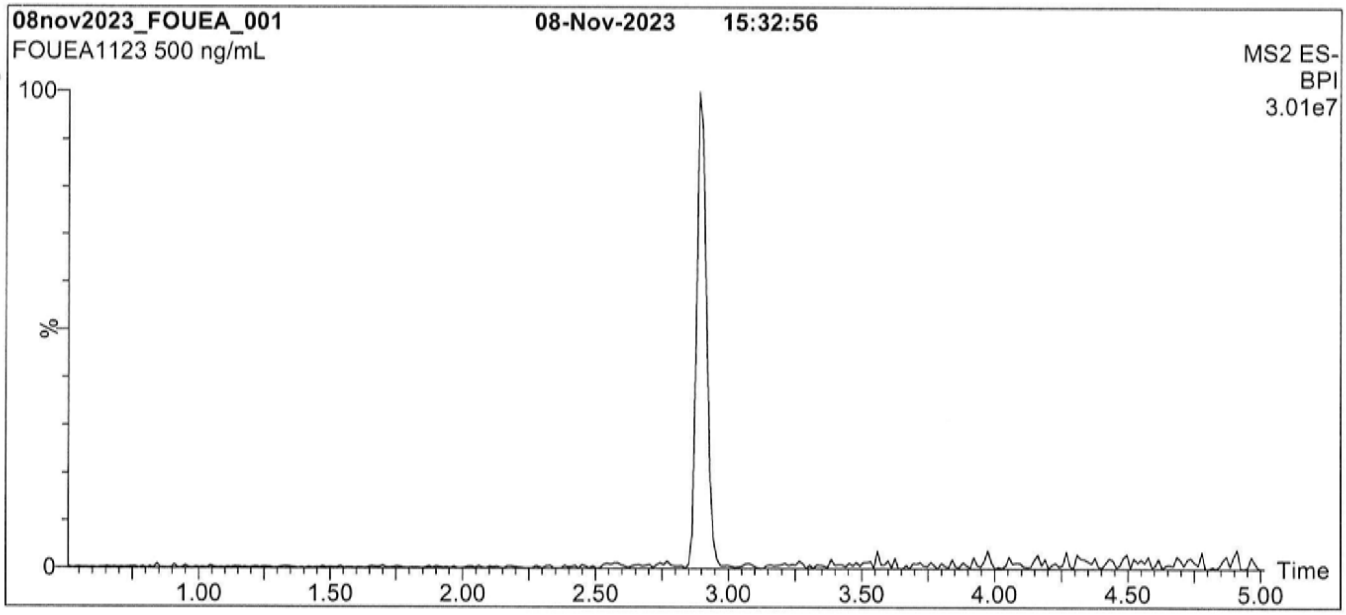


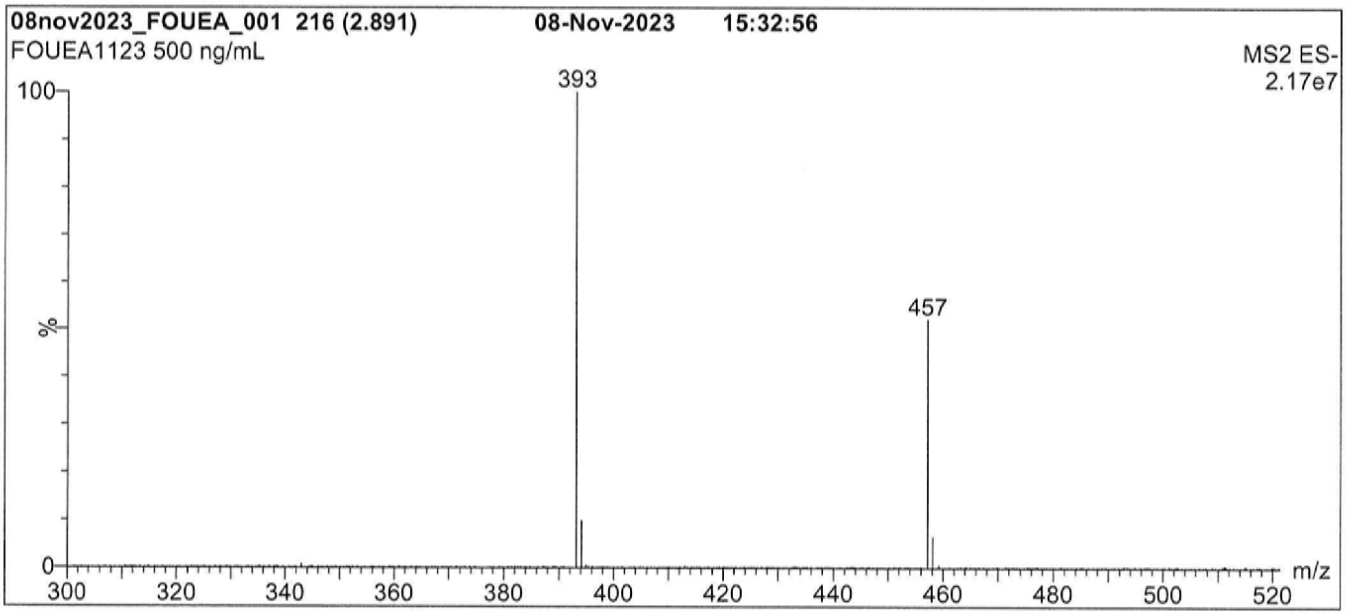


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDA | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHS | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSA | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDS | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONS | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTS | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTS | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTS | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBS | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoS | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDS | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpS | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxA | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxS | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNS | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOS | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 example | Expires: | 11/11/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/26/2024 15:12 by ABK |
| Lot Number:s | x | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeS | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA 50ug/mLs | 02/23/2022s | Wellington Laboratories | PFHxDA0222 | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mL | 12/29/2021s | Wellington Laboratories | FHxSA1221I | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# nalytical Standard RecordA

**24B0292**

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires: | 01/09/2027s |
| Standard Type: | Others | Prepared: | 01/09/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: FHUEA0124)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:52 by ABK |
| Lot Number: | FHUEA0124s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

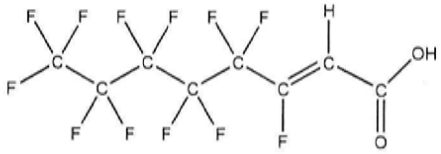

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

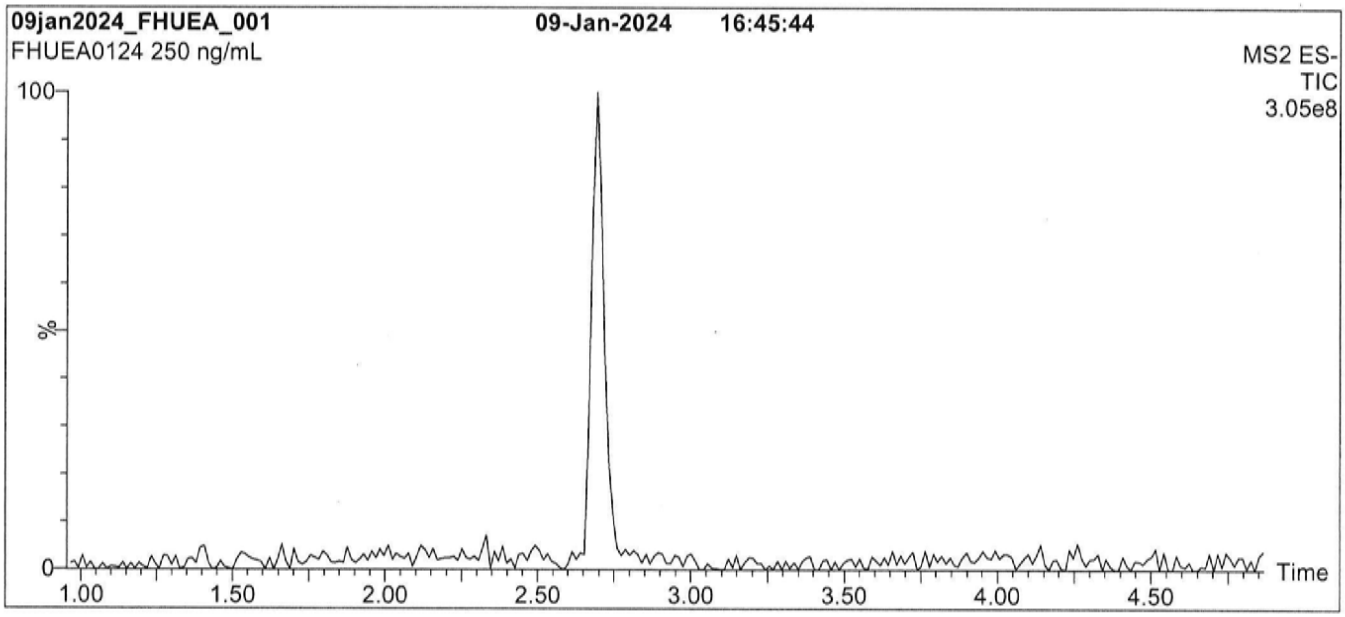


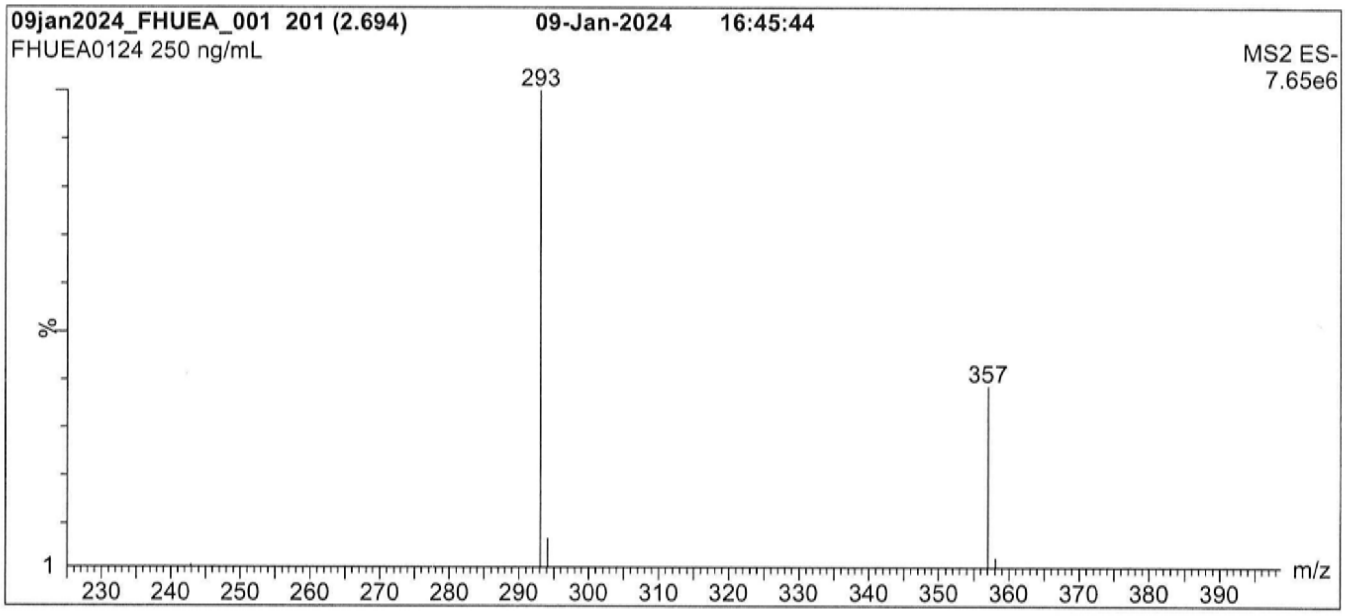


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0293**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires: | 11/14/2025s |
| Standard Type: | Others | Prepared: | 11/14/2022s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFHUEA1122)s |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFHUEA1122s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

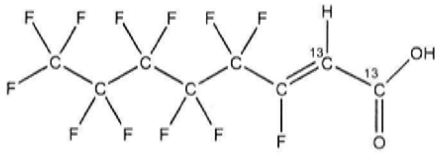

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-($1,2\text{-}^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-($1,2\text{-}^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

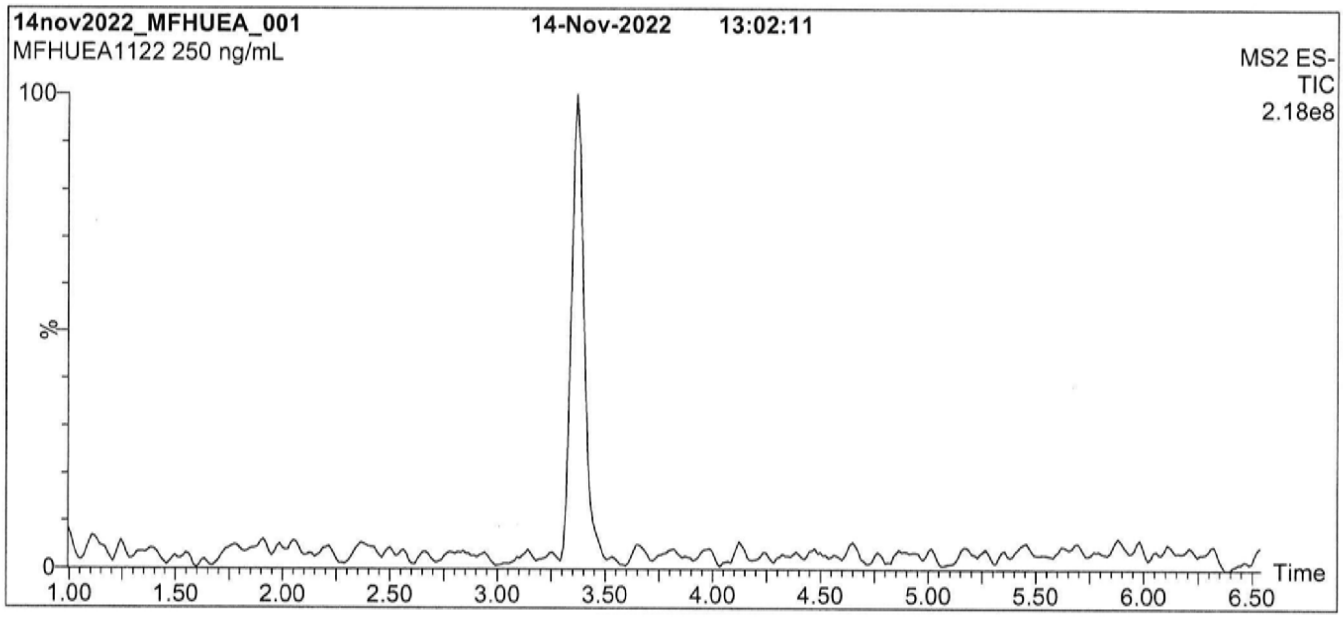


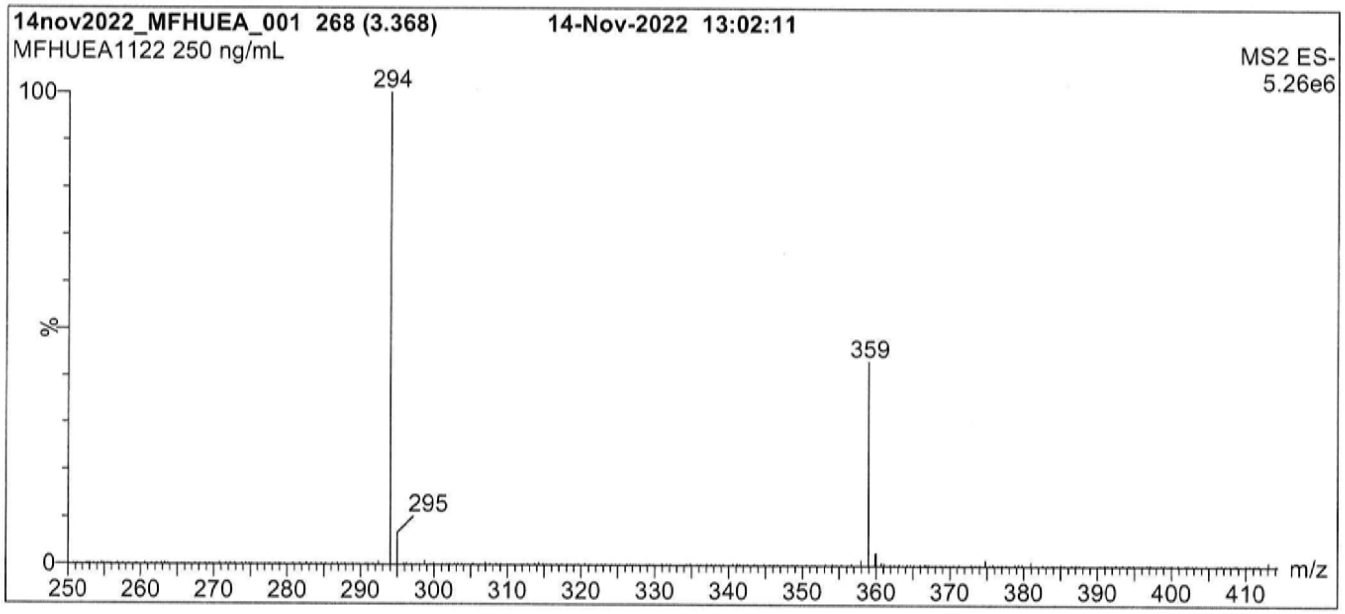


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

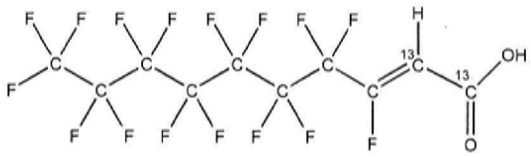

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

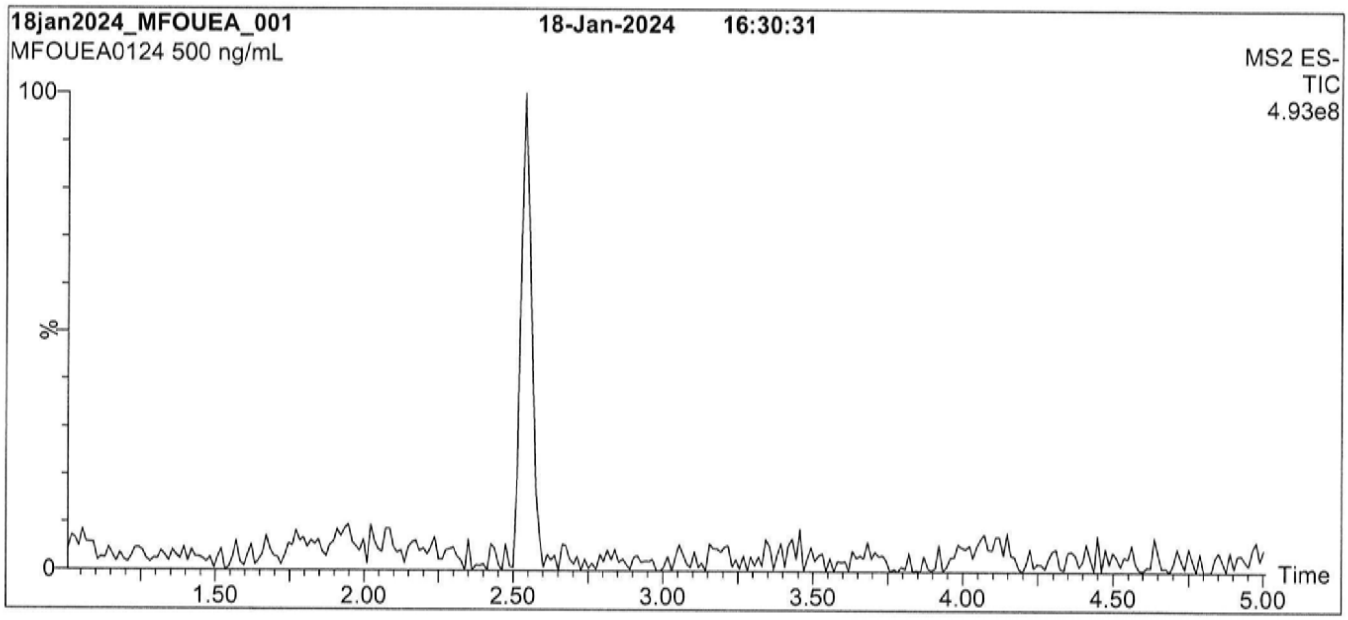


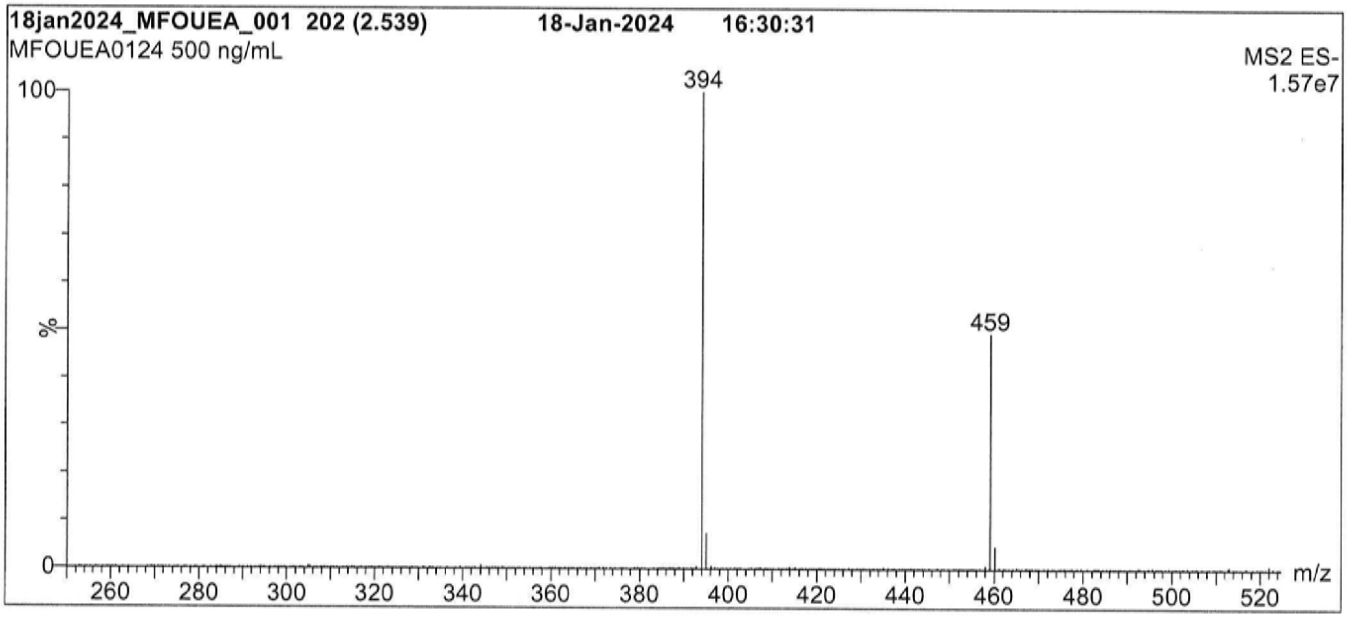


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# nalytical Standard RecordA

**24B0299**

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires: | 01/18/2027s |
| Standard Type: | Others | Prepared: | 01/18/2024s |
| Solvent: | MeOHs | Prepared By: | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/15/2024 14:56 by ABK |
| Lot Number:s | MFOUEA0124s | | |
| Comments: | Purity >98%r | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | | 872398-78-2s | 50s | ug/mLs |

# nalytical Standard RecordA

## 24B0394

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number: | 64211s | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFHxDA | 24B0186s | 13C2-PFHxDA | 0.1s | ug/mLs |
| 13C2D4-10:2FTS | 24B0192s | 13C2D4-10:2FTS | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS 50ug/mLs | 08/28/2023s | Wellington Laboratories | M2PFHxDA0823 | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122s | 11/14/2025s | 02/15/2024 14:56s | by ABK | 0.01s |
| 24B0299s | 13C2-FOUEA EIS s 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124s | 01/18/2027s | 02/15/2024 14:56s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 14:57 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTS | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123s | 11/08/2026s | 02/15/2024 14:51s | by ABK | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL s [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124s | 01/09/2027s | 02/15/2024 14:52s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24B0397B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 02/16/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/04/2024 19:07 by ABK |
| Lot Number:s | x | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0466

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0468B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mL s | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTS | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTS | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTS | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONS | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBS | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoS | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDS | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHS | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpS | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxA | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDA | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxS | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSA | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNS | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOS | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1 | 02/01/2024s | In houses | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTS | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTS | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTS | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONS | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBS | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoS | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDS | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHS | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpS | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxA | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDA | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxS | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSA | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNS | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOS | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeS | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTS | 24B0289s | 13C2-4:2FTS | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 02/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTS | 24B0289s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0289s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0289s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0289s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0289s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 12/01/2023s | In houses | x | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | x | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordB

## 24B0552B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:50 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0523s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0523s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0523s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0523s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0523s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0523s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires: | 08/20/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 02/22/2024s |
| Solvent: | MeOH/64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 6s | Last Edit: | 02/22/2024 09:51 by DAGs |
| Lot Number:s | x | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTS | 23L0524s | 13C2-4:2FTS | 0.04s | ug/mLs |
| 13C2-6:2FTS | 23L0524s | 13C2-6:2FTS | 0.04s | ug/mLs |
| 13C2-8:2FTS | 23L0524s | 13C2-8:2FTS | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBS | 23L0524s | 13C3-PFBS | 0.02s | ug/mLs |
| 13C3-PFHXS | 23L0524s | 13C3-PFHXS | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOS | 23L0524s | 13C8-PFOS | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EIS | 10/31/2023s | Wellington Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires: | 08/24/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxA | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOS | 22A0234s | 13C4-PFOS | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXS | 22A0234s | 18O2-PFHXS | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In houses | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# nalytical Standard RecordA

## 24B0646

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires: | 07/09/2024s |
| Standard Type: | Internal Standard | Prepared: | 02/26/2024s |
| Solvent: | MeOH/62335s | Prepared By: | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:49 by ABK |
| Lot Number: | * | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxA | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOS | 24B0645s | 13C4-PFOS | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXS | 24B0645s | 18O2-PFHXS | 0.001s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In houses | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordB

## 24C0037B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires: | 08/08/2034s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfonimide Lith] | 08/08/2022s | Sigma-Aldrich | MKCS0286 | 08/08/2034s | 03/06/2024 19:17s | by ABK | 100000s |

# Analytical Standard RecordK

## 24C0038K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# nalytical Standard RecordA

## 24C0039

| | | | |
|---|---|---|---|
| Description: s | TFSI (SS) 50ug/mLs | Expires: | 08/31/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls): s | 1s | Department:s | PFAS |
| Vials: s | 1s | Last Edit: | 03/06/2024 19:21 by ABK |
| Lot Number: | * | | |

| Analyte A | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| TFSI s | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

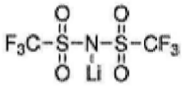

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTS | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTS | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTS | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONS | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBS | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoS | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDS | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpS | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxA | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxS | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNS | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOS | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeS | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHS | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDA | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSA | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires: | 08/19/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/04/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24B0395s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24B0395s | 13C2-PFHxDA | 0.002s | ug/mLs |
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTS | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23G0454s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023 | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523s | PFAS SS- 5C 200ng/mLs | 08/21/2023 | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041s | PFAS SS- 5C B 200ng/mLs | 03/04/2024 | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0041B

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires: | 10/20/2024s |
| Standard Type: | Others | Prepared: | 03/04/2024s |
| Solvent: | MeOH/63096s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTS | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABK | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL s (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABK | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABK | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.04s |

# Analytical Standard RecordB

## 24C0280B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/12/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# Analytical Standard RecordB

## 24C0281B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/12/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/12/2024 16:39 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTS | 24B0553s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0553s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0553s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0553s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0553s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0553s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | x | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# nalytical Standard RecordA

## 24C0392

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires: | 03/05/2025s |
| Standard Type: | Analyte Spike | Prepared: | 03/18/2024s |
| Solvent: | MeOH 64211s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/18/2024 11:15 by DAGs |
| Lot Number: | x | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.25s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDS | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTS | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTS | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTS | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONS | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBS | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoS | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDS | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHS | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpS | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxA | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDA | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxS | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSA | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNS | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOS | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeS | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTS | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires: | 08/13/2024s |
| Standard Type: | Calibration Standard | Prepared: | 03/19/2024s |
| Solvent: | MeOH/64011s | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTS | 24B0552s | 13C2-4:2FTS | 0.004s | ug/mLs |
| 13C2-6:2FTS | 24B0552s | 13C2-6:2FTS | 0.004s | ug/mLs |
| 13C2-8:2FTS | 24B0552s | 13C2-8:2FTS | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBS | 24B0552s | 13C3-PFBS | 0.002s | ug/mLs |
| 13C3-PFHXS | 24B0552s | 13C3-PFHXS | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOS | 24B0552s | 13C8-PFOS | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTS | 24C0280s | 13C2D4-10:2FTS | 0.008s | ug/mLs |
| 13C2-PFHxDA | 24C0280s | 13C2-PFHxDA | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used:** A

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls) A |
|---|---|---|---|---|---|---|---|---|
| 24B0291 s | PFAS - MIX 1633 s 200ng/mL rev1 example | 02/16/2024s | In houses | x | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396 s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In houses | x | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In houses | x | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280 s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In houses | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# Analytical Standard RecordB

## 24C0424B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires: | 08/14/2024s |
| Standard Type: | Surrogate Spike | Prepared: | 03/19/2024s |
| Solvent: | MeOHs | Prepared By: | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/19/2024 13:18 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTS | 24B0394s | 13C2D4-10:2FTS | 0.08s | ug/mLs |
| 13C2-PFHxDA | 24B0394s | 13C2-PFHxDA | 0.02s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In houses | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.comL

NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: 1312L

April 09, 2024 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: JPL-GW MonitoringL
24C0142L

Enclosed are the results of analyses for samples received by our laboratory on 3/22/2024. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

Eric Ogden eric.ogden@metirigroup.comn
Project Managern

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. L*
*No duplication of this report is allowed, except in its entirety.L*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

# Data Validatable Report

## Samples in this Reporta

| Lab IDa | Sample a | Matrixa | Date Sampleda | Date Receiveda |
|---|---|---|---|---|
| 24C0142-01o | MW-13o | Watero | 03/21/2024 08:10o | 03/22/2024o |
| 24C0142-02o | DUP-6-032124o | Watero | 03/21/2024 08:20o | 03/22/2024o |
| 24C0142-03o | MW-16o | Watero | 03/21/2024 09:37o | 03/22/2024o |
| 24C0142-04o | DUP-7-032124o | Watero | 03/21/2024 09:47o | 03/22/2024o |
| 24C0142-05o | MW-7o | Watero | 03/21/2024 11:27o | 03/22/2024o |
| 24C0142-06o | DUP-8-032124o | Watero | 03/21/2024 11:37o | 03/22/2024o |
| 24C0142-07o | EB-9-032124o | Watero | 03/21/2024 11:45o | 03/22/2024o |
| 24C0142-08o | FB-9-032124o | Watero | 03/21/2024 11:55o | 03/22/2024o |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Containers Receiveda

| Lab IDa | Container Typea | Counta | Preservation Checka |
|---|---|---|---|
| 24C0142-01t | | | |
| | 500mL Pt | 1t | |
| 24C0142-02t | | | |
| | 500mL Pt | 1t | |
| 24C0142-03t | | | |
| | 500mL Pt | 1t | |
| 24C0142-04 | | | |
| | 500mL Pt | 1t | |
| 24C0142-05t | | | |
| | 500mL Pt | 1t | |
| 24C0142-06t | | | |
| | 500mL Pt | 1t | |
| 24C0142-07t | | | |
| | 500mL Pt | 1t | |
| 24C0142-08t | | | |
| | 500mL Pt | 1t | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

a

**Sample: aMW-13 a**

**24C0142-01 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 11o | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | 12o | 0.75o | 0.061o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | 7.5o | 0.37o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | 2.4o | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 1.9o B, MI5o | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | 0.37o | 0.077o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | 1.2o | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | 0.23o Jo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | 0.96o MI5o | 0.37o | 0.030o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.32o MI5, Jo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | 0.37o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | 1.5o | 0.077o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | 0.37o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | 1.5o | 0.95o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | 1.5o | 0.98o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | 0.75o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | 0.75o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | 0.75o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | 0.75o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | 0.75o | 0.085o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | 0.75o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | 0.75o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | 0.75o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | 1.5o | 0.54o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | 1.5o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *92.8%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *88.0%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/09/2024 11:49 |

## Sample Results
**(Continued)**

### Sample: MW-13 (Continued)
**24C0142-01 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *72.7%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *86.7%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *99.8%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *99.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *102%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *81.7%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *87.7%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *97.8%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *92.7%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *116%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *111%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *101%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *71.8%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *47.4%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *50.5%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *103%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *107%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *47.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *48.9%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *74.6%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-6-032124 a**

**24C0142-02 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 9.6o MI1o | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | 12o | 0.75o | 0.061o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | 6.5o | 0.37o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | 2.3o | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 2.0o B, MI5o | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | 0.37o | 0.077o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | 1.2o | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | 0.21o Jo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | 0.94o MI5o | 0.37o | 0.030o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.35o IR1, o MI5, Jo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | 0.37o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | 1.5o | 0.077o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | 1.5o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | 0.37o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | 1.5o | 0.95o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | 1.5o | 0.98o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | 0.75o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | 0.75o | 0.12o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | 0.75o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | 0.75o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | 0.75o | 0.085o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | 0.75o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | 0.75o | 0.20o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | 0.75o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | 1.5o | 0.54o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | 1.5o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *99.0%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aDUP-6-032124 (Continued)a

**24C0142-02 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFPEAo* | *119%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFHXAo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *119%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *108%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *99.0%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *102%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *99.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *99.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *82.5%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *90.9%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *105%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *96.9%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *121%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *114%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *106%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *81.5%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *49.0%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *52.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *104%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *114%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *57.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *60.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-16 a**

**24C0142-03 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 4.7o | MI1o | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | 7.3o | | 0.72o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | NDo | | 0.36o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | NDo | | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 0.25o | B, Jo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | | 0.36o | 0.091o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | NDo | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | NDo | | 0.36o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | NDo | | 0.36o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.13o | MI2, Jo | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | | 1.4o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | | 1.4o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | | 0.36o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | | 1.4o | 0.91o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | | 1.4o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | | 0.72o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | | 0.72o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | | 0.72o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | | 0.72o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | | 0.72o | 0.082o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | | 0.72o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | | 1.4o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | | 1.4o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *102%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *109%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aMW-16 (Continued)a

**24C0142-03 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *107%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *99.3%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *105%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *103%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *99.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *95.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *76.3%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *96.0%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *105%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *111%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *126%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *113%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *98.0%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *72.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *48.8%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *51.0%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *78.1%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *102%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *63.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *64.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-7-032124 a**

**24C0142-04 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 4.9o MI1o | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | 7.6o | 0.72o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | NDo | 0.36o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | NDo | 0.36o | 0.037o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 0.27o B, Jo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | 0.36o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | 0.36o | 0.091o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | NDo | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | NDo | 0.36o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | NDo | 0.36o | 0.028o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.13o MI2, Jo | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | 1.4o | 0.074o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | 1.4o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | 0.36o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | 1.4o | 0.91o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | 1.4o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | 0.72o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | 0.72o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | 0.72o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | 0.72o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | 0.72o | 0.082o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | 0.72o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | 0.72o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | 1.4o | 0.52o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | 1.4o | 0.40o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *95.2%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *107%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aDUP-7-032124 (Continued)a

**24C0142-04 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *111%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *111%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *107%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.0%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *101%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *99.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *95.7%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *81.5%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *97.2%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *105%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *114%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *127%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *112%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *94.3%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *55.7%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *39.3%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *41.1%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *80.3%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *102%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *43.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *46.2%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *107%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aMW-7 a**

**24C0142-05 (Water)a**

| Analyteo | Result | Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 4.0o | MI1o | 1.4o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | 6.0o | | 0.71o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | NDo | | 0.36o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | NDo | | 0.36o | 0.036o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 0.25o | B, Jo | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | | 0.36o | 0.073o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | | 0.36o | 0.090o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | | 0.36o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | | 0.36o | 0.099o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | | 0.36o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | NDo | | 0.36o | 0.033o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | NDo | | 0.36o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | NDo | | 0.36o | 0.028o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | | 0.36o | 0.046o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.094o | MI2, Jo | 0.36o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | | 0.36o | 0.13o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | | 0.36o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | | 1.4o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | | 1.4o | 0.073o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | | 0.36o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | | 1.4o | 0.42o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | | 1.4o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | | 0.36o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | | 0.36o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | | 1.4o | 0.90o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | | 1.4o | 0.93o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | | 0.71o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | | 0.71o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | | 0.71o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | | 0.71o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | | 0.71o | 0.081o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | | 0.71o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | | 0.71o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | | 0.71o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | | 1.4o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | | 1.4o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | | 1.4o | 0.49o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *91.7%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *116%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/09/2024 11:49 |

## Sample Results
**(Continued)**

### Sample: MW-7 (Continued)
**24C0142-05 (Water)**

| Analyte | Result | Qual | PQL | MDL | Units | Date Analyzed | DF | Method | Prep Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)** | | | | | | | | | |
| *Surrogate: 13C5-PFHXA* | *114%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C4-PFHPA* | *113%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOA* | *99.6%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C9-PFNA* | *104%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C6-PFDA* | *101%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C7-PFUnA* | *96.3%* | | *30-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFDOA* | *98.8%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFTEDA* | *96.1%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-PFHxDA* | *77.4%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFBS* | *94.0%* | | *40-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-PFHXS* | *100%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOS* | *102%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-4:2FTS* | *108%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-6:2FTS* | *121%* | | *40-200* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2-8:2FTS* | *115%* | | *40-300* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C2D4-10:2FTS* | *101%* | | *20-150* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C8-PFOSA* | *81.9%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSA* | *54.9%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSA* | *58.3%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D3-NMEFOSAA* | *84.0%* | | *40-170* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D5-NETFOSAA* | *101%* | | *25-135* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D7-NMEFOSE* | *67.3%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: D9-NETFOSE* | *69.5%* | | *10-130* | | | *03/29/24* | 1 | *EPA 1633* | |
| *Surrogate: 13C3-HFPO-DA* | *105%* | | *40-130* | | | *03/29/24* | 1 | *EPA 1633* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aDUP-8-032124 a**

**24C0142-06 (Water)a**

| Analyteo | Result /Qual o | | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | | |
| PFBAo | 4.1o | MI1o | 1.4o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | 5.3o | | 0.70o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | NDo | | 0.35o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | NDo | | 0.35o | 0.036o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 0.25o | B, Jo | 0.35o | 0.13o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | | 0.35o | 0.072o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | | 0.35o | 0.089o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | | 0.35o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | | 0.35o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | | 0.35o | 0.17o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | | 0.35o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | NDo | | 0.35o | 0.032o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | NDo | | 0.35o | 0.055o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | NDo | | 0.35o | 0.028o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | | 0.35o | 0.045o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.11o | MI2, Jo | 0.35o | 0.056o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | | 0.35o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | | 0.35o | 0.13o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | | 0.35o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | | 1.4o | 0.25o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | | 1.4o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | | 1.4o | 0.072o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | | 1.4o | 0.35o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | | 0.35o | 0.091o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | | 1.4o | 0.42o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | | 1.4o | 0.36o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | | 0.35o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | | 0.35o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | | 1.4o | 0.89o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | | 1.4o | 0.92o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | | 0.70o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | | 0.70o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | | 0.70o | 0.096o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | | 0.70o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | | 0.70o | 0.080o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | | 0.70o | 0.26o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | | 0.70o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | | 0.70o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | | 1.4o | 0.50o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | | 1.4o | 0.39o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | | 1.4o | 0.49o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *93.3%o* | | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *117%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aDUP-8-032124 (Continued)a

**24C0142-06 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *108%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *117%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *108%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *99.6%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *96.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *93.3%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *79.1%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *94.8%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *99.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *101%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *113%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *125%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *114%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *103%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *51.3%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *38.1%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *40.9%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *87.0%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *106%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *41.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *43.3%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *109%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aEB-9-032124 a**

**24C0142-07 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 0.37o MI1, Jo | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | NDo | 0.74o | 0.060o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | NDo | 0.37o | 0.051o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | NDo | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 0.24o B, Jo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | 0.37o | 0.076o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | 0.37o | 0.094o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | NDo | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | NDo | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | NDo | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | 0.37o | 0.048o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.071o MI2, Jo | 0.37o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | 1.5o | 0.076o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | 1.5o | 0.44o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | 0.37o | 0.098o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | 1.5o | 0.94o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | 1.5o | 0.97o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | 0.74o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | 0.74o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | 0.74o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | 0.74o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | 0.74o | 0.084o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | 0.74o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | 0.74o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | 0.74o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *100%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *108%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aEB-9-032124 (Continued)a

**24C0142-07 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *98.4%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *106%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *99.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *105%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *101%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *97.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *93.2%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *79.9%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *104%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *103%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *98.1%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *111%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *123%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *128%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *116%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *65.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *42.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *47.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *104%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *106%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *50.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *53.8%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *105%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

**Sample: aFB-9-032124 a**

**24C0142-08 (Water)a**

| Analyteo | Result /Qual o | PQLo | MDLo | Unitso | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances a** | | | | | | | | |
| PFBAo | 0.29o MI1, Jo | 1.5o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeAo | NDo | 0.73o | 0.059o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxAo | NDo | 0.37o | 0.050o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpAo | NDo | 0.37o | 0.038o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOAo | 0.26o B, Jo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNAo | NDo | 0.37o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDAo | NDo | 0.37o | 0.093o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFUnAo | NDo | 0.37o | 0.15o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoAo | NDo | 0.37o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTrDAo | NDo | 0.37o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFTeDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxDAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFODAo | NDo | 0.37o | 0.18o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFBSo | NDo | 0.37o | 0.034o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFPeSo | NDo | 0.37o | 0.057o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHxSo | NDo | 0.37o | 0.029o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFHpSo | NDo | 0.37o | 0.047o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSo | 0.072o MI2, Jo | 0.37o | 0.058o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFNSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDSo | NDo | 0.37o | 0.14o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFDoSo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 4:2FTSo | NDo | 1.5o | 0.27o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 6:2FTSo | NDo | 1.5o | 0.29o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 8:2FTSo | NDo | 1.5o | 0.075o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 10:2FTSo | NDo | 1.5o | 0.37o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFOSAo | NDo | 0.37o | 0.095o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAo | NDo | 1.5o | 0.43o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAo | NDo | 1.5o | 0.38o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSAAo | NDo | 0.37o | 0.097o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSAAo | NDo | 0.37o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NMeFOSEo | NDo | 1.5o | 0.93o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NEtFOSEo | NDo | 1.5o | 0.96o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| HFPO-DAo | NDo | 0.73o | 0.16o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| ADONAo | NDo | 0.73o | 0.11o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFEESAo | NDo | 0.73o | 0.10o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMPAo | NDo | 0.73o | 0.049o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| PFMBAo | NDo | 0.73o | 0.083o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| NFDHAo | NDo | 0.73o | 0.28o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 9Cl-PF3ONSo | NDo | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 11Cl-PF3OUDSo | NDo | 0.73o | 0.19o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 3:3FTCAo | NDo | 1.5o | 0.53o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 5:3FTCAo | NDo | 1.5o | 0.41o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| 7:3FTCAo | NDo | 1.5o | 0.51o | ng/Lo | 03/29/24o | 1o | EPA 1633o | BDC0363o |
| *Surrogate: 13C4-PFBAo* | *99.2%o* | *5-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C5-PFPEAo* | *101%o* | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager: David Connero | Reported:o04/09/2024 11:49o |

## Sample Resultsa

**(Continued) a**

### Sample: aFB-9-032124 (Continued)a

**24C0142-08 (Water)a**

| Analyteo | Resultø | Qual o | PQL | MDLo | Units | Dateo Analyzedo | DFo | Methodo | Prepo Batcho |
|---|---|---|---|---|---|---|---|---|---|
| **Per- and Polyfluoroalkyl Substances (Continued)a** | | | | | | | | | |
| *Surrogate: 13C5-PFHXAo* | *93.5%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C4-PFHPAo* | *98.2%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOAo* | *99.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C9-PFNAo* | *104%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C6-PFDAo* | *98.3%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C7-PFUnAo* | *103%o* | | *30-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFDOAo* | *94.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFTEDAo* | *97.4%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-PFHxDAo* | *73.8%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFBSo* | *98.9%o* | | *40-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-PFHXSo* | *99.9%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSo* | *100%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-4:2FTSo* | *124%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-6:2FTSo* | *122%o* | | *40-200o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2-8:2FTSo* | *126%o* | | *40-300o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C2D4-10:2FTSo* | *117%o* | | *20-150o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C8-PFOSAo* | *61.1%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAo* | *38.1%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAo* | *40.8%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D3-NMEFOSAAo* | *101%o* | | *40-170o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D5-NETFOSAAo* | *101%o* | | *25-135o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D7-NMEFOSEo* | *44.6%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: D9-NETFOSEo* | *47.5%o* | | *10-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |
| *Surrogate: 13C3-HFPO-DAo* | *93.6%o* | | *40-130o* | | | *03/29/24o* | 1o | *EPA 1633o* | |

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| | | |
|---|---|---|
| Tidewater, Inc.o | Project: JPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number: JPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49 |

## Quality Controlu

### Per- and Polyfluoroalkyl Substancesu

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Method: EPA 1633u*** | | | | | | | | | | |
| ***Batch: BDC0363 - EPA 1633u*** | | | | | | | | | | |
| **Blank (BDC0363-BLK1)u** | | | | | Prepared: 03/26/24 07:38 Analyzed: 03/29/24 13:21 | | | | | |
| PFBAo | NDo | 1.6o | 0.21o | ng/L | | | | | | |
| PFPeAo | NDo | 0.80o | 0.065o | ng/L | | | | | | |
| PFHxAo | NDo | 0.40o | 0.055o | ng/L | | | | | | |
| PFHpAo | NDo | 0.40o | 0.041o | ng/L | | | | | | |
| PFOAo | 0.256oJo | 0.40o | 0.15 | ng/L | | | | | | |
| PFNAo | NDo | 0.40o | 0.082o | ng/L | | | | | | |
| PFDAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| PFUnAo | NDo | 0.40o | 0.16o | ng/L | | | | | | |
| PFDoAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| PFTrDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFTeDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFHxDAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFODAo | NDo | 0.40o | 0.20o | ng/L | | | | | | |
| PFBSo | NDo | 0.40o | 0.037o | ng/L | | | | | | |
| PFPeSo | NDo | 0.40o | 0.063o | ng/L | | | | | | |
| PFHxSo | NDo | 0.40o | 0.032o | ng/L | | | | | | |
| PFHpSo | NDo | 0.40o | 0.051o | ng/L | | | | | | |
| PFOSo | 0.0956oMI2, Jo | 0.40o | 0.064 | ng/L | | | | | | |
| PFNSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| PFDSo | NDo | 0.40o | 0.15o | ng/L | | | | | | |
| PFDoSo | NDo | 0.40o | 0.12o | ng/L | | | | | | |
| 4:2FTSo | NDo | 1.6o | 0.29o | ng/L | | | | | | |
| 6:2FTSo | NDo | 1.6o | 0.31o | ng/L | | | | | | |
| 8:2FTSo | NDo | 1.6o | 0.082o | ng/L | | | | | | |
| 10:2FTSo | NDo | 1.6o | 0.40o | ng/L | | | | | | |
| PFOSAo | NDo | 0.40o | 0.10o | ng/L | | | | | | |
| NMeFOSAo | NDo | 1.6o | 0.47o | ng/L | | | | | | |
| NEtFOSAo | NDo | 1.6o | 0.41o | ng/L | | | | | | |
| NMeFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NEtFOSAAo | NDo | 0.40o | 0.11o | ng/L | | | | | | |
| NMeFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| NEtFOSEo | NDo | 1.6o | 1.0o | ng/L | | | | | | |
| HFPO-DAo | NDo | 0.80o | 0.17o | ng/L | | | | | | |
| ADONAo | NDo | 0.80o | 0.12o | ng/L | | | | | | |
| PFEESAo | NDo | 0.80o | 0.11o | ng/L | | | | | | |
| PFMPAo | NDo | 0.80o | 0.054o | ng/L | | | | | | |
| PFMBAo | NDo | 0.80o | 0.091o | ng/L | | | | | | |
| NFDHAo | NDo | 0.80o | 0.30o | ng/L | | | | | | |
| 9Cl-PF3ONSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 11Cl-PF3OUDSo | NDo | 0.80o | 0.21o | ng/L | | | | | | |
| 3:3FTCAo | NDo | 1.6o | 0.57o | ng/L | | | | | | |
| 5:3FTCAo | NDo | 1.6o | 0.44o | ng/L | | | | | | |
| 7:3FTCAo | NDo | 1.6o | 0.55o | ng/L | | | | | | |
| *Surrogate: 13C4-PFBAo* | *31.6o* | | | *ng/Lo* | *32.0o* | | *98.9o* | *5-130o* | | |
| *Surrogate: 13C5-PFPEAo* | *17.3o* | | | *ng/Lo* | *16.0o* | | *108o* | *40-130o* | | |
| *Surrogate: 13C5-PFHXAo* | *6.90o* | | | *ng/Lo* | *8.00o* | | *86.2o* | *40-130o* | | |
| *Surrogate: 13C4-PFHPAo* | *8.53o* | | | *ng/Lo* | *8.00o* | | *107o* | *40-130o* | | |

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*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQualo | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limitso | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BDC0363-BLK1)u** | | | | | Prepared: 03/26/24 07:38 Analyzed: 03/29/24 13:21o | | | | | |
| *Surrogate: 13C8-PFOAo* | *8.04o* | | | *ng/Lo* | *8.00o* | | *101o* | *40-130o* | | |
| *Surrogate: 13C9-PFNAo* | *4.10o* | | | *ng/Lo* | *4.00o* | | *103o* | *40-130o* | | |
| *Surrogate: 13C6-PFDAo* | *4.09o* | | | *ng/Lo* | *4.00o* | | *102o* | *40-130o* | | |
| *Surrogate: 13C7-PFUnAo* | *3.82o* | | | *ng/Lo* | *4.00o* | | *95.5o* | *30-130o* | | |
| *Surrogate: 13C2-PFDOAo* | *3.92o* | | | *ng/Lo* | *4.00o* | | *97.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.75o* | | | *ng/Lo* | *4.00o* | | *93.9o* | *10-130o* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.05o* | | | *ng/Lo* | *8.00o* | | *63.2o* | *20-150o* | | |
| *Surrogate: 13C3-PFBSo* | *8.09o* | | | *ng/Lo* | *8.00o* | | *101o* | *40-135o* | | |
| *Surrogate: 13C3-PFHXSo* | *7.90o* | | | *ng/Lo* | *8.00o* | | *98.7o* | *40-130o* | | |
| *Surrogate: 13C8-PFOSo* | *7.94o* | | | *ng/Lo* | *8.00o* | | *99.3o* | *40-130o* | | |
| *Surrogate: 13C2-4:2FTSo* | *19.4o* | | | *ng/Lo* | *16.0o* | | *121o* | *40-200o* | | |
| *Surrogate: 13C2-6:2FTSo* | *19.3o* | | | *ng/Lo* | *16.0o* | | *120o* | *40-200o* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.5o* | | | *ng/Lo* | *16.0o* | | *122o* | *40-300o* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *35.8o* | | | *ng/Lo* | *32.0o* | | *112o* | *20-150o* | | |
| *Surrogate: 13C8-PFOSAo* | *4.11o* | | | *ng/Lo* | *8.00o* | | *51.4o* | *40-130o* | | |
| *Surrogate: D3-NMEFOSAo* | *2.51o* | | | *ng/Lo* | *8.00o* | | *31.4o* | *10-130o* | | |
| *Surrogate: D5-NETFOSAo* | *2.80o* | | | *ng/Lo* | *8.00o* | | *35.0o* | *10-130o* | | |
| *Surrogate: D3-NMEFOSAAo* | *16.1o* | | | *ng/Lo* | *16.0o* | | *101o* | *40-170o* | | |
| *Surrogate: D5-NETFOSAAo* | *16.6o* | | | *ng/Lo* | *16.0o* | | *104o* | *25-135o* | | |
| *Surrogate: D7-NMEFOSEo* | *32.1o* | | | *ng/Lo* | *80.0o* | | *40.2o* | *10-130o* | | |
| *Surrogate: D9-NETFOSEo* | *35.9o* | | | *ng/Lo* | *80.0o* | | *44.9o* | *10-130o* | | |
| *Surrogate: 13C3-HFPO-DAo* | *31.4o* | | | *ng/Lo* | *32.0o* | | *98.1o* | *40-130o* | | |
| **LCS (BDC0363-BS1)u** | | | | | Prepared: 03/26/24 07:38 Analyzed: 03/29/24 13:41o | | | | | |
| PFBAo | 16.8o | | 0.21o | ng/Lo | 16.0o | | 105o | 70-140o | | |
| PFPeAo | 7.40o | | 0.065o | ng/Lo | 8.00o | | 92.4o | 65-135o | | |
| PFHxAo | 3.60o | | 0.055o | ng/Lo | 4.00o | | 89.9o | 70-145o | | |
| PFHpAo | 3.71o | | 0.041o | ng/Lo | 4.00o | | 92.7o | 70-150o | | |
| PFOAo | 3.93o | | 0.15o | ng/Lo | 4.00o | | 98.3o | 70-150o | | |
| PFNAo | 3.65o | | 0.082o | ng/Lo | 4.00o | | 91.3o | 70-150o | | |
| PFDAo | 3.50o | | 0.10o | ng/Lo | 4.00o | | 87.4o | 70-140o | | |
| PFUnAo | 3.83o | | 0.16o | ng/Lo | 4.00o | | 95.8o | 70-145o | | |
| PFDoAo | 3.80o | | 0.11o | ng/Lo | 4.00o | | 95.1o | 70-140o | | |
| PFTrDAo | 3.59o | | 0.20o | ng/Lo | 4.00o | | 89.8o | 65-140o | | |
| PFTeDAo | 3.79o | | 0.20o | ng/Lo | 4.00o | | 94.6o | 60-140o | | |
| PFHxDAo | 3.81o | | 0.20o | ng/Lo | 4.00o | | 95.3o | 40-150o | | |
| PFODAo | 3.61o | | 0.20o | ng/Lo | 4.00o | | 90.3o | 40-150o | | |
| PFBSo | 3.17o | | 0.037o | ng/Lo | 3.54o | | 89.5o | 60-145o | | |
| PFPeSo | 3.46o | | 0.063o | ng/Lo | 3.76o | | 92.1o | 65-140o | | |
| PFHxSo | 3.25oMI5o | | 0.032o | ng/Lo | 3.66o | | 88.8o | 65-145o | | |
| PFHpSo | 3.71o | | 0.051o | ng/Lo | 3.82o | | 97.2o | 70-150o | | |
| PFOSo | 3.57o | | 0.064o | ng/Lo | 3.72o | | 95.9o | 55-150o | | |
| PFNSo | 3.72o | | 0.12o | ng/Lo | 3.84o | | 96.8o | 65-145o | | |
| PFDSo | 3.77o | | 0.15o | ng/Lo | 3.86o | | 97.7o | 60-145o | | |
| PFDoSo | 3.46o | | 0.12o | ng/Lo | 3.88o | | 89.2o | 50-145o | | |
| 4:2FTSo | 13.8o | | 0.29o | ng/Lo | 15.0o | | 92.0o | 70-145o | | |
| 6:2FTSo | 12.8o | | 0.31o | ng/Lo | 15.2o | | 84.2o | 65-155o | | |
| 8:2FTSo | 13.9o | | 0.082o | ng/Lo | 15.4o | | 90.3o | 60-150o | | |
| 10:2FTSo | 17.0o | | 0.40o | ng/Lo | 15.4o | | 110o | 40-150o | | |
| PFOSAo | 4.04o | | 0.10o | ng/Lo | 4.00o | | 101o | 70-145o | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported:o04/09/2024 11:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BDC0363-BS1)u** | | | | | Prepared: 03/26/24 07:38 | | Analyzed: 03/29/24 13:41o | | | |
| NMeFOSAo | 16.2o | | 0.47o | ng/L | 16.0o | | 101 | 60-150 | | |
| NEtFOSAo | 15.2o | | 0.41o | ng/L | 16.0o | | 95.3 | 65-145 | | |
| NMeFOSAAo | 3.67o | | 0.11o | ng/L | 4.00o | | 91.8 | 50-140 | | |
| NEtFOSAAo | 3.60o | | 0.11o | ng/L | 4.00o | | 90.1 | 70-145 | | |
| NMeFOSEo | 13.1o | | 1.0o | ng/L | 16.0o | | 81.6 | 70-145 | | |
| NEtFOSEo | 15.2o | | 1.0o | ng/L | 16.0o | | 95.0 | 70-135 | | |
| HFPO-DAo | 3.88o | | 0.17o | ng/L | 4.00o | | 97.0 | 70-140 | | |
| ADONAo | 3.74o | | 0.12o | ng/L | 3.78o | | 99.0 | 65-145 | | |
| PFEESAo | 7.07o | | 0.11o | ng/L | 7.12o | | 99.3 | 70-140 | | |
| PFMPAo | 7.02o | | 0.054o | ng/L | 8.00o | | 87.7 | 55-140 | | |
| PFMBAo | 7.25o | | 0.091o | ng/L | 8.00o | | 90.7 | 60-150 | | |
| NFDHAo | 7.31o | | 0.30o | ng/L | 8.00o | | 91.4 | 50-150 | | |
| 9Cl-PF3ONSo | 3.55o | | 0.21o | ng/L | 3.74o | | 94.9 | 70-155 | | |
| 11Cl-PF3OUDSo | 3.83o | | 0.21o | ng/L | 3.78o | | 101 | 55-160 | | |
| 3:3FTCAo | 12.3o | | 0.57o | ng/L | 16.0o | | 76.8 | 65-130 | | |
| 5:3FTCAo | 13.8o | | 0.44o | ng/L | 16.0o | | 86.0 | 70-135 | | |
| 7:3FTCAo | 13.6o | | 0.55o | ng/L | 16.0o | | 85.0 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *33.8o* | | | *ng/Lo* | *32.0o* | | *106* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *18.1o* | | | *ng/Lo* | *16.0o* | | *113* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *8.32o* | | | *ng/Lo* | *8.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.64o* | | | *ng/Lo* | *8.00o* | | *108* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *8.32o* | | | *ng/Lo* | *8.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.04o* | | | *ng/Lo* | *4.00o* | | *101* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *4.27o* | | | *ng/Lo* | *4.00o* | | *107* | *40-130* | | |
| *Surrogate: 13C7-PFUnAo* | *4.18o* | | | *ng/Lo* | *4.00o* | | *105* | *30-130* | | |
| *Surrogate: 13C2-PFDOAo* | *4.12o* | | | *ng/Lo* | *4.00o* | | *103* | *10-130* | | |
| *Surrogate: 13C2-PFTEDAo* | *3.78o* | | | *ng/Lo* | *4.00o* | | *94.6* | *10-130* | | |
| *Surrogate: 13C2-PFHxDAo* | *5.35o* | | | *ng/Lo* | *8.00o* | | *66.8* | *20-150* | | |
| *Surrogate: 13C3-PFBSo* | *7.91o* | | | *ng/Lo* | *8.00o* | | *98.8* | *40-135* | | |
| *Surrogate: 13C3-PFHXSo* | *8.37o* | | | *ng/Lo* | *8.00o* | | *105* | *40-130* | | |
| *Surrogate: 13C8-PFOSo* | *8.36o* | | | *ng/Lo* | *8.00o* | | *105* | *40-130* | | |
| *Surrogate: 13C2-4:2FTSo* | *18.4o* | | | *ng/Lo* | *16.0o* | | *115* | *40-200* | | |
| *Surrogate: 13C2-6:2FTSo* | *20.8o* | | | *ng/Lo* | *16.0o* | | *130* | *40-200* | | |
| *Surrogate: 13C2-8:2FTSo* | *19.8o* | | | *ng/Lo* | *16.0o* | | *123* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTSo* | *32.6o* | | | *ng/Lo* | *32.0o* | | *102* | *20-150* | | |
| *Surrogate: 13C8-PFOSAo* | *5.11o* | | | *ng/Lo* | *8.00o* | | *63.9* | *40-130* | | |
| *Surrogate: D3-NMEFOSAo* | *2.90o* | | | *ng/Lo* | *8.00o* | | *36.3* | *10-130* | | |
| *Surrogate: D5-NETFOSAo* | *3.16o* | | | *ng/Lo* | *8.00o* | | *39.5* | *10-130* | | |
| *Surrogate: D3-NMEFOSAAo* | *16.8o* | | | *ng/Lo* | *16.0o* | | *105* | *40-170* | | |
| *Surrogate: D5-NETFOSAAo* | *18.0o* | | | *ng/Lo* | *16.0o* | | *112* | *25-135* | | |
| *Surrogate: D7-NMEFOSEo* | *37.2o* | | | *ng/Lo* | *80.0o* | | *46.4* | *10-130* | | |
| *Surrogate: D9-NETFOSEo* | *39.4o* | | | *ng/Lo* | *80.0o* | | *49.2* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DAo* | *32.9o* | | | *ng/Lo* | *32.0o* | | *103* | *40-130* | | |

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|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Quality Controlu
**(Continued)u**

### Per- and Polyfluoroalkyl Substances (Continued)u

| Analyteo | Result/oQual | PQLo | MDLo | Unitso | Spikeo Levelo | Sourceo Resulto | %RECo | %RECo Limits | RPDo | RPDo Limito |
|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0363-MRL1)u** | | | | | Prepared: 03/26/24 07:38 | Analyzed: 03/29/24 14:02o | | | | |
| PFBAo | 2.87oMI1o | | 0.21o | ng/L | 3.20o | | 89.6 | 70-140 | | |
| PFPeAo | 1.33o | | 0.065o | ng/L | 1.60o | | 83.3 | 65-135 | | |
| PFHxAo | 0.681o | | 0.055o | ng/L | 0.800o | | 85.1 | 70-145 | | |
| PFHpAo | 0.575o | | 0.041o | ng/L | 0.800o | | 71.9 | 70-150 | | |
| PFOAo | 0.923o | | 0.15o | ng/L | 0.800o | | 115 | 70-150 | | |
| PFNAo | 0.640o | | 0.082o | ng/L | 0.800o | | 80.0 | 70-150 | | |
| PFDAo | 0.649o | | 0.10o | ng/L | 0.800o | | 81.2 | 70-140 | | |
| PFUnAo | 0.650o | | 0.16o | ng/L | 0.800o | | 81.3 | 70-145 | | |
| PFDoAo | 0.674o | | 0.11o | ng/L | 0.800o | | 84.2 | 70-140 | | |
| PFTrDAo | 0.651o | | 0.20o | ng/L | 0.800o | | 81.4 | 65-140 | | |
| PFTeDAo | 0.603o | | 0.20o | ng/L | 0.800o | | 75.3 | 60-140 | | |
| PFHxDAo | 0.671o | | 0.20o | ng/L | 0.800o | | 83.9 | 40-150 | | |
| PFODAo | 0.556o | | 0.20o | ng/L | 0.800o | | 69.5 | 40-150 | | |
| PFBSo | 0.543o | | 0.037o | ng/L | 0.708o | | 76.7 | 60-145 | | |
| PFPeSo | 0.560o | | 0.063o | ng/L | 0.752o | | 74.5 | 65-140 | | |
| PFHxSo | 0.579oMI5o | | 0.032o | ng/L | 0.732o | | 79.2 | 65-145 | | |
| PFHpSo | 0.569o | | 0.051o | ng/L | 0.764o | | 74.4 | 70-150 | | |
| PFOSo | 0.676o | | 0.064o | ng/L | 0.744o | | 90.8 | 55-150 | | |
| PFNSo | 0.595o | | 0.12o | ng/L | 0.768o | | 77.4 | 65-145 | | |
| PFDSo | 0.632o | | 0.15o | ng/L | 0.772o | | 81.9 | 60-145 | | |
| PFDoSo | 0.584o | | 0.12o | ng/L | 0.776o | | 75.3 | 50-145 | | |
| 4:2FTSo | 2.05oBS1o | | 0.29o | ng/L | 3.00o | | 68.4 | 70-145 | | |
| 6:2FTSo | 2.34o | | 0.31o | ng/L | 3.04o | | 76.8 | 65-155 | | |
| 8:2FTSo | 2.51o | | 0.082o | ng/L | 3.07o | | 81.6 | 60-150 | | |
| 10:2FTSo | 3.05o | | 0.40o | ng/L | 3.09o | | 98.7 | 40-150 | | |
| PFOSAo | 0.709o | | 0.10o | ng/L | 0.800o | | 88.6 | 70-145 | | |
| NMeFOSAo | 2.52o | | 0.47o | ng/L | 3.20o | | 78.8 | 60-150 | | |
| NEtFOSAo | 2.16oMI5o | | 0.41o | ng/L | 3.20o | | 67.6 | 65-145 | | |
| NMeFOSAAo | 0.657o | | 0.11o | ng/L | 0.800o | | 82.1 | 50-140 | | |
| NEtFOSAAo | 0.642o | | 0.11o | ng/L | 0.800o | | 80.2 | 70-145 | | |
| NMeFOSEo | 2.72o | | 1.0o | ng/L | 3.20o | | 85.0 | 70-145 | | |
| NEtFOSEo | 2.61o | | 1.0o | ng/L | 3.20o | | 81.5 | 70-135 | | |
| HFPO-DAo | 0.648odo | | 0.17o | ng/L | 0.800o | | 81.0 | 70-140 | | |
| ADONAo | 0.629odo | | 0.12o | ng/L | 0.756o | | 83.2 | 65-145 | | |
| PFEESAo | 1.20o | | 0.11o | ng/L | 1.42o | | 84.5 | 70-140 | | |
| PFMPAo | 1.20o | | 0.054o | ng/L | 1.60o | | 75.0 | 55-140 | | |
| PFMBAo | 1.20o | | 0.091o | ng/L | 1.60o | | 74.9 | 60-150 | | |
| NFDHAo | 1.28o | | 0.30o | ng/L | 1.60o | | 80.1 | 50-150 | | |
| 9Cl-PF3ONSo | 0.634odo | | 0.21o | ng/L | 0.748o | | 84.7 | 70-155 | | |
| 11Cl-PF3OUDSo | 0.636odo | | 0.21o | ng/L | 0.756o | | 84.1 | 55-160 | | |
| 3:3FTCAo | 2.28o | | 0.57o | ng/L | 3.20o | | 71.3 | 65-130 | | |
| 5:3FTCAo | 2.46o | | 0.44o | ng/L | 3.20o | | 76.9 | 70-135 | | |
| 7:3FTCAo | 2.38o | | 0.55o | ng/L | 3.20o | | 74.3 | 50-145 | | |
| *Surrogate: 13C4-PFBAo* | *31.7o* | | | *ng/Lo* | *32.0o* | | *99.0* | *5-130* | | |
| *Surrogate: 13C5-PFPEAo* | *16.8o* | | | *ng/Lo* | *16.0o* | | *105* | *40-130* | | |
| *Surrogate: 13C5-PFHXAo* | *7.66o* | | | *ng/Lo* | *8.00o* | | *95.8* | *40-130* | | |
| *Surrogate: 13C4-PFHPAo* | *8.10o* | | | *ng/Lo* | *8.00o* | | *101* | *40-130* | | |
| *Surrogate: 13C8-PFOAo* | *7.87o* | | | *ng/Lo* | *8.00o* | | *98.4* | *40-130* | | |
| *Surrogate: 13C9-PFNAo* | *4.17o* | | | *ng/Lo* | *4.00o* | | *104* | *40-130* | | |
| *Surrogate: 13C6-PFDAo* | *3.94o* | | | *ng/Lo* | *4.00o* | | *98.4* | *40-130* | | |

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. o*
*No duplication of this report is allowed, except in its entirety.o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

| | | |
|---|---|---|
| Tidewater, Inc. | Project: JPL-GW Monitoring | |
| 5835 Avenida Encinas, Suite 118 | Project Number: JPL-GW Monitoring | |
| Carlsbad, CA 92208 | Project Manager: David Connero | Reported: 04/09/2024 11:49 |

## Quality Control
**(Continued)**

### Per- and Polyfluoroalkyl Substances (Continued)

| Analyte | Result | Qual | PQL | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MRL Check (BDC0363-MRL1)** | | | | | | Prepared: 03/26/24 07:38 Analyzed: 03/29/24 14:02 | | | | | |
| *Surrogate: 13C7-PFUnA* | *3.89* | | | | *ng/L* | *4.00* | | *97.2* | *30-130* | | |
| *Surrogate: 13C2-PFDOA* | *3.86* | | | | *ng/L* | *4.00* | | *96.5* | *10-130* | | |
| *Surrogate: 13C2-PFTEDA* | *3.63* | | | | *ng/L* | *4.00* | | *90.7* | *10-130* | | |
| *Surrogate: 13C2-PFHxDA* | *4.90* | | | | *ng/L* | *8.00* | | *61.3* | *20-150* | | |
| *Surrogate: 13C3-PFBS* | *8.01* | | | | *ng/L* | *8.00* | | *100* | *40-135* | | |
| *Surrogate: 13C3-PFHXS* | *8.18* | | | | *ng/L* | *8.00* | | *102* | *40-130* | | |
| *Surrogate: 13C8-PFOS* | *8.33* | | | | *ng/L* | *8.00* | | *104* | *40-130* | | |
| *Surrogate: 13C2-4:2FTS* | *20.6* | | | | *ng/L* | *16.0* | | *129* | *40-200* | | |
| *Surrogate: 13C2-6:2FTS* | *21.1* | | | | *ng/L* | *16.0* | | *132* | *40-200* | | |
| *Surrogate: 13C2-8:2FTS* | *19.2* | | | | *ng/L* | *16.0* | | *120* | *40-300* | | |
| *Surrogate: 13C2D4-10:2FTS* | *36.2* | | | | *ng/L* | *32.0* | | *113* | *20-150* | | |
| *Surrogate: 13C8-PFOSA* | *4.79* | | | | *ng/L* | *8.00* | | *59.8* | *40-130* | | |
| *Surrogate: D3-NMEFOSA* | *2.61* | | | | *ng/L* | *8.00* | | *32.6* | *10-130* | | |
| *Surrogate: D5-NETFOSA* | *2.87* | | | | *ng/L* | *8.00* | | *35.9* | *10-130* | | |
| *Surrogate: D3-NMEFOSAA* | *15.9* | | | | *ng/L* | *16.0* | | *99.3* | *40-170* | | |
| *Surrogate: D5-NETFOSAA* | *16.8* | | | | *ng/L* | *16.0* | | *105* | *25-135* | | |
| *Surrogate: D7-NMEFOSE* | *34.3* | | | | *ng/L* | *80.0* | | *42.8* | *10-130* | | |
| *Surrogate: D9-NETFOSE* | *35.7* | | | | *ng/L* | *80.0* | | *44.6* | *10-130* | | |
| *Surrogate: 13C3-HFPO-DA* | *31.9* | | | | *ng/L* | *32.0* | | *99.8* | *40-130* | | |

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*No duplication of this report is allowed, except in its entirety.*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

| | | |
|---|---|---|
| Tidewater, Inc.o | Project:oJPL-GW Monitoringo | |
| 5835 Avenida Encinas, Suite 118o | Project Number:oJPL-GW Monitoringo | |
| Carlsbad, CA 92208o | Project Manager:oDavid Connero | Reported: 04/09/2024 11:49o |

## Notes and Definitions o

| Itemo | Definitiono |
|---|---|
| Bo | Blank contamination |
| BS1o | Blank spike recovered below the lower control limit o |
| IR1o | Ion ratio below the lower control limit o |
| IS1o | Internal standard recovered below the lower control limit o |
| Jo | Estimated value o |
| MI1o | Manual integration, integration does not follow baseline o |
| MI2o | Manual integration, non-target peak interference o |
| MI5o | Manual integration, whole peak was not integrated o |
| S1o | Surrogate recovered below the lower control limit o |
| S2o | Surrogate recovered above the upper control limit o |
| Uo | Not detected o |
| Dryo | Sample results reported on a dry weight basis. o |
| DFo | Dilution Factor o |
| LODo | Limit of Detection |
| LOQo | Limit of Quantitation |
| DLo | Detection Limit o |
| *o | Value outside control limitso |
| RPDo | Relative Percent Differenceo |
| %RECo | Percent Recoveryo |
| Sourceo | Sample that was matrix spiked or duplicated.o |

LOQ, Limit of Quantitation = Method Reporting Limit (MRL).o

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0142** R

Printed: 04/09/2024 11:50 ami

**Project: R** **JPL-GW Monitoring**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**Report To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

**Invoice To: R**
Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

Date Received:i 03/22/2024 10:00 AMi
Date Due:i 04/05/2024 (10.00 day TAT)i

Logged In By:i Christina Aguilari
Received By:i Jake Henigei

| Analysisa | Commentsa |
|---|---|
| **24C0142-01 MW-13 [Water] Sampled 3/21/2024 8:10:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-02 DUP-6-032124 [Water] Sampled 3/21/2024 8:20:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-03 MW-16 [Water] Sampled 3/21/2024 9:37:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-04 DUP-7-032124 [Water] Sampled 3/21/2024 9:47:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-05 MW-7 [Water] Sampled 3/21/2024 11:27:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-06 DUP-8-032124 [Water] Sampled 3/21/2024 11:37:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-07 EB-9-032124 [Water] Sampled 3/21/2024 11:45:00AMR** | |
| 1633i | NASA Listi |
| **24C0142-08 FB-9-032124 [Water] Sampled 3/21/2024 11:55:00AMR** | |
| 1633i | NASA Listi |

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AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

# WORK ORDER

**24C0142** R

Printed: 04/09/2024 11:50 ami

**(Continued)R**

**Project: R** **JPL-GW MonitoringR**
**Project Number: R** **JPL-GW MonitoringR**
**Project Manager:R** **Eric OgdenR**
**PO Number:R**

**24C0142C** **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **0.5°CR**

| | | | |
|---|---|---|---|
| Custody Sealsi | Noi | Were all containers sealed in separate bags?i | Yes i |
| Containers Intacti | Yesi | Did all containers arrive in good condition?i | Yes i |
| COC/Labels Agreei | Yesi | Correct containers/preserv. for tests indicated?i | Yes i |
| Preservation Confirmedi | Yesi | Sufficient volume sent for tests requested?i | Yesi |
| Received On Icei | Yesi | Were bubbles absent in volatile samples?i | Yes i |
| Was a chain of custody received?i | Yesi | Sufficient remaining holding time for analyses?i | Yes i |
| COCs complete/signed in the appropriate places?i | Yesi | pH of non-VOA preserved containers documented?i | No i |
| Sample labels complete? Sample ID, date/time, etc.i | Yesi | Unpreserved vials received for VOA analysis?i | No i |
| Did all container labels agree with COCs?i | Yesi | If "yes", are unpreserved VOA vials noted on Worki | No i |

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD

C.O.C. 62606

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tidewater Inc | Phone: 626-298-5715 | Company Name: Tidewater | Phone: 626-298-5715 |
| Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 | Address: 3761 A Hucks Dr OH 43065 | Fax: 614-792-2897 |
| Attn: David Conner | | Attn: David Conner | |
| Email: david.conner@tideh20.net | | Email: david.conner@tideh20.net | |

| Project Name/Number | Sampler (Print) | Date Shipped: |
|---|---|---|
| SPL-6 Monitoring | Thinh Hoang | Carrier: |
| Purchase Order Number | Sampler (Signature) | Waybill No.: |
| | | Comments: |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | | Analysis Requested/Method Number: 8260 1633 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-13 | | 03/21/24 | 0810 | | 1 | X | | | | X | Laboratory please |
| DUP-6-032124 | | 03/21/24 | 0820 | | 1 | X | | | | X | select 25D65 |
| MW-16 | | 03/21/24 | 0937 | | 1 | X | | | | X | for level IV |
| DUP-7-032124 | | | 0947 | | 1 | X | | | | X | Validation |
| MW-7 | | | 1127 | | 1 | X | | | | X | |
| DUP-8-032124 | | | 1137 | | 1 | X | | | | X | |
| EB-9-032124 | | | 1145 | | 1 | X | | | | X | |
| FB-9-032124 | | | 1155 | | 1 | X | | | | X | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Shuttle Temperature: IRB: 0.5°C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retentic

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 03/21/24 | 1315 | Nicole Park | Nicole (Shine Tech) | 3/21/24 | 1315 | FEDEX 7756 3939 2139 |
| **Relinquished by:** | **Date** | **Time** | **Received by:** | **Relinquished by:** | **Date** | **Time** | **Received at lab by:** |
| | | | | | 3/22/24 | 1000 | APPL |

White: Return to client with report  Yellow: Laboratory Copy  See reverse side for Container Preservative and Sampling Information

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Table of Contents

No Custody Seal Available

# PFASA

# SAMPLE DATAM

# ANALYSIS DATA SHEETL

MW-13-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-01- | File ID:- | S2024-03-29A (14)- |
| Sampled:- | 03/21/24 08:10- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 15:44- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.324 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 11- | 0.19- | 1.5- | |
| PFPeA- | 12- | 0.061- | 0.75- | |
| PFHxA- | 7.5- | 0.051- | 0.37- | |
| PFHpA- | 2.4- | 0.038- | 0.37- | |
| PFOA- | 1.9- | 0.14- | 0.37- | B, MI5- |
| PFNA- | ND- | 0.077- | 0.37- | U- |
| PFDA- | ND- | 0.095- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.19- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | 1.2- | 0.034- | 0.37- | |
| PFPeS- | 0.23- | 0.059- | 0.37- | J- |
| PFHxS- | 0.96- | 0.030- | 0.37- | MI5- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.32- | 0.059- | 0.37- | MI5, J- |
| PFNS- | ND- | 0.12- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.077- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.39- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.099- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

MW-13-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-01- | File ID:- | S2024-03-29A (14)- |
| Sampled:- | 03/21/24 08:10- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 15:44- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 534.324 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.95- | 1.5- | U- |
| NEtFOSE- | ND- | 0.98- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.75- | U- |
| ADONA- | ND- | 0.12- | 0.75- | U- |
| PFEESA- | ND- | 0.10- | 0.75- | U- |
| PFMPA- | ND- | 0.050- | 0.75- | U- |
| PFMBA- | ND- | 0.085- | 0.75- | U- |
| NFDHA- | ND- | 0.28- | 0.75- | U- |
| 9Cl-PF3ONS- | ND- | 0.20- | 0.75- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.75- | U- |
| 3:3FTCA- | ND- | 0.54- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.52- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (14)
Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 80817<br>( 163.0 / 69.0 ) 2327 | ( 2.41 , 0.67 ) ( N/A , 0.00 , -0.8) | 473.6<br>110.9 | 0.0288<br>105.1<br>106.5 | 1.3480 | N/A | 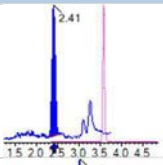 | 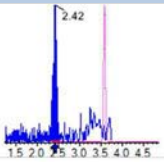 | |
| PFBA | ( 213.0 / 169.0 ) 889026 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 878.8 | N/A<br>0.0<br>0.0 | 3.0520 | N/A | 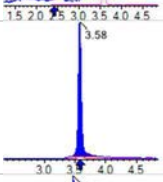 | | |
| PFPeA | ( 263.0 / 219.0 ) 615145<br>( 263.0 / 69.0 ) 8563 | ( 4.27 , 1.00 ) ( 0.00 , N/A , -0.2) | 1044.5<br>88.1 | 0.0139<br>117.0<br>120.0 | 3.2650 | N/A | 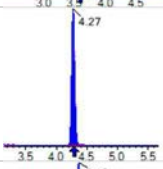 | 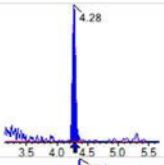 | |
| PFHxA | ( 313.0 / 269.0 ) 348110<br>( 313.0 / 119.0 ) 37471 | ( 5.16 , 1.00 ) ( 0.00 , N/A , 0.1) | 1014.9<br>632.2 | 0.1076<br>96.8<br>92.2 | 2.0150 | N/A | 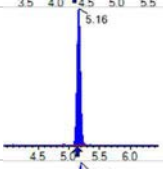 | 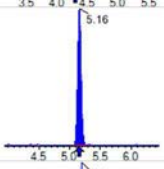 | |
| PFHpA | ( 363.0 / 319.0 ) 157844<br>( 363.0 / 169.0 ) 50208 | ( 6.30 , 1.00 ) ( 0.00 , N/A , -0.2) | 773.7<br>865.5 | 0.3181<br>104.1<br>98.1 | 0.6450 | N/A | 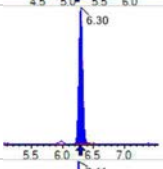 | 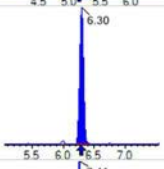 | |
| PFOA | ( 413.0 / 369.0 ) 191213<br>( 413.0 / 169.0 ) 75840 | ( 7.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 238.1<br>301.7 | 0.3966<br>111.0<br>115.2 | 0.5080 | N/A | 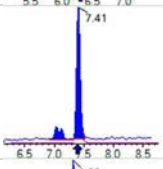 | 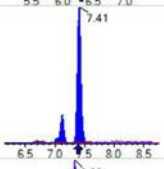 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 3594<br>( 463.0 / 169.0 ) 836 | ( 8.92 , 1.00 ) ( -0.01 , N/A , -0.9) | 39.6<br>36.2 | 0.2325<br>94.6<br>88.3 | 0.0150 | N/A | 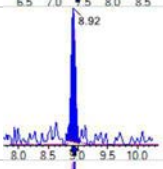 | 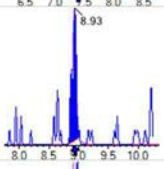 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 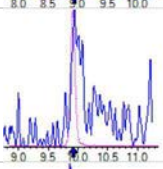 | 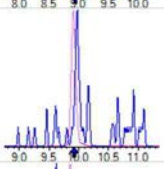 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 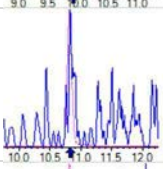 | 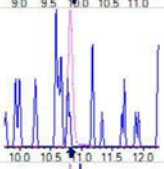 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 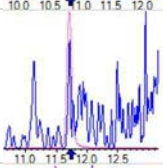 | 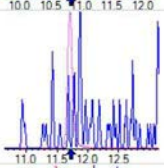 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 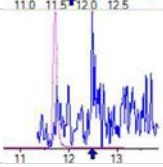 | 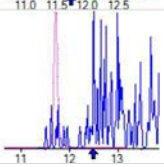 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: 24C0142-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 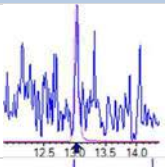 | 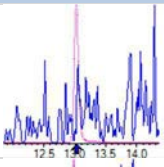 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 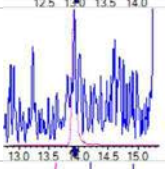 | 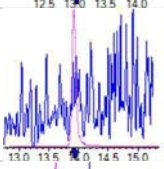 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 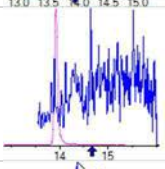 | 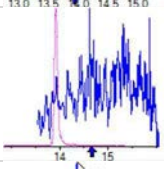 | |
| PFBS | ( 299.0 / 80.0 )<br>102502<br>( 299.0 / 99.0 )<br>73101 | ( 5.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 526.5<br>524.1 | 0.7132<br>96.3<br>95.4 | 0.3220 | N/A | 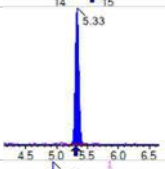 | 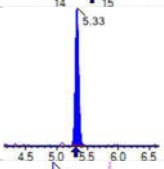 | |
| PFPeS | ( 349.0 / 80.0 )<br>57987<br>( 349.0 / 99.0 )<br>17904 | ( 6.61 , 0.82 )<br>( N/A , 0.01 , 0.2) | 241.4<br>173.0 | 0.3088<br>90.4<br>88.4 | 0.0630 | N/A | 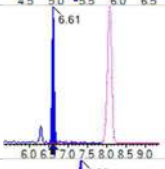 | 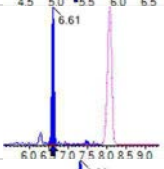 | |
| PFHxS | ( 399.0 / 80.0 )<br>289927<br>( 399.0 / 99.0 )<br>83855 | ( 8.08 , 1.00 )<br>( 0.00 , N/A , 0.0) | 869.3<br>1012.2 | 0.2892<br>88.1<br>90.1 | 0.2560 | N/A | 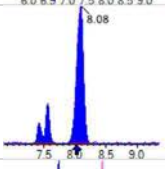 | 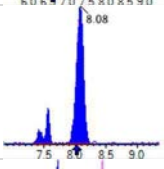 | MI5 DG 2024-04-01 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 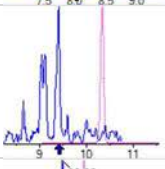 | 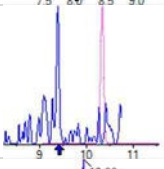 | |
| PFOS | ( 499.0 / 80.0 )<br>73409<br>( 499.0 / 99.0 )<br>9996 | ( 10.00 , 0.97 )<br>( -0.34 , N/A , -19.7) | 176.8<br>6174.6 | 0.1362<br>58.9<br>60.6 | 0.0860 | N/A | 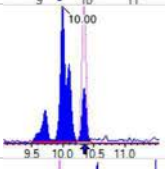 | 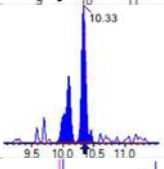 | MI5 DG 2024-04-01 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 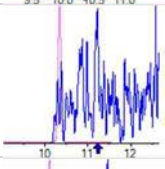 | 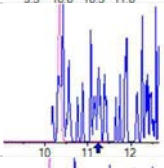 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 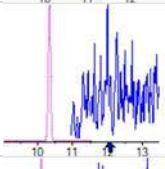 | 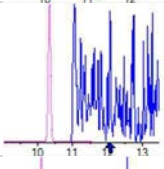 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 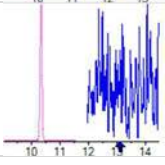 | 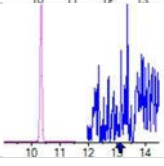 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 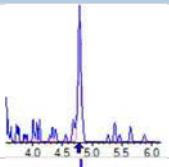 | 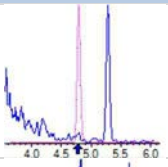 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 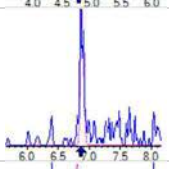 | 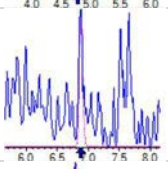 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 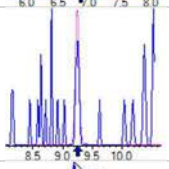 | 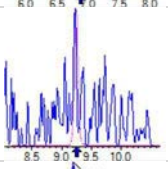 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15099<br>( 627.0 / 81.0 )<br>25517 | ( 10.96 , 1.00 )<br>( 0.01 , N/A , 0.0) | 213.2<br>117.4 | 1.6900<br>117.5<br>116.9 | 0.0500 | N/A | 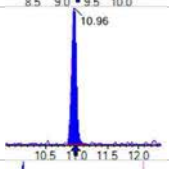 | 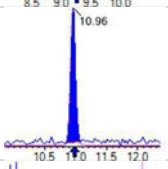 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 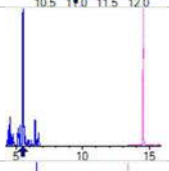 | 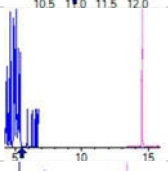 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 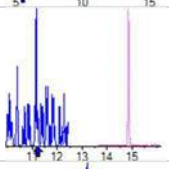 | 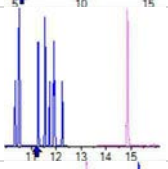 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 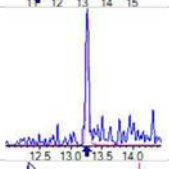 | 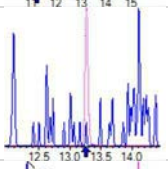 | |
| TFSI | ( 279.7 / 147.0 )<br>614512<br>( 279.7 / 211.0 )<br>50835 | ( 6.98 , 0.53 )<br>( N/A , 0.01 , 0.0) | 68.6<br>1114.9 | 0.0827<br>93.5<br>93.7 | 0.6630 | N/A | 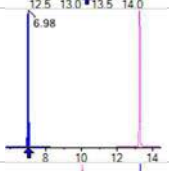 | 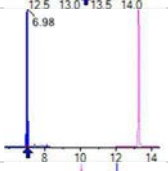 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 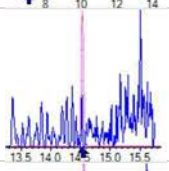 | 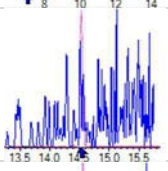 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 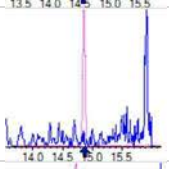 | 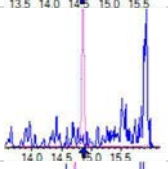 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 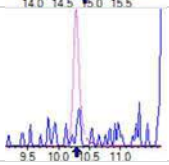 | 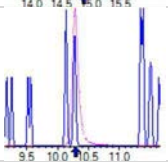 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (14)
Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 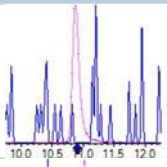 | 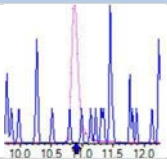 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 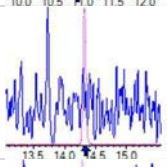 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 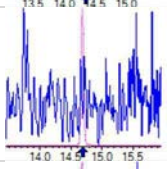 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 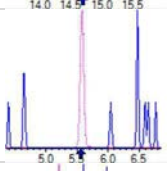 | 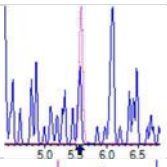 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 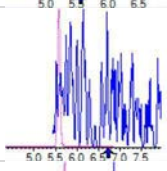 | 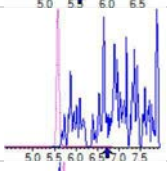 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 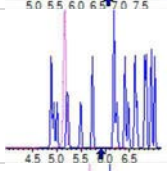 | 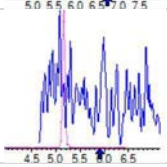 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 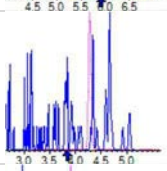 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 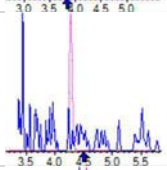 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 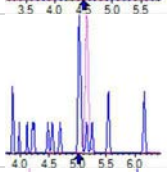 | 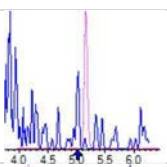 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 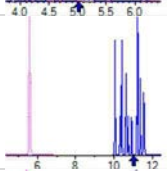 | 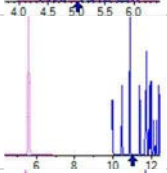 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 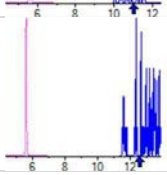 | 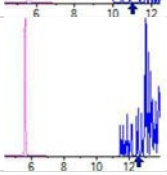 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (14)
Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 6545<br>( 461.0 / 381.2 ) 2546 | ( 9.19 , 0.89 )<br>( N/A , -0.12 , -5.5) | 47.3<br>39.5 | 0.3889<br>100.7<br>99.1 | 0.0140 | N/A | 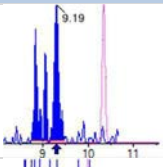 | 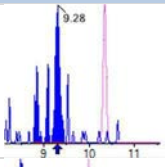 | MI5 DG 2024-04-02 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 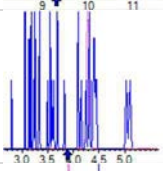 | 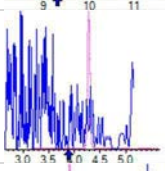 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 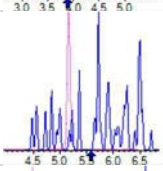 | 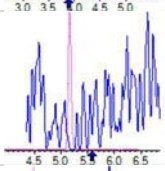 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 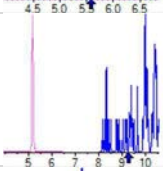 | 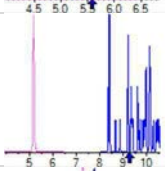 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 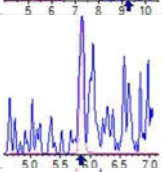 | 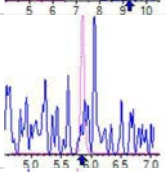 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 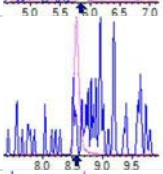 | 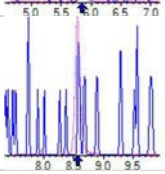 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 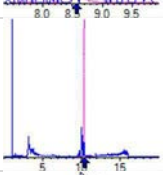 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 264175 | ( 3.58 , N/A )<br>( N/A , 0.00 , N/A ) | 1728.6 | N/A | 0.9360<br>[ 1.0000 ] | 93.6%<br>{ 100.1% } | 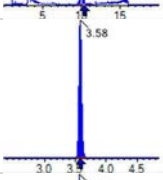 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 117086 | ( 5.17 , N/A )<br>( N/A , 0.02 , N/A ) | 8977.5 | N/A | 0.9920<br>[ 1.0000 ] | 99.2%<br>{ 118.3% } | 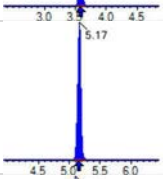 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 354099 | ( 7.41 , N/A )<br>( N/A , 0.02 , N/A ) | 5935.6 | N/A | 0.9120<br>[ 1.0000 ] | 91.2%<br>{ 100.6% } | 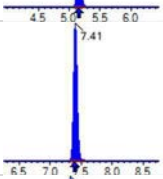 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 237535 | ( 8.92 , N/A )<br>( N/A , -0.01 , N/A ) | 1181.9 | N/A | 0.8130<br>[ 1.0000 ] | 81.3%<br>{ 99.1% } | 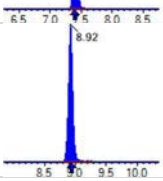 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-01
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (14)
Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 231073 | ( 9.91 , N/A ) ( N/A , -0.01 , N/A ) | 7070.3 | N/A | 0.8060 [ 1.0000 ] | 80.6% { 94.2% } | 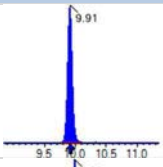 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 915308 | ( 8.08 , N/A ) ( N/A , 0.06 , N/A ) | 6358.2 | N/A | 0.9320 [ 1.0000 ] | 93.2% { 103.1% } | 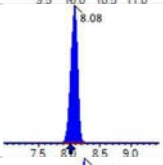 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 676145 | ( 10.34 , N/A ) ( N/A , -0.01 , N/A ) | 3240.8 | N/A | 0.8620 [ 1.0000 ] | 86.2% { 98.1% } | 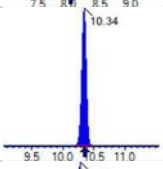 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2119903 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 71614.3 | N/A | 7.4240 [ 8.0000 ] | 92.8% { 96.5% } | 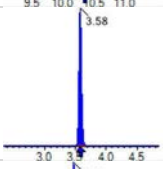 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 754740 | ( 4.28 , N/A ) ( N/A , -0.01 , N/A ) | 4393.4 | N/A | 3.5210 [ 4.0000 ] | 88.0% { 99.0% } | 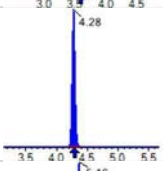 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 372322 | ( 5.16 , N/A ) ( N/A , 0.01 , N/A ) | 9445.4 | N/A | 1.4540 [ 2.0000 ] | 72.7% { 85.5% } | 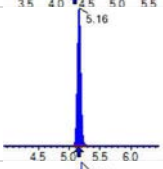 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 493476 | ( 6.30 , N/A ) ( N/A , 0.01 , N/A ) | 5875.3 | N/A | 1.7350 [ 2.0000 ] | 86.7% { 96.3% } | 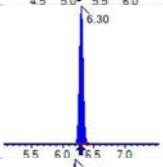 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 749749 | ( 7.40 , N/A ) ( N/A , 0.02 , N/A ) | 4438.8 | N/A | 1.9980 [ 2.0000 ] | 99.9% { 105.5% } | 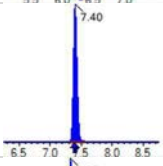 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 240169 | ( 8.92 , N/A ) ( N/A , -0.01 , N/A ) | 5622.9 | N/A | 1.0240 [ 1.0000 ] | 102.4% { 102.2% } | 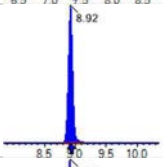 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 278083 | ( 9.91 , N/A ) ( N/A , -0.01 , N/A ) | 1366.0 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 99.2% } | 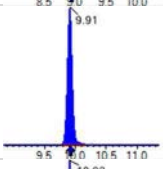 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 316056 | ( 10.82 , N/A ) ( N/A , -0.01 , N/A ) | 959.8 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 98.0% } | 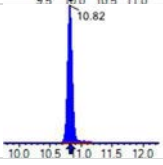 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 324225 | ( 11.71 , N/A ) ( N/A , -0.01 , N/A ) | 1336.1 | N/A | 0.9980 [ 1.0000 ] | 99.8% { 95.4% } | 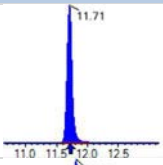 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 292470 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1059.8 | N/A | 1.0170 [ 1.0000 ] | 101.7% { 96.3% } | 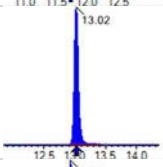 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 393339 | ( 13.92 , N/A ) ( N/A , -0.01 , N/A ) | 2037.5 | N/A | 1.6340 [ 2.0000 ] | 81.7% { 92.3% } | 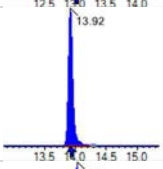 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1293514 | ( 5.33 , N/A ) ( N/A , 0.01 , N/A ) | 2014.8 | N/A | 1.7530 [ 2.0000 ] | 87.7% { 92.4% } | 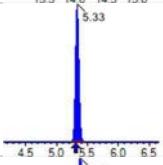 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1290911 | ( 8.08 , N/A ) ( N/A , 0.06 , N/A ) | 5263.2 | N/A | 1.9550 [ 2.0000 ] | 97.8% { 103.9% } | 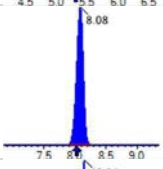 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1464082 | ( 10.34 , N/A ) ( N/A , -0.01 , N/A ) | 2479.3 | N/A | 2.0350 [ 2.0000 ] | 101.8% { 100.8% } | 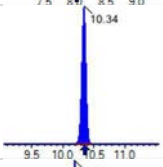 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 601587 | ( 4.79 , N/A ) ( N/A , 0.01 , N/A ) | 74.8 | N/A | 3.7070 [ 4.0000 ] | 92.7% { 96.5% } | 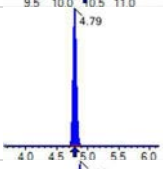 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1852891 | ( 6.88 , N/A ) ( N/A , 0.01 , N/A ) | 5136.5 | N/A | 4.6470 [ 4.0000 ] | 116.2% { 113.2% } | 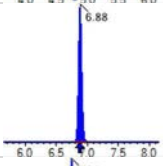 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1543898 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 2065.9 | N/A | 4.4260 [ 4.0000 ] | 110.6% { 116.2% } | 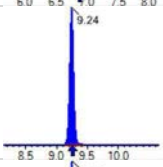 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3061107 | ( 10.95 , N/A ) ( N/A , -0.01 , N/A ) | 1786.6 | N/A | 8.1110 [ 8.0000 ] | 101.4% { 113.1% } | 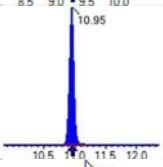 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1096206 | ( 13.27 , N/A ) ( N/A , 0.01 , N/A ) | 2503.4 | N/A | 1.4350 [ 2.0000 ] | 71.8% { 72.9% } | 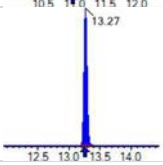 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-01 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (14)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 15:44

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 162742 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 1488.1 | N/A | 0.9480 [ 2.0000 ] | 47.4% { 47.8% } | 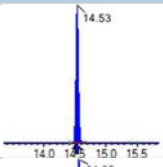 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 158398 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1482.8 | N/A | 1.0090 [ 2.0000 ] | 50.5% { 48.9% } | 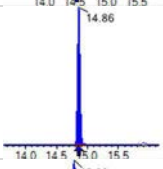 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1025495 | ( 10.28 , N/A ) ( N/A , -0.01 , N/A ) | 3271.1 | N/A | 4.1060 [ 4.0000 ] | 102.6% { 100.0% } | 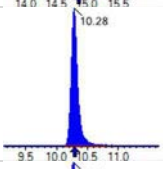 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 962854 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 1964.4 | N/A | 4.2710 [ 4.0000 ] | 106.8% { 105.4% } | 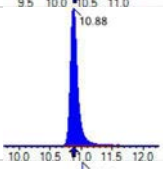 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 613602 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 1761.3 | N/A | 9.5660 [ 20.0000 ] | 47.8% { 49.6% } | 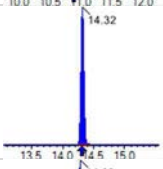 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 586924 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 2747.7 | N/A | 9.7700 [ 20.0000 ] | 48.9% { 54.1% } | 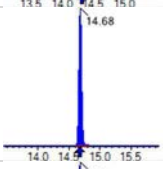 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 662145 | ( 5.58 , N/A ) ( N/A , 0.01 , N/A ) | 2392.3 | N/A | 5.9680 [ 8.0000 ] | 74.6% { 84.6% } | 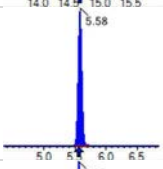 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 547299 | ( 5.85 , N/A ) ( N/A , 0.01 , N/A ) | 2173.4 | N/A | 2.1730 [ 2.0000 ] | 108.7% { 108.1% } | 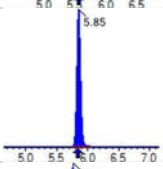 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 540199 | ( 8.57 , N/A ) ( N/A , 0.00 , N/A ) | 1102.6 | N/A | 1.9040 [ 2.0000 ] | 95.2% { 92.3% } | 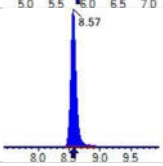 | | |

# ANALYSIS DATA SHEETL

## DUP-6-032124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0142P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0142-02P | File ID: | S2024-03-29A (15)P |
| Sampled:P | 03/21/24 08:20P | repared:P | 03/26/24 07:38P | Analyzed: | 03/29/24 16:05P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 534.614 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0363P | Sequence:P | SD01122P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| FBAP | 9.6P | 0.19P | 1.5 | MI1P |
| FPeAP | 12P | 0.061P | 0.75 | |
| PFHxAP | 6.5P | 0.051P | 0.37 | |
| PFHpAP | 2.3P | 0.038P | 0.37 | |
| PFOAP | 2.0P | 0.14P | 0.37 | B, MI5P |
| FNAP | NDP | 0.077P | 0.37 | UP |
| FDAP | NDP | 0.095P | 0.37 | UP |
| FUnAP | NDP | 0.15P | 0.37 | UP |
| FDoAP | NDP | 0.10P | 0.37 | UP |
| PFTrDAP | NDP | 0.19P | 0.37 | UP |
| PFTeDAP | NDP | 0.19P | 0.37 | UP |
| FHxDAP | NDP | 0.19P | 0.37 | UP |
| FODAP | NDP | 0.19P | 0.37 | UP |
| FBSP | 1.2P | 0.034P | 0.37 | |
| PFPeSP | 0.21P | 0.059P | 0.37 | JP |
| FHxSP | 0.94P | 0.030P | 0.37 | MI5P |
| FHpSP | NDP | 0.048P | 0.37 | UP |
| FOSP | 0.35P | 0.059P | 0.37 | IR1, MI5, JP |
| FNSP | NDP | 0.12P | 0.37 | UP |
| FDSP | NDP | 0.14P | 0.37 | UP |
| FDoSP | NDP | 0.11P | 0.37 | UP |
| 4:2FTSP | NDP | 0.27P | 1.5P | UP |
| 6:2FTSP | NDP | 0.29P | 1.5P | UP |
| 8:2FTSP | NDP | 0.077P | 1.5P | UP |
| 10:2FTSP | NDP | 0.37P | 1.5P | UP |
| FOSAP | NDP | 0.097P | 0.37 | UP |
| NMeFOSAP | NDP | 0.44P | 1.5P | UP |
| NEtFOSAP | NDP | 0.39P | 1.5P | UP |
| NMeFOSAAP | NDP | 0.099P | 0.37P | UP |
| NEtFOSAAP | NDP | 0.11P | 0.37P | UP |

# ANALYSIS DATA SHEETL

## DUP-6-032124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0142P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0142-02P | File ID: | S2024-03-29A (15)P |
| Sampled:P | 03/21/24 08:20P | repared:P | 03/26/24 07:38P | Analyzed: | 03/29/24 16:05P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 534.614 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0363P | Sequence:P | SD01122P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.95P | 1.5P | UP |
| NEtFOSEP | NDP | 0.98P | 1.5P | UP |
| HFPO-DAP | NDP | 0.16P | 0.75P | UP |
| ADONAP | NDP | 0.12P | 0.75P | UP |
| FEESAP | NDP | 0.10P | 0.75 | UP |
| PFMPAP | NDP | 0.050P | 0.75 | UP |
| FMBAP | NDP | 0.085P | 0.75 | UP |
| NFDHAP | NDP | 0.28P | 0.75P | UP |
| 9Cl-PF3ONSP | NDP | 0.20P | 0.75P | UP |
| 11Cl-PF3OUDSP | NDP | 0.19P | 0.75P | UP |
| 3:3FTCAP | NDP | 0.54P | 1.5P | UP |
| 5:3FTCAP | NDP | 0.41P | 1.5P | UP |
| 7:3FTCAP | NDP | 0.52P | 1.5P | UP |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 80470<br>( 163.0 / 69.0 ) 2424 | ( 2.40 , 0.67 ) ( N/A , -0.01 , 0.0) | 465.6<br>132.4 | 0.0301<br>109.9<br>111.4 | 1.3090 | N/A | 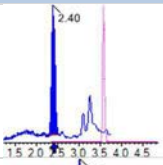 | 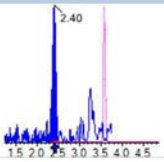 | |
| PFBA | ( 213.0 / 169.0 ) 777963 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 652.3 | N/A<br>0.0<br>0.0 | 2.5540 | N/A | 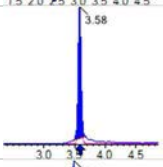 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) 622887<br>( 263.0 / 69.0 ) 7795 | ( 4.28 , 1.00 ) ( 0.00 , N/A , 0.1) | 1153.4<br>100.5 | 0.0125<br>105.2<br>107.9 | 3.1360 | N/A | 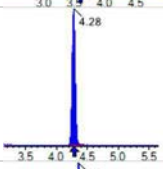 | 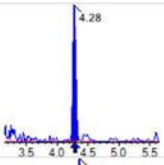 | |
| PFHxA | ( 313.0 / 269.0 ) 334084<br>( 313.0 / 119.0 ) 41395 | ( 5.15 , 1.00 ) ( 0.00 , N/A , -0.1) | 1064.2<br>695.1 | 0.1239<br>111.4<br>106.2 | 1.7470 | N/A | 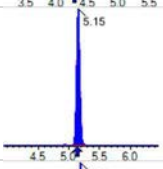 | 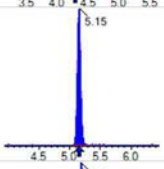 | |
| PFHpA | ( 363.0 / 319.0 ) 158096<br>( 363.0 / 169.0 ) 46327 | ( 6.29 , 1.00 ) ( 0.00 , N/A , -0.1) | 807.3<br>638.1 | 0.2930<br>95.9<br>90.4 | 0.6020 | N/A | 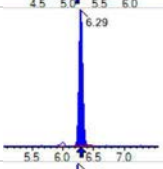 | 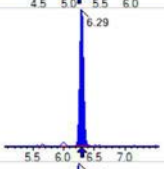 | |
| PFOA | ( 413.0 / 369.0 ) 204160<br>( 413.0 / 169.0 ) 77496 | ( 7.40 , 1.00 ) ( 0.00 , N/A , 0.0) | 263.1<br>297.6 | 0.3796<br>106.2<br>110.2 | 0.5290 | N/A | 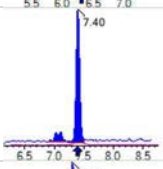 | 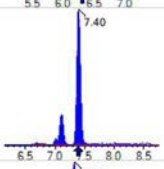 | MI5 DG 2024-04-01 |
| PFNA | ( 463.0 / 419.0 ) 3893<br>( 463.0 / 169.0 ) 1069 | ( 8.92 , 1.00 ) ( 0.00 , N/A , -0.4) | 43.0<br>44.4 | 0.2746<br>111.8<br>104.3 | 0.0160 | N/A | 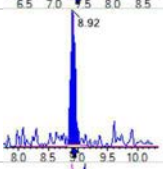 | 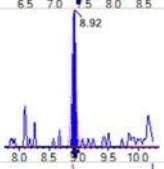 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 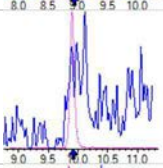 | 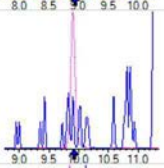 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 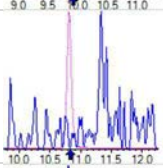 | 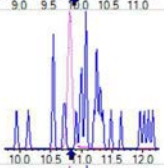 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 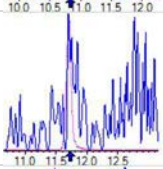 | 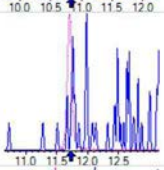 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 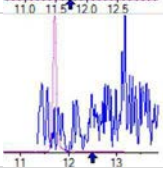 | 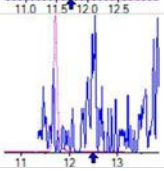 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 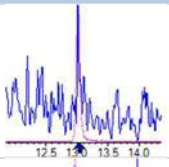 | 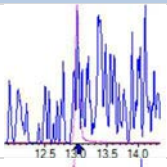 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 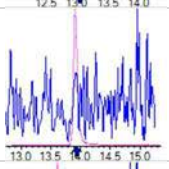 | 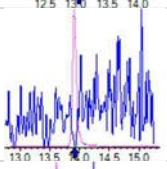 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 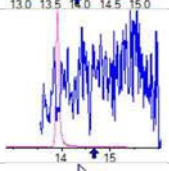 | 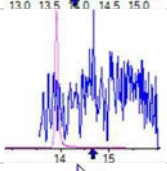 | |
| PFBS | ( 299.0 / 80.0 )<br>104649<br>( 299.0 / 99.0 )<br>75572 | ( 5.32 , 1.00 )<br>( -0.01 , N/A , 0.0) | 493.8<br>510.2 | 0.7221<br>97.5<br>96.6 | 0.3200 | N/A | 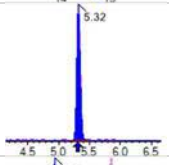 | 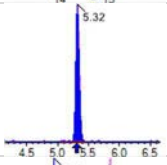 | |
| PFPeS | ( 349.0 / 80.0 )<br>54089<br>( 349.0 / 99.0 )<br>21328 | ( 6.61 , 0.82 )<br>( N/A , 0.00 , -0.2) | 241.7<br>207.0 | 0.3943<br>115.4<br>112.9 | 0.0570 | N/A | 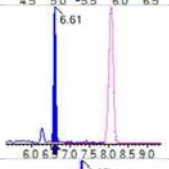 | 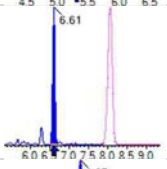 | |
| PFHxS | ( 399.0 / 80.0 )<br>293701<br>( 399.0 / 99.0 )<br>92018 | ( 8.07 , 1.00 )<br>( 0.01 , N/A , 0.2) | 919.6<br>949.6 | 0.3133<br>95.5<br>97.6 | 0.2530 | N/A | 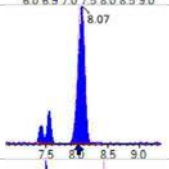 | 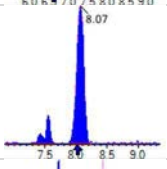 | MI5 DG<br>2024-04-01 |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 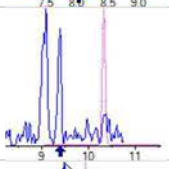 | 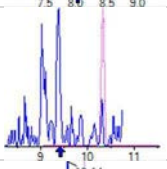 | |
| PFOS | ( 499.0 / 80.0 )<br>80118<br>( 499.0 / 99.0 )<br>7561 | ( 10.01 , 0.97 )<br>( -0.33 , N/A , -7.9) | 203.7<br>153.2 | 0.0944<br>40.8<br>42.0 | 0.0920 | N/A | 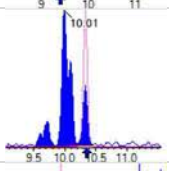 | 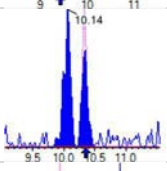 | IR1,MI5 DG<br>2024-04-01 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 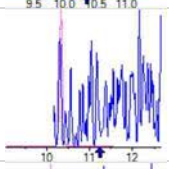 | 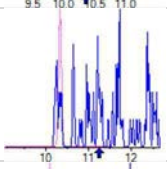 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 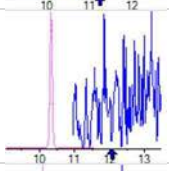 | 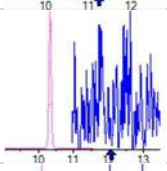 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 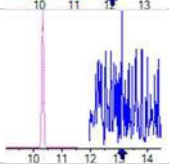 | 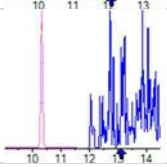 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (15)
Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 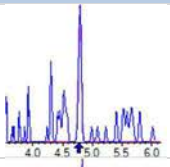 | 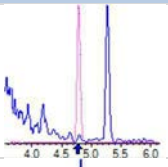 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 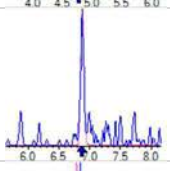 | 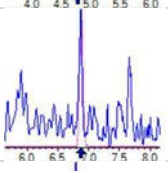 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 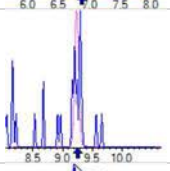 | 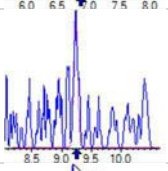 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18702<br>( 627.0 / 81.0 ) 26407 | ( 10.95 , 1.00 ) ( 0.01 , N/A , 0.5) | 378.2<br>116.2 | 1.4120<br>98.2<br>97.7 | 0.0600 | N/A | 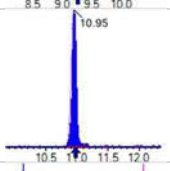 | 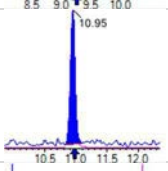 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 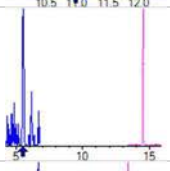 | 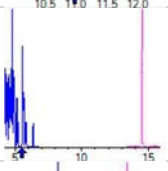 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 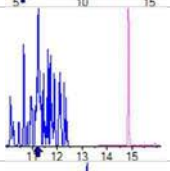 | 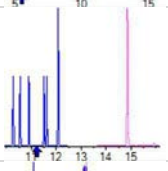 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 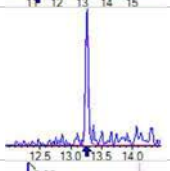 | 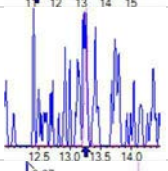 | |
| TFSI | ( 279.7 / 147.0 ) 632595<br>( 279.7 / 211.0 ) 55148 | ( 6.98 , 0.53 ) ( N/A , 0.01 , 0.2) | 61.2<br>1664.0 | 0.0872<br>98.5<br>98.7 | 0.6120 | N/A | 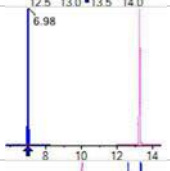 | 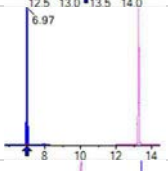 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 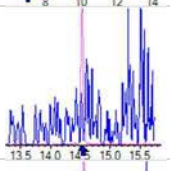 | 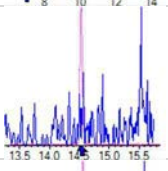 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 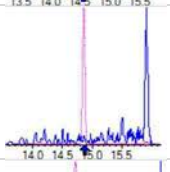 | 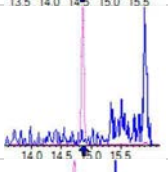 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 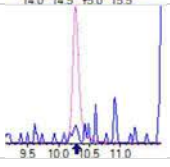 | 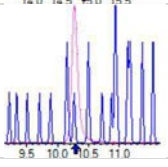 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 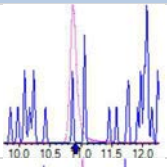 | 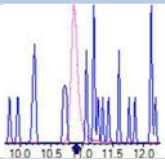 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 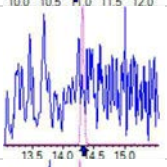 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 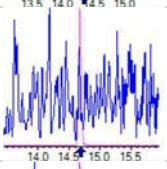 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 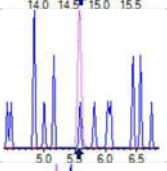 | 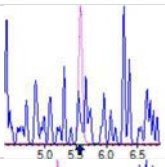 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 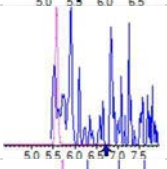 | 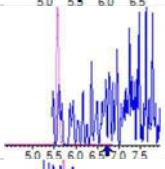 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 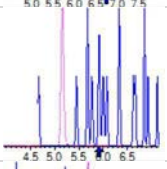 | 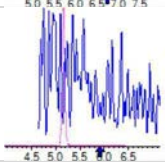 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 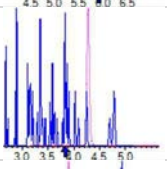 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 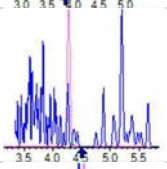 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 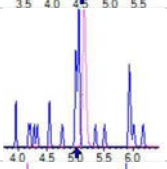 | 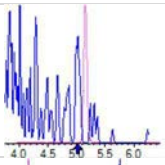 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 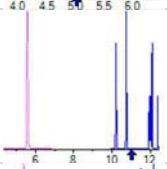 | 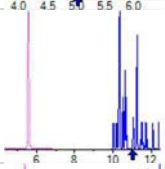 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 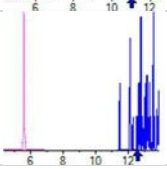 | 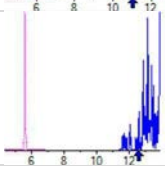 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (15)
Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 6770<br>( 461.0 / 381.2 ) 2804 | ( 9.30 , 0.90 )<br>( N/A , -0.01 , 0.4) | 58.5<br>77.8 | 0.4141<br>107.2<br>105.5 | 0.0150 | N/A | 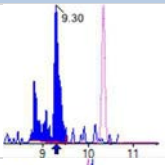 | 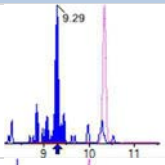 | MI5 DG 2024-04-02 |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 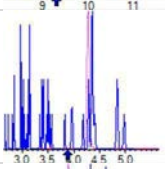 | 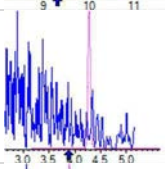 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 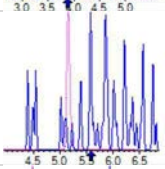 | 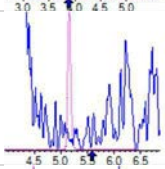 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 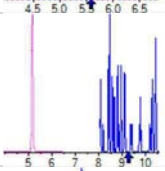 | 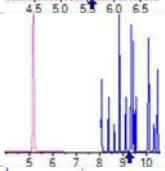 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 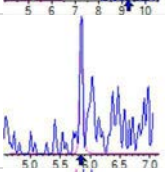 | 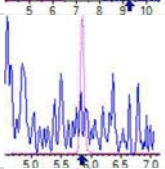 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 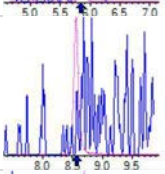 | 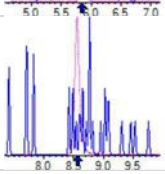 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 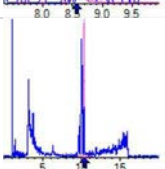 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 253803 | ( 3.58 , N/A )<br>( N/A , 0.00 , N/A ) | 1863.1 | N/A | 0.8990<br>[ 1.0000 ] | 89.9%<br>{ 96.2% } | 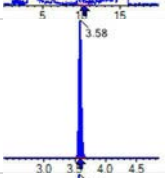 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 91607 | ( 5.16 , N/A )<br>( N/A , 0.00 , N/A ) | 783232.2 | N/A | 0.7760<br>[ 1.0000 ] | 77.6%<br>{ 92.5% } | 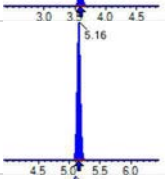 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 335508 | ( 7.40 , N/A )<br>( N/A , 0.01 , N/A ) | 6354.3 | N/A | 0.8640<br>[ 1.0000 ] | 86.4%<br>{ 95.3% } | 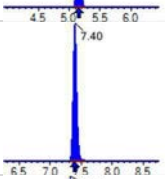 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 243241 | ( 8.92 , N/A )<br>( N/A , -0.01 , N/A ) | 1406.3 | N/A | 0.8330<br>[ 1.0000 ] | 83.3%<br>{ 101.5% } | 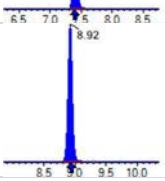 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (15)
Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 237318 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 79181.3 | N/A | 0.8280 [ 1.0000 ] | 82.8% { 96.7% } | 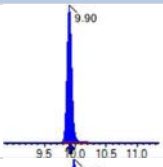 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 908161 | ( 8.07 , N/A ) ( N/A , 0.05 , N/A ) | 6542.2 | N/A | 0.9250 [ 1.0000 ] | 92.5% { 102.3% } | 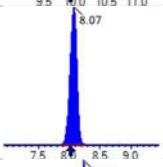 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 665006 | ( 10.34 , N/A ) ( N/A , -0.02 , N/A ) | 3213.0 | N/A | 0.8480 [ 1.0000 ] | 84.8% { 96.5% } | 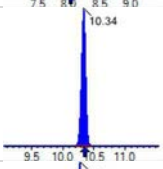 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2172672 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 85726.8 | N/A | 7.9200 [ 8.0000 ] | 99.0% { 98.9% } | 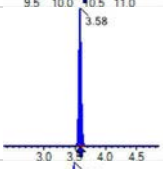 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 795768 | ( 4.28 , N/A ) ( N/A , -0.01 , N/A ) | 5371.4 | N/A | 4.7450 [ 4.0000 ] | 118.6% { 104.4% } | 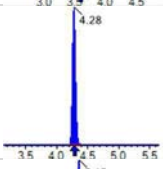 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 412061 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 10555.1 | N/A | 2.0560 [ 2.0000 ] | 102.8% { 94.6% } | 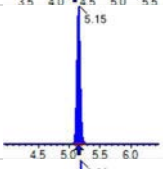 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 529057 | ( 6.29 , N/A ) ( N/A , 0.01 , N/A ) | 12759.7 | N/A | 2.3770 [ 2.0000 ] | 118.8% { 103.3% } | 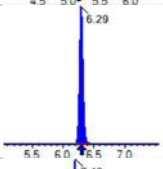 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 768075 | ( 7.40 , N/A ) ( N/A , 0.01 , N/A ) | 5439.4 | N/A | 2.1600 [ 2.0000 ] | 108.0% { 108.1% } | 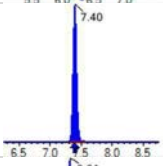 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 247935 | ( 8.91 , N/A ) ( N/A , -0.02 , N/A ) | 4548.8 | N/A | 1.0320 [ 1.0000 ] | 103.2% { 105.5% } | 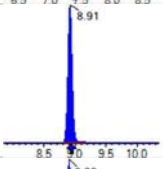 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 271394 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 1001.6 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 96.8% } | 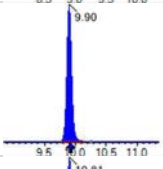 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 331223 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 1298.9 | N/A | 1.0180 [ 1.0000 ] | 101.8% { 102.7% } | 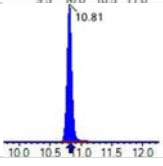 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-02 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (15)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 331639 | ( 11.71 , N/A ) ( N/A , -0.02 , N/A ) | 1379.1 | N/A | 0.9940 [ 1.0000 ] | 99.4% { 97.6% } | 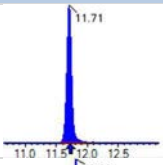  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 293898 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1177.6 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 96.8% } | 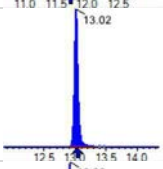  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 408078 | ( 13.92 , N/A ) ( N/A , -0.01 , N/A ) | 2347.3 | N/A | 1.6510 [ 2.0000 ] | 82.5% { 95.7% } | 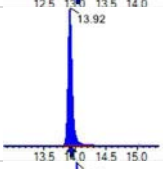  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1331023 | ( 5.33 , N/A ) ( N/A , 0.01 , N/A ) | 2116.8 | N/A | 1.8180 [ 2.0000 ] | 90.9% { 95.0% } | 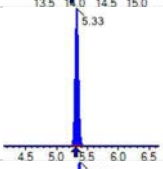  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1327952 | ( 8.07 , N/A ) ( N/A , 0.05 , N/A ) | 5337.8 | N/A | 2.0270 [ 2.0000 ] | 101.3% { 106.9% } | 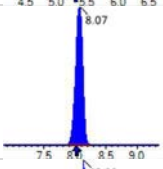  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1492832 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 1848.0 | N/A | 2.1100 [ 2.0000 ] | 105.5% { 102.8% } | 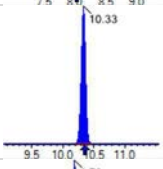  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 624017 | ( 4.79 , N/A ) ( N/A , 0.00 , N/A ) | 56.2 | N/A | 3.8750 [ 4.0000 ] | 96.9% { 100.1% } | 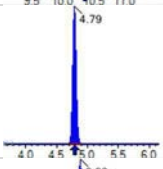  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1916580 | ( 6.88 , N/A ) ( N/A , 0.01 , N/A ) | 4849.3 | N/A | 4.8450 [ 4.0000 ] | 121.1% { 117.1% } | 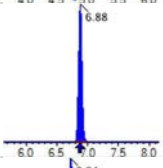  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1581389 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 1773.0 | N/A | 4.5690 [ 4.0000 ] | 114.2% { 119.0% } | 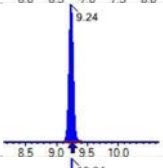  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3160901 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1926.8 | N/A | 8.4420 [ 8.0000 ] | 105.5% { 116.8% } | 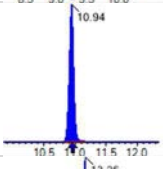  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1223934 | ( 13.26 , N/A ) ( N/A , 0.01 , N/A ) | 3426.5 | N/A | 1.6300 [ 2.0000 ] | 81.5% { 81.4% } | 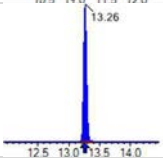  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-02
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (15)
Acquired: 2024/03/29 - 16:05

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 165592 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 1281.1 | N/A | 0.9810 [ 2.0000 ] | 49.0% { 48.7% } | 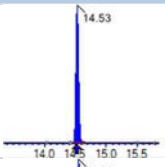  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 162450 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1462.0 | N/A | 1.0520 [ 2.0000 ] | 52.6% { 50.2% } | 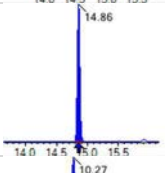  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1020614 | ( 10.27 , N/A ) ( N/A , -0.02 , N/A ) | 3061.7 | N/A | 4.1550 [ 4.0000 ] | 103.9% { 99.6% } | 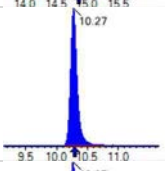  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1011803 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 1962.9 | N/A | 4.5640 [ 4.0000 ] | 114.1% { 110.8% } | 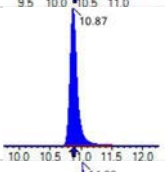  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 724321 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 2076.1 | N/A | 11.4810 [ 20.0000 ] | 57.4% { 58.6% } | 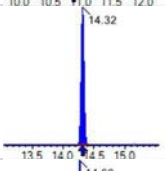  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 714869 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 3369.5 | N/A | 12.0990 [ 20.0000 ] | 60.5% { 65.9% } | 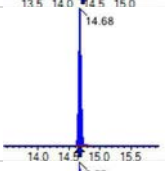  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 698082 | ( 5.57 , N/A ) ( N/A , 0.01 , N/A ) | 2645.4 | N/A | 8.0410 [ 8.0000 ] | 100.5% { 89.2% } | 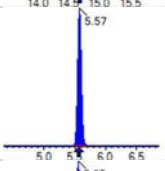  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 566907 | ( 5.85 , N/A ) ( N/A , 0.01 , N/A ) | 1945.5 | N/A | 2.1920 [ 2.0000 ] | 109.6% { 112.0% } | 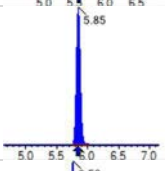  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 562104 | ( 8.56 , N/A ) ( N/A , -0.01 , N/A ) | 1072.9 | N/A | 1.9290 [ 2.0000 ] | 96.5% { 96.0% } | 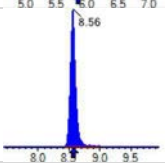  | | |

# ANALYSIS DATA SHEETL

MW-16-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-03- | File ID:- | S2024-03-29A (16)- |
| Sampled:- | 03/21/24 09:37- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 16:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 555.378 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 4.7- | 0.19- | 1.4- | MI1- |
| PFPeA- | 7.3- | 0.059- | 0.72- | |
| PFHxA- | ND- | 0.049- | 0.36- | U- |
| PFHpA- | ND- | 0.037- | 0.36- | U- |
| PFOA- | 0.25- | 0.14- | 0.36- | B, J- |
| PFNA- | ND- | 0.074- | 0.36- | U- |
| PFDA- | ND- | 0.091- | 0.36- | U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.10- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | ND- | 0.033- | 0.36- | U- |
| PFPeS- | ND- | 0.056- | 0.36- | U- |
| PFHxS- | ND- | 0.029- | 0.36- | U- |
| PFHpS- | ND- | 0.046- | 0.36- | U- |
| PFOS- | 0.13- | 0.057- | 0.36- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.14- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.074- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.094- | 0.36- | U- |
| NMeFOSA- | ND- | 0.43- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.095- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-16-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-03- | File ID:- | S2024-03-29A (16)- |
| Sampled:- | 03/21/24 09:37- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 16:25- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 555.378 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.91- | 1.4- | U- |
| NEtFOSE- | ND- | 0.94- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.72- | U- |
| ADONA- | ND- | 0.11- | 0.72- | U- |
| PFEESA- | ND- | 0.098- | 0.72- | U- |
| PFMPA- | ND- | 0.049- | 0.72- | U- |
| PFMBA- | ND- | 0.082- | 0.72- | U- |
| NFDHA- | ND- | 0.27- | 0.72- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.72- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.72- | U- |
| 3:3FTCA- | ND- | 0.52- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.40- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.50- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (16)
Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 75957<br>( 163.0 / 69.0 ) 1934 | ( 2.41 , 0.68 )<br>( N/A , 0.00 , 0.3) | 416.2<br>147.1 | 0.0255<br>92.9<br>94.2 | 1.1520 | N/A | 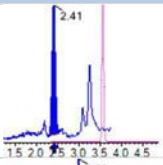 | 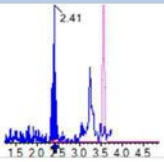 | |
| PFBA | ( 213.0 / 169.0 ) 478163 | ( 3.56 , 1.00 )<br>( 0.00 , N/A , 0.0) | 406.1 | N/A<br>0.0<br>0.0 | 1.3140 | N/A | 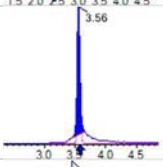 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) 430737<br>( 263.0 / 69.0 ) 4716 | ( 4.25 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1417.0<br>74.8 | 0.0109<br>92.0<br>94.4 | 2.0170 | N/A | 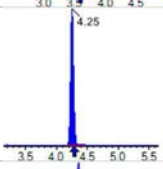 | 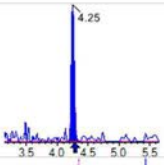 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 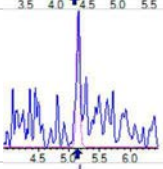 | 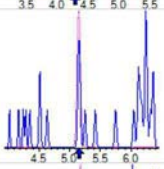 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 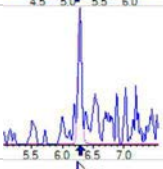 | 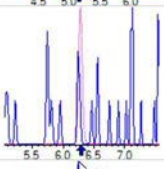 | |
| PFOA | ( 413.0 / 369.0 ) 29493<br>( 413.0 / 169.0 ) 10185 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 59.4<br>94.5 | 0.3453<br>96.6<br>100.3 | 0.0690 | N/A | 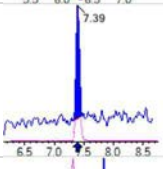 | 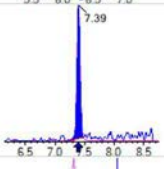 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 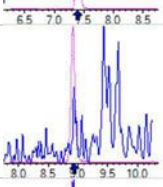 | 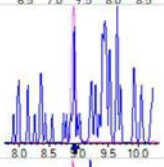 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 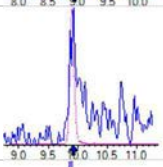 | 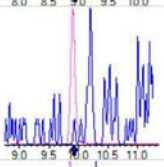 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 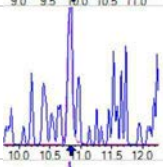 | 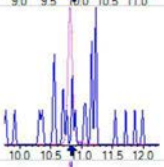 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 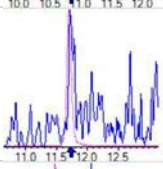 | 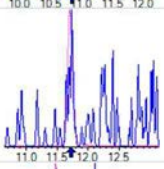 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 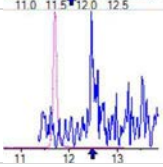 | 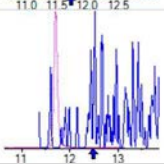 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (16)
Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 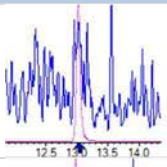 | 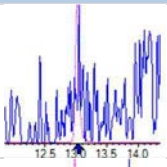 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 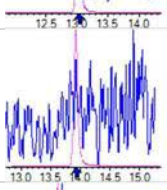 | 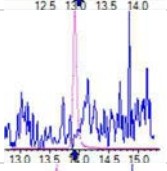 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 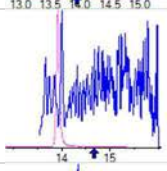 | 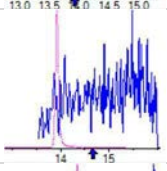 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 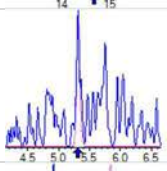 | 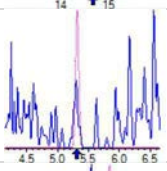 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 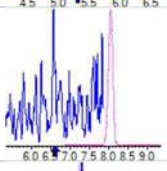 | 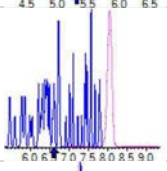 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 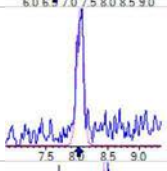 | 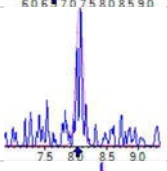 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 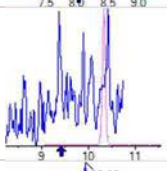 | 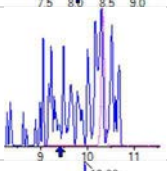 | |
| PFOS | ( 499.0 / 80.0 )<br>33097<br>( 499.0 / 99.0 )<br>6287 | ( 10.33 , 1.00 )<br>( -0.01 , N/A , -0.3) | 109.9<br>629.4 | 0.1900<br>82.2<br>84.5 | 0.0360 | N/A | 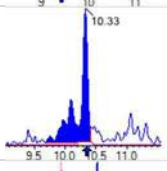 | 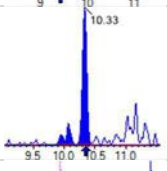 | MI2 DG<br>2024-04-01 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 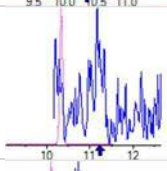 | 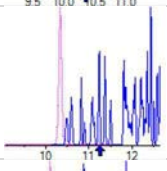 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 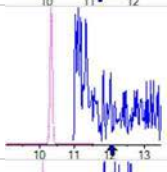 | 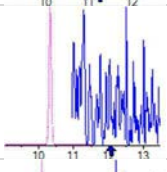 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 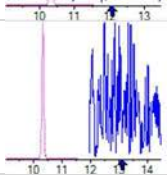 | 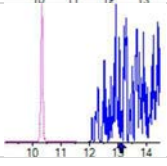 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (16)
Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 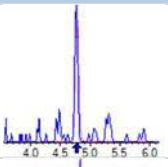 | 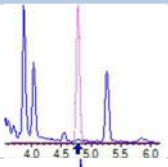 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 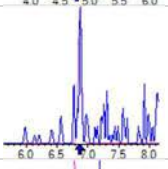 | 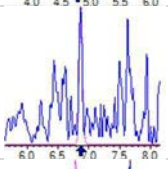 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 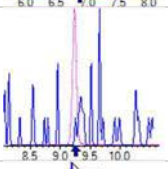 | 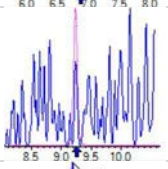 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>18061<br>( 627.0 / 81.0 )<br>25029 | ( 10.94 , 1.00 )<br>( 0.01 , N/A , 0.0) | 244.1<br>132.8 | 1.3858<br>96.4<br>95.9 | 0.0590 | N/A | 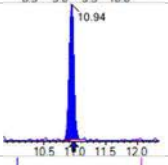 | 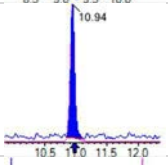 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 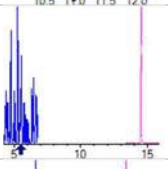 | 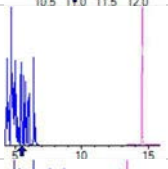 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 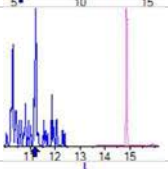 | 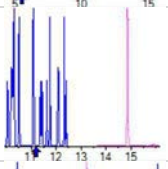 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 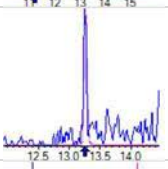 | 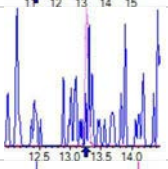 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 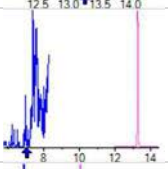 | 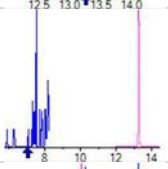 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 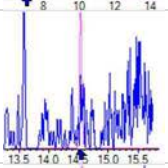 | 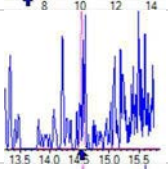 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 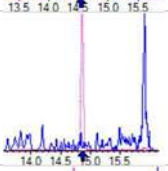 | 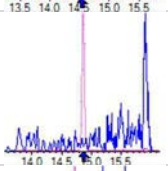 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 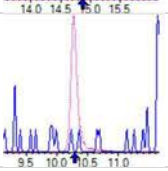 | 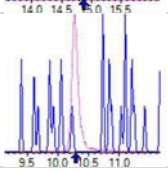 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (16)
Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 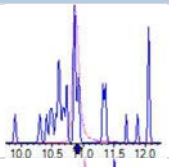 | 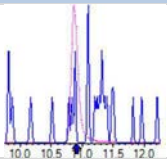 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 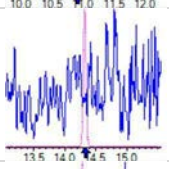 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 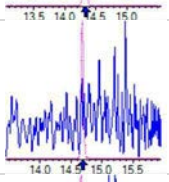 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 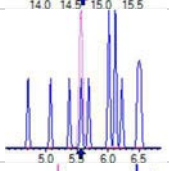 | 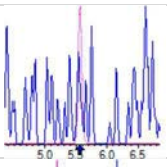 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 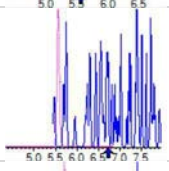 | 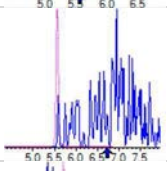 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 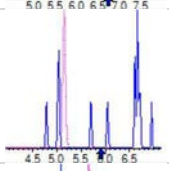 | 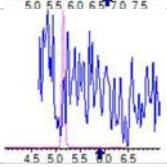 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 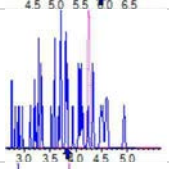 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 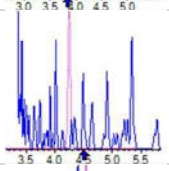 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 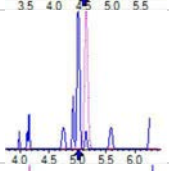 | 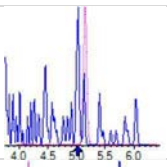 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 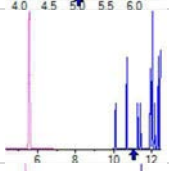 | 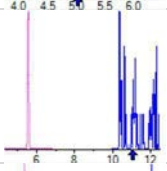 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 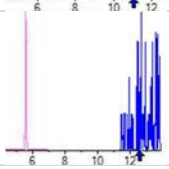 | 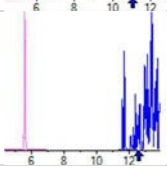 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-03 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 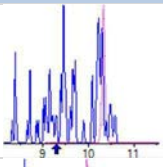 | 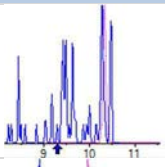 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 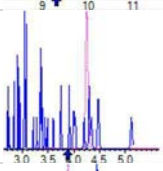 | 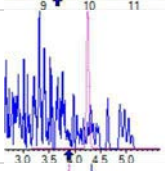 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 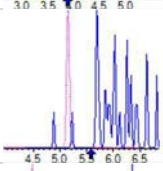 | 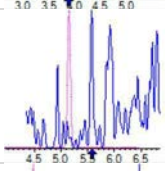 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 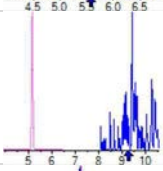 | 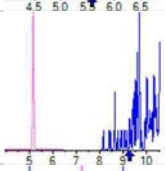 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 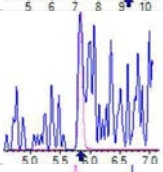 | 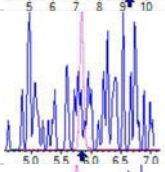 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 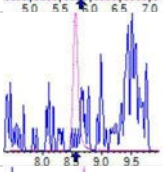 | 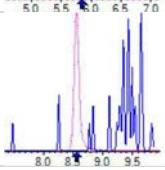 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 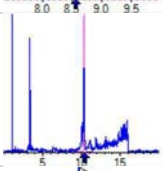 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 264430 | ( 3.56 , N/A )<br>( N/A , -0.02 , N/A ) | 1625.9 | N/A | 0.9370<br>[ 1.0000 ] | 93.7%<br>{ 100.2% } | 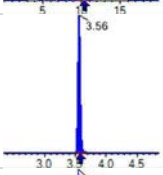 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106775 | ( 5.15 , N/A )<br>( N/A , 0.00 , N/A ) | 64557.8 | N/A | 0.9040<br>[ 1.0000 ] | 90.4%<br>{ 107.9% } | 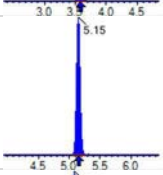 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 373057 | ( 7.39 , N/A )<br>( N/A , 0.00 , N/A ) | 6822.6 | N/A | 0.9610<br>[ 1.0000 ] | 96.1%<br>{ 106.0% } | 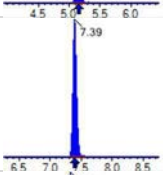 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 271958 | ( 8.92 , N/A )<br>( N/A , -0.02 , N/A ) | 1398.3 | N/A | 0.9310<br>[ 1.0000 ] | 93.1%<br>{ 113.4% } | 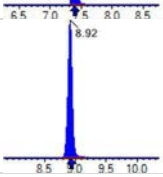 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-03 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (16)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 259801 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 5727.7 | N/A | 0.9060 [ 1.0000 ] | 90.6% { 105.9% } | 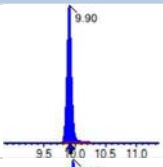  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 950523 | ( 8.05 , N/A ) ( N/A , 0.03 , N/A ) | 7045.9 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 107.1% } | 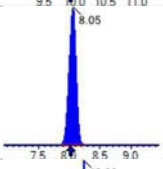  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 715238 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 1659.9 | N/A | 0.9120 [ 1.0000 ] | 91.2% { 103.8% } | 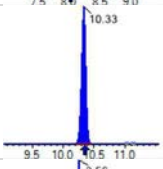  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2329825 | ( 3.56 , N/A ) ( N/A , -0.02 , N/A ) | 110497.0 | N/A | 8.1510 [ 8.0000 ] | 101.9% { 106.0% } | 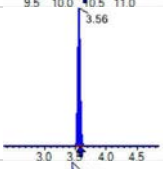  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 855458 | ( 4.25 , N/A ) ( N/A , -0.04 , N/A ) | 6616.4 | N/A | 4.3760 [ 4.0000 ] | 109.4% { 112.3% } | 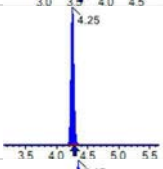  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 471584 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 30508.8 | N/A | 2.0190 [ 2.0000 ] | 100.9% { 108.3% } | 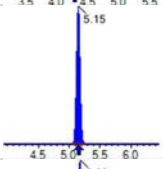  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 522248 | ( 6.28 , N/A ) ( N/A , -0.01 , N/A ) | 12809.6 | N/A | 2.0130 [ 2.0000 ] | 100.6% { 101.9% } | 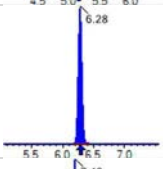  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 845334 | ( 7.40 , N/A ) ( N/A , 0.01 , N/A ) | 4567.4 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 119.0% } | 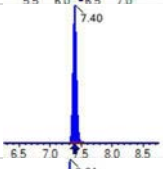  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 266510 | ( 8.91 , N/A ) ( N/A , -0.02 , N/A ) | 3933.1 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 113.4% } | 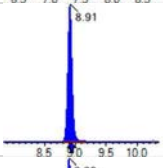  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 314174 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 1589.8 | N/A | 1.0470 [ 1.0000 ] | 104.7% { 112.1% } | 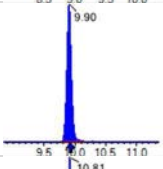  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 365780 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 1325.7 | N/A | 1.0270 [ 1.0000 ] | 102.7% { 113.4% } | 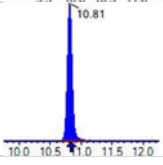  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (16)
Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 364923 | ( 11.71 , N/A ) ( N/A , -0.02 , N/A ) | 1586.1 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 107.4% } | 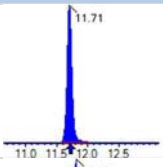 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 309083 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1468.9 | N/A | 0.9560 [ 1.0000 ] | 95.6% { 101.8% } | 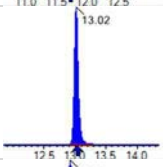 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 412926 | ( 13.92 , N/A ) ( N/A , -0.01 , N/A ) | 2112.4 | N/A | 1.5260 [ 2.0000 ] | 76.3% { 96.9% } | 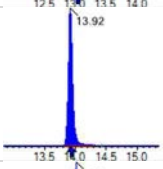 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1471438 | ( 5.32 , N/A ) ( N/A , -0.01 , N/A ) | 1484.3 | N/A | 1.9210 [ 2.0000 ] | 96.0% { 105.1% } | 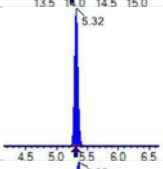 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1422228 | ( 8.05 , N/A ) ( N/A , 0.03 , N/A ) | 5157.7 | N/A | 2.0740 [ 2.0000 ] | 103.7% { 114.5% } | 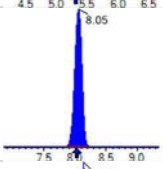 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1592112 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 1550.4 | N/A | 2.0920 [ 2.0000 ] | 104.6% { 109.6% } | 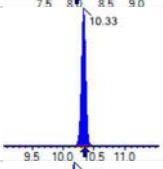 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 746939 | ( 4.78 , N/A ) ( N/A , -0.01 , N/A ) | 81.5 | N/A | 4.4320 [ 4.0000 ] | 110.8% { 119.8% } | 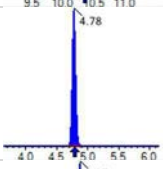 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2079852 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 5032.6 | N/A | 5.0230 [ 4.0000 ] | 125.6% { 127.1% } | 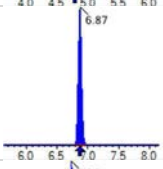 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1630483 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 1839.0 | N/A | 4.5010 [ 4.0000 ] | 112.5% { 122.7% } | 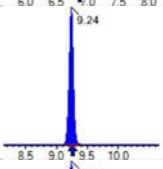 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3072783 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1535.5 | N/A | 7.8410 [ 8.0000 ] | 98.0% { 113.6% } | 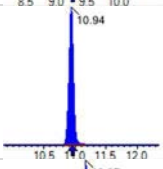 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1177051 | ( 13.27 , N/A ) ( N/A , 0.01 , N/A ) | 3096.5 | N/A | 1.4570 [ 2.0000 ] | 72.9% { 78.3% } | 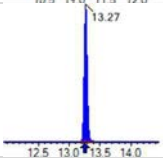 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-03
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (16)
Acquired: 2024/03/29 - 16:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 177269 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 1519.9 | N/A | 0.9760 [ 2.0000 ] | 48.8% { 52.1% } | 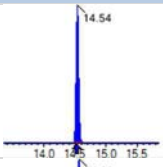  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 169238 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1673.1 | N/A | 1.0190 [ 2.0000 ] | 51.0% { 52.3% } | 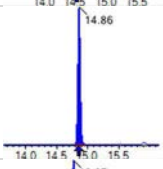  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 824880 | ( 10.27 , N/A ) ( N/A , -0.02 , N/A ) | 2854.3 | N/A | 3.1220 [ 4.0000 ] | 78.1% { 80.5% } | 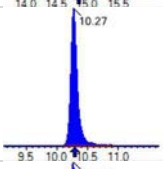  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 969263 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 1921.5 | N/A | 4.0650 [ 4.0000 ] | 101.6% { 106.1% } | 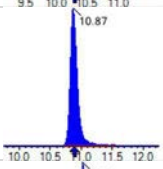  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 861641 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 1952.1 | N/A | 12.6990 [ 20.0000 ] | 63.5% { 69.7% } | 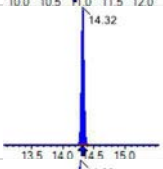  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 825179 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 4064.1 | N/A | 12.9850 [ 20.0000 ] | 64.9% { 76.0% } | 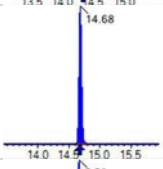  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 815138 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 2545.8 | N/A | 8.0560 [ 8.0000 ] | 100.7% { 104.2% } | 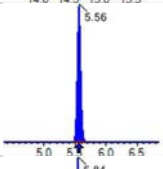  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 614059 | ( 5.84 , N/A ) ( N/A , -0.01 , N/A ) | 1200.7 | N/A | 2.1690 [ 2.0000 ] | 108.4% { 121.3% } | 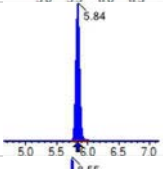  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 611333 | ( 8.55 , N/A ) ( N/A , -0.01 , N/A ) | 1206.5 | N/A | 1.9170 [ 2.0000 ] | 95.8% { 104.4% } | 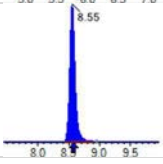  | | |

# ANALYSIS DATA SHEETL

## DUP-7-032124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0142P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0142-04P | File ID: | S2024-03-29A (17)P |
| Sampled:P | 03/21/24 09:47P | repared:P | 03/26/24 07:38P | Analyzed: | 03/29/24 16:46P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 555.593 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0363P | Sequence:P | SD01122P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| FBAP | 4.9P | 0.19P | 1.4 | MI1P |
| FPeAP | 7.6P | 0.058P | 0.72 | |
| PFHxAP | NDP | 0.049P | 0.36 | UP |
| FHpAP | NDP | 0.037P | 0.36 | UP |
| FOAP | 0.27P | 0.14P | 0.36 | B, JP |
| FNAP | NDP | 0.074P | 0.36 | UP |
| FDAP | NDP | 0.091P | 0.36 | UP |
| FUnAP | NDP | 0.14P | 0.36 | UP |
| FDoAP | NDP | 0.10P | 0.36 | UP |
| PFTrDAP | NDP | 0.18P | 0.36 | UP |
| PFTeDAP | NDP | 0.18P | 0.36 | UP |
| FHxDAP | NDP | 0.18P | 0.36 | UP |
| FODAP | NDP | 0.18P | 0.36 | UP |
| FBSP | NDP | 0.033P | 0.36 | UP |
| FPeSP | NDP | 0.056P | 0.36 | UP |
| FHxSP | NDP | 0.028P | 0.36 | UP |
| FHpSP | NDP | 0.046P | 0.36 | UP |
| FOSP | 0.13P | 0.057P | 0.36 | MI2, JP |
| FNSP | NDP | 0.11P | 0.36 | UP |
| FDSP | NDP | 0.14P | 0.36 | UP |
| FDoSP | NDP | 0.11P | 0.36 | UP |
| 4:2FTSP | NDP | 0.26P | 1.4P | UP |
| 6:2FTSP | NDP | 0.28P | 1.4P | UP |
| 8:2FTSP | NDP | 0.074P | 1.4P | UP |
| 10:2FTSP | NDP | 0.36P | 1.4P | UP |
| FOSAP | NDP | 0.094P | 0.36 | UP |
| NMeFOSAP | NDP | 0.43P | 1.4P | UP |
| NEtFOSAP | NDP | 0.37P | 1.4P | UP |
| NMeFOSAAP | NDP | 0.095P | 0.36P | UP |
| NEtFOSAAP | NDP | 0.10P | 0.36P | UP |

# ANALYSIS DATA SHEETL

## DUP-7-032124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0142P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0142-04P | File ID: | S2024-03-29A (17)P |
| Sampled:P | 03/21/24 09:47P | repared:P | 03/26/24 07:38P | Analyzed: | 03/29/24 16:46P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 555.593 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0363P | Sequence:P | SD01122P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.91P | 1.4P | UP |
| NEtFOSEP | NDP | 0.94P | 1.4P | UP |
| HFPO-DAP | NDP | 0.16P | 0.72P | UP |
| ADONAP | NDP | 0.11P | 0.72P | UP |
| FEESAP | NDP | 0.098P | 0.72 | UP |
| PFMPAP | NDP | 0.049P | 0.72 | UP |
| FMBAP | NDP | 0.082P | 0.72 | UP |
| NFDHAP | NDP | 0.27P | 0.72P | UP |
| 9Cl-PF3ONSP | NDP | 0.19P | 0.72P | UP |
| 11Cl-PF3OUDSP | NDP | 0.19P | 0.72P | UP |
| 3:3FTCAP | NDP | 0.52P | 1.4P | UP |
| 5:3FTCAP | NDP | 0.40P | 1.4P | UP |
| 7:3FTCAP | NDP | 0.50P | 1.4P | UP |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (17)
Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>71991<br>( 163.0 / 69.0 )<br>1743 | ( 2.41 , 0.67 )<br>( N/A , 0.00 , -0.2) | 384.2<br>83.6 | 0.0242<br>88.3<br>89.5 | 1.1030 | N/A | 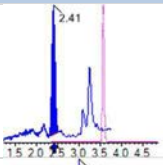 | 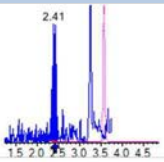 | |
| PFBA | ( 213.0 / 169.0 )<br>489597 | ( 3.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 479.5 | N/A<br>0.0<br>0.0 | 1.3710 | N/A | 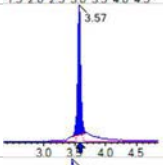 | | MI1 DG<br>2024-04-02 |
| PFPeA | ( 263.0 / 219.0 )<br>439578<br>( 263.0 / 69.0 )<br>4856 | ( 4.26 , 1.00 )<br>( 0.00 , N/A , -0.3) | 1295.6<br>60.2 | 0.0110<br>92.8<br>95.3 | 2.1040 | N/A | 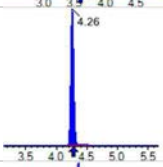 | 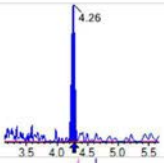 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 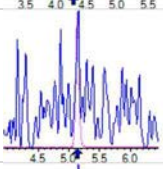 | 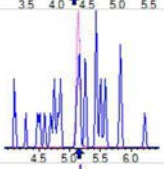 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 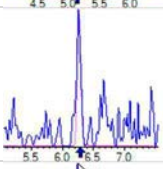 | 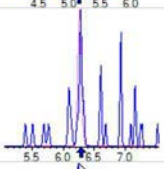 | |
| PFOA | ( 413.0 / 369.0 )<br>31316<br>( 413.0 / 169.0 )<br>11611 | ( 7.40 , 1.00 )<br>( 0.00 , N/A , 0.1) | 57.7<br>101.1 | 0.3708<br>103.7<br>107.6 | 0.0740 | N/A | 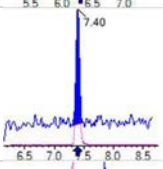 | 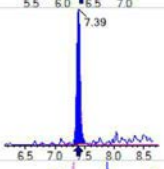 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 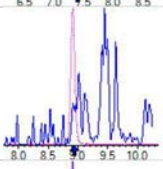 | 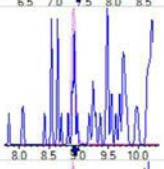 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 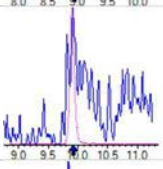 | 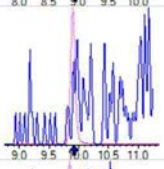 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 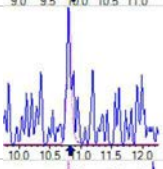 | 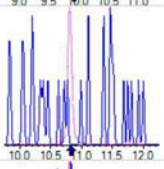 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 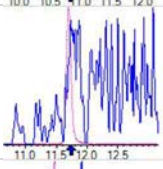 | 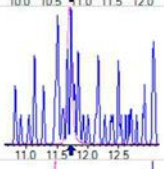 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 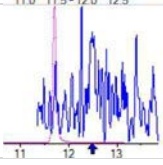 | 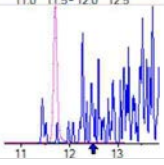 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (17)
Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 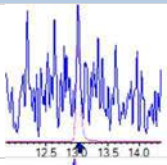 | 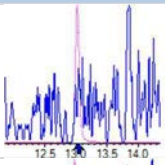 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 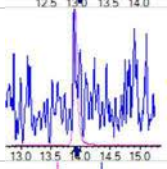 | 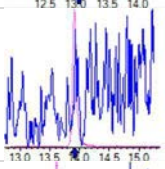 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 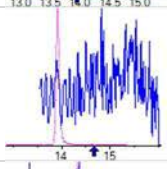 | 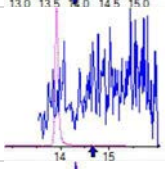 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 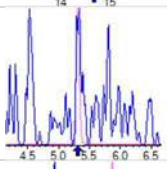 | 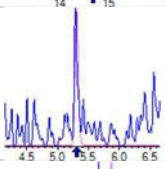 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 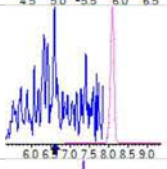 | 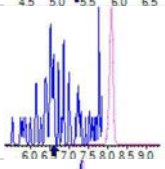 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 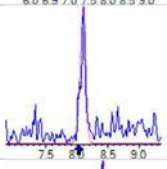 | 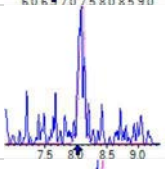 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 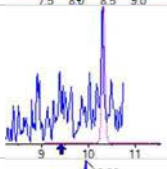 | 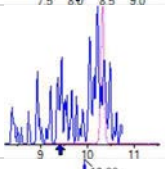 | |
| PFOS | ( 499.0 / 80.0 )<br>32728<br>( 499.0 / 99.0 )<br>6548 | ( 10.33 , 1.00 )<br>( 0.00 , N/A , 0.1) | 114.3<br>494.1 | 0.2001<br>86.6<br>89.0 | 0.0350 | N/A | 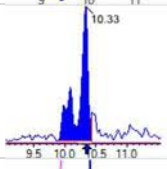 | 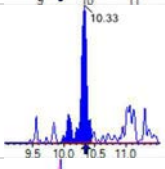 | MI2 DG<br>2024-04-01 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 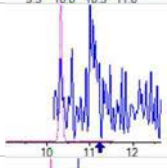 | 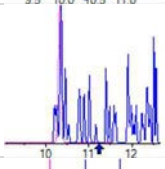 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 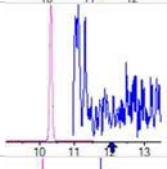 | 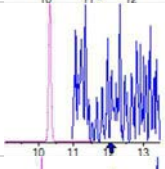 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 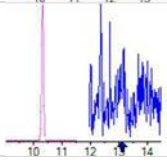 | 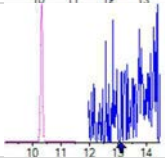 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (17)
Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 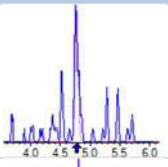 | 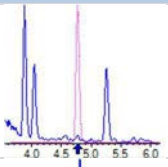 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 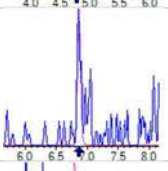 | 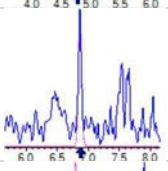 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 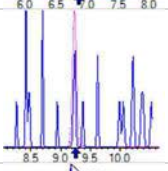 | 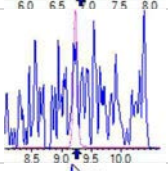 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>15682<br>( 627.0 / 81.0 )<br>23496 | ( 10.94 , 1.00 )<br>( 0.01 , N/A , 0.0) | 320.3<br>93.8 | 1.4983<br>104.2<br>103.7 | 0.0530 | N/A | 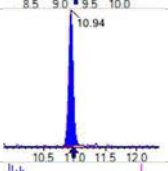 | 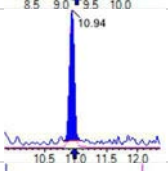 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 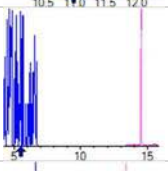 | 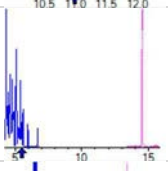 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 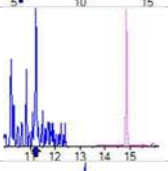 | 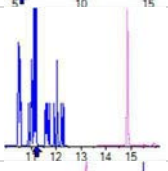 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 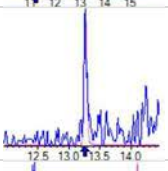 | 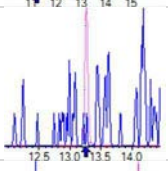 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 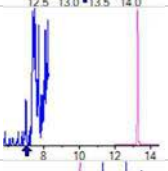 | 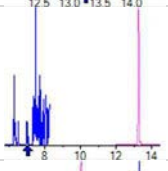 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 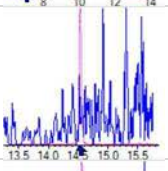 | 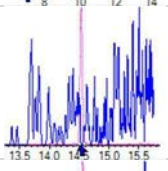 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 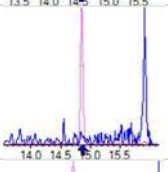 | 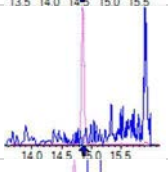 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 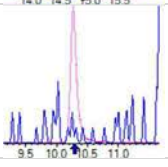 | 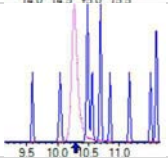 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (17)
Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 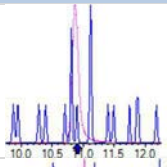 | 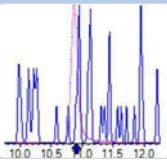 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 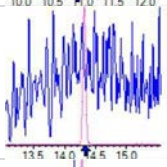 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 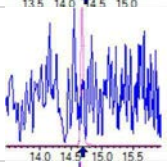 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 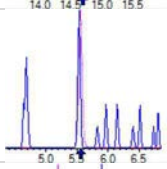 | 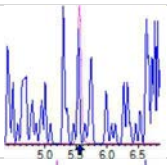 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 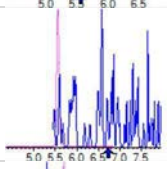 | 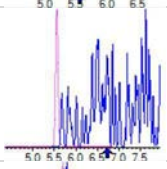 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 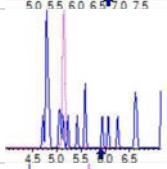 | 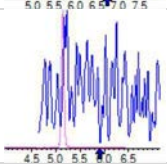 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 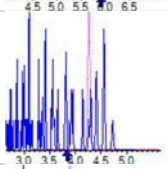 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 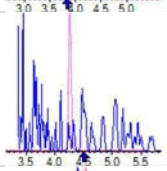 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 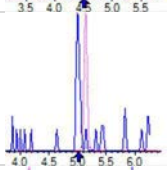 | 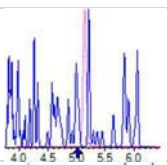 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 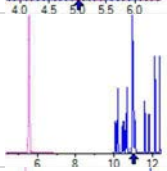 | 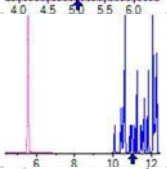 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 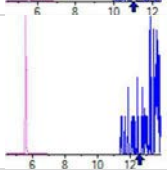 | 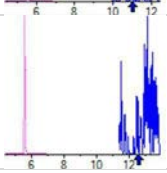 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (17)
Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 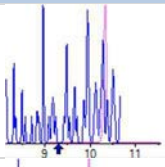 | 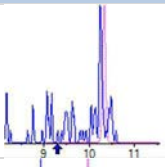 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 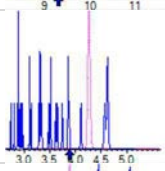 | 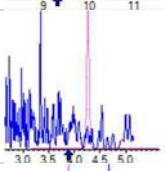 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 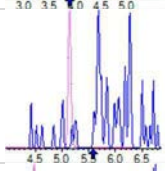 | 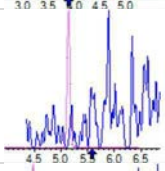 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 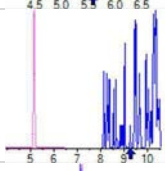 | 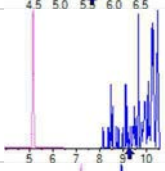 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 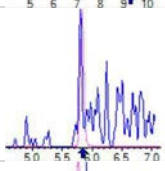 | 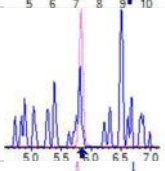 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 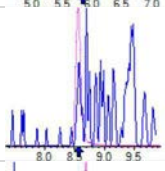 | 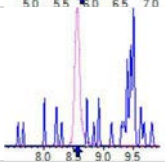 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 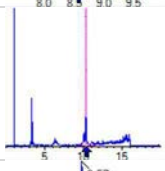 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 280220 | ( 3.57 , N/A )<br>( N/A , -0.01 , N/A ) | 1787.8 | N/A | 0.9930<br>[ 1.0000 ] | 99.3%<br>{ 106.2% } | 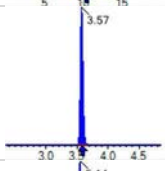 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 107222 | ( 5.14 , N/A )<br>( N/A , -0.01 , N/A ) | 63669.3 | N/A | 0.9080<br>[ 1.0000 ] | 90.8%<br>{ 108.3% } | 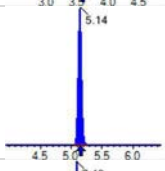 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 384761 | ( 7.40 , N/A )<br>( N/A , 0.01 , N/A ) | 6552.3 | N/A | 0.9910<br>[ 1.0000 ] | 99.1%<br>{ 109.3% } | 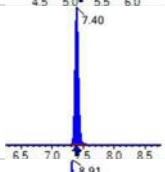 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 262153 | ( 8.91 , N/A )<br>( N/A , -0.02 , N/A ) | 1308.8 | N/A | 0.8970<br>[ 1.0000 ] | 89.7%<br>{ 109.3% } | 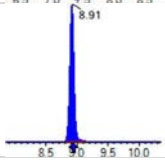 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-04
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (17)
Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266977 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 5253.1 | N/A | 0.9310 [ 1.0000 ] | 93.1% { 108.8% } | 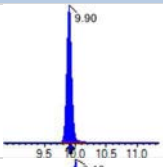 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 955992 | ( 8.10 , N/A ) ( N/A , 0.08 , N/A ) | 6475.5 | N/A | 0.9730 [ 1.0000 ] | 97.3% { 107.7% } | 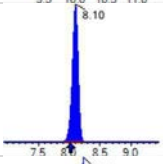 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 713124 | ( 10.33 , N/A ) ( N/A , -0.03 , N/A ) | 1792.4 | N/A | 0.9090 [ 1.0000 ] | 90.9% { 103.5% } | 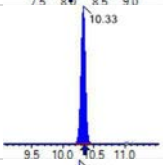 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2306607 | ( 3.57 , N/A ) ( N/A , -0.01 , N/A ) | 94885.4 | N/A | 7.6150 [ 8.0000 ] | 95.2% { 105.0% } | 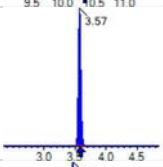 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 836968 | ( 4.26 , N/A ) ( N/A , -0.02 , N/A ) | 4967.9 | N/A | 4.2640 [ 4.0000 ] | 106.6% { 109.8% } | 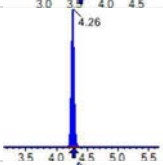 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 520174 | ( 5.14 , N/A ) ( N/A , -0.01 , N/A ) | 9868.7 | N/A | 2.2180 [ 2.0000 ] | 110.9% { 119.4% } | 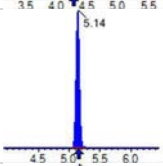 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 579683 | ( 6.27 , N/A ) ( N/A , -0.02 , N/A ) | 35458.9 | N/A | 2.2250 [ 2.0000 ] | 111.3% { 113.2% } | 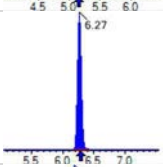 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 846097 | ( 7.39 , N/A ) ( N/A , 0.01 , N/A ) | 6180.9 | N/A | 2.0750 [ 2.0000 ] | 103.7% { 119.1% } | 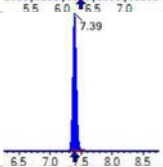 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 276540 | ( 8.91 , N/A ) ( N/A , -0.02 , N/A ) | 2574.2 | N/A | 1.0680 [ 1.0000 ] | 106.8% { 117.7% } | 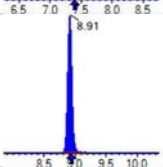 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 302426 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 1264.8 | N/A | 0.9800 [ 1.0000 ] | 98.0% { 107.9% } | 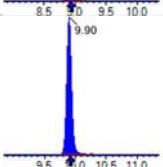 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 369149 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 1184.3 | N/A | 1.0090 [ 1.0000 ] | 100.9% { 114.5% } | 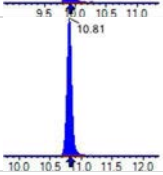 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-04 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 374893 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1348.5 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 110.3% } | 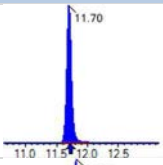  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 318111 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1290.6 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 104.7% } | 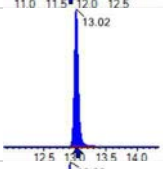  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 453396 | ( 13.92 , N/A ) ( N/A , -0.01 , N/A ) | 2292.9 | N/A | 1.6310 [ 2.0000 ] | 81.5% { 106.4% } | 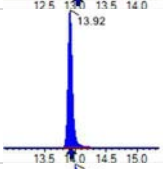  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1498713 | ( 5.31 , N/A ) ( N/A , -0.01 , N/A ) | 1715.5 | N/A | 1.9450 [ 2.0000 ] | 97.2% { 107.0% } | 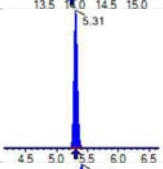  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1416900 | ( 8.10 , N/A ) ( N/A , 0.08 , N/A ) | 5386.8 | N/A | 2.0540 [ 2.0000 ] | 102.7% { 114.1% } | 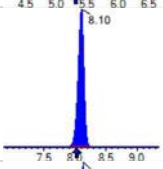  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1589459 | ( 10.33 , N/A ) ( N/A , -0.03 , N/A ) | 2205.9 | N/A | 2.0950 [ 2.0000 ] | 104.7% { 109.4% } | 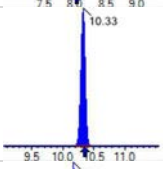  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 774388 | ( 4.77 , N/A ) ( N/A , -0.01 , N/A ) | 60.2 | N/A | 4.5680 [ 4.0000 ] | 114.2% { 124.2% } | 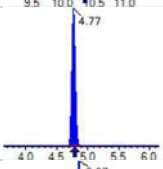  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2118309 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 5183.8 | N/A | 5.0870 [ 4.0000 ] | 127.2% { 129.4% } | 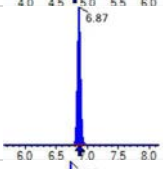  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1630324 | ( 9.23 , N/A ) ( N/A , -0.02 , N/A ) | 2577.9 | N/A | 4.4750 [ 4.0000 ] | 111.9% { 122.7% } | 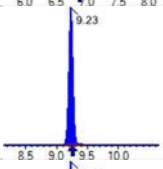  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2972948 | ( 10.93 , N/A ) ( N/A , -0.03 , N/A ) | 1587.7 | N/A | 7.5420 [ 8.0000 ] | 94.3% { 109.9% } | 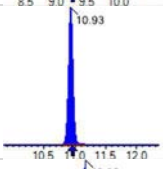  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 897741 | ( 13.26 , N/A ) ( N/A , 0.01 , N/A ) | 3460.7 | N/A | 1.1150 [ 2.0000 ] | 55.7% { 59.7% } | 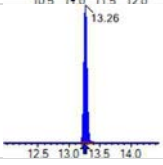  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-04 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (17)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 16:46

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 142222 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 1199.1 | N/A | 0.7850 [ 2.0000 ] | 39.3% { 41.8% } | 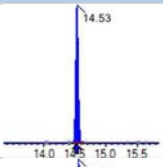 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 136110 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1290.3 | N/A | 0.8220 [ 2.0000 ] | 41.1% { 42.0% } | 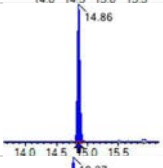 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 846098 | ( 10.27 , N/A ) ( N/A , -0.02 , N/A ) | 2794.7 | N/A | 3.2120 [ 4.0000 ] | 80.3% { 82.5% } | 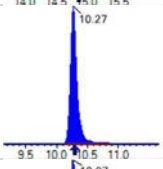 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 969360 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 2312.9 | N/A | 4.0770 [ 4.0000 ] | 101.9% { 106.1% } | 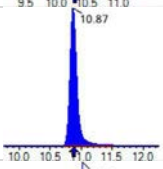 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 588335 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 1743.6 | N/A | 8.6960 [ 20.0000 ] | 43.5% { 47.6% } | 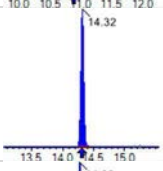 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 585013 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 3073.9 | N/A | 9.2330 [ 20.0000 ] | 46.2% { 53.9% } | 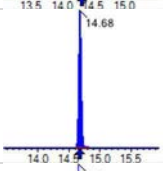 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 866240 | ( 5.55 , N/A ) ( N/A , -0.01 , N/A ) | 1990.9 | N/A | 8.5250 [ 8.0000 ] | 106.6% { 110.7% } | 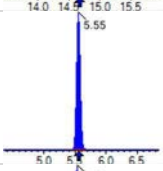 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 640989 | ( 5.83 , N/A ) ( N/A , -0.02 , N/A ) | 2192.6 | N/A | 2.2030 [ 2.0000 ] | 110.2% { 126.6% } | 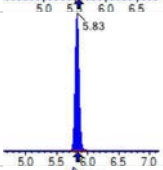 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 651354 | ( 8.56 , N/A ) ( N/A , -0.01 , N/A ) | 1163.6 | N/A | 1.9870 [ 2.0000 ] | 99.4% { 111.3% } | 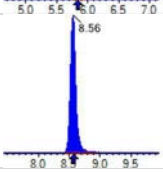 | | |

# ANALYSIS DATA SHEETL

MW-7-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-05- | File ID:- | S2024-03-29A (18)- |
| Sampled:- | 03/21/24 11:27- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 17:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 562.05 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 4.0- | 0.19- | 1.4- | MI1- |
| PFPeA- | 6.0- | 0.058- | 0.71- | |
| PFHxA- | ND- | 0.049- | 0.36- | U- |
| PFHpA- | ND- | 0.036- | 0.36- | U- |
| PFOA- | 0.25- | 0.14- | 0.36- | B, J- |
| PFNA- | ND- | 0.073- | 0.36- | U- |
| PFDA- | ND- | 0.090- | 0.36- | U- |
| PFUnA- | ND- | 0.14- | 0.36- | U- |
| PFDoA- | ND- | 0.099- | 0.36- | U- |
| PFTrDA- | ND- | 0.18- | 0.36- | U- |
| PFTeDA- | ND- | 0.18- | 0.36- | U- |
| PFHxDA- | ND- | 0.18- | 0.36- | U- |
| PFODA- | ND- | 0.18- | 0.36- | U- |
| PFBS- | ND- | 0.033- | 0.36- | U- |
| PFPeS- | ND- | 0.056- | 0.36- | U- |
| PFHxS- | ND- | 0.028- | 0.36- | U- |
| PFHpS- | ND- | 0.046- | 0.36- | U- |
| PFOS- | 0.094- | 0.057- | 0.36- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.36- | U- |
| PFDS- | ND- | 0.13- | 0.36- | U- |
| PFDoS- | ND- | 0.11- | 0.36- | U- |
| 4:2FTS- | ND- | 0.26- | 1.4- | U- |
| 6:2FTS- | ND- | 0.28- | 1.4- | U- |
| 8:2FTS- | ND- | 0.073- | 1.4- | U- |
| 10:2FTS- | ND- | 0.36- | 1.4- | U- |
| PFOSA- | ND- | 0.093- | 0.36- | U- |
| NMeFOSA- | ND- | 0.42- | 1.4- | U- |
| NEtFOSA- | ND- | 0.37- | 1.4- | U- |
| NMeFOSAA- | ND- | 0.094- | 0.36- | U- |
| NEtFOSAA- | ND- | 0.10- | 0.36- | U- |

# ANALYSIS DATA SHEETL

MW-7-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-05- | File ID:- | S2024-03-29A (18)- |
| Sampled:- | 03/21/24 11:27- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 17:06- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 562.05 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.90- | 1.4- | U- |
| NEtFOSE- | ND- | 0.93- | 1.4- | U- |
| HFPO-DA- | ND- | 0.16- | 0.71- | U- |
| ADONA- | ND- | 0.11- | 0.71- | U- |
| PFEESA- | ND- | 0.097- | 0.71- | U- |
| PFMPA- | ND- | 0.048- | 0.71- | U- |
| PFMBA- | ND- | 0.081- | 0.71- | U- |
| NFDHA- | ND- | 0.27- | 0.71- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.71- | U- |
| 11Cl-PF3OUDS- | ND- | 0.18- | 0.71- | U- |
| 3:3FTCA- | ND- | 0.51- | 1.4- | U- |
| 5:3FTCA- | ND- | 0.39- | 1.4- | U- |
| 7:3FTCA- | ND- | 0.49- | 1.4- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (18)
Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 70885<br>( 163.0 / 69.0 ) 1694 | ( 2.40 , 0.68 )<br>( N/A , 0.00 , -0.7) | 467.1<br>74.4 | 0.0239<br>87.2<br>88.4 | 1.1200 | N/A | 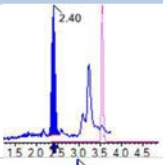 | 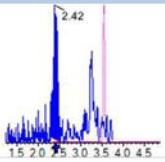 | |
| PFBA | ( 213.0 / 169.0 ) 403770 | ( 3.55 , 1.00 )<br>( 0.00 , N/A , 0.0) | 367.9 | N/A<br>0.0<br>0.0 | 1.1130 | N/A | 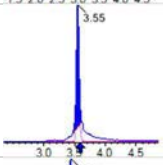 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) 362016<br>( 263.0 / 69.0 ) 4895 | ( 4.23 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1209.5<br>88.7 | 0.0135<br>113.6<br>116.6 | 1.6800 | N/A | 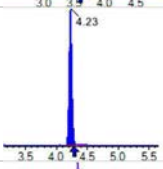 | 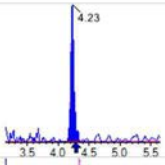 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 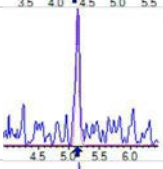 | 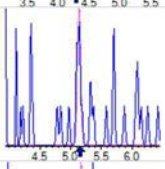 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 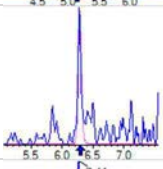 | 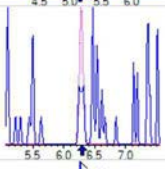 | |
| PFOA | ( 413.0 / 369.0 ) 28984<br>( 413.0 / 169.0 ) 12411 | ( 7.41 , 1.00 )<br>( 0.00 , N/A , 0.0) | 57.8<br>105.6 | 0.4282<br>119.8<br>124.3 | 0.0710 | N/A | 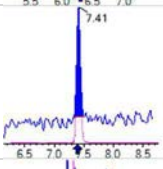 | 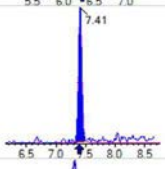 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 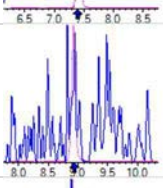 | 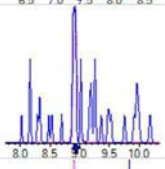 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 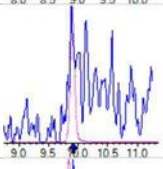 | 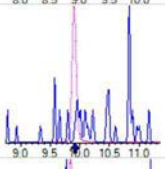 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 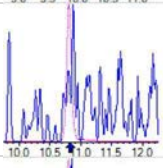 | 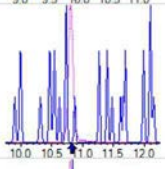 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 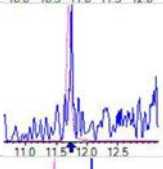 | 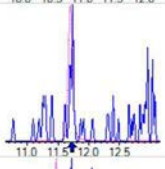 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 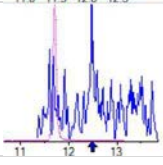 | 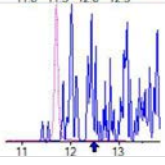 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (18)
Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 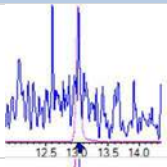 | 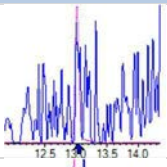 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 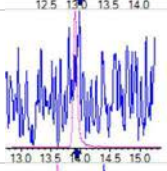 | 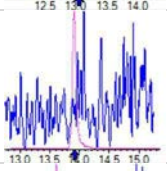 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 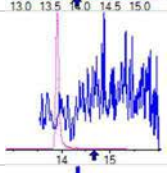 | 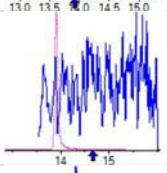 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 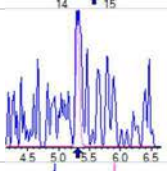 | 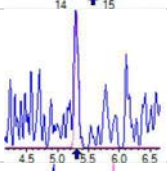 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 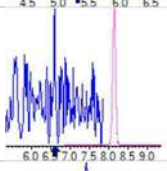 | 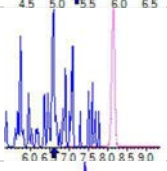 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 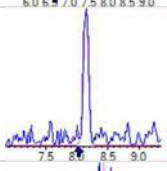 | 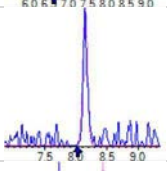 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 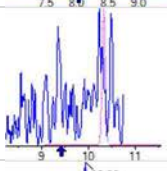 | 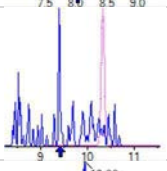 | |
| PFOS | ( 499.0 / 80.0 )<br>25123<br>( 499.0 / 99.0 )<br>4160 | ( 10.33 , 1.00 )<br>( 0.00 , N/A , -0.2) | 101.3<br>477.6 | 0.1656<br>71.7<br>73.6 | 0.0270 | N/A | 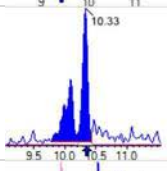 | 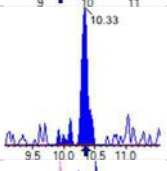 | MI2 DG 2024-04-01 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 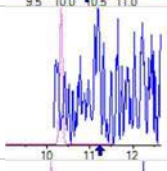 | 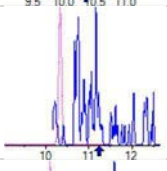 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 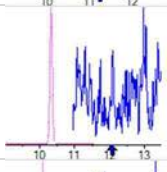 | 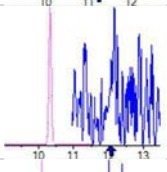 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 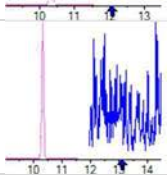 | 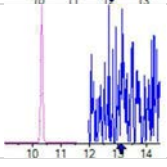 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (18)
Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 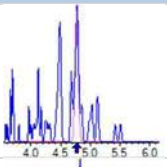 | 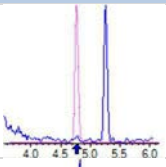 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 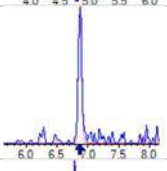 | 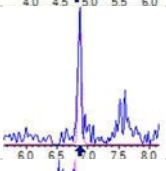 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 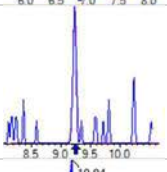 | 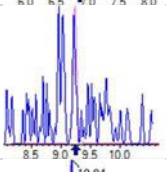 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18887<br>( 627.0 / 81.0 ) 29139 | ( 10.94 , 1.00 ) ( 0.01 , N/A , -0.1) | 219.3<br>114.6 | 1.5428<br>107.3<br>106.8 | 0.0590 | N/A | 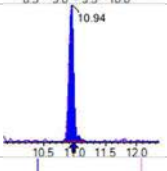 | 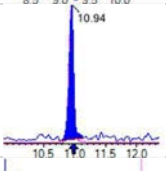 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 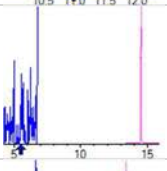 | 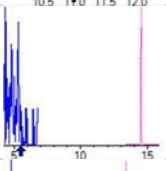 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 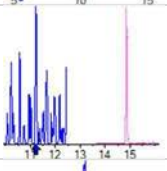 | 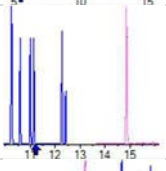 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 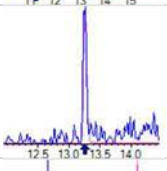 | 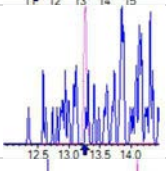 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 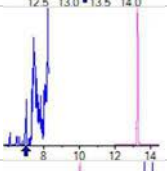 | 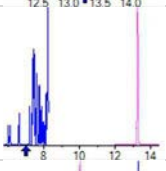 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 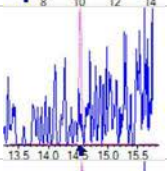 | 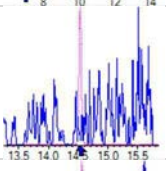 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 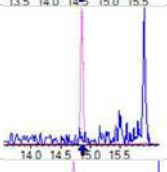 | 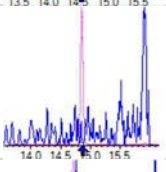 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 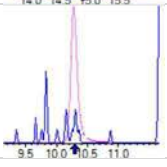 | 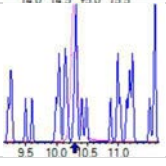 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (18)
Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 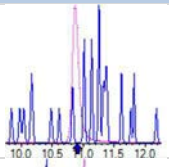 | 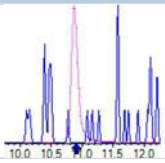 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 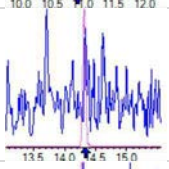 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 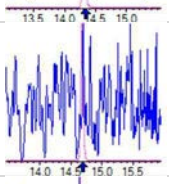 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 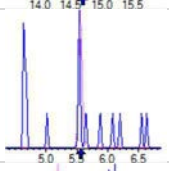 | 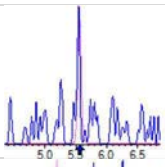 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 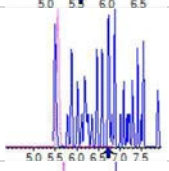 | 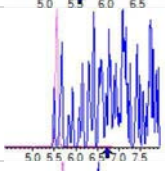 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 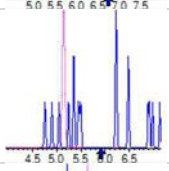 | 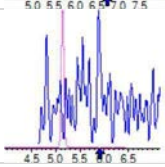 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 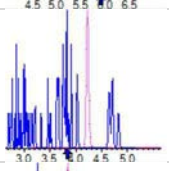 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 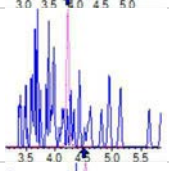 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 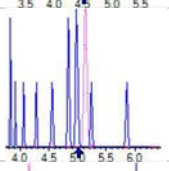 | 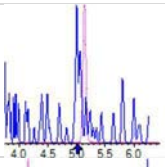 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 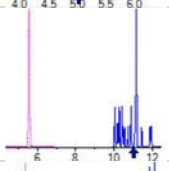 | 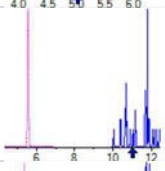 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 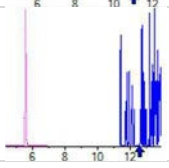 | 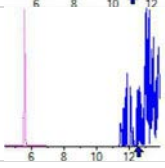 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-05 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 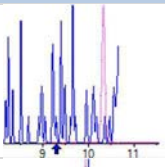 | 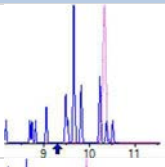 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 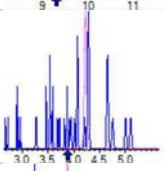 | 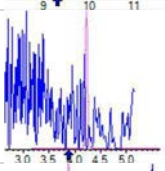 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 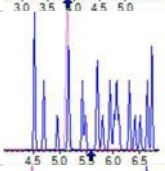 | 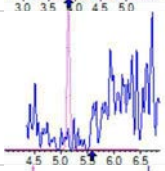 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 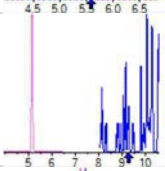 | 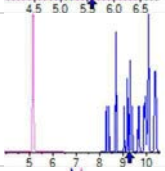 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 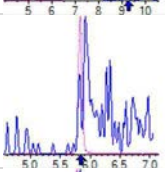 | 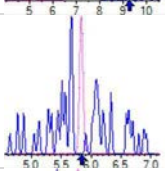 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 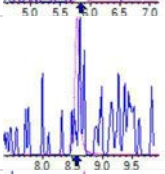 | 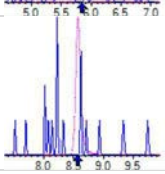 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 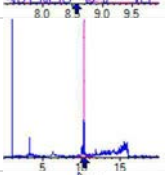 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 281983 | ( 3.55 , N/A )<br>( N/A , -0.03 , N/A ) | 1976.6 | N/A | 0.9990<br>[ 1.0000 ] | 99.9%<br>{ 106.8% } | 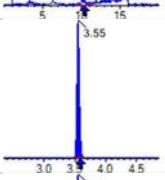 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 101350 | ( 5.14 , N/A )<br>( N/A , -0.01 , N/A ) | 16725.6 | N/A | 0.8580<br>[ 1.0000 ] | 85.8%<br>{ 102.4% } | 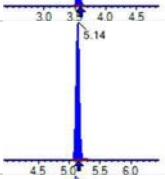 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 384985 | ( 7.41 , N/A )<br>( N/A , 0.02 , N/A ) | 16687.1 | N/A | 0.9920<br>[ 1.0000 ] | 99.2%<br>{ 109.4% } | 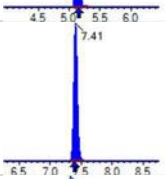 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 268681 | ( 8.92 , N/A )<br>( N/A , -0.01 , N/A ) | 1799.4 | N/A | 0.9200<br>[ 1.0000 ] | 92.0%<br>{ 112.1% } | 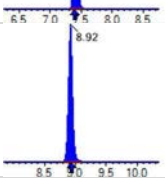 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-05 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (18)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 270183 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 5431.1 | N/A | 0.9430 [ 1.0000 ] | 94.3% { 110.1% } | 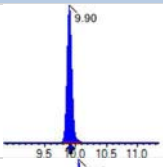  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 965060 | ( 8.15 , N/A ) ( N/A , 0.13 , N/A ) | 8243.4 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 108.7% } | 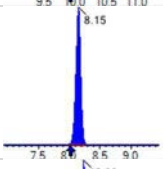  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 754346 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 2414.0 | N/A | 0.9620 [ 1.0000 ] | 96.2% { 109.4% } | 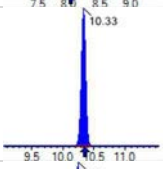  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2236082 | ( 3.55 , N/A ) ( N/A , -0.03 , N/A ) | 244337.2 | N/A | 7.3360 [ 8.0000 ] | 91.7% { 101.8% } | 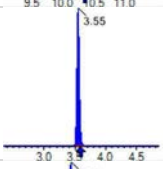  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 863125 | ( 4.23 , N/A ) ( N/A , -0.06 , N/A ) | 6751.7 | N/A | 4.6520 [ 4.0000 ] | 116.3% { 113.3% } | 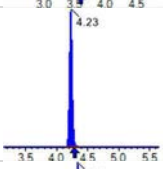  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 507611 | ( 5.14 , N/A ) ( N/A , -0.01 , N/A ) | 9198.6 | N/A | 2.2890 [ 2.0000 ] | 114.5% { 116.5% } | 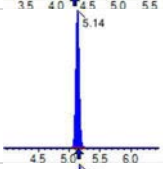  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 557306 | ( 6.28 , N/A ) ( N/A , -0.01 , N/A ) | 9209.2 | N/A | 2.2630 [ 2.0000 ] | 113.2% { 108.8% } | 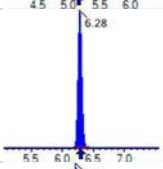  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 812622 | ( 7.41 , N/A ) ( N/A , 0.02 , N/A ) | 4507.8 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 114.4% } | 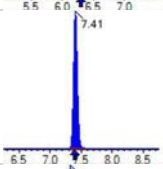  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 275591 | ( 8.92 , N/A ) ( N/A , -0.01 , N/A ) | 4341.5 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 117.3% } | 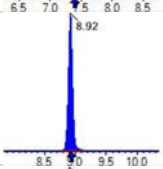  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 313770 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 1174.1 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 111.9% } | 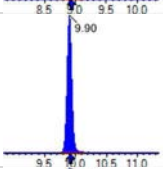  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 356419 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 863.4 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 110.5% } | 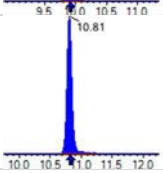  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (18)
Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 375265 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1544.7 | N/A | 0.9880 [ 1.0000 ] | 98.8% { 110.4% } | 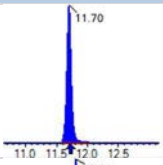 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 323320 | ( 13.01 , N/A ) ( N/A , -0.02 , N/A ) | 1302.6 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 106.4% } | 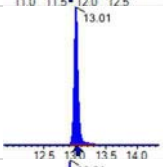 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 435458 | ( 13.91 , N/A ) ( N/A , -0.02 , N/A ) | 1910.7 | N/A | 1.5470 [ 2.0000 ] | 77.4% { 102.1% } | 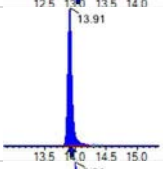 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1462423 | ( 5.31 , N/A ) ( N/A , -0.01 , N/A ) | 1539.9 | N/A | 1.8800 [ 2.0000 ] | 94.0% { 104.4% } | 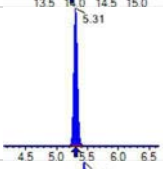 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1395384 | ( 8.15 , N/A ) ( N/A , 0.13 , N/A ) | 6290.2 | N/A | 2.0040 [ 2.0000 ] | 100.2% { 112.3% } | 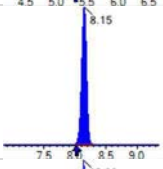 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1632632 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 1741.5 | N/A | 2.0340 [ 2.0000 ] | 101.7% { 112.4% } | 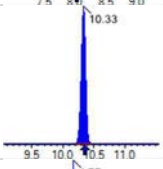 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 742240 | ( 4.77 , N/A ) ( N/A , -0.02 , N/A ) | 56.0 | N/A | 4.3370 [ 4.0000 ] | 108.4% { 119.0% } | 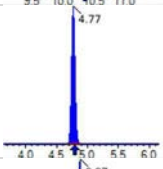 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2027884 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 6449.9 | N/A | 4.8240 [ 4.0000 ] | 120.6% { 123.9% } | 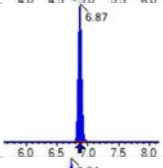 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1685355 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 2307.5 | N/A | 4.5820 [ 4.0000 ] | 114.6% { 126.8% } | 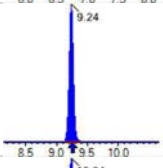 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3222329 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1599.9 | N/A | 8.0980 [ 8.0000 ] | 101.2% { 119.1% } | 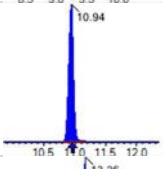 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1394938 | ( 13.26 , N/A ) ( N/A , 0.01 , N/A ) | 3610.7 | N/A | 1.6370 [ 2.0000 ] | 81.9% { 92.8% } | 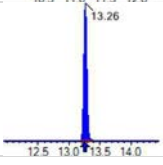 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-05
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (18)
Acquired: 2024/03/29 - 17:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 210469 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 1300.6 | N/A | 1.0990 [ 2.0000 ] | 54.9% { 61.9% } | 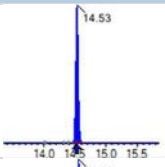 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 204145 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1824.2 | N/A | 1.1660 [ 2.0000 ] | 58.3% { 63.1% } | 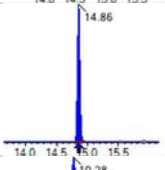 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 936135 | ( 10.28 , N/A ) ( N/A , -0.02 , N/A ) | 2757.7 | N/A | 3.3590 [ 4.0000 ] | 84.0% { 91.3% } | 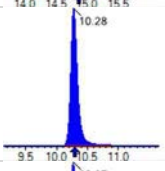 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1011149 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 2202.6 | N/A | 4.0210 [ 4.0000 ] | 100.5% { 110.7% } | 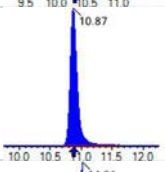 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 963697 | ( 14.31 , N/A ) ( N/A , 0.01 , N/A ) | 2313.5 | N/A | 13.4660 [ 20.0000 ] | 67.3% { 77.9% } | 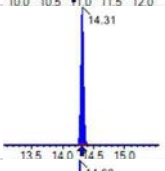 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 930971 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 3940.2 | N/A | 13.8910 [ 20.0000 ] | 69.5% { 85.8% } | 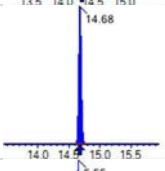 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 807494 | ( 5.55 , N/A ) ( N/A , -0.01 , N/A ) | 2411.8 | N/A | 8.4070 [ 8.0000 ] | 105.1% { 103.2% } | 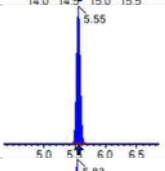 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 635422 | ( 5.83 , N/A ) ( N/A , -0.01 , N/A ) | 2207.8 | N/A | 2.1580 [ 2.0000 ] | 107.9% { 125.5% } | 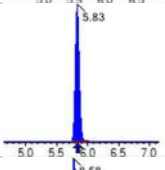 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 614518 | ( 8.58 , N/A ) ( N/A , 0.01 , N/A ) | 1266.7 | N/A | 1.8520 [ 2.0000 ] | 92.6% { 105.0% } | 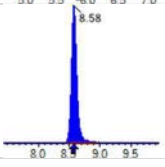 | | |

# ANALYSIS DATA SHEETL

## DUP-8-032124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0142P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0142-06P | File ID: | S2024-03-29A (19)P |
| Sampled:P | 03/21/24 11:37P | repared:P | 03/26/24 07:38P | Analyzed: | 03/29/24 17:27P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 570.103 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0363P | Sequence:P | SD01122P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| FBAP | 4.1P | 0.18P | 1.4 | MI1P |
| FPeAP | 5.3P | 0.057P | 0.70 | |
| PFHxAP | NDP | 0.048P | 0.35 | UP |
| FHpAP | NDP | 0.036P | 0.35 | UP |
| FOAP | 0.25P | 0.13P | 0.35 | B, JP |
| FNAP | NDP | 0.072P | 0.35 | UP |
| FDAP | NDP | 0.089P | 0.35 | UP |
| FUnAP | NDP | 0.14P | 0.35 | UP |
| FDoAP | NDP | 0.098P | 0.35 | UP |
| PFTrDAP | NDP | 0.18P | 0.35 | UP |
| PFTeDAP | NDP | 0.17P | 0.35 | UP |
| FHxDAP | NDP | 0.18P | 0.35 | UP |
| FODAP | NDP | 0.18P | 0.35 | UP |
| FBSP | NDP | 0.032P | 0.35 | UP |
| FPeSP | NDP | 0.055P | 0.35 | UP |
| FHxSP | NDP | 0.028P | 0.35 | UP |
| FHpSP | NDP | 0.045P | 0.35 | UP |
| FOSP | 0.11P | 0.056P | 0.35 | MI2, JP |
| FNSP | NDP | 0.11P | 0.35 | UP |
| FDSP | NDP | 0.13P | 0.35 | UP |
| FDoSP | NDP | 0.11P | 0.35 | UP |
| 4:2FTSP | NDP | 0.25P | 1.4P | UP |
| 6:2FTSP | NDP | 0.28P | 1.4P | UP |
| 8:2FTSP | NDP | 0.072P | 1.4P | UP |
| 10:2FTSP | NDP | 0.35P | 1.4P | UP |
| FOSAP | NDP | 0.091P | 0.35 | UP |
| NMeFOSAP | NDP | 0.42P | 1.4P | UP |
| NEtFOSAP | NDP | 0.36P | 1.4P | UP |
| NMeFOSAAP | NDP | 0.093P | 0.35P | UP |
| NEtFOSAAP | NDP | 0.10P | 0.35P | UP |

# ANALYSIS DATA SHEETL

## DUP-8-032124P

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:P | AP L, LLCP | | | Work Order:P | 24C0142P |
| Client:P | Tidewater, Inc.P | | | roject:P | JPL-GW MonitoringP |
| Matrix:P | WaterP | Laboratory ID:P | 24C0142-06P | File ID: | S2024-03-29A (19)P |
| Sampled:P | 03/21/24 11:37P | repared:P | 03/26/24 07:38P | Analyzed: | 03/29/24 17:27P |
| Solids:P | | reparation:P | EPA 1633P | Dilution:P | 1P |
| Initial/Final:P | 570.103 mL / 2 mLP | | | Instrument: | SaphiraP |
| Batch:P | BDC0363P | Sequence:P | SD01122P | Calibration:P | 2413019P |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSEP | NDP | 0.89P | 1.4P | UP |
| NEtFOSEP | NDP | 0.92P | 1.4P | UP |
| HFPO-DAP | NDP | 0.15P | 0.70P | UP |
| ADONAP | NDP | 0.11P | 0.70P | UP |
| FEESAP | NDP | 0.096P | 0.70 | UP |
| PFMPAP | NDP | 0.047P | 0.70 | UP |
| FMBAP | NDP | 0.080P | 0.70 | UP |
| NFDHAP | NDP | 0.26P | 0.70P | UP |
| 9Cl-PF3ONSP | NDP | 0.18P | 0.70P | UP |
| 11Cl-PF3OUDSP | NDP | 0.18P | 0.70P | UP |
| 3:3FTCAP | NDP | 0.50P | 1.4P | UP |
| 5:3FTCAP | NDP | 0.39P | 1.4P | UP |
| 7:3FTCAP | NDP | 0.49P | 1.4P | UP |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (19)
Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 71932<br>( 163.0 / 69.0 ) 1946 | ( 2.41 , 0.68 )<br>( N/A , 0.00 , -0.3) | 428.3<br>119.2 | 0.0271<br>98.7<br>100.1 | 1.1370 | N/A | 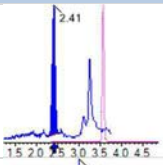 | 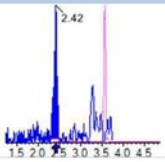 | |
| PFBA | ( 213.0 / 169.0 ) 417944 | ( 3.57 , 1.00 )<br>( 0.00 , N/A , 0.0) | 392.3 | N/A<br>0.0<br>0.0 | 1.1640 | N/A | 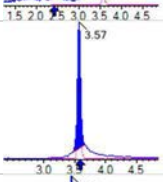 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) 342611<br>( 263.0 / 69.0 ) 3909 | ( 4.25 , 1.00 )<br>( 0.00 , N/A , 0.2) | 1327.0<br>68.7 | 0.0114<br>95.9<br>98.4 | 1.5070 | N/A | 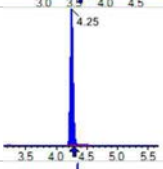 | 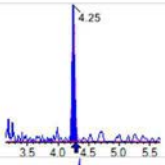 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 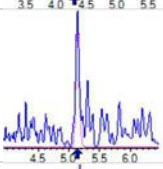 | 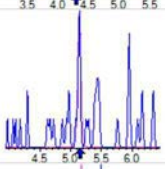 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 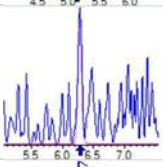 | 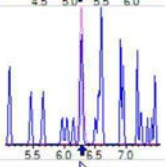 | |
| PFOA | ( 413.0 / 369.0 ) 29870<br>( 413.0 / 169.0 ) 11070 | ( 7.41 , 1.00 )<br>( 0.00 , N/A , 0.2) | 55.6<br>86.2 | 0.3706<br>103.7<br>107.6 | 0.0710 | N/A | 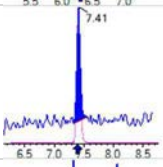 | 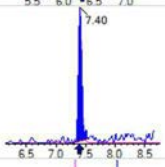 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 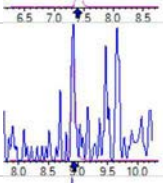 | 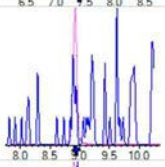 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 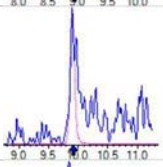 | 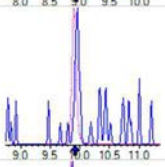 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 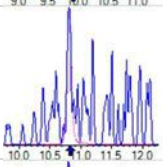 | 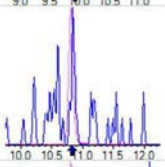 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 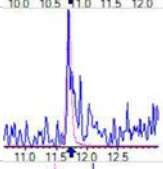 | 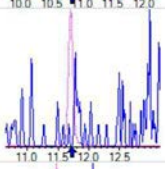 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 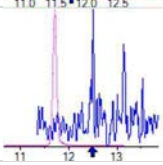 | 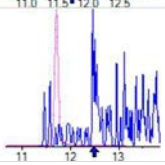 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (19)
Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 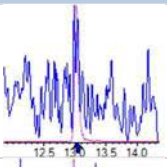 | 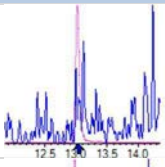 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 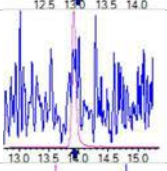 | 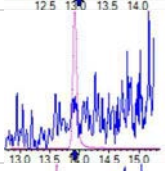 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 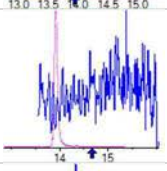 | 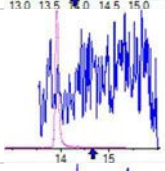 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 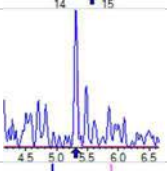 | 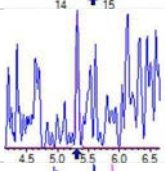 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 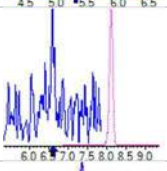 | 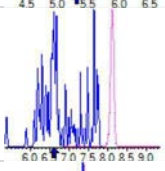 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 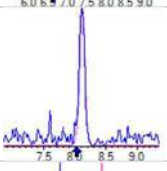 | 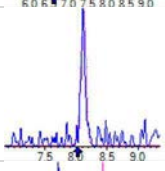 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 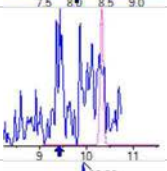 | 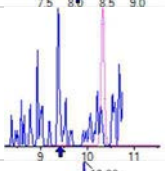 | |
| PFOS | ( 499.0 / 80.0 )<br>28376<br>( 499.0 / 99.0 )<br>3611 | ( 10.33 , 1.00 )<br>( 0.00 , N/A , 0.0) | 107.3<br>120.8 | 0.1273<br>55.1<br>56.6 | 0.0300 | N/A | 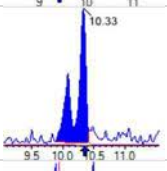 | 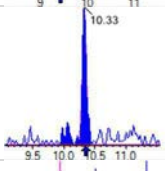 | MI2 DG<br>2024-04-01 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 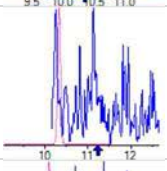 | 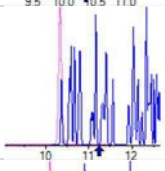 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 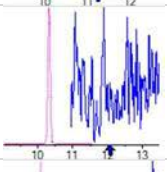 | 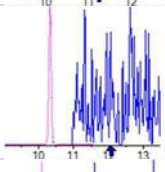 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 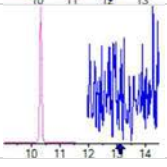 | 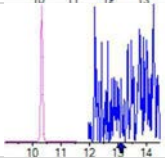 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-06 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 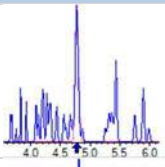 | 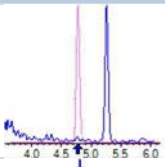 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 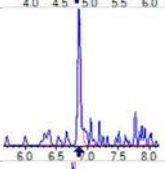 | 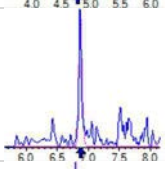 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 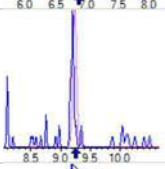 | 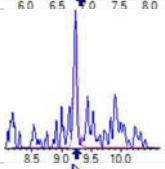 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>18758<br>( 627.0 / 81.0 )<br>25235 | ( 10.95 , 1.00 )<br>( 0.01 , N/A , 0.0) | 250.5<br>116.1 | 1.3453<br>93.6<br>93.1 | 0.0550 | N/A | 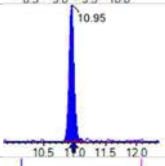 | 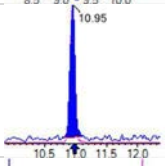 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 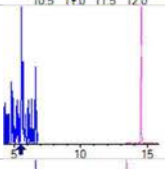 | 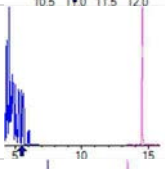 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 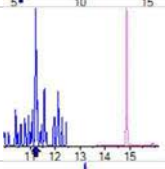 | 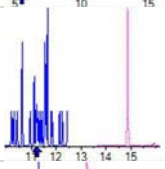 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 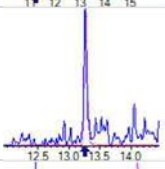 | 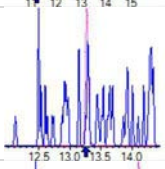 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 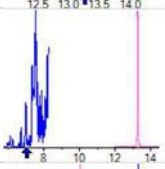 | 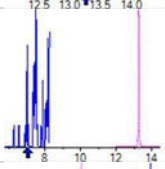 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 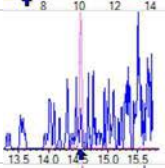 | 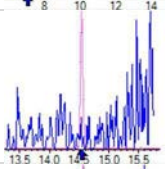 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 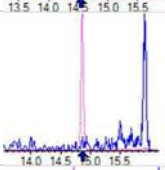 | 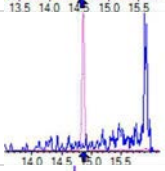 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 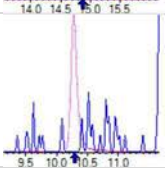 | 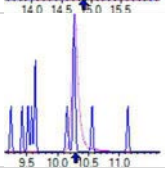 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (19)
Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 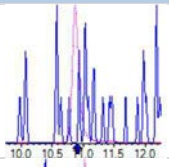 | 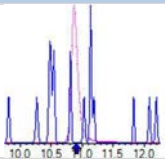 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 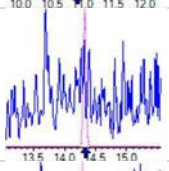 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 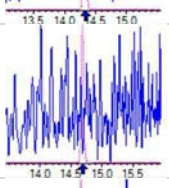 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 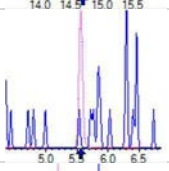 | 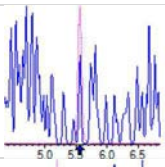 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 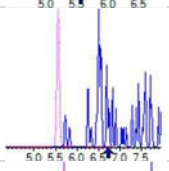 | 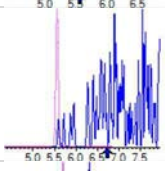 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 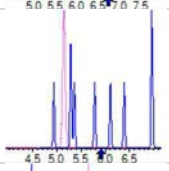 | 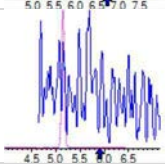 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 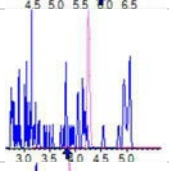 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 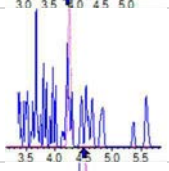 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 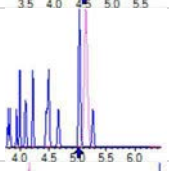 | 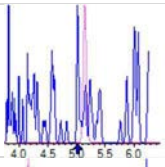 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 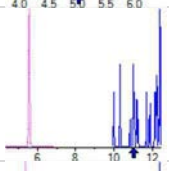 | 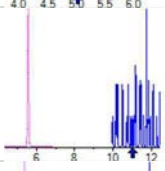 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 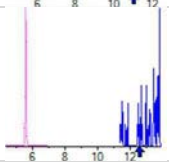 | 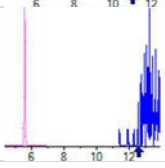 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-06 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (19)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 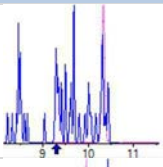 | 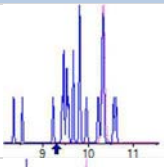 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 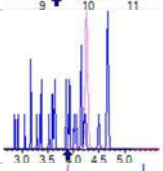 | 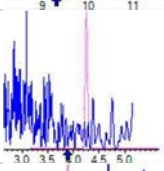 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 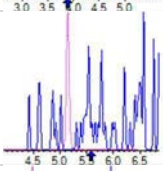 | 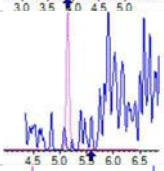 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 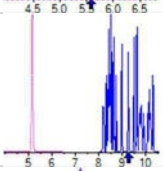 | 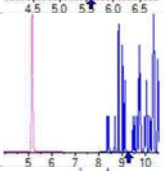 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 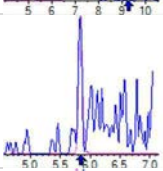 | 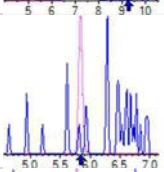 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 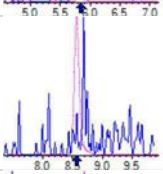 | 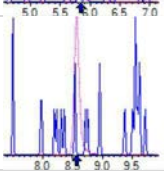 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 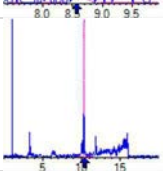 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277234 | ( 3.57 , N/A )<br>( N/A , -0.02 , N/A ) | 1721.5 | N/A | 0.9820<br>[ 1.0000 ] | 98.2%<br>{ 105.0% } | 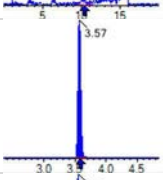 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 105822 | ( 5.15 , N/A )<br>( N/A , -0.01 , N/A ) | 19699.2 | N/A | 0.8960<br>[ 1.0000 ] | 89.6%<br>{ 106.9% } | 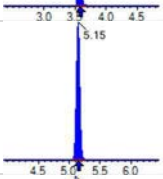 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 380886 | ( 7.41 , N/A )<br>( N/A , 0.02 , N/A ) | 6582.9 | N/A | 0.9810<br>[ 1.0000 ] | 98.1%<br>{ 108.2% } | 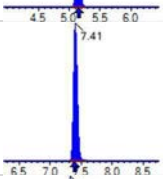 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 270199 | ( 8.92 , N/A )<br>( N/A , -0.01 , N/A ) | 1618.3 | N/A | 0.9250<br>[ 1.0000 ] | 92.5%<br>{ 112.7% } | 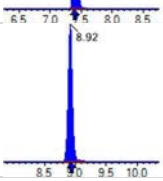 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (19)
Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277249 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 7163.7 | N/A | 0.9670 [ 1.0000 ] | 96.7% { 113.0% } | 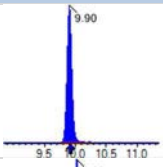 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1007176 | ( 8.12 , N/A ) ( N/A , 0.10 , N/A ) | 10491.7 | N/A | 1.0250 [ 1.0000 ] | 102.5% { 113.5% } | 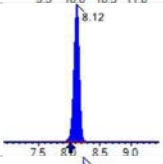 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 754411 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 1984.1 | N/A | 0.9620 [ 1.0000 ] | 96.2% { 109.4% } | 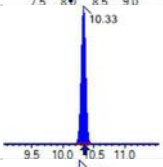 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2236421 | ( 3.57 , N/A ) ( N/A , -0.01 , N/A ) | 118881.6 | N/A | 7.4630 [ 8.0000 ] | 93.3% { 101.8% } | 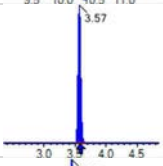 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 910536 | ( 4.25 , N/A ) ( N/A , -0.03 , N/A ) | 7713.1 | N/A | 4.7000 [ 4.0000 ] | 117.5% { 119.5% } | 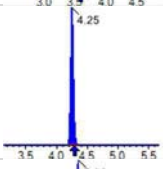 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 498925 | ( 5.14 , N/A ) ( N/A , -0.01 , N/A ) | 16034.5 | N/A | 2.1550 [ 2.0000 ] | 107.8% { 114.5% } | 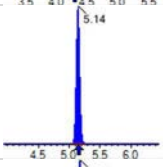 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 603993 | ( 6.28 , N/A ) ( N/A , -0.01 , N/A ) | 11674.0 | N/A | 2.3490 [ 2.0000 ] | 117.4% { 117.9% } | 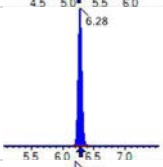 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 835883 | ( 7.41 , N/A ) ( N/A , 0.02 , N/A ) | 4301.4 | N/A | 2.0710 [ 2.0000 ] | 103.5% { 117.6% } | 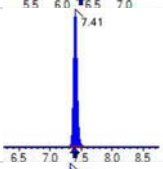 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 287511 | ( 8.92 , N/A ) ( N/A , -0.01 , N/A ) | 4723.5 | N/A | 1.0780 [ 1.0000 ] | 107.8% { 122.3% } | 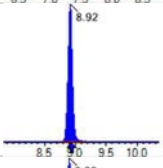 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 329888 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 2045.7 | N/A | 1.0300 [ 1.0000 ] | 103.0% { 117.7% } | 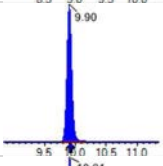 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 378400 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 1099.5 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 117.3% } | 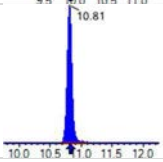 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (19)
Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 376494 | ( 11.71 , N/A ) ( N/A , -0.02 , N/A ) | 1532.0 | N/A | 0.9660 [ 1.0000 ] | 96.6% { 110.8% } | 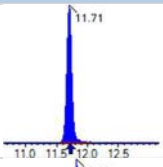 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 322106 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1222.2 | N/A | 0.9330 [ 1.0000 ] | 93.3% { 106.0% } | 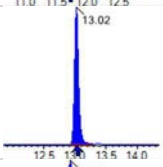 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 456729 | ( 13.92 , N/A ) ( N/A , -0.01 , N/A ) | 2393.8 | N/A | 1.5820 [ 2.0000 ] | 79.1% { 107.1% } | 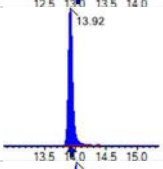 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1539792 | ( 5.31 , N/A ) ( N/A , -0.01 , N/A ) | 1640.9 | N/A | 1.8970 [ 2.0000 ] | 94.8% { 109.9% } | 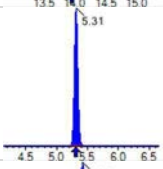 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1452260 | ( 8.12 , N/A ) ( N/A , 0.10 , N/A ) | 6430.7 | N/A | 1.9990 [ 2.0000 ] | 99.9% { 116.9% } | 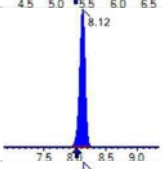 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1623897 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 1768.3 | N/A | 2.0230 [ 2.0000 ] | 101.2% { 111.8% } | 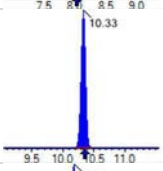 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 807911 | ( 4.77 , N/A ) ( N/A , -0.01 , N/A ) | 65.0 | N/A | 4.5240 [ 4.0000 ] | 113.1% { 129.5% } | 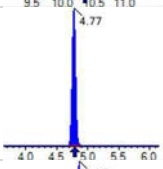 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2198271 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 6396.5 | N/A | 5.0110 [ 4.0000 ] | 125.3% { 134.3% } | 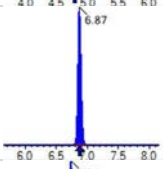 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1748152 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 1940.0 | N/A | 4.5540 [ 4.0000 ] | 113.9% { 131.5% } | 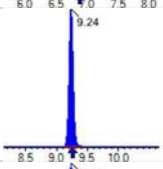 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3405210 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1956.4 | N/A | 8.2000 [ 8.0000 ] | 102.5% { 125.8% } | 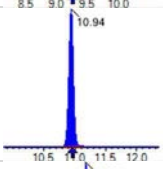 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 873435 | ( 13.27 , N/A ) ( N/A , 0.02 , N/A ) | 3600.7 | N/A | 1.0250 [ 2.0000 ] | 51.3% { 58.1% } | 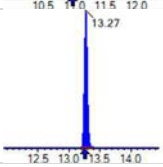 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-06
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (19)
Acquired: 2024/03/29 - 17:27

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 145878 | ( 14.54 , N/A ) ( N/A , 0.02 , N/A ) | 1041.6 | N/A | 0.7610 [ 2.0000 ] | 38.1% { 42.9% } | 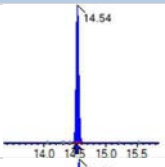  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 143207 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1176.3 | N/A | 0.8180 [ 2.0000 ] | 40.9% { 44.2% } | 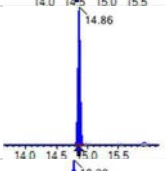  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 969359 | ( 10.28 , N/A ) ( N/A , -0.02 , N/A ) | 3033.9 | N/A | 3.4780 [ 4.0000 ] | 87.0% { 94.6% } | 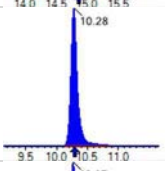  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1066222 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 1967.0 | N/A | 4.2390 [ 4.0000 ] | 106.0% { 116.8% } | 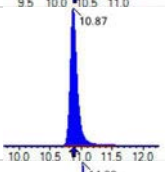  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 595487 | ( 14.32 , N/A ) ( N/A , 0.02 , N/A ) | 1977.6 | N/A | 8.3200 [ 20.0000 ] | 41.6% { 48.2% } | 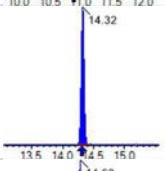  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 580931 | ( 14.68 , N/A ) ( N/A , 0.02 , N/A ) | 2552.7 | N/A | 8.6670 [ 20.0000 ] | 43.3% { 53.5% } | 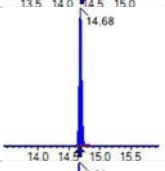  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 876000 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 2393.6 | N/A | 8.7350 [ 8.0000 ] | 109.2% { 111.9% } | 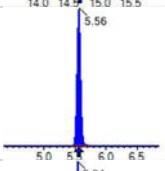  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 682109 | ( 5.84 , N/A ) ( N/A , -0.01 , N/A ) | 2460.4 | N/A | 2.2580 [ 2.0000 ] | 112.9% { 134.7% } | 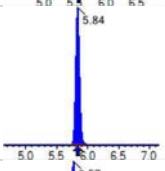  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 658416 | ( 8.57 , N/A ) ( N/A , 0.00 , N/A ) | 1398.9 | N/A | 1.9340 [ 2.0000 ] | 96.7% { 112.5% } | 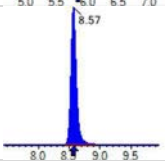  | | |

# ANALYSIS DATA SHEETL

EB-9-032124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-07- | File ID:- | S2024-03-29A (22)- |
| Sampled:- | 03/21/24 11:45- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 18:29- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 539.452 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.37- | 0.19- | 1.5- | MI1, J- |
| PFPeA- | ND- | 0.060- | 0.74- | U- |
| PFHxA- | ND- | 0.051- | 0.37- | U- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | 0.24- | 0.14- | 0.37- | B, J- |
| PFNA- | ND- | 0.076- | 0.37- | U- |
| PFDA- | ND- | 0.094- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.19- | 0.37- | U- |
| PFODA- | ND- | 0.19- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.058- | 0.37- | U- |
| PFHxS- | ND- | 0.029- | 0.37- | U- |
| PFHpS- | ND- | 0.048- | 0.37- | U- |
| PFOS- | 0.071- | 0.059- | 0.37- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.076- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.097- | 0.37- | U- |
| NMeFOSA- | ND- | 0.44- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.098- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

EB-9-032124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-07- | File ID:- | S2024-03-29A (22)- |
| Sampled:- | 03/21/24 11:45- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 18:29- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 539.452 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.94- | 1.5- | U- |
| NEtFOSE- | ND- | 0.97- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.74- | U- |
| ADONA- | ND- | 0.11- | 0.74- | U- |
| PFEESA- | ND- | 0.10- | 0.74- | U- |
| PFMPA- | ND- | 0.050- | 0.74- | U- |
| PFMBA- | ND- | 0.084- | 0.74- | U- |
| NFDHA- | ND- | 0.28- | 0.74- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.74- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.74- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 17681<br>( 163.0 / 69.0 ) 704 | ( 2.40 , 0.67 )<br>( N/A , -0.01 , 0.1) | 102.0<br>58.8 | 0.0398<br>145.3<br>147.3 | 0.2440 | N/A | 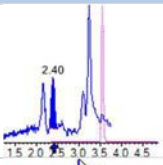 | 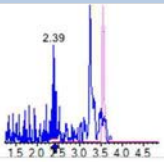 | |
| PFBA | ( 213.0 / 169.0 ) 142860 | ( 3.55 , 1.00 )<br>( 0.00 , N/A , 0.0) | 96.1 | N/A<br>0.0<br>0.0 | 0.0990 | N/A | 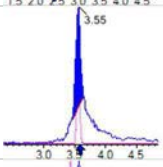 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 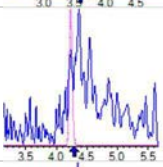 | 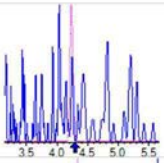 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 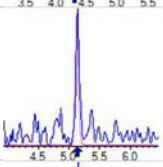 | 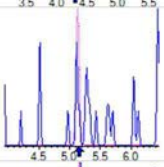 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 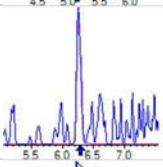 | 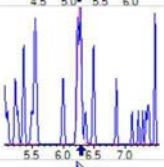 | |
| PFOA | ( 413.0 / 369.0 ) 28365<br>( 413.0 / 169.0 ) 11281 | ( 7.37 , 1.00 )<br>( 0.00 , N/A , 0.1) | 71.0<br>97.8 | 0.3977<br>111.3<br>115.5 | 0.0650 | N/A | 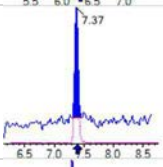 | 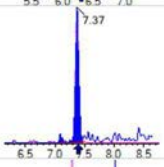 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 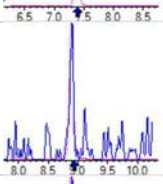 | 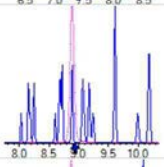 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 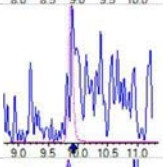 | 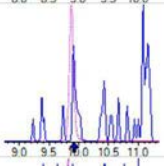 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 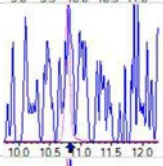 | 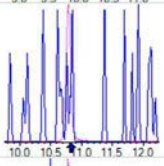 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 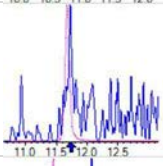 | 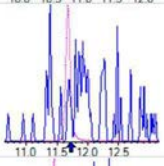 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 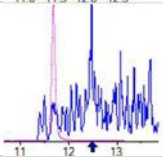 | 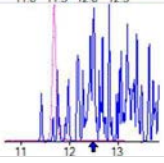 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 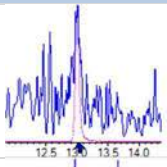 | 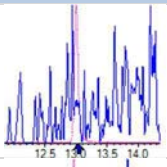 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 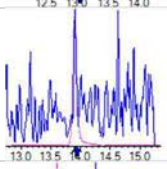 | 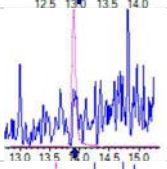 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 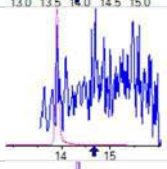 | 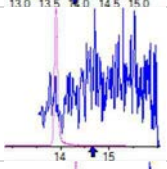 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 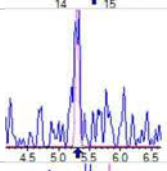 | 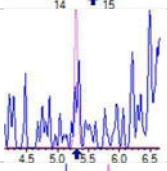 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 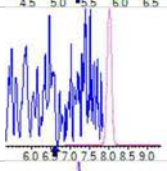 | 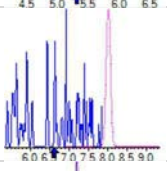 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 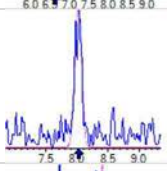 | 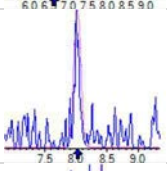 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 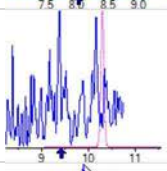 | 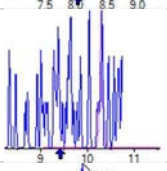 | |
| PFOS | ( 499.0 / 80.0 )<br>18811<br>( 499.0 / 99.0 )<br>3531 | ( 10.29 , 1.00 )<br>( -0.01 , N/A , -0.2) | 94.9<br>3121.8 | 0.1877<br>81.2<br>83.5 | 0.0190 | N/A | 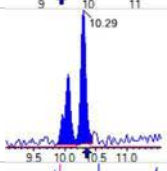 | 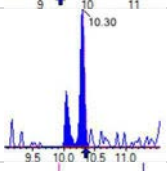 | MI2 DG<br>2024-04-02 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 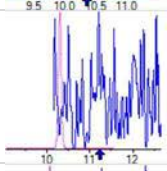 | 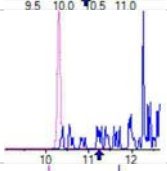 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 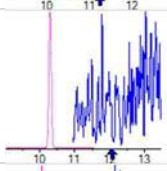 | 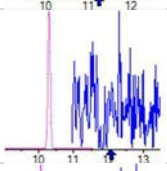 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 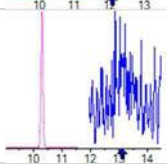 | 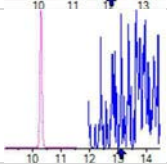 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 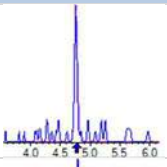 | 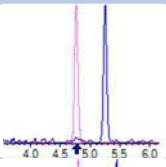 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 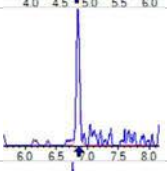 | 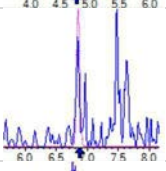 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 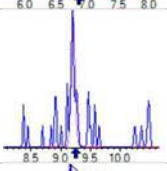 | 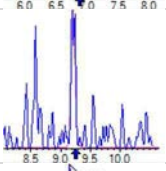 | |
| 10:2FTS | ( 627.0 / 607.0 ) 21816<br>( 627.0 / 81.0 ) 28477 | ( 10.93 , 1.00 ) ( 0.01 , N/A , 0.7) | 237.0<br>117.3 | 1.3053<br>90.8<br>90.3 | 0.0580 | N/A | 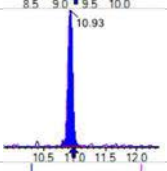 | 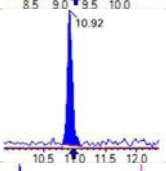 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 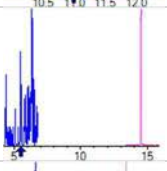 | 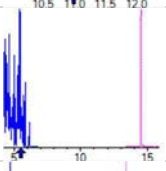 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 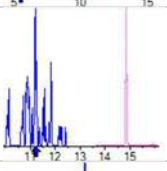 | 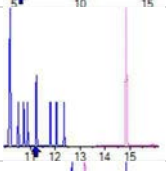 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 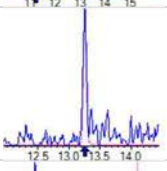 | 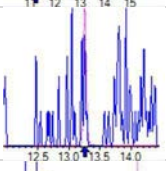 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 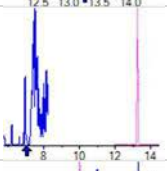 | 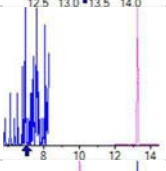 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 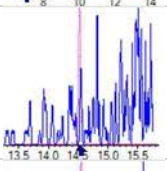 | 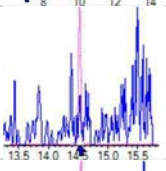 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 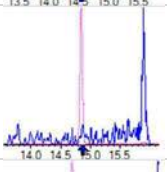 | 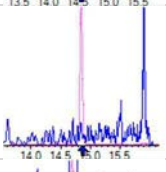 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 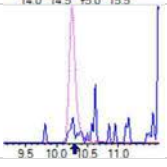 | 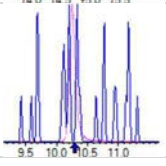 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 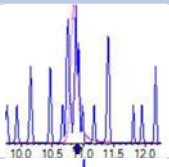 | 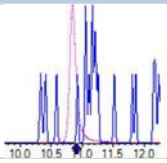 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 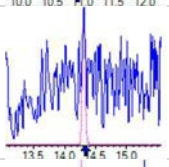 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 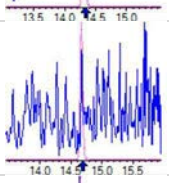 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 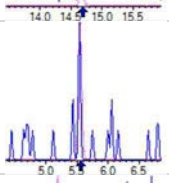 | 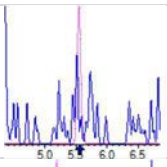 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 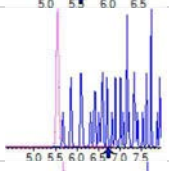 | 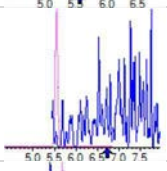 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 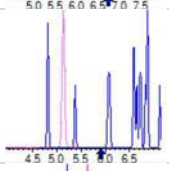 | 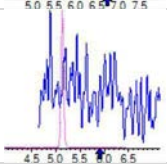 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 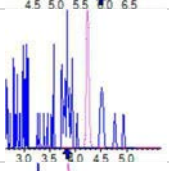 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 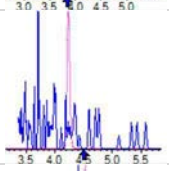 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 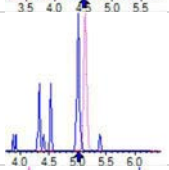 | 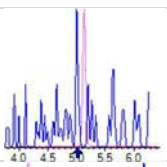 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 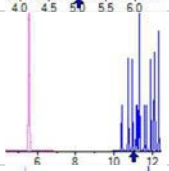 | 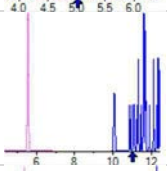 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 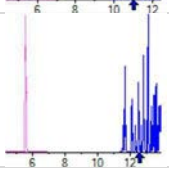 | 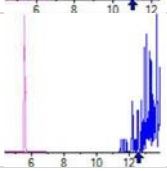 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 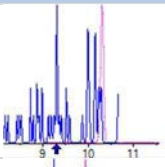 | 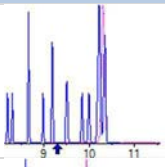 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 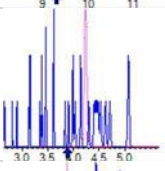 | 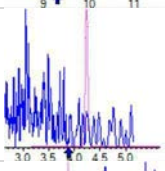 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 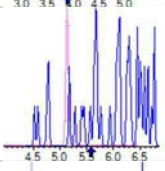 | 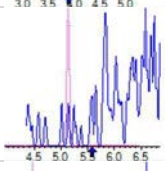 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 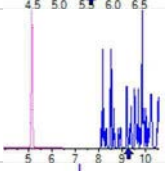 | 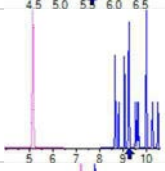 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 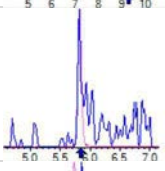 | 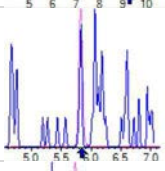 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 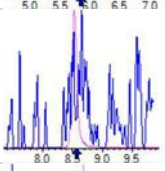 | 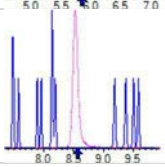 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 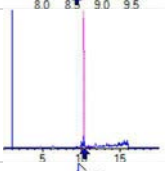 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 296298 | ( 3.55 , N/A ) ( N/A , -0.03 , N/A ) | 2144.0 | N/A | 1.0500 [ 1.0000 ] | 105.0% { 112.3% } | 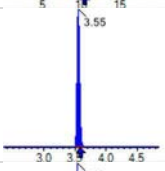 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116130 | ( 5.13 , N/A ) ( N/A , -0.02 , N/A ) | 61907.8 | N/A | 0.9840 [ 1.0000 ] | 98.4% { 117.3% } | 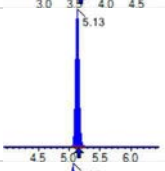 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 394092 | ( 7.37 , N/A ) ( N/A , -0.02 , N/A ) | 7657.1 | N/A | 1.0150 [ 1.0000 ] | 101.5% { 112.0% } | 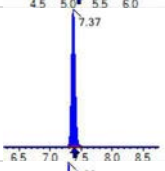 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 288250 | ( 8.89 , N/A ) ( N/A , -0.04 , N/A ) | 1474.2 | N/A | 0.9870 [ 1.0000 ] | 98.7% { 120.2% } | 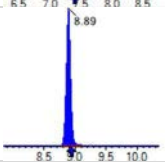 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 278312 | ( 9.88 , N/A ) ( N/A , -0.05 , N/A ) | 8485.0 | N/A | 0.9710 [ 1.0000 ] | 97.1% { 113.4% } | 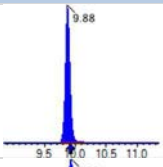 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 987465 | ( 8.02 , N/A ) ( N/A , 0.00 , N/A ) | 6217.5 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 111.3% } | 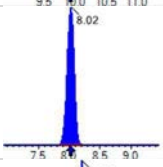 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 808112 | ( 10.31 , N/A ) ( N/A , -0.05 , N/A ) | 3017.7 | N/A | 1.0300 [ 1.0000 ] | 103.0% { 117.2% } | 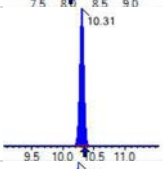 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2564977 | ( 3.55 , N/A ) ( N/A , -0.03 , N/A ) | 112292.2 | N/A | 8.0090 [ 8.0000 ] | 100.1% { 116.7% } | 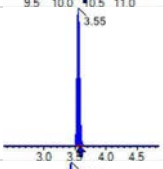 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 919742 | ( 4.23 , N/A ) ( N/A , -0.05 , N/A ) | 5013.3 | N/A | 4.3260 [ 4.0000 ] | 108.1% { 120.7% } | 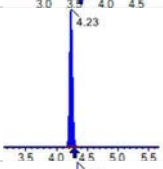 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 499983 | ( 5.13 , N/A ) ( N/A , -0.02 , N/A ) | 8527.2 | N/A | 1.9680 [ 2.0000 ] | 98.4% { 114.8% } | 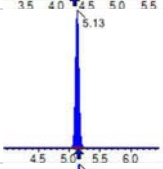 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 597416 | ( 6.26 , N/A ) ( N/A , -0.02 , N/A ) | 5965.0 | N/A | 2.1170 [ 2.0000 ] | 105.9% { 116.6% } | 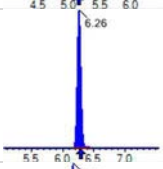 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 862587 | ( 7.37 , N/A ) ( N/A , -0.02 , N/A ) | 4868.0 | N/A | 2.0650 [ 2.0000 ] | 103.3% { 121.4% } | 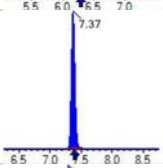 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 284184 | ( 8.89 , N/A ) ( N/A , -0.04 , N/A ) | 4191.7 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 120.9% } | 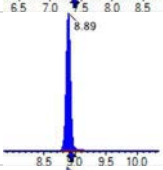 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336997 | ( 9.88 , N/A ) ( N/A , -0.04 , N/A ) | 1477.5 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 120.2% } | 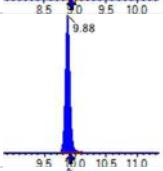 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 386702 | ( 10.79 , N/A ) ( N/A , -0.05 , N/A ) | 1205.0 | N/A | 1.0140 [ 1.0000 ] | 101.4% { 119.9% } | 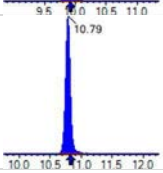 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-07 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (22)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 381342 | ( 11.68 , N/A ) ( N/A , -0.05 , N/A ) | 1580.8 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 112.2% } | 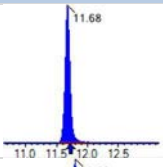  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 322940 | ( 13.00 , N/A ) ( N/A , -0.03 , N/A ) | 1383.3 | N/A | 0.9320 [ 1.0000 ] | 93.2% { 106.3% } | 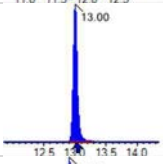  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 463491 | ( 13.90 , N/A ) ( N/A , -0.03 , N/A ) | 1977.1 | N/A | 1.5990 [ 2.0000 ] | 79.9% { 108.7% } | 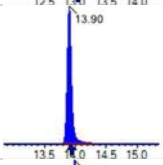  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1661879 | ( 5.30 , N/A ) ( N/A , -0.02 , N/A ) | 1391.2 | N/A | 2.0880 [ 2.0000 ] | 104.4% { 118.6% } | 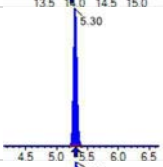  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1472426 | ( 8.02 , N/A ) ( N/A , 0.00 , N/A ) | 6937.8 | N/A | 2.0670 [ 2.0000 ] | 103.3% { 118.5% } | 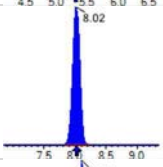  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1686608 | ( 10.30 , N/A ) ( N/A , -0.05 , N/A ) | 2766.6 | N/A | 1.9620 [ 2.0000 ] | 98.1% { 116.1% } | 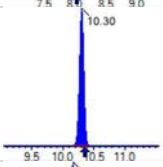  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 778022 | ( 4.76 , N/A ) ( N/A , -0.02 , N/A ) | 74.0 | N/A | 4.4430 [ 4.0000 ] | 111.1% { 124.8% } | 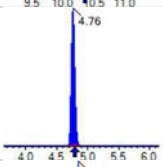  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2121022 | ( 6.85 , N/A ) ( N/A , -0.02 , N/A ) | 6466.5 | N/A | 4.9310 [ 4.0000 ] | 123.3% { 129.6% } | 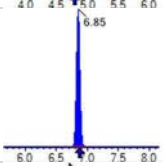  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1927821 | ( 9.21 , N/A ) ( N/A , -0.04 , N/A ) | 2405.6 | N/A | 5.1220 [ 4.0000 ] | 128.1% { 145.0% } | 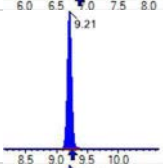  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3779196 | ( 10.91 , N/A ) ( N/A , -0.04 , N/A ) | 1930.3 | N/A | 9.2820 [ 8.0000 ] | 116.0% { 139.7% } | 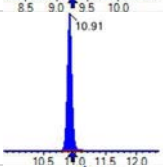  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1197877 | ( 13.25 , N/A ) ( N/A , 0.00 , N/A ) | 3939.8 | N/A | 1.3120 [ 2.0000 ] | 65.6% { 79.7% } | 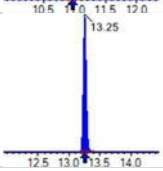  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-07
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (22)
Acquired: 2024/03/29 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 174251 | ( 14.52 , N/A ) ( N/A , 0.00 , N/A ) | 1520.7 | N/A | 0.8490 [ 2.0000 ] | 42.5% { 51.2% } | 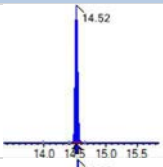  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 178094 | ( 14.85 , N/A ) ( N/A , 0.00 , N/A ) | 1371.4 | N/A | 0.9490 [ 2.0000 ] | 47.5% { 55.0% } | 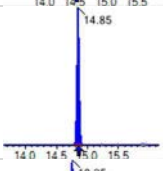  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1240084 | ( 10.25 , N/A ) ( N/A , -0.04 , N/A ) | 2936.6 | N/A | 4.1540 [ 4.0000 ] | 103.9% { 121.0% } | 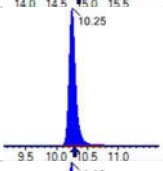  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1147008 | ( 10.85 , N/A ) ( N/A , -0.05 , N/A ) | 2052.7 | N/A | 4.2570 [ 4.0000 ] | 106.4% { 125.6% } | 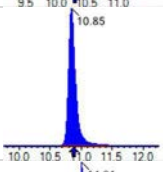  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 773520 | ( 14.31 , N/A ) ( N/A , 0.00 , N/A ) | 2021.2 | N/A | 10.0900 [ 20.0000 ] | 50.4% { 62.6% } | 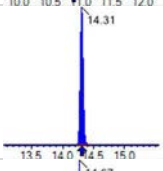  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 772046 | ( 14.67 , N/A ) ( N/A , 0.00 , N/A ) | 3232.7 | N/A | 10.7530 [ 20.0000 ] | 53.8% { 71.2% } | 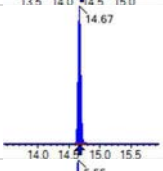  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 927366 | ( 5.55 , N/A ) ( N/A , -0.02 , N/A ) | 2885.9 | N/A | 8.4270 [ 8.0000 ] | 105.3% { 118.5% } | 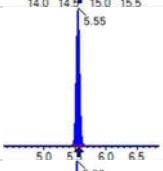  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 650573 | ( 5.82 , N/A ) ( N/A , -0.02 , N/A ) | 2490.2 | N/A | 2.1450 [ 2.0000 ] | 107.3% { 128.5% } | 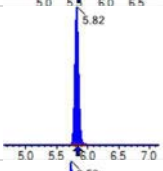  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 654983 | ( 8.53 , N/A ) ( N/A , -0.04 , N/A ) | 1050.8 | N/A | 1.9170 [ 2.0000 ] | 95.8% { 111.9% } | 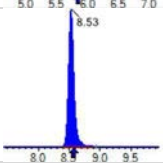  | | |

# ANALYSIS DATA SHEETL

FB-9-032124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-08- | File ID:- | S2024-03-29A (23)- |
| Sampled:- | 03/21/24 11:55- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 18:49- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.341 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| PFBA- | 0.29- | 0.19- | 1.5- | MI1, J- |
| PFPeA- | ND- | 0.059- | 0.73- | U- |
| PFHxA- | ND- | 0.050- | 0.37- | U- |
| PFHpA- | ND- | 0.038- | 0.37- | U- |
| PFOA- | 0.26- | 0.14- | 0.37- | B, J- |
| PFNA- | ND- | 0.075- | 0.37- | U- |
| PFDA- | ND- | 0.093- | 0.37- | U- |
| PFUnA- | ND- | 0.15- | 0.37- | U- |
| PFDoA- | ND- | 0.10- | 0.37- | U- |
| PFTrDA- | ND- | 0.19- | 0.37- | U- |
| PFTeDA- | ND- | 0.18- | 0.37- | U- |
| PFHxDA- | ND- | 0.18- | 0.37- | U- |
| PFODA- | ND- | 0.18- | 0.37- | U- |
| PFBS- | ND- | 0.034- | 0.37- | U- |
| PFPeS- | ND- | 0.057- | 0.37- | U- |
| PFHxS- | ND- | 0.029- | 0.37- | U- |
| PFHpS- | ND- | 0.047- | 0.37- | U- |
| PFOS- | 0.072- | 0.058- | 0.37- | MI2, J- |
| PFNS- | ND- | 0.11- | 0.37- | U- |
| PFDS- | ND- | 0.14- | 0.37- | U- |
| PFDoS- | ND- | 0.11- | 0.37- | U- |
| 4:2FTS- | ND- | 0.27- | 1.5- | U- |
| 6:2FTS- | ND- | 0.29- | 1.5- | U- |
| 8:2FTS- | ND- | 0.075- | 1.5- | U- |
| 10:2FTS- | ND- | 0.37- | 1.5- | U- |
| PFOSA- | ND- | 0.095- | 0.37- | U- |
| NMeFOSA- | ND- | 0.43- | 1.5- | U- |
| NEtFOSA- | ND- | 0.38- | 1.5- | U- |
| NMeFOSAA- | ND- | 0.097- | 0.37- | U- |
| NEtFOSAA- | ND- | 0.11- | 0.37- | U- |

# ANALYSIS DATA SHEETL

FB-9-032124-

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:- | APPL, LLC- | | | Work Order:- | 24C0142- |
| Client:- | Tidewater, Inc.- | | | Project:- | JPL-GW Monitoring- |
| Matrix:- | Water- | Laboratory ID:- | 24C0142-08- | File ID:- | S2024-03-29A (23)- |
| Sampled:- | 03/21/24 11:55- | Prepared:- | 03/26/24 07:38- | Analyzed:- | 03/29/24 18:49- |
| Solids:- | | Preparation:- | EPA 1633- | Dilution:- | 1- |
| Initial/Final:- | 546.341 mL / 2 mL- | | | Instrument:- | Saphira- |
| Batch:- | BDC0363- | Sequence:- | SD01122- | Calibration:- | 2413019- |

| COMPOUNDL | CONC. (ng/L)L | MDL | PQL | QL |
|---|---|---|---|---|
| NMeFOSE- | ND- | 0.93- | 1.5- | U- |
| NEtFOSE- | ND- | 0.96- | 1.5- | U- |
| HFPO-DA- | ND- | 0.16- | 0.73- | U- |
| ADONA- | ND- | 0.11- | 0.73- | U- |
| PFEESA- | ND- | 0.10- | 0.73- | U- |
| PFMPA- | ND- | 0.049- | 0.73- | U- |
| PFMBA- | ND- | 0.083- | 0.73- | U- |
| NFDHA- | ND- | 0.28- | 0.73- | U- |
| 9Cl-PF3ONS- | ND- | 0.19- | 0.73- | U- |
| 11Cl-PF3OUDS- | ND- | 0.19- | 0.73- | U- |
| 3:3FTCA- | ND- | 0.53- | 1.5- | U- |
| 5:3FTCA- | ND- | 0.41- | 1.5- | U- |
| 7:3FTCA- | ND- | 0.51- | 1.5- | U- |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (23)
Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 14450<br>( 163.0 / 69.0 ) 460 | ( 2.38 , 0.67 )<br>( N/A , -0.03 , -0.7) | 81.3<br>31.9 | 0.0318<br>116.1<br>117.7 | 0.2060 | N/A | 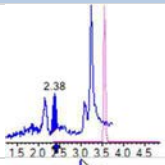 | 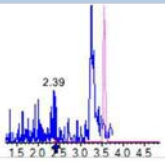 | |
| PFBA | ( 213.0 / 169.0 ) 131633 | ( 3.55 , 1.00 )<br>( 0.00 , N/A , 0.0) | 92.3 | N/A<br>0.0<br>0.0 | 0.0790 | N/A | 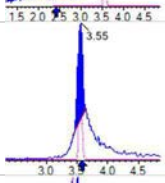 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 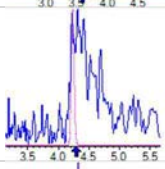 | 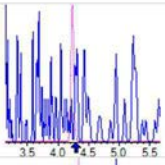 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 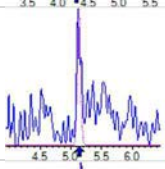 | 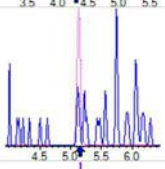 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 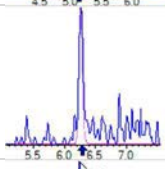 | 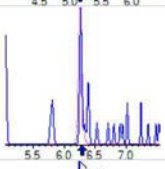 | |
| PFOA | ( 413.0 / 369.0 ) 28520<br>( 413.0 / 169.0 ) 11225 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , -0.2) | 57.6<br>85.0 | 0.3936<br>110.1<br>114.3 | 0.0710 | N/A | 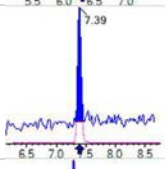 | 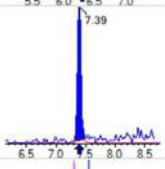 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 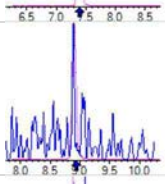 | 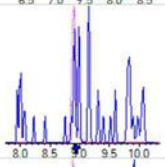 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 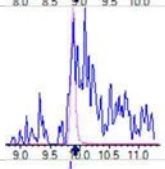 | 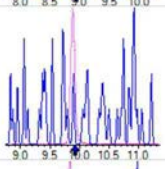 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 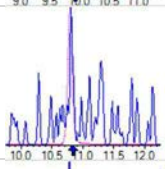 | 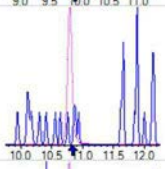 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 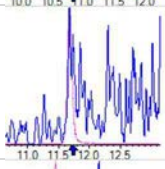 | 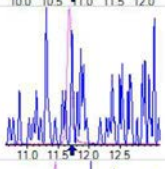 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 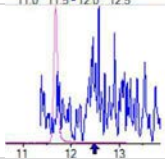 | 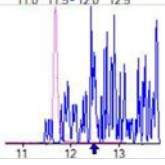 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (23)
Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 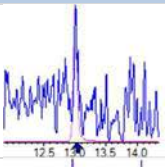 | 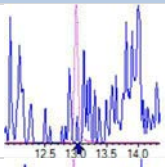 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 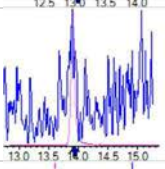 | 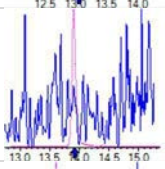 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 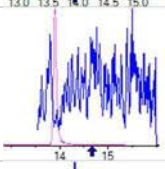 | 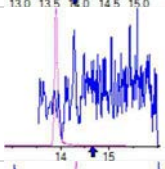 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 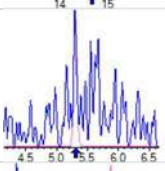 | 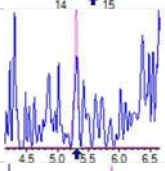 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 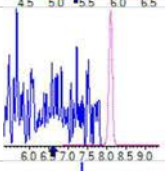 | 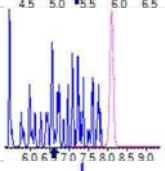 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 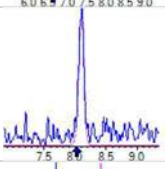 | 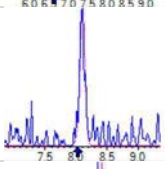 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 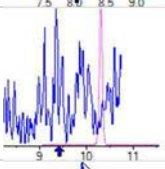 | 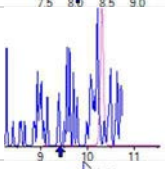 | |
| PFOS | ( 499.0 / 80.0 )<br>19359<br>( 499.0 / 99.0 )<br>4873 | ( 10.30 , 1.00 )<br>( -0.01 , N/A , -1.1) | 90.8<br>315.7 | 0.2517<br>108.9<br>111.9 | 0.0200 | N/A | 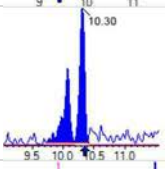 | 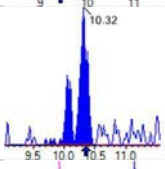 | MI2 DG<br>2024-04-02 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 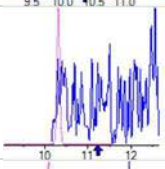 | 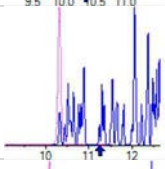 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 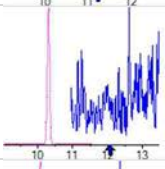 | 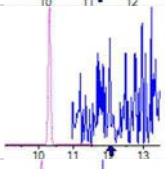 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 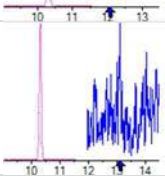 | 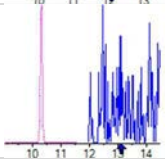 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (23)
Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 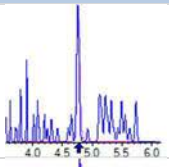 | 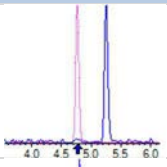 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 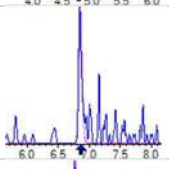 | 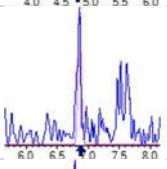 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 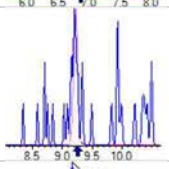 | 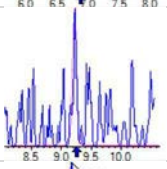 | |
| 10:2FTS | ( 627.0 / 607.0 ) 18248<br>( 627.0 / 81.0 ) 29385 | ( 10.92 , 1.00 ) ( 0.01 , N/A , 0.0) | 250.5<br>128.4 | 1.6103<br>112.0<br>111.4 | 0.0490 | N/A | 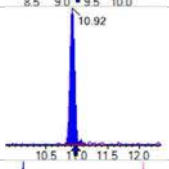 | 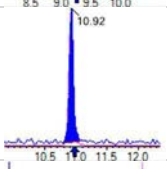 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 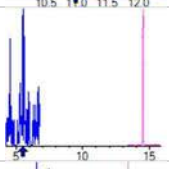 | 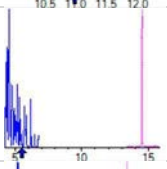 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 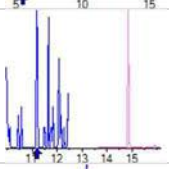 | 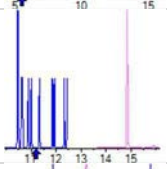 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 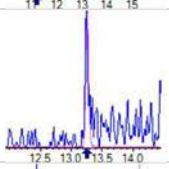 | 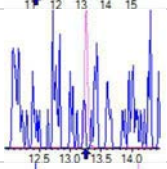 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 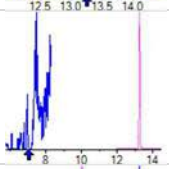 | 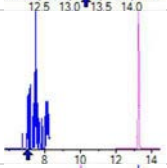 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 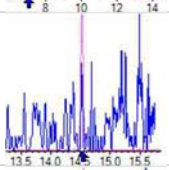 | 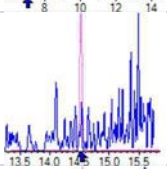 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 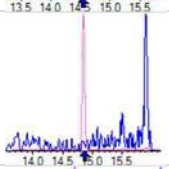 | 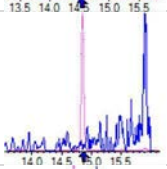 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 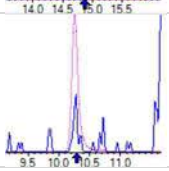 | 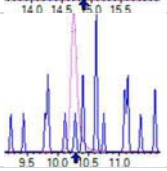 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (23)
Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 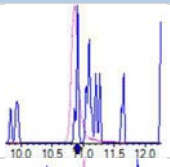 | 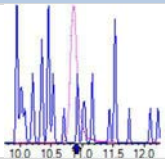 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 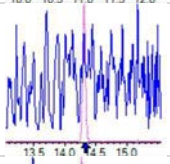 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 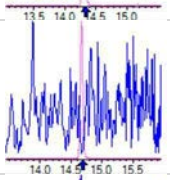 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 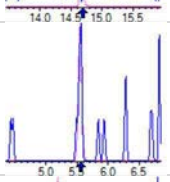 | 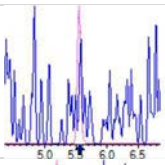 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 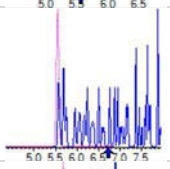 | 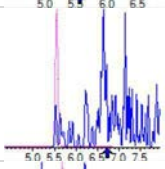 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 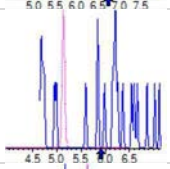 | 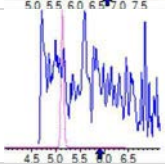 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 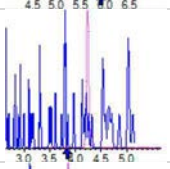 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 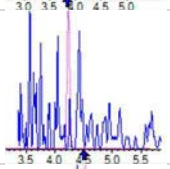 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 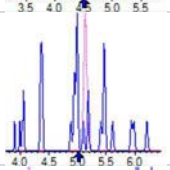 | 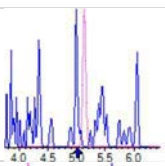 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 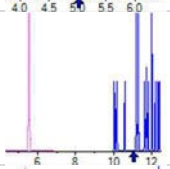 | 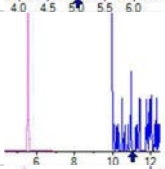 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 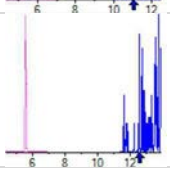 | 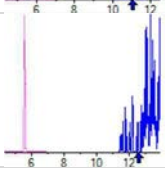 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-08 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 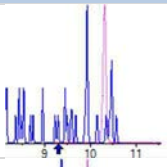 | 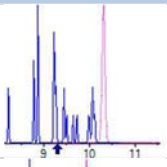 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 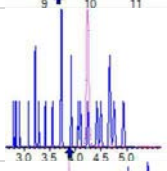 | 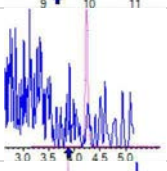 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 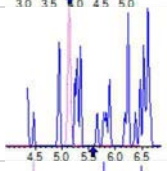 | 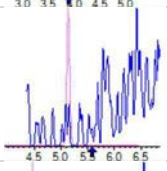 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 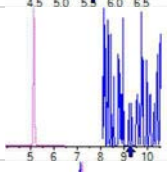 | 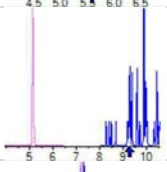 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 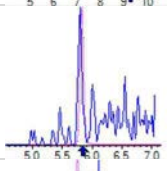 | 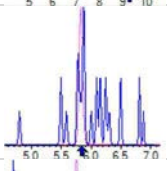 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 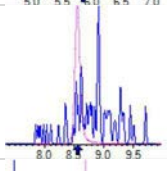 | 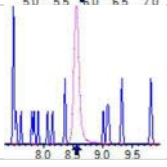 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 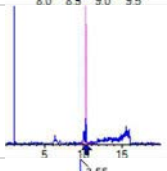 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 288492 | ( 3.55 , N/A ) ( N/A , -0.03 , N/A ) | 2224.4 | N/A | 1.0220 [ 1.0000 ] | 102.2% { 109.3% } | 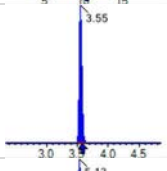 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 120960 | ( 5.13 , N/A ) ( N/A , -0.02 , N/A ) | 9265996.2 | N/A | 1.0250 [ 1.0000 ] | 102.5% { 122.2% } | 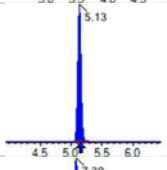 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378469 | ( 7.39 , N/A ) ( N/A , 0.00 , N/A ) | 5886.6 | N/A | 0.9750 [ 1.0000 ] | 97.5% { 107.5% } | 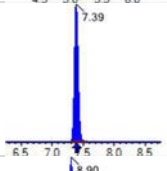 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 273699 | ( 8.90 , N/A ) ( N/A , -0.03 , N/A ) | 1733.7 | N/A | 0.9370 [ 1.0000 ] | 93.7% { 114.2% } | 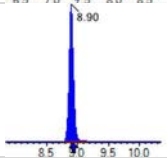 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (23)
Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 282150 | ( 9.89 , N/A ) ( N/A , -0.04 , N/A ) | 7675.3 | N/A | 0.9840 [ 1.0000 ] | 98.4% { 115.0% } | 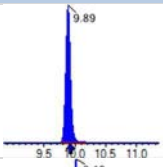 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 966872 | ( 8.10 , N/A ) ( N/A , 0.08 , N/A ) | 7239.9 | N/A | 0.9840 [ 1.0000 ] | 98.4% { 108.9% } | 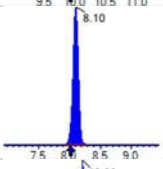 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 789640 | ( 10.32 , N/A ) ( N/A , -0.04 , N/A ) | 2321.1 | N/A | 1.0070 [ 1.0000 ] | 100.7% { 114.6% } | 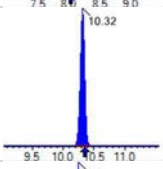 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2474409 | ( 3.55 , N/A ) ( N/A , -0.03 , N/A ) | 98683.2 | N/A | 7.9350 [ 8.0000 ] | 99.2% { 112.6% } | 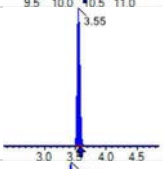 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 893070 | ( 4.23 , N/A ) ( N/A , -0.05 , N/A ) | 6861.2 | N/A | 4.0330 [ 4.0000 ] | 100.8% { 117.2% } | 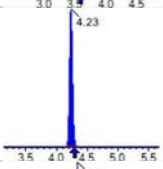 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 494760 | ( 5.13 , N/A ) ( N/A , -0.02 , N/A ) | 7708.5 | N/A | 1.8700 [ 2.0000 ] | 93.5% { 113.6% } | 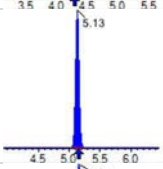 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 576954 | ( 6.26 , N/A ) ( N/A , -0.02 , N/A ) | 5619.3 | N/A | 1.9630 [ 2.0000 ] | 98.2% { 112.6% } | 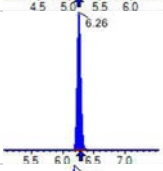 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 799008 | ( 7.39 , N/A ) ( N/A , 0.00 , N/A ) | 4210.2 | N/A | 1.9920 [ 2.0000 ] | 99.6% { 112.4% } | 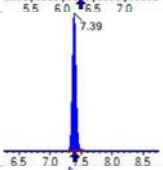 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 280932 | ( 8.90 , N/A ) ( N/A , -0.03 , N/A ) | 5129.1 | N/A | 1.0400 [ 1.0000 ] | 104.0% { 119.5% } | 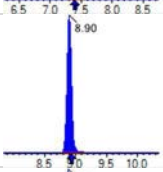 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 320636 | ( 9.88 , N/A ) ( N/A , -0.04 , N/A ) | 1227.8 | N/A | 0.9830 [ 1.0000 ] | 98.4% { 114.4% } | 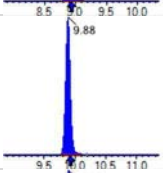 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 399258 | ( 10.79 , N/A ) ( N/A , -0.04 , N/A ) | 1099.1 | N/A | 1.0330 [ 1.0000 ] | 103.3% { 123.8% } | 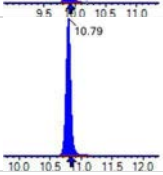 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: 24C0142-08 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (23)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 374399 | ( 11.68 , N/A ) ( N/A , -0.04 , N/A ) | 1469.2 | N/A | 0.9440 [ 1.0000 ] | 94.4% { 110.2% } | 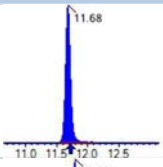 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 342273 | ( 13.00 , N/A ) ( N/A , -0.03 , N/A ) | 1301.2 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 112.7% } | 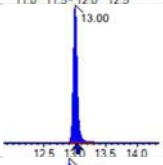 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 433967 | ( 13.90 , N/A ) ( N/A , -0.03 , N/A ) | 2199.5 | N/A | 1.4770 [ 2.0000 ] | 73.8% { 101.8% } | 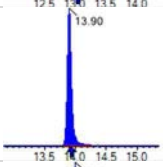 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1541389 | ( 5.30 , N/A ) ( N/A , -0.02 , N/A ) | 1761.7 | N/A | 1.9780 [ 2.0000 ] | 98.9% { 110.0% } | 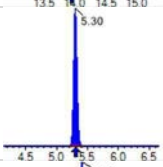 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1393673 | ( 8.10 , N/A ) ( N/A , 0.09 , N/A ) | 6324.3 | N/A | 1.9980 [ 2.0000 ] | 99.9% { 112.2% } | 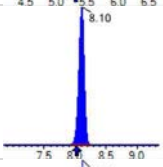 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1685943 | ( 10.31 , N/A ) ( N/A , -0.04 , N/A ) | 2265.3 | N/A | 2.0070 [ 2.0000 ] | 100.3% { 116.1% } | 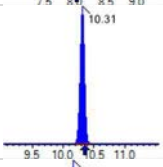 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 850841 | ( 4.76 , N/A ) ( N/A , -0.02 , N/A ) | 73.1 | N/A | 4.9630 [ 4.0000 ] | 124.1% { 136.4% } | 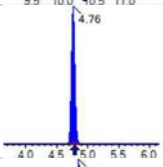 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2059396 | ( 6.86 , N/A ) ( N/A , -0.02 , N/A ) | 7844.8 | N/A | 4.8900 [ 4.0000 ] | 122.2% { 125.8% } | 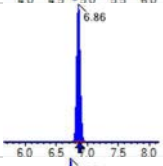 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1851623 | ( 9.22 , N/A ) ( N/A , -0.03 , N/A ) | 1983.9 | N/A | 5.0250 [ 4.0000 ] | 125.6% { 139.3% } | 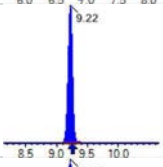 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3718454 | ( 10.92 , N/A ) ( N/A , -0.04 , N/A ) | 1896.4 | N/A | 9.3280 [ 8.0000 ] | 116.6% { 137.4% } | 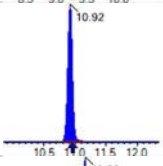 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1090477 | ( 13.26 , N/A ) ( N/A , 0.00 , N/A ) | 2984.3 | N/A | 1.2230 [ 2.0000 ] | 61.1% { 72.5% } | 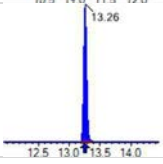 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 24C0142-08
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (23)
Acquired: 2024/03/29 - 18:49

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 152939 | ( 14.52 , N/A ) ( N/A , 0.00 , N/A ) | 1066.2 | N/A | 0.7630 [ 2.0000 ] | 38.1% { 44.9% } | 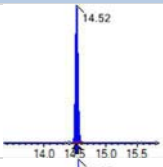  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 149706 | ( 14.85 , N/A ) ( N/A , 0.00 , N/A ) | 1453.4 | N/A | 0.8170 [ 2.0000 ] | 40.8% { 46.2% } | 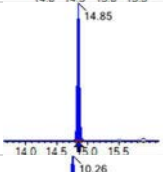  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1177147 | ( 10.26 , N/A ) ( N/A , -0.04 , N/A ) | 2888.2 | N/A | 4.0350 [ 4.0000 ] | 100.9% { 114.8% } | 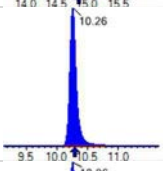  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1067670 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 2040.8 | N/A | 4.0560 [ 4.0000 ] | 101.4% { 116.9% } | 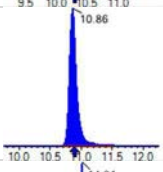  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 668842 | ( 14.31 , N/A ) ( N/A , 0.00 , N/A ) | 1829.3 | N/A | 8.9280 [ 20.0000 ] | 44.6% { 54.1% } | 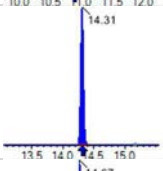  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 666127 | ( 14.67 , N/A ) ( N/A , 0.00 , N/A ) | 3026.1 | N/A | 9.4950 [ 20.0000 ] | 47.5% { 61.4% } | 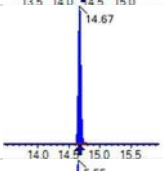  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 858602 | ( 5.55 , N/A ) ( N/A , -0.02 , N/A ) | 2655.8 | N/A | 7.4900 [ 8.0000 ] | 93.6% { 109.7% } | 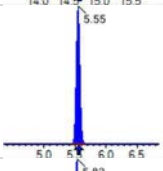  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 645634 | ( 5.82 , N/A ) ( N/A , -0.02 , N/A ) | 2400.0 | N/A | 2.1000 [ 2.0000 ] | 105.0% { 127.5% } | 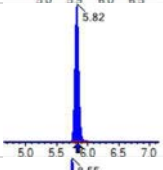  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 615305 | ( 8.55 , N/A ) ( N/A , -0.01 , N/A ) | 1234.8 | N/A | 1.7760 [ 2.0000 ] | 88.8% { 105.1% } | 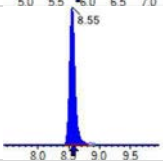  | | |

# QUALITY CONTROLA

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-13 (24C0142-01 ) ng/L** | Lab File ID: S2024-03-29A (14) | | | Analyzed: 03/29/24 15:44 |
| 13C4-PFBA | 29.9 | 92.8 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 88.0 | 40 - 130 | |
| 13C5-PFHXA | 7.49 | 72.7 | 40 - 130 | |
| 13C4-PFHPA | 7.49 | 86.7 | 40 - 130 | |
| 13C8-PFOA | 7.49 | 99.9 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 102 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 104 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 99.8 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 99.8 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 102 | 10 - 130 | |
| 13C2-PFHxDA | 7.49 | 81.7 | 20 - 150 | |
| 13C3-PFBS | 7.49 | 87.7 | 40 - 135 | |
| 13C3-PFHXS | 7.49 | 97.8 | 40 - 130 | |
| 13C8-PFOS | 7.49 | 102 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 92.7 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 116 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 111 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.9 | 101 | 20 - 150 | |
| 13C8-PFOSA | 7.49 | 71.8 | 40 - 130 | |
| D3-NMEFOSA | 7.49 | 47.4 | 10 - 130 | |
| D5-NETFOSA | 7.49 | 50.5 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 103 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 107 | 25 - 135 | |
| D7-NMEFOSE | 74.9 | 47.8 | 10 - 130 | |
| D9-NETFOSE | 74.9 | 48.9 | 10 - 130 | |
| 13C3-HFPO-DA | 29.9 | 74.6 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-6-032124 (24C0142-02 ) ng/L** | Lab File ID: S2024-03-29A (15) | | | Analyzed: 03/29/24 16:05 |
| 13C4-PFBA | 29.9 | 99.0 | 5 - 130 | |
| 13C5-PFPEA | 15.0 | 119 | 40 - 130 | |
| 13C5-PFHXA | 7.48 | 103 | 40 - 130 | |
| 13C4-PFHPA | 7.48 | 119 | 40 - 130 | |
| 13C8-PFOA | 7.48 | 108 | 40 - 130 | |
| 13C9-PFNA | 3.74 | 103 | 40 - 130 | |
| 13C6-PFDA | 3.74 | 99.0 | 40 - 130 | |
| 13C7-PFUnA | 3.74 | 102 | 30 - 130 | |
| 13C2-PFDOA | 3.74 | 99.4 | 10 - 130 | |
| 13C2-PFTEDA | 3.74 | 99.5 | 10 - 130 | |
| 13C2-PFHxDA | 7.48 | 82.5 | 20 - 150 | |
| 13C3-PFBS | 7.48 | 90.9 | 40 - 135 | |
| 13C3-PFHXS | 7.48 | 101 | 40 - 130 | |
| 13C8-PFOS | 7.48 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 15.0 | 96.9 | 40 - 200 | |
| 13C2-6:2FTS | 15.0 | 121 | 40 - 200 | |
| 13C2-8:2FTS | 15.0 | 114 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.9 | 106 | 20 - 150 | |
| 13C8-PFOSA | 7.48 | 81.5 | 40 - 130 | |
| D3-NMEFOSA | 7.48 | 49.0 | 10 - 130 | |
| D5-NETFOSA | 7.48 | 52.6 | 10 - 130 | |
| D3-NMEFOSAA | 15.0 | 104 | 40 - 170 | |
| D5-NETFOSAA | 15.0 | 114 | 25 - 135 | |
| D7-NMEFOSE | 74.8 | 57.4 | 10 - 130 | |
| D9-NETFOSE | 74.8 | 60.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.9 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-16 (24C0142-03 ) ng/L** | Lab File ID: S2024-03-29A (16) | | | Analyzed: 03/29/24 16:25 |
| 13C4-PFBA | 28.8 | 102 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 109 | 40 - 130 | |
| 13C5-PFHXA | 7.20 | 101 | 40 - 130 | |
| 13C4-PFHPA | 7.20 | 101 | 40 - 130 | |
| 13C8-PFOA | 7.20 | 107 | 40 - 130 | |
| 13C9-PFNA | 3.60 | 99.3 | 40 - 130 | |
| 13C6-PFDA | 3.60 | 105 | 40 - 130 | |
| 13C7-PFUnA | 3.60 | 103 | 30 - 130 | |
| 13C2-PFDOA | 3.60 | 99.9 | 10 - 130 | |
| 13C2-PFTEDA | 3.60 | 95.6 | 10 - 130 | |
| 13C2-PFHxDA | 7.20 | 76.3 | 20 - 150 | |
| 13C3-PFBS | 7.20 | 96.0 | 40 - 135 | |
| 13C3-PFHXS | 7.20 | 104 | 40 - 130 | |
| 13C8-PFOS | 7.20 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 111 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 126 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 113 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 98.0 | 20 - 150 | |
| 13C8-PFOSA | 7.20 | 72.9 | 40 - 130 | |
| D3-NMEFOSA | 7.20 | 48.8 | 10 - 130 | |
| D5-NETFOSA | 7.20 | 51.0 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 78.1 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 102 | 25 - 135 | |
| D7-NMEFOSE | 72.0 | 63.5 | 10 - 130 | |
| D9-NETFOSE | 72.0 | 64.9 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 101 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-7-032124 (24C0142-04 ) ng/L** | Lab File ID: S2024-03-29A (17) | | | Analyzed: 03/29/24 16:46 |
| 13C4-PFBA | 28.8 | 95.2 | 5 - 130 | |
| 13C5-PFPEA | 14.4 | 107 | 40 - 130 | |
| 13C5-PFHXA | 7.20 | 111 | 40 - 130 | |
| 13C4-PFHPA | 7.20 | 111 | 40 - 130 | |
| 13C8-PFOA | 7.20 | 104 | 40 - 130 | |
| 13C9-PFNA | 3.60 | 107 | 40 - 130 | |
| 13C6-PFDA | 3.60 | 98.0 | 40 - 130 | |
| 13C7-PFUnA | 3.60 | 101 | 30 - 130 | |
| 13C2-PFDOA | 3.60 | 99.9 | 10 - 130 | |
| 13C2-PFTEDA | 3.60 | 95.7 | 10 - 130 | |
| 13C2-PFHxDA | 7.20 | 81.5 | 20 - 150 | |
| 13C3-PFBS | 7.20 | 97.2 | 40 - 135 | |
| 13C3-PFHXS | 7.20 | 103 | 40 - 130 | |
| 13C8-PFOS | 7.20 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 14.4 | 114 | 40 - 200 | |
| 13C2-6:2FTS | 14.4 | 127 | 40 - 200 | |
| 13C2-8:2FTS | 14.4 | 112 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.8 | 94.3 | 20 - 150 | |
| 13C8-PFOSA | 7.20 | 55.7 | 40 - 130 | |
| D3-NMEFOSA | 7.20 | 39.3 | 10 - 130 | |
| D5-NETFOSA | 7.20 | 41.1 | 10 - 130 | |
| D3-NMEFOSAA | 14.4 | 80.3 | 40 - 170 | |
| D5-NETFOSAA | 14.4 | 102 | 25 - 135 | |
| D7-NMEFOSE | 72.0 | 43.5 | 10 - 130 | |
| D9-NETFOSE | 72.0 | 46.2 | 10 - 130 | |
| 13C3-HFPO-DA | 28.8 | 107 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MW-7 (24C0142-05 ) ng/L** | Lab File ID: S2024-03-29A (18) | | | Analyzed: 03/29/24 17:06 |
| 13C4-PFBA | 28.5 | 91.7 | 5 - 130 | |
| 13C5-PFPEA | 14.2 | 116 | 40 - 130 | |
| 13C5-PFHXA | 7.12 | 114 | 40 - 130 | |
| 13C4-PFHPA | 7.12 | 113 | 40 - 130 | |
| 13C8-PFOA | 7.12 | 99.6 | 40 - 130 | |
| 13C9-PFNA | 3.56 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.56 | 101 | 40 - 130 | |
| 13C7-PFUnA | 3.56 | 96.3 | 30 - 130 | |
| 13C2-PFDOA | 3.56 | 98.8 | 10 - 130 | |
| 13C2-PFTEDA | 3.56 | 96.1 | 10 - 130 | |
| 13C2-PFHxDA | 7.12 | 77.4 | 20 - 150 | |
| 13C3-PFBS | 7.12 | 94.0 | 40 - 135 | |
| 13C3-PFHXS | 7.12 | 100 | 40 - 130 | |
| 13C8-PFOS | 7.12 | 102 | 40 - 130 | |
| 13C2-4:2FTS | 14.2 | 108 | 40 - 200 | |
| 13C2-6:2FTS | 14.2 | 121 | 40 - 200 | |
| 13C2-8:2FTS | 14.2 | 115 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.5 | 101 | 20 - 150 | |
| 13C8-PFOSA | 7.12 | 81.9 | 40 - 130 | |
| D3-NMEFOSA | 7.12 | 54.9 | 10 - 130 | |
| D5-NETFOSA | 7.12 | 58.3 | 10 - 130 | |
| D3-NMEFOSAA | 14.2 | 84.0 | 40 - 170 | |
| D5-NETFOSAA | 14.2 | 101 | 25 - 135 | |
| D7-NMEFOSE | 71.2 | 67.3 | 10 - 130 | |
| D9-NETFOSE | 71.2 | 69.5 | 10 - 130 | |
| 13C3-HFPO-DA | 28.5 | 105 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **DUP-8-032124 (24C0142-06 ) ng/L** | Lab File ID: S2024-03-29A (19) | | | Analyzed: 03/29/24 17:27 |
| 13C4-PFBA | 28.1 | 93.3 | 5 - 130 | |
| 13C5-PFPEA | 14.0 | 117 | 40 - 130 | |
| 13C5-PFHXA | 7.02 | 108 | 40 - 130 | |
| 13C4-PFHPA | 7.02 | 117 | 40 - 130 | |
| 13C8-PFOA | 7.02 | 104 | 40 - 130 | |
| 13C9-PFNA | 3.51 | 108 | 40 - 130 | |
| 13C6-PFDA | 3.51 | 103 | 40 - 130 | |
| 13C7-PFUnA | 3.51 | 99.6 | 30 - 130 | |
| 13C2-PFDOA | 3.51 | 96.6 | 10 - 130 | |
| 13C2-PFTEDA | 3.51 | 93.3 | 10 - 130 | |
| 13C2-PFHxDA | 7.02 | 79.1 | 20 - 150 | |
| 13C3-PFBS | 7.02 | 94.8 | 40 - 135 | |
| 13C3-PFHXS | 7.02 | 99.9 | 40 - 130 | |
| 13C8-PFOS | 7.02 | 101 | 40 - 130 | |
| 13C2-4:2FTS | 14.0 | 113 | 40 - 200 | |
| 13C2-6:2FTS | 14.0 | 125 | 40 - 200 | |
| 13C2-8:2FTS | 14.0 | 114 | 40 - 300 | |
| 13C2D4-10:2FTS | 28.1 | 103 | 20 - 150 | |
| 13C8-PFOSA | 7.02 | 51.3 | 40 - 130 | |
| D3-NMEFOSA | 7.02 | 38.1 | 10 - 130 | |
| D5-NETFOSA | 7.02 | 40.9 | 10 - 130 | |
| D3-NMEFOSAA | 14.0 | 87.0 | 40 - 170 | |
| D5-NETFOSAA | 14.0 | 106 | 25 - 135 | |
| D7-NMEFOSE | 70.2 | 41.6 | 10 - 130 | |
| D9-NETFOSE | 70.2 | 43.3 | 10 - 130 | |
| 13C3-HFPO-DA | 28.1 | 109 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **EB-9-032124 (24C0142-07 ) ng/L** | Lab File ID: S2024-03-29A (22) | | | Analyzed: 03/29/24 18:29 |
| 13C4-PFBA | 29.7 | 100 | 5 - 130 | |
| 13C5-PFPEA | 14.8 | 108 | 40 - 130 | |
| 13C5-PFHXA | 7.41 | 98.4 | 40 - 130 | |
| 13C4-PFHPA | 7.41 | 106 | 40 - 130 | |
| 13C8-PFOA | 7.41 | 103 | 40 - 130 | |
| 13C9-PFNA | 3.71 | 99.9 | 40 - 130 | |
| 13C6-PFDA | 3.71 | 105 | 40 - 130 | |
| 13C7-PFUnA | 3.71 | 101 | 30 - 130 | |
| 13C2-PFDOA | 3.71 | 97.5 | 10 - 130 | |
| 13C2-PFTEDA | 3.71 | 93.2 | 10 - 130 | |
| 13C2-PFHxDA | 7.41 | 79.9 | 20 - 150 | |
| 13C3-PFBS | 7.41 | 104 | 40 - 135 | |
| 13C3-PFHXS | 7.41 | 103 | 40 - 130 | |
| 13C8-PFOS | 7.41 | 98.1 | 40 - 130 | |
| 13C2-4:2FTS | 14.8 | 111 | 40 - 200 | |
| 13C2-6:2FTS | 14.8 | 123 | 40 - 200 | |
| 13C2-8:2FTS | 14.8 | 128 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.7 | 116 | 20 - 150 | |
| 13C8-PFOSA | 7.41 | 65.6 | 40 - 130 | |
| D3-NMEFOSA | 7.41 | 42.5 | 10 - 130 | |
| D5-NETFOSA | 7.41 | 47.5 | 10 - 130 | |
| D3-NMEFOSAA | 14.8 | 104 | 40 - 170 | |
| D5-NETFOSAA | 14.8 | 106 | 25 - 135 | |
| D7-NMEFOSE | 74.1 | 50.4 | 10 - 130 | |
| D9-NETFOSE | 74.1 | 53.8 | 10 - 130 | |
| 13C3-HFPO-DA | 29.7 | 105 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **FB-9-032124 (24C0142-08 ) ng/L** | Lab File ID: S2024-03-29A (23) | | | Analyzed: 03/29/24 18:49 |
| 13C4-PFBA | 29.3 | 99.2 | 5 - 130 | |
| 13C5-PFPEA | 14.6 | 101 | 40 - 130 | |
| 13C5-PFHXA | 7.32 | 93.5 | 40 - 130 | |
| 13C4-PFHPA | 7.32 | 98.2 | 40 - 130 | |
| 13C8-PFOA | 7.32 | 99.6 | 40 - 130 | |
| 13C9-PFNA | 3.66 | 104 | 40 - 130 | |
| 13C6-PFDA | 3.66 | 98.3 | 40 - 130 | |
| 13C7-PFUnA | 3.66 | 103 | 30 - 130 | |
| 13C2-PFDOA | 3.66 | 94.4 | 10 - 130 | |
| 13C2-PFTEDA | 3.66 | 97.4 | 10 - 130 | |
| 13C2-PFHxDA | 7.32 | 73.8 | 20 - 150 | |
| 13C3-PFBS | 7.32 | 98.9 | 40 - 135 | |
| 13C3-PFHXS | 7.32 | 99.9 | 40 - 130 | |
| 13C8-PFOS | 7.32 | 100 | 40 - 130 | |
| 13C2-4:2FTS | 14.6 | 124 | 40 - 200 | |
| 13C2-6:2FTS | 14.6 | 122 | 40 - 200 | |
| 13C2-8:2FTS | 14.6 | 126 | 40 - 300 | |
| 13C2D4-10:2FTS | 29.3 | 117 | 20 - 150 | |
| 13C8-PFOSA | 7.32 | 61.1 | 40 - 130 | |
| D3-NMEFOSA | 7.32 | 38.1 | 10 - 130 | |
| D5-NETFOSA | 7.32 | 40.8 | 10 - 130 | |
| D3-NMEFOSAA | 14.6 | 101 | 40 - 170 | |
| D5-NETFOSAA | 14.6 | 101 | 25 - 135 | |
| D7-NMEFOSE | 73.2 | 44.6 | 10 - 130 | |
| D9-NETFOSE | 73.2 | 47.5 | 10 - 130 | |
| 13C3-HFPO-DA | 29.3 | 93.6 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **Blank (BDC0363-BLK1 ) ng/L** | Lab File ID: S2024-03-29A (7) | | | Analyzed: 03/29/24 13:21 |
| 13C4-PFBA | 32.0 | 98.9 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 108 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 86.2 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 107 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 101 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 103 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 102 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 95.5 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 97.9 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 93.9 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 63.2 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 101 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 98.7 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 99.3 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 121 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 120 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 122 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 112 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 51.4 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 31.4 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 35.0 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 101 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 104 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 40.2 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 44.9 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 98.1 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| LCS (BDC0363-BS1 ) ng/L | Lab File ID: S2024-03-29A (8) | | | Analyzed: 03/29/24 13:41 |
| 13C4-PFBA | 32.0 | 106 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 113 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 104 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 108 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 104 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 101 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 107 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 105 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 103 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 94.6 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 66.8 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 98.8 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 105 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 105 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 115 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 130 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 123 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 102 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 63.9 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 36.3 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 39.5 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 105 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 112 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 46.4 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 49.2 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 103 | 40 - 130 | |

# SURROGATE SUMMARY SHEET

## EPA 1633

Client: Tidewater, Inc.
Work Order: 24C0142
Project: JPL-GW Monitoring

| Surrogate Compound | Spike level | % Recovery | Recovery Limits | Q |
|---|---|---|---|---|
| **MRL Check (BDC0363-MRL1 ) ng/L** | Lab File ID: S2024-03-29A (9) | | | Analyzed: 03/29/24 14:02 |
| 13C4-PFBA | 32.0 | 99.0 | 5 - 130 | |
| 13C5-PFPEA | 16.0 | 105 | 40 - 130 | |
| 13C5-PFHXA | 8.00 | 95.8 | 40 - 130 | |
| 13C4-PFHPA | 8.00 | 101 | 40 - 130 | |
| 13C8-PFOA | 8.00 | 98.4 | 40 - 130 | |
| 13C9-PFNA | 4.00 | 104 | 40 - 130 | |
| 13C6-PFDA | 4.00 | 98.4 | 40 - 130 | |
| 13C7-PFUnA | 4.00 | 97.2 | 30 - 130 | |
| 13C2-PFDOA | 4.00 | 96.5 | 10 - 130 | |
| 13C2-PFTEDA | 4.00 | 90.7 | 10 - 130 | |
| 13C2-PFHxDA | 8.00 | 61.3 | 20 - 150 | |
| 13C3-PFBS | 8.00 | 100 | 40 - 135 | |
| 13C3-PFHXS | 8.00 | 102 | 40 - 130 | |
| 13C8-PFOS | 8.00 | 104 | 40 - 130 | |
| 13C2-4:2FTS | 16.0 | 129 | 40 - 200 | |
| 13C2-6:2FTS | 16.0 | 132 | 40 - 200 | |
| 13C2-8:2FTS | 16.0 | 120 | 40 - 300 | |
| 13C2D4-10:2FTS | 32.0 | 113 | 20 - 150 | |
| 13C8-PFOSA | 8.00 | 59.8 | 40 - 130 | |
| D3-NMEFOSA | 8.00 | 32.6 | 10 - 130 | |
| D5-NETFOSA | 8.00 | 35.9 | 10 - 130 | |
| D3-NMEFOSAA | 16.0 | 99.3 | 40 - 170 | |
| D5-NETFOSAA | 16.0 | 105 | 25 - 135 | |
| D7-NMEFOSE | 80.0 | 42.8 | 10 - 130 | |
| D9-NETFOSE | 80.0 | 44.6 | 10 - 130 | |
| 13C3-HFPO-DA | 32.0 | 99.8 | 40 - 130 | |

# METHOD BLANK SUMMARY

## EPA 1633T

Laboratory:T APPL, LLC Work Order:T 24C0142T

Client:T idewater, Inc.T Project:T JPL-GW MonitoringT

Blank ID:T BDC0363-BLK1T Batch:T BDC0363T Prepared:T 03/26/2024 07:38/

| Client Sample IDT | Laboratory Sample IDT | Lab File ID | Time AnalyzedT |
|---|---|---|---|
| LCST | BDC0363-BS1T | S2024-03-29A (8)T | 13:41T |
| MRL CheckT | BDC0363-MRL1T | S2024-03-29A (9)T | 14:02T |
| MW-13T | 24C0142-01T | S2024-03-29A (14)T | 15:44T |
| DUP-6-032124T | 24C0142-02T | S2024-03-29A (15)T | 16:05T |
| MW-16T | 24C0142-03T | S2024-03-29A (16)T | 16:25T |
| DUP-7-032124T | 24C0142-04T | S2024-03-29A (17)T | 16:46T |
| MW-7T | 24C0142-05T | S2024-03-29A (18)T | 17:06T |
| DUP-8-032124T | 24C0142-06T | S2024-03-29A (19)T | 17:27T |
| EB-9-032124T | 24C0142-07T | S2024-03-29A (22)T | 18:29T |
| FB-9-032124T | 24C0142-08T | S2024-03-29A (23)T | 18:49T |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-BLK1a | File ID:a | S2024-03-29A (7)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 13:21a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.256a | 0.15a | 0.40a | Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0956a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.41a | 0.40a | Ua |

# ANALYSIS DATA SHEETL

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-BLK1a | File ID:a | S2024-03-29A (7)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 13:21a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDL | CONC. (ng/L)L | MDL | RL | QL |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0363A | Laboratory ID:A | BDC0363-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFBA | 16.0A | 16.8A | 105A | 70 - 140A |
| PFPeA | 8.00A | 7.40A | 92.4A | 65 - 135A |
| PFHxA | 4.00A | 3.60A | 89.9A | 70 - 145A |
| PFHpA | 4.00A | 3.71A | 92.7A | 70 - 150A |
| PFOA | 4.00A | 3.93A | 98.3A | 70 - 150A |
| PFNA | 4.00A | 3.65A | 91.3A | 70 - 150A |
| PFDA | 4.00A | 3.50A | 87.4A | 70 - 140A |
| PFUnA | 4.00A | 3.83A | 95.8A | 70 - 145A |
| PFDoA | 4.00A | 3.80A | 95.1A | 70 - 140A |
| PFTrDA | 4.00A | 3.59A | 89.8A | 65 - 140A |
| PFTeDA | 4.00A | 3.79A | 94.6A | 60 - 140A |
| PFHxDA | 4.00A | 3.81A | 95.3A | 40 - 150A |
| PFODA | 4.00A | 3.61A | 90.3A | 40 - 150A |
| PFBSA | 3.54A | 3.17A | 89.5A | 60 - 145A |
| PFPeSA | 3.76A | 3.46A | 92.1A | 65 - 140A |
| PFHxSA | 3.66A | 3.25A | 88.8A | 65 - 145A |
| PFHpSA | 3.82A | 3.71A | 97.2A | 70 - 150A |
| PFOSA | 3.72A | 3.57A | 95.9A | 55 - 150A |
| PFNSA | 3.84A | 3.72A | 96.8A | 65 - 145A |
| PFDSA | 3.86A | 3.77A | 97.7A | 60 - 145A |
| PFDoSA | 3.88A | 3.46A | 89.2A | 50 - 145A |
| 4:2FTSA | 15.0A | 13.8A | 92.0A | 70 - 145A |
| 6:2FTSA | 15.2A | 12.8A | 84.2A | 65 - 155A |
| 8:2FTSA | 15.4A | 13.9A | 90.3A | 60 - 150A |
| 10:2FTSA | 15.4A | 17.0A | 110A | 40 - 150A |
| PFOSA | 4.00A | 4.04A | 101A | 70 - 145A |
| NMeFOSA | 16.0A | 16.2A | 101A | 60 - 150A |
| NEtFOSA | 16.0A | 15.2A | 95.3A | 65 - 145A |
| NMeFOSA | 4.00A | 3.67A | 91.8A | 50 - 140A |
| NEtFOSA | 4.00A | 3.60A | 90.1A | 70 - 145A |
| NMeFOSEA | 16.0A | 13.1A | 81.6A | 70 - 145A |
| NEtFOSEA | 16.0A | 15.2A | 95.0A | 70 - 135A |
| HFPO-DA | 4.00A | 3.88A | 97.0 | 70 - 140A |
| DONA | 3.78A | 3.74A | 99.0A | 65 - 145A |

# LCS / LCS DUPLICATE RECOVERY

EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | APPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Matrix:A | WaterA | Preparation:A | EPA 1633A |
| Batch:A | BDC0363A | Laboratory ID:A | BDC0363-BS1A |
| Column:A | | | |

| ANALYTE | SPIKES ADDEDS (ng/L)S | LCS CONCENTRATIONS (ng/L)S | LCS S %S REC. S | QCS LIMITS REC.S |
|---|---|---|---|---|
| PFEESA | 7.12A | 7.07A | 99.3A | 70 - 140A |
| PFMPA | 8.00A | 7.02A | 87.7A | 55 - 140A |
| PFMBA | 8.00A | 7.25A | 90.7A | 60 - 150A |
| NFDHA | 8.00A | 7.31A | 91.4A | 50 - 150A |
| 9Cl-PF3ONSA | 3.74A | 3.55A | 94.9A | 70 - 155A |
| 11Cl-PF3OUDSA | 3.78A | 3.83A | 101A | 55 - 160A |
| 3:3FTCA | 16.0A | 12.3A | 76.8A | 65 - 130A |
| 5:3FTCA | 16.0A | 13.8A | 86.0A | 70 - 135A |
| 7:3FTCA | 16.0A | 13.6A | 85.0A | 50 - 145A |

# CALIBRATION SUMMARYL

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) | 13C4_PFBA_EIS | 2.0000 | 1.0000 | y = 0.05658 x (std. dev. = 0.00942) (weighting: None) | %RSE=16.7 |
| PFBA | ( 213.0 / 169.0 ) | 13C4_PFBA_EIS | 4.0000 | 1.0000 | y = 0.49263 x + 0.04347 (r = 0.99956) (weighting: 1 / x) | %RSE=3.6 |
| PFPeA | ( 263.0 / 219.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.49922 x (std. dev. = 0.03294) (weighting: None) | %RSE=6.6 |
| PFHxA | ( 313.0 / 269.0 ) | 13C5_PFHxA_EIS | 1.0000 | 1.0000 | y = 0.46396 x (std. dev. = 0.03593) (weighting: None) | %RSE=7.7 |
| PFHpA | ( 363.0 / 319.0 ) | 13C4_PFHpA_EIS | 1.0000 | 1.0000 | y = 0.49610 x (std. dev. = 0.02906) (weighting: None) | %RSE=5.9 |
| PFOA | ( 413.0 / 369.0 ) | 13C8_PFOA_EIS | 1.0000 | 1.0000 | y = 0.50211 x (std. dev. = 0.02926) (weighting: None) | %RSE=5.8 |
| PFNA | ( 463.0 / 419.0 ) | 13C9_PFNA_EIS | 1.0000 | 1.0000 | y = 1.00481 x (std. dev. = 0.04365) (weighting: None) | %RSE=4.3 |
| PFDA | ( 513.0 / 469.0 ) | 13C6_PFDA_EIS | 1.0000 | 1.0000 | y = 0.99868 x (std. dev. = 0.05189) (weighting: None) | %RSE=5.2 |
| PFUnA | ( 563.0 / 519.0 ) | 13C7_PFUnA_EIS | 1.0000 | 1.0000 | y = 0.90803 x (std. dev. = 0.09985) (weighting: None) | %RSE=11.0 |
| PFDoA | ( 613.0 / 569.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 1.00351 x (std. dev. = 0.04887) (weighting: None) | %RSE=4.9 |
| PFTrDA | ( 663.0 / 619.0 ) | 13C2_PFDoA_EIS | 1.0000 | 1.0000 | y = 0.97570 x (std. dev. = 0.06326) (weighting: None) | %RSE=6.5 |
| PFTeDA | ( 713.0 / 669.0 ) | 13C2_PFTeDA_EIS | 1.0000 | 1.0000 | y = 0.93380 x (std. dev. = 0.04173) (weighting: None) | %RSE=4.5 |
| PFHxDA | ( 813.0 / 769.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.46845 x (std. dev. = 0.01773) (weighting: None) | %RSE=3.8 |
| PFODA | ( 913.0 / 869.0 ) | 13C2_PFHxDA_EIS | 1.0000 | 1.0000 | y = 0.29669 x (std. dev. = 0.02397) (weighting: None) | %RSE=8.1 |
| PFBS | ( 299.0 / 80.0 ) | 13C3_PFBS_EIS | 1.0000 | 0.8850 | y = 0.21756 x (std. dev. = 0.01699) (weighting: None) | %RSE=7.8 |
| PFPeS | ( 349.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9380 | y = 0.67420 x (std. dev. = 0.04128) (weighting: None) | %RSE=6.1 |
| PFHxS | ( 399.0 / 80.0 ) | 13C3_PFHxS_EIS | 1.0000 | 0.9110 | y = 0.79781 x (std. dev. = 0.03897) (weighting: None) | %RSE=4.9 |
| PFHpS | ( 449.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9510 | y = 0.56824 x (std. dev. = 0.02975) (weighting: None) | %RSE=5.2 |
| PFOS | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9270 | y = 0.53833 x (std. dev. = 0.02074) (weighting: None) | %RSE=3.9 |
| PFNS | ( 549.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9600 | y = 0.50782 x (std. dev. = 0.02565) (weighting: None) | %RSE=5.1 |
| PFDS | ( 599.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9630 | y = 0.62281 x (std. dev. = 0.06711) (weighting: None) | %RSE=10.8 |
| PFDoS | ( 699.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 0.9700 | y = 0.60668 x (std. dev. = 0.06243) (weighting: None) | %RSE=10.3 |
| 4:2FTS | ( 327.0 / 307.0 ) | 13C2_4:2FTS_EIS | 4.0000 | 0.9350 | y = 2.46725 x (std. dev. = 0.12108) (weighting: None) | %RSE=4.9 |
| 6:2FTS | ( 427.0 / 407.0 ) | 13C2_6:2FTS_EIS | 4.0000 | 0.9490 | y = 0.80558 x (std. dev. = 0.03512) (weighting: None) | %RSE=4.4 |
| 8:2FTS | ( 527.0 / 507.0 ) | 13C2_8:2FTS_EIS | 4.0000 | 0.9580 | y = 0.94263 x (std. dev. = 0.08100) (weighting: None) | %RSE=8.6 |
| 10:2FTS | ( 627.0 / 607.0 ) | 13C2D4_10:2FTS_EIS | 4.0000 | 0.9660 | y = 0.38362 x (std. dev. = 0.01374) (weighting: None) | %RSE=3.6 |
| PFBSA | ( 297.9 / 78.0 ) | D3_NMeFOSA_EIS | 1.0000 | 1.0000 | y = 1.51739 x (std. dev. = 0.05746) (weighting: None) | %RSE=3.8 |
| PFHxSA | ( 397.9 / 78.0 ) | D5_NEtFOSA_EIS | 1.0000 | 1.0000 | y = 3.14702 x (std. dev. = 0.20606) (weighting: None) | %RSE=6.5 |
| PFOSA | ( 498.0 / 78.0 ) | 13C8_PFOSA_EIS | 1.0000 | 1.0000 | y = 0.48379 x (std. dev. = 0.02055) (weighting: None) | %RSE=4.2 |
| TFSI | ( 279.7 / 147.0 ) | 13C8_PFOSA_EIS | 1.0000 | 0.9790 | y = 0.82771 x (std. dev. = 0.07132) (weighting: None) | %RSE=8.6 |
| NMeFOSA | ( 512.0 / 219.0 ) | D3_NMeFOSA_EIS | 4.0000 | 1.0000 | y = 1.77759 x (std. dev. = 0.09332) (weighting: None) | %RSE=5.3 |
| NEtFOSA | ( 526.0 / 219.0 ) | D5_NEtFOSA_EIS | 4.0000 | 1.0000 | y = 2.26554 x (std. dev. = 0.11465) (weighting: None) | %RSE=5.1 |
| NMeFOSAA | ( 570.0 / 419.0 ) | D3_MeFOSAA_EIS | 1.0000 | 1.0000 | y = 0.23062 x (std. dev. = 0.00868) (weighting: None) | %RSE=3.8 |
| NEtFOSAA | ( 584.0 / 419.0 ) | D5_EtFOSAA_EIS | 1.0000 | 1.0000 | y = 0.24252 x (std. dev. = 0.01770) (weighting: None) | %RSE=7.3 |
| NMeFOSE | ( 616.0 / 59.0 ) | D7_NMeFOSE_EIS | 4.0000 | 1.0000 | y = 0.21652 x (std. dev. = 0.01255) (weighting: None) | %RSE=5.8 |
| NEtFOSE | ( 630.0 / 59.0 ) | D9_NEtFOSE_EIS | 4.0000 | 1.0000 | y = 0.19052 x (std. dev. = 0.00900) (weighting: None) | %RSE=4.7 |
| HFPO-DA | ( 285.0 / 169.0 ) | 13C3_HFPODA_EIS | 1.0000 | 1.0000 | y = 0.07339 x (std. dev. = 0.00821) (weighting: None) | %RSE=11.2 |
| ADONA | ( 377.0 / 85.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9430 | y = 0.91250 x (std. dev. = 0.06385) (weighting: None) | %RSE=7.0 |
| PFEESA | ( 315.0 / 135.0 ) | 13C5_PFHxA_EIS | 2.0000 | 0.8920 | y = 0.60249 x (std. dev. = 0.04382) (weighting: None) | %RSE=7.3 |
| PFMPA | ( 229.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.18354 x (std. dev. = 0.01098) (weighting: None) | %RSE=6.0 |
| PFMBA | ( 279.0 / 85.0 ) | 13C5_PFPeA_EIS | 2.0000 | 1.0000 | y = 0.41347 x (std. dev. = 0.02750) (weighting: None) | %RSE=6.7 |
| NFDHA | ( 295.0 / 201.0 ) | 13C5_PFHxA_EIS | 2.0000 | 1.0000 | y = 0.32946 x (std. dev. = 0.02348) (weighting: None) | %RSE=7.1 |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9330 | y = 1.00360 x (std. dev. = 0.08363) (weighting: None) | %RSE=8.3 |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) | 13C3_HFPODA_EIS | 1.0000 | 0.9430 | y = 0.78829 x (std. dev. = 0.06163) (weighting: None) | %RSE=7.8 |
| PFECHS | ( 461.0 / 98.9 ) | 13C8_PFOS_EIS | 1.0000 | 0.9240 | y = 0.28779 x (std. dev. = 0.02105) (weighting: None) | %RSE=7.3 |
| 3:3FTCA | ( 241.0 / 177.0 ) | 13C5_PFPeA_EIS | 4.0000 | 1.0000 | y = 0.08571 x (std. dev. = 0.00689) (weighting: None) | %RSE=8.0 |
| 5:3FTCA | ( 341.0 / 236.7 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 0.50491 x (std. dev. = 0.04227) (weighting: None) | %RSE=8.4 |

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

| Analyte | ( Q1 / Q3 ) | Internal Standard | Multiplier | AcidFactor | Function | Qualifier |
|---|---|---|---|---|---|---|
| 7:3FTCA | ( 441.0 / 317.0 ) | 13C5_PFHxA_EIS | 4.0000 | 1.0000 | y = 1.07269 x (std. dev. = 0.08355) (weighting: None) | %RSE=7.8 |
| 6:2FTUCA | ( 357.2 / 293.0 ) | 13C2_6:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.52579 x (std. dev. = 0.03797) (weighting: None) | %RSE=7.2 |
| 8:2FTUCA | ( 457.2 / 393.0 ) | 13C2_8:2FTUCA_EIS | 1.0000 | 1.0000 | y = 0.41328 x (std. dev. = 0.03407) (weighting: None) | %RSE=8.2 |
| TDCA | ( 499.0 / 80.0 ) | 13C8_PFOS_EIS | 1.0000 | 1.0000 | y = 0.39167 x (std. dev. = 0.01908) (weighting: None) | %RSE=4.9 |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) | 13C3_PFBA_IIS | 1.0000 | 1.0000 | y = 282245.7148 x | %RSD=11.5 |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) | 13C2_PFHxA_IIS | 1.0000 | 1.0000 | y = 118063.2838 x | %RSD=5.1 |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) | 13C4_PFOA_IIS | 1.0000 | 1.0000 | y = 388138.8961 x | %RSD=6.9 |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 292133.7888 x | %RSD=5.1 |
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 286626.9039 x | %RSD=5.3 |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) | 18O2_PFHxS_IIS | 1.0000 | 1.0000 | y = 982139.5047 x | %RSD=5.7 |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) | 13C4_PFOS_IIS | 1.0000 | 1.0000 | y = 784514.6312 x | %RSD=5.9 |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) | 13C3_PFBA_IIS | 8.0000 | 1.0000 | y = 8.6472 x | %RSD=4.0 |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) | 13C2_PFHxA_IIS | 4.0000 | 1.0000 | y = 7.3234 x | %RSD=11.0 |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.3755 x | %RSD=6.7 |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) | 13C2_PFHxA_IIS | 2.0000 | 1.0000 | y = 4.8597 x | %RSD=6.3 |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) | 13C4_PFOA_IIS | 2.0000 | 1.0000 | y = 2.1197 x | %RSD=6.2 |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) | 13C5_PFNA_IIS | 1.0000 | 1.0000 | y = 0.9873 x | %RSD=3.1 |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.1555 x | %RSD=5.6 |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.3704 x | %RSD=8.7 |
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.4057 x | %RSD=5.1 |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) | 13C2_PFDA_IIS | 1.0000 | 1.0000 | y = 1.2448 x | %RSD=7.2 |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.0831 x | %RSD=4.7 |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.6121 x | %RSD=5.9 |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) | 18O2_PFHxS_IIS | 2.0000 | 1.0000 | y = 1.4428 x | %RSD=4.6 |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.1278 x | %RSD=3.4 |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 0.7093 x | %RSD=12.3 |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.7424 x | %RSD=13.8 |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) | 18O2_PFHxS_IIS | 4.0000 | 1.0000 | y = 1.5245 x | %RSD=13.7 |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) | 18O2_PFHxS_IIS | 8.0000 | 1.0000 | y = 3.2984 x | %RSD=7.8 |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 2.2589 x | %RSD=6.5 |
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.5079 x | %RSD=5.8 |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) | 13C4_PFOS_IIS | 2.0000 | 1.0000 | y = 0.4642 x | %RSD=8.8 |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.4776 x | %RSD=9.4 |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) | 13C4_PFOS_IIS | 4.0000 | 1.0000 | y = 1.3336 x | %RSD=11.5 |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.8973 x | %RSD=7.9 |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) | 13C4_PFOS_IIS | 20.0000 | 1.0000 | y = 1.7769 x | %RSD=7.9 |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) | 13C2_PFHxA_IIS | 8.0000 | 1.0000 | y = 7.5812 x | %RSD=6.7 |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.1795 x | %RSD=10.3 |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) | 13C2_PFDA_IIS | 2.0000 | 1.0000 | y = 2.4555 x | %RSD=5.9 |

$$x = \text{Concentration Analyte}$$

$$y = \text{Area Ratio} = \frac{\text{Area Analyte}}{\text{Area Internal Standard}}$$

$$\text{Acid Factor} = \frac{\text{Moleculat weight Acid}}{\text{Molecular weight Salt}}$$

$$\text{Multiplier} = \frac{\text{Concentration of Analyte}}{\text{Concentration of PFOA}} \text{in curve standard mix}$$

$$\text{Result } \left(\frac{\text{ng}}{\text{mL}}\right) = x^{*}\text{Multiplier}^{*}\text{Acid Factor}$$

Chemist:DAG
Instrument:Saphira
Type:Sciex Q5500

Quant Method:1633 - S2024-03-28A

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

## 1. Negative Prerequisites

| Step | Result | Details |
|---|---|---|
| Achieve Stable Spray Neg | **Pass** | |

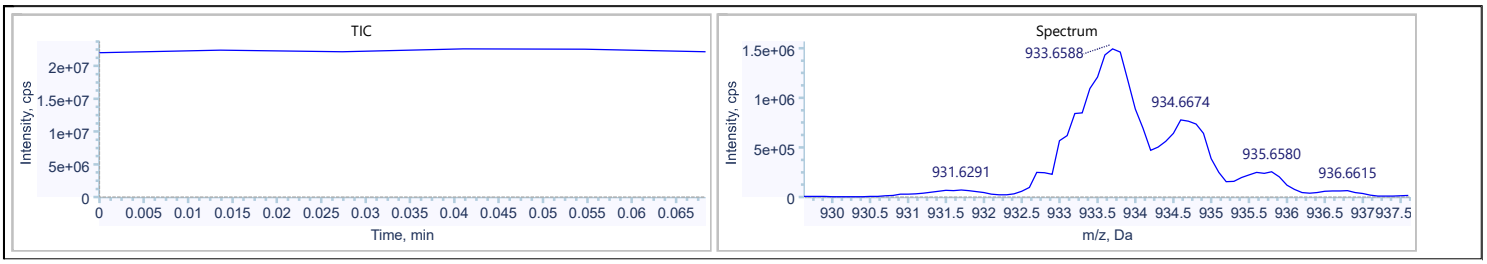


| Step | Result | Details |
|---|---|---|
| Optimize Gas 1 Neg | **Pass** | Found best GS1 value of 17 |

| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Intensity | 5.00e4 | 1.00e8 | 1.55e6 | Pass |

| Parameter | Ramp Start | Ramp End | Ramp Step | Initial Default | Current Value | Best Value |
|---|---|---|---|---|---|---|
| GS1 | 10.0 | 40.0 | 1.0 | 20.0 | 17.0 | 17.0 |

Best Value Criteria: The value with the maximum intensity and meets all specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 17.0

Saved value 933.636 - 17 to: GS1.MassSpectrometer

## 2. Negative Q1 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| Step | Result | Details |
|---|---|---|
| Confirm Q1 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q1 Negative 10 Da sec |

Sum of 10 spectra

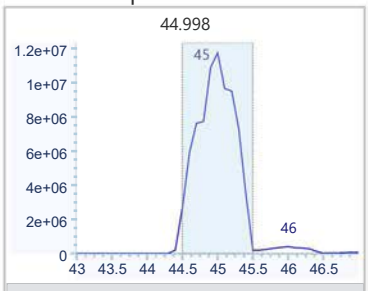


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 44.9974 | Pass |
| Width | 0.60 | 0.80 | 0.74 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.18e7 | Pass |

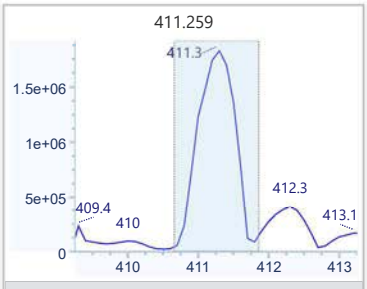


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2656 | Pass |
| Width | 0.60 | 0.80 | 0.64 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.83e6 | Pass |

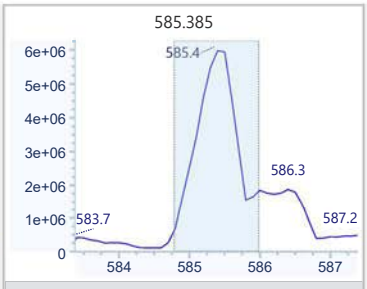


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3897 | Pass |
| Width | 0.60 | 0.80 | 0.66 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 5.97e6 | Pass |

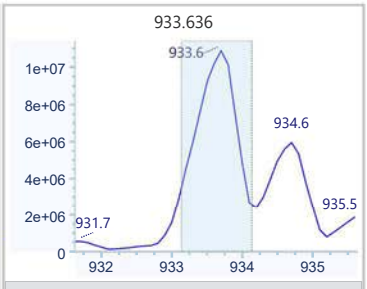


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6402 | Pass |
| Width | 0.60 | 0.80 | 0.71 | Pass |
| Intensity | 1.00e7 | 1.00e11 | 1.09e7 | Pass |

## 3. Negative Q3 Unit Resolution Optimization

| Step | Result | Details |
|---|---|---|
| Confirm Q3 Negative 10 Da/sec | **Pass** | Data file:D:\SCIEX OS Data\Optimization \Optimization-2024-02-15-13-26-49\Confirm Q3 Negative 10 Da sec |

Sum of 10 spectra

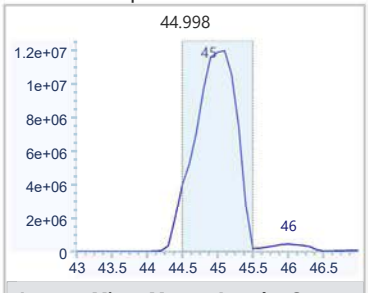


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 44.898 | 45.098 | 45.0006 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 1.20e7 | Pass |

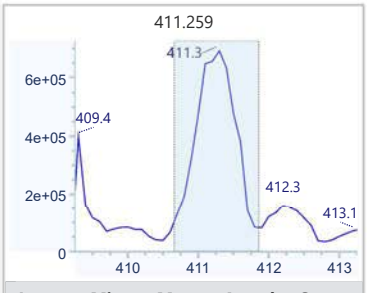


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 411.159 | 411.359 | 411.2536 | Pass |
| Width | 0.60 | 0.80 | 0.70 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 6.92e5 | Pass |

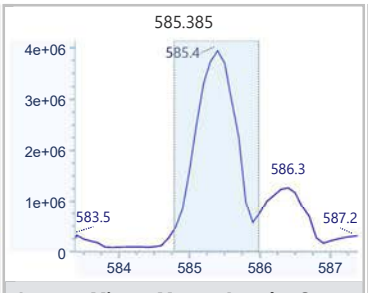


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 585.285 | 585.485 | 585.3798 | Pass |
| Width | 0.60 | 0.80 | 0.68 | Pass |
| Intensity | 1.00e2 | 1.00e11 | 3.94e6 | Pass |

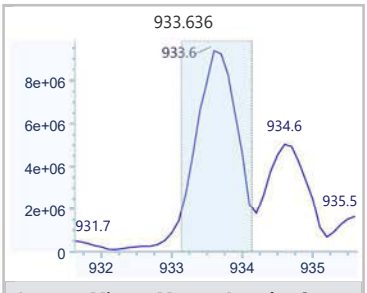


| Item | Min | Max | Actual | Status |
|---|---|---|---|---|
| Mass | 933.536 | 933.736 | 933.6476 | Pass |
| Width | 0.60 | 0.80 | 0.69 | Pass |
| Intensity | 8.00e6 | 1.00e11 | 9.37e6 | Pass |

## 4. Report

| Step | Result | Details |
|---|---|---|
| Preview Report | **Pass** | Instrument Tuning Report |

# Instrument Tuning Report

| | | | |
|---|---|---|---|
| **Instrument Name:** | SCIEX Triple Quad 5500 | **Manufacturer:** | AB Sciex |
| **Instrument Model:** | TripleQuad5500 | **Target Instrument:** | TripleQuad5500 |
| **Ion Source:** | TurboIonSpray | **Optimization Set:** | 5500 MS Scan Tuning |
| **Serial Number:** | BB212771511 | **Doc Num Revision:** | TripleQuad5500PickSetTune Eng |
| **User Name:** | Chemist_pfas | | |

| | | |
|---|---|---|
| Save Tuning Settings | **Pass** | Tuning Settings were saved. |

Save Tuning Settings Save Settings

Tuning Settings were saved.

SCIEX

**SCIEX OS version:** 3.1.6.44 Inject: 2024-02-15 3:06:00 P.M **Printed by:** ~~APPL2K3/Chemist_pfas~~ Dipti GOKAL
**Workstation ID:** SAPHIRA-PC **Printed on:** 2/15/2024 3:55:09 PM

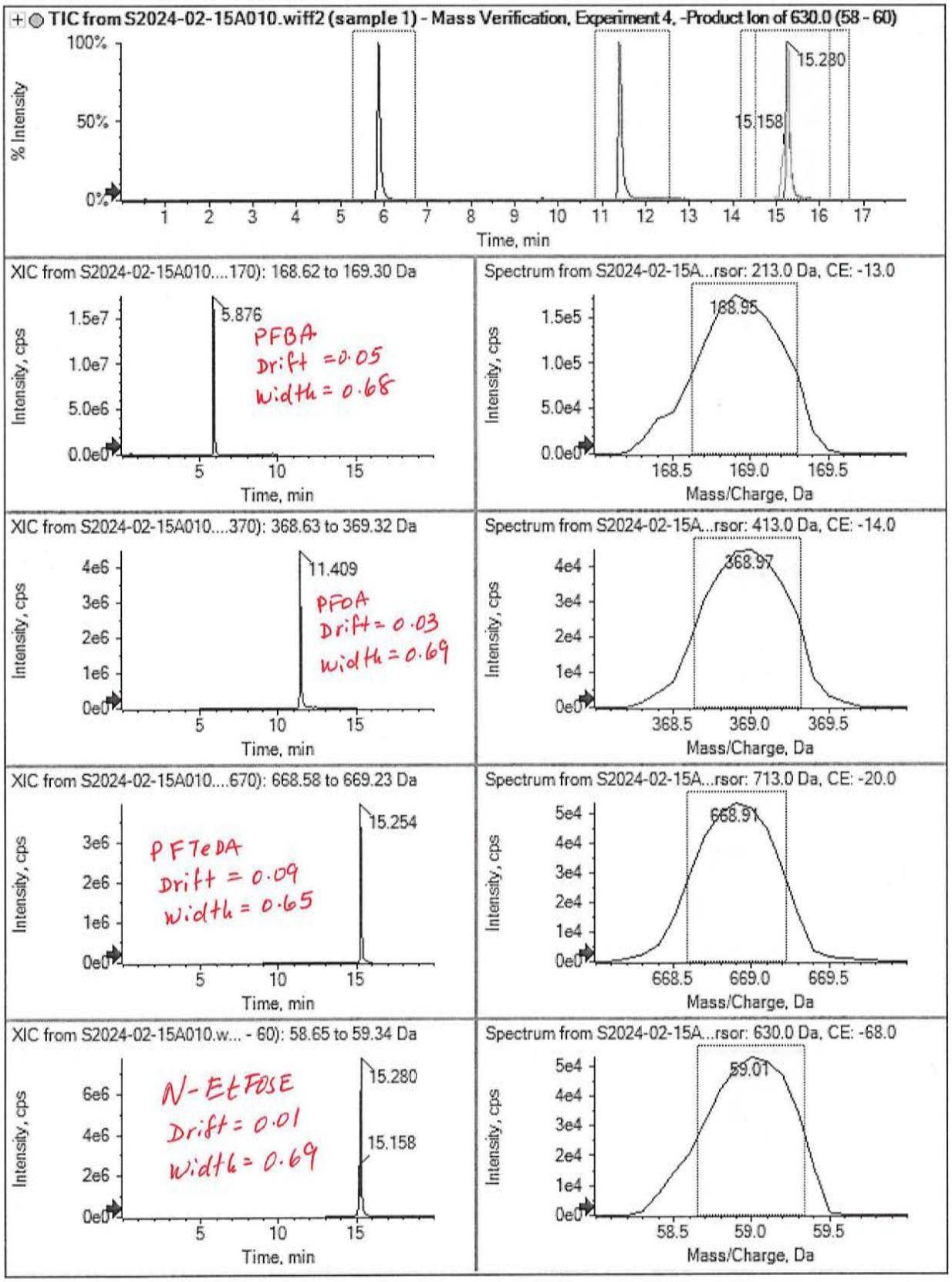

# EPA 1633A

Initial Calibration: SD01148 i

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 11424<br>( 163.0 / 69.0 ) 513 | ( 2.49 , 0.68 )<br>( N/A , -0.01 , 1.9) | 50.8<br>48.2 | 0.0449<br>164.0<br>164.0 | 0.1520 | N/A | 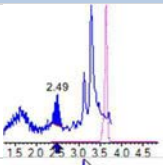 | 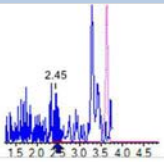 | |
| PFBA | ( 213.0 / 169.0 ) 244062 | ( 3.64 , 1.00 )<br>( 0.01 , N/A , 0.0) | 171.8 | N/A<br>0.0<br>0.0 | 0.3920 | N/A | 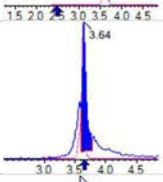 | | |
| PFPeA | ( 263.0 / 219.0 ) 47108<br>( 263.0 / 69.0 ) 481 | ( 4.39 , 1.00 )<br>( 0.00 , N/A , -0.6) | 249.8<br>14.0 | 0.0102<br>85.9<br>85.9 | 0.2050 | N/A | 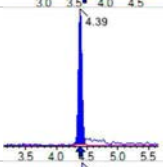 | 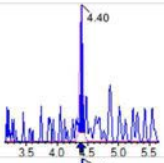 | |
| PFHxA | ( 313.0 / 269.0 ) 21432<br>( 313.0 / 119.0 ) 2635 | ( 5.22 , 1.00 )<br>( 0.00 , N/A , 0.5) | 165.4<br>89.5 | 0.1229<br>110.5<br>110.5 | 0.0850 | N/A | 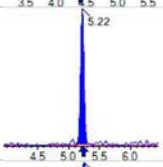 | 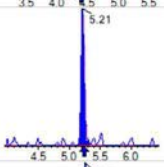 | |
| PFHpA | ( 363.0 / 319.0 ) 28749<br>( 363.0 / 169.0 ) 8589 | ( 6.35 , 1.00 )<br>( 0.00 , N/A , -0.1) | 286.3<br>191.0 | 0.2988<br>97.8<br>97.8 | 0.0950 | N/A | 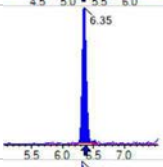 | 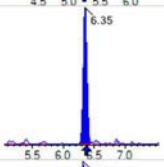 | |
| PFOA | ( 413.0 / 369.0 ) 47012<br>( 413.0 / 169.0 ) 15577 | ( 7.47 , 1.00 )<br>( 0.00 , N/A , -0.1) | 106.9<br>124.3 | 0.3313<br>92.7<br>92.7 | 0.1100 | N/A | 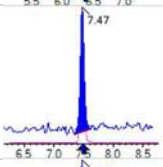 | 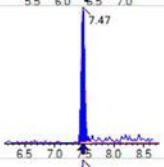 | |
| PFNA | ( 463.0 / 419.0 ) 29466<br>( 463.0 / 169.0 ) 6868 | ( 9.07 , 1.00 )<br>( 0.00 , N/A , -0.1) | 332.1<br>154.1 | 0.2331<br>94.9<br>94.9 | 0.1000 | N/A | 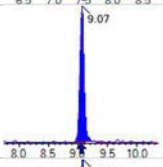 | 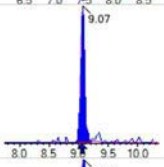 | |
| PFDA | ( 513.0 / 469.0 ) 35328<br>( 513.0 / 169.0 ) 2624 | ( 10.07 , 1.00 )<br>( 0.00 , N/A , -0.6) | 303.6<br>363874.1 | 0.0743<br>62.3<br>62.3 | 0.1020 | N/A | 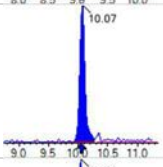 | 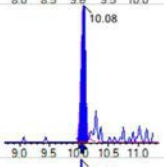 | |
| PFUnA | ( 563.0 / 519.0 ) 30872<br>( 563.0 / 169.0 ) 5510 | ( 10.99 , 1.00 )<br>( 0.00 , N/A , 0.4) | 303.8<br>133.6 | 0.1785<br>115.3<br>115.3 | 0.0820 | N/A | 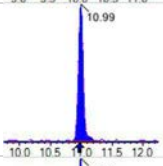 | 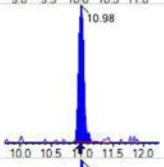 | |
| PFDoA | ( 613.0 / 569.0 ) 39355<br>( 613.0 / 169.0 ) 5791 | ( 11.89 , 1.00 )<br>( 0.00 , N/A , -0.3) | 220.9<br>74.1 | 0.1472<br>96.9<br>96.9 | 0.0950 | N/A | 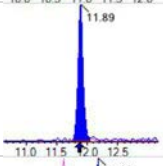 | 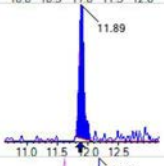 | |
| PFTrDA | ( 663.0 / 619.0 ) 36629<br>( 663.0 / 169.0 ) 9543 | ( 12.60 , 1.06 )<br>( N/A , 0.01 , 0.0) | 249.0<br>136.1 | 0.2605<br>96.8<br>96.8 | 0.0910 | N/A | 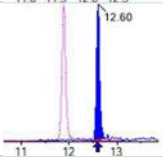 | 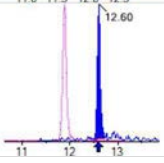 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 33810<br>( 713.0 / 169.0 ) 8418 | ( 13.14 , 1.00 ) ( -0.01 , N/A , -0.4) | 204.5<br>85.3 | 0.2490<br>91.7<br>91.7 | 0.0990 | N/A | 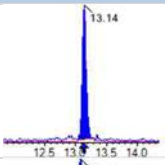 | 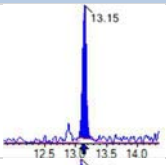 | |
| PFHxDA | ( 813.0 / 769.0 ) 27570<br>( 813.0 / 169.0 ) 7349 | ( 14.04 , 1.00 ) ( 0.00 , N/A , -0.5) | 175.8<br>49.0 | 0.2666<br>101.9<br>101.9 | 0.0990 | N/A | 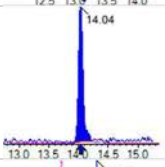 | 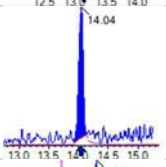 | |
| PFODA | ( 913.0 / 869.0 ) 15390<br>( 913.0 / 169.0 ) 5052 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.0) | 76.1<br>29.2 | 0.3282<br>104.7<br>104.7 | 0.0880 | N/A | 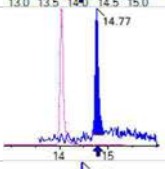 | 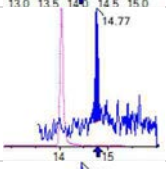 | |
| PFBS | ( 299.0 / 80.0 ) 30767<br>( 299.0 / 99.0 ) 21524 | ( 5.40 , 1.00 ) ( 0.00 , N/A , 0.2) | 429.2<br>168.7 | 0.6996<br>94.4<br>94.4 | 0.0770 | N/A | 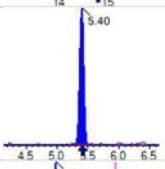 | 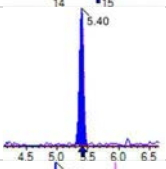 | |
| PFPeS | ( 349.0 / 80.0 ) 95828<br>( 349.0 / 99.0 ) 33243 | ( 6.68 , 0.81 ) ( N/A , -0.01 , 0.0) | 599.9<br>525.5 | 0.3469<br>101.5<br>101.5 | 0.0930 | N/A | 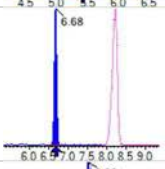 | 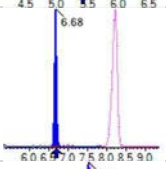 | |
| PFHxS | ( 399.0 / 80.0 ) 110599<br>( 399.0 / 99.0 ) 35884 | ( 8.22 , 1.00 ) ( 0.00 , N/A , 0.7) | 583.8<br>1059.5 | 0.3244<br>98.9<br>98.9 | 0.0880 | N/A | 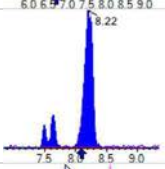 | 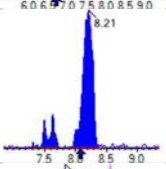 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 87755<br>( 449.0 / 99.0 ) 24540 | ( 9.56 , 0.91 ) ( N/A , 0.02 , 0.2) | 562.3<br>294.7 | 0.2796<br>107.2<br>107.2 | 0.0870 | N/A | 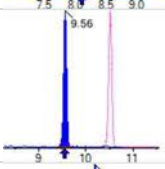 | 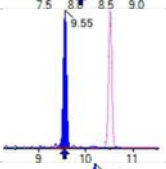 | |
| PFOS | ( 499.0 / 80.0 ) 93324<br>( 499.0 / 99.0 ) 21599 | ( 10.52 , 1.00 ) ( 0.00 , N/A , 0.1) | 466.3<br>718.8 | 0.2314<br>100.2<br>100.2 | 0.0960 | N/A | 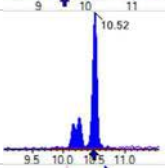 | 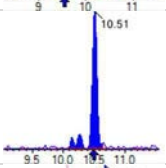 | |
| PFNS | ( 549.0 / 80.0 ) 79220<br>( 549.0 / 99.0 ) 23878 | ( 11.40 , 1.08 ) ( N/A , 0.02 , -0.1) | 457.0<br>238.4 | 0.3014<br>112.5<br>112.5 | 0.0890 | N/A | 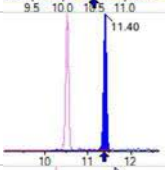 | 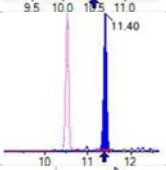 | |
| PFDS | ( 599.0 / 80.0 ) 101122<br>( 599.0 / 99.0 ) 27831 | ( 12.20 , 1.16 ) ( N/A , 0.01 , 0.0) | 650.8<br>191.7 | 0.2752<br>108.1<br>108.1 | 0.0930 | N/A | 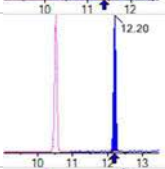 | 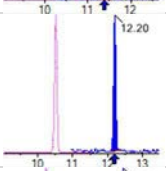 | |
| PFDoS | ( 699.0 / 80.0 ) 102038<br>( 699.0 / 99.0 ) 24044 | ( 13.20 , 1.26 ) ( N/A , 0.00 , -0.1) | 719.1<br>269.5 | 0.2356<br>105.4<br>105.4 | 0.0970 | N/A | 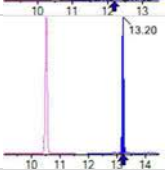 | 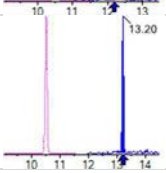 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 179225<br>( 327.0 / 81.0 ) 151427 | ( 4.85 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1812.8<br>582.9 | 0.8449<br>99.0<br>99.0 | 0.3630 | N/A | 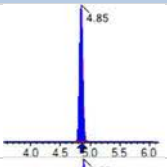 | 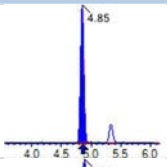 | |
| 6:2FTS | ( 427.0 / 407.0 ) 138066<br>( 427.0 / 81.0 ) 181781 | ( 6.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2052.8<br>1492.7 | 1.3166<br>102.1<br>102.1 | 0.3540 | N/A | 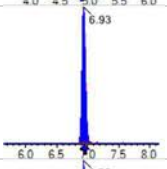 | 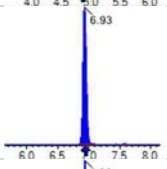 | |
| 8:2FTS | ( 527.0 / 507.0 ) 148936<br>( 527.0 / 81.0 ) 154914 | ( 9.38 , 1.00 )<br>( 0.00 , N/A , -0.1) | 1697.0<br>1003.9 | 1.0401<br>94.2<br>94.2 | 0.3610 | N/A | 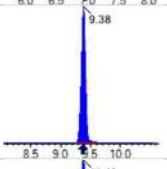 | 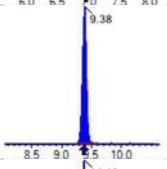 | |
| 10:2FTS | ( 627.0 / 607.0 ) 119836<br>( 627.0 / 81.0 ) 174439 | ( 11.13 , 1.00 )<br>( 0.01 , N/A , 0.2) | 800.4<br>423.0 | 1.4556<br>101.2<br>101.2 | 0.3590 | N/A | 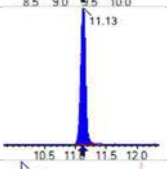 | 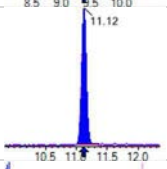 | |
| PFBSA | ( 297.9 / 78.0 ) 59293<br>( 297.9 / 278.0 ) 218 | ( 5.55 , 0.38 )<br>( N/A , 0.00 , -8.5) | 436.4<br>4.1 | 0.0037<br>283.6<br>283.6 | 0.0990 | N/A | 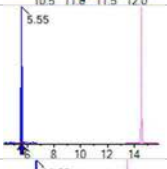 | 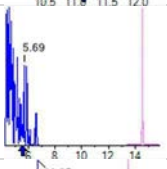 | |
| PFHxSA | ( 397.9 / 78.0 ) 115672<br>( 397.9 / 378.0 ) 314 | ( 11.23 , 0.75 )<br>( N/A , 0.00 , -1.0) | 957.5<br>40.0 | 0.0027<br>67.1<br>67.1 | 0.0980 | N/A | 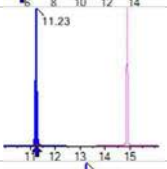 | 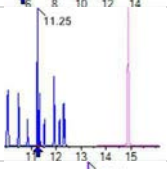 | |
| PFOSA | ( 498.0 / 78.0 ) 83077<br>( 498.0 / 478.0 ) 1224 | ( 13.28 , 1.00 )<br>( -0.01 , N/A , -0.9) | 783.8<br>28.3 | 0.0147<br>100.2<br>100.2 | 0.0980 | N/A | 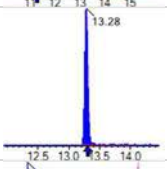 | 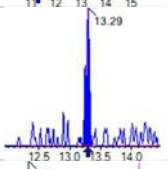 | |
| TFSI | ( 279.7 / 147.0 ) 117672<br>( 279.7 / 211.0 ) 11787 | ( 7.09 , 0.53 )<br>( N/A , 0.01 , 0.0) | 50.1<br>658.9 | 0.1002<br>113.2<br>113.2 | 0.0790 | N/A | 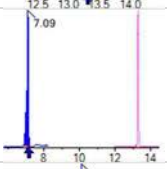 | 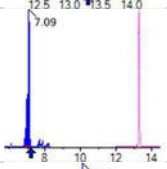 | |
| NMeFOSA | ( 512.0 / 219.0 ) 67741<br>( 512.0 / 169.0 ) 52839 | ( 14.56 , 1.00 )<br>( 0.00 , N/A , 1.3) | 832.1<br>344.5 | 0.7800<br>101.8<br>101.8 | 0.3840 | N/A | 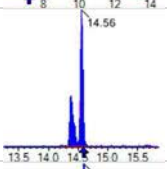 | 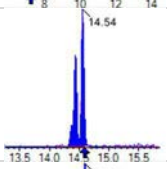 | |
| NEtFOSA | ( 526.0 / 219.0 ) 79393<br>( 526.0 / 169.0 ) 99627 | ( 14.89 , 1.00 )<br>( 0.01 , N/A , 1.7) | 803.6<br>795.8 | 1.2549<br>100.4<br>100.4 | 0.3730 | N/A | 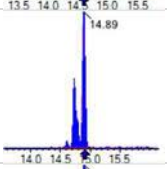 | 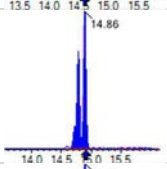 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 27875<br>( 570.0 / 483.0 ) 13190 | ( 10.44 , 1.00 )<br>( 0.01 , N/A , 0.1) | 439.1<br>93119.3 | 0.4732<br>102.0<br>102.0 | 0.0990 | N/A | 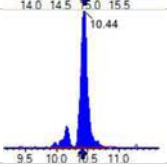 | 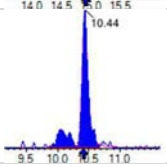 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 24693<br>( 584.0 / 526.0 ) 15199 | ( 11.04 , 1.00 ) ( 0.00 , N/A , -0.7) | 1791.1<br>276.3 | 0.6155<br>102.6<br>102.6 | 0.0920 | N/A | 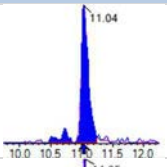 | 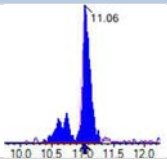 | MI5 DG 2024-03-29 |
| NMeFOSE | ( 616.0 / 59.0 ) 33653 | ( 14.35 , 1.00 ) ( 0.02 , N/A , 0.0) | 186.6 | N/A<br>0.0<br>0.0 | 0.4040 | N/A | 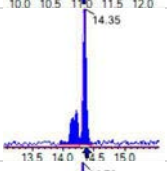 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 26710 | ( 14.73 , 1.00 ) ( 0.02 , N/A , 0.0) | 222.3 | N/A<br>0.0<br>0.0 | 0.3890 | N/A | 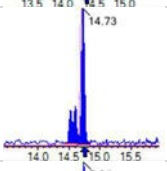 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 5426<br>( 285.0 / 185.0 ) 16307 | ( 5.64 , 1.00 ) ( 0.00 , N/A , -0.1) | 221.6<br>196.1 | 3.0053<br>107.0<br>107.0 | 0.0760 | N/A | 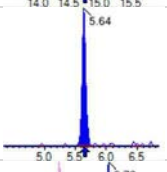 | 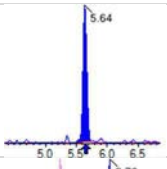 | |
| ADONA | ( 377.0 / 85.0 ) 79219<br>( 377.0 / 251.0 ) 6946 | ( 6.79 , 1.20 ) ( N/A , -0.01 , 0.0) | 955.1<br>83.6 | 0.0877<br>83.6<br>83.6 | 0.0850 | N/A | 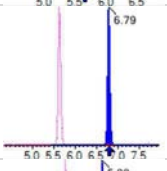 | 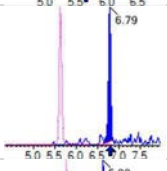 | |
| PFEESA | ( 315.0 / 135.0 ) 33896<br>( 315.0 / 83.0 ) 21770 | ( 5.98 , 1.15 ) ( N/A , -0.02 , 0.1) | 640.5<br>110.2 | 0.6423<br>100.1<br>100.1 | 0.1850 | N/A | 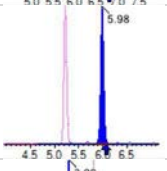 | 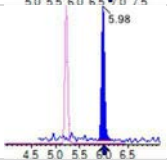 | |
| PFMPA | ( 229.0 / 85.0 ) 16056 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 513.9 | N/A<br>0.0<br>0.0 | 0.1900 | N/A | 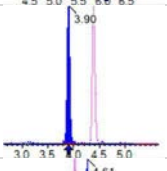 | | |
| PFMBA | ( 279.0 / 85.0 ) 36236 | ( 4.61 , 1.05 ) ( N/A , 0.00 , 0.0) | 411.6 | N/A<br>0.0<br>0.0 | 0.1900 | N/A | 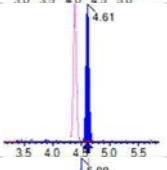 | | |
| NFDHA | ( 295.0 / 201.0 ) 18745<br>( 295.0 / 85.0 ) 17618 | ( 5.09 , 0.98 ) ( N/A , -0.01 , 0.3) | 942.2<br>271.5 | 0.9399<br>94.5<br>94.5 | 0.2090 | N/A | 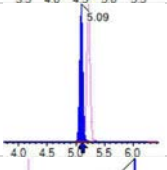 | 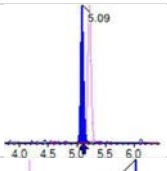 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 86161<br>( 533.0 / 353.0 ) 26940 | ( 11.20 , 1.99 ) ( N/A , 0.02 , 0.1) | 937.2<br>514.1 | 0.3127<br>98.1<br>98.1 | 0.0830 | N/A | 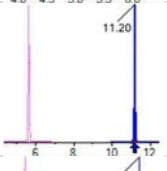 | 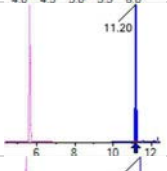 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 66326<br>( 633.0 / 453.0 ) 23901 | ( 12.66 , 2.25 ) ( N/A , 0.01 , 0.2) | 975.7<br>319.4 | 0.3604<br>106.2<br>106.2 | 0.0820 | N/A | 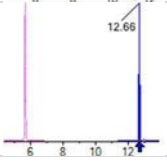 | 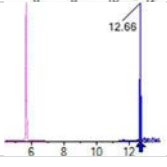 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 43851<br>( 461.0 / 381.2 ) 15851 | ( 9.46 , 0.90 ) ( N/A , 0.02 , 0.1) | 2157.0<br>908.5 | 0.3615<br>93.6<br>93.6 | 0.0840 | N/A | 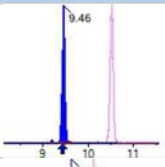 | 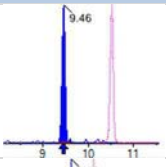 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 8726<br>( 241.0 / 117.0 ) 18815 | ( 3.96 , 0.90 ) ( N/A , -0.01 , 0.0) | 412.1<br>133.0 | 2.1562<br>98.2<br>98.2 | 0.4410 | N/A | 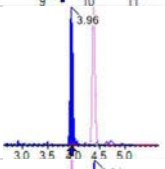 | 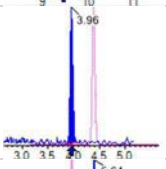 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 28555<br>( 341.0 / 217.0 ) 37510 | ( 5.64 , 1.08 ) ( N/A , -0.02 , 0.1) | 552.1<br>219.2 | 1.3136<br>85.8<br>85.8 | 0.4160 | N/A | 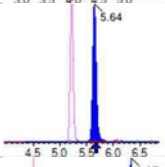 | 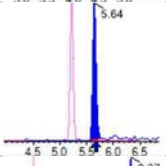 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 57118<br>( 441.0 / 337.0 ) 46760 | ( 9.37 , 1.80 ) ( N/A , 0.04 , 0.1) | 769.6<br>2363120.9 | 0.8187<br>95.8<br>95.8 | 0.3920 | N/A | 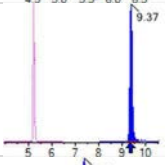 | 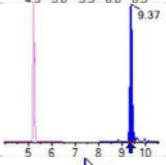 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 29520<br>( 357.2 / 243.0 ) 3301 | ( 5.89 , 1.00 ) ( -0.01 , N/A , -0.7) | 246.8<br>51.9 | 0.1118<br>104.3<br>104.3 | 0.0840 | N/A | 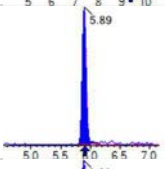 | 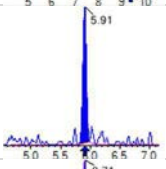 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 24816<br>( 457.2 / 343.0 ) 1129 | ( 8.69 , 1.00 ) ( -0.01 , N/A , -1.3) | 260.9<br>16441.3 | 0.0455<br>101.4<br>101.4 | 0.0810 | N/A | 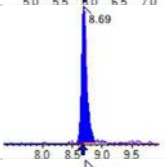 | 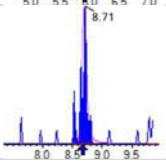 | |
| TDCA | ( 499.0 / 80.0 ) 62286 | ( 10.51 , 1.00 ) ( N/A , 0.02 , 0.0) | 932.4 | N/A<br>0.0<br>0.0 | 0.0950 | N/A | 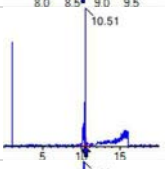 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 297658 | ( 3.63 , N/A ) ( N/A , -0.02 , N/A ) | 1635.1 | N/A | 1.0550<br>[ 1.0000 ] | 105.5%<br>{ 107.4% } | 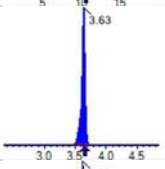 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 114374 | ( 5.22 , N/A ) ( N/A , -0.02 , N/A ) | 670228.8 | N/A | 0.9690<br>[ 1.0000 ] | 96.9%<br>{ 99.4% } | 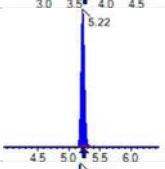 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 378250 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5267.8 | N/A | 0.9750<br>[ 1.0000 ] | 97.5%<br>{ 96.4% } | 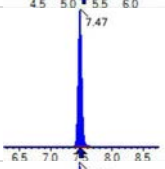 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 297288 | ( 9.07 , N/A ) ( N/A , 0.02 , N/A ) | 1494.8 | N/A | 1.0180<br>[ 1.0000 ] | 101.8%<br>{ 102.3% } | 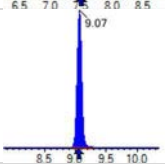 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281405 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 24158.5 | N/A | 0.9820 [ 1.0000 ] | 98.2% { 103.4% } | 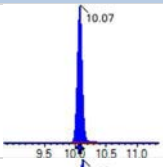 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 967713 | ( 8.22 , N/A ) ( N/A , 0.13 , N/A ) | 9229.8 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 101.7% } | 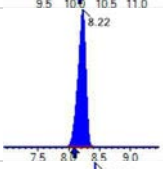 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 751287 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 3115.8 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 101.6% } | 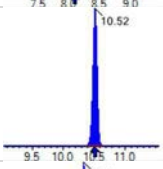 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2658506 | ( 3.63 , N/A ) ( N/A , -0.02 , N/A ) | 322733.7 | N/A | 8.2630 [ 8.0000 ] | 103.3% { 109.0% } | 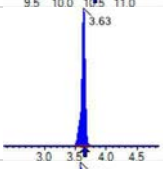 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 922775 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 5673.3 | N/A | 4.4070 [ 4.0000 ] | 110.2% { 99.8% } | 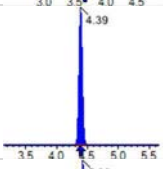 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 543980 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 7572.4 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 101.6% } | 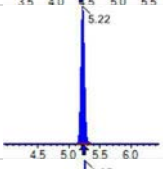 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 610145 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 6550.2 | N/A | 2.1950 [ 2.0000 ] | 109.8% { 107.0% } | 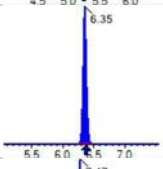 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 852451 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5309.5 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 112.6% } | 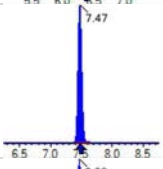 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 292129 | ( 9.06 , N/A ) ( N/A , 0.02 , N/A ) | 4367.0 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 102.9% } | 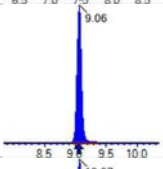 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 348347 | ( 10.07 , N/A ) ( N/A , 0.02 , N/A ) | 1671.8 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 103.5% } | 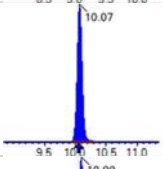 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 412449 | ( 10.99 , N/A ) ( N/A , 0.02 , N/A ) | 1234.6 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 105.2% } | 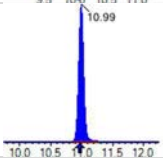 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (1)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 413551 | ( 11.89 , N/A ) ( N/A , 0.02 , N/A ) | 1443.6 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 103.6% } | 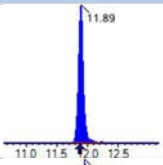 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 364139 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1250.0 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 100.5% } | 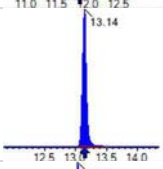 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 591883 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2281.7 | N/A | 2.0190 [ 2.0000 ] | 101.0% { 103.6% } | 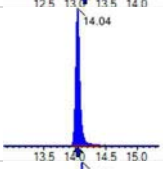 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1619455 | ( 5.40 , N/A ) ( N/A , -0.01 , N/A ) | 2095.4 | N/A | 2.0760 [ 2.0000 ] | 103.8% { 101.9% } | 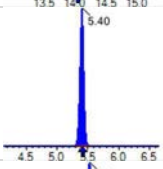 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1440662 | ( 8.22 , N/A ) ( N/A , 0.13 , N/A ) | 5874.9 | N/A | 2.0640 [ 2.0000 ] | 103.2% { 104.9% } | 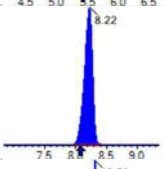 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1682588 | ( 10.52 , N/A ) ( N/A , 0.02 , N/A ) | 1902.6 | N/A | 2.1050 [ 2.0000 ] | 105.3% { 107.5% } | 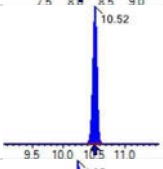 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 747900 | ( 4.85 , N/A ) ( N/A , -0.01 , N/A ) | 64.6 | N/A | 4.3590 [ 4.0000 ] | 109.0% { 107.2% } | 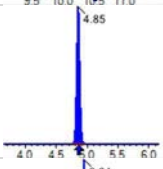 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1840115 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 6568.9 | N/A | 4.3650 [ 4.0000 ] | 109.1% { 110.9% } | 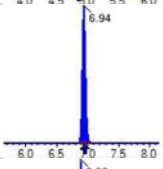 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1679015 | ( 9.39 , N/A ) ( N/A , 0.02 , N/A ) | 2075.8 | N/A | 4.5520 [ 4.0000 ] | 113.8% { 113.6% } | 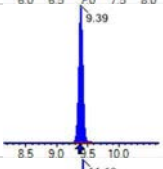 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3361452 | ( 11.12 , N/A ) ( N/A , 0.02 , N/A ) | 1949.2 | N/A | 8.4250 [ 8.0000 ] | 105.3% { 118.1% } | 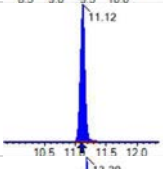 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1755121 | ( 13.29 , N/A ) ( N/A , -0.02 , N/A ) | 3216.8 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 104.3% } | 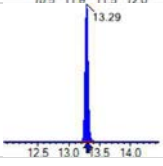 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (1)
Acquired: 2024/03/28 - 15:25

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 396518 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2692.0 | N/A | 2.0780 [ 2.0000 ] | 103.9% { 107.0% } | 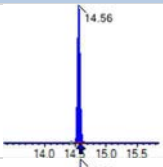  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 376281 | ( 14.88 , N/A ) ( N/A , -0.03 , N/A ) | 2584.8 | N/A | 2.1580 [ 2.0000 ] | 107.9% { 105.8% } | 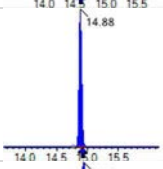  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1222822 | ( 10.44 , N/A ) ( N/A , 0.02 , N/A ) | 3931.4 | N/A | 4.4060 [ 4.0000 ] | 110.2% { 105.5% } | 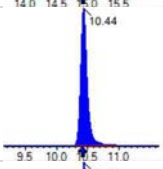  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1100790 | ( 11.04 , N/A ) ( N/A , 0.02 , N/A ) | 3251.6 | N/A | 4.3950 [ 4.0000 ] | 109.9% { 106.5% } | 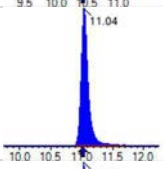  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1538473 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2676.2 | N/A | 21.5860 [ 20.0000 ] | 107.9% { 108.4% } | 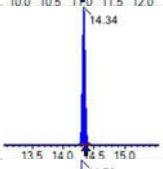  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1440884 | ( 14.70 , N/A ) ( N/A , -0.03 , N/A ) | 5136.3 | N/A | 21.5870 [ 20.0000 ] | 107.9% { 107.9% } | 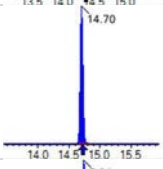  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 968447 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2880.8 | N/A | 8.9350 [ 8.0000 ] | 111.7% { 107.2% } | 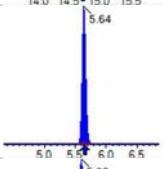  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 666361 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 1584.8 | N/A | 2.1730 [ 2.0000 ] | 108.6% { 117.4% } | 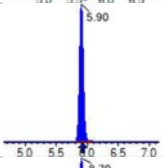  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 744188 | ( 8.70 , N/A ) ( N/A , 0.03 , N/A ) | 1145.3 | N/A | 2.1540 [ 2.0000 ] | 107.7% { 113.8% } | 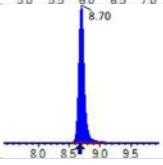  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 71130<br>( 163.0 / 69.0 ) 2043 | ( 2.49 , 0.68 )<br>( N/A , 0.00 , -1.0) | 192.9<br>54.7 | 0.0287<br>104.8<br>104.8 | 0.8600 | N/A | 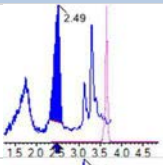 | 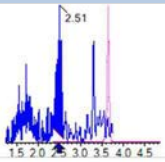 | |
| PFBA | ( 213.0 / 169.0 ) 852236 | ( 3.64 , 1.00 )<br>( 0.00 , N/A , 0.0) | 622.3 | N/A<br>0.0<br>0.0 | 2.0150 | N/A | 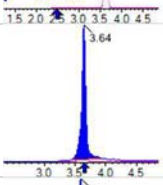 | | |
| PFPeA | ( 263.0 / 219.0 ) 233658<br>( 263.0 / 69.0 ) 1847 | ( 4.39 , 1.00 )<br>( 0.00 , N/A , 0.7) | 1204.4<br>30.0 | 0.0079<br>66.4<br>66.4 | 1.0080 | N/A | 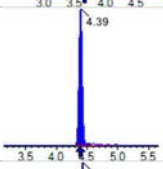 | 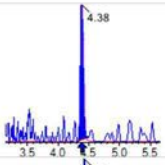 | |
| PFHxA | ( 313.0 / 269.0 ) 120459<br>( 313.0 / 119.0 ) 15334 | ( 5.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 699.9<br>446.4 | 0.1273<br>114.4<br>114.4 | 0.4900 | N/A | 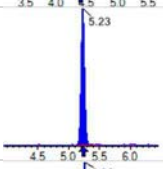 | 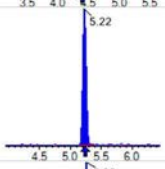 | |
| PFHpA | ( 363.0 / 319.0 ) 144823<br>( 363.0 / 169.0 ) 44324 | ( 6.36 , 1.00 )<br>( 0.00 , N/A , 0.1) | 873.2<br>621.4 | 0.3061<br>100.1<br>100.1 | 0.4970 | N/A | 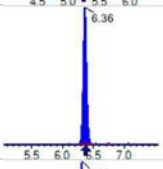 | 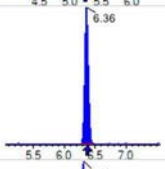 | |
| PFOA | ( 413.0 / 369.0 ) 201655<br>( 413.0 / 169.0 ) 72410 | ( 7.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 312.9<br>520.1 | 0.3591<br>100.5<br>100.5 | 0.4550 | N/A | 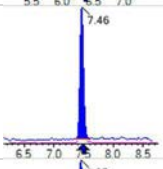 | 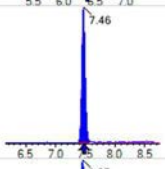 | |
| PFNA | ( 463.0 / 419.0 ) 142582<br>( 463.0 / 169.0 ) 34136 | ( 9.05 , 1.00 )<br>( 0.00 , N/A , 0.0) | 994.2<br>492.6 | 0.2394<br>97.5<br>97.5 | 0.4980 | N/A | 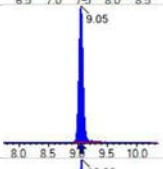 | 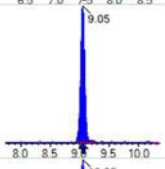 | |
| PFDA | ( 513.0 / 469.0 ) 173070<br>( 513.0 / 169.0 ) 20337 | ( 10.06 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1742.8<br>100786.3 | 0.1175<br>98.6<br>98.6 | 0.5010 | N/A | 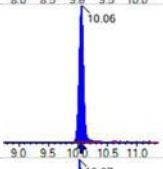 | 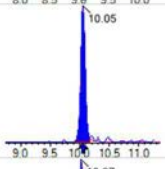 | |
| PFUnA | ( 563.0 / 519.0 ) 181180<br>( 563.0 / 169.0 ) 23660 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.3) | 814.5<br>326.2 | 0.1306<br>84.3<br>84.3 | 0.4790 | N/A | 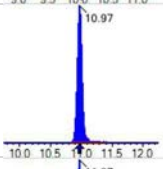 | 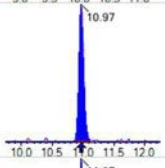 | |
| PFDoA | ( 613.0 / 569.0 ) 200523<br>( 613.0 / 169.0 ) 29402 | ( 11.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 764.3<br>384.0 | 0.1466<br>96.5<br>96.5 | 0.4790 | N/A | 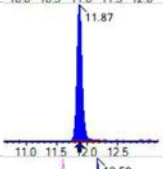 | 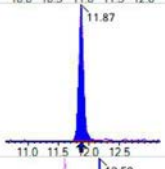 | |
| PFTrDA | ( 663.0 / 619.0 ) 192911<br>( 663.0 / 169.0 ) 52830 | ( 12.59 , 1.06 )<br>( N/A , 0.00 , -0.1) | 825.5<br>436.7 | 0.2739<br>101.7<br>101.7 | 0.4740 | N/A | 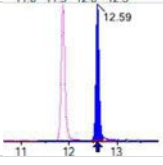 | 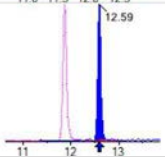 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 165100<br>( 713.0 / 169.0 ) 45935 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.4) | 650.2<br>289.7 | 0.2782<br>102.5<br>102.5 | 0.5140 | N/A | 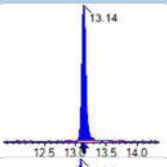 | 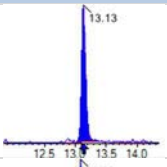 | |
| PFHxDA | ( 813.0 / 769.0 ) 140221<br>( 813.0 / 169.0 ) 36682 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.2) | 649.4<br>245.5 | 0.2616<br>100.0<br>100.0 | 0.5090 | N/A | 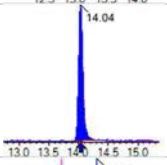 | 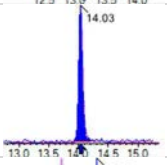 | |
| PFODA | ( 913.0 / 869.0 ) 86338<br>( 913.0 / 169.0 ) 29199 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.1) | 347.5<br>142.5 | 0.3382<br>107.9<br>107.9 | 0.4940 | N/A | 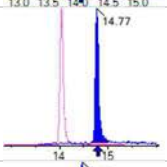 | 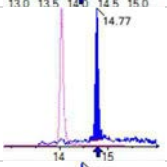 | |
| PFBS | ( 299.0 / 80.0 ) 174035<br>( 299.0 / 99.0 ) 131818 | ( 5.40 , 1.00 ) ( -0.01 , N/A , 0.0) | 1419.0<br>726.5 | 0.7574<br>102.3<br>102.3 | 0.4380 | N/A | 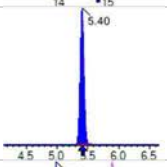 | 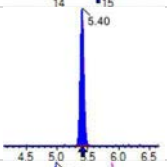 | |
| PFPeS | ( 349.0 / 80.0 ) 499313<br>( 349.0 / 99.0 ) 174428 | ( 6.69 , 0.82 ) ( N/A , -0.01 , 0.1) | 1718.1<br>1396.7 | 0.3493<br>102.2<br>102.2 | 0.4820 | N/A | 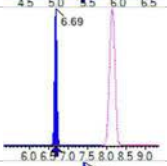 | 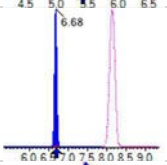 | |
| PFHxS | ( 399.0 / 80.0 ) 565570<br>( 399.0 / 99.0 ) 186087 | ( 8.15 , 1.00 ) ( 0.01 , N/A , 0.3) | 1490.6<br>1304.6 | 0.3290<br>100.3<br>100.3 | 0.4480 | N/A | 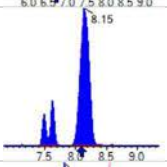 | 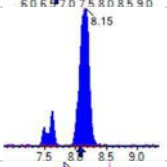 | |
| PFHpS | ( 449.0 / 80.0 ) 471503<br>( 449.0 / 99.0 ) 136814 | ( 9.54 , 0.91 ) ( N/A , 0.01 , 0.0) | 1680.6<br>1249.8 | 0.2902<br>111.2<br>111.2 | 0.4750 | N/A | 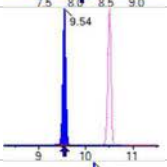 | 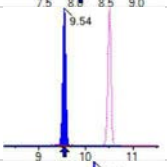 | |
| PFOS | ( 499.0 / 80.0 ) 444392<br>( 499.0 / 99.0 ) 96575 | ( 10.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 1103.0<br>2945.2 | 0.2173<br>94.1<br>94.1 | 0.4600 | N/A | 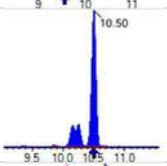 | 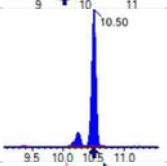 | |
| PFNS | ( 549.0 / 80.0 ) 431530<br>( 549.0 / 99.0 ) 121653 | ( 11.39 , 1.08 ) ( N/A , 0.00 , 0.2) | 1458.1<br>972.5 | 0.2819<br>105.2<br>105.2 | 0.4900 | N/A | 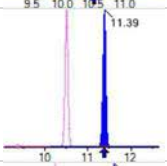 | 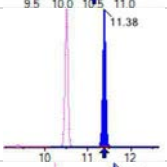 | |
| PFDS | ( 599.0 / 80.0 ) 534969<br>( 599.0 / 99.0 ) 135685 | ( 12.19 , 1.16 ) ( N/A , 0.00 , 0.1) | 1714.8<br>678.7 | 0.2536<br>99.6<br>99.6 | 0.4970 | N/A | 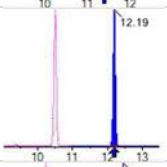 | 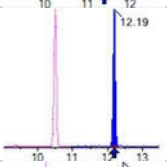 | |
| PFDoS | ( 699.0 / 80.0 ) 513457<br>( 699.0 / 99.0 ) 116280 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 2043.6<br>1130.8 | 0.2265<br>101.3<br>101.3 | 0.4930 | N/A | 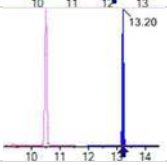 | 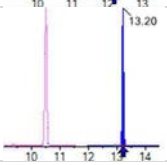 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 959487<br>( 327.0 / 81.0 ) 866625 | ( 4.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 4587.5<br>2183.1 | 0.9032<br>105.9<br>105.9 | 1.9420 | N/A | 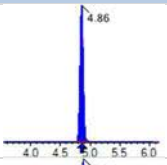 | 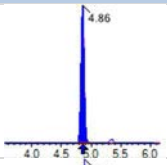 | |
| 6:2FTS | ( 427.0 / 407.0 ) 773348<br>( 427.0 / 81.0 ) 1003546 | ( 6.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 4664.5<br>4127.3 | 1.2977<br>100.6<br>100.6 | 1.9730 | N/A | 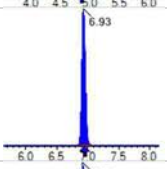 | 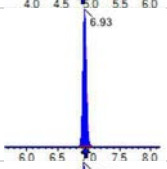 | |
| 8:2FTS | ( 527.0 / 507.0 ) 781918<br>( 527.0 / 81.0 ) 851272 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2204.0<br>2423.7 | 1.0887<br>98.6<br>98.6 | 2.1520 | N/A | 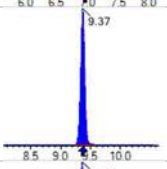 | 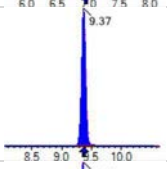 | |
| 10:2FTS | ( 627.0 / 607.0 ) 685080<br>( 627.0 / 81.0 ) 988519 | ( 11.11 , 1.00 ) ( 0.01 , N/A , 0.1) | 1504.9<br>1440.5 | 1.4429<br>100.4<br>100.4 | 1.9730 | N/A | 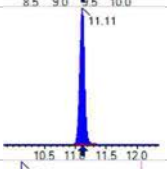 | 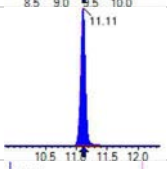 | |
| PFBSA | ( 297.9 / 78.0 ) 300472<br>( 297.9 / 278.0 ) 345 | ( 5.56 , 0.38 ) ( N/A , 0.00 , 0.9) | 931.0<br>6.5 | 0.0011<br>88.6<br>88.6 | 0.5350 | N/A | 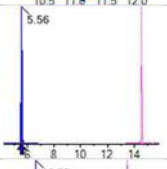 | 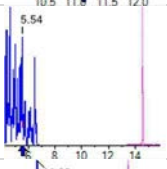 | |
| PFHxSA | ( 397.9 / 78.0 ) 583051<br>( 397.9 / 378.0 ) 2436 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.3) | 1594.8<br>109.4 | 0.0042<br>103.4<br>103.4 | 0.5050 | N/A | 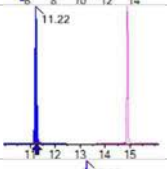 | 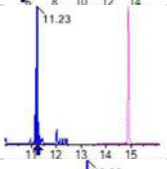 | |
| PFOSA | ( 498.0 / 78.0 ) 425048<br>( 498.0 / 478.0 ) 4917 | ( 13.28 , 1.00 ) ( -0.01 , N/A , 0.3) | 2164.9<br>122.6 | 0.0116<br>78.7<br>78.7 | 0.4940 | N/A | 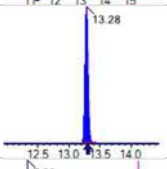 | 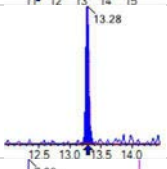 | |
| TFSI | ( 279.7 / 147.0 ) 737122<br>( 279.7 / 211.0 ) 70195 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.2) | 69.9<br>57592.6 | 0.0952<br>107.6<br>107.6 | 0.4910 | N/A | 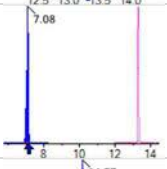 | 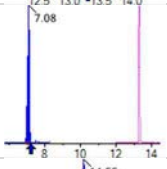 | |
| NMeFOSA | ( 512.0 / 219.0 ) 346231<br>( 512.0 / 169.0 ) 263582 | ( 14.57 , 1.00 ) ( 0.00 , N/A , 1.3) | 1889.1<br>1004.9 | 0.7613<br>99.3<br>99.3 | 2.1060 | N/A | 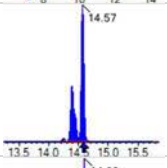 | 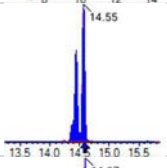 | |
| NEtFOSA | ( 526.0 / 219.0 ) 405095<br>( 526.0 / 169.0 ) 492466 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 1.7) | 2086.8<br>1956.4 | 1.2157<br>97.2<br>97.2 | 1.9510 | N/A | 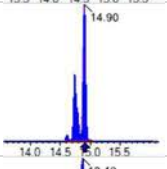 | 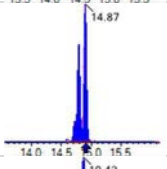 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 136672<br>( 570.0 / 483.0 ) 66727 | ( 10.42 , 1.00 ) ( 0.01 , N/A , 0.1) | 10906.3<br>5311.6 | 0.4882<br>105.2<br>105.2 | 0.5080 | N/A | 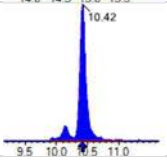 | 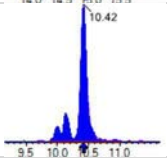 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 126811<br>( 584.0 / 526.0 ) 79788 | ( 11.04 , 1.00 ) ( 0.01 , N/A , -0.4) | 20295.9<br>508.6 | 0.6292<br>104.9<br>104.9 | 0.4870 | N/A | 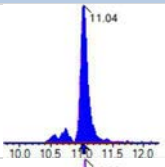 | 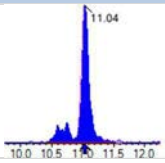 | |
| NMeFOSE | ( 616.0 / 59.0 ) 154569 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 692.5 | N/A<br>0.0<br>0.0 | 1.9760 | N/A | 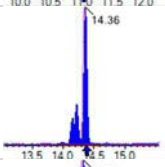 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 128541 | ( 14.74 , 1.00 ) ( 0.03 , N/A , 0.0) | 919.8 | N/A<br>0.0<br>0.0 | 2.0030 | N/A | 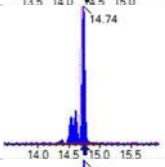 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 33046<br>( 285.0 / 185.0 ) 90444 | ( 5.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 1125.8<br>634.4 | 2.7369<br>97.5<br>97.5 | 0.4780 | N/A | 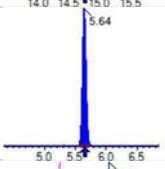 | 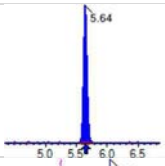 | |
| ADONA | ( 377.0 / 85.0 ) 413299<br>( 377.0 / 251.0 ) 43822 | ( 6.79 , 1.20 ) ( N/A , -0.01 , -0.2) | 2490.1<br>495.7 | 0.1060<br>101.1<br>101.1 | 0.4530 | N/A | 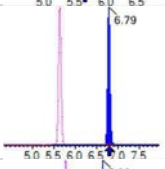 | 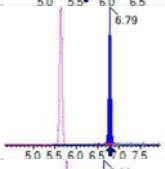 | |
| PFEESA | ( 315.0 / 135.0 ) 158771<br>( 315.0 / 83.0 ) 95912 | ( 5.99 , 1.15 ) ( N/A , -0.01 , -0.1) | 2285.3<br>270.2 | 0.6041<br>94.1<br>94.1 | 0.8870 | N/A | 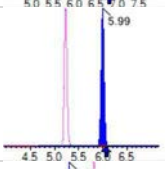 | 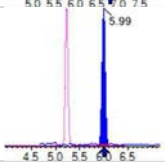 | |
| PFMPA | ( 229.0 / 85.0 ) 86584 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 2108.8 | N/A<br>0.0<br>0.0 | 1.0160 | N/A | 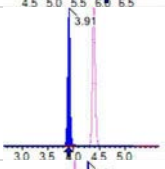 | | |
| PFMBA | ( 279.0 / 85.0 ) 186380 | ( 4.61 , 1.05 ) ( N/A , 0.01 , 0.0) | 1673.3 | N/A<br>0.0<br>0.0 | 0.9700 | N/A | 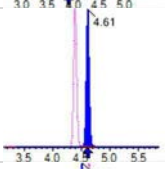 | | |
| NFDHA | ( 295.0 / 201.0 ) 93370<br>( 295.0 / 85.0 ) 98548 | ( 5.10 , 0.98 ) ( N/A , 0.00 , 0.0) | 1641.9<br>1235.3 | 1.0555<br>106.1<br>106.1 | 1.0690 | N/A | 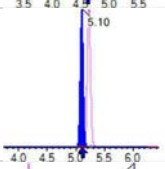 | 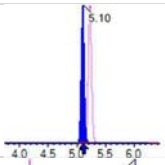 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 425787<br>( 533.0 / 353.0 ) 146975 | ( 11.18 , 1.98 ) ( N/A , 0.01 , 0.0) | 2558.3<br>1153.7 | 0.3452<br>108.3<br>108.3 | 0.4200 | N/A | 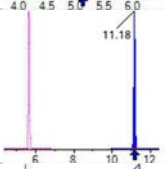 | 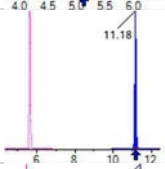 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 358272<br>( 633.0 / 453.0 ) 122752 | ( 12.65 , 2.24 ) ( N/A , 0.00 , 0.0) | 2472.0<br>1032.6 | 0.3426<br>101.0<br>101.0 | 0.4550 | N/A | 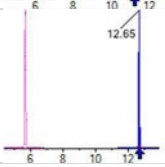 | 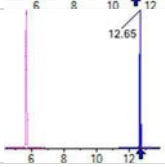 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 229740<br>( 461.0 / 381.2 ) 87792 | ( 9.44 , 0.90 ) ( N/A , 0.01 , 0.1) | 2312.9<br>11707.1 | 0.3821<br>98.9<br>98.9 | 0.4430 | N/A | 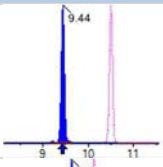 | 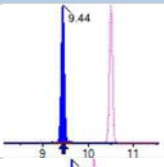 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 43054<br>( 241.0 / 117.0 ) 91972 | ( 3.96 , 0.90 ) ( N/A , 0.00 , -0.2) | 1829.7<br>660.2 | 2.1362<br>97.3<br>97.3 | 2.1630 | N/A | 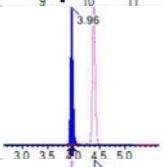 | 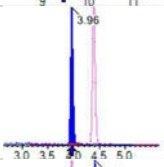 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 142287<br>( 341.0 / 217.0 ) 210281 | ( 5.65 , 1.08 ) ( N/A , -0.01 , -0.2) | 1171.9<br>849.1 | 1.4779<br>96.5<br>96.5 | 2.1260 | N/A | 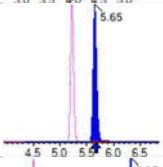 | 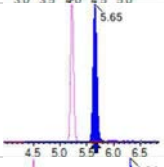 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 296746<br>( 441.0 / 337.0 ) 252083 | ( 9.35 , 1.79 ) ( N/A , 0.02 , 0.2) | 5942.8<br>13250392.4 | 0.8495<br>99.4<br>99.4 | 2.0870 | N/A | 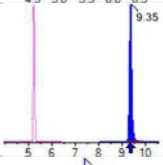 | 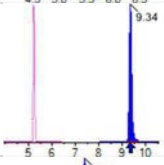 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 172769<br>( 357.2 / 243.0 ) 18678 | ( 5.90 , 1.00 ) ( -0.01 , N/A , 0.0) | 727.9<br>299.5 | 0.1081<br>100.8<br>100.8 | 0.4850 | N/A | 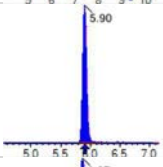 | 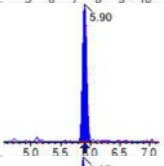 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 151786<br>( 457.2 / 343.0 ) 6616 | ( 8.67 , 1.00 ) ( -0.01 , N/A , -0.3) | 677.9<br>179.5 | 0.0436<br>97.1<br>97.1 | 0.4980 | N/A | 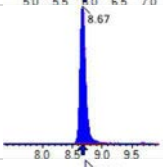 | 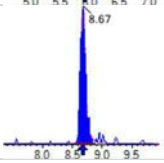 | |
| TDCA | ( 499.0 / 80.0 ) 318331 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 2136.4 | N/A<br>0.0<br>0.0 | 0.4890 | N/A | 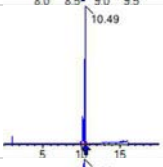 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 323037 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 1649.4 | N/A | 1.1450<br>[ 1.0000 ] | 114.5%<br>{ 116.6% } | 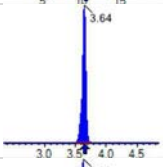 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 119925 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 5368.4 | N/A | 1.0160<br>[ 1.0000 ] | 101.6%<br>{ 104.2% } | 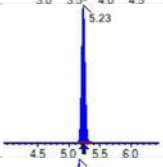 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 410964 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 6719.2 | N/A | 1.0590<br>[ 1.0000 ] | 105.9%<br>{ 104.7% } | 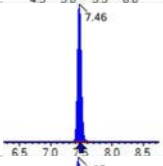 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 298322 | ( 9.05 , N/A ) ( N/A , 0.01 , N/A ) | 1523.3 | N/A | 1.0210<br>[ 1.0000 ] | 102.1%<br>{ 102.7% } | 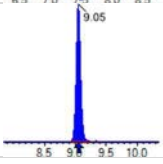 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 309296 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 24599.9 | N/A | 1.0790 [ 1.0000 ] | 107.9% { 113.6% } | 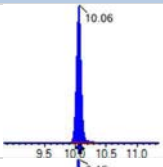  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1020358 | ( 8.15 , N/A ) ( N/A , 0.06 , N/A ) | 5835.6 | N/A | 1.0390 [ 1.0000 ] | 103.9% { 107.3% } | 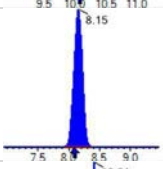  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 799049 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 3335.3 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 108.0% } | 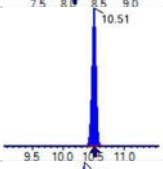  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2922788 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 109727.0 | N/A | 8.3710 [ 8.0000 ] | 104.6% { 119.8% } | 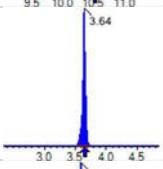  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 928942 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 6120.6 | N/A | 4.2310 [ 4.0000 ] | 105.8% { 100.4% } | 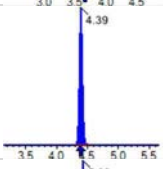  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 530264 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 11749.4 | N/A | 2.0210 [ 2.0000 ] | 101.1% { 99.1% } | 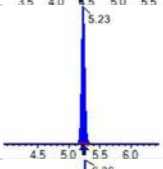  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 586880 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 5180.6 | N/A | 2.0140 [ 2.0000 ] | 100.7% { 102.9% } | 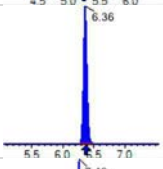  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 883058 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5945.6 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 116.7% } | 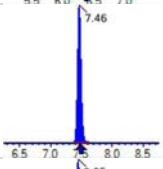  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 285138 | ( 9.05 , N/A ) ( N/A , 0.01 , N/A ) | 6659.2 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 100.4% } | 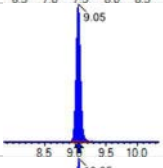  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 345915 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1675.8 | N/A | 0.9680 [ 1.0000 ] | 96.8% { 102.8% } | 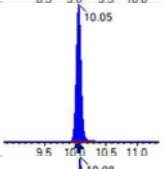  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 416572 | ( 10.98 , N/A ) ( N/A , 0.00 , N/A ) | 1014.3 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 106.3% } | 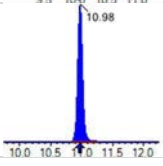  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 416908 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1379.0 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 104.5% } | 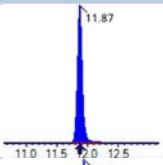 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 344034 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1219.6 | N/A | 0.8940 [ 1.0000 ] | 89.4% { 95.0% } | 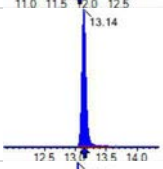 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 588510 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2798.2 | N/A | 1.8270 [ 2.0000 ] | 91.3% { 103.0% } | 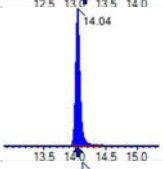 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1615177 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1232.5 | N/A | 1.9640 [ 2.0000 ] | 98.2% { 101.6% } | 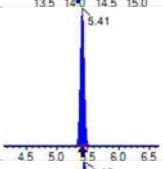 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1442698 | ( 8.15 , N/A ) ( N/A , 0.06 , N/A ) | 5802.0 | N/A | 1.9600 [ 2.0000 ] | 98.0% { 105.0% } | 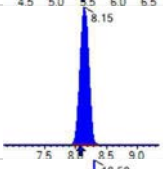 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1663183 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1522.1 | N/A | 1.9560 [ 2.0000 ] | 97.8% { 106.2% } | 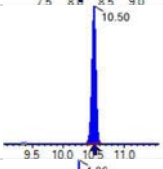 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 748709 | ( 4.86 , N/A ) ( N/A , 0.00 , N/A ) | 53.9 | N/A | 4.1380 [ 4.0000 ] | 103.5% { 107.3% } | 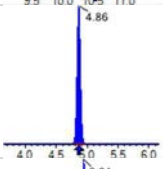 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1847080 | ( 6.94 , N/A ) ( N/A , -0.02 , N/A ) | 5883.5 | N/A | 4.1560 [ 4.0000 ] | 103.9% { 111.3% } | 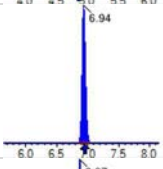 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1477518 | ( 9.37 , N/A ) ( N/A , 0.01 , N/A ) | 1686.1 | N/A | 3.7990 [ 4.0000 ] | 95.0% { 99.9% } | 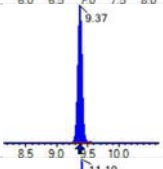 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3497358 | ( 11.10 , N/A ) ( N/A , 0.01 , N/A ) | 1518.5 | N/A | 8.3130 [ 8.0000 ] | 103.9% { 122.8% } | 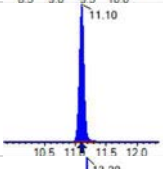 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1777416 | ( 13.29 , N/A ) ( N/A , -0.02 , N/A ) | 3787.0 | N/A | 1.9690 [ 2.0000 ] | 98.5% { 105.6% } | 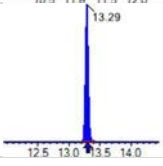 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (2)
Acquired: 2024/03/28 - 15:45

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 369985 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2420.3 | N/A | 1.8230 [ 2.0000 ] | 91.2% { 99.8% } | 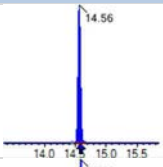 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 366514 | ( 14.89 , N/A ) ( N/A , -0.02 , N/A ) | 2737.2 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 103.0% } | 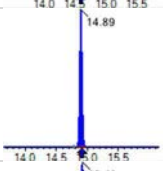 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1166984 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 3991.0 | N/A | 3.9540 [ 4.0000 ] | 98.8% { 100.7% } | 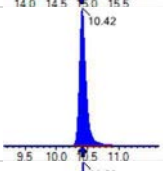 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1074413 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 2790.3 | N/A | 4.0330 [ 4.0000 ] | 100.8% { 104.0% } | 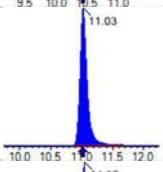 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1445300 | ( 14.35 , N/A ) ( N/A , -0.02 , N/A ) | 3088.3 | N/A | 19.0660 [ 20.0000 ] | 95.3% { 101.8% } | 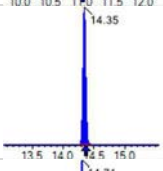 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1347446 | ( 14.71 , N/A ) ( N/A , -0.02 , N/A ) | 4435.6 | N/A | 18.9800 [ 20.0000 ] | 94.9% { 100.9% } | 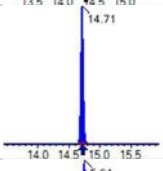 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 941627 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2470.3 | N/A | 8.2850 [ 8.0000 ] | 103.6% { 104.2% } | 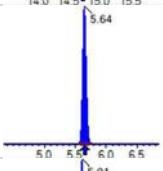 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 677271 | ( 5.91 , N/A ) ( N/A , -0.01 , N/A ) | 1607.3 | N/A | 2.0090 [ 2.0000 ] | 100.5% { 119.3% } | 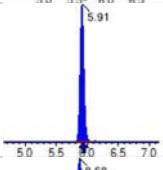 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 737759 | ( 8.68 , N/A ) ( N/A , 0.01 , N/A ) | 1148.4 | N/A | 1.9430 [ 2.0000 ] | 97.1% { 112.8% } | 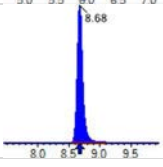 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 145514<br>( 163.0 / 69.0 ) 3863 | ( 2.49 , 0.68 ) ( N/A , 0.00 , 1.1) | 298.1<br>82.3 | 0.0265<br>96.9<br>96.9 | 2.0040 | N/A | 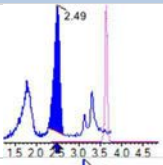 | 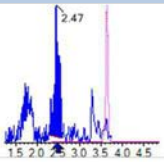 | |
| PFBA | ( 213.0 / 169.0 ) 1425799 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 999.9 | N/A<br>0.0<br>0.0 | 4.1580 | N/A | 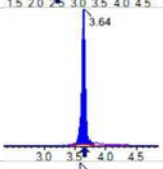 | | |
| PFPeA | ( 263.0 / 219.0 ) 476899<br>( 263.0 / 69.0 ) 6696 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1860.7<br>144.3 | 0.0140<br>118.0<br>118.0 | 2.1100 | N/A | 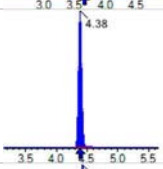 | 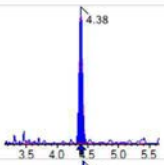 | |
| PFHxA | ( 313.0 / 269.0 ) 259371<br>( 313.0 / 119.0 ) 28876 | ( 5.22 , 1.00 ) ( 0.00 , N/A , 0.2) | 1291.2<br>581.9 | 0.1113<br>100.1<br>100.1 | 1.0520 | N/A | 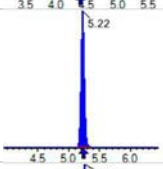 | 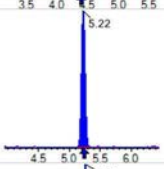 | |
| PFHpA | ( 363.0 / 319.0 ) 308156<br>( 363.0 / 169.0 ) 95195 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.1) | 1306.5<br>1624.2 | 0.3089<br>101.1<br>101.1 | 1.0480 | N/A | 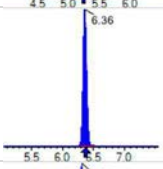 | 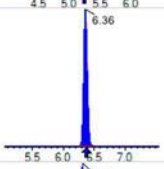 | |
| PFOA | ( 413.0 / 369.0 ) 423798<br>( 413.0 / 169.0 ) 150375 | ( 7.47 , 1.00 ) ( 0.00 , N/A , 0.0) | 634.0<br>871.9 | 0.3548<br>99.3<br>99.3 | 0.9610 | N/A | 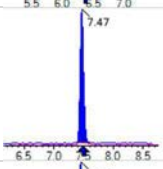 | 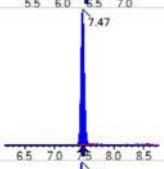 | |
| PFNA | ( 463.0 / 419.0 ) 290147<br>( 463.0 / 169.0 ) 75359 | ( 9.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 1122.7<br>716.3 | 0.2597<br>105.7<br>105.7 | 0.9470 | N/A | 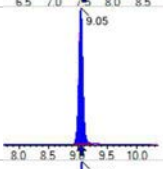 | 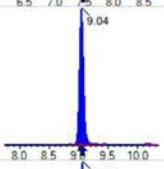 | |
| PFDA | ( 513.0 / 469.0 ) 341989<br>( 513.0 / 169.0 ) 40754 | ( 10.06 , 1.00 ) ( 0.00 , N/A , 0.0) | 2229.9<br>1987.1 | 0.1192<br>100.0<br>100.0 | 1.0380 | N/A | 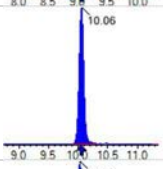 | 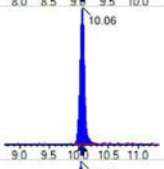 | |
| PFUnA | ( 563.0 / 519.0 ) 387879<br>( 563.0 / 169.0 ) 50654 | ( 10.98 , 1.00 ) ( 0.00 , N/A , 0.0) | 1226.3<br>445.3 | 0.1306<br>84.3<br>84.3 | 1.0320 | N/A | 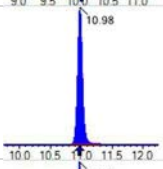 | 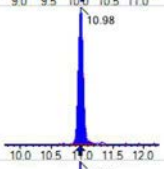 | |
| PFDoA | ( 613.0 / 569.0 ) 435851<br>( 613.0 / 169.0 ) 64674 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 1108.5<br>481.9 | 0.1484<br>97.7<br>97.7 | 1.0430 | N/A | 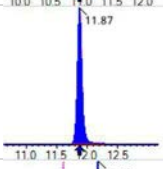 | 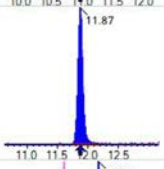 | |
| PFTrDA | ( 663.0 / 619.0 ) 421756<br>( 663.0 / 169.0 ) 104133 | ( 12.60 , 1.06 ) ( N/A , 0.00 , 0.0) | 1178.9<br>677.4 | 0.2469<br>91.7<br>91.7 | 1.0380 | N/A | 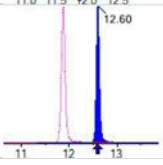 | 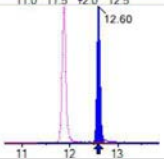 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 350549<br>( 713.0 / 169.0 ) 92196 | ( 13.14 , 1.00 ) ( 0.00 , N/A , -0.1) | 1165.3<br>556.7 | 0.2630<br>96.9<br>96.9 | 1.0270 | N/A | 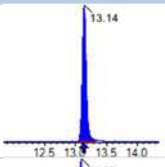 | 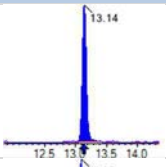 | |
| PFHxDA | ( 813.0 / 769.0 ) 273645<br>( 813.0 / 169.0 ) 71604 | ( 14.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 1080.5<br>482.6 | 0.2617<br>100.0<br>100.0 | 0.9290 | N/A | 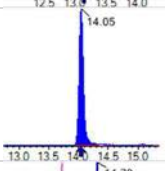 | 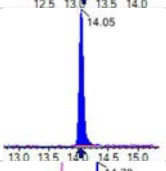 | |
| PFODA | ( 913.0 / 869.0 ) 199547<br>( 913.0 / 169.0 ) 57993 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.3) | 619.5<br>240.4 | 0.2906<br>92.7<br>92.7 | 1.0700 | N/A | 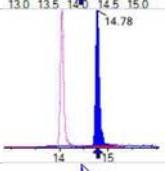 | 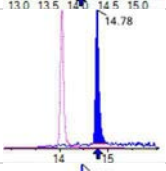 | |
| PFBS | ( 299.0 / 80.0 ) 376594<br>( 299.0 / 99.0 ) 275015 | ( 5.40 , 1.00 ) ( 0.00 , N/A , -0.1) | 1997.1<br>1158.3 | 0.7303<br>98.6<br>98.6 | 0.9530 | N/A | 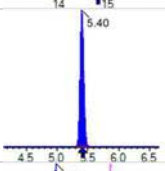 | 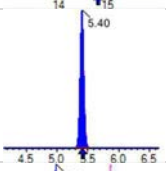 | |
| PFPeS | ( 349.0 / 80.0 ) 1027089<br>( 349.0 / 99.0 ) 355133 | ( 6.68 , 0.83 ) ( N/A , -0.01 , 0.0) | 2004.8<br>1922.2 | 0.3458<br>101.2<br>101.2 | 0.9670 | N/A | 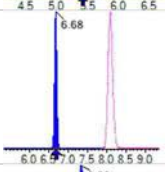 | 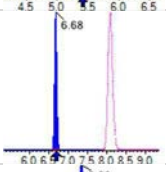 | |
| PFHxS | ( 399.0 / 80.0 ) 1175433<br>( 399.0 / 99.0 ) 378742 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.0) | 2231.6<br>2489.3 | 0.3222<br>98.2<br>98.2 | 0.9080 | N/A | 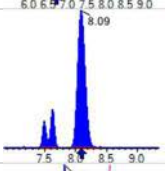 | 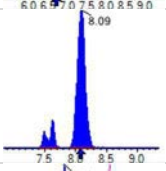 | |
| PFHpS | ( 449.0 / 80.0 ) 997685<br>( 449.0 / 99.0 ) 264661 | ( 9.54 , 0.91 ) ( N/A , 0.01 , 0.0) | 2687.4<br>2093.3 | 0.2653<br>101.7<br>101.7 | 0.9600 | N/A | 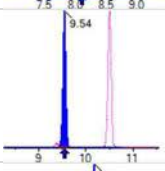 | 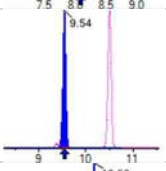 | |
| PFOS | ( 499.0 / 80.0 ) 908024<br>( 499.0 / 99.0 ) 210627 | ( 10.50 , 1.00 ) ( 0.00 , N/A , -0.1) | 1780.4<br>2945.9 | 0.2320<br>100.4<br>100.4 | 0.9000 | N/A | 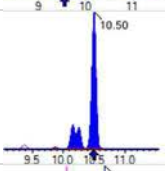 | 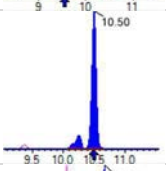 | |
| PFNS | ( 549.0 / 80.0 ) 909278<br>( 549.0 / 99.0 ) 249520 | ( 11.39 , 1.08 ) ( N/A , 0.01 , 0.1) | 2172.1<br>1187.4 | 0.2744<br>102.4<br>102.4 | 0.9880 | N/A | 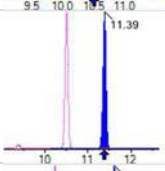 | 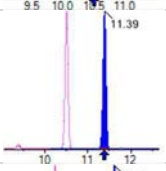 | |
| PFDS | ( 599.0 / 80.0 ) 1168204<br>( 599.0 / 99.0 ) 296179 | ( 12.19 , 1.16 ) ( N/A , 0.01 , -0.1) | 2510.7<br>1223.7 | 0.2535<br>99.6<br>99.6 | 1.0390 | N/A | 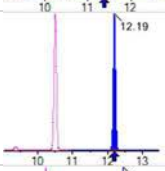 | 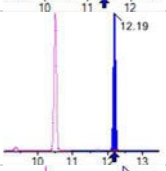 | |
| PFDoS | ( 699.0 / 80.0 ) 1112363<br>( 699.0 / 99.0 ) 254718 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.0) | 2874.9<br>1923.8 | 0.2290<br>102.5<br>102.5 | 1.0220 | N/A | 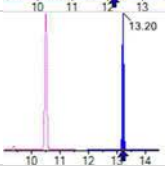 | 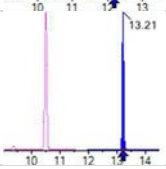 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1902835<br>( 327.0 / 81.0 ) 1699760 | ( 4.85 , 1.00 ) ( 0.00 , N/A , 0.0) | 3617.0<br>3087.8 | 0.8933<br>104.7<br>104.7 | 3.7550 | N/A | 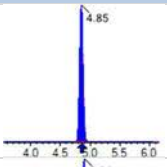 | 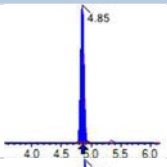 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1562397<br>( 427.0 / 81.0 ) 2137487 | ( 6.94 , 1.00 ) ( 0.00 , N/A , 0.2) | 5404.1<br>4640.0 | 1.3681<br>106.1<br>106.1 | 3.7380 | N/A | 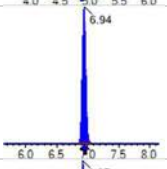 | 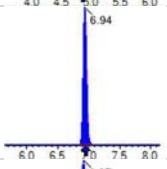 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1685864<br>( 527.0 / 81.0 ) 1749456 | ( 9.37 , 1.00 ) ( -0.01 , N/A , 0.1) | 3003.5<br>3022.9 | 1.0377<br>94.0<br>94.0 | 3.9330 | N/A | 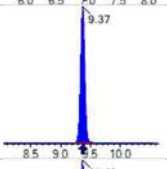 | 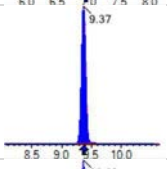 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1406760<br>( 627.0 / 81.0 ) 1987463 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.1) | 1478.3<br>1746.3 | 1.4128<br>98.3<br>98.3 | 3.9320 | N/A | 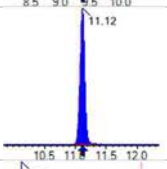 | 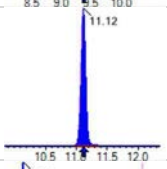 | |
| PFBSA | ( 297.9 / 78.0 ) 613429<br>( 297.9 / 278.0 ) 1175 | ( 5.55 , 0.38 ) ( N/A , -0.01 , -1.9) | 1321.9<br>11.3 | 0.0019<br>147.9<br>147.9 | 0.9760 | N/A | 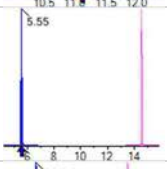 | 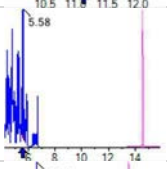 | |
| PFHxSA | ( 397.9 / 78.0 ) 1246780<br>( 397.9 / 378.0 ) 3972 | ( 11.23 , 0.75 ) ( N/A , -0.01 , 0.2) | 1831.4<br>168.1 | 0.0032<br>78.9<br>78.9 | 1.0580 | N/A | 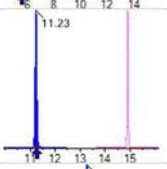 | 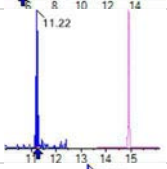 | |
| PFOSA | ( 498.0 / 78.0 ) 936174<br>( 498.0 / 478.0 ) 13937 | ( 13.29 , 1.00 ) ( -0.01 , N/A , 0.0) | 2398.2<br>342.3 | 0.0149<br>101.3<br>101.3 | 1.0440 | N/A | 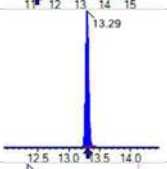 | 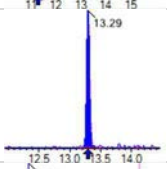 | |
| TFSI | ( 279.7 / 147.0 ) 1495168<br>( 279.7 / 211.0 ) 133745 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.2) | 86.1<br>2322.9 | 0.0895<br>101.1<br>101.1 | 0.9550 | N/A | 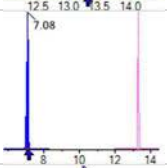 | 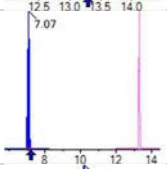 | |
| NMeFOSA | ( 512.0 / 219.0 ) 757556<br>( 512.0 / 169.0 ) 575082 | ( 14.58 , 1.00 ) ( 0.00 , N/A , 1.2) | 3001.3<br>1365.0 | 0.7591<br>99.0<br>99.0 | 4.1160 | N/A | 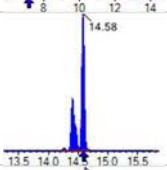 | 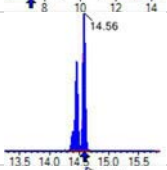 | |
| NEtFOSA | ( 526.0 / 219.0 ) 848996<br>( 526.0 / 169.0 ) 1092083 | ( 14.91 , 1.00 ) ( 0.01 , N/A , 2.2) | 3155.5<br>2671.5 | 1.2863<br>102.9<br>102.9 | 4.0050 | N/A | 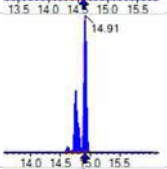 | 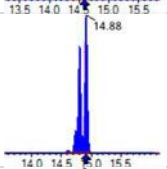 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 295170<br>( 570.0 / 483.0 ) 135509 | ( 10.43 , 1.00 ) ( 0.00 , N/A , -0.1) | 15553.3<br>2463.7 | 0.4591<br>98.9<br>98.9 | 1.0520 | N/A | 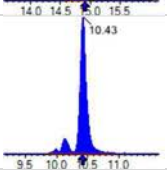 | 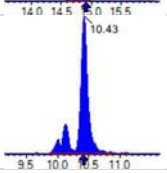 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 278378<br>( 584.0 / 526.0 ) 162542 | ( 11.04 , 1.00 ) ( 0.01 , N/A , 0.3) | 1771.5<br>526.6 | 0.5839<br>97.3<br>97.3 | 1.0500 | N/A | 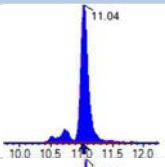 | 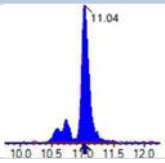 | |
| NMeFOSE | ( 616.0 / 59.0 ) 339675 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 1402.9 | N/A<br>0.0<br>0.0 | 3.9500 | N/A | 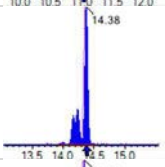 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 281541 | ( 14.75 , 1.00 ) ( 0.02 , N/A , 0.0) | 1360.0 | N/A<br>0.0<br>0.0 | 3.9800 | N/A | 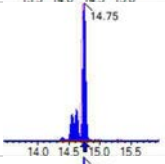 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 70438<br>( 285.0 / 185.0 ) 185220 | ( 5.64 , 1.00 ) ( -0.01 , N/A , 0.0) | 1210.6<br>1237.0 | 2.6295<br>93.7<br>93.7 | 1.0390 | N/A | 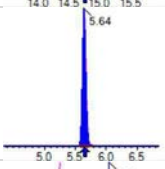 | 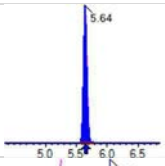 | |
| ADONA | ( 377.0 / 85.0 ) 859878<br>( 377.0 / 251.0 ) 91610 | ( 6.79 , 1.20 ) ( N/A , -0.01 , -0.1) | 2767.7<br>764.9 | 0.1065<br>101.6<br>101.6 | 0.9620 | N/A | 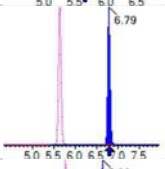 | 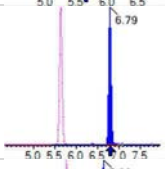 | |
| PFEESA | ( 315.0 / 135.0 ) 323289<br>( 315.0 / 83.0 ) 195259 | ( 5.99 , 1.15 ) ( N/A , -0.01 , 0.0) | 2106.9<br>569.7 | 0.6040<br>94.1<br>94.1 | 1.8020 | N/A | 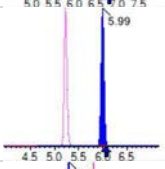 | 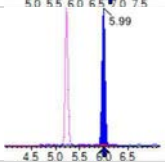 | |
| PFMPA | ( 229.0 / 85.0 ) 175871 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 5066.9 | N/A<br>0.0<br>0.0 | 2.1160 | N/A | 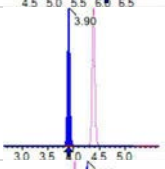 | | |
| PFMBA | ( 279.0 / 85.0 ) 352957 | ( 4.60 , 1.05 ) ( N/A , 0.00 , 0.0) | 2717.3 | N/A<br>0.0<br>0.0 | 1.8850 | N/A | 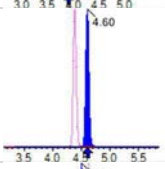 | | |
| NFDHA | ( 295.0 / 201.0 ) 177168<br>( 295.0 / 85.0 ) 181976 | ( 5.10 , 0.98 ) ( N/A , -0.01 , 0.2) | 3407.4<br>1396.4 | 1.0271<br>103.3<br>103.3 | 2.0230 | N/A | 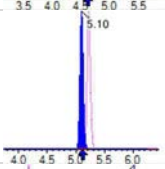 | 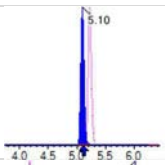 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 921016<br>( 533.0 / 353.0 ) 292103 | ( 11.18 , 1.98 ) ( N/A , 0.01 , 0.1) | 3301.2<br>2335.6 | 0.3172<br>99.5<br>99.5 | 0.9270 | N/A | 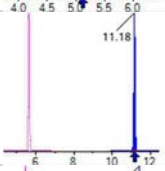 | 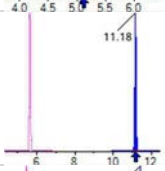 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 767652<br>( 633.0 / 453.0 ) 260925 | ( 12.66 , 2.24 ) ( N/A , 0.01 , 0.0) | 3575.1<br>2371.9 | 0.3399<br>100.2<br>100.2 | 0.9950 | N/A | 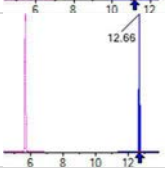 | 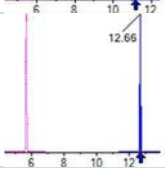 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 467142<br>( 461.0 / 381.2 ) 182220 | ( 9.44 , 0.90 ) ( N/A , 0.01 , 0.2) | 3706.9<br>3376.2 | 0.3901<br>101.0<br>101.0 | 0.8620 | N/A | 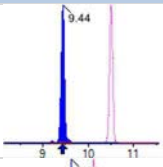 | 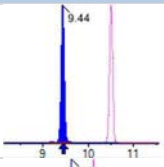 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 78844<br>( 241.0 / 117.0 ) 192973 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.0) | 1916.4<br>1101.3 | 2.4475<br>111.5<br>111.5 | 4.0630 | N/A | 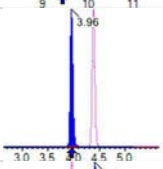 | 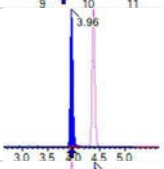 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 269659<br>( 341.0 / 217.0 ) 438937 | ( 5.65 , 1.08 ) ( N/A , -0.01 , 0.1) | 1425.7<br>1009.2 | 1.6277<br>106.3<br>106.3 | 4.0180 | N/A | 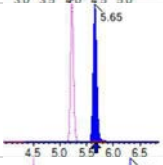 | 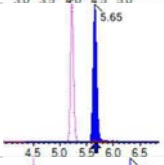 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 599610<br>( 441.0 / 337.0 ) 538412 | ( 9.33 , 1.79 ) ( N/A , 0.00 , 0.1) | 10806.0<br>11527.9 | 0.8979<br>105.1<br>105.1 | 4.2060 | N/A | 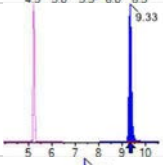 | 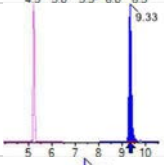 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 359955<br>( 357.2 / 243.0 ) 38813 | ( 5.90 , 1.00 ) ( -0.01 , N/A , 0.0) | 1073.6<br>490.0 | 0.1078<br>100.6<br>100.6 | 1.0040 | N/A | 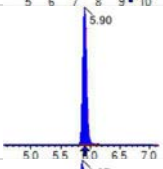 | 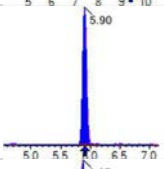 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 314580<br>( 457.2 / 343.0 ) 11976 | ( 8.67 , 1.00 ) ( 0.00 , N/A , 0.0) | 970.9<br>284.9 | 0.0381<br>84.8<br>84.8 | 1.0180 | N/A | 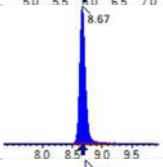 | 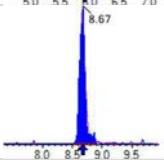 | |
| TDCA | ( 499.0 / 80.0 ) 662831 | ( 10.49 , 1.00 ) ( N/A , 0.01 , 0.0) | 5021.6 | N/A<br>0.0<br>0.0 | 0.9730 | N/A | 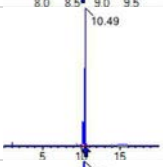 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 314166 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 1805.0 | N/A | 1.1130 [ 1.0000 ] | 111.3% { 113.4% } | 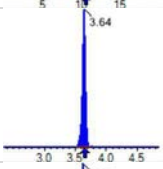 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 125606 | ( 5.23 , N/A ) ( N/A , -0.01 , N/A ) | 15935526.7 | N/A | 1.0640 [ 1.0000 ] | 106.4% { 109.2% } | 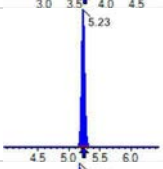 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 424058 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5688.3 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 108.0% } | 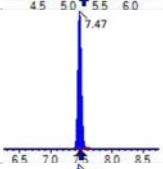 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 311748 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 1913.2 | N/A | 1.0670 [ 1.0000 ] | 106.7% { 107.3% } | 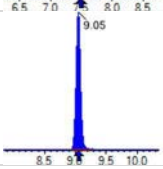 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 300394 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 5494.7 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 110.4% } | 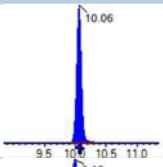 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1056354 | ( 8.10 , N/A ) ( N/A , 0.00 , N/A ) | 7602.5 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 111.0% } | 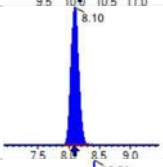 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 828067 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 2686.0 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 111.9% } | 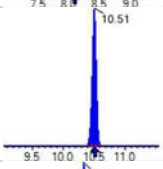 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2566437 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 134366.8 | N/A | 7.5580 [ 8.0000 ] | 94.5% { 105.2% } | 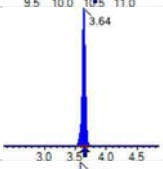 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 905587 | ( 4.38 , N/A ) ( N/A , 0.00 , N/A ) | 5048.4 | N/A | 3.9380 [ 4.0000 ] | 98.4% { 97.9% } | 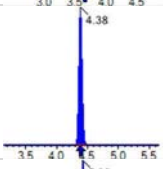 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 531649 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 57010.9 | N/A | 1.9350 [ 2.0000 ] | 96.7% { 99.3% } | 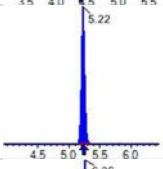 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 592663 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 6270.5 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 103.9% } | 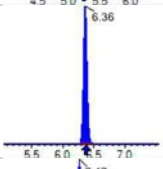 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 878219 | ( 7.47 , N/A ) ( N/A , -0.01 , N/A ) | 7252.7 | N/A | 1.9540 [ 2.0000 ] | 97.7% { 116.0% } | 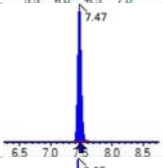 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 304768 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 5045.9 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 107.3% } | 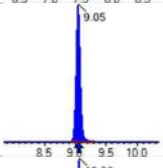 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 329781 | ( 10.06 , N/A ) ( N/A , 0.01 , N/A ) | 1797.9 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 98.0% } | 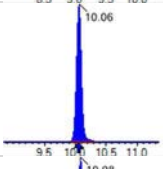 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 413773 | ( 10.98 , N/A ) ( N/A , 0.01 , N/A ) | 1043.0 | N/A | 1.0050 [ 1.0000 ] | 100.5% { 105.5% } | 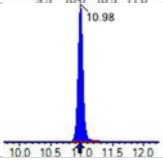 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 416497 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1405.5 | N/A | 0.9860 [ 1.0000 ] | 98.6% { 104.4% } | 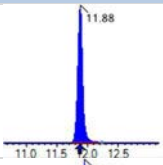  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 365648 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1378.9 | N/A | 0.9780 [ 1.0000 ] | 97.8% { 100.9% } | 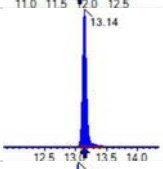  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 628692 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2983.9 | N/A | 2.0090 [ 2.0000 ] | 100.5% { 110.0% } | 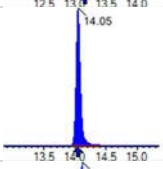  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1607606 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1368.2 | N/A | 1.8880 [ 2.0000 ] | 94.4% { 101.2% } | 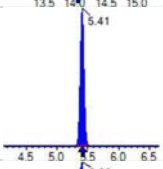  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1477903 | ( 8.09 , N/A ) ( N/A , 0.01 , N/A ) | 5393.3 | N/A | 1.9390 [ 2.0000 ] | 97.0% { 107.6% } | 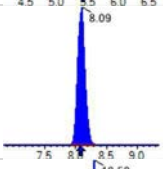  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1739176 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1505.4 | N/A | 1.9740 [ 2.0000 ] | 98.7% { 111.1% } | 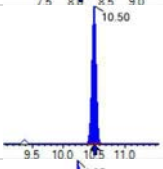  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 767667 | ( 4.85 , N/A ) ( N/A , -0.01 , N/A ) | 64.2 | N/A | 4.0980 [ 4.0000 ] | 102.5% { 110.0% } | 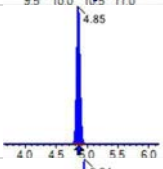  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1969693 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 6493.7 | N/A | 4.2810 [ 4.0000 ] | 107.0% { 118.7% } | 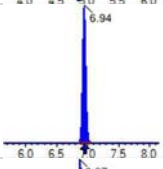  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1742876 | ( 9.37 , N/A ) ( N/A , 0.01 , N/A ) | 2037.4 | N/A | 4.3290 [ 4.0000 ] | 108.2% { 117.9% } | 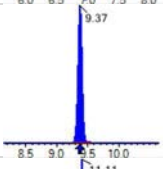  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3604522 | ( 11.11 , N/A ) ( N/A , 0.01 , N/A ) | 1564.9 | N/A | 8.2760 [ 8.0000 ] | 103.5% { 126.6% } | 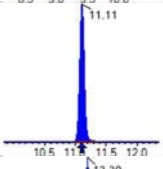  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1853258 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3817.1 | N/A | 1.9820 [ 2.0000 ] | 99.1% { 110.1% } | 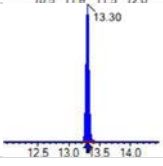  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (3)
Acquired: 2024/03/28 - 16:06

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 414163 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 2724.4 | N/A | 1.9700 [ 2.0000 ] | 98.5% { 111.7% } | 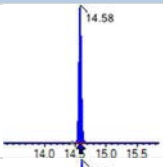  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 374296 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2901.4 | N/A | 1.9470 [ 2.0000 ] | 97.4% { 105.2% } | 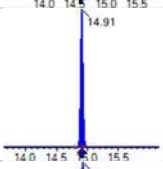  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1216766 | ( 10.42 , N/A ) ( N/A , 0.01 , N/A ) | 3570.8 | N/A | 3.9780 [ 4.0000 ] | 99.4% { 105.0% } | 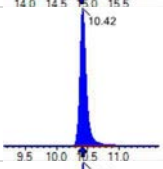  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1093128 | ( 11.03 , N/A ) ( N/A , 0.00 , N/A ) | 2431.9 | N/A | 3.9600 [ 4.0000 ] | 99.0% { 105.8% } | 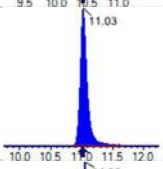  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1588712 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3552.1 | N/A | 20.2240 [ 20.0000 ] | 101.1% { 111.9% } | 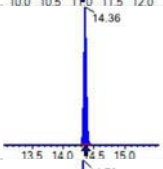  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1485051 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 4971.9 | N/A | 20.1850 [ 20.0000 ] | 100.9% { 111.2% } | 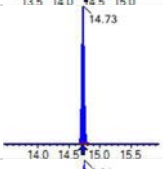  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 923542 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2227.0 | N/A | 7.7590 [ 8.0000 ] | 97.0% { 102.2% } | 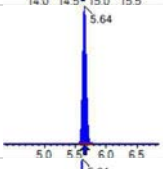  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 682194 | ( 5.91 , N/A ) ( N/A , -0.01 , N/A ) | 1763.2 | N/A | 2.0840 [ 2.0000 ] | 104.2% { 120.2% } | 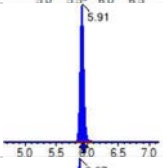  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 747738 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1167.0 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 114.3% } | 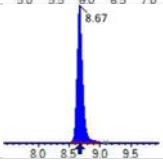  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 280958<br>( 163.0 / 69.0 ) 8406 | ( 2.49 , 0.68 ) ( N/A , 0.00 , -0.6) | 509.8<br>111.0 | 0.0299<br>109.2<br>109.2 | 4.1210 | N/A | 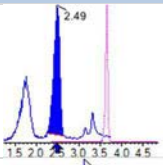 | 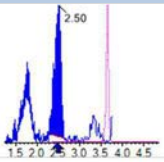 | |
| PFBA | ( 213.0 / 169.0 ) 2546709 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 1671.4 | N/A<br>0.0<br>0.0 | 8.2280 | N/A | 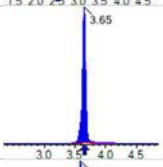 | | |
| PFPeA | ( 263.0 / 219.0 ) 859484<br>( 263.0 / 69.0 ) 10121 | ( 4.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 2509.6<br>171.5 | 0.0118<br>99.0<br>99.0 | 3.9160 | N/A | 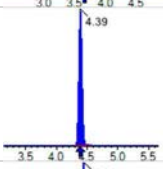 | 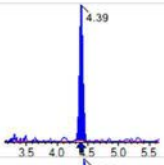 | |
| PFHxA | ( 313.0 / 269.0 ) 477184<br>( 313.0 / 119.0 ) 58579 | ( 5.24 , 1.00 ) ( 0.00 , N/A , 0.1) | 1609.0<br>802.0 | 0.1228<br>110.4<br>110.4 | 2.0720 | N/A | 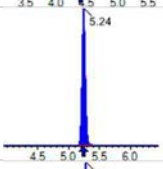 | 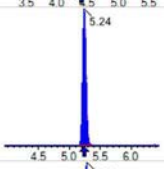 | |
| PFHpA | ( 363.0 / 319.0 ) 561132<br>( 363.0 / 169.0 ) 174177 | ( 6.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 1684.5<br>1767.2 | 0.3104<br>101.6<br>101.6 | 1.9210 | N/A | 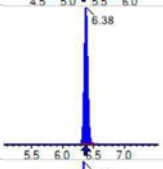 | 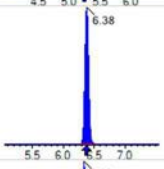 | |
| PFOA | ( 413.0 / 369.0 ) 818445<br>( 413.0 / 169.0 ) 299700 | ( 7.49 , 1.00 ) ( 0.00 , N/A , 0.1) | 834.7<br>1378.5 | 0.3662<br>102.4<br>102.4 | 2.0250 | N/A | 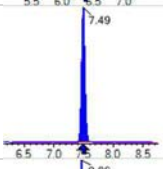 | 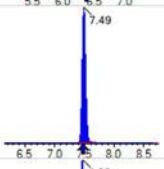 | |
| PFNA | ( 463.0 / 419.0 ) 586380<br>( 463.0 / 169.0 ) 148433 | ( 9.06 , 1.00 ) ( 0.00 , N/A , -0.2) | 1740.8<br>1612.6 | 0.2531<br>103.0<br>103.0 | 2.1240 | N/A | 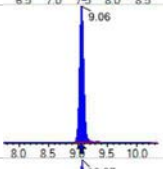 | 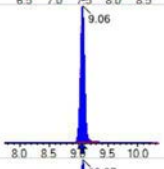 | |
| PFDA | ( 513.0 / 469.0 ) 666543<br>( 513.0 / 169.0 ) 80690 | ( 10.07 , 1.00 ) ( 0.00 , N/A , 0.0) | 3136.9<br>5619.1 | 0.1211<br>101.6<br>101.6 | 2.0720 | N/A | 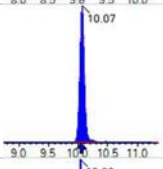 | 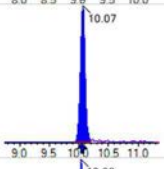 | |
| PFUnA | ( 563.0 / 519.0 ) 742182<br>( 563.0 / 169.0 ) 113773 | ( 10.99 , 1.00 ) ( 0.00 , N/A , 0.1) | 1155.6<br>848.9 | 0.1533<br>99.0<br>99.0 | 2.0030 | N/A | 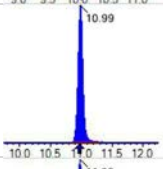 | 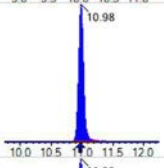 | |
| PFDoA | ( 613.0 / 569.0 ) 847736<br>( 613.0 / 169.0 ) 129433 | ( 11.88 , 1.00 ) ( 0.00 , N/A , 0.0) | 1362.0<br>801.0 | 0.1527<br>100.5<br>100.5 | 2.0770 | N/A | 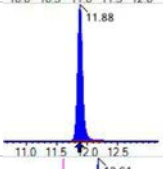 | 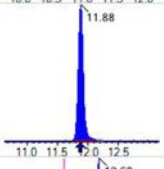 | |
| PFTrDA | ( 663.0 / 619.0 ) 850384<br>( 663.0 / 169.0 ) 217072 | ( 12.61 , 1.06 ) ( N/A , 0.01 , 0.0) | 1342.5<br>919.6 | 0.2553<br>94.8<br>94.8 | 2.1430 | N/A | 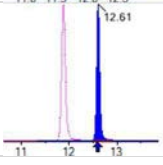 | 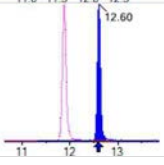 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 692145<br>( 713.0 / 169.0 ) 182569 | ( 13.15 , 1.00 ) ( 0.00 , N/A , 0.0) | 1403.5<br>850.8 | 0.2638<br>97.2<br>97.2 | 1.9780 | N/A | 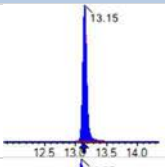 | 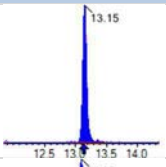 | |
| PFHxDA | ( 813.0 / 769.0 ) 566500<br>( 813.0 / 169.0 ) 153346 | ( 14.05 , 1.00 ) ( 0.00 , N/A , 0.1) | 1407.9<br>696.7 | 0.2707<br>103.5<br>103.5 | 1.9940 | N/A | 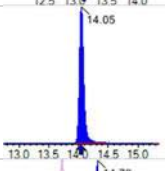 | 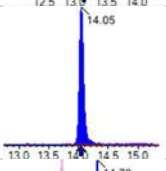 | |
| PFODA | ( 913.0 / 869.0 ) 386961<br>( 913.0 / 169.0 ) 117391 | ( 14.78 , 1.05 ) ( N/A , 0.01 , 0.0) | 1224.2<br>477.9 | 0.3034<br>96.8<br>96.8 | 2.1500 | N/A | 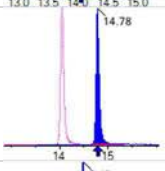 | 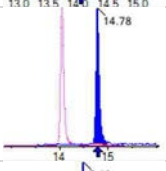 | |
| PFBS | ( 299.0 / 80.0 ) 679819<br>( 299.0 / 99.0 ) 506378 | ( 5.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 2729.6<br>1826.6 | 0.7449<br>100.6<br>100.6 | 1.7600 | N/A | 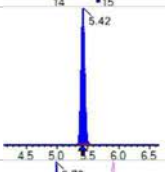 | 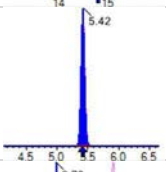 | |
| PFPeS | ( 349.0 / 80.0 ) 1932428<br>( 349.0 / 99.0 ) 672651 | ( 6.70 , 0.82 ) ( N/A , 0.01 , -0.1) | 3746.3<br>3772.4 | 0.3481<br>101.9<br>101.9 | 1.9670 | N/A | 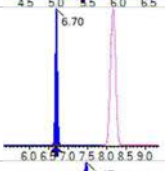 | 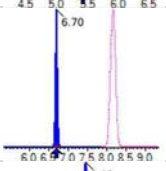 | |
| PFHxS | ( 399.0 / 80.0 ) 2208377<br>( 399.0 / 99.0 ) 729906 | ( 8.17 , 1.00 ) ( 0.00 , N/A , 0.2) | 2663.2<br>2994.9 | 0.3305<br>100.7<br>100.7 | 1.8440 | N/A | 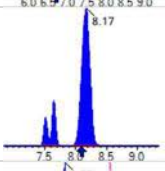 | 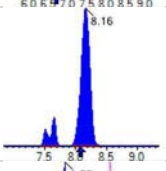 | |
| PFHpS | ( 449.0 / 80.0 ) 1978707<br>( 449.0 / 99.0 ) 521853 | ( 9.55 , 0.91 ) ( N/A , 0.02 , 0.1) | 2956.0<br>2403.5 | 0.2637<br>101.1<br>101.1 | 2.0790 | N/A | 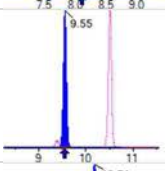 | 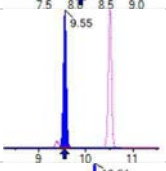 | |
| PFOS | ( 499.0 / 80.0 ) 1809820<br>( 499.0 / 99.0 ) 429080 | ( 10.51 , 1.00 ) ( 0.00 , N/A , 0.0) | 2557.0<br>6203.8 | 0.2371<br>102.6<br>102.6 | 1.9570 | N/A | 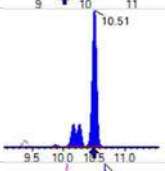 | 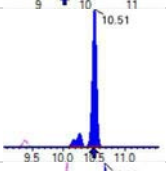 | |
| PFNS | ( 549.0 / 80.0 ) 1711402<br>( 549.0 / 99.0 ) 479185 | ( 11.39 , 1.08 ) ( N/A , 0.01 , -0.1) | 2257.9<br>1855.6 | 0.2800<br>104.5<br>104.5 | 2.0300 | N/A | 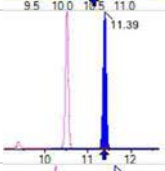 | 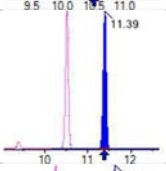 | |
| PFDS | ( 599.0 / 80.0 ) 2303005<br>( 599.0 / 99.0 ) 605086 | ( 12.20 , 1.16 ) ( N/A , 0.01 , 0.1) | 3615.0<br>2237.4 | 0.2627<br>103.2<br>103.2 | 2.2350 | N/A | 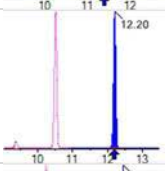 | 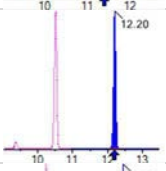 | |
| PFDoS | ( 699.0 / 80.0 ) 2188537<br>( 699.0 / 99.0 ) 513707 | ( 13.21 , 1.26 ) ( N/A , 0.01 , 0.1) | 4641.7<br>3226.0 | 0.2347<br>105.0<br>105.0 | 2.1950 | N/A | 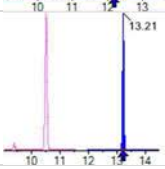 | 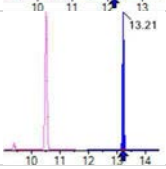 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 3326281<br>( 327.0 / 81.0 ) 3107523 | ( 4.87 , 1.00 ) ( 0.00 , N/A , 0.2) | 5254.9<br>3844.4 | 0.9342<br>109.5<br>109.5 | 7.2450 | N/A | 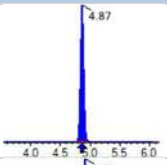 | 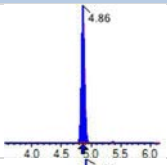 | |
| 6:2FTS | ( 427.0 / 407.0 ) 3086997<br>( 427.0 / 81.0 ) 3757029 | ( 6.96 , 1.00 ) ( 0.00 , N/A , 0.1) | 5270.6<br>7414.4 | 1.2171<br>94.4<br>94.4 | 8.0350 | N/A | 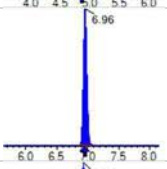 | 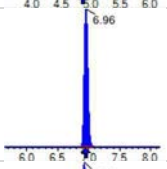 | |
| 8:2FTS | ( 527.0 / 507.0 ) 3242856<br>( 527.0 / 81.0 ) 3257495 | ( 9.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3507.6<br>2613.9 | 1.0045<br>91.0<br>91.0 | 8.3810 | N/A | 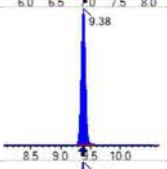 | 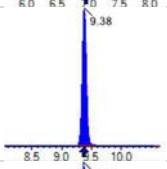 | |
| 10:2FTS | ( 627.0 / 607.0 ) 2562664<br>( 627.0 / 81.0 ) 3719670 | ( 11.12 , 1.00 ) ( 0.01 , N/A , 0.3) | 1499.1<br>1492.2 | 1.4515<br>101.0<br>101.0 | 7.9260 | N/A | 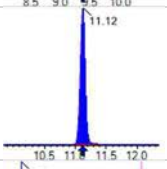 | 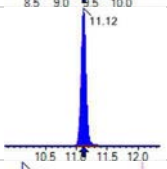 | |
| PFBSA | ( 297.9 / 78.0 ) 1212729<br>( 297.9 / 278.0 ) 1709 | ( 5.57 , 0.38 ) ( N/A , 0.01 , -0.2) | 1379.5<br>16.7 | 0.0014<br>108.8<br>108.8 | 1.9740 | N/A | 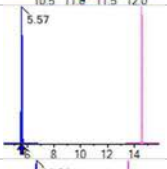 | 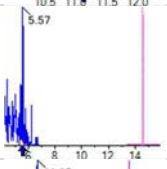 | |
| PFHxSA | ( 397.9 / 78.0 ) 2487712<br>( 397.9 / 378.0 ) 9746 | ( 11.24 , 0.75 ) ( N/A , 0.01 , -0.3) | 2093.3<br>373.8 | 0.0039<br>97.0<br>97.0 | 2.0930 | N/A | 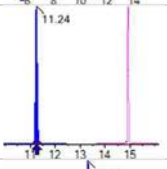 | 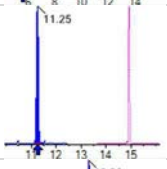 | |
| PFOSA | ( 498.0 / 78.0 ) 1799808<br>( 498.0 / 478.0 ) 24039 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.1) | 2681.0<br>450.1 | 0.0134<br>90.8<br>90.8 | 2.0330 | N/A | 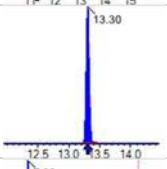 | 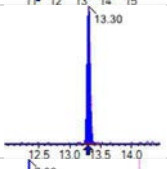 | |
| TFSI | ( 279.7 / 147.0 ) 3051709<br>( 279.7 / 211.0 ) 267670 | ( 7.09 , 0.53 ) ( N/A , 0.01 , 0.0) | 83.5<br>166407.7 | 0.0877<br>99.1<br>99.1 | 1.9730 | N/A | 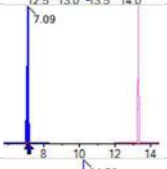 | 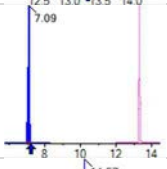 | |
| NMeFOSA | ( 512.0 / 219.0 ) 1496986<br>( 512.0 / 169.0 ) 1143838 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 1.4) | 3969.6<br>1905.8 | 0.7641<br>99.7<br>99.7 | 8.3200 | N/A | 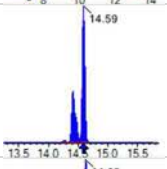 | 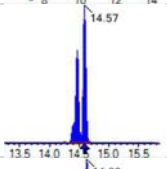 | |
| NEtFOSA | ( 526.0 / 219.0 ) 1759136<br>( 526.0 / 169.0 ) 2199535 | ( 14.93 , 1.00 ) ( 0.01 , N/A , 2.1) | 3999.2<br>3622.7 | 1.2503<br>100.0<br>100.0 | 8.2220 | N/A | 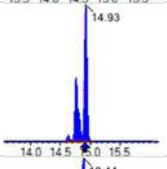 | 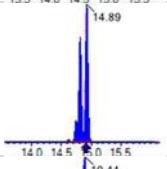 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 538209<br>( 570.0 / 483.0 ) 263265 | ( 10.44 , 1.00 ) ( 0.01 , N/A , 0.1) | 641.0<br>2844.9 | 0.4891<br>105.4<br>105.4 | 1.9660 | N/A | 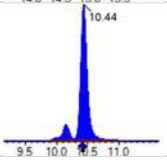 | 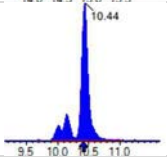 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 536778<br>( 584.0 / 526.0 ) 318100 | ( 11.05 , 1.00 ) ( 0.01 , N/A , 0.0) | 2328.7<br>645.1 | 0.5926<br>98.8<br>98.8 | 2.0570 | N/A | 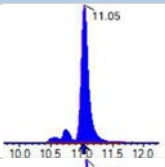 | 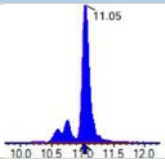 | |
| NMeFOSE | ( 616.0 / 59.0 ) 695855 | ( 14.39 , 1.00 ) ( 0.02 , N/A , 0.0) | 1783.3 | N/A<br>0.0<br>0.0 | 8.3670 | N/A | 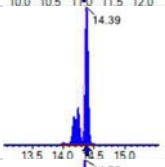 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 572559 | ( 14.76 , 1.00 ) ( 0.02 , N/A , 0.0) | 2146.3 | N/A<br>0.0<br>0.0 | 8.2890 | N/A | 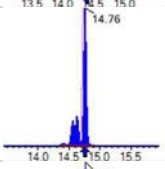 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 140562<br>( 285.0 / 185.0 ) 367785 | ( 5.66 , 1.00 ) ( 0.00 , N/A , 0.2) | 1874.9<br>1550.0 | 2.6165<br>93.2<br>93.2 | 2.1710 | N/A | 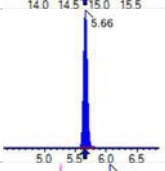 | 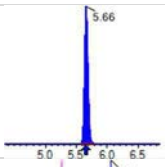 | |
| ADONA | ( 377.0 / 85.0 ) 1652515<br>( 377.0 / 251.0 ) 171701 | ( 6.81 , 1.20 ) ( N/A , 0.01 , 0.1) | 2811.0<br>1192.7 | 0.1039<br>99.1<br>99.1 | 1.9360 | N/A | 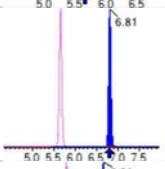 | 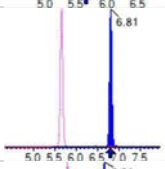 | |
| PFEESA | ( 315.0 / 135.0 ) 620578<br>( 315.0 / 83.0 ) 386374 | ( 6.01 , 1.15 ) ( N/A , 0.01 , 0.0) | 3273.2<br>978.1 | 0.6226<br>97.0<br>97.0 | 3.7040 | N/A | 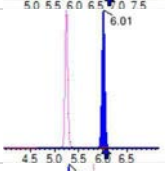 | 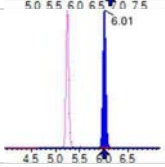 | |
| PFMPA | ( 229.0 / 85.0 ) 326561 | ( 3.91 , 0.89 ) ( N/A , 0.00 , 0.0) | 4533.8 | N/A<br>0.0<br>0.0 | 4.0470 | N/A | 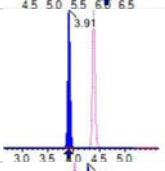 | | |
| PFMBA | ( 279.0 / 85.0 ) 792058 | ( 4.61 , 1.05 ) ( N/A , 0.01 , 0.0) | 4157.4 | N/A<br>0.0<br>0.0 | 4.3580 | N/A | 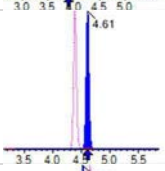 | | |
| NFDHA | ( 295.0 / 201.0 ) 359159<br>( 295.0 / 85.0 ) 356401 | ( 5.12 , 0.98 ) ( N/A , 0.01 , 0.1) | 3656.1<br>2166.3 | 0.9923<br>99.8<br>99.8 | 4.3920 | N/A | 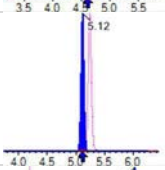 | 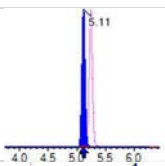 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 1848172<br>( 533.0 / 353.0 ) 593017 | ( 11.19 , 1.98 ) ( N/A , 0.01 , 0.1) | 2707.6<br>2895.5 | 0.3209<br>100.6<br>100.6 | 1.9480 | N/A | 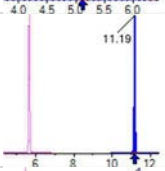 | 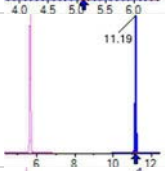 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 1503185<br>( 633.0 / 453.0 ) 520004 | ( 12.66 , 2.24 ) ( N/A , 0.01 , -0.1) | 3930.2<br>2908.8 | 0.3459<br>102.0<br>102.0 | 2.0390 | N/A | 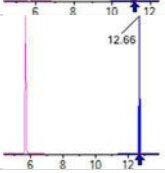 | 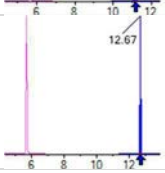 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 959824<br>( 461.0 / 381.2 ) 360156 | ( 9.45 , 0.90 ) ( N/A , 0.02 , 0.0) | 3688.7<br>3416.3 | 0.3752<br>97.1<br>97.1 | 1.9330 | N/A | 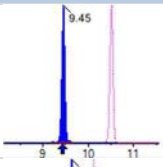 | 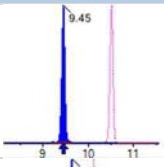 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 159682<br>( 241.0 / 117.0 ) 376621 | ( 3.96 , 0.90 ) ( N/A , 0.00 , -0.1) | 3883.4<br>1867.5 | 2.3586<br>107.4<br>107.4 | 8.4760 | N/A | 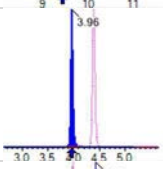 | 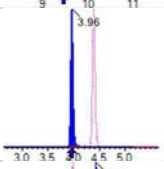 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 567194<br>( 341.0 / 217.0 ) 811951 | ( 5.67 , 1.08 ) ( N/A , 0.01 , 0.0) | 1208.1<br>1531.4 | 1.4315<br>93.5<br>93.5 | 9.0520 | N/A | 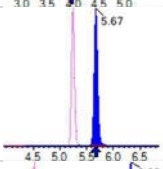 | 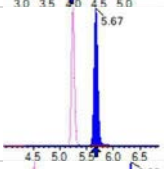 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 1200723<br>( 441.0 / 337.0 ) 1029784 | ( 9.36 , 1.79 ) ( N/A , 0.03 , 0.1) | 12481.8<br>18357.4 | 0.8576<br>100.4<br>100.4 | 9.0200 | N/A | 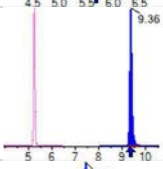 | 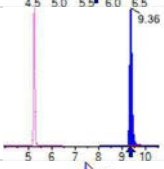 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 726637<br>( 357.2 / 243.0 ) 75689 | ( 5.92 , 1.00 ) ( -0.01 , N/A , 0.1) | 1778.6<br>780.8 | 0.1042<br>97.1<br>97.1 | 2.0210 | N/A | 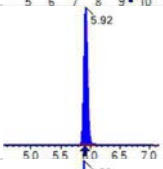 | 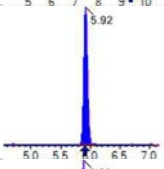 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 636763<br>( 457.2 / 343.0 ) 28293 | ( 8.69 , 1.00 ) ( -0.01 , N/A , 0.2) | 1082.7<br>577.7 | 0.0444<br>99.0<br>99.0 | 2.1580 | N/A | 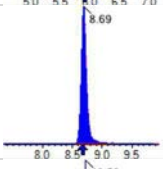 | 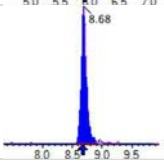 | |
| TDCA | ( 499.0 / 80.0 ) 1350109 | ( 10.50 , 1.00 ) ( N/A , 0.01 , 0.0) | 7643.2 | N/A<br>0.0<br>0.0 | 2.1630 | N/A | 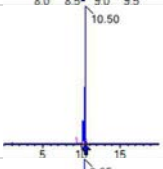 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 281337 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1641.3 | N/A | 0.9970<br>[ 1.0000 ] | 99.7%<br>{ 101.5% } | 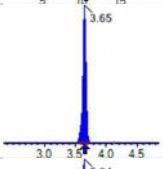 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116609 | ( 5.24 , N/A ) ( N/A , 0.01 , N/A ) | 98172.4 | N/A | 0.9880<br>[ 1.0000 ] | 98.8%<br>{ 101.3% } | 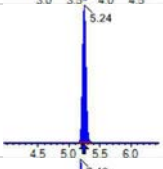 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 349325 | ( 7.49 , N/A ) ( N/A , 0.02 , N/A ) | 5480.7 | N/A | 0.9000<br>[ 1.0000 ] | 90.0%<br>{ 89.0% } | 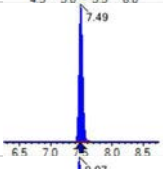 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 279583 | ( 9.07 , N/A ) ( N/A , 0.02 , N/A ) | 1800.3 | N/A | 0.9570<br>[ 1.0000 ] | 95.7%<br>{ 96.2% } | 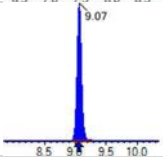 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 277934 | ( 10.07 , N/A ) ( N/A , 0.01 , N/A ) | 7820.3 | N/A | 0.9700 [ 1.0000 ] | 97.0% { 102.1% } | 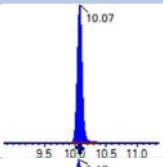 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 921598 | ( 8.17 , N/A ) ( N/A , 0.08 , N/A ) | 6069.8 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 96.9% } | 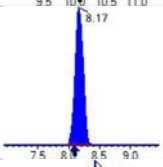 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 727296 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 4541.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 98.3% } | 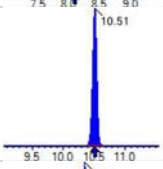 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2409864 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1244067.1 | N/A | 7.9250 [ 8.0000 ] | 99.1% { 98.8% } | 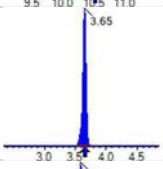 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 879194 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 4687.2 | N/A | 4.1180 [ 4.0000 ] | 103.0% { 95.1% } | 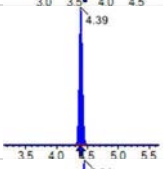 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 496392 | ( 5.24 , N/A ) ( N/A , 0.01 , N/A ) | 19023.4 | N/A | 1.9460 [ 2.0000 ] | 97.3% { 92.8% } | 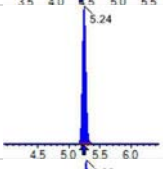 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588735 | ( 6.38 , N/A ) ( N/A , 0.01 , N/A ) | 8845.4 | N/A | 2.0780 [ 2.0000 ] | 103.9% { 103.2% } | 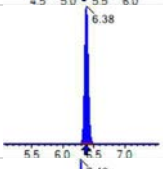 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 805049 | ( 7.49 , N/A ) ( N/A , 0.02 , N/A ) | 4914.9 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 106.3% } | 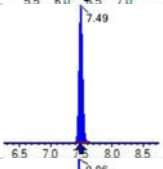 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 274761 | ( 9.06 , N/A ) ( N/A , 0.02 , N/A ) | 14442.9 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 96.8% } | 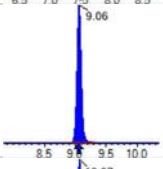 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 322055 | ( 10.07 , N/A ) ( N/A , 0.01 , N/A ) | 1215.9 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 95.7% } | 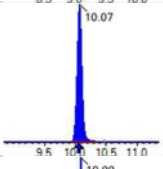 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 408049 | ( 10.99 , N/A ) ( N/A , 0.01 , N/A ) | 1180.8 | N/A | 1.0710 [ 1.0000 ] | 107.1% { 104.1% } | 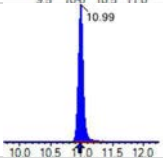 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 406674 | ( 11.88 , N/A ) ( N/A , 0.01 , N/A ) | 1723.4 | N/A | 1.0410 [ 1.0000 ] | 104.1% { 101.9% } | 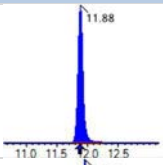 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 374749 | ( 13.15 , N/A ) ( N/A , 0.01 , N/A ) | 1407.1 | N/A | 1.0830 [ 1.0000 ] | 108.3% { 103.5% } | 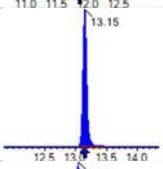 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 606541 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2628.9 | N/A | 2.0950 [ 2.0000 ] | 104.8% { 106.1% } | 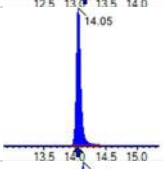 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1570870 | ( 5.42 , N/A ) ( N/A , 0.01 , N/A ) | 1648.8 | N/A | 2.1150 [ 2.0000 ] | 105.7% { 98.9% } | 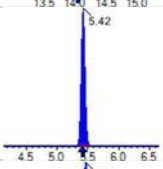 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1367635 | ( 8.17 , N/A ) ( N/A , 0.08 , N/A ) | 6748.2 | N/A | 2.0570 [ 2.0000 ] | 102.9% { 99.6% } | 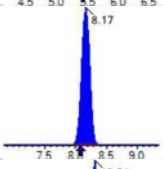 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1593623 | ( 10.51 , N/A ) ( N/A , 0.01 , N/A ) | 1775.1 | N/A | 2.0600 [ 2.0000 ] | 103.0% { 101.8% } | 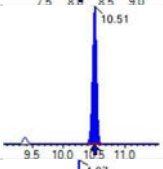 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 695640 | ( 4.87 , N/A ) ( N/A , 0.00 , N/A ) | 55.1 | N/A | 4.2570 [ 4.0000 ] | 106.4% { 99.7% } | 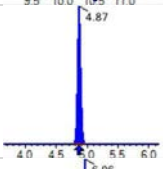 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1810422 | ( 6.96 , N/A ) ( N/A , 0.01 , N/A ) | 5914.3 | N/A | 4.5100 [ 4.0000 ] | 112.7% { 109.1% } | 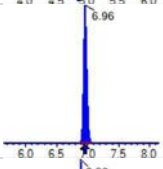 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1573483 | ( 9.39 , N/A ) ( N/A , 0.02 , N/A ) | 1754.7 | N/A | 4.4800 [ 4.0000 ] | 112.0% { 106.4% } | 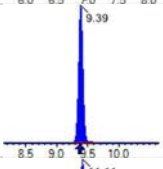 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3257337 | ( 11.11 , N/A ) ( N/A , 0.01 , N/A ) | 1329.6 | N/A | 8.5720 [ 8.0000 ] | 107.2% { 114.4% } | 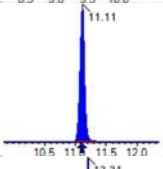 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1830002 | ( 13.31 , N/A ) ( N/A , 0.01 , N/A ) | 3678.9 | N/A | 2.2280 [ 2.0000 ] | 111.4% { 108.7% } | 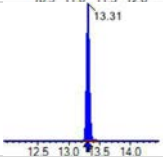 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (4)
Acquired: 2024/03/28 - 16:26

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 404855 | ( 14.59 , N/A ) ( N/A , 0.01 , N/A ) | 2501.8 | N/A | 2.1920 [ 2.0000 ] | 109.6% { 109.2% } | 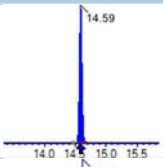  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 377740 | ( 14.92 , N/A ) ( N/A , 0.01 , N/A ) | 3109.7 | N/A | 2.2380 [ 2.0000 ] | 111.9% { 106.2% } | 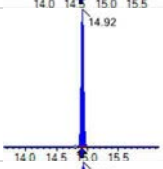  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1186780 | ( 10.43 , N/A ) ( N/A , 0.02 , N/A ) | 3797.4 | N/A | 4.4170 [ 4.0000 ] | 110.4% { 102.4% } | 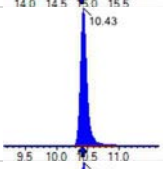  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1075995 | ( 11.03 , N/A ) ( N/A , 0.01 , N/A ) | 2702.0 | N/A | 4.4380 [ 4.0000 ] | 110.9% { 104.1% } | 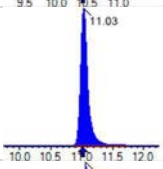  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1536412 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3118.3 | N/A | 22.2680 [ 20.0000 ] | 111.3% { 108.2% } | 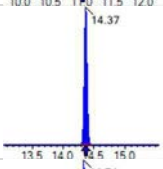  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1450205 | ( 14.74 , N/A ) ( N/A , 0.01 , N/A ) | 3666.0 | N/A | 22.4430 [ 20.0000 ] | 112.2% { 108.6% } | 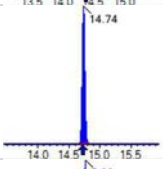  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 882027 | ( 5.66 , N/A ) ( N/A , 0.01 , N/A ) | 2659.6 | N/A | 7.9820 [ 8.0000 ] | 99.8% { 97.6% } | 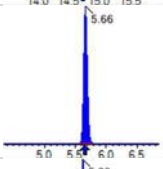  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 683769 | ( 5.93 , N/A ) ( N/A , 0.01 , N/A ) | 1953.6 | N/A | 2.2580 [ 2.0000 ] | 112.9% { 120.5% } | 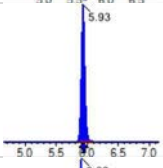  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 713849 | ( 8.69 , N/A ) ( N/A , 0.02 , N/A ) | 1146.8 | N/A | 2.0920 [ 2.0000 ] | 104.6% { 109.2% } | 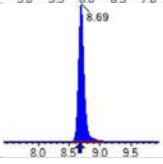  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 648060<br>( 163.0 / 69.0 ) 17761 | ( 2.49 , 0.68 )<br>( N/A , 0.00 , -0.1) | 647.4<br>165.2 | 0.0274<br>100.0<br>100.0 | 9.3920 | N/A | 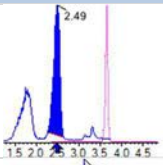 | 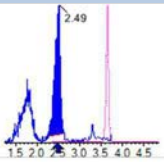 | |
| PFBA | ( 213.0 / 169.0 ) 5789052 | ( 3.65 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2315.7 | N/A<br>0.0<br>0.0 | 18.9200 | N/A | 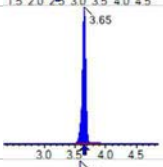 | | |
| PFPeA | ( 263.0 / 219.0 ) 2023232<br>( 263.0 / 69.0 ) 24077 | ( 4.38 , 1.00 )<br>( 0.00 , N/A , 0.1) | 3977.7<br>333.5 | 0.0119<br>100.0<br>100.0 | 8.7630 | N/A | 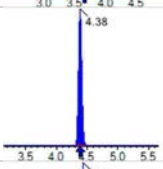 | 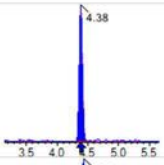 | |
| PFHxA | ( 313.0 / 269.0 ) 1179163<br>( 313.0 / 119.0 ) 131159 | ( 5.23 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2359.8<br>1537.5 | 0.1112<br>100.0<br>100.0 | 4.7490 | N/A | 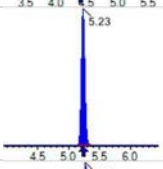 | 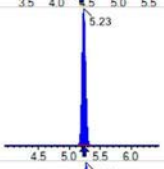 | |
| PFHpA | ( 363.0 / 319.0 ) 1309433<br>( 363.0 / 169.0 ) 400217 | ( 6.37 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2319.8<br>2574.5 | 0.3056<br>100.0<br>100.0 | 4.6280 | N/A | 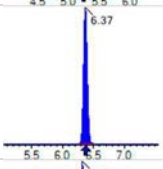 | 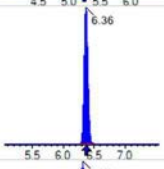 | |
| PFOA | ( 413.0 / 369.0 ) 1854014<br>( 413.0 / 169.0 ) 662712 | ( 7.47 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1197.6<br>1955.5 | 0.3574<br>100.0<br>100.0 | 4.8780 | N/A | 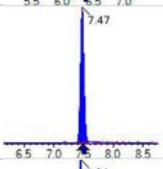 | 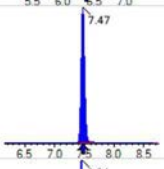 | |
| PFNA | ( 463.0 / 419.0 ) 1353850<br>( 463.0 / 169.0 ) 332596 | ( 9.04 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1987.3<br>2018.4 | 0.2457<br>100.0<br>100.0 | 4.7450 | N/A | 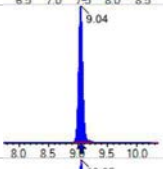 | 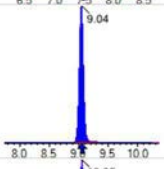 | |
| PFDA | ( 513.0 / 469.0 ) 1479091<br>( 513.0 / 169.0 ) 176256 | ( 10.05 , 1.00 )<br>( 0.00 , N/A , 0.1) | 5273.1<br>5077.9 | 0.1192<br>100.0<br>100.0 | 4.4010 | N/A | 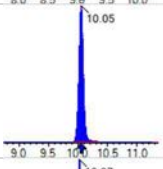 | 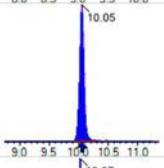 | |
| PFUnA | ( 563.0 / 519.0 ) 1611191<br>( 563.0 / 169.0 ) 249482 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1315.7<br>968.6 | 0.1548<br>100.0<br>100.0 | 4.5260 | N/A | 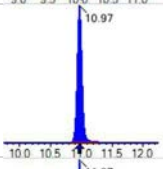 | 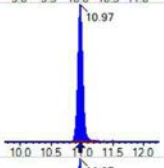 | |
| PFDoA | ( 613.0 / 569.0 ) 1860735<br>( 613.0 / 169.0 ) 282596 | ( 11.87 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1995.1<br>1191.8 | 0.1519<br>100.0<br>100.0 | 4.6460 | N/A | 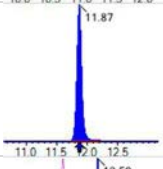 | 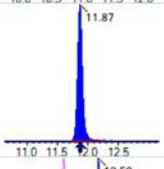 | |
| PFTrDA | ( 663.0 / 619.0 ) 1794665<br>( 663.0 / 169.0 ) 483150 | ( 12.59 , 1.06 )<br>( N/A , 0.00 , 0.0) | 1559.0<br>1527.5 | 0.2692<br>100.0<br>100.0 | 4.6090 | N/A | 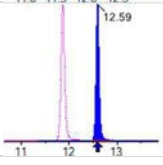 | 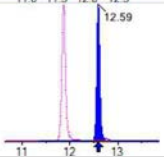 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1535133<br>( 713.0 / 169.0 ) 416590 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.1) | 1795.5<br>1402.7 | 0.2714<br>100.0<br>100.0 | 4.5380 | N/A | 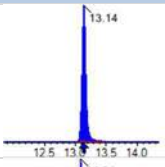 | 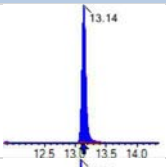 | |
| PFHxDA | ( 813.0 / 769.0 ) 1293413<br>( 813.0 / 169.0 ) 338356 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2411.3<br>1216.4 | 0.2616<br>100.0<br>100.0 | 4.8300 | N/A | 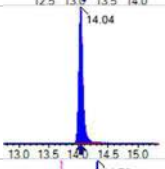 | 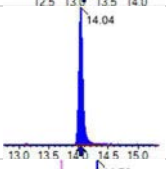 | |
| PFODA | ( 913.0 / 869.0 ) 791549<br>( 913.0 / 169.0 ) 248125 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.1) | 1706.2<br>923.3 | 0.3135<br>100.0<br>100.0 | 4.6680 | N/A | 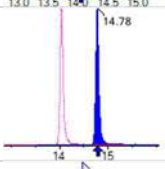 | 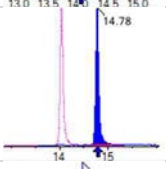 | |
| PFBS | ( 299.0 / 80.0 ) 1642161<br>( 299.0 / 99.0 ) 1216344 | ( 5.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 3254.9<br>2633.5 | 0.7407<br>100.0<br>100.0 | 4.2030 | N/A | 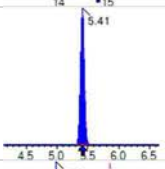 | 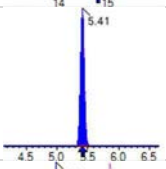 | |
| PFPeS | ( 349.0 / 80.0 ) 4665382<br>( 349.0 / 99.0 ) 1594131 | ( 6.69 , 0.83 ) ( N/A , 0.00 , 0.0) | 4734.1<br>4227.4 | 0.3417<br>100.0<br>100.0 | 4.7280 | N/A | 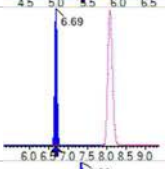 | 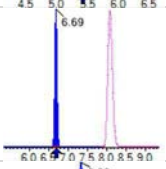 | |
| PFHxS | ( 399.0 / 80.0 ) 5100879<br>( 399.0 / 99.0 ) 1674005 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 3944.0<br>4430.5 | 0.3282<br>100.0<br>100.0 | 4.2410 | N/A | 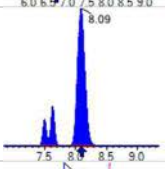 | 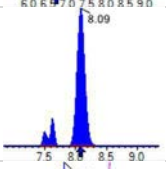 | |
| PFHpS | ( 449.0 / 80.0 ) 4334193<br>( 449.0 / 99.0 ) 1130788 | ( 9.53 , 0.91 ) ( N/A , 0.00 , 0.0) | 3315.1<br>2729.4 | 0.2609<br>100.0<br>100.0 | 4.6350 | N/A | 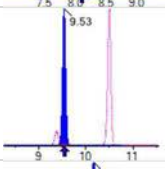 | 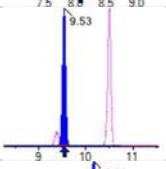 | |
| PFOS | ( 499.0 / 80.0 ) 3995293<br>( 499.0 / 99.0 ) 923153 | ( 10.50 , 1.00 ) ( 0.00 , N/A , 0.0) | 2972.9<br>6712.8 | 0.2311<br>100.0<br>100.0 | 4.3970 | N/A | 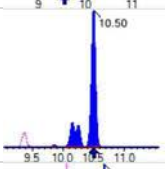 | 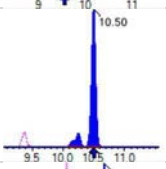 | |
| PFNS | ( 549.0 / 80.0 ) 3955021<br>( 549.0 / 99.0 ) 1059805 | ( 11.38 , 1.08 ) ( N/A , 0.00 , 0.1) | 3219.3<br>2629.2 | 0.2680<br>100.0<br>100.0 | 4.7750 | N/A | 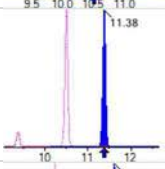 | 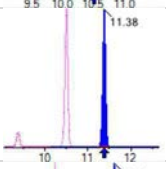 | |
| PFDS | ( 599.0 / 80.0 ) 4924068<br>( 599.0 / 99.0 ) 1254008 | ( 12.19 , 1.16 ) ( N/A , 0.00 , -0.1) | 4145.2<br>2834.2 | 0.2547<br>100.0<br>100.0 | 4.8640 | N/A | 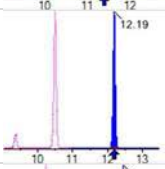 | 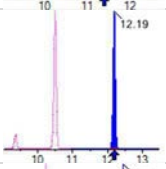 | |
| PFDoS | ( 699.0 / 80.0 ) 4865689<br>( 699.0 / 99.0 ) 1087465 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 4270.0<br>4361.8 | 0.2235<br>100.0<br>100.0 | 4.9670 | N/A | 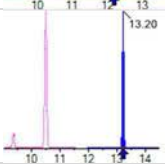 | 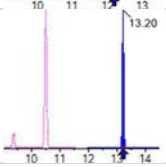 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 8113263<br>( 327.0 / 81.0 ) 6922214 | ( 4.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 6947.9<br>4823.6 | 0.8532<br>100.0<br>100.0 | 17.6170 | N/A | 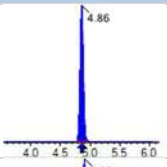 | 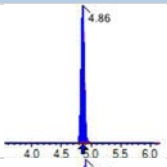 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6620628<br>( 427.0 / 81.0 ) 8538390 | ( 6.95 , 1.00 ) ( 0.00 , N/A , 0.1) | 6990.3<br>6415.9 | 1.2897<br>100.0<br>100.0 | 18.8080 | N/A | 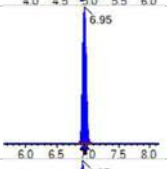 | 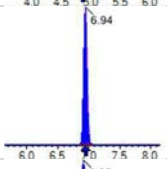 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6241512<br>( 527.0 / 81.0 ) 6888385 | ( 9.37 , 1.00 ) ( 0.00 , N/A , 0.1) | 2492.0<br>2311.5 | 1.1036<br>100.0<br>100.0 | 17.1660 | N/A | 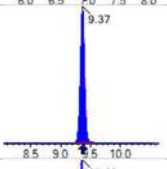 | 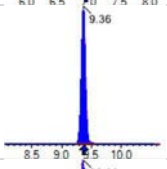 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5477078<br>( 627.0 / 81.0 ) 7874345 | ( 11.11 , 1.00 ) ( 0.01 , N/A , -0.1) | 1483.9<br>1444.8 | 1.4377<br>100.0<br>100.0 | 19.3810 | N/A | 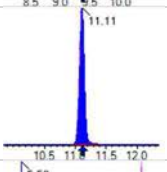 | 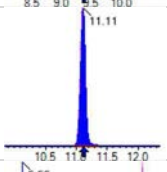 | |
| PFBSA | ( 297.9 / 78.0 ) 2862047<br>( 297.9 / 278.0 ) 3705 | ( 5.56 , 0.38 ) ( N/A , 0.00 , 0.5) | 1632.7<br>27.9 | 0.0013<br>100.0<br>100.0 | 5.0880 | N/A | 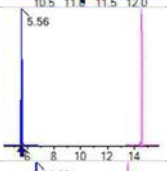 | 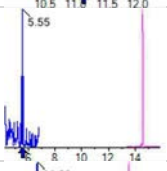 | |
| PFHxSA | ( 397.9 / 78.0 ) 4800431<br>( 397.9 / 378.0 ) 19388 | ( 11.23 , 0.75 ) ( N/A , 0.00 , 0.1) | 1988.9<br>467.6 | 0.0040<br>100.0<br>100.0 | 4.2890 | N/A | 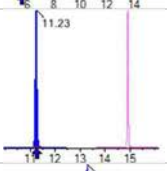 | 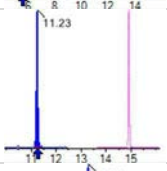 | |
| PFOSA | ( 498.0 / 78.0 ) 3805705<br>( 498.0 / 478.0 ) 55953 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.0) | 4258.8<br>1038.5 | 0.0147<br>100.0<br>100.0 | 4.6730 | N/A | 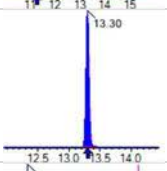 | 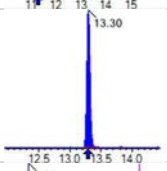 | |
| TFSI | ( 279.7 / 147.0 ) 7048670<br>( 279.7 / 211.0 ) 623738 | ( 7.08 , 0.53 ) ( N/A , 0.00 , 0.0) | 84.5<br>31300821.4 | 0.0885<br>100.0<br>100.0 | 4.9550 | N/A | 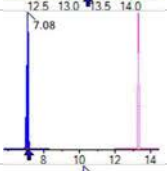 | 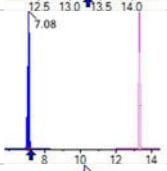 | |
| NMeFOSA | ( 512.0 / 219.0 ) 3092097<br>( 512.0 / 169.0 ) 2370255 | ( 14.58 , 1.00 ) ( 0.00 , N/A , 1.3) | 4390.7<br>1754.1 | 0.7666<br>100.0<br>100.0 | 18.7700 | N/A | 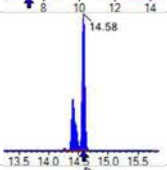 | 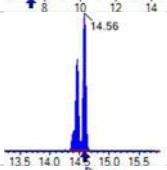 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3779125<br>( 526.0 / 169.0 ) 4725110 | ( 14.92 , 1.00 ) ( 0.01 , N/A , 2.1) | 4338.1<br>3548.5 | 1.2503<br>100.0<br>100.0 | 18.7590 | N/A | 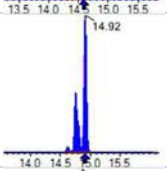 | 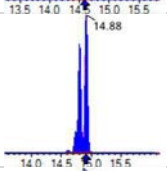 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1240421<br>( 570.0 / 483.0 ) 575595 | ( 10.42 , 1.00 ) ( 0.00 , N/A , 0.0) | 126950.6<br>2371.8 | 0.4640<br>100.0<br>100.0 | 4.6410 | N/A | 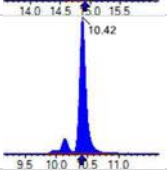 | 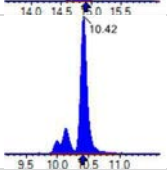 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1148920<br>( 584.0 / 526.0 ) 689225 | ( 11.04 , 1.00 )<br>( 0.01 , N/A , 0.2) | 2247.1<br>757.4 | 0.5999<br>100.0<br>100.0 | 4.5840 | N/A | 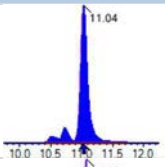 | 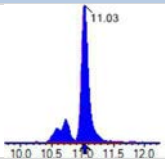 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1364930 | ( 14.38 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2308.1 | N/A<br>0.0<br>0.0 | 17.7610 | N/A | 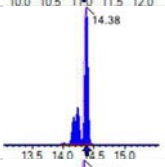 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1171484 | ( 14.75 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3474.5 | N/A<br>0.0<br>0.0 | 18.4200 | N/A | 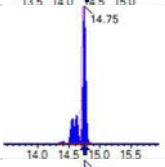 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 311130<br>( 285.0 / 185.0 ) 873489 | ( 5.65 , 1.00 )<br>( -0.01 , N/A , -0.1) | 2042.5<br>2466.0 | 2.8075<br>100.0<br>100.0 | 4.6930 | N/A | 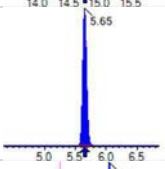 | 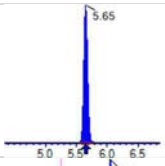 | |
| ADONA | ( 377.0 / 85.0 ) 3823329<br>( 377.0 / 251.0 ) 400996 | ( 6.80 , 1.20 )<br>( N/A , 0.00 , 0.0) | 3270.0<br>1761.6 | 0.1049<br>100.0<br>100.0 | 4.3730 | N/A | 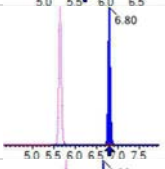 | 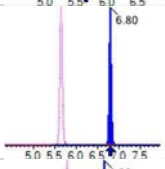 | |
| PFEESA | ( 315.0 / 135.0 ) 1367203<br>( 315.0 / 83.0 ) 877540 | ( 6.00 , 1.15 )<br>( N/A , 0.00 , 0.0) | 4177.8<br>1585.5 | 0.6419<br>100.0<br>100.0 | 7.5680 | N/A | 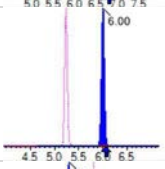 | 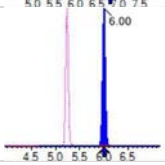 | |
| PFMPA | ( 229.0 / 85.0 ) 779251 | ( 3.91 , 0.89 )<br>( N/A , 0.00 , 0.0) | 10808.5 | N/A<br>0.0<br>0.0 | 9.1810 | N/A | 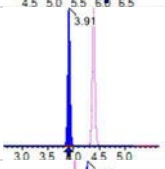 | | |
| PFMBA | ( 279.0 / 85.0 ) 1760365 | ( 4.60 , 1.05 )<br>( N/A , 0.00 , 0.0) | 7506.8 | N/A<br>0.0<br>0.0 | 9.2060 | N/A | 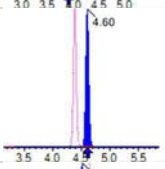 | | |
| NFDHA | ( 295.0 / 201.0 ) 787938<br>( 295.0 / 85.0 ) 783543 | ( 5.11 , 0.98 )<br>( N/A , 0.00 , 0.0) | 3610.1<br>3074.7 | 0.9944<br>100.0<br>100.0 | 8.9370 | N/A | 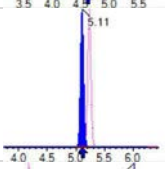 | 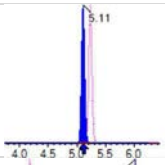 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 4263457<br>( 533.0 / 353.0 ) 1359493 | ( 11.18 , 1.98 )<br>( N/A , 0.00 , 0.1) | 3140.1<br>2523.7 | 0.3189<br>100.0<br>100.0 | 4.3890 | N/A | 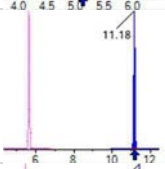 | 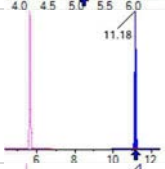 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3409140<br>( 633.0 / 453.0 ) 1156654 | ( 12.66 , 2.24 )<br>( N/A , 0.00 , 0.0) | 4579.0<br>3687.7 | 0.3393<br>100.0<br>100.0 | 4.5160 | N/A | 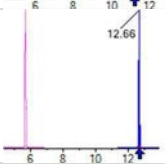 | 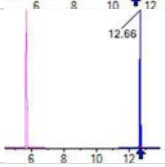 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 2199689<br>( 461.0 / 381.2 ) 849612 | ( 9.44 , 0.90 ) ( N/A , 0.00 , 0.0) | 4673.7<br>4472.4 | 0.3862<br>100.0<br>100.0 | 4.5110 | N/A | 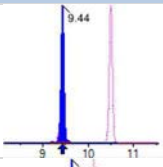 | 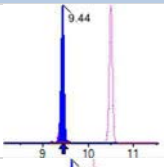 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 352296<br>( 241.0 / 117.0 ) 773362 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.0) | 5949.6<br>3763.1 | 2.1952<br>100.0<br>100.0 | 17.7760 | N/A | 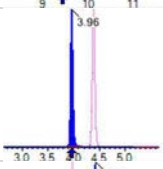 | 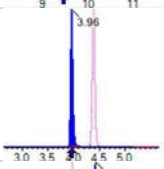 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1147153<br>( 341.0 / 217.0 ) 1756394 | ( 5.66 , 1.08 ) ( N/A , 0.00 , -0.1) | 1554.9<br>1526.0 | 1.5311<br>100.0<br>100.0 | 16.9810 | N/A | 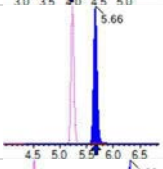 | 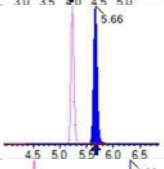 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2500654<br>( 441.0 / 337.0 ) 2136156 | ( 9.33 , 1.78 ) ( N/A , 0.00 , 0.0) | 10903.9<br>26038.4 | 0.8542<br>100.0<br>100.0 | 17.4230 | N/A | 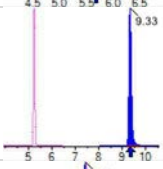 | 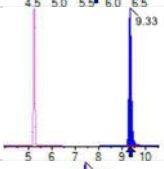 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1558737<br>( 357.2 / 243.0 ) 167151 | ( 5.91 , 1.00 ) ( -0.01 , N/A , 0.0) | 2124.2<br>1192.1 | 0.1072<br>100.0<br>100.0 | 5.2230 | N/A | 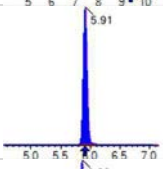 | 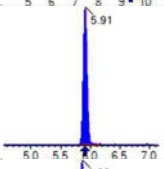 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1383033<br>( 457.2 / 343.0 ) 62067 | ( 8.66 , 1.00 ) ( -0.01 , N/A , 0.1) | 1425.5<br>639.8 | 0.0449<br>100.0<br>100.0 | 5.1180 | N/A | 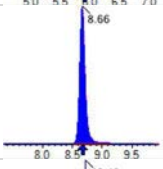 | 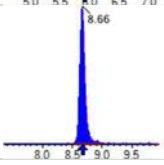 | |
| TDCA | ( 499.0 / 80.0 ) 2925200 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 23057.3 | N/A<br>0.0<br>0.0 | 4.7710 | N/A | 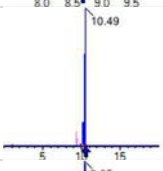 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 277139 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1362.3 | N/A | 0.9820<br>[ 1.0000 ] | 98.2%<br>{ 100.0% } | 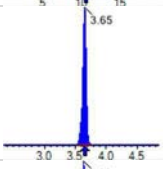 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 115060 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 18847.2 | N/A | 0.9750<br>[ 1.0000 ] | 97.5%<br>{ 100.0% } | 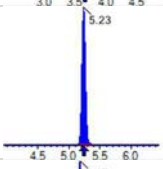 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 392520 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 6469.4 | N/A | 1.0110<br>[ 1.0000 ] | 101.1%<br>{ 100.0% } | 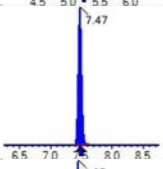 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 290614 | ( 9.05 , N/A ) ( N/A , 0.00 , N/A ) | 1640.6 | N/A | 0.9950<br>[ 1.0000 ] | 99.5%<br>{ 100.0% } | 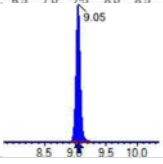 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL5 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (5)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 272171 | ( 10.06 , N/A ) ( N/A , 0.00 , N/A ) | 157007.7 | N/A | 0.9500 [ 1.0000 ] | 95.0% { 100.0% } | 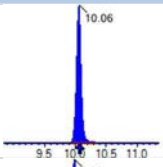  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 951286 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5836.5 | N/A | 0.9690 [ 1.0000 ] | 96.9% { 100.0% } | 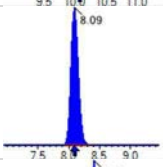  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 739718 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 4014.2 | N/A | 0.9430 [ 1.0000 ] | 94.3% { 100.0% } | 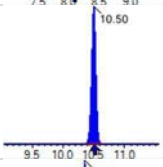  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2438938 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 72163.7 | N/A | 8.1420 [ 8.0000 ] | 101.8% { 100.0% } | 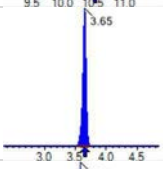  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 924925 | ( 4.39 , N/A ) ( N/A , 0.00 , N/A ) | 5250.5 | N/A | 4.3910 [ 4.0000 ] | 109.8% { 100.0% } | 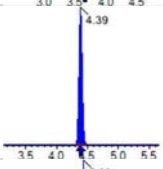  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 535186 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 32203.4 | N/A | 2.1260 [ 2.0000 ] | 106.3% { 100.0% } | 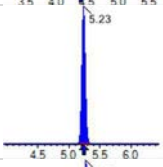  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 570287 | ( 6.37 , N/A ) ( N/A , 0.00 , N/A ) | 12603.7 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 100.0% } | 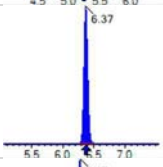  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 756985 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 5516.4 | N/A | 1.8200 [ 2.0000 ] | 91.0% { 100.0% } | 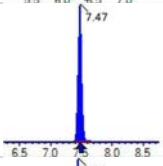  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283961 | ( 9.04 , N/A ) ( N/A , 0.00 , N/A ) | 6387.3 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 100.0% } | 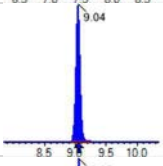  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 336539 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 1510.2 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 100.0% } | 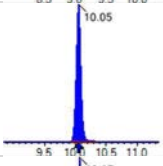  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 392051 | ( 10.97 , N/A ) ( N/A , 0.00 , N/A ) | 1050.8 | N/A | 1.0510 [ 1.0000 ] | 105.1% { 100.0% } | 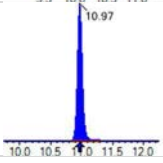  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 399094 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1546.0 | N/A | 1.0430 [ 1.0000 ] | 104.3% { 100.0% } | 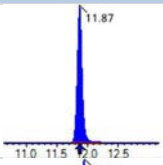 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 362241 | ( 13.14 , N/A ) ( N/A , 0.00 , N/A ) | 1334.8 | N/A | 1.0690 [ 1.0000 ] | 106.9% { 100.0% } | 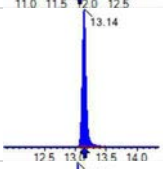 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 571585 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2545.5 | N/A | 2.0160 [ 2.0000 ] | 100.8% { 100.0% } | 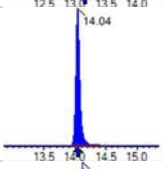 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1588988 | ( 5.41 , N/A ) ( N/A , 0.00 , N/A ) | 2162.0 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 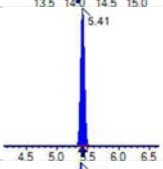 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1373382 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5719.9 | N/A | 2.0010 [ 2.0000 ] | 100.1% { 100.0% } | 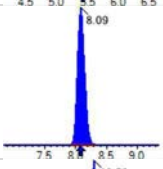 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1565551 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 1057.0 | N/A | 1.9890 [ 2.0000 ] | 99.5% { 100.0% } | 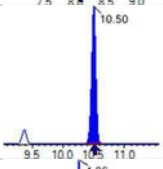 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 697760 | ( 4.86 , N/A ) ( N/A , 0.00 , N/A ) | 58.7 | N/A | 4.1370 [ 4.0000 ] | 103.4% { 100.0% } | 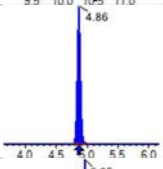 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1658824 | ( 6.95 , N/A ) ( N/A , 0.00 , N/A ) | 5866.7 | N/A | 4.0030 [ 4.0000 ] | 100.1% { 100.0% } | 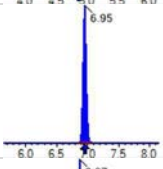 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1478563 | ( 9.37 , N/A ) ( N/A , 0.00 , N/A ) | 3104.3 | N/A | 4.0780 [ 4.0000 ] | 102.0% { 100.0% } | 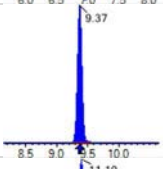 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2847020 | ( 11.10 , N/A ) ( N/A , 0.00 , N/A ) | 1774.9 | N/A | 7.2590 [ 8.0000 ] | 90.7% { 100.0% } | 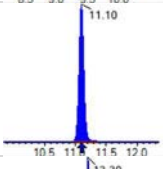 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1683304 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3070.2 | N/A | 2.0150 [ 2.0000 ] | 100.7% { 100.0% } | 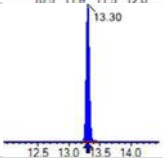 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL5
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (5)
Acquired: 2024/03/28 - 16:47

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 370692 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 2352.3 | N/A | 1.9730 [ 2.0000 ] | 98.7% { 100.0% } | 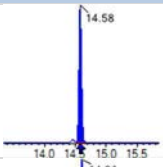  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 355689 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2645.7 | N/A | 2.0720 [ 2.0000 ] | 103.6% { 100.0% } | 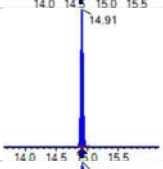  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1158891 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 3684.2 | N/A | 4.2410 [ 4.0000 ] | 106.0% { 100.0% } | 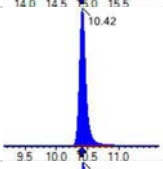  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1033424 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 3055.1 | N/A | 4.1900 [ 4.0000 ] | 104.8% { 100.0% } | 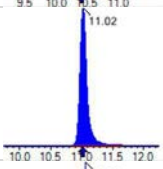  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1419770 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3426.4 | N/A | 20.2320 [ 20.0000 ] | 101.2% { 100.0% } | 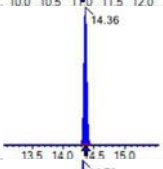  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1335269 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 5403.2 | N/A | 20.3170 [ 20.0000 ] | 101.6% { 100.0% } | 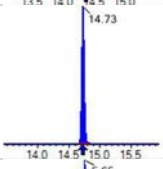  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 903308 | ( 5.65 , N/A ) ( N/A , 0.00 , N/A ) | 2350.3 | N/A | 8.2840 [ 8.0000 ] | 103.6% { 100.0% } | 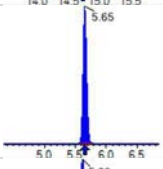  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 567556 | ( 5.92 , N/A ) ( N/A , 0.00 , N/A ) | 2313.3 | N/A | 1.9140 [ 2.0000 ] | 95.7% { 100.0% } | 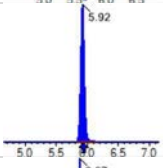  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 653909 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1282.2 | N/A | 1.9570 [ 2.0000 ] | 97.8% { 100.0% } | 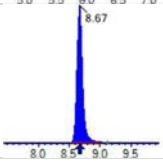  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 1410776<br>( 163.0 / 69.0 ) 39371 | ( 2.48 , 0.68 ) ( N/A , -0.01 , 0.2) | 1403.2<br>319.4 | 0.0279<br>101.8<br>101.8 | 23.6740 | N/A | 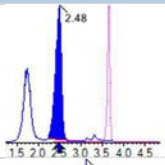 | 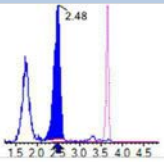 | |
| PFBA | ( 213.0 / 169.0 ) 10236281 | ( 3.65 , 1.00 ) ( 0.00 , N/A , 0.0) | 2879.9 | N/A<br>0.0<br>0.0 | 39.1070 | N/A | 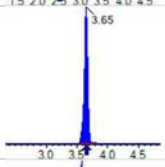 | | |
| PFPeA | ( 263.0 / 219.0 ) 4048261<br>( 263.0 / 69.0 ) 46489 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 5627.7<br>547.2 | 0.0115<br>96.5<br>96.5 | 18.8630 | N/A | 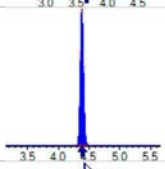 | 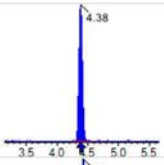 | |
| PFHxA | ( 313.0 / 269.0 ) 2339879<br>( 313.0 / 119.0 ) 278107 | ( 5.23 , 1.00 ) ( 0.00 , N/A , 0.0) | 2343.3<br>1828.3 | 0.1189<br>106.9<br>106.9 | 9.8390 | N/A | 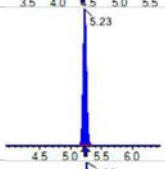 | 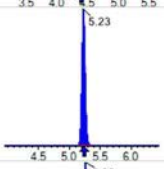 | |
| PFHpA | ( 363.0 / 319.0 ) 2699056<br>( 363.0 / 169.0 ) 836355 | ( 6.36 , 1.00 ) ( 0.00 , N/A , 0.0) | 2955.7<br>2567.7 | 0.3099<br>101.4<br>101.4 | 9.9190 | N/A | 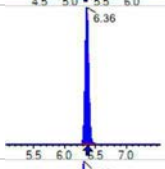 | 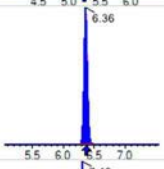 | |
| PFOA | ( 413.0 / 369.0 ) 3931616<br>( 413.0 / 169.0 ) 1422616 | ( 7.46 , 1.00 ) ( 0.00 , N/A , 0.1) | 2035.7<br>2247.3 | 0.3618<br>101.2<br>101.2 | 9.7280 | N/A | 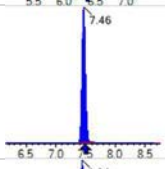 | 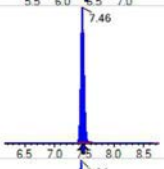 | |
| PFNA | ( 463.0 / 419.0 ) 2766583<br>( 463.0 / 169.0 ) 693602 | ( 9.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2439.9<br>2100.0 | 0.2507<br>102.1<br>102.1 | 9.6980 | N/A | 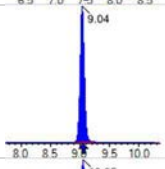 | 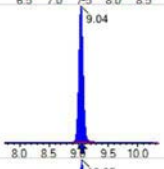 | |
| PFDA | ( 513.0 / 469.0 ) 3151937<br>( 513.0 / 169.0 ) 374125 | ( 10.05 , 1.00 ) ( 0.00 , N/A , -0.1) | 6041.9<br>3869.6 | 0.1187<br>99.6<br>99.6 | 9.8040 | N/A | 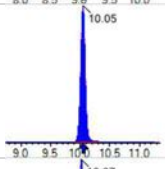 | 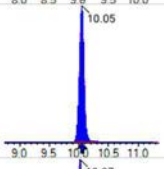 | |
| PFUnA | ( 563.0 / 519.0 ) 3513685<br>( 563.0 / 169.0 ) 520449 | ( 10.97 , 1.00 ) ( 0.00 , N/A , 0.0) | 1519.2<br>1154.2 | 0.1481<br>95.7<br>95.7 | 9.9360 | N/A | 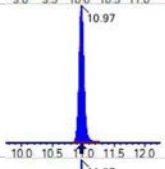 | 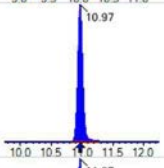 | |
| PFDoA | ( 613.0 / 569.0 ) 3919525<br>( 613.0 / 169.0 ) 592934 | ( 11.87 , 1.00 ) ( 0.00 , N/A , 0.1) | 2119.3<br>1738.8 | 0.1513<br>99.6<br>99.6 | 9.9560 | N/A | 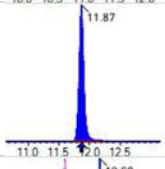 | 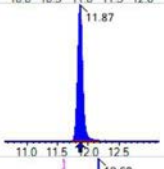 | |
| PFTrDA | ( 663.0 / 619.0 ) 4001296<br>( 663.0 / 169.0 ) 1042973 | ( 12.60 , 1.06 ) ( N/A , 0.00 , 0.0) | 1852.5<br>1696.7 | 0.2607<br>96.8<br>96.8 | 10.4540 | N/A | 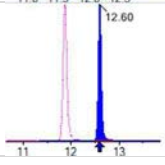 | 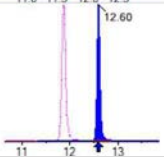 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 3255016<br>( 713.0 / 169.0 ) 874433 | ( 13.14 , 1.00 ) ( 0.00 , N/A , 0.0) | 2053.0<br>1430.2 | 0.2686<br>99.0<br>99.0 | 9.9300 | N/A | 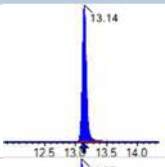 | 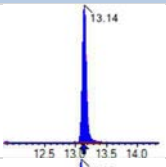 | |
| PFHxDA | ( 813.0 / 769.0 ) 2833744<br>( 813.0 / 169.0 ) 723213 | ( 14.05 , 1.00 ) ( 0.00 , N/A , 0.2) | 2117.6<br>1323.6 | 0.2552<br>97.6<br>97.6 | 10.2560 | N/A | 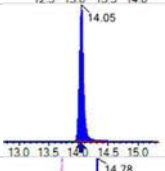 | 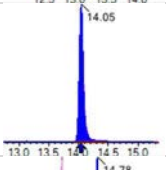 | |
| PFODA | ( 913.0 / 869.0 ) 1612349<br>( 913.0 / 169.0 ) 538911 | ( 14.78 , 1.05 ) ( N/A , 0.00 , 0.0) | 2225.2<br>1483.9 | 0.3342<br>106.6<br>106.6 | 9.2140 | N/A | 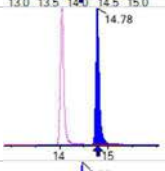 | 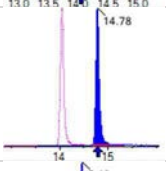 | |
| PFBS | ( 299.0 / 80.0 ) 3230446<br>( 299.0 / 99.0 ) 2480147 | ( 5.41 , 1.00 ) ( 0.00 , N/A , 0.1) | 4578.2<br>3619.1 | 0.7677<br>103.7<br>103.7 | 8.3490 | N/A | 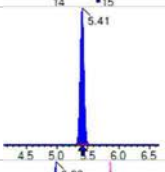 | 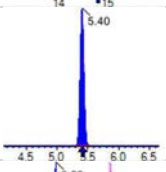 | |
| PFPeS | ( 349.0 / 80.0 ) 9433675<br>( 349.0 / 99.0 ) 3278192 | ( 6.68 , 0.83 ) ( N/A , -0.01 , 0.0) | 3596.1<br>3202.3 | 0.3475<br>101.7<br>101.7 | 9.3820 | N/A | 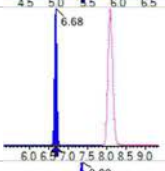 | 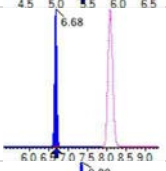 | |
| PFHxS | ( 399.0 / 80.0 ) 10963120<br>( 399.0 / 99.0 ) 3556590 | ( 8.09 , 1.00 ) ( 0.00 , N/A , 0.2) | 4134.1<br>7330.4 | 0.3244<br>98.9<br>98.9 | 8.9450 | N/A | 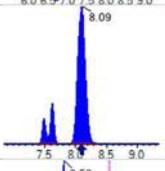 | 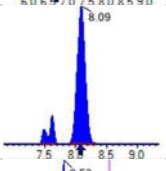 | |
| PFHpS | ( 449.0 / 80.0 ) 9554510<br>( 449.0 / 99.0 ) 2565679 | ( 9.53 , 0.91 ) ( N/A , -0.01 , 0.0) | 3632.9<br>3833.5 | 0.2685<br>102.9<br>102.9 | 9.6130 | N/A | 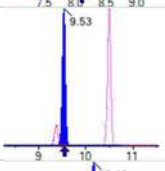 | 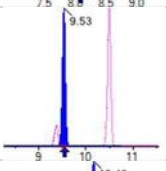 | |
| PFOS | ( 499.0 / 80.0 ) 8612719<br>( 499.0 / 99.0 ) 1969372 | ( 10.49 , 1.00 ) ( 0.00 , N/A , -0.1) | 3701.4<br>26412.4 | 0.2287<br>99.0<br>99.0 | 8.9170 | N/A | 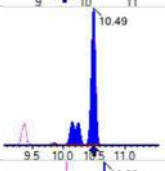 | 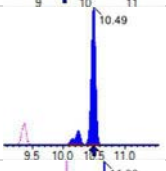 | |
| PFNS | ( 549.0 / 80.0 ) 8536984<br>( 549.0 / 99.0 ) 2272578 | ( 11.38 , 1.08 ) ( N/A , 0.00 , 0.1) | 3435.6<br>3070.7 | 0.2662<br>99.3<br>99.3 | 9.6960 | N/A | 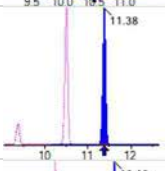 | 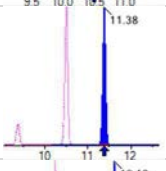 | |
| PFDS | ( 599.0 / 80.0 ) 10328374<br>( 599.0 / 99.0 ) 2646854 | ( 12.19 , 1.16 ) ( N/A , 0.00 , -0.1) | 3070.9<br>3125.1 | 0.2563<br>100.6<br>100.6 | 9.5970 | N/A | 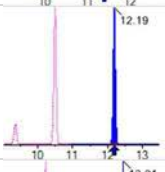 | 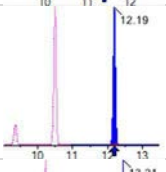 | |
| PFDoS | ( 699.0 / 80.0 ) 10304526<br>( 699.0 / 99.0 ) 2358315 | ( 13.21 , 1.26 ) ( N/A , 0.00 , 0.0) | 3708.6<br>3908.4 | 0.2289<br>102.4<br>102.4 | 9.8960 | N/A | 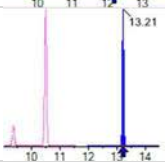 | 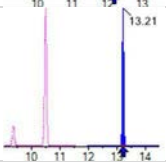 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 12826412<br>( 327.0 / 81.0 ) 12040727 | ( 4.85 , 1.00 ) ( 0.00 , N/A , -0.1) | 5557.6<br>3826.0 | 0.9387<br>110.0<br>110.0 | 40.1350 | N/A | 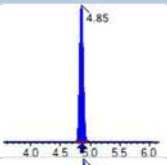 | 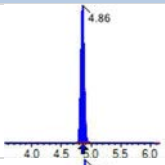 | |
| 6:2FTS | ( 427.0 / 407.0 ) 12451942<br>( 427.0 / 81.0 ) 14327020 | ( 6.94 , 1.00 ) ( 0.00 , N/A , 0.0) | 6527.5<br>6891.6 | 1.1506<br>89.2<br>89.2 | 38.8800 | N/A | 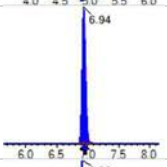 | 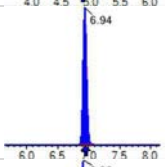 | |
| 8:2FTS | ( 527.0 / 507.0 ) 12302014<br>( 527.0 / 81.0 ) 12387553 | ( 9.36 , 1.00 ) ( 0.00 , N/A , -0.1) | 2416.2<br>2406.2 | 1.0070<br>91.2<br>91.2 | 38.1390 | N/A | 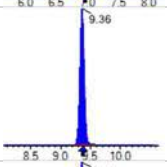 | 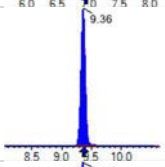 | |
| 10:2FTS | ( 627.0 / 607.0 ) 10300136<br>( 627.0 / 81.0 ) 14674308 | ( 11.11 , 1.00 ) ( 0.01 , N/A , -0.1) | 1307.6<br>1434.9 | 1.4247<br>99.1<br>99.1 | 38.7910 | N/A | 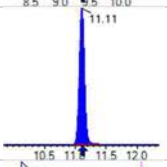 | 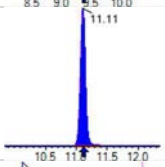 | |
| PFBSA | ( 297.9 / 78.0 ) 5932998<br>( 297.9 / 278.0 ) 7823 | ( 5.56 , 0.38 ) ( N/A , 0.00 , -0.3) | 2373.4<br>92.2 | 0.0013<br>101.9<br>101.9 | 9.9660 | N/A | 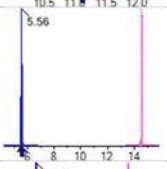 | 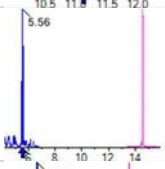 | |
| PFHxSA | ( 397.9 / 78.0 ) 11374028<br>( 397.9 / 378.0 ) 46692 | ( 11.24 , 0.75 ) ( N/A , 0.00 , -0.2) | 1944.2<br>771.6 | 0.0041<br>101.6<br>101.6 | 9.8990 | N/A | 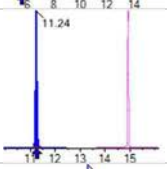 | 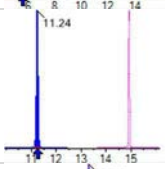 | |
| PFOSA | ( 498.0 / 78.0 ) 8608641<br>( 498.0 / 478.0 ) 121621 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.1) | 3522.9<br>1461.7 | 0.0141<br>96.1<br>96.1 | 10.0630 | N/A | 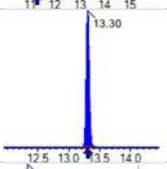 | 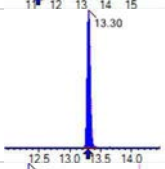 | |
| TFSI | ( 279.7 / 147.0 ) 15108526<br>( 279.7 / 211.0 ) 1326403 | ( 7.07 , 0.53 ) ( N/A , -0.01 , 0.0) | 95.8<br>4726.2 | 0.0878<br>99.2<br>99.2 | 10.1090 | N/A | 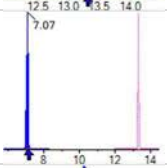 | 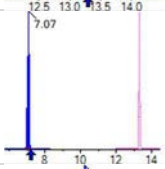 | |
| NMeFOSA | ( 512.0 / 219.0 ) 7108106<br>( 512.0 / 169.0 ) 5412014 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 1.7) | 4566.0<br>1799.3 | 0.7614<br>99.3<br>99.3 | 40.7690 | N/A | 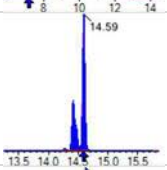 | 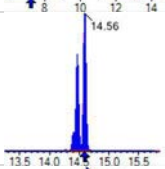 | |
| NEtFOSA | ( 526.0 / 219.0 ) 8272563<br>( 526.0 / 169.0 ) 10357876 | ( 14.93 , 1.00 ) ( 0.01 , N/A , 2.2) | 5059.7<br>3979.7 | 1.2521<br>100.1<br>100.1 | 40.0030 | N/A | 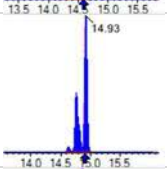 | 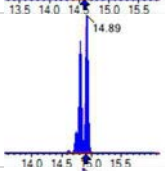 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 2561023<br>( 570.0 / 483.0 ) 1207080 | ( 10.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 9045.2<br>1777.3 | 0.4713<br>101.6<br>101.6 | 9.8500 | N/A | 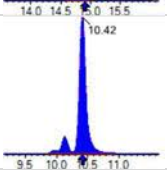 | 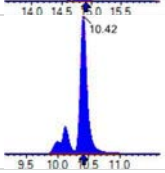 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 2363676<br>( 584.0 / 526.0 ) 1403055 | ( 11.03 , 1.00 )<br>( 0.01 , N/A , -0.1) | 2001.8<br>758.0 | 0.5936<br>99.0<br>99.0 | 9.8330 | N/A | 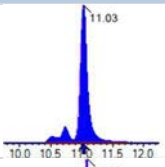 | 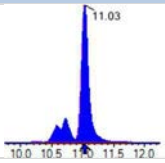 | |
| NMeFOSE | ( 616.0 / 59.0 ) 3082333 | ( 14.39 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3738.6 | N/A<br>0.0<br>0.0 | 38.5190 | N/A | 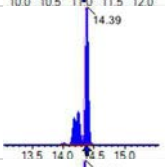 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 2512991 | ( 14.76 , 1.00 )<br>( 0.03 , N/A , 0.0) | 4539.0 | N/A<br>0.0<br>0.0 | 38.6480 | N/A | 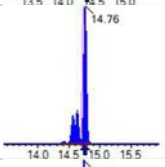 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 642376<br>( 285.0 / 185.0 ) 1708527 | ( 5.64 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2067.0<br>3090.7 | 2.6597<br>94.7<br>94.7 | 10.4470 | N/A | 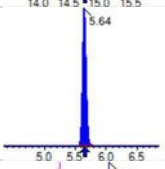 | 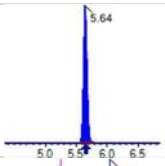 | |
| ADONA | ( 377.0 / 85.0 ) 8184355<br>( 377.0 / 251.0 ) 838218 | ( 6.79 , 1.20 )<br>( N/A , -0.01 , 0.0) | 3547.3<br>2209.7 | 0.1024<br>97.7<br>97.7 | 10.0920 | N/A | 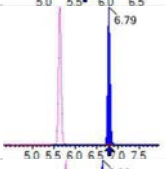 | 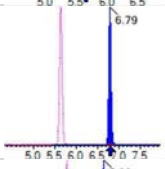 | |
| PFEESA | ( 315.0 / 135.0 ) 2948130<br>( 315.0 / 83.0 ) 1807357 | ( 5.99 , 1.15 )<br>( N/A , -0.01 , -0.1) | 3424.7<br>2942.5 | 0.6131<br>95.5<br>95.5 | 17.0400 | N/A | 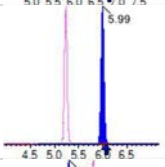 | 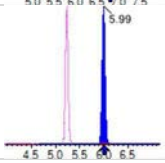 | |
| PFMPA | ( 229.0 / 85.0 ) 1499132 | ( 3.91 , 0.89 )<br>( N/A , 0.00 , 0.0) | 10379.5 | N/A<br>0.0<br>0.0 | 19.0000 | N/A | 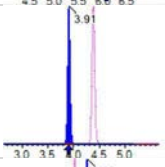 | | |
| PFMBA | ( 279.0 / 85.0 ) 3509087 | ( 4.60 , 1.05 )<br>( N/A , -0.01 , 0.0) | 5279.9 | N/A<br>0.0<br>0.0 | 19.7420 | N/A | 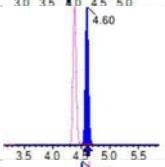 | | |
| NFDHA | ( 295.0 / 201.0 ) 1654782<br>( 295.0 / 85.0 ) 1488098 | ( 5.10 , 0.98 )<br>( N/A , 0.00 , 0.0) | 4255.9<br>3811.0 | 0.8993<br>90.4<br>90.4 | 19.5980 | N/A | 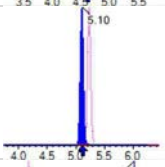 | 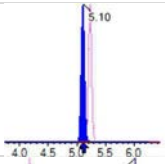 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 8935681<br>( 533.0 / 353.0 ) 2744055 | ( 11.18 , 1.98 )<br>( N/A , 0.00 , 0.1) | 2592.7<br>3173.5 | 0.3071<br>96.3<br>96.3 | 9.9180 | N/A | 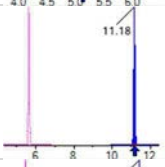 | 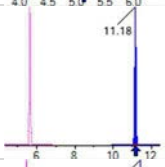 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 6852342<br>( 633.0 / 453.0 ) 2268398 | ( 12.66 , 2.24 )<br>( N/A , 0.00 , 0.1) | 4354.9<br>4055.9 | 0.3310<br>97.6<br>97.6 | 9.7860 | N/A | 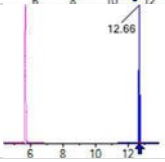 | 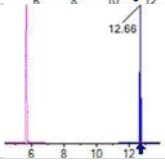 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 4706891<br>( 461.0 / 381.2 ) 1798113 | ( 9.43 , 0.90 ) ( N/A , -0.01 , 0.0) | 5200.7<br>5755.6 | 0.3820<br>98.9<br>98.9 | 9.0800 | N/A | 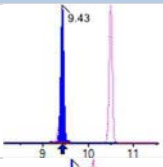 | 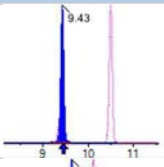 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 660291<br>( 241.0 / 117.0 ) 1572648 | ( 3.96 , 0.90 ) ( N/A , 0.00 , 0.1) | 7042.7<br>5484.0 | 2.3817<br>108.5<br>108.5 | 35.8410 | N/A | 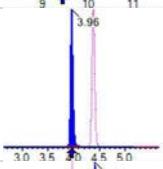 | 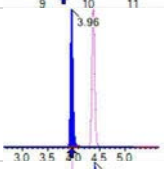 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 2477767<br>( 341.0 / 217.0 ) 3891348 | ( 5.66 , 1.08 ) ( N/A , 0.00 , 0.1) | 2053.6<br>2000.1 | 1.5705<br>102.6<br>102.6 | 38.2960 | N/A | 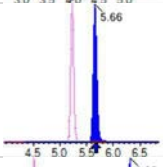 | 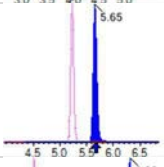 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 5141269<br>( 441.0 / 337.0 ) 4590024 | ( 9.33 , 1.78 ) ( N/A , 0.00 , 0.1) | 14794.4<br>16877.7 | 0.8928<br>104.5<br>104.5 | 37.4030 | N/A | 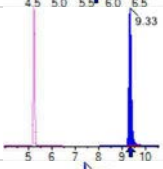 | 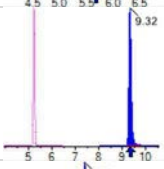 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 3279006<br>( 357.2 / 243.0 ) 353637 | ( 5.91 , 1.00 ) ( -0.01 , N/A , 0.0) | 2632.7<br>1790.3 | 0.1078<br>100.6<br>100.6 | 10.0310 | N/A | 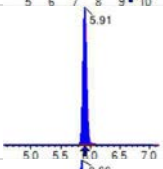 | 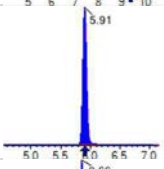 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 2860820<br>( 457.2 / 343.0 ) 125837 | ( 8.66 , 1.00 ) ( -0.01 , N/A , 0.1) | 1481.4<br>938.9 | 0.0440<br>98.0<br>98.0 | 9.9810 | N/A | 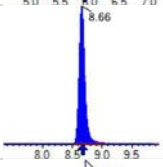 | 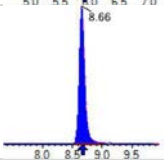 | |
| TDCA | ( 499.0 / 80.0 ) 6469918 | ( 10.49 , 1.00 ) ( N/A , 0.00 , 0.0) | 43110.0 | N/A<br>0.0<br>0.0 | 9.9260 | N/A | 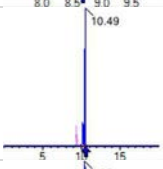 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 238901 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 1298.3 | N/A | 0.8460<br>[ 1.0000 ] | 84.6%<br>{ 86.2% } | 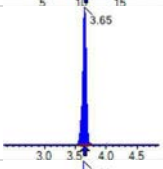 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 110377 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 116220.5 | N/A | 0.9350<br>[ 1.0000 ] | 93.5%<br>{ 95.9% } | 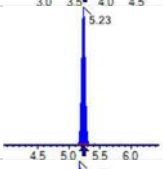 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 367272 | ( 7.47 , N/A ) ( N/A , -0.01 , N/A ) | 6296.2 | N/A | 0.9460<br>[ 1.0000 ] | 94.6%<br>{ 93.6% } | 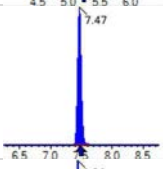 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 267925 | ( 9.04 , N/A ) ( N/A , -0.01 , N/A ) | 1602.2 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 92.2% } | 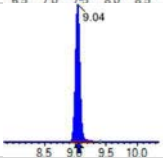 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 266253 | ( 10.05 , N/A ) ( N/A , 0.00 , N/A ) | 7915.3 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 97.8% } | 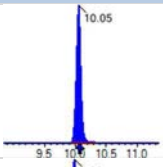 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 906781 | ( 8.09 , N/A ) ( N/A , 0.00 , N/A ) | 5459.0 | N/A | 0.9230 [ 1.0000 ] | 92.3% { 95.3% } | 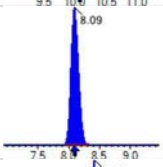 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 757166 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 3989.1 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 102.4% } | 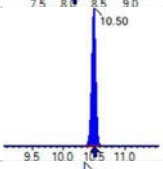 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2106359 | ( 3.65 , N/A ) ( N/A , 0.00 , N/A ) | 117705.5 | N/A | 8.1570 [ 8.0000 ] | 102.0% { 86.4% } | 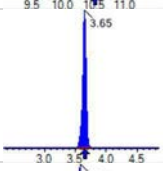 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 859769 | ( 4.38 , N/A ) ( N/A , -0.01 , N/A ) | 7061.2 | N/A | 4.2550 [ 4.0000 ] | 106.4% { 93.0% } | 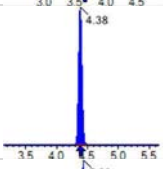 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 512563 | ( 5.23 , N/A ) ( N/A , 0.00 , N/A ) | 9789.5 | N/A | 2.1230 [ 2.0000 ] | 106.1% { 95.8% } | 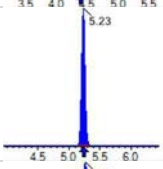 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 548495 | ( 6.36 , N/A ) ( N/A , -0.01 , N/A ) | 8960.0 | N/A | 2.0450 [ 2.0000 ] | 102.3% { 96.2% } | 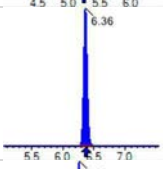 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 804930 | ( 7.46 , N/A ) ( N/A , -0.01 , N/A ) | 5914.7 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 106.3% } | 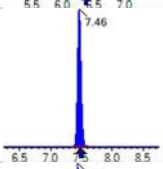 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 283915 | ( 9.04 , N/A ) ( N/A , -0.01 , N/A ) | 9552.5 | N/A | 1.0730 [ 1.0000 ] | 107.3% { 100.0% } | 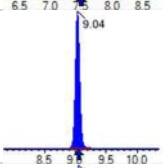 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 321929 | ( 10.05 , N/A ) ( N/A , -0.01 , N/A ) | 1251.4 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 95.7% } | 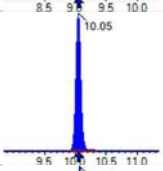 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389467 | ( 10.97 , N/A ) ( N/A , 0.00 , N/A ) | 1198.0 | N/A | 1.0670 [ 1.0000 ] | 106.7% { 99.3% } | 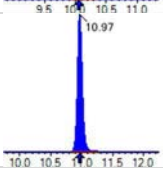 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 392293 | ( 11.87 , N/A ) ( N/A , 0.00 , N/A ) | 1474.6 | N/A | 1.0480 [ 1.0000 ] | 104.8% { 98.3% } | 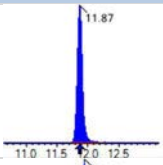 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 351047 | ( 13.15 , N/A ) ( N/A , 0.00 , N/A ) | 1512.8 | N/A | 1.0590 [ 1.0000 ] | 105.9% { 96.9% } | 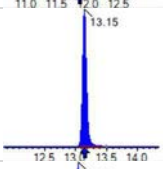 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 589796 | ( 14.05 , N/A ) ( N/A , 0.01 , N/A ) | 2357.7 | N/A | 2.1270 [ 2.0000 ] | 106.3% { 103.2% } | 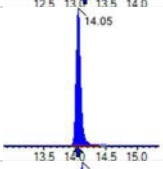 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1573417 | ( 5.41 , N/A ) ( N/A , -0.01 , N/A ) | 1278.0 | N/A | 2.1530 [ 2.0000 ] | 107.6% { 99.0% } | 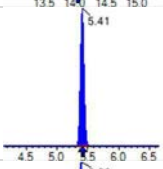 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1399479 | ( 8.09 , N/A ) ( N/A , 0.01 , N/A ) | 5713.0 | N/A | 2.1390 [ 2.0000 ] | 107.0% { 101.9% } | 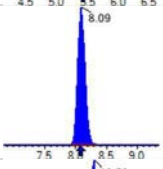 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1664184 | ( 10.50 , N/A ) ( N/A , 0.00 , N/A ) | 914.0 | N/A | 2.0660 [ 2.0000 ] | 103.3% { 106.3% } | 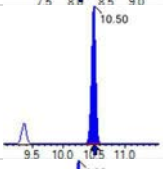 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 484195 | ( 4.86 , N/A ) ( N/A , -0.01 , N/A ) | 73.1 | N/A | 3.0110 [ 4.0000 ] | 75.3% { 69.4% } | 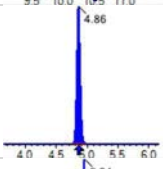 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1509185 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 5300.1 | N/A | 3.8210 [ 4.0000 ] | 95.5% { 91.0% } | 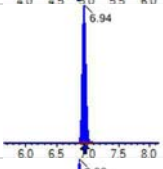 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1311671 | ( 9.36 , N/A ) ( N/A , -0.01 , N/A ) | 1896.3 | N/A | 3.7950 [ 4.0000 ] | 94.9% { 88.7% } | 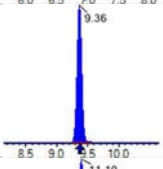 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2675016 | ( 11.10 , N/A ) ( N/A , 0.00 , N/A ) | 1367.6 | N/A | 7.1550 [ 8.0000 ] | 89.4% { 94.0% } | 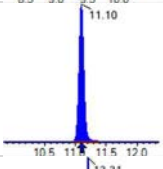 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1768293 | ( 13.31 , N/A ) ( N/A , 0.01 , N/A ) | 3201.2 | N/A | 2.0680 [ 2.0000 ] | 103.4% { 105.0% } | 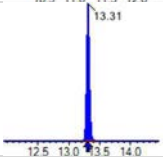 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL6
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (6)
Acquired: 2024/03/28 - 17:07

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 392329 | ( 14.59 , N/A ) ( N/A , 0.01 , N/A ) | 2195.6 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 105.8% } | 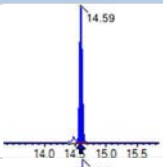  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 365125 | ( 14.92 , N/A ) ( N/A , 0.01 , N/A ) | 2483.7 | N/A | 2.0770 [ 2.0000 ] | 103.9% { 102.7% } | 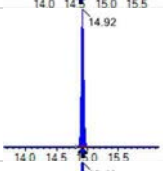  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1127383 | ( 10.42 , N/A ) ( N/A , 0.00 , N/A ) | 2830.7 | N/A | 4.0310 [ 4.0000 ] | 100.8% { 97.3% } | 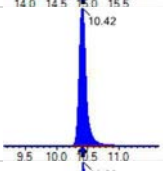  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 991205 | ( 11.02 , N/A ) ( N/A , 0.00 , N/A ) | 2493.6 | N/A | 3.9270 [ 4.0000 ] | 98.2% { 95.9% } | 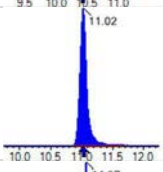  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1478328 | ( 14.37 , N/A ) ( N/A , 0.01 , N/A ) | 3364.6 | N/A | 20.5810 [ 20.0000 ] | 102.9% { 104.1% } | 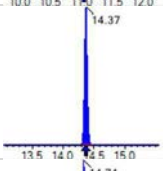  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1365169 | ( 14.74 , N/A ) ( N/A , 0.01 , N/A ) | 4529.3 | N/A | 20.2930 [ 20.0000 ] | 101.5% { 102.2% } | 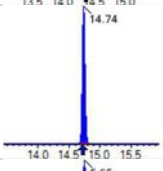  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 837808 | ( 5.65 , N/A ) ( N/A , -0.01 , N/A ) | 3014.0 | N/A | 8.0100 [ 8.0000 ] | 100.1% { 92.7% } | 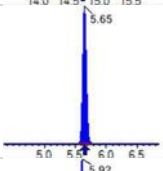  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 621730 | ( 5.92 , N/A ) ( N/A , -0.01 , N/A ) | 2463.3 | N/A | 2.1430 [ 2.0000 ] | 107.1% { 109.5% } | 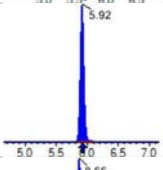  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 693525 | ( 8.66 , N/A ) ( N/A , -0.01 , N/A ) | 1087.6 | N/A | 2.1220 [ 2.0000 ] | 106.1% { 106.1% } | 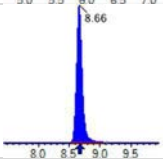  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 2767895<br>( 163.0 / 69.0 ) 73153 | ( 2.48 , 0.68 ) ( N/A , -0.01 , 0.0) | 1529.3<br>428.2 | 0.0264<br>96.4<br>96.4 | 49.0070 | N/A | 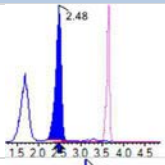 | 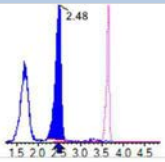 | |
| PFBA | ( 213.0 / 169.0 ) 20144386 | ( 3.64 , 1.00 ) ( 0.00 , N/A , 0.0) | 2896.1 | N/A<br>0.0<br>0.0 | 81.5800 | N/A | 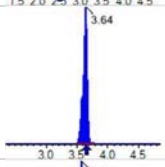 | | |
| PFPeA | ( 263.0 / 219.0 ) 8191769<br>( 263.0 / 69.0 ) 95115 | ( 4.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 6544.5<br>1379.7 | 0.0116<br>97.6<br>97.6 | 41.3530 | N/A | 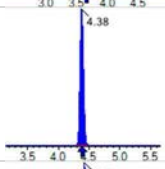 | 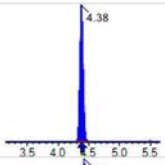 | |
| PFHxA | ( 313.0 / 269.0 ) 5108899<br>( 313.0 / 119.0 ) 581861 | ( 5.22 , 1.00 ) ( 0.00 , N/A , 0.0) | 3270.0<br>2394.0 | 0.1139<br>102.4<br>102.4 | 21.8930 | N/A | 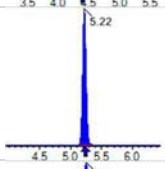 | 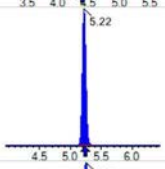 | |
| PFHpA | ( 363.0 / 319.0 ) 6040424<br>( 363.0 / 169.0 ) 1767960 | ( 6.35 , 1.00 ) ( 0.00 , N/A , 0.0) | 3112.7<br>2804.9 | 0.2927<br>95.8<br>95.8 | 22.1490 | N/A | 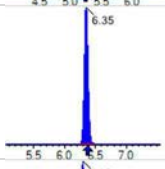 | 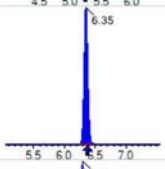 | |
| PFOA | ( 413.0 / 369.0 ) 8578956<br>( 413.0 / 169.0 ) 3122595 | ( 7.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 2081.6<br>2560.7 | 0.3640<br>101.8<br>101.8 | 21.0010 | N/A | 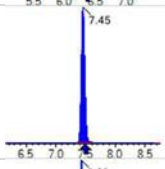 | 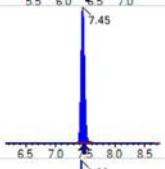 | |
| PFNA | ( 463.0 / 419.0 ) 6159981<br>( 463.0 / 169.0 ) 1566898 | ( 9.03 , 1.00 ) ( 0.00 , N/A , 0.1) | 2350.7<br>1871.3 | 0.2544<br>103.5<br>103.5 | 20.4370 | N/A | 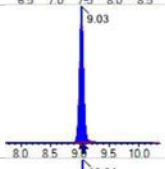 | 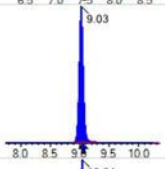 | |
| PFDA | ( 513.0 / 469.0 ) 6822175<br>( 513.0 / 169.0 ) 793094 | ( 10.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 9930.9<br>4899.1 | 0.1163<br>97.6<br>97.6 | 20.4840 | N/A | 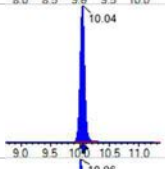 | 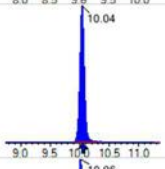 | |
| PFUnA | ( 563.0 / 519.0 ) 7699348<br>( 563.0 / 169.0 ) 1073513 | ( 10.96 , 1.00 ) ( 0.00 , N/A , 0.0) | 1361.8<br>1146.0 | 0.1394<br>90.0<br>90.0 | 22.3440 | N/A | 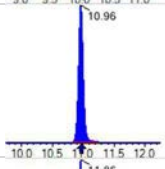 | 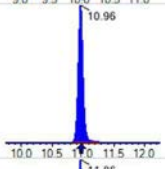 | |
| PFDoA | ( 613.0 / 569.0 ) 8517622<br>( 613.0 / 169.0 ) 1268183 | ( 11.86 , 1.00 ) ( 0.00 , N/A , 0.0) | 2070.7<br>1670.2 | 0.1489<br>98.0<br>98.0 | 21.0020 | N/A | 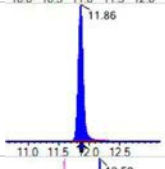 | 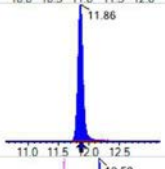 | |
| PFTrDA | ( 663.0 / 619.0 ) 8350718<br>( 663.0 / 169.0 ) 2094467 | ( 12.59 , 1.06 ) ( N/A , -0.01 , 0.0) | 1909.3<br>1721.2 | 0.2508<br>93.2<br>93.2 | 21.1770 | N/A | 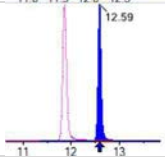 | 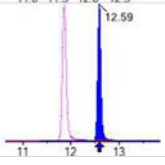 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 7009272<br>( 713.0 / 169.0 ) 1839944 | ( 13.13 , 1.00 ) ( 0.00 , N/A , 0.1) | 1809.0<br>1449.9 | 0.2625<br>96.7<br>96.7 | 21.2270 | N/A | 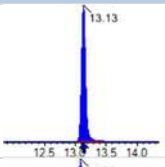 | 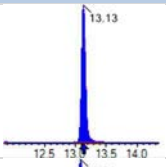 | |
| PFHxDA | ( 813.0 / 769.0 ) 6046764<br>( 813.0 / 169.0 ) 1462750 | ( 14.04 , 1.00 ) ( 0.00 , N/A , 0.0) | 2296.3<br>1729.1 | 0.2419<br>92.5<br>92.5 | 20.9780 | N/A | 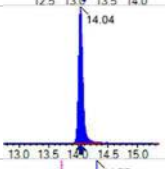 | 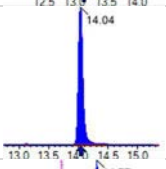 | |
| PFODA | ( 913.0 / 869.0 ) 3872356<br>( 913.0 / 169.0 ) 1207475 | ( 14.77 , 1.05 ) ( N/A , -0.01 , 0.0) | 2776.6<br>2020.6 | 0.3118<br>99.5<br>99.5 | 21.2120 | N/A | 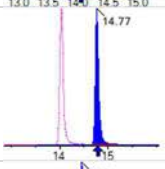 | 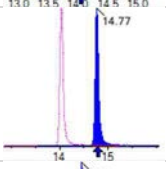 | |
| PFBS | ( 299.0 / 80.0 ) 7383443<br>( 299.0 / 99.0 ) 5403141 | ( 5.40 , 1.00 ) ( 0.00 , N/A , 0.0) | 3012.4<br>2867.8 | 0.7318<br>98.8<br>98.8 | 19.0010 | N/A | 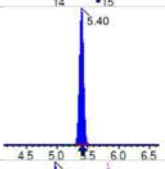 | 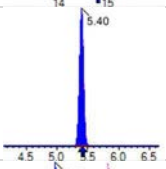 | |
| PFPeS | ( 349.0 / 80.0 ) 19547962<br>( 349.0 / 99.0 ) 7036099 | ( 6.67 , 0.83 ) ( N/A , -0.02 , 0.1) | 4291.5<br>4836.8 | 0.3599<br>105.3<br>105.3 | 19.5690 | N/A | 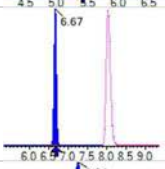 | 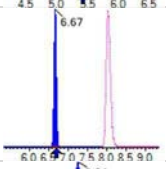 | |
| PFHxS | ( 399.0 / 80.0 ) 24130124<br>( 399.0 / 99.0 ) 7650869 | ( 8.04 , 1.00 ) ( 0.00 , N/A , 0.2) | 4657.0<br>5151.5 | 0.3171<br>96.6<br>96.6 | 19.8170 | N/A | 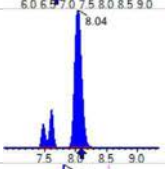 | 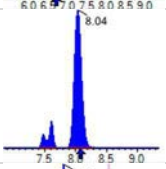 | |
| PFHpS | ( 449.0 / 80.0 ) 20405149<br>( 449.0 / 99.0 ) 5670578 | ( 9.52 , 0.91 ) ( N/A , -0.01 , 0.1) | 3021.0<br>2990.5 | 0.2779<br>106.5<br>106.5 | 19.7430 | N/A | 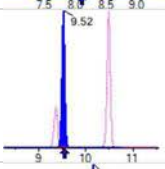 | 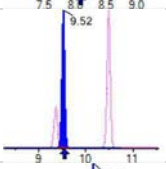 | |
| PFOS | ( 499.0 / 80.0 ) 18765848<br>( 499.0 / 99.0 ) 4259440 | ( 10.48 , 1.00 ) ( 0.00 , N/A , 0.0) | 4643.5<br>13759.1 | 0.2270<br>98.2<br>98.2 | 18.6830 | N/A | 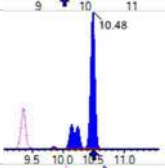 | 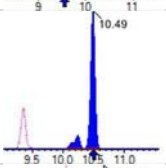 | |
| PFNS | ( 549.0 / 80.0 ) 18249823<br>( 549.0 / 99.0 ) 5058160 | ( 11.37 , 1.08 ) ( N/A , -0.01 , 0.0) | 3632.1<br>3729.3 | 0.2772<br>103.4<br>103.4 | 19.9340 | N/A | 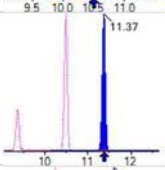 | 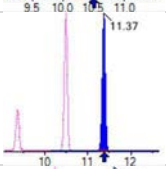 | |
| PFDS | ( 599.0 / 80.0 ) 20950812<br>( 599.0 / 99.0 ) 5699792 | ( 12.18 , 1.16 ) ( N/A , -0.01 , 0.0) | 4312.8<br>3759.2 | 0.2721<br>106.8<br>106.8 | 18.7220 | N/A | 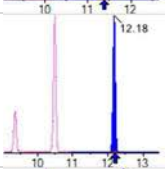 | 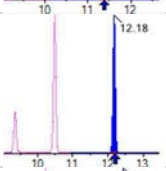 | |
| PFDoS | ( 699.0 / 80.0 ) 20566724<br>( 699.0 / 99.0 ) 5039727 | ( 13.20 , 1.26 ) ( N/A , 0.00 , 0.1) | 4646.2<br>5764.7 | 0.2450<br>109.6<br>109.6 | 18.9940 | N/A | 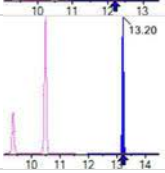 | 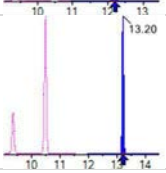 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 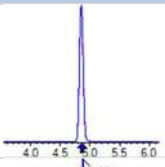 | 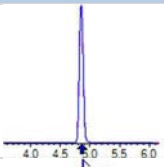 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) 20512887<br>( 427.0 / 81.0 ) 25142299 | ( 6.93 , 1.00 ) ( 0.00 , N/A , 0.0) | 6835.6<br>6457.3 | 1.2257<br>95.0<br>95.0 | 73.7280 | N/A | 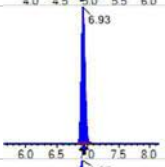 | 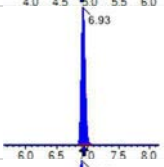 | |
| 8:2FTS | ( 527.0 / 507.0 ) 20737387<br>( 527.0 / 81.0 ) 22196144 | ( 9.35 , 1.00 ) ( -0.01 , N/A , 0.1) | 2027.1<br>2088.8 | 1.0703<br>97.0<br>97.0 | 71.0010 | N/A | 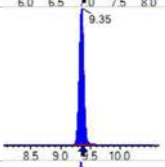 | 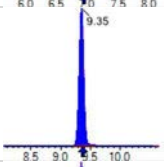 | |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 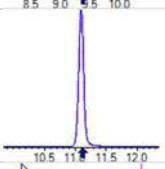 | 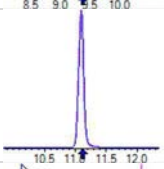 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 12524701<br>( 297.9 / 278.0 ) 17127 | ( 5.55 , 0.38 ) ( N/A , -0.01 , 0.3) | 1280.6<br>148.2 | 0.0014<br>105.6<br>105.6 | 20.4740 | N/A | 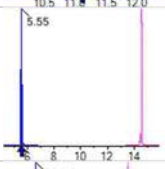 | 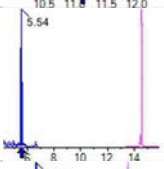 | |
| PFHxSA | ( 397.9 / 78.0 ) 24114997<br>( 397.9 / 378.0 ) 100173 | ( 11.22 , 0.75 ) ( N/A , -0.01 , -0.2) | 1968.6<br>1032.9 | 0.0042<br>102.9<br>102.9 | 21.1720 | N/A | 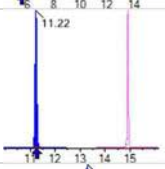 | 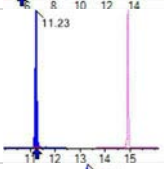 | |
| PFOSA | ( 498.0 / 78.0 ) 18038492<br>( 498.0 / 478.0 ) 256040 | ( 13.30 , 1.00 ) ( -0.01 , N/A , 0.0) | 3155.8<br>2047.1 | 0.0142<br>96.5<br>96.5 | 21.3150 | N/A | 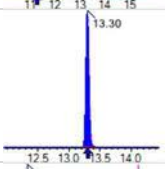 | 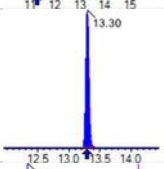 | |
| TFSI | ( 279.7 / 147.0 ) 31918008<br>( 279.7 / 211.0 ) 2902274 | ( 7.07 , 0.53 ) ( N/A , -0.01 , 0.0) | 103.5<br>5242.1 | 0.0909<br>102.8<br>102.8 | 21.5900 | N/A | 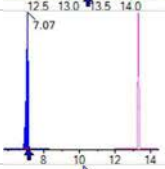 | 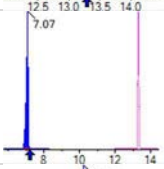 | |
| NMeFOSA | ( 512.0 / 219.0 ) 14921604<br>( 512.0 / 169.0 ) 11712804 | ( 14.59 , 1.00 ) ( 0.00 , N/A , 2.0) | 4959.6<br>1712.0 | 0.7850<br>102.4<br>102.4 | 83.2870 | N/A | 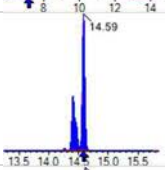 | 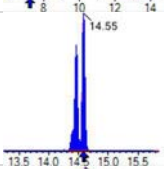 | |
| NEtFOSA | ( 526.0 / 219.0 ) 17338797<br>( 526.0 / 169.0 ) 21713888 | ( 14.92 , 1.00 ) ( 0.01 , N/A , 2.5) | 5472.5<br>3992.7 | 1.2523<br>100.2<br>100.2 | 84.5840 | N/A | 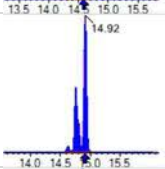 | 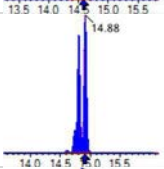 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5429378<br>( 570.0 / 483.0 ) 2544481 | ( 10.41 , 1.00 ) ( 0.01 , N/A , 0.1) | 9339.1<br>1721.1 | 0.4687<br>101.0<br>101.0 | 20.5890 | N/A | 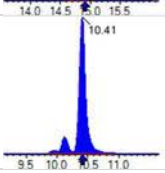 | 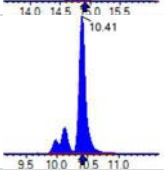 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 4688352<br>( 584.0 / 526.0 ) 2764951 | ( 11.02 , 1.00 ) ( 0.01 , N/A , 0.0) | 2383.2<br>688.2 | 0.5897<br>98.3<br>98.3 | 22.4580 | N/A | 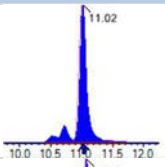 | 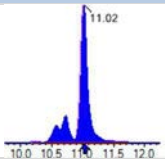 | |
| NMeFOSE | ( 616.0 / 59.0 ) 6907762 | ( 14.38 , 1.00 ) ( 0.02 , N/A , 0.0) | 5119.9 | N/A<br>0.0<br>0.0 | 85.4840 | N/A | 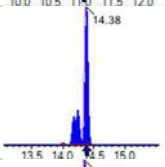 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 5528338 | ( 14.75 , 1.00 ) ( 0.02 , N/A , 0.0) | 5731.7 | N/A<br>0.0<br>0.0 | 83.1020 | N/A | 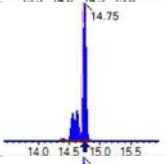 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 1364668<br>( 285.0 / 185.0 ) 3536154 | ( 5.63 , 1.00 ) ( -0.01 , N/A , -0.1) | 2459.3<br>3125.1 | 2.5912<br>92.3<br>92.3 | 21.5040 | N/A | 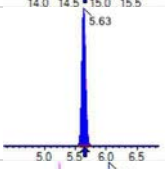 | 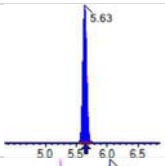 | |
| ADONA | ( 377.0 / 85.0 ) 17414987<br>( 377.0 / 251.0 ) 1757128 | ( 6.78 , 1.20 ) ( N/A , -0.02 , 0.1) | 3602.9<br>2618.0 | 0.1009<br>96.2<br>96.2 | 20.8060 | N/A | 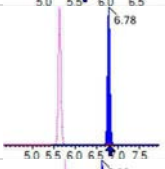 | 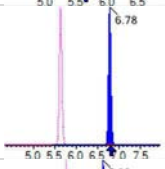 | |
| PFEESA | ( 315.0 / 135.0 ) 6607349<br>( 315.0 / 83.0 ) 3698181 | ( 5.98 , 1.15 ) ( N/A , -0.02 , 0.0) | 3439.3<br>2708.8 | 0.5597<br>87.2<br>87.2 | 38.9200 | N/A | 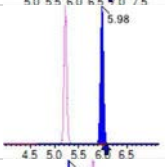 | 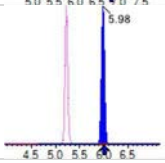 | |
| PFMPA | ( 229.0 / 85.0 ) 3195192 | ( 3.90 , 0.89 ) ( N/A , -0.01 , 0.0) | 11465.8 | N/A<br>0.0<br>0.0 | 43.8720 | N/A | 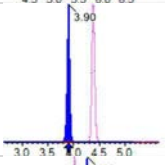 | | |
| PFMBA | ( 279.0 / 85.0 ) 7008463 | ( 4.60 , 1.05 ) ( N/A , -0.01 , 0.0) | 6349.4 | N/A<br>0.0<br>0.0 | 42.7170 | N/A | 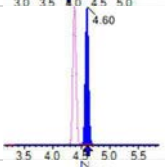 | | |
| NFDHA | ( 295.0 / 201.0 ) 3267704<br>( 295.0 / 85.0 ) 3452312 | ( 5.10 , 0.98 ) ( N/A , -0.01 , 0.1) | 3828.7<br>3736.6 | 1.0565<br>106.2<br>106.2 | 39.4400 | N/A | 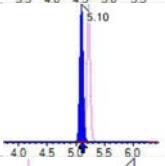 | 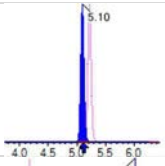 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 19365712<br>( 533.0 / 353.0 ) 6025199 | ( 11.17 , 1.98 ) ( N/A , -0.01 , 0.0) | 3972.6<br>3210.4 | 0.3111<br>97.6<br>97.6 | 20.8260 | N/A | 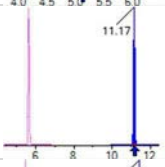 | 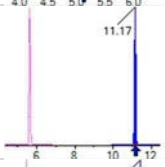 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 14885861<br>( 633.0 / 453.0 ) 4856425 | ( 12.65 , 2.24 ) ( N/A , -0.01 , 0.0) | 4696.1<br>3676.4 | 0.3262<br>96.2<br>96.2 | 20.5980 | N/A | 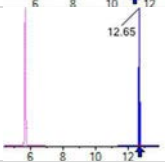 | 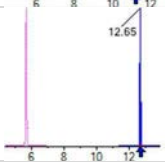 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 10792210<br>( 461.0 / 381.2 ) 4094528 | ( 9.42 , 0.90 )<br>( N/A , -0.02 , -0.1) | 5896.9<br>5731.1 | 0.3794<br>98.2<br>98.2 | 20.0200 | N/A | 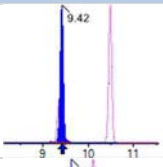 | 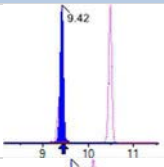 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 1331098<br>( 241.0 / 117.0 ) 2977953 | ( 3.96 , 0.90 )<br>( N/A , -0.01 , 0.0) | 5314.1<br>6422.8 | 2.2372<br>101.9<br>101.9 | 78.2760 | N/A | 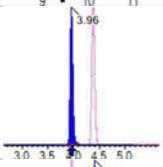 | 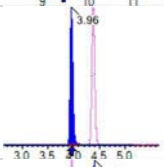 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 5051595<br>( 341.0 / 217.0 ) 7492471 | ( 5.65 , 1.08 )<br>( N/A , -0.01 , 0.0) | 1486.6<br>1526.9 | 1.4832<br>96.9<br>96.9 | 79.5690 | N/A | 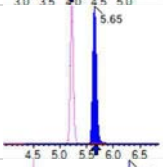 | 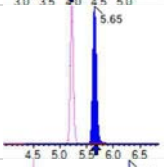 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 10903970<br>( 441.0 / 337.0 ) 9463060 | ( 9.30 , 1.78 )<br>( N/A , -0.03 , 0.0) | 11802.7<br>26493.6 | 0.8679<br>101.6<br>101.6 | 80.8420 | N/A | 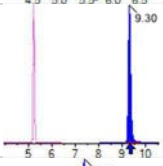 | 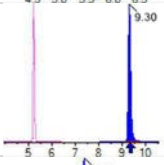 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 6401630<br>( 357.2 / 243.0 ) 691595 | ( 5.89 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2130.8<br>1985.0 | 0.1080<br>100.7<br>100.7 | 21.6660 | N/A | 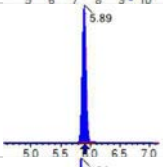 | 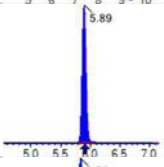 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 5962342<br>( 457.2 / 343.0 ) 255761 | ( 8.64 , 1.00 )<br>( 0.00 , N/A , 0.3) | 1397.5<br>964.8 | 0.0429<br>95.6<br>95.6 | 20.8210 | N/A | 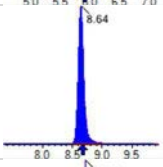 | 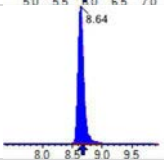 | |
| TDCA | ( 499.0 / 80.0 ) 14316347 | ( 10.48 , 1.00 )<br>( N/A , -0.01 , 0.0) | 57784.2 | N/A<br>0.0<br>0.0 | 21.1220 | N/A | 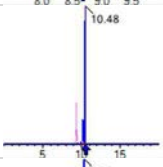 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 243482 | ( 3.64 , N/A )<br>( N/A , -0.01 , N/A ) | 1266.9 | N/A | 0.8630<br>[ 1.0000 ] | 86.3%<br>{ 87.9% } | 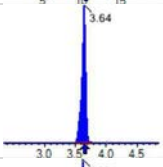 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 128124 | ( 5.22 , N/A )<br>( N/A , -0.01 , N/A ) | 67838.8 | N/A | 1.0850<br>[ 1.0000 ] | 108.5%<br>{ 111.4% } | 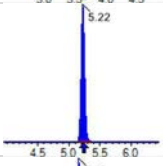 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 414467 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 5671.5 | N/A | 1.0680<br>[ 1.0000 ] | 106.8%<br>{ 105.6% } | 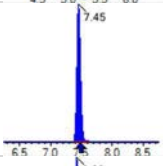 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 308932 | ( 9.03 , N/A )<br>( N/A , -0.02 , N/A ) | 1418.7 | N/A | 1.0580<br>[ 1.0000 ] | 105.8%<br>{ 106.3% } | 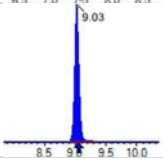 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 299193 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 7550.6 | N/A | 1.0440 [ 1.0000 ] | 104.4% { 109.9% } | 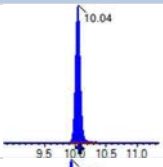 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 1050630 | ( 8.04 , N/A ) ( N/A , -0.05 , N/A ) | 5938.9 | N/A | 1.0700 [ 1.0000 ] | 107.0% { 110.4% } | 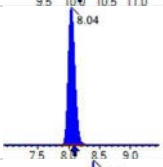 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 844338 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 3663.6 | N/A | 1.0760 [ 1.0000 ] | 107.6% { 114.1% } | 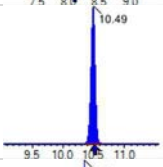 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1996356 | ( 3.64 , N/A ) ( N/A , -0.01 , N/A ) | 91367.2 | N/A | 7.5860 [ 8.0000 ] | 94.8% { 81.9% } | 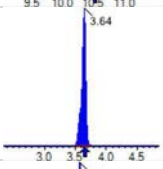 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 793608 | ( 4.38 , N/A ) ( N/A , -0.01 , N/A ) | 4895.6 | N/A | 3.3830 [ 4.0000 ] | 84.6% { 85.8% } | 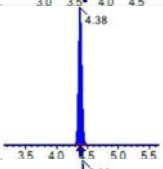 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 502955 | ( 5.22 , N/A ) ( N/A , -0.01 , N/A ) | 12364.4 | N/A | 1.7940 [ 2.0000 ] | 89.7% { 94.0% } | 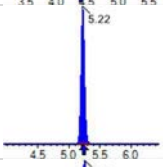 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 549713 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 5786.9 | N/A | 1.7660 [ 2.0000 ] | 88.3% { 96.4% } | 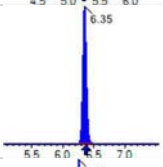 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 813563 | ( 7.45 , N/A ) ( N/A , -0.02 , N/A ) | 4980.6 | N/A | 1.8520 [ 2.0000 ] | 92.6% { 107.5% } | 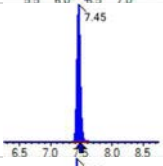 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 299964 | ( 9.03 , N/A ) ( N/A , -0.02 , N/A ) | 34627.4 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 105.6% } | 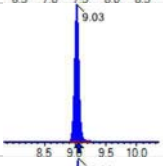 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 333488 | ( 10.04 , N/A ) ( N/A , -0.01 , N/A ) | 1697.5 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 99.1% } | 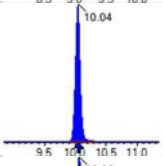 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 379484 | ( 10.96 , N/A ) ( N/A , -0.01 , N/A ) | 1142.3 | N/A | 0.9260 [ 1.0000 ] | 92.6% { 96.8% } | 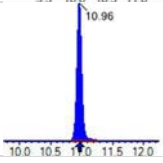 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL7 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 404144 | ( 11.86 , N/A ) ( N/A , -0.01 , N/A ) | 1292.8 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 101.3% } | 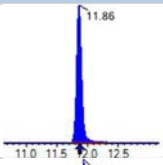  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 353610 | ( 13.14 , N/A ) ( N/A , -0.01 , N/A ) | 1367.5 | N/A | 0.9490 [ 1.0000 ] | 94.9% { 97.6% } | 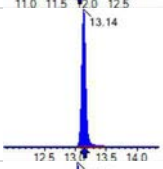  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 615303 | ( 14.04 , N/A ) ( N/A , 0.00 , N/A ) | 2358.7 | N/A | 1.9750 [ 2.0000 ] | 98.7% { 107.6% } | 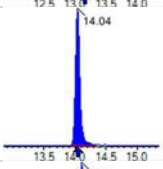  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1580181 | ( 5.40 , N/A ) ( N/A , -0.01 , N/A ) | 1284.0 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 99.4% } | 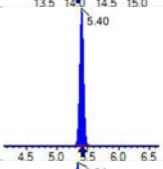  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1390350 | ( 8.04 , N/A ) ( N/A , -0.05 , N/A ) | 6727.0 | N/A | 1.8340 [ 2.0000 ] | 91.7% { 101.2% } | 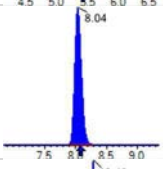  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1730504 | ( 10.49 , N/A ) ( N/A , -0.01 , N/A ) | 611.7 | N/A | 1.9260 [ 2.0000 ] | 96.3% { 110.5% } | 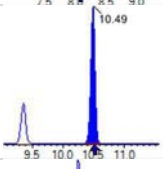  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 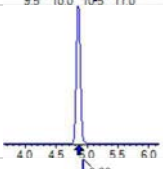 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1311079 | ( 6.93 , N/A ) ( N/A , -0.02 , N/A ) | 4859.9 | N/A | 2.8650 [ 4.0000 ] | 71.6% { 79.0% } | 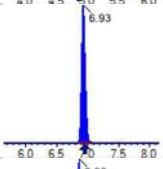  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1187694 | ( 9.36 , N/A ) ( N/A , -0.01 , N/A ) | 1643.7 | N/A | 2.9660 [ 4.0000 ] | 74.2% { 80.3% } | 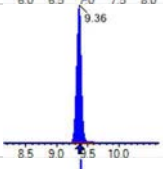  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 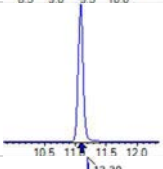 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1749249 | ( 13.30 , N/A ) ( N/A , 0.00 , N/A ) | 3547.4 | N/A | 1.8340 [ 2.0000 ] | 91.7% { 103.9% } | 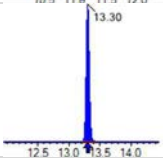  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL7
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (7)
Acquired: 2024/03/28 - 17:28

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 403152 | ( 14.58 , N/A ) ( N/A , 0.00 , N/A ) | 1970.7 | N/A | 1.8800 [ 2.0000 ] | 94.0% { 108.8% } | 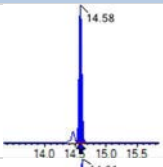  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 361925 | ( 14.91 , N/A ) ( N/A , 0.00 , N/A ) | 2610.3 | N/A | 1.8470 [ 2.0000 ] | 92.3% { 101.8% } | 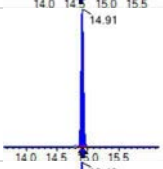  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1143459 | ( 10.40 , N/A ) ( N/A , -0.01 , N/A ) | 3149.4 | N/A | 3.6660 [ 4.0000 ] | 91.7% { 98.7% } | 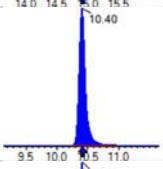  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 860790 | ( 11.01 , N/A ) ( N/A , -0.01 , N/A ) | 2203.6 | N/A | 3.0580 [ 4.0000 ] | 76.4% { 83.3% } | 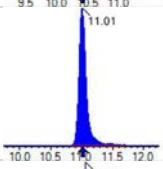  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1492864 | ( 14.36 , N/A ) ( N/A , 0.00 , N/A ) | 3592.4 | N/A | 18.6370 [ 20.0000 ] | 93.2% { 105.1% } | 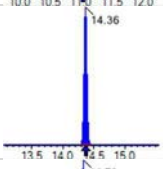  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1396714 | ( 14.73 , N/A ) ( N/A , 0.00 , N/A ) | 4587.7 | N/A | 18.6190 [ 20.0000 ] | 93.1% { 104.6% } | 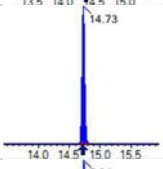  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 864706 | ( 5.64 , N/A ) ( N/A , -0.01 , N/A ) | 2122.0 | N/A | 7.1220 [ 8.0000 ] | 89.0% { 95.7% } | 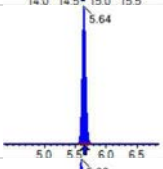  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 561949 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 2522.7 | N/A | 1.7230 [ 2.0000 ] | 86.2% { 99.0% } | 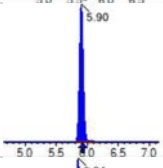  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 692896 | ( 8.64 , N/A ) ( N/A , -0.03 , N/A ) | 1100.9 | N/A | 1.8860 [ 2.0000 ] | 94.3% { 106.0% } | 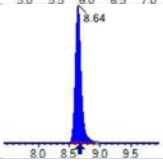  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 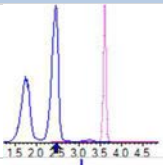 | 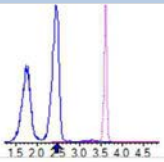 | NR, |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 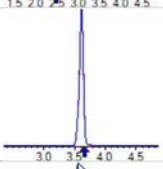 | | NR, |
| PFPeA | ( 263.0 / 219.0 )<br>18554576<br>( 263.0 / 69.0 )<br>221123 | ( 4.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 6986.2<br>2573.5 | 0.0119<br>100.1<br>100.1 | 108.2410 | N/A | 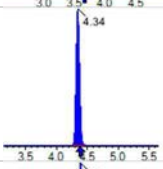 | 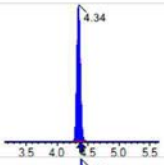 | |
| PFHxA | ( 313.0 / 269.0 )<br>11534220<br>( 313.0 / 119.0 )<br>1329778 | ( 5.19 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2672.5<br>3229.0 | 0.1153<br>103.7<br>103.7 | 52.7870 | N/A | 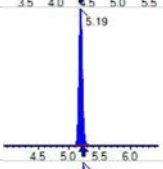 | 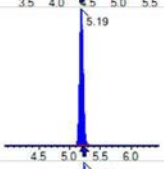 | |
| PFHpA | ( 363.0 / 319.0 )<br>13530873<br>( 363.0 / 169.0 )<br>4150115 | ( 6.34 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3777.1<br>3792.5 | 0.3067<br>100.4<br>100.4 | 51.0870 | N/A | 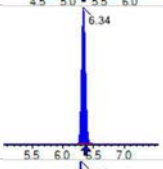 | 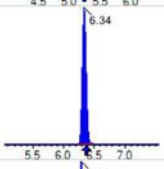 | |
| PFOA | ( 413.0 / 369.0 )<br>19770928<br>( 413.0 / 169.0 )<br>7332025 | ( 7.45 , 1.00 )<br>( 0.00 , N/A , 0.1) | 2723.8<br>3051.6 | 0.3708<br>103.7<br>103.7 | 51.0090 | N/A | 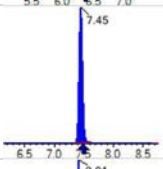 | 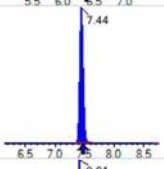 | |
| PFNA | ( 463.0 / 419.0 )<br>14796587<br>( 463.0 / 169.0 )<br>3725225 | ( 9.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 2068.6<br>2126.6 | 0.2518<br>102.5<br>102.5 | 52.5390 | N/A | 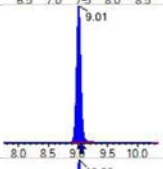 | 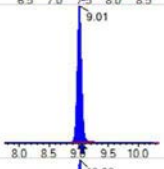 | |
| PFDA | ( 513.0 / 469.0 )<br>15665927<br>( 513.0 / 169.0 )<br>1884520 | ( 10.02 , 1.00 )<br>( 0.00 , N/A , 0.0) | 13025.6<br>5477.1 | 0.1203<br>100.9<br>100.9 | 51.1610 | N/A | 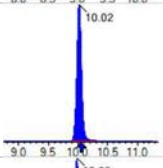 | 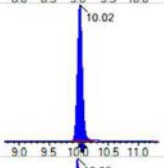 | |
| PFUnA | ( 563.0 / 519.0 )<br>17217624<br>( 563.0 / 169.0 )<br>2479183 | ( 10.93 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1752.1<br>1201.6 | 0.1440<br>93.0<br>93.0 | 58.3950 | N/A | 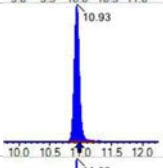 | 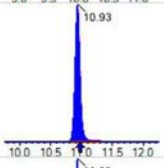 | |
| PFDoA | ( 613.0 / 569.0 )<br>19180204<br>( 613.0 / 169.0 )<br>2853413 | ( 11.83 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1899.7<br>1815.9 | 0.1488<br>98.0<br>98.0 | 51.8370 | N/A | 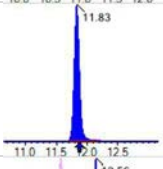 | 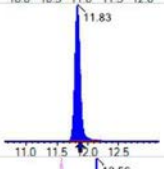 | |
| PFTrDA | ( 663.0 / 619.0 )<br>18136554<br>( 663.0 / 169.0 )<br>4683446 | ( 12.56 , 1.06 )<br>( N/A , -0.04 , 0.1) | 1807.0<br>1776.7 | 0.2582<br>95.9<br>95.9 | 50.4130 | N/A | 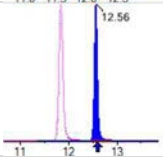 | 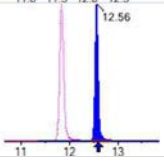 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 15453969<br>( 713.0 / 169.0 ) 4040988 | ( 13.10 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2037.6<br>1868.7 | 0.2615<br>96.4<br>96.4 | 50.0110 | N/A | 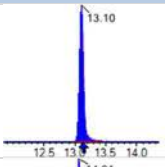 | 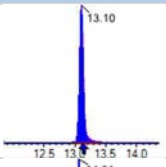 | |
| PFHxDA | ( 813.0 / 769.0 ) 13785746<br>( 813.0 / 169.0 ) 3776458 | ( 14.01 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3649.3<br>2219.9 | 0.2739<br>104.7<br>104.7 | 51.0880 | N/A | 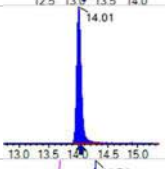 | 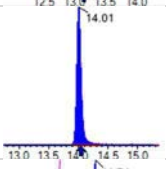 | |
| PFODA | ( 913.0 / 869.0 ) 9179280<br>( 913.0 / 169.0 ) 2594696 | ( 14.74 , 1.05 )<br>( N/A , -0.04 , 0.2) | 3140.3<br>2229.5 | 0.2827<br>90.2<br>90.2 | 53.7110 | N/A | 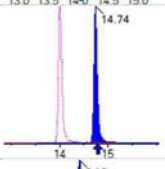 | 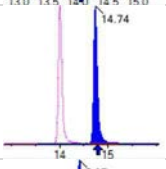 | |
| PFBS | ( 299.0 / 80.0 ) 17642099<br>( 299.0 / 99.0 ) 13037007 | ( 5.37 , 1.00 )<br>( 0.00 , N/A , 0.0) | 3775.5<br>3570.0 | 0.7390<br>99.8<br>99.8 | 48.5430 | N/A | 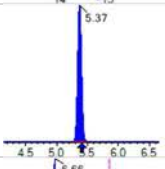 | 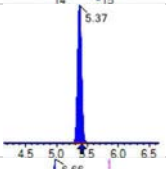 | |
| PFPeS | ( 349.0 / 80.0 ) 41089857<br>( 349.0 / 99.0 ) 15601355 | ( 6.66 , 0.83 )<br>( N/A , -0.03 , 0.0) | 3563.7<br>3576.1 | 0.3797<br>111.1<br>111.1 | 40.2470 | N/A | 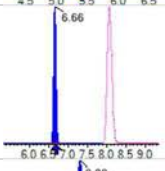 | 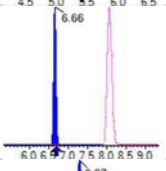 | |
| PFHxS | ( 399.0 / 80.0 ) 59257946<br>( 399.0 / 99.0 ) 19384754 | ( 8.08 , 1.00 )<br>( 0.00 , N/A , 0.2) | 5122.6<br>7240.0 | 0.3271<br>99.7<br>99.7 | 47.6170 | N/A | 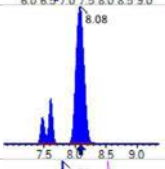 | 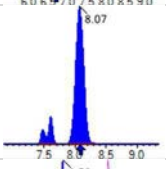 | MI5 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 46276875<br>( 449.0 / 99.0 ) 13749946 | ( 9.50 , 0.91 )<br>( N/A , -0.03 , -0.1) | 3159.8<br>3453.6 | 0.2971<br>113.9<br>113.9 | 45.6670 | N/A | 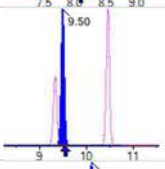 | 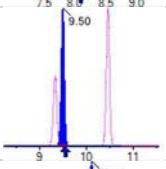 | |
| PFOS | ( 499.0 / 80.0 ) 47298154<br>( 499.0 / 99.0 ) 11732524 | ( 10.46 , 1.00 )<br>( 0.00 , N/A , 0.0) | 4215.1<br>12254.0 | 0.2481<br>107.4<br>107.4 | 48.0290 | N/A | 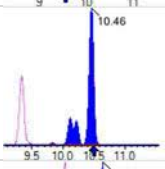 | 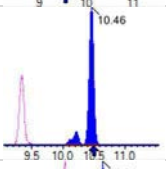 | |
| PFNS | ( 549.0 / 80.0 ) 39659288<br>( 549.0 / 99.0 ) 11404012 | ( 11.34 , 1.08 )<br>( N/A , -0.04 , 0.0) | 3451.9<br>3523.9 | 0.2875<br>107.3<br>107.3 | 44.1830 | N/A | 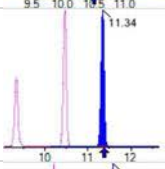 | 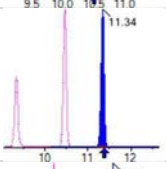 | |
| PFDS | ( 599.0 / 80.0 ) 41471869<br>( 599.0 / 99.0 ) 11416695 | ( 12.15 , 1.16 )<br>( N/A , -0.04 , 0.0) | 3595.8<br>4837.0 | 0.2753<br>108.1<br>108.1 | 37.7980 | N/A | 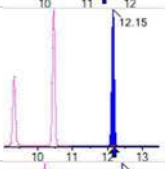 | 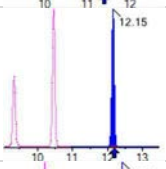 | |
| PFDoS | ( 699.0 / 80.0 ) 39725590<br>( 699.0 / 99.0 ) 10204172 | ( 13.17 , 1.26 )<br>( N/A , -0.03 , 0.0) | 5203.9<br>6256.7 | 0.2569<br>114.9<br>114.9 | 37.4190 | N/A | 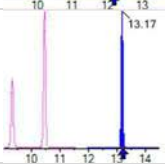 | 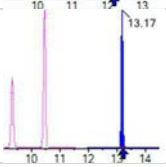 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 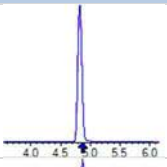 | 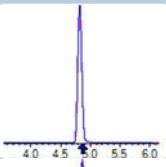 | NR, |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 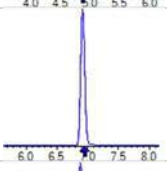 | 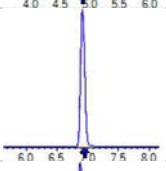 | NR, |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 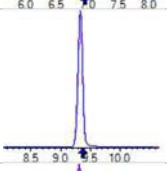 | 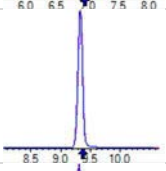 | NR, |
| 10:2FTS | ( 627.0 / 607.0 ) N/A<br>( 627.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 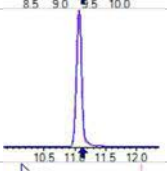 | 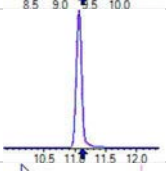 | NR, |
| PFBSA | ( 297.9 / 78.0 ) 30768790<br>( 297.9 / 278.0 ) 43534 | ( 5.52 , 0.38 ) ( N/A , -0.04 , 0.0) | 1847.0<br>354.3 | 0.0014<br>109.3<br>109.3 | 47.1510 | N/A | 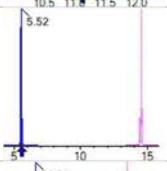 | 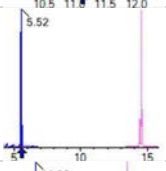 | |
| PFHxSA | ( 397.9 / 78.0 ) 51111724<br>( 397.9 / 378.0 ) 233176 | ( 11.21 , 0.75 ) ( N/A , -0.03 , 0.0) | 1822.2<br>1619.9 | 0.0046<br>113.0<br>113.0 | 50.0600 | N/A | 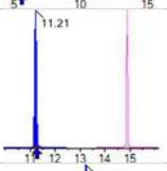 | 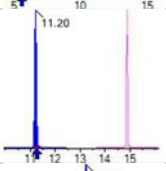 | |
| PFOSA | ( 498.0 / 78.0 ) 40160583<br>( 498.0 / 478.0 ) 658215 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 3742.5<br>3644.9 | 0.0164<br>111.5<br>111.5 | 48.2840 | N/A | 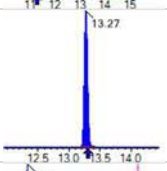 | 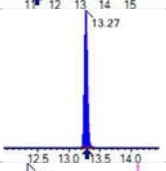 | |
| TFSI | ( 279.7 / 147.0 ) 75387177<br>( 279.7 / 211.0 ) 7514251 | ( 7.04 , 0.53 ) ( N/A , -0.04 , -0.2) | 92.4<br>218246.7 | 0.0997<br>112.6<br>112.6 | 51.8820 | N/A | 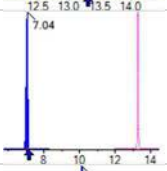 | 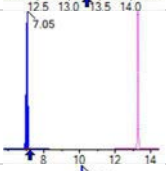 | |
| NMeFOSA | ( 512.0 / 219.0 ) 35094422<br>( 512.0 / 169.0 ) 26676680 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 2.7) | 4161.7<br>1586.2 | 0.7601<br>99.2<br>99.2 | 183.6330 | N/A | 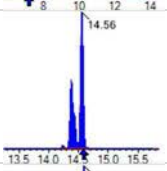 | 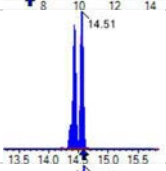 | |
| NEtFOSA | ( 526.0 / 219.0 ) 39274605<br>( 526.0 / 169.0 ) 48620335 | ( 14.88 , 1.00 ) ( 0.00 , N/A , 2.2) | 4404.9<br>3542.8 | 1.2380<br>99.0<br>99.0 | 213.7310 | N/A | 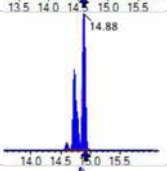 | 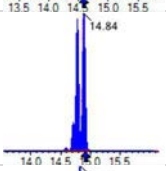 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 11894876<br>( 570.0 / 483.0 ) 5531101 | ( 10.38 , 1.00 ) ( 0.01 , N/A , 0.1) | 7266.9<br>1479.8 | 0.4650<br>100.2<br>100.2 | 50.9080 | N/A | 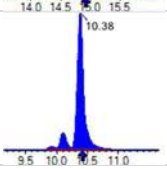 | 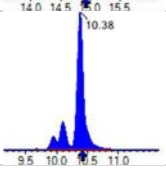 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 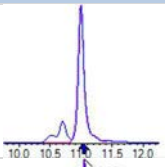 | 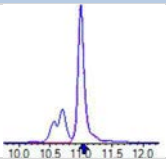 | NR, |
| NMeFOSE | ( 616.0 / 59.0 ) 15548262 | ( 14.36 , 1.00 ) ( 0.02 , N/A , 0.0) | 7738.1 | N/A<br>0.0<br>0.0 | 209.7860 | N/A | 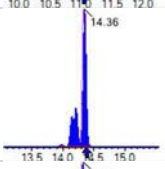 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 13177396 | ( 14.73 , 1.00 ) ( 0.03 , N/A , 0.0) | 7209.8 | N/A<br>0.0<br>0.0 | 213.6710 | N/A | 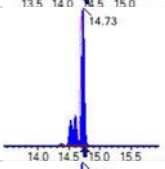 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 3326507<br>( 285.0 / 185.0 ) 8883990 | ( 5.61 , 1.00 ) ( 0.00 , N/A , 0.1) | 2892.0<br>3175.5 | 2.6707<br>95.1<br>95.1 | 54.8320 | N/A | 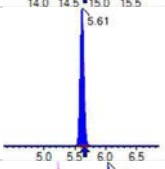 | 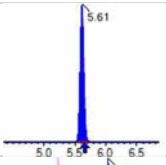 | |
| ADONA | ( 377.0 / 85.0 ) 37445272<br>( 377.0 / 251.0 ) 4192796 | ( 6.77 , 1.21 ) ( N/A , -0.03 , 0.1) | 3377.3<br>3411.7 | 0.1120<br>106.8<br>106.8 | 46.7970 | N/A | 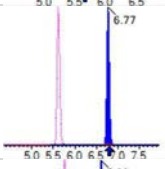 | 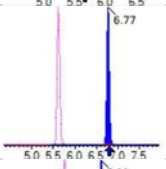 | |
| PFEESA | ( 315.0 / 135.0 ) 14642600<br>( 315.0 / 83.0 ) 8329006 | ( 5.96 , 1.15 ) ( N/A , -0.04 , 0.0) | 3891.0<br>3109.2 | 0.5688<br>88.6<br>88.6 | 92.1100 | N/A | 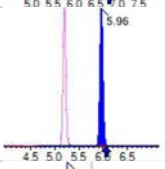 | 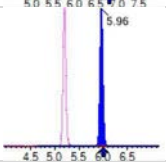 | |
| PFMPA | ( 229.0 / 85.0 ) 6311706 | ( 3.87 , 0.89 ) ( N/A , -0.04 , 0.0) | 13117.5 | N/A<br>0.0<br>0.0 | 100.1500 | N/A | 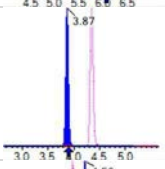 | | |
| PFMBA | ( 279.0 / 85.0 ) 15220419 | ( 4.56 , 1.05 ) ( N/A , -0.04 , 0.0) | 7658.9 | N/A<br>0.0<br>0.0 | 107.2050 | N/A | 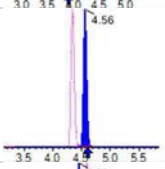 | | |
| NFDHA | ( 295.0 / 201.0 ) 7106610<br>( 295.0 / 85.0 ) 7628719 | ( 5.06 , 0.97 ) ( N/A , -0.04 , -0.2) | 4429.4<br>4187.1 | 1.0735<br>107.9<br>107.9 | 91.6020 | N/A | 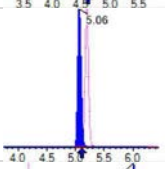 | 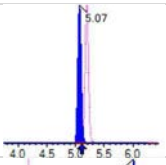 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 43792558<br>( 533.0 / 353.0 ) 14922410 | ( 11.14 , 1.98 ) ( N/A , -0.04 , 0.0) | 3595.8<br>3786.2 | 0.3408<br>106.9<br>106.9 | 49.2630 | N/A | 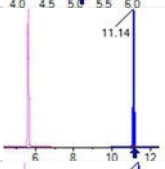 | 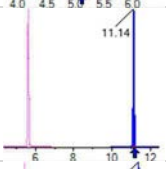 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 30740034<br>( 633.0 / 453.0 ) 10004422 | ( 12.62 , 2.25 ) ( N/A , -0.03 , 0.1) | 4056.4<br>3828.7 | 0.3255<br>95.9<br>95.9 | 44.4940 | N/A | 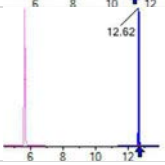 | 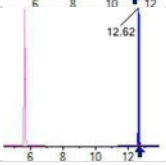 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL8 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 27145880<br>( 461.0 / 381.2 ) 10478652 | ( 9.40 , 0.90 )<br>( N/A , -0.04 , -0.1) | 5007.7<br>4849.6 | 0.3860<br>99.9<br>99.9 | 51.3610 | N/A | 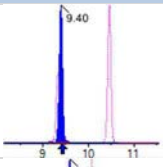 | 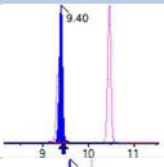 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 2874523<br>( 241.0 / 117.0 ) 6492163 | ( 3.92 , 0.90 )<br>( N/A , -0.04 , 0.0) | 9365.4<br>8027.5 | 2.2585<br>102.9<br>102.9 | 195.3420 | N/A | 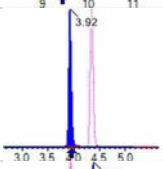 | 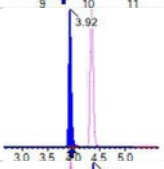 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 11417785<br>( 341.0 / 217.0 ) 17462477 | ( 5.62 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1413.1<br>1415.9 | 1.5294<br>99.9<br>99.9 | 192.0640 | N/A | 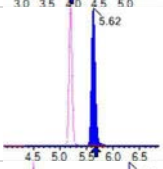 | 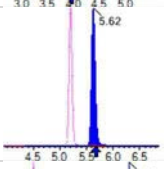 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 24807747<br>( 441.0 / 337.0 ) 21735712 | ( 9.29 , 1.79 )<br>( N/A , -0.04 , 0.1) | 14395.0<br>23388.8 | 0.8762<br>102.6<br>102.6 | 196.4220 | N/A | 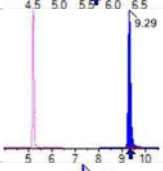 | 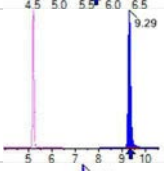 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 14503690<br>( 357.2 / 243.0 ) 1547364 | ( 5.88 , 1.00 )<br>( -0.01 , N/A , 0.0) | 2017.0<br>2021.0 | 0.1067<br>99.5<br>99.5 | 52.1000 | N/A | 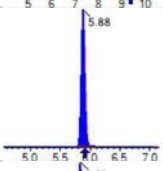 | 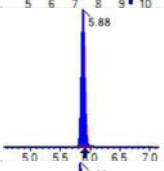 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 13714959<br>( 457.2 / 343.0 ) 570235 | ( 8.63 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1901.8<br>1195.8 | 0.0416<br>92.6<br>92.6 | 51.8790 | N/A | 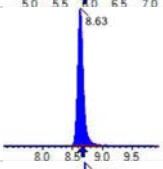 | 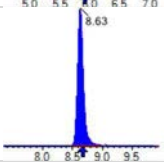 | |
| TDCA | ( 499.0 / 80.0 ) 33897287 | ( 10.45 , 1.00 )<br>( N/A , -0.04 , 0.0) | 48590.1 | N/A<br>0.0<br>0.0 | 51.0080 | N/A | 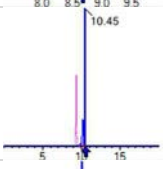 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A ) | N/A | N/A | 0.0000<br>[ 1.0000 ] | 0.0%<br>{ 0.0% } | 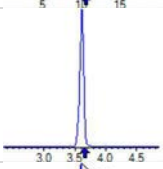 | | NR,IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 114430 | ( 5.20 , N/A )<br>( N/A , -0.04 , N/A ) | 72065.8 | N/A | 0.9690<br>[ 1.0000 ] | 96.9%<br>{ 99.5% } | 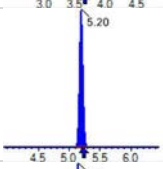 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 368256 | ( 7.45 , N/A )<br>( N/A , -0.03 , N/A ) | 5334.1 | N/A | 0.9490<br>[ 1.0000 ] | 94.9%<br>{ 93.8% } | 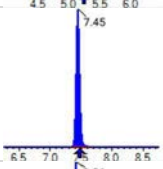 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282658 | ( 9.01 , N/A )<br>( N/A , -0.03 , N/A ) | 1650.3 | N/A | 0.9680<br>[ 1.0000 ] | 96.8%<br>{ 97.3% } | 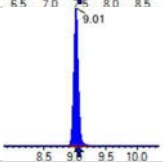 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 286370 | ( 10.02 , N/A ) ( N/A , -0.04 , N/A ) | 3201.2 | N/A | 0.9990 [ 1.0000 ] | 99.9% { 105.2% } | 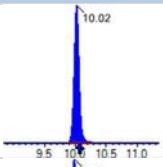 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 982397 | ( 8.08 , N/A ) ( N/A , -0.01 , N/A ) | 4609.5 | N/A | 1.0000 [ 1.0000 ] | 100.0% { 103.3% } | 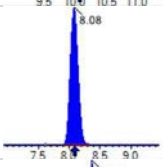 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 829195 | ( 10.47 , N/A ) ( N/A , -0.04 , N/A ) | 4198.3 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 112.1% } | 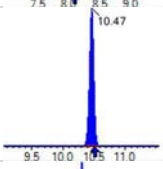 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 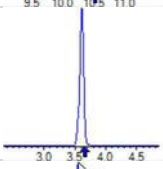 | | NR,S1, |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 686743 | ( 4.34 , N/A ) ( N/A , -0.04 , N/A ) | 4643.4 | N/A | 3.2780 [ 4.0000 ] | 81.9% { 74.2% } | 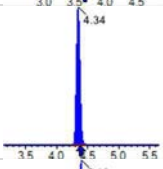 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 470958 | ( 5.19 , N/A ) ( N/A , -0.04 , N/A ) | 11926.8 | N/A | 1.8810 [ 2.0000 ] | 94.1% { 88.0% } | 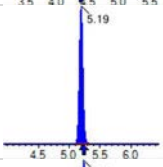 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 533884 | ( 6.34 , N/A ) ( N/A , -0.03 , N/A ) | 5860.6 | N/A | 1.9200 [ 2.0000 ] | 96.0% { 93.6% } | 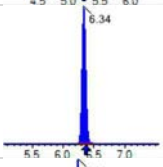 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 771941 | ( 7.44 , N/A ) ( N/A , -0.03 , N/A ) | 4563.1 | N/A | 1.9780 [ 2.0000 ] | 98.9% { 102.0% } | 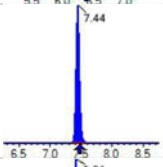 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 280283 | ( 9.01 , N/A ) ( N/A , -0.03 , N/A ) | 7588.4 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 98.7% } | 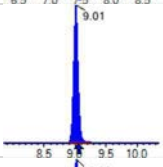 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 306614 | ( 10.02 , N/A ) ( N/A , -0.03 , N/A ) | 1239.2 | N/A | 0.9270 [ 1.0000 ] | 92.7% { 91.1% } | 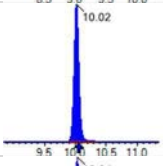 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 324712 | ( 10.94 , N/A ) ( N/A , -0.04 , N/A ) | 1097.9 | N/A | 0.8270 [ 1.0000 ] | 82.7% { 82.8% } | 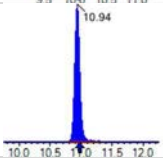 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-CAL8 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (8)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 368717 | ( 11.83 , N/A ) ( N/A , -0.04 , N/A ) | 1365.6 | N/A | 0.9160 [ 1.0000 ] | 91.6% { 92.4% } | 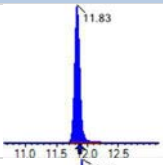 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 330920 | ( 13.11 , N/A ) ( N/A , -0.03 , N/A ) | 1403.1 | N/A | 0.9280 [ 1.0000 ] | 92.8% { 91.4% } | 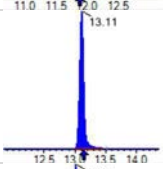 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 576024 | ( 14.01 , N/A ) ( N/A , -0.03 , N/A ) | 2129.5 | N/A | 1.9310 [ 2.0000 ] | 96.6% { 100.8% } | 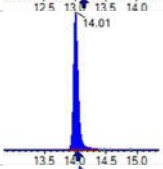 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1477912 | ( 5.38 , N/A ) ( N/A , -0.04 , N/A ) | 950.1 | N/A | 1.8660 [ 2.0000 ] | 93.3% { 93.0% } | 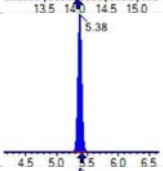 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1421005 | ( 8.07 , N/A ) ( N/A , -0.01 , N/A ) | 5389.1 | N/A | 2.0050 [ 2.0000 ] | 100.3% { 103.5% } | 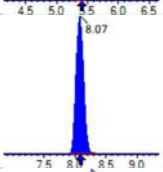 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1696685 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 390.0 | N/A | 1.9230 [ 2.0000 ] | 96.2% { 108.4% } | 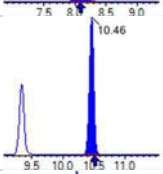 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 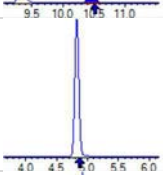 | | S1, |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 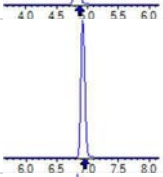 | | S1, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 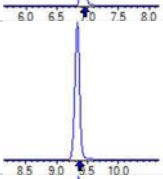 | | S1, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 8.0000 ] | 0.0% { 0.0% } | 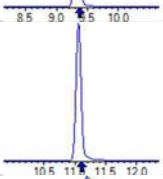 | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1719266 | ( 13.28 , N/A ) ( N/A , -0.03 , N/A ) | 3364.9 | N/A | 1.8360 [ 2.0000 ] | 91.8% { 102.1% } | 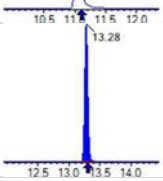 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-CAL8
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (8)
Acquired: 2024/03/28 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 430048 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 1664.4 | N/A | 2.0420 [ 2.0000 ] | 102.1% { 116.0% } | 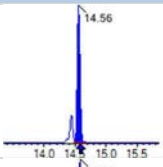  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 324439 | ( 14.88 , N/A ) ( N/A , -0.03 , N/A ) | 2677.9 | N/A | 1.6860 [ 2.0000 ] | 84.3% { 91.2% } | 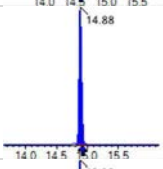  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1013157 | ( 10.38 , N/A ) ( N/A , -0.04 , N/A ) | 2656.2 | N/A | 3.3080 [ 4.0000 ] | 82.7% { 87.4% } | 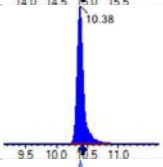  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 4.0000 ] | 0.0% { 0.0% } | 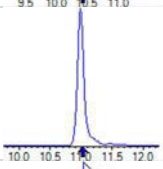 | | S1, |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1369214 | ( 14.33 , N/A ) ( N/A , -0.03 , N/A ) | 2597.7 | N/A | 17.4060 [ 20.0000 ] | 87.0% { 96.4% } | 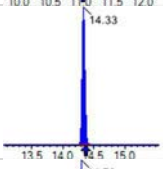  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1294812 | ( 14.70 , N/A ) ( N/A , -0.03 , N/A ) | 4527.9 | N/A | 17.5760 [ 20.0000 ] | 87.9% { 97.0% } | 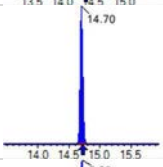  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 826643 | ( 5.62 , N/A ) ( N/A , -0.04 , N/A ) | 2450.0 | N/A | 7.6230 [ 8.0000 ] | 95.3% { 91.5% } | 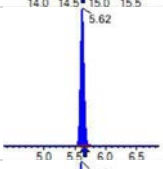  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 529449 | ( 5.89 , N/A ) ( N/A , -0.04 , N/A ) | 2268.9 | N/A | 1.6970 [ 2.0000 ] | 84.8% { 93.3% } | 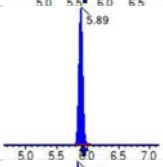  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 639678 | ( 8.63 , N/A ) ( N/A , -0.03 , N/A ) | 1130.5 | N/A | 1.8190 [ 2.0000 ] | 91.0% { 97.8% } | 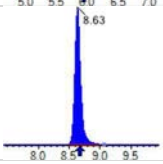  | | |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0142L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| ANALYTEC | EXPECTEDC (ng/mL)C | FOUNDC (ng/mL)C | % DRIFTC | QC LIMITC |
|---|---|---|---|---|
| PFBAL | 4.00L | 3.97L | -0.8L | 30.00L |
| PFPeAL | 4.00L | 3.67L | -8.2L | 30.00L |
| PFHxAL | 4.00L | 3.66L | -8.6L | 30.00L |
| PFHpAL | 4.00L | 3.76L | -6.0L | 30.00L |
| PFOAL | 4.00L | 3.43L | -14.3L | 30.00L |
| PFNAL | 4.00L | 3.69L | -7.7L | 30.00L |
| PFDAL | 4.00L | 3.83L | -4.2L | 30.00L |
| PFUnAL | 4.00L | 3.57L | -10.7L | 30.00L |
| PFDoAL | 4.00L | 3.28L | -18.1L | 30.00L |
| PFTrDAL | 4.00L | 3.41L | -14.7L | 30.00L |
| PFTeDAL | 4.00L | 4.03L | 0.6L | 30.00L |
| PFHxDAL | 4.00L | 3.11L | -22.2L | 30.00L |
| PFODAL | 4.00L | 3.42L | -14.5L | 30.00L |
| PFBSL | 4.00L | 3.89L | -2.7L | 30.00L |
| PFPeSL | 4.00L | 3.91L | -2.2L | 30.00L |
| PFHxSL | 4.00L | 3.82L | -4.4L | 30.00L |
| PFHpSL | 4.00L | 3.67L | -8.3L | 30.00L |
| PFOSL | 4.00L | 3.43L | -14.3L | 30.00L |
| PFNSL | 4.00L | 3.71L | -7.3L | 30.00L |
| PFDSL | 4.00L | 3.94L | -1.4L | 30.00L |
| PFDoSL | 4.00L | 3.86L | -3.6L | 30.00L |
| 4:2FTSL | 4.00L | 4.10L | 2.5L | 30.00L |
| 6:2FTSL | 4.00L | 4.19L | 4.9L | 30.00L |
| 8:2FTSL | 4.00L | 3.70L | -7.6L | 30.00L |
| 10:2FTSL | 3.86L | 4.07L | 5.5L | 30.00L |
| PFOSAL | 4.00L | 3.70L | -7.5L | 30.00L |
| NMeFOSAL | 4.00L | 3.64L | -9.1L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0142L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| NEtFOSAL | 4.00L | 3.47L | -13.3L | 30.00L |
| NMeFOSAAL | 4.00L | 3.84L | -4.1L | 30.00L |
| NEtFOSAAL | 4.00L | 3.67L | -8.2L | 30.00L |
| NMeFOSEL | 4.00L | 4.04L | 0.9L | 30.00L |
| NEtFOSEL | 4.00L | 3.97L | -0.7L | 30.00L |
| HFPO-DAL | 4.00L | 3.83L | -4.2L | 30.00L |
| ADONAL | 4.00L | 3.73L | -6.8L | 30.00L |
| PFEESAL | 4.00L | 3.34L | -16.5L | 30.00L |
| PFMPAL | 4.00L | 3.39L | -15.2L | 30.00L |
| PFMBAL | 4.00L | 3.40L | -15.0L | 30.00L |
| NFDHAL | 4.00L | 3.65L | -8.7L | 30.00L |
| 9Cl-PF3ONSL | 4.00L | 3.71L | -7.1L | 30.00L |
| 11Cl-PF3OUDSL | 4.00L | 3.92L | -2.0L | 30.00L |
| 3:3FTCAL | 4.00L | 4.15L | 3.7L | 30.00L |
| 5:3FTCAL | 4.00L | 3.77L | -5.7L | 30.00L |
| 7:3FTCAL | 4.00L | 3.91L | -2.1L | 30.00L |
| 13C4-PFBAL | 8.00L | 8.69L | 8.6L | 30.00L |
| 13C5-PFPEAL | 4.00L | 4.82L | 20.6L | 30.00L |
| 13C5-PFHXAL | 2.00L | 2.31L | 15.5L | 30.00L |
| 13C4-PFHPAL | 2.00L | 2.21L | 10.7L | 30.00L |
| 13C8-PFOAL | 2.00L | 2.20L | 10.2L | 30.00L |
| 13C9-PFNAL | 1.00L | 1.12L | 12.1L | 30.00L |
| 13C6-PFDAL | 1.00L | 1.11L | 11.3L | 30.00L |
| 13C7-PFUnAL | 1.00L | 1.14L | 14.4L | 30.00L |
| 13C2-PFDOAL | 1.00L | 1.14L | 13.8L | 30.00L |
| 13C2-PFTEDAL | 1.00L | 1.15L | 15.0L | 30.00L |
| 13C2-PFHxDAL | 2.00L | 2.34L | 17.2L | 30.00L |
| 13C3-PFBSL | 2.00L | 2.22L | 11.0L | 30.00L |
| 13C3-PFHXSL | 2.00L | 2.19L | 9.5L | 30.00L |

# SECOND-SOURCE CALIBRATION VERIFICATIONC

## EPA 1633C

**Laboratory:C**APPL, L CL

**SDG:C**24C0142L

**Client:C**Tidewater, Inc.L

**Project:C**JPL-GW MonitoringL

**Calibration:** 2413019L

**Laboratory ID:C**SD01148-SCV1L

**Sequence:** SD01148L

**Standard ID:C**24C0040L

| | | | | |
|---|---|---|---|---|
| 13C8-PFOSL | 2.00L | 2.22L | 11.2L | 30.00L |
| 13C2-4:2FTSL | 4.00L | 5.14L | 28.6L | 30.00L |
| 13C2-6:2FTSL | 4.00L | 4.87L | 21.7L | 30.00L |
| 13C2-8:2FTSL | 4.00L | 5.00L | 25.0L | 30.00L |
| 13C2D4-10:2FTSL | 8.00L | 9.84L | 23.0L | 30.00L |
| 13C8-PFOSAL | 2.00L | 2.21L | 10.3L | 30.00L |
| D3-NMEFOSAL | 2.00L | 2.22L | 11.2L | 30.00L |
| D5-NETFOSAL | 2.00L | 2.25L | 12.6L | 30.00L |
| D3-NMEFOSAAL | 4.00L | 4.76L | 19.0L | 30.00L |
| D5-NETFOSAAL | 4.00L | 4.59L | 14.7L | 30.00L |
| D7-NMEFOSEL | 20.0L | 23.3L | 16.7L | 30.00L |
| D9-NETFOSEL | 20.0L | 23.2L | 16.1L | 30.00L |
| 13C3-HFPO-DAL | 8.00L | 8.92L | 11.4L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 235166<br>( 163.0 / 69.0 ) 6507 | ( 2.44 , 0.68 ) ( N/A , -0.05 , 0.2) | 436.6<br>112.0 | 0.0277<br>101.0<br>101.0 | 3.2530 | N/A | 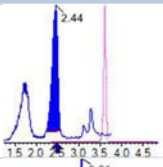 | 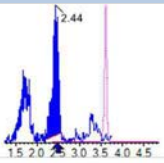 | |
| PFBA | ( 213.0 / 169.0 ) 1360095 | ( 3.61 , 1.00 ) ( 0.00 , N/A , 0.0) | 959.5 | N/A<br>0.0<br>0.0 | 3.9690 | N/A | 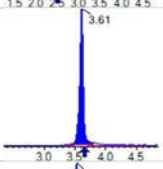 | | |
| PFPeA | ( 263.0 / 219.0 ) 864174<br>( 263.0 / 69.0 ) 10090 | ( 4.33 , 1.00 ) ( 0.00 , N/A , 0.2) | 1777.4<br>171.8 | 0.0117<br>98.1<br>98.1 | 3.6710 | N/A | 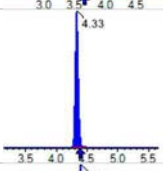 | 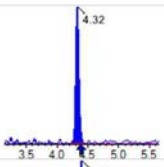 | |
| PFHxA | ( 313.0 / 269.0 ) 915352<br>( 313.0 / 119.0 ) 101986 | ( 5.19 , 1.00 ) ( 0.00 , N/A , 0.0) | 2599.0<br>1473.6 | 0.1114<br>100.2<br>100.2 | 3.6550 | N/A | 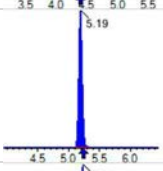 | 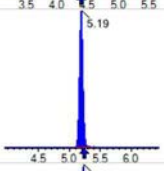 | |
| PFHpA | ( 363.0 / 319.0 ) 1071859<br>( 363.0 / 169.0 ) 316940 | ( 6.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 3462.6<br>2670.7 | 0.2957<br>96.7<br>96.7 | 3.7610 | N/A | 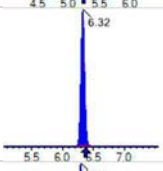 | 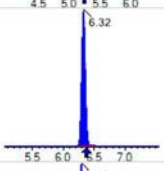 | |
| PFOA | ( 413.0 / 369.0 ) 1421044<br>( 413.0 / 169.0 ) 517030 | ( 7.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1111.6<br>1160.2 | 0.3638<br>101.8<br>101.8 | 3.4280 | N/A | 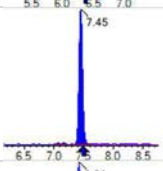 | 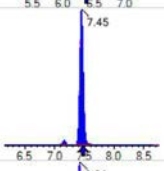 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 ) 1081992<br>( 463.0 / 169.0 ) 275627 | ( 9.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 1996.5<br>2033.4 | 0.2547<br>103.7<br>103.7 | 3.6920 | N/A | 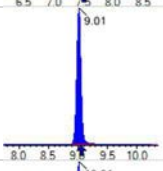 | 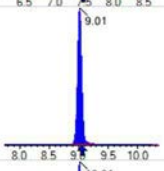 | |
| PFDA | ( 513.0 / 469.0 ) 1273534<br>( 513.0 / 169.0 ) 143723 | ( 10.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 4506.3<br>3091.9 | 0.1129<br>94.7<br>94.7 | 3.8300 | N/A | 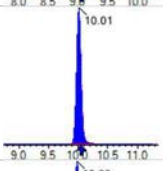 | 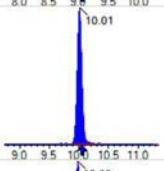 | |
| PFUnA | ( 563.0 / 519.0 ) 1316985<br>( 563.0 / 169.0 ) 190676 | ( 10.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 1275.4<br>513.7 | 0.1448<br>93.5<br>93.5 | 3.5740 | N/A | 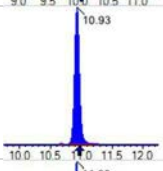 | 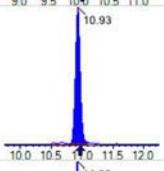 | |
| PFDoA | ( 613.0 / 569.0 ) 1362545<br>( 613.0 / 169.0 ) 209953 | ( 11.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1352.3<br>679.2 | 0.1541<br>101.5<br>101.5 | 3.2770 | N/A | 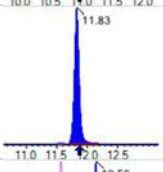 | 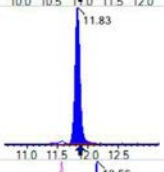 | |
| PFTrDA | ( 663.0 / 619.0 ) 1380135<br>( 663.0 / 169.0 ) 370899 | ( 12.56 , 1.06 ) ( N/A , -0.04 , 0.0) | 1223.6<br>711.5 | 0.2687<br>99.8<br>99.8 | 3.4140 | N/A | 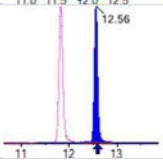 | 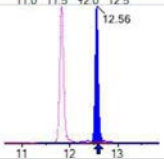 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1393663<br>( 713.0 / 169.0 ) 368951 | ( 13.10 , 1.00 ) ( 0.00 , N/A , 0.0) | 1434.6<br>766.9 | 0.2647<br>97.6<br>97.6 | 4.0260 | N/A | 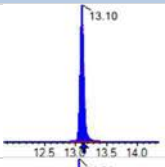 | 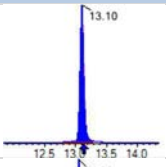 | |
| PFHxDA | ( 813.0 / 769.0 ) 921289<br>( 813.0 / 169.0 ) 252019 | ( 14.01 , 1.00 ) ( 0.00 , N/A , -0.1) | 1667.1<br>757.2 | 0.2736<br>104.6<br>104.6 | 3.1120 | N/A | 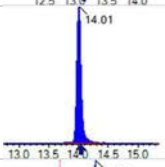 | 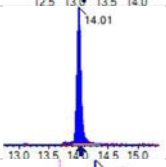 | |
| PFODA | ( 913.0 / 869.0 ) 641579<br>( 913.0 / 169.0 ) 199675 | ( 14.74 , 1.05 ) ( N/A , -0.04 , 0.1) | 1546.6<br>639.9 | 0.3112<br>99.3<br>99.3 | 3.4210 | N/A | 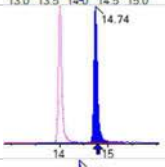 | 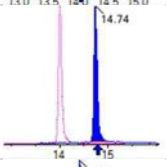 | |
| PFBS | ( 299.0 / 80.0 ) 1513995<br>( 299.0 / 99.0 ) 1113378 | ( 5.37 , 1.00 ) ( 0.00 , N/A , 0.0) | 3017.3<br>2498.3 | 0.7354<br>99.3<br>99.3 | 3.8920 | N/A | 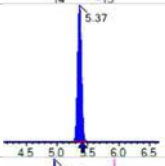 | 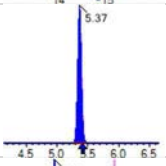 | |
| PFPeS | ( 349.0 / 80.0 ) 3924753<br>( 349.0 / 99.0 ) 1382683 | ( 6.65 , 0.81 ) ( N/A , -0.04 , -0.1) | 4924.1<br>4084.0 | 0.3523<br>103.1<br>103.1 | 3.9110 | N/A | 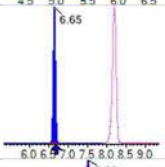 | 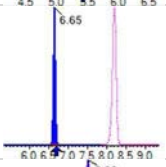 | |
| PFHxS | ( 399.0 / 80.0 ) 4675678<br>( 399.0 / 99.0 ) 1488309 | ( 8.20 , 1.00 ) ( 0.00 , N/A , 0.1) | 5118.6<br>5169.5 | 0.3183<br>97.0<br>97.0 | 3.8230 | N/A | 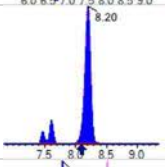 | 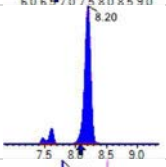 | |
| PFHpS | ( 449.0 / 80.0 ) 3779274<br>( 449.0 / 99.0 ) 1027436 | ( 9.50 , 0.91 ) ( N/A , -0.04 , 0.2) | 2759.4<br>2847.2 | 0.2719<br>104.2<br>104.2 | 3.6680 | N/A | 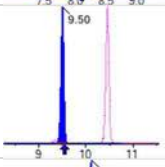 | 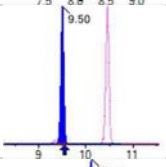 | |
| PFOS | ( 499.0 / 80.0 ) 3432752<br>( 499.0 / 99.0 ) 768658 | ( 10.45 , 1.00 ) ( 0.00 , N/A , 0.0) | 1979.3<br>5764.5 | 0.2239<br>96.9<br>96.9 | 3.4290 | N/A | 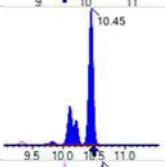 | 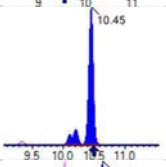 | |
| PFNS | ( 549.0 / 80.0 ) 3385234<br>( 549.0 / 99.0 ) 909095 | ( 11.34 , 1.08 ) ( N/A , -0.04 , 0.0) | 3157.1<br>2600.5 | 0.2685<br>100.2<br>100.2 | 3.7100 | N/A | 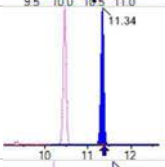 | 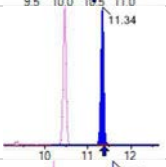 | |
| PFDS | ( 599.0 / 80.0 ) 4398381<br>( 599.0 / 99.0 ) 1122436 | ( 12.15 , 1.16 ) ( N/A , -0.04 , 0.0) | 3445.1<br>2327.6 | 0.2552<br>100.2<br>100.2 | 3.9430 | N/A | 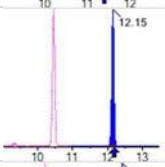 | 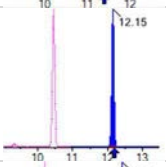 | |
| PFDoS | ( 699.0 / 80.0 ) 4164049<br>( 699.0 / 99.0 ) 969806 | ( 13.17 , 1.26 ) ( N/A , -0.03 , 0.0) | 5492.4<br>4447.0 | 0.2329<br>104.2<br>104.2 | 3.8580 | N/A | 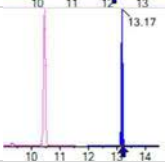 | 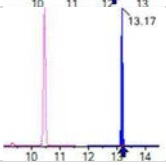 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 2181822<br>( 327.0 / 81.0 ) 1810736 | ( 4.81 , 1.00 ) ( -0.01 , N/A , 0.1) | 4312.6<br>3339.1 | 0.8299<br>97.3<br>97.3 | 4.1020 | N/A | 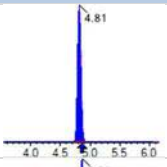 | 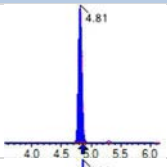 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1668262<br>( 427.0 / 81.0 ) 2042250 | ( 6.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 5547.4<br>6669.4 | 1.2242<br>94.9<br>94.9 | 4.1950 | N/A | 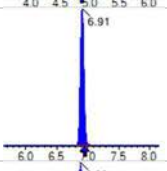 | 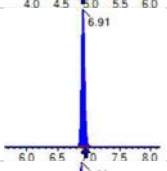 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1530234<br>( 527.0 / 81.0 ) 1580240 | ( 9.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 2841.5<br>2440.7 | 1.0327<br>93.6<br>93.6 | 3.6960 | N/A | 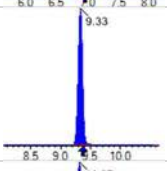 | 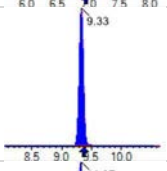 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1449318<br>( 627.0 / 81.0 ) 2006754 | ( 11.07 , 1.00 ) ( 0.01 , N/A , -0.1) | 1302.3<br>1308.2 | 1.3846<br>96.3<br>96.3 | 4.0730 | N/A | 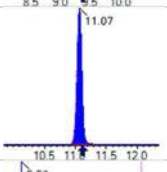 | 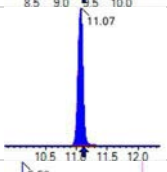 | |
| PFBSA | ( 297.9 / 78.0 ) 2735385<br>( 297.9 / 278.0 ) 4473 | ( 5.53 , 0.38 ) ( N/A , -0.03 , -0.2) | 1976.1<br>51.4 | 0.0016<br>126.3<br>126.3 | 4.3780 | N/A | 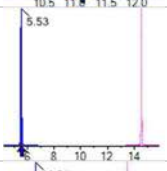 | 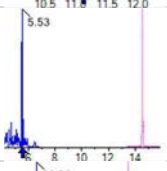 | |
| PFHxSA | ( 397.9 / 78.0 ) 4599620<br>( 397.9 / 378.0 ) 19304 | ( 11.21 , 0.75 ) ( N/A , -0.02 , 0.0) | 1246.5<br>292.1 | 0.0042<br>103.9<br>103.9 | 3.8380 | N/A | 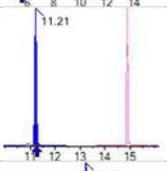 | 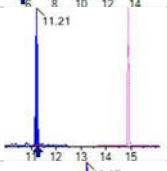 | |
| PFOSA | ( 498.0 / 78.0 ) 3252050<br>( 498.0 / 478.0 ) 46246 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.1) | 1959.8<br>597.2 | 0.0142<br>96.7<br>96.7 | 3.7010 | N/A | 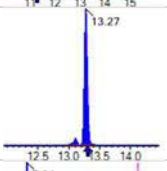 | 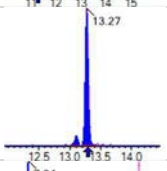 | MI5 DG 2024-03-29 |
| TFSI | ( 279.7 / 147.0 ) 5684699<br>( 279.7 / 211.0 ) 509582 | ( 7.04 , 0.53 ) ( N/A , -0.04 , -0.1) | 83.3<br>2516728.3 | 0.0896<br>101.3<br>101.3 | 3.7040 | N/A | 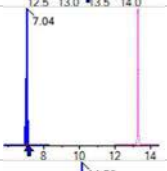 | 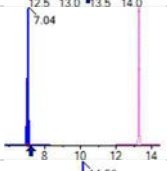 | |
| NMeFOSA | ( 512.0 / 219.0 ) 665367<br>( 512.0 / 169.0 ) 433567 | ( 14.56 , 1.00 ) ( 0.00 , N/A , 0.0) | 5517.5<br>2636.5 | 0.6516<br>85.0<br>85.0 | 3.6370 | N/A | 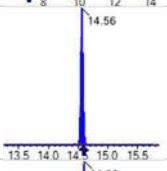 | 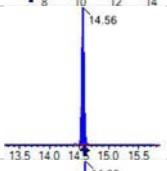 | |
| NEtFOSA | ( 526.0 / 219.0 ) 748227<br>( 526.0 / 169.0 ) 821322 | ( 14.90 , 1.00 ) ( 0.01 , N/A , 0.1) | 7045.4<br>6317.3 | 1.0977<br>87.8<br>87.8 | 3.4690 | N/A | 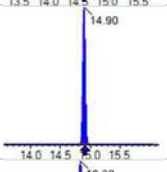 | 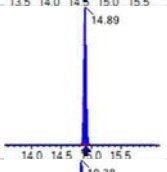 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1134272<br>( 570.0 / 483.0 ) 512190 | ( 10.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 3365.8<br>1434.9 | 0.4516<br>97.3<br>97.3 | 3.8380 | N/A | 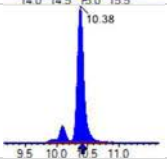 | 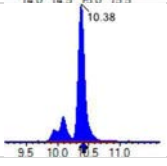 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-SCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (10)
Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 993289<br>( 584.0 / 526.0 ) 622352 | ( 10.99 , 1.00 )<br>( 0.01 , N/A , -0.1) | 1704.2<br>890.6 | 0.6266<br>104.4<br>104.4 | 3.6740 | N/A | 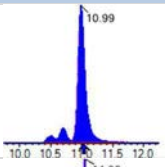 | 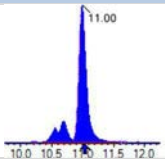 | |
| NMeFOSE | ( 616.0 / 59.0 ) 352402 | ( 14.36 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2726.5 | N/A<br>0.0<br>0.0 | 4.0360 | N/A | 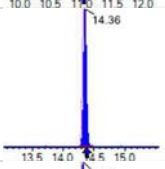 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 284314 | ( 14.73 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2917.8 | N/A<br>0.0<br>0.0 | 3.9720 | N/A | 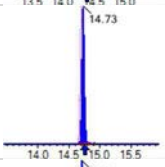 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 253881<br>( 285.0 / 185.0 ) 709307 | ( 5.60 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1622.4<br>2003.2 | 2.7939<br>99.5<br>99.5 | 3.8330 | N/A | 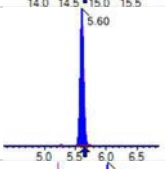 | 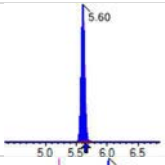 | |
| ADONA | ( 377.0 / 85.0 ) 3254890<br>( 377.0 / 251.0 ) 340133 | ( 6.76 , 1.21 )<br>( N/A , -0.04 , 0.1) | 3009.5<br>1361.5 | 0.1045<br>99.6<br>99.6 | 3.7260 | N/A | 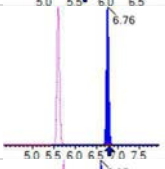 | 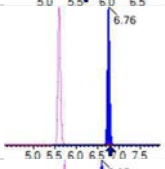 | |
| PFEESA | ( 315.0 / 135.0 ) 608573<br>( 315.0 / 83.0 ) 352500 | ( 5.95 , 1.15 )<br>( N/A , -0.04 , 0.1) | 2920.8<br>1029.1 | 0.5792<br>90.2<br>90.2 | 3.3400 | N/A | 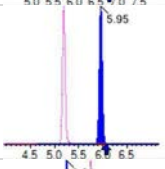 | 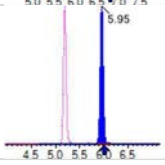 | |
| PFMPA | ( 229.0 / 85.0 ) 293727 | ( 3.86 , 0.89 )<br>( N/A , -0.05 , 0.0) | 6806.6 | N/A<br>0.0<br>0.0 | 3.3940 | N/A | 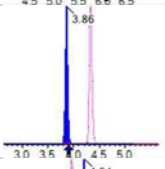 | | |
| PFMBA | ( 279.0 / 85.0 ) 662742 | ( 4.54 , 1.05 )<br>( N/A , -0.06 , 0.0) | 3090.5 | N/A<br>0.0<br>0.0 | 3.3990 | N/A | 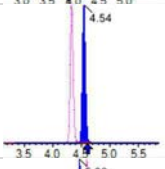 | | |
| NFDHA | ( 295.0 / 201.0 ) 324787<br>( 295.0 / 85.0 ) 331785 | ( 5.06 , 0.98 )<br>( N/A , -0.04 , 0.1) | 2862.8<br>3125.0 | 1.0215<br>102.7<br>102.7 | 3.6530 | N/A | 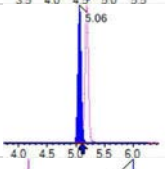 | 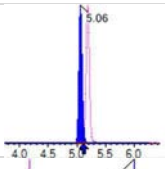 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3604854<br>( 533.0 / 353.0 ) 1165515 | ( 11.13 , 1.98 )<br>( N/A , -0.04 , 0.1) | 3561.2<br>3527.4 | 0.3233<br>101.4<br>101.4 | 3.7140 | N/A | 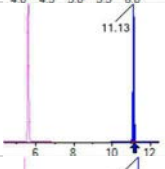 | 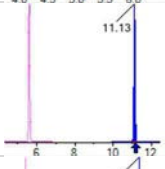 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2957374<br>( 633.0 / 453.0 ) 1020314 | ( 12.62 , 2.25 )<br>( N/A , -0.04 , 0.0) | 4043.5<br>3488.3 | 0.3450<br>101.7<br>101.7 | 3.9210 | N/A | 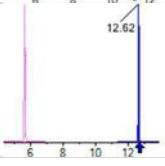 | 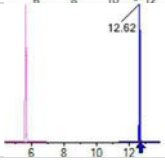 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1825909<br>( 461.0 / 381.2 ) 677380 | ( 9.40 , 0.90 )<br>( N/A , -0.04 , 0.0) | 2232.1<br>2205.4 | 0.3710<br>96.0<br>96.0 | 3.3980 | N/A | 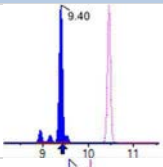 | 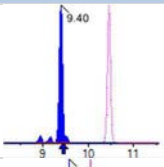 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 83819<br>( 241.0 / 117.0 ) 182168 | ( 3.91 , 0.90 )<br>( N/A , -0.05 , 0.0) | 2348.9<br>1073.6 | 2.1733<br>99.0<br>99.0 | 4.1480 | N/A | 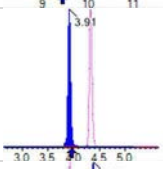 | 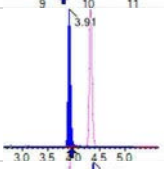 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 257037<br>( 341.0 / 217.0 ) 372405 | ( 5.62 , 1.08 )<br>( N/A , -0.04 , 0.0) | 1019.1<br>859.4 | 1.4488<br>94.6<br>94.6 | 3.7730 | N/A | 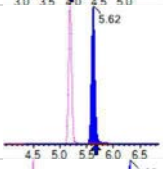 | 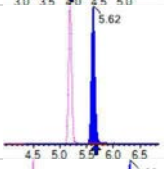 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 566539<br>( 441.0 / 337.0 ) 484100 | ( 9.33 , 1.80 )<br>( N/A , 0.00 , 0.1) | 3699.8<br>23194.6 | 0.8545<br>100.0<br>100.0 | 3.9140 | N/A | 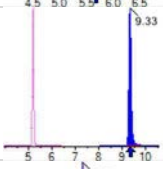 | 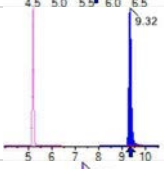 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1383618<br>( 357.2 / 243.0 ) 137847 | ( 5.87 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1666.2<br>1141.7 | 0.0996<br>92.9<br>92.9 | 4.0580 | N/A | 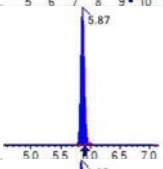 | 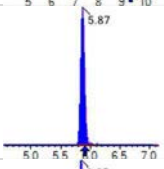 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1241005<br>( 457.2 / 343.0 ) 51903 | ( 8.65 , 1.00 )<br>( 0.00 , N/A , 0.1) | 1338.4<br>411.4 | 0.0418<br>93.2<br>93.2 | 4.0610 | N/A | 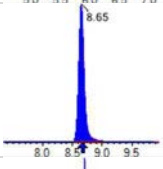 | 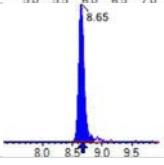 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 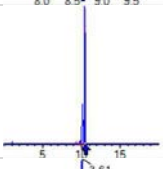 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 271996 | ( 3.61 , N/A )<br>( N/A , -0.04 , N/A ) | 1637.2 | N/A | 0.9640<br>[ 1.0000 ] | 96.4%<br>{ 98.1% } | 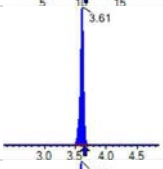 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106809 | ( 5.19 , N/A )<br>( N/A , -0.05 , N/A ) | 15822.4 | N/A | 0.9050<br>[ 1.0000 ] | 90.5%<br>{ 92.8% } | 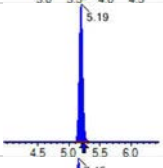 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353445 | ( 7.45 , N/A )<br>( N/A , -0.02 , N/A ) | 6398.2 | N/A | 0.9110<br>[ 1.0000 ] | 91.1%<br>{ 90.0% } | 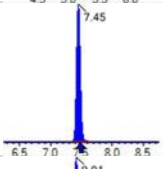 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 263587 | ( 9.01 , N/A )<br>( N/A , -0.03 , N/A ) | 1791.1 | N/A | 0.9020<br>[ 1.0000 ] | 90.2%<br>{ 90.7% } | 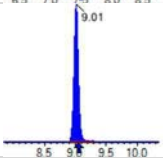 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 258924 | ( 10.02 , N/A ) ( N/A , -0.04 , N/A ) | 3093.0 | N/A | 0.9030 [ 1.0000 ] | 90.3% { 95.1% } | 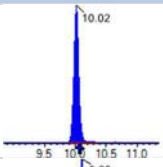 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 883755 | ( 8.20 , N/A ) ( N/A , 0.11 , N/A ) | 6048.5 | N/A | 0.9000 [ 1.0000 ] | 90.0% { 92.9% } | 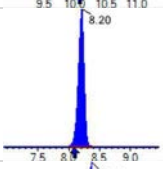 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 728766 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 2669.9 | N/A | 0.9290 [ 1.0000 ] | 92.9% { 98.5% } | 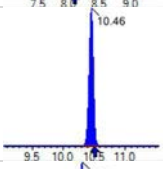 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2555252 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 190912.6 | N/A | 8.6910 [ 8.0000 ] | 108.6% { 104.8% } | 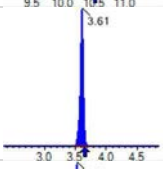 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 943044 | ( 4.33 , N/A ) ( N/A , -0.06 , N/A ) | 7003.3 | N/A | 4.8230 [ 4.0000 ] | 120.6% { 102.0% } | 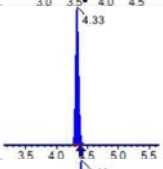 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 539734 | ( 5.19 , N/A ) ( N/A , -0.05 , N/A ) | 7182.2 | N/A | 2.3100 [ 2.0000 ] | 115.5% { 100.9% } | 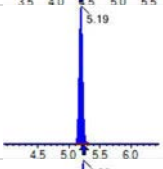 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 574412 | ( 6.33 , N/A ) ( N/A , -0.04 , N/A ) | 9188.4 | N/A | 2.2130 [ 2.0000 ] | 110.7% { 100.7% } | 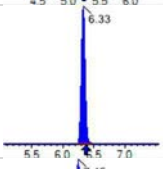 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 825628 | ( 7.45 , N/A ) ( N/A , -0.03 , N/A ) | 5715.1 | N/A | 2.2040 [ 2.0000 ] | 110.2% { 109.1% } | 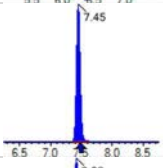 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291694 | ( 9.02 , N/A ) ( N/A , -0.03 , N/A ) | 4491.4 | N/A | 1.1210 [ 1.0000 ] | 112.1% { 102.7% } | 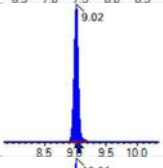 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 332917 | ( 10.01 , N/A ) ( N/A , -0.04 , N/A ) | 1528.0 | N/A | 1.1130 [ 1.0000 ] | 111.3% { 98.9% } | 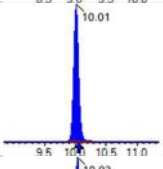 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 405814 | ( 10.93 , N/A ) ( N/A , -0.04 , N/A ) | 1190.6 | N/A | 1.1440 [ 1.0000 ] | 114.4% { 103.5% } | 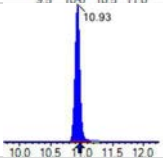 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 414363 | ( 11.83 , N/A ) ( N/A , -0.04 , N/A ) | 1464.6 | N/A | 1.1380 [ 1.0000 ] | 113.8% { 103.8% } | 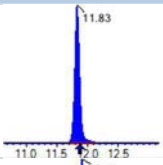 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 370739 | ( 13.11 , N/A ) ( N/A , -0.04 , N/A ) | 1588.6 | N/A | 1.1500 [ 1.0000 ] | 115.0% { 102.3% } | 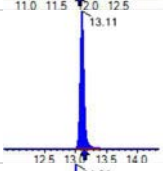 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 632035 | ( 14.01 , N/A ) ( N/A , -0.03 , N/A ) | 2389.9 | N/A | 2.3440 [ 2.0000 ] | 117.2% { 110.6% } | 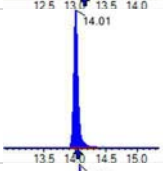 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1582099 | ( 5.37 , N/A ) ( N/A , -0.05 , N/A ) | 1295.3 | N/A | 2.2210 [ 2.0000 ] | 111.0% { 99.6% } | 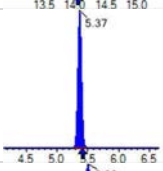 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1396656 | ( 8.20 , N/A ) ( N/A , 0.12 , N/A ) | 6139.5 | N/A | 2.1910 [ 2.0000 ] | 109.5% { 101.7% } | 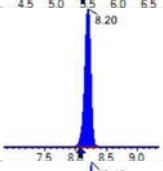 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1724941 | ( 10.46 , N/A ) ( N/A , -0.04 , N/A ) | 1537.8 | N/A | 2.2250 [ 2.0000 ] | 111.2% { 110.2% } | 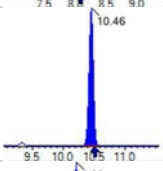 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 805955 | ( 4.82 , N/A ) ( N/A , -0.04 , N/A ) | 66.0 | N/A | 5.1430 [ 4.0000 ] | 128.6% { 115.5% } | 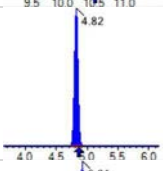 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1874169 | ( 6.91 , N/A ) ( N/A , -0.04 , N/A ) | 7706.7 | N/A | 4.8680 [ 4.0000 ] | 121.7% { 113.0% } | 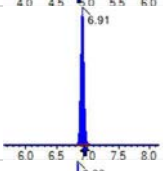 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1683640 | ( 9.33 , N/A ) ( N/A , -0.03 , N/A ) | 2452.3 | N/A | 4.9990 [ 4.0000 ] | 125.0% { 113.9% } | 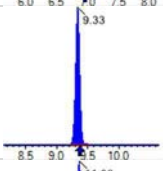 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3584382 | ( 11.06 , N/A ) ( N/A , -0.04 , N/A ) | 1791.4 | N/A | 9.8370 [ 8.0000 ] | 123.0% { 125.9% } | 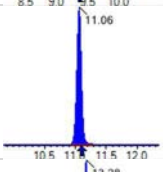 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1816057 | ( 13.28 , N/A ) ( N/A , -0.02 , N/A ) | 3294.6 | N/A | 2.2060 [ 2.0000 ] | 110.3% { 107.9% } | 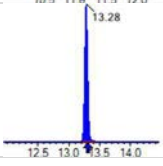 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-SCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (10)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:29

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 411717 | ( 14.56 , N/A ) ( N/A , -0.02 , N/A ) | 2447.6 | N/A | 2.2250 [ 2.0000 ] | 111.2% { 111.1% } | 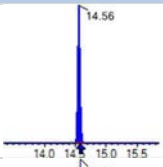 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 380831 | ( 14.89 , N/A ) ( N/A , -0.02 , N/A ) | 2980.8 | N/A | 2.2510 [ 2.0000 ] | 112.6% { 107.1% } | 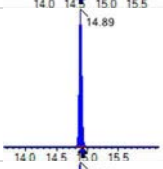 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1281618 | ( 10.38 , N/A ) ( N/A , -0.04 , N/A ) | 3452.4 | N/A | 4.7610 [ 4.0000 ] | 119.0% { 110.6% } | 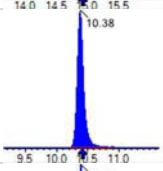 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1114793 | ( 10.98 , N/A ) ( N/A , -0.04 , N/A ) | 2548.9 | N/A | 4.5880 [ 4.0000 ] | 114.7% { 107.9% } | 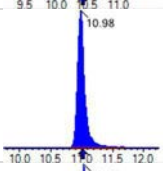 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1612975 | ( 14.34 , N/A ) ( N/A , -0.02 , N/A ) | 2824.9 | N/A | 23.3300 [ 20.0000 ] | 116.7% { 113.6% } | 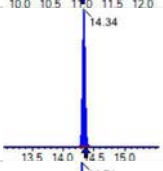 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1502982 | ( 14.71 , N/A ) ( N/A , -0.02 , N/A ) | 4878.2 | N/A | 23.2130 [ 20.0000 ] | 116.1% { 112.6% } | 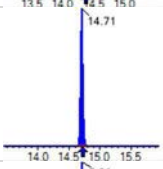 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 902456 | ( 5.61 , N/A ) ( N/A , -0.04 , N/A ) | 2389.7 | N/A | 8.9160 [ 8.0000 ] | 111.4% { 99.9% } | 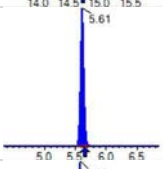 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 648395 | ( 5.88 , N/A ) ( N/A , -0.04 , N/A ) | 1841.6 | N/A | 2.2980 [ 2.0000 ] | 114.9% { 114.2% } | 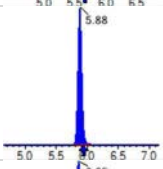 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 739387 | ( 8.65 , N/A ) ( N/A , -0.02 , N/A ) | 1409.3 | N/A | 2.3260 [ 2.0000 ] | 116.3% { 113.1% } | 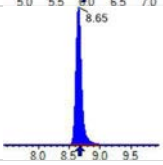 | | |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0142L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2413019L

**Laboratory ID:W**SD01122-LCV1L

**Sequence:W**SD01122L

**Standard ID:W**24B0466L

| ANALYTEW | EXPECTEDW (ng/mL)W | FOUNDW (ng/mL)W | % DRIFTW | QC LIMITW |
|---|---|---|---|---|
| PFBAL | 0.400L | 0.410L | 2.5L | 30.00L |
| PFPeAL | 0.200L | 0.200L | 0.2L | 30.00L |
| PFHxAL | 0.100L | 0.116L | 15.7L | 30.00L |
| PFHpAL | 0.100L | 0.0908L | -9.2L | 30.00L |
| PFOAL | 0.100L | 0.109L | 8.9L | 30.00L |
| PFNAL | 0.100L | 0.0919L | -8.1L | 30.00L |
| PFDAL | 0.100L | 0.0850L | -15.0L | 30.00L |
| PFUnAL | 0.100L | 0.0982L | -1.8L | 30.00L |
| PFDoAL | 0.100L | 0.0953L | -4.7L | 30.00L |
| PFTrDAL | 0.100L | 0.0948L | -5.2L | 30.00L |
| PFTeDAL | 0.100L | 0.0865L | -13.5L | 30.00L |
| PFHxDAL | 0.100L | 0.0832L | -16.8L | 30.00L |
| PFODAL | 0.100L | 0.0853L | -14.7L | 30.00L |
| PFBSL | 0.0885L | 0.0740L | -16.4L | 30.00L |
| PFPeSL | 0.0940L | 0.0913L | -2.8L | 30.00L |
| PFHxSL | 0.0915L | 0.0854L | -6.7L | 30.00L |
| PFHpSL | 0.0955L | 0.0863L | -9.6L | 30.00L |
| PFOSL | 0.0930L | 0.0919L | -1.2L | 30.00L |
| PFNSL | 0.0960L | 0.0866L | -9.8L | 30.00L |
| PFDSL | 0.0965L | 0.0894L | -7.3L | 30.00L |
| PFDoSL | 0.0970L | 0.0863L | -11.1L | 30.00L |
| 4:2FTSL | 0.375L | 0.352L | -6.1L | 30.00L |
| 6:2FTSL | 0.380L | 0.343L | -9.7L | 30.00L |
| 8:2FTSL | 0.384L | 0.342L | -11.1L | 30.00L |
| 10:2FTSL | 0.386L | 0.451L | 17.0L | 30.00L |
| PFOSAL | 0.100L | 0.0901L | -9.9L | 30.00L |
| NMeFOSAL | 0.400L | 0.359L | -10.4L | 30.00L |
| NEtFOSAL | 0.400L | 0.347L | -13.4L | 30.00L |

# LOW-CONCENTRATION CALIBRATION VERIFICATIONW

## EPA 1633W

**Laboratory:W**APPL, L CL

**SDG:W**24C0142L

**Client:W**Tidewater, Inc.L

**Project:W**JPL-GW MonitoringL

**Calibration:W**2413019L

**Laboratory ID:W**SD01122-LCV1L

**Sequence:W**SD01122L

**Standard ID:W**24B0466L

| | | | | |
|---|---|---|---|---|
| NMeFOSAAL | 0.100L | 0.0965L | -3.5L | 30.00L |
| NEtFOSAAL | 0.100L | 0.0801L | -19.9L | 30.00L |
| NMeFOSEL | 0.400L | 0.343L | -14.4L | 30.00L |
| NEtFOSEL | 0.400L | 0.389L | -2.7L | 30.00L |
| HFPO-DAL | 0.100L | 0.0934L | -6.6L | 30.00L |
| ADONAL | 0.0945L | 0.0945L | 0.02L | 30.00L |
| PFEESAL | 0.178L | 0.195L | 9.4L | 30.00L |
| PFMPAL | 0.200L | 0.183L | -8.7L | 30.00L |
| PFMBAL | 0.200L | 0.170L | -15.0L | 30.00L |
| NFDHAL | 0.200L | 0.176L | -11.9L | 30.00L |
| 9Cl-PF3ONSL | 0.0935L | 0.0892L | -4.6L | 30.00L |
| 11Cl-PF3OUDSL | 0.0945L | 0.0860L | -9.0L | 30.00L |
| 3:3FTCAL | 0.400L | 0.356L | -10.9L | 30.00L |
| 5:3FTCAL | 0.400L | 0.461L | 15.2L | 30.00L |
| 7:3FTCAL | 0.400L | 0.427L | 6.8L | 30.00L |

* Values outside of QC limitsL

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 17960<br>( 163.0 / 69.0 ) 379 | ( 2.40 , 0.67 ) ( N/A , -0.01 , -1.6) | 54.9<br>15.8 | 0.0211<br>77.1<br>78.1 | 0.2440<br>[ 0.2000 ] | 121.9% | 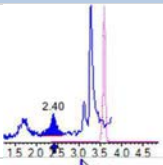 | 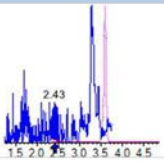 | MI5 DG 2024-03-29 |
| PFBA | ( 213.0 / 169.0 ) 244676 | ( 3.60 , 1.00 ) ( 0.01 , N/A , 0.0) | 153.7 | N/A<br>0.0<br>0.0 | 0.4100<br>[ 0.4000 ] | 102.5% | 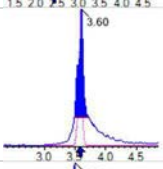 | | MI2 DG 2024-03-29 |
| PFPeA | ( 263.0 / 219.0 ) 43298<br>( 263.0 / 69.0 ) 676 | ( 4.30 , 1.00 ) ( 0.00 , N/A , -2.5) | 231.8<br>12.0 | 0.0156<br>131.2<br>134.6 | 0.2000<br>[ 0.2000 ] | 100.2% | 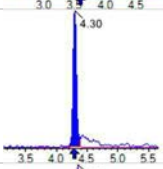 | 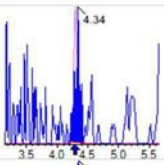 | |
| PFHxA | ( 313.0 / 269.0 ) 22567<br>( 313.0 / 119.0 ) 2403 | ( 5.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 199.9<br>73.4 | 0.1065<br>95.7<br>91.3 | 0.1160<br>[ 0.1000 ] | 115.7% | 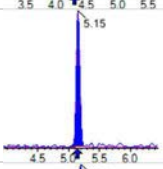 | 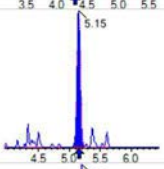 | |
| PFHpA | ( 363.0 / 319.0 ) 26434<br>( 363.0 / 169.0 ) 6489 | ( 6.29 , 1.00 ) ( 0.00 , N/A , -0.3) | 251.7<br>210.6 | 0.2455<br>80.3<br>75.7 | 0.0910<br>[ 0.1000 ] | 90.8% | 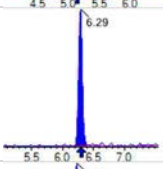 | 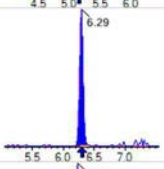 | |
| PFOA | ( 413.0 / 369.0 ) 43119<br>( 413.0 / 169.0 ) 15162 | ( 7.39 , 1.00 ) ( 0.00 , N/A , 0.3) | 73.6<br>128.2 | 0.3516<br>98.4<br>102.1 | 0.1090<br>[ 0.1000 ] | 108.9% | 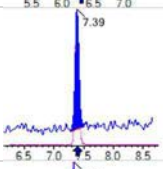 | 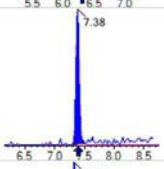 | |
| PFNA | ( 463.0 / 419.0 ) 24108<br>( 463.0 / 169.0 ) 5939 | ( 8.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 299.7<br>169.5 | 0.2463<br>100.3<br>93.5 | 0.0920<br>[ 0.1000 ] | 91.9% | 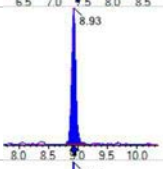 | 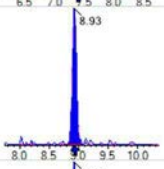 | |
| PFDA | ( 513.0 / 469.0 ) 26865<br>( 513.0 / 169.0 ) 2749 | ( 9.92 , 1.00 ) ( 0.00 , N/A , -0.3) | 288.6<br>186.0 | 0.1023<br>85.9<br>81.0 | 0.0850<br>[ 0.1000 ] | 85.0% | 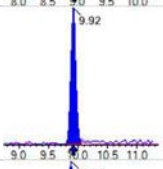 | 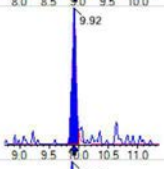 | |
| PFUnA | ( 563.0 / 519.0 ) 32570<br>( 563.0 / 169.0 ) 3866 | ( 10.83 , 1.00 ) ( 0.00 , N/A , -0.1) | 253.7<br>91.7 | 0.1187<br>76.7<br>77.4 | 0.0980<br>[ 0.1000 ] | 98.2% | 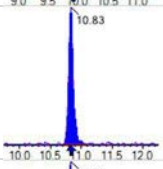 | 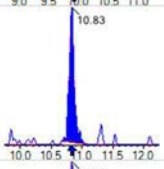 | |
| PFDoA | ( 613.0 / 569.0 ) 36010<br>( 613.0 / 169.0 ) 5508 | ( 11.73 , 1.00 ) ( 0.00 , N/A , -0.1) | 223.8<br>77.6 | 0.1530<br>100.7<br>98.7 | 0.0950<br>[ 0.1000 ] | 95.3% | 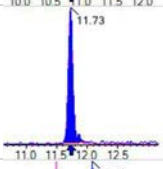 | 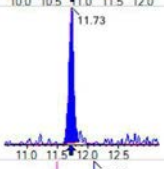 | |
| PFTrDA | ( 663.0 / 619.0 ) 34861<br>( 663.0 / 169.0 ) 9282 | ( 12.48 , 1.06 ) ( N/A , 0.00 , -0.5) | 208.9<br>108.2 | 0.2663<br>98.9<br>100.2 | 0.0950<br>[ 0.1000 ] | 94.8% | 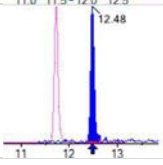 | 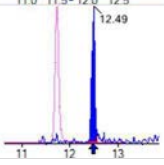 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 26350<br>( 713.0 / 169.0 ) 7069 | ( 13.03 , 1.00 ) ( 0.00 , N/A , 0.2) | 172.7<br>74.2 | 0.2683<br>98.9<br>108.3 | 0.0860<br>[ 0.1000 ] | 86.5% | 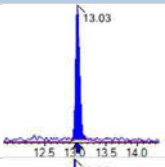 | 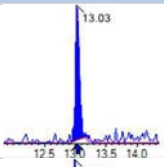 | |
| PFHxDA | ( 813.0 / 769.0 ) 18252<br>( 813.0 / 169.0 ) 4753 | ( 13.94 , 1.00 ) ( 0.00 , N/A , 0.0) | 119.1<br>35.9 | 0.2604<br>99.5<br>97.4 | 0.0830<br>[ 0.1000 ] | 83.2% | 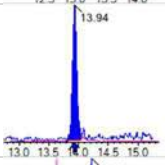 | 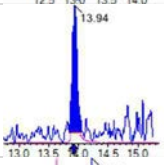 | |
| PFODA | ( 913.0 / 869.0 ) 11849<br>( 913.0 / 169.0 ) 4131 | ( 14.67 , 1.05 ) ( N/A , 0.01 , 0.1) | 62.7<br>35.5 | 0.3486<br>111.2<br>111.9 | 0.0850<br>[ 0.1000 ] | 85.3% | 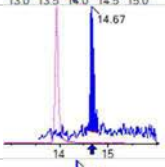 | 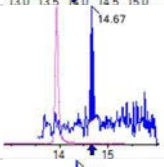 | |
| PFBS | ( 299.0 / 80.0 ) 27882<br>( 299.0 / 99.0 ) 23803 | ( 5.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 427.3<br>273.5 | 0.8537<br>115.3<br>114.2 | 0.0740<br>[ 0.0880 ] | 83.6% | 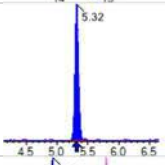 | 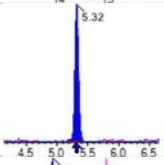 | |
| PFPeS | ( 349.0 / 80.0 ) 90577<br>( 349.0 / 99.0 ) 30838 | ( 6.60 , 0.83 ) ( N/A , 0.00 , -0.1) | 517.3<br>540.8 | 0.3405<br>99.6<br>97.5 | 0.0910<br>[ 0.0940 ] | 97.3% | 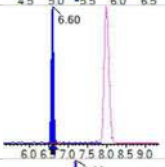 | 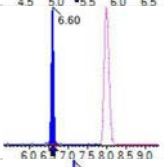 | |
| PFHxS | ( 399.0 / 80.0 ) 103176<br>( 399.0 / 99.0 ) 35352 | ( 8.00 , 1.00 ) ( 0.00 , N/A , 0.3) | 533.5<br>818.5 | 0.3426<br>104.4<br>106.8 | 0.0850<br>[ 0.0910 ] | 93.7% | 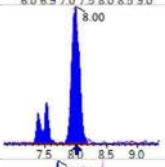 | 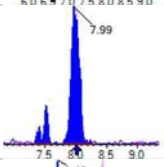 | MI2 DG 2024-03-29 |
| PFHpS | ( 449.0 / 80.0 ) 81599<br>( 449.0 / 99.0 ) 22985 | ( 9.40 , 0.91 ) ( N/A , 0.00 , 0.1) | 612.6<br>234.7 | 0.2817<br>108.0<br>104.6 | 0.0860<br>[ 0.0950 ] | 90.7% | 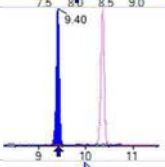 | 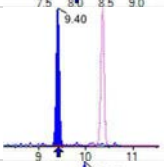 | |
| PFOS | ( 499.0 / 80.0 ) 84403<br>( 499.0 / 99.0 ) 20668 | ( 10.35 , 1.00 ) ( -0.01 , N/A , 0.2) | 431.3<br>1345.1 | 0.2449<br>106.0<br>108.9 | 0.0920<br>[ 0.0930 ] | 99.1% | 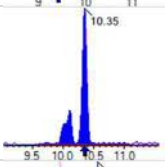 | 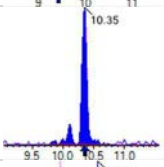 | |
| PFNS | ( 549.0 / 80.0 ) 72459<br>( 549.0 / 99.0 ) 18408 | ( 11.23 , 1.08 ) ( N/A , 0.00 , 0.0) | 421.3<br>197.7 | 0.2540<br>94.8<br>89.4 | 0.0870<br>[ 0.0960 ] | 90.2% | 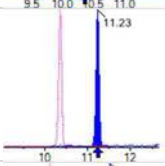 | 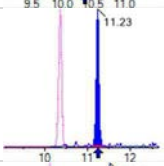 | |
| PFDS | ( 599.0 / 80.0 ) 91513<br>( 599.0 / 99.0 ) 25312 | ( 12.05 , 1.16 ) ( N/A , 0.01 , 0.0) | 431.5<br>181.3 | 0.2766<br>108.6<br>108.3 | 0.0890<br>[ 0.0960 ] | 92.9% | 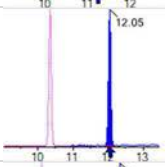 | 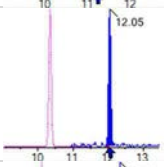 | |
| PFDoS | ( 699.0 / 80.0 ) 85414<br>( 699.0 / 99.0 ) 20253 | ( 13.10 , 1.27 ) ( N/A , 0.01 , 0.2) | 602.3<br>332.1 | 0.2371<br>106.1<br>99.4 | 0.0860<br>[ 0.0970 ] | 89.0% | 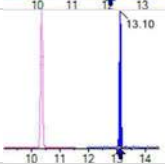 | 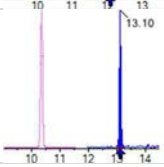 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 182874<br>( 327.0 / 81.0 ) 154928 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.0) | 1781.1<br>539.8 | 0.8472<br>99.3<br>90.1 | 0.3520<br>[ 0.3740 ] | 94.2% | 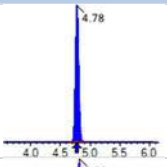 | 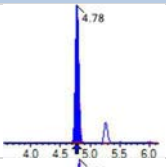 | |
| 6:2FTS | ( 427.0 / 407.0 ) 148087<br>( 427.0 / 81.0 ) 201533 | ( 6.86 , 1.00 ) ( -0.01 , N/A , 0.1) | 2175.6<br>1716.6 | 1.3609<br>105.5<br>106.4 | 0.3430<br>[ 0.3800 ] | 90.4% | 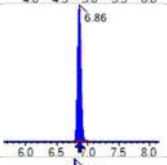 | 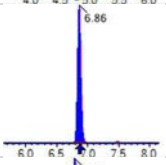 | |
| 8:2FTS | ( 527.0 / 507.0 ) 146069<br>( 527.0 / 81.0 ) 156678 | ( 9.24 , 1.00 ) ( -0.01 , N/A , -0.1) | 1909.4<br>1096.4 | 1.0726<br>97.2<br>102.1 | 0.3420<br>[ 0.3830 ] | 89.1% | 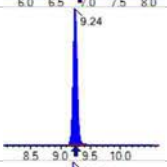 | 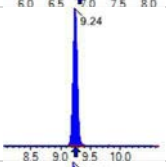 | |
| 10:2FTS | ( 627.0 / 607.0 ) 148129<br>( 627.0 / 81.0 ) 194127 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.0) | 933.2<br>727.7 | 1.3105<br>91.2<br>90.7 | 0.4510<br>[ 0.3860 ] | 116.8% | 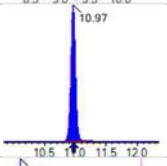 | 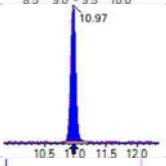 | |
| PFBSA | ( 297.9 / 78.0 ) 49083<br>( 297.9 / 278.0 ) 165 | ( 5.49 , 0.38 ) ( N/A , 0.00 , 2.0) | 396.6<br>4.4 | 0.0034<br>260.0<br>236.3 | 0.0900<br>[ 0.1000 ] | 89.7% | 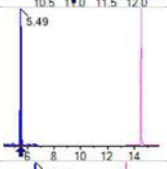 | 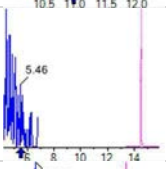 | |
| PFHxSA | ( 397.9 / 78.0 ) 91807<br>( 397.9 / 378.0 ) 481 | ( 11.19 , 0.75 ) ( N/A , 0.00 , -0.2) | 779.2<br>181.8 | 0.0052<br>129.8<br>123.3 | 0.0840<br>[ 0.1000 ] | 84.3% | 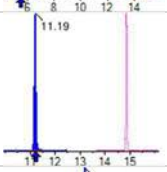 | 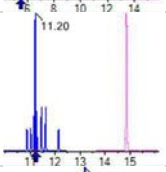 | |
| PFOSA | ( 498.0 / 78.0 ) 71312<br>( 498.0 / 478.0 ) 1192 | ( 13.26 , 1.00 ) ( -0.01 , N/A , -0.1) | 745.0<br>47.5 | 0.0167<br>113.7<br>118.1 | 0.0900<br>[ 0.1000 ] | 90.1% | 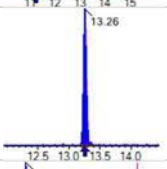 | 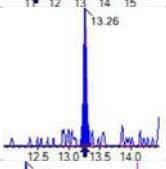 | |
| TFSI | ( 279.7 / 147.0 ) 121546<br>( 279.7 / 211.0 ) 12053 | ( 6.97 , 0.53 ) ( N/A , 0.00 , -0.3) | 48.8<br>296.3 | 0.0992<br>112.1<br>112.3 | 0.0880<br>[ 0.0980 ] | 89.8% | 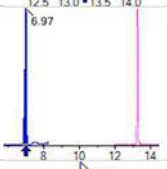 | 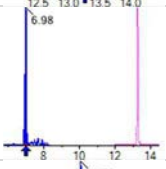 | |
| NMeFOSA | ( 512.0 / 219.0 ) 57456<br>( 512.0 / 169.0 ) 40999 | ( 14.53 , 1.00 ) ( 0.00 , N/A , 0.8) | 717.2<br>317.3 | 0.7136<br>93.1<br>95.6 | 0.3590<br>[ 0.4000 ] | 89.6% | 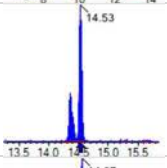 | 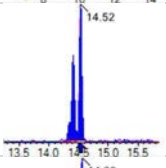 | |
| NEtFOSA | ( 526.0 / 219.0 ) 67924<br>( 526.0 / 169.0 ) 87906 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 2.3) | 752.8<br>682.1 | 1.2942<br>103.5<br>103.8 | 0.3470<br>[ 0.4000 ] | 86.6% | 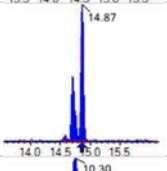 | 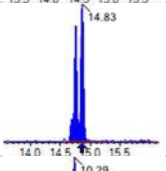 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 26919<br>( 570.0 / 483.0 ) 11745 | ( 10.30 , 1.00 ) ( 0.01 , N/A , 0.6) | 12994.9<br>464.5 | 0.4363<br>94.0<br>97.3 | 0.0960<br>[ 0.1000 ] | 96.5% | 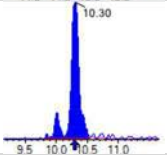 | 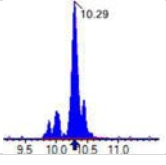 | MI2 DG 2024-03-29 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 21189<br>( 584.0 / 526.0 ) 13293 | ( 10.91 , 1.00 ) ( 0.02 , N/A , 0.8) | 1494.6<br>404.1 | 0.6274<br>104.6<br>103.8 | 0.0800<br>[ 0.1000 ] | 80.1% | 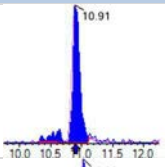 | 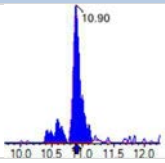 | MI2 DG 2024-03-29 |
| NMeFOSE | ( 616.0 / 59.0 ) 24534 | ( 14.33 , 1.00 ) ( 0.02 , N/A , 0.0) | 163.5 | N/A<br>0.0<br>0.0 | 0.3430<br>[ 0.4000 ] | 85.6% | 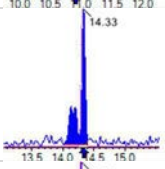 | | MI2 DG 2024-03-29 |
| NEtFOSE | ( 630.0 / 59.0 ) 22744 | ( 14.70 , 1.00 ) ( 0.02 , N/A , 0.0) | 191.4 | N/A<br>0.0<br>0.0 | 0.3890<br>[ 0.4000 ] | 97.3% | 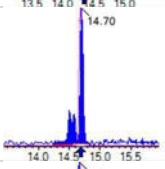 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 5787<br>( 285.0 / 185.0 ) 14375 | ( 5.56 , 1.00 ) ( -0.01 , N/A , -0.3) | 353.6<br>152.3 | 2.4843<br>88.5<br>88.1 | 0.0930<br>[ 0.1000 ] | 93.4% | 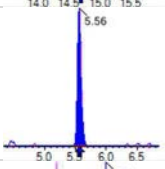 | 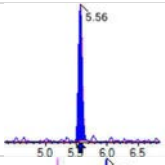 | |
| ADONA | ( 377.0 / 85.0 ) 77202<br>( 377.0 / 251.0 ) 7563 | ( 6.72 , 1.21 ) ( N/A , 0.00 , 0.4) | 1055.2<br>86.0 | 0.0980<br>93.4<br>95.6 | 0.0950<br>[ 0.0940 ] | 100.3% | 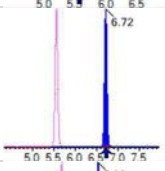 | 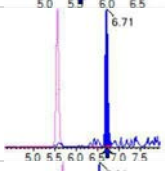 | |
| PFEESA | ( 315.0 / 135.0 ) 27644<br>( 315.0 / 83.0 ) 17971 | ( 5.90 , 1.15 ) ( N/A , 0.00 , -0.2) | 627.3<br>88.2 | 0.6501<br>101.3<br>102.6 | 0.1950<br>[ 0.1780 ] | 109.1% | 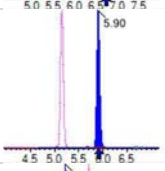 | 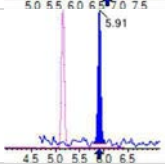 | |
| PFMPA | ( 229.0 / 85.0 ) 14492 | ( 3.84 , 0.89 ) ( N/A , 0.01 , 0.0) | 556.2 | N/A<br>0.0<br>0.0 | 0.1830<br>[ 0.2000 ] | 91.3% | 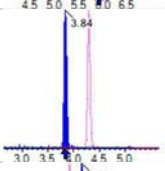 | | |
| PFMBA | ( 279.0 / 85.0 ) 30421 | ( 4.50 , 1.05 ) ( N/A , 0.01 , 0.0) | 473.6 | N/A<br>0.0<br>0.0 | 0.1700<br>[ 0.2000 ] | 85.0% | 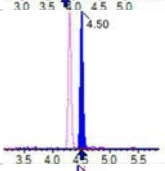 | | |
| NFDHA | ( 295.0 / 201.0 ) 12199<br>( 295.0 / 85.0 ) 14432 | ( 5.03 , 0.98 ) ( N/A , 0.00 , 0.2) | 301.7<br>345.1 | 1.1830<br>119.0<br>115.7 | 0.1760<br>[ 0.2000 ] | 88.1% | 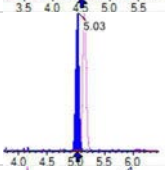 | 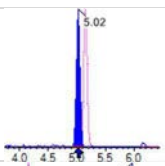 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 80925<br>( 533.0 / 353.0 ) 27553 | ( 11.03 , 1.98 ) ( N/A , 0.00 , 0.1) | 998.2<br>689.8 | 0.3405<br>106.8<br>104.3 | 0.0890<br>[ 0.0930 ] | 95.6% | 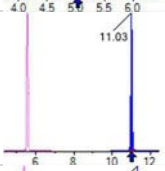 | 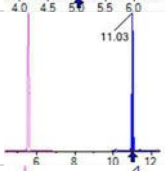 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 60645<br>( 633.0 / 453.0 ) 21779 | ( 12.54 , 2.25 ) ( N/A , 0.01 , -0.1) | 1083.6<br>246.2 | 0.3591<br>105.8<br>110.6 | 0.0860<br>[ 0.0940 ] | 91.2% | 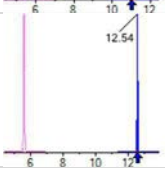 | 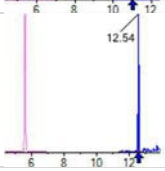 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 37861<br>( 461.0 / 381.2 ) 14790 | ( 9.30 , 0.90 ) ( N/A , 0.00 , -0.1) | 802.8<br>21878.4 | 0.3906<br>101.1<br>99.5 | 0.0770<br>[ 0.0920 ] | 83.1% | 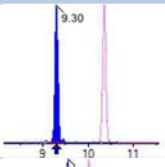 | 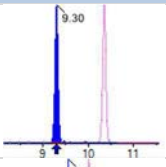 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 6605<br>( 241.0 / 117.0 ) 15855 | ( 3.89 , 0.91 ) ( N/A , 0.01 , 0.0) | 361.1<br>144.1 | 2.4004<br>109.3<br>103.4 | 0.3560<br>[ 0.4000 ] | 89.1% | 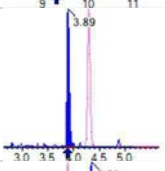 | 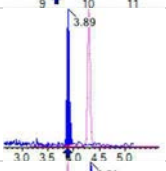 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 24455<br>( 341.0 / 217.0 ) 30700 | ( 5.58 , 1.08 ) ( N/A , 0.00 , 0.2) | 373.9<br>167.2 | 1.2554<br>82.0<br>86.3 | 0.4610<br>[ 0.4000 ] | 115.2% | 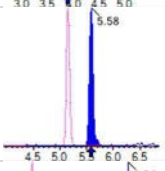 | 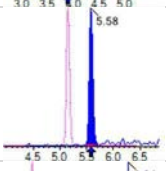 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 48144<br>( 441.0 / 337.0 ) 39296 | ( 9.24 , 1.79 ) ( N/A , 0.00 , 0.0) | 25375.7<br>1226.6 | 0.8162<br>95.5<br>94.1 | 0.4270<br>[ 0.4000 ] | 106.8% | 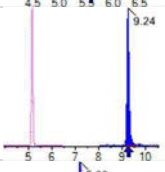 | 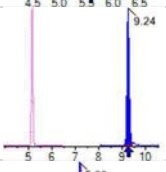 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 29144<br>( 357.2 / 243.0 ) 3377 | ( 5.83 , 1.00 ) ( -0.01 , N/A , -0.1) | 268.4<br>73.2 | 0.1159<br>108.1<br>105.2 | 0.0990<br>[ 0.1000 ] | 99.4% | 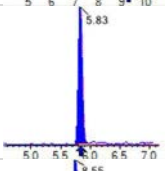 | 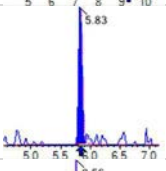 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 26106<br>( 457.2 / 343.0 ) 1313 | ( 8.55 , 1.00 ) ( -0.01 , N/A , -0.3) | 207.1<br>48.0 | 0.0503<br>112.1<br>116.8 | 0.1000<br>[ 0.1000 ] | 100.0% | 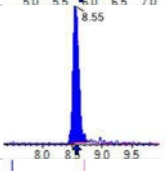 | 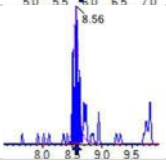 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.1000 ] | N/A% | 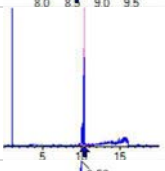 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 269061 | ( 3.59 , N/A ) ( N/A , 0.01 , N/A ) | 1572.0 | N/A | 0.9530<br>[ 1.0000 ] | 95.3%<br>{ 101.9% } | 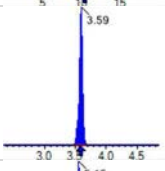 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 101590 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 708089.6 | N/A | 0.8600<br>[ 1.0000 ] | 86.0%<br>{ 102.6% } | 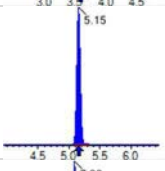 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 347907 | ( 7.38 , N/A ) ( N/A , -0.01 , N/A ) | 4887.7 | N/A | 0.8960<br>[ 1.0000 ] | 89.6%<br>{ 98.9% } | 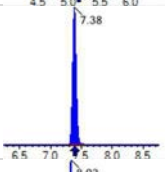 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 246393 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 1240.5 | N/A | 0.8430<br>[ 1.0000 ] | 84.3%<br>{ 102.8% } | 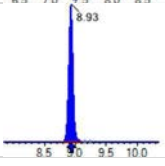 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-LCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (2)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 253684 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 7391.6 | N/A | 0.8850 [ 1.0000 ] | 88.5% { 103.4% } | 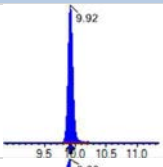 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 904137 | ( 8.00 , N/A ) ( N/A , -0.02 , N/A ) | 7040.2 | N/A | 0.9210 [ 1.0000 ] | 92.1% { 101.9% } | 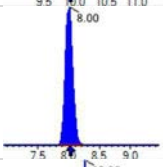 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 699283 | ( 10.36 , N/A ) ( N/A , 0.00 , N/A ) | 3515.5 | N/A | 0.8910 [ 1.0000 ] | 89.1% { 101.4% } | 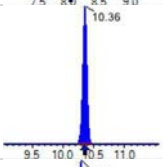 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2603850 | ( 3.59 , N/A ) ( N/A , 0.01 , N/A ) | 42983.2 | N/A | 8.9530 [ 8.0000 ] | 111.9% { 118.5% } | 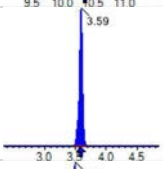 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 865209 | ( 4.30 , N/A ) ( N/A , 0.01 , N/A ) | 4642.0 | N/A | 4.6520 [ 4.0000 ] | 116.3% { 113.5% } | 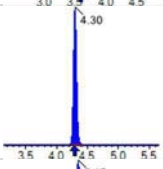 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 420429 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 11659.2 | N/A | 1.8920 [ 2.0000 ] | 94.6% { 96.5% } | 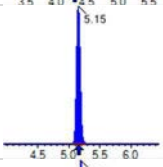 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 587033 | ( 6.29 , N/A ) ( N/A , 0.00 , N/A ) | 12078.8 | N/A | 2.3780 [ 2.0000 ] | 118.9% { 114.6% } | 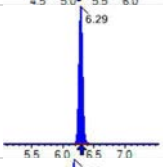 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 788813 | ( 7.38 , N/A ) ( N/A , -0.01 , N/A ) | 5590.2 | N/A | 2.1390 [ 2.0000 ] | 107.0% { 111.0% } | 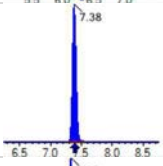 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 261151 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 4464.2 | N/A | 1.0740 [ 1.0000 ] | 107.4% { 111.1% } | 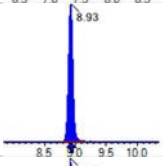 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316344 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 1535.8 | N/A | 1.0790 [ 1.0000 ] | 107.9% { 112.8% } | 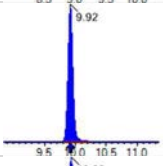 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 365180 | ( 10.83 , N/A ) ( N/A , 0.00 , N/A ) | 1189.6 | N/A | 1.0500 [ 1.0000 ] | 105.0% { 113.2% } | 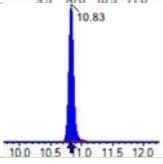 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 376723 | ( 11.73 , N/A ) ( N/A , 0.00 , N/A ) | 1539.6 | N/A | 1.0560 [ 1.0000 ] | 105.6% { 110.9% } | 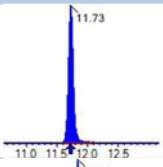  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 326322 | ( 13.04 , N/A ) ( N/A , 0.01 , N/A ) | 1710.9 | N/A | 1.0330 [ 1.0000 ] | 103.3% { 107.4% } | 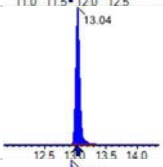  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 468165 | ( 13.94 , N/A ) ( N/A , 0.01 , N/A ) | 2284.1 | N/A | 1.7720 [ 2.0000 ] | 88.6% { 109.8% } | 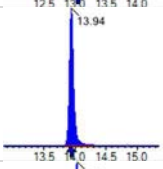  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1532369 | ( 5.32 , N/A ) ( N/A , 0.00 , N/A ) | 1501.4 | N/A | 2.1030 [ 2.0000 ] | 105.1% { 109.4% } | 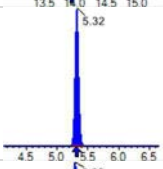  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1380226 | ( 8.00 , N/A ) ( N/A , -0.02 , N/A ) | 5701.5 | N/A | 2.1160 [ 2.0000 ] | 105.8% { 111.1% } | 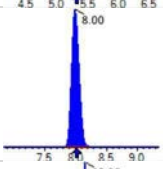  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1582427 | ( 10.36 , N/A ) ( N/A , 0.00 , N/A ) | 1786.9 | N/A | 2.1270 [ 2.0000 ] | 106.4% { 108.9% } | 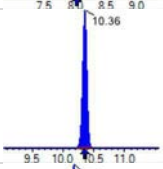  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 786495 | ( 4.78 , N/A ) ( N/A , 0.00 , N/A ) | 79.7 | N/A | 4.9060 [ 4.0000 ] | 122.6% { 126.1% } | 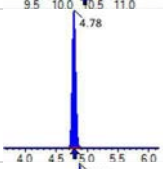  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2033153 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 7461.1 | N/A | 5.1620 [ 4.0000 ] | 129.1% { 124.2% } | 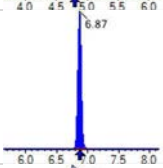  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1739199 | ( 9.25 , N/A ) ( N/A , 0.00 , N/A ) | 2114.7 | N/A | 5.0470 [ 4.0000 ] | 126.2% { 130.9% } | 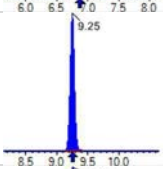  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3305487 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 1617.9 | N/A | 8.8670 [ 8.0000 ] | 110.8% { 122.2% } | 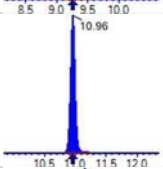  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1635955 | ( 13.26 , N/A ) ( N/A , 0.01 , N/A ) | 2926.8 | N/A | 2.0710 [ 2.0000 ] | 103.6% { 108.8% } | 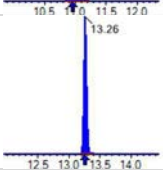  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-LCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (2)
Acquired: 2024/03/29 - 11:38

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 360597 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 2728.1 | N/A | 2.0310 [ 2.0000 ] | 101.5% { 106.0% } | 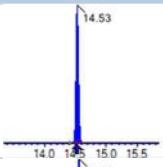  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 346037 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 2865.5 | N/A | 2.1320 [ 2.0000 ] | 106.6% { 106.9% } | 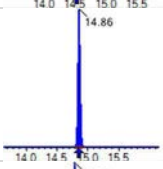  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1210169 | ( 10.29 , N/A ) ( N/A , 0.00 , N/A ) | 4281.0 | N/A | 4.6850 [ 4.0000 ] | 117.1% { 118.0% } | 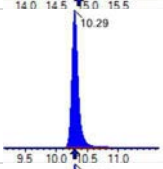  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1090129 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 2277.5 | N/A | 4.6760 [ 4.0000 ] | 116.9% { 119.4% } | 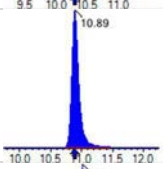  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1323366 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 2846.1 | N/A | 19.9480 [ 20.0000 ] | 99.7% { 107.0% } | 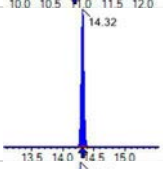  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1227511 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 3801.7 | N/A | 19.7580 [ 20.0000 ] | 98.8% { 113.1% } | 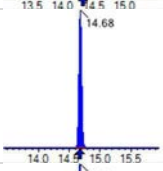  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 843809 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 2416.2 | N/A | 8.7650 [ 8.0000 ] | 109.6% { 107.8% } | 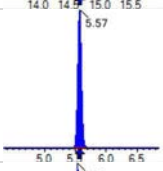  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 557471 | ( 5.84 , N/A ) ( N/A , 0.00 , N/A ) | 2087.5 | N/A | 2.0160 [ 2.0000 ] | 100.8% { 110.1% } | 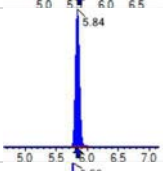  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 631774 | ( 8.56 , N/A ) ( N/A , -0.01 , N/A ) | 1077.7 | N/A | 2.0280 [ 2.0000 ] | 101.4% { 107.9% } | 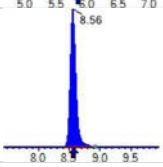  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01122A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01122-CCV1A | PFBA | 20.0A | 18.7A | 93.7A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 10.2A | 102A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.31A | 86.2A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.48A | 89.7A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.82A | 96.4A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.55A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.49A | 89.9A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.72A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.70A | 94.0A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.61A | 92.2A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.92A | 98.3A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.61A | 92.1A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.32A | 86.4A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.03A | 91.1A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.56A | 97.1A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.27A | 93.3A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.54A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.20A | 90.4A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.48A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.69A | 97.3A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.83A | 99.6A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.1A | 91.0A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.3A | 91.0A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.3A | 95.3A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.3A | 100A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.76A | 95.2A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.9A | 94.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 18.8A | 94.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.78A | 95.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.69A | 93.8A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01122A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01122-CCV1A | NMeFOSEA | 20.0A | 18.2A | 91.1A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.4A | 97.1A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.20A | 84.1A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.75A | 101A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.14A | 91.5A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.90A | 99.0A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.72A | 97.2A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 8.46A | 84.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.27A | 91.3A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.65A | 98.5A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.8A | 93.9A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.0A | 94.8A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 18.2A | 91.0A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (3)
Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 563301<br>( 163.0 / 69.0 ) 15228 | ( 2.41 , 0.67 ) ( N/A , 0.00 , 0.5) | 678.5<br>155.1 | 0.0270<br>98.6<br>100.0 | 9.0600<br>[ 10.0000 ] | 90.6% | 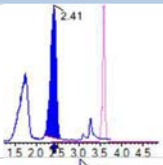 | 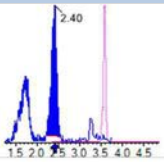 | |
| PFBA | ( 213.0 / 169.0 ) 5169291 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 1904.5 | N/A<br>0.0<br>0.0 | 18.7470<br>[ 20.0000 ] | 93.7% | 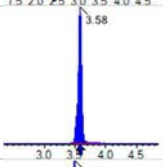 | | |
| PFPeA | ( 263.0 / 219.0 ) 1947805<br>( 263.0 / 69.0 ) 22591 | ( 4.29 , 1.00 ) ( 0.00 , N/A , 0.1) | 4166.0<br>387.4 | 0.0116<br>97.5<br>100.0 | 10.2390<br>[ 10.0000 ] | 102.4% | 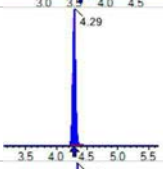 | 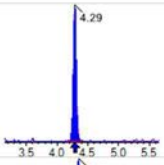 | |
| PFHxA | ( 313.0 / 269.0 ) 870672<br>( 313.0 / 119.0 ) 101609 | ( 5.15 , 1.00 ) ( 0.00 , N/A , -0.1) | 1932.9<br>1170.2 | 0.1167<br>104.9<br>100.0 | 4.3080<br>[ 5.0000 ] | 86.2% | 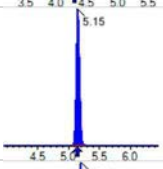 | 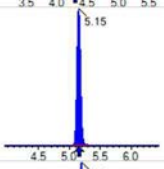 | |
| PFHpA | ( 363.0 / 319.0 ) 1139744<br>( 363.0 / 169.0 ) 369545 | ( 6.29 , 1.00 ) ( 0.00 , N/A , 0.0) | 2249.4<br>2158.2 | 0.3242<br>106.1<br>100.0 | 4.4840<br>[ 5.0000 ] | 89.7% | 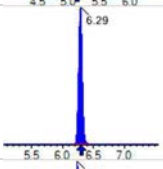 | 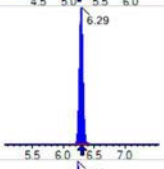 | |
| PFOA | ( 413.0 / 369.0 ) 1719270<br>( 413.0 / 169.0 ) 592169 | ( 7.39 , 1.00 ) ( 0.00 , N/A , 0.0) | 1498.1<br>2010.4 | 0.3444<br>96.4<br>100.0 | 4.8190<br>[ 5.0000 ] | 96.4% | 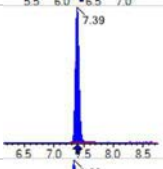 | 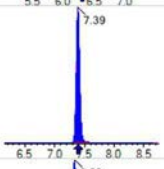 | |
| PFNA | ( 463.0 / 419.0 ) 1075400<br>( 463.0 / 169.0 ) 283227 | ( 8.93 , 1.00 ) ( 0.00 , N/A , 0.1) | 2051.1<br>1636.2 | 0.2634<br>107.2<br>100.0 | 4.5540<br>[ 5.0000 ] | 91.1% | 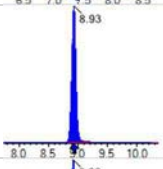 | 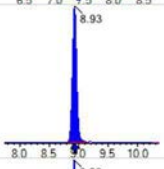 | |
| PFDA | ( 513.0 / 469.0 ) 1258228<br>( 513.0 / 169.0 ) 159014 | ( 9.92 , 1.00 ) ( 0.00 , N/A , -0.1) | 4189.0<br>4386.4 | 0.1264<br>106.1<br>100.0 | 4.4940<br>[ 5.0000 ] | 89.9% | 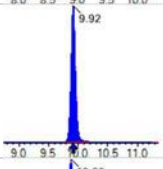 | 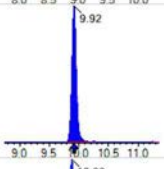 | |
| PFUnA | ( 563.0 / 519.0 ) 1382863<br>( 563.0 / 169.0 ) 211988 | ( 10.83 , 1.00 ) ( 0.00 , N/A , 0.0) | 1127.0<br>1041.2 | 0.1533<br>99.0<br>100.0 | 4.7220<br>[ 5.0000 ] | 94.4% | 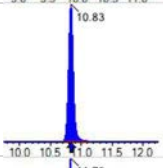 | 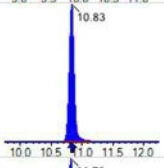 | |
| PFDoA | ( 613.0 / 569.0 ) 1602151<br>( 613.0 / 169.0 ) 248316 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.0) | 1825.9<br>842.4 | 0.1550<br>102.1<br>100.0 | 4.6990<br>[ 5.0000 ] | 94.0% | 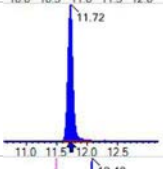 | 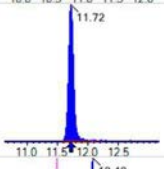 | |
| PFTrDA | ( 663.0 / 619.0 ) 1528617<br>( 663.0 / 169.0 ) 406107 | ( 12.48 , 1.06 ) ( N/A , 0.00 , 0.0) | 1744.0<br>1150.0 | 0.2657<br>98.7<br>100.0 | 4.6110<br>[ 5.0000 ] | 92.2% | 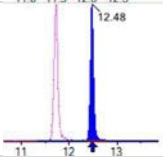 | 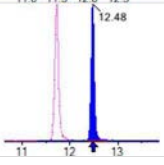 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (3)
Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1394179<br>( 713.0 / 169.0 ) 345281 | ( 13.03 , 1.00 ) ( 0.00 , N/A , 0.0) | 1878.9<br>1268.8 | 0.2477<br>91.3<br>100.0 | 4.9160<br>[ 5.0000 ] | 98.3% | 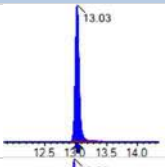 | 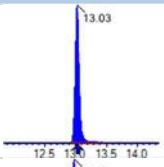 | |
| PFHxDA | ( 813.0 / 769.0 ) 919941<br>( 813.0 / 169.0 ) 245966 | ( 13.92 , 1.00 ) ( 0.00 , N/A , 0.0) | 2045.1<br>980.1 | 0.2674<br>102.2<br>100.0 | 4.6060<br>[ 5.0000 ] | 92.1% | 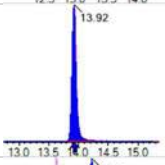 | 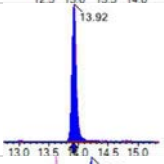 | |
| PFODA | ( 913.0 / 869.0 ) 546355<br>( 913.0 / 169.0 ) 170270 | ( 14.66 , 1.05 ) ( N/A , 0.00 , 0.3) | 1452.0<br>650.2 | 0.3116<br>99.4<br>100.0 | 4.3200<br>[ 5.0000 ] | 86.4% | 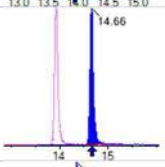 | 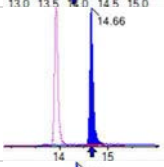 | |
| PFBS | ( 299.0 / 80.0 ) 1387218<br>( 299.0 / 99.0 ) 1037220 | ( 5.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 3356.7<br>2979.0 | 0.7477<br>100.9<br>100.0 | 4.0280<br>[ 4.4240 ] | 91.0% | 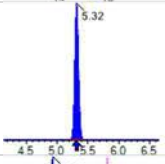 | 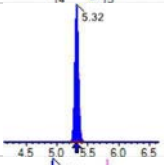 | |
| PFPeS | ( 349.0 / 80.0 ) 4071395<br>( 349.0 / 99.0 ) 1421600 | ( 6.60 , 0.82 ) ( N/A , 0.00 , 0.0) | 3815.2<br>4873.9 | 0.3492<br>102.2<br>100.0 | 4.5620<br>[ 4.6920 ] | 97.2% | 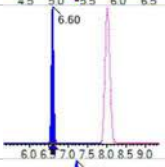 | 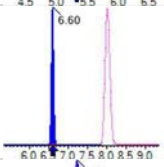 | |
| PFHxS | ( 399.0 / 80.0 ) 4646050<br>( 399.0 / 99.0 ) 1490966 | ( 8.02 , 1.00 ) ( 0.00 , N/A , 0.2) | 2939.6<br>3971.0 | 0.3209<br>97.8<br>100.0 | 4.2710<br>[ 4.5550 ] | 93.8% | 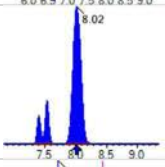 | 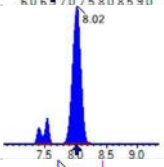 | |
| PFHpS | ( 449.0 / 80.0 ) 3936111<br>( 449.0 / 99.0 ) 1059691 | ( 9.40 , 0.91 ) ( N/A , 0.00 , 0.0) | 3259.0<br>3246.3 | 0.2692<br>103.2<br>100.0 | 4.5360<br>[ 4.7570 ] | 95.4% | 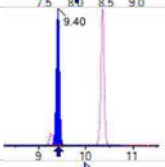 | 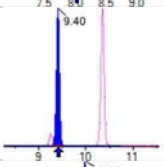 | |
| PFOS | ( 499.0 / 80.0 ) 3545584<br>( 499.0 / 99.0 ) 797289 | ( 10.35 , 1.00 ) ( 0.00 , N/A , -0.1) | 3100.5<br>6229.2 | 0.2249<br>97.3<br>100.0 | 4.2050<br>[ 4.6370 ] | 90.7% | 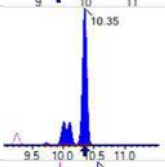 | 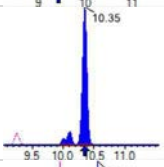 | |
| PFNS | ( 549.0 / 80.0 ) 3439971<br>( 549.0 / 99.0 ) 977933 | ( 11.23 , 1.08 ) ( N/A , 0.00 , 0.0) | 3103.6<br>3064.7 | 0.2843<br>106.1<br>100.0 | 4.4760<br>[ 4.7990 ] | 93.3% | 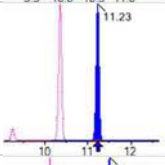 | 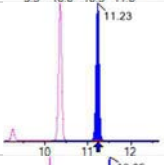 | |
| PFDS | ( 599.0 / 80.0 ) 4404513<br>( 599.0 / 99.0 ) 1124791 | ( 12.05 , 1.16 ) ( N/A , 0.00 , 0.0) | 3887.5<br>2820.7 | 0.2554<br>100.3<br>100.0 | 4.6880<br>[ 4.8160 ] | 97.4% | 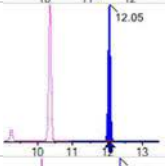 | 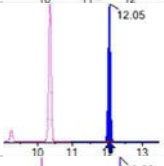 | |
| PFDoS | ( 699.0 / 80.0 ) 4389437<br>( 699.0 / 99.0 ) 1046996 | ( 13.09 , 1.26 ) ( N/A , 0.00 , 0.0) | 4397.2<br>3387.4 | 0.2385<br>106.7<br>100.0 | 4.8290<br>[ 4.8480 ] | 99.6% | 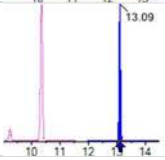 | 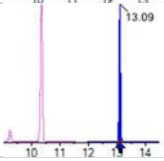 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (3)
Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7041311<br>( 327.0 / 81.0 ) 6623136 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 4649.5<br>3380.4 | 0.9406<br>110.2<br>100.0 | 17.1060<br>[ 18.6910 ] | 91.5% | 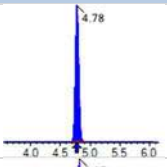 | 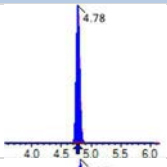 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6002724<br>( 427.0 / 81.0 ) 7676781 | ( 6.87 , 1.00 ) ( -0.01 , N/A , 0.0) | 6453.9<br>5594.6 | 1.2789<br>99.2<br>100.0 | 17.2830<br>[ 18.9810 ] | 91.1% | 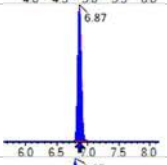 | 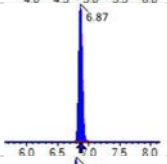 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5977440<br>( 527.0 / 81.0 ) 6277572 | ( 9.25 , 1.00 ) ( 0.00 , N/A , 0.1) | 2296.2<br>2429.2 | 1.0502<br>95.2<br>100.0 | 18.2880<br>[ 19.1660 ] | 95.4% | 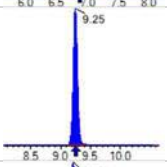 | 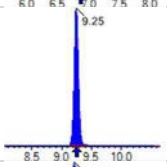 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5197201<br>( 627.0 / 81.0 ) 7510968 | ( 10.97 , 1.00 ) ( 0.01 , N/A , 0.0) | 1492.1<br>1633.0 | 1.4452<br>100.5<br>100.0 | 19.3490<br>[ 19.3240 ] | 100.1% | 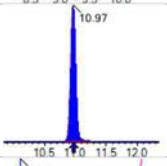 | 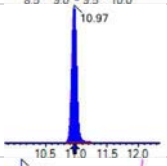 | |
| PFBSA | ( 297.9 / 78.0 ) 2141589<br>( 297.9 / 278.0 ) 3051 | ( 5.49 , 0.38 ) ( N/A , 0.00 , 0.1) | 2270.1<br>35.4 | 0.0014<br>110.0<br>100.0 | 4.1480<br>[ 5.0000 ] | 83.0% | 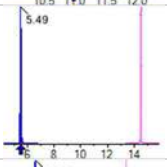 | 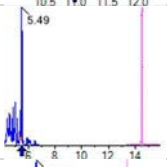 | |
| PFHxSA | ( 397.9 / 78.0 ) 4625119<br>( 397.9 / 378.0 ) 19659 | ( 11.20 , 0.75 ) ( N/A , 0.00 , 0.1) | 2140.7<br>410.5 | 0.0043<br>105.2<br>100.0 | 4.5400<br>[ 5.0000 ] | 90.8% | 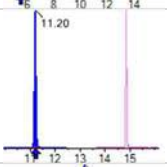 | 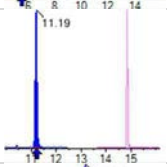 | |
| PFOSA | ( 498.0 / 78.0 ) 3461549<br>( 498.0 / 478.0 ) 48998 | ( 13.25 , 1.00 ) ( -0.01 , N/A , 0.0) | 2751.8<br>876.4 | 0.0142<br>96.3<br>100.0 | 4.7590<br>[ 5.0000 ] | 95.2% | 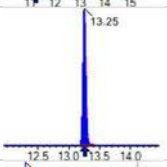 | 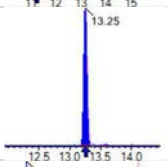 | |
| TFSI | ( 279.7 / 147.0 ) 6237018<br>( 279.7 / 211.0 ) 550911 | ( 6.97 , 0.53 ) ( N/A , 0.00 , 0.0) | 102.4<br>328342.5 | 0.0883<br>99.8<br>100.0 | 4.9080<br>[ 4.8970 ] | 100.2% | 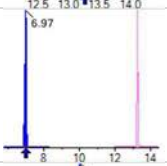 | 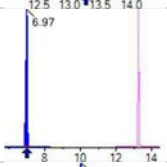 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2858298<br>( 512.0 / 169.0 ) 2132902 | ( 14.53 , 1.00 ) ( 0.00 , N/A , 0.8) | 4798.9<br>1815.7 | 0.7462<br>97.3<br>100.0 | 18.9020<br>[ 20.0000 ] | 94.5% | 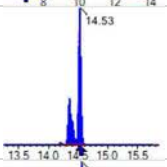 | 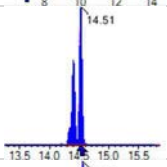 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3452254<br>( 526.0 / 169.0 ) 4304531 | ( 14.86 , 1.00 ) ( 0.01 , N/A , 2.0) | 4894.4<br>4195.8 | 1.2469<br>99.7<br>100.0 | 18.8300<br>[ 20.0000 ] | 94.1% | 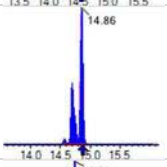 | 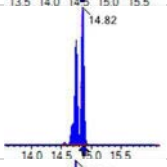 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1129495<br>( 570.0 / 483.0 ) 506437 | ( 10.30 , 1.00 ) ( 0.00 , N/A , 0.0) | 9715.4<br>1719.3 | 0.4484<br>96.6<br>100.0 | 4.7770<br>[ 5.0000 ] | 95.5% | 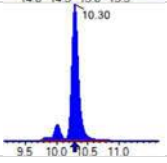 | 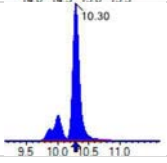 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1038977<br>( 584.0 / 526.0 ) 628152 | ( 10.90 , 1.00 )<br>( 0.01 , N/A , 0.1) | 2024.5<br>924.6 | 0.6046<br>100.8<br>100.0 | 4.6910<br>[ 5.0000 ] | 93.8% | 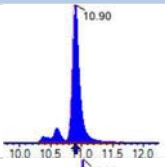 | 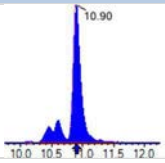 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1219694 | ( 14.32 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2469.2 | N/A<br>0.0<br>0.0 | 18.2260<br>[ 20.0000 ] | 91.1% | 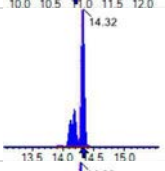 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1003589 | ( 14.69 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3425.9 | N/A<br>0.0<br>0.0 | 19.4190<br>[ 20.0000 ] | 97.1% | 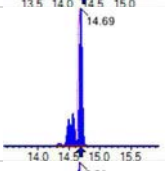 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 241422<br>( 285.0 / 185.0 ) 681001 | ( 5.56 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1876.5<br>2008.9 | 2.8208<br>100.5<br>100.0 | 4.2030<br>[ 5.0000 ] | 84.1% | 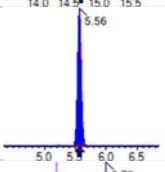 | 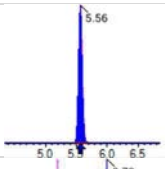 | |
| ADONA | ( 377.0 / 85.0 ) 3599164<br>( 377.0 / 251.0 ) 368648 | ( 6.72 , 1.21 )<br>( N/A , 0.00 , 0.1) | 3019.1<br>1747.4 | 0.1024<br>97.7<br>100.0 | 4.7510<br>[ 4.7140 ] | 100.8% | 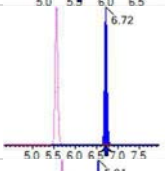 | 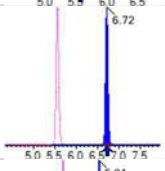 | |
| PFEESA | ( 315.0 / 135.0 ) 1196893<br>( 315.0 / 83.0 ) 758094 | ( 5.91 , 1.15 )<br>( N/A , 0.00 , 0.0) | 3468.3<br>1436.5 | 0.6334<br>98.7<br>100.0 | 8.1400<br>[ 8.9250 ] | 91.2% | 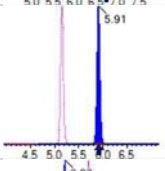 | 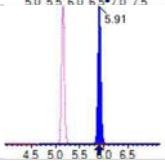 | |
| PFMPA | ( 229.0 / 85.0 ) 692338 | ( 3.83 , 0.89 )<br>( N/A , 0.00 , 0.0) | 7476.7 | N/A<br>0.0<br>0.0 | 9.8990<br>[ 10.0000 ] | 99.0% | 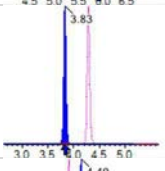 | | |
| PFMBA | ( 279.0 / 85.0 ) 1531948 | ( 4.49 , 1.05 )<br>( N/A , 0.00 , 0.0) | 5675.6 | N/A<br>0.0<br>0.0 | 9.7230<br>[ 10.0000 ] | 97.2% | 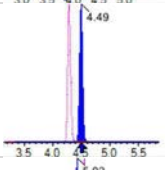 | | |
| NFDHA | ( 295.0 / 201.0 ) 607400<br>( 295.0 / 85.0 ) 620935 | ( 5.02 , 0.98 )<br>( N/A , 0.00 , 0.1) | 3182.9<br>2725.1 | 1.0223<br>102.8<br>100.0 | 8.4650<br>[ 10.0000 ] | 84.6% | 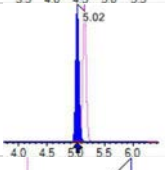 | 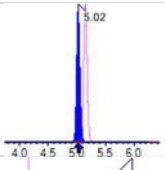 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3595266<br>( 533.0 / 353.0 ) 1173212 | ( 11.02 , 1.98 )<br>( N/A , 0.00 , 0.0) | 3512.2<br>3359.8 | 0.3263<br>102.3<br>100.0 | 4.2720<br>[ 4.6660 ] | 91.5% | 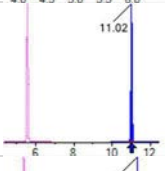 | 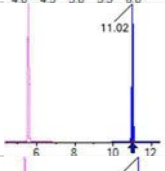 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3042390<br>( 633.0 / 453.0 ) 988183 | ( 12.53 , 2.25 )<br>( N/A , 0.00 , 0.0) | 4073.3<br>3327.7 | 0.3248<br>95.7<br>100.0 | 4.6510<br>[ 4.7160 ] | 98.6% | 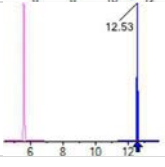 | 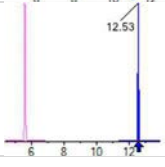 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (3)
Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1810103<br>( 461.0 / 381.2 ) 710333 | ( 9.30 , 0.90 ) ( N/A , 0.00 , 0.0) | 5528.9<br>3611.8 | 0.3924<br>101.6<br>100.0 | 4.0000<br>[ 4.6190 ] | 86.6% | 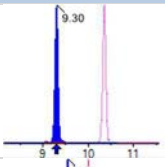 | 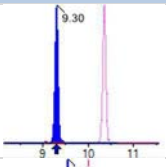 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 306748<br>( 241.0 / 117.0 ) 712363 | ( 3.88 , 0.91 ) ( N/A , 0.00 , 0.0) | 4987.4<br>3895.9 | 2.3223<br>105.8<br>100.0 | 18.7850<br>[ 20.0000 ] | 93.9% | 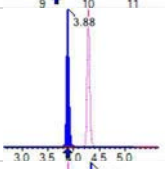 | 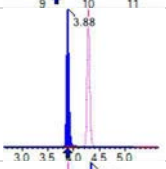 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1042575<br>( 341.0 / 217.0 ) 1516362 | ( 5.58 , 1.08 ) ( N/A , 0.00 , 0.0) | 1618.5<br>2009.2 | 1.4544<br>95.0<br>100.0 | 18.9620<br>[ 20.0000 ] | 94.8% | 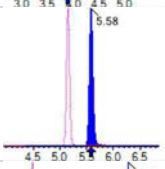 | 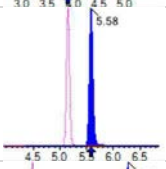 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2126010<br>( 441.0 / 337.0 ) 1844659 | ( 9.24 , 1.79 ) ( N/A , 0.00 , 0.0) | 10009.0<br>439589.5 | 0.8677<br>101.6<br>100.0 | 18.2000<br>[ 20.0000 ] | 91.0% | 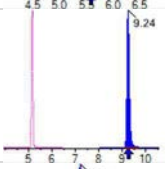 | 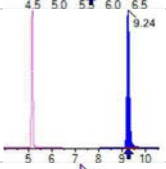 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1390247<br>( 357.2 / 243.0 ) 153112 | ( 5.83 , 1.00 ) ( -0.01 , N/A , 0.0) | 2236.7<br>1307.0 | 0.1101<br>102.7<br>100.0 | 5.2220<br>[ 5.0000 ] | 104.4% | 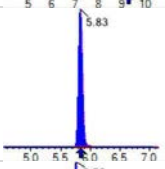 | 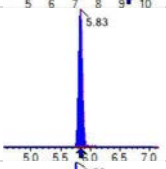 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1273468<br>( 457.2 / 343.0 ) 54850 | ( 8.56 , 1.00 ) ( -0.01 , N/A , 0.0) | 1237.6<br>631.3 | 0.0431<br>96.0<br>100.0 | 5.2640<br>[ 5.0000 ] | 105.3% | 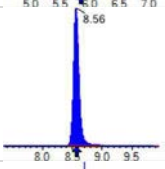 | 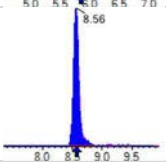 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 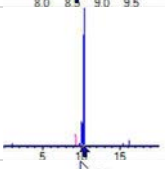 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 263934 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 1493.2 | N/A | 0.9350<br>[ 1.0000 ] | 93.5%<br>{ 100.0% } | 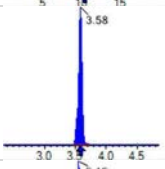 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 98995 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 612028.4 | N/A | 0.8380<br>[ 1.0000 ] | 83.8%<br>{ 100.0% } | 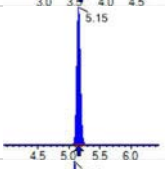 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 351919 | ( 7.39 , N/A ) ( N/A , 0.00 , N/A ) | 9726.4 | N/A | 0.9070<br>[ 1.0000 ] | 90.7%<br>{ 100.0% } | 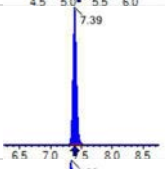 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 239753 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 1379.8 | N/A | 0.8210<br>[ 1.0000 ] | 82.1%<br>{ 100.0% } | 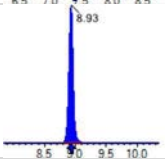 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 245324 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 6392.3 | N/A | 0.8560 [ 1.0000 ] | 85.6% { 100.0% } | 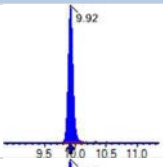 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 887477 | ( 8.02 , N/A ) ( N/A , 0.00 , N/A ) | 7774.0 | N/A | 0.9040 [ 1.0000 ] | 90.4% { 100.0% } | 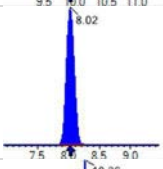 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 689338 | ( 10.36 , N/A ) ( N/A , 0.00 , N/A ) | 3165.2 | N/A | 0.8790 [ 1.0000 ] | 87.9% { 100.0% } | 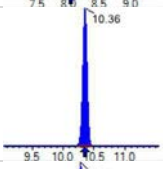 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2197606 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 70283.7 | N/A | 7.7030 [ 8.0000 ] | 96.3% { 100.0% } | 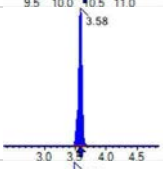 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 762090 | ( 4.28 , N/A ) ( N/A , 0.00 , N/A ) | 5824.0 | N/A | 4.2050 [ 4.0000 ] | 105.1% { 100.0% } | 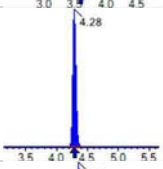 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 435589 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 13293.4 | N/A | 2.0110 [ 2.0000 ] | 100.6% { 100.0% } | 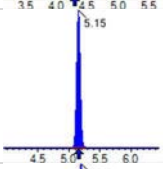 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 512303 | ( 6.29 , N/A ) ( N/A , 0.00 , N/A ) | 5427.8 | N/A | 2.1300 [ 2.0000 ] | 106.5% { 100.0% } | 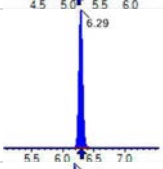 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 710573 | ( 7.39 , N/A ) ( N/A , 0.00 , N/A ) | 5727.0 | N/A | 1.9050 [ 2.0000 ] | 95.3% { 100.0% } | 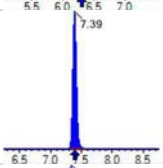 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 235015 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 5311.0 | N/A | 0.9930 [ 1.0000 ] | 99.3% { 100.0% } | 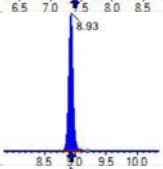 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 280327 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 1439.9 | N/A | 0.9890 [ 1.0000 ] | 98.9% { 100.0% } | 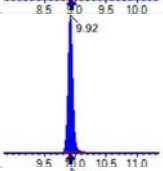 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 322515 | ( 10.83 , N/A ) ( N/A , 0.00 , N/A ) | 1192.2 | N/A | 0.9590 [ 1.0000 ] | 95.9% { 100.0% } | 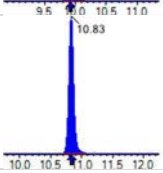 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (3)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 339766 | ( 11.72 , N/A ) ( N/A , 0.00 , N/A ) | 1333.2 | N/A | 0.9850 [ 1.0000 ] | 98.5% { 100.0% } | 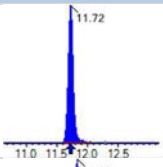 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 303737 | ( 13.03 , N/A ) ( N/A , 0.00 , N/A ) | 989.0 | N/A | 0.9950 [ 1.0000 ] | 99.5% { 100.0% } | 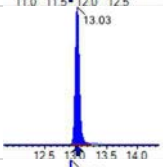 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 426311 | ( 13.93 , N/A ) ( N/A , 0.00 , N/A ) | 2154.9 | N/A | 1.6680 [ 2.0000 ] | 83.4% { 100.0% } | 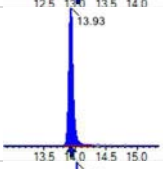 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1400667 | ( 5.32 , N/A ) ( N/A , 0.00 , N/A ) | 1993.0 | N/A | 1.9580 [ 2.0000 ] | 97.9% { 100.0% } | 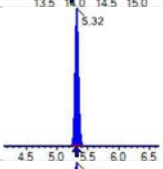 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1242073 | ( 8.02 , N/A ) ( N/A , 0.00 , N/A ) | 6061.3 | N/A | 1.9400 [ 2.0000 ] | 97.0% { 100.0% } | 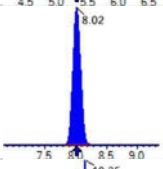 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1452747 | ( 10.35 , N/A ) ( N/A , 0.00 , N/A ) | 950.5 | N/A | 1.9810 [ 2.0000 ] | 99.0% { 100.0% } | 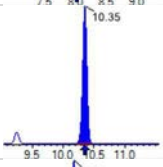 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 623641 | ( 4.78 , N/A ) ( N/A , 0.00 , N/A ) | 59.7 | N/A | 3.9630 [ 4.0000 ] | 99.1% { 100.0% } | 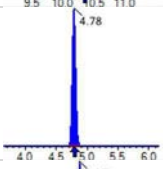 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1636689 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 6094.6 | N/A | 4.2340 [ 4.0000 ] | 105.8% { 100.0% } | 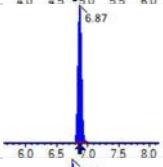 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1329088 | ( 9.25 , N/A ) ( N/A , 0.00 , N/A ) | 1743.7 | N/A | 3.9290 [ 4.0000 ] | 98.2% { 100.0% } | 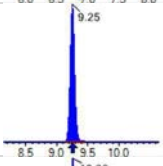 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2705977 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 1763.3 | N/A | 7.3950 [ 8.0000 ] | 92.4% { 100.0% } | 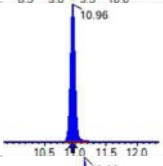 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1503521 | ( 13.26 , N/A ) ( N/A , 0.00 , N/A ) | 3232.2 | N/A | 1.9310 [ 2.0000 ] | 96.6% { 100.0% } | 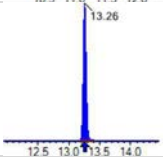 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (3)
Acquired: 2024/03/29 - 11:59

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 340270 | ( 14.52 , N/A ) ( N/A , 0.00 , N/A ) | 2033.2 | N/A | 1.9440 [ 2.0000 ] | 97.2% { 100.0% } | 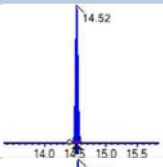 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 323701 | ( 14.85 , N/A ) ( N/A , 0.00 , N/A ) | 2370.0 | N/A | 2.0230 [ 2.0000 ] | 101.2% { 100.0% } | 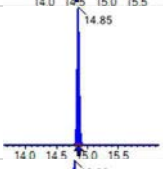 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1025206 | ( 10.29 , N/A ) ( N/A , 0.00 , N/A ) | 2823.3 | N/A | 4.0260 [ 4.0000 ] | 100.7% { 100.0% } | 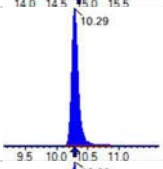 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 913216 | ( 10.89 , N/A ) ( N/A , 0.00 , N/A ) | 2540.5 | N/A | 3.9740 [ 4.0000 ] | 99.3% { 100.0% } | 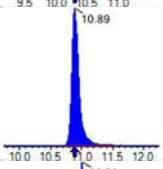 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1236314 | ( 14.31 , N/A ) ( N/A , 0.00 , N/A ) | 2289.5 | N/A | 18.9050 [ 20.0000 ] | 94.5% { 100.0% } | 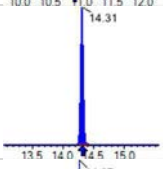 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1085066 | ( 14.67 , N/A ) ( N/A , 0.00 , N/A ) | 3747.6 | N/A | 17.7170 [ 20.0000 ] | 88.6% { 100.0% } | 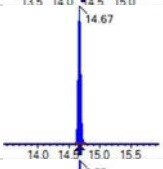 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 782620 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 2325.9 | N/A | 8.3420 [ 8.0000 ] | 104.3% { 100.0% } | 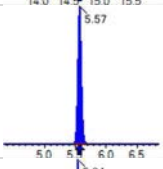 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 506337 | ( 5.84 , N/A ) ( N/A , 0.00 , N/A ) | 2211.6 | N/A | 1.8940 [ 2.0000 ] | 94.7% { 100.0% } | 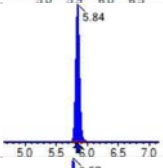 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 585316 | ( 8.57 , N/A ) ( N/A , 0.00 , N/A ) | 1485.5 | N/A | 1.9430 [ 2.0000 ] | 97.2% { 100.0% } | 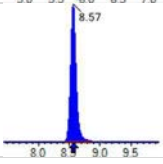 | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01122A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01122-CCV2A | PFBA | 20.0A | 18.9A | 94.4A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.31A | 93.1A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.67A | 93.4A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.47A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.85A | 97.1A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.65A | 93.1A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.46A | 89.3A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.93A | 98.7A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.75A | 94.9A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.73A | 94.6A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 4.55A | 91.0A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.57A | 91.3A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 3.78A | 75.6A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 3.98A | 90.1A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.52A | 96.2A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.24A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.55A | 95.3A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.18A | 89.8A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.59A | 95.6A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 4.75A | 98.6A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 4.92A | 101A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 18.2A | 96.8A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.9A | 94.4A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 18.3A | 95.3A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.4A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.89A | 97.7A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.7A | 93.3A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.2A | 96.1A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.63A | 92.5A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.66A | 93.3A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01122A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01122-CCV2A | NMeFOSEA | 20.0A | 17.5A | 87.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.9A | 99.3A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.34A | 86.9A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 4.50A | 95.4A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.21A | 92.3A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 9.02A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 8.98A | 89.8A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.34A | 93.4A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.35A | 92.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 4.67A | 99.0A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 18.3A | 91.7A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 19.2A | 96.2A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 18.7A | 93.3A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (20)
Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 509453<br>( 163.0 / 69.0 ) 14456 | ( 2.39 , 0.67 ) ( N/A , -0.02 , 0.3) | 766.8<br>171.6 | 0.0284<br>103.5<br>105.0 | 8.4740<br>[ 10.0000 ] | 84.7% | 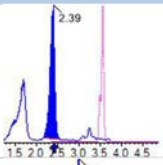 | 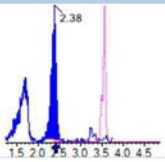 | |
| PFBA | ( 213.0 / 169.0 ) 5032910 | ( 3.56 , 1.00 ) ( 0.00 , N/A , 0.0) | 1823.3 | N/A<br>0.0<br>0.0 | 18.8770<br>[ 20.0000 ] | 94.4% | 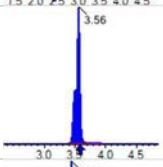 | | MI5 DG 2024-04-01 |
| PFPeA | ( 263.0 / 219.0 ) 1871169<br>( 263.0 / 69.0 ) 20810 | ( 4.25 , 1.00 ) ( 0.00 , N/A , 0.0) | 3078.8<br>344.8 | 0.0111<br>93.5<br>95.9 | 9.3140<br>[ 10.0000 ] | 93.1% | 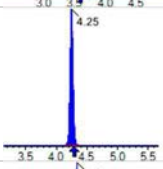 | 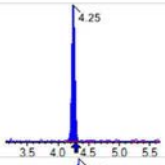 | |
| PFHxA | ( 313.0 / 269.0 ) 950487<br>( 313.0 / 119.0 ) 112210 | ( 5.13 , 1.00 ) ( 0.00 , N/A , 0.0) | 3279.1<br>2025.7 | 0.1181<br>106.1<br>101.2 | 4.6690<br>[ 5.0000 ] | 93.4% | 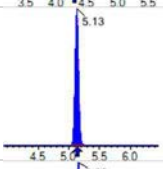 | 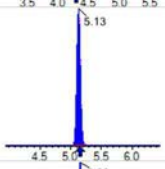 | |
| PFHpA | ( 363.0 / 319.0 ) 1123964<br>( 363.0 / 169.0 ) 365409 | ( 6.26 , 1.00 ) ( 0.00 , N/A , 0.0) | 2150.6<br>2390.1 | 0.3251<br>106.4<br>100.3 | 4.4670<br>[ 5.0000 ] | 89.3% | 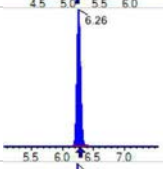 | 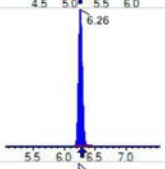 | |
| PFOA | ( 413.0 / 369.0 ) 1735936<br>( 413.0 / 169.0 ) 602122 | ( 7.38 , 1.00 ) ( 0.00 , N/A , 0.1) | 1312.6<br>1925.3 | 0.3469<br>97.0<br>100.7 | 4.8540<br>[ 5.0000 ] | 97.1% | 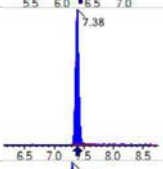 | 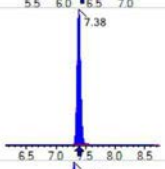 | |
| PFNA | ( 463.0 / 419.0 ) 1147673<br>( 463.0 / 169.0 ) 293889 | ( 8.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1850.9<br>1815.3 | 0.2561<br>104.2<br>97.2 | 4.6540<br>[ 5.0000 ] | 93.1% | 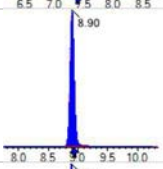 | 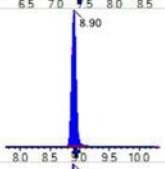 | |
| PFDA | ( 513.0 / 469.0 ) 1299490<br>( 513.0 / 169.0 ) 155881 | ( 9.89 , 1.00 ) ( 0.00 , N/A , 0.0) | 4996.6<br>5292.3 | 0.1200<br>100.7<br>94.9 | 4.4640<br>[ 5.0000 ] | 89.3% | 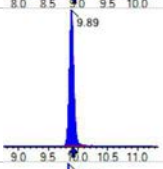 | 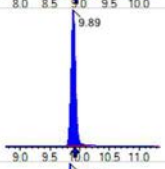 | |
| PFUnA | ( 563.0 / 519.0 ) 1498573<br>( 563.0 / 169.0 ) 223103 | ( 10.80 , 1.00 ) ( 0.00 , N/A , 0.2) | 1441.9<br>898.1 | 0.1489<br>96.1<br>97.1 | 4.9330<br>[ 5.0000 ] | 98.7% | 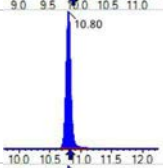 | 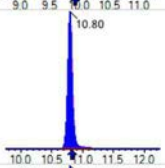 | |
| PFDoA | ( 613.0 / 569.0 ) 1623611<br>( 613.0 / 169.0 ) 246191 | ( 11.69 , 1.00 ) ( 0.00 , N/A , 0.2) | 1785.5<br>955.6 | 0.1516<br>99.8<br>97.8 | 4.7470<br>[ 5.0000 ] | 94.9% | 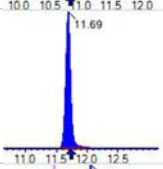 | 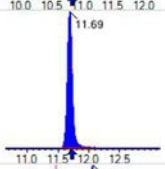 | |
| PFTrDA | ( 663.0 / 619.0 ) 1573142<br>( 663.0 / 169.0 ) 422445 | ( 12.45 , 1.06 ) ( N/A , -0.02 , -0.1) | 1385.6<br>1340.6 | 0.2685<br>99.7<br>101.1 | 4.7300<br>[ 5.0000 ] | 94.6% | 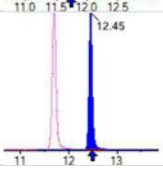 | 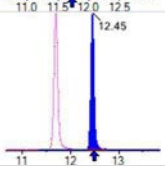 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1323634<br>( 713.0 / 169.0 ) 359548 | ( 13.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 1709.0<br>1348.0 | 0.2716<br>100.1<br>109.7 | 4.5490<br>[ 5.0000 ] | 91.0% | 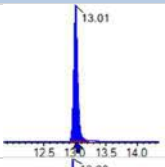 | 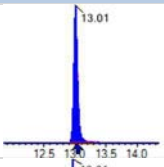 | |
| PFHxDA | ( 813.0 / 769.0 ) 1017773<br>( 813.0 / 169.0 ) 250891 | ( 13.90 , 1.00 ) ( -0.01 , N/A , -0.2) | 1982.4<br>949.1 | 0.2465<br>94.2<br>92.2 | 4.5670<br>[ 5.0000 ] | 91.3% | 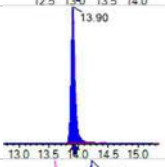 | 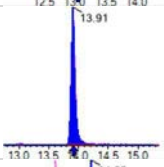 | |
| PFODA | ( 913.0 / 869.0 ) 533573<br>( 913.0 / 169.0 ) 184034 | ( 14.65 , 1.05 ) ( N/A , -0.01 , -0.2) | 1264.3<br>614.2 | 0.3449<br>110.0<br>110.7 | 3.7810<br>[ 5.0000 ] | 75.6% | 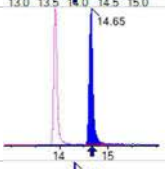 | 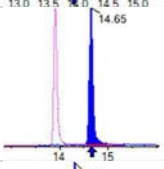 | |
| PFBS | ( 299.0 / 80.0 ) 1340055<br>( 299.0 / 99.0 ) 1013313 | ( 5.29 , 1.00 ) ( 0.00 , N/A , 0.0) | 2483.8<br>1931.2 | 0.7562<br>102.1<br>101.1 | 3.9810<br>[ 4.4240 ] | 90.0% | 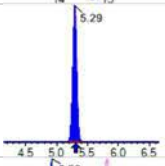 | 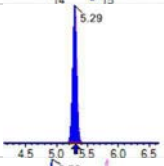 | |
| PFPeS | ( 349.0 / 80.0 ) 4080875<br>( 349.0 / 99.0 ) 1453976 | ( 6.58 , 0.82 ) ( N/A , -0.02 , 0.1) | 4422.9<br>4505.5 | 0.3563<br>104.3<br>102.0 | 4.5200<br>[ 4.6920 ] | 96.3% | 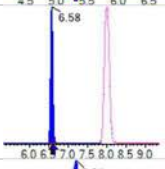 | 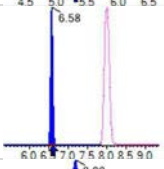 | |
| PFHxS | ( 399.0 / 80.0 ) 4661574<br>( 399.0 / 99.0 ) 1491746 | ( 8.01 , 1.00 ) ( 0.01 , N/A , 0.4) | 3159.7<br>3816.3 | 0.3200<br>97.5<br>99.7 | 4.2360<br>[ 4.5550 ] | 93.0% | 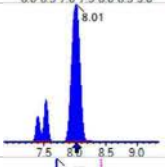 | 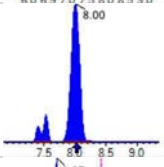 | |
| PFHpS | ( 449.0 / 80.0 ) 4115172<br>( 449.0 / 99.0 ) 1089869 | ( 9.37 , 0.91 ) ( N/A , -0.03 , -0.1) | 3016.4<br>4206.3 | 0.2648<br>101.5<br>98.4 | 4.5530<br>[ 4.7570 ] | 95.7% | 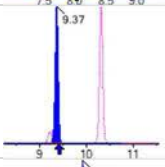 | 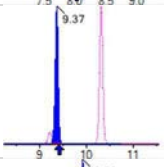 | |
| PFOS | ( 499.0 / 80.0 ) 3667852<br>( 499.0 / 99.0 ) 877635 | ( 10.32 , 1.00 ) ( 0.00 , N/A , -0.1) | 2679.0<br>8342.5 | 0.2393<br>103.6<br>106.4 | 4.1760<br>[ 4.6370 ] | 90.1% | 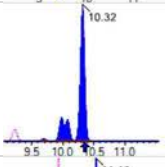 | 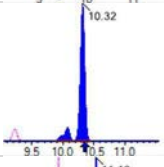 | |
| PFNS | ( 549.0 / 80.0 ) 3671570<br>( 549.0 / 99.0 ) 1030580 | ( 11.19 , 1.08 ) ( N/A , -0.04 , 0.0) | 3156.9<br>3386.1 | 0.2807<br>104.8<br>98.7 | 4.5870<br>[ 4.7990 ] | 95.6% | 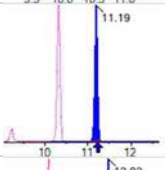 | 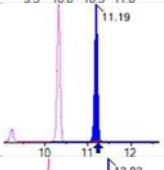 | |
| PFDS | ( 599.0 / 80.0 ) 4649832<br>( 599.0 / 99.0 ) 1188029 | ( 12.02 , 1.16 ) ( N/A , -0.03 , 0.1) | 3331.4<br>2851.8 | 0.2555<br>100.3<br>100.1 | 4.7520<br>[ 4.8160 ] | 98.7% | 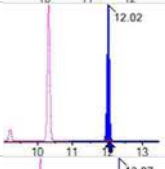 | 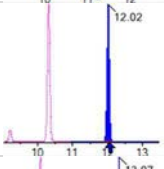 | |
| PFDoS | ( 699.0 / 80.0 ) 4654006<br>( 699.0 / 99.0 ) 1051454 | ( 13.07 , 1.27 ) ( N/A , -0.02 , 0.0) | 4550.6<br>3255.7 | 0.2259<br>101.1<br>94.7 | 4.9150<br>[ 4.8480 ] | 101.4% | 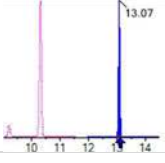 | 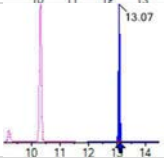 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (20)
Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 7084884<br>( 327.0 / 81.0 ) 6625714 | ( 4.76 , 1.00 ) ( -0.01 , N/A , 0.0) | 5013.8<br>3649.4 | 0.9352<br>109.6<br>99.4 | 18.1940<br>[ 18.6910 ] | 97.3% | 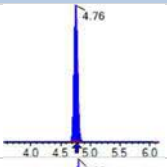 | 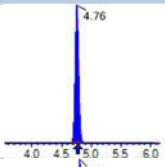 | |
| 6:2FTS | ( 427.0 / 407.0 ) 6159494<br>( 427.0 / 81.0 ) 7648037 | ( 6.86 , 1.00 ) ( 0.00 , N/A , -0.1) | 5328.7<br>5100.1 | 1.2417<br>96.3<br>97.1 | 17.9330<br>[ 18.9810 ] | 94.5% | 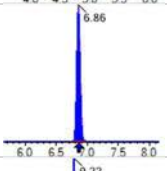 | 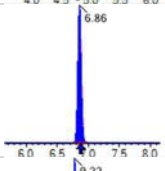 | |
| 8:2FTS | ( 527.0 / 507.0 ) 6500954<br>( 527.0 / 81.0 ) 6799412 | ( 9.22 , 1.00 ) ( 0.00 , N/A , 0.2) | 2616.8<br>2296.4 | 1.0459<br>94.8<br>99.6 | 18.2970<br>[ 19.1660 ] | 95.5% | 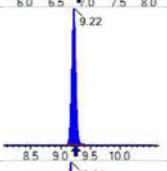 | 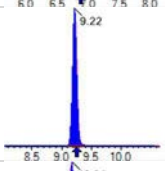 | |
| 10:2FTS | ( 627.0 / 607.0 ) 5789975<br>( 627.0 / 81.0 ) 8485852 | ( 10.94 , 1.00 ) ( 0.01 , N/A , 0.0) | 2069.7<br>1733.0 | 1.4656<br>101.9<br>101.4 | 19.4430<br>[ 19.3240 ] | 100.6% | 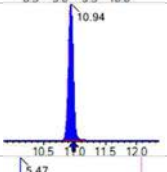 | 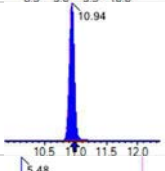 | |
| PFBSA | ( 297.9 / 78.0 ) 2342407<br>( 297.9 / 278.0 ) 3349 | ( 5.47 , 0.38 ) ( N/A , -0.02 , -0.5) | 2128.9<br>23.4 | 0.0014<br>110.4<br>100.4 | 4.3630<br>[ 5.0000 ] | 87.3% | 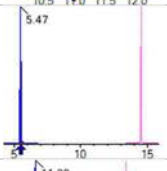 | 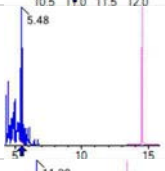 | |
| PFHxSA | ( 397.9 / 78.0 ) 4738160<br>( 397.9 / 378.0 ) 21682 | ( 11.20 , 0.75 ) ( N/A , 0.00 , -0.3) | 2225.2<br>494.0 | 0.0046<br>113.3<br>107.7 | 4.6570<br>[ 5.0000 ] | 93.1% | 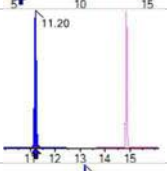 | 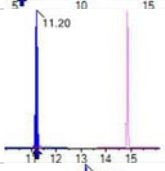 | |
| PFOSA | ( 498.0 / 78.0 ) 3655579<br>( 498.0 / 478.0 ) 49241 | ( 13.26 , 1.00 ) ( -0.01 , N/A , 0.0) | 3142.2<br>892.8 | 0.0135<br>91.6<br>95.2 | 4.8850<br>[ 5.0000 ] | 97.7% | 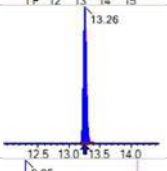 | 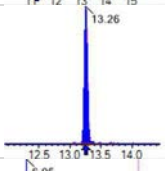 | |
| TFSI | ( 279.7 / 147.0 ) 5430033<br>( 279.7 / 211.0 ) 516041 | ( 6.95 , 0.52 ) ( N/A , -0.02 , 0.0) | 73.8<br>23431.7 | 0.0950<br>107.4<br>107.6 | 4.1540<br>[ 4.8970 ] | 84.8% | 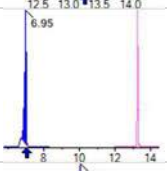 | 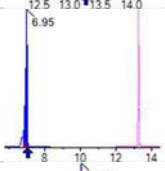 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2934008<br>( 512.0 / 169.0 ) 2221476 | ( 14.53 , 1.00 ) ( 0.00 , N/A , 0.6) | 5201.3<br>2066.0 | 0.7571<br>98.8<br>101.5 | 18.6590<br>[ 20.0000 ] | 93.3% | 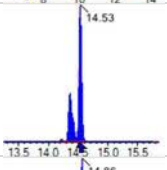 | 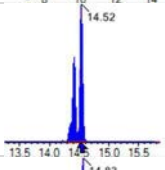 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3517836<br>( 526.0 / 169.0 ) 4420121 | ( 14.86 , 1.00 ) ( 0.01 , N/A , 2.1) | 5353.9<br>4033.8 | 1.2565<br>100.5<br>100.8 | 19.2130<br>[ 20.0000 ] | 96.1% | 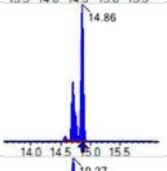 | 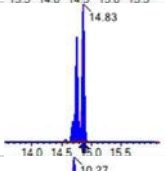 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 1134047<br>( 570.0 / 483.0 ) 532075 | ( 10.27 , 1.00 ) ( 0.00 , N/A , 0.1) | 3401.8<br>1455.6 | 0.4692<br>101.1<br>104.6 | 4.6270<br>[ 5.0000 ] | 92.5% | 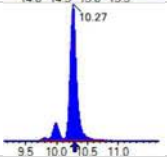 | 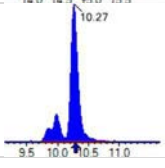 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (20)
Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 1066979<br>( 584.0 / 526.0 ) 659045 | ( 10.87 , 1.00 )<br>( 0.01 , N/A , 0.1) | 1825.1<br>882.7 | 0.6177<br>103.0<br>102.2 | 4.6650<br>[ 5.0000 ] | 93.3% | 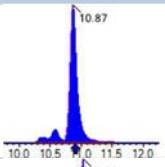 | 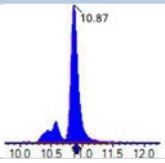 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1260745 | ( 14.33 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2523.8 | N/A<br>0.0<br>0.0 | 17.4750<br>[ 20.0000 ] | 87.4% | 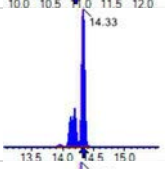 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 1100248 | ( 14.70 , 1.00 )<br>( 0.02 , N/A , 0.0) | 3784.5 | N/A<br>0.0<br>0.0 | 19.8510<br>[ 20.0000 ] | 99.3% | 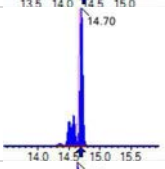 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 251389<br>( 285.0 / 185.0 ) 762564 | ( 5.54 , 1.00 )<br>( 0.00 , N/A , 0.0) | 1660.8<br>2122.0 | 3.0334<br>108.0<br>107.5 | 4.3440<br>[ 5.0000 ] | 86.9% | 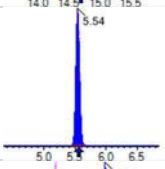 | 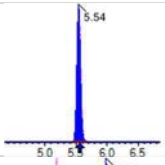 | |
| ADONA | ( 377.0 / 85.0 ) 3435814<br>( 377.0 / 251.0 ) 352890 | ( 6.70 , 1.21 )<br>( N/A , -0.02 , 0.0) | 2638.3<br>1573.7 | 0.1027<br>97.9<br>100.3 | 4.5020<br>[ 4.7140 ] | 95.5% | 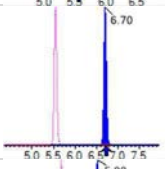 | 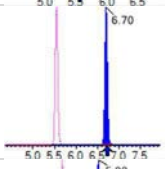 | |
| PFEESA | ( 315.0 / 135.0 ) 1216060<br>( 315.0 / 83.0 ) 763703 | ( 5.88 , 1.15 )<br>( N/A , -0.03 , -0.1) | 2565.4<br>1573.6 | 0.6280<br>97.8<br>99.2 | 8.2110<br>[ 8.9250 ] | 92.0% | 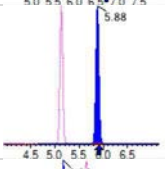 | 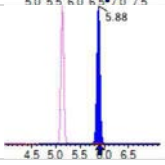 | |
| PFMPA | ( 229.0 / 85.0 ) 666058 | ( 3.80 , 0.89 )<br>( N/A , -0.03 , 0.0) | 7764.8 | N/A<br>0.0<br>0.0 | 9.0180<br>[ 10.0000 ] | 90.2% | 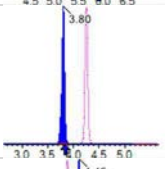 | | |
| PFMBA | ( 279.0 / 85.0 ) 1493551 | ( 4.45 , 1.05 )<br>( N/A , -0.04 , 0.0) | 5200.6 | N/A<br>0.0<br>0.0 | 8.9760<br>[ 10.0000 ] | 89.8% | 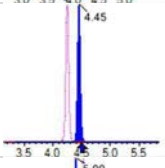 | | |
| NFDHA | ( 295.0 / 201.0 ) 674837<br>( 295.0 / 85.0 ) 631539 | ( 5.00 , 0.98 )<br>( N/A , -0.02 , 0.1) | 3757.4<br>2401.2 | 0.9358<br>94.1<br>91.5 | 9.3360<br>[ 10.0000 ] | 93.4% | 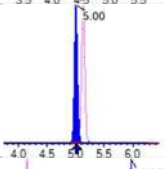 | 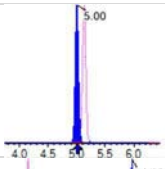 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 3684614<br>( 533.0 / 353.0 ) 1162672 | ( 10.99 , 1.98 )<br>( N/A , -0.04 , 0.1) | 3290.7<br>3041.9 | 0.3155<br>99.0<br>96.7 | 4.3460<br>[ 4.6660 ] | 93.1% | 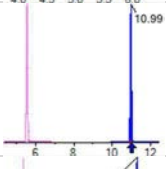 | 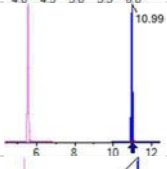 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 3079414<br>( 633.0 / 453.0 ) 1047463 | ( 12.51 , 2.26 )<br>( N/A , -0.02 , 0.0) | 4208.2<br>3936.7 | 0.3402<br>100.3<br>104.7 | 4.6730<br>[ 4.7160 ] | 99.1% | 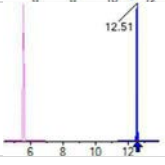 | 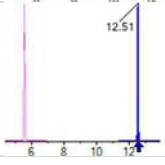 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (20)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1898983<br>( 461.0 / 381.2 ) 761930 | ( 9.27 , 0.90 )<br>( N/A , -0.04 , 0.0) | 4273.5<br>5287.3 | 0.4012<br>103.9<br>102.2 | 4.0290<br>[ 4.6190 ] | 87.2% | 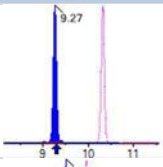 | 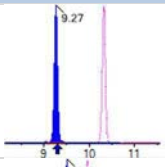 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 316320<br>( 241.0 / 117.0 ) 687784 | ( 3.86 , 0.91 )<br>( N/A , -0.03 , 0.0) | 4622.1<br>3894.0 | 2.1743<br>99.0<br>93.6 | 18.3420<br>[ 20.0000 ] | 91.7% | 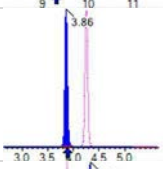 | 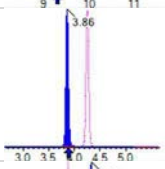 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 1065998<br>( 341.0 / 217.0 ) 1534598 | ( 5.56 , 1.08 )<br>( N/A , -0.02 , 0.0) | 1663.4<br>1684.6 | 1.4396<br>94.0<br>99.0 | 19.2460<br>[ 20.0000 ] | 96.2% | 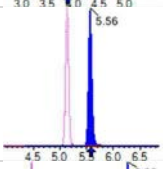 | 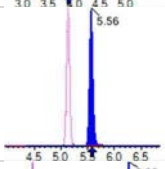 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 2195177<br>( 441.0 / 337.0 ) 1913076 | ( 9.22 , 1.80 )<br>( N/A , -0.02 , -0.1) | 8658.9<br>65152.5 | 0.8715<br>102.0<br>100.4 | 18.6550<br>[ 20.0000 ] | 93.3% | 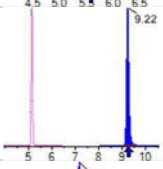 | 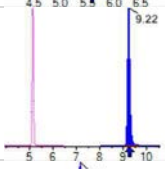 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1447678<br>( 357.2 / 243.0 ) 155702 | ( 5.81 , 1.00 )<br>( -0.01 , N/A , 0.0) | 1922.4<br>1105.2 | 0.1076<br>100.3<br>97.7 | 5.3010<br>[ 5.0000 ] | 106.0% | 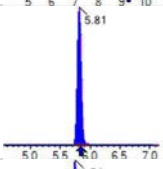 | 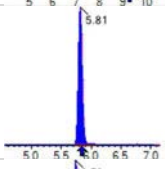 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1302403<br>( 457.2 / 343.0 ) 55968 | ( 8.54 , 1.00 )<br>( -0.01 , N/A , 0.3) | 1416.3<br>572.5 | 0.0430<br>95.8<br>99.8 | 5.2740<br>[ 5.0000 ] | 105.5% | 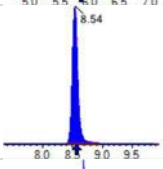 | 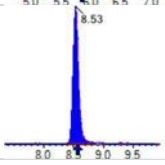 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 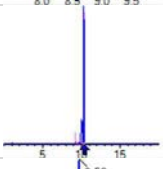 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 189682 | ( 3.56 , N/A )<br>( N/A , -0.02 , N/A ) | 1015.4 | N/A | 0.6720<br>[ 1.0000 ] | 67.2%<br>{ 71.9% } | 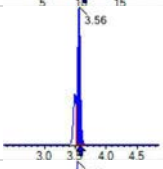 | | IS1, |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 108205 | ( 5.13 , N/A )<br>( N/A , -0.02 , N/A ) | 4707.9 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 109.3% } | 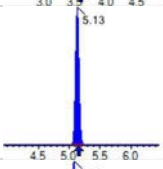 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 353920 | ( 7.39 , N/A )<br>( N/A , 0.00 , N/A ) | 6415.6 | N/A | 0.9120<br>[ 1.0000 ] | 91.2%<br>{ 100.6% } | 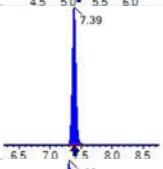 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 258093 | ( 8.90 , N/A )<br>( N/A , -0.03 , N/A ) | 1965.5 | N/A | 0.8830<br>[ 1.0000 ] | 88.3%<br>{ 107.7% } | 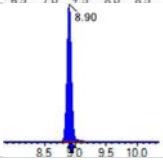 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (20)
Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 268951 | ( 9.89 , N/A ) ( N/A , -0.03 , N/A ) | 7683.1 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 109.6% } | 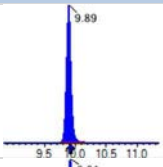 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 916776 | ( 8.01 , N/A ) ( N/A , -0.01 , N/A ) | 6766.4 | N/A | 0.9330 [ 1.0000 ] | 93.3% { 103.3% } | 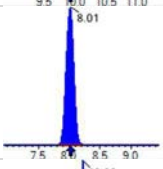 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 738680 | ( 10.32 , N/A ) ( N/A , -0.03 , N/A ) | 4310.0 | N/A | 0.9420 [ 1.0000 ] | 94.2% { 107.2% } | 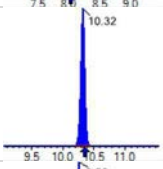 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2125097 | ( 3.56 , N/A ) ( N/A , -0.02 , N/A ) | 50462.5 | N/A | 10.3650 [ 8.0000 ] | 129.6% { 96.7% } | 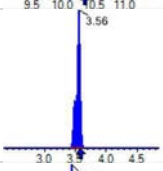 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 804850 | ( 4.25 , N/A ) ( N/A , -0.04 , N/A ) | 6050.2 | N/A | 4.0630 [ 4.0000 ] | 101.6% { 105.6% } | 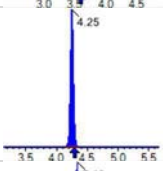 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 438786 | ( 5.13 , N/A ) ( N/A , -0.02 , N/A ) | 28263.9 | N/A | 1.8540 [ 2.0000 ] | 92.7% { 100.7% } | 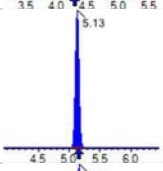 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 507164 | ( 6.27 , N/A ) ( N/A , -0.02 , N/A ) | 6722.3 | N/A | 1.9290 [ 2.0000 ] | 96.4% { 99.0% } | 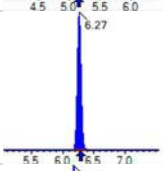 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 712204 | ( 7.38 , N/A ) ( N/A , -0.01 , N/A ) | 5856.3 | N/A | 1.8990 [ 2.0000 ] | 94.9% { 100.2% } | 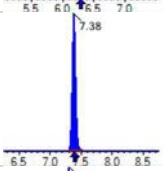 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 245442 | ( 8.90 , N/A ) ( N/A , -0.03 , N/A ) | 7210.9 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 104.4% } | 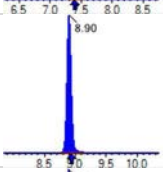 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 291513 | ( 9.89 , N/A ) ( N/A , -0.03 , N/A ) | 1424.6 | N/A | 0.9380 [ 1.0000 ] | 93.8% { 104.0% } | 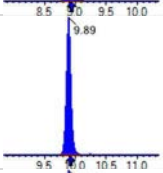 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 334542 | ( 10.80 , N/A ) ( N/A , -0.03 , N/A ) | 1169.2 | N/A | 0.9080 [ 1.0000 ] | 90.8% { 103.7% } | 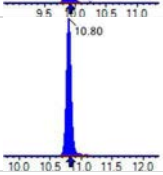 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (20)
Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 340865 | ( 11.69 , N/A ) ( N/A , -0.03 , N/A ) | 1395.0 | N/A | 0.9020 [ 1.0000 ] | 90.2% { 100.3% } | 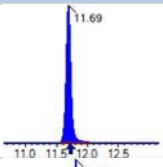 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 311577 | ( 13.01 , N/A ) ( N/A , -0.02 , N/A ) | 1269.0 | N/A | 0.9310 [ 1.0000 ] | 93.1% { 102.6% } | 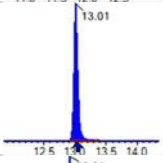 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 475688 | ( 13.91 , N/A ) ( N/A , -0.02 , N/A ) | 2208.9 | N/A | 1.6980 [ 2.0000 ] | 84.9% { 111.6% } | 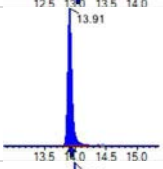 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1368749 | ( 5.30 , N/A ) ( N/A , -0.02 , N/A ) | 1761.2 | N/A | 1.8520 [ 2.0000 ] | 92.6% { 97.7% } | 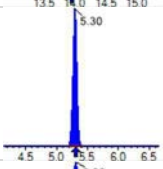 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1256530 | ( 8.00 , N/A ) ( N/A , -0.01 , N/A ) | 5932.6 | N/A | 1.9000 [ 2.0000 ] | 95.0% { 101.2% } | 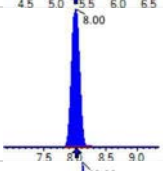 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1513148 | ( 10.32 , N/A ) ( N/A , -0.03 , N/A ) | 1190.4 | N/A | 1.9250 [ 2.0000 ] | 96.3% { 104.2% } | 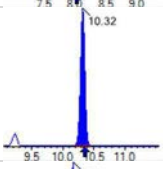 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 589979 | ( 4.76 , N/A ) ( N/A , -0.02 , N/A ) | 58.1 | N/A | 3.6290 [ 4.0000 ] | 90.7% { 94.6% } | 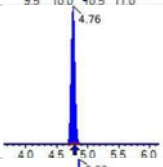 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1618556 | ( 6.86 , N/A ) ( N/A , -0.01 , N/A ) | 6350.5 | N/A | 4.0530 [ 4.0000 ] | 101.3% { 98.9% } | 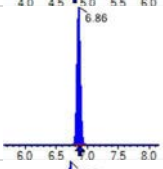 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1444790 | ( 9.22 , N/A ) ( N/A , -0.03 , N/A ) | 2574.1 | N/A | 4.1350 [ 4.0000 ] | 103.4% { 108.7% } | 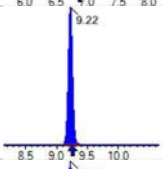 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3000030 | ( 10.93 , N/A ) ( N/A , -0.03 , N/A ) | 1513.9 | N/A | 7.9370 [ 8.0000 ] | 99.2% { 110.9% } | 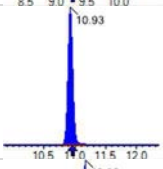 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1546712 | ( 13.26 , N/A ) ( N/A , 0.01 , N/A ) | 3680.2 | N/A | 1.8540 [ 2.0000 ] | 92.7% { 102.9% } | 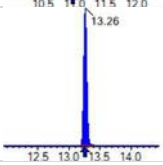 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (20)
Acquired: 2024/03/29 - 17:48

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 353832 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 2242.8 | N/A | 1.8860 [ 2.0000 ] | 94.3% { 104.0% } | 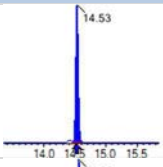  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 323274 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 2795.2 | N/A | 1.8850 [ 2.0000 ] | 94.3% { 99.9% } | 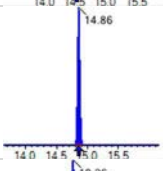  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1062707 | ( 10.26 , N/A ) ( N/A , -0.03 , N/A ) | 3083.0 | N/A | 3.8950 [ 4.0000 ] | 97.4% { 103.7% } | 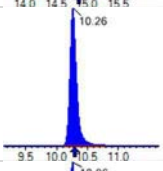  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 943181 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 1811.9 | N/A | 3.8300 [ 4.0000 ] | 95.7% { 103.3% } | 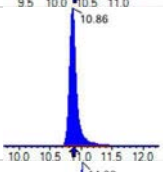  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1332820 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 2570.2 | N/A | 19.0190 [ 20.0000 ] | 95.1% { 107.8% } | 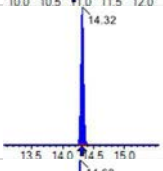  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1163649 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 4823.8 | N/A | 17.7310 [ 20.0000 ] | 88.7% { 107.2% } | 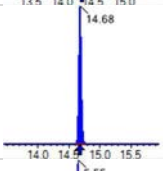  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 788470 | ( 5.55 , N/A ) ( N/A , -0.02 , N/A ) | 3086.7 | N/A | 7.6890 [ 8.0000 ] | 96.1% { 100.7% } | 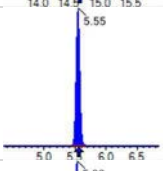  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 519404 | ( 5.82 , N/A ) ( N/A , -0.02 , N/A ) | 2465.5 | N/A | 1.7720 [ 2.0000 ] | 88.6% { 102.6% } | 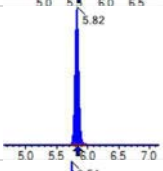  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 597582 | ( 8.54 , N/A ) ( N/A , -0.02 , N/A ) | 1147.5 | N/A | 1.8100 [ 2.0000 ] | 90.5% { 102.1% } | 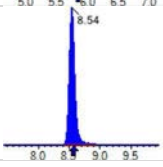  | | |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01122A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01122-CCV3A | PFBA | 20.0A | 19.4A | 96.9A | ng/mLA | +/- 30.00%A |
| | PFPeA | 10.0A | 9.24A | 92.4A | ng/mLA | +/- 30.00%A |
| | PFHxA | 5.00A | 4.43A | 88.5A | ng/mLA | +/- 30.00%A |
| | PFHpA | 5.00A | 4.65A | 92.9A | ng/mLA | +/- 30.00%A |
| | PFOA | 5.00A | 4.40A | 88.1A | ng/mLA | +/- 30.00%A |
| | PFNA | 5.00A | 4.67A | 93.3A | ng/mLA | +/- 30.00%A |
| | PFDA | 5.00A | 4.42A | 88.4A | ng/mLA | +/- 30.00%A |
| | PFUnA | 5.00A | 4.79A | 95.8A | ng/mLA | +/- 30.00%A |
| | PFDoA | 5.00A | 4.77A | 95.5A | ng/mLA | +/- 30.00%A |
| | PFTrDA | 5.00A | 4.81A | 96.2A | ng/mLA | +/- 30.00%A |
| | PFTeDA | 5.00A | 5.08A | 102A | ng/mLA | +/- 30.00%A |
| | PFHxDA | 5.00A | 4.41A | 88.2A | ng/mLA | +/- 30.00%A |
| | PFODA | 5.00A | 4.20A | 83.9A | ng/mLA | +/- 30.00%A |
| | PFBSA | 4.42A | 4.13A | 93.5A | ng/mLA | +/- 30.00%A |
| | PFPeSA | 4.70A | 4.24A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFHxSA | 4.58A | 4.27A | 93.2A | ng/mLA | +/- 30.00%A |
| | PFHpSA | 4.78A | 4.77A | 99.7A | ng/mLA | +/- 30.00%A |
| | PFOSA | 4.65A | 4.30A | 92.5A | ng/mLA | +/- 30.00%A |
| | PFNSA | 4.80A | 4.55A | 94.7A | ng/mLA | +/- 30.00%A |
| | PFDSA | 4.82A | 5.03A | 104A | ng/mLA | +/- 30.00%A |
| | PFDoSA | 4.85A | 5.16A | 106A | ng/mLA | +/- 30.00%A |
| | 4:2FTSA | 18.8A | 17.9A | 95.4A | ng/mLA | +/- 30.00%A |
| | 6:2FTSA | 19.0A | 17.6A | 92.6A | ng/mLA | +/- 30.00%A |
| | 8:2FTSA | 19.2A | 17.6A | 91.5A | ng/mLA | +/- 30.00%A |
| | 10:2FTSA | 19.3A | 19.6A | 101A | ng/mLA | +/- 30.00%A |
| | PFOSA | 5.00A | 4.78A | 95.6A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 20.0A | 18.7A | 93.6A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 20.0A | 19.1A | 95.5A | ng/mLA | +/- 30.00%A |
| | NMeFOSA | 5.00A | 4.52A | 90.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSA | 5.00A | 4.69A | 93.8A | ng/mLA | +/- 30.00%A |

# INITIAL AND CONTINUING CALIBRATION CHECKA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | PPL, LLCA | Work Order:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project: | JPL-GW MonitoringA |
| Instrument ID:A | SaphiraA | Calibration:A | 2413019A |
| Standard ID:A | 24C0420C | Sequence:A | SD01122A |

| Lab Sample ID | AnalyteA | TrueA | FoundA | %RA | UnitsA | Control LimitA |
|---|---|---|---|---|---|---|
| SD01122-CCV3A | NMeFOSEA | 20.0A | 18.3A | 91.4A | ng/mLA | +/- 30.00%A |
| | NEtFOSEA | 20.0A | 19.1A | 95.7A | ng/mLA | +/- 30.00%A |
| | HFPO-DA | 5.00A | 4.50A | 89.9A | ng/mLA | +/- 30.00%A |
| | DONA | 4.72A | 5.04A | 107A | ng/mL | +/- 30.00%A |
| | PFEESA | 8.90A | 8.02A | 90.2A | ng/mLA | +/- 30.00%A |
| | PFMPA | 10.0A | 10.1A | 101A | ng/mLA | +/- 30.00%A |
| | PFMBA | 10.0A | 9.37A | 93.7A | ng/mLA | +/- 30.00%A |
| | NFDHA | 10.0A | 9.26A | 92.6A | ng/mLA | +/- 30.00%A |
| | 9Cl-PF3ONSA | 4.68A | 4.54A | 96.9A | ng/mLA | +/- 30.00%A |
| | 11Cl-PF3OUDSA | 4.72A | 5.00A | 106A | ng/mLA | +/- 30.00%A |
| | 3:3FTCA | 20.0A | 20.1A | 100A | ng/mLA | +/- 30.00%A |
| | 5:3FTCA | 20.0A | 18.1A | 90.5A | ng/mLA | +/- 30.00%A |
| | 7:3FTCA | 20.0A | 19.2A | 96.1A | ng/mLA | +/- 30.00%A |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (30)
Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 438865<br>( 163.0 / 69.0 ) 12888 | ( 2.38 , 0.67 ) ( N/A , -0.03 , 0.6) | 711.0<br>160.3 | 0.0294<br>107.2<br>108.6 | 8.3620<br>[ 10.0000 ] | 83.6% | 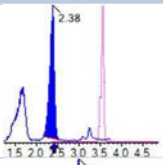 | 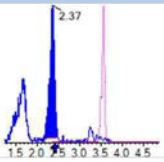 | |
| PFBA | ( 213.0 / 169.0 ) 4509678 | ( 3.56 , 1.00 ) ( 0.00 , N/A , 0.0) | 1798.5 | N/A<br>0.0<br>0.0 | 19.3850<br>[ 20.0000 ] | 96.9% | 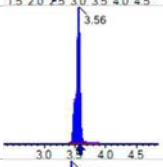 | | |
| PFPeA | ( 263.0 / 219.0 ) 1498292<br>( 263.0 / 69.0 ) 18129 | ( 4.24 , 1.00 ) ( 0.00 , N/A , -0.1) | 3412.6<br>378.8 | 0.0121<br>101.7<br>104.3 | 9.2440<br>[ 10.0000 ] | 92.4% | 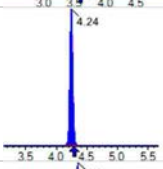 | 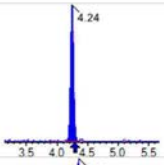 | |
| PFHxA | ( 313.0 / 269.0 ) 729029<br>( 313.0 / 119.0 ) 88240 | ( 5.14 , 1.00 ) ( 0.00 , N/A , -0.2) | 2009.0<br>1588.9 | 0.1210<br>108.8<br>103.7 | 4.4260<br>[ 5.0000 ] | 88.5% | 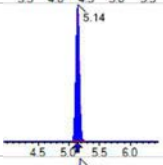 | 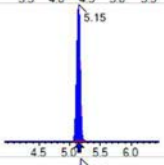 | |
| PFHpA | ( 363.0 / 319.0 ) 1020945<br>( 363.0 / 169.0 ) 291998 | ( 6.28 , 1.00 ) ( 0.00 , N/A , 0.0) | 2545.3<br>1914.6 | 0.2860<br>93.6<br>88.2 | 4.6470<br>[ 5.0000 ] | 92.9% | 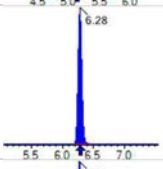 | 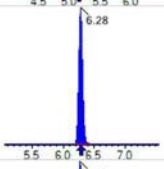 | |
| PFOA | ( 413.0 / 369.0 ) 1464750<br>( 413.0 / 169.0 ) 533728 | ( 7.42 , 1.00 ) ( 0.00 , N/A , 0.1) | 1184.3<br>1887.0 | 0.3644<br>101.9<br>105.8 | 4.4040<br>[ 5.0000 ] | 88.1% | 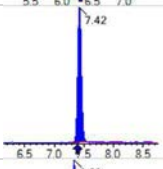 | 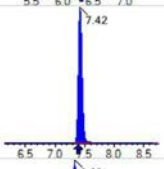 | |
| PFNA | ( 463.0 / 419.0 ) 933568<br>( 463.0 / 169.0 ) 241018 | ( 8.93 , 1.00 ) ( 0.00 , N/A , 0.1) | 2042.2<br>1479.3 | 0.2582<br>105.1<br>98.0 | 4.6650<br>[ 5.0000 ] | 93.3% | 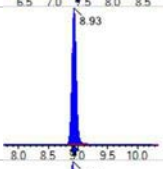 | 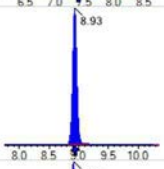 | |
| PFDA | ( 513.0 / 469.0 ) 1032916<br>( 513.0 / 169.0 ) 125063 | ( 9.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 4041.9<br>3968.1 | 0.1211<br>101.6<br>95.8 | 4.4210<br>[ 5.0000 ] | 88.4% | 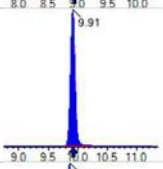 | 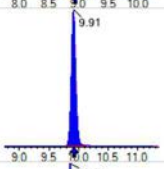 | |
| PFUnA | ( 563.0 / 519.0 ) 1221725<br>( 563.0 / 169.0 ) 180490 | ( 10.82 , 1.00 ) ( 0.00 , N/A , 0.1) | 1344.5<br>1002.3 | 0.1477<br>95.4<br>96.4 | 4.7880<br>[ 5.0000 ] | 95.8% | 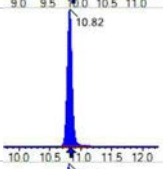 | 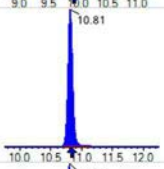 | |
| PFDoA | ( 613.0 / 569.0 ) 1403723<br>( 613.0 / 169.0 ) 214884 | ( 11.70 , 1.00 ) ( 0.00 , N/A , 0.0) | 1993.9<br>1027.2 | 0.1531<br>100.8<br>98.8 | 4.7730<br>[ 5.0000 ] | 95.5% | 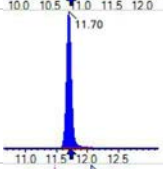 | 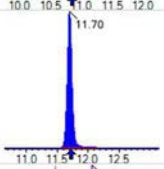 | |
| PFTrDA | ( 663.0 / 619.0 ) 1375242<br>( 663.0 / 169.0 ) 371512 | ( 12.46 , 1.06 ) ( N/A , -0.02 , 0.1) | 1510.9<br>1186.3 | 0.2701<br>100.3<br>101.7 | 4.8090<br>[ 5.0000 ] | 96.2% | 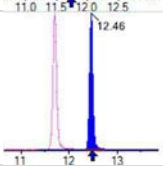 | 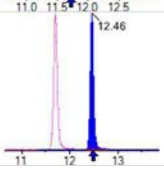 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (30)
Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 1246895<br>( 713.0 / 169.0 ) 322681 | ( 13.01 , 1.00 ) ( 0.00 , N/A , 0.0) | 1727.4<br>1169.1 | 0.2588<br>95.4<br>104.5 | 5.0810<br>[ 5.0000 ] | 101.6% | 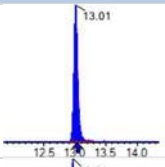 | 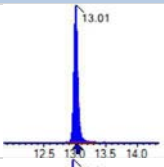 | |
| PFHxDA | ( 813.0 / 769.0 ) 768268<br>( 813.0 / 169.0 ) 231065 | ( 13.91 , 1.00 ) ( 0.00 , N/A , 0.1) | 1848.6<br>950.3 | 0.3008<br>115.0<br>112.5 | 4.4090<br>[ 5.0000 ] | 88.2% | 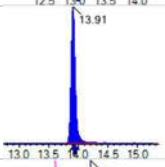 | 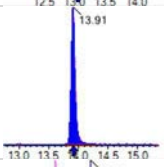 | |
| PFODA | ( 913.0 / 869.0 ) 463173<br>( 913.0 / 169.0 ) 144022 | ( 14.64 , 1.05 ) ( N/A , -0.02 , 0.1) | 1395.0<br>530.1 | 0.3109<br>99.2<br>99.8 | 4.1970<br>[ 5.0000 ] | 83.9% | 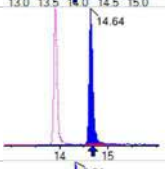 | 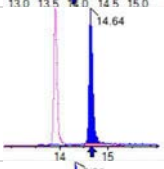 | |
| PFBS | ( 299.0 / 80.0 ) 1104968<br>( 299.0 / 99.0 ) 745999 | ( 5.31 , 1.00 ) ( 0.00 , N/A , 0.1) | 2246.1<br>1966.0 | 0.6751<br>91.1<br>90.3 | 4.1320<br>[ 4.4240 ] | 93.4% | 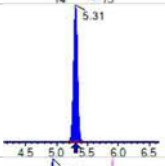 | 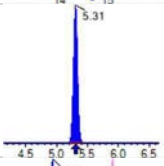 | |
| PFPeS | ( 349.0 / 80.0 ) 3463304<br>( 349.0 / 99.0 ) 1211308 | ( 6.60 , 0.81 ) ( N/A , 0.00 , 0.1) | 2896.0<br>2767.5 | 0.3498<br>102.4<br>100.2 | 4.2400<br>[ 4.6920 ] | 90.4% | 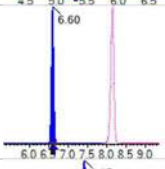 | 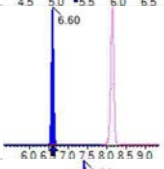 | |
| PFHxS | ( 399.0 / 80.0 ) 4250372<br>( 399.0 / 99.0 ) 1350546 | ( 8.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 3909.8<br>5342.6 | 0.3177<br>96.8<br>99.0 | 4.2690<br>[ 4.5550 ] | 93.7% | 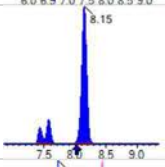 | 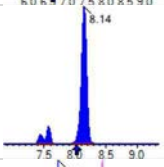 | MI5 DG 2024-04-01 |
| PFHpS | ( 449.0 / 80.0 ) 3539526<br>( 449.0 / 99.0 ) 921407 | ( 9.40 , 0.91 ) ( N/A , -0.01 , 0.0) | 4166.0<br>2660.1 | 0.2603<br>99.8<br>96.7 | 4.7660<br>[ 4.7570 ] | 100.2% | 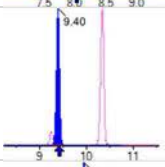 | 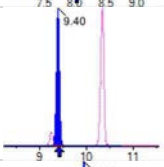 | |
| PFOS | ( 499.0 / 80.0 ) 3102590<br>( 499.0 / 99.0 ) 701857 | ( 10.34 , 1.00 ) ( 0.00 , N/A , 0.0) | 2739.5<br>6022.1 | 0.2262<br>97.9<br>100.6 | 4.2990<br>[ 4.6370 ] | 92.7% | 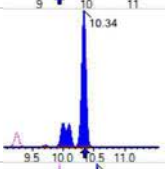 | 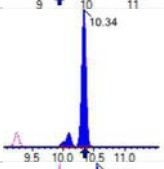 | |
| PFNS | ( 549.0 / 80.0 ) 2990873<br>( 549.0 / 99.0 ) 802467 | ( 11.21 , 1.08 ) ( N/A , -0.02 , 0.1) | 3064.7<br>2883.8 | 0.2683<br>100.1<br>94.4 | 4.5470<br>[ 4.7990 ] | 94.7% | 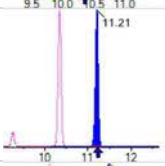 | 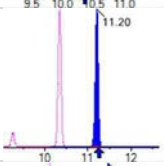 | |
| PFDS | ( 599.0 / 80.0 ) 4043141<br>( 599.0 / 99.0 ) 1024318 | ( 12.02 , 1.16 ) ( N/A , -0.02 , 0.0) | 3839.4<br>3157.7 | 0.2533<br>99.5<br>99.2 | 5.0280<br>[ 4.8160 ] | 104.4% | 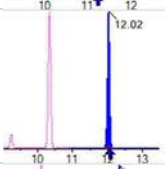 | 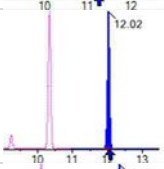 | |
| PFDoS | ( 699.0 / 80.0 ) 4014358<br>( 699.0 / 99.0 ) 932635 | ( 13.08 , 1.26 ) ( N/A , -0.02 , 0.0) | 4748.4<br>4147.7 | 0.2323<br>104.0<br>97.4 | 5.1600<br>[ 4.8480 ] | 106.4% | 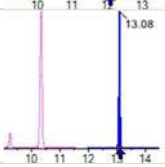 | 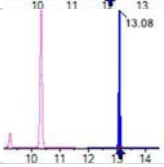 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (30)
Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 5749451<br>( 327.0 / 81.0 ) 5197156 | ( 4.77 , 1.00 ) ( 0.00 , N/A , 0.0) | 4321.1<br>3657.1 | 0.9039<br>105.9<br>96.1 | 17.9400<br>[ 18.6910 ] | 96.0% | 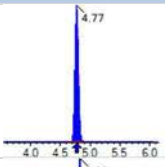 | 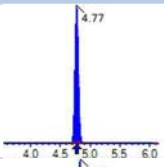 | |
| 6:2FTS | ( 427.0 / 407.0 ) 5278151<br>( 427.0 / 81.0 ) 7234743 | ( 6.88 , 1.00 ) ( -0.01 , N/A , -0.1) | 6375.1<br>5553.7 | 1.3707<br>106.3<br>107.2 | 17.5970<br>[ 18.9810 ] | 92.7% | 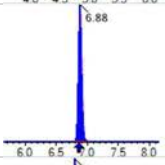 | 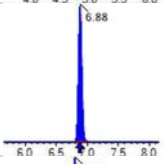 | |
| 8:2FTS | ( 527.0 / 507.0 ) 5119257<br>( 527.0 / 81.0 ) 5388143 | ( 9.24 , 1.00 ) ( -0.01 , N/A , -0.1) | 2500.1<br>2328.0 | 1.0525<br>95.4<br>100.2 | 17.5730<br>[ 19.1660 ] | 91.7% | 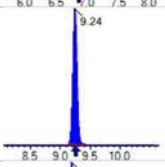 | 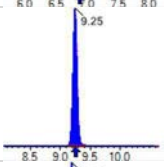 | |
| 10:2FTS | ( 627.0 / 607.0 ) 4674334<br>( 627.0 / 81.0 ) 6962915 | ( 10.95 , 1.00 ) ( 0.01 , N/A , 0.1) | 1662.4<br>1615.5 | 1.4896<br>103.6<br>103.1 | 19.5840<br>[ 19.3240 ] | 101.3% | 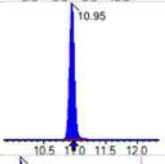 | 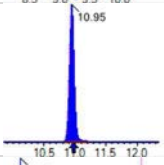 | |
| PFBSA | ( 297.9 / 78.0 ) 1765769<br>( 297.9 / 278.0 ) 2656 | ( 5.50 , 0.38 ) ( N/A , 0.00 , 0.0) | 1576.6<br>39.5 | 0.0015<br>116.2<br>105.6 | 3.7620<br>[ 5.0000 ] | 75.2% | 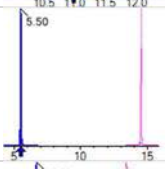 | 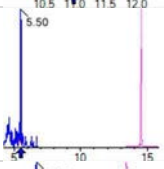 | |
| PFHxSA | ( 397.9 / 78.0 ) 4035275<br>( 397.9 / 378.0 ) 17331 | ( 11.24 , 0.76 ) ( N/A , 0.05 , -0.1) | 2212.7<br>414.7 | 0.0043<br>106.3<br>101.0 | 4.5170<br>[ 5.0000 ] | 90.3% | 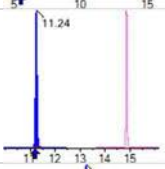 | 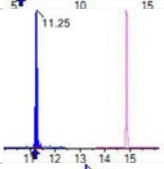 | |
| PFOSA | ( 498.0 / 78.0 ) 3130564<br>( 498.0 / 478.0 ) 40655 | ( 13.27 , 1.00 ) ( -0.01 , N/A , 0.0) | 3691.4<br>799.8 | 0.0130<br>88.3<br>91.7 | 4.7780<br>[ 5.0000 ] | 95.6% | 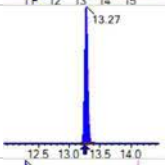 | 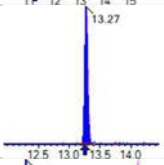 | |
| TFSI | ( 279.7 / 147.0 ) 4206906<br>( 279.7 / 211.0 ) 422637 | ( 6.97 , 0.52 ) ( N/A , 0.00 , 0.1) | 80.5<br>2918.1 | 0.1005<br>113.5<br>113.7 | 3.6750<br>[ 4.8970 ] | 75.1% | 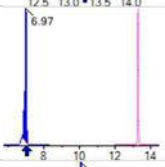 | 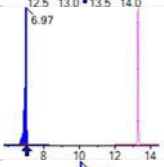 | |
| NMeFOSA | ( 512.0 / 219.0 ) 2571867<br>( 512.0 / 169.0 ) 1934714 | ( 14.54 , 1.00 ) ( 0.00 , N/A , 0.5) | 4341.2<br>2162.2 | 0.7523<br>98.1<br>100.8 | 18.7110<br>[ 20.0000 ] | 93.6% | 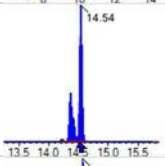 | 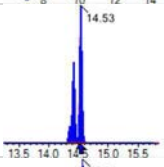 | |
| NEtFOSA | ( 526.0 / 219.0 ) 3070261<br>( 526.0 / 169.0 ) 3837123 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 1.9) | 5300.4<br>3959.8 | 1.2498<br>100.0<br>100.2 | 19.0950<br>[ 20.0000 ] | 95.5% | 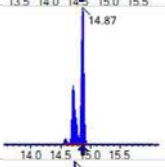 | 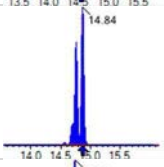 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 945423<br>( 570.0 / 483.0 ) 434435 | ( 10.29 , 1.00 ) ( 0.00 , N/A , 0.0) | 5175.2<br>1838.9 | 0.4595<br>99.0<br>102.5 | 4.5200<br>[ 5.0000 ] | 90.4% | 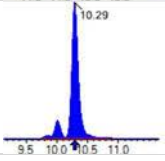 | 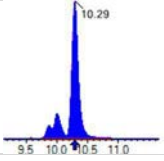 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCV3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (30)
Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 882171<br>( 584.0 / 526.0 ) 542980 | ( 10.90 , 1.00 ) ( 0.01 , N/A , 0.1) | 2063.9<br>893.2 | 0.6155<br>102.6<br>101.8 | 4.6900<br>[ 5.0000 ] | 93.8% | 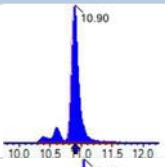 | 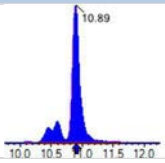 | |
| NMeFOSE | ( 616.0 / 59.0 ) 1048243 | ( 14.34 , 1.00 ) ( 0.02 , N/A , 0.0) | 2807.3 | N/A<br>0.0<br>0.0 | 18.2810<br>[ 20.0000 ] | 91.4% | 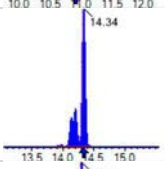 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 885511 | ( 14.71 , 1.00 ) ( 0.02 , N/A , 0.0) | 3587.9 | N/A<br>0.0<br>0.0 | 19.1430<br>[ 20.0000 ] | 95.7% | 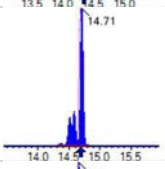 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 202621<br>( 285.0 / 185.0 ) 500925 | ( 5.56 , 1.00 ) ( 0.00 , N/A , 0.1) | 1725.0<br>1820.8 | 2.4722<br>88.1<br>87.6 | 4.4960<br>[ 5.0000 ] | 89.9% | 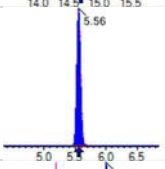 | 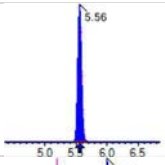 | |
| ADONA | ( 377.0 / 85.0 ) 2993493<br>( 377.0 / 251.0 ) 317500 | ( 6.73 , 1.21 ) ( N/A , 0.01 , 0.0) | 2905.9<br>1516.6 | 0.1061<br>101.1<br>103.6 | 5.0360<br>[ 4.7140 ] | 106.8% | 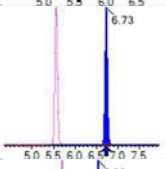 | 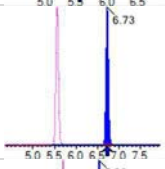 | |
| PFEESA | ( 315.0 / 135.0 ) 961537<br>( 315.0 / 83.0 ) 596913 | ( 5.90 , 1.15 ) ( N/A , -0.01 , 0.1) | 3656.6<br>1158.4 | 0.6208<br>96.7<br>98.0 | 8.0240<br>[ 8.9250 ] | 89.9% | 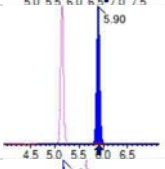 | 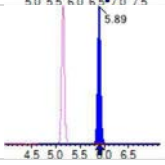 | |
| PFMPA | ( 229.0 / 85.0 ) 599510 | ( 3.80 , 0.90 ) ( N/A , -0.03 , 0.0) | 7759.0 | N/A<br>0.0<br>0.0 | 10.0610<br>[ 10.0000 ] | 100.6% | 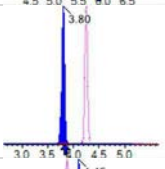 | | |
| PFMBA | ( 279.0 / 85.0 ) 1257845 | ( 4.45 , 1.05 ) ( N/A , -0.05 , 0.0) | 4819.7 | N/A<br>0.0<br>0.0 | 9.3700<br>[ 10.0000 ] | 93.7% | 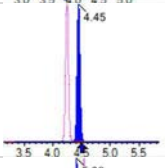 | | |
| NFDHA | ( 295.0 / 201.0 ) 541344<br>( 295.0 / 85.0 ) 505998 | ( 5.02 , 0.97 ) ( N/A , -0.01 , 0.1) | 3018.1<br>3135.2 | 0.9347<br>94.0<br>91.4 | 9.2570<br>[ 10.0000 ] | 92.6% | 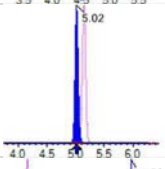 | 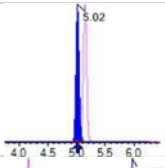 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 2994887<br>( 533.0 / 353.0 ) 961249 | ( 11.00 , 1.98 ) ( N/A , -0.02 , 0.0) | 3625.9<br>2898.5 | 0.3210<br>100.7<br>98.4 | 4.5350<br>[ 4.6660 ] | 97.2% | 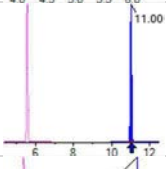 | 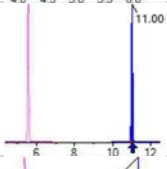 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 2564561<br>( 633.0 / 453.0 ) 848195 | ( 12.52 , 2.25 ) ( N/A , -0.02 , 0.1) | 5278.4<br>3451.2 | 0.3307<br>97.5<br>101.8 | 4.9970<br>[ 4.7160 ] | 106.0% | 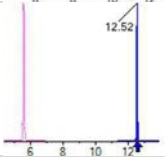 | 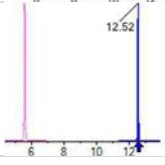 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 1530154<br>( 461.0 / 381.2 ) 616521 | ( 9.29 , 0.90 )<br>( N/A , -0.01 , -0.1) | 4937.1<br>4012.6 | 0.4029<br>104.3<br>102.7 | 3.9510<br>[ 4.6190 ] | 85.5% | 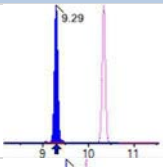 | 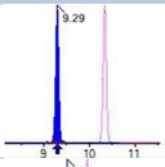 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 279050<br>( 241.0 / 117.0 ) 602915 | ( 3.86 , 0.91 )<br>( N/A , -0.03 , 0.0) | 5659.8<br>3630.3 | 2.1606<br>98.4<br>93.0 | 20.0560<br>[ 20.0000 ] | 100.3% | 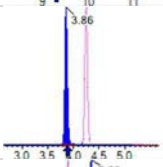 | 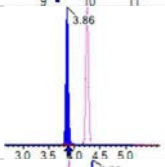 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 811378<br>( 341.0 / 217.0 ) 1242594 | ( 5.58 , 1.08 )<br>( N/A , 0.00 , 0.0) | 1846.7<br>1505.7 | 1.5315<br>100.0<br>105.3 | 18.1060<br>[ 20.0000 ] | 90.5% | 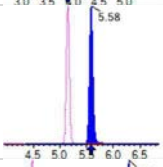 | 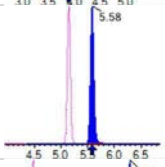 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 1829750<br>( 441.0 / 337.0 ) 1623484 | ( 9.28 , 1.80 )<br>( N/A , 0.04 , 0.0) | 22924.9<br>2676.5 | 0.8873<br>103.9<br>102.3 | 19.2190<br>[ 20.0000 ] | 96.1% | 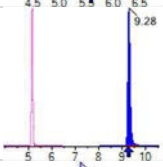 | 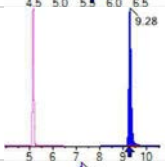 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 1199222<br>( 357.2 / 243.0 ) 134298 | ( 5.83 , 1.00 )<br>( -0.01 , N/A , 0.2) | 1674.7<br>1053.0 | 0.1120<br>104.4<br>101.7 | 5.2140<br>[ 5.0000 ] | 104.3% | 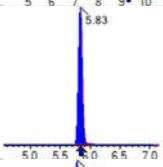 | 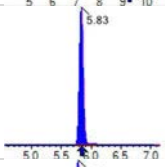 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 1113979<br>( 457.2 / 343.0 ) 47649 | ( 8.58 , 1.00 )<br>( -0.01 , N/A , -0.1) | 1388.0<br>446.2 | 0.0428<br>95.3<br>99.3 | 5.4370<br>[ 5.0000 ] | 108.7% | 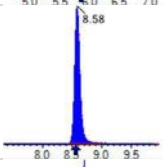 | 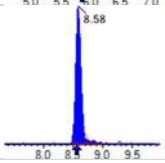 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 5.0000 ] | N/A% | 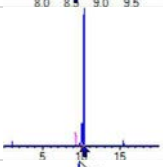 | | CV2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 224372 | ( 3.56 , N/A )<br>( N/A , -0.02 , N/A ) | 1079.6 | N/A | 0.7950<br>[ 1.0000 ] | 79.5%<br>{ 85.0% } | 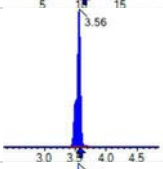 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 84487 | ( 5.15 , N/A )<br>( N/A , -0.01 , N/A ) | 16083.7 | N/A | 0.7160<br>[ 1.0000 ] | 71.6%<br>{ 85.3% } | 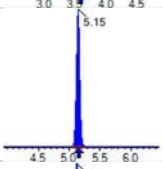 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 308283 | ( 7.43 , N/A )<br>( N/A , 0.04 , N/A ) | 5933.6 | N/A | 0.7940<br>[ 1.0000 ] | 79.4%<br>{ 87.6% } | 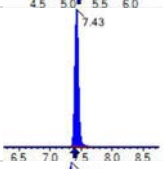 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 207010 | ( 8.93 , N/A )<br>( N/A , 0.00 , N/A ) | 1530.5 | N/A | 0.7090<br>[ 1.0000 ] | 70.9%<br>{ 86.3% } | 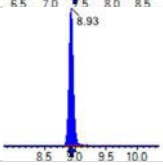 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 198736 | ( 9.92 , N/A ) ( N/A , -0.01 , N/A ) | 21545.5 | N/A | 0.6930 [ 1.0000 ] | 69.3% { 81.0% } | 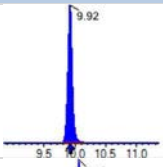 | | IS1, |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 817541 | ( 8.15 , N/A ) ( N/A , 0.13 , N/A ) | 6541.5 | N/A | 0.8320 [ 1.0000 ] | 83.2% { 92.1% } | 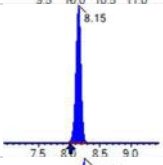 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 601757 | ( 10.34 , N/A ) ( N/A , -0.02 , N/A ) | 3349.5 | N/A | 0.7670 [ 1.0000 ] | 76.7% { 87.3% } | 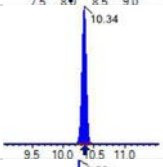 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 1855168 | ( 3.56 , N/A ) ( N/A , -0.02 , N/A ) | 64121.2 | N/A | 7.6490 [ 8.0000 ] | 95.6% { 84.4% } | 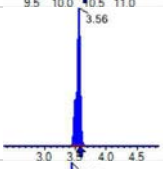 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 649336 | ( 4.25 , N/A ) ( N/A , -0.04 , N/A ) | 4722.9 | N/A | 4.1980 [ 4.0000 ] | 104.9% { 85.2% } | 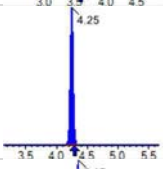 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 355006 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 1574214.4 | N/A | 1.9210 [ 2.0000 ] | 96.0% { 81.5% } | 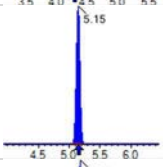 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 442890 | ( 6.28 , N/A ) ( N/A , 0.00 , N/A ) | 11696.1 | N/A | 2.1570 [ 2.0000 ] | 107.9% { 86.5% } | 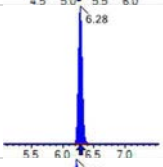 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 662464 | ( 7.42 , N/A ) ( N/A , 0.04 , N/A ) | 4706.1 | N/A | 2.0280 [ 2.0000 ] | 101.4% { 93.2% } | 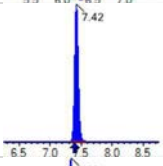 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 199147 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 3520.8 | N/A | 0.9740 [ 1.0000 ] | 97.4% { 84.7% } | 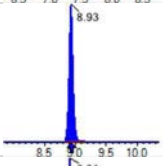 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 233969 | ( 9.91 , N/A ) ( N/A , -0.01 , N/A ) | 1348.1 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 83.5% } | 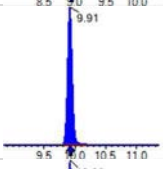 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 280996 | ( 10.82 , N/A ) ( N/A , -0.02 , N/A ) | 896.4 | N/A | 1.0320 [ 1.0000 ] | 103.2% { 87.1% } | 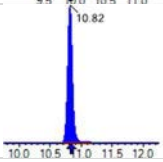 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 293091 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1237.3 | N/A | 1.0490 [ 1.0000 ] | 104.9% { 86.3% } | 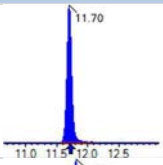 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 262826 | ( 13.01 , N/A ) ( N/A , -0.02 , N/A ) | 1221.9 | N/A | 1.0620 [ 1.0000 ] | 106.2% { 86.5% } | 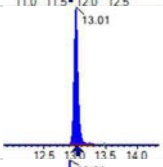 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 371997 | ( 13.91 , N/A ) ( N/A , -0.02 , N/A ) | 2305.1 | N/A | 1.7970 [ 2.0000 ] | 89.9% { 87.3% } | 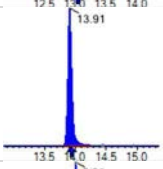 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1087560 | ( 5.31 , N/A ) ( N/A , -0.01 , N/A ) | 1214.4 | N/A | 1.6500 [ 2.0000 ] | 82.5% { 77.6% } | 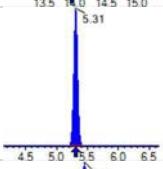 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1136749 | ( 8.15 , N/A ) ( N/A , 0.13 , N/A ) | 6888.1 | N/A | 1.9270 [ 2.0000 ] | 96.4% { 91.5% } | 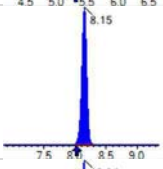 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1243390 | ( 10.34 , N/A ) ( N/A , -0.02 , N/A ) | 1199.5 | N/A | 1.9420 [ 2.0000 ] | 97.1% { 85.6% } | 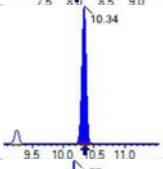 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 485552 | ( 4.77 , N/A ) ( N/A , -0.01 , N/A ) | 68.6 | N/A | 3.3490 [ 4.0000 ] | 83.7% { 77.9% } | 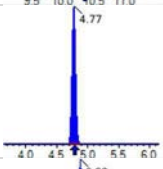 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1413482 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 5860.4 | N/A | 3.9690 [ 4.0000 ] | 99.2% { 86.4% } | 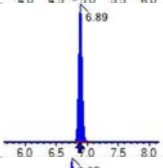 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1184603 | ( 9.25 , N/A ) ( N/A , 0.00 , N/A ) | 2377.6 | N/A | 3.8020 [ 4.0000 ] | 95.0% { 89.1% } | 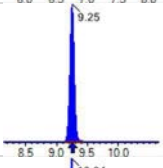 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 2404521 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1813.1 | N/A | 7.1330 [ 8.0000 ] | 89.2% { 88.9% } | 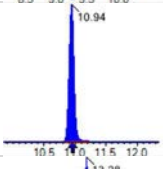 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1354298 | ( 13.28 , N/A ) ( N/A , 0.02 , N/A ) | 3783.1 | N/A | 1.9930 [ 2.0000 ] | 99.6% { 90.1% } | 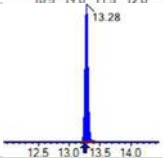 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: SD01122-CCV3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (30)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 21:13

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 309295 | ( 14.54 , N/A ) ( N/A , 0.02 , N/A ) | 2010.9 | N/A | 2.0240 [ 2.0000 ] | 101.2% { 90.9% } | 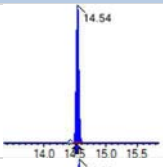  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 283891 | ( 14.86 , N/A ) ( N/A , 0.02 , N/A ) | 2716.7 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 87.7% } | 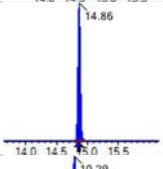  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 906951 | ( 10.29 , N/A ) ( N/A , -0.01 , N/A ) | 2964.7 | N/A | 4.0800 [ 4.0000 ] | 102.0% { 88.5% } | 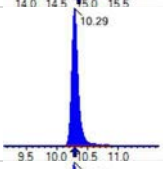  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 775627 | ( 10.88 , N/A ) ( N/A , -0.01 , N/A ) | 2233.7 | N/A | 3.8660 [ 4.0000 ] | 96.7% { 84.9% } | 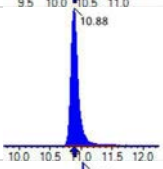  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1059338 | ( 14.32 , N/A ) ( N/A , 0.02 , N/A ) | 2656.9 | N/A | 18.5570 [ 20.0000 ] | 92.8% { 85.7% } | 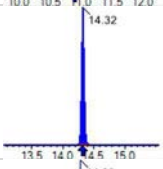  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 971202 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 4216.0 | N/A | 18.1660 [ 20.0000 ] | 90.8% { 89.5% } | 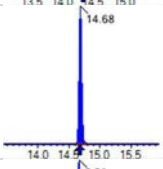  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 614057 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 2629.1 | N/A | 7.6700 [ 8.0000 ] | 95.9% { 78.5% } | 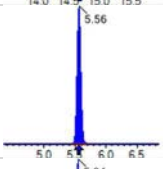  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 437409 | ( 5.84 , N/A ) ( N/A , 0.00 , N/A ) | 2458.4 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 86.4% } | 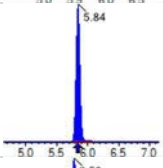  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 495731 | ( 8.59 , N/A ) ( N/A , 0.02 , N/A ) | 1060.9 | N/A | 2.0320 [ 2.0000 ] | 101.6% { 84.7% } | 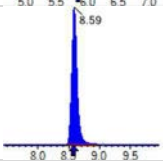  | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01122L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB10 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .04940 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01122L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB10 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.470 | ng/mL0 | | |
| | 13C5-PFPEA | 4.50 | ng/mL0 | | |
| | 13C5-PFHXA | 2.0 | ng/mL0 | | |
| | 13C4-PFHPA | 2.010 | ng/mL0 | | |
| | 13C8-PFOA | 2.230 | ng/mL0 | | |
| | 13C9-PFNA | 1.090 | ng/mL0 | | |
| | 13C6-PFDA | 1.110 | ng/mL0 | | |
| | 13C7-PFUnA | 1.090 | ng/mL0 | | |
| | 13C2-PFDOA | 1.080 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.060 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.950 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.190 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.180 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.110 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.870 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 5.280 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 5.310 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.50 | ng/mL0 | | |
| | 13C8-PFOSA | 2.090 | ng/mL0 | | |
| | D3-NMEFOSA | 2.070 | ng/mL0 | | |
| | D5-NETFOSA | 2.10 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.670 | ng/mL0 | | |
| | D5-NETFOSAA | 4.730 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01122L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB10 | D7-NMEFOSE0 | 19.40 | ng/mL0 | | |
| | D9-NETFOSE0 | 18.0 | ng/mL0 | | |
| | 13C3-HFPO-DA | 8.580 | ng/mL0 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 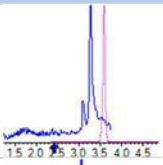 | 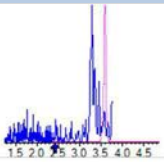 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 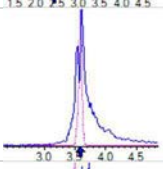 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 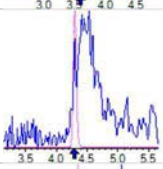 | 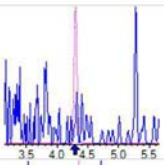 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 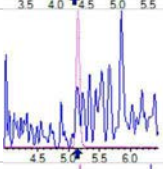 | 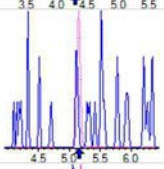 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 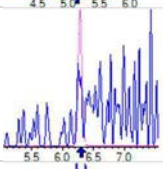 | 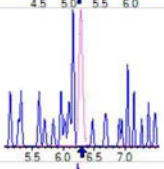 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 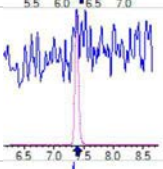 | 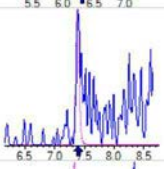 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 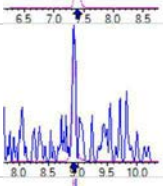 | 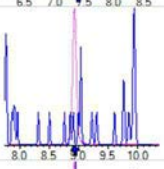 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 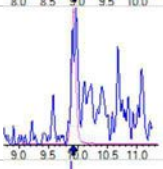 | 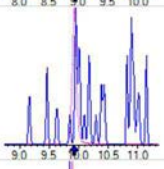 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 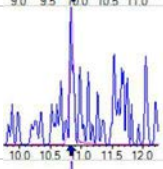 | 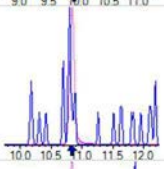 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 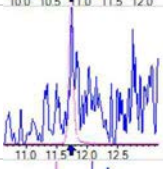 | 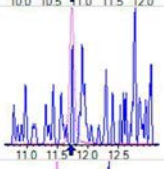 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 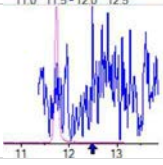 | 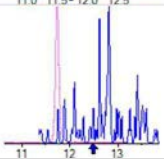 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 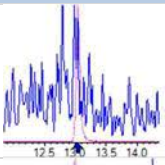 | 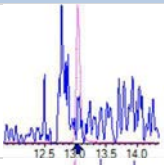 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 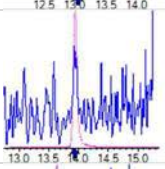 | 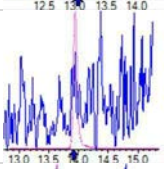 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 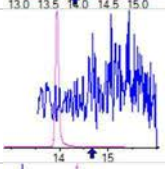 | 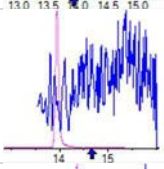 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 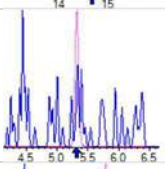 | 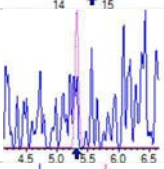 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 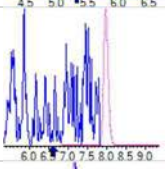 | 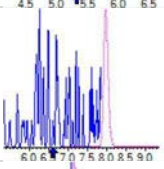 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 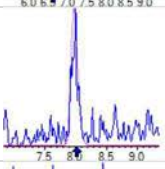 | 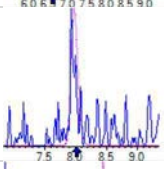 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 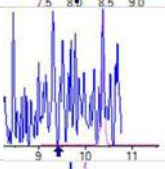 | 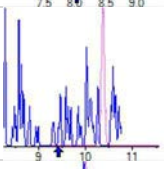 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 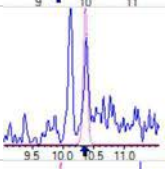 | 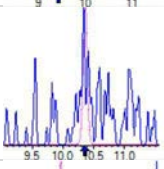 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 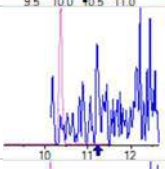 | 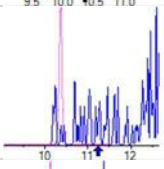 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 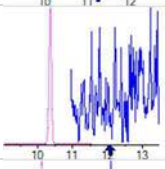 | 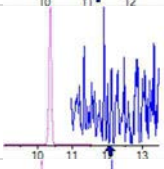 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 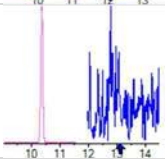 | 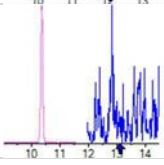 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 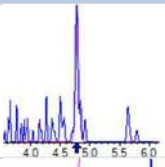 | 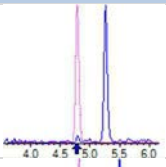 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 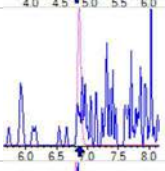 | 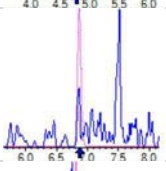 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 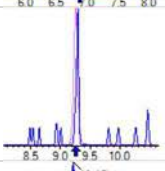 | 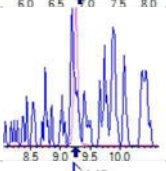 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>19903<br>( 627.0 / 81.0 )<br>30222 | ( 10.97 , 1.00 )<br>( 0.00 , N/A , -0.2) | 353.7<br>138.5 | 1.5185<br>105.6<br>105.1 | 0.0490 | N/A | 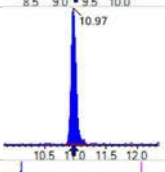 | 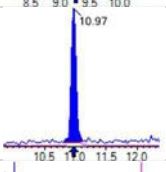 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 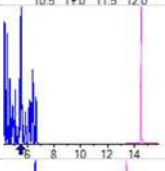 | 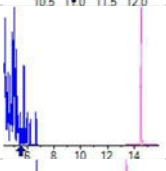 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 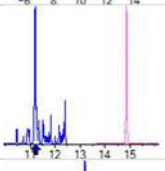 | 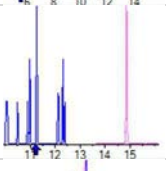 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 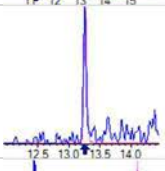 | 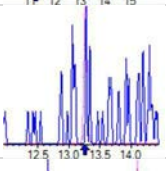 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 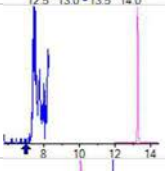 | 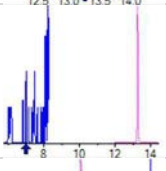 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 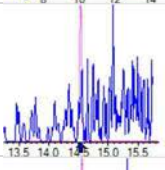 | 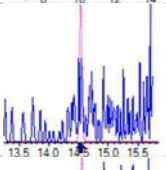 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 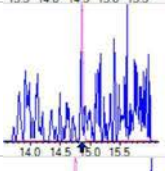 | 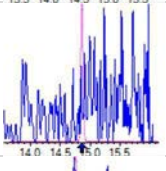 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 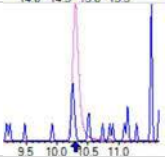 | 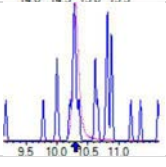 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 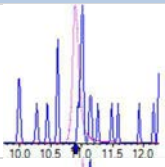 | 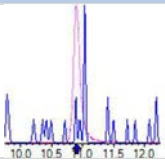 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 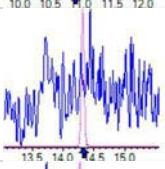 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 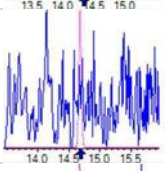 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 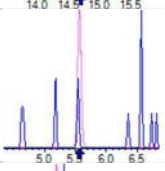 | 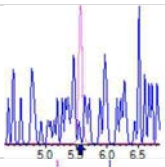 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 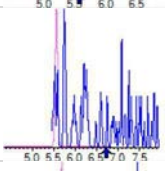 | 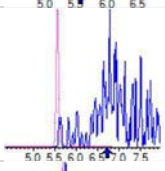 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 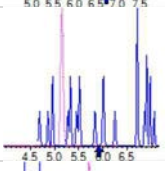 | 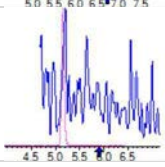 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 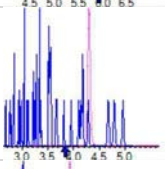 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 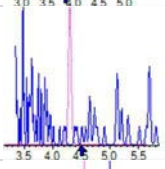 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 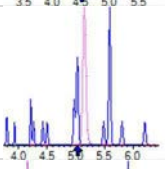 | 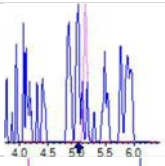 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 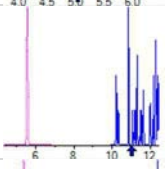 | 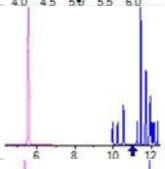 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 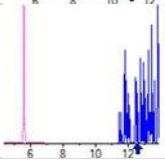 | 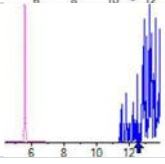 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 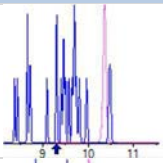 | 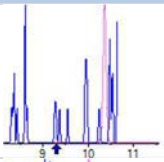 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 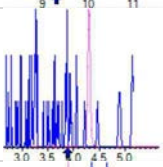 | 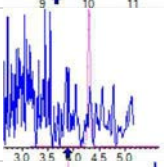 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 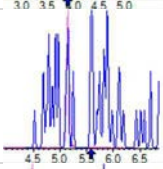 | 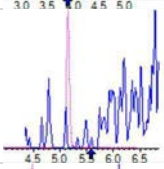 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 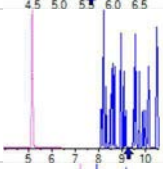 | 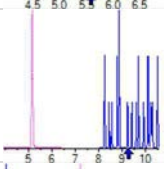 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>N/A<br>( 357.2 / 243.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 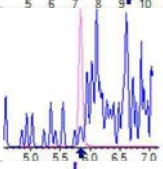 | 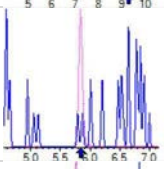 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 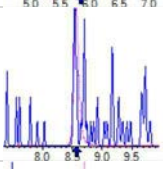 | 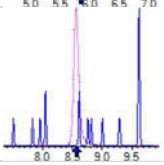 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 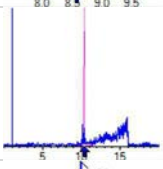 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>301206 | ( 3.59 , N/A )<br>( N/A , 0.01 , N/A ) | 1810.6 | N/A | 1.0670<br>[ 1.0000 ] | 106.7%<br>{ 114.1% } | 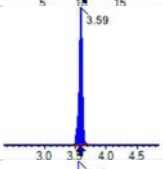 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>118780 | ( 5.15 , N/A )<br>( N/A , 0.00 , N/A ) | 4834.1 | N/A | 1.0060<br>[ 1.0000 ] | 100.6%<br>{ 120.0% } | 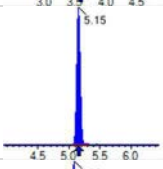 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>367810 | ( 7.38 , N/A )<br>( N/A , -0.01 , N/A ) | 6040.9 | N/A | 0.9480<br>[ 1.0000 ] | 94.8%<br>{ 104.5% } | 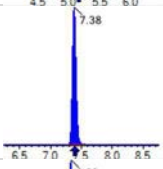 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>269885 | ( 8.93 , N/A )<br>( N/A , 0.00 , N/A ) | 1647.2 | N/A | 0.9240<br>[ 1.0000 ] | 92.4%<br>{ 112.6% } | 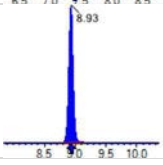 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 267061 | ( 9.93 , N/A ) ( N/A , 0.01 , N/A ) | 7553648.0 | N/A | 0.9320 [ 1.0000 ] | 93.2% { 108.9% } | 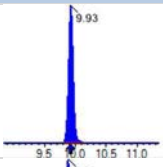 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 938359 | ( 7.98 , N/A ) ( N/A , -0.04 , N/A ) | 6799.8 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 105.7% } | 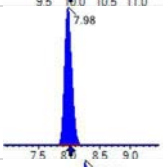 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 756983 | ( 10.36 , N/A ) ( N/A , 0.01 , N/A ) | 4854.3 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 109.8% } | 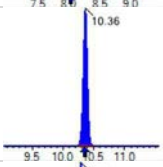 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2758318 | ( 3.59 , N/A ) ( N/A , 0.01 , N/A ) | 189410.3 | N/A | 8.4720 [ 8.0000 ] | 105.9% { 125.5% } | 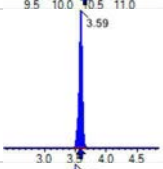 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 978471 | ( 4.30 , N/A ) ( N/A , 0.01 , N/A ) | 7585.5 | N/A | 4.4990 [ 4.0000 ] | 112.5% { 128.4% } | 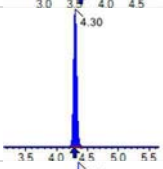 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 520485 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 1877755.3 | N/A | 2.0030 [ 2.0000 ] | 100.1% { 119.5% } | 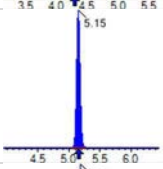 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 578900 | ( 6.28 , N/A ) ( N/A , 0.00 , N/A ) | 5579.8 | N/A | 2.0060 [ 2.0000 ] | 100.3% { 113.0% } | 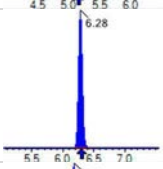 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 870797 | ( 7.38 , N/A ) ( N/A , -0.01 , N/A ) | 6339.9 | N/A | 2.2340 [ 2.0000 ] | 111.7% { 122.5% } | 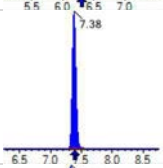 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 291230 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 2592.6 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 123.9% } | 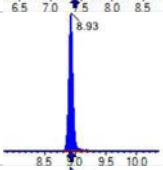 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 342864 | ( 9.93 , N/A ) ( N/A , 0.01 , N/A ) | 1309.6 | N/A | 1.1110 [ 1.0000 ] | 111.1% { 122.3% } | 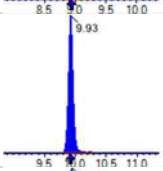 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 400031 | ( 10.84 , N/A ) ( N/A , 0.01 , N/A ) | 1071.9 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 124.0% } | 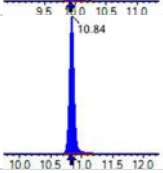 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 405782 | ( 11.74 , N/A ) ( N/A , 0.01 , N/A ) | 1697.8 | N/A | 1.0810 [ 1.0000 ] | 108.1% { 119.4% } | 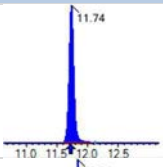 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 351516 | ( 13.04 , N/A ) ( N/A , 0.01 , N/A ) | 1390.4 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 115.7% } | 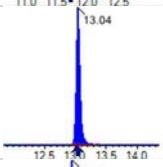 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 541631 | ( 13.95 , N/A ) ( N/A , 0.02 , N/A ) | 2515.4 | N/A | 1.9470 [ 2.0000 ] | 97.4% { 127.1% } | 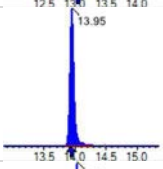 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1656350 | ( 5.32 , N/A ) ( N/A , 0.00 , N/A ) | 1759.6 | N/A | 2.1900 [ 2.0000 ] | 109.5% { 118.3% } | 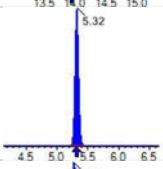 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1475491 | ( 7.98 , N/A ) ( N/A , -0.04 , N/A ) | 5261.2 | N/A | 2.1800 [ 2.0000 ] | 109.0% { 118.8% } | 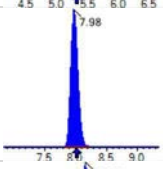 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1698233 | ( 10.36 , N/A ) ( N/A , 0.01 , N/A ) | 3247.9 | N/A | 2.1090 [ 2.0000 ] | 105.4% { 116.9% } | 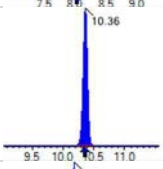 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 809790 | ( 4.78 , N/A ) ( N/A , 0.00 , N/A ) | 82.6 | N/A | 4.8670 [ 4.0000 ] | 121.7% { 129.8% } | 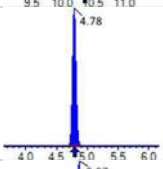 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2156305 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 6514.9 | N/A | 5.2750 [ 4.0000 ] | 131.9% { 131.7% } | 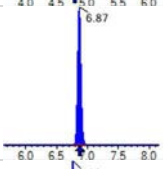 | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1899774 | ( 9.26 , N/A ) ( N/A , 0.01 , N/A ) | 2749.3 | N/A | 5.3120 [ 4.0000 ] | 132.8% { 142.9% } | 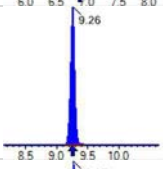 | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 4057135 | ( 10.97 , N/A ) ( N/A , 0.01 , N/A ) | 1947.1 | N/A | 10.4870 [ 8.0000 ] | 131.1% { 149.9% } | 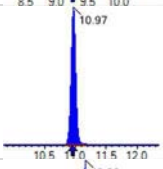 | | S2, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1787170 | ( 13.26 , N/A ) ( N/A , 0.01 , N/A ) | 3983.0 | N/A | 2.0900 [ 2.0000 ] | 104.5% { 118.9% } | 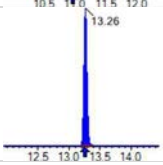 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (1)
Acquired: 2024/03/29 - 11:18

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CVmin, ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration True ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 398613 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 2711.3 | N/A | 2.0740 [ 2.0000 ] | 103.7% { 117.1% } | 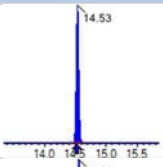  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 369733 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 3005.0 | N/A | 2.1040 [ 2.0000 ] | 105.2% { 114.2% } | 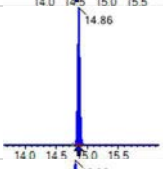  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1307139 | ( 10.30 , N/A ) ( N/A , 0.01 , N/A ) | 3320.9 | N/A | 4.6740 [ 4.0000 ] | 116.9% { 127.5% } | 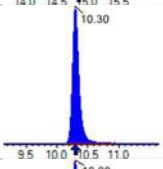  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1192652 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 1915.9 | N/A | 4.7260 [ 4.0000 ] | 118.1% { 130.6% } | 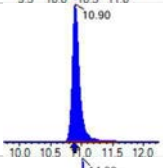  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1394127 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 2419.1 | N/A | 19.4130 [ 20.0000 ] | 97.1% { 112.8% } | 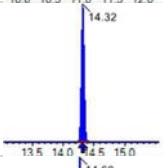  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1208832 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 3871.4 | N/A | 17.9740 [ 20.0000 ] | 89.9% { 111.4% } | 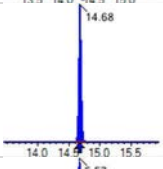  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 966155 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 2830.4 | N/A | 8.5830 [ 8.0000 ] | 107.3% { 123.5% } | 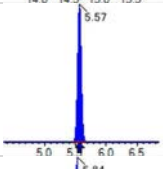  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 688791 | ( 5.84 , N/A ) ( N/A , -0.01 , N/A ) | 2537.2 | N/A | 2.3670 [ 2.0000 ] | 118.3% { 136.0% } | 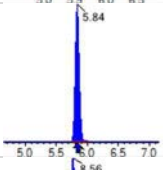  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 749646 | ( 8.56 , N/A ) ( N/A , 0.00 , N/A ) | 1085.9 | N/A | 2.2860 [ 2.0000 ] | 114.3% { 128.1% } | 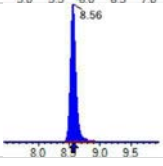  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01122L
Calibration:N 2413019L

SDG:N 24C0142L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB20 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05920 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01122L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB20 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.860 | ng/mL0 | | |
| | 13C5-PFPEA | 4.610 | ng/mL0 | | |
| | 13C5-PFHXA | 2.20 | ng/mL0 | | |
| | 13C4-PFHPA | 2.320 | ng/mL0 | | |
| | 13C8-PFOA | 2.190 | ng/mL0 | | |
| | 13C9-PFNA | 1.040 | ng/mL0 | | |
| | 13C6-PFDA | 1.010 | ng/mL0 | | |
| | 13C7-PFUnA | 1.010 | ng/mL0 | | |
| | 13C2-PFDOA | .9520 | ng/mL0 | | |
| | 13C2-PFTEDA | .990 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.830 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.040 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.090 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.150 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.10 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 5.180 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.890 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 9.310 | ng/mL0 | | |
| | 13C8-PFOSA | 2.140 | ng/mL0 | | |
| | D3-NMEFOSA | 2.130 | ng/mL0 | | |
| | D5-NETFOSA | 2.140 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.710 | ng/mL0 | | |
| | D5-NETFOSAA | 4.80 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0142L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01122L | Instrument: | Saphira |
| Calibration: | 2413019L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01122-CCB20 | D7-NMEFOSE0 | 21.80 | ng/mL | 0 | |
| | D9-NETFOSE0 | 19.40 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.680 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (6)
Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 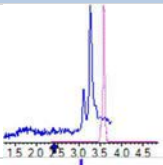 | 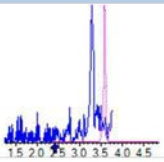 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 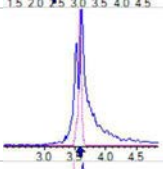 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 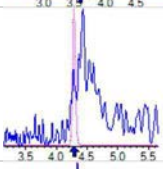 | 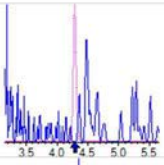 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 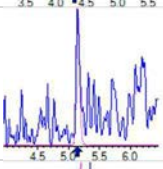 | 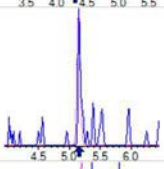 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 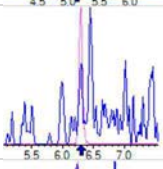 | 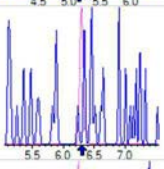 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 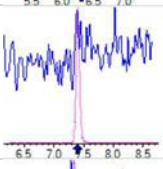 | 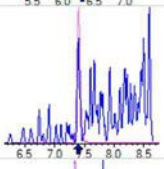 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 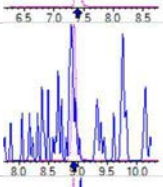 | 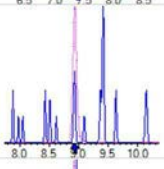 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 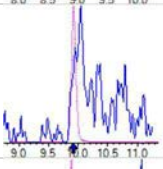 | 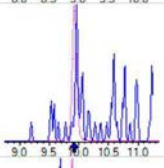 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 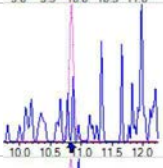 | 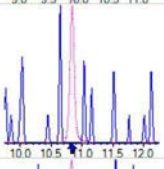 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 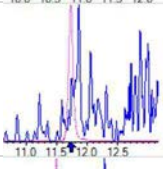 | 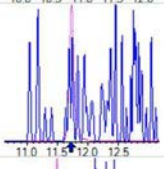 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 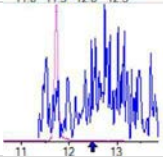 | 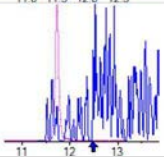 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (6)
Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 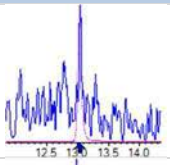 | 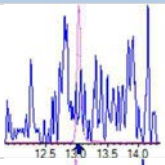 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 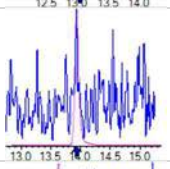 | 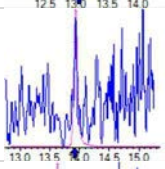 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 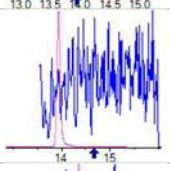 | 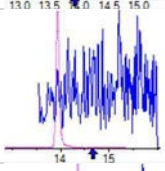 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 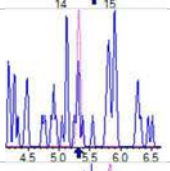 | 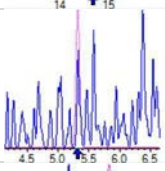 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 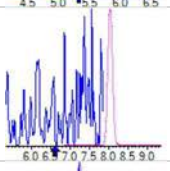 | 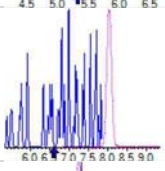 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 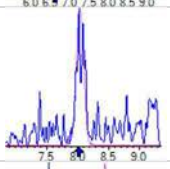 | 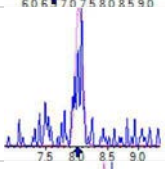 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 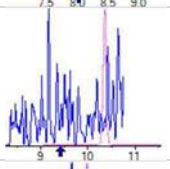 | 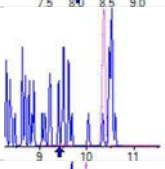 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 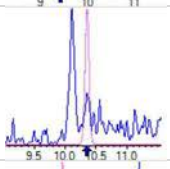 | 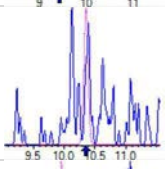 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 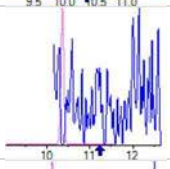 | 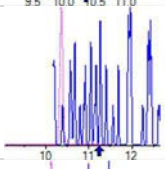 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 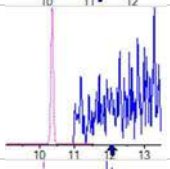 | 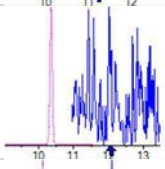 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 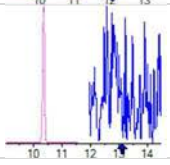 | 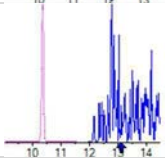 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (6)
Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 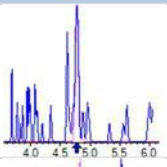 | 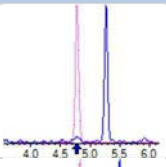 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 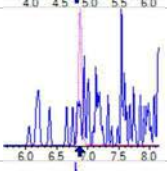 | 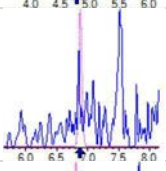 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 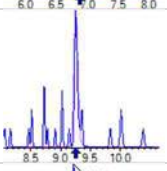 | 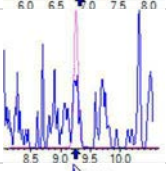 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>20996<br>( 627.0 / 81.0 )<br>29888 | ( 10.97 , 1.00 )<br>( 0.01 , N/A , 0.1) | 334.6<br>126.9 | 1.4235<br>99.0<br>98.5 | 0.0590 | N/A | 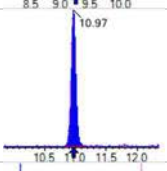 | 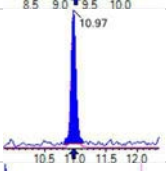 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 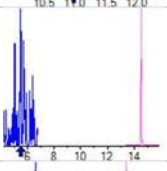 | 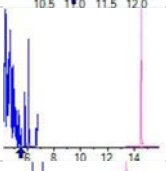 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 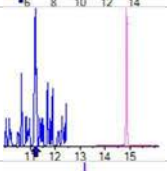 | 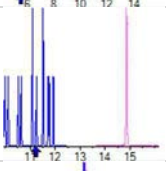 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 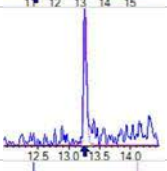 | 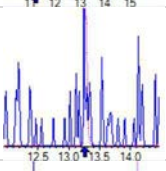 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 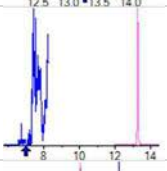 | 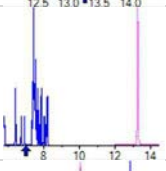 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 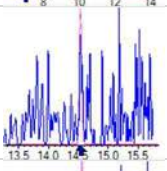 | 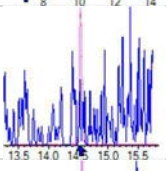 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 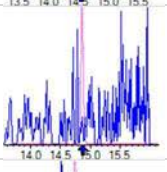 | 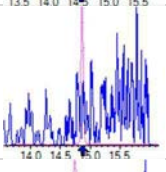 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 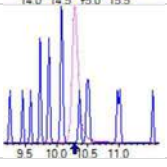 | 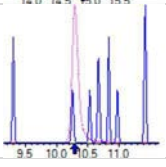 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (6)
Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 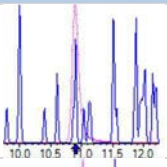 | 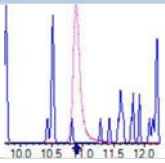 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 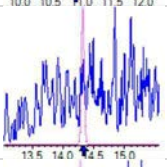 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 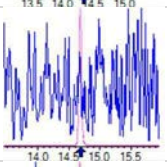 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 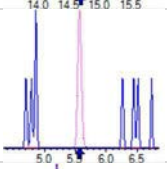 | 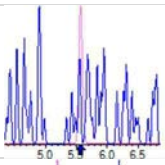 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 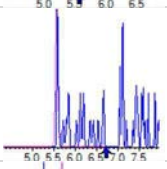 | 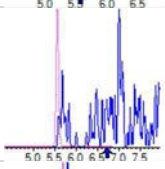 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 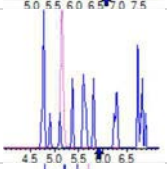 | 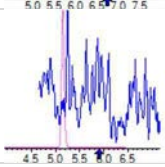 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 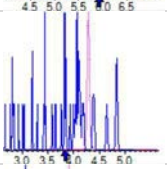 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 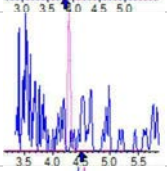 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 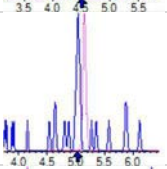 | 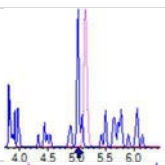 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 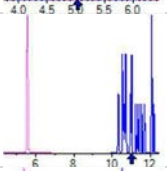 | 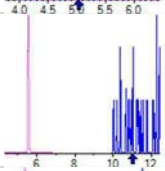 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 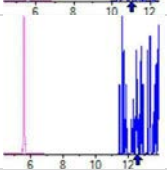 | 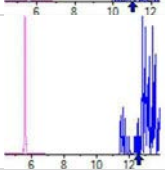 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (6)
Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 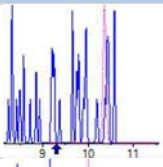 | 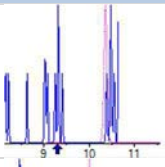 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 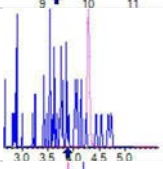 | 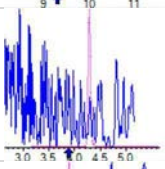 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 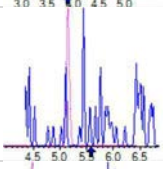 | 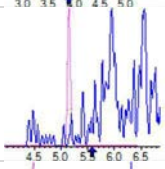 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 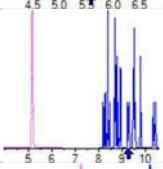 | 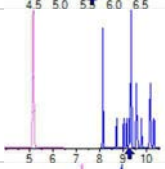 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 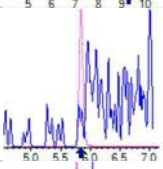 | 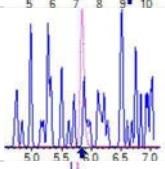 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 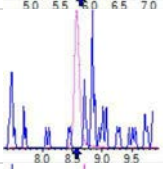 | 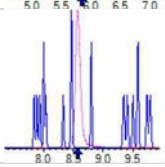 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 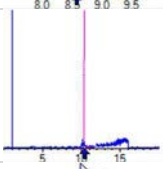 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 283899 | ( 3.59 , N/A )<br>( N/A , 0.00 , N/A ) | 1453.6 | N/A | 1.0060<br>[ 1.0000 ] | 100.6%<br>{ 107.6% } | 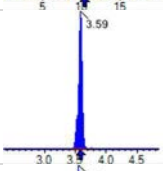 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 105217 | ( 5.15 , N/A )<br>( N/A , 0.00 , N/A ) | 915580.8 | N/A | 0.8910<br>[ 1.0000 ] | 89.1%<br>{ 106.3% } | 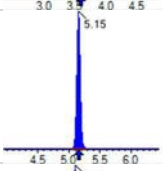 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 355932 | ( 7.40 , N/A )<br>( N/A , 0.01 , N/A ) | 8946.2 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 101.1% } | 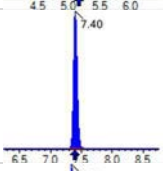 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 258467 | ( 8.94 , N/A )<br>( N/A , 0.01 , N/A ) | 1662.4 | N/A | 0.8850<br>[ 1.0000 ] | 88.5%<br>{ 107.8% } | 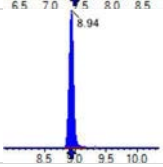 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCB2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 276735 | ( 9.93 , N/A ) ( N/A , 0.01 , N/A ) | 149890.7 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 112.8% } | 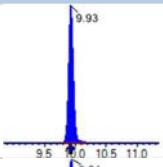 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 930182 | ( 8.04 , N/A ) ( N/A , 0.02 , N/A ) | 5781.7 | N/A | 0.9470 [ 1.0000 ] | 94.7% { 104.8% } | 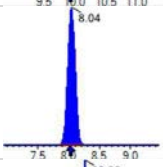 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 710941 | ( 10.36 , N/A ) ( N/A , 0.00 , N/A ) | 4141.4 | N/A | 0.9060 [ 1.0000 ] | 90.6% { 103.1% } | 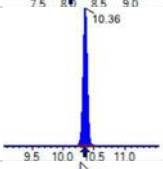 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2719546 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 75021.9 | N/A | 8.8620 [ 8.0000 ] | 110.8% { 123.8% } | 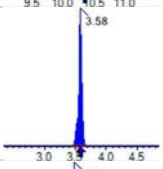 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 887902 | ( 4.28 , N/A ) ( N/A , 0.00 , N/A ) | 4696.9 | N/A | 4.6090 [ 4.0000 ] | 115.2% { 116.5% } | 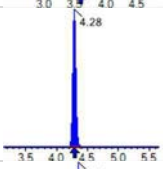 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 506595 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 7339.3 | N/A | 2.2010 [ 2.0000 ] | 110.0% { 116.3% } | 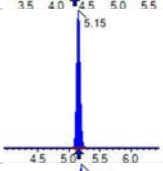 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 593286 | ( 6.29 , N/A ) ( N/A , 0.01 , N/A ) | 7868.9 | N/A | 2.3210 [ 2.0000 ] | 116.0% { 115.8% } | 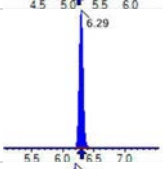 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 827497 | ( 7.40 , N/A ) ( N/A , 0.01 , N/A ) | 6130.0 | N/A | 2.1940 [ 2.0000 ] | 109.7% { 116.5% } | 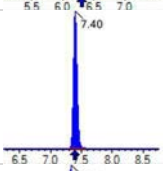 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 266646 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 4270.2 | N/A | 1.0450 [ 1.0000 ] | 104.5% { 113.5% } | 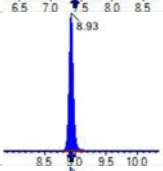 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 324411 | ( 9.92 , N/A ) ( N/A , 0.01 , N/A ) | 1707.5 | N/A | 1.0150 [ 1.0000 ] | 101.5% { 115.7% } | 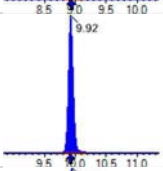 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 382079 | ( 10.84 , N/A ) ( N/A , 0.01 , N/A ) | 1151.0 | N/A | 1.0070 [ 1.0000 ] | 100.7% { 118.5% } | 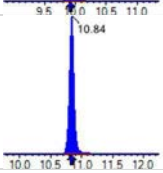 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCB2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 370245 | ( 11.73 , N/A ) ( N/A , 0.01 , N/A ) | 1507.4 | N/A | 0.9520 [ 1.0000 ] | 95.2% { 109.0% } | 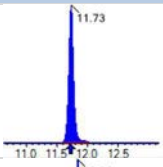 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 340897 | ( 13.04 , N/A ) ( N/A , 0.01 , N/A ) | 1228.0 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 112.2% } | 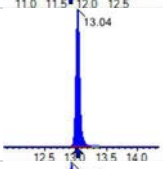 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 526883 | ( 13.94 , N/A ) ( N/A , 0.01 , N/A ) | 2338.5 | N/A | 1.8280 [ 2.0000 ] | 91.4% { 123.6% } | 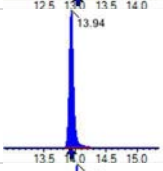 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1530706 | ( 5.32 , N/A ) ( N/A , 0.00 , N/A ) | 2404.5 | N/A | 2.0420 [ 2.0000 ] | 102.1% { 109.3% } | 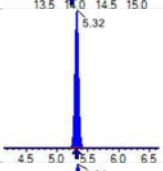 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1401270 | ( 8.04 , N/A ) ( N/A , 0.02 , N/A ) | 6749.9 | N/A | 2.0880 [ 2.0000 ] | 104.4% { 112.8% } | 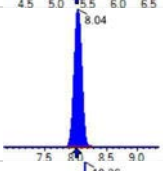 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1624700 | ( 10.36 , N/A ) ( N/A , 0.01 , N/A ) | 2486.8 | N/A | 2.1480 [ 2.0000 ] | 107.4% { 111.8% } | 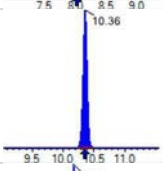 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 840517 | ( 4.78 , N/A ) ( N/A , 0.00 , N/A ) | 70.3 | N/A | 5.0960 [ 4.0000 ] | 127.4% { 134.8% } | 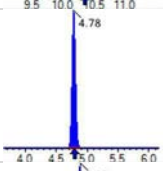 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2097719 | ( 6.88 , N/A ) ( N/A , 0.01 , N/A ) | 7241.5 | N/A | 5.1770 [ 4.0000 ] | 129.4% { 128.2% } | 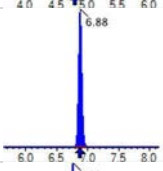 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1733705 | ( 9.26 , N/A ) ( N/A , 0.01 , N/A ) | 2245.0 | N/A | 4.8900 [ 4.0000 ] | 122.3% { 130.4% } | 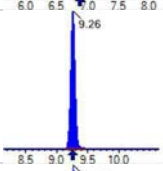 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3571855 | ( 10.97 , N/A ) ( N/A , 0.01 , N/A ) | 1801.9 | N/A | 9.3130 [ 8.0000 ] | 116.4% { 132.0% } | 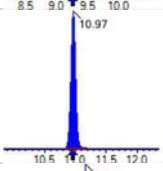 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1719740 | ( 13.27 , N/A ) ( N/A , 0.02 , N/A ) | 3407.2 | N/A | 2.1420 [ 2.0000 ] | 107.1% { 114.4% } | 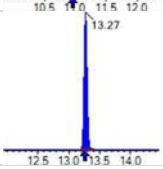 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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Chemist: DAG | Sample I.D.: SD01122-CCB2 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (6)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 13:00

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 385374 | ( 14.54 , N/A ) ( N/A , 0.01 , N/A ) | 2218.4 | N/A | 2.1350 [ 2.0000 ] | 106.7% { 113.3% } | 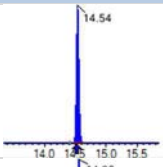  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 352772 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 2524.0 | N/A | 2.1380 [ 2.0000 ] | 106.9% { 109.0% } | 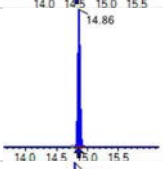  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1237908 | ( 10.30 , N/A ) ( N/A , 0.00 , N/A ) | 2524.2 | N/A | 4.7140 [ 4.0000 ] | 117.8% { 120.7% } | 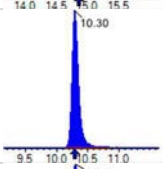  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1136655 | ( 10.90 , N/A ) ( N/A , 0.00 , N/A ) | 2055.0 | N/A | 4.7960 [ 4.0000 ] | 119.9% { 124.5% } | 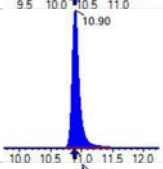  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1472600 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 2930.3 | N/A | 21.8340 [ 20.0000 ] | 109.2% { 119.1% } | 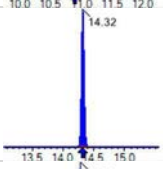  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1227566 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 5121.5 | N/A | 19.4340 [ 20.0000 ] | 97.2% { 113.1% } | 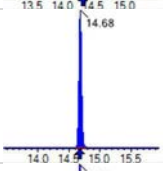  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 865815 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 3022.9 | N/A | 8.6830 [ 8.0000 ] | 108.5% { 110.6% } | 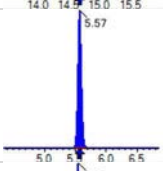  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 650908 | ( 5.85 , N/A ) ( N/A , 0.00 , N/A ) | 2367.6 | N/A | 2.1580 [ 2.0000 ] | 107.9% { 128.6% } | 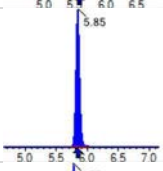  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 705830 | ( 8.57 , N/A ) ( N/A , 0.01 , N/A ) | 1193.2 | N/A | 2.0770 [ 2.0000 ] | 103.9% { 120.6% } | 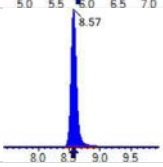  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01122L
Calibration:N 2413019L

SDG:N 24C0142L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB30 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05180 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01122L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB30 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.630 | ng/mL0 | | |
| | 13C5-PFPEA | 4.590 | ng/mL0 | | |
| | 13C5-PFHXA | 2.030 | ng/mL0 | | |
| | 13C4-PFHPA | 2.040 | ng/mL0 | | |
| | 13C8-PFOA | 2.210 | ng/mL0 | | |
| | 13C9-PFNA | 1.110 | ng/mL0 | | |
| | 13C6-PFDA | 1.060 | ng/mL0 | | |
| | 13C7-PFUnA | 1.080 | ng/mL0 | | |
| | 13C2-PFDOA | 1.030 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.020 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.750 | ng/mL0 | | |
| | 13C3-PFBS0 | 2.190 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.150 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.110 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.120 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 5.30 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 5.380 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 10.60 | ng/mL0 | | |
| | 13C8-PFOSA | 2.070 | ng/mL0 | | |
| | D3-NMEFOSA | 1.990 | ng/mL0 | | |
| | D5-NETFOSA | 2.040 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.430 | ng/mL0 | | |
| | D5-NETFOSAA | 4.520 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0142L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01122L | Instrument: | Saphira |
| Calibration: | 2413019L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01122-CCB30 | D7-NMEFOSE0 | 19.90 | ng/mL | 0 | |
| | D9-NETFOSE0 | 18.60 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.460 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 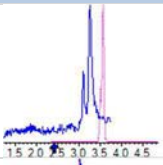 | 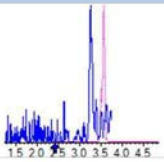 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 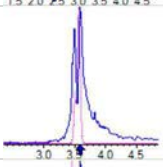 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 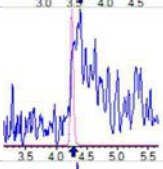 | 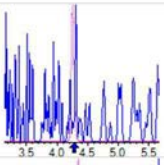 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 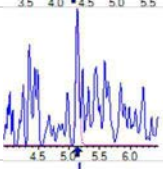 | 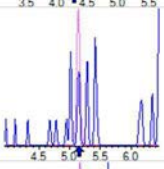 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 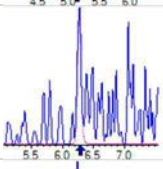 | 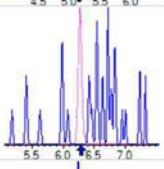 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 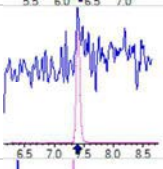 | 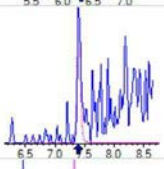 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 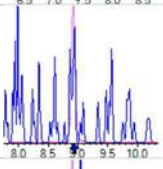 | 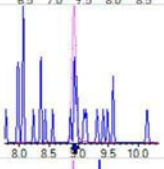 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 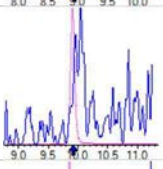 | 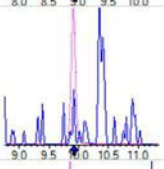 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 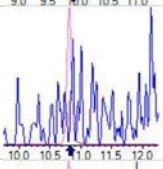 | 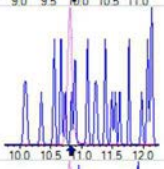 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 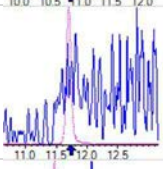 | 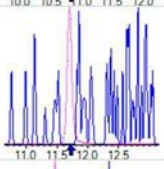 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 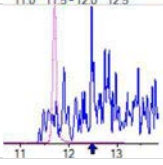 | 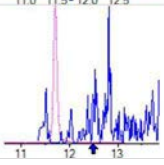 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (21)
Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 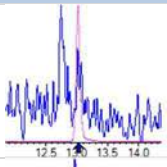 | 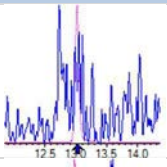 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 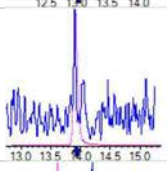 | 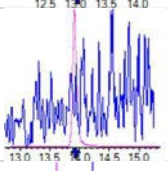 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 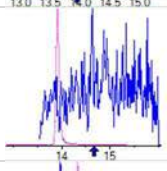 | 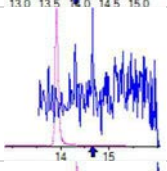 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 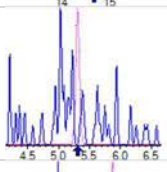 | 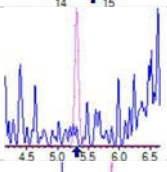 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 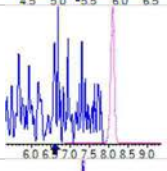 | 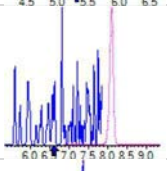 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 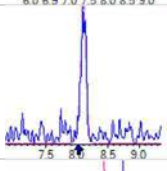 | 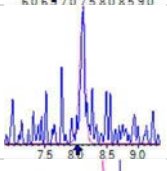 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 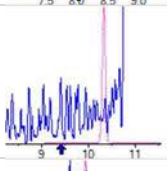 | 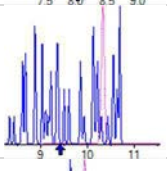 | |
| PFOS | ( 499.0 / 80.0 )<br>N/A<br>( 499.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 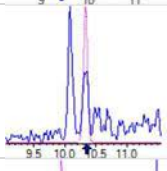 | 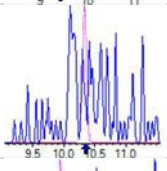 | |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 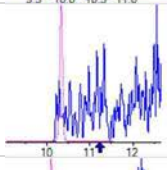 | 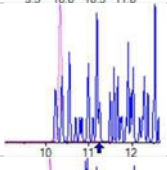 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 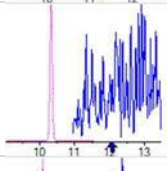 | 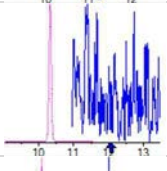 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 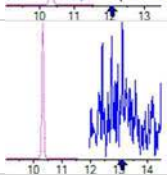 | 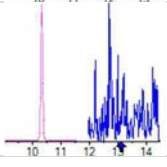 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (21)
Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 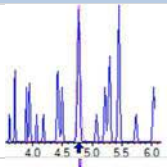 | 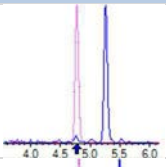 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 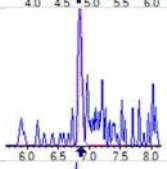 | 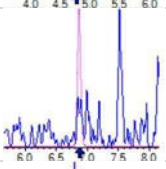 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 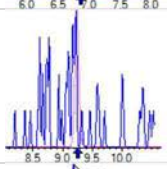 | 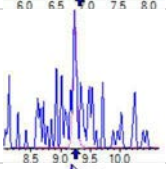 | |
| 10:2FTS | ( 627.0 / 607.0 ) 21188<br>( 627.0 / 81.0 ) 32291 | ( 10.95 , 1.00 ) ( 0.01 , N/A , -0.1) | 246.0<br>116.4 | 1.5241<br>106.0<br>105.5 | 0.0520 | N/A | 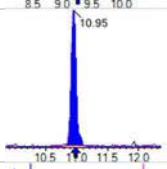 | 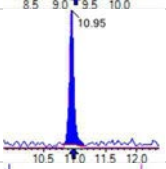 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 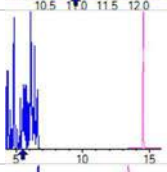 | 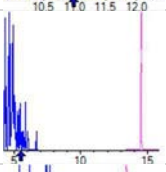 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 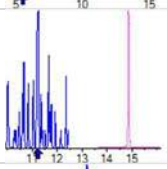 | 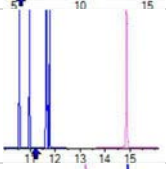 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 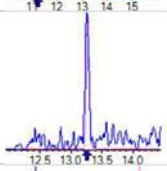 | 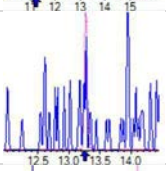 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 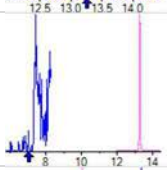 | 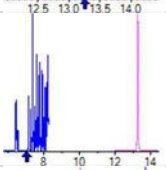 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 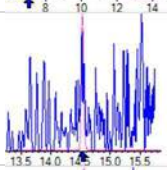 | 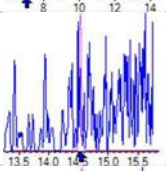 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 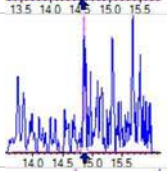 | 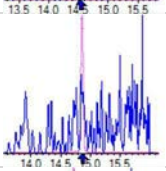 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 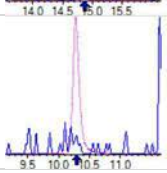 | 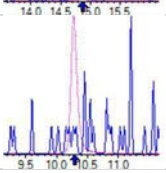 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (21)
Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 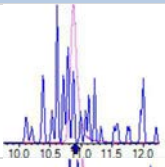 | 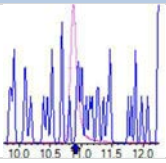 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 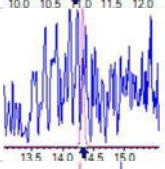 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 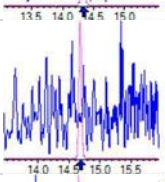 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 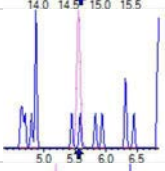 | 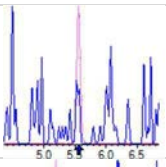 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 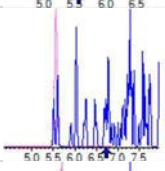 | 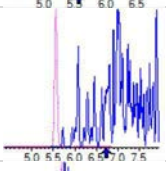 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 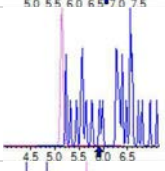 | 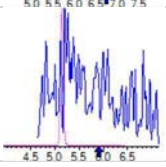 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 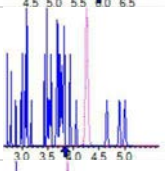 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 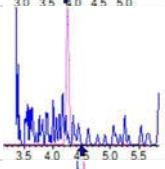 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 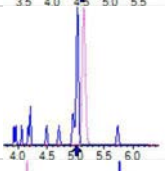 | 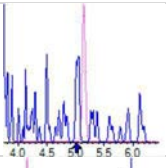 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 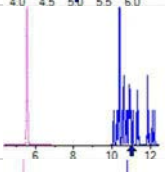 | 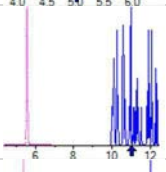 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 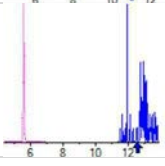 | 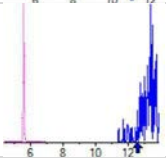 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (21)
Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 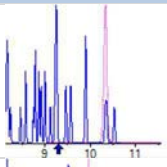 | 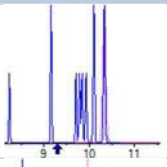 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 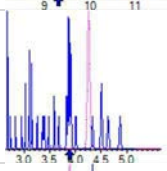 | 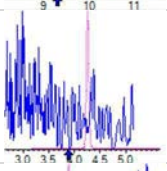 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 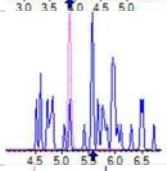 | 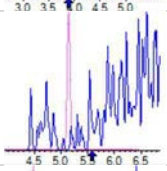 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 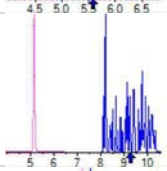 | 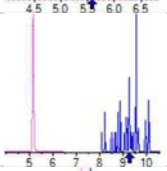 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 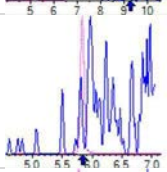 | 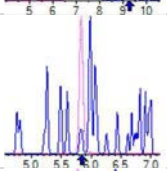 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 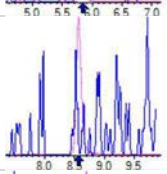 | 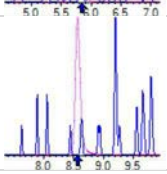 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 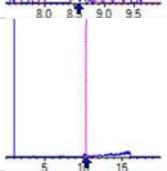 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 288669 | ( 3.57 , N/A )<br>( N/A , -0.02 , N/A ) | 1515.9 | N/A | 1.0230<br>[ 1.0000 ] | 102.3%<br>{ 109.4% } | 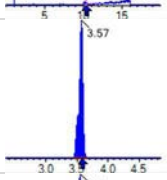 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116568 | ( 5.14 , N/A )<br>( N/A , -0.01 , N/A ) | 896060.5 | N/A | 0.9870<br>[ 1.0000 ] | 98.7%<br>{ 117.8% } | 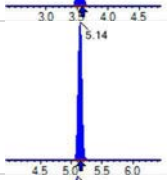 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 372911 | ( 7.40 , N/A )<br>( N/A , 0.01 , N/A ) | 4451.8 | N/A | 0.9610<br>[ 1.0000 ] | 96.1%<br>{ 106.0% } | 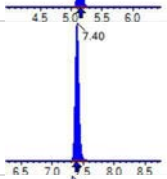 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 274856 | ( 8.92 , N/A )<br>( N/A , -0.01 , N/A ) | 1500.0 | N/A | 0.9410<br>[ 1.0000 ] | 94.1%<br>{ 114.6% } | 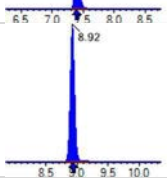 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (21)
Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 281843 | ( 9.91 , N/A ) ( N/A , -0.01 , N/A ) | 15069.1 | N/A | 0.9830 [ 1.0000 ] | 98.3% { 114.9% } | 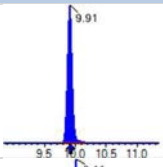 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 946278 | ( 8.11 , N/A ) ( N/A , 0.08 , N/A ) | 7658.3 | N/A | 0.9630 [ 1.0000 ] | 96.3% { 106.6% } | 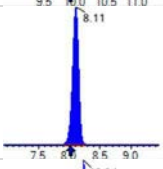 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 786701 | ( 10.34 , N/A ) ( N/A , -0.02 , N/A ) | 3056.0 | N/A | 1.0030 [ 1.0000 ] | 100.3% { 114.1% } | 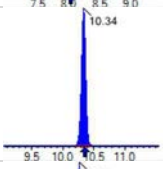 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2691471 | ( 3.57 , N/A ) ( N/A , -0.01 , N/A ) | 139514.0 | N/A | 8.6260 [ 8.0000 ] | 107.8% { 122.5% } | 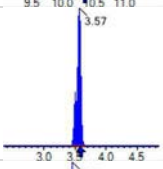 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 979672 | ( 4.26 , N/A ) ( N/A , -0.03 , N/A ) | 6124.0 | N/A | 4.5900 [ 4.0000 ] | 114.8% { 128.6% } | 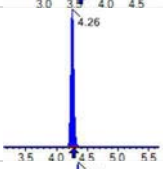 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 518697 | ( 5.14 , N/A ) ( N/A , -0.01 , N/A ) | 30074.1 | N/A | 2.0340 [ 2.0000 ] | 101.7% { 119.1% } | 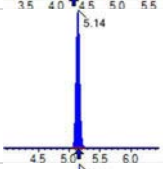 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 578664 | ( 6.27 , N/A ) ( N/A , -0.01 , N/A ) | 8042.3 | N/A | 2.0430 [ 2.0000 ] | 102.2% { 113.0% } | 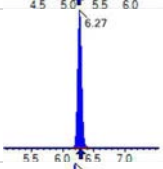 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 874268 | ( 7.40 , N/A ) ( N/A , 0.01 , N/A ) | 3769.7 | N/A | 2.2120 [ 2.0000 ] | 110.6% { 123.0% } | 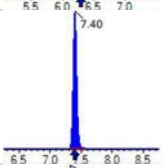 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 300322 | ( 8.92 , N/A ) ( N/A , -0.01 , N/A ) | 7829.7 | N/A | 1.1070 [ 1.0000 ] | 110.7% { 127.8% } | 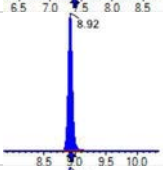 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 344277 | ( 9.91 , N/A ) ( N/A , -0.01 , N/A ) | 940.9 | N/A | 1.0570 [ 1.0000 ] | 105.7% { 122.8% } | 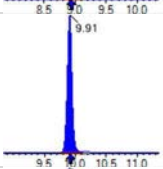 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 418841 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 1322.4 | N/A | 1.0840 [ 1.0000 ] | 108.4% { 129.9% } | 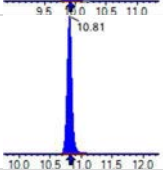 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCB3 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (21)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 408082 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1769.5 | N/A | 1.0300 [ 1.0000 ] | 103.0% { 120.1% } | 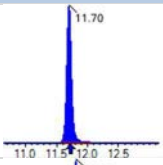 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 357621 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1356.2 | N/A | 1.0190 [ 1.0000 ] | 101.9% { 117.7% } | 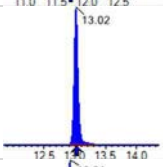 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 513859 | ( 13.91 , N/A ) ( N/A , -0.02 , N/A ) | 2578.7 | N/A | 1.7510 [ 2.0000 ] | 87.5% { 120.5% } | 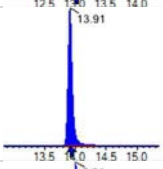 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1668854 | ( 5.31 , N/A ) ( N/A , -0.01 , N/A ) | 1434.4 | N/A | 2.1880 [ 2.0000 ] | 109.4% { 119.1% } | 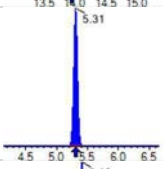 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1467628 | ( 8.10 , N/A ) ( N/A , 0.08 , N/A ) | 5934.9 | N/A | 2.1500 [ 2.0000 ] | 107.5% { 118.2% } | 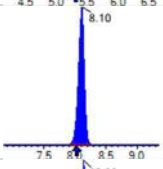 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1766630 | ( 10.33 , N/A ) ( N/A , -0.02 , N/A ) | 2324.2 | N/A | 2.1110 [ 2.0000 ] | 105.5% { 121.6% } | 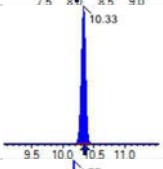 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 859057 | ( 4.77 , N/A ) ( N/A , -0.01 , N/A ) | 72.6 | N/A | 5.1200 [ 4.0000 ] | 128.0% { 137.7% } | 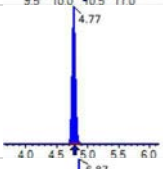 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2185078 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 6570.3 | N/A | 5.3010 [ 4.0000 ] | 132.5% { 133.5% } | 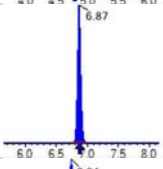 | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1941394 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 2590.0 | N/A | 5.3830 [ 4.0000 ] | 134.6% { 146.1% } | 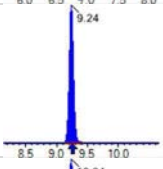 | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 4124219 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1648.7 | N/A | 10.5710 [ 8.0000 ] | 132.1% { 152.4% } | 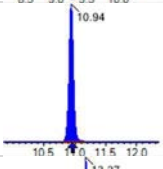 | | S2, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1838541 | ( 13.27 , N/A ) ( N/A , 0.02 , N/A ) | 3835.6 | N/A | 2.0690 [ 2.0000 ] | 103.5% { 122.3% } | 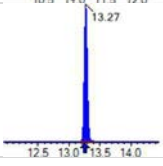 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB3
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (21)
Acquired: 2024/03/29 - 18:08

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 396842 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 3030.5 | N/A | 1.9860 [ 2.0000 ] | 99.3% { 116.6% } | 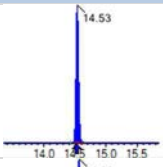  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 371637 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 2491.9 | N/A | 2.0350 [ 2.0000 ] | 101.8% { 114.8% } | 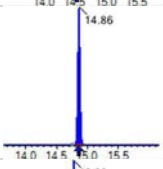  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1288730 | ( 10.28 , N/A ) ( N/A , -0.02 , N/A ) | 2670.2 | N/A | 4.4350 [ 4.0000 ] | 110.9% { 125.7% } | 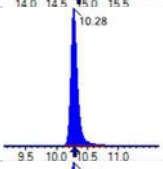  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1185676 | ( 10.88 , N/A ) ( N/A , -0.02 , N/A ) | 2824.5 | N/A | 4.5210 [ 4.0000 ] | 113.0% { 129.8% } | 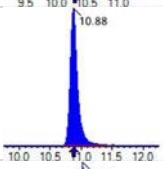  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1487236 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 2811.9 | N/A | 19.9280 [ 20.0000 ] | 99.6% { 120.3% } | 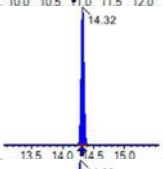  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1300781 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 4086.9 | N/A | 18.6100 [ 20.0000 ] | 93.1% { 119.9% } | 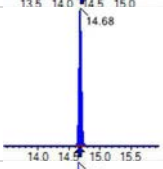  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 935085 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 2385.3 | N/A | 8.4650 [ 8.0000 ] | 105.8% { 119.5% } | 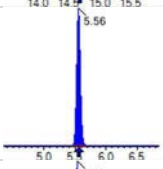  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 667807 | ( 5.83 , N/A ) ( N/A , -0.01 , N/A ) | 1998.5 | N/A | 2.1740 [ 2.0000 ] | 108.7% { 131.9% } | 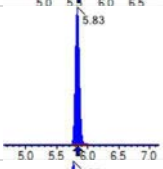  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 757277 | ( 8.57 , N/A ) ( N/A , 0.00 , N/A ) | 1472.3 | N/A | 2.1880 [ 2.0000 ] | 109.4% { 129.4% } | 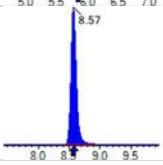  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01122L
Calibration:N 2413019L

SDG:N 24C0142L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB40 | PFBA | .0 | ng/mL0 | .40 | U |
| | PFPeA | .0 | ng/mL0 | .20 | U |
| | PFHxA | .0 | ng/mL0 | .10 | U |
| | PFHpA | .0 | ng/mL0 | .10 | U |
| | PFOA | .0 | ng/mL0 | .10 | U |
| | PFNA | .0 | ng/mL0 | .10 | U |
| | PFDA | .0 | ng/mL0 | .10 | U |
| | PFUnA | .0 | ng/mL0 | .10 | U |
| | PFDoA | .0 | ng/mL0 | .10 | U |
| | PFTrDA | .0 | ng/mL0 | .10 | U |
| | PFTeDA | .0 | ng/mL0 | .10 | U |
| | PFHxDA | .0 | ng/mL0 | .10 | U |
| | PFODA | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | .0 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .05070 | ng/mL0 | .40 | U |
| | PFOSA | .0 | ng/mL0 | .10 | U |
| | NMeFOSA | .0 | ng/mL0 | .40 | U |
| | NEtFOSA | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA | .0 | ng/mL0 | .10 | U |
| | NEtFOSAA | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01122L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01122-CCB40 | ADONA | .0 | ng/mL0 | .20 | U |
| | PFEESA | .0 | ng/mL0 | .20 | U |
| | PFMPA | .0 | ng/mL0 | .20 | U |
| | PFMBA | .0 | ng/mL0 | .20 | U |
| | NFDHA | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA | 8.320 | ng/mL0 | | |
| | 13C5-PFPEA | 4.720 | ng/mL0 | | |
| | 13C5-PFHXA | 2.040 | ng/mL0 | | |
| | 13C4-PFHPA | 2.40 | ng/mL0 | | |
| | 13C8-PFOA | 2.020 | ng/mL0 | | |
| | 13C9-PFNA | 1.030 | ng/mL0 | | |
| | 13C6-PFDA | 1.050 | ng/mL0 | | |
| | 13C7-PFUnA | 1.120 | ng/mL0 | | |
| | 13C2-PFDOA | 1.130 | ng/mL0 | | |
| | 13C2-PFTEDA | 1.170 | ng/mL0 | | |
| | 13C2-PFHxDA | 1.910 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.980 | ng/mL0 | | |
| | 13C3-PFHXS0 | 2.160 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.110 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 5.180 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 5.190 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.960 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 9.660 | ng/mL0 | | |
| | 13C8-PFOSA | 2.150 | ng/mL0 | | |
| | D3-NMEFOSA | 2.230 | ng/mL0 | | |
| | D5-NETFOSA | 2.180 | ng/mL0 | | |
| | D3-NMEFOSAA | 4.630 | ng/mL0 | | |
| | D5-NETFOSAA | 4.810 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0142L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01122L | Instrument: | Saphira |
| Calibration: | 2413019L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01122-CCB40 | D7-NMEFOSE0 | 21.30 | ng/mL | 0 | |
| | D9-NETFOSE0 | 18.70 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 8.420 | ng/mL | 0 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (31)
Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) N/A<br>( 163.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 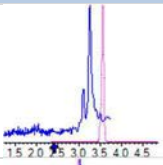 | 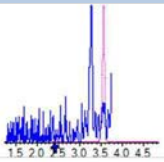 | |
| PFBA | ( 213.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 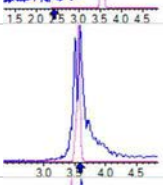 | | |
| PFPeA | ( 263.0 / 219.0 ) N/A<br>( 263.0 / 69.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 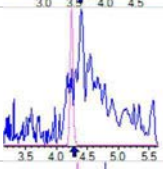 | 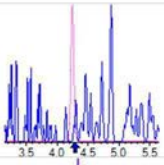 | |
| PFHxA | ( 313.0 / 269.0 ) N/A<br>( 313.0 / 119.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 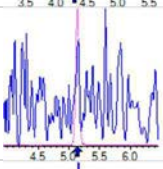 | 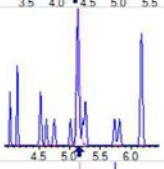 | |
| PFHpA | ( 363.0 / 319.0 ) N/A<br>( 363.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 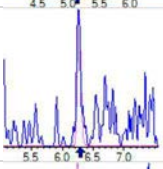 | 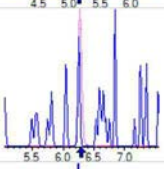 | |
| PFOA | ( 413.0 / 369.0 ) N/A<br>( 413.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 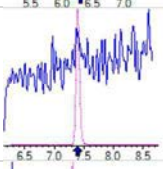 | 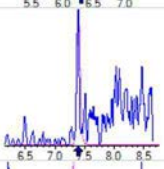 | |
| PFNA | ( 463.0 / 419.0 ) N/A<br>( 463.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 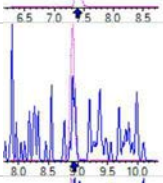 | 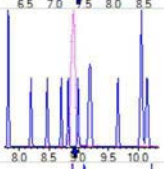 | |
| PFDA | ( 513.0 / 469.0 ) N/A<br>( 513.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 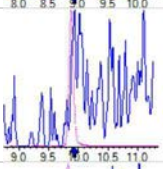 | 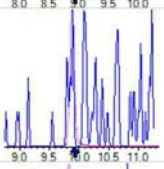 | |
| PFUnA | ( 563.0 / 519.0 ) N/A<br>( 563.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 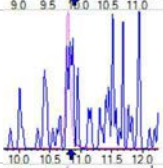 | 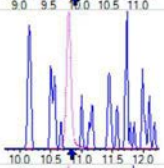 | |
| PFDoA | ( 613.0 / 569.0 ) N/A<br>( 613.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 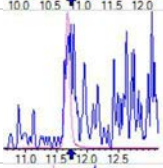 | 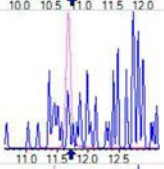 | |
| PFTrDA | ( 663.0 / 619.0 ) N/A<br>( 663.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 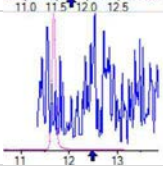 | 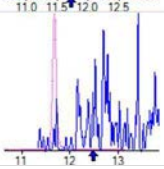 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (31)
Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 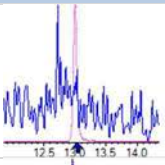 | 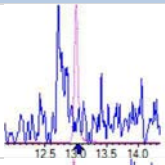 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 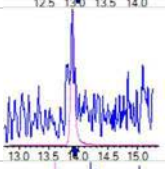 | 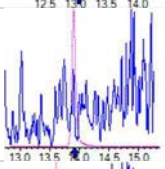 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 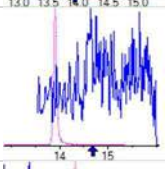 | 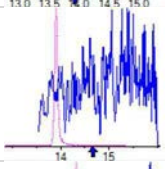 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 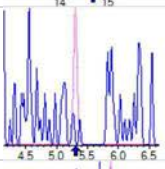 | 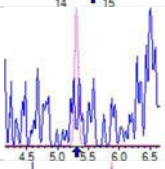 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 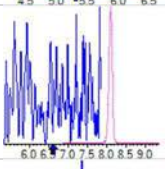 | 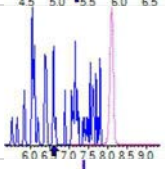 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 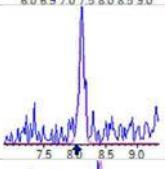 | 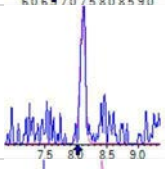 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 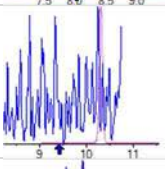 | 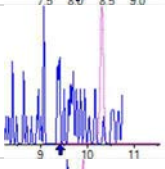 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 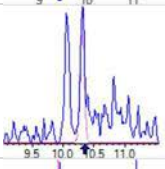 | 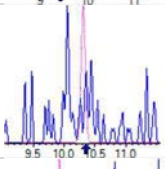 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 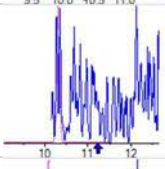 | 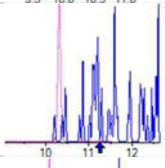 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 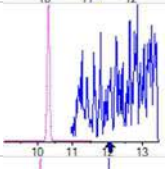 | 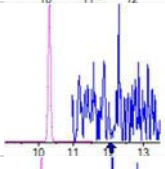 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 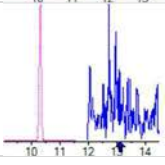 | 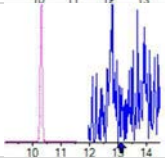 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCB4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (31)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 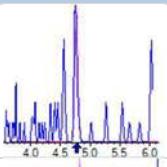 | 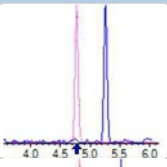 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 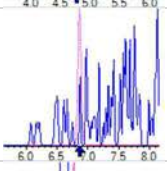 | 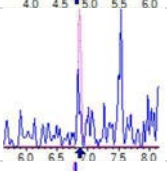 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 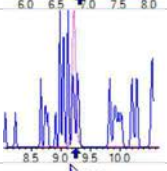 | 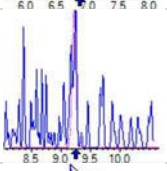 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>17785<br>( 627.0 / 81.0 )<br>30957 | ( 10.92 , 1.00 )<br>( 0.00 , N/A , 0.0) | 224.1<br>142.5 | 1.7407<br>121.1<br>120.4 | 0.0510 | N/A | 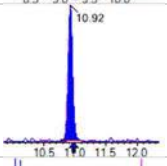 | 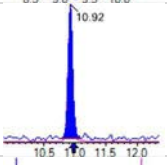 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 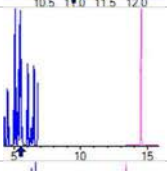 | 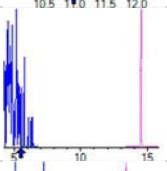 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 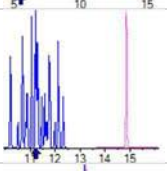 | 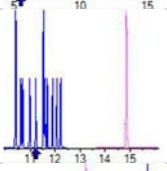 | |
| PFOSA | ( 498.0 / 78.0 )<br>N/A<br>( 498.0 / 478.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 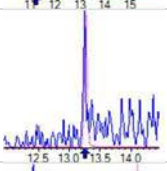 | 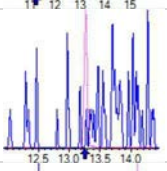 | |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 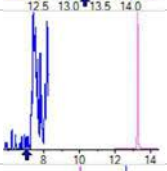 | 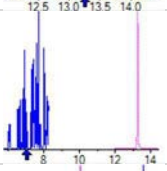 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>N/A<br>( 512.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 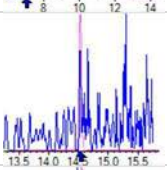 | 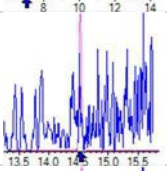 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>N/A<br>( 526.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 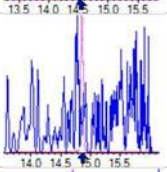 | 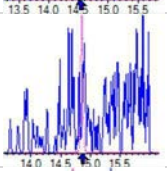 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 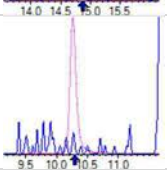 | 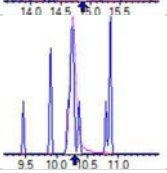 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (31)
Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 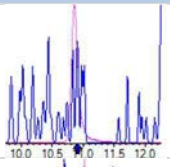 | 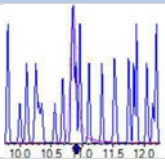 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 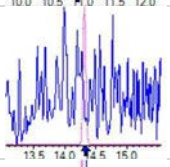 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 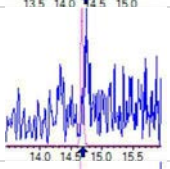 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 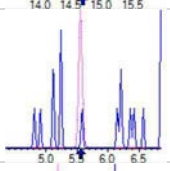 | 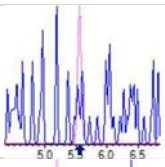 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 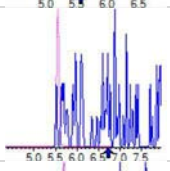 | 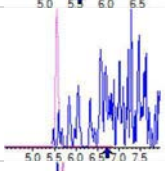 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 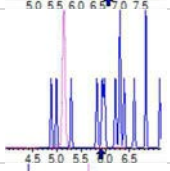 | 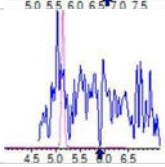 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 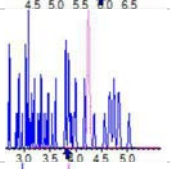 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 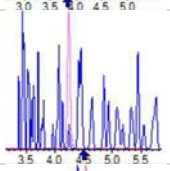 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 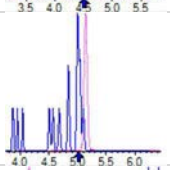 | 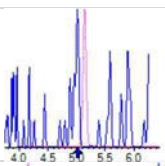 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 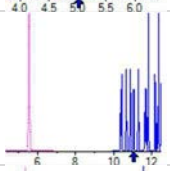 | 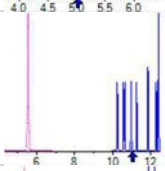 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 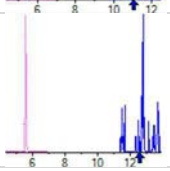 | 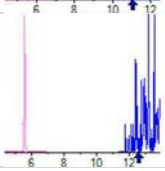 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (31)
Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 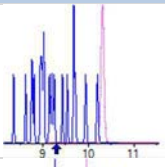 | 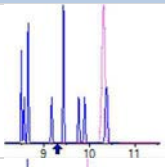 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 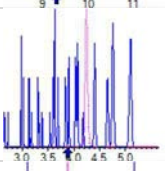 | 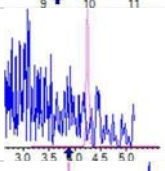 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 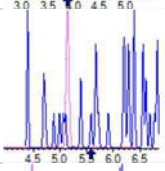 | 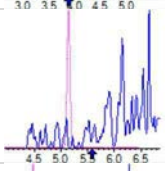 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 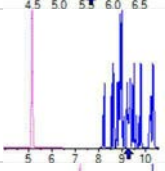 | 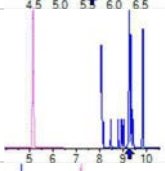 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 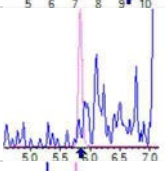 | 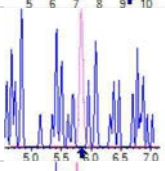 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 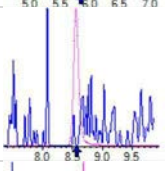 | 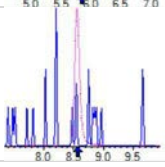 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 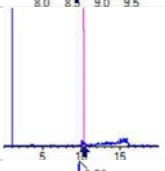 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 274728 | ( 3.56 , N/A )<br>( N/A , -0.02 , N/A ) | 1470.5 | N/A | 0.9730<br>[ 1.0000 ] | 97.3%<br>{ 104.1% } | 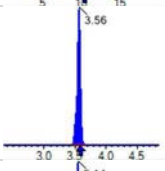 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 96533 | ( 5.14 , N/A )<br>( N/A , -0.01 , N/A ) | 868921.8 | N/A | 0.8180<br>[ 1.0000 ] | 81.8%<br>{ 97.5% } | 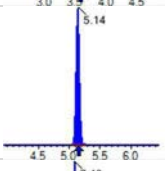 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 364170 | ( 7.40 , N/A )<br>( N/A , 0.01 , N/A ) | 6416.0 | N/A | 0.9380<br>[ 1.0000 ] | 93.8%<br>{ 103.5% } | 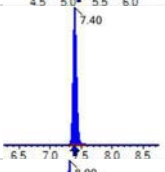 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 248731 | ( 8.90 , N/A )<br>( N/A , -0.03 , N/A ) | 1451.9 | N/A | 0.8510<br>[ 1.0000 ] | 85.1%<br>{ 103.7% } | 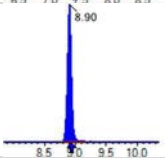 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (31)
Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 232995 | ( 9.89 , N/A ) ( N/A , -0.04 , N/A ) | 20209.9 | N/A | 0.8130 [ 1.0000 ] | 81.3% { 95.0% } | 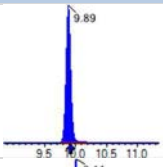  | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 886486 | ( 8.11 , N/A ) ( N/A , 0.08 , N/A ) | 6861.8 | N/A | 0.9030 [ 1.0000 ] | 90.3% { 99.9% } | 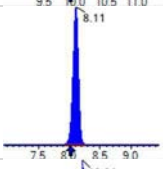  | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 661568 | ( 10.31 , N/A ) ( N/A , -0.04 , N/A ) | 3344.8 | N/A | 0.8430 [ 1.0000 ] | 84.3% { 96.0% } | 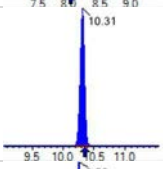  | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2471032 | ( 3.56 , N/A ) ( N/A , -0.02 , N/A ) | 98878.0 | N/A | 8.3210 [ 8.0000 ] | 104.0% { 112.4% } | 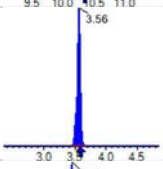  | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 833569 | ( 4.24 , N/A ) ( N/A , -0.04 , N/A ) | 6776.2 | N/A | 4.7160 [ 4.0000 ] | 117.9% { 109.4% } | 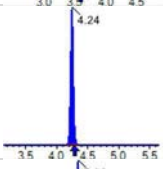  | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 431355 | ( 5.14 , N/A ) ( N/A , -0.01 , N/A ) | 34527.1 | N/A | 2.0430 [ 2.0000 ] | 102.1% { 99.0% } | 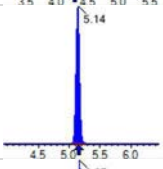  | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 563775 | ( 6.27 , N/A ) ( N/A , -0.01 , N/A ) | 7310.1 | N/A | 2.4040 [ 2.0000 ] | 120.2% { 110.0% } | 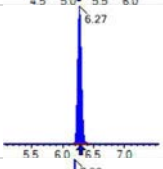  | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 779711 | ( 7.39 , N/A ) ( N/A , 0.01 , N/A ) | 4709.0 | N/A | 2.0200 [ 2.0000 ] | 101.0% { 109.7% } | 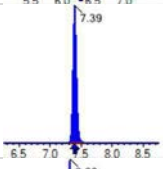  | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 252512 | ( 8.90 , N/A ) ( N/A , -0.03 , N/A ) | 4343.2 | N/A | 1.0280 [ 1.0000 ] | 102.8% { 107.4% } | 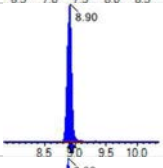  | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 282471 | ( 9.88 , N/A ) ( N/A , -0.04 , N/A ) | 1253.1 | N/A | 1.0490 [ 1.0000 ] | 104.9% { 100.8% } | 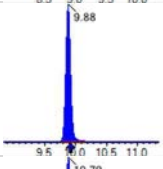  | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 358493 | ( 10.79 , N/A ) ( N/A , -0.04 , N/A ) | 1189.0 | N/A | 1.1230 [ 1.0000 ] | 112.3% { 111.2% } | 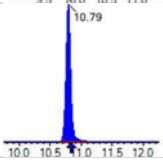  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-CCB4 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (31)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 371242 | ( 11.68 , N/A ) ( N/A , -0.04 , N/A ) | 1343.5 | N/A | 1.1340 [ 1.0000 ] | 113.4% { 109.3% } | 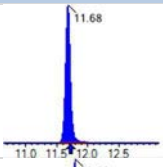  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 339317 | ( 13.00 , N/A ) ( N/A , -0.03 , N/A ) | 1331.6 | N/A | 1.1700 [ 1.0000 ] | 117.0% { 111.7% } | 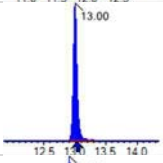  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 462355 | ( 13.90 , N/A ) ( N/A , -0.03 , N/A ) | 2872.6 | N/A | 1.9050 [ 2.0000 ] | 95.3% { 108.5% } | 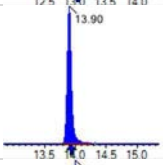  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1412036 | ( 5.30 , N/A ) ( N/A , -0.02 , N/A ) | 1465.5 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 100.8% } | 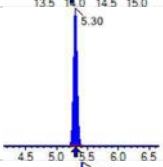  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1380695 | ( 8.10 , N/A ) ( N/A , 0.09 , N/A ) | 6298.6 | N/A | 2.1590 [ 2.0000 ] | 107.9% { 111.2% } | 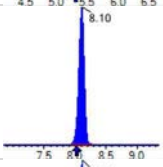  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1487250 | ( 10.31 , N/A ) ( N/A , -0.05 , N/A ) | 2559.7 | N/A | 2.1130 [ 2.0000 ] | 105.7% { 102.4% } | 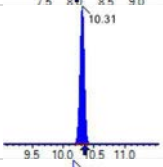  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 814606 | ( 4.77 , N/A ) ( N/A , -0.01 , N/A ) | 74.9 | N/A | 5.1820 [ 4.0000 ] | 129.6% { 130.6% } | 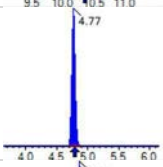  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2002421 | ( 6.87 , N/A ) ( N/A , -0.01 , N/A ) | 7570.1 | N/A | 5.1860 [ 4.0000 ] | 129.6% { 122.3% } | 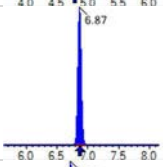  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1677438 | ( 9.22 , N/A ) ( N/A , -0.03 , N/A ) | 2480.3 | N/A | 4.9650 [ 4.0000 ] | 124.1% { 126.2% } | 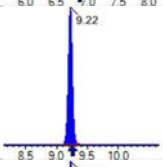  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3532402 | ( 10.92 , N/A ) ( N/A , -0.04 , N/A ) | 1677.8 | N/A | 9.6640 [ 8.0000 ] | 120.8% { 130.5% } | 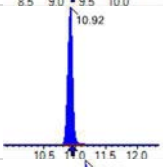  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1610116 | ( 13.27 , N/A ) ( N/A , 0.01 , N/A ) | 3478.8 | N/A | 2.1550 [ 2.0000 ] | 107.7% { 107.1% } | 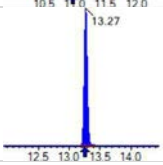  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-CCB4
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (31)
Acquired: 2024/03/29 - 21:33

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 374966 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 2707.5 | N/A | 2.2320 [ 2.0000 ] | 111.6% { 110.2% } | 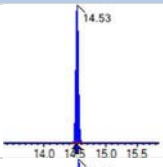  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 335369 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 3121.4 | N/A | 2.1840 [ 2.0000 ] | 109.2% { 103.6% } | 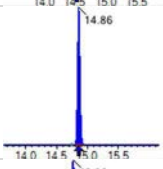  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1131814 | ( 10.26 , N/A ) ( N/A , -0.03 , N/A ) | 3556.0 | N/A | 4.6310 [ 4.0000 ] | 115.8% { 110.4% } | 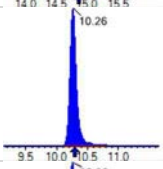  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1060315 | ( 10.86 , N/A ) ( N/A , -0.03 , N/A ) | 2218.4 | N/A | 4.8070 [ 4.0000 ] | 120.2% { 116.1% } | 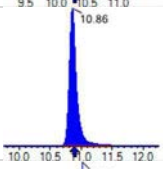  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1335009 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 3170.4 | N/A | 21.2710 [ 20.0000 ] | 106.4% { 108.0% } | 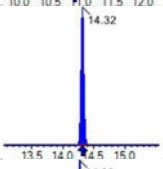  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1096856 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 5314.1 | N/A | 18.6610 [ 20.0000 ] | 93.3% { 101.1% } | 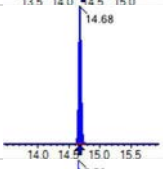  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 770086 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 2364.3 | N/A | 8.4180 [ 8.0000 ] | 105.2% { 98.4% } | 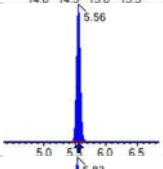  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 581839 | ( 5.83 , N/A ) ( N/A , -0.01 , N/A ) | 1857.9 | N/A | 2.2920 [ 2.0000 ] | 114.6% { 114.9% } | 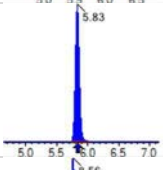  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 687243 | ( 8.56 , N/A ) ( N/A , -0.01 , N/A ) | 1154.0 | N/A | 2.4020 [ 2.0000 ] | 120.1% { 117.4% } | 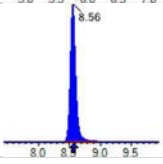  | | |

# ANALYSIS SEQUENCE BLANKSN

Laboratory:N APPL, L CL
Client:N Tidewater, Inc.L
Sequence:N SD01148L
Calibration:N 2413019L

SDG:N 24C0142L
Project:N JPL-GW MonitoringL
Instrument:N Saphira

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01148-ICB1 0 | PFBA0 | .1890 | ng/mL0 | .40 | U |
| | PFPeA0 | .0 | ng/mL0 | .20 | U |
| | PFHxA0 | .0 | ng/mL0 | .10 | U |
| | PFHpA0 | .0 | ng/mL0 | .10 | U |
| | PFOA0 | .0 | ng/mL0 | .10 | U |
| | PFNA0 | .0 | ng/mL0 | .10 | U |
| | PFDA0 | .0 | ng/mL0 | .10 | U |
| | PFUnA0 | .0 | ng/mL0 | .10 | U |
| | PFDoA0 | .0 | ng/mL0 | .10 | U |
| | PFTrDA0 | .0 | ng/mL0 | .10 | U |
| | PFTeDA0 | .0 | ng/mL0 | .10 | U |
| | PFHxDA0 | .0 | ng/mL0 | .10 | U |
| | PFODA0 | .0 | ng/mL0 | .10 | U |
| | PFBS0 | .0 | ng/mL0 | .10 | U |
| | PFPeS0 | .0 | ng/mL0 | .10 | U |
| | PFHxS0 | .0 | ng/mL0 | .10 | U |
| | PFHpS0 | .0 | ng/mL0 | .10 | U |
| | PFOS0 | 0.0110 | ng/mL0 | .10 | U |
| | PFNS0 | .0 | ng/mL0 | .10 | U |
| | PFDS0 | .0 | ng/mL0 | .10 | U |
| | PFDoS0 | .0 | ng/mL0 | .10 | U |
| | 4:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 6:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 8:2FTS0 | .0 | ng/mL0 | .40 | U |
| | 10:2FTS0 | .07990 | ng/mL0 | .40 | U |
| | PFOSA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSA0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSA0 | .0 | ng/mL0 | .40 | U |
| | NMeFOSAA0 | .01810 | ng/mL0 | .10 | U |
| | NEtFOSAA0 | .0 | ng/mL0 | .10 | U |
| | NMeFOSE0 | .0 | ng/mL0 | .40 | U |
| | NEtFOSE0 | .0 | ng/mL0 | .40 | U |
| | HFPO-DA0 | .0 | ng/mL0 | .20 | U |

# ANALYSIS SEQUENCE BLANKSN

| | | | |
|---|---|---|---|
| Laboratory:N | APPL, L CL | SDG:N | 24C0142L |
| Client:N | Tidewater, Inc.L | Project:N | JPL-GW MonitoringL |
| Sequence:N | SD01148L | Instrument:N | Saphira |
| Calibration:N | 2413019L | | |

| Lab Sample IDN | AnalyteN | FoundN | UnitsN | RLN | CN |
|---|---|---|---|---|---|
| SD01148-ICB1 0 | ADONA0 | .0 | ng/mL0 | .20 | U |
| | PFEESA0 | .0 | ng/mL0 | .20 | U |
| | PFMPA0 | .0 | ng/mL0 | .20 | U |
| | PFMBA0 | .0 | ng/mL0 | .20 | U |
| | NFDHA0 | .0 | ng/mL0 | .20 | U |
| | 9Cl-PF3ONS0 | .0 | ng/mL0 | .20 | U |
| | 11Cl-PF3OUDS0 | .0 | ng/mL0 | .20 | U |
| | 3:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 5:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 7:3FTCA0 | .0 | ng/mL0 | .40 | U |
| | 13C4-PFBA0 | 8.060 | ng/mL0 | | |
| | 13C5-PFPEA0 | 4.650 | ng/mL0 | | |
| | 13C5-PFHXA0 | 2.030 | ng/mL0 | | |
| | 13C4-PFHPA0 | 2.220 | ng/mL0 | | |
| | 13C8-PFOA0 | 2.140 | ng/mL0 | | |
| | 13C9-PFNA | 0.990 | ng/mL0 | | |
| | 13C6-PFDA | 0.960 | ng/mL0 | | |
| | 13C7-PFUnA | 0.9610 | ng/mL0 | | |
| | 13C2-PFDOA | 0.9550 | ng/mL0 | | |
| | 13C2-PFTEDA | 0.9480 | ng/mL0 | | |
| | 13C2-PFHxDA0 | 1.780 | ng/mL0 | | |
| | 13C3-PFBS0 | 1.940 | ng/mL0 | | |
| | 13C3-PFHXS0 | 1.980 | ng/mL0 | | |
| | 13C8-PFOS0 | 2.030 | ng/mL0 | | |
| | 13C2-4:2FTS0 | 4.670 | ng/mL0 | | |
| | 13C2-6:2FTS0 | 4.680 | ng/mL0 | | |
| | 13C2-8:2FTS0 | 4.620 | ng/mL0 | | |
| | 13C2D4-10:2FTS0 | 8.390 | ng/mL0 | | |
| | 13C8-PFOSA0 | 1.990 | ng/mL0 | | |
| | D3-NMEFOSA0 | 1.980 | ng/mL0 | | |
| | D5-NETFOSA0 | 2.090 | ng/mL0 | | |
| | D3-NMEFOSAA0 | 4.420 | ng/mL0 | | |
| | D5-NETFOSAA0 | 4.550 | ng/mL0 | | |

# ANALYSIS SEQUENCE BLANKS

| | | | |
|---|---|---|---|
| Laboratory: | APPL, L CL | SDG: | 24C0142L |
| Client: | Tidewater, Inc.L | Project: | JPL-GW MonitoringL |
| Sequence: | SD01148L | Instrument: | Saphira |
| Calibration: | 2413019L | | |

| Lab Sample ID | Analyte | Found | Units | RL | CN |
|---|---|---|---|---|---|
| SD01148-ICB10 | D7-NMEFOSE0 | 19.80 | ng/mL | 0 | |
| | D9-NETFOSE0 | 20.40 | ng/mL | 0 | |
| | 13C3-HFPO-DA | 0 | 8.20 | ng/mL | 0 |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 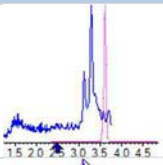 | 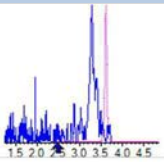 | |
| PFBA | ( 213.0 / 169.0 )<br>158073 | ( 3.64 , 1.01 )<br>( 0.03 , N/A , 0.0) | 104.4 | N/A<br>0.0<br>0.0 | 0.1890 | N/A | 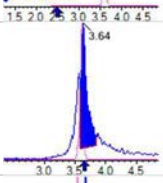 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 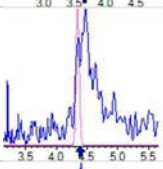 | 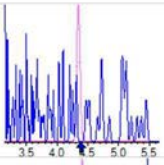 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 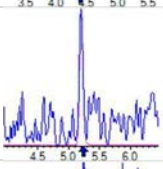 | 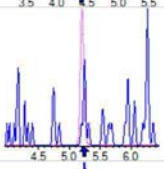 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 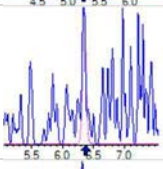 | 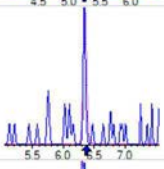 | |
| PFOA | ( 413.0 / 369.0 )<br>N/A<br>( 413.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 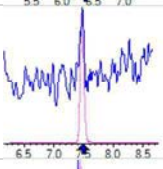 | 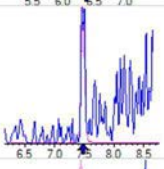 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 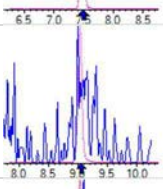 | 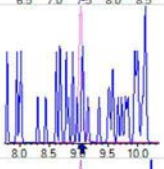 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 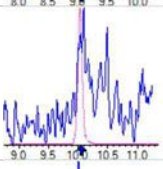 | 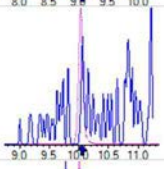 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 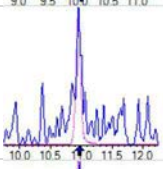 | 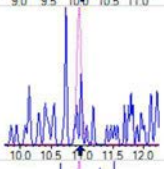 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 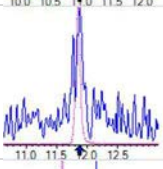 | 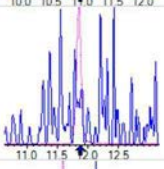 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 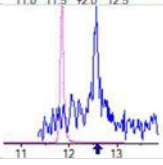 | 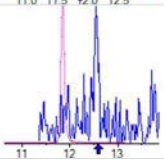 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 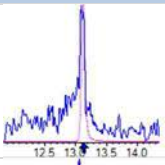 | 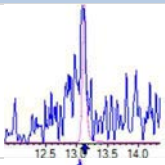 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 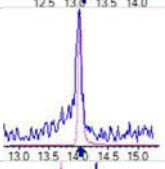 | 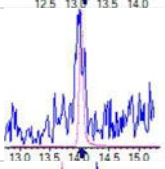 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 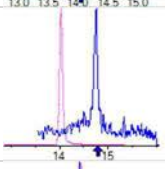 | 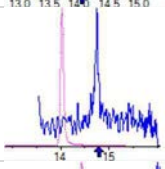 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 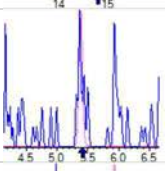 | 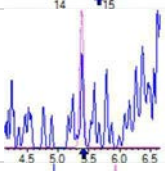 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 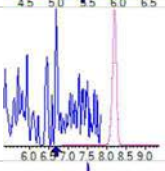 | 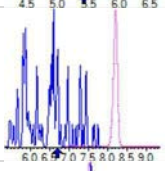 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 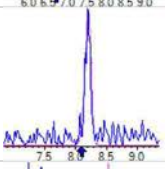 | 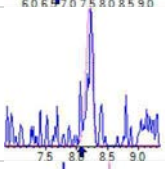 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 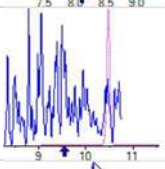 | 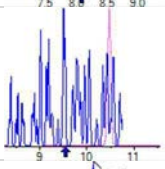 | |
| PFOS | ( 499.0 / 80.0 )<br>10221<br>( 499.0 / 99.0 )<br>2115 | ( 10.41 , 0.99 )<br>( -0.06 , N/A , -3.7) | 64.0<br>1823.6 | 0.2070<br>89.6<br>89.6 | 0.0110 | N/A | 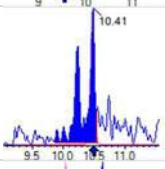 | 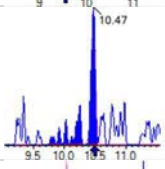 | MI5 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 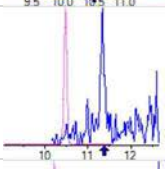 | 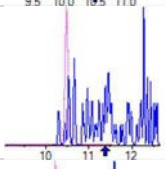 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 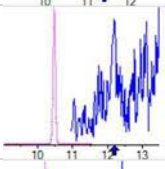 | 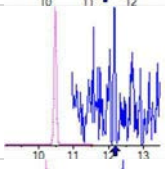 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 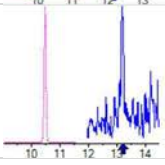 | 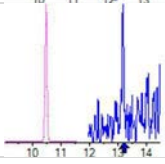 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 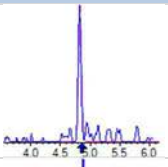 | 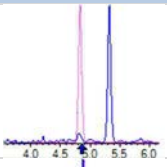 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 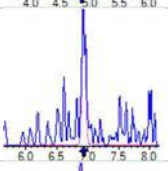 | 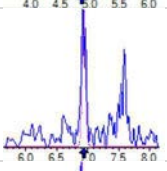 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 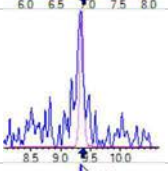 | 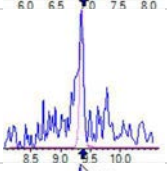 | |
| 10:2FTS | ( 627.0 / 607.0 ) 25777<br>( 627.0 / 81.0 ) 32268 | ( 11.08 , 1.00 ) ( 0.01 , N/A , 0.2) | 119.4<br>103.4 | 1.2518<br>87.1<br>87.1 | 0.0800 | N/A | 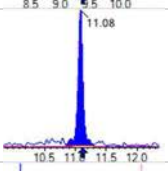 | 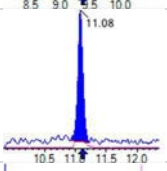 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 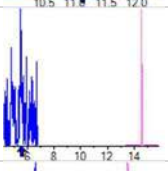 | 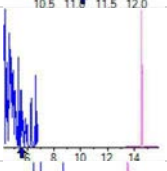 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 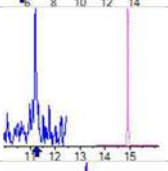 | 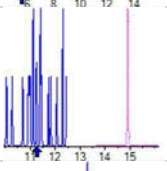 | |
| PFOSA | ( 498.0 / 78.0 ) N/A<br>( 498.0 / 478.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 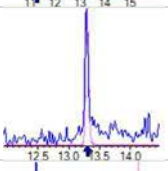 | 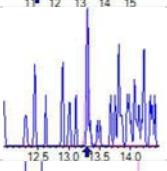 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 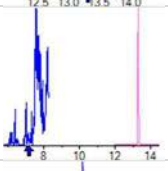 | 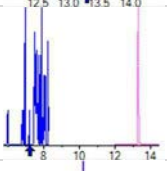 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 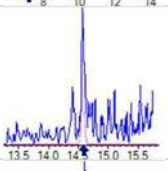 | 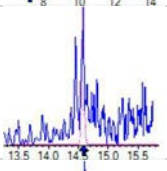 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 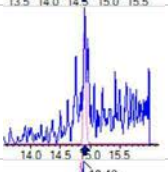 | 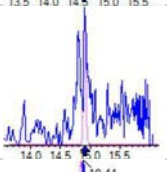 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 5071<br>( 570.0 / 483.0 ) 2169 | ( 10.42 , 1.00 ) ( 0.02 , N/A , 0.5) | 43.2<br>791.9 | 0.4278<br>92.2<br>92.2 | 0.0180 | N/A | 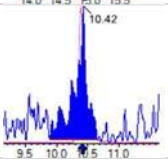 | 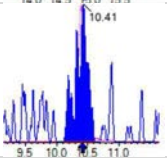 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 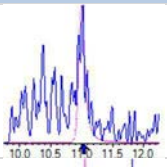 | 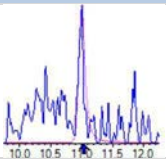 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 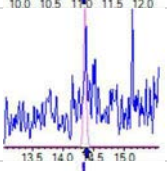 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 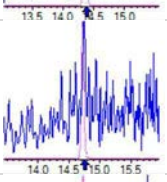 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 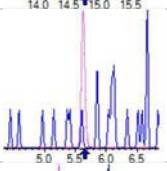 | 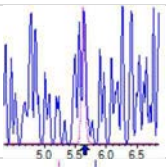 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 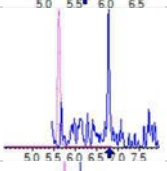 | 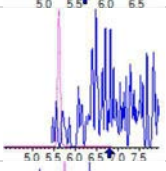 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 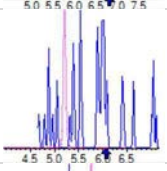 | 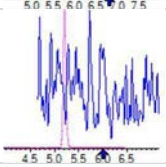 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 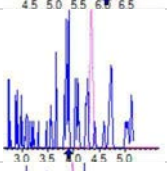 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 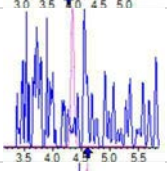 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 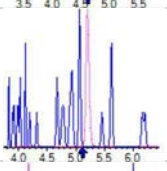 | 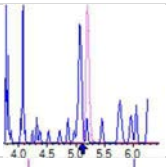 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 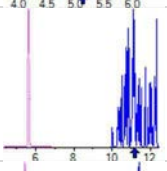 | 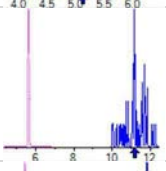 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 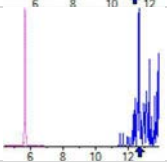 | 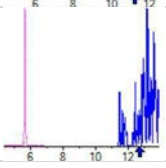 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 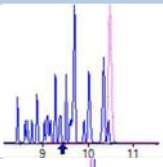 | 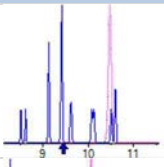 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 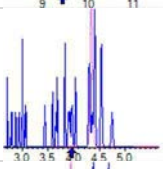 | 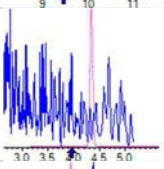 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 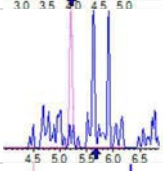 | 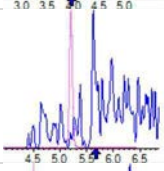 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 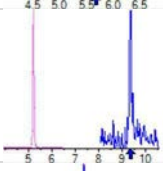 | 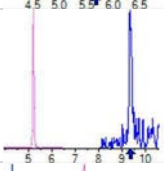 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 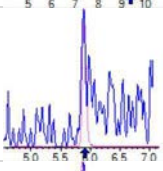 | 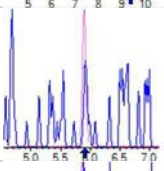 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 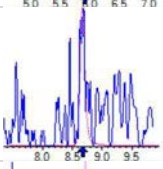 | 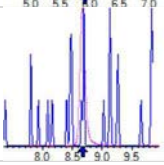 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 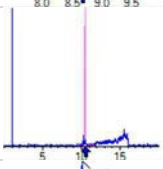 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 271603 | ( 3.61 , N/A )<br>( N/A , -0.04 , N/A ) | 1765.0 | N/A | 0.9620<br>[ 1.0000 ] | 96.2%<br>{ 98.0% } | 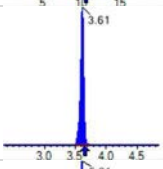 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 109151 | ( 5.21 , N/A )<br>( N/A , -0.03 , N/A ) | 968721.8 | N/A | 0.9250<br>[ 1.0000 ] | 92.5%<br>{ 94.9% } | 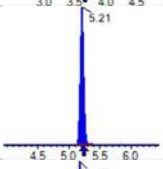 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 370901 | ( 7.47 , N/A )<br>( N/A , 0.00 , N/A ) | 5406.0 | N/A | 0.9560<br>[ 1.0000 ] | 95.6%<br>{ 94.5% } | 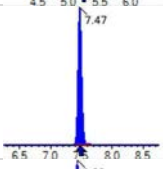 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282226 | ( 9.03 , N/A )<br>( N/A , -0.01 , N/A ) | 2166.9 | N/A | 0.9660<br>[ 1.0000 ] | 96.6%<br>{ 97.1% } | 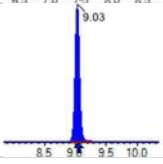 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-ICB1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 295805 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 8472.2 | N/A | 1.0320 [ 1.0000 ] | 103.2% { 108.7% } | 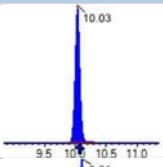 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 940221 | ( 8.21 , N/A ) ( N/A , 0.12 , N/A ) | 5678.7 | N/A | 0.9570 [ 1.0000 ] | 95.7% { 98.8% } | 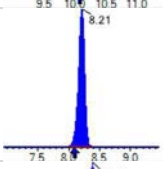 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 743825 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 3764.8 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 100.6% } | 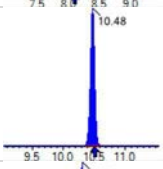 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2366553 | ( 3.61 , N/A ) ( N/A , -0.04 , N/A ) | 262733.8 | N/A | 8.0610 [ 8.0000 ] | 100.8% { 97.0% } | 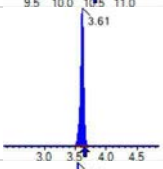 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 929871 | ( 4.34 , N/A ) ( N/A , -0.04 , N/A ) | 6195.5 | N/A | 4.6530 [ 4.0000 ] | 116.3% { 100.5% } | 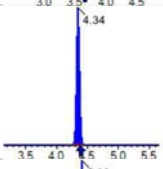 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 484104 | ( 5.20 , N/A ) ( N/A , -0.03 , N/A ) | 9073.5 | N/A | 2.0270 [ 2.0000 ] | 101.4% { 90.5% } | 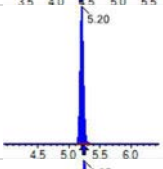 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 588065 | ( 6.35 , N/A ) ( N/A , -0.02 , N/A ) | 9116.3 | N/A | 2.2170 [ 2.0000 ] | 110.9% { 103.1% } | 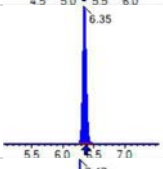 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 842406 | ( 7.47 , N/A ) ( N/A , 0.00 , N/A ) | 4909.5 | N/A | 2.1430 [ 2.0000 ] | 107.2% { 111.3% } | 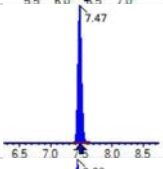 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 275807 | ( 9.03 , N/A ) ( N/A , -0.01 , N/A ) | 5012.8 | N/A | 0.9900 [ 1.0000 ] | 99.0% { 97.1% } | 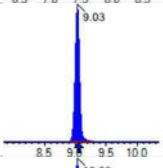 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 328131 | ( 10.03 , N/A ) ( N/A , -0.02 , N/A ) | 1418.1 | N/A | 0.9600 [ 1.0000 ] | 96.0% { 97.5% } | 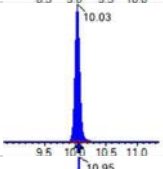 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 389721 | ( 10.95 , N/A ) ( N/A , -0.02 , N/A ) | 1166.7 | N/A | 0.9610 [ 1.0000 ] | 96.1% { 99.4% } | 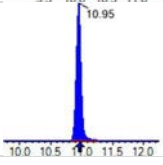 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01148-ICB1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-28A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 396994 | ( 11.85 , N/A ) ( N/A , -0.02 , N/A ) | 1324.6 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 99.5% } | 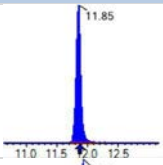  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 348990 | ( 13.13 , N/A ) ( N/A , -0.02 , N/A ) | 1332.2 | N/A | 0.9480 [ 1.0000 ] | 94.8% { 96.3% } | 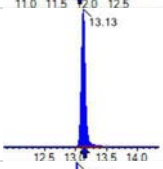  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 549693 | ( 14.03 , N/A ) ( N/A , -0.01 , N/A ) | 2623.2 | N/A | 1.7840 [ 2.0000 ] | 89.2% { 96.2% } | 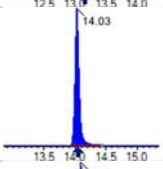  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1469989 | ( 5.39 , N/A ) ( N/A , -0.03 , N/A ) | 1636.0 | N/A | 1.9400 [ 2.0000 ] | 97.0% { 92.5% } | 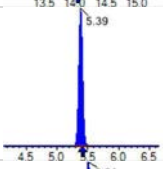  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1346230 | ( 8.21 , N/A ) ( N/A , 0.12 , N/A ) | 6373.3 | N/A | 1.9850 [ 2.0000 ] | 99.2% { 98.0% } | 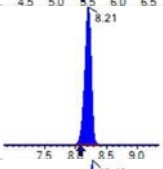  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1606986 | ( 10.48 , N/A ) ( N/A , -0.02 , N/A ) | 2074.7 | N/A | 2.0310 [ 2.0000 ] | 101.5% { 102.6% } | 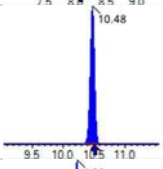  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 778425 | ( 4.83 , N/A ) ( N/A , -0.03 , N/A ) | 59.9 | N/A | 4.6690 [ 4.0000 ] | 116.7% { 111.6% } | 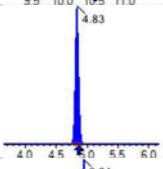  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 1915077 | ( 6.94 , N/A ) ( N/A , -0.01 , N/A ) | 7754.3 | N/A | 4.6760 [ 4.0000 ] | 116.9% { 115.4% } | 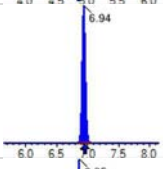  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1655492 | ( 9.35 , N/A ) ( N/A , -0.02 , N/A ) | 2518.6 | N/A | 4.6200 [ 4.0000 ] | 115.5% { 112.0% } | 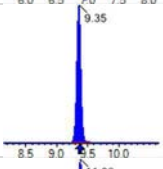  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3250874 | ( 11.08 , N/A ) ( N/A , -0.02 , N/A ) | 1739.5 | N/A | 8.3860 [ 8.0000 ] | 104.8% { 114.2% } | 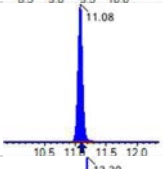  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1670409 | ( 13.30 , N/A ) ( N/A , -0.01 , N/A ) | 3297.5 | N/A | 1.9880 [ 2.0000 ] | 99.4% { 99.2% } | 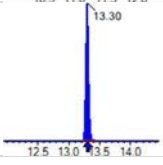  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01148-ICB1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-28A (9)
Acquired: 2024/03/28 - 18:09

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 374739 | ( 14.57 , N/A ) ( N/A , -0.01 , N/A ) | 2651.6 | N/A | 1.9840 [ 2.0000 ] | 99.2% { 101.1% } | 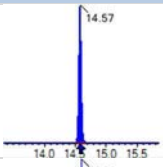  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 360886 | ( 14.90 , N/A ) ( N/A , -0.01 , N/A ) | 3140.8 | N/A | 2.0900 [ 2.0000 ] | 104.5% { 101.5% } | 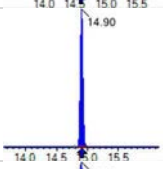  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1214676 | ( 10.40 , N/A ) ( N/A , -0.02 , N/A ) | 4889.3 | N/A | 4.4210 [ 4.0000 ] | 110.5% { 104.8% } | 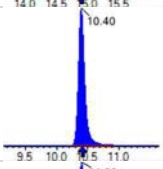  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1128882 | ( 11.00 , N/A ) ( N/A , -0.02 , N/A ) | 2853.5 | N/A | 4.5520 [ 4.0000 ] | 113.8% { 109.2% } | 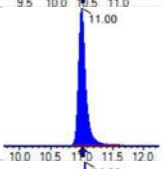  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1394785 | ( 14.36 , N/A ) ( N/A , -0.01 , N/A ) | 2349.5 | N/A | 19.7660 [ 20.0000 ] | 98.8% { 98.2% } | 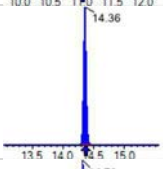  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1345626 | ( 14.72 , N/A ) ( N/A , -0.01 , N/A ) | 4451.8 | N/A | 20.3620 [ 20.0000 ] | 101.8% { 100.8% } | 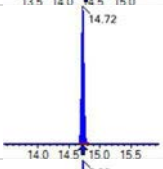  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 847815 | ( 5.63 , N/A ) ( N/A , -0.03 , N/A ) | 2610.7 | N/A | 8.1960 [ 8.0000 ] | 102.5% { 93.9% } | 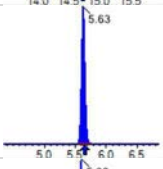  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 584674 | ( 5.90 , N/A ) ( N/A , -0.02 , N/A ) | 3075.1 | N/A | 1.8140 [ 2.0000 ] | 90.7% { 103.0% } | 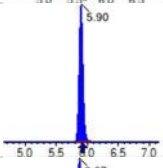  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 660409 | ( 8.67 , N/A ) ( N/A , 0.00 , N/A ) | 1110.6 | N/A | 1.8180 [ 2.0000 ] | 90.9% { 101.0% } | 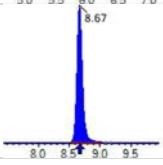  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (4)
Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>N/A<br>( 163.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 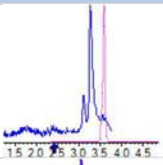 | 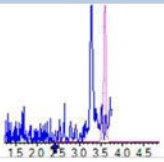 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 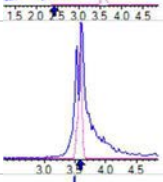 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 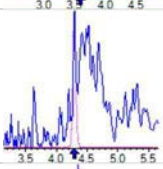 | 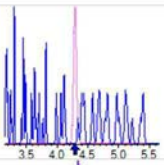 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 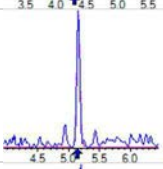 | 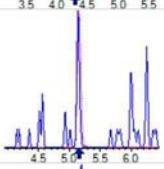 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 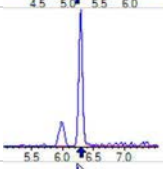 | 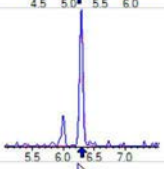 | |
| PFOA | ( 413.0 / 369.0 )<br>3150266<br>( 413.0 / 169.0 )<br>1240935 | ( 7.39 , 1.00 )<br>( 0.00 , N/A , 0.0) | 762.1<br>669.1 | 0.3939<br>110.2<br>114.4 | 7.6770 | N/A | 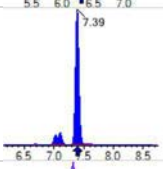 | 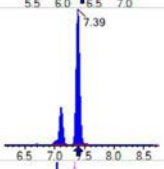 | MI5 DG 2024-03-29 |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 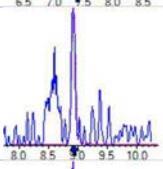 | 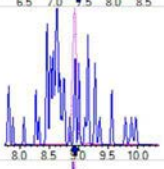 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 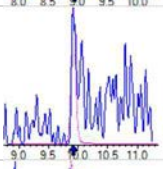 | 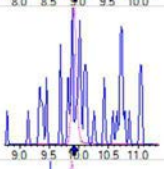 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 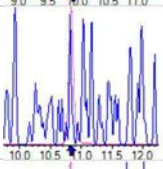 | 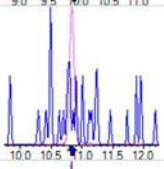 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 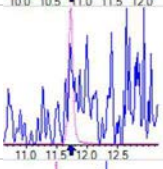 | 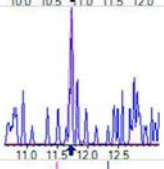 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 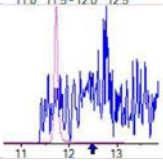 | 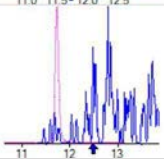 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (4)
Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) N/A<br>( 713.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 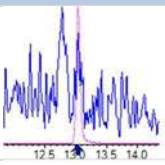 | 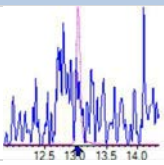 | |
| PFHxDA | ( 813.0 / 769.0 ) N/A<br>( 813.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 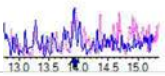 | 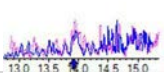 | |
| PFODA | ( 913.0 / 869.0 ) N/A<br>( 913.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 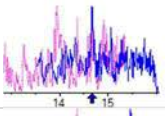 | 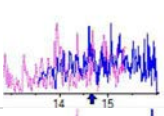 | |
| PFBS | ( 299.0 / 80.0 ) N/A<br>( 299.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 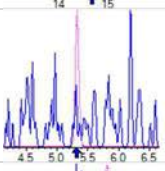 | 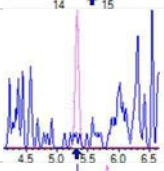 | |
| PFPeS | ( 349.0 / 80.0 ) N/A<br>( 349.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 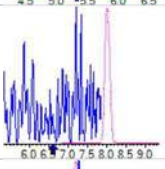 | 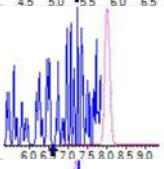 | |
| PFHxS | ( 399.0 / 80.0 ) N/A<br>( 399.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 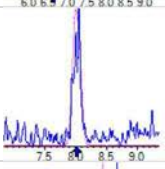 | 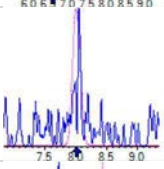 | |
| PFHpS | ( 449.0 / 80.0 ) N/A<br>( 449.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 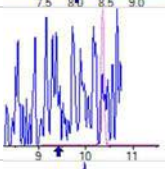 | 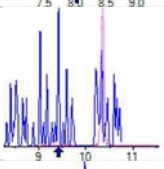 | |
| PFOS | ( 499.0 / 80.0 ) N/A<br>( 499.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 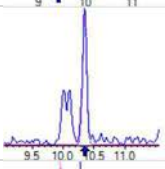 | 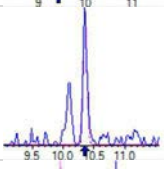 | |
| PFNS | ( 549.0 / 80.0 ) N/A<br>( 549.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 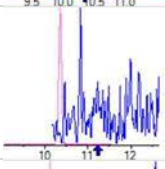 | 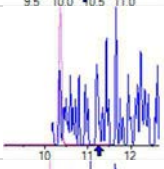 | |
| PFDS | ( 599.0 / 80.0 ) N/A<br>( 599.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 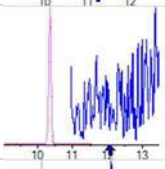 | 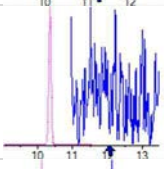 | |
| PFDoS | ( 699.0 / 80.0 ) N/A<br>( 699.0 / 99.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 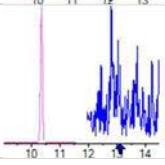 | 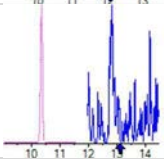 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (4)
Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 )<br>N/A<br>( 327.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 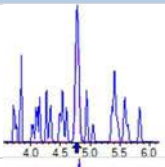 | 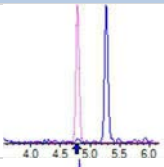 | |
| 6:2FTS | ( 427.0 / 407.0 )<br>N/A<br>( 427.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 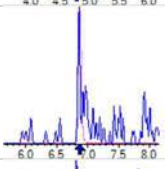 | 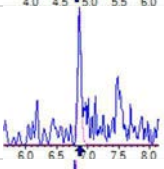 | |
| 8:2FTS | ( 527.0 / 507.0 )<br>N/A<br>( 527.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 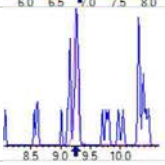 | 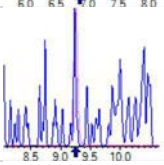 | |
| 10:2FTS | ( 627.0 / 607.0 )<br>N/A<br>( 627.0 / 81.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 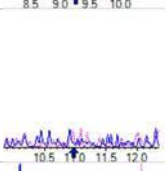 | 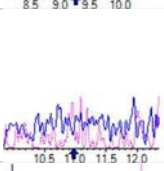 | |
| PFBSA | ( 297.9 / 78.0 )<br>N/A<br>( 297.9 / 278.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 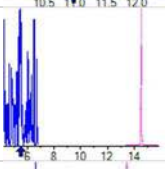 | 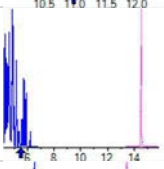 | |
| PFHxSA | ( 397.9 / 78.0 )<br>N/A<br>( 397.9 / 378.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 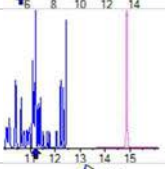 | 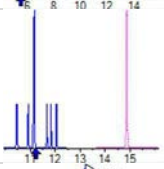 | |
| PFOSA | ( 498.0 / 78.0 )<br>7932915<br>( 498.0 / 478.0 )<br>112552 | ( 13.27 , 1.00 )<br>( -0.01 , N/A , 0.0) | 636.5<br>565.3 | 0.0142<br>96.5<br>100.2 | 9.3520 | N/A | 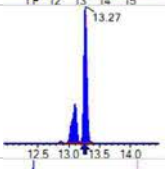 | 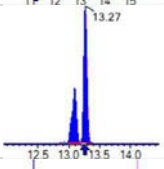 | MI5 DG<br>2024-03-29 |
| TFSI | ( 279.7 / 147.0 )<br>N/A<br>( 279.7 / 211.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 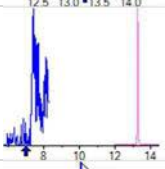 | 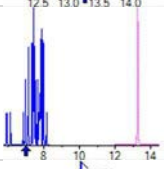 | |
| NMeFOSA | ( 512.0 / 219.0 )<br>1457532<br>( 512.0 / 169.0 )<br>1092174 | ( 14.54 , 1.00 )<br>( 0.00 , N/A , 0.9) | 3801.4<br>1604.4 | 0.7493<br>97.8<br>100.4 | 8.1800 | N/A | 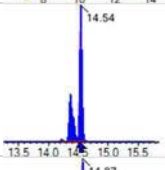 | 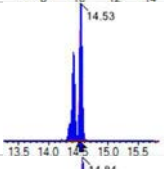 | |
| NEtFOSA | ( 526.0 / 219.0 )<br>1677657<br>( 526.0 / 169.0 )<br>2111654 | ( 14.87 , 1.00 )<br>( 0.01 , N/A , 2.0) | 4463.9<br>3395.0 | 1.2587<br>100.7<br>100.9 | 8.1110 | N/A | 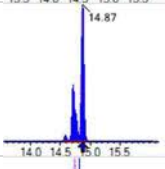 | 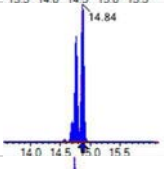 | |
| NMeFOSAA | ( 570.0 / 419.0 )<br>N/A<br>( 570.0 / 483.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 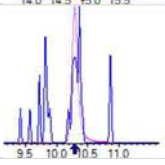 | 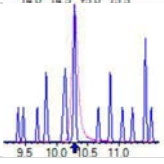 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (4)
Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 )<br>N/A<br>( 584.0 / 526.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 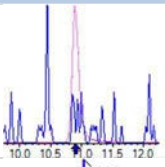 | 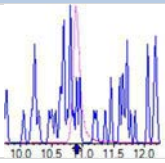 | |
| NMeFOSE | ( 616.0 / 59.0 )<br>690177 | ( 14.34 , 1.00 )<br>( 0.02 , N/A , 0.0) | 2050.6 | N/A<br>0.0<br>0.0 | 8.8410 | N/A | 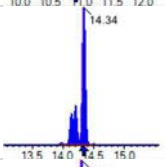 | | |
| NEtFOSE | ( 630.0 / 59.0 )<br>545168 | ( 14.71 , 1.00 )<br>( 0.03 , N/A , 0.0) | 2254.8 | N/A<br>0.0<br>0.0 | 9.3890 | N/A | 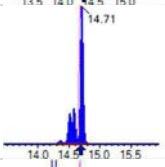 | | |
| HFPO-DA | ( 285.0 / 169.0 )<br>N/A<br>( 285.0 / 185.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 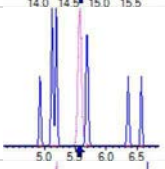 | 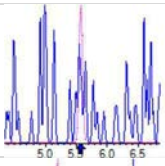 | |
| ADONA | ( 377.0 / 85.0 )<br>N/A<br>( 377.0 / 251.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 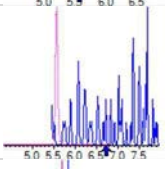 | 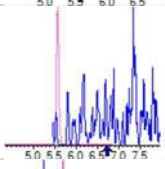 | |
| PFEESA | ( 315.0 / 135.0 )<br>N/A<br>( 315.0 / 83.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 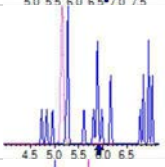 | 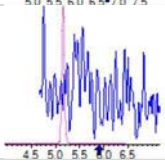 | |
| PFMPA | ( 229.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 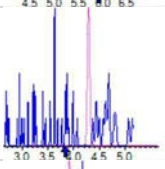 | | |
| PFMBA | ( 279.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 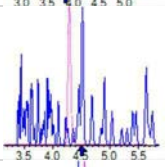 | | |
| NFDHA | ( 295.0 / 201.0 )<br>N/A<br>( 295.0 / 85.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 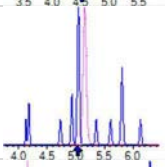 | 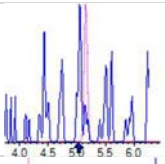 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 )<br>N/A<br>( 533.0 / 353.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 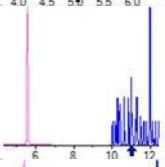 | 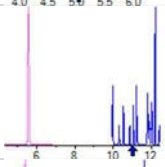 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 )<br>N/A<br>( 633.0 / 453.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 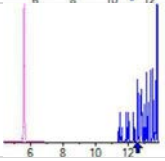 | 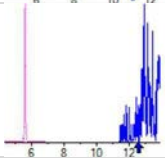 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (4)
Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) N/A<br>( 461.0 / 381.2 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 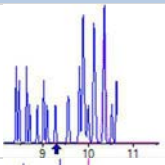 | 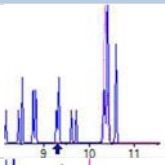 | |
| 3:3FTCA | ( 241.0 / 177.0 ) N/A<br>( 241.0 / 117.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 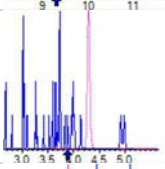 | 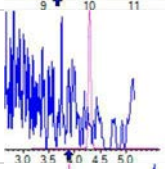 | |
| 5:3FTCA | ( 341.0 / 236.7 ) N/A<br>( 341.0 / 217.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 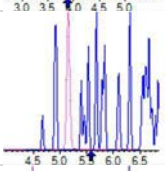 | 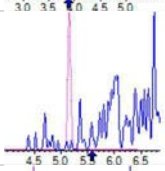 | |
| 7:3FTCA | ( 441.0 / 317.0 ) N/A<br>( 441.0 / 337.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 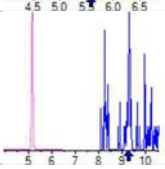 | 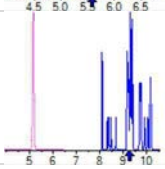 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) N/A<br>( 357.2 / 243.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 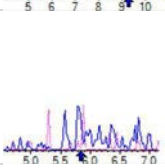 | 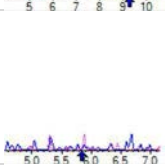 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) N/A<br>( 457.2 / 343.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 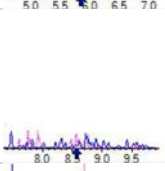 | 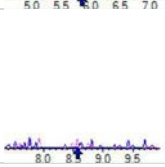 | NR, |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 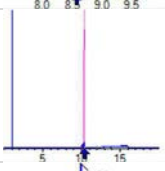 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 281153 | ( 3.59 , N/A ) ( N/A , 0.00 , N/A ) | 1472.1 | N/A | 0.9960 [ 1.0000 ] | 99.6% { 106.5% } | 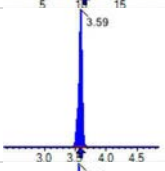 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 105835 | ( 5.16 , N/A ) ( N/A , 0.01 , N/A ) | 108949.6 | N/A | 0.8960 [ 1.0000 ] | 89.6% { 106.9% } | 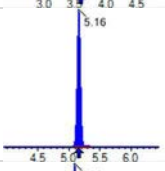 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 356463 | ( 7.39 , N/A ) ( N/A , 0.00 , N/A ) | 12357.6 | N/A | 0.9180 [ 1.0000 ] | 91.8% { 101.3% } | 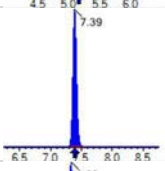 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 264587 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 1530.2 | N/A | 0.9060 [ 1.0000 ] | 90.6% { 110.4% } | 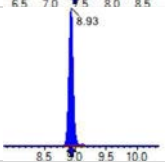 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (4)
Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 250358 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 1006271.2 | N/A | 0.8730 [ 1.0000 ] | 87.3% { 102.1% } | 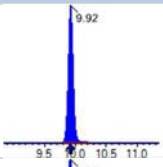 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 905357 | ( 8.02 , N/A ) ( N/A , 0.00 , N/A ) | 5694.8 | N/A | 0.9220 [ 1.0000 ] | 92.2% { 102.0% } | 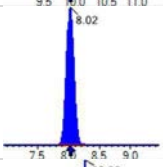 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 739594 | ( 10.36 , N/A ) ( N/A , 0.00 , N/A ) | 3389.8 | N/A | 0.9430 [ 1.0000 ] | 94.3% { 107.3% } | 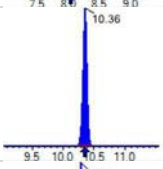 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2544268 | ( 3.59 , N/A ) ( N/A , 0.01 , N/A ) | 82023.2 | N/A | 8.3720 [ 8.0000 ] | 104.7% { 115.8% } | 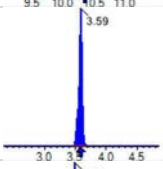 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 890718 | ( 4.29 , N/A ) ( N/A , 0.01 , N/A ) | 6909.3 | N/A | 4.5970 [ 4.0000 ] | 114.9% { 116.9% } | 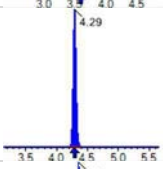 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 487288 | ( 5.16 , N/A ) ( N/A , 0.01 , N/A ) | 8719.9 | N/A | 2.1050 [ 2.0000 ] | 105.2% { 111.9% } | 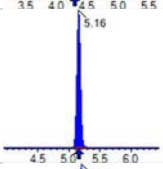 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 524647 | ( 6.29 , N/A ) ( N/A , 0.00 , N/A ) | 6881.6 | N/A | 2.0400 [ 2.0000 ] | 102.0% { 102.4% } | 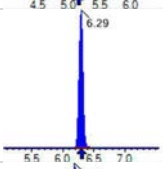 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 817250 | ( 7.39 , N/A ) ( N/A , 0.00 , N/A ) | 4841.0 | N/A | 2.1630 [ 2.0000 ] | 108.2% { 115.0% } | 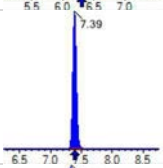 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 265186 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 6472.5 | N/A | 1.0150 [ 1.0000 ] | 101.5% { 112.8% } | 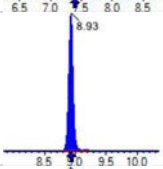 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 316315 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 1776.2 | N/A | 1.0930 [ 1.0000 ] | 109.3% { 112.8% } | 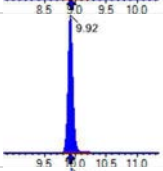 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 381361 | ( 10.83 , N/A ) ( N/A , 0.00 , N/A ) | 1076.3 | N/A | 1.1120 [ 1.0000 ] | 111.2% { 118.2% } | 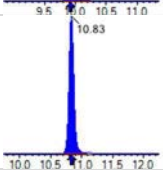 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 385503 | ( 11.73 , N/A ) ( N/A , 0.00 , N/A ) | 1718.2 | N/A | 1.0950 [ 1.0000 ] | 109.5% { 113.5% } | 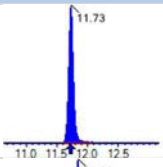  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 341994 | ( 13.04 , N/A ) ( N/A , 0.02 , N/A ) | 1336.1 | N/A | 1.0970 [ 1.0000 ] | 109.7% { 112.6% } | 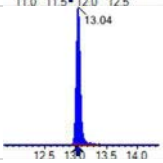  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 1409 | ( 13.95 , N/A ) ( N/A , 0.02 , N/A ) | 10.2 | N/A | 0.0050 [ 2.0000 ] | 0.3% { 0.3% } | 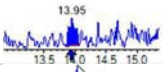  | | S1, |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1580923 | ( 5.33 , N/A ) ( N/A , 0.01 , N/A ) | 1352.7 | N/A | 2.1660 [ 2.0000 ] | 108.3% { 112.9% } | 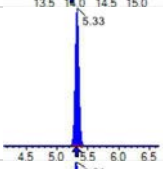  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1426840 | ( 8.01 , N/A ) ( N/A , -0.01 , N/A ) | 5940.2 | N/A | 2.1850 [ 2.0000 ] | 109.2% { 114.9% } | 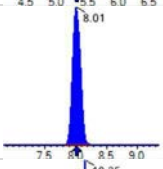  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1686818 | ( 10.35 , N/A ) ( N/A , 0.00 , N/A ) | 1821.5 | N/A | 2.1440 [ 2.0000 ] | 107.2% { 116.1% } | 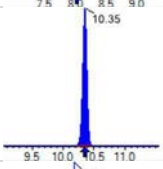  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 795232 | ( 4.79 , N/A ) ( N/A , 0.01 , N/A ) | 73.8 | N/A | 4.9540 [ 4.0000 ] | 123.8% { 127.5% } | 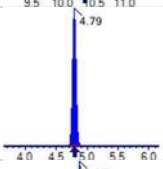  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2070537 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 7049.2 | N/A | 5.2500 [ 4.0000 ] | 131.3% { 126.5% } | 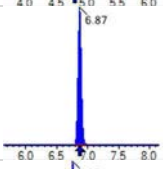  | | S2, |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1947483 | ( 9.25 , N/A ) ( N/A , 0.00 , N/A ) | 2574.1 | N/A | 5.6440 [ 4.0000 ] | 141.1% { 146.5% } | 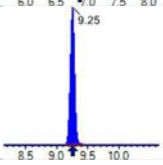  | | S2, |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 479 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 6.4 | N/A | 0.0010 [ 8.0000 ] | 0.0% { 0.0% } | 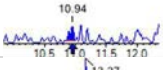  | | S1, |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1753457 | ( 13.27 , N/A ) ( N/A , 0.02 , N/A ) | 3407.9 | N/A | 2.0990 [ 2.0000 ] | 105.0% { 116.6% } | 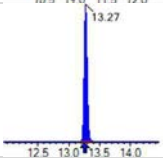  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: SD01122-PEM1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (4)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 12:19

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 400929 | ( 14.54 , N/A ) ( N/A , 0.02 , N/A ) | 2296.4 | N/A | 2.1350 [ 2.0000 ] | 106.7% { 117.8% } | 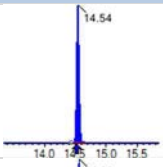  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 365201 | ( 14.86 , N/A ) ( N/A , 0.02 , N/A ) | 3667.3 | N/A | 2.1270 [ 2.0000 ] | 106.4% { 112.8% } | 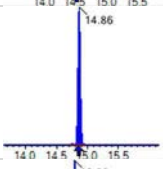  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1209228 | ( 10.29 , N/A ) ( N/A , 0.00 , N/A ) | 3378.8 | N/A | 4.4260 [ 4.0000 ] | 110.7% { 118.0% } | 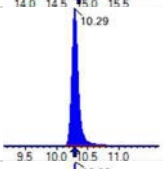  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1138999 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 2173.9 | N/A | 4.6190 [ 4.0000 ] | 115.5% { 124.7% } | 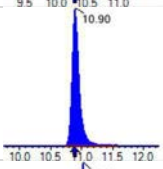  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 1442143 | ( 14.32 , N/A ) ( N/A , 0.02 , N/A ) | 2585.0 | N/A | 20.5540 [ 20.0000 ] | 102.8% { 116.6% } | 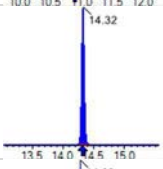  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 1219021 | ( 14.68 , N/A ) ( N/A , 0.02 , N/A ) | 4935.9 | N/A | 18.5510 [ 20.0000 ] | 92.8% { 112.3% } | 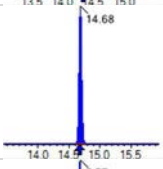  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 910205 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 2327.5 | N/A | 9.0750 [ 8.0000 ] | 113.4% { 116.3% } | 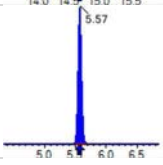  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 228 | ( 5.88 , N/A ) ( N/A , 0.04 , N/A ) | 16.4 | N/A | 0.0010 [ 2.0000 ] | 0.0% { 0.0% } | 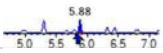  | | S1, |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A ) | N/A | N/A | 0.0000 [ 2.0000 ] | 0.0% { 0.0% } | 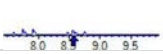 | | S1, |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: SD01122-PEM2
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (5)
Acquired: 2024/03/29 - 12:40

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFOS | ( 499.0 / 80.0 ) 29243<br>( 499.0 / 99.0 ) N/A | ( 9.73 , 0.94 ) ( -0.63 , N/A , #Value!) | 17.7 | N/A<br>0.0<br>0.0 | 0.0310 | N/A | 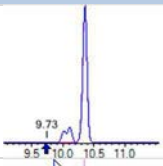 | 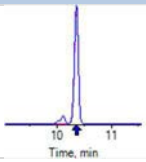 | |
| TDCA | ( 499.0 / 80.0 ) 6727776 | ( 6.48 , 0.63 ) ( N/A , #Value! , 0.0) | 49459.2 | N/A<br>0.0<br>0.0 | 10.6800 | N/A | 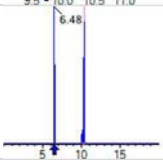 | | |

$$R.\ .PFOS - R.T.TDCA\ >\ 1\ minute$$

9.73 - 6.48 = 3.25 Pass

# QUALITY CONTROL RAW DATA

# FORM IR
# ANALYSIS DATA SHEETR

## Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-BLK1a | File ID:a | S2024-03-29A (7)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 13:21a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | NDa | 0.21a | 1.6a | Ua |
| PFPeAa | NDa | 0.065a | 0.80a | Ua |
| PFHxAa | NDa | 0.055a | 0.40a | Ua |
| PFHpAa | NDa | 0.041a | 0.40a | Ua |
| PFOAa | 0.256a | 0.15a | 0.40a | Ja |
| PFNAa | NDa | 0.082a | 0.40a | Ua |
| PFDAa | NDa | 0.10a | 0.40a | Ua |
| PFUnAa | NDa | 0.16a | 0.40a | Ua |
| PFDoAa | NDa | 0.11a | 0.40a | Ua |
| PFTrDAa | NDa | 0.20a | 0.40a | Ua |
| PFTeDAa | NDa | 0.20a | 0.40a | Ua |
| PFHxDAa | NDa | 0.20a | 0.40a | Ua |
| PFODAa | NDa | 0.20a | 0.40a | Ua |
| PFBSa | NDa | 0.037a | 0.40a | Ua |
| PFPeSa | NDa | 0.063a | 0.40a | Ua |
| PFHxSa | NDa | 0.032a | 0.40a | Ua |
| PFHpSa | NDa | 0.051a | 0.40a | Ua |
| PFOSa | 0.0956a | 0.064a | 0.40a | MI2, Ja |
| PFNSa | NDa | 0.12a | 0.40a | Ua |
| PFDSa | NDa | 0.15a | 0.40a | Ua |
| PFDoSa | NDa | 0.12a | 0.40a | Ua |
| 4:2FTSa | NDa | 0.29a | 1.6a | Ua |
| 6:2FTSa | NDa | 0.31a | 1.6a | Ua |
| 8:2FTSa | NDa | 0.082a | 1.6a | Ua |
| 10:2FTSa | NDa | 0.40a | 1.6a | Ua |
| PFOSAa | NDa | 0.10a | 0.40a | Ua |
| NMeFOSAa | NDa | 0.47a | 1.6a | Ua |
| NEtFOSAa | NDa | 0.41a | 1.6a | Ua |
| NMeFOSAAa | NDa | 0.11a | 0.40a | Ua |
| NEtFOSAAa | NDa | 0.11a | 0.40a | Ua |

# FORM IR
# ANALYSIS DATA SHEETR

Blanka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-BLK1a | File ID:a | S2024-03-29A (7)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 13:21a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | NDa | 1.0a | 1.6a | Ua |
| NEtFOSEa | NDa | 1.0a | 1.6a | Ua |
| HFPO-DAa | NDa | 0.17a | 0.80a | Ua |
| ADONAa | NDa | 0.12a | 0.80a | Ua |
| PFEESAa | NDa | 0.11a | 0.80a | Ua |
| PFMPAa | NDa | 0.054a | 0.80a | Ua |
| PFMBAa | NDa | 0.091a | 0.80a | Ua |
| NFDHAa | NDa | 0.30a | 0.80a | Ua |
| 9Cl-PF3ONSa | NDa | 0.21a | 0.80a | Ua |
| 11Cl-PF3OUDSa | NDa | 0.21a | 0.80a | Ua |
| 3:3FTCAa | NDa | 0.57a | 1.6a | Ua |
| 5:3FTCAa | NDa | 0.44a | 1.6a | Ua |
| 7:3FTCAa | NDa | 0.55a | 1.6a | Ua |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 )<br>16630<br>( 163.0 / 69.0 )<br>726 | ( 2.43 , 0.68 )<br>( N/A , 0.02 , 0.6) | 93.5<br>57.0 | 0.0436<br>159.2<br>161.4 | 0.2400 | N/A | 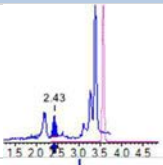 | 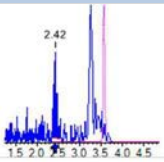 | |
| PFBA | ( 213.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 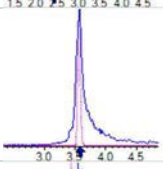 | | |
| PFPeA | ( 263.0 / 219.0 )<br>N/A<br>( 263.0 / 69.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 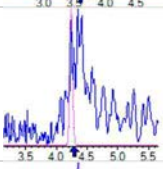 | 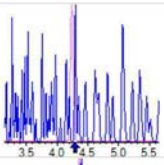 | |
| PFHxA | ( 313.0 / 269.0 )<br>N/A<br>( 313.0 / 119.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 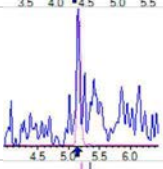 | 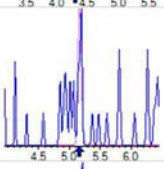 | |
| PFHpA | ( 363.0 / 319.0 )<br>N/A<br>( 363.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 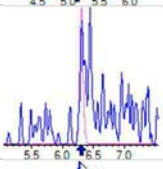 | 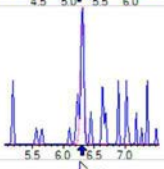 | |
| PFOA | ( 413.0 / 369.0 )<br>25044<br>( 413.0 / 169.0 )<br>9611 | ( 7.42 , 1.00 )<br>( 0.00 , N/A , 0.0) | 51.2<br>86.2 | 0.3838<br>107.4<br>111.4 | 0.0640 | N/A | 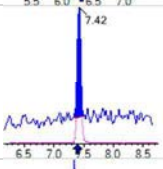 | 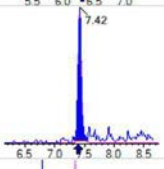 | |
| PFNA | ( 463.0 / 419.0 )<br>N/A<br>( 463.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 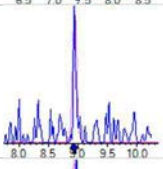 | 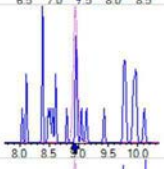 | |
| PFDA | ( 513.0 / 469.0 )<br>N/A<br>( 513.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 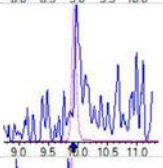 | 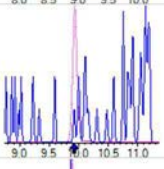 | |
| PFUnA | ( 563.0 / 519.0 )<br>N/A<br>( 563.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 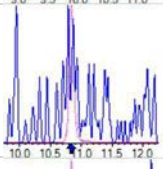 | 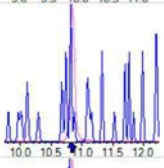 | |
| PFDoA | ( 613.0 / 569.0 )<br>N/A<br>( 613.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 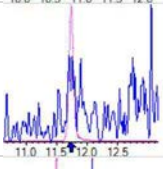 | 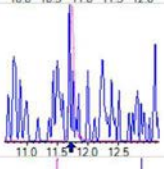 | |
| PFTrDA | ( 663.0 / 619.0 )<br>N/A<br>( 663.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 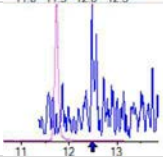 | 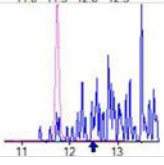 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 )<br>N/A<br>( 713.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 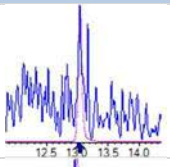 | 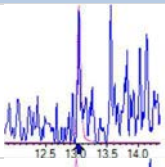 | |
| PFHxDA | ( 813.0 / 769.0 )<br>N/A<br>( 813.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 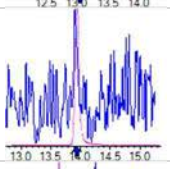 | 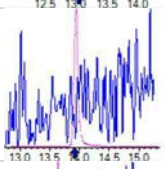 | |
| PFODA | ( 913.0 / 869.0 )<br>N/A<br>( 913.0 / 169.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 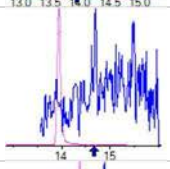 | 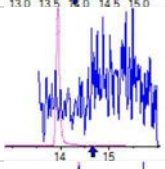 | |
| PFBS | ( 299.0 / 80.0 )<br>N/A<br>( 299.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 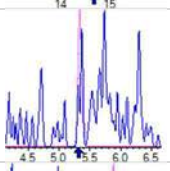 | 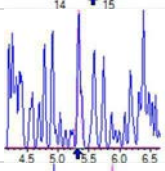 | |
| PFPeS | ( 349.0 / 80.0 )<br>N/A<br>( 349.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 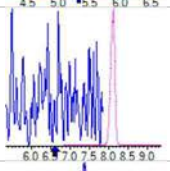 | 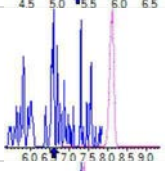 | |
| PFHxS | ( 399.0 / 80.0 )<br>N/A<br>( 399.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 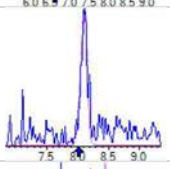 | 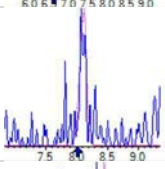 | |
| PFHpS | ( 449.0 / 80.0 )<br>N/A<br>( 449.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 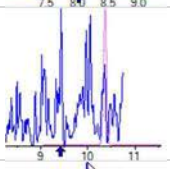 | 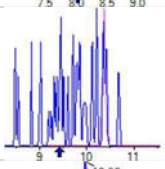 | |
| PFOS | ( 499.0 / 80.0 )<br>22831<br>( 499.0 / 99.0 )<br>3863 | ( 10.36 , 1.00 )<br>( 0.00 , N/A , 0.0) | 112.3<br>1501.7 | 0.1692<br>73.2<br>75.2 | 0.0240 | N/A | 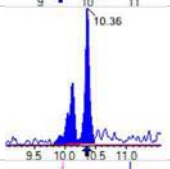 | 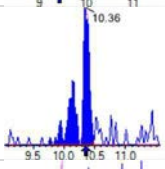 | MI2 DG<br>2024-03-29 |
| PFNS | ( 549.0 / 80.0 )<br>N/A<br>( 549.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 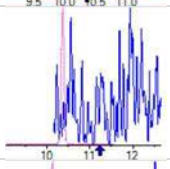 | 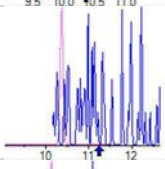 | |
| PFDS | ( 599.0 / 80.0 )<br>N/A<br>( 599.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 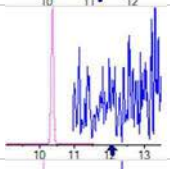 | 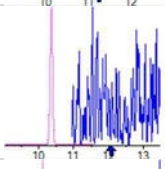 | |
| PFDoS | ( 699.0 / 80.0 )<br>N/A<br>( 699.0 / 99.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 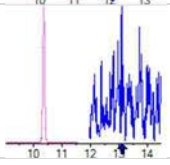 | 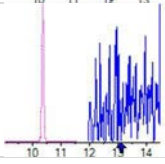 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) N/A<br>( 327.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 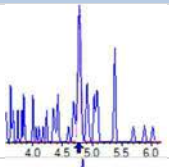 | 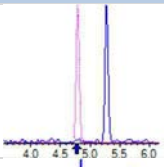 | |
| 6:2FTS | ( 427.0 / 407.0 ) N/A<br>( 427.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 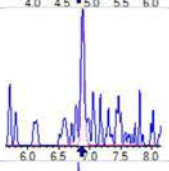 | 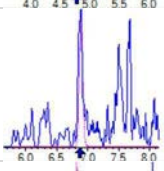 | |
| 8:2FTS | ( 527.0 / 507.0 ) N/A<br>( 527.0 / 81.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 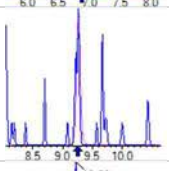 | 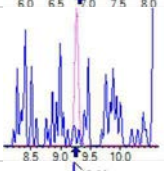 | |
| 10:2FTS | ( 627.0 / 607.0 ) 20593<br>( 627.0 / 81.0 ) 26029 | ( 10.98 , 1.00 ) ( 0.01 , N/A , 0.2) | 243.9<br>117.8 | 1.2640<br>87.9<br>87.5 | 0.0590 | N/A | 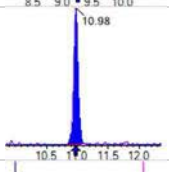 | 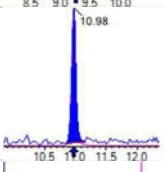 | |
| PFBSA | ( 297.9 / 78.0 ) N/A<br>( 297.9 / 278.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 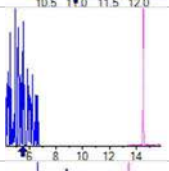 | 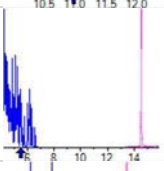 | |
| PFHxSA | ( 397.9 / 78.0 ) N/A<br>( 397.9 / 378.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 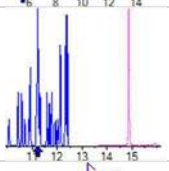 | 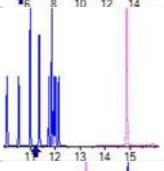 | |
| PFOSA | ( 498.0 / 78.0 ) 9726<br>( 498.0 / 478.0 ) N/A | ( 13.27 , 1.00 ) ( -0.01 , N/A , #Value!) | 112.6<br>N/A | N/A<br>0.0<br>0.0 | 0.0220 | N/A | 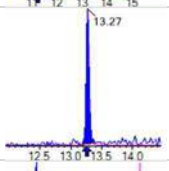 | 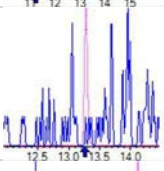 | |
| TFSI | ( 279.7 / 147.0 ) N/A<br>( 279.7 / 211.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 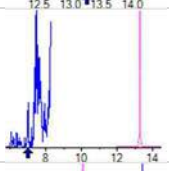 | 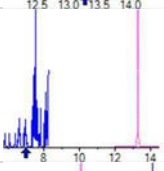 | |
| NMeFOSA | ( 512.0 / 219.0 ) N/A<br>( 512.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 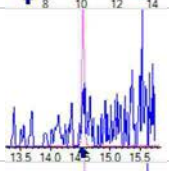 | 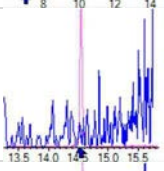 | |
| NEtFOSA | ( 526.0 / 219.0 ) N/A<br>( 526.0 / 169.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 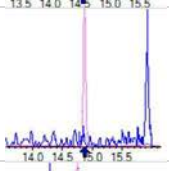 | 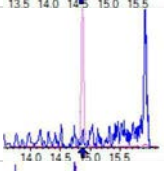 | |
| NMeFOSAA | ( 570.0 / 419.0 ) N/A<br>( 570.0 / 483.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 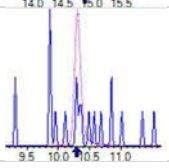 | 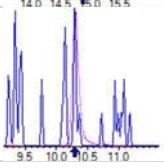 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) N/A<br>( 584.0 / 526.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 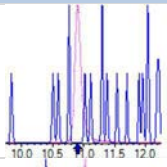 | 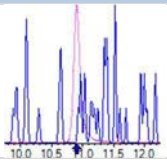 | |
| NMeFOSE | ( 616.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 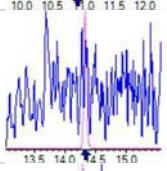 | | |
| NEtFOSE | ( 630.0 / 59.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 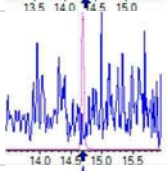 | | |
| HFPO-DA | ( 285.0 / 169.0 ) N/A<br>( 285.0 / 185.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 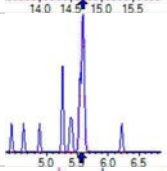 | 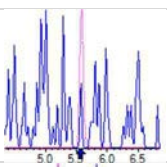 | |
| ADONA | ( 377.0 / 85.0 ) N/A<br>( 377.0 / 251.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 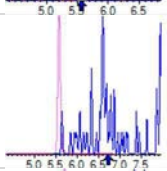 | 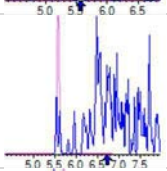 | |
| PFEESA | ( 315.0 / 135.0 ) N/A<br>( 315.0 / 83.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 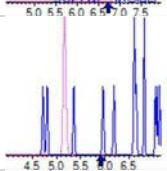 | 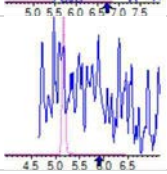 | |
| PFMPA | ( 229.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 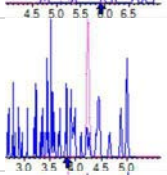 | | |
| PFMBA | ( 279.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 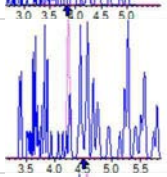 | | |
| NFDHA | ( 295.0 / 201.0 ) N/A<br>( 295.0 / 85.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 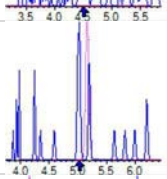 | 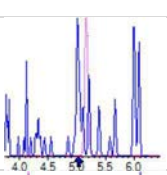 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) N/A<br>( 533.0 / 353.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 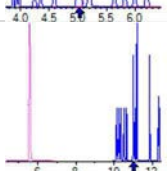 | 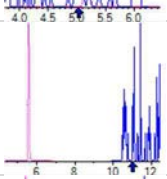 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) N/A<br>( 633.0 / 453.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 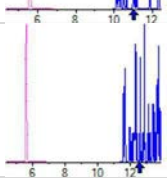 | 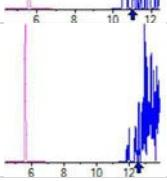 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 )<br>N/A<br>( 461.0 / 381.2 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 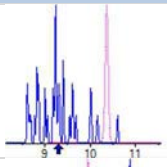 | 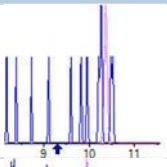 | |
| 3:3FTCA | ( 241.0 / 177.0 )<br>N/A<br>( 241.0 / 117.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 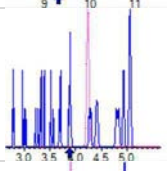 | 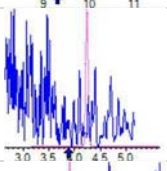 | |
| 5:3FTCA | ( 341.0 / 236.7 )<br>N/A<br>( 341.0 / 217.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 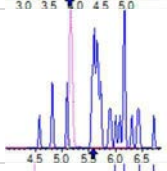 | 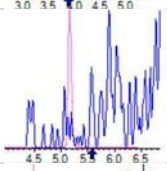 | |
| 7:3FTCA | ( 441.0 / 317.0 )<br>N/A<br>( 441.0 / 337.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 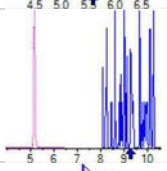 | 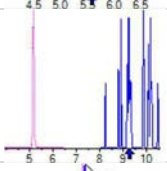 | |
| 6:2FTUCA | ( 357.2 / 293.0 )<br>4801<br>( 357.2 / 243.0 )<br>895 | ( 5.84 , 1.00 )<br>( -0.01 , N/A , -2.6) | 45.7<br>16.4 | 0.1864<br>173.8<br>169.2 | 0.0150 | N/A | 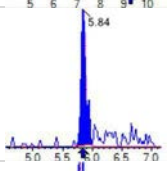 | 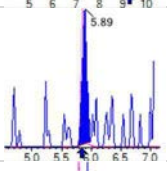 | |
| 8:2FTUCA | ( 457.2 / 393.0 )<br>N/A<br>( 457.2 / 343.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A<br>N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 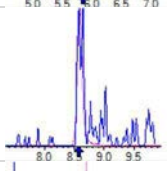 | 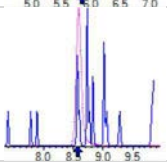 | |
| TDCA | ( 499.0 / 80.0 )<br>N/A | ( N/A , N/A )<br>( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000 | N/A | 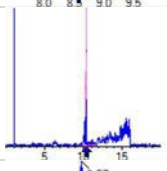 | | |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 )<br>286973 | ( 3.57 , N/A )<br>( N/A , -0.02 , N/A ) | 2174.2 | N/A | 1.0170<br>[ 1.0000 ] | 101.7%<br>{ 108.7% } | 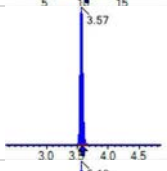 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 )<br>108277 | ( 5.16 , N/A )<br>( N/A , 0.01 , N/A ) | 10687689.2 | N/A | 0.9170<br>[ 1.0000 ] | 91.7%<br>{ 109.4% } | 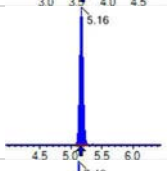 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 )<br>366406 | ( 7.42 , N/A )<br>( N/A , 0.03 , N/A ) | 13400.8 | N/A | 0.9440<br>[ 1.0000 ] | 94.4%<br>{ 104.1% } | 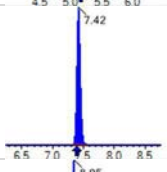 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 )<br>264677 | ( 8.95 , N/A )<br>( N/A , 0.01 , N/A ) | 1776.2 | N/A | 0.9060<br>[ 1.0000 ] | 90.6%<br>{ 110.4% } | 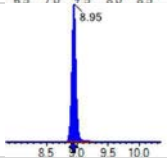 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 274513 | ( 9.93 , N/A ) ( N/A , 0.01 , N/A ) | 74665.3 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 111.9% } | 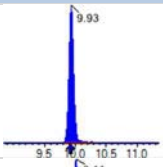 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 954182 | ( 8.11 , N/A ) ( N/A , 0.09 , N/A ) | 5516.1 | N/A | 0.9720 [ 1.0000 ] | 97.2% { 107.5% } | 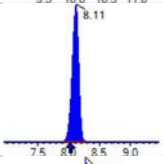 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 779425 | ( 10.37 , N/A ) ( N/A , 0.01 , N/A ) | 3507.3 | N/A | 0.9940 [ 1.0000 ] | 99.4% { 113.1% } | 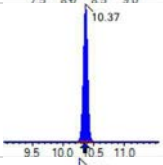 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2454230 | ( 3.57 , N/A ) ( N/A , -0.02 , N/A ) | 103995.7 | N/A | 7.9120 [ 8.0000 ] | 98.9% { 111.7% } | 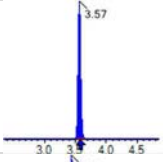 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 856318 | ( 4.24 , N/A ) ( N/A , -0.05 , N/A ) | 6055.5 | N/A | 4.3200 [ 4.0000 ] | 108.0% { 112.4% } | 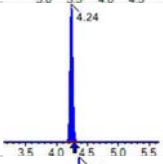 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 408557 | ( 5.16 , N/A ) ( N/A , 0.01 , N/A ) | 13243.7 | N/A | 1.7250 [ 2.0000 ] | 86.2% { 93.8% } | 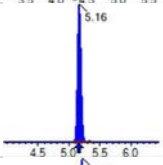 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 561233 | ( 6.30 , N/A ) ( N/A , 0.02 , N/A ) | 6750.3 | N/A | 2.1330 [ 2.0000 ] | 106.7% { 109.6% } | 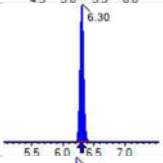 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 780688 | ( 7.42 , N/A ) ( N/A , 0.03 , N/A ) | 5187.7 | N/A | 2.0100 [ 2.0000 ] | 100.5% { 109.9% } | 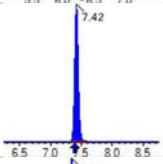 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 267999 | ( 8.94 , N/A ) ( N/A , 0.01 , N/A ) | 3962.0 | N/A | 1.0260 [ 1.0000 ] | 102.6% { 114.0% } | 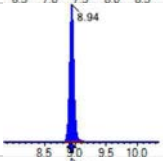 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 324132 | ( 9.93 , N/A ) ( N/A , 0.01 , N/A ) | 1709.3 | N/A | 1.0220 [ 1.0000 ] | 102.2% { 115.6% } | 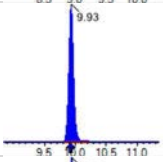 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 359328 | ( 10.84 , N/A ) ( N/A , 0.01 , N/A ) | 1004.3 | N/A | 0.9550 [ 1.0000 ] | 95.5% { 111.4% } | 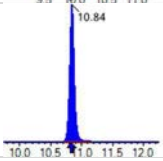 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0363-BLK1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (7)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 377898 | ( 11.74 , N/A ) ( N/A , 0.01 , N/A ) | 1633.0 | N/A | 0.9790 [ 1.0000 ] | 97.9% { 111.2% } | 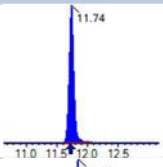 | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 320783 | ( 13.04 , N/A ) ( N/A , 0.01 , N/A ) | 1157.7 | N/A | 0.9390 [ 1.0000 ] | 93.9% { 105.6% } | 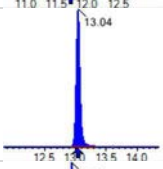 | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 361210 | ( 13.94 , N/A ) ( N/A , 0.02 , N/A ) | 1963.7 | N/A | 1.2630 [ 2.0000 ] | 63.2% { 84.7% } | 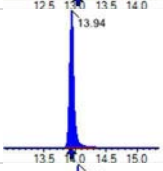 | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1555819 | ( 5.34 , N/A ) ( N/A , 0.02 , N/A ) | 1593.1 | N/A | 2.0230 [ 2.0000 ] | 101.1% { 111.1% } | 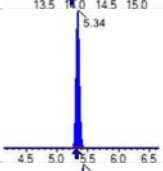 | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1359253 | ( 8.11 , N/A ) ( N/A , 0.09 , N/A ) | 5506.3 | N/A | 1.9750 [ 2.0000 ] | 98.7% { 109.4% } | 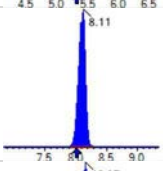 | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1646561 | ( 10.37 , N/A ) ( N/A , 0.01 , N/A ) | 3225.5 | N/A | 1.9860 [ 2.0000 ] | 99.3% { 113.3% } | 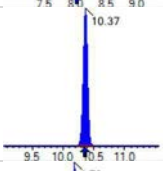 | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 819275 | ( 4.79 , N/A ) ( N/A , 0.01 , N/A ) | 68.4 | N/A | 4.8420 [ 4.0000 ] | 121.1% { 131.4% } | 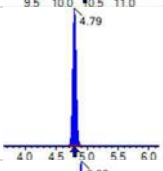 | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2000697 | ( 6.89 , N/A ) ( N/A , 0.02 , N/A ) | 7003.4 | N/A | 4.8140 [ 4.0000 ] | 120.3% { 122.2% } | 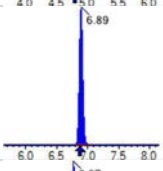 | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1768393 | ( 9.27 , N/A ) ( N/A , 0.02 , N/A ) | 2298.2 | N/A | 4.8630 [ 4.0000 ] | 121.6% { 133.1% } | 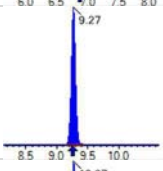 | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3523578 | ( 10.97 , N/A ) ( N/A , 0.01 , N/A ) | 1798.0 | N/A | 8.9560 [ 8.0000 ] | 112.0% { 130.2% } | 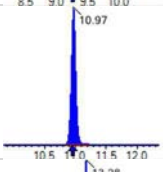 | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 904108 | ( 13.28 , N/A ) ( N/A , 0.02 , N/A ) | 2918.3 | N/A | 1.0270 [ 2.0000 ] | 51.4% { 60.1% } | 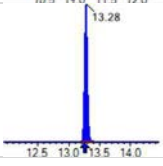 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BLK1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (7)
Acquired: 2024/03/29 - 13:21

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 124406 | ( 14.54 , N/A ) ( N/A , 0.02 , N/A ) | 828.9 | N/A | 0.6290 [ 2.0000 ] | 31.4% { 36.6% } | 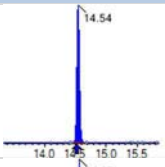 | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 126809 | ( 14.87 , N/A ) ( N/A , 0.02 , N/A ) | 1229.0 | N/A | 0.7010 [ 2.0000 ] | 35.0% { 39.2% } | 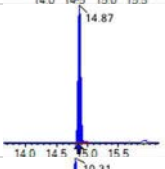 | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1158666 | ( 10.31 , N/A ) ( N/A , 0.01 , N/A ) | 3069.0 | N/A | 4.0240 [ 4.0000 ] | 100.6% { 113.0% } | 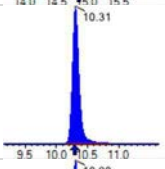 | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1080965 | ( 10.90 , N/A ) ( N/A , 0.01 , N/A ) | 2233.5 | N/A | 4.1600 [ 4.0000 ] | 104.0% { 118.4% } | 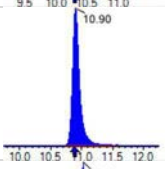 | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 593920 | ( 14.33 , N/A ) ( N/A , 0.02 , N/A ) | 1636.1 | N/A | 8.0320 [ 20.0000 ] | 40.2% { 48.0% } | 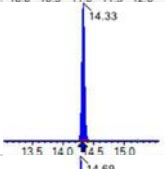 | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 621826 | ( 14.69 , N/A ) ( N/A , 0.02 , N/A ) | 3062.4 | N/A | 8.9800 [ 20.0000 ] | 44.9% { 57.3% } | 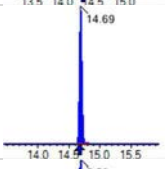 | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 804975 | ( 5.58 , N/A ) ( N/A , 0.02 , N/A ) | 2604.3 | N/A | 7.8450 [ 8.0000 ] | 98.1% { 102.9% } | 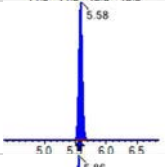 | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 627614 | ( 5.86 , N/A ) ( N/A , 0.02 , N/A ) | 2602.0 | N/A | 2.0980 [ 2.0000 ] | 104.9% { 124.0% } | 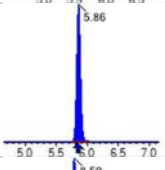 | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 600786 | ( 8.59 , N/A ) ( N/A , 0.02 , N/A ) | 1267.2 | N/A | 1.7830 [ 2.0000 ] | 89.1% { 102.6% } | 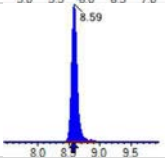 | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-BS1a | File ID:a | S2024-03-29A (8)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 13:41a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| PFBAa | 16.8a | 0.21a | 1.6a | |
| PFPeAa | 7.40a | 0.065a | 0.80a | |
| PFHxAa | 3.60a | 0.055a | 0.40a | |
| PFHpAa | 3.71a | 0.041a | 0.40a | |
| PFOAa | 3.93a | 0.15a | 0.40a | |
| PFNAa | 3.65a | 0.082a | 0.40a | |
| PFDAa | 3.50a | 0.10a | 0.40a | |
| PFUnAa | 3.83a | 0.16a | 0.40a | |
| PFDoAa | 3.80a | 0.11a | 0.40a | |
| PFTrDAa | 3.59a | 0.20a | 0.40a | |
| PFTeDAa | 3.79a | 0.20a | 0.40a | |
| PFHxDAa | 3.81a | 0.20a | 0.40a | |
| PFODAa | 3.61a | 0.20a | 0.40a | |
| PFBSa | 3.17a | 0.037a | 0.40a | |
| PFPeSa | 3.46a | 0.063a | 0.40a | |
| PFHxSa | 3.25a | 0.032a | 0.40a | MI5a |
| PFHpSa | 3.71a | 0.051a | 0.40a | |
| PFOSa | 3.57a | 0.064a | 0.40a | |
| PFNSa | 3.72a | 0.12a | 0.40a | |
| PFDSa | 3.77a | 0.15a | 0.40a | |
| PFDoSa | 3.46a | 0.12a | 0.40a | |
| 4:2FTSa | 13.8a | 0.29a | 1.6a | |
| 6:2FTSa | 12.8a | 0.31a | 1.6a | |
| 8:2FTSa | 13.9a | 0.082a | 1.6a | |
| 10:2FTSa | 17.0a | 0.40a | 1.6a | |
| PFOSAa | 4.04a | 0.10a | 0.40a | |
| NMeFOSAa | 16.2a | 0.47a | 1.6a | |
| NEtFOSAa | 15.2a | 0.41a | 1.6a | |
| NMeFOSAAa | 3.67a | 0.11a | 0.40a | |
| NEtFOSAAa | | | | |

# FORM IR
# ANALYSIS DATA SHEETR

LCSa

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-BS1a | File ID:a | S2024-03-29A (8)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 13:41a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019 |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | L | Q |
|---|---|---|---|---|
| NMeFOSEa | 13.1a | 1.0a | 1.6a | |
| NEtFOSEa | 15.2a | 1.0a | 1.6a | |
| HFPO-DAa | 3.88a | 0.17a | 0.80a | |
| ADONAa | 3.74a | 0.12a | 0.80a | |
| PFEESAa | 7.07a | 0.11a | 0.80a | |
| PFMPAa | 7.02a | 0.054a | 0.80a | |
| PFMBAa | 7.25a | 0.091a | 0.80a | |
| NFDHAa | 7.31a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 3.55a | 0.21a | 0.80a | |
| 11Cl-PF3OUDSa | 3.83a | 0.21a | 0.80a | |
| 3:3FTCAa | 12.3a | 0.57a | 1.6a | |
| 5:3FTCAa | 13.8a | 0.44a | 1.6a | |
| 7:3FTCAa | 13.6a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 270009<br>( 163.0 / 69.0 ) 7402 | ( 2.42 , 0.67 ) ( N/A , 0.01 , -0.1) | 1209.9<br>414.3 | 0.0274<br>100.0<br>101.4 | 3.9230<br>[ 2.0000 ] | 196.1% | 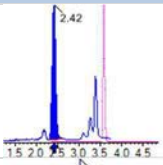 | 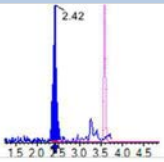 | BS2, |
| PFBA | ( 213.0 / 169.0 ) 1363981 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 1164.3 | N/A<br>0.0<br>0.0 | 4.1990<br>[ 4.0000 ] | 105.0% | 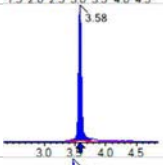 | | |
| PFPeA | ( 263.0 / 219.0 ) 408123<br>( 263.0 / 69.0 ) 4390 | ( 4.27 , 1.00 ) ( 0.00 , N/A , 0.3) | 1525.5<br>88.9 | 0.0108<br>90.4<br>92.8 | 1.8490<br>[ 2.0000 ] | 92.4% | 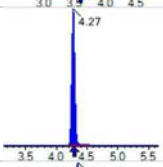 | 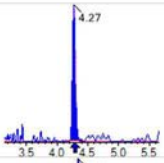 | |
| PFHxA | ( 313.0 / 269.0 ) 202893<br>( 313.0 / 119.0 ) 25177 | ( 5.15 , 1.00 ) ( 0.00 , N/A , 0.1) | 998.0<br>576.9 | 0.1241<br>111.6<br>106.3 | 0.8990<br>[ 1.0000 ] | 89.9% | 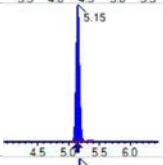 | 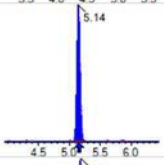 | |
| PFHpA | ( 363.0 / 319.0 ) 257968<br>( 363.0 / 169.0 ) 82749 | ( 6.27 , 1.00 ) ( 0.00 , N/A , -0.1) | 1136.7<br>1109.6 | 0.3208<br>105.0<br>98.9 | 0.9270<br>[ 1.0000 ] | 92.7% | 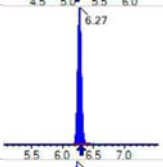 | 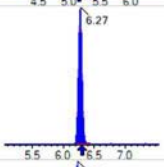 | |
| PFOA | ( 413.0 / 369.0 ) 406939<br>( 413.0 / 169.0 ) 140331 | ( 7.38 , 1.00 ) ( 0.00 , N/A , 0.0) | 533.6<br>733.0 | 0.3448<br>96.5<br>100.1 | 0.9830<br>[ 1.0000 ] | 98.3% | 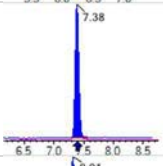 | 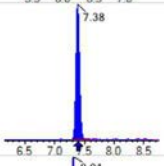 | |
| PFNA | ( 463.0 / 419.0 ) 249320<br>( 463.0 / 169.0 ) 59280 | ( 8.91 , 1.00 ) ( 0.00 , N/A , 0.3) | 1235.8<br>662.9 | 0.2378<br>96.8<br>90.3 | 0.9130<br>[ 1.0000 ] | 91.3% | 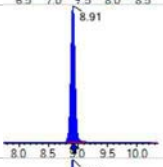 | 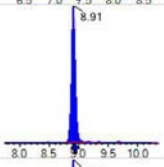 | |
| PFDA | ( 513.0 / 469.0 ) 271378<br>( 513.0 / 169.0 ) 31357 | ( 9.90 , 1.00 ) ( 0.00 , N/A , 0.0) | 1868.2<br>1491.5 | 0.1155<br>97.0<br>91.4 | 0.8740<br>[ 1.0000 ] | 87.4% | 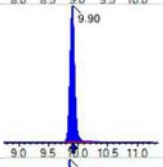 | 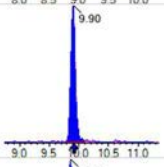 | |
| PFUnA | ( 563.0 / 519.0 ) 314713<br>( 563.0 / 169.0 ) 44417 | ( 10.81 , 1.00 ) ( 0.00 , N/A , 0.0) | 1017.8<br>496.3 | 0.1411<br>91.1<br>92.1 | 0.9580<br>[ 1.0000 ] | 95.8% | 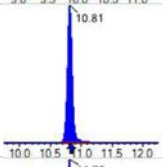 | 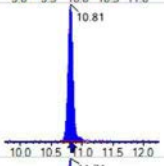 | |
| PFDoA | ( 613.0 / 569.0 ) 348394<br>( 613.0 / 169.0 ) 47548 | ( 11.70 , 1.00 ) ( 0.00 , N/A , -0.3) | 1289.3<br>397.2 | 0.1365<br>89.9<br>88.1 | 0.9510<br>[ 1.0000 ] | 95.1% | 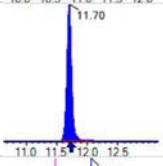 | 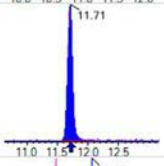 | |
| PFTrDA | ( 663.0 / 619.0 ) 320080<br>( 663.0 / 169.0 ) 87586 | ( 12.46 , 1.06 ) ( N/A , -0.01 , 0.2) | 1136.4<br>695.4 | 0.2736<br>101.6<br>103.0 | 0.8980<br>[ 1.0000 ] | 89.8% | 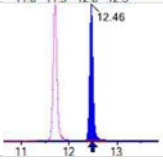 | 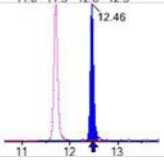 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 262623<br>( 713.0 / 169.0 ) 69659 | ( 13.02 , 1.00 ) ( 0.00 , N/A , 0.2) | 1047.1<br>562.1 | 0.2652<br>97.7<br>107.1 | 0.9460<br>[ 1.0000 ] | 94.6% | 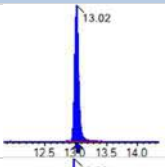 | 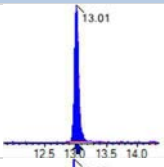 | |
| PFHxDA | ( 813.0 / 769.0 ) 156870<br>( 813.0 / 169.0 ) 40665 | ( 13.92 , 1.00 ) ( 0.00 , N/A , 0.0) | 790.0<br>247.4 | 0.2592<br>99.1<br>97.0 | 0.9530<br>[ 1.0000 ] | 95.3% | 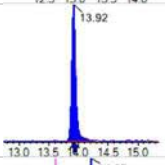 | 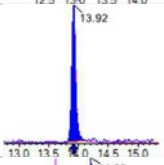 | |
| PFODA | ( 913.0 / 869.0 ) 94139<br>( 913.0 / 169.0 ) 29159 | ( 14.65 , 1.05 ) ( N/A , -0.01 , 0.2) | 399.8<br>131.5 | 0.3097<br>98.8<br>99.4 | 0.9030<br>[ 1.0000 ] | 90.3% | 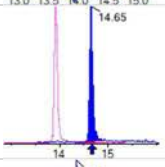 | 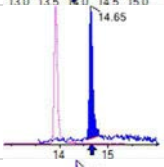 | |
| PFBS | ( 299.0 / 80.0 ) 292005<br>( 299.0 / 99.0 ) 215135 | ( 5.32 , 1.00 ) ( 0.00 , N/A , 0.1) | 1159.0<br>1039.6 | 0.7367<br>99.5<br>98.5 | 0.7930<br>[ 0.8850 ] | 89.6% | 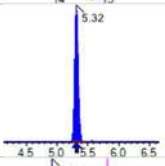 | 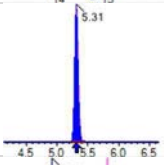 | |
| PFPeS | ( 349.0 / 80.0 ) 883684<br>( 349.0 / 99.0 ) 320992 | ( 6.59 , 0.82 ) ( N/A , -0.01 , 0.0) | 2197.0<br>2245.6 | 0.3632<br>106.3<br>104.0 | 0.8660<br>[ 0.9380 ] | 92.3% | 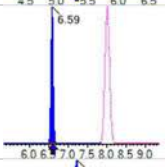 | 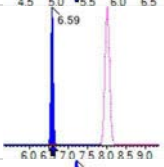 | |
| PFHxS | ( 399.0 / 80.0 ) 1010985<br>( 399.0 / 99.0 ) 326060 | ( 8.02 , 1.00 ) ( 0.00 , N/A , 0.0) | 1606.9<br>2035.2 | 0.3225<br>98.3<br>100.5 | 0.8130<br>[ 0.9110 ] | 89.2% | 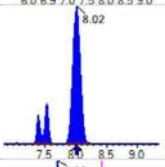 | 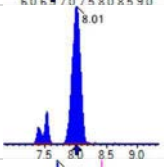 | MI5 DG 2024-04-01 |
| PFHpS | ( 449.0 / 80.0 ) 884482<br>( 449.0 / 99.0 ) 224604 | ( 9.39 , 0.91 ) ( N/A , -0.02 , 0.2) | 2247.0<br>1420.6 | 0.2539<br>97.3<br>94.3 | 0.9290<br>[ 0.9510 ] | 97.6% | 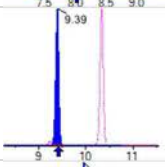 | 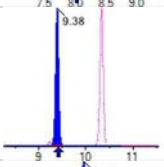 | |
| PFOS | ( 499.0 / 80.0 ) 825516<br>( 499.0 / 99.0 ) 189013 | ( 10.33 , 1.00 ) ( 0.00 , N/A , 0.1) | 1129.8<br>4402.6 | 0.2290<br>99.1<br>101.8 | 0.8920<br>[ 0.9270 ] | 96.2% | 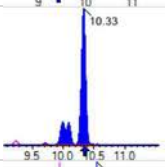 | 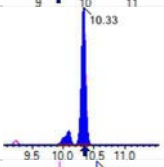 | |
| PFNS | ( 549.0 / 80.0 ) 784308<br>( 549.0 / 99.0 ) 213380 | ( 11.21 , 1.08 ) ( N/A , -0.02 , 0.0) | 1924.4<br>1509.5 | 0.2721<br>101.5<br>95.7 | 0.9300<br>[ 0.9600 ] | 96.8% | 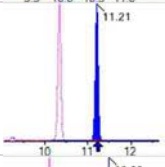 | 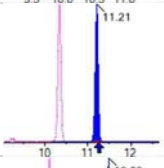 | |
| PFDS | ( 599.0 / 80.0 ) 972531<br>( 599.0 / 99.0 ) 258001 | ( 12.03 , 1.16 ) ( N/A , -0.02 , 0.2) | 2779.5<br>1397.0 | 0.2653<br>104.2<br>103.9 | 0.9430<br>[ 0.9630 ] | 97.9% | 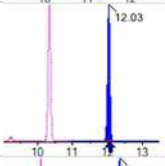 | 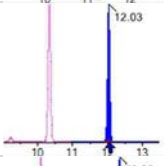 | |
| PFDoS | ( 699.0 / 80.0 ) 863308<br>( 699.0 / 99.0 ) 211261 | ( 13.08 , 1.27 ) ( N/A , -0.01 , 0.0) | 2884.9<br>1894.1 | 0.2447<br>109.5<br>102.6 | 0.8650<br>[ 0.9700 ] | 89.2% | 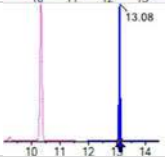 | 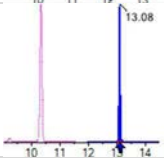 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 1745813<br>( 327.0 / 81.0 ) 1601415 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 3557.9<br>3090.4 | 0.9173<br>107.5<br>97.5 | 3.4490<br>[ 3.7380 ] | 92.3% | 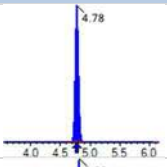 | 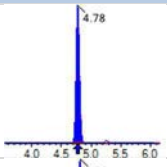 | |
| 6:2FTS | ( 427.0 / 407.0 ) 1444114<br>( 427.0 / 81.0 ) 1928063 | ( 6.86 , 1.00 ) ( -0.01 , N/A , 0.0) | 6234.9<br>4442.1 | 1.3351<br>103.5<br>104.4 | 3.2000<br>[ 3.7960 ] | 84.3% | 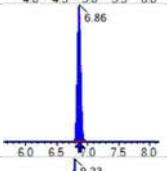 | 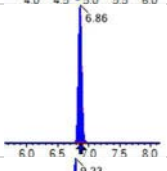 | |
| 8:2FTS | ( 527.0 / 507.0 ) 1510243<br>( 527.0 / 81.0 ) 1610015 | ( 9.23 , 1.00 ) ( 0.00 , N/A , 0.1) | 2017.5<br>2038.6 | 1.0661<br>96.6<br>101.5 | 3.4690<br>[ 3.8330 ] | 90.5% | 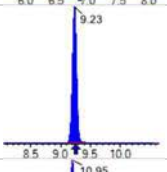 | 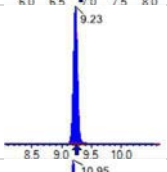 | |
| 10:2FTS | ( 627.0 / 607.0 ) 1336569<br>( 627.0 / 81.0 ) 1906613 | ( 10.95 , 1.00 ) ( 0.01 , N/A , 0.1) | 1199.7<br>1334.9 | 1.4265<br>99.2<br>98.7 | 4.2600<br>[ 3.8650 ] | 110.2% | 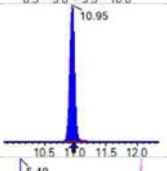 | 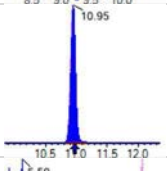 | |
| PFBSA | ( 297.9 / 78.0 ) 122095<br>( 297.9 / 278.0 ) 540 | ( 5.49 , 0.38 ) ( N/A , 0.00 , -0.6) | 937.9<br>7.8 | 0.0044<br>341.4<br>310.2 | 0.6090<br>[ 1.0000 ] | 60.9% | 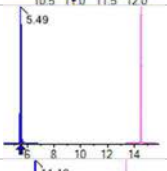 | 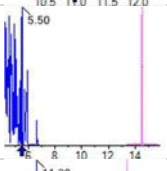 | |
| PFHxSA | ( 397.9 / 78.0 ) 482577<br>( 397.9 / 378.0 ) 1761 | ( 11.19 , 0.75 ) ( N/A , 0.00 , -0.4) | 1629.4<br>232.6 | 0.0036<br>90.3<br>85.8 | 1.1670<br>[ 1.0000 ] | 116.7% | 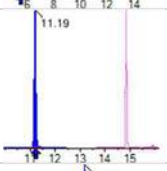 | 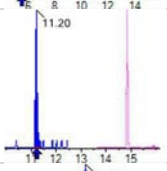 | |
| PFOSA | ( 498.0 / 78.0 ) 505842<br>( 498.0 / 478.0 ) 6192 | ( 13.25 , 1.00 ) ( -0.01 , N/A , 0.1) | 1712.6<br>171.5 | 0.0122<br>83.3<br>86.5 | 1.0110<br>[ 1.0000 ] | 101.1% | 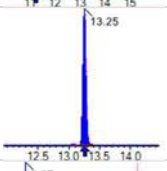 | 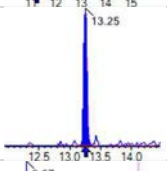 | |
| TFSI | ( 279.7 / 147.0 ) 1329820<br>( 279.7 / 211.0 ) 117114 | ( 6.97 , 0.53 ) ( N/A , 0.00 , 0.1) | 86.6<br>2526.5 | 0.0881<br>99.5<br>99.7 | 1.5210<br>[ 0.9790 ] | 155.3% | 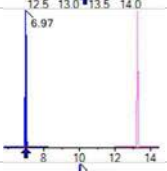 | 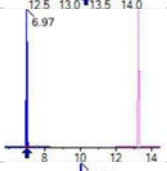 | BS2, |
| NMeFOSA | ( 512.0 / 219.0 ) 237947<br>( 512.0 / 169.0 ) 174713 | ( 14.53 , 1.00 ) ( 0.00 , N/A , 0.2) | 1855.0<br>813.0 | 0.7343<br>95.8<br>98.4 | 4.0500<br>[ 4.0000 ] | 101.3% | 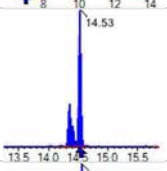 | 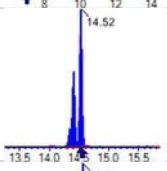 | |
| NEtFOSA | ( 526.0 / 219.0 ) 283661<br>( 526.0 / 169.0 ) 347241 | ( 14.86 , 1.00 ) ( 0.01 , N/A , 1.4) | 1894.3<br>1527.3 | 1.2241<br>97.9<br>98.2 | 3.8110<br>[ 4.0000 ] | 95.3% | 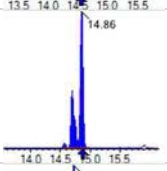 | 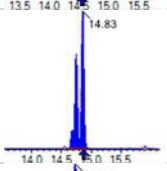 | |
| NMeFOSAA | ( 570.0 / 419.0 ) 236000<br>( 570.0 / 483.0 ) 110994 | ( 10.28 , 1.00 ) ( 0.00 , N/A , -0.2) | 2289.6<br>36841.6 | 0.4703<br>101.4<br>104.9 | 0.9180<br>[ 1.0000 ] | 91.8% | 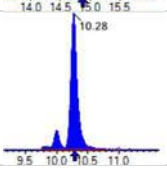 | 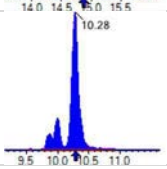 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 234861<br>( 584.0 / 526.0 ) 145287 | ( 10.89 , 1.00 ) ( 0.01 , N/A , 0.2) | 1225.1<br>531.3 | 0.6186<br>103.1<br>102.3 | 0.9010<br>[ 1.0000 ] | 90.1% | 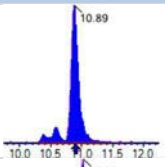 | 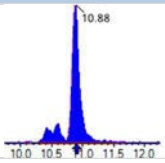 | |
| NMeFOSE | ( 616.0 / 59.0 ) 111691 | ( 14.33 , 1.00 ) ( 0.02 , N/A , 0.0) | 518.2 | N/A<br>0.0<br>0.0 | 3.2650<br>[ 4.0000 ] | 81.6% | 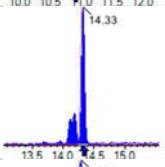 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 113564 | ( 14.69 , 1.00 ) ( 0.02 , N/A , 0.0) | 873.3 | N/A<br>0.0<br>0.0 | 3.8010<br>[ 4.0000 ] | 95.0% | 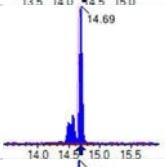 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 59300<br>( 285.0 / 185.0 ) 151555 | ( 5.55 , 1.00 ) ( -0.01 , N/A , 0.0) | 1244.0<br>1164.2 | 2.5558<br>91.0<br>90.6 | 0.9700<br>[ 1.0000 ] | 97.0% | 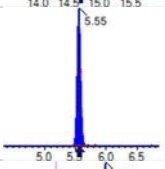 | 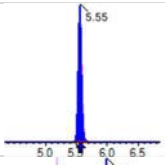 | |
| ADONA | ( 377.0 / 85.0 ) 754464<br>( 377.0 / 251.0 ) 81458 | ( 6.71 , 1.21 ) ( N/A , -0.01 , 0.2) | 2089.3<br>662.4 | 0.1080<br>102.9<br>105.4 | 0.9360<br>[ 0.9430 ] | 99.3% | 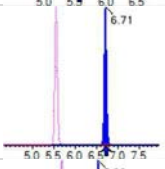 | 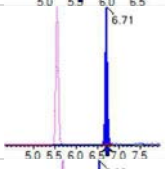 | |
| PFEESA | ( 315.0 / 135.0 ) 290358<br>( 315.0 / 83.0 ) 162996 | ( 5.89 , 1.15 ) ( N/A , -0.01 , -0.2) | 2916.5<br>471.6 | 0.5614<br>87.5<br>88.6 | 1.7680<br>[ 1.7850 ] | 99.1% | 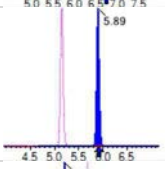 | 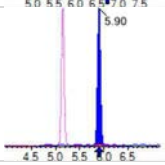 | |
| PFMPA | ( 229.0 / 85.0 ) 142348 | ( 3.82 , 0.89 ) ( N/A , -0.01 , 0.0) | 3748.8 | N/A<br>0.0<br>0.0 | 1.7540<br>[ 2.0000 ] | 87.7% | 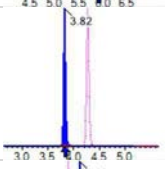 | | |
| PFMBA | ( 279.0 / 85.0 ) 331487 | ( 4.48 , 1.05 ) ( N/A , -0.02 , 0.0) | 2289.4 | N/A<br>0.0<br>0.0 | 1.8130<br>[ 2.0000 ] | 90.7% | 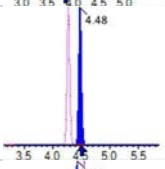 | | |
| NFDHA | ( 295.0 / 201.0 ) 146535<br>( 295.0 / 85.0 ) 134106 | ( 5.02 , 0.98 ) ( N/A , -0.01 , 0.1) | 2330.1<br>1377.6 | 0.9152<br>92.0<br>89.5 | 1.8280<br>[ 2.0000 ] | 91.4% | 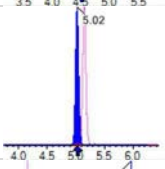 | 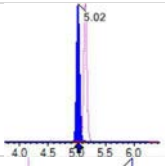 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 795015<br>( 533.0 / 353.0 ) 262654 | ( 11.01 , 1.98 ) ( N/A , -0.02 , 0.1) | 2726.0<br>1428.3 | 0.3304<br>103.6<br>101.2 | 0.8870<br>[ 0.9330 ] | 95.1% | 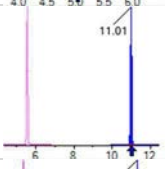 | 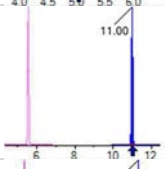 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 666144<br>( 633.0 / 453.0 ) 230258 | ( 12.52 , 2.25 ) ( N/A , -0.01 , 0.1) | 4207.2<br>1705.0 | 0.3457<br>101.9<br>106.4 | 0.9570<br>[ 0.9430 ] | 101.4% | 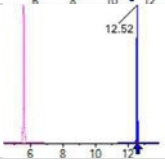 | 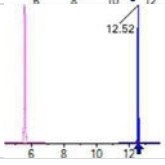 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 417428<br>( 461.0 / 381.2 ) 156902 | ( 9.29 , 0.90 ) ( N/A , -0.02 , -0.1) | 2804.8<br>2074.4 | 0.3759<br>97.3<br>95.8 | 0.8400<br>[ 0.9240 ] | 91.0% | 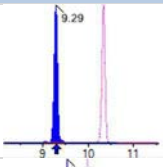 | 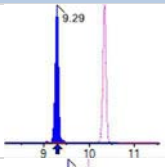 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 58191<br>( 241.0 / 117.0 ) 128567 | ( 3.87 , 0.91 ) ( N/A , -0.01 , 0.1) | 1974.9<br>963.6 | 2.2094<br>100.6<br>95.1 | 3.0710<br>[ 4.0000 ] | 76.8% | 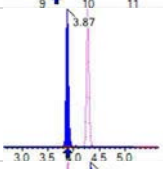 | 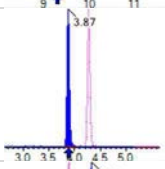 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 211239<br>( 341.0 / 217.0 ) 312078 | ( 5.57 , 1.08 ) ( N/A , -0.01 , 0.2) | 935.1<br>944.2 | 1.4774<br>96.5<br>101.6 | 3.4400<br>[ 4.0000 ] | 86.0% | 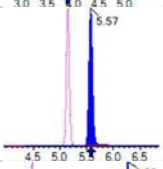 | 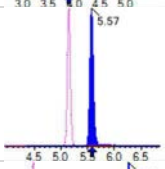 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 443367<br>( 441.0 / 337.0 ) 389579 | ( 9.23 , 1.79 ) ( N/A , -0.02 , 0.1) | 9123.7<br>1523396.9 | 0.8787<br>102.9<br>101.3 | 3.3980<br>[ 4.0000 ] | 85.0% | 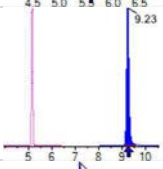 | 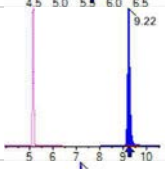 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 328046<br>( 357.2 / 243.0 ) 38450 | ( 5.82 , 1.00 ) ( -0.01 , N/A , -0.1) | 1113.3<br>522.4 | 0.1172<br>109.3<br>106.4 | 1.0040<br>[ 1.0000 ] | 100.4% | 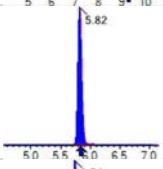 | 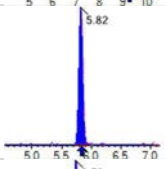 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 278815<br>( 457.2 / 343.0 ) 12739 | ( 8.54 , 1.00 ) ( -0.01 , N/A , 0.6) | 964.9<br>343.8 | 0.0457<br>101.8<br>106.1 | 1.1170<br>[ 1.0000 ] | 111.7% | 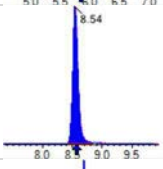 | 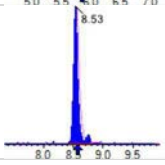 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 1.0000 ] | N/A% | 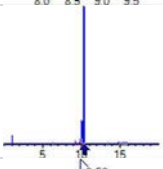 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 266260 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 2054.9 | N/A | 0.9430<br>[ 1.0000 ] | 94.3%<br>{ 100.9% } | 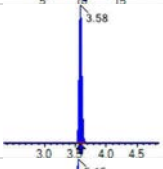 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 106892 | ( 5.15 , N/A ) ( N/A , -0.01 , N/A ) | 848022.5 | N/A | 0.9050<br>[ 1.0000 ] | 90.5%<br>{ 108.0% } | 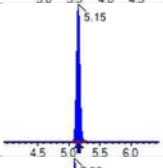 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 374099 | ( 7.39 , N/A ) ( N/A , -0.01 , N/A ) | 6885.9 | N/A | 0.9640<br>[ 1.0000 ] | 96.4%<br>{ 106.3% } | 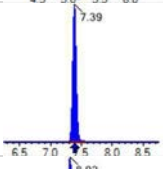 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 272406 | ( 8.92 , N/A ) ( N/A , -0.02 , N/A ) | 1783.0 | N/A | 0.9320<br>[ 1.0000 ] | 93.2%<br>{ 113.6% } | 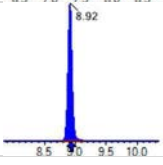 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 252381 | ( 9.91 , N/A ) ( N/A , -0.02 , N/A ) | 5878.6 | N/A | 0.8810 [ 1.0000 ] | 88.1% { 102.9% } | 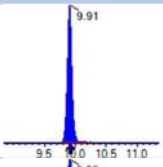 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 940605 | ( 8.02 , N/A ) ( N/A , 0.00 , N/A ) | 6421.9 | N/A | 0.9580 [ 1.0000 ] | 95.8% { 106.0% } | 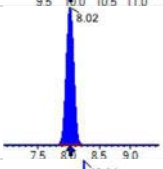 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 717096 | ( 10.34 , N/A ) ( N/A , -0.02 , N/A ) | 2777.0 | N/A | 0.9140 [ 1.0000 ] | 91.4% { 104.0% } | 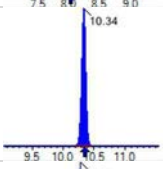 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2432975 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 340356.2 | N/A | 8.4540 [ 8.0000 ] | 105.7% { 110.7% } | 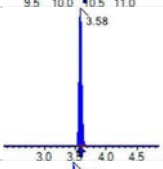 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 884376 | ( 4.27 , N/A ) ( N/A , -0.01 , N/A ) | 5453.9 | N/A | 4.5190 [ 4.0000 ] | 113.0% { 116.0% } | 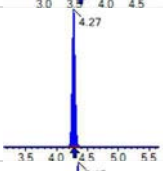 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 486511 | ( 5.15 , N/A ) ( N/A , 0.00 , N/A ) | 12834.3 | N/A | 2.0800 [ 2.0000 ] | 104.0% { 111.7% } | 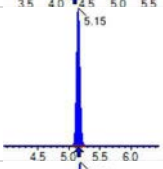 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 561078 | ( 6.27 , N/A ) ( N/A , -0.02 , N/A ) | 12194.0 | N/A | 2.1600 [ 2.0000 ] | 108.0% { 109.5% } | 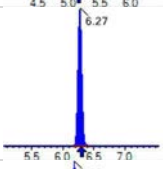 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 824469 | ( 7.38 , N/A ) ( N/A , 0.00 , N/A ) | 5741.3 | N/A | 2.0790 [ 2.0000 ] | 104.0% { 116.0% } | 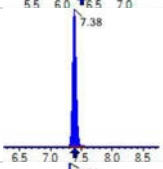 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 271755 | ( 8.91 , N/A ) ( N/A , -0.02 , N/A ) | 6589.4 | N/A | 1.0100 [ 1.0000 ] | 101.0% { 115.6% } | 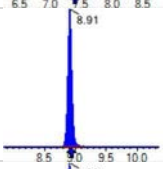 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 310989 | ( 9.90 , N/A ) ( N/A , -0.02 , N/A ) | 1316.7 | N/A | 1.0660 [ 1.0000 ] | 106.6% { 110.9% } | 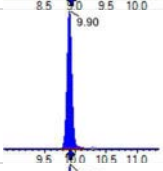 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 361832 | ( 10.81 , N/A ) ( N/A , -0.02 , N/A ) | 1376.1 | N/A | 1.0460 [ 1.0000 ] | 104.6% { 112.2% } | 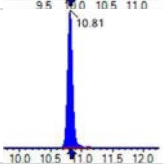 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 365235 | ( 11.70 , N/A ) ( N/A , -0.02 , N/A ) | 1692.5 | N/A | 1.0300 [ 1.0000 ] | 103.0% { 107.5% } | 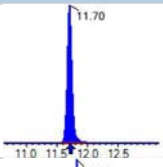  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 297150 | ( 13.02 , N/A ) ( N/A , -0.01 , N/A ) | 1504.5 | N/A | 0.9460 [ 1.0000 ] | 94.6% { 97.8% } | 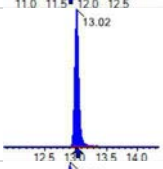  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 351334 | ( 13.92 , N/A ) ( N/A , -0.01 , N/A ) | 1846.2 | N/A | 1.3370 [ 2.0000 ] | 66.8% { 82.4% } | 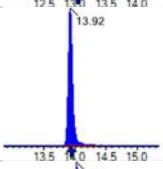  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1498339 | ( 5.32 , N/A ) ( N/A , 0.00 , N/A ) | 1659.0 | N/A | 1.9760 [ 2.0000 ] | 98.8% { 107.0% } | 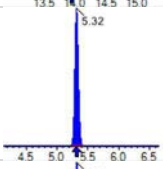  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1420524 | ( 8.01 , N/A ) ( N/A , 0.00 , N/A ) | 6189.6 | N/A | 2.0930 [ 2.0000 ] | 104.7% { 114.4% } | 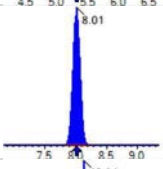  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1594700 | ( 10.34 , N/A ) ( N/A , -0.02 , N/A ) | 1450.9 | N/A | 2.0900 [ 2.0000 ] | 104.5% { 109.8% } | 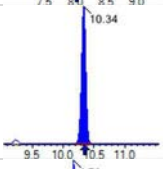  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 766877 | ( 4.78 , N/A ) ( N/A , 0.00 , N/A ) | 58.2 | N/A | 4.5980 [ 4.0000 ] | 114.9% { 123.0% } | 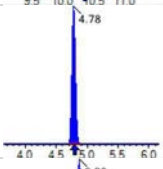  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2126754 | ( 6.86 , N/A ) ( N/A , -0.01 , N/A ) | 6995.9 | N/A | 5.1910 [ 4.0000 ] | 129.8% { 129.9% } | 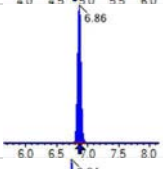  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1770270 | ( 9.24 , N/A ) ( N/A , -0.01 , N/A ) | 2215.6 | N/A | 4.9380 [ 4.0000 ] | 123.5% { 133.2% } | 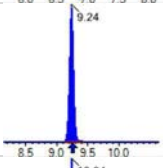  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3160449 | ( 10.94 , N/A ) ( N/A , -0.02 , N/A ) | 1635.4 | N/A | 8.1490 [ 8.0000 ] | 101.9% { 116.8% } | 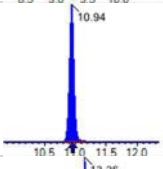  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1034546 | ( 13.26 , N/A ) ( N/A , 0.00 , N/A ) | 4052.1 | N/A | 1.2770 [ 2.0000 ] | 63.9% { 68.8% } | 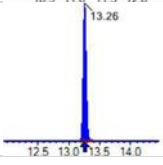  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-BS1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (8)
Acquired: 2024/03/29 - 13:41

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 132207 | ( 14.52 , N/A ) ( N/A , 0.00 , N/A ) | 1034.4 | N/A | 0.7260 [ 2.0000 ] | 36.3% { 38.9% } | 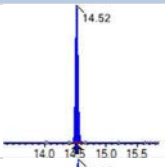  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 131421 | ( 14.85 , N/A ) ( N/A , 0.00 , N/A ) | 1053.9 | N/A | 0.7900 [ 2.0000 ] | 39.5% { 40.6% } | 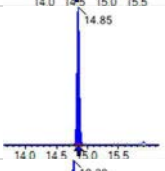  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1115039 | ( 10.28 , N/A ) ( N/A , -0.02 , N/A ) | 4113.7 | N/A | 4.2090 [ 4.0000 ] | 105.2% { 108.8% } | 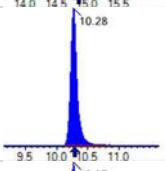  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1074842 | ( 10.87 , N/A ) ( N/A , -0.02 , N/A ) | 2221.8 | N/A | 4.4960 [ 4.0000 ] | 112.4% { 117.7% } | 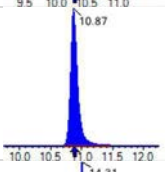  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 631949 | ( 14.31 , N/A ) ( N/A , 0.00 , N/A ) | 1990.6 | N/A | 9.2890 [ 20.0000 ] | 46.4% { 51.1% } | 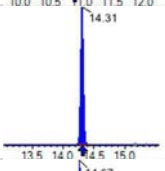  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 627271 | ( 14.67 , N/A ) ( N/A , 0.00 , N/A ) | 2833.6 | N/A | 9.8460 [ 20.0000 ] | 49.2% { 57.8% } | 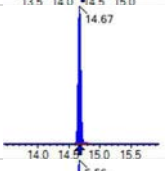  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 833002 | ( 5.56 , N/A ) ( N/A , -0.01 , N/A ) | 2565.6 | N/A | 8.2230 [ 8.0000 ] | 102.8% { 106.4% } | 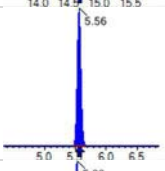  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 621679 | ( 5.83 , N/A ) ( N/A , -0.01 , N/A ) | 2498.4 | N/A | 2.2600 [ 2.0000 ] | 113.0% { 122.8% } | 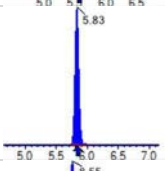  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 603733 | ( 8.55 , N/A ) ( N/A , -0.01 , N/A ) | 1036.8 | N/A | 1.9480 [ 2.0000 ] | 97.4% { 103.1% } | 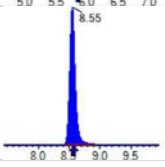  | | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-MRL1a | File ID:a | S2024-03-29A (9)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 14:02a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| PFBAa | 2.87a | 0.21a | 1.6a | MI1a |
| PFPeAa | 1.33a | 0.065a | 0.80a | |
| PFHxAa | 0.681a | 0.055a | 0.40a | |
| PFHpAa | 0.575a | 0.041a | 0.40a | |
| PFOAa | 0.923a | 0.15a | 0.40a | |
| PFNAa | 0.640a | 0.082a | 0.40a | |
| PFDAa | 0.649a | 0.10a | 0.40a | |
| PFUnAa | 0.650a | 0.16a | 0.40a | |
| PFDoAa | 0.674a | 0.11a | 0.40a | |
| PFTrDAa | 0.651a | 0.20a | 0.40a | |
| PFTeDAa | 0.603a | 0.20a | 0.40a | |
| PFHxDAa | 0.671a | 0.20a | 0.40a | |
| PFODAa | 0.556a | 0.20a | 0.40a | |
| PFBSa | 0.543a | 0.037a | 0.40a | |
| PFPeSa | 0.560a | 0.063a | 0.40a | |
| PFHxSa | 0.579a | 0.032a | 0.40a | MI5a |
| PFHpSa | 0.569a | 0.051a | 0.40a | |
| PFOSa | 0.676a | 0.064a | 0.40a | |
| PFNSa | 0.595a | 0.12a | 0.40a | |
| PFDSa | 0.632a | 0.15a | 0.40a | |
| PFDoSa | 0.584a | 0.12a | 0.40a | |
| 4:2FTSa | 2.05a | 0.29a | 1.6a | BS1a |
| 6:2FTSa | 2.34a | 0.31a | 1.6a | |
| 8:2FTSa | 2.51a | 0.082a | 1.6a | |
| 10:2FTSa | 3.05a | 0.40a | 1.6a | |
| PFOSAa | 0.709a | 0.10a | 0.40a | |
| NMeFOSAa | 2.52a | 0.47a | 1.6a | |
| NEtFOSAa | 2.16a | 0.41a | 1.6a | MI5a |
| NMeFOSAAa | 0.657a | 0.11a | 0.40a | |
| NEtFOSAAa | [illegible] | [illegible] | [illegible] | |

# FORM IR
# ANALYSIS DATA SHEETR

## MRL Checka

| | | | | | |
|---|---|---|---|---|---|
| Laboratory:a | APPL, LLCa | | | Work Order:a | 24C0142a |
| Client:a | Tidewater, Inc.a | | Project:a | JPL-GW Monitoringa | |
| Matrix:a | Watera | Laboratory ID:a | BDC0363-MRL1a | File ID:a | S2024-03-29A (9)a |
| Sampled:a | | Prepared:a | 03/26/24 07:38a | Analyzed:a | 03/29/24 14:02a |
| Solids:a | | Preparation:a | EPA 1633a | Dilution:a | 1a |
| Batch:a | BDC0363a | Sequence:a | SD01122a | Calibration:a | 2413019a |
| Instrument:a | Saphira | | | | |
| Column:a | 1a | | | | |

| COMPOUNDR | CONC. (ng/L)R | MDLR | LR | Q |
|---|---|---|---|---|
| NMeFOSEa | 2.72a | 1.0a | 1.6a | |
| NEtFOSEa | 2.61a | 1.0a | 1.6a | |
| HFPO-DAa | 0.648a | 0.17a | 0.80a | Ja |
| ADONAa | 0.629a | 0.12a | 0.80a | Ja |
| PFEESAa | 1.20a | 0.11a | 0.80a | |
| PFMPAa | 1.20a | 0.054a | 0.80a | |
| PFMBAa | 1.20a | 0.091a | 0.80a | |
| NFDHAa | 1.28a | 0.30a | 0.80a | |
| 9Cl-PF3ONSa | 0.634a | 0.21a | 0.80a | Ja |
| 11Cl-PF3OUDSa | 0.636a | 0.21a | 0.80a | Ja |
| 3:3FTCAa | 2.28a | 0.57a | 1.6a | |
| 5:3FTCAa | 2.46a | 0.44a | 1.6a | |
| 7:3FTCAa | 2.38a | 0.55a | 1.6a | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (9)
Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFPrA | ( 163.0 / 119.0 ) 54914<br>( 163.0 / 69.0 ) 1850 | ( 2.42 , 0.68 ) ( N/A , 0.01 , -0.4) | 250.1<br>91.3 | 0.0337<br>122.9<br>124.6 | 0.7690<br>[ 0.4000 ] | 192.3% | 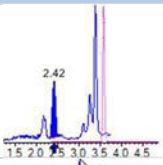 | 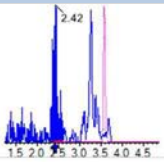 | BS2, |
| PFBA | ( 213.0 / 169.0 ) 332614 | ( 3.58 , 1.00 ) ( 0.00 , N/A , 0.0) | 303.3 | N/A<br>0.0<br>0.0 | 0.7170<br>[ 0.8000 ] | 89.6% | 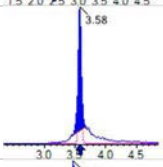 | | MI1 DG 2024-04-02 |
| PFPeA | ( 263.0 / 219.0 ) 74310<br>( 263.0 / 69.0 ) 1034 | ( 4.27 , 1.00 ) ( 0.00 , N/A , 0.0) | 482.8<br>21.8 | 0.0139<br>116.9<br>120.0 | 0.3330<br>[ 0.4000 ] | 83.3% | 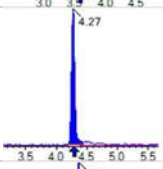 | 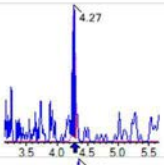 | |
| PFHxA | ( 313.0 / 269.0 ) 38409<br>( 313.0 / 119.0 ) 3762 | ( 5.15 , 1.00 ) ( 0.00 , N/A , 0.2) | 246.0<br>92.3 | 0.0980<br>88.1<br>83.9 | 0.1700<br>[ 0.2000 ] | 85.1% | 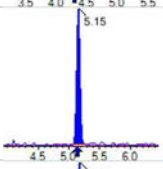 | 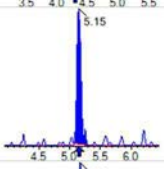 | |
| PFHpA | ( 363.0 / 319.0 ) 40690<br>( 363.0 / 169.0 ) 13610 | ( 6.28 , 1.00 ) ( 0.00 , N/A , 0.1) | 378.5<br>318.2 | 0.3345<br>109.4<br>103.2 | 0.1440<br>[ 0.2000 ] | 71.9% | 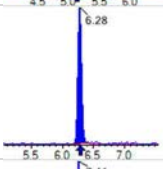 | 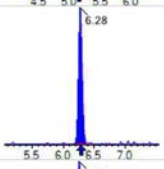 | |
| PFOA | ( 413.0 / 369.0 ) 98762<br>( 413.0 / 169.0 ) 33354 | ( 7.41 , 1.00 ) ( 0.00 , N/A , 0.0) | 150.9<br>265.4 | 0.3377<br>94.5<br>98.1 | 0.2310<br>[ 0.2000 ] | 115.4% | 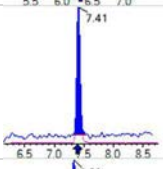 | 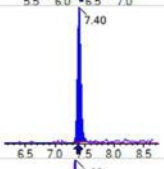 | |
| PFNA | ( 463.0 / 419.0 ) 46787<br>( 463.0 / 169.0 ) 10990 | ( 8.93 , 1.00 ) ( 0.00 , N/A , -0.1) | 532.0<br>216.7 | 0.2349<br>95.6<br>89.2 | 0.1600<br>[ 0.2000 ] | 80.0% | 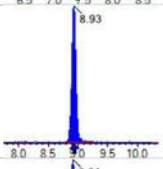 | 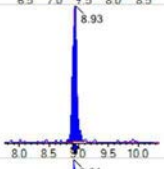 | |
| PFDA | ( 513.0 / 469.0 ) 53540<br>( 513.0 / 169.0 ) 6823 | ( 9.91 , 1.00 ) ( 0.00 , N/A , -0.1) | 480.7<br>1409.0 | 0.1274<br>106.9<br>100.8 | 0.1620<br>[ 0.2000 ] | 81.2% | 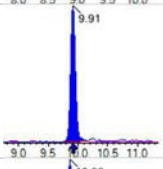 | 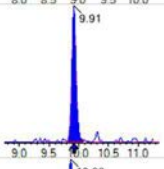 | |
| PFUnA | ( 563.0 / 519.0 ) 57098<br>( 563.0 / 169.0 ) 8475 | ( 10.82 , 1.00 ) ( 0.00 , N/A , 0.2) | 371.1<br>156.3 | 0.1484<br>95.9<br>96.8 | 0.1630<br>[ 0.2000 ] | 81.3% | 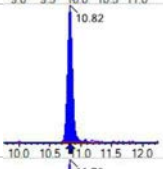 | 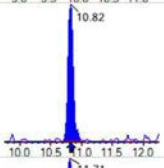 | |
| PFDoA | ( 613.0 / 569.0 ) 66560<br>( 613.0 / 169.0 ) 9001 | ( 11.72 , 1.00 ) ( 0.00 , N/A , 0.4) | 346.9<br>74.4 | 0.1352<br>89.0<br>87.3 | 0.1680<br>[ 0.2000 ] | 84.2% | 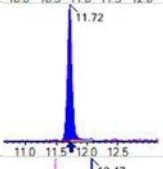 | 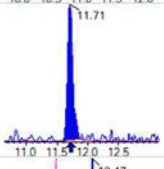 | |
| PFTrDA | ( 663.0 / 619.0 ) 62562<br>( 663.0 / 169.0 ) 14394 | ( 12.47 , 1.06 ) ( N/A , 0.00 , 0.0) | 419.0<br>189.9 | 0.2301<br>85.5<br>86.6 | 0.1630<br>[ 0.2000 ] | 81.4% | 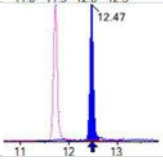 | 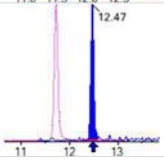 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (9)
Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFTeDA | ( 713.0 / 669.0 ) 46159<br>( 713.0 / 169.0 ) 11918 | ( 13.03 , 1.00 ) ( 0.00 , N/A , 0.1) | 260.6<br>130.9 | 0.2582<br>95.1<br>104.3 | 0.1510<br>[ 0.2000 ] | 75.3% | 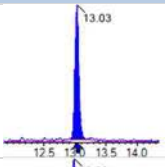 | 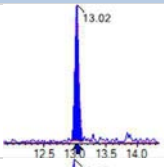 | |
| PFHxDA | ( 813.0 / 769.0 ) 29152<br>( 813.0 / 169.0 ) 6843 | ( 13.92 , 1.00 ) ( -0.01 , N/A , 0.0) | 167.5<br>47.5 | 0.2347<br>89.7<br>87.8 | 0.1680<br>[ 0.2000 ] | 83.9% | 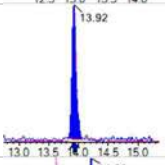 | 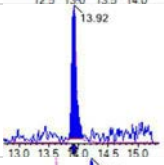 | |
| PFODA | ( 913.0 / 869.0 ) 15285<br>( 913.0 / 169.0 ) 5308 | ( 14.66 , 1.05 ) ( N/A , 0.00 , 0.0) | 89.5<br>26.9 | 0.3472<br>110.8<br>111.4 | 0.1390<br>[ 0.2000 ] | 69.5% | 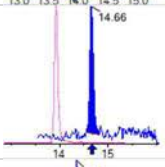 | 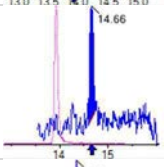 | |
| PFBS | ( 299.0 / 80.0 ) 53176<br>( 299.0 / 99.0 ) 38565 | ( 5.32 , 1.00 ) ( 0.00 , N/A , 0.0) | 464.2<br>364.2 | 0.7252<br>97.9<br>97.0 | 0.1360<br>[ 0.1770 ] | 76.8% | 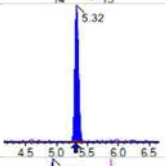 | 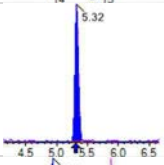 | |
| PFPeS | ( 349.0 / 80.0 ) 146482<br>( 349.0 / 99.0 ) 55198 | ( 6.60 , 0.81 ) ( N/A , 0.00 , -0.2) | 806.8<br>650.2 | 0.3768<br>110.3<br>107.9 | 0.1400<br>[ 0.1880 ] | 74.6% | 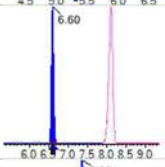 | 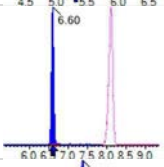 | |
| PFHxS | ( 399.0 / 80.0 ) 184703<br>( 399.0 / 99.0 ) 63855 | ( 8.11 , 1.00 ) ( 0.00 , N/A , -0.1) | 791.7<br>1096.0 | 0.3457<br>105.3<br>107.7 | 0.1450<br>[ 0.1820 ] | 79.5% | 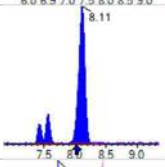 | 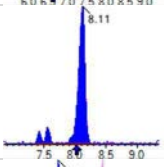 | MI5 DG 2024-04-01 |
| PFHpS | ( 449.0 / 80.0 ) 150948<br>( 449.0 / 99.0 ) 41065 | ( 9.40 , 0.91 ) ( N/A , 0.00 , -0.1) | 855.5<br>498.5 | 0.2721<br>104.3<br>101.1 | 0.1420<br>[ 0.1900 ] | 74.7% | 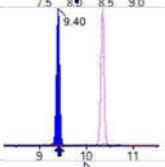 | 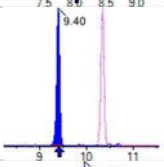 | |
| PFOS | ( 499.0 / 80.0 ) 174330<br>( 499.0 / 99.0 ) 37000 | ( 10.34 , 1.00 ) ( -0.01 , N/A , -0.1) | 605.9<br>1293.0 | 0.2122<br>91.9<br>94.4 | 0.1690<br>[ 0.1850 ] | 91.1% | 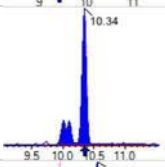 | 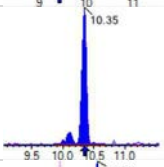 | |
| PFNS | ( 549.0 / 80.0 ) 139876<br>( 549.0 / 99.0 ) 40100 | ( 11.22 , 1.08 ) ( N/A , -0.01 , -0.1) | 728.9<br>420.0 | 0.2867<br>107.0<br>100.8 | 0.1490<br>[ 0.1920 ] | 77.5% | 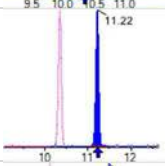 | 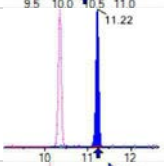 | |
| PFDS | ( 599.0 / 80.0 ) 181788<br>( 599.0 / 99.0 ) 47627 | ( 12.04 , 1.16 ) ( N/A , -0.01 , -0.2) | 875.8<br>301.9 | 0.2620<br>102.9<br>102.6 | 0.1580<br>[ 0.1930 ] | 82.1% | 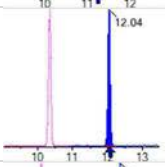 | 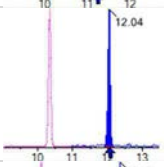 | |
| PFDoS | ( 699.0 / 80.0 ) 162430<br>( 699.0 / 99.0 ) 39740 | ( 13.09 , 1.26 ) ( N/A , 0.00 , 0.0) | 1192.3<br>592.8 | 0.2447<br>109.5<br>102.6 | 0.1460<br>[ 0.1940 ] | 75.3% | 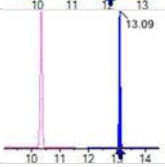 | 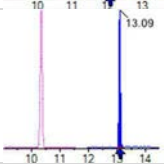 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (9)
Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 4:2FTS | ( 327.0 / 307.0 ) 305045<br>( 327.0 / 81.0 ) 280079 | ( 4.78 , 1.00 ) ( 0.00 , N/A , 0.1) | 2746.4<br>926.6 | 0.9182<br>107.6<br>97.6 | 0.5130<br>[ 0.7480 ] | 68.7% | 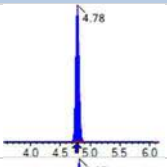 | 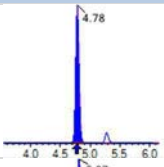 | BS1, |
| 6:2FTS | ( 427.0 / 407.0 ) 281119<br>( 427.0 / 81.0 ) 375346 | ( 6.87 , 1.00 ) ( 0.00 , N/A , 0.0) | 3470.8<br>2839.2 | 1.3352<br>103.5<br>104.4 | 0.5840<br>[ 0.7590 ] | 76.9% | 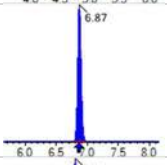 | 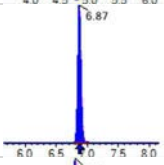 | |
| 8:2FTS | ( 527.0 / 507.0 ) 277701<br>( 527.0 / 81.0 ) 314005 | ( 9.24 , 1.00 ) ( 0.00 , N/A , 0.2) | 2049.0<br>1530.2 | 1.1307<br>102.5<br>107.7 | 0.6260<br>[ 0.7670 ] | 81.7% | 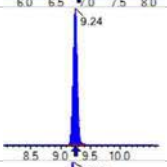 | 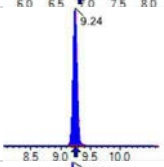 | |
| 10:2FTS | ( 627.0 / 607.0 ) 278689<br>( 627.0 / 81.0 ) 400741 | ( 10.96 , 1.00 ) ( 0.01 , N/A , 0.1) | 1249.8<br>769.3 | 1.4380<br>100.0<br>99.5 | 0.7620<br>[ 0.7730 ] | 98.6% | 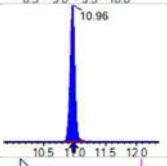 | 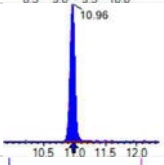 | |
| PFBSA | ( 297.9 / 78.0 ) 29879<br>( 297.9 / 278.0 ) 289 | ( 5.49 , 0.38 ) ( N/A , 0.00 , 0.0) | 290.1<br>7.7 | 0.0097<br>746.7<br>678.6 | 0.1480<br>[ 0.2000 ] | 74.2% | 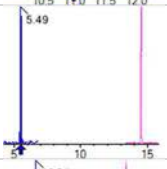 | 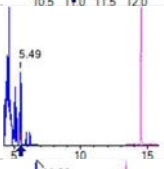 | |
| PFHxSA | ( 397.9 / 78.0 ) 92126<br>( 397.9 / 378.0 ) 458 | ( 11.21 , 0.75 ) ( N/A , 0.01 , -1.0) | 902.9<br>30.3 | 0.0050<br>123.1<br>117.0 | 0.2190<br>[ 0.2000 ] | 109.6% | 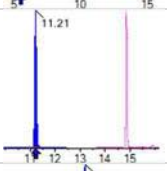 | 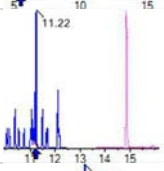 | |
| PFOSA | ( 498.0 / 78.0 ) 92886<br>( 498.0 / 478.0 ) 1793 | ( 13.26 , 1.00 ) ( -0.01 , N/A , 0.1) | 728.0<br>80.8 | 0.0193<br>131.3<br>136.4 | 0.1770<br>[ 0.2000 ] | 88.6% | 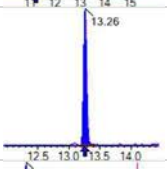 | 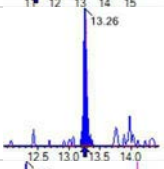 | |
| TFSI | ( 279.7 / 147.0 ) 256817<br>( 279.7 / 211.0 ) 25421 | ( 6.98 , 0.53 ) ( N/A , 0.01 , 0.0) | 71.4<br>1535.2 | 0.0990<br>111.9<br>112.1 | 0.2800<br>[ 0.1960 ] | 143.1% | 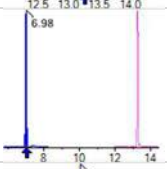 | 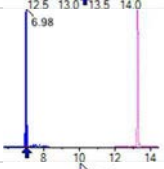 | |
| NMeFOSA | ( 512.0 / 219.0 ) 37173<br>( 512.0 / 169.0 ) 24491 | ( 14.53 , 1.00 ) ( 0.00 , N/A , 0.9) | 466.0<br>168.4 | 0.6588<br>85.9<br>88.3 | 0.6300<br>[ 0.8000 ] | 78.8% | 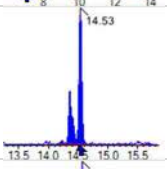 | 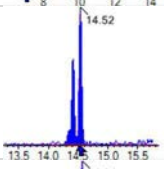 | |
| NEtFOSA | ( 526.0 / 219.0 ) 40890<br>( 526.0 / 169.0 ) 50851 | ( 14.87 , 1.00 ) ( 0.01 , N/A , 1.6) | 426.1<br>464.8 | 1.2436<br>99.5<br>99.7 | 0.5410<br>[ 0.8000 ] | 67.6% | 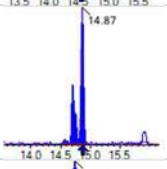 | 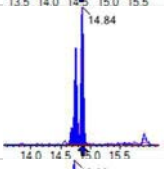 | MI5 DG 2024-04-01 |
| NMeFOSAA | ( 570.0 / 419.0 ) 44552<br>( 570.0 / 483.0 ) 18691 | ( 10.29 , 1.00 ) ( 0.01 , N/A , 0.7) | 837.5<br>191.8 | 0.4195<br>90.4<br>93.6 | 0.1640<br>[ 0.2000 ] | 82.1% | 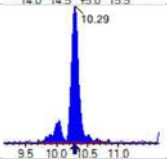 | 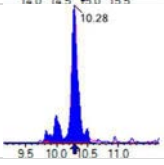 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (9)
Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | ( 584.0 / 419.0 ) 43737<br>( 584.0 / 526.0 ) 26585 | ( 10.89 , 1.00 ) ( 0.01 , N/A , -0.3) | 14319.8<br>330.5 | 0.6078<br>101.3<br>100.5 | 0.1600<br>[ 0.2000 ] | 80.2% | 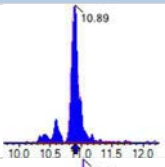 | 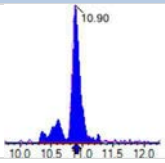 | |
| NMeFOSE | ( 616.0 / 59.0 ) 24003 | ( 14.34 , 1.00 ) ( 0.02 , N/A , 0.0) | 153.7 | N/A<br>0.0<br>0.0 | 0.6800<br>[ 0.8000 ] | 85.0% | 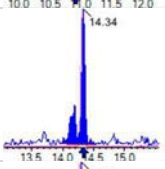 | | |
| NEtFOSE | ( 630.0 / 59.0 ) 19771 | ( 14.70 , 1.00 ) ( 0.03 , N/A , 0.0) | 193.6 | N/A<br>0.0<br>0.0 | 0.6520<br>[ 0.8000 ] | 81.5% | 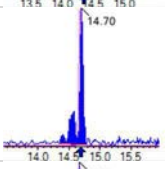 | | |
| HFPO-DA | ( 285.0 / 169.0 ) 10439<br>( 285.0 / 185.0 ) 27343 | ( 5.57 , 1.00 ) ( 0.00 , N/A , 0.3) | 356.4<br>259.6 | 2.6192<br>93.3<br>92.9 | 0.1620<br>[ 0.2000 ] | 81.0% | 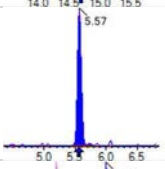 | 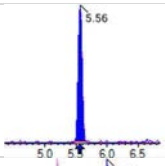 | |
| ADONA | ( 377.0 / 85.0 ) 133553<br>( 377.0 / 251.0 ) 15524 | ( 6.72 , 1.21 ) ( N/A , 0.00 , 0.1) | 1347.2<br>152.8 | 0.1162<br>110.8<br>113.5 | 0.1570<br>[ 0.1890 ] | 83.4% | 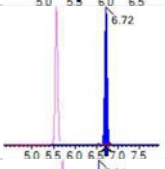 | 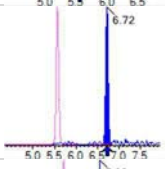 | |
| PFEESA | ( 315.0 / 135.0 ) 49377<br>( 315.0 / 83.0 ) 32618 | ( 5.91 , 1.15 ) ( N/A , 0.00 , 0.1) | 968.7<br>163.9 | 0.6606<br>102.9<br>104.3 | 0.3010<br>[ 0.3570 ] | 84.3% | 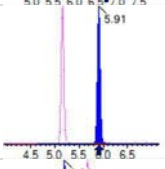 | 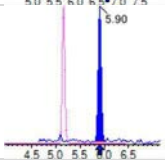 | |
| PFMPA | ( 229.0 / 85.0 ) 24582 | ( 3.82 , 0.89 ) ( N/A , -0.01 , 0.0) | 739.3 | N/A<br>0.0<br>0.0 | 0.3000<br>[ 0.4000 ] | 75.0% | 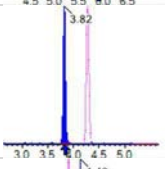 | | |
| PFMBA | ( 279.0 / 85.0 ) 55311 | ( 4.48 , 1.05 ) ( N/A , -0.01 , 0.0) | 703.6 | N/A<br>0.0<br>0.0 | 0.3000<br>[ 0.4000 ] | 74.9% | 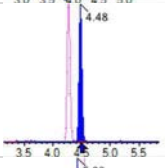 | | |
| NFDHA | ( 295.0 / 201.0 ) 25671<br>( 295.0 / 85.0 ) 21706 | ( 5.03 , 0.98 ) ( N/A , 0.00 , 0.0) | 1222.8<br>391.7 | 0.8455<br>85.0<br>82.7 | 0.3200<br>[ 0.4000 ] | 80.1% | 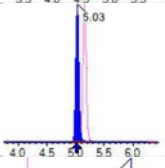 | 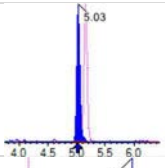 | |
| 9Cl-PF3ONS | ( 531.0 / 351.0 ) 149588<br>( 533.0 / 353.0 ) 47698 | ( 11.02 , 1.98 ) ( N/A , -0.01 , 0.0) | 1923.0<br>784.3 | 0.3189<br>100.0<br>97.7 | 0.1580<br>[ 0.1870 ] | 84.9% | 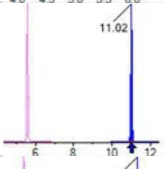 | 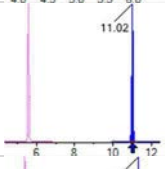 | |
| 11Cl-PF3OUDS | ( 631.0 / 451.0 ) 116608<br>( 633.0 / 453.0 ) 43404 | ( 12.53 , 2.25 ) ( N/A , 0.00 , 0.2) | 1417.6<br>424.2 | 0.3722<br>109.7<br>114.6 | 0.1590<br>[ 0.1890 ] | 84.2% | 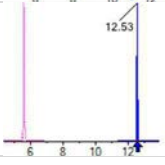 | 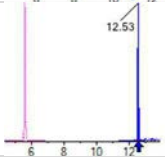 | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0363-MRL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| PFECHS | ( 461.0 / 98.9 ) 74653<br>( 461.0 / 381.2 ) 28294 | ( 9.30 , 0.90 ) ( N/A , 0.00 , 0.0) | 1624.2<br>1530.5 | 0.3790<br>98.1<br>96.6 | 0.1350<br>[ 0.1850 ] | 72.9% | 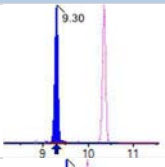 | 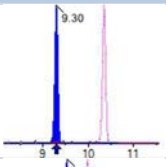 | |
| 3:3FTCA | ( 241.0 / 177.0 ) 10922<br>( 241.0 / 117.0 ) 23241 | ( 3.87 , 0.91 ) ( N/A , -0.01 , 0.1) | 427.3<br>235.0 | 2.1279<br>96.9<br>91.6 | 0.5710<br>[ 0.8000 ] | 71.3% | 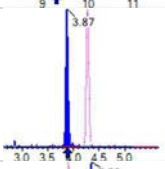 | 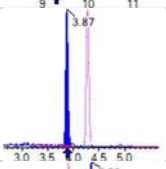 | |
| 5:3FTCA | ( 341.0 / 236.7 ) 37743<br>( 341.0 / 217.0 ) 52519 | ( 5.58 , 1.08 ) ( N/A , 0.00 , 0.0) | 697.7<br>260.7 | 1.3915<br>90.9<br>95.7 | 0.6150<br>[ 0.8000 ] | 76.9% | 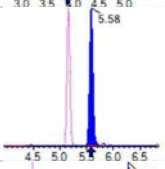 | 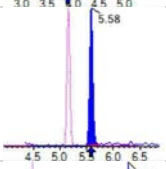 | |
| 7:3FTCA | ( 441.0 / 317.0 ) 77469<br>( 441.0 / 337.0 ) 68013 | ( 9.26 , 1.80 ) ( N/A , 0.01 , 0.1) | 31126.6<br>481588.1 | 0.8779<br>102.8<br>101.2 | 0.5940<br>[ 0.8000 ] | 74.3% | 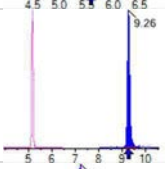 | 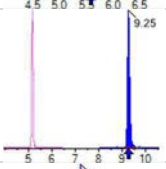 | |
| 6:2FTUCA | ( 357.2 / 293.0 ) 69894<br>( 357.2 / 243.0 ) 8940 | ( 5.83 , 1.00 ) ( -0.01 , N/A , -0.1) | 487.0<br>152.3 | 0.1279<br>119.3<br>116.1 | 0.2040<br>[ 0.2000 ] | 102.0% | 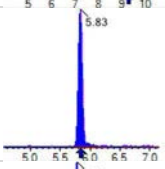 | 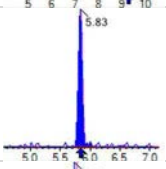 | |
| 8:2FTUCA | ( 457.2 / 393.0 ) 56496<br>( 457.2 / 343.0 ) 3036 | ( 8.57 , 1.00 ) ( 0.00 , N/A , 1.5) | 398.3<br>162.0 | 0.0537<br>119.7<br>124.8 | 0.2170<br>[ 0.2000 ] | 108.7% | 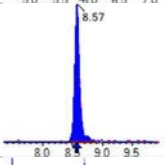 | 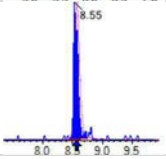 | |
| TDCA | ( 499.0 / 80.0 ) N/A | ( N/A , N/A ) ( N/A , N/A , N/A) | N/A | N/A<br>0.0<br>0.0 | 0.0000<br>[ 0.2000 ] | N/A% | 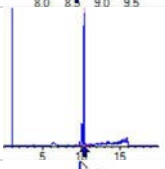 | | BS2, |
| 13C3_PFBA_IIS | ( 216.0 / 172.0 ) 294784 | ( 3.58 , N/A ) ( N/A , -0.01 , N/A ) | 1809.1 | N/A | 1.0440<br>[ 1.0000 ] | 104.4%<br>{ 111.7% } | 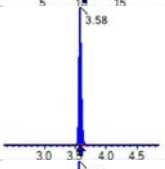 | | |
| 13C2_PFHxA_IIS | ( 315.0 / 270.0 ) 116035 | ( 5.16 , N/A ) ( N/A , 0.00 , N/A ) | 753972.7 | N/A | 0.9830<br>[ 1.0000 ] | 98.3%<br>{ 117.2% } | 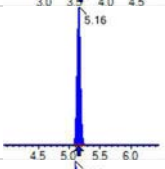 | | |
| 13C4_PFOA_IIS | ( 417.0 / 372.0 ) 408528 | ( 7.41 , N/A ) ( N/A , 0.02 , N/A ) | 6562.6 | N/A | 1.0530<br>[ 1.0000 ] | 105.3%<br>{ 116.1% } | 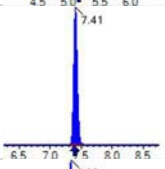 | | |
| 13C5_PFNA_IIS | ( 468.0 / 423.0 ) 282836 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 1672.7 | N/A | 0.9680<br>[ 1.0000 ] | 96.8%<br>{ 118.0% } | 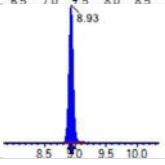 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG | Sample I.D.: BDC0363-MRL1 | Quant Method: 1633 - S2024-03-28A
Instrument: Saphira | DF , IV: 1 , 5.0µL | Path: S2024-03-29A (9)
Type: Sciex Q3 5500 | Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm | Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDA_IIS | ( 515.0 / 470.1 ) 290429 | ( 9.92 , N/A ) ( N/A , -0.01 , N/A ) | 7628.0 | N/A | 1.0130 [ 1.0000 ] | 101.3% { 118.4% } | 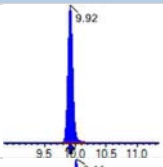 | | |
| 18O2_PFHxS_IIS | ( 403.0 / 83.9 ) 986463 | ( 8.11 , N/A ) ( N/A , 0.09 , N/A ) | 8482.1 | N/A | 1.0040 [ 1.0000 ] | 100.4% { 111.2% } | 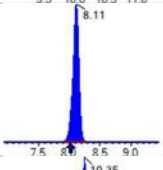 | | |
| 13C4_PFOS_IIS | ( 503.0 / 79.9 ) 802089 | ( 10.35 , N/A ) ( N/A , -0.01 , N/A ) | 2787.5 | N/A | 1.0220 [ 1.0000 ] | 102.2% { 116.4% } | 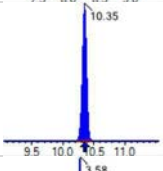 | | |
| 13C4_PFBA_EIS | ( 217.0 / 172.0 ) 2523774 | ( 3.58 , N/A ) ( N/A , 0.00 , N/A ) | 267704.9 | N/A | 7.9210 [ 8.0000 ] | 99.0% { 114.8% } | 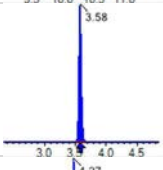 | | |
| 13C5_PFPeA_EIS | ( 268.0 / 223.0 ) 893262 | ( 4.27 , N/A ) ( N/A , -0.01 , N/A ) | 6075.4 | N/A | 4.2050 [ 4.0000 ] | 105.1% { 117.2% } | 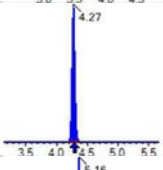 | | |
| 13C5_PFHxA_EIS | ( 318.0 / 273.0 ) 486284 | ( 5.16 , N/A ) ( N/A , 0.01 , N/A ) | 13466.7 | N/A | 1.9160 [ 2.0000 ] | 95.8% { 111.6% } | 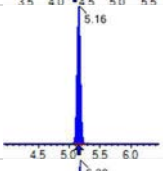 | | |
| 13C4_PFHpA_EIS | ( 367.0 / 322.0 ) 570697 | ( 6.28 , N/A ) ( N/A , -0.01 , N/A ) | 5561.0 | N/A | 2.0240 [ 2.0000 ] | 101.2% { 111.4% } | 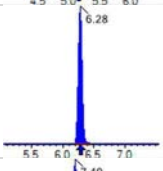 | | |
| 13C8_PFOA_EIS | ( 421.0 / 376.0 ) 852008 | ( 7.40 , N/A ) ( N/A , 0.02 , N/A ) | 5700.5 | N/A | 1.9680 [ 2.0000 ] | 98.4% { 119.9% } | 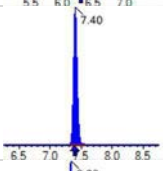 | | |
| 13C9_PFNA_EIS | ( 472.0 / 427.0 ) 290924 | ( 8.93 , N/A ) ( N/A , 0.00 , N/A ) | 4693.7 | N/A | 1.0420 [ 1.0000 ] | 104.2% { 123.8% } | 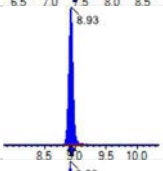 | | |
| 13C6_PFDA_EIS | ( 519.0 / 474.0 ) 330297 | ( 9.92 , N/A ) ( N/A , 0.00 , N/A ) | 1350.5 | N/A | 0.9840 [ 1.0000 ] | 98.4% { 117.8% } | 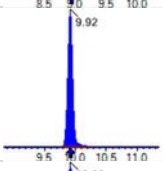 | | |
| 13C7_PFUnA_EIS | ( 570.0 / 525.0 ) 386711 | ( 10.82 , N/A ) ( N/A , -0.01 , N/A ) | 1165.9 | N/A | 0.9720 [ 1.0000 ] | 97.2% { 119.9% } | 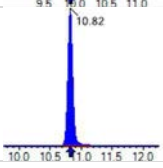 | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (9)
Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 13C2_PFDoA_EIS | ( 615.0 / 570.0 ) 393804 | ( 11.72 , N/A ) ( N/A , -0.01 , N/A ) | 1562.6 | N/A | 0.9650 [ 1.0000 ] | 96.5% { 115.9% } | 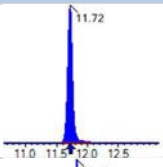  | | |
| 13C2_PFTeDA_EIS | ( 715.0 / 670.0 ) 328024 | ( 13.03 , N/A ) ( N/A , 0.00 , N/A ) | 1542.0 | N/A | 0.9070 [ 1.0000 ] | 90.7% { 108.0% } | 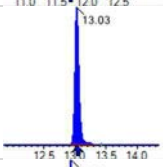  | | |
| 13C2_PFHxDA_EIS | ( 815.0 / 770.0 ) 370769 | ( 13.93 , N/A ) ( N/A , 0.00 , N/A ) | 1802.7 | N/A | 1.2260 [ 2.0000 ] | 61.3% { 87.0% } | 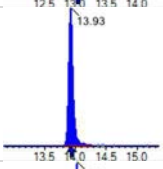  | | |
| 13C3_PFBS_EIS | ( 302.0 / 80.0 ) 1591818 | ( 5.33 , N/A ) ( N/A , 0.01 , N/A ) | 1531.5 | N/A | 2.0020 [ 2.0000 ] | 100.1% { 113.6% } | 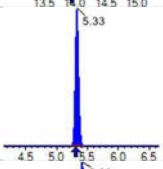  | | |
| 13C3_PFHxS_EIS | ( 402.0 / 80.0 ) 1455881 | ( 8.11 , N/A ) ( N/A , 0.09 , N/A ) | 6191.6 | N/A | 2.0460 [ 2.0000 ] | 102.3% { 117.2% } | 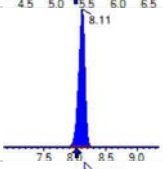  | | |
| 13C8_PFOS_EIS | ( 507.0 / 80.0 ) 1778161 | ( 10.35 , N/A ) ( N/A , -0.01 , N/A ) | 1637.6 | N/A | 2.0840 [ 2.0000 ] | 104.2% { 122.4% } | 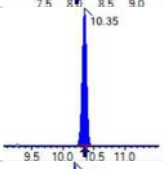  | | |
| 13C2_4:2FTS_EIS | ( 329.0 / 81.0 ) 900308 | ( 4.79 , N/A ) ( N/A , 0.00 , N/A ) | 64.1 | N/A | 5.1470 [ 4.0000 ] | 128.7% { 144.4% } | 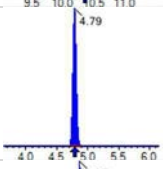  | | |
| 13C2_6:2FTS_EIS | ( 429.0 / 81.0 ) 2268913 | ( 6.87 , N/A ) ( N/A , 0.00 , N/A ) | 6626.7 | N/A | 5.2800 [ 4.0000 ] | 132.0% { 138.6% } | 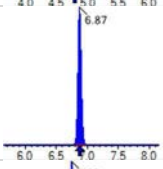  | | |
| 13C2_8:2FTS_EIS | ( 529.0 / 81.0 ) 1802559 | ( 9.25 , N/A ) ( N/A , 0.00 , N/A ) | 2485.0 | N/A | 4.7940 [ 4.0000 ] | 119.9% { 135.6% } | 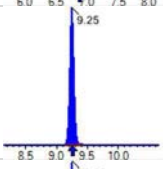  | | |
| 13C2D4_10:2FTS_EIS | ( 633.0 / 82.0 ) 3685619 | ( 10.96 , N/A ) ( N/A , 0.00 , N/A ) | 1663.4 | N/A | 9.0620 [ 8.0000 ] | 113.3% { 136.2% } | 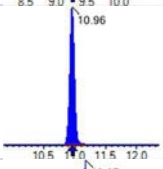  | | |
| 13C8_PFOSA_EIS | ( 506.0 / 78.0 ) 1083755 | ( 13.27 , N/A ) ( N/A , 0.01 , N/A ) | 2888.1 | N/A | 1.1960 [ 2.0000 ] | 59.8% { 72.1% } | 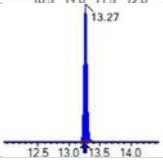  | | |

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: DAG
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: BDC0363-MRL1
DF , IV: 1 , 5.0µL
Acquisition Method: \\svante\pfas\InstrumentData\SaphiraEPA1633\Acquisition Methods\EPA 1633 S2024-03-28.msm

Quant Method: 1633 - S2024-03-28A
Path: S2024-03-29A (9)
Acquired: 2024/03/29 - 14:02

| Analyte | ( Q1 / Q3 ) Area Counts*min | R.T. ( R.T [min] , R.R.T. ) ( ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s]) | S / N | Ion Ratio IR Vs MP% IR Vs CV% | Concentration [ True ] ng/mL | Q.C. Rec. {Area%CV} | Primary Transition | Confirmation Transition | Flag |
|---|---|---|---|---|---|---|---|---|---|
| D3_NMeFOSA_EIS | ( 515.0 / 169.0 ) 132763 | ( 14.53 , N/A ) ( N/A , 0.01 , N/A ) | 1012.1 | N/A | 0.6520 [ 2.0000 ] | 32.6% { 39.0% } | 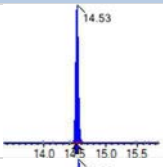  | | |
| D5_NEtFOSA_EIS | ( 531.0 / 169.0 ) 133504 | ( 14.86 , N/A ) ( N/A , 0.01 , N/A ) | 1340.7 | N/A | 0.7170 [ 2.0000 ] | 35.9% { 41.2% } | 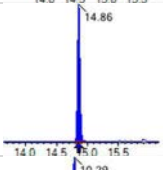  | | |
| D3_MeFOSAA_EIS | ( 573.0 / 419.0 ) 1176372 | ( 10.29 , N/A ) ( N/A , 0.00 , N/A ) | 3163.3 | N/A | 3.9700 [ 4.0000 ] | 99.3% { 114.7% } | 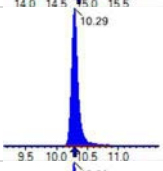  | | |
| D5_EtFOSAA_EIS | ( 589.0 / 419.0 ) 1123802 | ( 10.89 , N/A ) ( N/A , -0.01 , N/A ) | 2710.0 | N/A | 4.2030 [ 4.0000 ] | 105.1% { 123.1% } | 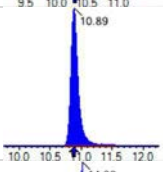  | | |
| D7_NMeFOSE_EIS | ( 623.0 / 58.9 ) 652100 | ( 14.32 , N/A ) ( N/A , 0.01 , N/A ) | 1377.9 | N/A | 8.5700 [ 20.0000 ] | 42.8% { 52.7% } | 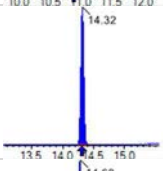  | | |
| D9_NEtFOSE_EIS | ( 639.0 / 58.9 ) 636297 | ( 14.68 , N/A ) ( N/A , 0.01 , N/A ) | 3389.9 | N/A | 8.9290 [ 20.0000 ] | 44.6% { 58.6% } | 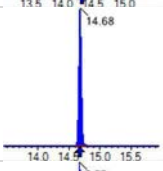  | | |
| 13C3_HFPODA_EIS | ( 287.0 / 169.0 ) 877930 | ( 5.57 , N/A ) ( N/A , 0.00 , N/A ) | 2589.8 | N/A | 7.9840 [ 8.0000 ] | 99.8% { 112.2% } | 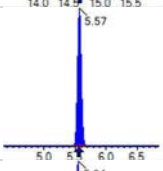  | | |
| 13C2_6:2FTUCA_EIS | ( 359.2 / 294.0 ) 651838 | ( 5.84 , N/A ) ( N/A , 0.00 , N/A ) | 2573.1 | N/A | 2.0600 [ 2.0000 ] | 103.0% { 128.7% } | 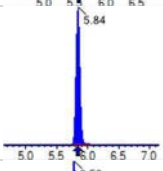  | | |
| 13C2_8:2FTUCA_EIS | ( 459.2 / 394.0 ) 628600 | ( 8.58 , N/A ) ( N/A , 0.01 , N/A ) | 1026.2 | N/A | 1.7630 [ 2.0000 ] | 88.1% { 107.4% } | 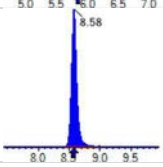  | | |

# PREPARATION BATCH SUMMARY

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory: | PPL, LLC | Work Order: | 24C0142A |
| Client: | Tidewater, Inc. | Project: | JPL-GW Monitoring |
| Batch: | BDC0363A Batch Matrix: Water | Preparation: | EPA 1633A |

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT mL | FINAL VOL. mL |
|---|---|---|---|---|
| MW-13- | 24C0142-01- | 03/26/24 07:38- | 534.32- | 2.00- |
| DUP-6-032124- | 24C0142-02- | 03/26/24 07:38- | 534.61- | 2.00- |
| MW-16- | 24C0142-03- | 03/26/24 07:38- | 555.38- | 2.00- |
| DUP-7-032124- | 24C0142-04- | 03/26/24 07:38- | 555.59- | 2.00- |
| MW-7- | 24C0142-05 | 03/26/24 07:38- | 562.05 | 2.00- |
| DUP-8-032124- | 24C0142-06- | 03/26/24 07:38- | 570.10- | 2.00- |
| EB-9-032124- | 24C0142-07- | 03/26/24 07:38- | 539.45 | 2.00- |
| FB-9-032124- | 24C0142-08- | 03/26/24 07:38- | 546.34- | 2.00- |
| Blank- | BDC0363-BLK1- | 03/26/24 07:38- | 500.00- | 2.00- |
| LCS- | BDC0363-BS1- | 03/26/24 07:38- | 500.00- | 2.00- |
| MRL Check- | BDC0363-MRL1- | 03/26/24 07:38- | 500.00- | 2.00- |

# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/27/2024 9:58 am

BDC0363

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | Sample and Source ID<br>ID's Confirmed By: | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 24C0136-01 A | CD-1 M | 617.359 | 45.96 | 7 | 3/26/2024 7:38:00AM | 571.399 | 2 | | 200 , 200 | |
| 24C0136-02 A | CD-2 M | 628.525 | 46.061 | 7 | 3/26/2024 7:38:00AM | 582.464 | 2 | | 200 , 200 | |
| 24C0136-03 A | CD-3 M | 617.043 | 46.643 | 7 | 3/26/2024 7:38:00AM | 570.4 | 2 | | 200 , 200 | |
| 24C0136-04 A | CD-4 M | 620.118 | 47.069 | 7 | 3/26/2024 7:38:00AM | 573.049 | 2 | | 200 , 200 | |
| 24C0142-01 A | MW-13 A | 579.225 | 44.901 | 7 | 3/26/2024 7:38:00AM | 534.324 | 2 | | 200 , 200 | |
| 24C0142-02 A | DUP-6-032124 A | 580.33 | 45.716 | 7 | 3/26/2024 7:38:00AM | 534.614 | 2 | | 200 , 200 | |
| 24C0142-03 A | MW-16 A | 600.718 | 45.34 | 7 | 3/26/2024 7:38:00AM | 555.378 | 2 | | 200 , 200 | |
| 24C0142-04 A | DUP-7-032124 A | 600.86 | 45.267 | 7 | 3/26/2024 7:38:00AM | 555.593 | 2 | | 200 , 200 | |
| 24C0142-05 A | MW-7 A | 607.48 | 45.43 | 7 | 3/26/2024 7:38:00AM | 562.05 | 2 | | 200 , 200 | |
| 24C0142-06 A | DUP-8-032124 A | 615.283 | 45.18 | 7 | 3/26/2024 7:38:00AM | 570.103 | 2 | | 200 , 200 | |
| 24C0142-07 A | EB-9-032124 A | 584.286 | 44.834 | 7 | 3/26/2024 7:38:00AM | 539.452 | 2 | | 200 , 200 | |
| 24C0142-08 A | FB-9-032124 A | 591.881 | 45.54 | 7 | 3/26/2024 7:38:00AM | 546.341 | 2 | | 200 , 200 | |
| 24C0143-01 A | SP 2 A | 541.161 | 45.936 | 7 | 3/26/2024 7:38:00AM | 495.225 | 2 | | 200 , 200 | |
| 24C0143-02 A | SP 2 BLANK A | 612.908 | 45.771 | 7 | 3/26/2024 7:38:00AM | 567.137 | 2 | | 200 , 200 | |
| 24C0144-01 A | MW-1 A | 629.673 | 46.842 | 7 | 3/26/2024 7:38:00AM | 582.831 | 2 | | 200 , 200 | |
| 24C0144-02 A | MW-2 A | 603.265 | 45.785 | 7 | 3/26/2024 7:38:00AM | 557.48 | 2 | | 200 , 200 | |
| 24C0144-03 A | MW-3 A | 598.821 | 46.517 | 7 | 3/26/2024 7:38:00AM | 552.304 | 2 | | 200 , 200 | |
| 24C0144-04 A | MW-4 A | 619.462 | 47.048 | 7 | 3/26/2024 7:38:00AM | 572.414 | 2 | | 200 , 200 | |
| BDC0363-BLK1 | Blank | | | | 3/26/2024 7:38:00AM | 500 | 2 | | 200 , 200 | |
| BDC0363-BS1 | LCS | | | | 3/26/2024 7:38:00AM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0363-MRL1 | MRL Check | | | | 3/26/2024 7:38:00AM | 500 | 2 | 40 , 40 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B0390 | PFAS - MIX 1633 10ng/mL rev1 |
| 24C0392 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0553 | MPFAC-HIF-ES 20.0ng/mL |
| 24C0574 | 1633 EIS MIXB 20-80ng/mL |

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____



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# PREPARATION BENCH SHEET
# PFAS

Print Date/Time: 03/27/2024 9:58 am

BDC0363

(Continued)

**Matrix: Water**

Start Date/Time _____

StopDate/Time _____

**Prepared using: PFAS - EPA 1633**

**Equipment Used:**

**Balances:** Scale
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| 23H0402 | Envi-carb | 148517 |
| 24A0488 | Am. Ac. preservative | R021040 |
| 24C0557 | Reagent - 1.0% Ammonia Hydroxide | 2023082320 |
| 24C0564 | Reagent -0.3M Formic Acid | 50009265 |
| 24C0565 | Reagent - 0.05MFA wash | 50009265 |

Batch Comments:

Spiked By: KMY 03/26/24 07:38
Witness By: CFM
pH Lot: 10BDH3431
Biotage Cartridge Lot: 23173102PA
Concentration: 0/27/24
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____





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# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/25/2024 1:38 pm

BDC0363

**Matrix: Water**

**Prepared using: PFAS - EPA 1633**

| Lab Number | | Sample and Source ID (ID's Confirmed By: CFM) | | Weight Before (g) | Weight After (g) | pH | Prepared | Initial (mL) | Final (mL) | µL Spike | µL Surrogate | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24C0136-01 | A | CD-1 | M | 617.359 | 45.960 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0136-02 | A | CD-2 | M | 628.525 | 46.061 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0136-03 | A | CD-3 | M | 617.043 | 46.643 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0136-04 | A | CD-4 | M | 620.118 | 47.069 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-01 | A | MW-13 | A | 579.225 | 44.901 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-02 | A | DUP-6-032124 | A | 580.330 | 45.716 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-03 | A | MW-16 | A | 600.718 | 45.340 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-04 | A | DUP-7-032124 | A | 600.560 | 45.267 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-05 | A | MW-7 | A | 607.480 | 45.430 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-06 | A | DUP-8-032124 | A | 615.283 | 45.180 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-07 | A | EB-9-032124 | A | 584.286 | 44.834 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0142-08 | A | FB-9-032124 | A | 591.881 | 45.540 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0143-01 | A | SP 2 | A | 541.161 | 45.936 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | initial pH @ 9 Adjust to 7 Slight Foamy |
| 24C0143-02 | A | SP 2 BLANK | A | 612.908 | 45.771 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0144-01 | A | MW-1 | A | 629.673 | 46.842 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0144-02 | A | MW-2 | A | 603.265 | 45.785 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0144-03 | A | MW-3 | A | 598.821 | 46.517 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| 24C0144-04 | A | MW-4 | A | 619.462 | 47.048 | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| BDC0363-BLK1 | | Blank | | | | 7 | 3/25/2024 1:30:00PM | 500 | 2 | | 200 , 200 | |
| BDC0363-BS1 | | LCS | | | | 7 | 3/25/2024 1:30:00PM | 500 | 2 | 200 , 200 | 200 , 200 | |
| BDC0363-MRL1 | | MRL Check | | | | 7 | 3/25/2024 1:30:00PM | 500 | 2 | 40 , 40 | 200 , 200 | |

**Analyses**

1633

**Spiking Solution(s)**

| | |
|---|---|
| 24B~~0012~~ 0390 | PFAS - MIX 1633 10ng/mL rev1 |
| 24C0392 | 1633 MIX B 5C 10ng/mL |

**Surrogate Solution(s)**

| | |
|---|---|
| 24B0553 | MPFAC-HIF-ES 20.0ng/mL |
| 24C~~0424~~ 0574 | 1633 EIS MIXB 20-80ng/mL |

MY/CFM 07:38 — Spiking Witnessed By

3-26-24 — Date

Loading Elute, Cap into Vial / Rinsed DI/0.05FA Drying

CFM / YHR — Preparation Reviewed By

Date

JR — Extracts Received By

3-27-24 — Date



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# PREPARATION BENCH SHEET
## PFAS

Print Date/Time: 03/25/2024 1:38 pm

BDC0363

(Continued)

**Matrix: Water**

Start Date/Time _____

StopDate/Time _____

**Equipment Used:**
**Balances:** SCALE
**Hotblock/Plate:**
**Sonic Horns:**
**Pipettes:** HK-47
**Water Baths:**
**Ovens:**
**Desiccator:**
**pH Probes:**

**Prepared using: PFAS - EPA 1633**

**Reagents**

| Standard | Description | LotNum |
|---|---|---|
| | | 24A0488 |
| | | 24AC0557 |
| | | 24AC0564 |
| | | 24AC0565 |

Am Ac
1%
0.3m
0.05 FA

Batch Comments:

Spiked By:
Witness By:
pH Lot: 10BDH3431
Biotage Cartridge Lot: 2317 3102 PA
Concentration: 3-27-24 07:49/ 08:14
IIS: 24B0645
Carbon Lot: 148517

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date 3-27-24





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# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01122A | Instrument:A | SaphiraA |
| Calibration: | 2413019A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Calibration BlankI | SD01122-CCB1A | S2024-03-29A (1)A | 03/29/24 11:18A |
| Low Cal CheckI | SD01122-LCV1A | S2024-03-29A (2)A | 03/29/24 11:38A |
| Calibration CheckI | SD01122-CCV1A | S2024-03-29A (3)A | 03/29/24 11:59A |
| Performance MixI | SD01122-PEM1A | S2024-03-29A (4)A | 03/29/24 12:19A |
| Performance MixI | SD01122-PEM2A | S2024-03-29A (5)A | 03/29/24 12:40A |
| Calibration BlankI | SD01122-CCB2A | S2024-03-29A (6)A | 03/29/24 13:00A |
| BlankI | BDC0363-BLK1A | S2024-03-29A (7)A | 03/29/24 13:21A |
| LCSI | BDC0363-BS1A | S2024-03-29A (8)A | 03/29/24 13:41A |
| MRL CheckI | BDC0363-MRL1A | S2024-03-29A (9)A | 03/29/24 14:02A |
| MW-13I | 24C0142-01A | S2024-03-29A (14)A | 03/29/24 15:44A |
| DUP-6-032124I | 24C0142-02A | S2024-03-29A (15)A | 03/29/24 16:05A |
| MW-16I | 24C0142-03A | S2024-03-29A (16)A | 03/29/24 16:25A |
| DUP-7-032124I | 24C0142-04A | S2024-03-29A (17)A | 03/29/24 16:46A |
| MW-7I | 24C0142-05A | S2024-03-29A (18)A | 03/29/24 17:06A |
| DUP-8-032124I | 24C0142-06A | S2024-03-29A (19)A | 03/29/24 17:27A |
| Calibration CheckI | SD01122-CCV2A | S2024-03-29A (20)A | 03/29/24 17:48A |
| Calibration BlankI | SD01122-CCB3A | S2024-03-29A (21)A | 03/29/24 18:08A |
| EB-9-032124I | 24C0142-07A | S2024-03-29A (22)A | 03/29/24 18:29A |
| FB-9-032124I | 24C0142-08A | S2024-03-29A (23)A | 03/29/24 18:49A |
| Calibration CheckI | SD01122-CCV3A | S2024-03-29A (30)A | 03/29/24 21:13A |
| Calibration BlankI | SD01122-CCB4A | S2024-03-29A (31)A | 03/29/24 21:33A |

# INJECTION LOG - ANALYSIS SEQUENCE SUMMARYA

## EPA 1633A

| | | | |
|---|---|---|---|
| Laboratory:A | APPL, LLCA | SDG:A | 24C0142A |
| Client:A | Tidewater, Inc.A | Project:A | JPL-GW MonitoringA |
| Sequence:A | SD01148A | Instrument:A | SaphiraA |
| Calibration: | 2413019A | | |

| Sample NameA | Lab Sample IDA | Lab File ID | Analysis Date/TimeA |
|---|---|---|---|
| Cal Standardl | SD01148-CAL1A | S2024-03-28A (1)A | 03/28/24 15:25A |
| Cal Standardl | SD01148-CAL2A | S2024-03-28A (2)A | 03/28/24 15:45A |
| Cal Standardl | SD01148-CAL3A | S2024-03-28A (3)A | 03/28/24 16:06A |
| Cal Standardl | SD01148-CAL4A | S2024-03-28A (4)A | 03/28/24 16:26A |
| Cal Standardl | SD01148-CAL5A | S2024-03-28A (5)A | 03/28/24 16:47A |
| Cal Standardl | SD01148-CAL6A | S2024-03-28A (6)A | 03/28/24 17:07A |
| Cal Standardl | SD01148-CAL7A | S2024-03-28A (7)A | 03/28/24 17:28A |
| Cal Standardl | SD01148-CAL8A | S2024-03-28A (8)A | 03/28/24 17:48A |
| Initial Cal Blankl | SD01148-ICB1A | S2024-03-28A (9)A | 03/28/24 18:09A |
| Secondary Cal Checkl | SD01148-SCV1A | S2024-03-28A (10)A | 03/28/24 18:29A |

# Analytical Standardsa

# List of Standards

| | |
|---|---|
| 21L0004 | Parents |
| 21L0004 | Parents |
| 21L0005s | Parents |
| 21L0005s | Parents |
| 21L0007s | Parents |
| 21L0007s | Parents |
| 22A0116s | Parents |
| 22A0116s | Parents |
| 22A0117s | Parents |
| 22A0117s | Parents |
| 22A0118s | Parents |
| 22A0118s | Parents |
| 22A0119s | Parents |
| 22A0119s | Parents |
| 22A0120s | Parents |
| 22A0120s | Parents |
| 22A0121s | Parents |
| 22A0121s | Parents |
| 22A0122s | Parents |
| 22A0122s | Parents |
| 22A0123s | Parents |
| 22A0123s | Parents |
| 22A0234 | Parents |
| 22F0445s | Parents |
| 22F0446s | Parents |
| 22J0297s | Parents |
| 22J0297s | Parents |
| 22J0298s | Parents |
| 22J0298s | Parents |
| 22J0301s | Parents |
| 22J0301s | Parents |
| 22J0302s | Parents |
| 22J0302s | Parents |
| 22J0303s | Parents |
| 22J0303s | Parents |
| 22J0304 | Parents |
| 22J0304 | Parents |
| 22J0420s | Parents |
| 23A0022s | Parents |
| 23A0024 | Parents |
| 23A0025s | Parents |
| 23A0419s | Parents |
| 23A0419s | Parents |
| 23A0420s | Parents |
| 23A0420s | Parents |
| 23C0154 | Parents |
| 23C0154 | Parents |
| 23C0155s | Parents |
| 23C0155s | Parents |
| 23C0156s | Parents |
| 23C0156s | Parents |
| 23C0442s | Parents |
| 23C0442s | Parents |
| 23D0468s | Parents |
| 23D0537s | TDCA-PFOS 1ug/mL,10ng/mls |
| 23D0543s | PFAS RES-MIX 10ng/mLs |
| 23F0057s | Parents |
| 23F0057s | Parents |
| 23F0057s | Parents |
| 23G0454 | Parents |
| 23H0440s | Parents |
| 23H0440s | Parents |
| 23H0498s | Parents |

| | |
|---|---|
| 23H0498s | Parents |
| 23H0499s | Parents |
| 23H0499s | Parents |
| 23H0500s | Parents |
| 23H0500s | Parents |
| 23H0501s | Parents |
| 23H0501s | Parents |
| 23H0522s | Parents |
| 23H0523s | Parents |
| 23I0026s | Parents |
| 23I0026s | Parents |
| 23K0147s | Parents |
| 23K0147s | Parents |
| 23K0147s | Parents |
| 23K0148s | Parents |
| 23K0148s | Parents |
| 23K0149s | Parents |
| 23K0149s | Parents |
| 23L0007s | Parents |
| 23L0144 | Parents |
| 23L0144 | Parents |
| 23L0145s | Parents |
| 23L0145s | Parents |
| 23L0523s | Parents |
| 23L0523s | Parents |
| 23L0524 | Parents |
| 23L0524 | Parents |
| 23L0528s | Parents |
| 23L0528s | Parents |
| 24A0367s | Parents |
| 24A0367s | Parents |
| 24A0369s | Parents |
| 24A0370s | Parents |
| 24A0370s | Parents |
| 24A0371s | Parents |
| 24B0010s | Parents |
| 24B0182s | Parents |
| 24B0182s | Parents |
| 24B0183s | Parents |
| 24B0183s | Parents |
| 24B0184 | Parents |
| 24B0184 | Parents |
| 24B0185s | Parents |
| 24B0185s | Parents |
| 24B0185s | Parents |
| 24B0186s | Parents |
| 24B0186s | Parents |
| 24B0187s | Parents |
| 24B0187s | Parents |
| 24B0188s | Parents |
| 24B0188s | Parents |
| 24B0192s | Parents |
| 24B0192s | Parents |
| 24B0193s | Parents |
| 24B0193s | Parents |
| 24B0289s | Parents |
| 24B0290s | Parents |
| 24B0290s | Parents |
| 24B0291s | Parents |
| 24B0292s | Parents |
| 24B0292s | Parents |
| 24B0293s | Parents |
| 24B0293s | Parents |
| 24B0299s | Parents |
| 24B0299s | Parents |
| 24B0390s | PFAS - MIX 1633 10ng/mL rev1s |
| 24B0394 | Parents |
| 24B0395s | Parents |

| | |
|---|---|
| 24B0396s | Parents |
| 24B0397s | Parents |
| 24B0466s | S1633 - B CAL 0.1 ng/mLs |
| 24B0467s | S1633 - B CAL 0.5 ng/mLs |
| 24B0468s | S1633 - B CAL 1.0 ng/mLs |
| 24B0469s | S1633 - B CAL 2.0 ng/mLs |
| 24B0471s | S1633 - B CAL 10 ng/mLs |
| 24B0472s | S1633 - B CAL 20 ng/mLs |
| 24B0473s | S1633 - B CAL 50 ng/mLs |
| 24B0552s | Parents |
| 24B0553s | MPFAC-HIF-ES 20.0ng/mLs |
| 24B0645s | Parents |
| 24B0646s | 1633- IIS Static 1ng/mLs |
| 24C0037s | Parents |
| 24C0038s | Parents |
| 24C0039s | Parents |
| 24C0039s | Parents |
| 24C0040s | S1633 - B SCV 4.0 ng/mLs |
| 24C0041s | Parents |
| 24C0041s | Parents |
| 24C0280s | Parents |
| 24C0281s | S1633 - B ICB 0.0 ng/mLs |
| 24C0392s | 1633 MIX B 5C 10ng/mLs |
| 24C0420s | S1633 - B CAL 5.0 ng/mLs |
| 24C0574 | 1633 EIS MIXB 20-80ng/mLs |

# Analytical Standard Record

## 21L0004L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 3:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:39 by DAGs |
| Lot Number:s | FPrPA1020s | | |
| Comments: | 3:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 3:3FTCAs | | 356-02-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FPrPA
**COMPOUND:** 3-Perfluoropropyl propanoic acid
**LOT NUMBER:** FPrPA1020

**STRUCTURE:**
**CAS #:** 356-02-5

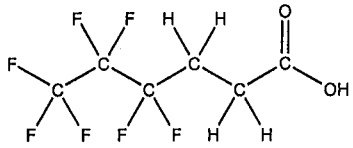


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_5F_7O_2$ | **MOLECULAR WEIGHT:** | 242.09 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by $^{19}F$ NMR.

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**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0005L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 5:3FTA 50ug/mLs | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOHs | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:41 by DAGs |
| Lot Number:s | FPePA1120s | | |
| Comments: | 5:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 5:3FTCAs | | 914637-49-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** FPePA
**COMPOUND:** 3-Perfluoropentyl propanoic acid

**LOT NUMBER:** FPePA1120

**STRUCTURE:**

**CAS #:** 914637-49-3

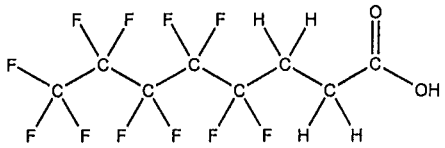

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_5F_{11}O_2$ | **MOLECULAR WEIGHT:** | 342.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/11/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/11/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains <1% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by $^{19}F$ NMR.

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**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record

## 21L0007L

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS 7:3FTA 50ug/mLs | Expires:s | 11/12/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021s |
| Solvent:s | MeOH | Prepared By:s | Hart Hedgpeths |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/31/2022 14:42 by DAGs |
| Lot Number:s | FHpPA1020s | | |
| Comments:3 | 7:3 FTCA 50.0ug/mL | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 7:3FTCAs | | 812-70-4 | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FHpPA
**COMPOUND:** 3-Perfluoroheptyl propanoic acid
**LOT NUMBER:** FHpPA1020

**STRUCTURE:**
**CAS #:** 812-70-4

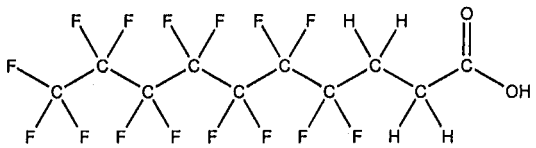

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_5F_{15}O_2$ | **MOLECULAR WEIGHT:** | 442.12 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/12/2020 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/12/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 11/27/2020 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record0

**22A01160**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS M3PFBA 50ug/mL | Expires:s | 08/19/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/19/2021 |
| Solvent:s | MeOH | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:48 by HGH |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | | 13C3-PFBAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M3PFBA
**COMPOUND:** Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

**LOT NUMBER:** M3PFBA0721

**STRUCTURE:**

**CAS #:** Not available

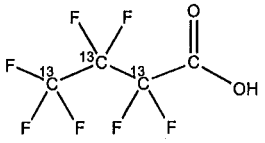

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_3{}^{12}CHF_7O_2$ | **MOLECULAR WEIGHT:** | 217.02 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99%$^{13}C$<br>(2,3,4-$^{13}C_3$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/19/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/19/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of $^{13}C$ in the unlabelled carbon atom.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 08/25/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record

## 22A0117L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxA 50ug/mL | Expires:s | 10/04/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/04/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxA0921)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:58 by DAGs |
| Lot Number:s | MPFHxA0921s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFHXAs | | 13C2-PFHxAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxA | **LOT NUMBER:** | MPFHxA0921 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-47-3 |

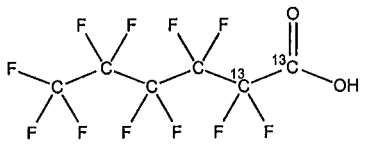

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_4HF_{11}O_2$ | **MOLECULAR WEIGHT:** | 316.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/04/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/04/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/22/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# Analytical Standard Record0

**22A01180**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFNA 50ug/mL | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFNA1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:59 by DAGs |
| Lot Number:s | MPFNA1021s | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C5-PFNAs | | 13C5-PFNAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA1021 |
| **COMPOUND:** | Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-49-5 |

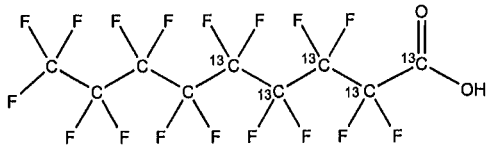

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record0

**22A01190**

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOA 50ug/mL | Expires: | 12/07/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/07/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOA1121) |
| Final Volume (mls):s | 1.2 | Department:s | PFAS |
| Vials:s | 1s | Last Edit: | 03/06/2024 16:54 by HGHs |
| Lot Number:s | MPFOA1121 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C4-PFOA | | 13C4-PFOA | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOA
**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1121

**STRUCTURE:**

**CAS #:** 960315-48-4

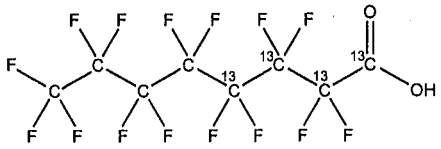

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4HF_{15}O_2$ | **MOLECULAR WEIGHT:** | 418.04 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/07/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/07/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 12/20/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record

## 22A0120L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFDA 50ug/mL | Expires:s | 12/08/2026 |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/08/2021 |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFDA1221)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:56 by HGHs |
| Lot Number:s | MPFDA1221s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-PFDAs | | 13C2-PFDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDA | **LOT NUMBER:** | MPFDA1221 |
| **COMPOUND:** | Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 960315-50-8 |

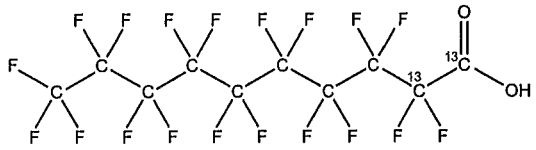

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 516.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 12/08/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/08/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 12/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard Record

## 22A0121L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFOS 50ug/mL | Expires: | 08/18/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 08/18/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFOS0821) |
| Final Volume (mls):s | 1.2 | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 03/06/2024 16:57 by HGH |
| Lot Number:s | MPFOS0821 | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C4-PFOS | | 13C4-PFOS | 50s | ug/mLs |

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## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFOS | **LOT NUMBER:** | MPFOS0821 |
| **COMPOUND:** | Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | 960315-53-1 |

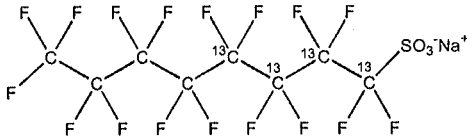


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.9 ± 2.4 µg/mL (MPFOS acid)<br>47.8 ± 2.4 µg/mL (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2,3,4$-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/18/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/18/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~0.4% sodium perfluoro-1-($^{13}C_3$)heptanesulfonate.

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**Certified By:** _____ **Date:** 08/19/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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# Analytical Standard Record

## 22A0122L

| | | | |
|---|---|---|---|
| Description:s | PFAS - IIS MPFHxS 50ug/mL | Expires:s | 10/29/2026s |
| Standard Type:s | Analyte Spikes | Prepared:s | 10/29/2021s |
| Solvent:s | MeOH | Prepared By:s | Wellington Laboratories (Lot#: MPFHxS1021)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:05 by DAGs |
| Lot Number:s | MPFHxS1021s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 18O2-PFHXSs | | 18O2-PFHXSs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS1021 |
| **COMPOUND:** | Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate | | |
| **STRUCTURE:** | 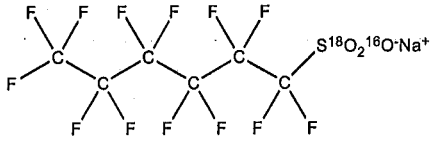 | **CAS #:** | 1585941-14-5 |
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 426.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.4 ± 2.4 µg/mL (MPFHxS acid)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/29/2026 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

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**Certified By:** _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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Calbiochem®

Certificate of Analysis

# Taurodeoxycholic Acid, Sodium Salt - CAS 1180-95-6 - Calbiochem

| | |
|---|---|
| **Batch Number:** | 3761825 |
| **Material Number:** | 580221-5GM |
| **Molecular Formula:** | $C_{26}H_{44}NO_6S \cdot Na$ |
| **Molecular Weight:** | 521.7 |
| **CAS Number:** | 1180-95-6 |

**Quality Release Date:** 05 OCT 2021
**Recommended Retest Date:** 30 SEP 2023

## Analytical Data

| Test | Tolerance | Result |
|---|---|---|
| **Solubility:** | | $H_2O$ (100 mg/ml) |
| **Chloride:** | | <0.01% |
| **Loss on drying:** | ≤5.0 % | 0.1% |
| **Color:** | | White |
| **Form:** | | Powder |
| **TLC:** | ≥95.0 % | ≥95.00% |
| **IR:** | | Conforms to reference |
| **Optical rotation:** | 35.0 ° - 39.0 ° | +36.38° |
| **Water by Karl Fischer:** | ≤5.0 % | 2.86% |
| **Carbon:** | ≥0.00 % | 57.78% |
| **Hydrogen:** | ≥0.00 % | 8.32 % |
| **Nitrogen:** | ≥0.00 % | 2.77 % |

**Storage and Handling:** +15°C to +30°C

This lot conforms to specifications established by EMD Millipore Corporation for this product.

Issued by Jamie Thomas

This document has been electronically produced and is valid without a signature

Quality Control/ Assurance Signature

05 OCT 2021
Date

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**EMD Millipore Corporation | 28820 Single Oak Dr., Temecula, CA 92590**

**Technical Support NA +1-800-221-1975 | email: www.millipore.com/techservices | www.calbiochem.com**

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580221-5GM/09-MAY-2018/EA

# Analytical Standard Record0

**22A0123** 0

| | | | |
|---|---|---|---|
| Description:s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | Expires:s | 09/30/2030s |
| Standard Type:s | Other | Prepared:s | 10/09/2021s |
| Solvent:s | nas | Prepared By:s | Calbiochem (Lot#: 3761825) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 16:19 by DAGs |
| Lot Number:s | 3761825 | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACID | | 516-50-7 | 1000000s | ug/gs |

# Analytical Standard Record0

## 22A02340

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 5ug/mL | Expires:s | 01/20/2023s |
| Standard Type:s | Internal Standard | Prepared:s | 01/20/2022s |
| Solvent:s | MeOH/61252s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 12s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/20/2022 15:49 by HGHs |
| Comments:f | mpfna had more left over than others. | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| 13C3-PFBAs | 22A0116s | 13C3-PFBAs | 5s | ug/mLs |
| 13C2-PFHXAs | 22A0117 | 13C2-PFHxAs | 5s | ug/mLs |
| 13C5-PFNAs | 22A0118s | 13C5-PFNAs | 5s | ug/mLs |
| 13C4-PFOAs | 22A0119s | 13C4-PFOAs | 5s | ug/mLs |
| 13C2-PFDAs | 22A0120s | 13C2-PFDAs | 5s | ug/mLs |
| 13C4-PFOSs | 22A0121s | 13C4-PFOSs | 5s | ug/mLs |
| 18O2-PFHXSs | 22A0122s | 18O2-PFHXSs | 5s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0116s | PFAS - IIS M3PFBA 50ug/mLs | 08/19/2021s | Wellington Laboratories | M3PFBA0721 | 08/19/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0117 | PFAS - IIS MPFHxA 50ug/mLs | 10/04/2021s | Wellington Laboratories | MPFHxA0921s | 10/04/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0118s | PFAS - IIS MPFNA 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFNA1021s | 10/29/2026s | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0119s | PFAS - IIS MPFOA 50ug/mLs | 12/07/2021 | Wellington Laboratories | MPFOA1121s | 12/07/2026 | 01/20/2022 15:48s | by HGHs | 1.2 |
| 22A0120s | PFAS - IIS MPFDA 50ug/mLs | 12/08/2021s | Wellington Laboratories | MPFDA1221s | 12/08/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0121s | PFAS - IIS MPFOS 50ug/mLs | 08/18/2021s | Wellington Laboratories | MPFOS0821s | 08/18/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |
| 22A0122s | PFAS - IIS MPFHxS 50ug/mLs | 10/29/2021s | Wellington Laboratories | MPFHxS1021s | 10/29/2026s | 01/20/2022 15:49s | by HGHs | 1.2 |

# Analytical Standard Record

## 22F04450

| | | | |
|---|---|---|---|
| Description:s | TDCA 1000ug/mLs | Expires:s | 09/19/2026s |
| Standard Type:s | Others | Prepared:s | 01/12/2022s |
| Solvent:s | 62097s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 25s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACID | 22A0123s | 516-50-7 | 1000s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22A0123s | PFAS Taurodeoxycholic Acid, Sodium Salt neat | 10/09/2021s | Calbiochem | 3761825 | 09/30/2030s | 03/06/2024 17:00 | by HGHs | 0.025 |

# Analytical Standard Record

**22F0446** 0

| | | | |
|---|---|---|---|
| Description:s | TDCA 100ug/mLs | Expires:s | 09/19/2026s |
| Standard Type:s | Others | Prepared:s | 01/13/2022s |
| Solvent:s | 62097s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 3s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 17:01 by HGHs |
| Lot Number:s | 3761825 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACID | 22F0445s | 516-50-7 | 100s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared | Prepared By0 | Lot Nbr0 | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22F0445s | TDCA 1000ug/mLs | 01/12/2022s | Calbiochem | 3761825 | 09/19/2026s | 03/06/2024 17:01 | by HGHs | 0.3 |

# Analytical Standard Record

**22J02970**

| | | | |
|---|---|---|---|
| Description:s | T-PFOAs | Expires:s | 01/27/2027s |
| Standard Type:s | Others | Prepared:s | 01/27/2022s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: TPFOA0122)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/18/2022 12:59 by HGHs |
| Lot Number:s | TPFOA0122s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | | 335-67-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | T-PFOA | **LOT NUMBER:** | TPFOA0122 |
| **COMPOUND:** | Ammonium perfluorooctanoate (Technical Grade) | | |
| **STRUCTURE:** | (see Table A) | **CAS #:** | 3825-26-1 (for linear ammonium perfluorooctanoate) |

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}O_2NH_4$ |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (gravimetric) |
| **CHEMICAL PURITY:** | Technical material |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **LAST TESTED:** (mm/dd/yyyy) | 01/27/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/27/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

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**Certified By:** _____ **Date:** 01/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard Record

## 22J02980

| | | | |
|---|---|---|---|
| Description:s | br-FOSAs | Expires: | 10/07/2027s |
| Standard Type:s | Others | Prepared:s | 09/14/2022s |
| Solvent:s | Isopropanols | Prepared By:s | Wellington Laboratories (Lot#: br-FOSA0922)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 10/18/2022 13:03 by HGHs |
| Lot Number:s | br-FOSA0922s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSAs | | 754-91-6s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-FOSA

**Perfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-FOSA |
| **LOT NUMBER:** | brFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Isopropanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/14/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 754-91-6 (for linear isomer).

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**Table A:** **br-FOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | Perfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH_2$ | 66.6 |
| 2 | Perfluoro-1-methyl-1-heptanesulfonamide** | $CF_3(CF_2)_5CF(CF_3)SO_2NH_2$ | 0.8 |
| 3 | Perfluoro-2-methyl-1-heptanesulfonamide | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2NH_2$ | 0.3 |
| 4 | Perfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2NH_2$ | 4.2 |
| 5 | Perfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2NH_2$ | 3.5 |
| 6 | Perfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2NH_2$ | 7.8 |
| 7 | Perfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_3)(CF_2)_5SO_2NH_2$ | 16.8 |
| 8 | Perfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3C(CF_3)_2(CF_2)_4SO_2NH_2$ | 0.2 |

* Percent of total perfluorooctanesulfonamide isomers only.
** Systematic Name: Perfluoro-2-octanesulfonamide.

**Certified By:** _____ **Date:** 11/15/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

**22J03010**

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSAs | Expires:s | 08/23/2027s |
| Standard Type:s | Others | Prepared:s | 08/23/2022s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: beNMeFOSA0822)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/18/2022 13:37 by HGHs |
| Lot Number:s | beNMeFOSA0822s | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSAs | | 31506-32-8s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NMeFOSA

**N-Methylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSA |
| **LOT NUMBER:** | brNMeFOSA0822 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/18/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 08/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/23/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 31506-32-8 (for linear isomer).

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**Table A:** **br-NMeFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Methylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\vert$<br>$CH_3$ | 72.3 |
| 2 | N-Methylperfluoro-3-methyl-1-heptanesulfonamide | $CF_3(CF_2)_3CF(CF_2)_2SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.1 |
| 3 | N-Methylperfluoro-4-methyl-1-heptanesulfonamide | $CF_3(CF_2)_2CF(CF_2)_3SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 2.6 |
| 4 | N-Methylperfluoro-5-methyl-1-heptanesulfonamide | $CF_3CF_2CF(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 6.7 |
| 5 | N-Methylperfluoro-6-methyl-1-heptanesulfonamide | $CF_3CF(CF_2)_5SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 16.2 |
| 6 | N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamide | $CF_3$<br>$\vert$<br>$CF_3C(CF_2)_4SO_2NH$<br>$\vert$ $\vert$<br>$CF_3$ $CH_3$ | 0.04 |

* Percent of total N-methylperfluorooctanesulfonamide isomers only.

**Certified By:** _____ **Date:** 11/15/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard Record

## 22J03020

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSAs | Expires:s | 10/07/2027s |
| Standard Type:s | Others | Prepared:s | 10/07/2022s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: beNEtFOSA0922) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/18/2022 13:38 by HGHs |
| Lot Number:s | beNEtFOSA0922 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSA | | 4151-50-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NEtFOSA

**N-Ethylperfluorooctanesulfonamide**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSA |
| **LOT NUMBER:** | brNEtFOSA0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 08/23/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/07/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 4151-50-2 (for linear isomer).

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**Table A:** **br-NEtFOSA; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | N-Ethylperfluoro-1-octanesulfonamide | $CF_3(CF_2)_7SO_2NH$<br>$\quad\quad\quad

# Analytical Standard Record

**22J03030**

| | | | |
|---|---|---|---|
| Description:s | br-NMeFOSEs | Expires:s | 10/07/2027s |
| Standard Type:s | Others | Prepared:s | 10/07/2022s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: beNMeFOSE0922) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/26/2022 10:16 by HGHs |
| Lot Number:s | beNMeFOSE0922 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NMeFOSE | | 24448-09-7s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-NMeFOSE

**2-(N-Methylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NMeFOSE |
| **LOT NUMBER:** | brNMeFOSE0922 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/02/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/07/2022 (HRGC/LRMS) |
| | 10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).

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**Table A:** **br-NMeFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Methylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$ | 67.6 |
| 2 | 2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$ | 3.9 |
| 3 | 2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$ | 3.2 |
| 4 | 2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 7.7 |
| 5 | 2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$ | 17.5 |
| 6 | 2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$ | 0.2 |

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

**22J03040**

| | | | |
|---|---|---|---|
| Description:s | br-NEtFOSEs | Expires:s | 10/07/2027s |
| Standard Type:s | Others | Prepared:s | 10/07/2022s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: beNEtFOSE1022) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 10/18/2022 13:43 by HGHs |
| Lot Number:s | beNEtFOSE1022 | | |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| NEtFOSE | | 1691-99-2s | 50s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# br-NEtFOSE

**2-(N-Ethylperfluorooctanesulfonamido)ethanol**
**Isomeric Mix**

| | |
|---|---|
| **PRODUCT CODE:** | br-NEtFOSE |
| **LOT NUMBER:** | brNEtFOSE1022 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/12/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 09/12/2022 (HRGC/LRMS)<br>10/07/2022 (LC/MS) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/07/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol linear and branched isomers. The full name, structure, and percent composition for each of the isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).

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**Table A:** **br-NEtFOSE; Isomeric Components and Percent Composition (by $^{19}$F-NMR)***

| Isomer | Compound | Structure | Percent Composition by $^{19}$F-NMR |
|---|---|---|---|
| 1 | 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol | $CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$ | 64.6 |
| 2 | 2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.2 |
| 3 | 2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.1 |
| 4 | 2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol | $CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$ | 4.3 |
| 5 | 2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol | $CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 8.8 |
| 6 | 2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol | $CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$ | 17.8 |
| 7 | 2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol | $CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$ | 0.3 |

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only.

**Certified By:** _____ **Date:** 11/14/2022
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard Record

## 22J0420

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 1000ng/mL | Expires: | 04/24/2023s |
| Standard Type:s | Others | Prepared:s | 10/26/2022s |
| Solvent:s | MeOHs | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 10/26/2022 10:16 by HGHs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOAs | 22J0297 | 335-67-1s | 1s | ug/mLs |
| PFOSAs | 22J0298 | 754-91-6s | 1s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 1s | ug/mLs |
| NEtFOSA | 22J0302 | 4151-50-2s | 1s | ug/mLs |
| NMeFOSE | 22J0303 | 24448-09-7s | 1s | ug/mLs |
| NEtFOSE | 22J0304 | 1691-99-2s | 1s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 22J0297 | T-PFOAs | 01/27/2022s | Wellington Laboratories | TPFOA0122s | 01/27/2027s | 10/18/2022 12:59s | by HGHs | 0.02 |
| 22J0298 | br-FOSAs | 09/14/2022s | Wellington Laboratories | br-FOSA0922s | 10/07/2027s | 10/18/2022 13:03s | by HGHs | 0.02 |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.02 |
| 22J0302 | br-NEtFOSA | 10/07/2022s | Wellington Laboratories | beNEtFOSA0922 | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.02 |
| 22J0303 | br-NMeFOSE | 10/07/2022s | Wellington Laboratories | beNMeFOSE0922 | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.02 |
| 22J0304 | br-NEtFOSE | 10/07/2022s | Wellington Laboratories | beNEtFOSE1022 | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.02 |

Reviewed By

Date

# Analytical Standard Record

**23A0 220**

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4mg/mls | Expires:s | 07/03/2023s |
| Standard Type:s | Others | Prepared:s | 01/04/2023s |
| Solvent:s | 62097s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 40s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/04/2023 11:14 by DAGs |

| Analyte0 | Parent0 | CAS Number0 | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSs | 23A0024s | 1763-23-1s | 400s | ug/mLs |

**Parent Standards used: 0**

| Standard 0 | Description0 | Prepared0 | Prepared By0 | Lot Nbr | Expires0 | Last Edit0 | | (mls)0 |
|---|---|---|---|---|---|---|---|---|
| 23A0024s | PFOS 40% | 01/04/2023s | Sigma-Aldrich | 0000100807s | 11/10/2023s | 01/04/2023 11:14s | by DAGs | 0.04s |

Reviewed By

Date

# Analytical Standard Record0

**23A0 240**

| | | | |
|---|---|---|---|
| Description:s | PFOS 40% | Expires: | 11/10/2030s |
| Standard Type:s | Others | Prepared:s | 01/04/2023s |
| Solvent:s | methanol 77283 | Prepared By:s | Sigma-Aldrich (Lot#: 0000100807) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 03/06/2024 17:23 by HGHs |
| Lot Number:s | 0000100807s | | |
| Comments:a | neat-77283a | | |

| Analyte0 | Parent0 | CAS Number | Concentration 0 | Units0 |
|---|---|---|---|---|
| PFOSs | | 1763-23-1s | 400000s | ug/gs |

# nalytical Standard RecordA

## 23A0025

| | | | |
|---|---|---|---|
| Description:s | PFOS 0.4ug/mls | Expires:s | 07/03/2023s |
| Standard Type:s | Others | Prepared:s | 01/04/2023s |
| Solvent:s | 62097s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 40s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 01/04/2023 11:18 by DAG |

| AnalyteA | ParentA | CAS Number | Concentration A | UnitsA |
|---|---|---|---|---|
| PFOSs | 23A0022s | 1763-23-1s | 0.4 | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot Nbr | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 23A0022s | PFOS 0.4mg/ml | 01/04/2023s | In house | 3761825s | 07/03/2023s | 01/04/2023 11:14s | by DAGs | 0.04 |

Reviewed By

Date

# nalytical Standard RecordA

**23A0419**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFHxDA 50ug/mLs | Expires:s | 02/23/2027s |
| Standard Type:s | Analyte Spikes | Prepared:s | 02/23/2022s |
| Solvent:s | Methanols | Prepared By:s | Wellington Laboratories (Lot#: PFHxDA0222)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 04/18/2023 14:39 by DAGs |
| Lot Number:s | PFHxDA0222s | | |
| Comments: | PFHxDA (Perfluoro-n-hexadecanoic acid)H<br>CAS: 67905-19-5H | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFHxDAs | | 67905-19-5s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHxDA
**LOT NUMBER:** PFHxDA0222
**COMPOUND:** Perfluoro-n-hexadecanoic acid

**STRUCTURE:**
**CAS #:** 67905-19-5

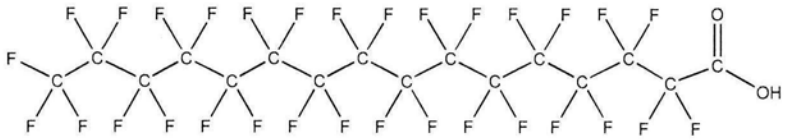

**MOLECULAR FORMULA:** $C_{16}HF_{31}O_2$
**MOLECULAR WEIGHT:** 814.13
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 02/23/2022
**EXPIRY DATE:** (mm/dd/yyyy) 02/23/2027
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 03/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

**23A0420**

| | | | |
|---|---|---|---|
| Description:s | PFAS - SAS PFODA 50ug/mLs | Expires:s | 07/05/2027s |
| Standard Type:s | Analyte Spikes | Prepared:s | 07/05/2022s |
| Solvent:s | Methanols | Prepared By:s | Wellington Laboratories (Lot#: PFODA0622)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 04/19/2023 16:08 by ABK |
| Lot Number:s | PFODA0622s | | |
| Comments: | PFODA (Perfluoro-n-octadecanoic acid)O<br>CAS: 16517-11-6O | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFODA
**LOT NUMBER:** PFODA0622
**COMPOUND:** Perfluoro-n-octadecanoic acid

**STRUCTURE:**
**CAS #:** 16517-11-6

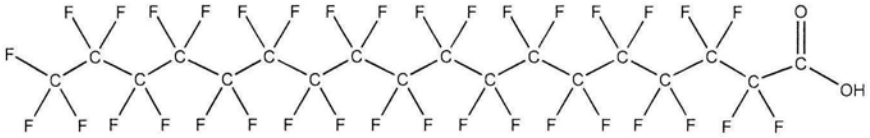

**MOLECULAR FORMULA:** $C_{18}HF_{35}O_2$
**MOLECULAR WEIGHT:** 914.14
**CONCENTRATION:** 50.0 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/05/2022
**EXPIRY DATE:** (mm/dd/yyyy) 07/05/2027
**RECOMMENDED STORAGE:** Store ampoule at ambient temperature in a dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition. The stated validity period applies to the sealed ampoules stored at ambient temperature.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/05/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0154C

| | | | |
|---|---|---|---|
| Description:s | PFECHS 50.0ug/mLs | Expires:s | 03/28/2027s |
| Standard Type:s | Others | Prepared:s | 03/28/2022s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: PFECHS0222) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 14:41 by DAGs |
| Lot Number:s | PFECHS0222 | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFECHS | | 646-83-3s | 46.2 | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFECHS **LOT NUMBER:** PFECHS0222

**COMPOUND:** Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

**STRUCTURE:**

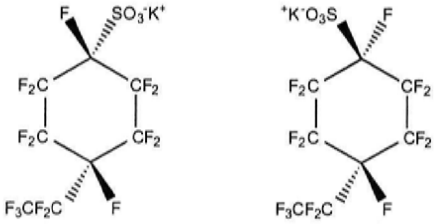


*cis*-isomer *trans*-isomer

**CAS #:** 335-24-0

| | |
|---|---|
| **MOLECULAR FORMULA:** | $C_8F_{15}SO_3K$ |
| **MOLECULAR WEIGHT:** | 500.22 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (K salt)<br>46.2 ± 2.3 µg/mL (PFECHS acid)<br>46.1 ± 2.3 µg/mL (PFECHS anion) |
| **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% |
| **LAST TESTED:** (mm/dd/yyyy) | 03/28/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/28/2027 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*).

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**Certified By:** _____ **Date:** 03/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
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# Analytical Standard RecordC

## 23C0155C

| | | | |
|---|---|---|---|
| Description:s | FBSA-I 50.0ug/mL | Expires: | 02/01/2028s |
| Standard Type:s | Others | Prepared:s | 02/01/2023s |
| Solvent:s | Isopropanols | Prepared By:s | Wellington Laboratories (Lot#: FBSA0123I)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:54 by DAGs |
| Lot Number:s | FBSA0123Is | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FBSA-I | **LOT NUMBER:** | FBSA0123I |
| **COMPOUND:** | Perfluoro-1-butanesulfonamide | | |
| **STRUCTURE:** | | **CAS #:** | 30334-69-1 |

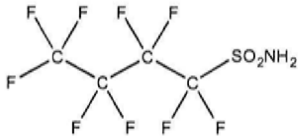

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4H_2F_9NO_2S$ | **MOLECULAR WEIGHT:** | 299.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 02/01/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/01/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# Analytical Standard RecordC

## 23C0156C

| | | | |
|---|---|---|---|
| Description:s | FHxSA-I 50.0ug/mL | Expires: | 12/29/2026s |
| Standard Type:s | Others | Prepared:s | 12/29/2021s |
| Solvent:s | Isopropanols | Prepared By:s | Wellington Laboratories (Lot#: FHxSA1221I)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 03/06/2024 14:56 by DAGs |
| Lot Number:s | FHxSA1221Is | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| PFHxSAs | | 41997-13-1s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHxSA-I
**COMPOUND:** Perfluoro-1-hexanesulfonamide
**LOT NUMBER:** FHxSA1221I

**STRUCTURE:**
**CAS #:** 41997-13-1

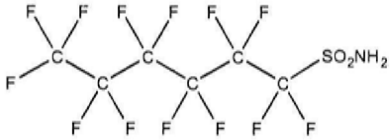

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6H_2F_{13}NO_2S$ | **MOLECULAR WEIGHT:** | 399.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 12/29/2021 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 12/29/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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**Certified By:** _____ **Date:** 01/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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# nalytical Standard RecordA

## 23C0442

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EIS | Expires: | 11/23/2025 s |
| Standard Type:s | Others | Prepared:s | 10/28/2022 s |
| Solvent:s | MeOHs | Prepared By: s | Wellington Laboratories (Lot#: MPFACHIFES1022) |
| Final Volume (mls): s | 1.2 | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 01/29/2024 10:17 by ABK |
| Lot Number: | MPFACHIFES1022 | | |

| AnalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25 | ug/mLs |
| 13C2-PFTEDA | | 13C2-PFTEDA | 0.25 | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5 | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5 | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5 | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5 | ug/mLs |
| 13C5-PFPEA | | 13C5-PFPEA | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25 | ug/mLs |
| 13C7-PFUnA | | 13C7-PFUDA | 0.25 | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5 | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5 | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5 | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25 | ug/mLs |
| D3-NMEFOSA | | D3-NMEFOSA | 0.5 | ug/mLs |
| D3-NMEFOSAA | | D3-NMEFOSAA | 1s | ug/mLs |
| D5-NETFOSA | | D5-NETFOSA | 0.5 | ug/mLs |
| D5-NETFOSAA | | D5-NETFOSAA | 1s | ug/mLs |
| D7-NMEFOSE | | D7-NMEFOSE | 5s | ug/mLs |
| D9-NETFOSE | | D9-NETFOSE | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1022 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/28/2022 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/23/2022 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/23/2025 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), three mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), three mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, three mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoacetic acids, two mass-labelled ($^{2}H$) perfluorooctanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid (GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 22 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 17 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 24 |
| N-methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 16 |
| 2-(N-methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 23 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23D0468D

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mL | Expires: | 10/21/2023s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 04/24/2023s |
| Solvent:s | MeOH/62335s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 1s | Last Edit: | 03/07/2024 18:19 by ABK |
| Lot Number:s | * | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-4:2FTSs | 23C0442s | 13C2-4:2FTSs | 0.04 | ug/mLs |
| 13C2-6:2FTSs | 23C0442s | 13C2-6:2FTSs | 0.04 | ug/mLs |
| 13C2-8:2FTSs | 23C0442s | 13C2-8:2FTSs | 0.04 | ug/mLs |
| 13C2-PFDOAs | 23C0442s | 13C2-PFDOAs | 0.01 | ug/mLs |
| 13C2-PFTEDA | 23C0442s | 13C2-PFTEDA | 0.01 | ug/mLs |
| 13C3-HFPO-DAs | 23C0442s | 13C3-HFPO-DAs | 0.08 | ug/mLs |
| 13C3-PFBSs | 23C0442s | 13C3-PFBSs | 0.02 | ug/mLs |
| 13C3-PFHXSs | 23C0442s | 13C3-PFHXSs | 0.02 | ug/mLs |
| 13C4-PFBAs | 23C0442s | 13C4-PFBAs | 0.08 | ug/mLs |
| 13C4-PFHPAs | 23C0442s | 13C4-PFHPAs | 0.02 | ug/mLs |
| 13C5-PFHXAs | 23C0442s | 13C5-PFHXAs | 0.02 | ug/mLs |
| 13C5-PFPEA | 23C0442s | 13C5-PFPEA | 0.04 | ug/mLs |
| 13C6-PFDAs | 23C0442s | 13C6-PFDAs | 0.01 | ug/mLs |
| 13C7-PFUnA | 23C0442s | 13C7-PFUDA | 0.01 | ug/mLs |
| 13C8-PFOAs | 23C0442s | 13C8-PFOAs | 0.02 | ug/mLs |
| 13C8-PFOSs | 23C0442s | 13C8-PFOSs | 0.02 | ug/mLs |
| 13C8-PFOSAs | 23C0442s | 13C8-PFOSAs | 0.02 | ug/mLs |
| 13C9-PFNAs | 23C0442s | 13C9-PFNAs | 0.01 | ug/mLs |
| D3-NMEFOSA | 23C0442s | D3-NMEFOSA | 0.02 | ug/mLs |
| D3-NMEFOSAA | 23C0442s | D3-NMEFOSAA | 0.04 | ug/mLs |
| D5-NETFOSA | 23C0442s | D5-NETFOSA | 0.02 | ug/mLs |
| D5-NETFOSAA | 23C0442s | D5-NETFOSAA | 0.04 | ug/mLs |
| D7-NMEFOSE | 23C0442s | D7-NMEFOSE | 0.2 | ug/mLs |
| D9-NETFOSE | 23C0442s | D9-NETFOSE | 0.2 | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23C0442s | MPFAC-HIF-ES-EIS | 10/28/2022s | Wellington Laboratories | MPFACHIFES1022 | 11/23/2025s | 01/29/2024 10:17s | by ABK | 0.2 |

# Analytical Standard RecordD

## 23D0537D

| | | | |
|---|---|---|---|
| Description:s | TDCA-PFOS 1ug/mL,10ng/ml | Expires:s | 07/03/2023s |
| Standard Type:s | Others | Prepared:s | 04/26/2023s |
| Solvent:s | MeOH/62286s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 18:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| TAURODEOXYCHOLIC ACIDs | 22F0446s | 516-50-7s | 1s | ug/mLs |
| PFOSs | 23A0025s | 1763-23-1s | 0.01s | ug/mLs |
| 13C2-4:2FTSs | 23D0468s | 13C2-4:2FTSs | 0.004s | ug/mLs |
| 13C2-6:2FTSs | 23D0468s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 23D0468s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 23D0468s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 23D0468s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 23D0468s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 23D0468s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22F0446s | TDCA 100ug/mLs | 01/13/2022s | Calbiochems | 3761825s | 09/19/2026s | 03/06/2024 17:01s | by HGHs | 0.01s |
| 23A0025s | PFOS 0.4ug/mls | 01/04/2023s | In houses | 3761825s | 07/03/2023s | 03/06/2024 17:23s | by HGHs | 0.025s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | *s | *s | 10/21/2023s | 03/07/2024 18:19s | by ABKs | 0.1s |

# Analytical Standard RecordD

## 23D0543D

| | | | |
|---|---|---|---|
| Description:s | PFAS RES-MIX 10ng/mLs | Expires: | 08/05/2023s |
| Standard Type:s | Others | Prepared:s | 04/26/2023s |
| Solvent:s | MeOH/62244s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 18:23 by ABKs |
| Lot Number:s | *s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| NEtFOSAs | 22J0420 | 4151-50-2s | 0.01s | ug/mLs |
| NEtFOSEs | 22J0420 | 1691-99-2s | 0.01s | ug/mLs |
| NMeFOSAs | 22J0420 | 31506-32-8s | 0.01s | ug/mLs |
| NMeFOSEs | 22J0420 | 24448-09-7s | 0.01s | ug/mLs |
| PFOAs | 22J0420 | 335-67-1s | 0.01s | ug/mLs |
| PFOSAs | 22J0420 | 754-91-6s | 0.01s | ug/mLs |
| 13C2-4:2FTSs | 23D0468s | 13C2-4:2FTSs | 0.004s | ug/mLs |
| 13C2-6:2FTSs | 23D0468s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 23D0468s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 23D0468s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 23D0468s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 23D0468s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 23D0468s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 23D0468s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 23D0468s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 23D0468s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 23D0468s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 23D0468s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 23D0468s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 23D0468s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 23D0468s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 23D0468s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 23D0468s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 23D0468s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 23D0468s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 23D0468s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 23D0468s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 23D0468s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 23D0468s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 23D0468s | D9-NETFOSEs | 0.02s | ug/mLs |

**Parent Standards used: D**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 22J0420 | PFAS RES-MIX s 1000ng/mLs | 10/26/2022s | Dipti Gokal | 62244s | 01/27/2027s | 04/26/2023 12:44s | by DAGs | 0.01s |
| 23D0468s | MPFAC-HIF-ES s 20.0ng/mLs | 04/24/2023s | *s | *s | 10/21/2023s | 03/07/2024 18:19s | by ABKs | 0.1s |

# Analytical Standard RecordF

## 23F0057F

| | | | |
|---|---|---|---|
| Description:s | PFAS1633SS-ABS65735s | Expires:s | 05/17/2024s |
| Standard Type:s | Others | Prepared:s | 05/17/2023s |
| Solvent:s | MeOH(1mMKOH)040723s | Prepared By:s | Absolute Standards (Lot#: 051723) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 07/25/2023 17:19 by DAGs |
| Lot Number:s | 051723s | | |

| AnalyteF | ParentF | CAS NumberF | Concentration F | UnitsF |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | | 763051-92-9s | 2s | ug/mLs |
| 3:3FTCAs | | 356-02-5s | 2s | ug/mLs |
| 4:2FTSs | | 757124-72-4s | 2s | ug/mLs |
| 5:3FTCAs | | 914637-49-3s | 2s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 2s | ug/mLs |
| 7:3FTCAs | | 812-70-4s | 2s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 2s | ug/mLs |
| 9Cl-PF3ONSs | | 756426-58-1s | 2s | ug/mLs |
| ADONAs | | 919005-14-4s | 2s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |
| NEtFOSAs | | 4151-50-2s | 2s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 2s | ug/mLs |
| NEtFOSEs | | 1691-99-2s | 2s | ug/mLs |
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| NMeFOSAs | | 31506-32-8s | 2s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 2s | ug/mLs |
| NMeFOSEs | | 24448-09-7s | 2s | ug/mLs |
| PFBAs | | 375-22-4s | 2s | ug/mLs |
| PFBSs | | 375-73-5s | 2s | ug/mLs |
| PFDAs | | 335-76-2s | 2s | ug/mLs |
| PFDoAs | | 307-55-1s | 2s | ug/mLs |
| PFDoSs | | 79780-39-5s | 2s | ug/mLs |
| PFDSs | | 335-77-3s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 2s | ug/mLs |
| PFHpAs | | 375-85-9s | 2s | ug/mLs |
| PFHpSs | | 375-92-8s | 2s | ug/mLs |
| PFHxAs | | 307-24-4s | 2s | ug/mLs |
| PFHxSs | | 355-46-4s | 2s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |
| PFNAs | | 375-95-1s | 2s | ug/mLs |
| PFNSs | | 68259-12-1s | 2s | ug/mLs |
| PFOAs | | 335-67-1s | 2s | ug/mLs |
| PFOSs | | 1763-23-1s | 2s | ug/mLs |
| PFOSAs | | 754-91-6s | 2s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 2s | ug/mLs |
| PFTeDAs | | 376-06-7s | 2s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 2s | ug/mLs |
| PFUnAs | | 2058-94-8s | 2s | ug/mLs |

**Absolute Standards, Inc.**
800-368-1131
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**Certified Reference Material CRM**

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT

**Part Number:** 65735
**Lot Number:** 051723
**Description:** Method 1633 - PFCs - Calibration Standard
40 components
**Expiration Date:** 051724 **Solvent:** Methanol (1 mM KOH) **Lot#** 040723
**Recommended Storage:** Freezer (0 °C)
**Nominal Concentration (µg/mL):** 2
**NIST Test ID#:** 6UTB 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

| | | |
|---|---|---|
| Formulated By: | Prashant Chauhan | 051723 DATE |
| Reviewed By: | Pedro L. Rentas | 051723 DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluoro-n-butanoic acid (PFBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-22-4 | N/A | N/A |
| 2. | Perfluoro-n-pentanoic acid (PFPeA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2706-90-3 | N/A | N/A |
| 3. | Perfluorohexanoic acid (PFHxA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-24-4 | N/A | N/A |
| 4. | Perfluoroheptanoic acid (PFHpA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 375-85-9 | N/A | N/A |
| 5. | Perfluorooctanoic acid (PFOA-branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| 6. | Perfluorononanoic acid (PFNA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 375-95-1 | N/A | N/A |
| 7. | Perfluorodecanoic acid (PFDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 335-76-2 | N/A | orl-rat 57mg/kg |
| 8. | Perfluoroundecanoic acid (PFUnA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 2058-94-8 | N/A | N/A |
| 9. | Tricosafluorododecanoic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 307-55-1 | N/A | N/A |
| 10. | Perfluorotridecanoic acid (PFTrDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 72629-94-8 | N/A | N/A |
| 11. | Perfluorotetradecanoic acid (PFTeDA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 376-06-7 | N/A | N/A |
| 12. | (K) Perfluoro-1-butanesulfonate | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 29420-49-3 | N/A | N/A |
| 13. | (Na) Perfluoro-1-pentanesulfonate (PFPeS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 630402-22-1 | N/A | N/A |
| 14. | (K) Perfluorohexane-1-sulfonate (branched) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 3871-99-6 | N/A | N/A |
| 15. | Perfluorooctanesulfonic acid (br-PFOS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 1763-23-1 (L) | N/A | N/A |
| 16. | 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 757124-72-4 | N/A | N/A |
| 17. | 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 27619-97-2 | N/A | N/A |
| 18. | Perfluoro(2-ethoxyethane)sulfonic acid | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.05 | 113507-82-7 | N/A | N/A |
| 19. | Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 377-73-1 | N/A | N/A |
| 20. | Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 863090-89-5 | N/A | N/A |
| 21. | 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA) | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.05 | 13252-13-6 | N/A | N/A |
| 22. | 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) | 65738 | 033122 | 0.040 | 2.00 | 0.017 | 50.4 | 2.0 | 0.04 | 356-02-5 | N/A | N/A |
| 23. | 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 65739 | 033122 | 0.040 | 2.00 | 0.017 | 50.2 | 2.0 | 0.04 | 914637-49-3 | N/A | N/A |
| 24. | 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 65740 | 050123 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 812-70-4 | N/A | N/A |
| 25. | Perfluoro-1-heptanesulfonic acid (PFHpS) | 3672 | LPFHpS0822 | 0.042 | 2.10 | 0.017 | 47.6 | 2.0 | 0.11 | 375-92-8 | N/A | N/A |
| 26. | Perfluoro-1-nonanesulfonic acid (PFNS) | 3957 | LPFNS1122 | 0.042 | 2.10 | 0.017 | 48.0 | 2.0 | 0.11 | 68259-12-1 | N/A | N/A |
| 27. | Perfluoro-1-decanesulfonic acid (PFDS) | 3671 | LPFDS1122 | 0.042 | 2.10 | 0.017 | 48.2 | 2.0 | 0.11 | 335-77-3 | N/A | N/A |
| 28. | 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | 3662 | 82FTS0822 | 0.042 | 2.10 | 0.017 | 47.9 | 2.0 | 0.11 | 39108-34-4 FA | N/A | N/A |
| 29. | Perfluoro-1-dodecanesulfonic acid (PFDoS) | 4436 | LPFDoS0423 | 0.041 | 2.04 | 0.017 | 48.4 | 2.0 | 0.10 | 79780-39-5 | N/A | N/A |
| 30. | N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA) | 3666 | NMeFOSA1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 31506-32-8 | N/A | N/A |
| 31. | N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA) | 3663 | NEtFOSA0422M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 4151-50-2 | N/A | N/A |
| 32. | N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2991-50-6 (L) | N/A | N/A |
| 33. | N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.03 | 2355-31-9 (L) | N/A | N/A |
| 34. | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE) | 3668 | NMeFOSE1122M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 24448-09-7 | N/A | N/A |
| 35. | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE) | 3665 | NEtFOSE1222M | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 1691-99-2 | N/A | N/A |
| 36. | Perfluorooctanesulfonamide (br-FOSA)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 50.1 | 2.0 | 0.04 | 754-91-6 (L) | N/A | N/A |
| 37. | Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | 4448 | 36OPFHpA0522 | 0.040 | 2.00 | 0.017 | 50.0 | 2.0 | 0.11 | 151772-58-6 | N/A | N/A |
| 38. | Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA) | 4103 | NaDONA0922 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 919005-14-4 FA | N/A | N/A |
| 39. | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 4164 | 9ClPF3ONS1022 | 0.042 | 2.10 | 0.017 | 46.6 | 2.0 | 0.10 | 756426-58-1 | N/A | N/A |
| 40. | 11-Chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 4165 | 11ClPF3OUdS0522 | 0.042 | 2.10 | 0.017 | 47.1 | 2.0 | 0.11 | 763051-92-9 | N/A | N/A |
| | Perfluorooctanoic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 49.6 | 1.98 | 0.034 | 335-67-1 (L) | N/A | ipr-rat 189mg/kg |
| | Perfluorooctanoic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.6 | 0.02 | 0.0004 | 90480-55-0 (br) | N/A | ipr-rat 189mg/kg |
| | Perfluorohexanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 44.1 | 1.76 | 0.03 | 355-46-4 (L) | N/A | N/A |
| | Perfluorohexanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 6.0 | 0.24 | 0.0041 | 3871-99-6 (br) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (linear)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 38.1 | 1.52 | 0.03 | 1763-23-1 (L) | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 7.5 | 0.30 | 0.005 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 4.0 | 0.16 | 0.003 | N/A | N/A | N/A |
| | Heptadecafluorooctanesulfonic acid (branched isomer)* | 65946 | 102022 | 0.040 | 2.00 | 0.017 | 0.5 | 0.02 | 0.0003 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 36.6 | 1.46 | 0.02 | 2991-50-6 (L) | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 7.7 | 0.31 | 0.005 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 5.3 | 0.21 | 0.004 | N/A | N/A | N/A |
| | N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4163 | BrNEtFOSAA1022 | 0.040 | 2.00 | 0.017 | 0.4 | 0.015 | 0.0002 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 36.0 | 1.44 | 0.02 | 2355-31-9 (L) | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 6.5 | 0.26 | 0.004 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 5.0 | 0.20 | 0.003 | N/A | N/A | N/A |
| | N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)* | 4162 | brNMeFOSAA0422 | 0.040 | 2.00 | 0.017 | 2.5 | 0.10 | 0.0017 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (linear)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 45.7 | 1.83 | 0.03 | 754-91-6 (L) | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.040 | 2.00 | 0.017 | 3.6 | 0.14 | 0.002 | N/A | N/A | N/A |
| | Perfluorooctanesulfonamide (branched)* | 65633 | 020122 | 0.042 | 2.10 | 0.017 | 0.8 | 0.03 | 0.0005 | N/A | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CERTIFIED WEIGHT REPORT&

**Part Number:(** 65735(
**Lot Number:(** 051723&
**Description:(** Method 1633 - PFCs - Calibration Standard&
40 components&
**Expiration Date:(** 051724 **Solvent:(** **Lot#(**
**Recommended Storage:(** Freezer (0 °C)& Methanol (1 mM KOH)& 040723&
**Nominal Concentration (µg/mL):(** 2&
**NIST Test ID#:(** 6UTB& 5E-05& Balance Uncertainty&
Volume(s) shown below were combined and diluted to (mL):& 50.0& 0.001& Flask Uncertainty&

Formulated By:& Prashant Chauhan& 051723& DATE&
Reviewed By:& Pedro L. Rentas& 051723& DATE&

| Compound( | Part& Number& | Lot& Number& | Dilution& Factor& | Initial& Vol. (mL)& | Uncertainty& Pipette (mL)& | Initial & Conc.(µg/mL)& | Final& Conc.(µg/mL)& | Expanded& Uncertainty& (+/-) µg/mL& | SDS Information (Solvent Safety Info. On Attached pg.) CAS#& | OSHA PEL (TWA)& | LD50& |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.&Perfluoro-n-butanoic acid (PFBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-22-4 | N/A& | N/A& |
| 2.&Perfluoro-n-pentanoic acid (PFPeA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-90-3& | N/A& | N/A& |
| 3.&Perfluorohexanoic acid (PFHxA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-24-4 | N/A& | N/A& |
| 4.&Perfluoroheptanoic acid (PFHpA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 375-85-9& | N/A& | N/A& |
| 5.&Perfluorooctanoic acid (PFOA-branched)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| 6.&Perfluorononanoic acid (PFNA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-95-1& | N/A& | N/A& |
| 7.&Perfluorodecanoic acid (PFDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 335-76-2& | N/A& | orl-rat 57mg/kg |
| 8.&Perfluoroundecanoic acid (PFUnA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2058-94-8& | N/A& | N/A& |
| 9.&Tricosafluorododecanoic acid& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 307-55-1& | N/A& | N/A& |
| 10.&Perfluorotridecanoic acid (PFTrDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 72629-94-8& | N/A& | N/A& |
| 11.&Perfluorotetradecanoic acid (PFTeDA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 376-06-7& | N/A& | N/A& |
| 12.&Perfluoro-1-butanesulfonic acid (PFBS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 375-73-5& | N/A& | N/A& |
| 13.&Perfluoro-1-pentanesulfonic acid (PFPeS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 2706-91-4 | N/A& | N/A& |
| 14.&Perfluorohexane-1-sulfonic acid (linear & branched) (PFHxS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 355-46-4 (L)& | N/A& | N/A& |
| 15.&Perfluorooctanesulfonic acid (br-PFOS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 1763-23-1 (L)& | N/A& | N/A& |
| 16.&1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 757124-72-4 | N/A& | N/A& |
| 17.&1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 27619-97-2& | N/A& | N/A& |
| 18.&Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.05& | 113507-82-7& | N/A& | N/A& |
| 19.&Perfluoro-4-oxapentanoic acid (PF4OPeA; PFMPA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 377-73-1& | N/A& | N/A& |
| 20.&Perfluoro-5-oxahexanoic acid (PF5OHxA; PFMBA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 863090-89-5& | N/A& | N/A& |
| 21.&2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid (HFPO-DA)& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.05& | 13252-13-6& | N/A& | N/A& |
| 22.&2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)& | 65738& | 033122& | 0.040& | 2.00& | 0.017& | 50.4 | 2.0& | 0.04 | 356-02-5& | N/A& | N/A& |
| 23.&2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)& | 65739& | 033122& | 0.040& | 2.00& | 0.017& | 50.2& | 2.0& | 0.04 | 914637-49-3& | N/A& | N/A& |
| 24.&2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)& | 65740& | 050123& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 812-70-4 | N/A& | N/A& |
| 25.&Perfluoro-1-heptanesulfonic acid (PFHpS)& | 3672& | LPFHpS0822& | 0.042& | 2.10& | 0.017& | 47.6& | 2.0& | 0.11& | 375-92-8& | N/A& | N/A& |
| 26.&Perfluoro-1-nonanesulfonic acid (PFNS)& | 3957& | LPFNS1122& | 0.042& | 2.10& | 0.017& | 48.0& | 2.0& | 0.11& | 68259-12-1& | N/A& | N/A& |
| 27.&Perfluoro-1-decanesulfonic acid (PFDS)& | 3671& | LPFDS1122& | 0.042& | 2.10& | 0.017& | 48.2& | 2.0& | 0.11& | 335-77-3& | N/A& | N/A& |
| 28.&1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)& | 3662& | 82FTS0822& | 0.042& | 2.10& | 0.017& | 47.9& | 2.0& | 0.11& | 39108-34-4 FA& | N/A& | N/A& |
| 29.&Perfluoro-1-dodecanesulfonic acid (PFDoS)& | 4436& | LPFDoS0423& | 0.041& | 2.04 | 0.017& | 48.4 | 2.0& | 0.10& | 79780-39-5& | N/A& | N/A& |
| 30.&N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)& | 3666& | NMeFOSA1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 31506-32-8& | N/A& | N/A& |
| 31.&N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)& | 3663& | NEtFOSA0422M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 4151-50-2& | N/A& | N/A& |
| 32.&N-Ethylperfluorooctanesulfonamidoacetic acid (br-NEtFOSAA)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Methylperfluorooctanesulfonamidoacetic acid (br-NMeFOSAA)*& | 4162& | brNMeFOSAA0422 | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.03& | 2355-31-9 (L)& | N/A& | N/A& |
| 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)& | 3668& | NMeFOSE1122M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 24448-09-7& | N/A& | N/A& |
| 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)& | 3665& | NEtFOSE1222M& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 1691-99-2& | N/A& | N/A& |
| Perfluorooctanesulfonamide (br-FOSA)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 50.1& | 2.0& | 0.04 | 754-91-6 (L)& | N/A& | N/A& |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA)& | 4488& | 36OPFHpA0522& | 0.040& | 2.00& | 0.017& | 50.0& | 2.0& | 0.11& | 151772-58-6& | N/A& | N/A & |
| Hodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)& | 4103& | NaDONA0922& | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 919005-14-4 FA | N/A& | N/A & |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)& | 4164 | 9ClPF3ONS1022& | 0.042& | 2.10& | 0.017& | 46.6& | 2.0& | 0.10& | 756426-58-1& | N/A& | N/A & |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)& | 4165& | 11ClPF3OUdS0522 | 0.042& | 2.10& | 0.017& | 47.1& | 2.0& | 0.11& | 763051-92-9& | N/A& | N/A & |
| Perfluorooctanoic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 49.6& | 1.98& | 0.034 | 335-67-1 (L)& | N/A& | ipr-rat 189mg/kg |
| Perfluorooctanoic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.6& | 0.02& | 0.0004 | 90480-55-0 (br)& | N/A& | ipr-rat 189mg/kg & |
| Perfluorohexanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 44.1& | 1.76& | 0.03& | 355-46-4 (L)& | N/A& | N/A& |
| Perfluorohexanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 6.0& | 0.24 | 0.0041& | 3871-99-6 (br)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (linear)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 38.1& | 1.52& | 0.03& | 1763-23-1 (L)& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 7.5& | 0.30& | 0.005& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 4.0& | 0.16& | 0.003& | N/A& | N/A& | N/A& |
| Heptadecafluorooctanesulfonic acid (branched isomer)*& | 65946& | 102022& | 0.040& | 2.00& | 0.017& | 0.5& | 0.02& | 0.0003& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 36.6& | 1.46& | 0.02& | 2991-50-6 (L)& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 7.7& | 0.31& | 0.005& | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 5.3& | 0.21& | 0.004 | N/A& | N/A& | N/A& |
| N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4163& | BrNEtFOSAA1022& | 0.040& | 2.00& | 0.017& | 0.4 | 0.015& | 0.0002& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 36.0& | 1.44 | 0.02& | 2355-31-9 (L)& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 6.5& | 0.26& | 0.004 | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 5.0& | 0.20& | 0.003& | N/A& | N/A& | N/A& |
| N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*& | 4162& | brNMeFOSAA0422& | 0.040& | 2.00& | 0.017& | 2.5& | 0.10& | 0.0017& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (linear)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 45.7& | 1.83& | 0.03& | 754-91-6 (L)& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.040& | 2.00& | 0.017& | 3.6& | 0.14 | 0.002& | N/A& | N/A& | N/A& |
| Perfluorooctanesulfonamide (branched)*& | 65633& | 020122& | 0.042& | 2.10& | 0.017& | 0.8& | 0.03& | 0.0005& | N/A& | N/A& | N/A& |

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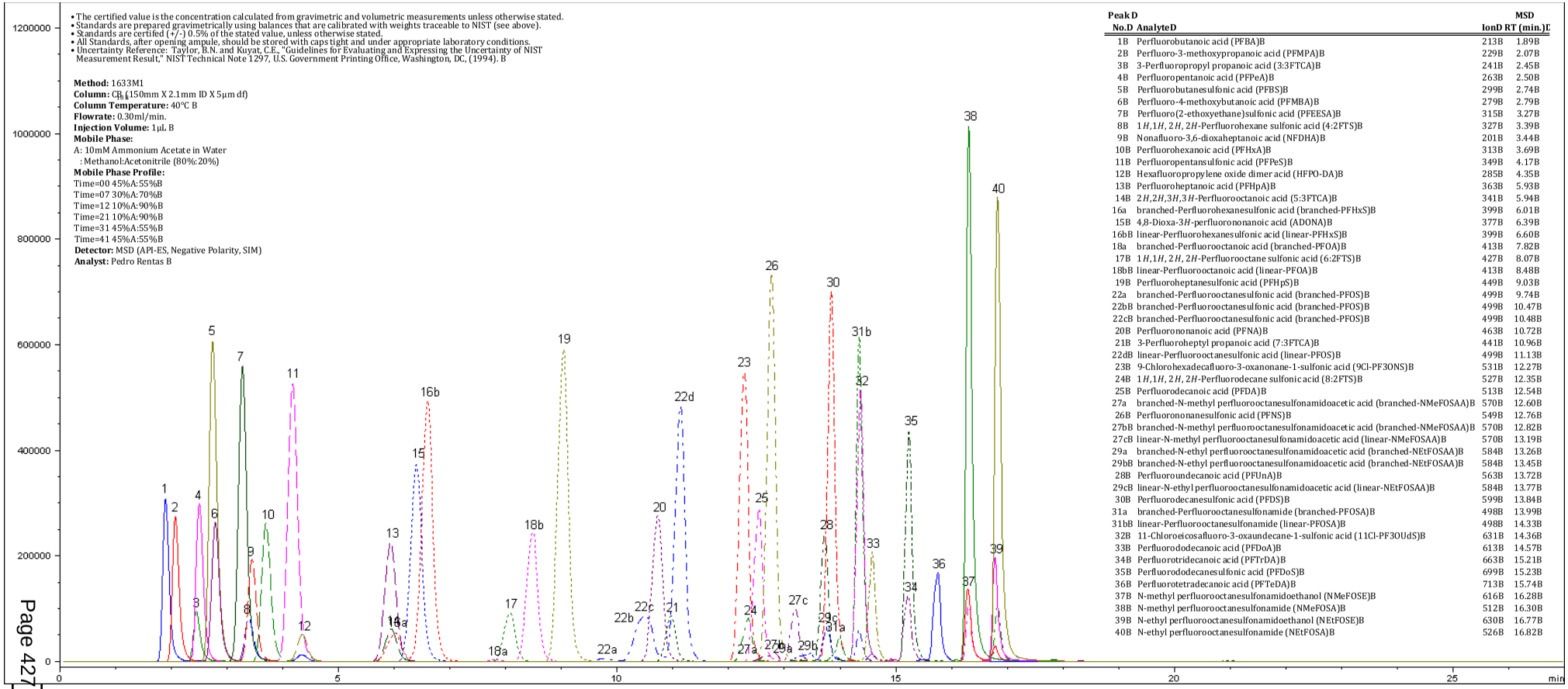


| Peak No. | Analyte | D | MSD Ion | D | RT (min.) | D |
|---|---|---|---|---|---|---|
| 1B | Perfluorobutanoic acid (PFBA) | B | 213 | B | 1.89 | B |
| 2B | Perfluoro-3-methoxypropanoic acid (PFMPA) | B | 229 | B | 2.07 | B |
| 3B | 3-Perfluoropropyl propanoic acid (3:3FTCA) | B | 241 | B | 2.45 | B |
| 4B | Perfluoropentanoic acid (PFPeA) | B | 263 | B | 2.50 | B |
| 5B | Perfluorobutanesulfonic acid (PFBS) | B | 299 | B | 2.74 | B |
| 6B | Perfluoro-4-methoxybutanoic acid (PFMBA) | B | 279 | B | 2.79 | B |
| 7B | Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | B | 315 | B | 3.27 | B |
| 8B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid (4:2FTS) | B | 327 | B | 3.39 | B |
| 9B | Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | B | 201 | B | 3.44 | B |
| 10B | Perfluorohexanoic acid (PFHxA) | B | 313 | B | 3.69 | B |
| 11B | Perfluoropentansulfonic acid (PFPeS) | B | 349 | B | 4.17 | B |
| 12B | Hexafluoropropylene oxide dimer acid (HFPO-DA) | B | 285 | B | 4.35 | B |
| 13B | Perfluoroheptanoic acid (PFHpA) | B | 363 | B | 5.93 | B |
| 14B | 2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3FTCA) | B | 341 | B | 5.94 | B |
| 16a | branched-Perfluorohexanesulfonic acid (branched-PFHxS) | B | 399 | B | 6.01 | B |
| 15B | 4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA) | B | 377 | B | 6.39 | B |
| 16bB | linear-Perfluorohexanesulfonic acid (linear-PFHxS) | B | 399 | B | 6.60 | B |
| 18a | branched-Perfluorooctanoic acid (branched-PFOA) | B | 413 | B | 7.82 | B |
| 17B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid (6:2FTS) | B | 427 | B | 8.07 | B |
| 18bB | linear-Perfluorooctanoic acid (linear-PFOA) | B | 413 | B | 8.48 | B |
| 19B | Perfluoroheptanesulfonic acid (PFHpS) | B | 449 | B | 9.03 | B |
| 22a | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 9.74 | B |
| 22bB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.47 | B |
| 22cB | branched-Perfluorooctanesulfonic acid (branched-PFOS) | B | 499 | B | 10.48 | B |
| 20B | Perfluorononanoic acid (PFNA) | B | 463 | B | 10.72 | B |
| 21B | 3-Perfluoroheptyl propanoic acid (7:3FTCA) | B | 441 | B | 10.96 | B |
| 22dB | linear-Perfluorooctanesulfonic acid (linear-PFOS) | B | 499 | B | 11.13 | B |
| 23B | 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | B | 531 | B | 12.27 | B |
| 24B | 1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid (8:2FTS) | B | 527 | B | 12.35 | B |
| 25B | Perfluorodecanoic acid (PFDA) | B | 513 | B | 12.54 | B |
| 27a | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.60 | B |
| 26B | Perfluorononanesulfonic acid (PFNS) | B | 549 | B | 12.76 | B |
| 27bB | branched-N-methyl perfluorooctanesulfonamidoacetic acid (branched-NMeFOSAA) | B | 570 | B | 12.82 | B |
| 27cB | linear-N-methyl perfluorooctanesulfonamidoacetic acid (linear-NMeFOSAA) | B | 570 | B | 13.19 | B |
| 29a | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.26 | B |
| 29bB | branched-N-ethyl perfluorooctanesulfonamidoacetic acid (branched-NEtFOSAA) | B | 584 | B | 13.45 | B |
| 28B | Perfluoroundecanoic acid (PFUnA) | B | 563 | B | 13.72 | B |
| 29cB | linear-N-ethyl perfluorooctanesulfonamidoacetic acid (linear-NEtFOSAA) | B | 584 | B | 13.77 | B |
| 30B | Perfluorodecanesulfonic acid (PFDS) | B | 599 | B | 13.84 | B |
| 31a | branched-Perfluorooctanesulfonamide (branched-PFOSA) | B | 498 | B | 13.99 | B |
| 31bB | linear-Perfluorooctanesulfonamide (linear-PFOSA) | B | 498 | B | 14.33 | B |
| 32B | 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | B | 631 | B | 14.36 | B |
| 33B | Perfluorododecanoic acid (PFDoA) | B | 613 | B | 14.57 | B |
| 34B | Perfluorotridecanoic acid (PFTrDA) | B | 663 | B | 15.21 | B |
| 35B | Perfluorododecanesulfonic acid (PFDoS) | B | 699 | B | 15.23 | B |
| 36B | Perfluorotetradecanoic acid (PFTeDA) | B | 713 | B | 15.74 | B |
| 37B | N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) | B | 616 | B | 16.28 | B |
| 38B | N-methyl perfluorooctanesulfonamide (NMeFOSA) | B | 512 | B | 16.30 | B |
| 39B | N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE) | B | 630 | B | 16.77 | B |
| 40B | N-ethyl perfluorooctanesulfonamide (NEtFOSA) | B | 526 | B | 16.82 | B |

# Analytical Standard RecordG

## 23G0454G

| | | | |
|---|---|---|---|
| Description:s | PFAS 1633 SS ABS 200ng/mLs | Expires:s | 05/17/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 07/27/2023s |
| Solvent:s | MeOH/62335s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 18:26 by ABKs |
| Lot Number:s | *s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 23F0057s | 763051-92-9s | 0.2s | ug/mLs |
| 3:3FTCAs | 23F0057s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTSs | 23F0057s | 757124-72-4s | 0.2s | ug/mLs |
| 5:3FTCAs | 23F0057s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTSs | 23F0057s | 27619-97-2s | 0.2s | ug/mLs |
| 7:3FTCAs | 23F0057s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTSs | 23F0057s | 39108-34-4s | 0.2s | ug/mLs |
| 9Cl-PF3ONSs | 23F0057s | 756426-58-1s | 0.2s | ug/mLs |
| ADONAs | 23F0057s | 919005-14-4s | 0.2s | ug/mLs |
| HFPO-DAs | 23F0057s | 13252-13-6s | 0.2s | ug/mLs |
| NEtFOSAs | 23F0057s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23F0057s | 2991-50-6s | 0.2s | ug/mLs |
| NEtFOSEs | 23F0057s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23F0057s | 151772-58-6s | 0.2s | ug/mLs |
| NMeFOSAs | 23F0057s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23F0057s | 2355-31-9s | 0.2s | ug/mLs |
| NMeFOSEs | 23F0057s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23F0057s | 375-22-4s | 0.2s | ug/mLs |
| PFBSs | 23F0057s | 375-73-5s | 0.2s | ug/mLs |
| PFDAs | 23F0057s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23F0057s | 307-55-1s | 0.2s | ug/mLs |
| PFDoSs | 23F0057s | 79780-39-5s | 0.2s | ug/mLs |
| PFDSs | 23F0057s | 335-77-3s | 0.2s | ug/mLs |
| PFEESAs | 23F0057s | 113507-82-7s | 0.2s | ug/mLs |
| PFHpAs | 23F0057s | 375-85-9s | 0.2s | ug/mLs |
| PFHpSs | 23F0057s | 375-92-8s | 0.2s | ug/mLs |
| PFHxAs | 23F0057s | 307-24-4s | 0.2s | ug/mLs |
| PFHxSs | 23F0057s | 355-46-4s | 0.2s | ug/mLs |
| PFMBAs | 23F0057s | 863090-89-5s | 0.2s | ug/mLs |
| PFMPAs | 23F0057s | 377-73-1s | 0.2s | ug/mLs |
| PFNAs | 23F0057s | 375-95-1s | 0.2s | ug/mLs |
| PFNSs | 23F0057s | 68259-12-1s | 0.2s | ug/mLs |
| PFOAs | 23F0057s | 335-67-1s | 0.2s | ug/mLs |
| PFOSs | 23F0057s | 1763-23-1s | 0.2s | ug/mLs |
| PFOSAs | 23F0057s | 754-91-6s | 0.2s | ug/mLs |
| PFPeAs | 23F0057s | 2706-90-3s | 0.2s | ug/mLs |
| PFPeSs | 23F0057s | 2706-91-4s | 0.2s | ug/mLs |
| PFTeDAs | 23F0057s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23F0057s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23F0057s | 2058-94-8s | 0.2s | ug/mLs |

# Analytical Standard RecordG

**23G0454** G

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23F0057s | PFAS1633SS-ABS65735s | 05/17/2023s | Absolute Standard | 051723s | 05/17/2024s | 07/25/2023 17:19s | by DAGs | 1s |

# Analytical Standard Record

**23H0440** H

| | | | |
|---|---|---|---|
| Description:s | PFECHS (SS)s | Expires:s | 01/12/2025 s |
| Standard Type:s | Others | Prepared:s | 12/12/2022 s |
| Solvent:s | MeOHs | Prepared By: s | AccuStandard (Lot#: 222121115) |
| Final Volume (mls):s | 1s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit:s | 03/06/2024 17:57 by ABK s |
| Lot Number:s | 222121115 s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHSs | | 646-83-3s | 1.82s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-041S-0.02X
**Description:** Potassium perfluoro-4-ethylcyclohexane sulfonate (PFECHS)
**Lot:** 222121115
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Dec 12, 2022
**Expiration:** Jan 12, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| Potassium perfluoro-4-ethylcyclohexane sulfonate | 335-24-0 | 98.2 | 2.016 | 1.980 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

** Mixture of linear and branched isomers

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015**

# Analytical Standard RecordH

## 23H0498H

| | | | |
|---|---|---|---|
| Description:s | Perfluorobutylsulfonamide (PFBSA) | Expires:s | 04/22/2025s |
| Standard Type:s | Others | Prepared:s | 04/22/2020s |
| Solvent:s | MeOHs | Prepared By:s | Absolute Standards, Inc. (Lot#: 042220) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 08/18/2023 16:18 by DAGs |
| Lot Number:s | 042220s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFBSAs | | 30334-69-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74482
**Lot Number:** 042220
**Description:** Perfluorobutylsulfonamide

| | | Solvent: | Lot# |
|---|---|---|---|
| Expiration Date: | 042225 | Methanol (1 mM KOH) | 030920 |
| Recommended Storage: | Freezer (0 °C) | | |
| Nominal Concentration (µg/mL): | 1000 | | |
| NIST Test ID#: | 6UTB | 5E-05 Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| Prashant Chauhan | Formulated By: | 042220 DATE |
| Pedro L. Rentas | Reviewed By: | 042220 DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Perfluorobutylsulfonamide | 4482 | 358300 | 1000 | 99 | 0.2 | 0.01006 | 0.01012 | 1005.7 | 10.7 | 30334-69-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

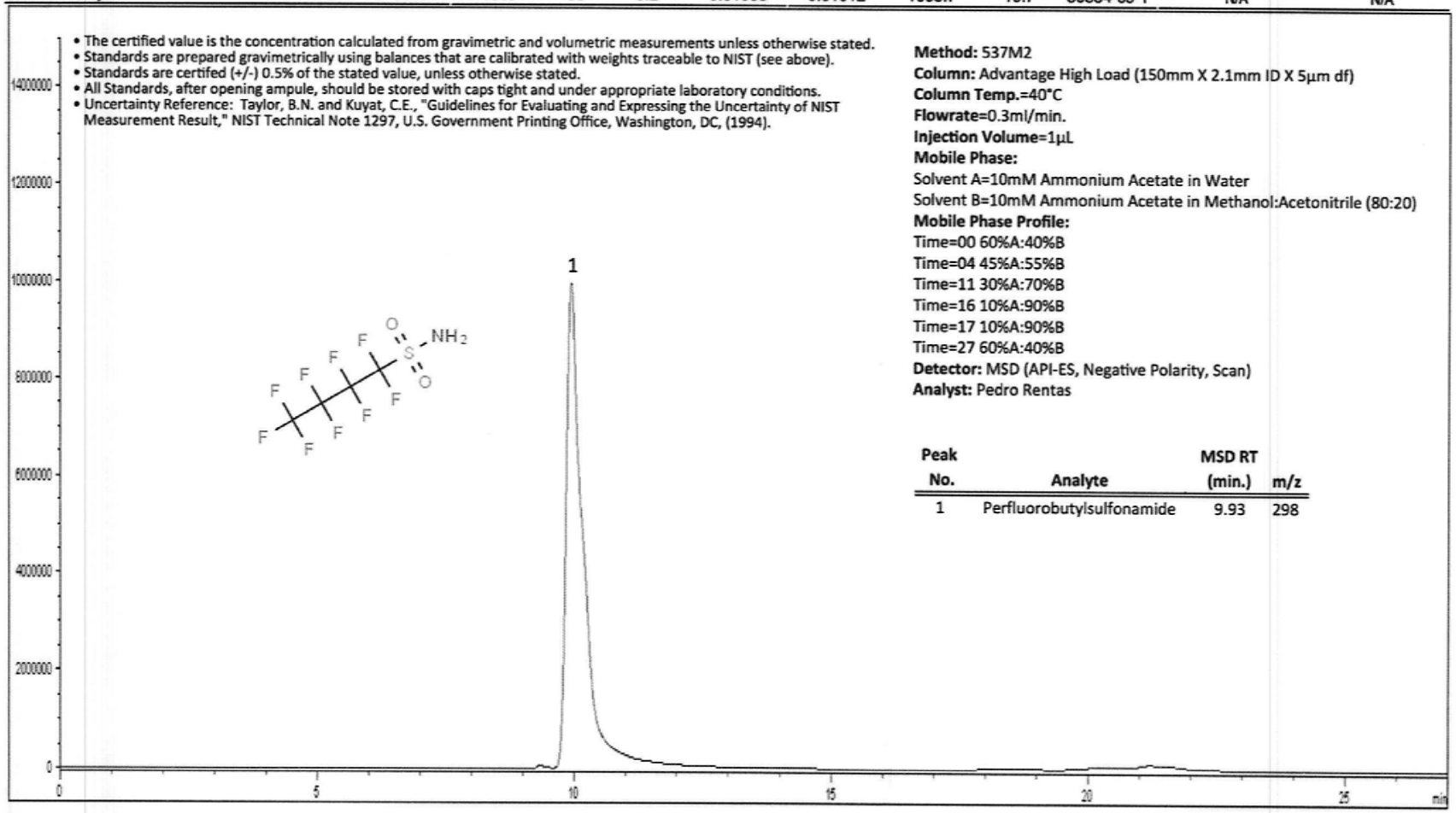


**Method:** 537M2
**Column:** Advantage High Load (150mm X 2.1mm ID X 5µm df)
**Column Temp.**=40°C
**Flowrate**=0.3ml/min.
**Injection Volume**=1µL
**Mobile Phase:**
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
**Mobile Phase Profile:**
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
**Detector:** MSD (API-ES, Negative Polarity, Scan)
**Analyst:** Pedro Rentas

| Peak No. | Analyte | MSD RT (min.) | m/z |
|---|---|---|---|
| 1 | Perfluorobutylsulfonamide | 9.93 | 298 |

# Analytical Standard RecordH

## 23H0499H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexsnesulfonamide (PFHxSA) | Expires:s | 09/11/2025s |
| Standard Type:s | Others | Prepared:s | 09/11/2020s |
| Solvent:s | MeOHs | Prepared By:s | Absolute Standards, Inc. (Lot#: 091120) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 08/18/2023 16:22 by DAGs |
| Lot Number:s | 091120s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration | UnitsH |
|---|---|---|---|---|
| PFHxSAs | | 41997-13-1s | 1000s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 74491
Lot Number: 091120
Description: Perfluorohexanesulfonamide

| | | | Solvent: | Lot# |
|---|---|---|---|---|
| Expiration Date: | 091125 | | Methanol (1 mM KOH) | 042920 |
| Recommended Storage: | Freezer (0 °C) | | | |
| Nominal Concentration (µg/mL): | 1000 | | | |
| NIST Test ID#: | 23060 | 5E-05 | Balance Uncertainty | |
| Weight(s) shown below were combined and diluted to (mL): | 10.0 | 0.002 | Flask Uncertainty | |

| | | |
|---|---|---|
| | | 091120 |
| Formulated By: | Benson Chan | DATE |
| | | 091120 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexanesulfonamide | 4491 | 616300 | 1000 | 98 | 0.2 | 0.01017 | 0.01009 | 992.5 | 10.7 | 41997-13-1 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard Record

## 23H0500H

| | | | |
|---|---|---|---|
| Description:s | Perfluorostearic acid (PFODA) | Expires:s | 10/15/2025s |
| Standard Type:s | Others | Prepared:s | 10/15/2020s |
| Solvent:s | MeOHs | Prepared By:s | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 08/18/2023 16:24 by DAGs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFODAs | | 16517-11-6s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99670
**Lot Number:** 101520
**Description:** Perfluorostearic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 2 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | 25.0 | 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorostearic acid | 99667 | 040518 | 0.04 | 1.00 | 0.004 | 50.4 | 2.0 | 0.03 | 16517-11-6 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0501H

| | | | |
|---|---|---|---|
| Description:s | Perfluorohexadecanoic acid (PFHxDA) | Expires:s | 10/15/2025s |
| Standard Type:s | Others | Prepared:s | 10/15/2020s |
| Solvent:s | MeOHs | Prepared By:s | Absolute Standards, Inc. (Lot#: 101520) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 08/21/2023 14:57 by ABKs |
| Lot Number:s | 101520s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFHxDAs | | 67905-19-5s | 2s | ug/mLs |

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ERTIFIED WEIGHT REPORT

**Part Number:** 99671
**Lot Number:** 101520
**Description:** Perfluorohexadecanoic acid

| | | Solvent: | Lot# |
|---|---|---|---|
| **Expiration Date:** | 101525 | Methanol (1 mM KOH) | 042920 |
| **Recommended Storage:** | Refrigerate (4 °C) | | |
| **Nominal Concentration (µg/mL):** | 50 | | |
| **NIST Test ID#:** | 23060 | 5E-05 Balance Uncertainty | |
| Volume(s) shown below were combined and diluted to (mL): | | 25.0 0.002 Flask Uncertainty | |

| | | |
|---|---|---|
| | | 101520 |
| Formulated By: | Benson Chan | DATE |
| | | 101520 |
| Reviewed By: | Pedro L. Rentas | DATE |

| | Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(µg/mL) | Final Conc.(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Perfluorohexadecanoic acid | 99668 | 040518 | 0.04 | 1.00 | 0.004 | 50.2 | 2.0 | 0.03 | 67905-19-5 | N/A | N/A |

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Analytical Standard RecordH

## 23H0522H

| | | | |
|---|---|---|---|
| Description:s | PFBSA-and PFHxSA SS Stock 20ug/mLs | Expires:s | 04/22/2025s |
| Standard Type:s | Others | Prepared:s | 08/21/2023s |
| Solvent:s | MeOH/63096s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:42 by ABKs |
| Lot Number:s | *s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFBSAs | 23H0498s | 30334-69-1s | 20s | ug/mLs |
| PFHxSAs | 23H0499s | 41997-13-1s | 20s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23H0498s | Perfluorobutylsulfonamide (PFBSA)s | 04/22/2020s | Absolute s Standards, Inc. | 042220s | 04/22/2025s | 08/18/2023 16:18s | by DAGs | 0.02s |
| 23H0499s | Perfluorohexsnesulfonamide (PFHxSA)s | 09/11/2020s | Absolute s Standards, Inc. | 091120s | 09/11/2025s | 08/18/2023 16:22s | by DAGs | 0.02s |

# Analytical Standard RecordH

## 23H0523H

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C 200ng/mLs | Expires:s | 01/12/2025s |
| Standard Type:s | Others | Prepared:s | 08/21/2023s |
| Solvent:s | MeOH/63096s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:43 by ABKs |
| Lot Number:s | *s | | |

| AnalyteH | ParentH | CAS NumberH | Concentration H | UnitsH |
|---|---|---|---|---|
| PFECHSs | 23H0440s | 646-83-3s | 0.182s | ug/mLs |
| PFODAs | 23H0500s | 16517-11-6s | 0.2s | ug/mLs |
| PFHxDAs | 23H0501s | 67905-19-5s | 0.2s | ug/mLs |
| PFBSAs | 23H0522s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSAs | 23H0522s | 41997-13-1s | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 23H0440s | PFECHS (SS)s | 12/12/2022s | AccuStandard | 222121115s | 01/12/2025s | 03/06/2024 17:57s | by ABKs | 1s |
| 23H0500s | Perfluorostearic acid (PFODA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/18/2023 16:24s | by DAGs | 1s |
| 23H0501s | Perfluorohexadecanoic acid (PFHxDA)s | 10/15/2020s | Absolute s Standards, Inc. | 101520s | 10/15/2025s | 08/21/2023 14:57s | by ABKs | 1s |
| 23H0522s | PFBSA-and PFHxSA SS s Stock 20ug/mL | 08/21/2023s | *s | *s | 04/22/2025s | 03/06/2024 19:42s | by ABKs | 0.1s |

# Analytical Standard Record

## 23I0026I

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires:s | 03/24/2026s |
| Standard Type:s | Others | Prepared:s | 03/23/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: PFACMXF0323) |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by DAGs |
| Lot Number:s | PFACMXF0323s | | |

| AnalyteI | ParentI | CAS NumberI | Concentration I | UnitsI |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONSs | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0323 |
| **SOLVENT(S):** | Methanol / Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 03/23/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 03/24/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 03/24/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 03/29/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires:s | 10/03/2026s |
| Standard Type:s | Others | Prepared:s | 09/25/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONSs | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXF

**Native Replacement PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXF |
| **LOT NUMBER:** | PFACMXF0923 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/25/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

## DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and hexafluoropropylene oxide dimer acid (GenX, HFPO-DA). The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

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**Table A:** **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid | HFPO-DA | 2000 | | A |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Sodium dodecafluoro-3H-4,8-dioxanonanoate | NaDONA | 2000 | 1890 | B |
| Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate | 9Cl-PF3ONS | 2000 | 1870 | C |
| Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate | 11Cl-PF3OUdS | 2000 | 1890 | D |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 10/04/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0147K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXF 2 ug/mLs | Expires:s | 10/03/2026s |
| Standard Type:s | Others | Prepared:s | 09/25/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: PFACMXF0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:26 by DAGs |
| Lot Number:s | PFACMXF0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | | 763051-92-9s | 1.89s | ug/mLs |
| 9Cl-PF3ONSs | | 756426-58-1s | 1.87s | ug/mLs |
| ADONAs | | 919005-14-4s | 1.89s | ug/mLs |
| HFPO-DAs | | 13252-13-6s | 2s | ug/mLs |

# Analytical Standard RecordK

## 23K0148K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires:s | 10/19/2028s |
| Standard Type:s | Others | Prepared:s | 10/17/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:27 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

## DESCRIPTION:

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

## DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

## ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordK

## 23K0149K

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type:s | Others | Prepared:s | 09/28/2023s |
| Solvent:s | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 11/09/2023 14:29 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

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# PFAC-MXH

**Native PFAS**
**Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_5$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordD

## 23L0007D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 examples | Expires:s | 05/29/2024s |
| Standard Type:s | Analyte Spikes | Prepared:s | 12/01/2023s |
| Solvent:s | MeOH 63264s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 12/01/2023 14:54 by DAGs |
| Lot Number:s | xs | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDAs | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHSs | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSAs | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDSs | 23I0026s | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONSs | 23I0026s | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23I0026s | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23I0026s | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23K0148 | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23K0148 | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23K0148 | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23K0148 | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTSs | 23K0149 | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTSs | 23K0149 | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTSs | 23K0149 | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23K0149 | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23K0149 | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23K0149 | 375-22-4s | 0.8s | ug/mLs |
| PFBSs | 23K0149 | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23K0149 | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23K0149 | 307-55-1s | 0.2s | ug/mLs |
| PFDoSs | 23K0149 | 79780-39-5s | 0.194s | ug/mLs |
| PFDSs | 23K0149 | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23K0149 | 375-85-9s | 0.2s | ug/mLs |
| PFHpSs | 23K0149 | 375-92-8s | 0.191s | ug/mLs |
| PFHxAs | 23K0149 | 307-24-4s | 0.2s | ug/mLs |
| PFHxSs | 23K0149 | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23K0149 | 375-95-1s | 0.2s | ug/mLs |
| PFNSs | 23K0149 | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23K0149 | 335-67-1s | 0.2s | ug/mLs |
| PFOSs | 23K0149 | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23K0149 | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordD

## 23L0007D

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 examples | Expires:s | 05/29/2024s |
| Standard Type:s | Analyte Spike | Prepared:s | 12/01/2023s |
| Solvent:s | MeOH 63264s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 12/01/2023 14:54 by DAGs |
| Lot Number:s | xs | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteD | ParentD | CAS NumberD | Concentration D | UnitsD |
|---|---|---|---|---|
| PFPeAs | 23K0149 | 2706-90-3s | 0.4s | ug/mLs |
| PFPeSs | 23K0149 | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23K0149 | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23K0149 | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23K0149 | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used: D**

| Standard | DescriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington s Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington s Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington s Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington s Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington s Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington s Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington s Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA s 50ug/mLs | 02/23/2022s | Wellington s Laboratories | PFHxDA0222s | 02/23/2027s | 04/18/2023 14:39s | by DAGs | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington s Laboratories | PFODA0622s | 07/05/2027s | 04/19/2023 16:08s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington s Laboratories | PFECHS0222s | 03/28/2027s | 04/18/2023 13:26s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington s Laboratories | FBSA0123Is | 02/01/2028s | 04/18/2023 14:35s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mLs | 12/29/2021s | Wellington s Laboratories | FHxSA1221Is | 12/29/2026s | 04/18/2023 14:34s | by DAGs | 0.024s |
| 23I0026s | PFAS - MIX MXF 2 ug/mLs | 03/23/2023s | Wellington s Laboratories | PFACMXF0323s | 03/24/2026s | 09/01/2023 10:51s | by DAGs | 0.6s |
| 23K0148 | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington s Laboratories | PFACMXG1023s | 10/19/2028s | 11/09/2023 14:27s | by DAGs | 1.2s |
| 23K0149 | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington s Laboratories | PFACMXH0923s | 10/03/2028s | 11/09/2023 14:29s | by DAGs | 1.2s |

# Analytical Standard RecordL

## 23L0144L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXG 2 ug/mLs | Expires:s | 10/19/2028s |
| Standard Type:s | Others | Prepared:s | 10/17/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXG1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:51 by DAGs |
| Lot Number:s | PFACMXG1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| NFDHAs | | 151772-58-6s | 2s | ug/mLs |
| PFEESAs | | 113507-82-7s | 1.78s | ug/mLs |
| PFMBAs | | 863090-89-5s | 2s | ug/mLs |
| PFMPAs | | 377-73-1s | 2s | ug/mLs |

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# PFAC-MXG

**Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXG |
| **LOT NUMBER:** | PFACMXG1023 |
| **SOLVENT(S):** | Methanol/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/17/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/19/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/19/2028 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

PFAC-MXG is a solution/mixture of native perfluoroalkyl ether carboxylic acids and a native perfluoroalkyl ether sulfonate. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXG; Components and Concentrations (ng/mL; ± 5% in methanol/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-4-oxapentanoic acid | PF4OPeA | 2000 | | A |
| Perfluoro-5-oxahexanoic acid | PF5OHxA | 2000 | | B |
| Perfluoro-3,6-dioxaheptanoic acid | 3,6-OPFHpA | 2000 | | D |
| **Compound** | **Acronym** | **Concentration* (ng/mL)** | | **Peak Assignment in Figure 1** |
| | | **as the salt** | **as the acid** | |
| Potassium perfluoro(2-ethoxyethane)sulfonate | PFEESA | 2000 | 1780 | C |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/07/2023
(mm/dd/yyyy)
B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0145L

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX MXH 1 ug/mLs | Expires:s | 10/03/2028s |
| Standard Type:s | Others | Prepared:s | 09/28/2023s |
| Solvent:s | MeOH/Isopropanol 2%/water <1%s | Prepared By:s | Wellington Laboratories (Lot#: s PFACMXH0923)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 12/08/2023 15:54 by DAGs |
| Lot Number:s | PFACMXH0923s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration | UnitsL |
|---|---|---|---|---|
| 4:2FTSs | | 757124-72-4s | 3.75s | ug/mLs |
| 6:2FTSs | | 27619-97-2s | 3.8s | ug/mLs |
| 8:2FTSs | | 39108-34-4s | 3.84s | ug/mLs |
| NEtFOSAAs | | 2991-50-6s | 1s | ug/mLs |
| NMeFOSAAs | | 2355-31-9s | 1s | ug/mLs |
| PFBAs | | 375-22-4s | 4s | ug/mLs |
| PFBSs | | 375-73-5s | 0.887s | ug/mLs |
| PFDAs | | 335-76-2s | 1s | ug/mLs |
| PFDoAs | | 307-55-1s | 1s | ug/mLs |
| PFDoSs | | 79780-39-5s | 0.97s | ug/mLs |
| PFDSs | | 335-77-3s | 0.965s | ug/mLs |
| PFHpAs | | 375-85-9s | 1s | ug/mLs |
| PFHpSs | | 375-92-8s | 0.953s | ug/mLs |
| PFHxAs | | 307-24-4s | 1s | ug/mLs |
| PFHxSs | | 355-46-4s | 0.914s | ug/mLs |
| PFNAs | | 375-95-1s | 1s | ug/mLs |
| PFNSs | | 68259-12-1s | 0.962s | ug/mLs |
| PFOAs | | 335-67-1s | 1s | ug/mLs |
| PFOSs | | 1763-23-1s | 0.928s | ug/mLs |
| PFOSAs | | 754-91-6s | 1s | ug/mLs |
| PFPeAs | | 2706-90-3s | 2s | ug/mLs |
| PFPeSs | | 2706-91-4s | 0.941s | ug/mLs |
| PFTeDAs | | 376-06-7s | 1s | ug/mLs |
| PFTrDAs | | 72629-94-8s | 1s | ug/mLs |
| PFUnAs | | 2058-94-8s | 1s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# PFAC-MXH

**Native PFAS Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | PFAC-MXH |
| **LOT NUMBER:** | PFACMXH0923 |
| **SOLVENT(S):** | Methanol/Isopropanol (2%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 09/28/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 10/03/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/03/2028 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

PFAC-MXH is a solution/mixture of native linear perfluoroalkylcarboxylic acids ($C_4$-$C_{14}$), perfluoroalkanesulfonates ($C_4$, $C_6$, $C_7$, $C_9$, $C_{10}$, and $C_{12}$ linear; $C_6$ and $C_8$ linear and branched), fluorotelomer sulfonates (4:2, 6:2, and 8:2), linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide. The components and their concentrations are given in Table A.

The individual components all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of N-MeFOSAA
Table C: Isomeric Components and Percent Composition of N-EtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **PFAC-MXH; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (2%)/water (<1%))**

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| Perfluoro-n-butanoic acid | PFBA | 4000 | | 1 |
| Perfluoro-n-pentanoic acid | PFPeA | 2000 | | 2 |
| Perfluoro-n-hexanoic acid | PFHxA | 1000 | | 5 |
| Perfluoro-n-heptanoic acid | PFHpA | 1000 | | 7 |
| Perfluoro-n-octanoic acid | PFOA | 1000 | | 11 |
| Perfluoro-n-nonanoic acid | PFNA | 1000 | | 14 |
| Perfluoro-n-decanoic acid | PFDA | 1000 | | 18 |
| Perfluoro-n-undecanoic acid | PFUdA | 1000 | | 24 |
| Perfluoro-n-dodecanoic acid | PFDoA | 1000 | | 26 |
| Perfluoro-n-tridecanoic acid | PFTrDA | 1000 | | 27 |
| Perfluoro-n-tetradecanoic acid | PFTeDA | 1000 | | 29 |
| Perfluoro-1-octanesulfonamide | FOSA | 1000 | | 23 |
| N-Methylperfluorooctanesulfonamidoacetic acid[a] | N-MeFOSAA: linear isomer | 1000 | 760 | 20 |
| | N-MeFOSAA: ∑ branched isomers | | 240 | 17 |
| N-Ethylperfluorooctanesulfonamidoacetic acid[b] | N-EtFOSAA: linear isomer | 1000 | 775 | 22 |
| | N-EtFOSAA: ∑ branched isomers | | 225 | 21 |

| Compound | Acronym | Concentration* (ng/mL) | | | Peak Assignment in Figure 1 |
|---|---|---|---|---|---|
| | | as the salt | | as the acid | |
| Potassium perfluoro-1-butanesulfonate | L-PFBS | 1000 | | 887 | 3 |
| Sodium perfluoro-1-pentanesulfonate | L-PFPeS | 1000 | | 941 | 6 |
| Potassium perfluorohexanesulfonate[c] | PFHxSK: linear isomer | 1000 | 811 | 741 | 9 |
| | PFHxSK: ∑ branched isomers | | 189 | 173 | 8 |
| Sodium perfluoro-1-heptanesulfonate | L-PFHpS | 1000 | | 953 | 12 |
| Potassium perfluorooctanesulfonate[d] | PFOSK: linear isomer | 1000 | 788 | 732 | 15 |
| | PFOSK: ∑ branched isomers | | 211 | 196 | 13 |
| Sodium perfluoro-1-nonanesulfonate | L-PFNS | 1000 | | 962 | 19 |
| Sodium perfluoro-1-decanesulfonate | L-PFDS | 1000 | | 965 | 25 |
| Sodium perfluoro-1-dodecanesulfonate | L-PFDoS | 1000 | | 970 | 28 |
| Sodium 1H,1H,2H,2H-perfluorohexanesulfonate | 4:2FTS | 4000 | | 3750 | 4 |
| Sodium 1H,1H,2H,2H-perfluorooctanesulfonate | 6:2FTS | 4000 | | 3800 | 10 |
| Sodium 1H,1H,2H,2H-perfluorodecanesulfonate | 8:2FTS | 4000 | | 3840 | 16 |

* Concentrations have been rounded to three significant figures.

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

**Certified By:** _____ **Date:** 10/11/2023 (mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0523G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EISs | Expires:s | 11/02/2026s |
| Standard Type:s | Others | Prepared:s | 10/31/2023s |
| Solvent:s | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s |
| Final Volume (mls):s | 1.2s | Department:s | MPFACHIFES1023)s PFASs |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:33 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordG

## 23L0524G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EISs | Expires:s | 11/02/2026s |
| Standard Type:s | Others | Prepared:s | 10/31/2023s |
| Solvent:s | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:34 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# Analytical Standard RecordL

## 23L0528L

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES-EISs | Expires:s | 11/02/2026s |
| Standard Type:s | Others | Prepared:s | 10/31/2023s |
| Solvent:s | MeOH/Isopropyl (1%)/water (<1%s | Prepared By:s | Wellington Laboratories (Lot#: s MPFACHIFES1023)s |
| Final Volume (mls):s | 1.2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 12/21/2023 09:36 by DAGs |
| Lot Number:s | MPFACHIFES1023s | | |

| AnalyteL | ParentL | CAS NumberL | Concentration L | UnitsL |
|---|---|---|---|---|
| 13C2-4:2FTSs | | 13C2-4:2FTSs | 1s | ug/mLs |
| 13C2-6:2FTSs | | 13C2-6:2FTSs | 1s | ug/mLs |
| 13C2-8:2FTSs | | 13C2-8:2FTSs | 1s | ug/mLs |
| 13C2-PFDOAs | | 13C2-PFDOAs | 0.25s | ug/mLs |
| 13C2-PFTEDAs | | 13C2-PFTEDAs | 0.25s | ug/mLs |
| 13C3-HFPO-DAs | | 13C3-HFPO-DAs | 2s | ug/mLs |
| 13C3-PFBSs | | 13C3-PFBSs | 0.5s | ug/mLs |
| 13C3-PFHXSs | | 13C3-PFHXSs | 0.5s | ug/mLs |
| 13C4-PFBAs | | 13C4-PFBAs | 2s | ug/mLs |
| 13C4-PFHPAs | | 13C4-PFHPAs | 0.5s | ug/mLs |
| 13C5-PFHXAs | | 13C5-PFHXAs | 0.5s | ug/mLs |
| 13C5-PFPEAs | | 13C5-PFPEAs | 1s | ug/mLs |
| 13C6-PFDAs | | 13C6-PFDAs | 0.25s | ug/mLs |
| 13C7-PFUnAs | | 13C7-PFUDAs | 0.25s | ug/mLs |
| 13C8-PFOAs | | 13C8-PFOAs | 0.5s | ug/mLs |
| 13C8-PFOSs | | 13C8-PFOSs | 0.5s | ug/mLs |
| 13C8-PFOSAs | | 13C8-PFOSAs | 0.5s | ug/mLs |
| 13C9-PFNAs | | 13C9-PFNAs | 0.25s | ug/mLs |
| D3-NMEFOSAs | | D3-NMEFOSAs | 0.5s | ug/mLs |
| D3-NMEFOSAAs | | D3-NMEFOSAAs | 1s | ug/mLs |
| D5-NETFOSAs | | D5-NETFOSAs | 0.5s | ug/mLs |
| D5-NETFOSAAs | | D5-NETFOSAAs | 1s | ug/mLs |
| D7-NMEFOSEs | | D7-NMEFOSEs | 5s | ug/mLs |
| D9-NETFOSEs | | D9-NETFOSEs | 5s | ug/mLs |

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

# MPFAC-HIF-ES

**Mass-Labelled PFAS Extraction Standard Solution/Mixture**

| | |
|---|---|
| **PRODUCT CODE:** | MPFAC-HIF-ES |
| **LOT NUMBER:** | MPFACHIFES1023 |
| **SOLVENT(S):** | Methanol/Isopropanol (1%)/Water (<1%) |
| **DATE PREPARED:** (mm/dd/yyyy) | 10/31/2023 |
| **LAST TESTED:** (mm/dd/yyyy) | 11/02/2023 |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/02/2026 |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule |

**DESCRIPTION:**

MPFAC-HIF-ES is a solution/mixture of mass-labelled ($^{13}C$) perfluoroalkylcarboxylic acids ($C_4$-$C_{12}$, $C_{14}$), mass-labelled ($^{13}C$) perfluoroalkanesulfonates ($C_4$, $C_6$, and $C_8$), mass-labelled (one $^{13}C$ and two $^{2}H$) perfluoro-1-octanesulfonamides, mass-labelled ($^{13}C$) fluorotelomer sulfonates (4:2, 6:2, and 8:2), mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoacetic acids, mass-labelled ($^{2}H$) perfluoro-1-octanesulfonamidoethanols, and mass-labelled ($^{13}C$) hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX, M3HFPO-DA). The components and their concentrations are given in Table A.

The individual $^{13}C$-labelled components all have chemical purities >98% and isotopic purities of ≥99%. The individual $^{2}H$-labelled components all have chemical purities >98% and isotopic purities of ≥98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Table A:** **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (1%)/water (<1%))**

| Compound | Acronym | Concentration (ng/mL) | Peak Assignment in Figure 1 |
|---|---|---|---|
| Perfluoro-n-($^{13}C_4$)butanoic acid | MPFBA | 2000 | 1 |
| Perfluoro-n-($^{13}C_5$)pentanoic acid | M5PFPeA | 1000 | 2 |
| Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid | M5PFHxA | 500 | 5 |
| Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid | M4PFHpA | 500 | 7 |
| Perfluoro-n-($^{13}C_8$)octanoic acid | M8PFOA | 500 | 10 |
| Perfluoro-n-($^{13}C_9$)nonanoic acid | M9PFNA | 250 | 11 |
| Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid | M6PFDA | 250 | 14 |
| Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid | M7PFUdA | 250 | 18 |
| Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid | MPFDoA | 250 | 19 |
| Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid | M2PFTeDA | 250 | 24 |
| Perfluoro-1-($^{13}C_8$)octanesulfonamide | M8FOSA | 500 | 16 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamide | d-N-MeFOSA | 500 | 21 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamide | d-N-EtFOSA | 500 | 23 |
| N-Methyl-$d_3$-perfluoro-1-octanesulfonamidoacetic acid | d3-N-MeFOSAA | 1000 | 15 |
| N-Ethyl-$d_5$-perfluoro-1-octanesulfonamidoacetic acid | d5-N-EtFOSAA | 1000 | 17 |
| 2-(N-Methyl-$d_3$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d7-N-MeFOSE | 5000 | 20 |
| 2-(N-Ethyl-$d_5$-perfluoro-1-octanesulfonamido)ethan-$d_4$-ol | d9-N-EtFOSE | 5000 | 22 |
| 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid | M3HFPO-DA | 2000 | 6 |

| Compound | Acronym | Concentration* (ng/mL) | | Peak Assignment in Figure 1 |
|---|---|---|---|---|
| | | as the salt | as the acid | |
| Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate | M3PFBS | 500 | 466 | 3 |
| Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate | M3PFHxS | 500 | 474 | 8 |
| Sodium perfluoro-1-($^{13}C_8$)octanesulfonate | M8PFOS | 500 | 479 | 12 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate | M2-4:2FTS | 1000 | 938 | 4 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate | M2-6:2FTS | 1000 | 951 | 9 |
| Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate | M2-8:2FTS | 1000 | 960 | 13 |

* Concentrations have been rounded to three significant figures.

**Certified By:** _____ **Date:** 11/03/2023
(mm/dd/yyyy)

B.G. Chittim, General Manager

# nalytical Standard RecordA

**24A0367**

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS)s | Expires:s | 08/16/2032s |
| Standard Type:s | Others | Prepared:s | 08/16/2022s |
| Solvent:s | * | Prepared By:s | Sigma-Aldrich (Lot#: MKCS1066) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 18:56 by ABKs |
| Lot Number:s | MKCS1066s | | |
| Comments: | Neat 10G bottle 97%. Liquida | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 1s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Pentafluoropropionic acid - 97%

| | |
|---|---|
| **Product Number:** | **245917** |
| **Batch Number:** | **MKCS1066** |
| Brand: | ALDRICH |
| CAS Number: | 422-64-0 |
| MDL Number: | MFCD00004170 |
| Formula: | C3HF5O2 |
| Formula Weight: | 164.03 g/mol |
| Quality Release Date: | 16 AUG 2022 |

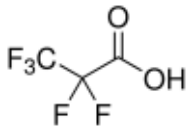


| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless to Faint Yellow and Colorless to Faint Orange | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Titration with NaOH | 96.5 - 103.5 % | 100.0 % |
| GC (area %) | ≥ 96.5 % | 96.8 % |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# nalytical Standard RecordA

## 24A0369

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 10,000ug/mL | Expires:s | 07/14/2034 s |
| Standard Type:s | Analyte Spikes | Prepared:s | 01/16/2024 s |
| Solvent:s | MeOH/63321s | Prepared By: s | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit: s | 03/06/2024 19:02 by ABK |
| Lot Number:s | * | | |
| Comments: | 0.1048g of Neat 97% into 10mL MeOH1 | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24A0367s | 422-64-0s | 10000s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24A0367s | PFPrA (SS)s | 08/16/2022s | Sigma-Aldrich | MKCS1066 | 08/16/2032s | 03/06/2024 18:56s | by ABK | 100000s |

# Analytical Standard RecordK

## 24A0370K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 200ug/mLs | Expires:s | 07/14/2034s |
| Standard Type:s | Others | Prepared:s | 01/16/2024s |
| Solvent:s | MeOH/63321s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:03 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0370K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 200ug/mLs | Expires:s | 07/14/2034s |
| Standard Type:s | Others | Prepared:s | 01/16/2024s |
| Solvent:s | MeOH/63321s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:05 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0369s | 422-64-0s | 200s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24A0369s | PFPrA (SS) 10,000ug/mL | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:02s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24A0371K

| | | | |
|---|---|---|---|
| Description:s | PFPrA (SS) 50ug/mLs | Expires:s | 07/14/2034s |
| Standard Type:s | Others | Prepared:s | 01/16/2024s |
| Solvent:s | MeOH/63321s | Prepared By:s | Dipti Gokals |
| Final Volume (mls):s | 2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:06 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0370s | 422-64-0s | 50s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24A0370s | PFPrA (SS) 200ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:05s | by ABK | 0.5s |

# Analytical Standard Record

## 24B0010B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1s | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 02/01/2024s |
| Solvent:s | MeOHs | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:55 by ABK |
| Lot Number:s | 63321s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTSs | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTSs | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTSs | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONSs | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBSs | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoSs | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDSs | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHSs | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpSs | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxAs | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDAs | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxSs | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSAs | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNSs | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOSs | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeSs | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard Record

**24B0010** B

**Parent Standards used: B**

| Standard B | DescriptionB | Prepared | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 examples | 12/01/2023s | In house | xs | 11/11/2025s | 03/06/2024 19:55s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0182B

| | | | |
|---|---|---|---|
| Description:s | PFPrA 100ug/mL (PFOA-015S)s | Expires:s | 03/05/2025s |
| Standard Type:s | Others | Prepared:s | 02/05/2024s |
| Solvent:s | MeOHs | Prepared By:s | AccuStandard (Lot#: 224011649)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:33 by ABK |
| Lot Number:s | 224011649s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| PFPrAs | | 422-64-0s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-015S
**Description:** 2,2,3,3,3-Pentafluoropropionic acid (PFPrA)
**Lot:** 224011649
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Feb 5, 2024
**Expiration:** Mar 5, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2,2,3,3,3-Pentafluoropropionic acid | 422-64-0 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

**24B0183** B

| | | | |
|---|---|---|---|
| Description:s | FHUEA (SS) 100ug/mL PFOA-024S [6:2FTUCA] | Expires:s | 10/20/2024s |
| Standard Type:s | Others | Prepared:s | 09/20/2023s |
| Solvent:s | methanols | Prepared By:s | AccuStandard (Lot#: 222051212-02) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/15/2024 14:52 by ABKs |
| Lot Number:s | 222051212-02s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | | 70887-88-6s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-024S
**Description:** 2H-Perfluoro-2-octenoic acid (FHUEA)
**Lot:** 222051212-02
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Sep 20, 2023
**Expiration:** Oct 20, 2024
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (<-10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-octenoic acid | 70887-88-6 | 95.0 | 106.4* | 101.1 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

**24B0184** B

| | | | |
|---|---|---|---|
| Description:s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | Expires:s | 08/06/2025s |
| Standard Type:s | Others | Prepared:s | 07/06/2023s |
| Solvent:s | MeOHs | Prepared By:s | AccuStandard (Lot#: 223061612) |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/15/2024 14:52 by ABKs |
| Lot Number:s | 223061612s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 8:2FTUCAs | | 70887-84-2s | 101s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOA-027S
**Description:** 2H-Perfluoro-2-decenoic Acid (FOUEA)
**Lot:** 223061612
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jul 6, 2023
**Expiration:** Aug 6, 2025
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)/Sonicate

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity[3] % | Prepared Concentration[2] (µg/mL) | Certified Analyte Concentration[1] (µg/mL) |
|---|---|---|---|---|
| 2H-Perfluoro-2-decenoic Acid | 70887-84-2 | 100.0 | 101.0 | 101.0 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires:s | 02/24/2026s |
| Standard Type:s | Others | Prepared:s | 01/24/2024s |
| Solvent:s | MeOHs | Prepared By:s | AccuStandard (Lot#: 224011548)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** PFOS-030S
**Description:** Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
**Lot:** 224011548
**Solvent:** Methanol
**Hazards:** *Refer to SDS for complete safety information*

**Signal Word: Danger**

**Date Certified:** Jan 24, 2024
**Expiration:** Feb 24, 2026
**Sample Size:** 1 mL
**Components:** 1
**Storage Condition:** Freeze (< -10 °C)

**Certified Reference Material**

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

| Component | CAS # | Purity³ % | Prepared Concentration² (µg/mL) | Certified Analyte Concentration¹ (µg/mL) |
|---|---|---|---|---|
| Bis(trifluoromethane)sulfonimide lithium salt | 90076-65-6 | 97.0 | 103.0* | 99.9 |

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

² All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

³ Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

# Analytical Standard RecordB

## 24B0185B

| | | | |
|---|---|---|---|
| Description:s | TFSI 100ug/mL (HQ-115) (PFOA-030S) | Expires:s | 02/24/2026s |
| Standard Type:s | Others | Prepared:s | 01/24/2024s |
| Solvent:s | MeOHs | Prepared By:s | AccuStandard (Lot#: 224011548)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | 224011548s | | |
| Comments:O | PFOS-030SO | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 97.8s | ug/mLs |

# Analytical Standard RecordB

## 24B0186B

| | | | |
|---|---|---|---|
| Description:s | 13C2-PFHxDA EIS 50ug/mLs | Expires:s | 08/28/2028s |
| Standard Type:s | Others | Prepared:s | 08/28/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: M2PFHxDA0823)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/13/2024 16:11 by ABK |
| Lot Number:s | M2PFHxDA0823s | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDAs | | 13C2-PFHxDAs | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2PFHxDA
**COMPOUND:** Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid

**LOT NUMBER:** M2PFHxDA0823

**STRUCTURE:**

**CAS #:** Not available

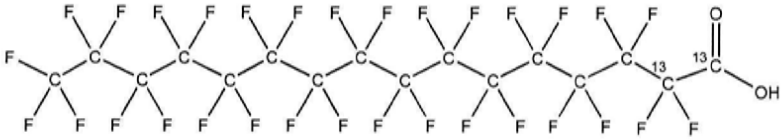

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{14}HF_{31}O_2$ | **MOLECULAR WEIGHT:** | 816.11 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2-$^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 08/28/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 08/28/2028 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.9% of perfluoro-n-($^{13}C_1$)pentadecanoic acid ($^{13}C_1$-PFPeDA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **M2PFHxDA; LC/MS Data (Full Scan and Mass Spectrum)**

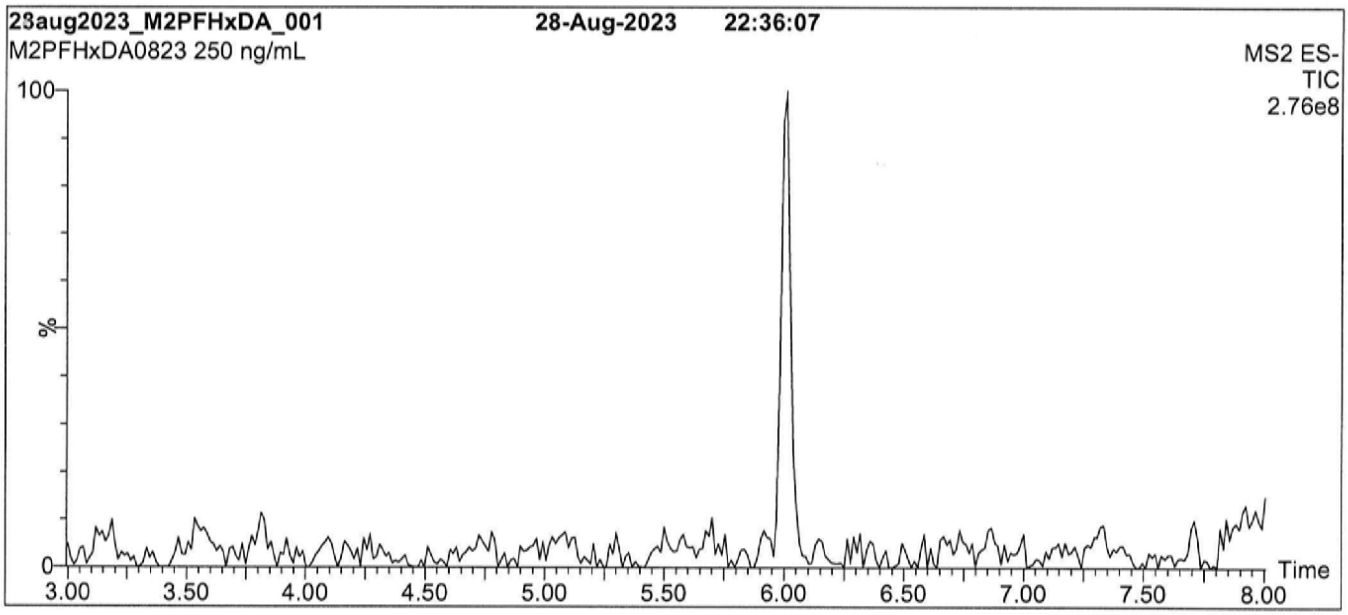


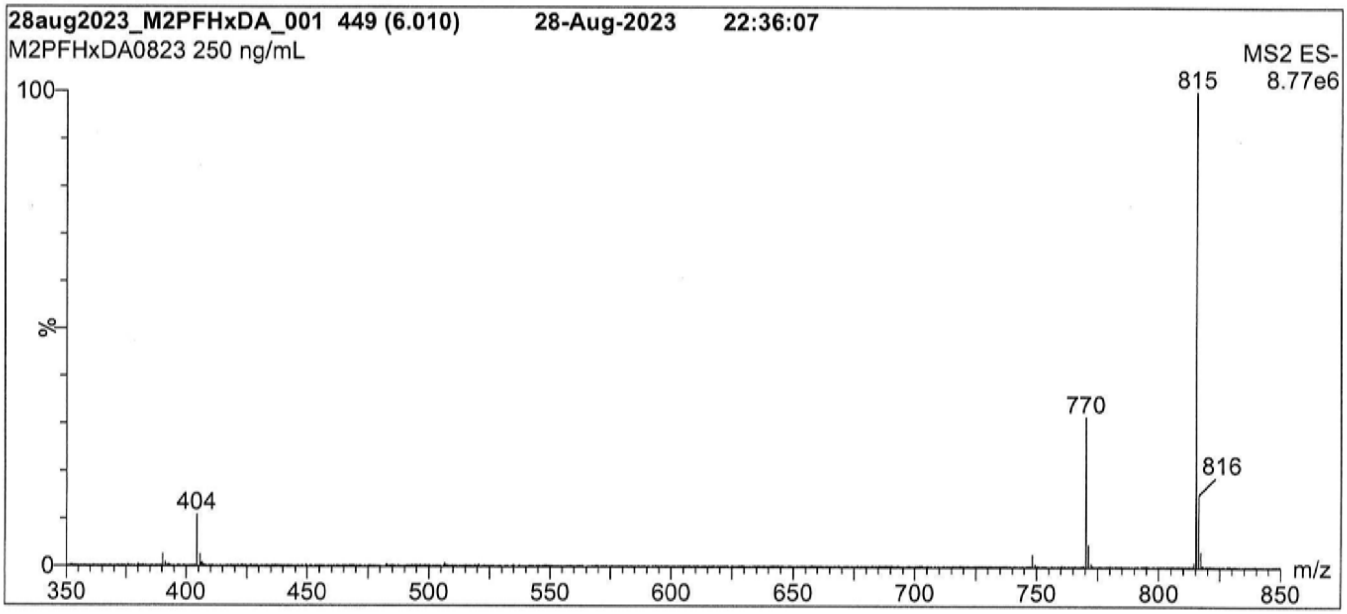


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0187B

| | | | |
|---|---|---|---|
| Description:s | 10:2FTS 50.0ug/mLs | Expires:s | 09/13/2028s |
| Standard Type:s | Others | Prepared:s | 09/13/2023s |
| Solvent:s | MeOHs | Prepared By:s | Wellington Laboratories (Lot#: 102FTS0923)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:45 by ABK |
| Lot Number:s | 102FTS0923s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTSs | | 120226-60-0s | 48.3s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** 10:2FTS **LOT NUMBER:** 102FTS0923
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorododecanesulfonate

**STRUCTURE:** **CAS #:** 108026-35-3

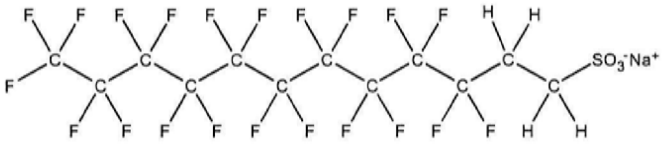


| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{12}H_4F_{21}SO_3Na$ | **MOLECULAR WEIGHT:** | 650.18 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>48.3 ± 2.4 µg/mL (10:2FTS acid)<br>48.2 ± 2.4 µg/mL (10:2FTS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 09/13/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 09/13/2028 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/14/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **10:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**

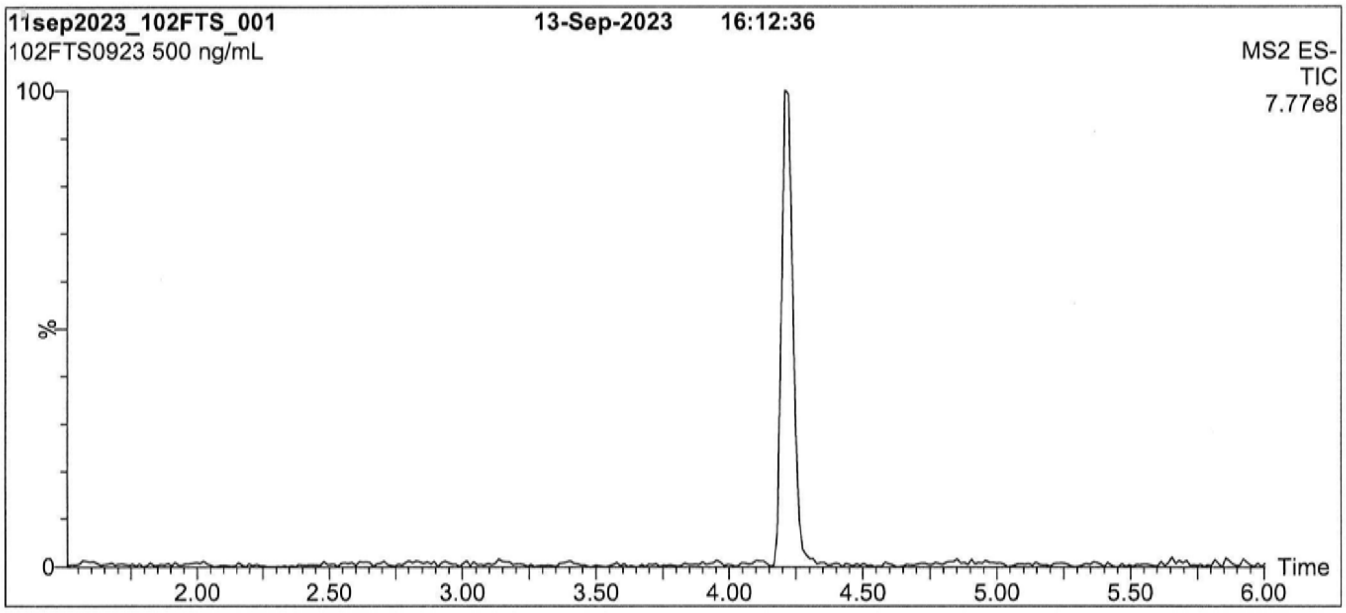


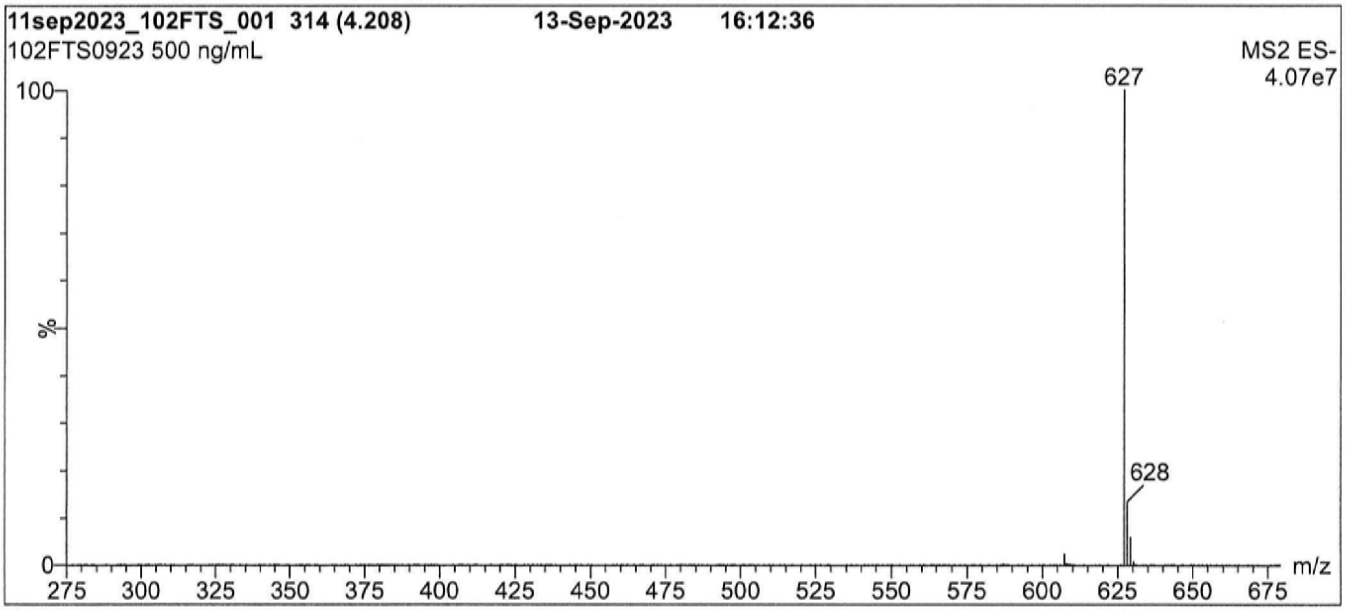


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (275 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

## 24B0188B

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) [Bis(trifluoromethane)sulfonimide Lith]s | Expires:s | 08/08/2034s |
| Standard Type:s | Others | Prepared:s | 08/08/2022s |
| Solvent:s | Solid | Prepared By:s | Sigma-Aldrich (Lot#: MKCS0286)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:17 by ABKs |
| Lot Number:s | MKCS0286s | | |
| Comments:r | Purity 99.95% (SS)r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| TFSIs | | 82113-65-3s | 0.978s | ug/mLs |

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

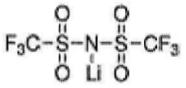

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24B0192B

| | | | |
|---|---|---|---|
| Description:s | 13C2D4-10:2FTS EIS 50ug/mLs | Expires:s | 10/26/2027s |
| Standard Type:s | Others | Prepared:s | 10/26/2022s |
| Solvent:s | MeOHs | Prepared By:s | Cambridge Isotope Laboratories (Lot#: SECG-003)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/13/2024 18:17 by ABK |
| Lot Number:s | SECG-003s | | |
| Comments:a | Transferred to injection value - ABK 2/13/24a | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2D4-10:2FTSs | | 13C2D4-10:2FTSs | 50s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:** (Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Product Information

Chemical Purity Specification: ≥98%

MW*: 656.19
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

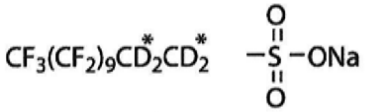

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C10*C2D4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 10/26/2022 |
| Expiration Date | 10/26/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),NA SALT(13C2,99%;D4,98%)50UG/ML IN MEOH

**Lot Number:** SECG-003

**Catalog Number:** CDLM-10750-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.3 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 88.9%* |
| HPLC for Concentration | 49.1 ± 5.8 µg/mL (k=2) |
| Additional Information | *No interfering peaks and no related impurities. |

Acq. File:
FTS_Perfluorododecane_QC-22-09959

Sample Name: CDLM-10750-S 13C2 D4 10:2 FTS
Sample Number: N/A

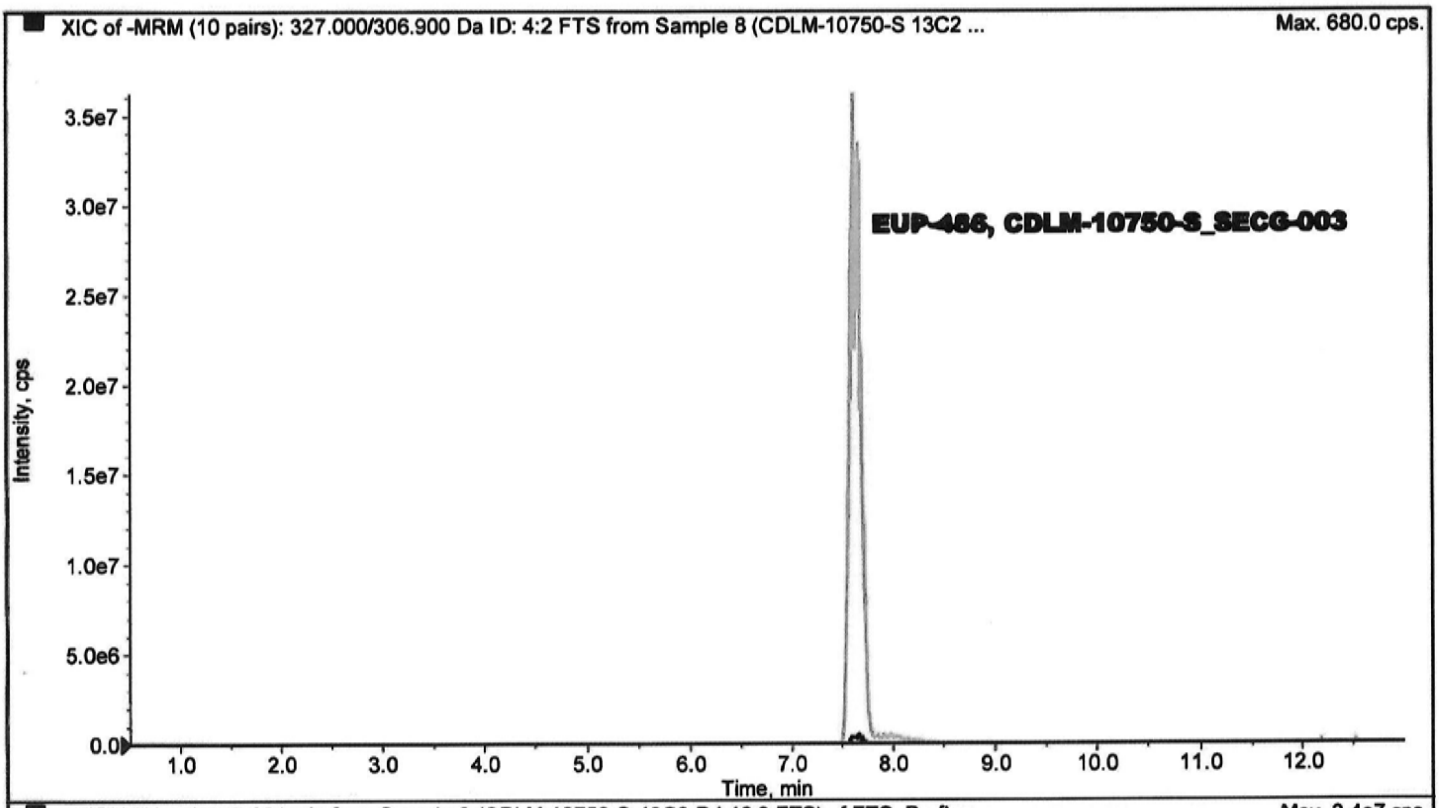


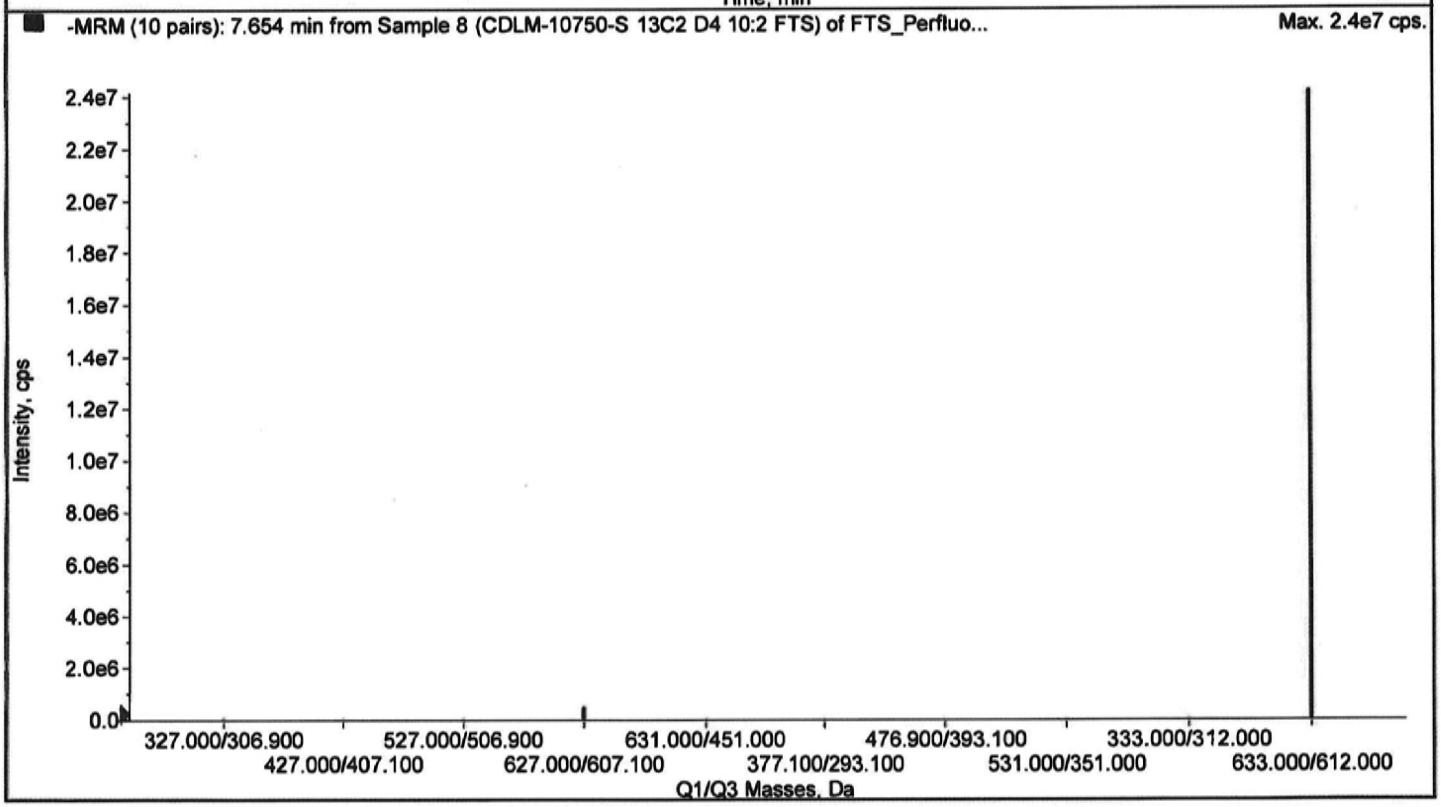

# Analytical Standard RecordB

## 24B0193B

| | | | |
|---|---|---|---|
| Description:s | 10:2 FTS (SS) 50ug/mLs | Expires:s | 02/03/2027s |
| Standard Type:s | Others | Prepared:s | 02/03/2022s |
| Solvent:s | MeOHs | Prepared By:s | Cambridge Isotope Laboratories (Lot#: SEBF-016)s |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:49 by ABK |
| Lot Number:s | SEBF-016s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTSs | | 120226-60-0s | 48.3s | ug/mLs |

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Product Name:**
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Product Information

Chemical Purity Specification: ≥94%

MW*: 650.18
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

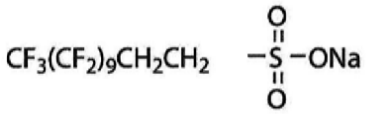

Unlabeled CAS Number: 108026-35-3

Chemical Formula: C12H4F21NaO3S

Storage: Store at room temperature away from light and moisture.
Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

**Approved by:** Marina Klionsky

Marina Klionsky, Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 2/03/2022 |
| Expiration Date | 2/03/2027 |

(continued on next page)

Cambridge Isotope Laboratories, Inc. **Certificate of Analysis**

**Product Name:** 1H,1H,2H,2H-PERFLUORODODECANE SULFONIC ACID (10:2 FTS),SODIUM SALT(UNL)(CP 94%)50UG/ML IN MEOH
(Isotopic Label & Enrichment Specification)

**Lot Number:** SEBF-016

**Catalog Number:** ULM-10754-S

## Quality Control Tests and Results (continued)

| | |
|---|---|
| Concentration Based on Gravimetry (of the salt) | 50.0 ± 0.1 µg/mL (k=2) |
| Chemical Purity of Neat Material(s) | 94.0% |
| HPLC for Chemical Purity | 94.0% |

# Analytical Standard RecordB

## 24B0289B

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 02/15/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 6s | Last Edit:s | 02/26/2024 13:44 by DAGs |
| Lot Number:s | xs | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTSs | 23L0528s | 13C2-4:2FTSs | 0.04s | ug/mLs |
| 13C2-6:2FTSs | 23L0528s | 13C2-6:2FTSs | 0.04s | ug/mLs |
| 13C2-8:2FTSs | 23L0528s | 13C2-8:2FTSs | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0528s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0528s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0528s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBSs | 23L0528s | 13C3-PFBSs | 0.02s | ug/mLs |
| 13C3-PFHXSs | 23L0528s | 13C3-PFHXSs | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0528s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0528s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0528s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0528s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0528s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0528s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0528s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOSs | 23L0528s | 13C8-PFOSs | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0528s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0528s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0528s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0528s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0528s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0528s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0528s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0528s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0528s | MPFAC-HIF-ES-EISs | 10/31/2023s | Wellington s Laboratories | MPFACHIFES1023s | 11/02/2026s | 02/26/2024 13:44s | by DAGs | 0.2s |

# Analytical Standard RecordB

**24B0290** B

| | | | |
|---|---|---|---|
| Description:s | FOUEA 50.0ug/mL [8:2FTUCA] | Expires:s | 11/08/2026s |
| Standard Type:s | Others | Prepared:s | 11/08/2023s |
| Solvent:s | MeOH | Prepared By: s | Wellington Laboratories (Lot#: FOUEA1123) |
| Final Volume (mls):s | 1.2s | Department: s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/15/2024 14:51 by ABK s |
| Lot Number: s | FOUEA1123 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 8:2FTUCA | | 70887-84-2s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FOUEA | **LOT NUMBER:** | FOUEA1123 |
| **COMPOUND:** | 2H-Perfluoro-2-decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 70887-84-2 |

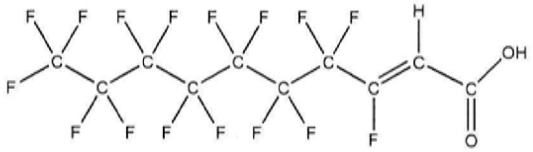

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 458.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 11/08/2023 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/08/2026 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/09/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

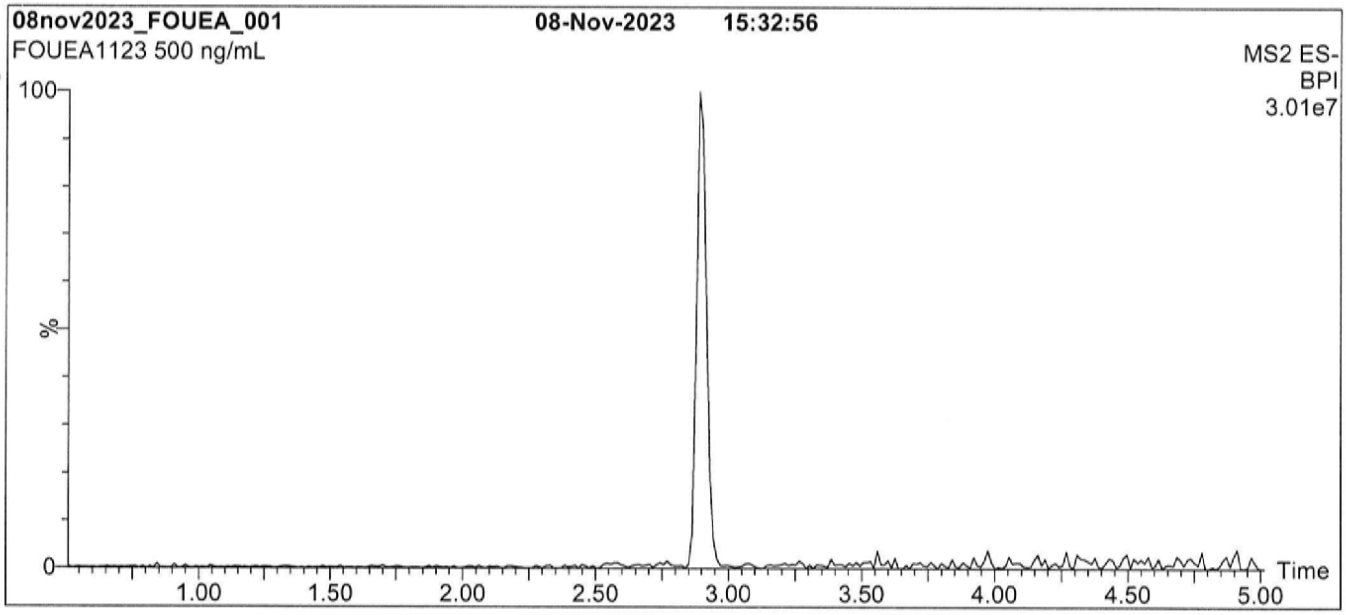


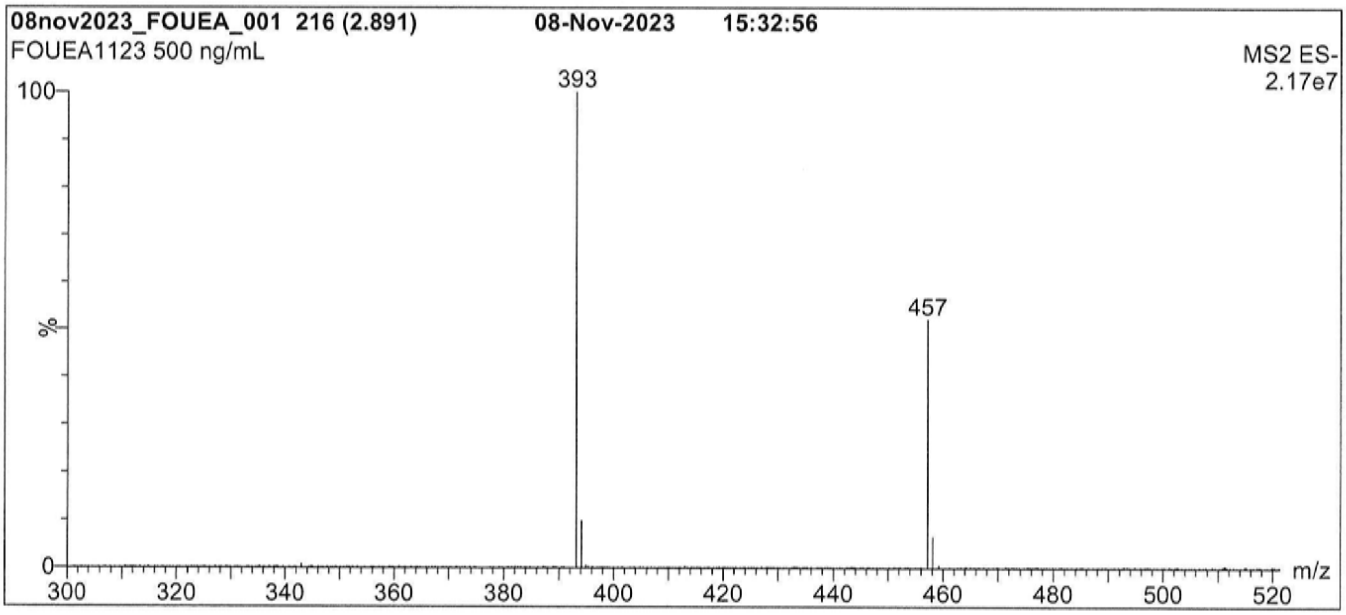


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0291** B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 examples | Expires:s | 11/11/2025 s |
| Standard Type:s | Analyte Spikes | Prepared:s | 02/16/2024 s |
| Solvent:s | MeOH 64011s | Prepared By: s | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit: s | 03/26/2024 15:12 by ABK |
| Lot Number:s | xs | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 3:3FTCAs | 21L0004s | 356-02-5s | 0.8s | ug/mLs |
| 5:3FTCAs | 21L0005s | 914637-49-3s | 0.8s | ug/mLs |
| 7:3FTCAs | 21L0007s | 812-70-4s | 0.8s | ug/mLs |
| NMeFOSAs | 22J0301 | 31506-32-8s | 0.8s | ug/mLs |
| NEtFOSAs | 22J0302 | 4151-50-2s | 0.8s | ug/mLs |
| NMeFOSEs | 22J0303 | 24448-09-7s | 0.8s | ug/mLs |
| NEtFOSEs | 22J0304 | 1691-99-2s | 0.8s | ug/mLs |
| PFHxDAs | 23A0419s | 67905-19-5s | 0.2s | ug/mLs |
| PFODAs | 23A0420s | 16517-11-6s | 0.2s | ug/mLs |
| PFECHSs | 23C0154s | 646-83-3s | 0.185s | ug/mLs |
| PFBSAs | 23C0155s | 30334-69-1s | 0.2s | ug/mLs |
| PFHxSAs | 23C0156s | 41997-13-1s | 0.2s | ug/mLs |
| 11Cl-PF3OUDSs | 23K0147 | 763051-92-9s | 0.189s | ug/mLs |
| 9Cl-PF3ONSs | 23K0147 | 756426-58-1s | 0.187s | ug/mLs |
| ADONAs | 23K0147 | 919005-14-4s | 0.189s | ug/mLs |
| HFPO-DAs | 23K0147 | 13252-13-6s | 0.2s | ug/mLs |
| NFDHAs | 23L0144s | 151772-58-6s | 0.4s | ug/mLs |
| PFEESAs | 23L0144s | 113507-82-7s | 0.356s | ug/mLs |
| PFMBAs | 23L0144s | 863090-89-5s | 0.4s | ug/mLs |
| PFMPAs | 23L0144s | 377-73-1s | 0.4s | ug/mLs |
| 4:2FTSs | 23L0145s | 757124-72-4s | 0.75s | ug/mLs |
| 6:2FTSs | 23L0145s | 27619-97-2s | 0.76s | ug/mLs |
| 8:2FTSs | 23L0145s | 39108-34-4s | 0.768s | ug/mLs |
| NEtFOSAAs | 23L0145s | 2991-50-6s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0145s | 2355-31-9s | 0.2s | ug/mLs |
| PFBAs | 23L0145s | 375-22-4s | 0.8s | ug/mLs |
| PFBSs | 23L0145s | 375-73-5s | 0.177s | ug/mLs |
| PFDAs | 23L0145s | 335-76-2s | 0.2s | ug/mLs |
| PFDoAs | 23L0145s | 307-55-1s | 0.2s | ug/mLs |
| PFDoSs | 23L0145s | 79780-39-5s | 0.194s | ug/mLs |
| PFDSs | 23L0145s | 335-77-3s | 0.193s | ug/mLs |
| PFHpAs | 23L0145s | 375-85-9s | 0.2s | ug/mLs |
| PFHpSs | 23L0145s | 375-92-8s | 0.191s | ug/mLs |
| PFHxAs | 23L0145s | 307-24-4s | 0.2s | ug/mLs |
| PFHxSs | 23L0145s | 355-46-4s | 0.183s | ug/mLs |
| PFNAs | 23L0145s | 375-95-1s | 0.2s | ug/mLs |
| PFNSs | 23L0145s | 68259-12-1s | 0.192s | ug/mLs |
| PFOAs | 23L0145s | 335-67-1s | 0.2s | ug/mLs |
| PFOSs | 23L0145s | 1763-23-1s | 0.186s | ug/mLs |
| PFOSAs | 23L0145s | 754-91-6s | 0.2s | ug/mLs |

# Analytical Standard RecordB

## 24B0291B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 200ng/mL rev1 examples | Expires:s | 11/11/2025s |
| Standard Type:s | Analyte Spike | Prepared:s | 02/16/2024s |
| Solvent:s | MeOH 64011s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 6s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/26/2024 15:12 by ABK |
| Lot Number:s | xs | | |
| Comments:8 | 2208uL of MeOH used.8 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| PFPeAs | 23L0145s | 2706-90-3s | 0.4s | ug/mLs |
| PFPeSs | 23L0145s | 2706-91-4s | 0.188s | ug/mLs |
| PFTeDAs | 23L0145s | 376-06-7s | 0.2s | ug/mLs |
| PFTrDAs | 23L0145s | 72629-94-8s | 0.2s | ug/mLs |
| PFUnAs | 23L0145s | 2058-94-8s | 0.2s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 21L0004s | PFAS - SAS 3:3FTA s 50ug/mLs | 12/07/2021s | Wellington s Laboratories | FPrPA1020s | 11/12/2025s | 10/31/2022 14:39s | by DAGs | 0.096s |
| 21L0005s | PFAS - SAS 5:3FTA s 50ug/mLs | 12/07/2021s | Wellington s Laboratories | FPePA1120s | 11/11/2025s | 10/31/2022 14:41s | by DAGs | 0.096s |
| 21L0007s | PFAS - SAS 7:3FTA s 50ug/mLs | 12/07/2021s | Wellington s Laboratories | FHpPA1020s | 11/12/2025s | 10/31/2022 14:42s | by DAGs | 0.096s |
| 22J0301 | br-NMeFOSAs | 08/23/2022s | Wellington s Laboratories | beNMeFOSA0822s | 08/23/2027s | 10/18/2022 13:37s | by HGHs | 0.096s |
| 22J0302 | br-NEtFOSAs | 10/07/2022s | Wellington s Laboratories | beNEtFOSA0922s | 10/07/2027s | 10/18/2022 13:38s | by HGHs | 0.096s |
| 22J0303 | br-NMeFOSEs | 10/07/2022s | Wellington s Laboratories | beNMeFOSE0922s | 10/07/2027s | 10/26/2022 10:16s | by HGHs | 0.096s |
| 22J0304 | br-NEtFOSEs | 10/07/2022s | Wellington s Laboratories | beNEtFOSE1022s | 10/07/2027s | 10/18/2022 13:43s | by HGHs | 0.096s |
| 23A0419s | PFAS - SAS PFHxDA s 50ug/mLs | 02/23/2022s | Wellington s Laboratories | PFHxDA0222s | 02/23/2027s | 03/06/2024 19:54s | by ABK | 0.024s |
| 23A0420s | PFAS - SAS PFODA s 50ug/mLs | 07/05/2022s | Wellington s Laboratories | PFODA0622s | 07/05/2027s | 03/06/2024 19:55s | by ABK | 0.024s |
| 23C0154s | PFECHS 50.0ug/mLs | 03/28/2022s | Wellington s Laboratories | PFECHS0222s | 03/28/2027s | 03/06/2024 14:41s | by DAGs | 0.024s |
| 23C0155s | FBSA-I 50.0ug/mLs | 02/01/2023s | Wellington s Laboratories | FBSA0123Is | 02/01/2028s | 03/06/2024 14:54s | by DAGs | 0.024s |
| 23C0156s | FHxSA-I 50.0ug/mLs | 12/29/2021s | Wellington s Laboratories | FHxSA1221Is | 12/29/2026s | 03/06/2024 14:56s | by DAGs | 0.024s |
| 23K0147 | PFAS - MIX MXF 2 ug/mLs | 09/25/2023s | Wellington s Laboratories | PFACMXF0923s | 10/03/2026s | 11/09/2023 14:26s | by DAGs | 0.6s |
| 23L0144s | PFAS - MIX MXG 2 ug/mLs | 10/17/2023s | Wellington s Laboratories | PFACMXG1023s | 10/19/2028s | 12/08/2023 15:51s | by DAGs | 1.2s |
| 23L0145s | PFAS - MIX MXH 1 ug/mLs | 09/28/2023s | Wellington s Laboratories | PFACMXH0923s | 10/03/2028s | 12/08/2023 15:54s | by DAGs | 1.2s |

# Analytical Standard RecordB

**24B0292** B

| | | | |
|---|---|---|---|
| Description:s | FHUEA 50.0ug/mL [6:2FTUCA] | Expires:s | 01/09/2027s |
| Standard Type:s | Others | Prepared:s | 01/09/2024s |
| Solvent:s | MeOH | Prepared By: s | Wellington Laboratories (Lot#: FHUEA0124) |
| Final Volume (mls):s | 1.2s | Department: s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/15/2024 14:52 by ABK s |
| Lot Number: s | FHUEA0124 | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 6:2FTUCA | | 70887-88-6s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** FHUEA
**COMPOUND:** 2H-Perfluoro-2-octenoic acid

**LOT NUMBER:** FHUEA0124

**STRUCTURE:**

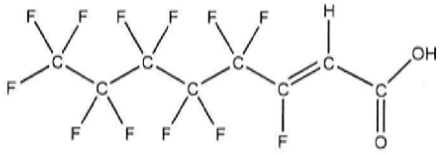

**CAS #:** 70887-88-6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 358.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 01/09/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/09/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/10/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **FHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

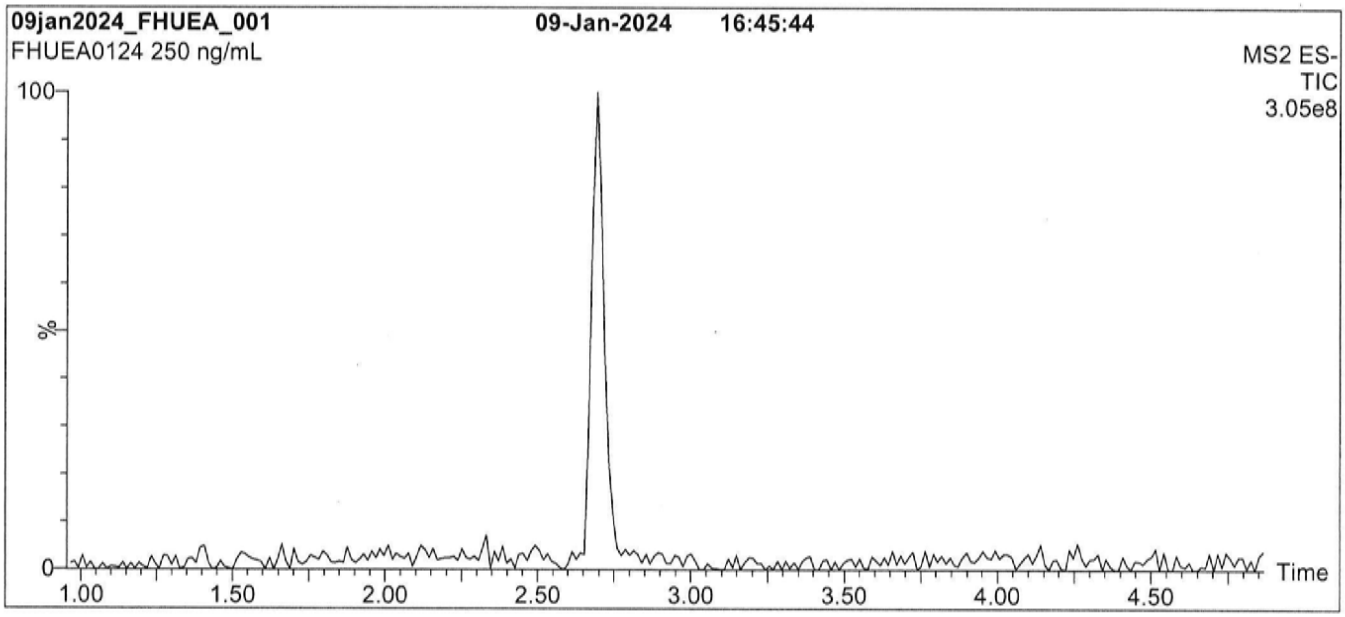


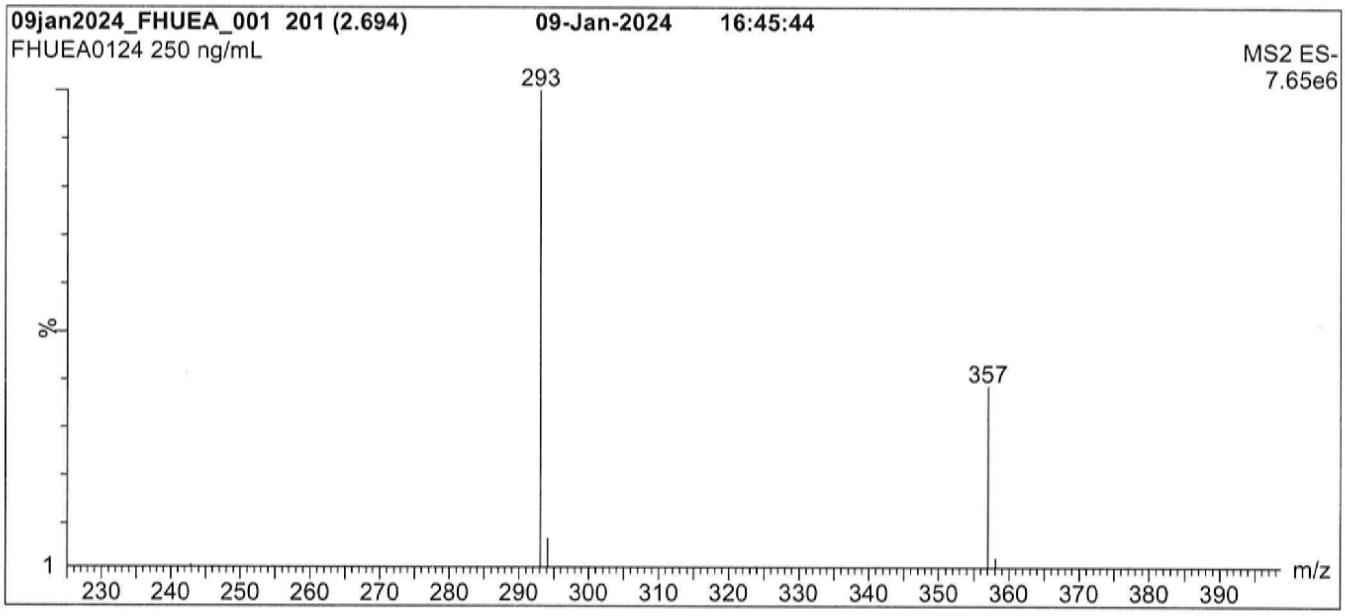


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0293** B

| | | | |
|---|---|---|---|
| Description:s | 13C2-FHUEA EIS 50ug/mL [6:2FTUCA] | Expires:s | 11/14/2025s |
| Standard Type:s | Others | Prepared:s | 11/14/2022s |
| Solvent:s | MeOH | Prepared By: s | Wellington Laboratories (Lot#: MFHUEA1122) |
| Final Volume (mls):s | 1.2s | Department: s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/15/2024 14:56 by ABK s |
| Lot Number: s | MFHUEA1122 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCA | | 872398-79-3s | 50s | ug/mLs |

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFHUEA | **LOT NUMBER:** | MFHUEA1122 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)octenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-78-2 |

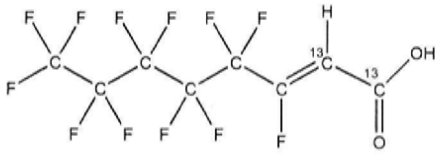

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{12}O_2$ | **MOLECULAR WEIGHT:** | 360.07 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 11/14/2022 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 11/14/2025 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-($1,2\text{-}^{13}C_2$)octenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.
- Contains ~0.5% of 2H-perfluoro-2-($1,2\text{-}^{13}C_2$)decenoic acid (MFOUEA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

***Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA***
***519-822-2436 • Fax: 519-822-2849 • info@well-labs.com***

**Figure 1:** **MFHUEA; LC/MS Data (Full Scan and Mass Spectrum)**

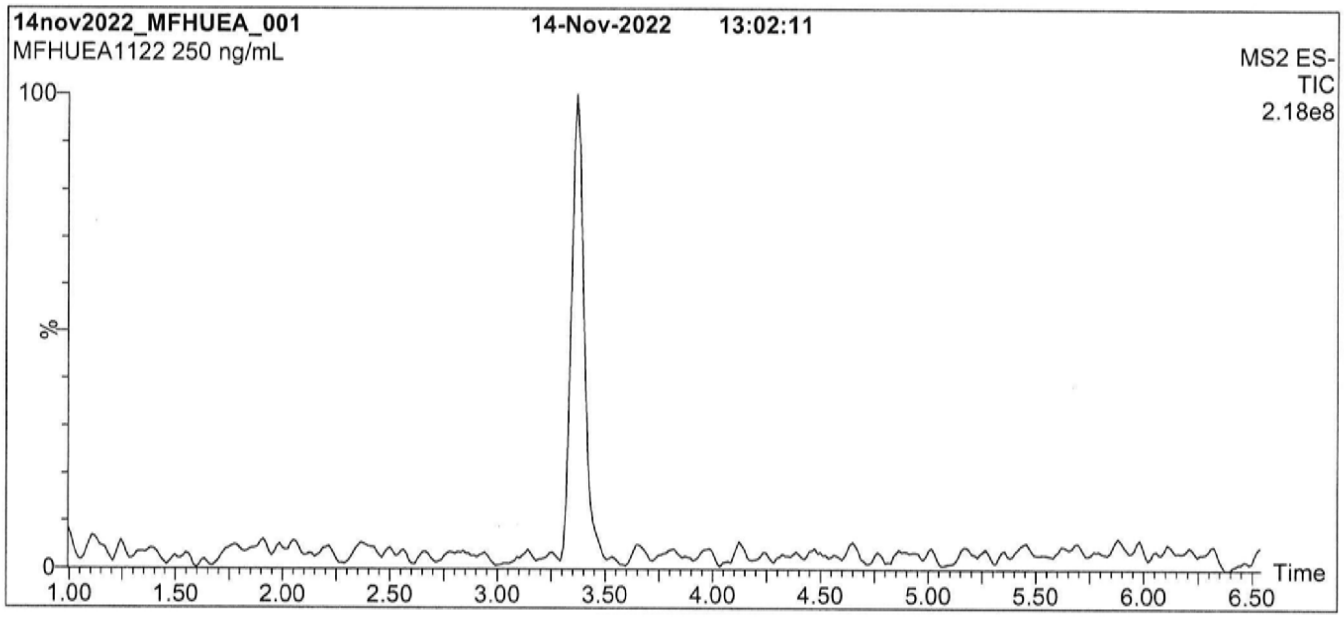


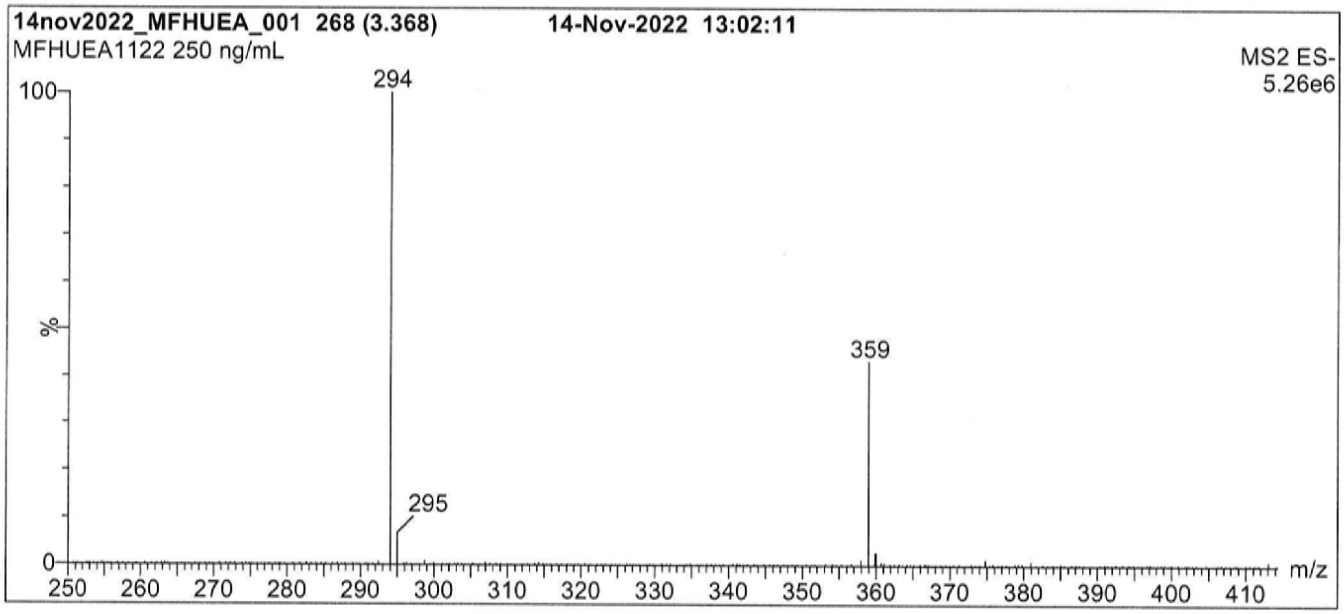


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% $H_2O$ / 50% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MFOUEA | **LOT NUMBER:** | MFOUEA0124 |
| **COMPOUND:** | 2H-Perfluoro-2-(1,2-$^{13}C_2$)decenoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 872398-79-3 |

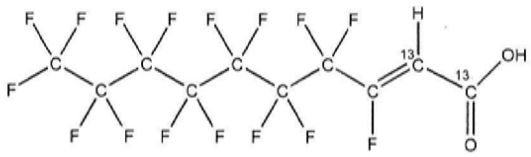

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_2F_{16}O_2$ | **MOLECULAR WEIGHT:** | 460.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL | **SOLVENT(S):** | Anhydrous Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 01/18/2024 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 01/18/2027 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-2-(1,2-$^{13}C_2$)decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 01/26/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

**Figure 1:** **MFOUEA; LC/MS Data (Full Scan and Mass Spectrum)**

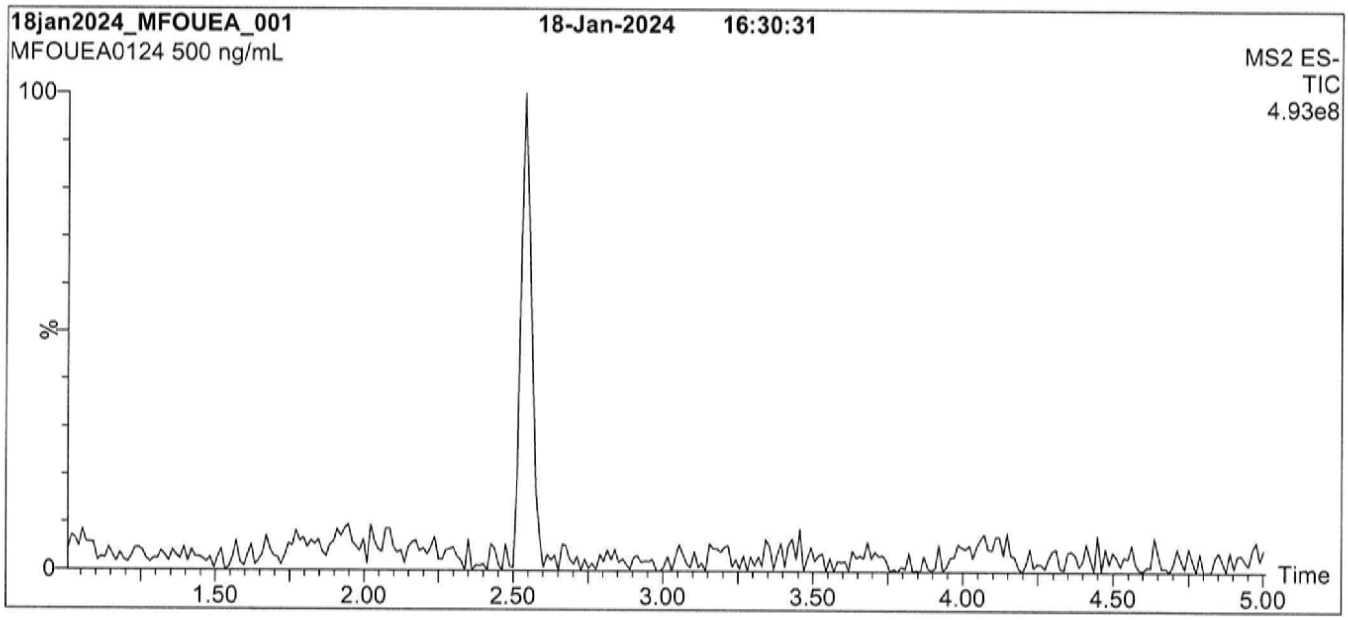


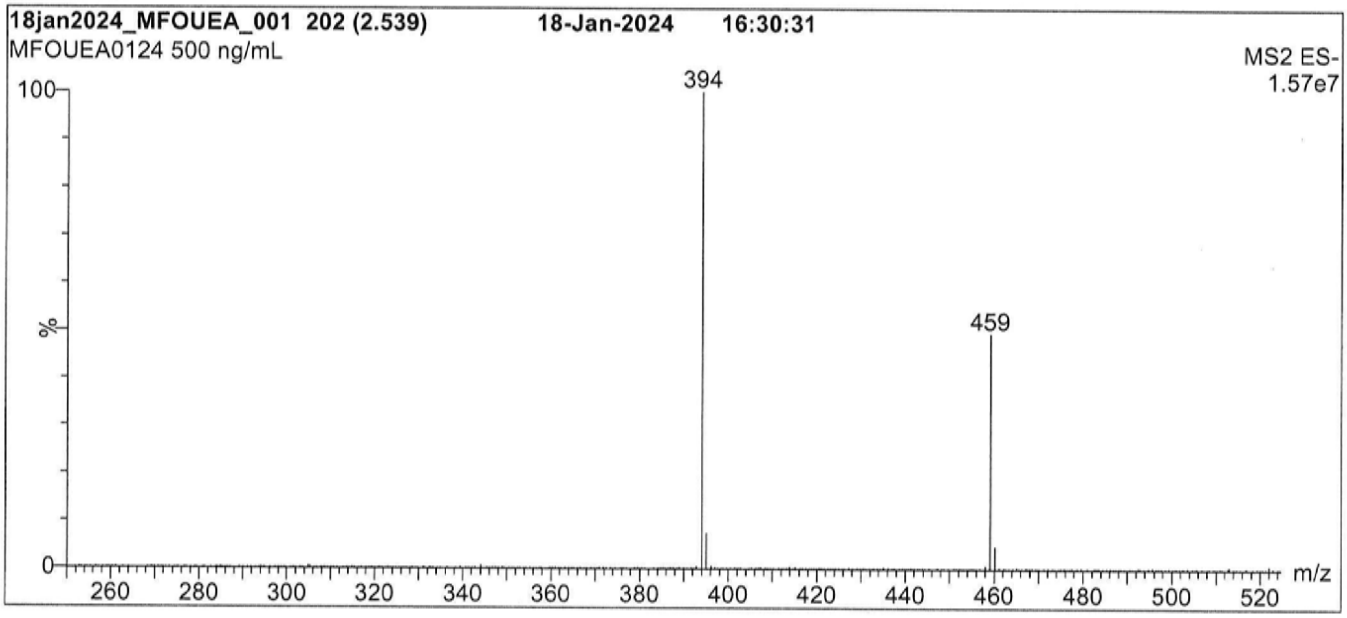


**Conditions for Figure 1:**

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

**Chromatographic Conditions:**

Column: Acquity UPLC BEH Shield $RP_{18}$
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% $H_2O$ / 60% (80:20 MeOH:ACN)
(both with 10 mM $NH_4OAc$ buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

**MS Parameters:**

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 30.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

# Analytical Standard RecordB

**24B0299** B

| | | | |
|---|---|---|---|
| Description:s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | Expires:s | 01/18/2027s |
| Standard Type:s | Others | Prepared:s | 01/18/2024s |
| Solvent:s | MeOH | Prepared By: s | Wellington Laboratories (Lot#: MFOUEA0124) |
| Final Volume (mls):s | 1.2s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit:s | 02/15/2024 14:56 by ABK s |
| Lot Number: s | MFOUEA0124 | | |
| Comments:r | Purity >98%r | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCA | | 872398-78-2s | 50s | ug/mLs |

# Analytical Standard RecordB

**24B0390** B

| | | | |
|---|---|---|---|
| Description:s | PFAS - MIX 1633 10ng/mL rev1s | Expires:s | 11/11/2025 s |
| Standard Type:s | Analyte Spikes | Prepared:s | 02/16/2024 s |
| Solvent:s | MeOHs | Prepared By: s | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit: s | 03/26/2024 15:13 by ABK |
| Lot Number:s | 63264s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 24B0291s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTSs | 24B0291s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTSs | 24B0291s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTSs | 24B0291s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONSs | 24B0291s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.04s | ug/mLs |
| PFBSs | 24B0291s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.01s | ug/mLs |
| PFDoSs | 24B0291s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDSs | 24B0291s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHSs | 24B0291s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.01s | ug/mLs |
| PFHpSs | 24B0291s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxAs | 24B0291s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDAs | 24B0291s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxSs | 24B0291s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSAs | 24B0291s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.01s | ug/mLs |
| PFNSs | 24B0291s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.01s | ug/mLs |
| PFOSs | 24B0291s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeSs | 24B0291s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.01s | ug/mLs |

# Analytical Standard RecordB

**24B0390** B

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24B0291s | PFAS - MIX 1633 s 200ng/mL rev1 examples | 02/16/2024s | In house | xs | 11/11/2025s | 03/26/2024 15:12s | by ABK | 0.5s |

# Analytical Standard RecordB

## 24B0394B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 100-400ng/mLs | Expires:s | 08/14/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 02/16/2024s |
| Solvent:s | MeOHs | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-PFHxDAs | 24B0186s | 13C2-PFHxDAs | 0.1s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0192s | 13C2D4-10:2FTSs | 0.4s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0293s | 872398-79-3s | 0.1s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0299s | 872398-78-2s | 0.1s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24B0186s | 13C2-PFHxDA EIS s 50ug/mLs | 08/28/2023s | Wellington s Laboratories | M2PFHxDA0823s | 08/28/2028s | 02/13/2024 16:11s | by ABK | 0.01s |
| 24B0192s | 13C2D4-10:2FTS EIS s 50ug/mLs | 10/26/2022s | Cambridge Isotope s Laboratories | SECG-003s | 10/26/2027s | 02/13/2024 18:17s | by ABK | 0.04s |
| 24B0293s | 13C2-FHUEA EIS s 50ug/mL [6:2FTUCA] | 11/14/2022s | Wellington Laboratories | MFHUEA1122 | 11/14/2025s | 02/15/2024 14:56s | by ABKs | 0.01s |
| 24B0299s | 13C2-FOUEA EIS 50ug/mL [8:2FTUCA] | 01/18/2024s | Wellington Laboratories | MFOUEA0124 | 01/18/2027s | 02/15/2024 14:56s | by ABKs | 0.01s |

# Analytical Standard RecordB

## 24B0395B

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires:s | 08/14/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 02/16/2024s |
| Solvent:s | MeOHs | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/16/2024 17:03 by DAGs |
| Lot Number:s | 64211s | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0394s | 13C2D4-10:2FTSs | 0.08s | ug/mLs |
| 13C2-PFHxDAs | 24B0394s | 13C2-PFHxDAs | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |

# nalytical Standard RecordA

## 24B0396

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 200-800ng/mLs | Expires:s | 03/05/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 02/16/2024s |
| Solvent:s | MeOH 64211s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 14:57 by DAGs |
| Lot Number: | xs | | |

| nalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| PFPrAs | 24B0182s | 422-64-0s | 0.404s | ug/mLs |
| TFSIs | 24B0185s | 82113-65-3s | 0.196s | ug/mLs |
| 10:2FTSs | 24B0187s | 120226-60-0s | 0.773s | ug/mLs |
| 8:2FTUCAs | 24B0290s | 70887-84-2s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0292s | 70887-88-6s | 0.2s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0182s | PFPrA 100ug/mL s (PFOA-015S)s | 02/05/2024s | AccuStandard | 224011649s | 03/05/2025s | 03/06/2024 19:33s | by ABK | 0.02s |
| 24B0185s | TFSI 100ug/mL s (HQ-115) (PFOA-030S) | 01/24/2024s | AccuStandard | 224011548s | 02/24/2026s | 03/06/2024 15:46s | by ABK | 0.01s |
| 24B0187s | 10:2FTS 50.0ug/mLs | 09/13/2023s | Wellington s Laboratories | 102FTS0923s | 09/13/2028s | 03/06/2024 19:45s | by ABK | 0.08s |
| 24B0290s | FOUEA 50.0ug/mL s [8:2FTUCA] | 11/08/2023s | Wellington Laboratories | FOUEA1123 | 11/08/2026s | 02/15/2024 14:51s | by ABKs | 0.02s |
| 24B0292s | FHUEA 50.0ug/mL [6:2FTUCA] | 01/09/2024s | Wellington Laboratories | FHUEA0124 | 01/09/2027s | 02/15/2024 14:52s | by ABKs | 0.02s |

# Analytical Standard RecordB

**24B0397** B

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires:s | 03/05/2025 s |
| Standard Type:s | Analyte Spikes | Prepared:s | 02/16/2024 s |
| Solvent:s | MeOH 64211s | Prepared By: s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit: s | 03/04/2024 19:07 by ABK |
| Lot Number:s | xs | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 10:2FTSs | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.00975s | ug/mLs |

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/04/2024 19:07s | by ABK | 0.25s |

# Analytical Standard RecordD

## 24B0466D

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 24B0010s | 763051-92-9s | 0.0000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.0004s | ug/mLs |
| 4:2FTSs | 24B0010s | 757124-72-4s | 0.000375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.0004s | ug/mLs |
| 6:2FTSs | 24B0010s | 27619-97-2s | 0.00038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.0004s | ug/mLs |
| 8:2FTSs | 24B0010s | 39108-34-4s | 0.000384s | ug/mLs |
| 9Cl-PF3ONSs | 24B0010s | 756426-58-1s | 0.0000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.0000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.0004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.0004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.0002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.0004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.0004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.0004s | ug/mLs |
| PFBSs | 24B0010s | 375-73-5s | 0.0000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0001s | ug/mLs |
| PFDoSs | 24B0010s | 79780-39-5s | 0.000097s | ug/mLs |
| PFDSs | 24B0010s | 335-77-3s | 0.0000965s | ug/mLs |
| PFECHSs | 24B0010s | 646-83-3s | 0.0000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.000178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0001s | ug/mLs |
| PFHpSs | 24B0010s | 375-92-8s | 0.0000955s | ug/mLs |
| PFHxAs | 24B0010s | 307-24-4s | 0.0001s | ug/mLs |
| PFHxDAs | 24B0010s | 67905-19-5s | 0.0001s | ug/mLs |
| PFHxSs | 24B0010s | 355-46-4s | 0.0000915s | ug/mLs |
| PFHxSAs | 24B0010s | 41997-13-1s | 0.0001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.0002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.0002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0001s | ug/mLs |
| PFNSs | 24B0010s | 68259-12-1s | 0.000096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0001s | ug/mLs |
| PFOSs | 24B0010s | 1763-23-1s | 0.000093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.0002s | ug/mLs |
| PFPeSs | 24B0010s | 2706-91-4s | 0.000094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0001s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# Analytical Standard RecordD

## 24B0466D

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.1 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0397s | 120226-60-0s | 0.000386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.000404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.000098s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1s | 02/01/2024s | In house | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.01s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.01s |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 24B0010s | 763051-92-9s | 0.000472s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.002s | ug/mLs |
| 4:2FTSs | 24B0010s | 757124-72-4s | 0.00188s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.002s | ug/mLs |
| 6:2FTSs | 24B0010s | 27619-97-2s | 0.0019s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.002s | ug/mLs |
| 8:2FTSs | 24B0010s | 39108-34-4s | 0.00192s | ug/mLs |
| 9Cl-PF3ONSs | 24B0010s | 756426-58-1s | 0.000468s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000472s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.0005s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.002s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.0005s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.002s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.001s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.002s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.0005s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.002s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.002s | ug/mLs |
| PFBSs | 24B0010s | 375-73-5s | 0.000442s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.0005s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.0005s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.0005s | ug/mLs |
| PFDoSs | 24B0010s | 79780-39-5s | 0.000485s | ug/mLs |
| PFDSs | 24B0010s | 335-77-3s | 0.000482s | ug/mLs |
| PFECHSs | 24B0010s | 646-83-3s | 0.000462s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00089s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.0005s | ug/mLs |
| PFHpSs | 24B0010s | 375-92-8s | 0.000478s | ug/mLs |
| PFHxAs | 24B0010s | 307-24-4s | 0.0005s | ug/mLs |
| PFHxDAs | 24B0010s | 67905-19-5s | 0.0005s | ug/mLs |
| PFHxSs | 24B0010s | 355-46-4s | 0.000458s | ug/mLs |
| PFHxSAs | 24B0010s | 41997-13-1s | 0.0005s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.001s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.001s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.0005s | ug/mLs |
| PFNSs | 24B0010s | 68259-12-1s | 0.00048s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.0005s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.0005s | ug/mLs |
| PFOSs | 24B0010s | 1763-23-1s | 0.000465s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.0005s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.001s | ug/mLs |
| PFPeSs | 24B0010s | 2706-91-4s | 0.00047s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.0005s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.0005s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.0005s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0467B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 0.5 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0397s | 120226-60-0s | 0.00193s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.0005s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.0005s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00202s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00049s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1s | 02/01/2024s | In house | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordD

## 24B0468D

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 24B0010s | 763051-92-9s | 0.000945s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTSs | 24B0010s | 757124-72-4s | 0.00375s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTSs | 24B0010s | 27619-97-2s | 0.0038s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTSs | 24B0010s | 39108-34-4s | 0.00384s | ug/mLs |
| 9Cl-PF3ONSs | 24B0010s | 756426-58-1s | 0.000935s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.000945s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.001s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.001s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.002s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.001s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.004s | ug/mLs |
| PFBSs | 24B0010s | 375-73-5s | 0.000885s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.001s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.001s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.001s | ug/mLs |
| PFDoSs | 24B0010s | 79780-39-5s | 0.00097s | ug/mLs |
| PFDSs | 24B0010s | 335-77-3s | 0.000965s | ug/mLs |
| PFECHSs | 24B0010s | 646-83-3s | 0.000925s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00178s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.001s | ug/mLs |
| PFHpSs | 24B0010s | 375-92-8s | 0.000955s | ug/mLs |
| PFHxAs | 24B0010s | 307-24-4s | 0.001s | ug/mLs |
| PFHxDAs | 24B0010s | 67905-19-5s | 0.001s | ug/mLs |
| PFHxSs | 24B0010s | 355-46-4s | 0.000915s | ug/mLs |
| PFHxSAs | 24B0010s | 41997-13-1s | 0.001s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.002s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.002s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.001s | ug/mLs |
| PFNSs | 24B0010s | 68259-12-1s | 0.00096s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.001s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.001s | ug/mLs |
| PFOSs | 24B0010s | 1763-23-1s | 0.00093s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.001s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.002s | ug/mLs |
| PFPeSs | 24B0010s | 2706-91-4s | 0.00094s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.001s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.001s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.001s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# Analytical Standard RecordD

## 24B0468D

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 1.0 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0397s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.001s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.001s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00404s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00098s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1s | 02/01/2024s | In house | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires:s | 08/13/2024 s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024 s |
| Solvent:s | MeOH/64011s | Prepared By: s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit: s | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| AnalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 24B0010s | 763051-92-9s | 0.00189s | ug/mLs |
| 3:3FTCAs | 24B0010s | 356-02-5s | 0.008s | ug/mLs |
| 4:2FTSs | 24B0010s | 757124-72-4s | 0.0075s | ug/mLs |
| 5:3FTCAs | 24B0010s | 914637-49-3s | 0.008s | ug/mLs |
| 6:2FTSs | 24B0010s | 27619-97-2s | 0.0076s | ug/mLs |
| 7:3FTCAs | 24B0010s | 812-70-4s | 0.008s | ug/mLs |
| 8:2FTSs | 24B0010s | 39108-34-4s | 0.00768s | ug/mLs |
| 9Cl-PF3ONSs | 24B0010s | 756426-58-1s | 0.00187s | ug/mLs |
| ADONAs | 24B0010s | 919005-14-4s | 0.00189s | ug/mLs |
| HFPO-DAs | 24B0010s | 13252-13-6s | 0.002s | ug/mLs |
| NEtFOSAs | 24B0010s | 4151-50-2s | 0.008s | ug/mLs |
| NEtFOSAAs | 24B0010s | 2991-50-6s | 0.002s | ug/mLs |
| NEtFOSEs | 24B0010s | 1691-99-2s | 0.008s | ug/mLs |
| NFDHAs | 24B0010s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 24B0010s | 31506-32-8s | 0.008s | ug/mLs |
| NMeFOSAAs | 24B0010s | 2355-31-9s | 0.002s | ug/mLs |
| NMeFOSEs | 24B0010s | 24448-09-7s | 0.008s | ug/mLs |
| PFBAs | 24B0010s | 375-22-4s | 0.008s | ug/mLs |
| PFBSs | 24B0010s | 375-73-5s | 0.00177s | ug/mLs |
| PFBSAs | 24B0010s | 30334-69-1s | 0.002s | ug/mLs |
| PFDAs | 24B0010s | 335-76-2s | 0.002s | ug/mLs |
| PFDoAs | 24B0010s | 307-55-1s | 0.002s | ug/mLs |
| PFDoSs | 24B0010s | 79780-39-5s | 0.00194s | ug/mLs |
| PFDSs | 24B0010s | 335-77-3s | 0.00193s | ug/mLs |
| PFECHSs | 24B0010s | 646-83-3s | 0.00185s | ug/mLs |
| PFEESAs | 24B0010s | 113507-82-7s | 0.00356s | ug/mLs |
| PFHpAs | 24B0010s | 375-85-9s | 0.002s | ug/mLs |
| PFHpSs | 24B0010s | 375-92-8s | 0.00191s | ug/mLs |
| PFHxAs | 24B0010s | 307-24-4s | 0.002s | ug/mLs |
| PFHxDAs | 24B0010s | 67905-19-5s | 0.002s | ug/mLs |
| PFHxSs | 24B0010s | 355-46-4s | 0.00183s | ug/mLs |
| PFHxSAs | 24B0010s | 41997-13-1s | 0.002s | ug/mLs |
| PFMBAs | 24B0010s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 24B0010s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 24B0010s | 375-95-1s | 0.002s | ug/mLs |
| PFNSs | 24B0010s | 68259-12-1s | 0.00192s | ug/mLs |
| PFOAs | 24B0010s | 335-67-1s | 0.002s | ug/mLs |
| PFODAs | 24B0010s | 16517-11-6s | 0.002s | ug/mLs |
| PFOSs | 24B0010s | 1763-23-1s | 0.00186s | ug/mLs |
| PFOSAs | 24B0010s | 754-91-6s | 0.002s | ug/mLs |
| PFPeAs | 24B0010s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeSs | 24B0010s | 2706-91-4s | 0.00188s | ug/mLs |
| PFTeDAs | 24B0010s | 376-06-7s | 0.002s | ug/mLs |
| PFTrDAs | 24B0010s | 72629-94-8s | 0.002s | ug/mLs |
| PFUnAs | 24B0010s | 2058-94-8s | 0.002s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# nalytical Standard RecordA

## 24B0469

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 2.0 ng/mLs | Expires:s | 08/13/2024 s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024 s |
| Solvent:s | MeOH/64011s | Prepared By: s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFAS s |
| Vials:s | 1s | Last Edit: s | 03/06/2024 15:46 by ABK |
| Lot Number: | * | | |

| AnalyteA | ParentA | CAS NumberA | Concentration A | UnitsA |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0397s | 120226-60-0s | 0.00772s | ug/mLs |
| 6:2FTUCAs | 24B0397s | 70887-88-6s | 0.002s | ug/mLs |
| 8:2FTUCAs | 24B0397s | 70887-84-2s | 0.002s | ug/mLs |
| PFPrAs | 24B0397s | 422-64-0s | 0.00808s | ug/mLs |
| TFSIs | 24B0397s | 82113-65-3s | 0.00196s | ug/mLs |

**Parent Standards used: A**

| Standard A | DescriptionA | PreparedA | Prepared ByA | Lot NbrA | ExpiresA | Last EditA | | (mls)A |
|---|---|---|---|---|---|---|---|---|
| 24B0010s | PFAS - MIX 1633 s 10ng/mL rev1s | 02/01/2024s | In house | 63321s | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.2s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0397s | 1633 MIX B 5C 10ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.2s |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 23L0007s | 763051-92-9s | 0.00945s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.04s | ug/mLs |
| 4:2FTSs | 23L0007s | 757124-72-4s | 0.0375s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.04s | ug/mLs |
| 6:2FTSs | 23L0007s | 27619-97-2s | 0.038s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.04s | ug/mLs |
| 8:2FTSs | 23L0007s | 39108-34-4s | 0.0384s | ug/mLs |
| 9Cl-PF3ONSs | 23L0007s | 756426-58-1s | 0.00935s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.00945s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.01s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.04s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.01s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.04s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.02s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.04s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.01s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.04s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.04s | ug/mLs |
| PFBSs | 23L0007s | 375-73-5s | 0.00885s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.01s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.01s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.01s | ug/mLs |
| PFDoSs | 23L0007s | 79780-39-5s | 0.0097s | ug/mLs |
| PFDSs | 23L0007s | 335-77-3s | 0.00965s | ug/mLs |
| PFECHSs | 23L0007s | 646-83-3s | 0.00925s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0178s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.01s | ug/mLs |
| PFHpSs | 23L0007s | 375-92-8s | 0.00955s | ug/mLs |
| PFHxAs | 23L0007s | 307-24-4s | 0.01s | ug/mLs |
| PFHxDAs | 23L0007s | 67905-19-5s | 0.01s | ug/mLs |
| PFHxSs | 23L0007s | 355-46-4s | 0.00915s | ug/mLs |
| PFHxSAs | 23L0007s | 41997-13-1s | 0.01s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.02s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.02s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.01s | ug/mLs |
| PFNSs | 23L0007s | 68259-12-1s | 0.0096s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.01s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.01s | ug/mLs |
| PFOSs | 23L0007s | 1763-23-1s | 0.0093s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.01s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.02s | ug/mLs |
| PFPeSs | 23L0007s | 2706-91-4s | 0.0094s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.01s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.01s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.01s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0471B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 10 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0404s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

# Analytical Standard RecordB

**24B0471** B

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 examples | 12/01/2023s | In house | xs | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.05s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.05s |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 23L0007s | 763051-92-9s | 0.0189s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.08s | ug/mLs |
| 4:2FTSs | 23L0007s | 757124-72-4s | 0.075s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.08s | ug/mLs |
| 6:2FTSs | 23L0007s | 27619-97-2s | 0.076s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.08s | ug/mLs |
| 8:2FTSs | 23L0007s | 39108-34-4s | 0.0768s | ug/mLs |
| 9Cl-PF3ONSs | 23L0007s | 756426-58-1s | 0.0187s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0189s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.02s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.08s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.02s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.08s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.04s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.08s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.02s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.08s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.08s | ug/mLs |
| PFBSs | 23L0007s | 375-73-5s | 0.0177s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.02s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.02s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.02s | ug/mLs |
| PFDoSs | 23L0007s | 79780-39-5s | 0.0194s | ug/mLs |
| PFDSs | 23L0007s | 335-77-3s | 0.0193s | ug/mLs |
| PFECHSs | 23L0007s | 646-83-3s | 0.0185s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.0356s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.02s | ug/mLs |
| PFHpSs | 23L0007s | 375-92-8s | 0.0191s | ug/mLs |
| PFHxAs | 23L0007s | 307-24-4s | 0.02s | ug/mLs |
| PFHxDAs | 23L0007s | 67905-19-5s | 0.02s | ug/mLs |
| PFHxSs | 23L0007s | 355-46-4s | 0.0183s | ug/mLs |
| PFHxSAs | 23L0007s | 41997-13-1s | 0.02s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.04s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.04s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.02s | ug/mLs |
| PFNSs | 23L0007s | 68259-12-1s | 0.0192s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.02s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.02s | ug/mLs |
| PFOSs | 23L0007s | 1763-23-1s | 0.0186s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.02s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.04s | ug/mLs |
| PFPeSs | 23L0007s | 2706-91-4s | 0.0188s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.02s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.02s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.02s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0472B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 20 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0396s | 120226-60-0s | 0.0773s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.02s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.02s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0808s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0196s | ug/mLs |

# Analytical Standard RecordB

**24B0472** B

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 examples | 12/01/2023s | In house | xs | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.1s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.1s |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 23L0007s | 763051-92-9s | 0.0472s | ug/mLs |
| 3:3FTCAs | 23L0007s | 356-02-5s | 0.2s | ug/mLs |
| 4:2FTSs | 23L0007s | 757124-72-4s | 0.188s | ug/mLs |
| 5:3FTCAs | 23L0007s | 914637-49-3s | 0.2s | ug/mLs |
| 6:2FTSs | 23L0007s | 27619-97-2s | 0.19s | ug/mLs |
| 7:3FTCAs | 23L0007s | 812-70-4s | 0.2s | ug/mLs |
| 8:2FTSs | 23L0007s | 39108-34-4s | 0.192s | ug/mLs |
| 9Cl-PF3ONSs | 23L0007s | 756426-58-1s | 0.0468s | ug/mLs |
| ADONAs | 23L0007s | 919005-14-4s | 0.0472s | ug/mLs |
| HFPO-DAs | 23L0007s | 13252-13-6s | 0.05s | ug/mLs |
| NEtFOSAs | 23L0007s | 4151-50-2s | 0.2s | ug/mLs |
| NEtFOSAAs | 23L0007s | 2991-50-6s | 0.05s | ug/mLs |
| NEtFOSEs | 23L0007s | 1691-99-2s | 0.2s | ug/mLs |
| NFDHAs | 23L0007s | 151772-58-6s | 0.1s | ug/mLs |
| NMeFOSAs | 23L0007s | 31506-32-8s | 0.2s | ug/mLs |
| NMeFOSAAs | 23L0007s | 2355-31-9s | 0.05s | ug/mLs |
| NMeFOSEs | 23L0007s | 24448-09-7s | 0.2s | ug/mLs |
| PFBAs | 23L0007s | 375-22-4s | 0.2s | ug/mLs |
| PFBSs | 23L0007s | 375-73-5s | 0.0442s | ug/mLs |
| PFBSAs | 23L0007s | 30334-69-1s | 0.05s | ug/mLs |
| PFDAs | 23L0007s | 335-76-2s | 0.05s | ug/mLs |
| PFDoAs | 23L0007s | 307-55-1s | 0.05s | ug/mLs |
| PFDoSs | 23L0007s | 79780-39-5s | 0.0485s | ug/mLs |
| PFDSs | 23L0007s | 335-77-3s | 0.0482s | ug/mLs |
| PFECHSs | 23L0007s | 646-83-3s | 0.0462s | ug/mLs |
| PFEESAs | 23L0007s | 113507-82-7s | 0.089s | ug/mLs |
| PFHpAs | 23L0007s | 375-85-9s | 0.05s | ug/mLs |
| PFHpSs | 23L0007s | 375-92-8s | 0.0478s | ug/mLs |
| PFHxAs | 23L0007s | 307-24-4s | 0.05s | ug/mLs |
| PFHxDAs | 23L0007s | 67905-19-5s | 0.05s | ug/mLs |
| PFHxSs | 23L0007s | 355-46-4s | 0.0458s | ug/mLs |
| PFHxSAs | 23L0007s | 41997-13-1s | 0.05s | ug/mLs |
| PFMBAs | 23L0007s | 863090-89-5s | 0.1s | ug/mLs |
| PFMPAs | 23L0007s | 377-73-1s | 0.1s | ug/mLs |
| PFNAs | 23L0007s | 375-95-1s | 0.05s | ug/mLs |
| PFNSs | 23L0007s | 68259-12-1s | 0.048s | ug/mLs |
| PFOAs | 23L0007s | 335-67-1s | 0.05s | ug/mLs |
| PFODAs | 23L0007s | 16517-11-6s | 0.05s | ug/mLs |
| PFOSs | 23L0007s | 1763-23-1s | 0.0465s | ug/mLs |
| PFOSAs | 23L0007s | 754-91-6s | 0.05s | ug/mLs |
| PFPeAs | 23L0007s | 2706-90-3s | 0.1s | ug/mLs |
| PFPeSs | 23L0007s | 2706-91-4s | 0.047s | ug/mLs |
| PFTeDAs | 23L0007s | 376-06-7s | 0.05s | ug/mLs |
| PFTrDAs | 23L0007s | 72629-94-8s | 0.05s | ug/mLs |
| PFUnAs | 23L0007s | 2058-94-8s | 0.05s | ug/mLs |
| 13C2-4:2FTSs | 24B0289s | 13C2-4:2FTSs | 0.004s | ug/mLs |

# Analytical Standard RecordB

## 24B0473B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 50 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 02/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 15:46 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration | UnitsB |
|---|---|---|---|---|
| 13C2-6:2FTSs | 24B0289s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0289s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0289s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0289s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0289s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0289s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0289s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0289s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0289s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0289s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0289s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0289s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0289s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0289s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0289s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0289s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0289s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0289s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0289s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0289s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0289s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0289s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0289s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 10:2FTSs | 24B0396s | 120226-60-0s | 0.193s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.05s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.05s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.049s | ug/mLs |

# Analytical Standard RecordB

**24B0473** B

**Parent Standards used:**

| Standard | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 23L0007s | PFAS - MIX 1633 s 200ng/mL rev1 examples | 12/01/2023s | In house | xs | 11/11/2025s | 03/06/2024 15:46s | by DAGs | 0.25s |
| 24B0289s | MPFAC-HIF-ES s 20.0ng/mLs | 02/15/2024s | Dipti Gokal | xs | 08/13/2024s | 02/26/2024 13:44s | by DAGs | 0.1s |
| 24B0395s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/06/2024 15:46s | by ABK | 0.25s |

# Analytical Standard RecordG

## 24B0552G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires:s | 08/20/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 02/22/2024s |
| Solvent:s | MeOH/64211s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 6s | Last Edit:s | 02/22/2024 09:50 by DAGs |
| Lot Number:s | xs | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | 23L0523s | 13C2-4:2FTSs | 0.04s | ug/mLs |
| 13C2-6:2FTSs | 23L0523s | 13C2-6:2FTSs | 0.04s | ug/mLs |
| 13C2-8:2FTSs | 23L0523s | 13C2-8:2FTSs | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0523s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0523s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0523s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBSs | 23L0523s | 13C3-PFBSs | 0.02s | ug/mLs |
| 13C3-PFHXSs | 23L0523s | 13C3-PFHXSs | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0523s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0523s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0523s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0523s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0523s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0523s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0523s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOSs | 23L0523s | 13C8-PFOSs | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0523s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0523s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0523s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0523s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0523s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0523s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0523s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0523s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0523s | MPFAC-HIF-ES-EISs | 10/31/2023s | Wellington s Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:33s | by DAGs | 0.2s |

# Analytical Standard RecordG

## 24B0553G

| | | | |
|---|---|---|---|
| Description:s | MPFAC-HIF-ES 20.0ng/mLs | Expires:s | 08/20/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 02/22/2024s |
| Solvent:s | MeOH/64211s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 6s | Last Edit:s | 02/22/2024 09:51 by DAGs |
| Lot Number:s | xs | | |
| Comments:i | Spiking Volume: 200 uL for 2 mL final 1633/B-15i | | |

| AnalyteG | ParentG | CAS NumberG | Concentration G | UnitsG |
|---|---|---|---|---|
| 13C2-4:2FTSs | 23L0524s | 13C2-4:2FTSs | 0.04s | ug/mLs |
| 13C2-6:2FTSs | 23L0524s | 13C2-6:2FTSs | 0.04s | ug/mLs |
| 13C2-8:2FTSs | 23L0524s | 13C2-8:2FTSs | 0.04s | ug/mLs |
| 13C2-PFDOAs | 23L0524s | 13C2-PFDOAs | 0.01s | ug/mLs |
| 13C2-PFTEDAs | 23L0524s | 13C2-PFTEDAs | 0.01s | ug/mLs |
| 13C3-HFPO-DAs | 23L0524s | 13C3-HFPO-DAs | 0.08s | ug/mLs |
| 13C3-PFBSs | 23L0524s | 13C3-PFBSs | 0.02s | ug/mLs |
| 13C3-PFHXSs | 23L0524s | 13C3-PFHXSs | 0.02s | ug/mLs |
| 13C4-PFBAs | 23L0524s | 13C4-PFBAs | 0.08s | ug/mLs |
| 13C4-PFHPAs | 23L0524s | 13C4-PFHPAs | 0.02s | ug/mLs |
| 13C5-PFHXAs | 23L0524s | 13C5-PFHXAs | 0.02s | ug/mLs |
| 13C5-PFPEAs | 23L0524s | 13C5-PFPEAs | 0.04s | ug/mLs |
| 13C6-PFDAs | 23L0524s | 13C6-PFDAs | 0.01s | ug/mLs |
| 13C7-PFUnAs | 23L0524s | 13C7-PFUDAs | 0.01s | ug/mLs |
| 13C8-PFOAs | 23L0524s | 13C8-PFOAs | 0.02s | ug/mLs |
| 13C8-PFOSs | 23L0524s | 13C8-PFOSs | 0.02s | ug/mLs |
| 13C8-PFOSAs | 23L0524s | 13C8-PFOSAs | 0.02s | ug/mLs |
| 13C9-PFNAs | 23L0524s | 13C9-PFNAs | 0.01s | ug/mLs |
| D3-NMEFOSAs | 23L0524s | D3-NMEFOSAs | 0.02s | ug/mLs |
| D3-NMEFOSAAs | 23L0524s | D3-NMEFOSAAs | 0.04s | ug/mLs |
| D5-NETFOSAs | 23L0524s | D5-NETFOSAs | 0.02s | ug/mLs |
| D5-NETFOSAAs | 23L0524s | D5-NETFOSAAs | 0.04s | ug/mLs |
| D7-NMEFOSEs | 23L0524s | D7-NMEFOSEs | 0.2s | ug/mLs |
| D9-NETFOSEs | 23L0524s | D9-NETFOSEs | 0.2s | ug/mLs |

**Parent Standards used: G**

| Standard G | DescriptionG | PreparedG | Prepared ByG | Lot NbrG | ExpiresG | Last EditG | | (mls)G |
|---|---|---|---|---|---|---|---|---|
| 23L0524s | MPFAC-HIF-ES-EISs | 10/31/2023s | Wellington s Laboratories | MPFACHIFES1023s | 11/02/2026s | 12/21/2023 09:34s | by DAGs | 0.2s |

# Analytical Standard RecordB

## 24B0645B

| | | | |
|---|---|---|---|
| Description:s | PFAS IIS 7C 40ng/mLs | Expires:s | 08/24/2024s |
| Standard Type:s | Internal Standard | Prepared:s | 02/26/2024s |
| Solvent:s | MeOH/62335s | Prepared By:s | Parker Fox |
| Final Volume (mls):s | 50s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 02/26/2024 09:14 by PAFs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 22A0234s | 13C2-PFDAs | 0.04s | ug/mLs |
| 13C2-PFHXAs | 22A0234s | 13C2-PFHxAs | 0.04s | ug/mLs |
| 13C3-PFBAs | 22A0234s | 13C3-PFBAs | 0.04s | ug/mLs |
| 13C4-PFOAs | 22A0234s | 13C4-PFOAs | 0.04s | ug/mLs |
| 13C4-PFOSs | 22A0234s | 13C4-PFOSs | 0.04s | ug/mLs |
| 13C5-PFNAs | 22A0234s | 13C5-PFNAs | 0.04s | ug/mLs |
| 18O2-PFHXSs | 22A0234s | 18O2-PFHXSs | 0.04s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 22A0234s | PFAS IIS 7C 5ug/mLs | 01/20/2022s | In house | * | 08/25/2026s | 01/23/2023 13:32s | by DAGs | 0.4s |

# Analytical Standard RecordB

## 24B0646B

| | | | |
|---|---|---|---|
| Description:s | 1633- IIS Static 1ng/mLs | Expires:s | 07/09/2024s |
| Standard Type:s | Internal Standard | Prepared:s | 02/26/2024s |
| Solvent:s | MeOH/62335s | Prepared By:s | Parker Fox |
| Final Volume (mls):s | 2s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 18:49 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-PFDAs | 24B0645s | 13C2-PFDAs | 0.001s | ug/mLs |
| 13C2-PFHXAs | 24B0645s | 13C2-PFHxAs | 0.001s | ug/mLs |
| 13C3-PFBAs | 24B0645s | 13C3-PFBAs | 0.001s | ug/mLs |
| 13C4-PFOAs | 24B0645s | 13C4-PFOAs | 0.001s | ug/mLs |
| 13C4-PFOSs | 24B0645s | 13C4-PFOSs | 0.001s | ug/mLs |
| 13C5-PFNAs | 24B0645s | 13C5-PFNAs | 0.001s | ug/mLs |
| 18O2-PFHXSs | 24B0645s | 18O2-PFHXSs | 0.001s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0645s | PFAS IIS 7C 40ng/mLs | 02/26/2024s | In house | * | 08/24/2024s | 03/06/2024 16:57s | by HGHs | 0.05s |

# Analytical Standard RecordK

## 24C0037K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 10,000ug/mL | Expires:s | 08/08/2034s |
| Standard Type:s | Others | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |
| Comments:1 | 0.1000g of Neat Salt 99.5% into 10mL MeOH1 | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24B0188s | 82113-65-3s | 9780s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0188s | TFSI (SS) s [Bis(trifluoromethane)sulfsonimide Lith]s | 08/08/2022s | Sigma-Aldrichs | MKCS0286s | 08/08/2034s | 03/06/2024 19:17s | by ABKs | 100000s |

# Analytical Standard RecordD

## 24C0038D

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 200ug/mLs | Expires:s | 08/31/2024s |
| Standard Type:s | Others | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| TFSIs | 24C0037s | 82113-65-3s | 196s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24C0037s | TFSI (SS) 10,000ug/mL | 03/04/2024s | * | * | 08/08/2034s | 03/06/2024 19:21s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24C0039K

| | | | |
|---|---|---|---|
| Description:s | TFSI (SS) 50ug/mLs | Expires:s | 08/31/2024s |
| Standard Type:s | Others | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:21 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| TFSIs | 24C0038s | 82113-65-3s | 49s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24C0038s | TFSI (SS) 200ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABK | 0.25s |

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# Certificate of Analysis

Product Name:
Bis(trifluoromethane)sulfonimide lithium salt - 99.95% trace metals basis

| | |
|---|---|
| **Product Number:** | **544094** |
| **Batch Number:** | **MKCS0286** |
| Brand: | ALDRICH |
| CAS Number: | 90076-65-6 |
| MDL Number: | MFCD00210017 |
| Formula: | C2F6LiNO4S2 |
| Formula Weight: | 287.09 g/mol |
| Quality Release Date: | 08 AUG 2022 |

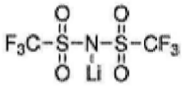

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Fluorine NMR Spectrum | Conforms to Structure | Conforms |
| Purity<br>99.95% Based on Trace Metals Analysis | Meets Requirements | Meets Requirements |
| Trace Metal Analysis | ≤ 550.0 ppm | 24.3 ppm |
| Silver (Ag) | | 2.2 ppm |
| Barium (Ba) | | 1.0 ppm |
| Calcium (Ca) | | 1.3 ppm |
| Magnesium (Mg) | | 0.1 ppm |
| Strontium (Sr) | | < 0.1 ppm |
| Cesium (Cs) | | 5.4 ppm |
| Potassium (K) | | 11.5 ppm |
| Sodium (Na) | | 2.8 ppm |

Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires:s | 08/19/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 23G0454s | 763051-92-9s | 0.004s | ug/mLs |
| 3:3FTCAs | 23G0454s | 356-02-5s | 0.004s | ug/mLs |
| 4:2FTSs | 23G0454s | 757124-72-4s | 0.004s | ug/mLs |
| 5:3FTCAs | 23G0454s | 914637-49-3s | 0.004s | ug/mLs |
| 6:2FTSs | 23G0454s | 27619-97-2s | 0.004s | ug/mLs |
| 7:3FTCAs | 23G0454s | 812-70-4s | 0.004s | ug/mLs |
| 8:2FTSs | 23G0454s | 39108-34-4s | 0.004s | ug/mLs |
| 9Cl-PF3ONSs | 23G0454s | 756426-58-1s | 0.004s | ug/mLs |
| ADONAs | 23G0454s | 919005-14-4s | 0.004s | ug/mLs |
| HFPO-DAs | 23G0454s | 13252-13-6s | 0.004s | ug/mLs |
| NEtFOSAs | 23G0454s | 4151-50-2s | 0.004s | ug/mLs |
| NEtFOSAAs | 23G0454s | 2991-50-6s | 0.004s | ug/mLs |
| NEtFOSEs | 23G0454s | 1691-99-2s | 0.004s | ug/mLs |
| NFDHAs | 23G0454s | 151772-58-6s | 0.004s | ug/mLs |
| NMeFOSAs | 23G0454s | 31506-32-8s | 0.004s | ug/mLs |
| NMeFOSAAs | 23G0454s | 2355-31-9s | 0.004s | ug/mLs |
| NMeFOSEs | 23G0454s | 24448-09-7s | 0.004s | ug/mLs |
| PFBAs | 23G0454s | 375-22-4s | 0.004s | ug/mLs |
| PFBSs | 23G0454s | 375-73-5s | 0.004s | ug/mLs |
| PFDAs | 23G0454s | 335-76-2s | 0.004s | ug/mLs |
| PFDoAs | 23G0454s | 307-55-1s | 0.004s | ug/mLs |
| PFDoSs | 23G0454s | 79780-39-5s | 0.004s | ug/mLs |
| PFDSs | 23G0454s | 335-77-3s | 0.004s | ug/mLs |
| PFEESAs | 23G0454s | 113507-82-7s | 0.004s | ug/mLs |
| PFHpAs | 23G0454s | 375-85-9s | 0.004s | ug/mLs |
| PFHpSs | 23G0454s | 375-92-8s | 0.004s | ug/mLs |
| PFHxAs | 23G0454s | 307-24-4s | 0.004s | ug/mLs |
| PFHxSs | 23G0454s | 355-46-4s | 0.004s | ug/mLs |
| PFMBAs | 23G0454s | 863090-89-5s | 0.004s | ug/mLs |
| PFMPAs | 23G0454s | 377-73-1s | 0.004s | ug/mLs |
| PFNAs | 23G0454s | 375-95-1s | 0.004s | ug/mLs |
| PFNSs | 23G0454s | 68259-12-1s | 0.004s | ug/mLs |
| PFOAs | 23G0454s | 335-67-1s | 0.004s | ug/mLs |
| PFOSs | 23G0454s | 1763-23-1s | 0.004s | ug/mLs |
| PFOSAs | 23G0454s | 754-91-6s | 0.004s | ug/mLs |
| PFPeAs | 23G0454s | 2706-90-3s | 0.004s | ug/mLs |
| PFPeSs | 23G0454s | 2706-91-4s | 0.004s | ug/mLs |
| PFTeDAs | 23G0454s | 376-06-7s | 0.004s | ug/mLs |
| PFTrDAs | 23G0454s | 72629-94-8s | 0.004s | ug/mLs |
| PFUnAs | 23G0454s | 2058-94-8s | 0.004s | ug/mLs |
| PFBSAs | 23H0523s | 30334-69-1s | 0.004s | ug/mLs |
| PFECHSs | 23H0523s | 646-83-3s | 0.00364s | ug/mLs |
| PFHxDAs | 23H0523s | 67905-19-5s | 0.004s | ug/mLs |
| PFHxSAs | 23H0523s | 41997-13-1s | 0.004s | ug/mLs |
| PFODAs | 23H0523s | 16517-11-6s | 0.004s | ug/mLs |
| 13C2-6:2FTUCAs | 24B0395s | 872398-79-3s | 0.002s | ug/mLs |

# Analytical Standard RecordB

## 24C0040B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B SCV 4.0 ng/mLs | Expires:s | 08/19/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/07/2024 18:26 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-8:2FTUCAs | 24B0395s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0395s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24B0395s | 13C2-PFHxDAs | 0.002s | ug/mLs |
| 13C2-4:2FTSs | 24B0553s | 13C2-4:2FTSs | 0.004s | ug/mLs |
| 13C2-6:2FTSs | 24B0553s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0553s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0553s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0553s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0553s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 10:2FTSs | 24C0041s | 120226-60-0s | 0.00386s | ug/mLs |
| 6:2FTUCAs | 24C0041s | 70887-88-6s | 0.00404s | ug/mLs |
| 8:2FTUCAs | 24C0041s | 70887-84-2s | 0.00404s | ug/mLs |
| PFPrAs | 24C0041s | 422-64-0s | 0.004s | ug/mLs |
| TFSIs | 24C0041s | 82113-65-3s | 0.00392s | ug/mLs |

# Analytical Standard RecordB

**24C0040** B

**Parent Standards used:** B

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls) B |
|---|---|---|---|---|---|---|---|---|
| 23G0454 s | PFAS 1633 SS ABS s 200ng/mLs | 07/27/2023s | * | * | 05/17/2024s | 03/07/2024 18:26s | by ABK | 0.02s |
| 23H0523 s | PFAS SS- 5C 200ng/mLs | 08/21/2023s | * | * | 01/12/2025s | 03/06/2024 19:43s | by ABK | 0.02s |
| 24B0395 s | 1633 EIS MIXB s 20-80ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 0.1s |
| 24B0553 s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | xs | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0041 s | PFAS SS- 5C B 200ng/mLs | 03/04/2024s | * | * | 10/20/2024s | 03/06/2024 19:49s | by ABK | 0.02s |

# Analytical Standard RecordK

## 24C0041K

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires:s | 10/20/2024s |
| Standard Type:s | Others | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/63096s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTSs | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABKs | 0.02s |
| 24B0184s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABKs | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022s | Cambridge Isotope s Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABKs | 0.04s |
| 24C0039s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABKs | 0.04s |

# Analytical Standard RecordK

## 24C0041K

| | | | |
|---|---|---|---|
| Description:s | PFAS SS- 5C B 200ng/mLs | Expires:s | 10/20/2024s |
| Standard Type:s | Others | Prepared:s | 03/04/2024s |
| Solvent:s | MeOH/63096s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/06/2024 19:49 by ABK |
| Lot Number:s | * | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| PFPrAs | 24A0371s | 422-64-0s | 0.2s | ug/mLs |
| 6:2FTUCAs | 24B0183s | 70887-88-6s | 0.202s | ug/mLs |
| 8:2FTUCAs | 24B0184s | 70887-84-2s | 0.202s | ug/mLs |
| 10:2FTSs | 24B0193s | 120226-60-0s | 0.193s | ug/mLs |
| TFSIs | 24C0039s | 82113-65-3s | 0.196s | ug/mLs |

**Parent Standards used:** B

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls) B |
|---|---|---|---|---|---|---|---|---|
| 24A0371s | PFPrA (SS) 50ug/mLs | 01/16/2024s | * | * | 07/14/2034s | 03/06/2024 19:06s | by ABK | 0.04s |
| 24B0183s | FHUEA (SS) 100ug/mL s PFOA-024S [6:2FTUCA] | 09/20/2023s | AccuStandard | 222051212-02s | 10/20/2024s | 02/15/2024 14:52s | by ABKs | 0.02s |
| 24B0184 s | FOUEA (SS) 100ug/mL (PFOA-027S) [8:2FTUCA] | 07/06/2023s | AccuStandard | 223061612s | 08/06/2025s | 03/06/2024 19:32s | by ABKs | 0.02s |
| 24B0193s | 10:2 FTS (SS) 50ug/mLs | 02/03/2022 s | Cambridge Isotope s Laboratories | SEBF-016s | 02/03/2027s | 03/06/2024 19:49s | by ABKs | 0.04s |
| 24C0039 s | TFSI (SS) 50ug/mLs | 03/04/2024s | * | * | 08/31/2024s | 03/06/2024 19:21s | by ABKs | 0.04s |

# Analytical Standard RecordD

## 24C0280D

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires:s | 08/14/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 03/12/2024s |
| Solvent:s | MeOHs | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 10s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/12/2024 15:51 by DAGs |
| Lot Number:s | 64011s | | |

| AnalyteD | ParentD | CAS NumberD | Concentration | UnitsD |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0394s | 13C2D4-10:2FTSs | 0.08s | ug/mLs |
| 13C2-PFHxDAs | 24B0394s | 13C2-PFHxDAs | 0.02s | ug/mLs |

**Parent Standards used:**

| Standard | escriptionD | PreparedD | Prepared ByD | Lot NbrD | ExpiresD | Last EditD | | (mls)D |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 2s |

# Analytical Standard RecordB

## 24C0281B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B ICB 0.0 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 03/12/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Andonios Karas |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/12/2024 16:39 by ABK |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 13C2-4:2FTSs | 24B0553s | 13C2-4:2FTSs | 0.004s | ug/mLs |
| 13C2-6:2FTSs | 24B0553s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0553s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0553s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0553s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0553s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0553s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0553s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0553s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0553s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0553s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0553s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0553s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0553s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0553s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0553s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0553s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0553s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0553s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0553s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0553s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0553s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0553s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0553s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24C0280s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24C0280s | 13C2-PFHxDAs | 0.002s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0553s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | Dipti Gokal | xs | 08/20/2024s | 02/22/2024 09:51s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In house | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# Analytical Standard RecordK

## 24C0392K

| | | | |
|---|---|---|---|
| Description:s | 1633 MIX B 5C 10ng/mLs | Expires:s | 03/05/2025s |
| Standard Type:s | Analyte Spikes | Prepared:s | 03/18/2024s |
| Solvent:s | MeOH 64211s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/18/2024 11:15 by DAGs |
| Lot Number:s | xs | | |

| AnalyteK | ParentK | CAS NumberK | Concentration | UnitsK |
|---|---|---|---|---|
| 10:2FTSs | 24B0396s | 120226-60-0s | 0.0386s | ug/mLs |
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.01s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.01s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0202s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0098s | ug/mLs |

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.25s |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standards | Prepared:s | 03/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 11Cl-PF3OUDSs | 24B0291s | 763051-92-9s | 0.00472s | ug/mLs |
| 3:3FTCAs | 24B0291s | 356-02-5s | 0.02s | ug/mLs |
| 4:2FTSs | 24B0291s | 757124-72-4s | 0.0188s | ug/mLs |
| 5:3FTCAs | 24B0291s | 914637-49-3s | 0.02s | ug/mLs |
| 6:2FTSs | 24B0291s | 27619-97-2s | 0.019s | ug/mLs |
| 7:3FTCAs | 24B0291s | 812-70-4s | 0.02s | ug/mLs |
| 8:2FTSs | 24B0291s | 39108-34-4s | 0.0192s | ug/mLs |
| 9Cl-PF3ONSs | 24B0291s | 756426-58-1s | 0.00468s | ug/mLs |
| ADONAs | 24B0291s | 919005-14-4s | 0.00472s | ug/mLs |
| HFPO-DAs | 24B0291s | 13252-13-6s | 0.005s | ug/mLs |
| NEtFOSAs | 24B0291s | 4151-50-2s | 0.02s | ug/mLs |
| NEtFOSAAs | 24B0291s | 2991-50-6s | 0.005s | ug/mLs |
| NEtFOSEs | 24B0291s | 1691-99-2s | 0.02s | ug/mLs |
| NFDHAs | 24B0291s | 151772-58-6s | 0.01s | ug/mLs |
| NMeFOSAs | 24B0291s | 31506-32-8s | 0.02s | ug/mLs |
| NMeFOSAAs | 24B0291s | 2355-31-9s | 0.005s | ug/mLs |
| NMeFOSEs | 24B0291s | 24448-09-7s | 0.02s | ug/mLs |
| PFBAs | 24B0291s | 375-22-4s | 0.02s | ug/mLs |
| PFBSs | 24B0291s | 375-73-5s | 0.00442s | ug/mLs |
| PFBSAs | 24B0291s | 30334-69-1s | 0.005s | ug/mLs |
| PFDAs | 24B0291s | 335-76-2s | 0.005s | ug/mLs |
| PFDoAs | 24B0291s | 307-55-1s | 0.005s | ug/mLs |
| PFDoSs | 24B0291s | 79780-39-5s | 0.00485s | ug/mLs |
| PFDSs | 24B0291s | 335-77-3s | 0.00482s | ug/mLs |
| PFECHSs | 24B0291s | 646-83-3s | 0.00462s | ug/mLs |
| PFEESAs | 24B0291s | 113507-82-7s | 0.0089s | ug/mLs |
| PFHpAs | 24B0291s | 375-85-9s | 0.005s | ug/mLs |
| PFHpSs | 24B0291s | 375-92-8s | 0.00478s | ug/mLs |
| PFHxAs | 24B0291s | 307-24-4s | 0.005s | ug/mLs |
| PFHxDAs | 24B0291s | 67905-19-5s | 0.005s | ug/mLs |
| PFHxSs | 24B0291s | 355-46-4s | 0.00458s | ug/mLs |
| PFHxSAs | 24B0291s | 41997-13-1s | 0.005s | ug/mLs |
| PFMBAs | 24B0291s | 863090-89-5s | 0.01s | ug/mLs |
| PFMPAs | 24B0291s | 377-73-1s | 0.01s | ug/mLs |
| PFNAs | 24B0291s | 375-95-1s | 0.005s | ug/mLs |
| PFNSs | 24B0291s | 68259-12-1s | 0.0048s | ug/mLs |
| PFOAs | 24B0291s | 335-67-1s | 0.005s | ug/mLs |
| PFODAs | 24B0291s | 16517-11-6s | 0.005s | ug/mLs |
| PFOSs | 24B0291s | 1763-23-1s | 0.00465s | ug/mLs |
| PFOSAs | 24B0291s | 754-91-6s | 0.005s | ug/mLs |
| PFPeAs | 24B0291s | 2706-90-3s | 0.01s | ug/mLs |
| PFPeSs | 24B0291s | 2706-91-4s | 0.0047s | ug/mLs |
| PFTeDAs | 24B0291s | 376-06-7s | 0.005s | ug/mLs |
| PFTrDAs | 24B0291s | 72629-94-8s | 0.005s | ug/mLs |
| PFUnAs | 24B0291s | 2058-94-8s | 0.005s | ug/mLs |
| 10:2FTSs | 24B0396s | 120226-60-0s | 0.0193s | ug/mLs |

# Analytical Standard RecordB

## 24C0420B

| | | | |
|---|---|---|---|
| Description:s | S1633 - B CAL 5.0 ng/mLs | Expires:s | 08/13/2024s |
| Standard Type:s | Calibration Standard | Prepared:s | 03/19/2024s |
| Solvent:s | MeOH/64011s | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 1s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/19/2024 14:29 by DAGs |
| Lot Number:s | * | | |

| AnalyteB | ParentB | CAS NumberB | Concentration B | UnitsB |
|---|---|---|---|---|
| 6:2FTUCAs | 24B0396s | 70887-88-6s | 0.005s | ug/mLs |
| 8:2FTUCAs | 24B0396s | 70887-84-2s | 0.005s | ug/mLs |
| PFPrAs | 24B0396s | 422-64-0s | 0.0101s | ug/mLs |
| TFSIs | 24B0396s | 82113-65-3s | 0.0049s | ug/mLs |
| 13C2-4:2FTSs | 24B0552s | 13C2-4:2FTSs | 0.004s | ug/mLs |
| 13C2-6:2FTSs | 24B0552s | 13C2-6:2FTSs | 0.004s | ug/mLs |
| 13C2-8:2FTSs | 24B0552s | 13C2-8:2FTSs | 0.004s | ug/mLs |
| 13C2-PFDOAs | 24B0552s | 13C2-PFDOAs | 0.001s | ug/mLs |
| 13C2-PFTEDAs | 24B0552s | 13C2-PFTEDAs | 0.001s | ug/mLs |
| 13C3-HFPO-DAs | 24B0552s | 13C3-HFPO-DAs | 0.008s | ug/mLs |
| 13C3-PFBSs | 24B0552s | 13C3-PFBSs | 0.002s | ug/mLs |
| 13C3-PFHXSs | 24B0552s | 13C3-PFHXSs | 0.002s | ug/mLs |
| 13C4-PFBAs | 24B0552s | 13C4-PFBAs | 0.008s | ug/mLs |
| 13C4-PFHPAs | 24B0552s | 13C4-PFHPAs | 0.002s | ug/mLs |
| 13C5-PFHXAs | 24B0552s | 13C5-PFHXAs | 0.002s | ug/mLs |
| 13C5-PFPEAs | 24B0552s | 13C5-PFPEAs | 0.004s | ug/mLs |
| 13C6-PFDAs | 24B0552s | 13C6-PFDAs | 0.001s | ug/mLs |
| 13C7-PFUnAs | 24B0552s | 13C7-PFUDAs | 0.001s | ug/mLs |
| 13C8-PFOAs | 24B0552s | 13C8-PFOAs | 0.002s | ug/mLs |
| 13C8-PFOSs | 24B0552s | 13C8-PFOSs | 0.002s | ug/mLs |
| 13C8-PFOSAs | 24B0552s | 13C8-PFOSAs | 0.002s | ug/mLs |
| 13C9-PFNAs | 24B0552s | 13C9-PFNAs | 0.001s | ug/mLs |
| D3-NMEFOSAs | 24B0552s | D3-NMEFOSAs | 0.002s | ug/mLs |
| D3-NMEFOSAAs | 24B0552s | D3-NMEFOSAAs | 0.004s | ug/mLs |
| D5-NETFOSAs | 24B0552s | D5-NETFOSAs | 0.002s | ug/mLs |
| D5-NETFOSAAs | 24B0552s | D5-NETFOSAAs | 0.004s | ug/mLs |
| D7-NMEFOSEs | 24B0552s | D7-NMEFOSEs | 0.02s | ug/mLs |
| D9-NETFOSEs | 24B0552s | D9-NETFOSEs | 0.02s | ug/mLs |
| 13C2-6:2FTUCAs | 24C0280s | 872398-79-3s | 0.002s | ug/mLs |
| 13C2-8:2FTUCAs | 24C0280s | 872398-78-2s | 0.002s | ug/mLs |
| 13C2D4-10:2FTSs | 24C0280s | 13C2D4-10:2FTSs | 0.008s | ug/mLs |
| 13C2-PFHxDAs | 24C0280s | 13C2-PFHxDAs | 0.002s | ug/mLs |

# Analytical Standard RecordB

**24C0420** B

**Parent Standards used: B**

| Standard B | DescriptionB | PreparedB | Prepared ByB | Lot NbrB | ExpiresB | Last EditB | | (mls)B |
|---|---|---|---|---|---|---|---|---|
| 24B0291s | PFAS - MIX 1633 s 200ng/mL rev1 examples | 02/16/2024s | In house | xs | 08/13/2024s | 03/06/2024 19:55s | by ABK | 0.025s |
| 24B0396s | 1633 MIX B 5C s 200-800ng/mLs | 02/16/2024s | In house | xs | 03/05/2025s | 03/07/2024 14:57s | by DAGs | 0.025s |
| 24B0552s | MPFAC-HIF-ES s 20.0ng/mLs | 02/22/2024s | In house | xs | 08/20/2024s | 03/19/2024 14:29s | by DAGs | 0.1s |
| 24C0280s | 1633 EIS MIXB s 20-80ng/mLs | 03/12/2024s | In house | 64011s | 08/14/2024s | 03/12/2024 15:51s | by DAGs | 0.1s |

# Analytical Standard RecordC

## 24C0574C

| | | | |
|---|---|---|---|
| Description:s | 1633 EIS MIXB 20-80ng/mLs | Expires:s | 08/14/2024s |
| Standard Type:s | Surrogate Spikes | Prepared:s | 03/25/2024s |
| Solvent:s | MeOHs | Prepared By:s | Dipti Gokal |
| Final Volume (mls):s | 5s | Department:s | PFASs |
| Vials:s | 1s | Last Edit:s | 03/25/2024 15:10 by DAGs |
| Lot Number:s | 64211s | | |

| Analyte | ParentC | AS NumberC | oncentration | UnitsC |
|---|---|---|---|---|
| 13C2-6:2FTUCAs | 24B0394s | 872398-79-3s | 0.02s | ug/mLs |
| 13C2-8:2FTUCAs | 24B0394s | 872398-78-2s | 0.02s | ug/mLs |
| 13C2D4-10:2FTSs | 24B0394s | 13C2D4-10:2FTSs | 0.08s | ug/mLs |
| 13C2-PFHxDAs | 24B0394s | 13C2-PFHxDAs | 0.02s | ug/mLs |

**Parent Standards used: C**

| Standard C | DescriptionC | PreparedC | Prepared ByC | Lot NbrC | ExpiresC | Last EditC | | (mls)C |
|---|---|---|---|---|---|---|---|---|
| 24B0394s | 1633 EIS MIXB s 100-400ng/mLs | 02/16/2024s | In house | 64211s | 08/14/2024s | 02/16/2024 17:03s | by DAGs | 1s |